# UIC - I - 8-1, 2 & 3 WDWs-1, 2 & 3 PERMITS, RENEWALS, & MODS (8 of 18) 2017

Form 3160–4 (November 1983) (formerly 9–330) DEPARTMENT OF BUREAU OF LAND	TATES THE INT MANAGEMEN	NM OIL C Drawer D Ar <b>tebrig</b> , ERIOR	ONS. CO D INNPUPLICA Struct rever	TE• TB• TB• TB• TB• TB• TB• TB• TB• TB• TB	DN Form a Budget Expires 5. LEASE DES NM-055	pproved. Bureau No. 1004-0137 s August 31, 1985 SIGNATION AND SERIAL NO. 57371
WELL COMPLETION OR RECOMP	PLETION R	EPORT A	ND LOO	G *	6. IF INDIAN,	ALLOTTER OR TRIBE NAME
1a. TYPE OF WELL: OIL GAS WELL WELL		)ther			7, UNIT AGRE	EMENT NAME
b. TYPE OF COMPLETION: NEW WORK DEEP DEEP BACK	DIFF. RESVR	Other	JENTIN .	> 	S. FARM OR I Chalk E 9. WELL NO. 2	Bluff Federal Com
P. O. Box 7698, Tyler, Texa	s 75711	RECEN	/ED		10. FIELD AND	D POOL, OR WILDCAT
4. LOCATION OF WELL (Report location clearly and in accord At surface 1350' FWL & 1650' FN	rdance with any L	state requirem	ents)+   1892		N. Illi H. SEC., T., R OR AREA	Inois Camp Morrow
At top prod. Interval reported below		O. C.	D.		Sec. 1	l, T18S-R27E
At total depth Same	14. PERMIT NO. API #30-015	автесна Б-26741	TE ISSUED		12. COUNTY O PARISH Eddy	N.M.
15. DATE SPUDDED 16. DATE T.D. REACHED 17. DATE CO	8/24/91	prod.) 18. EI KB 36	LEVATIONS (D	и, вкв. на 7 3613	r, gr, etc.)*	19. ELEV. CASINGHEAD
20. TOTAL DEPTH, MD & TVD         21. PLUG, BACK T.D., MD & TVD           10,140'         10,125'	22. IF MULT HOW MA	IPLE COMPL., NY*		ERVALS	ROTARY TOOL	LS CABLE TOOLS
24. PRODUCING INTERVAL(S). OF THIS COMPLETION-TOP, BE 9,999'-10,024' - MORYOW	DTTOM, NAME (M)	D AND TVD)*				25. WAS DIRECTIONAL SURVEY MADE YES
26. TYPE ELECTRIC AND OTHER LOGS RUN Dual Spaced Neutron/CBL						27. WAS WELL COBED NO
28. CASING CASING SIZE WEIGHT, LB./FT. DEPTH SET (	RECORD (Repo	rt all strings se E SIZE	t in well) CES	IENTING H	ECORD	AMOUNT PULLED
13-3/8" 61# 4	16' 17-	1/2"	450 - 0	lircul	ated	None
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10' 12- 48' 8-	1/4" 3/4"	1025 - 0000000000000000000000000000000000	Circula Circula	ated ated	None None
29. LINER RECORD	I	i	30.	ŕr	UBING RECO	1 (R1)
BIZE TOP (MD) BOTTOM (MD) SA	CKS CEMENT*	SCREEN (MD)		D	EPTH SET (MI	D) PACKER SET (MD)
			27/8	3"	9939	9939
31. PERFORATION RECORD (Interval, size and number)		82.	ACID, SHOT	FRACTI	JRE, CEMENT	SQUEEZE, ETC.
9999'-10,024' - 4 SPF, 101 holes		9999-10,	024 <sup>1</sup>	Acidi Acidi	zed w/500 zed w/20	0 of MATERIAL USED 00 gals 75% HCL. ,000 gals acid/CO2
33.+ DATE FIRST PRODUCTION PRODUCTION METHOD (Flow 8/26/91	PRODI oing, gas lift, pur Flowing	UCTION mping—size and	type of pun	n p )	WELL shut	STATUS (Producing or <sup>1-in)</sup> Producing
8/29/91 24 hrs. 16/64"	TEST PERIOD	01LBBL.		сю. 3	WATER-BBL.	. GAS-OIL RATIO
FLOW. TUBING PRESS. CASING PRESSURE CALCULATED 24-HOUR RATE	онвві О	сля—мся   118	8	WATER	HBL.	OIL GRAVITY-API (CORR.)
34. DISPOSITION OF GAB (Sold, used for fuel, vented, etc.) Sold					TEST WITNES	SED BY Pierce
35. LIST OF ATTACHMENTS					1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 -	
36. I hereby certify that the foregoing and attached infor SIGNED Marine Marine Marine Mon	mation is comple	ete and correct	as determine	ed from a	all available re	<b>corda</b> (0.3 )09)
*(See Instructions and	Spaces for Ac	dditional Dat	a on Reve	rse Side	DATE ;)	

Fitle 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

		TRUE IRT. DEPTH	-															
<b>JGIC MARKERS</b>	TOP	MEAS. DEPTH	370	1,034"	1,346°	1,833'	3,178	4,130"	5,076	5, 380'	6,644'	7,602"	8,3261	8,808'	9,496	9,696	10,056'	
38. GEOLO		NAME	Yates	Queen	Grayburg	San Andres	Glorietta	Tubb	Drinkard	Abo	Wolfcamp	Cisco	Canyon	Strawn	Morrow	Morrow Clastics	Chester	
zones of porosity and contents thereof; cored intervals; and all shion used, time tool open, flowing and shut-in pressures, and	DESCRIPTION, CONTENTS, ETC.	Sandstone	Sandstone	Detrital Limestone														
iow all important erval tested, cus	BOTTOM	97851	9878°	10024°														
OUS ZONES: (St cluding depth int	TOP	9752'	18086	16666														
<ol> <li>SUMMARY OF POR drill-stem, tests, in recoveries):</li> </ol>	FORMATION	liddle Morrow	ower Morrow	asal Morrow								, , ,						

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State (n New MORRO

Energy, Moderate and Gaussa, Fescusses, Separtment

Submit in duplicate to appropriate district office See Rule 401 & Role 1122

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#### OIL CONSERVISION DIVISION

P.O. P. - 1648

Real to New March 875 44 1788

# MOUTED. AND ONE POINT BACK FREISURE TEST FOR GAS WELL

Ореганы				25.3	or Unit Name			1
······································	MEWBOURNE		*\ -		CHALI	C BLUFF FI		
Type Test			. 1944	1.44 	-25-92	wei.	2	
Completion Date	That De		n ng Bart D.C. Ang Bart D.C.	and the second sec	8.100	P	IIr Sec 1 1	TWP - Rge. 8 27
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Tb - Size	√: 	Set At	i na principalitatione de la companya de la company El companya de la comp			Pee		
0.7.0		2011				1		
Z 770 Tosa Well - Similar	Giologia de Como	Mehiole	2 4 4 11 			For	nation	
17.50 Metris (2008)	rzeachanie ar	a creative a					Morrow	,
Producing Thru F	eservoir Temp 95	- in Annual Te	ne Baro.	- 5 · · · · · ·		Сог	inection	
	1775511 <del>             </del>  -	<u> </u>	с. 		Prever	Mei	er Run	Тарз
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an a	FLOX DA	\ 		A second se	NG DATA	CASI	NG DATA	Duration
NO	Orifice	* * S.	1891 - 1992 - 1997 - 19	€* ( .+ <u>6</u> §	Temp.	Press.	Temp	ol
Size	Size	. i g		Ya ku	۰ <b>۱</b> :	p.s.i.g.	212	Flow
<u>S1</u>			an an an an an an			Pkr		$\frac{1/2 \text{ hr.}}{1}$
<u>1.   3 X.375</u>		9. 						$\frac{1}{1}$ hr.
$12. 3 X_{-375}$		· · · · · · · · · · · · · · · · · · ·	お手術 一手をつい でもふたけ、「赤谷」					
3. 3 X.3/2		· · · · · · · · · · · · · · · · · · ·						1 111.
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2. 42	.1649		and the second	s is lowing third		X X X X		<u> </u>
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		19• <u>2</u>	1		* <b>]</b>			
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Approved By (28)00	. (75	nda <b>cı</b> ta İs		$\pi(20)$ .		in the second se	ecked By	
		4					1.1	

Form C-122 Revised 4-1-91 MEWBOURNE OIL COMPANY Chalk Bluff Fed., Well 2 1-18-27 Eddy County, New Mexico 2-25-92



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· · ·	Crimes	-	clsF.
	State of M Energy, Minerals and Na	New Mexico atural Resources Department	Revised 1-1-89
P.O. Box 1980, Hobbs, NM 88240	OIL CONSERVA	ATION DIVISION	SEP - 5 199 at Bottom of Page UV
P.O. Drawer DD, Artesia, NM 88210	P.O. E Santa Fe, New M	30x 2088 1exico 87504-2088	O. C. D. ARTESLA OFFICE
1000 Rio Brazos Rd., Aziec, NM 87410	REQUEST FOR ALLOWA	BLE AND AUTHORIZATI	ON
Operator MEWBOURNE OTL			Well API No.
Address P. O. Box 769	8, Tyler, Texas 7571		30-015-26741
Reason(s) for Filing (Check proper box)		Dunces (Please explain)	
Recompletion	Change in Transporter of: Oil Dry Gas	M.	
If change of operator give name and address of previous operator		2	I
II. DESCRIPTION OF WELL	AND LEASE	· · · · · · · · · · · · · · · · · · ·	
CHALK BLUFF FEDER	AL 2 N.Illinois	Camp-Morrow Gas	Kind of Lease Lease No. State, Federal or Fee NM-0557371
Unit LetterF		West Line and <u>1650</u>	Feet From The North Line
Section 1 Townsh	ip 28 South Range 27 E	ast , NMPM,	Eddy County
III. DESIGNATION OF TRAN	SPORTER OF OIL AND NATU	RAL GAS	
Amoco Pipeline Interco	prporate Trucking	Address (Give address to which app Oil Tender Dept. Bo:	woved copy of this form is to be sent) x 702068, Tulsa, Ok 74170–2068
Name of Authorized Transporter of Casin Transwestern Pipeline	nghead Gas or Dry Gas Company	Address (Give address to which app P.O.Box 1188, Houst	woved copy of this form is to be sent)
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge.	Is gas actually connected?	When? 8/13/91
If this production is commingled with that	from any other lease or pool, give comming	ling order number: <u>NO</u>	0/13/31
Designate Type of Completion	- (X) Oil Well Gas Well	New Well Workover Dec	pen Plug Back Same Res'v Diff Res'v
Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
Elevations (DF, RKB, RT, GR, etc.)	8/24/91 Name of Producing Formation	10,140' Top Oil/Gas Pay	10,125' Tubing Depth
KB 3615', DF 3613', GL 35 Perforations	599' Morrow	9,999'	9,939 1 Depth Casing Shoe
9999 -10,024	TUBING, CASING AND	CEMENTING RECORD	
HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
12-1/4"	<u>13-3/8"</u> 0_5/0"	416	450 - Circulated
8-3/4"	5-1/2"	10,148'	1020 - Circulated
V. TEST DATA AND REQUES	ST FOR ALLOWABLE		
Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, gas	lift, etc.) Post ID-2 B-1-50
Length of Test	Tubing Pressure	Casing Pressure	Choke Size camp + BK
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas- MCF
GAS WELL	Length of Their		
118	24 hours		Gravity of Condensate
Testing Method (pitos, back pr.) Back Pressure	Tubing Pressure (Shut-in) 410#	Casing Pressure (Shut-in)	Choke Size
VI. OPERATOR CERTIFIC I hereby certify that the rules and reput	ATE OF COMPLIANCE	OIL CONSEF	RVATION DIVISION
Division have been complied with and is true and complete to the best of my l	that the information given above knowledge and belief.	Date Approved	APR 2 3 1992
Den lond 7	/		
xuight /	hompon		AL SIGNED DY
Signature Gaylon Thompson, Engr	. Oppos. Secretary	ByORIGIN	VAL SIGNED BY VILLIAMS
Signature Gaylon Thompson, Engr Printed Name 9/03/91 Date	Oprns. Secretary (903) 561-2900	By ORIGIN MIKE V Title SUPER	VAL SIGNED BY VILLIAMS VISOR, DISTRICT II

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104
Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.

All sections of this form must be filled out for allowable on new and recompleted wells.
 Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
 Separate Form C-104 must be filed for each pool in multiply completed wells.

			cls					
orm 3160-5 June 1990) Do not use this forr Use	UNITED STAT DEPARTMENT OF THE BUREAU OF LAND MA SUNDRY NOTICES AND REF m for proposals to drill or to de e "APPLICATION FOR PERMIT	RECEIVED E INTERIOR NAGEMENT AUG 0 9 58 AM '92 PORTS ON WELLS Pepen GAGentry to a different reserve —" foAston proposals	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993 5. Lease Designation and Serial No. <u>NM-0557371</u> 6. If Indian, Allottee or Tribe Name Dir.					
1	SUBMIT IN TRIPL	LICATE	7. If Unit or CA, Agreement Designation					
1. Type of Well Oil Gas Well Well   2. Name of Operator	8. Well Name and No.							
<u>Mewbourne O</u> 3. Address and Telephone No.	Mewbourne Oil Company							
P.O. Box 52 4. Location of Well (Footage,	270 Hobbs, New Mexico Sec., T., R., M., or Survey Description)	88241	2 10. Field and Pool. or Exploratory Area NOT th L.LINOIS					
1350' FWL & Sec. 1-T185	1650' FNL 5-R27E		Camp Morrow 11. County or Parish, State					
2. CHECK AF	PPROPRIATE BOX(s) TO IND	DICATE NATURE OF NOTICE, REP	<u> </u>					
TYPE OF SU	JBMISSION	TYPE OF ACTI	ON					
X Notice of In	ntent		Change of Plans					
Subsequent	Report	L Recompletion X Plugging Back	New Construction					
Final Aband	donment Notice	Casing Repair Altering Casing Other	Water Shut-Off Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well					
Contraction of the second se	leted Operations (Clearly state all pertinent detail	s, and give pertinent dates, including estimated date of sta	arting any proposed work. If well is directionally drilled					
3. Describe Proposed or Compl give subsurface location Well' is curr has reached	ently producing from Ba it's economical limit.	I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in	9999' - 10,024' and to lower Morrow Sands.					
<ol> <li>Describe Proposed or Compl give subsurface location</li> <li>Well is curr has reached</li> <li>Set CIBP</li> <li>Perforat 9778'-97</li> <li>Stimulate</li> </ol>	ns and measured and true vertical depths for all cently producing from Ba it's economical limit. ' at 9950'. Cap with 50 ce Lower Morrow (9850'-9 '85') well as necessary and	<pre>I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in Cement. 0860'; 9864'-9878'; 9752'-97 evaluate.</pre>	99999' - 10,024' and to lower Morrow Sands. 62'; 9764'-9774';					
<ol> <li>Describe Proposed or Compl give subsurface location</li> <li>Well is curr has reached</li> <li>1. Set CIBP</li> <li>2. Perforat 9778'-97</li> <li>3. Stimulate</li> <li>4. Restore w</li> </ol>	ns and measured and true vertical depths for all cently producing from Ba it's economical limit. At 9950'. Cap with 50 te Lower Morrow (9850'-9 '85') well as necessary and rell to production.	I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in O' cement. O860'; 9864'-9878'; 9752'-97 evaluate.	9999' - 10,024' and to lower Morrow Sands. 62'; 9764'-9774';					
<ol> <li>Describe Proposed or Compl give subsurface location</li> <li>Well is curr has reached</li> <li>Set CIBP</li> <li>Perforat 9778'-97</li> <li>Stimulate</li> <li>Restore w</li> </ol>	ns and measured and true vertical depths for all cently producing from Ba it's economical limit. At 9950'. Cap with 50 te Lower Morrow (9850'-9 '85') well as necessary and rell to production.	I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in O' cement. 0860'; 9864'-9878'; 9752'-97 evaluate.	9999' - 10,024' and to lower Morrow Sands. 62'; 9764'-9774';					
<ol> <li>Describe Proposed or Compl give subsurface location</li> <li>Well is curr has reached</li> <li>Set CIBP</li> <li>Perforat 9778'-97</li> <li>Stimulate</li> <li>Restore w</li> <li>Will commenc</li> </ol>	ns and measured and true vertical depths for all cently producing from Ba it's economical limit. At 9950'. Cap with 50 te Lower Morrow (9850'-9 785') well as necessary and rell to production.	I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in O' cement. O860'; 9864'-9878'; 9752'-97 evaluate.	9999' - 10,024' and to lower Morrow Sands. 62'; 9764'-9774'; AUG 1 2 1992					
<ol> <li>Describe Proposed or Compl give subsurface location</li> <li>Well is curr has reached</li> <li>1. Set CIBP</li> <li>2. Perforat 9778'-97</li> <li>3. Stimulate</li> <li>4. Restore w</li> <li>Will commenc</li> </ol>	ns and measured and true vertical depths for all cently producing from Ba it's economical limit. At 9950'. Cap with 50 te Lower Morrow (9850'-9 785') well as necessary and rell to production.	I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in O' cement. 0860'; 9864'-9878'; 9752'-97 evaluate.	9999' - 10,024' and to lower Morrow Sands. 62'; 9764'-9774'; AUG 1 2 1992 O. C. D.					
<ol> <li>Describe Proposed or Compl give subsurface location</li> <li>Well is curr has reached</li> <li>Set CIBP</li> <li>Perforat 9778'-97</li> <li>Stimulate</li> <li>Restore w</li> <li>Will commenc</li> <li>Will commenc</li> </ol>	ns and measured and true vertical depths for all cently producing from Ba it's economical limit. At 9950'. Cap with 50 te Lower Morrow (9850'-9 785') well as necessary and vell to production. e operations upon BLM a	<pre>I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in O' cement. 0860'; 9864'-9878'; 9752'-97 evaluate. </pre>	9999' - 10,024' and to lower Morrow Sands. 62'; 9764'-9774'; AUG 1 2 1992 O. C. D. MILLING AMOUNT 3 1992					
<ul> <li>3. Describe Proposed or Compl give subsurface location</li> <li>Well is curr has reached</li> <li>1. Set CIBP</li> <li>2. Perforat 9778'-97</li> <li>3. Stimulate</li> <li>4. Restore w</li> <li>Will commenc</li> <li>4. I hereby certify that the fore Signed</li></ul>	<pre>hs and measured and true vertical depths for all cently producing from Ba it's economical limit. At 9950'. Cap with 50 te Lower Morrow (9850'-9 785') well as necessary and vell to production. e operations upon BLM a se operations upon BLM a true and correct w. m. Titl itate office use)</pre>	I markers and zones pertinent to this work.)* Isal Morrow perforations at Plans are to recomplete in )' cement. 2860'; 9864'-9878'; 9752'-97 evaluate. evaluate.	9999' - 10,024' and to lower Morrow Sands. 62'; 9764'-9774'; AUG 1 2 1992 O. C. D. Date August 3, 1992					

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	. · · ·	RECEIVED	<i>U</i> <sup>1</sup>
		COT 1 6 1992	
Form 3160-5	UNITED STATES		FORM APPROVED Budget Bureau No. 1004-0135
(June 1990)	DEPARTMENT OF THE INI	ERIOR OF CENT	Expires: March 31, 1993
	BUREAU OF LAND MANAG	EMEN I Contract	NM-0557371
SL	JNDRY NOTICES AND REPORT	S ON WELLS	6. If Indian, Allottee or Tribe Name
Do not use this form Use '	for proposals to drill or to deepen "APPLICATION FOR PERMIT—" for	or reentry to a different reservoir. or such proposals	
	SUBMIT IN TRIPLICA	TE	7. If Unit or CA, Agreement Designation
I. Type of Well Oil Gas	]		8. Well Name and No.
2. Name of Operator			Chalk Bluff Fed Com #2
Mewbourne 0il Com	npany		9. API Well No.
3. Address and Telephone No. D O Box 7608	$F_{\rm W10r}$ $F_{\rm OV20}$ 75711 (903)	) 561-2900	30-015-26741
4 Location of Well (Foothure Se	T R M or Survey Description	) 501-2500	10. Field and Pool, or Exploratory Area
a execution of wen (rootage, be	a, i., k., w., or survey description)		NOTEN IIIINOIS Camp MOTIO
1350' FWL & 1650	' FNL of Sec. 1, T18S-R27E		Eddy, New Mexico
12. CHECK APP	PROPRIATE BOX(s) TO INDICA	TE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUE	BMISSION	TYPE OF ACTION	
Notice of Inte	ent [	Abandonment	Change of Plans
Subsequent R	eport	Recompletion Plugging Back	New Construction
<b></b>		Casing Repair	Water Shut-Off
L Final Abando	nment Notice	Altering Casing	Conversion to Injection
		Other	(Note: Report results of multiple completion on Well
13. Describe Proposed or Complet	ed Operations (Clearly state all pertinent details, and	give pertinent dates, including estimated date of startin	Completion or Recompletion Report and Log form ) R any proposed work. If well is directionally drilled
give subsurface locations	and measured and true vertical depths for all marke	ers and zones pertinent to this work.)*	
top. PBTD @ 9935'	well. Pulled tbg & pkr. Ra •	n in hole w/CIBP set at 99	70'. Dumped 35'cement on
9/11/92 - RIH w/th	bg & pkr set at 9731'. Tes	ted to 8000 <b>#.</b> Set pkr w/15	pts compression. Tested
annulus to 2000 <b>#</b> .	Held OK. Tested tbg to 25	00#. Held OK. Swabbed well	down.
9/12/92 - Perf Low	wer Morrow 9850-9876' w/2	SPF, 22' net, 46 holes.	
9/13/92 - Acidized	d perfs w/2800 gals $7\frac{1}{2}$ % HC	L acid + additives contain	ing 1000 SCF/Bbl nitrogen
+ 60 ball sealers. to $1500$ and pump	. Flushed w/2% KCL contain	ing 1000 SCF/bbl nitrogen.	Pressure tested annulus
9/17/92 - Frac per	rfs w/40.000 gals Binary f	oam + 30 000# 20/40 Intern	ron TSDP 5400# 5 mine
4600 <b>#</b> , 10 mins 43	50#, 15 mins 4150#. AR 12	BPM. AP 8100#. MR 12 BPM.	MP 8400 $\#$ . Opened well and
left flowing to pa	it.		-
9/19/92 - Well flo	owing thru test unit. Put	well down sales line @ 5:0	0 PM 9/19/92.
		AR	
			5 1992
	- for the second	· •	
Signed CUMMA	oing is True the correct	nor Opros Secretaria	0/20/02
(This space for Vederal or Sta	the office uses	ngr.oprns.secretary	Date9/30/92
Approved by	Tide		<b>D</b>
Conditions of approval, if any	/: ····································		Date
Title 18 U.S.C. Section 1001, mal or representations as to any matter	kes it a crime for any person knowingly and willfully r within its jurisdiction.	to make to any department or agency of the United	States any false, fictitious or fraudulent statements

\*See Instruction on Reverse Side

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Form 3160-5 (June 1990)	UNI DEPARTMEN BUREAU OF	TED STATES T OF THE INTERIOR LAND MANAGEMENT	NOV 1 8 1992	FORM APPROVED Budget Bureau No. 1004-0135 Expires: March 31, 1993 5. Lease Designation and Serial No.
Do not use	SUNDRY NOTICES this form for proposals to dr Use "APPLICATION FO	AND REPORTS ON WELL ill or to deepen or reentry to R PERMIT—" for such propo	S a different reservoir. sals	NM-0557371 6. If Indian, Allottee or Tribe Name
	SUBMIT	IN TRIPLICATE		7. If Unit or CA, Agreement Designation
1. Type of Well Oil Well 2. Name of Operat	Gas Well Other			8. Well Name and No.
Mewbourr 3. Address and Te	ne Oil Company			9. API Well No.
P.O. BOX 4. Location of Wel	x 5270 Hobbs, New Me) II (Footage, Sec., T., R., M., or Survey D 1350'FWL E	(ico 88241 (505) 393 escription) 1050'FNL	- 5905	10. Field and Pool, or Exploratory Area         N. Illinois Camp Morrow         11. County or Parish, State
	288-278			Eddy Co., N.M.
12. CH		s) TO INDICATE NATURE	TYPE OF ACTION	
	Notice of Intent Subsequent Report	Abandonment Recompletion Plugging Back Casing Repair		Change of Plans New Construction Non-Routine Fracturing Water Shut-Off
	Final Abandonment Notice	Altering Casing Other		Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
13. Describe Propos give subsur	sed or Completed Operations (Clearly state a rface locations and measured and true vertion Control CLER & 00701	l pertinent details, and give pertinent dates, i al depths for all markers and zones pertine unpod 251 compont on CI	icluding estimated date of starting it to this work.)*	any proposed work. If well is directionally drilled,
9-09-92	Perforated Morrow for of 46 holes.	rmation (9850'-9860' 8	v 9864'-9876') wi	th 2 SPF for a total
9-12-92	Acidized Morrow perf	prations with 2800 gal	. 7 1/2% HCL and	1000 SCF/bb1. N2.
9-16-92	Fraced Morrow perfor 20/40 sand.	ations with 40,000 gal	. binary foam ca	rrying 30,000#
		Ac	2 1992	9 23 IN 92
14. I hereby certify	that the stepping of true and correct		ACO NEW RATVINO	
Signed	Endred Ar State Alterna una)	Title District Su	ıpt.	
Approved by _ Conditions of a	pproval, if any:	Title		Date
Title 18 U.S.C. Sec or representations a	ction 1001, makes it a crime for any person is to any matter within its jurisdiction.	knowingly and willfully to make to any dep	artment or agency of the United S	States any false, fictitious or fraudulent statements





Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline SAMPLE IDENTIFICATION: Chaulk Bluff Fed. #2 Attention: Mr. Ray Gallagher P. O. Box 791 COMPANY: Mewbourne Oil Co. Hobbs, New Mexico 88240 LEASE: PLANT: SAMPLE DATA: DATE SAMPLED: 11/5/92 3:15PM GAS (XX) LIQUID ( ) ANALYSIS DATE: 11-05-92 SAMPLED BY: Gallagher-Pro Well PRESSURE - PSIG 540.00 ANALYSIS BY: Rolland Perry

78.00

48,00

**REMARKS:** 

SAMPLE TEMP. "F

ATMOS, TEMP, °F

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	COM	PONENT ANALY	/SIS	
		MOL		
COMPONENT		PERCENT	GPM	
Oxygen	(02)			
Hydrogen Sulfide	(H2S)			
Nitrogen	(N2)	0.40		
Carbon Dioxide	(CO2)	0,59		
Methane	(C1)	88,27		
Ethane	(C2)	7.05	1.881	•
Propane	(C3)	2.37	0 652	
I-Butane	(IC4)	0.29	0,005	
N-Butane	(NC4)	0.52	0,095	
I-Pentane	(IC5)	0.15	0.104	
N-Pentane	(NC5)	0,10	0.035	
Hexane	(C6+)	0,26	0.038	
Heptanes Plus	(07)	0,20	0.107	
		100.00	0.000	
		100,00	2.990	
BTU/CU.FT DRY	•	1125	MOLECULAR WT	18.5705
AT 14,650 DRY		1121		
AT 14.650 WET		1102	26# GASOLINE -	0.253
AT 15.025 DRY		1150		V1200
AT 15.025 WET		1130		
SPECIFIC GRAVITY	· _			
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MEAQUER		0.041		
MEASURED	1	0.000		

ype Test	QQ ·	BI FIAL		ANNUAL				11-5	)ate 5-92	Leose N	a or Serial No.	
ompany	MEWBOU	RNE OIL	COMPANY		Connectio	n				Allottes		
ield		Res	MORROW			Location	1		•	Unit		
Comple Lic	on Date	Total C	Jepin		Plug Back 9935	TO	Ē	levation		form o Cha	k Bluff	
Size	$5\frac{1}{2}$	W1.	d	8	935	Perforati	an 110 (	9850	9876	Well no.	2	
bg.Size	2 7/8		2.44	5e 1	9731	Perforat	iam Fra	im Ti	<b>)</b>	Sec.	1wp-dik. 18	Rge. 27
Type Com	pierion (	Describe)						Packer 07	Set At	County Edd	or Parish	
Producin	single	Raser	YOF IEMP.	F	Mean An	nual Temp	FE	aro. Pres	3 Pa ;	State	. Maari a a	
<u> </u>	tbg	н	G		/ <u>,</u> CO,	<u> </u>		<u></u>	<u>5.2</u> Pro	<u>I Nev</u> wer	<u>Mexico</u> Meter Run	
_	9731	973	1.6	41	.5	9	.40				3.068 Flg	<b></b>
DATE	ELAP.	Wellhead	Working P	Pluces	MET	EH OH PR	UVER			nciude lla	vid Production data	
Time of <u>Reading</u>	Hrs.	Tbg. Psig.	Csg. Psig	Tempf	Pressure	DIII.	TempF	Orifica	( <sub>Ty</sub>	pe-A.P.I.	Gravity-Amount	<u> </u>
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MEWBOURNE OIL COMPANY Chalk Bluff Well #2 1-18-27 Eddy County, New Mexico 11-5-92



mit in duplicate to		Ene	rgy, Minera	als and Natural	Resources	Department	NEUK	Foir VED Rev	m C-122 vised 4-1-91
Rule 401 & Rule 1122			OIL CO	NSERVATI	ION DIV	ISION	n <b>rr</b>	3 1002	c S
611	CANSERVE	UN DIV	ISION Santa I	P.O. Box 2	2088 20. 87504 (	000	DEG	0 1992	UT.
U, L M	RECE	VED L'AND		INT BACK	DRECCI	1DE TEST EC	O. C	L.D.	
Perator 'O' Mewhourne	<u>NO i In</u>	HUL B	VIP 10	INT DACK		ase or Unit Name	alk Bluff		
ype Test		 г			Te	st Date	Well	No.	
v Initial	Total Depth		] Special	Back TD	Fi	<u>11-5-92</u>	Unit	$\frac{2}{11r + Src + 7}$	WP - Pas
	rour Depin			9935				1 18	27
sg. Size Wt.	d	Sct At	Perto	orations:			Cour	nty	
5 <sup>1</sup> / <sub>2</sub>		9935	From	<u>1:</u> 9850	To	.: <u>9876</u>		Eddy	
		0701					1 7		1
2 7/8 6. Single - Brade	<u>2.441</u> nhead - G.G. or G	<u>9731</u> .0. Multip	le From	1: Packer Set /	<u>Tc</u> ^( 9731	):	Form	Intion	in Mior
roducing Thru Reserv tbg. 171	pir Temp, °F Me	an Annua 60	Temp. 91	Baro, Press	• P 1.	3.2	Con	nection Phill:	ips
9731 <sup>H</sup> 9731	Gg .641	% CO2	.59	% N <sub>2</sub> .40	% H <sub>2</sub> S	Prover	Mete	r Run .068	Taps flo
	FLOW DATA	_1			TUB	ING DATA	CASIN	IG DATA	O•
VO. Prover Or Line x	fice Pr	ess.	Dilf.	Temp.	Press.	Temp.	Press.	Temp.	- Duration of
Size S	<u>ze p.s</u>	.i.g.	h w	٥Ŀ.	p.s.i.g.	- 19F	p.s.i.g.	°F	Flow
3 X 1.500	) 5:	30	3.00	78	2145				$\frac{1}{1} hr$
. 3 X 1.500	) 5:	30	6.00	84	2120			· · · · · · · · · · · · · · · · · · ·	30  min
<u>. 3 X 1.50</u>	) 54	40	15.00	78	2055				45 min
$\frac{3 \times 1.500}{3 \times 1.500}$	$\frac{1}{5}$	40	78.00	<u> </u>	1900				$\frac{1 \text{ hr.}}{20}$
<u> </u>	,,,	1 (1	RA1	E OF FLOW C	ALCULAT	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	<u></u>	L	<u> 30 min</u>
COEFFICIENT			Pressure	Flow	Temp.	Gravity Factor	Super Compr	ress. Ra	te of Flow
$\frac{10.}{11.13}$	40.37		543.2	J'acto	831	rg.	Factor, F p	v. (	Q, Mcfd
2. 11.13	57.09		543.2	.9	777	1.249	1.049	- ter	332
3. 11.13	91.09		553.2	.9	831	1.249	1.056	13	315
11.13	208.66		558.2		9905	1.249	1.056	20	)52 1/10
P. Te			Z	Gat Liquid Hydr	prestron Patio	Dry	1.000		N-64.11
NO. 81	38 1 4/		808	A.P. I. Gravity of	Liquid Hydr	ocarbons	.641		MCI/bbi. Deg.
281		5	.909	Specific Gravity S	Separator Gas			XXX	XXXXXX
382	38 1.44	+	.897	Specific Gravity I	Flowing Fluid	670	XXXXX	<u></u>	
482	$\frac{30}{26}$ 1.42	2	<u>.897</u>	Critical Temperat	ure	372	P.	R	P.S.I.A. R
2216.2 P	<sup>2</sup> 4911.5	<u>.                                    </u>	.095						
$P^2$	PP	2	P <sup>2</sup> · P <sup>2</sup>	1) $P_c^2$	<u> </u>	242	(2) P <sup>2</sup> <sub>c</sub>	<b>1</b> * =_	2.951
1. 2	59.0 466	51.1	250.4	$P_c^2 - P_w$	2		$P_{r}^{2}$ - 1	p_2	
2. 2.	34.8 45	57.3	354.3				r .	" <b>"</b>	
3. 20	73.3 + 429	$\frac{94.3}{12}$	617.3	AOF = Q	P 2	] " =	8,998		
+. 1 5. 1	343.0 330	96.6	1514.9		$P_c^2$ -	P <sup>2</sup>			
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Absolute Open Flow temarks:NO] Approved By Division	Fluid Produ	nducted B	y: LL TESTI	ERS	Calculated By BM	/:	Chec	ked By: BM	



#### Continued:

The proposed operation is described in detail on the attached diagrams.

A map is enclosed showing the lease numbers and location of all leases and wells that will contribute production to the proposed commingling/common storage facility. All unitized/communitized areas, producing zones/pools are also clearly illustrated.

A schematic diagram is also attached which clearly identifies all equipment that will be utilized.

The storage and measuring facility is located at  $\underline{NM}$  -1/4, Sec.], T <u>18</u> S, R<u>27</u> E, on lease No.055737], <u>Eddy</u> County, New Mexico. BLM will be notified if there is any future change in the facility location.

Details of the proposed method for allocating production to contributing sources is as follows:

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				noncentage (	of contribution
		+ha individua	i leases and a		
Gas will	be measured at	<u>_tne_individua</u>	i i i i i i i i i i i i i i i i i i i	loc volume	There is
<u>dus nrit</u>		annlind to the	integrated sa		
will be c	alculated and				
	Curlle produ	cina into the	system.		
rurrently	6 Wells produ				
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The working interest owners have been notified of the proposal.

The proposed commingling of production is in the interest of conservation and will not result in reduced royalty or improper measurement of production.

The proposed commingling is necessary for continued operation of the above referenced Federal leases.

We understand that the requested approval will not constitute the granting of any right-of-way or construction rights not granted by the lease instrument. And, we will submit within 30 days an application for right-of-way approval to the BLM's Realty Section in your office if we have not already done so.

Additional wells require additional commingling approvals.

9	
signature:	an <u>-</u>
Name: <u>Gregory Milner</u>	
Title: Engineer	

Date: \_\_\_\_\_6/06/95\_\_\_\_\_\_

#### CRA BLM FORMAT

# OFF LEASE STORAGE AND MEASUREMENT APPROVAL

#### This Format Should Be Attached To A Sundry Notice

To: Bureau of Land Management P. O. Box 1778 Carlsbad, New Mexico 88221-1778

<u>Mewbourne Oil Company</u> (Operator's Name) is requesting approval for surface commingling and off-lease storage and measurement of hydrocarbon production from the following formation(s) and well(s) on Federal Lease No. <u>NM-0557371</u>; Lease Name: <u>Chalk Bluff Federal</u>

<u>Well</u> No	Loc.	Sec.	Twp.	<u>Rng.</u>	Formation
<u>#2</u> <u>#3</u>	<u>F</u>		<u>185</u> 185	<u>27E</u> 27E	Morrow Morrow
	<u> </u>				<u></u>

with hydrocarbon production from the following formation(s) and well(s) on State lease No. <u>E-7179</u>; Lease Name: <u>Chalk Bluff</u>"6" <u>E-647</u> Illinois Camp 1

E-1313

 ;	Lease	Name:	<u>Chalk Bli</u>	<u>.111 "</u> 6	)''
			Illinois	Camp	17
			Illinois	Camp	20

Well No.	Loc.	Sec.	Twp.	Rng.	Formation
Chalk Bluff 6 St. #1	<u></u>	6	<u>185</u>	28E	Morrow
Illinois Camp 17 St. #2 Illinois Camp 20 St. #1		$\frac{17}{17}$	185 185	28E 28E	Morrow

Production from the wells involved is as follows:

			-	
Well Name and No.	BOPD	Oil Gravity	MCFPD	
Chalk Bluff Fed. #2	N/A	N/A	80	
Chalk Bluff Fed. #3	N/A	N/A	54	
Chalk Bluff 6 St. #1	N/A	N/A	166	
Illinois Camp 17 St. #1	N/A	N/A	1200	
Illinois Camp 17 St. #2	N/A	N/A	744	
Illinois Camp 20 St. #1	N/A	N/A	118	

\* Only gas will be comingled off lease

Continued ...

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Form 3160-5 (June 1990)	UNIT DEPARTMEN BUREAU OF I	TED STATES T OF THE INTERIOR LAND MANAGEMENT	NM OIL CONS COMMISSION Drawer DD Budget Burgau No. 1004-0135 Artesia, NHKpices Miltch 31, 1993 5. Lease Designation and Serial No. NM-0557371
Do not i	SUNDRY NOTICES use this form for proposals to dri Use "APPLICATION FOR	AND REPORTS ON WELLS III or to deepen or reentry to a different res R PERMIT—" for such proposals	6. If Indian, Allottee or Tribe Name ervoir.
	SUBMIT	IN TRIPLICATE	7. If Unit or CA, Agreement Designation
1. Type of V Oil Well 2. Name of O 3. Address a P.O. 4. Location o 1350 Sec.	Well Gas Operator Ourne Oil Company and Telephone No. Box 5270 Hobbs, New Mex of Well (Footage, Sec., T., R., M., or Survey De V FWL & 1650' FNL 1-T18S-R27E	√ <ico (505)="" 393-5905<br="" 88241="">escription)</ico>	8. Well Name and No. Chalk Bluff Fed. Com. #2 9. API Well No. <u>30-015-26741</u> 10. Field and Pool, or Exploratory Area <u>N. Illinois Camp Morrow</u> 11. County or Parish, State Eddy. Co. N.M.
12.	CHECK APPROPRIATE BOX(	s) TO INDICATE NATURE OF NOTICE,	REPORT, OR OTHER DATA
	TYPE OF SUBMISSION	TYPE OF #	ACTION
	<ul> <li>Notice of Intent</li> <li>Subsequent Report</li> <li>Final Abandonment Notice</li> </ul>	Abandonment Recompletion Plugging Back Casing Repair Altering Casing Other <u>Application for</u> Measurement Ap	Change of Plans  Change of Plans  New Construction  Non-Routine Fracturing  Water Shut-Off  Conversion to Injection  Conversion to Injection  Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
13. Describe give See	Proposed or Completed Operations (Clearly state al subsurface locations and measured and true vertic Attached Forms & Diagram	Il pertinent details, and give pertinent dates, including estimated dat cal depths for all markers and zones pertinent to this work.)* S.	te of starting any proposed work. If well is directionally drilled,

I hereby certify that the foregoing is true and correct Signed		Engineer	Date 6/06/95
(This space for Federal or State office use)			
Anoroved by Orig. Signed by Adam Selamen	Title	Petroleum Engineer	Date (0.5/95
Conditions of approval, if any:			

518T. 2

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

m 2160.5		
		FORM APPROVED Budget Bureau No. 1004-0135
BUREAU OF LAND	MANAGEMENT	Expires: March 31, 1993 5. Lease Designation and Serial No. NM_0557371
SUNDRY NOTICES AND The not use this form for proposals to drill or to Use "APPLICATION FOR PE	<b>REPORTS ON WELLS</b> o deepen or reentry to a different reservoi ERMIT-" for such proposals	6. If Indian, Allottee or Tribe Name 7.
SUBMIT IN TF	RIPLICATE 345678970,	7. If Unit or CA, Agreement Designation
Type of Well Oil Gas		8 Well Name and No.
Well Well Other		Chalk Bluff Fed #2
Name of Operator Mewbourne Oil Company	S RECEIVED 5	9. API Well No.
Address and Telephone No.	OCD ARTED 5	30-015-26741
P. O. Box 5270, Hobbs, NM 88241 (505)393-590	05 MILSIA V	10. Field and Pool, or Exploratory Area
. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1650' FNL & 1350' FWL of Section 1, T18S, R27E,	) Eddy County, NM	11. County or Parish, State
		Eddy, NM
2. CHECK APPROPRIATE BOX(s) TO	NDICATE NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION	
Notice of Intent	Abandonment	Change of Plans
Cubernund Bened		New Construction
Subsequent Report	L Plugging Back	Water Shut-Off
Final Abandonment Notice	Altering Casing	Conversion to Injection
<ol> <li>Describe Proposed or Completed Operations (Clearly state all p directionally drilled, give subsurface locations and measured and Set cast iron bridge plug to abandon Morrow Sand p</li> </ol>	Other pertinet details, and give pertinent dates, including estimated da id true vertical depths for all markders and zones pertinent to th perforations 9850-9860' and 9864-9876'. Perforat	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) te of starting any proposed work. If well is is work.)* e Morrow Sands 9764-74' and
13. Describe Proposed or Completed Operations (Clearly state all p directionally drilled, give subsurface locations and measured an Set cast iron bridge plug to abandon Morrow Sand p 9778-85' and test.	Other	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) te of starting any proposed work. If well is is work.)* e Morrow Sands 9764-74' and
<ul> <li>13. Describe Proposed or Completed Operations (Clearly state all p directionally drilled, give subsurface locations and measured an Set cast iron bridge plug to abandon Morrow Sand p 9778-85' and test.</li> <li>14. I hereby certify that the foregoing is true and correct</li> </ul>	Dertinet details, and give pertinent dates, including estimated da d true vertical depths for all markders and zones pertinent to th perforations 9850-9860' and 9864-9876'. Perforat	Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) te of starting any proposed work. If well is is work.)* e Morrow Sands 9764-74' and
<ul> <li>13. Describe Proposed or Completed Operations (Clearly state all p directionally drilled, give subsurface locations and measured an Set cast iron bridge plug to abandon Morrow Sand p 9778-85' and test.</li> <li>14. I hereby certify that the foregoing is true and correct Signed</li></ul>		Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.) te of starting any proposed work. If well is is work.)* e Morrow Sands 9764-74' and

30-015-20741

Ozeid- 14744 Peoperty- 7876 Pool- 788890

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9.5-91 Dual I seed nution Surf- 10122

NSL-3004 Appv. 4-25-91





# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON Governor Joanna Prukop Cabinet Secretary Mark E. Fesmire, P.E. Director Oil Conservation Division

) I I del Mars e cluret Program Marconomy Declaterative del der Concomposio

29-Jul-05

#### **MEWBOURNE OIL CO**

PO Box 5270 Hobbs NM 88241

**NOTICE OF VIOLATION - Inspection** 

Dear Operator:

The following inspection(s) indicate that the well, equipment, location or operational status of the well(s) failed to meet standards of the New Mexico Oil Conservation Division as described in the detail section below. To comply with standards imposed by Rules and Regulations of the Division, corrective action must be taken immediately and the situation brought into compliance. The detail section indicates preliminary findings and/or probable nature of the violation. This determination is based on an inspection of your well or facility by an inspector employed by the Oil Conservation Division on the date(s) indicated.

Please notify the proper district office of the Division, in writing, of the date corrective actions are scheduled to be made so that arrangements can be made to reinspect the well and/or facility.

			INSPECTIC	ON DETAIL	SECTION		
CHALK BL	UFF FEDER	AL COM No.0	02		F-1-18S-27E	30-015-26741-00-	00
Date	Type Inspectio	n	Inspector	Violation?	Non-Compliance?	Action Due By:	Inspection No.
07/29/2005	07/29/2005 Routine/Periodic		Chris Beadle	Yes	No	8/29/2005	iCLB0521034161
	Violations						
	Absent Well Ide	ntification Signs (R	ule 103)				
Comments	on Inspection:	Well sign not v around the sign	isible for distance re	equired by Rul	e 103. Well sign is h	idden inside bush gro	wn up

In the event that a satisfactory response is not received to this letter of direction by the "Corrective Action Due By:" date shown above, further enforcement will occur. Such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Divison Examiner in Santa Fe to show cause why you should not be ordered to permanently plug and abandon this well. Such a hearing may result in imposition of CIVIL PENALTIES for your violation of OCD rules.

Sincerely,

۴.

Artesia OCD District Office

Note: Information in Detail Section comes directly from field inspector data entries - not all blanks will contain data. \*Significant Non-Compliance events are reported directly to the EPA, Region VI, Dallas, Texas.

11

Oil Conservation Division \* 1301 W. Grand \* Artesia, New Mexico 88210 Phone: 505-748-1283 \* Fax: 505-748-9720 \* http://www.emnrd.state.nm.us



Mewbourne Oil Company 990' FSL & 730' FWL Sec. 6-T18S-R28E Chalk Bluff "6" State #1

BOP Diagram

98

Submit to Appropriate District Office State Lease - 4 copies Fee Lease - 3 copies

DISTRICT 1 P.O. Box 1980, Hobbs, NM 88240

DISTRICT II P.O. Drawer DD, Artesia, NM \$8210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

#### State of New Mexico Energy, Minerals and Natural Resources Der uent

+

## **OIL CONSERVATION DIVISION**

P.O. Box 2088 Santa Fe, New Mexico 87504-2088

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

					Lease			<u> </u>		Well No.	
					СЦАТ		11611 0+-	. + .		1	
MEWBO	UKN	L OIL	COMPANY Township		Rance	IC DLUFT	0 558	100		<u>i                                     </u>	
Unit Letter	300000		.10		200	TACT			FDDV		
M	6 100 01 14	/ell·	1 18 3	SUUTH	20	ENDI	NM	ĽМ		· · · · · · · · · · · · · · · · · · ·	
Actual Poolige Local			OTIMIT	•!	. 720		fact f		the LIFS	T line	
Ground level Flav	feet from	n the S Producin	g Formation	une a	Pool		100 1	1010		Dedicated Acre	age:
			B		Nowth	Tllingio	Comp. Mc	- ** *	- OLI	33/ 98	Across
3635		MC Modicated	OTTOW	ell by colored	pencil or bachure	marks on the p	at below.	<u>, , , , , , , , , , , , , , , , , , , </u>	.0w		746
1. Course					· · · · · · · · · · · · · · · · · · ·	<b>-</b>					
2. If more	than one	: lease is ded	licated to the wel	l, outline each	and identify the o	wnership thereo	f (both as to w	onki	ng interest and	royalty).	
2 16		lana of dif	ferent comembia	is dedicated t	o the well have th	e interest of all (	where been or		lidated by com	munitization.	
3. If more unitizati	ion force	-nooling. et	a?								
	Yes		No If	nnswer is "yes	" type of consolidation	tion					
If answer i	is "no" li	st the owner	and tract descri	ptions which l	have actually been	consolidated. (	Use reverse sid	ie of	Γ		
this form i	if necces	he assigned t	to the well until	li interests ha	ve been consolidat	ed (by communi	tization. unitiz	atio	n. forced-noolin	g. or otherwise)	
or until a r	DOD-Stade	iard unit, eli	minating such in	erest, has been	approved by the	Division.	,				
			······································								
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		i				Ì		1	best of my know	ledge and belief.	
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								1	Printed Name	/	
				╺┿╺━━╸		· +			W.H.	Cravey	
		1						1	Position		
		1							Distr	ict Supt.	·
		1							Company		
		Į.				-			Mewbo	ourne Oil	Co.
		ļ				1			Date		
		1				1			July	9. 1991	
						ļ			SURVEY	OR CERTIF	ICATION
						1					
		1				1			I hereby certif	fy that the well	location shown
						1			on this plat w actual memory	vas piolied from made hy me	n field moles of or under mo
		1				l			supervison, an	d that the san	ne is true and
		i				1			correct to the	e best of my	knowledge and
		Í		1		1			belief.		
		i				1			Date Surveyed		
						-			61284	CC OF	
		i				Ì			Signature S	A W NE	<u> </u>
730'		i				1			Professional St	urveyor	
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0 330 660	<b>990</b>	1520 1650	1980 2310	4040	2000 1500	1000	<u> </u>				

Submit to A propriate District Office State Lease - 6 copies Fee Vease - 5 copies	Enersy,	State of New Me Minerals and Natural Re	exico esources Department	-	۲۰ Form C-101 Revised 1-1-89
DISTRICT I P.O. Box 1980, Hobbs, NM DISTRICT II P.O. Drawer DD, Artesia, N	OIL ( 88240 SI	P.O. Box 208 P.O. Box 208 anta Fe, New Mexico	N DIVISION	API NO. (assigned by OC API NO. (assigned by OC S. Indicate Type of Leas S	$\begin{array}{c} \text{CD on New Wells)} \\ \begin{array}{c} 26943 \\ \text{e} \\ \text{TATE } \\ \end{array}  \text{FEE } \end{array}$
DISTRICT III 1000 Rio Brazos Rd., Aztec	NM 87410		JUL 1 5 1991	6. State Oil & Gas Lease E-7179	e No.
APPLICAT	ION FOR PERMIT T	O DRILL, DEEPEN, C	DR PLUBBACK		
Ia. Type of Work: DRILL b. Type of Well: OIL GAS WELL WELL	X RE-ENTER	DEEPEN SINGLE	PLUG BACK	Chalk Bluff	"6" State
2. Name of Operator				8. Well No.	
Address of Operator	<u>wbourne Oil Com</u>	pany ·		9. Pool name or Wildcat	11
P.(	<u>О. Вох 5270 Но</u>	bbs, New Mexico	88241	North Illino	is Camp //////
4. Well Location Unit Letter	M_: <u>730</u> Feet Fr	om The West	Line and	990 Feet From The	South Line
Section 6	Towns	hip <u>18</u> S Rau	nge 28E	NMPM ///////////////////////////////////	Eddy County
		10. Proposed Depth	11.1	Formation	12. Rotary or C.T.
		10,2	00'	Morrow	Rotary
13. Elevations (Show whethe	er DF, RT, GR, etc.)	4. Kind & Status Plug. Bond	15. Drilling Contractor	па Со Ана	Date Work will start
3635' (	<u>G.L.</u>	Blanket on file	WEK DITTT	nig co. j Aug	<u>ust 10, 1991</u>
17.	PR	OPOSED CASING AN			EST TOP
SIZE OF HOLE	SIZE OF CASING	68#	<u>2 400'</u>	500	Surface
12-1/4!	9-5/8''	36#	- 2,600'	1000	Surface
7-7/8"	5-1/2"	17#	10,200'	600	Back 6,000'
Blow Out Preven Mud Program: 2 8 Gas is not ded	ntor: Schaffer Hydril totco f 0' - 400' 400' - 2,600' ,600' - 8,400' ,400' - 10,200' icated.	LWS or equivale 900 series annul low monitors on Fresh water wit Fresh water wit Cut brine with Cut brine with Wt. 9.2-9.6 ppg	nt (Double Ram ar preventor. pits. h spud mud. Pa h LCM as needed lime. Drispac, salt g WL 10 cc's or APPR( PERM UNLC	Hydraulic) 900 s Grant rotating D per for LCM mate el, lime, soda a less DVAL VALID FOR T EXPIRES SS DRILLING UNDE	series. head, Port ID-1 3-V4-94 Wher hat API erial ash VP DAYS 1/52 RWAY
IN ABOVE SPACE DESC ZONE. GIVE BLOWOUT PREVI	CRIBE PROPOSED PROG ENTER PROGRAM, IF ANY.	RAM: IF PROPOSAL IS TO DEEPE	IN OR PLUG BACK, GIVE DATA C	N PRESENT PRODUCTIVE ZONE	ND PROPOSED NEW PRODUCTIVE
I hereby certify that the inform	nation above is true and complet	e to the best of my knowledge and	belief.		
SKONATURE	Jave		District S	uptp	ATE July 11, 1991
TYPE OR PRINT NAME	/			<b></b>	ELEPHONE NO.
(This space for State Use)	ORIGINAL SIGNED MIKE WILLIAMS SUPERVISOR, DIST	BY	TE	D	FEB 1 1 1992
CONDITIONS OF APPROVAL,	F.ANY:	- <b>-</b>			
NSL-R-	9631				

		RE	CEIVED
Submit 3 Copies to Appropriate District Office	State of New Me Energy, Minerals and Natural Re	xico APR sources Department	3 1992 Form C-103 Revised 1-1-89 ↓ P
DISTRICT 1 P.O. Box 1980, Hobbs, NM 88240	OIL CONSERVATIO P.O. Box 208	N DIVISION**	WELL API NO. 30-015-26943
DISTRICT II P.O. Drawer DD, Artesia, NM 88210	Santa Fe, New Mexico	IAR 2 3 1992	5. Indicate Type of Lease STATE FEE
DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410	•	O. C. D. VIESIA OFFICE	6. State Oil & Gas Lease No. E-7179
SUNDRY NOT	CES AND REPORTS ON WEL		
( DO NOT USE THIS FORM FOR PRO DIFFERENT RESER (FORM C-	POSALS TO DHILL OF TO DEEPEN VOIR. USE "APPLICATION FOR PEF 101) FOR SUCH PROPOSALS.)	OH PLUG BACK TO A	7. Lease Name or Unit Agreement Name
1. Type of Well: OIL GAS WELL WELL	OTHER		CHALK BLUFF "6" STATE
2. Name of Operator			8. Well No.
Mewbourne 011 Comp	any/		1 0. Pool name of Wildcat
P O Box 7698 Tv1	er. Texas 75711		NORTH ILLINOIS CAMP MORROW
4. Well Location		<u> </u>	
Unit Letter <u>M</u> : <u>73</u>	0 Feet From The West	Line and990	) Feet From The South Line
Section 6	Township 185 Ra	nge 28E M	IMPM Eddy County
	10. Elevation (Show whether	DF, RKB, RT, GR, etc.)	
	36	<u>35' GR</u>	
11. Check	Appropriate Box to Indicate I	Nature of Notice, Re	port, or Other Data
NOTICE OF INT	ENTION TO:	SUB	SEQUENT REPORT OF:
	PLUG AND ABANDON	REMEDIAL WORK	
	CHANGE PLANS	COMMENCE DRILLING	
PULL OR ALTER CASING		CASING TEST AND CE	
OTHER:		OTHER:	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

- 2/18/92 Spud 7:45 AM 2/17/92. Cemented 13-3/8" casing at 400' with 100 sxs Class "C" +
  10 pps Calseal + 5 pps Gilsonite + 1/2 pps Flocele + 2% CaCl<sup>2</sup> and 200 sxs Class "C"
  + 6% gel + ½ pps Flocele + 5# gilsonite + 2% CaCl<sup>2</sup>. Tailed in with 200 sxs Class "C"
  + 2% CaCl<sup>2</sup>. Plug down 4:15 PM 2/17/92. Pressure tested casing to 1000#. Float held
  okay. Did not circulate cement. WOC 3 hrs. Ran 1" and tagged at 190'. Cemented
  with 150 sxs Class "C" Neat. Circulated 20 sacks to pit. Total 12-1/4 hrs. WOC.
- 2/22/92 Ran 9-5/8" 24# J-55 casing set at 2600' and cemented with 100 sxs Class "C" + 10# calseal + ½ pps Flocele + 5 pps Gilsonite + 2% CaCl<sup>2</sup> and 700 sxs Class "C" Lite + ½ pps Flocele + 5 pps Gilsonite. Tailed in with 300 sxs Class "C" + 2% CaCl<sup>2</sup>. Had full returns while cementing. Plug down at 10:30 PM 2/22/92. Pressure tested casing to 1000# for 30 mins, float held okay. Circ 65 sxs to pit. WOC 8½ hours.

<u></u>		/	
I hereby certify that the informatio	in powe is true and complete to the best of my knowled	ge and belief.	
SKINATURE	on mon pour		
TYPE OK PRINT NAME		· · · · · · · · · · · · · · · · · · ·	TELEPHONE NO.
(This space for State Use)	ORIGINAL SIGNED BY MIKE WILLIAMS		APR 2 3 1992
APPROVED BY	SUPERVISOR, DISTRICT II	mue	DATE

CONDITIONS OF APPROVAL, IF ANY:

Submit 3 Copies to Appropriate District Office	State of New Me Energy, Minerals and Natural Re	exico esources Department	Form C-103 Revised 1-1-89
DISTRICT I P.O. Box 1980, Hobbs, NM 88240 DISTRICT II	OIL CONSERVATIO P.O. Box 208 Santa Fe, New Mexico	N DIVISION 88 87504-2088	WELL API NO. 30-015-26943
P.O. Drawer DD, Artesia, NM 88210 <u>DISTRICT III</u> 1000 Rio Brazos Rd., Aztec, NM 87410		MAR 2 3 199	5. Indicate Type of Lease STATE FEE
SUNDRY NOT ( DO NOT USE THIS FORM FOR PRO DIFFERENT RESEL (FORM C	ICES AND REPORTS ON WEL OPOSALS TO DRILL OR TO DEEPEN RVOIR. USE "APPLICATION FOR PEI -101) FOR SUCH PROPOSALS.)	LS ARTESIA OFFIC OR PLUG BACK TO A RMIT	7. Lease Name or Unit Agreement Name
1. Type of Well: OIL GAS WELL WELL	OTHER		CHALK BLUFF "6" STATE
2. Name of Operator Mewbourne Oil Comp	pany /		8. Well No. 1
3. Address of Operator P. O. Box 7698, Ty]	ler, Texas 75711		9. Pool name or Wildcat NORTH ILLINOIS CAMP MORROW
4. Well Location Unit Letter <u>M</u> : <u>73</u>	30 Feet From The West	Line and990	) Feet From The <u>South</u> Line
Section 6	Township 18S Ra 10. Elevation (Show whether 30	nge <u>28E</u> M DF, RKB, RT, GR, etc.) 535 'GR	MPM Eddy County
II. Check A NOTICE OF INT	Appropriate Box to Indicate I FENTION TO:	Nature of Notice, Re SUBS	port, or Other Data SEQUENT REPORT OF:
		REMEDIAL WORK	ALTERING CASING
	CHANGE PLANS	COMMENCE DRILLING	OPNS. DPLUG AND ABANDONMENT
PULL OR ALTER CASING		CASING TEST AND CEI	
OTHER:		OTHER:	[]

VE

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

3/14/92 - Ran 7" 26# S-95 casing set at 9445'. Bottom of packer at 7096'. DVT at 7033'.
<u>CEMENTED 1ST STAGE</u> with 325 sacks Class "H" + 2 pps KCL + .3% CFR-3 + .4% Halad 22A
+ 5 pps Gilsonite + 5 pps Silicalite & 300 sacks Class "H" + 2 pps KCL + .3% CFR-3
+ .4% Halad 22A + 5 pps Silicalite. Plug down at 9:00 AM 3/15/92. Pressure tested casing to 2600# and set packer. Checked float collar. Held okay. Did not have returns while cementing. Dropped bomb and opened DVT at 9:30 AM. Pumped 1 bbl and had full returns. Circulated bottoms up from DVT. Did circulate cement.
<u>CEMENTED 2ND STAGE</u> with 1170 sacks H/L + ½ pps Flocele + 5 pps Silicalite + 5 pps salt. Tailed in with 100 sacks Class "H" + 5# Silicalite + 2 pps KCL. Had full returns while cementing. Started losing returns with 140 bbls displacement gone. Lost complete returns with 240 bbls of displacement gone. Plug down at 11:45 AM 3/15/92. Closed DVT. Held okay. Did not circulate on 2nd stage. WOC 19-1/4 hours.

I hereby certify that the inform	tion above is tree and complete to the best of my knowled	ige and belief.	
SIGNATURE	m pomprou	me Engr.Oprns.Secretary	DATE <u>3/19/92</u>
TYPE OR PRINT NAME			TELEPHONE NO.
(This space for State Use)	ORIGINAL SIGNED BY MIKE WILLIAMS 7		
	SUPERVISOR DISTRICT I		MAR 2 6 1992

1	·-		CISE
Submit 3 Copies to Appropriate District Office	State of New Me Energy, Minerals and Natural Re	exico esources Department	Form C-103
DISTRICT I P.O. Box 1980, Hobbe, NM 88240	OIL CONSERVATIO P.O. Box 208	N DIVISION	WELL API NO. 30-015-26943
P.O. Drawer DD, Artesia, NM 88210	Santa Fe, New Mexico	87304-2088	5. Indicate Type of Lease STATE FEE
DISTRICT III 1000 Rio Brazos Rd., Aziec, NM 87410			6. State Oil & Gas Lease No. E-7179
SUNDRY NOT ( DO NOT USE THIS FORM FOR PR DIFFERENT RESE (FORM (	ICES AND REPORTS ON WEL OPOSALS TO DRILL OR TO DEEPEN RVOIR, USE "APPLICATION FOR PER 2-101) FOR SUCH PROPOSALS.)	LS OR PLUG BACK TO A RMIT	7. Lease Name or Unit Agreement Name
I. Type of Well: OL GAS WELL WELL	CTITER R	ECEIVED	CHALK BLUFF "6" STATE
2. Name of Operator Mewbourne Oil Com	pany 🗸 🛛 AP	R 2 4 1992	8. Well No. 1
3. Address of Operator P. O. Box 7698, Ty	ler, Texas 75711 💦	O. C. D.	9. Pool name or Wildcat NORTH ILLINOIS CAMP MORROW
4. Well Location Unit Letter <u>M</u> : 7	30 Feet From The West	Line and99	0 Feet From The South Line
Section 6	Township 18S Ra	nge <u>28E</u> DF. RKB. RT. GR. etc.)	NMPM Eddy County
	36	535' GR	
11. Check	Appropriate Box to Indicate N	Nature of Notice, R	eport, or Other Data
	TENTION TO:	508	
	PLUG AND ABANDON	REMEDIAL WORK	
TEMPORARILY ABANDON	CHANGE PLANS	COMMENCE DRILLING	GOPNS. L PLUG AND ABANDONMENT
PULL OR ALTER CASING		CASING TEST AND C	
OTHER:		OTHER:	
12. Describe Proposed or Completed Open work) SEE RULE 1103.	ations (Clearly state all pertinent details, an	ı ud give pertinent dates, inclu	ding estimated date of starting any proposed

- 3/24/92 Ran 4-1/2" 11.6# N-80 liner. Top of liner at 9077'. Set liner at 10,198'. Cemented with 750 gals mud flush followed by 175 sxs Class "H" + 5 pps KCL + 5 pps Silicalite + 6/10% Halad 22A + 4/10% CRF-3. Plug down to 10,151' at 7:15 AM 3/23/92 with full returns. Checked float. Held okay.
- 4/10/92 Tested casing to 1000# for 30 mins, held okay. Drilled out 120' cement in 4½" liner. Drilled through at 9200'. Tagged up at 10,103'. Drilled down to landing collar at 10,151'. Circulated hole. Tested casing to 1000# for 30 mins. Held OK.
- 4/11/92 Western spotted acid over perforation interval. Ran CBL from TD 10,159' to 620'. Had good bond around 4½" lienr from TD to 9600'.

og above is that and complete to the bast of my knowled	ee and belief.	
ne Trimpron	_ m. Engr.Oprns.Secretary	DATE4/22/92
		TELEFFIONE NO.
ORIGINAL SIGNED BY MIKE WILLIAMS SUPERVISOR, DISTRICT I	- TILE	MAY 2 5 1992
<i>.</i> .	ORIGINAL SIGNED BY MIKE WILLIAMS SUPERVISOR, DISTRICT I	ORIGINAL SIGNED BY MIKE WILLIAMS SUPERVISOR, DISTRICT IN TILE

				N.C.
Submit 3 Copies to Appropriate District Office	State of New 1 Energy, Minerals and Natural	Mexico Resources Department		Form C-103 Revised 1-1-89
<u>DISTRICT I</u> P.O. Box 1980, Hobba, NM 88240	OIL CONSERVATI P.O. Box 2	ON DIVISION	WELL API NO.	6943
DISTRICT II P.O. Drawer DD, Artesia, NM 88210	Santa Fe, New Mexic	xo 87504-2088	5. Indicate Type of Le	
DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410			6. State Oil & Gas Le E-7179	ase No.
SUNDRY NOT ( DO NOT USE THIS FORM FOR PR DIFFERENT RESE (FORM C	ICES AND REPORTS ON W OPOSALS TO DRILL OR TO DEEP RVOIR. USE "APPLICATION FOR I C-101) FOR SUCH PROPOSALS.)	ELLS EN OR PLUG BACK TO A PERMIT RECEIVED	7. Lease Name or Uni	t Agreement Name
1. Type of Well: OR. GAS WELL WELL	/ OTHER	APR 2 4 1992	CHALK BL	UFF "6" STATE
2. Name of Operator Mewbourne Oil Com	pany	O. C. D.	8. Well No.	
3. Address of Operator	<u> </u>	NETT CALL	9. Pool name or Wild	cat
P. O. Box 7698, Ty	ler, Texas 75711		NORTH ILLI	NOIS CAMP MORROW
Unit Letter $\underline{M}$ : 7	30 Feet From The West	Line and99	0 Feet From Th	e <u>South</u> Line
Section 6 11. Check NOTICE OF IN PERFORM REMEDIAL WORK TEMPORARILY ABANDON PULL OR ALTER CASING OTHER: 12. Describe Proposed or Completed Operations of the proposed of Completed Operations of the proposed	Township 18S 10. Elevation (Show wheth Appropriate Box to Indicat TENTION TO: PLUG AND ABANDON CHANGE PLANS Mitions (Clearly state all pertinent details tubing set at 9990'. compression. Lower Morrow 10,084' erfs with 2600 gals 7½ 3800#. Max TP 7600#. te. FTP 3000#.	Range       28E         Sur DF, RKB, RT, GR, etc.)       3635' GR         e Nature of Notice, Ru       SUB         I REMEDIAL WORK       SUB         COMMENCE DRILLING       CASING TEST AND CE         OTHER:       Perfo         and give pertinent dates, includ         Tested to 8000#.         HCL + additives         Avg 6300#.	NMPM EA	ddy County   ata PORT OF: TERING CASING UG AND ABANDONMENT UG AND ABANDONMENT Ize Ting any proposed Set packer with oles. (bbl N <sup>2</sup> & 15 fracting to pit on
	To P A	/		
I hereby certify it an etablish formation above is try	's and complete to the best of my knowledge i	md bellet. TTT F Engr. Oprns.	Secretarv	4/22/92
TYPE OR FRINT NAME			<b>_</b>	TELEPHONE NO.
(This space for State Use) ORIGINAL	SIGNED BY			
MIKE WILL APPROVED BY	IAMS <del>JR, DISTRICT II</del>	TTILE		MAY 2 5 1992
CONDITIONS OF AFFROVAL, IF ANY:				

SEC_	6	TWN	185	RGE	<u> 28c</u>
------	---	-----	-----	-----	-------------

API # 30-015-26943

OPERATOR	Mewbour	ne Oil			
WELL NAME	Chalt B	10ff "6"	57. #1		
STATE OCD TOPS	AS PER	Darrell	Moore	 DATE	5/27/92

Southeastern New Mexico

# Northwestern New Mexico

T. Anhy	T Canyon	T. Oio Alamo	T. Penn. "B"
T. Salt	T. Strawn 8910	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka 9593	T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	T. Menefee	T. Madison
T. Queen 1209	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg 1560	T. Montova	T. Mancos	T. McCracken
T. San Andres 2062	T. Simpson	T. Gallup	T. Ignacio Otzte
T. Glorieta 3632	T. McKee	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	T. Dakota	Т
T. Blinebry	T. Gr. Wash	T. Morrison	Т
T. Tubb	T. Delaware Sand	T. Todilto	Т
T. Drinkard	T. Bone Springs	T. Entrada	Т
T. Abo	T. Morrow 9842	T. Wingate	Т
T. Wolfcamp 6910	Т	T. Chinle	Т
T. Penn	Т	T. Permain	Т
T. Cisco (Bough C)	Т.	T. Penn "A"	т
	OIL OR GAS SA	NDS OR ZONES	
No. 1. from.	to	No. 3. from	to
No. 2. from.		No. 4, from.	to
	IMPORTANT \	WATER SANDS	
Include data on rate of water inflo	w and elevation to which water ros	e in hole.	
No. 1, from.	to	feet	••••••
No. 2, from.		feet	•••••
No. 3, from	to	feet	

REMARKS: Paris reported (10,084-10,092) are wrong.

KEN REYNOLDS-PRESIDENT ARNIE NEWKIRK-VICE-PRESIDENT

P. D. BOX 1498 ROSWELL, NEW MEXICO 88202-1498

505/623-5070 ROSWELL, NM

March 31,1992

Mewbourne Oil Company P.O. Box 5270 Hobbs, N.M. 88202

REF: Chalk Bluff "6" St. #1

Gentlemen:

The following is a Deviation Survey on the above referenced well located in Eddy County, New Mexico.

400'	_		3/40
912'	_	10	0
1405'			3/40
1878'	-	10	>
2367'	-	10	>
2600'	-	1	1/40
3082'	-	2	1/40
3176'	-	1	1/20
3299'	-	1	1/40
3791'	-	1	1/2°
4287'	_	2	1/40
438-'	_	1	1/40
4752'	_	1	1/40

 $5262' - 2 1/2^{\circ}$   $5316' - 2 1/2^{\circ}$   $5419' - 2 3/4^{\circ}$   $5513' - 3^{\circ}$   $5605' - 2 1/2^{\circ}$   $5698' - 2 1/2^{\circ}$   $5792' - 2 1/2^{\circ}$   $5885' - 2 1/4^{\circ}$   $5979' - 2 3/4^{\circ}$   $6072' - 2 3/4^{\circ}$   $6166' - 3 1/4^{\circ}$  $6259' - 3^{\circ}$ 

5168' - 2°

6351 <b>'</b>	-	2 3/4°	
6443'	-	2 1/20	
6534 '	-	2 3/4°	
6625 <b>'</b>	-	1 1/4°	
7151'	-	3/4°	
7278 <b>'</b>	-	1 1/4°	
7770'	-	1 1/4°	
8289'	-	10	
8778'	-	10	
9282'	-	1 1/4°	
9450'	-	1 3/4°	
10200'	-	1 1/2°	

Sincerely, K. te

Arnold Newkirk Vice President

STATE OF NEW MEXICO)

COUNTY OF CHAVES )

The foregoing was acknowledged before me this 31st day of March 1992 by Arnold Newkirk.

MY COMMISSION EXPIRES

October 07,1992

NOTARY PUBLI

			v —									6	15 Fm
Submit to Appropriate		Energ	St gy, Minerals	ate of New and Natural	Mexik I Reso	co urces Depa	, ; rtment	` <b>h</b>			Form Revis	C-105 ed 1-1-89	BN AN BH CX
State Lease – 6 copies Fee Lease – 5 copies DISTRICT I		OI	CONS	ERVAT	ION		ION	WELL	API NO	).			
P.O. Box 1980, Hobbs, N	M 88240	<b>U</b>		P.O. Box	2088			6 10	30-01	15-2694.	3		
DISTRICT II R.O. Drawer DD Arteria	NM 88210		Santa Fe,	New Mexi	co 87	5042088		5. 10	alcare 1	ype or Lease Si	TATE	FEE	: 🗆
DISTRICT III	ec NM 8741	ı			M	AY - 4 19	392	6. SI	ale Oil d E-717	k Gas Lease . 79	No.		
MELL CO					OBT	APPFOR			ΠΠ		MM	//////	
In Type of Well:	DMPLEIIU			non ner		HAR FAMI	EIC <sup></sup>	7. L	canc Nan	ne or Unit Ag	greement N	ame	m
oil Well       b. Type of Completion:	GAS WI			OTHER				-	CHALI	K BLUFF	"6" S	ГАТЕ	
WELL OVER	DEEPEN	BAC			er 			- - -	li Na				
MEWBOURNE O	LL COMPA	NY							1				
3. Address of Operator	508 Tv1	or To		!				9. P	ool name TH TI	or Wildcat	CAMP	MORROV	1 2 2 4
4. Well Location	<b>590, 191</b>	ei, ic.		L					, .				
Unit Letter	<u>M</u> ::	730 F <del>o</del>	et From The	WEST		Line and	·	990	Feet 1	From The	SO	UTH	Line
Section	6	Ta	waship 1	85	Range	28E		NMPM		EDD	Y	Co	unty
10. Date Spudded 1 2/17/92	1. Date T.D. R 3/21/9	teached 2	12. Date Con	mpl. <i>(Ready to</i> 4/16/92	Prod.)	13. E	levations ( 3339 '	DF& RK	(B, RT, C 3324	GR, etc.) 1	14. Elev. (	Casingheac	•
15. Total Depth 10. 200 '	16. Plug	Back T.D.	1	7. If Multiple Many Zones	Compl. ?	How	18. Interva Drilled	ls 1 <sup>Rc</sup> By 1	stary Too	sk X	(Cable To	ols	
19. Producing Interval(s),	of this complet	uon - Top,	Bottom, Name			I			· · · · · ·	20. Was Dir	ectional Su	rvey Made	
10,084'-10,0	092' – M	orrow									les		
21. Type Electric and Othe SDL-DSN, DI	er Logu Run L/DLL-MS	FL							. Was W	(ell Cored	NO		
23.		C	ASING RE	ECORD (	Repo	rt all strin	gs set i	n well	1)				
CASING SIZE	WEIGH	LB/FT.	DEPT	H SET	H	OLE SIZE	(	CEMEN	TING I	RECORD	AM	OUNT P	ULLED
13-3/8"	48 <b>#</b> &	68 <b>#</b>		400'	17	-1/2"	5	$\frac{00 \text{ sx}}{00}$	(s - (	<u>circ</u>		None	<u>}</u>
<u> </u>	24#		2,	600'	12	<u>-1/4"</u> _7/8"	11	00 sx	(s - c)	circ		None	<u> </u>
	201			44.5		-770	10	<u>, , , , , , , , , , , , , , , , , , , </u>	<u> </u>	strin	e e	none	
24.			VER RECOR	2D			2	5.	π	JBING RE	CORD		
		10		SACKS CEN	<u>IENT</u>	SCREEM	1	<u>SI2</u>	<u>Έ</u> '8"	DEPI	H SET	PACK	ER SET
4-1/2	3077		,170	175				2-51	0	, ,,,	<u>, , , , , , , , , , , , , , , , , , , </u>		<u> </u>
26. Perforation recor	d (interval,	size, and	number)			27. ACI	d, sho	T, FRA	CTUR	E, CEME	NT, SQL	JEEZE, I	ETC.
·	<b>-</b> -					DEPTH D	TERVAL	-	AMO	UNT AND K	IND MAT	ERIAL US	ED
10,084'-10,0	092' - 8	', 1 S	PF, 9 hol	les		10,084-	092		idize	ed with	2600	gals /	57
								<u>n</u>	<u>,L + a</u> 1 N <sup>2</sup>	$\frac{aaaitiv}{k}$	rac ha	<u>507 SC</u> 119	<u> </u>
28.				PRODUC	CTIC	N			<u>T</u>	<u></u>		***	
Date First Production 4/17/92		Produc	tion Method (Fi	lowing, gas lift, Flowing	, pumpi	ng - Size and I	уре ритр	)		Well St Pro	atus (Prod. oducin	or Shut-in E	)
Date of Test	Hours Tested	1	Choke Size	Prod'n For		Оil - BЫ.	Gas	MCF		Water - Bbl.		Gm - Oi	l Ratio
4/28/92	24 hou	rs	12/64"	Test Period	1	36	<u> </u>	902		0	52,	833:1	
riow Tubing Press.	Casing Press	une	Calculated 24- Hour Rate	ол - вы. 36		1.902	r	water -	DOL		5/.	- (corr.)	
29. Disposition of Gas (So	id, used for fue	i, venied, e	IC.)	<u> </u>			<u>h</u>		Test V	Vitnessed By	arce	·	
30. List Attachments									ر سوس	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			{
Logs	)												
31. I hereby certify that	the informati	on shown	on both sides	of this form	is true	and complet	e io ihe b	est of m	iy knowl	ledge and b	elief		
Signature Jul	Kal j	may	Inn	Name Gay	ylon	Thompso	on	Title <u>E</u>	ingr.(	Oprns.S	ec. Da	<u>4/28/</u>	/92

# INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

#### INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

#### Southeastern New Mexico

142 4 50 200

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#### Northwestern New Mexico

T. Anhy		T. Canyon 8,432'	_ T. Ojo Alamo	T. Penn. "B"
T. Salt			_ T. Kirtland-Fruitland	T. Penn. "C"
B. Salt		_ T. Atoka 9,562'	T. Pictured Cliffs	T. Penn. "D"
T. Yates	<u> </u>	T. Miss	_ T. Cliff House	T. Leadville
T. 7 Rivers	<u>596'</u>	T. Devonian	_ T. Menefee	T. Madison
T. Queen	1,209'	T. Silurian	_ T. Point Lookout	T. Elbert
T. Grayburg	1,560'	T. Montova	_ T. Mancos	T. McCracken
T. San Andres	2,062	T. Simpson	_ T. Gallup	T. Ignacio Otzte
T. Glorieta	3,626'	T. McKee	Base Greenhorn	T. Granite
T. Paddock	<del></del>	T. Ellenburger	_ T. Dakota	Т
T. Blinebry		T. Gr. Wash	_ T. Morrison	T
T. Tubb	4,736'	T. Delaware Sand	_ T. Todilto	T
T. Drinkard	<u>5,531'</u>	T. Bone Springs	_ T. Entrada	T
Т. Аьо	<u>5,878'</u>		_ T. Wingate	T
T. Wolfcamp_	6,606'		_ T. Chinle	Т
T. Penn			_ T. Permain	T
T. Cisco	7,742'	T	T. Penn "A"	, <b>T.</b>
		OIL OR GAS S	ANDS OR ZONES	t
No. 1, from	10,084'	to. 10,092'	No. 3, from	to
No. 2, from		to	No. 4, from	to
		IMPORTANT	WATER SANDS	
Include data or	n rate of water int	flow and elevation to which water ro	se in hole.	
No. 1, from	NONE	to	feet	
No 2 from		to	feet	

#### 

### LITHOLOGY RECORD (Attach additional sheet if necessary)

From	То	Thickness in Feet	Lithology	From	To	Thickness in Feet	Lithology
0 430 2490 2600 4782 7520 9450 9840	430 2490 2600 4782 7520 9450 9840	430' 2060' 110' 2182' 2730' 1930' 390' 188'	Red Bed & Anhydrite Anhydrite Anhydrite & Dolomite Dolomite Dolomite & Lime No Returns Lime Lime & Shale				
10028	10200	172'	Shale				
•	1.5 xy	1999 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100					
		and and a second second second second second second second second second second second second second second se	an An an				
	1		and the second sec		-		

	~		-15				
<u>_</u>			art				
Submit 5 Copies Appropriate District Office <u>DISTRICT 1</u> P.O. BOY 1980 Hobbs NM 88240	State of N Energy, Minerals and Na	lew Mexico tural Resources Department	Form C-104 Revised 1-1-89 See Instructions at Boltom of Page 1)				
DISTRICT II P.O. Drawer DD, Artesia, NM 88210	OIL CONSERVA P.O. B	ATION DIVISION					
DISTRICT III 1000 Rio Brazos Rd. Aztec. NM 87410	Santa Fe, New M	lexico 87504-2088					
I I I I I I I I I I I I I I I I I I I		BLE AND AUTHORIZAT	ION				
Operator		LAND NATONAL GAS	Well API No.				
MEWBOURNE OIL (	COMPANY		30-015-26943				
P. O. Box 7698	, Tyler, Texas 75711						
Reason(s) for Filing (Check proper box) New Well	Change in Transporter of:	<b>RECEWED</b> <sup>P</sup> lease explain)					
Recompletion	Oil Dry Gas	APR 2 4 1992					
Change in Operator	Casinghead Gas Condensate	0. C. D.					
and address of previous operator		APITSIA OFFICE	· · · · · · · · · · · · · · · · · · ·				
II. DESCRIPTION OF WELL	AND LEASE Well No. Pool Name, Includ	ing Formation	Kind of Lease No.				
CHALK BLUFF "6" STA	ATE 1 N. ILLIN	OIS CAMP MORROW	State, Federal or Fee E-7179				
Location	720	loot 000	South				
Unit LetterP1	_ :750 Feet From The	IESL Line and	Feet From The Line				
Section 6 Townshi	, 18S <sub>Range</sub> 28E	, МРМ,	Eddy County				
III. DESIGNATION OF TRAN	SPORTER OF OIL AND NATU	RAL GAS					
Name of Authorized Transporter of Oil PHILLIPS PETROLEUM	COMPANY - TRUCKS	Address (Give address to which ap	oproved copy of this form is to be sent) Odessa Texas 79761				
Name of Authonized Transporter of Casing	thead Gas or Dry Gas	Address (Give address to which ap	opproved copy of this form is to be sent)				
TRANSWESTERN PIPEL	I Unit Sec. Two Rec	P.O.Box 1188, H	ouston, Texas 77251				
give location of tanks.	M 6 18S 28E	Yes	4/22/92				
If this production is commingled with that IV. COMPLETION DATA	rom any other lease or pool, give comming	ling order number:					
Designate Type of Completion	- (X) X	X De	æpen   Plug Back  Same Kes V  Diff Kes V				
Date Spudded 2/17/92	Date Compl. Ready to Prod. 4/16/92	Total Depth 10 - 200 '	P.B.T.D.				
Elevations (DF, RKB, KT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth				
DF 3339', GR 3324' Perforations	Morrow	10,084'	Depth Casing Shoe				
10,084' - 10,092'							
HOLE SIZE	TUBING, CASING AND	CEMENTING RECORD	SACKS CEMENT				
17-1/2*	13-3/8"	400'	500 - circ				
12-1/4	9-5/8"	2,600'	<u>1100 - circ</u>				
7"	4½" Liner	10,198'	<u> </u>				
V. TEST DATA AND REQUES	T FOR ALLOWABLE	be equal to an exceed tan allowable	for this depth or he for full 24 hours )				
Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, pump, go	25 lift, etc.) Post E0-2				
Length of Test	Dubing Pressure	Casing Pressure	6-5-92 Choke Size				
			comp + tok				
Actual Prod. During Test	Oil - Bbls.	Water - Bbis.	Gas- MCF				
GAS WELL		1					
Actual Prod. Test - MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate				
2,149 Mcf	24 hours	89.9:1	N/A 51.6				
Back Pressure	N/A		12/64*				
VI. OPERATOR CERTIFIC. I hereby certify that the rules and regula Division have been complied with and t	ATE OF COMPLIANCE tions of the Oil Conservation hat the information given above	OIL CONSERVATION DIVISION					
is true and complete to the best of my k	nowledge and belief.	Date Approved MAY 2 5 1992					
Maylow /	ronchin	DV ORIGINAL SIGNED BY					
Signature Gayløn Thompson. E	ingr Oprns.Secretary	MIKE WILLIAMS					
Printed Name April 22, 1992	903) 561-2900	TitleSUPERVISOR, DISTRICT IN					
Date	Telephone No.						
	ويستعدد التواقي والمتحد والمتحد التقار المتحد والمحد						

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.

a) All sections of this form must be filled out for allowable on new and recompleted wells.
a) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
b) Separate Form C-104 must be filed for each pool in multiply completed wells.

MEWBOURNE OIL COMPANY Chalk Bluff "6" St., Well # 1 6-18-28 Eddy County, New Mexico 4-24-92

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· 1. 1 ¥. · · · State of New Mexico Energy, Minerals and Natural Resources Department

Submit in duplicate to appropriate district office See Rule 401 & Rule 1122

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#### OIL CONSERVATION DIVISION

P.O. Box 2088



# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MEWBOURNE OIL COMPANY								Lease or Unit Name CHALK BLUFF '6' St								
									Test Date Well No.							
Completion Date Total Depth						pecial Plue	tug Back (11)			<u>4-24-92</u>			1			
<u>4-16-92</u> 10151				10151					LICVA			m	6 18	28		
Csg. Size W1 d Set At I						Perf	forations: County									
7''	& 41/2"	19.6	1A		10198	Fron	n:	10084		To:	10092			Fddv		
Tbg. S	Size V	<sup>V1</sup> 6.5	d 2.	441	Set At	Perf	oration	15:	· -				Pool			
2 7/8 &2 3/8 4.7 1.995 9976 From: To: N Tilipoise Comp											ise Camp					
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Packer Set At Control Packer Set																
Producing Thru Reservoir Temp 9E Mann Annual Temp 9E D									<u>9976</u>					Connection		
$\frac{1}{175} \underbrace{(10088)}_{60} \underbrace{13.2}_{13.2}$																
ь *100	88 100	88	Gg	643	‰ СО <sub>2</sub>	1.1.	% N	2 3 <u>8</u>	% H	2 <sup>S</sup>	Prover		Meter R	lun 60	Taps	
	100	00	FLOW [			. 44		0		URIN	G DATA			00 DATA		
NO	Prover	Orif	ice	Press	1	Diff.	1	Temp	iopinor				CASING DATA		Duration	
NO.	Line X Size	Siz	r I	p.s.i.g		h <sub>w</sub>		el:	p.s.i.	s. g.	9F	p.s.i	.g.	۹۴. ۱۹۳۵	Flow	
SI									296	0		PK	R		72 hrs.	
1.	3 X .	750		430	34	4.00		111	281	5		11			1 hr.	
2.	$3 \times 1$	.000	·	440	4(	0.00		102	273	0			·		<u> </u>	
3.	$\frac{3 \times 1}{2 \times 1}$	.500		<u>435</u>	3	2.00			259	<u>0</u>					-1 hr.	
4.	<u> 3 X I</u>	.750		480	4	9.00		_54		<u>ک</u>					$- _1$ hr.	
			I			RA		F FLOW C		ATIO	NS		l_			
	COEFFICIE	NT		,		Pressure	:	Flow	Temp.	1	Gravity Factor	Super	Compress	s. 1	Rate of Flow	
NO.	(24 HOUR) $\bigvee h_w P_n$			h P m		1'm		Factor Ft.			Fg.		Factor, F pv.		Q, Mcfd	
1.	2.672		12	2.76	443.2			.9543			1.247 1.0		035 404			
2.	4.789		$\frac{134}{110}$	4.64	453.2		2	29619		_	1.247		1.035		801	
4.	11.13 119.		<u>9.70</u> 5.46	448.2		2 1 006			1 2/7 1		1/(1)		1/08			
5.			<b>b</b> /	2.40		47.	4	L•VA	10		L4/		050			
	P <sub>r</sub>	Tem	p.ºR	T,		Z	Gas I	.iquid Hydr	ocarbon R	atio	40.1				Mcf/bbl.	
<u>NO.</u>	). . 66 571 1 53 934 A.P. I. Gravity						I. Gravity of	of Liquid Hydrocarbons 51.6 @				<u>160°</u> Deg.				
2.	.67	5	62	1.51		933	Specific Gravity Separator Gas_				as643				<u> </u>	
3.	.66	5	38	1.44		916	Specific Gravity Howing Fluid				1id <u>XXXXX</u>					
4.	.73	5	14	1.38		893	Critical Pressure6				72 P.S.I.A.				P.S.I.A.	
5. Critical TemperatureR									K							
$P_{e} \times 3129.4 P_{e}^{2} - 9793.1$																
NO.	P <sub>t</sub> <sup>2</sup>		P.,	P_ 2	P_c <sup>2</sup>	- P <sub>w</sub> <sup>2</sup>	1)	P 2	=	4.55	<u> </u>	<sup>(2)</sup> [_	р <u>г</u>	_] "=	4.950	
1.	**:	30	73.7	9447.	6 34	45.5		$P_c^2 - P_c$	2			I	$P_c^2 - P_w^2$	2		
2.	**	30	37.7	9227,	6 50	65.5					1	E 062		-		
3.	**	29	33.4	8604.	8118	88.3	AC	F = Q	<u> </u>	c 2	<sup>n</sup> =	.903	)			
4.	**	_27	<u>95.9  </u>	7817.	1 19	76.0			P <sub>c</sub> <sup>2</sup>	- P.	2					
Absolute Open Flow 15,963 Mcfd @ 15.025 Angle of Slope $\Theta$ 45 Slope, n 1,000																
Remarks: * BHP Instrument Set @ this Depth																
	** Fr	om K	nown 1	B.H.P.	Calcul	lated	ba	ck to S	Surfac	e						
	*** W	e <del>ll -</del>	Made (	5.375-	BBLS 5	1.6-0	<del>60 (</del>	Condens	<del>sate &amp;</del>	3.0	BBLS H <sup>2</sup> C	)				
Approved By Division Conducted By: Calculated By:									Checke	d By:						
Pro V					weii	ell `lesters				BM			BM			

Form C-122 Revised 4-1-91

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	بالاداد الماد بالمنصوف	- U	r orm (-10)				
Submit 3 Copies to Appropriate District Office	Energy, Minerals and Natural Re	sources Department	Revised 1-1-89 CLST				
DISTRICT.I UIL CONSERV		N DIVISION	WELL API NO				
P.O. BOX 1980, HODDS, NM 88240	P.O. Box 208	8	30-015-269 <u>43</u>				
<u>DISTRICT II</u> P.O. Drawer DD, Ariesia, NM 88210	Santa Fe, New Mexico	NOV 1 6 1953	5. Indicate Type of Lease STATE FEE				
DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410		Q. C. D.	6. State Oil & Gas Lease No. E-7179				
SUNDBY NOT	CES AND REPORTS ON WEL	LS					
( DO NOT USE THIS FORM FOR PRO DIFFERENT RESENT (FORM C	DPOSALS TO DRILL OR TO DEEPEN RVOIR. USE "APPLICATION FOR PEF -101) FOR SUCH PROPOSALS.)	OR PLUG BACK TO A	7. Lease Name or Unit Agreement Name				
1. Type of Well: OIL GAS WELL WELL	OTHER		Chalk Bluff "6" State				
2. Name of Operator			8. Well No.				
Mewbourne Oil Company	/ /		0. Declarers of Wildow				
3. Address of Operator	North Illinois Comp Monrow						
P.O. Box 5270 Hobbs	<u>New Mexico 88241 (50</u>	<u>J5) 393-5905</u>	Nor ch III nors camp Porrow				
Unit Letter :	Feet From TheWest	Line and99	0 Feet From The <u>South</u> Line				
Section 6	Township 185 Rai	nge <u>28E</u>	NMPM Eddy County				
	10. Elevation (Show whether )	3324 ' GR					
11 Check	Appropriate Box to Indicate N	Nature of Notice, R	eport, or Other Data				
NOTICE OF IN	TENTION TO:	SUE	SEQUENT REPORT OF				
		REMEDIAL WORK					
	CHANGE PLANS						
		CASING TEST AND CE					
OTHER:		OTHER: Add Per	forations				
12. Describe Proposed or Completed Opera work) SEE RULE 1103.	ations (Clearly state all pertinent details, an	d give pertinent dates, inclu	ding estimated date of starting any proposed				

11/02/93 Rig up Schlumberger and perf'd Morrow 10,044' - 10,064' with 2 SPF. 20' and 41 holes.

11/03/93 Acidized Morrow formation with 4,000 gal. 7 1/2% FE acid & 1,000 CF/bbl. nitrogen Put well on production.

I hereby certify that the information above is true and complete to the best of my know SIGNATURE	iedge and belief. ππε _Production Engineer	date <u>11/15/93</u> (505)
TYPE OR FRINT NAME Brent Thurman		TELEPHONE NO 393-5905
(Thus space for State Use) ORIGINAL SIGNED BY MIKE WILLIAMS		NOV 2 3 1993
APPROVED BYSUPERVISOR, DISTRICT IN	TITL£	DATE
30-015-26943 DERID 14744 PROP 7877 PODI 7.8890

|923010-0 |923830-G |923050-W

xford® **Ø ESSELTE** MADE IN U.S.A. NO. R753 1/3 IT IS THEREFORE ORDERED THAT: R-9631

.....

(1) All mineral interests, whatever they may be, from the base of the Abo formation to the base of the Morrow formation, underlying Lots 3 through 7, the SE/4 NW/4, and the E/2 SW/4 (W/2 equivalent) of Section 6, Township 18 South, Range 28 East, NMPM, Eddy County, New Mexico, thereby forming a non-standard 334.98-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing within said vertical extent, which presently includes, but is not necessarily limited to the Undesignated Empire-Pennsylvanian Gas Pool and the Undesignated North Illinois Camp-Morrow Gas Pool, are hereby pooled, said unit shall be dedicated to a well to be drilled at an unorthodox gas well location 990 feet from the South line and 730 feet from the West line (Unit M) of said Section 6.

R-9631 Long. P.G. NSP ¥ NSW 12-19-91

5-22-92 O val S paced Auto Suf - 9416 0 wal hat 2588 - 946 4 9451 - 10205-Oval Induction 2588 - 9452



# MAP ID NO. 99

MEWBOURNE OIL CO. CHALK BLUFF FEDERAL COM NO. 003

API NO. 30-015-27163

#### APD ATTATCHMENT

Mewbourne Oil Company Chalk Bluff Federal Comm. #3 NM-016788 1980' FSL & 990' FEL Sec. 1-T18S-R27E Eddy County, NM.

- 1.) Casing Design and Safety Factors (See schedule 1 for used casing design program.)
- 2.) Cement Program for Casing Strings. Surface Casing:

250 sacks of Class "C" containing 2% CaCL2 + 1/4#/sack of cellophane flakes followed by 200 sacks of Class "C" containing 3% CaCL2.

#### Intermediate Casing:

700 sacks of Class "C" containing 6% gel + 2% CaCL2 + 1/2#/sack of cellophane flakes + 5#/sack of Gilsonite followed by 200 sacks of CLass "C" containing 3% CaCL2

#### Production Casing:

A cement diverter tool (D. V. Tool) will be run at a depth of approximately 7500' from surface. 1st Stage: 850 sacks of Class "H" containing 5#/sack KCL + .7% fluid loss additive + 5#/sack compressive strength extender. 2nd Stage: 900 sacks of Class "C" Lite containing 1/2#/sack cellophane flakes + 5#/sack Gilsonite + .4% fluid loss extender followed by 100 sacks of Class "H" containing .4% fluid loss additive + 5#/sack compressive strength extender.

- 3.) Drilling time will require approximately 35 40 days and drilling operations should begin approximately November 1, 1992.
- 4.) The possibility of encountering H2S gas in this area remote. Mewbourne Oil Company has drilled offset wells to this proposed location and none of these wells have encountered any H2S gas in the Pennsylvanian. In the event H2S is encountered, the necessary H2S safety equipment will be installed on location to provide for a safe working enviroment.
- 5.) Anticipated formation temperature and pressure in the Morrow zone will be approximately 155 degrees fahrenheit and 3,000# psi.

6.) This location is a non-standard location. A hearing is scheduled for October 15, 1992 in Santa Fe, New Mexico before the New Mexico Oil Conservation Division for an unorthodox location exception.

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7.) The pressure rating on the BOP STACK (see exhibit "D" of the APD) is 3,000# psi. The correct pressure rating of ANSI 900 series is noted in the APD. The API standard for pressure ratings for flanged equipment is in ANSI series. ANSI 600 series is 2,000# psi working pressue test, ANSI 900 series is 3,000# psi working pressure, ANSI 1500 series is 5,000# psi workpressure. 5.2

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| LEASE NAME:                    | CHALK B       | LUFF FE | )eral #3    | TYPE OF CSG | STRING    | Production  |
|--------------------------------|---------------|---------|-------------|-------------|-----------|-------------|
| LEGALS:                        | SEC 1-1       | 8S-27E  |             | DEPTH OF CS | 3:        | 10,300      |
| CASING MINIMUM PERFORM         | IANCE PI      | OPERTIE | 5           |             |           |             |
| CSG TYPE                       |               |         | K-FACTOR    | COLLAPSE    | BURST     | TENSION     |
| 1 5 1/2" 20 <b>#</b> N-80 LT&C |               |         | 991,000     | 8830        | 9190      | 428000      |
| 2 5 1/2" 17# N-80 LT&C         |               |         | 844,000     | 6380        | 7740      | 348000      |
| 3 5 1/2" 20# N-80 LT&C         |               |         | 991,000     | 8830        | 9190      | 428000      |
| 4                              |               |         |             |             |           |             |
| 5                              |               |         |             |             |           |             |
| GRADE OF CASING:               | 85            | 8 OF NE | W           | <u> </u>    |           |             |
| CSG TYPE                       |               |         |             | COLLAPSE    | BURST     | TENSION     |
| 1 5 1/2" 20# N-80 LT&C         |               |         |             | 7506        | 7812      | 363800      |
| 2 5 1/2" 17# N-80 LT&C         |               |         |             | 5423        | 6579      | 295800      |
| 3 5 1/2" 20# N-80 LT&C         |               |         |             | 7506        | 7812      | 363800      |
| 4 0                            |               |         |             | 0           | 0         | 0           |
| 5 0                            |               |         |             | 0           | 0         | 0           |
| SETTING DEPTH (WT. OF C        | SG IN AI      | R)      | CASING      | INTERVAL    | INTERVAL  | CUMMULATIVE |
| FROM                           | TO            | -       | WT. (LB/FT) | LGTH (FT.)  | WT. (LBS) | WT. (LBS)   |
| 1 0                            | 1,000         |         | 20          | 1000        | 20,000    | 181,100     |
| 2 1,000                        | 9,300         |         | 17          | 8300        | 141,100   | 161,100     |
| 3 9,300                        | 10,300        |         | 20          | 1000        | 20,000    | 20,000      |
| 4 0                            |               |         |             | 0           | 0         | 0           |
| 5 0                            |               | <u></u> |             | 0           | 0         | 0           |
| WELLBORE CONDITIONS            |               | 554     |             |             |           |             |
|                                | 9.0<br>0.050  | PPG     | 1.          |             |           |             |
| BOUTANCT FACTOR                | 0.803         | (ALK =  | L)          | COLLADER    | HOLF      |             |
| DISPLACEMENT FLUID WI.         | 0.3           | PPG     | ANNOLAR     | W/AVTAT     |           |             |
| NDN#B                          |               |         | DDFCCIDF    | TOPDING     | DRESSIRE  | TENSTON     |
|                                | -             |         | 0           | DOADING     | 0         | 154.478     |
| 1 1000                         |               |         | 499         | 5982        | 442       | 137.418     |
| 2 9300                         |               |         | 4643        | 5290        | 4111      | 17,060      |
| 3 10300                        |               |         | 5142        | 7506        | 4553      | 0           |
| 4 0                            |               |         | 0           | ERR         | 0         | 0           |
| 5 0                            |               |         | 0           | ERR         | 0         | 0           |
| FINIAL CASING DESIGN           |               |         |             | SAFTEY FACT | ORS       | <u></u>     |
|                                |               |         |             | COLLAPSE    | BURST     | TENSION     |
|                                | FROM          | то      | LENGTH      | >1.125      | >1.00     | >2.00       |
| 0                              | 0             | 0       | 0           | ERR         | ERR       | ERR         |
| 0                              | 0             | 0       | 0           | ERR         | ERR       | ERR         |
| 5 1/2" 20# N-80 LT&C           | 10,300        | 9,300   | 1000        | 1.460       | 1.716     | 21.325      |
| 5 1/2" 17# N-80 LT&C           | <b>9,</b> 300 | 1,000   | 8300        | 1.139       | 1.600     | 2.153       |
| 5 1/2" 20# N-80 LT&C           | 1,000         | 0       | 1000        | 11.983      | 17.673    | 2.355       |



EXHIBIT "D"

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Mewbourne Oil Company Chalk Bluff Federal #3 1980' FSL & 990' FEL Section 1-T17S-R29E Eddy County, New Mexico



| 76<br>108                                         | Ex.20<br>4 - 1 - 94<br>VB - 927                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Harrington-Fed. 4.1.95                                                                                                                            | Yateso Schellinger (Sol West)<br>Normon Challer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                                                                                                   | 16429 TD 750                                                                                                                                      | BEBGE Hondo Hunger St.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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                            | 10 Man Prost His et al Mappy Oil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| htswar 42<br>30561                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 27 189041 4<br>5000ers Alo Marbab                                                                                                                 | U.S. 48765 192 1<br>U.S. 48765 5tote                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| 1. 1 TX0<br>H 19-1-80<br>112263                   | Celsius Ener<br>HBF<br>IE429                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Berry 025527<br>To 500 (Pan Amer. E<br>Mesa Pet. %)                                                                                               | Watsan I Hap<br>Cliff Deon to 33se(Marcio)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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                                                                                                                                                                                                                                                                                                                                                                                                           | • <sup>1</sup> - <sup>1</sup> - <sup>1</sup> - <sup>1</sup> - <sup>1</sup> - <sup>1</sup> - <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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Submit to Appropriate District Office State Lease - 4 copies Fee Lease - 3 copies

DISTRICT I P.O. Box 1980, Hobbs, NM 88240

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aziec, NM \$7410

### State of New Mexico energy, Minerals and Natural Resources Department

Τ

# OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

## WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

| Operator                                                                                                       |                                         |                                           |                                       | Lease                                  | ······                                                                                           | <u> </u>             |                                   | Well No.                            |                               |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------|---------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------|----------------------|-----------------------------------|-------------------------------------|-------------------------------|
| MELIDOLIDNE OTT                                                                                                | COMDANT                                 |                                           |                                       | СНАТИ                                  | BUIEF                                                                                            | FFNFPAT.             |                                   | 3                                   |                               |
| Unit Letter Section                                                                                            |                                         | Township                                  |                                       | Range                                  |                                                                                                  |                      | County                            |                                     |                               |
| I                                                                                                              | 1                                       | 18 SC                                     | UTH                                   | 27                                     | EAST                                                                                             | NMPM                 | EL                                | DY                                  |                               |
| Actual Footage Location of                                                                                     | Well:                                   |                                           |                                       | ************************************** |                                                                                                  |                      | <u></u>                           |                                     |                               |
| 1980 feet f                                                                                                    | rom the SO                              | UTH                                       | line and                              | 990                                    | )                                                                                                | feet from t          | the EAST                          | line                                |                               |
| Ground level Elev.                                                                                             | Producing                               | Formation                                 |                                       | Pool                                   |                                                                                                  |                      |                                   | Dedicated Acrea                     | ge:                           |
| 3628                                                                                                           | Morro                                   | w                                         |                                       | North I                                | llinois                                                                                          | Camp Morro           | W                                 | 320                                 | Acres                         |
| 1. Outline the ac                                                                                              | reage dedicated                         | to the subject wel                        | i by colored per                      | cil or hachure n                       | narks on the pla                                                                                 | at below.            |                                   |                                     |                               |
| 2. If more than (                                                                                              | one lease is dedi                       | cated to the well,                        | outline each and                      | identify the ow                        | nership thereof                                                                                  | (both as to working  | ig interest and i                 | oyalty).                            |                               |
| 3. If more than (                                                                                              | one lease of diffe                      | erent ownership is                        | dedicated to the                      | well, have the                         | interest of all o                                                                                | where been consol    | idated by comm                    | unitization,                        |                               |
| unitization, fo                                                                                                | sce-pooling, etc.                       | .7                                        |                                       |                                        | •                                                                                                | • • • • •            | -                                 |                                     |                               |
| XX Yes                                                                                                         |                                         | No lían                                   | rwer is "yes" tyj                     | e of consolidati                       | ion <u>COM</u>                                                                                   | munitizati           | on                                |                                     |                               |
| If answer is "no"<br>this form if necc                                                                         | " Inst the owners                       | and user descript                         |                                       | actually obea c                        |                                                                                                  | Jae leverse sloe of  |                                   |                                     |                               |
| No allowable wi<br>or until a non-st                                                                           | ill be assigned to<br>andard unit, elim | the well until all<br>minating such inter | interests have b<br>est, has been apj | een consolidated<br>proved by the D    | f (by communit<br>ivi <b>sion</b> .                                                              | ization, unitization | , forced-poolin                   | g, or otherwise)                    |                               |
| r                                                                                                              |                                         |                                           |                                       |                                        | i                                                                                                |                      | OPERAT                            | OR CERTIFIC                         | CATION                        |
|                                                                                                                |                                         |                                           |                                       |                                        |                                                                                                  |                      | I hereby                          | certify that th                     | e information                 |
|                                                                                                                |                                         |                                           |                                       |                                        |                                                                                                  |                      | onlained herei<br>est of nor know | n in true and c<br>ladge and helief | ompiele lo lhe                |
|                                                                                                                |                                         |                                           |                                       |                                        | 1                                                                                                |                      |                                   |                                     | $\overline{}$                 |
|                                                                                                                | 1                                       |                                           |                                       |                                        |                                                                                                  | 3                    | ignature .                        | 116                                 | <u> </u>                      |
| •                                                                                                              | -                                       |                                           |                                       |                                        |                                                                                                  |                      | Kil                               | VIIce                               | nel                           |
|                                                                                                                |                                         |                                           |                                       |                                        | <b>.</b>                                                                                         | P                    | rinted Name                       |                                     |                               |
|                                                                                                                |                                         |                                           | ↓                                     |                                        | <br>                                                                                             |                      | Bill P                            | ierce                               |                               |
|                                                                                                                | ļ                                       |                                           |                                       |                                        | ļ                                                                                                | P                    | ositios                           |                                     |                               |
|                                                                                                                | ļ                                       |                                           |                                       |                                        | !                                                                                                |                      | Drilling                          | Superint                            | endent                        |
|                                                                                                                | ļ                                       |                                           |                                       |                                        |                                                                                                  |                      | lompany                           |                                     |                               |
|                                                                                                                |                                         |                                           |                                       |                                        | ļ                                                                                                | 1                    | Mewbourr                          | <u>ne Oil Com</u>                   | pany                          |
|                                                                                                                |                                         |                                           |                                       |                                        |                                                                                                  |                      | ate                               |                                     |                               |
|                                                                                                                | l                                       |                                           |                                       |                                        |                                                                                                  |                      | August 3                          | 1, 1992                             |                               |
|                                                                                                                |                                         |                                           |                                       |                                        | ļ                                                                                                |                      | SURVEY                            | OR CERTIFI                          | CATION                        |
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|                                                                                                                | ļ                                       |                                           | 1                                     |                                        | ļ                                                                                                |                      | hereby certif                     | y that the well                     | location shown                |
|                                                                                                                | I                                       |                                           | 1                                     |                                        | ļ                                                                                                |                      | n inis piai w<br>Ictual menerati  | made by me                          | pieca notes of<br>or under my |
|                                                                                                                | 1                                       |                                           |                                       |                                        | l 9                                                                                              | 90' 0e               | upervison, an                     | d that the sam                      | e is true and                 |
|                                                                                                                |                                         |                                           |                                       |                                        |                                                                                                  | 4                    | correct to the                    | best of my l                        | prowledge and                 |
|                                                                                                                | 1                                       |                                           |                                       |                                        | 1                                                                                                | 1 2                  | elief.                            |                                     |                               |
|                                                                                                                | 1                                       |                                           |                                       |                                        |                                                                                                  |                      | Date Surveyed                     |                                     |                               |
|                                                                                                                |                                         |                                           | +·                                    |                                        | ┟╴╺┥╺╸╺                                                                                          | - <b></b>            | 8/26/9                            | 92                                  |                               |
|                                                                                                                | Ì                                       |                                           | 1                                     |                                        |                                                                                                  |                      | Signature &                       | E BELLING                           |                               |
|                                                                                                                | İ                                       | • •                                       |                                       |                                        | a<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B<br>B |                      | O                                 |                                     |                               |
|                                                                                                                | İ                                       |                                           |                                       |                                        |                                                                                                  |                      | 1.5%                              |                                     | 3                             |
|                                                                                                                | i                                       |                                           |                                       |                                        |                                                                                                  | []                   | 15: 1                             | IERSCHER                            | <b>h</b>                      |
|                                                                                                                | i                                       |                                           | 1                                     |                                        | 1                                                                                                |                      | XA/L                              | JONS                                | ₽∛                            |
|                                                                                                                | i                                       |                                           | 1                                     |                                        | i                                                                                                |                      | Here                              | the to                              | an-                           |
|                                                                                                                |                                         | · · · · · · · · · · · · · · · · · · ·     |                                       |                                        | <u>i ł</u>                                                                                       |                      | Censustie No.                     | 540                                 | 1                             |
|                                                                                                                | 1320 1650                               | 1080 2310 2                               | 40 20                                 | 00 1500                                | 1000                                                                                             | 500 0                |                                   | 1                                   |                               |

#### 12. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drilling site and necessary access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by MEWBOURNE OIL COMPANY and its' contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

September 9, 1992

V

Kelly Ryan District Superintendent MEWBOURNE OIL COMPANY

The estimated depths at which anticipated C. water, oil or natural gas can be expected are: Possible surface water be-Water: tween 100' - 300'. Penrose @ 1520' Oil: Wolfcamp @ 6900' Gas: Proposed Casing Program: See Form 3160-3 D. Pressure Control Equipment: See Form 3160-3 Ε. and Exhibit "D". Mud Program: See Form 3160-3. F. Auxiliary Equipment: Mud-gas seperator, PVT G. system, and Hydraulic choke from 6,000' to T.D. Possibility of 4 H. Testing and Coring Program: DST's in the following zones: Wolfcamp, Cisco, Strawn, Morrow. No cores are planned at this time. Gamma Ray - Spectral Density Dual I. Logging: Spaced Neutron Log from T.D. to surface. Gamma Ray - Dual LaterLog - Micro

J. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to accomodate the increased pressures.

Guard Log from T. D. to Intermediate

K. Anticipated Starting Date: As soon as possible after BLM approval.

#### 11. OPERATOR'S REPRESENTATIVES:

The field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

| Kelly Ryan  | (505) 393-5905    | Box 5270  |
|-------------|-------------------|-----------|
| Bill Pierce | 24. hour aswering | Hobbs, NM |
| Greg miner  | Bervice.          | 00241     |

casing.

### 7. ANCILLARY FACILITIES:

A. None required.

- 8. WELLSITE LAYOUT:
  - A. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, reserve pits, trash container and location of major rig components.

<u>\_\_\_</u>

B. A 400' X 400' area has been flagged surroundthe staked well.

### 9. PLANS AND RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations, all equipment not needed for producing operations will be removed. Pits will be filled in after all fluids have evaporated and the location cleaned of all trash and junk to leave the wellsite in an asthetically pleasing condition as reasonably possible. All production facilities left on location will be painted to conform with BLM painting regulations within 120 days of completion.

### 10. OTHER INFORMATION:

- A. The geologic surface formation is hard clay interspersed with sand and chert outcroppings. Vegatative covering is generally sparse except in low-lying areas where grass is prevelant. Other vegatative covering consists mostly of greasewood and bear grass.
- B. The estimated tops of geologic markers are as follows:

| Queen        | 1260'        | Cisco  | 7740'   |
|--------------|--------------|--------|---------|
| 🗸 San Andres | 2100'        | Canyon | 8350'   |
| Glorieta     | 3720'        | Strawn | 8900'   |
| Tubb         | <b>4930'</b> | Atoka  | 9500'   |
| Abo          | 5900'        | Morrow | 9600'   |
| 🗸 Wolfcamp   | 6900'        | Miss.  | 10,100' |

#### 4. LOCATION AND TYPE OF WATER SUPPLY:

A. Water will be purchased from trucking companies servicing this area and will be trucked to the wellsite over existing and/or proposed roads shown on Exhibits "A" and "AA".

### 5. LOCATION OF CONSTRUCTION MATERIALS:

A. Caliche for construction of the location and any needed road repairs hopefully will come from the location itself. If this is not possible, caliche will be taken from a BLM pit located in the NE4/NW4 of Sec. 12-T18S-R27E which is BLM pit #18271203. This pit also extends into the SE4/SW4 of Sec. 1-T18S-R27E which is BLM pit # 18270114. An alternative pit which may be used in the event BLM pit #18271203 contains unsuitable material is a BLM pit located in the SW4/NE4 of Sec. 1-T18S-R27E which is BLM pit #18270107.

### 6. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
- C. Water used and produced during stimulation, production testing, squeezing opeations etc. will be disposed of in the drilling pits. Oil produced during tests will be stored on site in steel test tanks until sold.
- D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- E. All trash, junk and other waste material will be contained in an appropriate container to prevent scattering and will be removed and deposited in an approved sanitary landfill.
- F. All trash and debris will be buried or removed from the wellsite within 90 days after drilling and/or completion operations have ceased.

## MULTI-POINT BURFACE USE AND OPERATING PLAN MEWBOURNE OIL COMPANY CHALK BLUFF FEDERAL WELL NO. 3 1980' FSL & 990' FEL OF SEC. 1-T18S-R30E EDDY COUNTY, NEW MEXICO NEW MEXICO LEASE NO. NM-016788

This plan is submitted with the Application for Permit to Drill (APD) the above captioned well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities, operations plan and the magnitude of necessary surface disturbance involved, so that a complete, comprehensive appraisal can be made as to the environmental effects associated with this operation. The surface is owned by the Federal Government and is managed by the Bureau of Land Management.

- 1. EXISTING ROADS:
  - A. From the junction of U. S. 82 and U. S. 285 Highways in Artesia, proceed east on U. S. 82 12 miles. Turn right (south) on Eddy County Road #206 (Illinois Camp Road) and proceed south for 1.75 miles. Turn right (northwest) on Eddy County Road #204 and proceed .75 miles. Turn left (west) on caliche lease road and proceed 1 mile. Turn right (north) 100 yards on caliche lease road and location will be on the right hand side of the lease road. (Exhibit "A" & "AA")
    - B. Culverts: None required
    - C. Cuts and Fills: A two foot cut will be required to construct the location.
    - D. Turn-Outs: None required.
    - E. Gates or Cattleguards: None required.
- 2. LOCATION OF EXISTING WELLS
  - A. Existing wells in a 1 mile radius are shown on Exhibit "B".
- 3. LOCATION OF PROPOSED ACTIVITIES:
  - A. If the well is productive, all production facilities will be constructed on the existing pad.

| Form 3160-3<br>(November 1983)<br>(formerly 9-331C)                                                                                                                                                                                                                                                                                                                                                                                                  | I<br>DEPA<br>BU                                          | MANGE CO<br>Dra NH<br>RTMENT<br>IREAU OF | ED STATES                                | SIOA<br>NTER<br>SEMEN | SUB)<br>(O)<br>CON<br>CONT       | MIT IN TH<br>ther ins'<br>revers | RIPLICATE<br>ions on<br>le) | <ul> <li>Form approved.<br/>Budget Bureau</li> <li>Expires Augus</li> <li>5.0435z period artion</li> <li>NM-016788</li> </ul> | No. 1004-0136 CHY<br>t 31 1985 3<br>440 44241 80. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------|------------------------------------------|-----------------------|----------------------------------|----------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ON FOR                                                   | ERMIT T                                  | O DRILL                                  | DEEPE                 | N OR                             | PLUGB                            | ACK                         | 6. IF INDIAN, ALLOTTE                                                                                                         | E OB TBIBE NAME                                   |
| 1a. TYPE OF WORK                                                                                                                                                                                                                                                                                                                                                                                                                                     | DRILL XXX                                                |                                          | DEEPEN [                                 | ]                     | PL                               | UG BAG                           | ск 🗆                        | 7. UNIT AGREEMENT                                                                                                             | NAME                                              |
| b. TYPE OF WELL                                                                                                                                                                                                                                                                                                                                                                                                                                      | GAS (~)                                                  |                                          |                                          | 81                    | NGLE []                          | MULTIP                           | LB (                        |                                                                                                                               |                                                   |
| WELL                                                                                                                                                                                                                                                                                                                                                                                                                                                 | WELL LY                                                  | OTHER                                    |                                          | 20                    | NE LXI                           | ZONE                             | <u> </u>                    | Chalk Rluff                                                                                                                   | xx<br>Fed Comm                                    |
| Mowbourno                                                                                                                                                                                                                                                                                                                                                                                                                                            | nil Compan                                               |                                          |                                          |                       | 3                                | CEIVE                            | D.                          | 9. WELL NO.                                                                                                                   |                                                   |
| 3. ADDRESS OF OPERAT                                                                                                                                                                                                                                                                                                                                                                                                                                 | NR COMPAN                                                | v                                        | - <u></u>                                |                       | (1)                              | 7 1 2 1                          | 030                         | 3                                                                                                                             |                                                   |
| Box 5270                                                                                                                                                                                                                                                                                                                                                                                                                                             | Hobbs                                                    | , New Me                                 | <u>xico 8824</u>                         | 1                     |                                  |                                  | IJ <u>C</u>                 | 10. FIELD AND POOL,                                                                                                           | OR WILDCAT                                        |
| 4. LOCATION OF WELL<br>At surface<br>1980 <sup>1</sup> FSL<br>At proposed prod.<br>Same                                                                                                                                                                                                                                                                                                                                                              | and 990'                                                 | FEL                                      | In accordance with                       | I aly s               | A DT                             | 859 - Di                         | A<br>NCF                    | North Illinoi<br>11. BEC., T., R., M., OR<br>AND SURVEY OR A<br>185 21<br>1-T175-R29                                          | s Camp Morrow<br>BLX.<br>PE<br>E                  |
| 14. DISTANCE IN MIL                                                                                                                                                                                                                                                                                                                                                                                                                                  | ES AND DIRECTIO                                          | N FROM NEAR                              | EST TOWN OR POS                          | r office              | •                                |                                  |                             | 12. COUNTY OR PARISE                                                                                                          | 18. STATE                                         |
| 12 miles                                                                                                                                                                                                                                                                                                                                                                                                                                             | southeast                                                | of Artes                                 | ia, New Me                               | xico                  |                                  |                                  |                             | Eddy                                                                                                                          | NM                                                |
| 15. DISTANCE FROM PI<br>LOCATION TO NEAL                                                                                                                                                                                                                                                                                                                                                                                                             | LOPOSED*<br>REST                                         |                                          |                                          | 16. NO.               | OF ACRES IN                      | LEASE                            | 17. NO. 0<br>TO TI          | OF ACRES ASSIGNED<br>HIS WELL                                                                                                 |                                                   |
| (Also to nearest                                                                                                                                                                                                                                                                                                                                                                                                                                     | drig. unit line, i                                       | f any)                                   | 990'                                     | 10 100                | 320                              |                                  | 20 8074                     | 320                                                                                                                           |                                                   |
| TO NEAREST WELL<br>OR APPLIED FOR. ON                                                                                                                                                                                                                                                                                                                                                                                                                | L, DRILLING, COM                                         | PLETED,                                  | 20401                                    | 10. 11.               | 0 3001                           |                                  | RC                          | tary                                                                                                                          |                                                   |
| 21. ELEVATIONS (Show                                                                                                                                                                                                                                                                                                                                                                                                                                 | whether DF, RT                                           | , GR, etc.)                              | 2010                                     | ·                     | 0,000                            |                                  |                             | 22. APPROX. DATE WO                                                                                                           | DEK WILL START*                                   |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 28' GR                                                   |                                          |                                          |                       |                                  | *                                | <u>.</u>                    | Upon BLM app                                                                                                                  | roval                                             |
| 23.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                          | 1                                        | PROPOSED CASI                            | NG AND                | CEMENTING                        | PROGRAM                          | M N                         | o Water Basin                                                                                                                 |                                                   |
| SIZE OF HOLE                                                                                                                                                                                                                                                                                                                                                                                                                                         | BIZE OF                                                  | CASING                                   | WEIGHT PER FO                            | 700 <b>T</b>          | SETTING                          | DEPTH                            | 150                         | QUANTITY OF CEME                                                                                                              | TT                                                |
| 17 1/2"                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                          | <u>3/8"  </u>                            | <u> </u>                                 | ·                     |                                  | -<br>                            | 450 s                       | KS. LIASS L C                                                                                                                 | Trculated                                         |
| <u>12 1/4"</u><br>8 3/1"                                                                                                                                                                                                                                                                                                                                                                                                                             | 93                                                       | /8                                       | <u> </u>                                 |                       | 10,300                           | <u> </u>                         | <u> 800 sk</u>              | (s. of Class "                                                                                                                | H" SEE STIPS.                                     |
| Mud Program:                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                          | / -                                      |                                          | 1                     |                                  |                                  | 1                           | Part<br>10-                                                                                                                   | ID-1<br>16-91                                     |
| <ul> <li>0-400' Spud mud with fresh water gel and lime. LCM as needed.</li> <li>400' - 2600' Fresh water gel and lime. LCM as needed.</li> <li>2,600' - 8500' Cut brine with lime for pH control. Wt. 9.2 - 9.6# ppg, WL - NC. LCM as needed.</li> <li>8,500 - 10.300' Cut brine with Drispac, salt gel, lime, soda ash, and starch. Wt. 9.2 - 9.6 ppg. WL 10 CC or less. Raise weight accordingly if abnormal pressures are encountered.</li> </ul> |                                                          |                                          |                                          |                       |                                  |                                  |                             |                                                                                                                               |                                                   |
| BOP PROGRAM:                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                          |                                          |                                          |                       |                                  |                                  |                             |                                                                                                                               |                                                   |
| 900 series B                                                                                                                                                                                                                                                                                                                                                                                                                                         | OP and Hy                                                | drill on                                 | 13 3/8" su                               | irface                | e casing                         | and on                           | 9 5/8                       | " intermediate                                                                                                                | casing.                                           |
| Gas is not d<br>IN ABOVE SPACE DESC<br>zone. If proposal is<br>preventer program, if                                                                                                                                                                                                                                                                                                                                                                 | edicated.<br>RIBE PROPOSED F<br>to drill or deep<br>any. | PROGRAM: If poen directional             | roposal is to deep<br>ly, give pertinent | en or pl<br>data op   | lug back, give<br>n subsurface l | data on pr<br>locations an       | resent produ<br>id measured | uctive sone and propose<br>and true vertical dept                                                                             | ed new productive<br>bs. Give blowout             |
| 24.                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1// /2                                                   |                                          |                                          |                       |                                  |                                  |                             | 00.000                                                                                                                        | 11002                                             |
| SIGNED                                                                                                                                                                                                                                                                                                                                                                                                                                               | ly ley                                                   | pa-                                      | TIT                                      |                       | Strict S                         | uperint                          | endent                      | DATE                                                                                                                          | <u> </u>                                          |
| (This space for                                                                                                                                                                                                                                                                                                                                                                                                                                      | ederal or State                                          | office use)                              |                                          |                       |                                  |                                  |                             |                                                                                                                               |                                                   |
| PERMIT NO                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                          |                                          |                                          |                       | APPROVAL DAT                     | e                                |                             | 169                                                                                                                           | BEAU OF LAND                                      |
| APPROVED BY                                                                                                                                                                                                                                                                                                                                                                                                                                          | ROVAL IF ANY                                             |                                          | <b>T</b> IT                              | LE                    |                                  | i din d                          |                             | DATE                                                                                                                          | AFTER                                             |
| APPROVAL                                                                                                                                                                                                                                                                                                                                                                                                                                             | SUBJECT TO                                               | )<br>                                    |                                          |                       |                                  |                                  |                             | /                                                                                                                             | C WANTEN                                          |
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                              | REQUIREMEN                                               | TS AND                                   |                                          |                       |                                  |                                  |                             |                                                                                                                               | cp, w m                                           |
| SPECIAL S                                                                                                                                                                                                                                                                                                                                                                                                                                            | STIPULATIONS                                             | 5                                        | *See Instru                              | ctions (              | On Reverse                       | : Side                           |                             | 8 0/0.                                                                                                                        | 1992 05                                           |
| Title 18 U.S.C. SE<br>United States any fa                                                                                                                                                                                                                                                                                                                                                                                                           | tion 1001, mak<br>alse, fictitious                       | es it a crime<br>or fraudulen            | e for any person<br>it statements or     | knowin<br>represe     | gly and will<br>ntations as      | fully to ma<br>to any ma         | ake to any<br>tter within   | department 3 agend<br>its jurisdiction.                                                                                       | $N_{M}$                                           |

#### INSTRUCTIONS

from, the local Federal and/or State office. cedures and practices, either are shown below or will be issued by, or may be obtained number of copies to be submitted, particularly with regard to local, area, or regional proregulations. Any necessary special instructions concerning the use of this form and the redetal or a State agency, or both, pursuant to applicable Federal and/or State laws and tions, as indicated, on all types of lands and leases for appropriate action by either a GENERAL: This form is designed for submitting proposals to perform certain well opera-

or Federal office for specific instructions. land should be described in accordance with Federal requirements. Consult local State ITEM 4: If there are no applicable State requirements, locations on Federal or Indian State or Federal regulations concerning subsequent work proposals or reports on the well. tion or to a new reservoir, use this form with appropriate notations. Consult applicable ITEM 1: If the proposal is to redrift to the same reservoir at a different subsurface loca-

be furnished when required by Federal or State agency offices. land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should ITEM 14: Needed only when location of well cannot readily be found by road from the

subsurface location of hole in any present or objective production zone. ITEMS 15 AND 18: If well is to be, ot has been directionally drilled, give distances for

ITEM 22: Consult applicable Federal or State regulations, or appropriate officials, con-

cerning approval of the proposal before operations are started.

#### NOTICE

uon anished the following information in connection with information required by this applica-The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be fur-

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR Part 3160.

application for permit to drill, deepen, or plug back an oil or gas well. PRINCIPAL PURPOSE: The information is to be used to process and evaluate your

Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory (4)(5) Information from the record and/or the record will be transferred to appropriate ment and the projected impact on the land involved. (3) The evaluation of the effects of proposed operation on surface and subsurface water and other environmental impacts. the Federal or Indian resources encountered. (2) The review of procedures and equip-ROUTINE USES: (1) The analysis of the applicant's proposal to discover and extract

tion on an oil and gas lease. closure of the information is mandatory only if the lessee elects to initiate drilling opera-EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disinvestigations or prosecutions, as well as routine regulatory responsibility.

ះរខបា The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq) requires us to inform you

'saseat sed pue vironmental factors involved with drilling for oil and/or gas on Federal and Indian oil This information is being collected to allow evaluation of the technical, safety, and en-

This information will be used to analyze and approve applications.

tions on an oil and gas lease. Response to this request is mandatory only if the lessee elects to initiate drilling opera-

|                                                                                                                   | ·                                                                                                                                  |                                                                  | RECEIVED                                                                                                       | dsf                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form 3160-5<br>(June 1990)                                                                                        | UNI<br>DEPARTMEN<br>BUREAU OF I                                                                                                    | TED STATES<br>T OF THE INTERIOF<br>AND MANAGEMEN                 | FORM APPROVED<br>Budget Bureau No. 1004–0135<br>Expires: March 31, 1993<br>5. Lease Designation and Serial No. |                                                                                                                                                                                                                       |
| Do not use this f                                                                                                 | SUNDRY NOTICES<br>orm for proposals to dr<br>Jse "APPLICATION FO                                                                   | AND REPORTS ON<br>III or to deepen or ree<br>R PERMIT—" for such | WELLS<br>ntry to a different reservoir.<br>a proposals                                                         | NM-0557377<br>6. If Indian, Allottee or Tribe Name                                                                                                                                                                    |
|                                                                                                                   | SUBMIT                                                                                                                             | IN TRIPLICATE                                                    |                                                                                                                | 7. If Unit or CA, Agreement Designation                                                                                                                                                                               |
| Address and Telephone     P.O. Box 5     Address and Telephone     P.O. Box 5     Address C. 1-T18     Sec. 1-T18 | Other<br>Oil Company<br>No.<br>5270 Hobbs, New M<br>ge, Sec., T., R., M., or Survey D<br>& 990' FEL<br>SS-R27E<br>APPROPRIATE BOX( | exico 88241 (5<br>scription)                                     | 05) 393-5905<br>TURE OF NOTICE, REPC                                                                           | 8. Well Name and No.<br>Chalk Bluff Federal<br>9. API Well No.<br>3001527163<br>10. Field and Pool, or Exploratory Area<br>North Illinois Camp<br>11. County or Parish, State Morrow<br>Eddy Co., N.M.                |
| TYPE OF                                                                                                           | SUBMISSION                                                                                                                         |                                                                  | TYPE OF ACTION                                                                                                 | ١                                                                                                                                                                                                                     |
| <ul> <li>Notice</li> <li>Subsequ</li> <li>Final A</li> </ul>                                                      | of Intent<br>ient Report<br>bandonment Notice                                                                                      | Aband<br>Recom<br>Pluggi<br>Casing<br>Alterin<br>Other           | Jumment<br>pletion<br>ng Back<br>Repair<br>ug Casing<br><u>Spud well &amp; cemented</u><br>13-3/8" surf. csg.  | Change of Plans Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion of Report and Log form.) |

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Spudded well @ 4:00 p.m. MST 11/24/92. Drilled 17-1/2" surface hole to 400' KB. Ran 10 joints of 13-3/8", 54.50#, New LS, ST&C casing and set @ 400' KB. Western cemented w/100 sks. Class "H" cement containing 12% Thixad + 3% CaCl2 followed by 265 sks. of Class "C" containing 6% Gel + 3% CaCl2 + 1/4 pps celloseal + 5 pps gilsonite followed by 150 sks. of Class "C" neet containing 3% CaCl2. Circulated 50 sks. of cement to the pit. Job complete @ 5:30 a.m. 11/25/92.

| N. M. M. M. M. M. M. M. M. M. M. M. M. M.                             |  |
|-----------------------------------------------------------------------|--|
| 14. I hereby certify that the foregoing is true and correct<br>Signed |  |
| (This space for Federal or State office use)<br>Approved by           |  |

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

# **GENERAL INSTRUCTIONS**

structions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special in-

# SPECIFIC INSTRUCTIONS

zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

Item 4-If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 13—Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive

# NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et. seq., 351 et. seq., 25 U.S.C. et. seq.; 43 CFR 3160.

PRINCIPAL PURPOSE — The information is to be used to evaluate, when appropriate, approve applications, and report completion of secondary well operations, on a Federal or Indian lease.

**BOUTINE USES:** 

**`**\*'

- (1) Evaluate the equipment and procedures used during the proposed or completed subsequent well operations.
- (2) Request and grant approval to perform those actions covered by 43 CFR 3162.3-2(2).
- (5) Analyze future applications to drill or modify operations in light of data obtained and methods
- used. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

EFFECT OF NOT PROVIDING INFORMATION — Filing of this notice and report and disclosure of the information is mandatory once an oil or gas well is drilled.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et. seq.) requires us to inform you that: This information is being collected in order to evaluate proposed and/or completed subsequent well

operations on Federal or Indian oil and gas leases.

This information will be used to report subsequent operations once work is completed and when requested, to obtain approval for subsequent operations not previously authorized.

Response to this request is mandatory for the specific types of activities specified in 43 CFR Part 3160.

#### TNEMETATS SRUOH NEGRUB

Public reporting burden for this form is estimated to average 25 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct Bureau of Land Management, (Alternate) Bureau Clearance Officer, (WO-771), 18 and C Streets, N.W., Washington, D.C. 20240, and the Office of Management and Budget, Paperwork Reduction Project (1004-0135), Washington, D.C. 20503.

1. 1

|                                                                     |                                                                                          | KECEIVED                                                 |                                                                                                                                                                                |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form 3160-5<br>(June 1990)                                          | UNITED STA<br>DEPARTMENT OF TH<br>BUREAU OF LAND M/                                      | TES<br>E INTERIOR<br>ANAGEMENT<br>O. C. D.               | FORM APPROVED<br>Budget Bureau No. 1004-0135<br>Expires: March 31, 1993<br>5. Lease Designation and Serial No.                                                                 |
| <b>SU</b><br>Do not use this form f<br>Use "                        | NDRY NOTICES AND RE<br>for proposals to drill or to d<br>APPLICATION FOR PERMIT          | PORTS ON WELLS                                           | 6. If Indian, Allottee or Tribe Name                                                                                                                                           |
|                                                                     | SUBMIT IN TRIP                                                                           | PLICATE                                                  | 7. If Unit or CA, Agreement Designation                                                                                                                                        |
| 1. Type of Well       Oil       Well       Well       Well          | Other                                                                                    |                                                          | 8. Well Name and No.<br>Chalk Bluff Federal                                                                                                                                    |
| Mewbourne 0il<br>3. Address and Telephone No.<br>P.O. Box 5270      | 9. API Well No. COMM. #3<br><u>3001527163</u><br>10. Field and Pool, or Exploratory Area |                                                          |                                                                                                                                                                                |
| 4. Location of Well (Footage, Sec<br>1980' FSL & 1<br>Sec. 1-T18S-R | , T., R., M., or Survey Description)<br>FEL<br>27E                                       |                                                          | N. Illinois Camp Morrow<br>11. County or Parish, State<br>Eddy Co., New Mexico                                                                                                 |
| 12. CHECK APP                                                       | ROPRIATE BOX(s) TO IN                                                                    | DICATE NATURE OF NOTICE, RI                              | EPORT, OR OTHER DATA                                                                                                                                                           |
| TYPE OF SUBI                                                        | MISSION                                                                                  | TYPE OF AC                                               | TION                                                                                                                                                                           |
| Notice of Inten                                                     | t                                                                                        | Abandonment Recompletion                                 | Change of Plans New Construction                                                                                                                                               |
| Subsequent Rep                                                      | port                                                                                     | Plugging Back                                            | Non-Routine Fracturing Water Shut-Off                                                                                                                                          |
| Final Abandon                                                       | ment Notice                                                                              | Altering Casing<br>Other <u>Cement 9-5/8" Int</u><br>Cas | Conversion to Injection<br>Conversion to Injection<br>Dispose Water<br>(Note: Report results of multiple completion on Well<br>Completion or Recompletion Benom and Log (orm.) |

CISF

Drilled 12-1/4" Intermediate hole to 2600' KB. Ran 59 joints of 9-5/8", 36#, New LS, ST&C casing and set @ 2600' KB. Western cemented with 590 sacks of Class "C" lite containing 6% gel + 10 pps NaCl + 1/4 pps celloseal followed by 250 sacks of Class "C" containing 2% CaCl2. Circulated 50 sacks of cement to the pit. Job complete @ 11: 50 p.m. 11/29/92.

|                                                                       |                | DECOPTOS |
|-----------------------------------------------------------------------|----------------|----------|
| 14. I hereby certify that the foregoing is true and correct<br>Signed | Drilling Supt. | 12-02-92 |
| (This space for Federard's State office use)<br>Approved by           |                | Date     |

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*See Instruction on Reverse Side

# **GENERAL INSTRUCTIONS**

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# SPECIFIC INSTRUCTIONS

zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

Item 4--If there are no applicable State requirements, locations on Federal requirements. Consult local State or Federal office for specific instructions.

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AUTHORITY: 30 U.S.C. 181 et. seq., 351 et. seq., 25 U.S.C. et. seq.; 43 CFR 3160.

PRINCIPAL PURPOSE — The information is to be used to evaluate, when appropriate, approve applications, and report completion of secondary well operations, on a Federal or Indian lesse.

**BOUTINE USES:** 

- (1) Evaluate the equipment and procedures used during the proposed or completed subsequent well operations.
- (2) Request and grant approval to perform those actions covered by 43 CFR 3162.3-2(2).
- (3) Analyze future applications to drill or modify operations in light of data obtained and methods
- used. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

EFFECT OF NOT PROVIDING INFORMATION — Filing of this notice and report and disclosure of the information is mandatory once an oil or gas well is drilled.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et. seq.) requires us to inform you that: This information is being collected in order to evaluate proposed and/or completed subsequent well

operations on Federal or Indian oil and gas leases.

This information will be used to report subsequent operations once work is completed and when requested, to obtain approval for subsequent operations not previously authorized.

Response to this request is mandatory for the specific types of activities specified in 43 CFR Part 3160.

#### TNEMETATS SAUOH NEGRUB

Public reporting burden for this form is estimated to average 25 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct Bureau of Land Management, (Alternate) Bureau Clearance Officer, (WO-771), 18 and C Streets, N.W., Washington, D.C. 20240, and the Office of Management and Budget, Paperwork Reduction Project (1004-0135), Washington, D.C. 20503.

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|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Earm 1160 1                                        | s UNI                                                                                                                                                                                                | TED STATES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FORM APPROVED                                                                                                                   |
| (June 1990)                                        | DEFARTMEN                                                                                                                                                                                            | T OF THE INTERIOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Budget Bureau No. 1004–0135<br>Expires: March 31, 1993                                                                          |
|                                                    | BUREAU OF I                                                                                                                                                                                          | AND MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5. Lease Designation and Serial No                                                                                              |
|                                                    |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NM-0557371                                                                                                                      |
| Do not                                             | SUNDRY NOTICES<br>use this form for proposals to dri                                                                                                                                                 | AND REPORTS ON WELLS<br>ill or to deepen or reentry to a different reservoir.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6. If Indian, Allottee or Tribe Name                                                                                            |
|                                                    | Use "APPLICATION FO                                                                                                                                                                                  | R PERMIT—" for such proposals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                 |
|                                                    | SUBMIT                                                                                                                                                                                               | 7. If Unit of CA, Agreement Designation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                 |
| I. Type of Oil                                     |                                                                                                                                                                                                      | and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec | 8. Well Name and No.                                                                                                            |
| 2. Name of                                         | Operator                                                                                                                                                                                             | 〔主张台 ≤ 100 ¥                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Chalk Bluff Fed. Comm. 3                                                                                                        |
| Mew<br>3. Address                                  | bourne Oil Company                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 30-015-27163                                                                                                                    |
| P_0                                                | Box 5270 Hobbs, New Me                                                                                                                                                                               | xico 88241                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10. Field and Pool, or Exploratory Area                                                                                         |
| 4. Location                                        | of Well (Footage, Sec., T., R., M., or Survey D                                                                                                                                                      | escription)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | N. Illinois Camp Morrow                                                                                                         |
| 198                                                | 0' FSL & 1980 FEL                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                 |
| Sec                                                | . 1-T18S-R27E                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Eddy                                                                                                                            |
| 12.                                                | CHECK APPROPRIATE BOX(                                                                                                                                                                               | s) TO INDICATE NATURE OF NOTICE, REPO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RT, OR OTHER DATA                                                                                                               |
|                                                    | TYPE OF SUBMISSION                                                                                                                                                                                   | TYPE OF ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                 |
| · · · · · ·                                        | Notice of Intent                                                                                                                                                                                     | Abandonment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Change of Plans                                                                                                                 |
|                                                    | -                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | New Construction                                                                                                                |
|                                                    | Subsequent Report                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Non-Routine Fracturing                                                                                                          |
|                                                    |                                                                                                                                                                                                      | Litering Casing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Conversion to Injection                                                                                                         |
|                                                    | Final Abandonment Notice                                                                                                                                                                             | other <u>Cement 7" casing</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Dispose Water                                                                                                                   |
|                                                    |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (Note: Report results of multiple completion on Well<br>Completion or Recompletion Report and Log form.)                        |
| 13. Describe                                       | e Proposed or Completed Operations (Clearly state a                                                                                                                                                  | I pertinent details, and give pertinent dates, including estimated date of startin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ig any proposed work. If well is directionally drilled,                                                                         |
| Lost<br>26#<br>0 69<br>sks.<br>Lite<br>cont<br>"H" | t complete returns @ 7683'<br>& 29#, N-80 & S-95 grade<br>997' and external casing p<br>of Class "H" containing<br>e. Set ECP and opened DV<br>taining 1 pps celloseal +<br>Neet. Plug down to 6997' | Dry drilled 8-3/4" hole to 8968'.<br>used API casing and set 0 8968'. Mu<br>backer 0 7026'. Western cemented the<br>8 pps CSE + .75% CF-14 + 5 pps Gilson<br>tool. Cemented 2nd stage w/750 sks.<br>5 pps gilsonite + 3% salt followed by<br>0 2:45 a.m. 12/26/92                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Ran 226 Jts. of 7",<br>Itiple stage cementer<br>first stage w/350<br>nite + .35% Thrifty<br>of Class "C"<br>y 100 sks. of Class |
|                                                    |                                                                                                                                                                                                      | ACCOMIND FOR RECORD<br>OR G. SGD.) DAVID R G<br>FEB 4 1993<br>CARLSEAD, NEW MERIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | RECEIVED<br>JAN 25 9 40 M 93<br>CARLES STORES                                                                                   |
| 14. I hereby                                       | y certify that the foregoing is true and correct                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                 |
| Signed .                                           | Vsu vience                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Date                                                                                                                            |
| (This sp                                           | pace for Federal or State office use)                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Dette                                                                                                                           |
| Approve<br>Condition                               | ed by<br>ons of approval, if any:                                                                                                                                                                    | Title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                 |
|                                                    |                                                                                                                                                                                                      | bowingly and willfully to make to any department or essence of the United                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | d States any false, fictitious or fraudulent statements                                                                         |
| or represent                                       | 5.C. Section 1001, makes it a crime for any person<br>tations as to any matter within its jurisdiction.                                                                                              | a mowingly and without to make to any department of agency of the Clinic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                 |

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|--------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Form 3160-5                    | UNI                                                                                                | FED STATES .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | FORM APPROVEI                                                                                            |
| (June 1990)                    | DEPARTMEN                                                                                          | T OF THE INTERIOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Expires: March 31, 1973                                                                                  |
|                                | BUREAU OF I                                                                                        | AND MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5. Lease Designation and Serial No                                                                       |
|                                | SUNDRY NOTICES                                                                                     | AND REPORTS ON WELLS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6 If Indian, Allottee or Tribe Name                                                                      |
| Do not u                       | use this form for proposals to dr<br>Use "APPLICATION FO                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |
|                                | SUBMIT                                                                                             | 7. If Unit or CA, Agreement Designation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                          |
| 1. Type of W                   | 'ell                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 9. Well News and No.                                                                                     |
| Well                           | Well Other                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Chalk Pluff Fod Comm #2                                                                                  |
| 2. Name of C                   | perator                                                                                            | i. 🖕 🖓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 9. API Well No.                                                                                          |
| 3. Address a                   | d Telephone No.                                                                                    | t start and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s | 30-015-27163                                                                                             |
| P.O.                           | Box 5270 Hobbs, New Me>                                                                            | (ico 88241                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10. Field and Pool, or Exploratory Area                                                                  |
| 4. Location of                 | f Well (Footage, Sec., T., R., M., or Survey D                                                     | escription)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | N. Illinois Camp Morrow                                                                                  |
| 1000                           |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1. County of Farmer, Cart                                                                                |
| 1980<br>Sec                    | 1-T18S-R27F                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Eddy                                                                                                     |
| 12.                            | CHECK APPROPRIATE BOX                                                                              | s) TO INDICATE NATURE OF NOTICE, REPO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RT, OR OTHER DATA                                                                                        |
|                                |                                                                                                    | TYPE OF ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                          |
|                                |                                                                                                    | Abandonment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Change of Plans                                                                                          |
|                                | Notice of Intent                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | New Construction                                                                                         |
|                                | Subsequent Report                                                                                  | Plugging Back                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Non-Routine Fracturing                                                                                   |
|                                |                                                                                                    | Casing Repair                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Water Shut-Off                                                                                           |
|                                | Final Abandonment Notice                                                                           | Altering Casing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Dispose Water                                                                                            |
|                                |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (Note: Report results of multiple completion on Well<br>Completion or Recompletion Report and Log form.) |
| 13. Describe                   | Proposed or Completed Operations (Clearly state a                                                  | Il pertinent details, and give pertinent dates, including estimated date of starti                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ng any proposed work. If well is directionally drilled,                                                  |
| give                           | subsurface locations and measured and true verti                                                   | cal depths for all markers and zones pertinent to this work.)*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                          |
| Dr<br>N-                       | illed well to a total dep<br>80. used API casing and                                               | oth of 10,150' w/6" hole, ran 45 jts.<br>hung liner from 8599' to 10,150'. We                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | of 4-1/2", 11.6#,<br>stern cemented                                                                      |
| w/<br>10                       | 200 sks. of Class "H" co<br>0 sacks of Klay-Treat.                                                 | ntaining 5 pps CSE + 20 pps SF-3 + .9<br>Plug down to 10,113' @ 5:00 a.m. 01/0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | % CF-14 + 1 gal./<br>16/93. Released                                                                     |
| ri                             | g and moved off location                                                                           | . 01/08/93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                          |
|                                |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | >0 <b>-</b>                                                                                              |
|                                |                                                                                                    | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                          |
|                                |                                                                                                    | ACCENT RELATE DESIGN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                          |
|                                |                                                                                                    | ADIC SCAL DAVID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |
|                                |                                                                                                    | (DRIG. SGD.) DAVID R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | GLASS C T                                                                                                |
|                                |                                                                                                    | 1 4 1993                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | o m                                                                                                      |
|                                |                                                                                                    | A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF A CONTRACTOR OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |
|                                |                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>6 6 6</b>                                                                                             |
| 14. 1 hereby                   | certify that the foregoing is tree and correct                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |
| Signed                         | Bill fierce                                                                                        | Tide Drilling Superintendent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Date01/21/93                                                                                             |
| (This spa                      | ce for Federal or State office use)                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |
| Approve                        | 1 by                                                                                               | Title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Date                                                                                                     |
| Conditio                       | ns of approval, if any:                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |
|                                | · · · · · · · · · · · · · · · · · · ·                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ad States any fates firstitious or fraudulant statements                                                 |
| Title 18 U.S.<br>or representa | C. Section 1001, makes it a crime for any perso<br>tions as to any matter within its jurisdiction. | n knowingly and willfully to make to any department or agency of the Unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | au states any taise, iteritous of manufacture statements                                                 |
|                                |                                                                                                    | *See Instruction on Reverse Side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | · · ·                                                                                                    |

| OPERATOR       MEW BOHAVE       OFL       CO         WELL NAME       CHVLK BLAFF FEO Com # 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Southeastern New Mexico       Northwestern New         Anhy       T. Canyon       T. Ojo Alamo       T. Pen         State ocd tops as per       MRL AstHLE?       Datte         State       T. Canyon       T. Ojo Alamo       T. Pen         Salt       T. Strawn       9432       T. Kirdand-Fraitland       T. Pen         Salt       T. Atoka       9440       T. Fichned Cliffs       T. Lear         Yates       456       T. Devonian       T. Mancos       T. Marces         Queen       157       T. Silurian       T. Mancos       T. Marces         Garyburg       1934       T. Montoya       T. Mancos       T. Marces         Gloriera       3535       T. McKee       Base Greenhorn       T. G.         Blinebry       T. Gr. Wash       T. Monrison       T.       T.         Tubb       4760       T. Delaware Sand       T. Toolito       T.         Molfcamp       6745       T. Morison       T.       T.         Wolfcamp       6745       T. Morison       T.       T.         Standard       T. Gr. Wash       T. Coling       T.       T.         Tubb       4760       T. Delaware Sand       T. Coling       T. <t< th=""><th></th></t<> |           |
| WELL NAME       CHUK BLUFF FEO Com #3         STATE OCD TOPS AS PER       MARL ASHLEY       DATH         STATE OCD TOPS AS PER       MARL ASHLEY       DATH         Anhy       T. Canyon       T. Ojo Alamo       T. Perr         Salt       T. Stawn       2472       T. Kintand-Fruitland       T. Perr         Salt       T. Atokas       24/90       T. Picmarel Cliffs       T. Perr         Yates       450       T. Miss       T. Cliff House       T. Elber         7 Rivers       565       T. Devonian       T. Mancos       T. Mac         Queen       1/34       T. Silurian       T. Mancos       T. Mac         Garyburg       1474       T. Montorya       T. Gallup       T. Iger         San Andres       1/955       T. Simpson       T. Gallup       T. Iger         San Andres       1/955       T. McKee       Base Greenhorn       T. Gr.         Blinebry       T. Gr. Wash       T. Montorya       T       T.         Tubb       4760       T. Delaware Sand       T. Todilto       T.         Abo       57195       T. Modeov LS       4710       T. Wingane       T.                                                                      |           |
| STATE OCD TOPS AS PER       MARL Astiller       DATE         Southeastern New Mexico       Northwestern New         Anhy       T. Canyon       T. Ojo Alamo       T. Perr         Salt       T. Strawn       2932       T. Kiriand-Fraitland       T. Perr         Salt       T. Atokz       9490       T. Pienned Cliffs       T. Perr         Yates       450       T. Miss       T. Cliff House       T. Mar         Queen       1997       T. Slurian       T. Point Lookout       T. Eber         Grayburg       1994       T. Montoyz       T. Mancos       T. Medica         Glorieta       3535       T. McKee       Base Greenhorn       T. Gravita         Paddock       T. Ellenburger       T. Dakoza       T.       T.         Binebry       T. Gr. Wath       T. Monrison       T.       T.         Tubb       4760       T. Deizware Sand       T. Todilto       T.       T.         Drinkard       T. Bone Springs       T.       T.       T.       T.         Mol_       5795       T. Morkov LS       9710       T. Wingare       T.         Mol_       5795       T. Morkov LS       9710       T. Wingare       T.                              |           |
| Southenstern New Mexico       Northwestern New         Anhy       T. Canyon       T. Ojo Alamo       T. Perm         Salt       T. Strawn       9932       T. Kirtland-Fruitland       T. Perm         Salt       T. Atoka       9940       T. Kirtland-Fruitland       T. Perm         Yates       450       T. Miss       T. Perm       T. Perm         Yates       450       T. Miss       T. Cliff House       T. Lean         7 Rivers       665       T. Devonian       T. Menefee       T. Marcos       T. Marcos         Queen       1154       T. Silurian       T. Mancos       T. Menefee       T. Marcos         Grayburg       1494       T. Montoya       T. Mancos       T. Mex       Mex         San Andres       1485       T. Simpson       T. Gallup       T. Igna         Glorietz       5935       T. McKee       Base Greenhorn       T. Grag         Blinebry       T. Gr. Wash       T. Monrison       T.       T.         Tubb       4760       T. Delaware Sand       T. Todilto       T.         Drinkard       T. Bone Springs       T. Emraiz       T.       T.         Abo       5745       T       9740       T. Wingare             | 1-25-93   |
| Anny       T. Canyon       9932       T. Minand-Fruitland       T. Pern         Salt       T. Strawn       9932       T. Kiritand-Fruitland       T. Pern         Salt       T. Atoka       9940       T. Kiritand-Fruitland       T. Pern         Yates       450       T. Miss       T. Pern       T. Pern         Yates       450       T. Miss       T. Cliff House       T. Lean         7 Rivers       669       T. Devonian       T. Menefee       T. Mar         Queen       1169       T. Silurian       T. Menefee       T. Mar         Grayburg       14944       T. Montoya       T. Mancos       T. Men         San Andres       1985       T. Simpson       T. Gallup       T. Ign:         Glorieta       3535       T. McKee       Base Greenhorn       T. Gradito         Blinebry       T. Gr. Wash       T. Morrison       T.       T.         . Drinkard       .       T. Bone Springs       T. Enterata       T.         . Abo       5745       T. MoRev LS       9710       T. Wingate       T.         . Wolfcamp       6475       T       T.       T.       T.                                                                              | Mexico    |
| Sait       T. Strawn       9490       T. Kithand-Frintland       T. Pern         Sait       T. Atoka       9490       T. Pictured Cliffs       T. Pern         Yates       450       T. Miss       T. Cliff House       T. Lea         7 Rivers       565       T. Devonian       T. Menefee       T. Mar         Queen       //69       T. Silurian       T. Menefee       T. Mar         Grayburg       //474       T. Montoya       T. Mancos       T. Med         Grayburg       //474       T. Montoya       T. Mancos       T. Med         San Andres       //485       T. Simpson       T. Gallup       T. Ign:         Glorietz       3535       T. McKee       Base Greenhorn       T. Gra         Paddock       T. Ellenburger       T. Dakora       T.       T.         Blinebry       T. Gr. Wash       T. Monrison       T.       T.         Drinkard       T. Bone Springs       T. Enrada       T.       T.         Abo       5745       T. Montov LS       9710       T. Wingare       T.         Wolfcamp       6425       T       T.       T.       T.                                                                                            |           |
| Sait       T. Atoka.       T. Pictures (Lifts)       T. Lea         Yates       450       T. Miss       T. Cliff House       T. Lea         7 Rivers       669       T. Devonian       T. Menefee       T. Mar         Queen       //69       T. Silurian       T. Point Lookout       T. Elbe         Grayburg       //494       T. Montoya       T. Mancos       T. Menefee         Grayburg       //494       T. Montoya       T. Mancos       T. Menefee         San Andres       //985       T. Simpson       T. Gallup       T. Igni         Glorieta       5635       T. McKee       Base Greenhorn       T. Gra         Paddock       T. Ellenburger       T. Dakota       T.       T.         Paddock       T. Gr. Wash       T. Monrison       T.       T.         Tubb       4760       T. Delaware Sand       T. Todilto       T.         Drinkard       T.       MoReov LS       9710       T. Wingate       T.         Wolfcamp       6425       T       T.       T.       T.                                                                                                                                                                         | · "D"     |
| Yates       2450       T. Miss       T. Chill House       T. Mar         7 Rivers       665       T. Devonian       T. Menefree       T. Mar         Queen       1/59       T. Silurian       T. Point Lookout       T. Elba         Grayburg       1994       T. Montoya       T. Mancos       T. Mar         Grayburg       1994       T. Montoya       T. Mancos       T. Menefree         San Andres       1985       T. Simpson       T. Gallup       T. Ign:         Gloriera       3535       T. McKee       Base Greenhorn       T. Gra         Paddock       T. Ellenburger       T. Dakora       T.         Blinebry       T. Gr. Wash       T. Monrison       T.         Tubb       4760       T. Delaware Sand       T. Enrada       T.         Drinkard       T. Morklov US       9710       T. Wingare       T.         Wolfcamp       6475       T       T. Chinie       T.                                                                                                                                                                                                                                                                          | ville     |
| 7 Rivers       769       T. Devonian       T. Mentelier         Queen       1/69       T. Silurian       T. Point Lookout       T. Elbe         Grayburg       1494       T. Monnoya       T. Mancos       T. Mentelier         San Andres       1985       T. Simpson       T. Gallup       T. Ign:         Gloriera       3535       T. McRee       Base Greenhorn       T. Gra         Paddock       T. Ellenburger       T. Morrison       T.         Blinebry       T. Gr. Wash       T. Morrison       T.         Tubb       4760       T. Bone Springs       T. Enrada       T.         Abo       5745       T. MoRev LS       9710       T. Wingare       T.         Wolfcamp       6475       T       T.       T.       T.                                                                                                                                                                                                                                                                                                                                                                                                                                 | ison      |
| Queen       1154       T. Silurian       T. Point (Doublet       T. Montoya         Grayburg       1494       T. Montoya       T. Mancos       T. Montoya         San Andres       1985       T. Simpson       T. Gallup       T. Igna         Glorietz       3535       T. McKee       Base Greenhorn       T. Gra         Paddock       T. Ellenburger       T. Dakora       T.         Paddock       T. Gr. Wash       T. Monrison       T.         Tubb       4760       T. Delaware Sand       T. Todilto       T.         Drinkard       T. Bone Springs       T. Enrada       T.       T.         Abo       5745       T. MoReov LS       9710       T. Wingare       T.         Wolfcamp       1475       T       T.       T.       T.                                                                                                                                                                                                                                                                                                                                                                                                                      | rt        |
| Grayburg       1444       T. Montolya       T. Matters       T. Grayburg         San Andres       1485       T. Simpson       T. Gallup       T. Ign         Glorierz       3535       T. McKee       Base Greenhorn       T. Gra         Paddock       T. Ellenburger       T. Dakora       T.         Paddock       T. Gr. Wash       T. Dakora       T.         Blinebry       T. Gr. Wash       T. Monrison       T.         Tubb       4760       T. Delaware Sand       T. Todilto       T.         Drinkard       T. Bone Springs       T. Entrada       T.       T.         Abo       5745       T. MoRev LS       9710       T. Wingare       T.         Wolfcamp       1475       T       T.       T.       T.                                                                                                                                                                                                                                                                                                                                                                                                                                            | racken    |
| San Andres       1485       T. Simpson       T. Grampson       T. Grampson         Gloriera       3535       T. McKee       Base Greenhorn       T. Grampson         Paddock       T. Ellenburger       T. Dakora       T.         Blinebry       T. Gr. Wash       T. Morrison       T.         Tubb       4760       T. Delaware Sand       T. Todilto       T.         Drinkard       T. Bone Springs       T. Enrada       T.         Abo       5745       T. MoRHov LS       9710       T. Wingare       T.         Wolfcamp       6475       T       T.       T.       T.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | cin Otzie |
| Glorietz       2535       T. McKee       Base Greenhold       T. C.         Paddock       T. Ellenburger       T. Dakorz       T.         Blinebry       T. Gr. Wash       T. Monrison       T.         Tubb       4760       T. Delaware Sand       T. Todilto       T.         Drinkard       T. Bone Springs       T. Entrada       T.         Abo       5745       T. MoReov LS       9710       T. Wingate       T.         Wolfcamp       1475       T       T.       T.       T.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
| Paddock       T. Eilenburger       T. Dakotz         Blinebry       T. Gr. Wash       T. Monrison         Tubb       4760       T. Delaware Sand       T. Todilto                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |
| Blinebry       T. Gr. Wash       T. Monteson         Tubb       4760       T. Delaware Sand       T. Todilto       T         Drinkard       T. Bone Springs       T. Enrada       T         Abo       5745       T. Monteson       T. Wingare       T         Wolfcamp       6475       T       T       T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
| Tubb       4760       T. Delaware Sand       T. Todutts         Drinkard       •       T. Bone Springs       T. Entraia       T.         Abo       5745       T. Moldov LS       9710       T. Wingare       T.         Wolfcamp       6475       T       T.       T.       T.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |
| Dnnkard       .       T. Bone Springs       I. Finitality         Abo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| . Abo 5145 T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |
| Penn 7970 T I. Pennam T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
| . Cisco (Bough C) T T I. Penn "A" I. Penn "A"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
| oil or gas sands or zones                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
| No. 1. from No. 3. from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
| No. 4, from No. 4, from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
| IMPORTANT WATER SANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| Include data on mus of many inflow and elevation to which water rose in hole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |
| No 1 from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
| No. 2. from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
| No 3 from                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |

.

REMARKS:

|                                                                                                                                                                                                                                                                                     |                                                                                                                                   |                                                                                                         |                                                |                           |                                                           |                 |                                                              |                                 | dSF                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------|-----------------------------------------------------------|-----------------|--------------------------------------------------------------|---------------------------------|--------------------------------|
|                                                                                                                                                                                                                                                                                     | Eneŋ                                                                                                                              | gy, Min                                                                                                 | State of Ne<br>erais and Natu                  | ew Mexico<br>Iral Resourc | es Departm                                                | ent             |                                                              | Form C-<br>Revised<br>See Instr | 104 P 7<br>1-1-89<br>uctions 6 |
| P.O. Box 1980, Hobbs, NM 88240<br>DISTRICT II                                                                                                                                                                                                                                       | OI                                                                                                                                | OIL CONSERVATION DIVISIO                                                                                |                                                |                           |                                                           |                 | RECEIVED                                                     | at Bottor                       | n of Page                      |
| P.O. Drawer DD, Artesia, NM 88210                                                                                                                                                                                                                                                   |                                                                                                                                   | Santa                                                                                                   | Fe, New Me                                     | xico 8750                 | 4-2088                                                    | , E             | 1.1.2 4 1.                                                   | .93                             |                                |
| 1000 Rio Brazos Rd., Aztec, NM 87410                                                                                                                                                                                                                                                | REQUES                                                                                                                            |                                                                                                         |                                                |                           |                                                           | ZATION          | 0. C. D.                                                     |                                 |                                |
| I.<br>Operator                                                                                                                                                                                                                                                                      | 10                                                                                                                                | THAN                                                                                                    | SPORTOL                                        | AND NA                    | URAL GA                                                   | NG (10 A)       | PI No.                                                       |                                 |                                |
| Mewbourne Oil Compa                                                                                                                                                                                                                                                                 | ny                                                                                                                                |                                                                                                         | ······································         |                           |                                                           | 30              | -015-271                                                     | 63                              |                                |
| Address<br>P.O. Box 5270 Hobb                                                                                                                                                                                                                                                       | s. New Mexi                                                                                                                       | ico 8                                                                                                   | 38241                                          |                           |                                                           |                 |                                                              |                                 |                                |
| Reason(s) for Filing (Check proper box                                                                                                                                                                                                                                              | )                                                                                                                                 |                                                                                                         |                                                | Oth                       | zt (Piease expla                                          | un)             |                                                              |                                 |                                |
| Recompletion                                                                                                                                                                                                                                                                        | Oil                                                                                                                               |                                                                                                         | y Gas                                          |                           |                                                           |                 |                                                              |                                 |                                |
| Change in Operator                                                                                                                                                                                                                                                                  | Casinghead Ga                                                                                                                     | <u>00    1</u>                                                                                          | ndensate                                       |                           | ·····                                                     |                 |                                                              |                                 |                                |
| If change of operator give name<br>and address of previous operator                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                         |                                                |                           |                                                           |                 |                                                              |                                 |                                |
| II. DESCRIPTION OF WEL                                                                                                                                                                                                                                                              | L AND LEASE                                                                                                                       | INI- D-                                                                                                 | al bland Instant                               | E                         |                                                           | Kind            | f I anna                                                     |                                 | ase No                         |
| Chalk Bluff Federal (                                                                                                                                                                                                                                                               | Comm.                                                                                                                             | 3 No                                                                                                    | orth Illii                                     | nois Cam                  | p Morrow                                                  | XXXXX.          | Federal or Fiex                                              | NM-05                           | 57371                          |
| Location                                                                                                                                                                                                                                                                            | 1000                                                                                                                              |                                                                                                         | ¢,                                             | outh                      | 00                                                        | 0               |                                                              | Fact                            |                                |
| Unit Letter                                                                                                                                                                                                                                                                         | 1900                                                                                                                              | Fe                                                                                                      | et From The                                    | Lin                       | and                                                       | Fe              | et From The                                                  | Lusi                            | Line                           |
| Section ] Town                                                                                                                                                                                                                                                                      | ship 18S                                                                                                                          | Ra                                                                                                      | inge 27E                                       | , NI                      | MPM,                                                      |                 | Eddy                                                         |                                 | County                         |
| III. DESIGNATION OF TRA                                                                                                                                                                                                                                                             | NSPORTER O                                                                                                                        | F OIL                                                                                                   | AND NATU                                       | RAL GAS                   |                                                           |                 |                                                              |                                 |                                |
| Name of Authorized Transporter of Oil                                                                                                                                                                                                                                               | or C                                                                                                                              | Condensate                                                                                              | ° 🖄                                            | Address (Giv              | e address to wi                                           | ich approved    | copy of this for                                             | <b>mis to be se</b><br>70226    | <i>nt)</i><br>2014             |
| Amoco Pipeline IPL<br>Name of Authorized Transporter of Cas                                                                                                                                                                                                                         | inghead Gas                                                                                                                       | or                                                                                                      | Dry Gas                                        | Address (Giv              | e address to wi                                           | ich approved    | copy of this for                                             | <u>79330-</u><br>mis to be se   | nu)                            |
| Iranswestern Pipeline                                                                                                                                                                                                                                                               | <u>Company</u>                                                                                                                    | In.                                                                                                     | - Bee                                          | P.0. BO                   | X 1188 H                                                  | ouston,         | lexas /                                                      | 7251                            |                                |
| if well produces oil or liquids, give location of tanks.                                                                                                                                                                                                                            |                                                                                                                                   | 1                                                                                                       | 185 27E                                        | Yes                       |                                                           |                 | ,<br>1/15/93                                                 |                                 |                                |
| If this production is commingled with th                                                                                                                                                                                                                                            | at from any other les                                                                                                             | ue or poo                                                                                               | i, give commingi                               | ing order num             | ber:N                                                     | one             |                                                              |                                 |                                |
|                                                                                                                                                                                                                                                                                     | lOi                                                                                                                               | l Well                                                                                                  | Gas Well                                       | New Well                  | Workover                                                  | Deepen          | Plug Back                                                    | Same Res'v                      | Diff Res'v                     |
| Designate Type of Completic                                                                                                                                                                                                                                                         | Date Compl. Re                                                                                                                    | adv to Pr                                                                                               | <u> </u>                                       | X<br>Total Depth          | I                                                         | 1               | P.B.T.D.                                                     |                                 | 1                              |
| 11/24/92                                                                                                                                                                                                                                                                            |                                                                                                                                   | 01/16                                                                                                   | /93                                            |                           | 10,150                                                    | •               |                                                              | 10,102                          |                                |
| Elevations (DF, RKB, RT, GR, etc.)                                                                                                                                                                                                                                                  | Name of Produce                                                                                                                   | <b>ing Form</b><br>r Mor                                                                                | ation<br>Y)//W/                                | Top Oil/Gas               | <b>ray</b><br>995(                                        | ji -            | Tubing Depth                                                 | 9972'                           |                                |
| Perforations                                                                                                                                                                                                                                                                        |                                                                                                                                   | 1 101                                                                                                   | , di                                           | L                         | Depth Casing Shoe                                         |                 |                                                              |                                 |                                |
| 9950'-9954' 9957'-                                                                                                                                                                                                                                                                  | <u>9972'</u>                                                                                                                      |                                                                                                         | ASING AND                                      | CEMENTI                   | NG RECOR                                                  | D               |                                                              | 10,150                          | •                              |
| HOLE SIZE                                                                                                                                                                                                                                                                           | CASING                                                                                                                            | A TUB                                                                                                   | NG SIZE                                        |                           | DEPTH SET                                                 | +               | S                                                            | ACKS CEM                        | ENT                            |
| 17-1/2"                                                                                                                                                                                                                                                                             | 13-3/8"                                                                                                                           | 54                                                                                                      | <u>.5#</u>                                     |                           | 26                                                        | 00'-            | 1100 sack                                                    | (s Por                          | 1 <u>70-2</u>                  |
| 8-3/4"                                                                                                                                                                                                                                                                              | 7"                                                                                                                                |                                                                                                         | 26#                                            |                           | 8,0                                                       | 968'            | 1200 sac                                                     | cks .cm                         | mp + 0/5                       |
| 6"<br>V TEST DATA AND REOU                                                                                                                                                                                                                                                          | 4-1/2"                                                                                                                            | Liner                                                                                                   | 11.6#                                          | 8,600'                    | <u>to 10,15</u>                                           | 50'             | 1200 sacl                                                    | <u>(S</u>                       | /                              |
| OIL WELL (Test must be afu                                                                                                                                                                                                                                                          | r recovery of total w                                                                                                             | olume of l                                                                                              | load oil and must                              | be equal to or            | exceed top all                                            | owable for thi  | s depth or be fo                                             | r full 24 hou                   | rs.)                           |
| Date First New Oil Run To Tank                                                                                                                                                                                                                                                      | Date of Test                                                                                                                      |                                                                                                         |                                                | Producing M               | ethod ( <i>Flow, p</i>                                    | ump, gas igt, o | uc.)                                                         |                                 |                                |
| Length of Test                                                                                                                                                                                                                                                                      | Tubing Pressure                                                                                                                   | ;                                                                                                       |                                                | Casing Press              | lite                                                      |                 | Choke Size                                                   |                                 |                                |
| Actual Prod. During Test                                                                                                                                                                                                                                                            | Oil - Bbls.                                                                                                                       |                                                                                                         |                                                | Water - Bbis              | •                                                         |                 | Gas- MCF                                                     |                                 |                                |
|                                                                                                                                                                                                                                                                                     |                                                                                                                                   |                                                                                                         |                                                | <u> </u>                  |                                                           |                 | 1                                                            |                                 |                                |
| GAS WELL<br>Actual Prod. Test - MCF/D                                                                                                                                                                                                                                               | Length of Test                                                                                                                    |                                                                                                         |                                                | Bbis. Conder              | ante/MMCF                                                 |                 | Gravity of C                                                 | ondensate                       |                                |
|                                                                                                                                                                                                                                                                                     |                                                                                                                                   |                                                                                                         |                                                |                           | 30 : 1                                                    |                 | N/                                                           | Α                               |                                |
| 2000 MCF/D                                                                                                                                                                                                                                                                          | 2                                                                                                                                 | 4 Hrs                                                                                                   |                                                | Casing Da                 | une (Churt in)                                            |                 |                                                              |                                 |                                |
| 2000 MCF/D<br>Testing Method (pitot, back pr.)<br>Back Pressure                                                                                                                                                                                                                     | Tubing Pressure                                                                                                                   | 24 Hrs<br><b>: (Shut-in</b><br>2850                                                                     | )                                              | Casing Press              | ure (Shut-in)<br>()                                       |                 | 10                                                           | /64"                            |                                |
| 2000 MCF/D<br>Tossing Method (pilot, back pr.)<br>Back Pressure<br>VI. OPERATOR CERTIF                                                                                                                                                                                              | Tubing Pressur<br>Z<br>ICATE OF CO                                                                                                | 24 Hrs<br><b>: (Shut-in</b><br>2850<br><b>OMPL</b>                                                      | IANCE                                          | Casing Press              | ure (Shut-in)<br>0                                        |                 |                                                              | /64"<br>כוועופור                |                                |
| 2000 MCF/D<br>Testing Method ( <i>pitot. back pr.</i> )<br>Back Pressure<br>VI. OPERATOR CERTIF<br>I hereby certify that the rules and re<br>Division have been counciled with a                                                                                                    | Tubing Pressure<br>Tubing Pressure<br>Z<br>ICATE OF CO<br>guilations of the Oil<br>and that the informati                         | 24 Hrs<br>(Shut-in<br>2850<br>OMPL<br>Conservation given                                                | IANCE                                          | Casing Press              | ure (Shut-in)<br>0<br>OIL COI                             | NSERV           |                                                              | /64"<br>DIVISIC                 | ON                             |
| 2000 MCF/D<br>Testing Method ( <i>pitot, back pr.</i> )<br>Back Pressure<br>VI. OPERATOR CERTIF<br>I hereby certify that the rules and re<br>Division have been complied with a<br>is true and complete, to the best of r                                                           | Tubing Pressure<br>Z<br>ICATE OF CO<br>guistions of the Oil<br>and that the information<br>my knowledge and be                    | 24 Hrs<br>(Shut-in<br>2850<br>OMPL<br>Conservation given<br>elief.                                      | IANCE<br>ion<br>above                          | Casing Press              | OIL CON                                                   | NSERV           | 10<br>ATION [<br>JAN 2 9                                     | /64"<br>DIVISIC<br>1993         | ON                             |
| 2000 MCF/D<br>Testing Method (pitot, back pr.)<br>Back Pressure<br>VI. OPERATOR CERTIF<br>I hereby certify that the rules and re<br>Division have been completed with a<br>is true and complete to the best of r                                                                    | Tubing Pressur<br>Z<br>ICATE OF CO<br>gulations of the Oil<br>and that the information<br>my knowledge and be<br>TMM              | 24 Hrs<br>2850<br>OMPL<br>Conservation given<br>ellief.                                                 | IANCE<br>ion<br>above                          | Casing Press              | oll COI                                                   | NSERV           | ATION [<br>JAN 2 9                                           | /64"<br>DIVISIC<br>1993         | ON                             |
| 2000 MCF/D<br>Testing Method (pitot, back pr.)<br>Back Pressure<br>VI. OPERATOR CERTIF<br>I hereby certify that the rules and re<br>Division have been complied with a<br>is true and complete to the best of r                                                                     | Tubing Pressure<br>Tubing Pressure<br>ICATE OF CO<br>guissions of the Oil<br>and that the informati<br>my knowledge and be<br>TMM | 24 Hrs<br>5 (Shut-in<br>2850<br>OMPL<br>Conservation given<br>stief.<br>English                         | IANCE<br>ion<br>above                          | Casing Press              | UIE (Shut-in)<br>0<br>OIL COI<br>9 Approve                | NSERV           | TION E<br>JAN 2 9                                            | /64"<br>DIVISIC<br>1993         | N                              |
| 2000 MCF/D<br>Tossing Method (pitor, back pr.)<br>Back Pressure<br>VI. OPERATOR CERTIF<br>I hereby certify that the rules and re<br>Division have been complied with a<br>is true and complete to the best of r<br>Signature<br>Robert A Jones<br>Printed Name                      | Tubing Pressur<br>Z<br>ICATE OF CO<br>gulations of the Oil<br>and that the informati<br>my knowledge and be<br>TOTAL              | 24 Hrs<br>(Shut-in<br>2850<br>OMPL<br>Conservat<br>ion given<br>elief.<br>Engine<br>T                   | ion<br>above                                   | Casing Press              | o<br>OIL COI<br>Approve                                   | NSERV           | 10<br>ATION I<br>JAN 2 9<br>SIGNED BY<br>CALO<br>DR. DISTRIC | /64"<br>DIVISIC<br>1993         | N                              |
| 2000 MCF/D<br>Testing Method (pitor, back pr.)<br>Back Pressure<br>VI. OPERATOR CERTIF<br>I heroby certify that the rules and re<br>Division have been completed with a<br>is true and complete to the best of r<br>Signature<br>Robert A Jones<br>Printed Name<br>01/19/93<br>Date | Tubing Pressur<br>Z<br>ICATE OF CO<br>gulations of the Oil<br>and that the informati<br>my knowledge and be<br>TML<br>(505)       | 24 Hrs<br>(Shut-in<br>2850<br>OMPL<br>Conservation<br>given<br>elief.<br>Engine<br>T<br>393-1<br>Teleph | ion<br>above<br>eer<br>iite<br>5905<br>one No. | Casing Press              | ure (Shut-ia)<br>0<br>OIL COI<br>9 Approve<br>0<br>M<br>5 | NSERV           | TION I<br>JAN 2 9<br>SIGNED BY<br>CASE<br>R, DISTRM          | /64"<br>DIVISIC<br>1993         | DN                             |

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104 1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance Kequest for allowable for hewly difference of deepends were mass be decompared by declined of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of deviation of de





# **Job separation sheet**

| ,                               |                               |                              |                                     |                                                                                                                 | ,                            |                                  | ICF                         | 203031                             |
|---------------------------------|-------------------------------|------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------|-----------------------------|------------------------------------|
| Form 3160-4.                    |                               |                              |                                     | AND SUBMIT                                                                                                      | IN. BUPLICA                  | (<br>(                           | FOR                         | PPROVED                            |
| (0000011770)                    |                               |                              | ) SIALES:<br>NE THE DND             | TERMAR                                                                                                          |                              | ther in-                         | OMIN<br>Expires D           | 0, 1004-0137<br>eccember 31, 1991  |
|                                 | BU                            | REAU OF LA                   | ND MANAGENE                         | NTIA., NH                                                                                                       | 8821Qrevers                  | e side) 5. t<br>NN               | 1-05577                     |                                    |
| WELL CO                         | MPLETION                      | OR RECO                      | MPLETION I                          | REPORT                                                                                                          | ND400                        | <u>53</u> • •                    | INDIANAL                    | LOTTE TO ANE                       |
| 1a. TYPE OF WE                  | LL: QII<br>WR                 | LL X GAS                     | DRY                                 | Other,                                                                                                          |                              | <u>. F.</u> 7. 1                 | NIT AGREEN                  |                                    |
| L TYPE OF CON                   | WORK DE                       | 8.P                          | 2011                                |                                                                                                                 |                              | RS                               |                             |                                    |
| WELL -                          | OVER L EN                     |                              | JUNTIVE                             | VT141L                                                                                                          |                              | ==_  °·                          | nalk Blu                    | ff Fed. Comm. #3                   |
| Mewbourn                        | e Oil Compa                   | any                          |                                     |                                                                                                                 |                              | 9.                               | API WELL NO.                |                                    |
| 3. ADDRESS AND<br>P () Box      | 5270 Hob                      | o.<br>hs New Mey             | vico 88241                          | (505) 393                                                                                                       | 3-5905                       | 10.                              | 30-015-<br>FIELD AND P      | 27163<br>DOL, OB WILDCAT           |
| 4. LOCATION OF WI               | ULL (Report locati            | ion clearly and in           | accordance with an                  | y State require                                                                                                 | mente)*                      |                                  | <u>N. Illi</u>              | <u>nois Camp Morrow</u>            |
| At surface ]<br>At top prod. in | 980' FSL & terval reported by | 990' FEL                     |                                     |                                                                                                                 |                              | 11.                              | SEC., T., R., M<br>OR AREA  | I., OR BLOCK AND BURVET            |
| At total depth                  | Same                          |                              |                                     |                                                                                                                 |                              |                                  | Sec. 1-                     | T18S-R27E                          |
|                                 | • • • • •                     |                              | 14. PERMIT NO.                      | . D.                                                                                                            | ATE ISSUED                   | 12.                              | COUNTY OR<br>PARISH<br>Eddy | 13. STATE<br>N.M.                  |
| 15. DATE SPUDDED                | 16. DATE T.D. I               | TEACHED 17. DAT              | TE COMPL. (Ready t                  | o prod.) 18.                                                                                                    | ELEVATIONS (D                | , RKB, RT, GR                    | . ETC.)* 18                 | . ELEV. CASINGHEAD                 |
| 11/24/92<br>20. TOTAL DEPTH, MD | ■ 01/06/<br>■ TVD 21. PLL     | 93  <br>76. BACK T.D., MD A  | 01/16/93<br>TVD 22. IF MUL<br>HOW M | KB .<br>.TIPLE COMPL.,<br>IANT <sup>®</sup>                                                                     | 3643' DF<br>23. INTE<br>DRIL | 3641 ' GI<br>RVALS RO'<br>LED BY | 3628'                       | 3628 '<br>CABLE TOOLS              |
| 24. PRODUCING INTE              | RVAL(8), OF THIS              | COMPLETION-TO                | P, BOTTOM, NAME (1                  | ND AND TVD)*                                                                                                    |                              | ▶ !                              | X                           | 25. WAS DIRECTIONAL<br>SURVEY MADE |
| 9950'-995                       | 4', 9957'-                    | 9972' Lowe                   | er Morrow Or                        | range Sand                                                                                                      | d                            |                                  |                             | Yes                                |
| 26. TYPE ELECTRIC               | AND OTHER LOGS                | RUN                          |                                     |                                                                                                                 |                              |                                  | 27.                         | WAS WELL CORED                     |
| SDL-DSN_D                       | ual-Latero                    | -MFSL-GR So                  | onic CBL                            |                                                                                                                 |                              |                                  |                             | No                                 |
| 28.<br>CASING SIZE/GRADE        | WEIGHT, LB.,                  | CAS                          | TING RECORD (Reg                    | Dort all strings a                                                                                              | rop of cen                   | IENT. CEMENTI                    | G RECORD                    | AMOUNT PULLED                      |
| 13-3/8"                         | 5                             | 4.5#                         | 400'- 17-                           | -1/2"                                                                                                           | 100 sx.                      | Class                            | 'H"                         | None                               |
| <u> </u>                        | 26 &                          | $\frac{36\#}{29\#}$ 2,0      | <u>600'- 12-</u><br>968' 8-         | -1/4"                                                                                                           | <u>250 sx.</u>               | <u>Class</u>                     | <u>'С"</u>                  | None                               |
|                                 |                               |                              |                                     |                                                                                                                 | 1200 57.                     | 01035                            |                             |                                    |
| 29.                             | TOP (MP)                      | LINER RECORD                 |                                     | SCREEN (MD)                                                                                                     | 30.                          | TUBI                             | NG RECORD                   | PACKER ART (MD)                    |
| 4-1/2"                          | 8600'                         | 10,150'                      | 200 sxs.                            | None                                                                                                            | 2-7/8"                       |                                  | 972'                        | 9797'                              |
| 31 PERFORATION RE               | CORD (Internal a)             | re and number)               |                                     |                                                                                                                 | 2-3/8"                       |                                  |                             |                                    |
|                                 |                               |                              |                                     | DEPTH INTE                                                                                                      | RVAL (MD)                    | AMOUNT                           | AND KIND O                  | F MATERIAL USED                    |
| 9950'-99                        | 54' 9957'                     | -9972'                       |                                     | 9950'                                                                                                           | -9954'                       | None                             |                             |                                    |
| 4 SPF 1                         | 9' 76 hol                     | es                           |                                     | 9957'                                                                                                           | -9972'                       | <u>None</u>                      |                             |                                    |
| 33.*                            |                               |                              | PRO                                 | DUCTION                                                                                                         |                              |                                  |                             |                                    |
| DATE FIRST PRODUCT              | TON PROD                      | UCTION METHOD (              | Flowing, gas lift, p                | umping—size a                                                                                                   | nd type of pum               | <b>p</b> )                       | WELL STA<br>shut-in         | TUE (Producing or<br>)             |
| 01/16/93<br>DATE OF TEST        | HOURS TESTED                  | Flowing                      | PROD'N. FOR                         | 01L                                                                                                             | GA8                          | F. WA                            | Produ                       | CING                               |
| 01/16/93                        | 24                            | 10/64"                       |                                     | 50                                                                                                              | 200                          | <u>io  </u>                      | 0                           | 40 MCF/BBL                         |
| 2720                            | CASING PRESSU                 | RE CALCULATED<br>24-HOUR RAT | те <u>60</u>                        | 2 <u>00</u>                                                                                                     | 0                            | WATERRBL.                        | 01                          | GRAVITY-API (CORE.)                |
| 34. DISPOSITION OF              | IAB (Sold, used for           | fuel, vented, etc.           | )                                   | ACCEPTE                                                                                                         | 180257                       |                                  | T WITNESSEI                 | ) BT                               |
| 35. LIST OF ATTACH              | MENTS                         |                              |                                     | ANTO                                                                                                            | HIE.                         | CASE?                            |                             |                                    |
| Logs- *                         | Please hol                    | d in confi                   | dence<br>Information is con         | plete and correc                                                                                                | 4 1993<br>et as determine    | d from all a                     | vailable reco               | rd <b>s</b>                        |
| SIGNED                          | 7. 41                         | mp                           |                                     | Engineer                                                                                                        |                              |                                  | DATE _                      | 01/21/93                           |
|                                 | 1. 4.0                        |                              |                                     | a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a ser a s |                              | <b>6. 1 1</b>                    |                             |                                    |

### \*(See Instructions and Spaces for Additional Data on Reverse Side)

Citle 13 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the

| <ol> <li>SUMMARY OF POF<br/>drill-stein, tests, in<br/>recoveries);</li> </ol> | ROUS ZONES: (Sticluding depth int | iow all important z<br>ierval tested, cus | cones of porosity and contents thereof; cored intervals; and all<br>hion used, time tool open, flowing and shut-in pressures, and | 38. GEOL      | OGIC MARKERS |                     |
|--------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|---------------------|
| FURMATION                                                                      | TOP                               | BOTTOM                                    | DESCRIPTION, CONTENTS, ETC.                                                                                                       |               | τô           | Ρ                   |
| Morrow                                                                         | qq50'                             | 19721                                     | Sandstone                                                                                                                         | NAME          | MEAS. DEPTH  | TRUE<br>VERT. DEPTH |
|                                                                                |                                   | 1                                         |                                                                                                                                   | Yates         | 450'         |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | 7 Rivers      | 564 '        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Queen         | 1159'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Grayburg      | 1492'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | San Andres    | 1985'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Glorieta      | 3536'        |                     |
|                                                                                |                                   | -                                         |                                                                                                                                   | Tubb          | 4760'        |                     |
|                                                                                | د مرد<br>بر                       |                                           |                                                                                                                                   | Drinkard      | 5524         |                     |
| -                                                                              | · • • •                           |                                           |                                                                                                                                   | Abo           | 5744         |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Wolfcamp      | 6474'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Cisco         | 7686         |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Canyon        | 8440'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Strawn        | 8932'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Atoka         | 9490'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Morrow        | 9594'        |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | Morrow Clasti | c 9800'      |                     |
|                                                                                |                                   |                                           |                                                                                                                                   | L. Morrow     | , L166       |                     |
|                                                                                |                                   |                                           |                                                                                                                                   |               |              |                     |
|                                                                                |                                   |                                           |                                                                                                                                   |               |              |                     |

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~J.E. 6P0:1991-575-735/45086



January 06,1993

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Mewbourne Oil Company P.O. Box 5270 Hobbs, N.M. 88240

RE: Chalk Bluff Federal #3

The following is a Deviation Survey on the above referenced well located in Eddy County, New Mexico.

| 4001 2/49               | 5033' - 2 3/4° | 5813' - 4°      |
|-------------------------|----------------|-----------------|
| 400 - 374               | 5005' 2°       | 5875' - 4°      |
| 8871 - 10               | 5050 - 3       | 5967' - 3 3/4°  |
| 1359' - 1°              | 5158 - 3       | 600/ - 3 3//°   |
| 1864' - 2°              | 5222' - 3 1/4° | 0094 - 3374     |
| 22261 1 1/20            | 5283' - 3 3/4° | 621/' - 3 1/4°  |
| 2330 - 172              | 5346' - 3 3/4° | 6720' - 3 1/2°  |
| 2600 - 3/4              |                | 7213' - 3°      |
| 2792' - 1 1/4°          | 5409 - 4       | 76051 2 1/20    |
| 3086' - 1°              | 5464' - 4 1/4° |                 |
| $3580' - 1.1/3^{\circ}$ | 5555' - 4 1/4° | 8155' - 2 1/4°  |
| 3000 - 1 175            | 55871 _ A 1/A° | 8654' - 2°      |
| 40/9 - 1                |                | 9003' - 2°      |
| 4358' - 1 3/4°          | 5650 - 4 1/4   | 05001 1/49      |
| 4846' - 2 3/4°          | 5719' - 4 1/2° | 9509 - 1/4      |
|                         |                | 983/'- 3/4°     |
|                         |                | 10150' - 1 3/4° |

rere Garww. Chappell

Contracts Manager

STATE OF NEW MEXICO)

COUNTY OF CHAVES

The foregoing was acknowledged before me this O6th day of January 1993 by Gary W. Chappell.

MY COMMISSION EXPIRES

October 07,1996

TD

NOTARY PUBLIE

RECEIVED JAH 0 7 1993

| }   | COMPANY<br>UNIT 4 | :MEWBOURNE | E OIL          | LEASE     | CHALK BLU | JFF FED.CO | MWELL NO.<br>TOWNSHIP | : 3<br>· 18 | !         | Pc = 2273.2                             | Pc2 =          | 5167.4 *  <br>* |
|-----|-------------------|------------|----------------|-----------|-----------|------------|-----------------------|-------------|-----------|-----------------------------------------|----------------|-----------------|
|     | L                 | 9961       | H :            | 9961      |           | : 1        | G/GMIX                | : 0.849     |           | Pt2 = 5031.9                            | ₽₩ =           | 2244.7 *        |
|     | 102               | 0.42       | 3N2            | : 0.33    | H2S       |            |                       | DATE        | :         | 4810.1                                  |                | 2199.5 *        |
|     | di :              | 2.278      | Fr             | :0.012892 | GH        | : 8456.9   |                       | RANGE       | : 27      | 4465.6                                  |                | 2132.7 *        |
| ::: |                   |            |                |           |           |            |                       |             |           | 4053.0                                  |                | 2055.4 *        |
|     |                   |            |                |           |           |            |                       |             | •         |                                         |                | *!!             |
|     | V01 1             | 655        | PSTA 1         | 2243.2    |           |            | RESV TEMP             | 173.6       | i<br>T    | Pc2-Pw2= 128.6                          | ₽ <b>₩</b> 2 = | 5073.8 *        |
|     | VOL 2             | 1310       | PSIA 2         | 2193.2    |           |            |                       |             | 1         | 329.8                                   |                | 4837.6 *!!      |
|     | V01 3             | 2283       | PSTA 3         | · 2113 2  |           |            | SHUT-IN PR            | = 2273 2    | 1         | 618.9                                   |                | 4548.6 *!!      |
|     | V0L 4             | 3294       | PSTA 4         | 2013.2    |           |            |                       | 22/012      | 1         | 942.6                                   |                | 4224.8 *        |
|     |                   |            |                |           |           |            |                       |             | 1         | !                                       |                | *11             |
|     |                   |            |                | PCR       | . 668     |            |                       |             | 1         |                                         | 0.884          | *[]             |
|     |                   |            |                | TCR       | : 401     |            |                       |             | ŧ         | 1                                       |                | *               |
|     |                   |            |                |           | • •••     |            |                       |             | 1         | Pc2/(Pc2-Pw2) =                         | 40.184         | *               |
|     | LINE              | SATE 1     | 1              | BATE 2    | 1         | RATE 3     | 1                     | RATE 4      | 1 I       |                                         | 15.666         | *               |
|     |                   |            | 1              |           | •         | :          | 1                     | 1           |           | 1                                       | 8.350          | *!              |
|     |                   | '1ST       | 2ND            | '1ST      | 1 '2ND    | '1ST       | 2ND                   | ! '1ST      | 2ND       |                                         | 5.482          | *               |
|     |                   | ,<br>,     | 1              | 1         | 1         |            | 1                     | 1           |           | 1<br>                                   |                | x               |
| 1   | ្នូវ              | 0.655      | 0.655          | 1.310     | 1.310     | 2.283      | 2.283                 | 3.294       | 3.294     |                                         |                | *               |
| 2   | TW                | 534        | 534            | 534       | 534       | 534        | 534                   | 534         | 534       | [[Pc2/Pc2-Pw2]n =                       | 26.181         | * [ ]           |
| 3   | Ts                | 633.6      | 533.6          | 633.6     | 633.6     | 633.6      | 633.6                 | 633.6       | 633.6     |                                         | 11.386         | *[]             |
| 4   | ī                 | 583.8      | 583.8          | 583.8     | 583.8     | 583.8      | 583.8                 | 583.8       | 583.8     |                                         | 6.528          | * 1             |
|     | PR (est)          |            |                | 3.28      |           | 3.16       | 1                     | 3.01        |           |                                         | 4.500          | x               |
| 5   | Z(est)            | 0.727      | 0.738          | 0.727     | 0.736     | 0.723      | 0.733                 | 0.731       | 0.730     |                                         |                | r               |
| 6   | TZ                | 424.5      | 430.8          | 424.6     | 429.5     | 425.2      | 427.7                 | 426.5       | 426.0     | A0F= Q                                  | 17.148         | <b>x</b> 1 1    |
| 7   | GH/TZ             | 19.924     | 19.629         | 19.918    | 19.691    | 19.391     | 19.774                | 19.829      | 19.852    |                                         | 14.915         | *[]             |
| 8   | eS                | 2.111      | 2.088          | 2.110     | 2.093     | 2.108      | 2.099                 | 2.104       | 2.105     |                                         | 14.903         | *               |
| 7   | l-e-S             | 0.526      | 0.521          | 0.526     | 0.522     | 0.526      | 0.524                 | 0.525       | 0.525     |                                         | 14.823         | ¥ [             |
| 10  | Pt                | 2243.2     | 2243.2         | 2193.2    | 2193.2    | 2113.2     | 2113.2                | 2013.2      | 2013.2    |                                         |                | *!!             |
| 11  | Pt2 /1000         | 5031.9     | 5031.9         | 4810.1    | 4810.1    | 4465.6     | 4465.6                | 4053.0      | 4053.0    | * 1<br>* 1<br>* 1                       |                | ¥15             |
| 12  | Fr                | 0.012892   | 0.012892       | 0.012892  | 0.012892  | 0.012892   | 0.012892              | 0.012892    | 0.0128924 |                                         |                | * 1             |
| 13  | Fc=FrTZ           | 5.472      | 5.555          | 5.474     | 5.537     | 5.481      | 5.514                 | 5.498       | 5.492     | 1  <br>1  <br>1                         |                | <b>*</b> []     |
| 14  | FcQh              | 3.58       | 3.64           | 7.17      | 7.25      | 12.51      | 12.59                 | 13.11       | 18.09     |                                         |                | * 1             |
| 15  | L/H(FcQa)         | 12.8       | 13.2           | 51.4      | 52.6      | 156.6      | 158.5                 | 328.0       | 327.3     | t t<br>t 1                              |                | <b>x</b> 1      |
| 15  | Ēd                | 6.761363   | 5.396363       | 27.05758  | 27.47157  | '82.32401  | 132.97298             | ,172.0865   | 171.83059 | 4 I<br><del>1</del> 1                   |                | K I I           |
| 17  | Pw2               | 5038.7     | 5038.8         | 4837.2    | 4837.5    | +547.9     | 4548.6                | 4225.1      | 4224.8    | 1 E<br>1 I                              |                | <b>x</b> [ ]    |
| 3   | Ps2               | 10636.7    | 10519.8        | 10208.7   | ; 10123.1 | 9588.7     | 9547.9                | ; 3897.4    | 8894.3    | 4 F<br># F                              |                | <b>x</b> 11     |
| 19  | °5                | 3261.4     | 3243.4         | 3195.1    | 3181.7    | 3096.6     | 3090.0                | 2981.2      | 2982.3    | 1 F<br>F 1                              |                | ¥ 1 1<br>1 1    |
| 20  | p                 | 2752.3     | 2743.3         | 2694.2    | 2687.4    | 2604.9     | 2601.6                | 2497.2      | 2497.8    | t t i i i i i i i i i i i i i i i i i i |                | #11<br>#11      |
| 21  | 2 <b>r</b>        | 4.12       | 4.11           | 4.03      | 4.02      | 3.70       | 3.89                  | 3.74        | 3.74      | 11                                      |                | K H             |
| 22  | Ī                 | i.+5       | 1.46           | 1,46      | 1,45      | 1,46       | 1.45                  | 1.46        | 1.46      | 1 :<br>• 1                              |                | κ.,             |
| 13  | -                 | 1.733      | ).7 <b>3</b> 3 | 0.736     | 0.735     | . 3.733    | : 0.732               | 5,730       | 0.730     | 11                                      |                | -) * (          |
| ::: |                   |            |                |           |           |            |                       |             |           |                                         |                | <b></b>         |

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| MAR- | 5-93 | FRI | 9:52 | Laboratory | Services |
|------|------|-----|------|------------|----------|
|------|------|-----|------|------------|----------|

P.01

|              |                                                                                          | Labo<br>1<br>Hobbs              | r <b>atory S</b><br>331 Tasker<br>3, New Mexi | <b>iervices</b><br>Drive<br>ico 88240                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         |            |
|--------------|------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------|
| S            |                                                                                          | Telep                           | hone: (505)                                   | 397-3713                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |            |
| FOR:         | Mewbourne Oil Co<br>Attention: Mr. R<br>P. O. Box 5270<br>Hobbs, New Mexic               | .Jones<br>0 88240               |                                               | SAMPLE<br>IDENTIFICATION:<br>COMPANY<br>LEASE:<br>PLANT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Chalk ßluff #<br>Mewebourne Oi          | 3<br>1 Co. |
| SAMPLE DATA: | DATE SAMPLED:<br>ANALYSIS DATE:<br>PRESSURE - PSIG<br>SAMPLE TEMP. °F<br>ATMOS, TEMP. °F | 3/4/93<br>03-05-<br>530         | 12:30PM<br>93<br>.0                           | GAS (XX)<br>SAMPLED BY:<br>ANALYSIS BY:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LIQUID ( )<br>R. Jones<br>Rolland Perry | ,          |
| REMARKS:     |                                                                                          |                                 |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                         |            |
|              |                                                                                          | CON                             | IPONENT A                                     | NALYSIS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | · · · · · · · · · · · · · · · · · · ·   |            |
|              | COMPONENT                                                                                |                                 | MOL<br>PERCEN                                 | T GPI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Ŵ                                       |            |
|              | Hydrogen Sulfide<br>Nitrogen<br>Carbon Dioxide<br>Methane                                | (H2S)<br>(N2)<br>(CO2)<br>(C1)  | 0.3<br>0.4<br>83.1                            | 3<br>2<br>0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                         |            |
|              | Ethane<br>Propane<br>I-Butane                                                            | (C2)<br>(C3)<br>(IC4)<br>(NC4)  | 8.1<br>3.1<br>0.4                             | 4 2.16<br>4 0.86<br>0 0.13<br>6 0.27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4 2 0 0                                 |            |
|              | I-Pentane<br>N-Pentane<br>Hexane<br>Heptanes Plus                                        | (IC5)<br>(NC5)<br>(C6)<br>(C7+) | 0.3                                           | 0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14           0.14 | .0<br>.7<br>.4                          |            |
|              | BTU/CU.FT DRY                                                                            | <u>,</u> ,                      | 100.0                                         | 60 4.92                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ECULAR WT.                              | 21.1701    |
|              | AT 14.650 WET<br>AT 15.025 DRY<br>AT 15.025 WET                                          |                                 | 123<br>123<br>130                             | 39 26#G<br>98<br>)4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ASOLINE -                               | 1.591      |

SPECIFIC GRAVIT7 -CALCULATED MEASURED

0.731

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MEWBOURNE OIL COMPANY Chalk Bluff Federal Com. Well #3 1-18S-27E Eddy County, New Mexico 3/4/93



D MCF/DAT

Lag 2011 2014 = 3.81291

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Submit in duplicate to appropriate district office 33 See Rule 401 & Rule 1122

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State of New Mexico Energy, Minerals and Natural Resources Department CISE/Le

Form C-122

Revised 4-1-91

# OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

## MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

| MEWVOURNE                                                                                                                | OIL COMPANY                                | 2                              |                   | Le                                   | ase or Unit Name<br>CHALK BL | UFF FEDER            | AL COM.                               |                         |  |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------|-------------------|--------------------------------------|------------------------------|----------------------|---------------------------------------|-------------------------|--|
| pe TestX Initial                                                                                                         | Annual                                     | Special                        |                   | Te                                   | st Date<br>3/4/93            | Well                 | No. 3                                 |                         |  |
| mpletion Date                                                                                                            | Total Depth                                | Plug                           | Back TD           | El                                   | vation                       | Unit I               | ur Sec T                              | WP - Rge.               |  |
| 1/16/93                                                                                                                  | 10150                                      |                                | 10102             |                                      | GL 3628'                     | I                    | 1                                     | 18 <u>5</u> 27 <u>E</u> |  |
| sg. Size Wt.                                                                                                             | d Se                                       | tAt Perfo                      | rations:          |                                      |                              | Count                | ty                                    |                         |  |
| ا <u>ا</u> 10.                                                                                                           | 5 4.052                                    | 10150                          | . 0050            | Та                                   | . 005/                       |                      | FDDV                                  |                         |  |
| 2 IO.                                                                                                                    | d a se Se                                  | t At Perfo                     | rations:          | 10                                   |                              | Pool                 | CADI                                  |                         |  |
| • 2-778 4.7                                                                                                              | 8 1.91                                     |                                |                   |                                      |                              |                      | MO                                    | RROW 🥖                  |  |
| 3/8 & 6.5                                                                                                                | 2.441                                      | <u>9972</u> From               | <u>.: 9957</u>    | To                                   | <u> </u>                     |                      | NORTH IL                              | LINOIS                  |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple     Packer Set At     Formation       Subgke     9797     MORROW |                                            |                                |                   |                                      |                              |                      |                                       |                         |  |
| oducing Thru Reserve<br>DS. 13                                                                                           | Temp. °F Mean A                            | nnual Temp. °F<br>0            | Baro, Press       | <sup>- Р</sup> . 13.                 | 2                            | Conr<br>T1           | answeste                              | m                       |  |
| 950 <sup>H</sup> 9950                                                                                                    | Gg .731 %                                  | <sup>co</sup> <sub>2</sub> .42 | % № .33           | % H <sub>2</sub> S                   | Prover                       | Meter<br>3           | Run<br>068                            | Taps<br>flg.            |  |
|                                                                                                                          | FLOW DATA                                  |                                |                   | TUB                                  | ING DATA                     | CASIN                | G DATA                                | Duration                |  |
| Prover Orif                                                                                                              | ice Drass                                  | Diff.                          | Temn              | Press                                | Temp                         | Press                | Temp                                  | of                      |  |
| Line X                                                                                                                   |                                            | h,                             | ्रम<br>गुप्तामुः  | D.S.i.g.                             | ۹ <u>۲</u>                   | p.s.i.g.             | 9F                                    | Flow                    |  |
| 3125 312                                                                                                                 | E PB-                                      |                                |                   | 2260                                 |                              |                      | <u> </u>                              | 1.0 1.                  |  |
| 3 8 1 500                                                                                                                | 520                                        |                                | 17.0              | 2200                                 |                              | <u> </u>             |                                       | <u>40 nr.</u>           |  |
| $3 \times 1.500$                                                                                                         | 520                                        |                                | 10/               | 2230                                 |                              | 11                   | · · · · · · · · · · · · · · · · · · · | <u> </u>                |  |
| $3 \times 1.500$                                                                                                         |                                            | 19                             | 124               | 2180                                 |                              | 11                   |                                       |                         |  |
| <u>3 X 1.500</u>                                                                                                         |                                            | 52                             | 88                | 2100                                 |                              | 10                   |                                       | 1  nr                   |  |
| <u>3 X 1.500</u>                                                                                                         | 540                                        | 102                            | /0                | 2000                                 |                              |                      |                                       | 1  nr.                  |  |
|                                                                                                                          |                                            |                                |                   |                                      | IONE                         | L                    | l                                     |                         |  |
| COEFFICIENT                                                                                                              |                                            | Pressure                       |                   | Temp                                 | IUNS<br>Gravity Factor       | S                    |                                       | te of Flow              |  |
| O. (24 HOUR)                                                                                                             | h <sub>w</sub> P <sub>m</sub>              | Pm                             | Factor            | or FL                                | Fg.                          | Factor, F p          | <b>U</b> SS. Ka                       | Q, Mcfd                 |  |
| 11.13                                                                                                                    | 52.12                                      | 543.2                          | .924              | <u>+8</u>                            | 1.170                        | 1.043                | 65                                    | 5                       |  |
| 11.13                                                                                                                    | 101.59                                     | 543.2                          | .943              | 36                                   | 1.170                        | 1.049                | 131                                   | 0                       |  |
| 11.13                                                                                                                    | 168.84                                     | 548,2                          | .974              | +1                                   | 1,170                        | 1.066                | 228                                   | 3                       |  |
| 11.13                                                                                                                    | 237.54                                     | 553.2                          | .990              | )5                                   | 1.170                        | 1.075                | 329                                   | 4                       |  |
|                                                                                                                          |                                            |                                |                   |                                      |                              |                      |                                       |                         |  |
| P <sub>r</sub> Tem                                                                                                       | p.ºR T <sub>r</sub>                        | Z                              | Gas Liquid Hydro  | ocarbon Ratio                        | 23.                          | 63                   |                                       | Mcf/bbl                 |  |
| 81 60                                                                                                                    | 8 1 52                                     | 010                            | A.P. L Gravity of | Liquid Hydr                          | ocarbons                     | 57.0                 |                                       | D                       |  |
| 81 59                                                                                                                    | $\frac{0}{1.52}$                           | .919                           | Specific Gravity  | Separator Ga                         |                              |                      | XXX                                   | XXXXXX                  |  |
| •01 JO                                                                                                                   | $\frac{4}{0}$ 1.40                         | .909                           | Specific Gravity  | Flowing Flui                         | 11                           | XXXXX                | G                                     | Mix .84                 |  |
| .02 .04                                                                                                                  | $\frac{0}{1.37}$                           | .880                           | Critical Pressure | -668                                 | }                            | P.                   | s.l.a. 66                             | 4 P.S.I                 |  |
| .03 .03                                                                                                                  | 0 1.32                                     | .865                           | Critical Temperat | ture                                 | 401                          |                      | R 44                                  | 1                       |  |
| 2273 2 p2                                                                                                                | 5167 /                                     |                                | •                 |                                      |                              |                      |                                       |                         |  |
| <u> </u>                                                                                                                 |                                            |                                | 1) P <sup>2</sup> | - 5.                                 | 4821                         | $(2) = P^2$          | <b>a</b> <sup>1</sup> -               | 4,500                   |  |
| O. $P_t^2$                                                                                                               | P <sub>w</sub> P <sub>w</sub> <sup>2</sup> | $P_c^2 - P_w^2$                | 1) 1 <sub>c</sub> | - <u></u>                            |                              | $(2)$ $\frac{1}{-2}$ |                                       |                         |  |
| 5031.9 22                                                                                                                | 44.7 5038.8                                | 3 128.6                        | $P_c^2 - P_v$     | v                                    |                              | P                    | Pw <sup>*</sup>                       |                         |  |
| 4810.1 21                                                                                                                | 99.5 4837.6                                | 5 329.8                        |                   |                                      |                              |                      | -                                     |                         |  |
| 4465.6 21                                                                                                                | 32.7 4548.6                                | 618.9                          | AOF = Q           | P <sup>2</sup>                       | $1^{n} = -\frac{1}{2}$       | 4,823                |                                       |                         |  |
| 4053.9 20                                                                                                                | 55.4 4224.8                                | 3 942.6                        |                   | $\frac{1}{D^2}$                      | p 2                          |                      |                                       |                         |  |
|                                                                                                                          |                                            |                                |                   | <b>[</b> <sup>1</sup> ° <sup>-</sup> | ſw J                         |                      |                                       |                         |  |
| solute Open Flow 1                                                                                                       | 4,823                                      |                                | Mcfd @ 15.025     | Angle of                             | Slope $\Theta$ 49            |                      | Slope, n                              | .884                    |  |
| 12 2 2                                                                                                                   | LS CONDENSA                                |                                | ייי ייז סוו       |                                      |                              |                      |                                       |                         |  |
| marxs:D_                                                                                                                 | DO COMUCINOA.                              | E FRUDUCED                     | LOUTING 11        |                                      |                              |                      | · · · · · · · · · · · · · · · · · · · |                         |  |
|                                                                                                                          |                                            |                                |                   |                                      |                              |                      |                                       |                         |  |
|                                                                                                                          |                                            |                                |                   | Calculated P                         |                              |                      | hed By:                               |                         |  |
| proved by Division                                                                                                       | enduk<br>ריר                               | JUFII. TEST                    | TDC               | TC Calculated D                      | y.                           | - Chec               | C                                     |                         |  |

# THE MESTERN COMPLETE COMPLETE MERICA

# WATER ANALYSIS

### HOBBE, NEW MEXICO LAB

ANALYSIS #: HE010251

# GENERAL INFORMATION Mewbourne Oil Company DEPTH:

OPERATOR: Mewbourne Oil Compa WELL: Chalk Bluff Fed #3 FIELD: FORMATION: COUNTY: Eddy STATE: NM DEPTH: 0 DATE SAMPLED: DATE RECEIVED:02/24/93 SUBMITTED BY: Leonard Pounds WORKED BY: M Keith PHONE #: 505-392-5556

| SAMPLE DESCRIPTI                                                                                                     | ON: all water                                                                                  |                                                                                                                                              |                                                      |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
|                                                                                                                      | PHYSICAL AND                                                                                   | CHEMICAL DETERMINATIONS                                                                                                                      | · · ·                                                |
| SPECIFIC GRAVITY<br>RESISTIVITY (MEA<br>IRON (FE++):<br>CALCIUM:<br>MAGNESIUM:<br>CHLORIDE:<br>BODIUM+POTASS:<br>KCL | : 1.003 @ 7(<br>SURED): 3 (<br>150 PPM<br>10 PPM<br>6 PPM<br>1595 PPM<br>1243 PPM<br>:no trace | 0 °F PH: 6.75<br>OHMS @ 0 °F<br>SULFATE:<br>TOTAL HARDNESS:<br>BICARBONATE:<br>SODIUM CHLORIDE (CALC)<br>TOT. DISSOLVED SOLIDS:<br>OIL :none | 100 PPM<br>50 PPM<br>487 PPM<br>2624 PPM<br>3474 PPM |
| REMARKS:                                                                                                             |                                                                                                |                                                                                                                                              |                                                      |





• •
|                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                          | OT COMS                                |                                                                                                                                            | ston 35                                                                                                        |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--|--|
| Form 3169 5 UNIT<br>(June 1990 DEPARTMENT<br>BUREAU OF L                                                                                                                                                                                                                                                                                                                                                                          | ED STATES<br>I OF THE INTERIOR<br>AND MANAGEMENT                         | Drawer DD<br>Artesia NM                | 30610                                                                                                                                      | FORM APPROVE:<br>Budget Bureau No. 10.6-0000<br>Expires: March 31, 1950<br>5. Lease Designation and Seriel No. |  |  |
| SUNDRY NOTICES A<br>Do not use this form for proposals to dril<br>Use "APPLICATION FOF                                                                                                                                                                                                                                                                                                                                            | LIND REFORTS ON W<br>Il or to deepen or rector<br>PERMIT                 | ELLS<br>, to a different re<br>oposals | eservoir.                                                                                                                                  | NM-0557371<br>6. If Indian, Allottee or Tribe Name                                                             |  |  |
| SUBMIT                                                                                                                                                                                                                                                                                                                                                                                                                            | IN TRIPLICATE                                                            |                                        |                                                                                                                                            | 7. If Unit or CA, Agreement Designation                                                                        |  |  |
| I. Type of Well<br>Dil X Gas<br>Well Other                                                                                                                                                                                                                                                                                                                                                                                        |                                                                          |                                        |                                                                                                                                            | 8. Well Name and No.                                                                                           |  |  |
| 2. Name of Operator<br>Mewbourne Oil Company                                                                                                                                                                                                                                                                                                                                                                                      | ×                                                                        | ELEIVED                                | <u> </u>                                                                                                                                   | 9. API Well No.<br>30-015-27163                                                                                |  |  |
| P.O. Box 5270 Hobbs, New Me)<br>4 Location of Well (Equates Sec. T. B. M. or Survey De                                                                                                                                                                                                                                                                                                                                            | xico 88241 AP                                                            | <u>я 8 б 1993</u>                      |                                                                                                                                            | 10. Field and Pool, or Exploratory Area<br>N. Illinois Camp Morrow                                             |  |  |
| <b>990'</b><br>1980' FSL & <del>1980</del> ' FEL<br>Soc 1 T185-P27E                                                                                                                                                                                                                                                                                                                                                               | 31                                                                       | C. L. D.<br>Mark Inches                |                                                                                                                                            | 11. County or Parish, State                                                                                    |  |  |
| 12. CHECK APPROPRIATE BOX(s                                                                                                                                                                                                                                                                                                                                                                                                       | ) TO INDICATE NATU                                                       | IRE OF NOTICE                          | , REPOP                                                                                                                                    | RT, OR OTHER DATA                                                                                              |  |  |
| TYPE OF SUBMISSION                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                          | TYPE OF                                | ACTION                                                                                                                                     |                                                                                                                |  |  |
| Notice of Intent                                                                                                                                                                                                                                                                                                                                                                                                                  | Abandonm<br>Recomplet                                                    | ent                                    |                                                                                                                                            | Change of Plans  Change of Plans  New Construction  Non-Routine Fracturing  Water Shut-Off                     |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                   | Plugging E                                                               | eack<br>Dair                           |                                                                                                                                            |                                                                                                                |  |  |
| Final Abandonment Notice                                                                                                                                                                                                                                                                                                                                                                                                          | Altering C  Other                                                        | asing                                  | Conversion to Injection Conversion to Injection Conversion of multiple completion on Well Completion or Recompletion Report and Log form ) |                                                                                                                |  |  |
| <ul> <li>13. Describe Proposed or Completed Operations (Clearly state all give subsurface locations and measured and true vertica</li> <li>1) Formation: Morrow</li> <li>2) Amount of water produced 1</li> <li>3) Water analysis attached</li> <li>4) Water is stored on lease i</li> <li>5) Produced water will be tru</li> <li>6) The disposal well is I &amp; W</li> <li>Eddy County, New Mexico</li> <li>SWD #318</li> </ul> | 0 BW/mo.<br>n fiberglass tank<br>cked by I & W Inc.<br>Inc., Walter Solt | : #1, Unit Le                          | tter L,                                                                                                                                    | Section 5-T18S-R28E                                                                                            |  |  |
| 14. 1 hereby certify that the foregoing is true and correct<br>Signed <u>Third Theorem</u><br>(This space for Federal or State office use)<br>Approved by (ORIG. SGD.) DAVID R. GI<br>Conditions of approval, if any:<br>SEE ATTACHED                                                                                                                                                                                             | Title Produc                                                             | tion Engineer<br>som engineer          |                                                                                                                                            | Date March 4, 1993<br><u>4/22/93</u>                                                                           |  |  |
| Title 18 U.S.C. Section 1001, makes it a crime for any person<br>or representations as to any matter within its jurisdiction.                                                                                                                                                                                                                                                                                                     | knowingly and willfully to make to                                       | any department or agency               | of the United                                                                                                                              | States any false, fictitious or fraudulent statements                                                          |  |  |

| \$ | COMPANY       | :MEWBOURNE | OIL      | LEASE     | :CHALK BL: | JEE FED.COM | WELL NG.<br>TOWNSHIP | : 3<br>: 19 | 1         | Pc = 2273.2            | Pc2 =     | 5167.4 *¦¦<br>*¦! |
|----|---------------|------------|----------|-----------|------------|-------------|----------------------|-------------|-----------|------------------------|-----------|-------------------|
|    |               | 9961       | н        | • 9961    | <br>1/H    | : 1         | G/GMIX               | : 0.849     | 1         | Pt2 = 5031.9           | Ры =      | 2244.7 *          |
|    | . ۲<br>۹۲۵۶ • | 0 42       | 212      | • 0.33    | 825        |             | •, •                 | DATE        | :         | 4810.1                 |           | 2199.5 *          |
|    |               | 2 22       | Fr       | ·0 012892 | 6H         | • 8456 9    |                      | RANGE       | 27        | 4465.6                 |           | 2132.7 *:         |
|    | . u .<br>     |            |          |           |            |             |                      |             |           | 4053.0                 |           | 2055.4 *!!        |
|    |               |            |          |           |            |             |                      |             | 1         | 1                      |           | *1                |
|    | VOL 1 :       | 655        | PSIA 1   | : 2243.2  |            | 1           | RESV.TEMP            | 173.6       | 1         | Pc2-Pw2= 128.6         | P⊮2 =     | 5038.8 *          |
|    | VOL 2 :       | 1310       | PSIA 2   | : 2193.2  |            |             |                      |             | 1         | 329.8                  |           | 4837.6 *          |
|    | V01 3 :       | 2283       | PSIA 3   | : 2113.2  |            | Ś           | SHUT-IN PR           | = 2273.2    | 1         | 618.9                  |           | 4548.6 *          |
|    | VOL 4 ·       | 3294       | PSTA 4   | 2013.2    |            |             |                      |             | 1         | 942.6                  |           | 4224.8 *          |
|    | 101 4 .       | UL) (      |          |           |            |             |                      |             |           |                        |           | *[]               |
|    |               |            |          | PCR       | : 668      |             |                      |             | 1         | n =                    | 0.884     | *                 |
|    |               |            |          | TCR       | : 401      |             |                      |             |           | 1                      |           | *                 |
|    |               |            |          |           |            |             |                      |             | i<br>I    | Pc2/(Pc2-Pw2) =        | 40.184    | *                 |
|    | ETNE !        | RATE 1     |          | RATE 2    | t<br>•     | RATE 3      | 1                    | RATE 4      |           |                        | 15.666    | *                 |
|    |               |            |          | 1         |            | t           | f<br>f               |             | 1 1<br>1  | <br>                   | 8.350     | *11               |
|    |               | '1ST       | *2ND     | '1ST      | ''2ND      | '1ST        | '2ND                 | '1ST        | '2ND      | 1                      | 5.482     | *:                |
|    |               | 201        |          | 1         | 1          | 1           | ,<br>,<br>,          | !<br>!      | <br>      | <br>                   |           | *                 |
| 1  | QM            | 0.655      | 0.655    | 1.310     | 1.310      | 2.283       | 2.283                | 3.294       | 3.294     | l<br>l                 |           | *11               |
| 2  | TW            | 534        | 534      | 534       | 534        | 534         | 534                  | 534         | 534       | {[Pc2/Pc2-Pw2]n =      | 26.181    | *11               |
| 3  | Ts            | 633.6      | 633.6    | 633.6     | 633.6      | 633.6       | 633.6                | 633.6       | 633.6     | 1                      | 11.386    | ***               |
| 4  | T             | 583.8      | 583.8    | 583.8     | 583.8      | 583.8       | 583.8                | 583.8       | 583.8     | 1                      | 6.528     | * [ ]             |
|    | PR (est)      | 3,36       | 1        | 3.28      | 1          | 3.16        | 1                    | 3.01        | 1 1       | 1                      | 4.500     | *11               |
| 5  | Z(est)        | 0.727      | 0.738    | 0.727     | 0.736      | 0.728       | 0.733                | 0.731       | 0.730     | 1                      |           | *                 |
| 6  | 17            | 424.5      | 430.8    | 424.6     | 429.5      | 425.2       | 427.7                | 426.5       | 426.0     | ADF= Q                 | 17.148    | *14               |
| 7  | GH/T7         | 19.924     | 19.629   | 19.918    | 19.691     | 19.891      | 19.774               | 19.829      | 19.852    |                        | 14.915    | *                 |
| 8  | eS            | 2.111      | 2.088    | 2.110     | 2.093      | 2.108       | 2.099                | 2.104       | 2.105     |                        | 14.903    | *                 |
| ç  | 1-e-S         | 0.526      | 0.521    | 0.526     | 0.522      | 0.526       | 0.524                | 0.525       | 0.525     |                        | 14.823    | *                 |
| 10 | Pt            | 2243.2     | 2243.2   | 2193.2    | 2193.2     | 2113.2      | 2113.2               | 2013.2      | 2013.2    |                        |           | *[]               |
| 11 | Pt2 /1000     | 5031.9     | 5031.9   | 4810.1    | 4810.1     | 4465.6      | 4465.6               | 4053.0      | 4053.0    | 1                      |           | *1                |
| 12 | Fr            | 0.012892   | 0.012892 |           | 0.012892   | 0.012892    | 6.012892             | 0.012852    | 0.0128924 | t<br>It                |           | *[]               |
| 13 | Fc=FrTZ       | 5.472      | 5.555    | 5.474     | 5,537      | 5.481       | 5.514                | 5.498       | 5.492     | : t<br>  1             |           | *[]               |
| 14 | FcQm          | 3.58       | 3.64     | 7.17      | 7.25       | 12.51       | 12.59                | 18.11       | 18.09     | 1                      |           | *!!               |
| 15 | L/H(FcQm)     | 12.8       | 13.2     | 51.4      | 52.6       | 156.6       | 158.5                | 328.0       | 327.3     | 1<br>  1               |           | *                 |
| 16 | FW            | 6.761363   | 6.896568 | 27.05758  | 27.47157   | 82.32401    | 82.97298             | 172.0865    | 171.83059 | 1                      |           | ¥11               |
| 17 | Pw2           | 5038.7     | 5038.8   | 4837.2    | 4837.6     | 4547.9      | 4548.6               | 4225.1      | 4224.8    |                        |           | *==               |
| 18 | Ps2           | 10636.7    | 10519.8  | 10208.7   | 10123.1    | 9588.7      | 9547.9               | 8887.4      | 8894.3    | 11                     |           | *[]               |
| 19 | Ps            | 3261.4     | 3243.4   | 3195.1    | 3181.7     | 3096.6      | 3090.0               | 2981.2      | 2982.3    | <b> </b><br>  <b> </b> |           | *                 |
| 20 | . э<br>р      | 2752.3     | 2743.3   | 2694.2    | 2687.4     | 2604.9      | 2601.6               | 2497.2      | 2497.8    |                        |           | *                 |
| 21 | Pr            | 4.12       | 4.11     | 4.03      | 4.02       | 3.90        | 3.89                 | 3.74        | 3.74      | 11                     |           | <b>X</b> = 1      |
| 22 | Tr            | 1.46       | 1.46     | 1.46      | 1.46       | 1.46        | 1.46                 | 1.46        | 1.46      | <br>  1                |           | *[]               |
| 23 | I             | 0.738      | 0.738    | 0.736     | 0.735      | 0.733       | 0.732                | 0.730       | 0.730     | ll F                   | ORM C122- | D *::             |
|    |               |            |          |           |            |             |                      |             |           |                        |           | ::::::::*!!       |

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| M & P | $\mathbf{e}_{i} = \mathbf{e}_{i} \mathbf{z}_{i}$ | F E 1 | - : 5 2 | Laboratory | s Srvices |
|-------|--------------------------------------------------|-------|---------|------------|-----------|
|       | ·_··                                             |       |         |            |           |

P.01

|   | L |  |
|---|---|--|
| 5 | S |  |

# Laboratory Services 1331 Tasker Drive Hobbs, New Mexico 88240

Telephone: (505) 397-3713

Mewbourne Oil Co. FOR; Attention: Mr. R.Jones P. O. Box 5270 Hobbs, New Mexico 88240

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## SAMPLE COMPANY: LEASE: PLANT:

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IDENTIFICATION: Chalk Bluff #3 Mewebourne Oil Co.

| SAMPLE DATA: DATE SAMPLED: 3/4/<br>ANALYSIS DATE: 03-<br>PRESSURE – PSIG<br>SAMPLE TEMP. °F<br>ATMOS. TEMP. °F | 93 12:30PM GAS (XX)<br>05-93 SAMPLED<br>530.0 ANALYSIS | LIQUID()<br>BY: R. Jones<br>BY: Rolland Perry |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------|
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------|

REMARKS:

|                  |        | MOL     |                |         |
|------------------|--------|---------|----------------|---------|
| COMPONENT        |        | PERCENT | GPM            |         |
| Hudrogon Sulfide | (H2S)  |         |                |         |
| Nitropen         | (N2)   | 0.33    |                |         |
| Carbon Diovida   | (002)  | 0.42    |                |         |
| Mathona          | (01)   | 83.10   |                |         |
| Ethana           | (C2)   | 8.14    | 2.164          |         |
| Propose          | (02)   | 3.14    | 0.862          |         |
| L-Butana         | (004)  | 0.40    | 0.130          |         |
| NLButene         | (NC4)  | 0.86    | 0.270          |         |
| t Bootono        | (10)   | 0.39    | 0.140          |         |
| N-Dontano        | (NC5)  | 0.41    | 0.147          |         |
| Hevene           | (000)  | 2.81    | 1.214          |         |
| Hontanes Plus    | (07+)  | 0.00    | 0.000          |         |
| Heptanoo Filoo   | (0) () | 100.00  | 4.927          |         |
|                  |        | 4 -     |                | 31 1701 |
| BTU/CU.FT DR     | (      | 1269    | MOLECULAR WI.  | £1.1/VI |
| AT 14.650 DRY    |        | 1265    |                | 3 601   |
| AT 14.650 WET    |        | 1239    | 26# GASULINE - | 1.591   |
| AT 15.025 DRY    |        | 1298    |                |         |
| AT 15.025 WET    |        | 1304    |                |         |
| SPECIFIC GRAVIT  | Y      |         |                |         |
|                  | ກ      | 0.731   |                |         |
| MEASURE          |        |         |                |         |
| MEAVVIL          |        |         |                |         |

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است الد الالا ال

MEWBOURNE OIL COMPANY Chalk Bluff Federal Com. Well #3 1-18S-27E Eddy County, New Mexico 3/4/93



Log Qz = 850: Log = 2,92942

5100F N=, 88349 = .884

State of New Mexico

Inergy, Minerals and Natural Resources Dept 2011

RELEIVED Form C-122 Revised 4-1-91

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Submit in duplicate to appropriate district office See Rule 401 & Rule 1122

## OIL CONSERVATION DIVISION

P.O. Box 2088

EPR (1 8 1993)

Santa Fe, New Mexico 87504-2088

|                  |                                | MUL         | TIPO             | INT A               | ND ØNE                          | E POINT            | Г ВАСК                      | PRESSU                      | IRE TEST          | FOR GA  | S WEL                   | L          |                                      |
|------------------|--------------------------------|-------------|------------------|---------------------|---------------------------------|--------------------|-----------------------------|-----------------------------|-------------------|---------|-------------------------|------------|--------------------------------------|
| Operate          | Operator MEW OURNE OIL COMPANY |             |                  |                     |                                 |                    |                             |                             |                   |         |                         |            |                                      |
| Туре Т           | est<br>X Initial               |             | Ann              | ual                 |                                 | ial                |                             | 10                          | st Date<br>3/4/93 |         | Well No.                | 3          |                                      |
| Compl            | etion Date                     |             | Total Dep        | xh                  |                                 | Plug Back          | TD                          | Ele                         | vation            |         | Unit Ltr                | Sec T      | WP - Rge.                            |
| $\frac{1}{Crrs}$ | 16/93                          | Wt          | <u></u>          | <u>)150</u><br>  Se | n At                            | Perforatio         | <u>.02</u><br>ns:           | 1                           | GL_3628           |         | County                  | 1          | 18S 27E                              |
| Csg. Si          | LZC                            |             |                  |                     | 3600                            |                    |                             |                             | 00 <b>7</b> /     |         |                         |            |                                      |
| 42               | ···· .                         | 10.5        | 4.(              | 152                 | 10150                           | From:<br>Performin | 9950                        | То                          | : 9954            |         | ED.                     | DY         |                                      |
| Tbg. S           | <sup>ze</sup> 7/8              | 4.7 &       | ° 1.91           | - 0                 | a Al                            | renoiano           |                             |                             |                   |         | 1001                    | MC         | RROW                                 |
| 2 3/             | 8&                             | 6.5         | 2.44             | +1                  | 9972                            | From:              | 9957                        | To                          | <u>: 9972</u>     |         | NO                      | RTH IL     | LINOIS Camp                          |
| Type V           | Vell - Single<br>ke            | - Bradenhe  | ad - G.G.        | or G.O. I           | Multiple                        |                    | Packer Set                  | At 9797                     |                   |         | MO                      | RROW       |                                      |
| Produc           | ing Thru                       | Reservoir 7 | Temp. °F         | Mean A              | nnual Temp.                     | ٩                  | Baro, Press                 | - P 12                      | <u>.</u>          |         | Connectio               | on         |                                      |
| tbg.             | <u> </u>                       | 133         | ~                |                     | <u> </u>                        | ( <b>7</b> )       |                             | 15.<br>aus                  | <u>L</u>          |         | II an                   | sweste     | The                                  |
| 9950             | ) H                            | 950         | Gg               | 731   %             | .42                             | 96 N               | <sup>2</sup> .33            | % H <sub>2</sub> S          | Prover            |         | 3.06                    | 8          | flg.                                 |
|                  |                                | FL          | OW DA            | TA                  |                                 |                    |                             | TUB                         | ING DATA          | C       | CASING D                | ATA        | Duration                             |
| NO               | Prover                         | Orifice     |                  | Press.              | Dif                             | f.                 | Temp.                       | Press.                      | Temp.             | Pres    | ss.                     | Temp.      | of                                   |
| 10.              | Line X<br>Size                 | Size        |                  | p.s.i.g.            | hw                              |                    | Ŧ                           | p.s.i.g.                    | ٩F                | p.s.i   | .g.                     | °F         | Flow                                 |
| SI               |                                |             |                  |                     |                                 |                    |                             | 2260                        |                   | Pkr     |                         |            | 48 hr.                               |
| 1.               | 3 X 1.                         | 500         |                  | <u>530</u>          | 5                               |                    | 148                         | 2230                        |                   |         |                         |            | <u>l hr.</u>                         |
| 2.               | <u>3 X 1.</u>                  | 500         |                  | <u>530</u>          | 19                              |                    | 124                         | 2180                        |                   | 11      |                         |            | $\frac{1 \text{ hr.}}{1 \text{ hr}}$ |
| 3.               | <u>3 X 1.</u>                  | <u>.500</u> |                  | 535                 | 52                              |                    | 88                          | 2100                        | ··· <b></b>       | 11      |                         | <u> </u>   | $\frac{1}{1}$ hr                     |
| 4.               | <u>3 X I.</u>                  | 500         |                  | 540                 |                                 |                    | 70                          | 2000                        |                   |         |                         |            |                                      |
| 5.               | <u></u>                        |             | l                |                     |                                 | RATEO              | F FLOW C                    | ALCULAT                     | IONS              | · .     | J                       |            |                                      |
|                  | COEFFICI                       | ENT -       | ~ ~              |                     | Pı                              | ressure            | Flow                        | Temp.                       | Gravity Facto     | r Super | Compress.               | Ra         | te of Flow                           |
| NO.              | (24 HOU                        | R)          | <u> </u>         | ₽ <sub>m</sub>      |                                 | P                  | Facto                       | or FL                       | Fg.               | Fact    | or, F pv.               |            | Q, Mcfd                              |
| 1.               | 11.13                          |             | 52.              | 12                  | 54                              | 3.2                | .924                        | 18                          | 1.170             | ) 1.0   | )43                     | 65         | 5                                    |
| 2.               | -11.13                         |             | 101              | 8/                  | 54                              | 3.2                | .943                        | 36                          | 1.170             | 1.0     | )49                     | 131        | 0                                    |
| 3.               | 11.13                          |             | -237             | 54                  | 54                              | 8.2                | .974                        |                             |                   |         | )66                     | 2283       |                                      |
| 4.               | 11.15                          |             |                  |                     |                                 | 13.2               | .990                        |                             | 1.1/0             |         |                         |            | 4                                    |
| J.               | <u>Р</u>                       | Temp        | 2 D              | Т                   | 7                               | Gas                | l ionid Hydr                | i<br>verbon Ratio           | 23                | 63      |                         |            | Mcf/bbl                              |
| NO.              | - 1                            | Temp.       |                  | 1 50                |                                 | A.P.               | L Gravity of                | Liquid Hydro                | carbons           | 57.0    |                         |            | Deg.                                 |
| 1.               | .81                            | 608         |                  | 1.52                | .919                            | Spec               | cific Gravity               | Separator Gas               |                   | 1       |                         | XXX        | XXXXXX                               |
| 2.               | <u>.01</u>                     | 5/18        |                  | 1 37                | 880                             | Spec               | cific Gravity               | Flowing Fluid               |                   | X X X X | (X                      | Ģ,         | Mix .849                             |
| 3.               | 83                             | 530         |                  | $\frac{1.37}{1.32}$ | .865                            | Criti              | ical Pressure_              | 668                         | <i>k</i> 01       |         | P.S.I.A                 | 00         | 4P.S.I.A.                            |
| 5.               | .05                            |             |                  | 1150                |                                 | Спіц               | ical Temperat               | ure                         | 401               |         | R                       | 44         | <u> </u>                             |
| P_22             | 273.2                          | P_2         | 5167.            | .4                  |                                 |                    |                             |                             | 1005              |         |                         |            |                                      |
| c                | p <sup>2</sup>                 | P           |                  | p 2                 | P <sup>2</sup> -F               | , 2 1)             | P <sub>c</sub> <sup>2</sup> | =5.                         | 4821              | (2)     | $P_c^2$                 | n =        | 4.500                                |
| NO.              | 5021 0                         | 2 22/.      |                  | 5038 9              | R 128                           | 6                  | $P^2 - P$                   | 2                           |                   | Ī       | $P_{c}^{2} - P_{u}^{2}$ |            |                                      |
| $\frac{1}{2}$    | 4810                           | 2190        | $\frac{1}{9}, 5$ | 4837.0              | $\frac{5}{6}$ $\frac{120}{329}$ | 8                  | τ.                          | ,                           |                   | L       |                         | <b>J</b> . |                                      |
| 3.               | 4465.0                         | 5 213       | 2.7 2            | 4548.0              | 6 618.                          | <u>9</u> A         | OF = Q                      | P <sub>c</sub> <sup>2</sup> | <b>1</b> • =_     | 14,823  |                         |            |                                      |
| 4.               | 4053.9                         | 205         | 5.4 4            | 4224.8              | 8 942.                          | 6                  |                             | $P^2$ -                     | P <sup>2</sup>    |         |                         |            |                                      |
| 5.               |                                |             |                  |                     |                                 |                    |                             | <u>ь</u> с                  | * J               |         |                         |            |                                      |
| Absolu           | ite Open Flov                  | <u> </u>    | ,823             |                     |                                 | Mcfd               | @ 15.025                    | Angle of                    | Slope $\Theta49$  | )       | Slo                     | ppe, n     | 884                                  |
| Remar            | ks: 13                         | .3 BBL      | S CONI           | DENSA'              | TE PRODU                        | ICED DU            | RING TH                     | EST                         |                   |         |                         |            |                                      |
| 1.011101         | ·····                          |             |                  |                     |                                 |                    |                             |                             |                   |         |                         |            |                                      |
| <u> </u>         |                                |             | •                | ,                   |                                 |                    |                             |                             | ·····             |         |                         |            |                                      |
| Аррго            | ved By Divisi                  | ion         |                  | Condu               | cted By:                        | ידירידיי           |                             | Calculated By               | <i>;</i> :        |         | Checked B               | By:        |                                      |
|                  | PRO WELL TESTERS KS KS         |             |                  |                     |                                 |                    |                             |                             |                   |         |                         |            |                                      |

| Form 3160-5<br>(June 1990)                                                 | UNITED<br>DEPARTMENT OF<br>BUREAU OF LAND                             | STATES<br>THE INTERIOR<br>MANAGEMENT                          | N.M. Oil Ans D<br>811 S. 1st 3<br>Artesia No. 20 | <b>IVISION</b> FORM APPROVED<br>Budget Bureau No. 1004-0135<br>Expires: March 31, 1993<br><b>9834</b> Designation and Serial No.<br>NM 0557371 |  |  |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Do not use this form<br>Use                                                | SUNDRY NOTICES AND<br>for proposals to drill or<br>"APPLICATION FOR P | REPORTS ON WEL<br>to deepen or reentry<br>ERMIT-" for such pr | LS<br>v to a different reservoir.<br>oposals     | 6. If Indian, Allottee or Tribe Name                                                                                                           |  |  |
|                                                                            | SUBMIT IN T                                                           | RIPLICATE                                                     |                                                  | 7. If Unit or CA, Agreement Designation                                                                                                        |  |  |
| 1. Type of Well<br>Oil Gas<br>Well X Well                                  | Other                                                                 |                                                               |                                                  | 8. Well Name and No.<br>Chalk Bluff Fed. <del>Comm.</del> #3                                                                                   |  |  |
| 2. Name of Operator P<br>Mewbourne Oil Comp<br>3. Address and Telephone No | 2. Name of Operator V<br>Mewbourne Oil Company                        |                                                               |                                                  |                                                                                                                                                |  |  |
| P. O. Box 5270, Hobl<br>4. Location of Well (Footage,                      | os, NM 88241 505-393-59<br>Sec., T., R., M., or Survey Descriptio     | 05                                                            |                                                  | 10. Field and Pool, or Exploratory Area<br>N. Illinois Camp Morrow                                                                             |  |  |
| 1980' FSL & 990' FE                                                        | _ of Section 1, ⊺18S, R27E                                            |                                                               |                                                  | 11. County or Parish, State<br>Eddy                                                                                                            |  |  |
| 12. CHECK AI                                                               | PPROPRIATE BOX(s) TO                                                  | INDICATE NATURE                                               | OF NOTICE, REPORT, O                             | OR OTHER DATA                                                                                                                                  |  |  |
| TYPE OF S                                                                  | UBMISSION                                                             |                                                               | TYPE OF ACTION                                   |                                                                                                                                                |  |  |
| Notice of I                                                                | ntent                                                                 | Abandonme                                                     | ent<br>Dn                                        | Change of Plans  New Construction                                                                                                              |  |  |
| Subseque                                                                   | nt Report                                                             | Plugging Ba                                                   | nck<br>air                                       | Non-Routine Fracturing                                                                                                                         |  |  |
| 🗍 Final Aba                                                                | ndonment Notice                                                       | Altering Cas                                                  | sing W/S                                         | Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)    |  |  |

13. Describe Proposed or Completed Operations (Clearly state all pertinet details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markders and zones pertinent to this work.)\*

Add Morrow perforations 9860' to 9870'.

| 0222324252                                                  | 262728292     |
|-------------------------------------------------------------|---------------|
| APH<br>000<br>181<br>000<br>181<br>181<br>181<br>181<br>181 |               |
| ADDEPTED FOR RECORD                                         | SIA w         |
| SI S S S S S S S S S S S S S S S S S S                      | 16813         |
|                                                             |               |
| (ORIG. SGD.) GA                                             | HY GOUHLEY o- |

| 14. I hereby certify that the foregoing is true and correct |         |                  |      |          |
|-------------------------------------------------------------|---------|------------------|------|----------|
| Signed AEllen Elers                                         | Title _ | District Manager | Date | 04/15/99 |
| (This space for Federal of State office use)                |         |                  |      |          |
| Approved by                                                 | Title _ |                  | Date |          |

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

30-015-27163 ----Oxford<sup>®</sup> **⊗ ESSELTE** NO. R753 1/3 MADE IN U.S.A. ٠ • • • €<sub>A</sub> 1-21-93 Spectral Dunoity Dual Spaced Thurtron (365'- 8467' 400'- 10,100' Comp. Sonic Log. 6365'- 8467' Qual renduction Lateralg • Dual fat. 6357-81671 8357-81671 8357-81671 8357-81671 8357-80 8367-10,1431 MSH Jamma Collar Col for 13401-100691 NSL-R-9760 R-9760 SD + NSL 11-4-92



NAVAJO REFINING COMPANY, L.L.C. Map ID No. 100 Artificial Penetration Review



## **MAP ID NO. 100**

MEWBOURNE OIL CO. CHALK BLUFF 36 STATE NO. 001

API NO. 30-015-27286

WUN ~ a poy

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C-101 Ongard C102

OCRID # 14744 PROP # 7871 Pool # 96960

xforc & ESSELTE NO. R753 43 MADE IN U.S.A.

4-15-93 Oual Spaced Neutron Log Suy - 9242' 9370'-10,059 Comp Sonic Log. 1220'-9260' Dual Fat. 2598'- 9275' 9310'- 10,059' DHC-2464 At 100%

NSL- R-9815

| Submit to Appropriate<br>District Office<br>State Lease - 6 copies<br>Fee Lease - 5 copies | Е <i>у</i> ,                    | State of New Me<br>Minerals and Natural Re         | exico = sources Departmer.               |                                                            | Form C-1( C) 4 M<br>Revised 1-1-8 8 4 6       |  |  |
|--------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------|------------------------------------------|------------------------------------------------------------|-----------------------------------------------|--|--|
| DISTRICT J<br>P.O. Box 1980, Hobbs, NM                                                     | OIL (<br>85240<br>S             | CONSERVATIO<br>P.O. Box 208<br>anta Fe, New Mexico | N DIVISION<br>88<br>875 <b>9ECEIVED</b>  | API NO. (assigned by OCD on New Wells)<br>30 - 015 - 27286 |                                               |  |  |
| <u>DISTRICT II</u><br>P.O. Drawer DD, Artesia, N                                           | M 88210                         |                                                    | an an an an an an an an an an an an an a | 5. maicate Type                                            |                                               |  |  |
| DISTRICT III<br>1000 Rio Brazos Rd., Aztec.                                                | NM 87410                        |                                                    | C 14 7 5 [693                            | 6. State Oil & C                                           | Bas Lease No.                                 |  |  |
|                                                                                            | ION FOR PERMIT T                |                                                    |                                          |                                                            |                                               |  |  |
| 1a. Type of Work:                                                                          |                                 |                                                    |                                          | 7. Lease Name                                              | or Unit Agreement Name                        |  |  |
| DRILL<br>b. Type of Well:<br>OE. GAS<br>WELL WELL                                          |                                 | DEEPEN                                             |                                          | Chalk B                                                    | luff "36" State                               |  |  |
| 2. Name of Operator                                                                        |                                 |                                                    |                                          | 8. Well No.                                                |                                               |  |  |
| Mewbourne Oi                                                                               | 1 Company -                     |                                                    |                                          | 1.                                                         |                                               |  |  |
| 3. Address of Operator                                                                     |                                 | 1                                                  |                                          | 9. Pool name or                                            | Wildcat                                       |  |  |
| P.U. BOX 52/                                                                               | U HODDS, NEW M                  | 1ex1c0 88241                                       | <u> </u>                                 | 1111101                                                    | s callip Morrow Norch                         |  |  |
| 4. Well Location<br>Unit Letter M                                                          | : <u>990</u> Feet Fi            | rom The West                                       | Line and 66                              | 50 Feet From                                               | m The South Line                              |  |  |
| 26                                                                                         |                                 |                                                    | 275                                      | D (775 /                                                   | Eddy                                          |  |  |
| Section 30                                                                                 |                                 |                                                    | nge 2/C P                                | ммрм<br>//////////////////////////////////                 | Euly County                                   |  |  |
|                                                                                            |                                 | 10. Proposed Depth<br>10, 300'                     | 11. F                                    | ormation<br>Morrow                                         | 12. Rotary or C.T.<br>Rotary                  |  |  |
| 13. Elevations (Show whether<br>3635' G.R.                                                 | r DF, RT, GR, etc.)             | 4. Kind & Status Plug. Bond<br>Blanket on file     | 15. Drilling Contractor<br>WEK Drilli    | ing 16.                                                    | Approx. Date Work will start<br>Jan. 31, 1993 |  |  |
| 17.                                                                                        | PR                              | OPOSED CASING AN                                   | ND CEMENT PROGR                          | AM                                                         |                                               |  |  |
| SIZE OF HOLE                                                                               | SIZE OF CASING                  | WEIGHT PER FOOT                                    | SETTING DEPTH                            | SACKS OF CE                                                | EMENT EST. TOP                                |  |  |
| 17-1/2"                                                                                    | 13-3/8"                         | 48#                                                | 400'                                     | 400 sks.                                                   | Circ.                                         |  |  |
| 12-1/4"                                                                                    | 9-5/8"                          | 36#                                                | 2,600'-                                  | 700 sks.                                                   | Tie back into surf                            |  |  |
| 8-3/4"                                                                                     | 5-1/2"                          | 17#                                                | 10,300'-                                 | <u>600 sks.</u>                                            | Bring above top                               |  |  |
| Mud Program:                                                                               |                                 |                                                    |                                          |                                                            |                                               |  |  |
|                                                                                            |                                 |                                                    |                                          |                                                            |                                               |  |  |
| 0' - 400'                                                                                  | Spud mud w/fres                 | sh water gel, LCM                                  | M as needed.                             |                                                            | 1-LL-42                                       |  |  |
| 400' - 2,600'                                                                              | Fresh water ge                  | 1 & lime. LCM as                                   | s needed.                                |                                                            |                                               |  |  |
| 2,600' - 9,200'                                                                            | Cut brine with                  | Time for pH cont                                   | limo coda ach                            | and stanch                                                 | Wt 9.2-9.6 ppg                                |  |  |
| 9,200 - 10,300                                                                             | WI 10 cc or les                 | ss. Vis. 32-36.                                    | Raise wt. acco                           | dinaly if                                                  | abnormal pressures                            |  |  |
|                                                                                            | are encountered                 | d.                                                 |                                          | 2                                                          | F                                             |  |  |
| BOP Program:                                                                               |                                 | · · · · · ·                                        |                                          |                                                            |                                               |  |  |
|                                                                                            | 1500 Series Dou                 | uble Ram Hydraul                                   | ic BOP w/900 Sen                         | ries Hydril                                                | from Intermediate                             |  |  |
|                                                                                            | CSG. TO I.U.                    | 900 Series Hydri<br>d-gas seperator                | rotating head t                          | J. LO INLER<br>From Wolfca                                 | mp to T D                                     |  |  |
| Gas is not dedic                                                                           | ated.                           | a gus seperator,                                   | Totating head                            |                                                            |                                               |  |  |
| IN ABOVE SPACE DESC<br>ZONE, GIVE BLOWOUT PREVE                                            | TRIBE PROPOSED PROGI            | RAM: # PROPOSAL IS TO DEEPE                        | N OR PLUG BACK, GIVE DATA ON             | PRESENT PRODUCTIV                                          | E ZONE AND PROPOSED NEW PRODUCTIVE            |  |  |
| I hereby certify that the inform                                                           | stipe above is true and complet | ie to the best of my knowledge and                 | beliaf.                                  |                                                            |                                               |  |  |
| Bi                                                                                         | Officer                         | 0                                                  | Drilling Supe                            | erintendent                                                | DATE 01/18/93                                 |  |  |
| SIGNATURE                                                                                  |                                 |                                                    |                                          |                                                            | (505)                                         |  |  |
| TYPE OR FRINT NAME BI                                                                      | 11 Pierce                       |                                                    |                                          |                                                            | TELEPHONE NO. 393-5905                        |  |  |
| (This space for State Use)                                                                 | 6010.                           |                                                    | bedingit                                 |                                                            | 1-19-93                                       |  |  |
| APTROVED BY                                                                                | marin/                          | π                                                  |                                          |                                                            | DATE                                          |  |  |
| CONDITIONS OF APPROVAL, IF                                                                 | ANY:                            | O D IN CHEERIEN                                    | Δ1                                       | PPROVAL VAL                                                | ID FOR 80 DAYS                                |  |  |
| NSC * R-9815                                                                               | NOTIFY N.M.O<br>TIME TO WIT     | NESS CEMENTING                                     | THE PI                                   | ERMIT EXPIRI                                               | ES 7.11-13<br>ING UNDERWAY                    |  |  |

Submit to Appropriate District Office State Lease - 4 copies Fee Lease - 3 copies

DISTRICT I P.O. Box 1980, Hobbs, NM 88240

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 State of New Mexico inergy, Minerals and Natural Resources Departs.

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10-2003 Revision 10-3

DIV-IL NO

## OIL CONSERVATION DIVISIO

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

| WELL LOCATION AND ACREAGE DEDICATION PLAT<br>All Distances must be from the outer boundaries of the section |  |
|-------------------------------------------------------------------------------------------------------------|--|
|                                                                                                             |  |

| Operator                                                                                                        |             |                     |           |            |                            |              | Lear                      | 6                          |                 |                                                                                                                 |         |                                 |                                   |
|-----------------------------------------------------------------------------------------------------------------|-------------|---------------------|-----------|------------|----------------------------|--------------|---------------------------|----------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------|---------|---------------------------------|-----------------------------------|
| MEWBOURNE                                                                                                       | OIL         | COMF                | ANY       |            |                            |              |                           | CHALK                      | BLUFF           | 36 STATE                                                                                                        | C       |                                 | 1                                 |
| Unit Letter                                                                                                     | Sectio      | 201                 | Ī         | Township   | ,                          |              | Ran                       | 20                         |                 |                                                                                                                 |         | County                          |                                   |
| м                                                                                                               |             | 36                  |           | 17         | SOUT                       | н            |                           | 27 EA                      | ST              | N                                                                                                               | MPM     | EDD                             | Ý                                 |
| Actual Footage Loca                                                                                             | tion of     | Well:               |           |            |                            |              |                           |                            |                 |                                                                                                                 |         |                                 |                                   |
| 990.                                                                                                            | fect f      | rom the             | WE        | ST         |                            | line ar      | sd                        | 660                        |                 | fect                                                                                                            | from    | the SOUTI                       | I line                            |
| Ground level Elev.                                                                                              |             | Рл                  | ducing.   | Formation  | 1                          |              | Poo                       | 1                          |                 |                                                                                                                 |         |                                 | Dedicated Acreage:                |
| 3635                                                                                                            |             | Mor                 | row       |            |                            |              |                           | <u>llinoi</u>              | <u>s Camp</u>   | Morrow                                                                                                          | Nor     | <u>th</u>                       | <u>320</u> Acres                  |
| 1. Outline                                                                                                      | s the ac    | reage de            | dicated t | o the subj | ject well                  | by colored   | peacil of                 | hachure m                  | arks on the ;   | plat below.                                                                                                     |         |                                 |                                   |
| 2. If more                                                                                                      | e than (    | one lease           | is dedic  | ated to th | e well, oi                 | zline each   | and iden                  | tify the own               | ership there    | of (both as to                                                                                                  | workin  | ng interest and                 | l royalty).                       |
| 3. If more                                                                                                      | e than o    | -<br>DE lesse       | of diffe  | rent owne  | nship is d                 | ledicated to | the well                  | , have the i               | nterest of all  | owners been                                                                                                     | consol  | idated by com                   | munitization,                     |
| unitiza                                                                                                         | tion, fo    | rce-pool            | ng, etc.1 | ?          | •                          |              |                           |                            | 6.              |                                                                                                                 | +-      | <u></u>                         |                                   |
|                                                                                                                 | Yes         |                     |           | No         | If answ<br>interaction     | ver is "yes" | " type of                 | consolidatio               | na <u>UU</u> na |                                                                                                                 | ide of  | <u>un _</u>                     |                                   |
| If answer<br>this form                                                                                          | IS DO       | " ILS UDS<br>YEARTV | OWDER     |            | lescapuo                   |              |                           | my been u                  |                 | (0.00 1616.000                                                                                                  |         | •                               |                                   |
| No allow                                                                                                        | able wi     | ill be ass          | gned to   | the well u | intil all in<br>ch interes | terests have |                           | onsolidated<br>d by the Di | (by commu       | nitization, unit                                                                                                | ization | , forced-pooli                  | ng, or otherwise)                 |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            |                 |                                                                                                                 | _       | OPER A                          | TOR CERTIFICATION                 |
|                                                                                                                 |             | 1                   |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | I hereb                         | ertify that the information       |
|                                                                                                                 |             | Ì                   |           |            |                            |              |                           | [                          |                 |                                                                                                                 | c       | contained her                   | ein in true and complete to the   |
|                                                                                                                 |             | i                   |           |            |                            |              |                           | 1                          |                 |                                                                                                                 | 6       | ust of my low                   | wiedge and belief.                |
|                                                                                                                 |             | i                   |           |            | 1                          |              |                           |                            |                 |                                                                                                                 | ΙL      |                                 |                                   |
|                                                                                                                 |             | i                   |           |            |                            |              |                           |                            |                 |                                                                                                                 |         |                                 | n                                 |
| •                                                                                                               |             | i                   |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | 1Sil                            | Frence                            |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            |                 |                                                                                                                 | F       | rinted Name                     |                                   |
|                                                                                                                 |             |                     |           |            | ╴━╺┽                       |              |                           |                            | <br>            |                                                                                                                 | -   B   | <u>ill Pie</u>                  | rce                               |
|                                                                                                                 |             | ļ                   |           |            |                            |              |                           |                            |                 |                                                                                                                 | E       | Positios                        |                                   |
|                                                                                                                 |             | 1                   |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | rilling                         | Superintendent                    |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | Company                         |                                   |
|                                                                                                                 |             | 1                   |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | lewbourn                        | e Uil Company                     |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | Date                            | 07 1002                           |
|                                                                                                                 |             | I                   |           |            |                            |              |                           |                            | ļ               |                                                                                                                 |         | ctober                          | 2/, 1992                          |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | SURVE                           | YOR CERTIFICATION                 |
|                                                                                                                 |             | Rő 20               | 314 H     |            | 200                        | kri esti     |                           |                            |                 | <b>新教教</b> 会教                                                                                                   |         |                                 |                                   |
| and the second second second second second second second second second second second second second second secon |             |                     |           |            |                            |              |                           | 网络白                        |                 |                                                                                                                 | 34-     | I hereby cer                    | tify that the well location shown |
|                                                                                                                 |             | Ì                   |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | on this plat                    | was plotted from field notes of   |
|                                                                                                                 |             | i                   |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | actual starve,<br>supervison, i | and that the same is true and     |
|                                                                                                                 |             | i                   |           |            |                            |              |                           |                            | i               |                                                                                                                 |         | COTTECI 10                      | the best of my knowledge and      |
|                                                                                                                 |             | i                   |           |            |                            |              |                           |                            | 1               |                                                                                                                 |         | belief.                         |                                   |
|                                                                                                                 |             | i                   |           |            |                            |              |                           |                            | i               |                                                                                                                 |         | Date Survey                     | x                                 |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            | <u> </u>        |                                                                                                                 |         | 10/19/                          | /92                               |
|                                                                                                                 |             | i                   |           |            |                            |              |                           |                            | İ.              |                                                                                                                 |         | Signature &                     | Seal of                           |
|                                                                                                                 |             | i                   |           |            |                            | ļ            |                           |                            | i               |                                                                                                                 |         | Professional                    | Surveyor                          |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            | İ               | a la companya de la companya de la companya de la companya de la companya de la companya de la companya de la c |         |                                 | $\bigcirc$                        |
| 990'                                                                                                            | <b>_</b> •• | i                   |           |            |                            |              |                           |                            | i               |                                                                                                                 |         | $\bigcap$                       |                                   |
|                                                                                                                 | Ţ           |                     |           |            |                            | 1            |                           |                            | i               |                                                                                                                 |         | $\omega$                        | 101                               |
|                                                                                                                 | 0           |                     |           |            |                            | 1            | الم من الأسمانين · روم ال | l de men a comune ar       | İ.              |                                                                                                                 |         | Maa                             | the forme                         |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            |                 |                                                                                                                 |         | Certificate N                   | 3640                              |
|                                                                                                                 |             |                     |           |            |                            |              |                           |                            |                 | -                                                                                                               | ╕┟      |                                 |                                   |
| 0 330 660                                                                                                       | <b>990</b>  | 1320                | 1650      | 1980 2     | 310 26                     | 40           | 2000                      | 1500                       | 1000            | 500                                                                                                             | 0       |                                 |                                   |



Mewbourne Oil Company Chalk Bluff "36" State #1 660' FSL & 990' FWL Section 36-T17S-R27E Eddy County, New Mexico Lease Number E-379-4 FIELD REPORT FOR CEMENTING OF WELLS

•

OIL CONSERVATION DIVISION

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| <u></u>                |                   |                                       |                   |                      |             | API            | 30-015        | -2728    | 2      |
|------------------------|-------------------|---------------------------------------|-------------------|----------------------|-------------|----------------|---------------|----------|--------|
| Operator<br>Meu        | bourn             | e Gil Co.                             | Lease             | lk Bl                | ill "       | '36" St        | Well #        |          |        |
| Location<br>of Well    | Unit<br>M         | Section<br>36                         |                   | Townsh               | ip          | Range<br>27    | County<br>Edd | lu_      |        |
| Drilling<br>Contractor | WEK               | Drilling                              |                   | Туре                 | of E<br>Rio | quipment       |               | 0        |        |
|                        |                   | APPROV                                |                   | NG PRO               | <u>0</u>    | ung_           |               |          |        |
| * Witnes               | LA L              | <u> </u>                              |                   | 110_110              | OILAN       |                |               |          |        |
| Size of Hol            | e Size            | of Casing                             | Weigł<br>Foc      | t Per<br>t           | New         | or Used        | Depth         | Sacks    | Cement |
| 171/2                  | × 1               | 378                                   | Ц                 | 8#                   |             |                | 400±          | 400      | Circ   |
| 12/4                   | 0                 | 15/8                                  | 3                 | 6#                   | ·           |                | 2600±         | 700      | Surf   |
| 834                    | ·                 | 5 1/2                                 | )                 | 7#                   |             |                | 10,300±       | 600      | Тор    |
| Casing Data            | •                 |                                       |                   |                      |             |                | ·             |          | of ABO |
| Surface                | joints            | of_133/8".i                           | nch_48            | #                    | Grad        | e H-40         |               |          |        |
|                        |                   | Approv                                | ed) (Re           | jected               | )           |                |               |          | ÷      |
| Inspected b            | y m.cs            | 3                                     | · · ·             |                      |             | date J         | Pn 2-         | 93       |        |
| Cementing P            | rogram            |                                       |                   |                      |             |                |               |          |        |
| Size of hol            | e_101/211         |                                       | asing]            | 3 <sup>3</sup> /8" S | acks        | coment         | required      |          |        |
| Type of Sho            | e used <u>a</u> u | fide Float c                          | ollar u           | sedins               | erT         | Btm 3 jt:      | s welded      | Ves      |        |
| TD of hole_            | 400' S            | et 400' Fee                           | t of 133          | "Inch                | 48          | ≓ Grade        | H-40          |          |        |
| New-used cs            | g. @ 400          | with 200                              | <u>) ηηοις</u> sa | cks ne               | at c        | ement ar       | ound sho      | e        |        |
| + 230 s                | ax Hallin         | ourton Lite                           | additiv           | es <u>1/4</u> #      | floce       | le 5#gil       | sonite 27     | ٥٢٢      |        |
| Plug down @            | 8:45              | _ (PM)                                | Date_             | JAN,                 | 3 - 19      | 92             |               |          |        |
| Cement circ            | ulated            | Ves                                   |                   | No. o                | f Sa        | ck <u>s 30</u> | <del></del>   |          |        |
| Cemented by            | Hallibe           | rTon                                  |                   | Witne                | ssed        | by mike        | (STUBB le     | field    |        |
| Temp. Surve            | y ran @           | <u>(</u> AM) (P                       | M) Dat            | e                    |             | top_ce         | nent @        | <u>ر</u> |        |
| Casing test            | @                 | (AM) (P                               | M) Dat            | e                    |             |                |               |          |        |
| Method Used            |                   |                                       |                   | Witne                | sseu        | by             |               |          |        |
| Checked for            | shut of           | f @ (AM                               | (PM)              | Date                 |             |                |               |          |        |
| Method used            | <u></u>           |                                       |                   | Witne                | ssed        | by             |               |          |        |
| Remarks: <u>*</u>      | cement t          | ell back A                            | fter Plu          | Down                 | <u> </u>    |                |               |          |        |
| 1                      | Ready mix         | ed CMT top                            | to suit           | ale 2                | VArd        | { ~            |               |          |        |
|                        | 7                 | · · · · · · · · · · · · · · · · · · · |                   |                      | /           |                |               |          |        |
| 4 centraline           | r \$              |                                       |                   | <u></u>              |             |                | Lost circ     | . 2 3    | 49'    |
|                        |                   |                                       |                   |                      |             |                |               |          |        |

| Submit 3 Copies                                                                                                                                                                                                                                                | State of New Me<br>Energy, Minerals and Natural Re                                                                                                                                                                                                                                          | xico<br>sources Department                                                                                                                                                                                                  | Form C-103<br>Revised 1-1-8                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| District Office                                                                                                                                                                                                                                                | OIL CONSERVATIO                                                                                                                                                                                                                                                                             | N DIVISION                                                                                                                                                                                                                  | WELL API NO.                                                                                                                                                                                                                                                                                                                                          |
| P.O. Box 1980, Hobbs, NM 88240                                                                                                                                                                                                                                 | P.O. Box 208                                                                                                                                                                                                                                                                                | Sec. al                                                                                                                                                                                                                     | 30-015-27286                                                                                                                                                                                                                                                                                                                                          |
| <u>TRICT II</u><br>J. Drawer DD, Artesia, NM 88210                                                                                                                                                                                                             | Santa Fe, New Mexico                                                                                                                                                                                                                                                                        | 87504-2088<br>B () 9 1993                                                                                                                                                                                                   | 5. Indicate Type of Lease<br>STATE FEE                                                                                                                                                                                                                                                                                                                |
| DISTRICT III<br>1000 Rio Brazos Rd., Aztec, NM 87410                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                             | 0. C. D.                                                                                                                                                                                                                    | 6. State Oil & Gas Lease No.<br>E-379-4                                                                                                                                                                                                                                                                                                               |
| SUNDRY NOT<br>( DO NOT USE THIS FORM FOR PR<br>DIFFERENT RESE<br>(FORM C                                                                                                                                                                                       | ICES AND REPORTS ON WEL<br>OPOSALS TO DRILL OR TO DEEPEN<br>RVOIR. USE "APPLICATION FOR PEF<br>:-101) FOR SUCH PROPOSALS.)                                                                                                                                                                  | LS<br>OR PLUG BACK TO A<br>RMIT                                                                                                                                                                                             | 7. Lease Name or Unit Agreement Name                                                                                                                                                                                                                                                                                                                  |
| 1. Type of Well:<br>OIL GAS                                                                                                                                                                                                                                    | OTHER                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                             | Chalk Bluff "36" State                                                                                                                                                                                                                                                                                                                                |
| 2. Name of Operator                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                             | 8. Well No.                                                                                                                                                                                                                                                                                                                                           |
| Mewbourne Oil Company                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                       |
| 3. Address of Operator<br>P. O. Box 5270 Ho                                                                                                                                                                                                                    | bbs, New Mexico 88241                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                             | 9. Pool name or Wildcat<br>Illinois Camp Morrow North                                                                                                                                                                                                                                                                                                 |
| 4. Well Location M QQ                                                                                                                                                                                                                                          | Un Foot Form The West                                                                                                                                                                                                                                                                       | Line and 660                                                                                                                                                                                                                | ) Free From The South Line                                                                                                                                                                                                                                                                                                                            |
| Unit Letter! :                                                                                                                                                                                                                                                 | U Feet From The MCSC                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                       |
| Section 36                                                                                                                                                                                                                                                     | Township 175 Ra                                                                                                                                                                                                                                                                             | nge 27E                                                                                                                                                                                                                     | NMPM Eddy County                                                                                                                                                                                                                                                                                                                                      |
| \$77777777777777777777777777777777777777                                                                                                                                                                                                                       | 10. Elevation (Show whether 1                                                                                                                                                                                                                                                               | DF, KKB, KI, GK, &C.)                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                       |
| Charle                                                                                                                                                                                                                                                         | Appropriate Box to Indicate 1                                                                                                                                                                                                                                                               | Nature of Notice R                                                                                                                                                                                                          | eport or Other Data                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                | TENTION TO:                                                                                                                                                                                                                                                                                 | SUB                                                                                                                                                                                                                         | SEQUENT REPORT OF:                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                             | REMEDIAL WORK                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                | CHANGE PLANS                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                             | CASING TEST AND CI                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                       |
| OTHER:                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                             | OTHER:                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                       |
| 12. Describe Proposed or Completed Oper<br>work) SEE RULE 1103.<br>2-2-93: MIRU WEK Dr                                                                                                                                                                         | ations (Clearly state all pertinent details, an<br>rilling Co. Rig #2. Spi                                                                                                                                                                                                                  | nd give pertinent dates, inclu<br>udded 17 1/2" si                                                                                                                                                                          | ding estimated date of starting any proposed<br>urface hole @ 6:00 P. M. MST.                                                                                                                                                                                                                                                                         |
| 2-3-93: Drilled 17<br>new casing to 400'.<br>5#/sk. Gilsonite + 1/<br>taining 1/4#/sk. Floo<br>"C" Neet containing 2<br>cement to the pit.<br>Cement slurry volume<br>268 cu. ft. Total s<br>1350 psi in 12 hrs.<br>temp. was 70° F. NU<br>casing to 600# each | <pre>1/2" surface hole to 40 Howco cemented w/100 sl /2#/sk. Flocele + 2% Cat cele + 5#/sk. Gilsonite 2% CaCl<sub>2</sub>. Plug down to Cement Job witnessed by for lead cement was 580 lurry volume was 848 cu 0 70° F. Estimated for BOP and WOC 13 1/2 hrs for 30 min. w/rig pump.</pre> | 00' K. B. Ran<br>ks. of Class "C<br>Cl <sub>2</sub> followed by<br>+2% Cacl <sub>2</sub> , ta<br>353' @ 8:45 AM<br>Mike Stubblefi<br>O cu. ft. Slur<br>. ft. Compress<br>mation temperat<br>. Pressure tes<br>All held O. K | 9 jts. of 13 3/8", 48#, J-55, STC<br>" containing 10#/sk. Cal-Seal +<br>230 sacks of Class "C" Lite con-<br>iled in with 100 sacks of CLass<br>. MST. Circulated 30 sacks of<br>eld w/NMOCD office in Artesia.<br>ry volume for tail cement was<br>ive strength for tail slurry is<br>ure is 68° F, estimated slurry<br>ted blind rams, pipe rams and |
| I hereby certify that the information above is to                                                                                                                                                                                                              | nue and complete to the best of my knowledge and                                                                                                                                                                                                                                            | l belief.                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                       |
| SKONATURE Kill                                                                                                                                                                                                                                                 | Lince                                                                                                                                                                                                                                                                                       | ne Drilling Sup                                                                                                                                                                                                             | erintendent 2/4/93<br>505                                                                                                                                                                                                                                                                                                                             |
| TYPE OR PRINT NAME Bill Pi                                                                                                                                                                                                                                     | <u>erce</u>                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             | TELEPHONE NO. 393-5905                                                                                                                                                                                                                                                                                                                                |
| This space for State Use)                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                             | FEB 1 5 1993                                                                                                                                                                                                                                                                                                                                          |
| APPROVED BY                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                             | Π.E                                                                                                                                                                                                                         | DATE                                                                                                                                                                                                                                                                                                                                                  |

| CONDITIONS OF | APPROVAL, IF ANY: |
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|                                                                                                                                                                                                                                                                                                 | State of New Mex<br>Energy, Minerals and Natural Res                                                                                                                                                                                                                                                                | ico<br>ources Department                                                                                                                                                                               |                                                                                                                                                                                         | Form C·103<br>Revised 1·1-89                                                                                                                                                               |
| DISTRICT I<br>P.O. Box 1980, Hobbs, NM 88240                                                                                                                                                                                                                                                    | OIL CONSERVATIO                                                                                                                                                                                                                                                                                                     | N DIVISION                                                                                                                                                                                             | WELL API NO.                                                                                                                                                                            | 2000                                                                                                                                                                                       |
| TRICT II                                                                                                                                                                                                                                                                                        | Santa Fe, New Mexico V                                                                                                                                                                                                                                                                                              | ,<br>4 <b>7504</b> -2088                                                                                                                                                                               | <u>30-015-27</u>                                                                                                                                                                        | /286                                                                                                                                                                                       |
| J. Drawer DD, Artesia, NM 88210                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                     | ° α <b>(00</b> 2                                                                                                                                                                                       | 5. Indicate Type of Le                                                                                                                                                                  |                                                                                                                                                                                            |
| DISTRICT III<br>1000 Rio Brazos Rd., Aztec, NM 87410                                                                                                                                                                                                                                            | 1.181                                                                                                                                                                                                                                                                                                               | - 9 1993                                                                                                                                                                                               | 6. State Oil & Gas Les<br>F_ 379_4                                                                                                                                                      | ase No.                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                     | S MEELE                                                                                                                                                                                                |                                                                                                                                                                                         |                                                                                                                                                                                            |
| ( DO NOT USE THIS FORM FOR PR<br>DIFFERENT RESE<br>(FORM C                                                                                                                                                                                                                                      | OPOSALS TO DRILL OR TO DEEPEN (<br>RVOIR. USE "APPLICATION FOR PER<br>2-101) FOR SUCH PROPOSALS.)                                                                                                                                                                                                                   | OR PLUG BACK TO A                                                                                                                                                                                      | 7. Lease Name or Uni                                                                                                                                                                    | t Agreement Name                                                                                                                                                                           |
| 1. Type of Well:<br>OIL GAS<br>WELL WELL                                                                                                                                                                                                                                                        | OTHER                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                        | <br> Chalk Bluff '                                                                                                                                                                      | "36" State                                                                                                                                                                                 |
| 2. Name of Operator                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                        | 8. Well No.                                                                                                                                                                             |                                                                                                                                                                                            |
| Mewbourne 011 Company                                                                                                                                                                                                                                                                           | ,                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                        | 9. Pool name or Wilds                                                                                                                                                                   | cat                                                                                                                                                                                        |
| B O Pox 5270 Hot                                                                                                                                                                                                                                                                                | bs New Mexico 8824]                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                        | Illinois Camp                                                                                                                                                                           | o Morrow, North                                                                                                                                                                            |
| 4. Well Location                                                                                                                                                                                                                                                                                | 103, New Nex 100 00211                                                                                                                                                                                                                                                                                              | · ·····                                                                                                                                                                                                |                                                                                                                                                                                         | ·                                                                                                                                                                                          |
| Unit LetterM_ :99                                                                                                                                                                                                                                                                               | 0 Feet From The West                                                                                                                                                                                                                                                                                                | Line and 660                                                                                                                                                                                           | Feet From The                                                                                                                                                                           | e <u>South</u> Line                                                                                                                                                                        |
| Section 36                                                                                                                                                                                                                                                                                      | Township 17S Ran                                                                                                                                                                                                                                                                                                    | ige 27E                                                                                                                                                                                                | NMPM                                                                                                                                                                                    | Eddy County                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                 | 10. Elevation (Show whether I                                                                                                                                                                                                                                                                                       | OF, RKB, RT, GR, etc.)                                                                                                                                                                                 |                                                                                                                                                                                         |                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                 | 36                                                                                                                                                                                                                                                                                                                  | 35' GR                                                                                                                                                                                                 |                                                                                                                                                                                         | //////////////////////////////////////                                                                                                                                                     |
| 11. Check                                                                                                                                                                                                                                                                                       | Appropriate Box to Indicate N                                                                                                                                                                                                                                                                                       | lature of Notice, Ro                                                                                                                                                                                   | eport, or Uther D                                                                                                                                                                       |                                                                                                                                                                                            |
| NOTICE OF IN                                                                                                                                                                                                                                                                                    | TENTION TO:                                                                                                                                                                                                                                                                                                         | 208                                                                                                                                                                                                    |                                                                                                                                                                                         |                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                     | REMEDIAL WORK                                                                                                                                                                                          |                                                                                                                                                                                         |                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                     | COMMENCE DRILLING                                                                                                                                                                                      | OPNS. DPL                                                                                                                                                                               |                                                                                                                                                                                            |
| PULL OR ALTER CASING                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                     | CASING TEST AND CE                                                                                                                                                                                     | EMENT JOB                                                                                                                                                                               |                                                                                                                                                                                            |
| OTHER:                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                     | OTHER:                                                                                                                                                                                                 |                                                                                                                                                                                         |                                                                                                                                                                                            |
| 12. Describe Proposed or Completed Operwork) SEE RULE 1103.<br>2-7-93: Drilled 12<br>new LS casing and se<br>1/4#/sk. flocele + 8<br>CaCl Plug down to<br>Lead slurry weighed<br>Tail slurry weighed<br>Total slurry volume<br>12 hrs. @ 70° F. Es<br>WOC 12 hrs. NU BOP<br>w/rig pump. All hel | rations (Clearly state all pertiment details, and<br>1/4" Intermediate hole t<br>t @ 2603' K. B. Howco c<br>#/sk. salt followed by 2<br>2557' @ 6:15 P.M. MST 2<br>13.8#/gal. and yield was<br>14.8#/gal and yield was<br>was 1,754 cu. ft. Compr<br>timated formation temp.<br>and pressure tested blir<br>d O. K. | d give periment dates, includ<br>o 2603' K.B. F<br>emented w/950 s<br>00 sks. of Class<br>-7-93. Circula<br>146 cu. ft./sl<br>1.36 cu. ft./sl<br>essive strength<br>is 75° F, estim<br>d and pipe rams | ding estimated date of sta<br>Ran 58 jts. of<br>Sks. of Class<br>Ss "C" Neet ce<br>ated 50 sacks<br>k. Slurry vol<br>k. Slurry vol<br>h for tail slu<br>mated slurry t<br>s, and casing | 9 5/8", 36#, J-55,<br>"C" Lite containing<br>ment containing 2%<br>to pit.<br>ume was 1520 cu. ft.<br>ume was 268 cu. ft.<br>rry is 1350 psi in<br>emp. was 72° F.<br>to 1,000# for 30 min |
| I hereby certify that the information above is t                                                                                                                                                                                                                                                | ny and complete to the best of my knowledge and                                                                                                                                                                                                                                                                     | belief.<br>up Drilling Supe                                                                                                                                                                            | erintendent                                                                                                                                                                             | DATE 2/8/93                                                                                                                                                                                |
| SKINATURE                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                        |                                                                                                                                                                                         | 505<br>TELEPHONE NO. 393-5905                                                                                                                                                              |
| TYPE OR PRINT NAME Bill Pie                                                                                                                                                                                                                                                                     | erce                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                        |                                                                                                                                                                                         |                                                                                                                                                                                            |
| his space for State Use) OI                                                                                                                                                                                                                                                                     | RIGINAL SIGNED BY<br>IKE WILLIAMS                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                        |                                                                                                                                                                                         | EEB 1 5 1993                                                                                                                                                                               |
| APPROVED BY                                                                                                                                                                                                                                                                                     | THERMISOR, DISTRICT IP m                                                                                                                                                                                                                                                                                            | LE                                                                                                                                                                                                     |                                                                                                                                                                                         | - DATE                                                                                                                                                                                     |

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| P.O. BOX 1980, HODDE, NM 88240                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | P.O. 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| DISTRICT II<br>P.O. Drawer DD, Artesia, NM 88210                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Santa Fe, New Mexico                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>6/9</b> 04-2088                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5. 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| DISTRICT III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LAK:                                                                                                                                                                                                                                                                                                                                                                                                                               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USE "APPLICATION FOR P<br>C-101) FOR SUCH PROPOSALS.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N OR PLUG BACK TO A<br>ERMIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7. 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| 3. 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| II. NOTICE OF II NOTICE OF II PERFORM REMEDIAL WORK  TEMPORARILY ABANDON  DULL OR ALTER CASING  DTHER:  I2. Describe Proposed or Completed Op work) SEE RULE 1103.  2-24-93: Drilling 8 and spotted 150 sack 3-5-93: Drilled to  Section stuck 26' off                                                                                                                                                                                                                                                                                                                                            | NTENTION TO:<br>PLUG AND ABANDON<br>CHANGE PLANS<br>crations (Clearly state all pertinent details<br>3/4" production hole.<br>cement plug. Regained<br>9289'. Ran 215 joints<br>of bottom Cemented 19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SUE<br>REMEDIAL WORK<br>COMMENCE DRILLING<br>CASING TEST AND C<br>OTHER:<br>and give pertinent dates, inclu<br>Lost complete r<br>partial returns<br>of new 26#, N-80<br>stage by Howco                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SEQUENT REPORT OF:<br>ALTERING CASING<br>GOPNS. PLUG AND ABANDONMENT<br>EMENT JOB<br>ding estimated date of Starting any proposed<br>returns (8250'). Spotted mud pil<br>7" API casing and set (9253'.<br>W/535 sacks of Class "H" contai                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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Cemented<br>lowed by 335 sacks of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SUE<br>REMEDIAL WORK<br>COMMENCE DRILLING<br>CASING TEST AND C<br>OTHER:<br>and give pertinent dates, inclu<br>Lost complete r<br>partial returns<br>of new 26#, N-80<br>st stage by Howco<br>5#/sk. SilicaLite<br>2nd stage w/750<br>Class "H" contai                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SEQUENT REPORT OF:<br>ALTERING CASING<br>GOPNS. 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SilicaLite + 1/4#/sk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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Plug down to 6654<br>ry weighed 14.8#/gal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SUE<br>REMEDIAL WORK<br>COMMENCE DRILLING<br>CASING TEST AND C<br>OTHER:<br>and give pertinent dates, inclu<br>Lost complete r<br>partial returns<br>of new 26#, N-80<br>st stage by Howco<br>5#/sk. SilicaLite<br>1 2nd stage w/750<br>Class "H" contai<br>1 0 5:00 PM 3-5-9<br>with a yield of 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SEQUENT REPORT OF:<br>ALTERING CASING<br>GOPNS. 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Total slurry vo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| NOTICE OF II<br>PERFORM REMEDIAL WORK<br>TEMPORARILY ABANDON<br>PULL OR ALTER CASING<br>DTHER:<br>12. Describe Proposed or Completed Op<br>work) SEE RULE 1103.<br>2-24-93: Drilling 8<br>and spotted 150 sack<br>3-5-93: Drilled to<br>Casing stuck 36' off<br>3% KCL + 1% Halad 322<br>tool @ 6654' and circc<br>1/4#/sk. Flocele fol<br>Flocele + .6% Halad 3<br>1st stage cement slur<br>ume was 818 cu. ft.                                                                                                                                                                                  | NTENTION TO:<br>PLUG AND ABANDON<br>CHANGE PLANS<br>erations (Clearly state all pertinent details<br>3/4" production hole.<br>cement plug. Regained<br>9289'. Ran 215 joints<br>of bottom. Cemented 18<br>+ 5#/sk. Gilsonite + 5<br>ulated 6 hrs. Cemented<br>10wed by 335 sacks of<br>22. Plug down to 6654<br>ry weighed 14.8#/gal.<br>BHT by logs was 123° F<br>s 2025 psi in 12 hrs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SUE<br>REMEDIAL WORK<br>COMMENCE DRILLING<br>CASING TEST AND CO<br>OTHER:<br>and give pertinent dates, inclu<br>Lost complete r<br>partial returns<br>of new 26#, N-80<br>st stage by Howco<br>5#/sk. 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Compressive<br>ad cement slurry yield was 1.85 compressive<br>ad cement slurry yield was 1.85 compressive                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| NOTICE OF II<br>NOTICE OF II<br>PERFORM REMEDIAL WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | NTENTION TO:<br>PLUG AND ABANDON<br>CHANGE PLANS<br>CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHA                                                                                                                         | SUE<br>REMEDIAL WORK<br>COMMENCE DRILLING<br>CASING TEST AND C<br>OTHER:<br>and give pertinent dates, inclu<br>Lost complete r<br>partial returns<br>of new 26#, N-80<br>St stage by Howco<br>5#/sk. SilicaLite<br>2nd stage w/750<br>Class "H" contai<br>' @ 5:00 PM 3-5-9<br>with a yield of T<br>. Estimated slum<br>2nd. stage lea<br>1387 cu. ft. Tai<br>Total slurry volu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SEQUENT REPORT OF:<br>ALTERING CASING<br>GOPNS. 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Estimated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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Estimated<br>Derintendent 3-22-93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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Y Ihereby certify that the information above in SIGNATURE                                                         | NTENTION TO:<br>PLUG AND ABANDON<br>CHANGE PLANS<br>CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE<br>CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE CHANGE C                                                                                                                                                 | SUE<br>REMEDIAL WORK<br>COMMENCE DRILLING<br>CASING TEST AND C<br>OTHER:<br>and give pertinent dates, inclu<br>Lost complete r<br>and s, inclu<br>Lost complete r<br>and give pertinent dates, inclu<br>Lost complete r<br>and stage by Howco<br>States w/750<br>Class "H" contai<br>' @ 5:00 PM 3-5-9<br>with a yield of I<br>. Estimated slurr<br>2nd. stage lead<br>1387 cu. ft. Tai<br>Total slurry volu<br>and belief.<br>The Drilling Sup                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SEQUENT REPORT OF:<br>ALTERING CASING<br>GOPNS. PLUG AND ABANDONMENT<br>EMENT JOB<br>datage estimated date of starting any proposed<br>returns (8250'). Spotted mud pil<br>(7" API casing and set (9253'.<br>W/535 sacks of Class "H" contai<br>e + 10#/sk. Microbond. Opened D.<br>) sacks of Class "H" Lite contain<br>ining 8#/sk. 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Estimated<br>Derintendent DATE 3-22-93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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Estimated<br>Derintendent DATE 3-22-93<br>TELEPHONE NO. 505 393-59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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Tai<br>Total slurry volu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BSEQUENT REPORT OF:<br>ALTERING CASING<br>GOPNS. 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Estimated<br>Derintendent DATE 3-22-93<br>TELEPHONE NO. 505 393-59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

formation temp. was 100° F, estimated slurry temp. was 72° F. Compressive strength for 2nd stage lead slurry in 12 hrs. was 1600 psi and tail slurry was 1900 psi. WOC 24 hrs. Drilled out D. V. Tool, float collar, and 1/2 of shoe joint. Pressure tested casing, blind rams, and pipe rams to 2,000# for 30 min. Held O. K.

**DREERA** SERVED DT BELLING SE 145 LARE ALE DTE FINT I

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|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|                                                                                         | State of New Mer<br>Energy, Minerals and Natural Res                                                                          | ico<br>ources Department                                             | Form C-103<br>Revised 1-1-89                                                                        |
| District Office<br>DISTRICT I<br>P.O. Box 1980, Hobbs, NM 88240                         | OIL CONSERVATIO                                                                                                               | N DIVISION                                                           | WELL API NO.                                                                                        |
| DISTRICT II<br>P.O. Drawer DD, Artesia, NM 88210                                        | Santa Fe, New Mexico                                                                                                          | 37504-2088                                                           | 5. Indicate Type of Lease                                                                           |
| DISTRICT III<br>1000 Rio Brazos Rd., Aziec, NM 87410                                    |                                                                                                                               | DAR 2 4 19                                                           | 6. State Oil & Gas Lease No.<br>93 F-379-4                                                          |
| SUNDRY NOT<br>( DO NOT USE THIS FORM FOR PR<br>DIFFERENT RESE<br>(FORM C                | ICES AND REPORTS ON WELL<br>OPOSALS TO DRILL OR TO DEEPEN (<br>RVOIR. USE "APPLICATION FOR PER<br>2-101) FOR SUCH PROPOSALS.) | LS O.C.D.<br>DR PLUG BARK TOMP                                       | 7. Lease Name or Unit Agreement Name                                                                |
| 1. Type of Well:<br>OIL GAS<br>WELL WELL                                                | OTHER                                                                                                                         |                                                                      | Chalk Bluff "36" State                                                                              |
| 2. Name of Operator<br>Mowhourpone Oil Compar                                           |                                                                                                                               |                                                                      | 8. Well No.                                                                                         |
| 3. Address of Operator                                                                  | New Mexico 88241                                                                                                              |                                                                      | 9. Pool name or Wildcat<br>Illinois Camp Morrow-North                                               |
| 4. Well Location                                                                        | 0 Fort From The West                                                                                                          | Line and 660                                                         | 0 Feet From The South Line                                                                          |
| Unit Letter:                                                                            | Teach Free From The                                                                                                           | 27E                                                                  | NMPM County                                                                                         |
| Section 30                                                                              | 10. Elevation (Show whether I                                                                                                 | DF, RKB, RT, GR, etc.)                                               |                                                                                                     |
| 11. Check                                                                               | Appropriate Box to Indicate N                                                                                                 | Vature of Notice, R                                                  | leport, or Other Data                                                                               |
| NOTICE OF IN                                                                            | TENTION TO:                                                                                                                   | SUB                                                                  |                                                                                                     |
|                                                                                         |                                                                                                                               | REMEDIAL WORK                                                        |                                                                                                     |
|                                                                                         | CHANGE PLANS                                                                                                                  |                                                                      |                                                                                                     |
| PULL OR ALTER CASING                                                                    | _                                                                                                                             |                                                                      |                                                                                                     |
| OTHER:                                                                                  | LJ                                                                                                                            | OTHER:                                                               |                                                                                                     |
| 12. Describe Proposed or Completed Ope<br>work) SEE RULE 1103.                          | rations (Clearly state all pertinent details, an                                                                              | d give pertinent dates, inclu                                        | uding estimated date of starting any proposed                                                       |
| 3/19/93 T.D. 6" hol<br>flush joint liner.<br>"H" containing 5% sa<br>p.m. 03/19/93. Top | e @ 10,060'. Ran logs<br>Hung liner @ 10,057' KB<br>lt + 5% Halad 22-A + 5%<br>of liner @ 8439' KB. R                         | and 37 jts. of<br>. Howco cement<br>CFR-3. Plug o<br>ig released @ 3 | new 11.35#, N-80, 4-1/2"<br>ted w/225 sks. of Class<br>down to 10,012' @ 6:15<br>3:00 p.m. 03/20/93 |
|                                                                                         |                                                                                                                               |                                                                      |                                                                                                     |
|                                                                                         |                                                                                                                               |                                                                      |                                                                                                     |
|                                                                                         |                                                                                                                               |                                                                      |                                                                                                     |
|                                                                                         |                                                                                                                               |                                                                      |                                                                                                     |
|                                                                                         | and complete to the best of my knowledge and                                                                                  | belief.                                                              |                                                                                                     |
| I hereby certify that the information above 1                                           | incl III                                                                                                                      | Drilling S                                                           | upt DATE03/22/93                                                                                    |
|                                                                                         | Pierce                                                                                                                        |                                                                      | TELEPHONE NO. 393-5905                                                                              |
| (This space for State Use) ORIG<br>MIKE                                                 | INAL/SIGNED BY<br>WILLIAMS                                                                                                    |                                                                      | APR #* 5 1993                                                                                       |
| APPROVED BY SUPE                                                                        | RVISOR, DISTRICT IT                                                                                                           | TLE                                                                  | DATE                                                                                                |
| CONDITIONS OF APPROVAL, IF ANY:                                                         |                                                                                                                               |                                                                      |                                                                                                     |

originalisioned for Mike Wingtons Silferrotet die Versta

| SEC 3                      | 6 THN 7              | RGE 27                           |                                       | •<br>• .                                                | API #                                      | 30-015-27286     |
|----------------------------|----------------------|----------------------------------|---------------------------------------|---------------------------------------------------------|--------------------------------------------|------------------|
|                            | <br>:                | •                                |                                       |                                                         |                                            |                  |
| OPERA                      | TOR MENR             | MRAE OIL LO                      |                                       | •                                                       |                                            | •                |
|                            |                      | NEC 7/ 55#                       |                                       | ·····                                                   | _                                          |                  |
| WELL                       | NAME CHILL I         | glute 36 st                      | ·····                                 |                                                         |                                            | •                |
|                            |                      |                                  |                                       |                                                         |                                            |                  |
| STATE                      | OCD TOPS AS          | PER MA                           |                                       | ·                                                       |                                            | DATE 4-23.93     |
|                            |                      |                                  |                                       |                                                         |                                            |                  |
|                            |                      |                                  |                                       |                                                         | •                                          |                  |
| So                         | utheastern Ne        | W Mexico                         |                                       |                                                         | Northwe                                    | stern New Mexico |
| Anhy                       | - <b>T</b>           | Canyon                           | 8327                                  | T. Ojo Alama                                            |                                            | T. Pent. B       |
| Sait                       | Ť.                   | Strawn                           | 8870                                  | T. Kiniand-Fruid                                        | and                                        | T. Penn. "C"     |
| Sait                       | T.                   | Atoka                            | 4380                                  | T. Pictured Cliffs                                      |                                            | T. Penn. 'D'     |
| Yates                      | <u>328</u> <b>T.</b> | Miss                             | 10040                                 | T. Cliff House_                                         | •                                          | T. Lezdville     |
| 7 Rivers                   | <u>464</u> <b>T</b>  | Dermian                          |                                       | T. Menefee                                              |                                            | T. Madison       |
| Queen                      | 1008 T               | Silurian                         |                                       | . T. Point Lookom                                       | ·<br>· · · · · · · · · · · · · · · · · · · | T. Elbert        |
| Grayburg                   | 1360 T.              | Monoya                           | · · · · · · · · · · · · · · · · · · · | T. Mancos                                               |                                            | T. McCracken     |
| San Andres                 | 1785 T               | Simpson                          | •                                     | T. Gailup                                               |                                            | T. Ignacio Otzne |
| Gloriezz                   | <u> </u>             | McRee                            |                                       | Base Greenium.                                          |                                            | T. Granine       |
| Paddock                    |                      | Ellenburger                      |                                       | T. Dakora                                               |                                            | T                |
| Blinebry                   | T.                   | Gr. Wash                         |                                       | _ T. Monison                                            |                                            | T                |
| Tubb                       | 4025                 | Deizware Sand                    |                                       | _ T. Todilto                                            |                                            | T                |
| Drinkard                   | <u>4855</u> T        | Bone Springs                     | alian                                 | _ T. Ennada                                             |                                            | T                |
| . Abo                      | 5120 T               | MORRON CM                        | <u>1744</u>                           | _ T. Wingate                                            |                                            | T                |
| Wolfcamp                   | <u> </u>             | 1) 417                           | <u>r674</u>                           | _ T. Chinie                                             |                                            | T                |
| Penn                       | 8210                 | )<br>)                           |                                       | _ T. Permain                                            |                                            | <u> </u>         |
| . تعدن (Bough C            | 1                    |                                  |                                       | _ T. Fenn "A"                                           |                                            | k                |
|                            |                      |                                  | jh gas s                              | iands or zon                                            | NES                                        |                  |
| So 1 6                     |                      |                                  |                                       |                                                         |                                            | **               |
| No. 1. from                | *****                |                                  |                                       | No. 3, from                                             |                                            | ······           |
| No. 1. from<br>No. 2. from | *******              |                                  |                                       | No. 3, from<br>No. 4, from                              |                                            |                  |
| No. 1. from                | •••••••••            | .D                               | ORTANT                                | No. 3, from<br>No. 4, from<br>WATER SAN                 | DS                                         |                  |
| No. 1. from                | e of water inflow    | IMF<br>and elevation to wi       | ORTANT                                | No. 3, from<br>No. 4, from<br>WATER SAN<br>USE in hole. | DS                                         |                  |
| Io. 1. from                | e of water inflow    | iD<br>IMF<br>and elevation to wi | PORTANT<br>nich water r               | No. 3, from<br>No. 4, from<br>WATER SAN<br>OSE in hole. | DS                                         |                  |

.

REMARKS :

DRILLING CO., INC. - DIL WELL DRILLING CONTRACTORS

P. D. Box 1498 ROSWELL, NEW MEXICO 88202-1455 505/746-2719 505/623-5070 ARTESIA, NM ROSWELL, NM

RÉCEIVED

APR 1 5 1993

C. L. D.

March 19,1993

νE

Mewbourne Oil Company P.O. Box 5270 Hobbs, N.M. 88240

RE: Chalk Bluff "36" State #1

Gentlemen:

The following is a Deviation Survey on the above referenced well located in Eddy County, New Mexico.

5411' - 3°

| 424'  | _ | 3/4°   | 4197'  | 2 | 3/4°   |
|-------|---|--------|--------|---|--------|
| 9201  | - | 3/4°   | 4290'  | - | 2 3/4° |
| 1391  | - | 10     | 4384'  | - | 2 1/2° |
| 1891  | - | 1 1/4° | 4477'  | - | 2 3/4° |
| 2396' | _ | 1 3/4° | 4572'  | - | 2 1/2° |
| 26001 | 2 | 1/4°   | 4664 ' | - | 2 1/4° |
| 2779  | _ | 2°     | 4758'  | - | 2°     |
| 21031 | _ | 1 3/4° | 4851'  | - | 2 1/2° |
| 36881 | _ | 2 1/2° | 4943'  | - | 3 1/4° |
| 3814  | _ | 2 3/4° | 5036'  | - | 3°     |
| 3907  | _ | 2 3/4° | 5129'  | - | 3 1/4° |
| 40011 | _ | 2 1/2° | 5223'  | - | 3°     |
| 40961 | _ | 2 3/4° | 5317'  | - | 2 3/4° |
| 7020  |   | ·      |        |   |        |

| 5505'         | - | 3°     | <b>69</b> 15' | - | 1 | 3/4° |
|---------------|---|--------|---------------|---|---|------|
| 5599'         | - | 2 1/2° | 7322'         | - | 1 | 12/° |
| 5693'         | - | 3°     | 7824'         | - | 1 | 1/4° |
| 5787'         | _ | 2 1/2° | 8274'         | - | 1 | 1/4° |
| 5882'         | - | 3°     | 8702'         | - | 1 | 1/2° |
| 5976'         | - | 4°     | 8973'         | - | 1 | 1/2° |
| 6039'         |   | 4°     | 9289'         | - | 1 | 1/2° |
| <b>6</b> 070' | - | 4°     | 9388'         | - | 1 | 3/4° |
| 6132'         | - | 3 3/4° | 9833'         | _ | 2 | 1/2° |
| 6195'         | - | 4°     | 10060'        | - | 2 | 1/2° |
| 6258'         | - | 3 1/4° |               |   |   |      |
| 6320'         | - | 3°     |               |   |   |      |
|               |   | 0.00   |               |   |   |      |

7824' - 1 1/4° 8274' - 1 1/4° 8702' - 1 1/2° 8973' - 1 1/2° 9289' - 1 1/2° 9388' - 1 3/4° 9833' - 2 1/2° 0060' - 2 1/2° T.D.

6415' - 2 3/4°

Chappell Contracts manager STATE OF NEW MEXICO)

COUNTY OF CHAVES

The foregoing was acknowledged before me this 19th day of March 1993 by Gary W. Chappell.

MY COMMISSION EXPIRES

NOTARY PUBL

October 07, 1996

|                                            |                       | S                   | te of New N          | ferico.     |                |                    |                |                    | Form C-1            | 15th                     |
|--------------------------------------------|-----------------------|---------------------|----------------------|-------------|----------------|--------------------|----------------|--------------------|---------------------|--------------------------|
| Submit to Appropriate                      | E                     | octov, Minerals a   | and Natural 1        | Resource    | s Departura    |                    |                |                    | Revised 1           | 1.8 CT                   |
| State Lease - 6 copies                     | _                     |                     |                      |             | TATCIO         | V. [V]             | LL API NO      |                    |                     |                          |
| DISTRICT I                                 | 88240                 | DIL CONSE           | CRVATI               |             |                |                    | 30-015-2       | illi               |                     |                          |
| P.O. BOX 1980, HOODE 14.                   | 00170                 | Santa Fe, I         | New Mexic            | o 87504     | -2088          | 5.                 | Indicate Type  | of Lease<br>STATE  | : X                 | FEE                      |
| P.O. Drawer DD, Artesia, N                 | M 88210               |                     |                      | APR         | 1 5 1993       | 3 6                | State Oil & G  | as Lease No.       |                     |                          |
| DISTRICT III<br>1000 Rio Brazos Rd., Aztec | , NM 87410            |                     |                      | <u>—е</u>   | . L. D.        |                    | E-3/9-4        |                    | $\overline{m}$      |                          |
| WELL CO                                    | <b>IPLETION O</b>     | R RECOMPLE          | TION REPO            | RTAN        | NOG###         | • /                | Lease Name     | or Unit Agreen     | nent Name           |                          |
| 1a. Type of Well:<br>OIL WELL              | GAS WELL              | DRY                 | OTHER                |             |                |                    |                |                    |                     |                          |
| b. Type of Completion:                     |                       | _                   |                      |             |                |                    | Chalk B        | luff "36           | " Stat              | ie 🛛                     |
| NEW WORK                                   | DEEPEN                |                     |                      | R           |                |                    |                |                    |                     |                          |
| 2. Name of Operator                        |                       |                     |                      |             |                | 8                  | , well No.     |                    |                     |                          |
| Mewbourne Oi                               | <u>1 Company</u>      |                     |                      |             |                |                    | . Pool name of | Wildcat            |                     |                          |
| P 0 Box 527                                | 0 Hobbs,              | New Mexico          | 88241                |             |                |                    | <u>N. 111i</u> | nois Cam           | p mor               | <u>^OW</u>               |
| 4. Well Location                           |                       |                     | West                 |             | Line and       | 660                | Feet Fro       | m The S            | outh                | Line                     |
| Unit Letter                                | :990                  | _ Feet From The _   | <u></u>              |             |                |                    |                |                    | ldu.                |                          |
| Section 36                                 |                       | Township 17         | ′S                   | Range       | 27E            | NM                 | PM             | EU                 | Eley Cas            | County                   |
| 10. Date Spudded 11                        | Date T.D. Reache      | d 12. Date Co       | mpl. (Ready to       | Prod.)      | 13. Elevat     | KB 30              | 535' GR        | , 810.)            | 3635'               | GR                       |
| 02/02/93                                   | 03/17/93              | <b>T.D.</b>         | 17. If Multiple (    | Compl. Hos  | v   18.        | intervals          | Rotary Tools   | ICI                | ble Tools           |                          |
| 10.060'                                    | 10,01                 | 2'                  | Many Zone            | 22          |                |                    | <u> </u>       | ) Was Directio     | nal Surve           | v Made                   |
| 19. Producing interval(s), o               | f this completion -   | Top, Bottom, Name   |                      |             |                |                    | 4              | Yes                |                     | ,                        |
| 9842'-9886':                               | Lower Mor             | row                 |                      |             |                |                    | 22. Was Wel    | I Cored            |                     |                          |
| 21. Type Electric and Othe                 | -MSFI-GR              | Sonic, CBL          |                      |             |                |                    | <u> </u>       | No                 |                     |                          |
| <b>23.</b>                                 |                       | CASING R            | ECORD (              | Report      | all strings    | set in v           | well)          |                    |                     | DEDUCTO                  |
| CASING SIZE                                | WEIGHT LE             | JFT. DEPI           | TH SET               | HOL         | E SIZE         | CE                 | MENTING RI     | ECORD              | Circu               | lated                    |
| 13-3/8"                                    | 48#/ft.               |                     | 399'                 | <u> </u>    | -1/2"          | $\frac{530}{1150}$ | sx. Class      | <u>- "C"</u>       | Circi               | lated                    |
| 9-5/8"                                     | <u>36#/ft.</u>        |                     | <u>2003</u><br>9253' | 8           | -3/4"          | 1620               | sx. Class      | s "H"              | Circu               | lated                    |
|                                            | <u></u>               |                     | <u></u>              |             |                |                    |                |                    |                     |                          |
|                                            |                       |                     |                      |             |                | 25                 |                | BING REC           |                     |                          |
| 24.                                        |                       | LINER RECO          | ORD                  |             | SCREEN         |                    | SIZE           | DEPTH S            | SET                 | PACKER SET               |
| SIZE                                       | <u>8439'</u>          | 10,057 <sup>1</sup> | 225 sx               | •           |                | 2-7/               | 8-2-3/8"       | 9803'              |                     | 9702                     |
| 4-1/2                                      | 0435                  |                     |                      |             | m ACTD         | TOHS               | FRACTUR        | E. CEMEN           | r. soue             | EZE, ETC.                |
| 26. Perforation reco                       | rd (interval, siz     | e, and number)      |                      | ┝           | DEPTH INT      | ERVAL              | AMOU           | NT AND KIN         | D MATEI             | UAL USED                 |
| 9842'-9856                                 | 14' 4                 | spf 49 hole         | es                   |             |                |                    |                | •4 • • • • • • • • |                     | ан <b>с</b> ан 1999.<br> |
| 9864'-9886                                 | 22' 4                 | spf 80 hole         | es                   | ŀ           |                |                    |                |                    |                     |                          |
|                                            |                       |                     |                      | CTION       | 1              |                    |                |                    |                     |                          |
| 28.                                        |                       | Production Method   | (Flowing, gas li     | ft, pumping | - Size and typ | e pump)            |                | Well State         | us (Prod. o<br>cina | r Shut-in)               |
| 03/30/93                                   |                       | Flowing             |                      |             |                | Gee                |                | Vater - Bbl.       |                     | Gas - Oil Ratio          |
| Date of Test                               | Hours Tested          | Choke Size          | Prod'n Fo            | od   ]      | 0              | 15                 | 00             | 0                  | 150                 | ) MCF/BBL                |
| 03/31/93                                   | 24 HOURS              | Calculated 2        | 4- Oil - Bbl         | <u>_</u>    | Gas - MCF      | V                  | Vater - BbL    | Oil Grav           | ity - API -         | (Cort.)                  |
| 1500#                                      | Packer                | Hour Rate           | 10                   |             | 1500           |                    | U<br>Test V    | /itnessed By       | 55.0                |                          |
| 29. Disposition of Gas (S                  | old, used for fuel, 1 | vented, etc.)       |                      |             |                | ÷                  | Er             | ick W. N           | elson               |                          |
| Sold                                       |                       |                     |                      |             |                |                    |                |                    |                     |                          |
| 30. List Attachments                       |                       |                     |                      |             |                | to the he          | st of my know  | ledge and bel      | lief                |                          |
| 31. I hereby certify the                   | u the information     | shown on both sic   | ies of this form     | n is true a | na compiese    | ~~                 |                |                    | •                   |                          |
|                                            | -/ 11                 | 101                 | Printed              | rick N      | I. Nelso       | n -                | Fitte Engi     | neer               | Dat                 | 04/05/93                 |
| Signature Z                                | ul ll                 | , nem               |                      |             |                |                    |                |                    |                     |                          |

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# **INSTRUCTIONS**

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

00001

## Southeastern New Mexico

## Northwestern New Mexico

| T. Anhy            |               | T. Canyon8328'        | T. Ojo Alamo          | T. Penn. "B"     |
|--------------------|---------------|-----------------------|-----------------------|------------------|
| T. Salt            |               | T. Strawn 8822'       | T. Kirtland-Fruitland | T. Penn. "C"     |
| B. Salt            |               | <b>T. Atoka</b> 9380' | T. Pictured Cliffs    | T. Penn. "D"     |
| T. Yates           | 328'          | <b>T. Miss</b> 10040' | T. Cliff House        | T. Leadville     |
| T. 7 Rivers        | 464           | T. Devonian           | T. Menefee            | T. Madison       |
| T. Queen           | 1007          | T. Silurian           | T. Point Lookout      | T. Elbert        |
| T. Grayburg        | 1322          | T. Montoya            | T. Mancos             | T. McCracken     |
| T. San Andres      | <u>1784 '</u> | T. Simpson            | T. Gallup             | T. Ignacio Otzte |
| T. Glorieta        | <u>3164'</u>  | T. McKee              | Base Greenhorn        | T. Granite       |
| T. Paddock         |               | T. Ellenburger        | T. Dakota             | Т                |
| T. Blinebry        | ,             | T. Gr. Wash           | T. Morrison           | Т                |
| T. Tubb            | 4028'         | T. Delaware Sand      | T. Todilto            | T                |
| T. Drinkard        | <u>4870'</u>  | T. Bone Springs       | T. Entrada            |                  |
| T. Abo             | 5120'         | T. Morrow Lime 9494   | T. Wingate            | T                |
| T. Wolfcamp        | 6706'         | T.Morrow Clastics9674 | T. Chinle             | Т                |
| T. Penn            | 82081         | Т                     | T. Permain            | T                |
| T. Cisco (Bough C) | <u>.</u> _    | Т                     | T. Penn "A"           | Т                |

## OIL OR GAS SANDS OR ZONES

| No. 1, from           | No. 3. from   |  |  |  |  |  |  |  |
|-----------------------|---------------|--|--|--|--|--|--|--|
| No. 2, from           | No. 4, fromto |  |  |  |  |  |  |  |
| IMPORTANT WATER SANDS |               |  |  |  |  |  |  |  |

Include data on rate of water inflow and elevation to which water rose in hole.

00401

|       |            |    |       | ••••  |
|-------|------------|----|-------|-------|
| No. 3 | , from     | to | feet  |       |
| No. 2 | , from     | to | feet. | ••••• |
| No. 1 | , fromNQNE | to | feet  |       |

## LITHOLOGY RECORD (Attach additional sheet if necessary)

| From  | То     | Thickness<br>in Feet | Lithology          | From | То | Thickness<br>in Feet | Lithology |
|-------|--------|----------------------|--------------------|------|----|----------------------|-----------|
| 0'    | 1600'  | 1600'                | Redbed & Anhydrite |      |    |                      |           |
| 1600' | 6700'  | 5100'                | Dolomite Sandston  |      |    |                      |           |
| 6700' | 8200'  | 1500'                | Limestone & Shale  |      |    |                      |           |
| 8200' | 8600'  | 400'                 | No Returns         |      |    |                      |           |
| 8600' | 9700'  | 1100'                | lime & Shale       |      |    |                      |           |
| 9700' | مممم   | 2001                 | Sand & Shale       |      |    |                      |           |
| 00001 | 100001 | 200                  |                    |      |    |                      |           |
| 9900  | 10060. | 160.                 | Snale              |      |    |                      |           |
|       |        |                      |                    |      |    |                      |           |
|       |        |                      |                    |      |    |                      |           |
|       |        |                      |                    |      |    |                      |           |

# 

Laboratory Services 1331 Tasker Drive Hobbs, New Mexico 88240

Telephone: (505) 397-3713

| FOR:         | Mewbourne Oil Con<br>Attention: Mr. J.<br>P. O. Box 5270<br>Hobbs, New Mexico | npany<br>sy Prudhomme<br>o 88241 | SAMPLE<br>IDENTIFICATION:<br>COMPANY:<br>LEASE:<br>PLANT: | Chalk Bluff 36 State #1<br>Mewbourne Oil Co. |
|--------------|-------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------|----------------------------------------------|
| SAMPLE DATA: | DATE SAMPLED:<br>ANALYSIS DATE:                                               | 05-18-93<br>05-18-93             | GAS (XX)<br>SAMPLED BY:<br>ANALYSIS BY:                   | LIQUID ( )                                   |
|              | SAMPLE TEMP. °F                                                               |                                  |                                                           |                                              |
| REMARKS:     |                                                                               |                                  |                                                           |                                              |

|                  | COM   | PONENT ANALY | SIS            |         |
|------------------|-------|--------------|----------------|---------|
|                  |       | MOL          |                |         |
| COMPONENT        |       | PERCENT      | GPM            |         |
| Hydrogen Sulfide | (H2S) |              |                |         |
| Nitrogen         | (N2)  | 0.41         |                |         |
| Carbon Dioxide   | (CO2) | 0.41         |                |         |
| Methane          | (C1)  | 88.13        |                |         |
| Ethane           | (C2)  | 7.02         | 1.866          |         |
| Propane          | (C3)  | 2.44         | 0.669          |         |
| I-Butane         | (IC4) | 0.31         | 0.102          |         |
| N-Butane         | (NC4) | 0.59         | 0.184          |         |
| I-Pentane        | (IC5) | 0.19         | 0.070          |         |
| N-Pentane        | (NC5) | 0.15         | 0.055          |         |
| Hexane           | (C6)  | 0.35         | 0.150          |         |
| Heptanes Plus    | (C7+) | 0.00         | 0.000          |         |
| · · · ·          |       | 100.00       | 3.096          |         |
| BTU/CU.FT.       |       |              |                |         |
| AT 14.696 DR     | Y     | 1135         | MOLECULAR WT.  | 18.6894 |
| AT 14.650 DRY    | /     | 1132         |                |         |
| AT 14.650 WET    | ſ     | 1109         | 26# GASOLINE - | 0.337   |
| AT 15.025 DRY    | /     | 1161         |                |         |
| AT 15.025 WET    | Г     | 1166         |                |         |
|                  | Y     |              |                |         |
| CALCULATE        | ס     | 0,645        |                |         |
| MEASURE          |       |              |                |         |

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MEWBOURNE OIL COMPANY Chalk Bluff 36 State, Well #1 36-17S-27E Eddy County, New Mexico 5-18-93

)



Q MCF/DAY

State of New Mexico ergy, Minerals and Natural Resources Departi

Submit in duplicate to appropriate district office See Rule 401 & Rule 1122

## **OIL CONSERVATION DIVISION**



i

Santa Fe, New Mexico 87504-2088



# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

| Operator<br>MEWBOIL           | RNE O             | TL COM                | IPANY                     |                          |                                         |                                 |                           | ease or Unit Na       | ame<br>CHALK    | BLUFF                                        | 36 STAT        | Ε                     |
|-------------------------------|-------------------|-----------------------|---------------------------|--------------------------|-----------------------------------------|---------------------------------|---------------------------|-----------------------|-----------------|----------------------------------------------|----------------|-----------------------|
|                               |                   |                       |                           |                          |                                         |                                 | T                         | st Date<br>5-1893     |                 | Well No                                      | <sup>.</sup> 1 |                       |
| X Initia                      | 1                 | Ai<br>Total D         | epth and a                | Special   Pl             | ug Back                                 | <del>JR</del> o                 | E                         | levation 2            | 635             | Unit Ltr                                     | -<br>-1 75-27  | VP - Rge.             |
| 3-18-9                        | 3                 | <u> </u>              | · 10060                   | , P.                     | UI<br>InteroPre                         |                                 |                           |                       |                 | County                                       | 170 273        |                       |
| Csg. Size                     | WL.               |                       | 30 A                      |                          |                                         | 9842 To 9856 FDDY               |                           |                       |                 |                                              |                |                       |
| 4 <sup>1</sup> <sub>2</sub>   | 11.6              | 0 4.0                 | )52 100                   | JIZ F                    | rom:                                    | <u>9042</u>                     | T                         | 0: 90,00              |                 | Pool                                         |                |                       |
| <sup>1bg. Size</sup> 2 3/8    | <sup>wi.</sup> 6. | 5 2.4                 | 441 80                    | 224                      | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 0864                            | -                         | 9886                  |                 | N N                                          | ORTH IL        | LINOIS                |
| 2 //8 4./ 1.91 9000 From: 900 |                   |                       |                           |                          |                                         | Packer Set                      | 1<br>At                   | 0: 7000               |                 | Formați                                      | on             |                       |
| single                        | - Diauei          |                       |                           |                          |                                         | 968                             | <u>38</u>                 |                       |                 | Connec                                       |                |                       |
| Producing Thru                | Reservo           | ir Temp. <sup>o</sup> | F   Mean Ann<br>6         | ual Temp. <sup>4</sup> r |                                         | Baro, Press                     | - r<br>a                  | 13.2                  |                 | Î                                            | ranswes        | tern                  |
| Loci H                        | 061               | Gg                    | 6/15 % CC                 | $D_{2}$ 41               | % N                                     | <sup>2</sup> .41                | % H <sub>2</sub> S        | Prov                  | ver             | Meter R                                      | 068            | Taps<br>Flg.          |
| 9864 9                        |                   |                       |                           | • • •                    |                                         |                                 |                           | BING DATA             |                 | CASING                                       | DATA           | Duration              |
| Prover                        | Ori               | fice                  | Press                     | Diff.                    | _                                       | Temp.                           | Press.                    | Tem                   | p. P            | ress.                                        | Temp.          | of                    |
| NO. Line X                    | K<br>Si:          | ze                    | p.s.i.g.                  | h <sub>w</sub>           |                                         | ۹F                              | p.s.i.g.                  | ۶F                    | p.              | s.i.g.                                       | •F             | Flow                  |
| SI                            |                   |                       |                           |                          |                                         | 05                              | 2140                      |                       |                 | <u>.                                    </u> | <u>-</u>       | 60 Min                |
| 1. 3.068                      | <u>X 1</u> .      | .000                  | 425                       | 15.00                    |                                         | 05                              | 2125                      |                       |                 |                                              |                | 60 Min                |
| 2. 3.068                      | $\frac{X1}{V1}$   | .000                  | 425                       | 38.00                    |                                         | <u>90</u><br>82                 | 1990                      |                       |                 |                                              |                | 60 Min                |
| 3. 3.068                      | $\frac{X I}{V 2}$ | 000                   | 425                       | 74.00                    |                                         | 75                              | 1800                      |                       | 11              | _                                            |                | 60 Min                |
| 4. <u>5.000</u>               | <u> </u>          | .000                  |                           | 1 1.00                   |                                         |                                 |                           |                       |                 |                                              |                |                       |
|                               |                   |                       |                           | F                        | ATE O                                   | F FLOW C                        | ALCULA                    | TIONS                 |                 |                                              |                |                       |
| COEFFIC                       | TENT              |                       | h P                       | Pres                     | sure                                    | Flow                            | Temp.<br>or Ft            | Gravity F             | actor Sup<br>Fi | er Compres:<br>actor. F pv.                  | s. Ka          | te of Flow<br>O. Mcfd |
| NO. (24 HO                    | UR)               | 01                    | <u>"w'm</u>               | /38                      | <u> </u>                                | 959                             | 4                         | 1.245                 | 1.              | 034                                          | 48             | 0                     |
| 1. 4.78                       | 9                 | 158                   | 01                        | 438                      | 2                                       | .968                            | 0                         | 1.245                 | 1.              | 038                                          | 94             | .7                    |
| 3 15 61                       | 9                 | 129.                  | 04                        | 438.                     | 2                                       | .979                            | 5                         | 1.245                 | 1.              | 039                                          | 255            | 2                     |
| 4. 21.32                      |                   | 183.                  | 13                        | 453.                     | 2                                       | .985                            | 9                         | 1.245                 | 1.              | 047                                          | 501            | .8                    |
| 5.                            |                   |                       |                           | <u>_</u>                 |                                         |                                 |                           |                       | 62 / 70         |                                              |                |                       |
| P <sub>r</sub>                | Ter               | np.ºR                 | T <sub>r</sub>            | Z                        | Gas                                     | Liquid Hydr                     | ocarbon Rat               | io                    | 53              |                                              |                | McI/bbl.              |
| 1654                          | 56                | 5                     | 1.519                     | .935                     |                                         | . I. Gravity o<br>cific Gravity | f Liquid Hyd              |                       | .645            |                                              | XXX            | XXXXXX                |
| 2654                          | 55                | 0                     | 1.478                     | .929                     | - Spe                                   | cific Gravity                   | Flowing Flu               | ud                    | XXX             | XX                                           | GMIX           | .693                  |
| 3654                          | - 54              | 2                     | 1.45/                     | .920                     | - Crit                                  | ical Pressure                   |                           | 670                   |                 | P.S.                                         | LA. 669        | P.S.I.A.              |
| 4070                          |                   | <u> </u>              | 1.430                     | .915                     | - Crit                                  | ical Tempen                     | ture                      | 3/2                   |                 |                                              | _R             | R                     |
| <sup>5.</sup><br>2189.0       | <br>P             | 2 4791                | .7                        |                          |                                         |                                 |                           |                       |                 |                                              |                |                       |
| P                             |                   |                       | p 2                       | p <sup>2</sup> . p       | 2 1                                     | ) $P_c^2$                       | =_4                       | 403                   | (2)             | P <sub>c</sub> <sup>2</sup>                  | * =_           | 3.594                 |
| NO. Pi                        |                   | $\frac{r_w}{70.6}$    | <sup>r</sup> w<br>1.720.2 | 71                       |                                         | $P_{c}^{2} - P$                 | 2                         |                       |                 | $P_c^2 - P_w$                                | 2              |                       |
| 1                             | $-\frac{21}{21}$  | 12.0                  | 4720.2                    | 153                      | 2                                       | c                               | -                         |                       | 1               |                                              |                |                       |
| 2.                            | 21                | <u>55.7</u><br>68.9   | 4280.3                    | 511.4                    | 4 Α                                     | OF = Q                          | Γ P                       | 2 <sup>1</sup>        | = <u>18.03</u>  | 4                                            |                |                       |
| 4.                            | 19                | 24.4                  | 3703.3                    | 1088.                    | 4                                       |                                 | P <sup>2</sup>            | - P <sup>2</sup>      |                 |                                              |                |                       |
| 5.                            |                   |                       |                           |                          |                                         |                                 |                           | ······                |                 |                                              |                |                       |
| Abcolute Onen El              | low               | 18,0                  | 034                       |                          | Mcf                                     | d@15.025                        | Angle                     | of Slope <del>O</del> | 49              |                                              | Slope, n       | .863                  |
| Absolute Open Pl              | <b>D</b> DT C     |                       | Gravity                   | Oil Du                   | ring                                    | Test                            | <u></u> ,, <del>,</del> _ |                       |                 |                                              |                |                       |
| Remarks: 0                    | פרומס             | - 10                  | GLAVILY                   |                          | ~6                                      |                                 |                           |                       |                 |                                              |                |                       |
| Ca                            | alcula            | ated w                | ith B.H.                  | P. Inst                  | rumer                                   | 115.                            |                           |                       |                 |                                              |                |                       |
| Approved By Div               | vision            |                       | Conduct                   | ed By:                   |                                         |                                 | Calculated                | By:                   |                 | Check                                        | ed By:         |                       |
| PRO WELL TESTERS              |                   |                       |                           |                          | S                                       | KS                              |                           |                       | <u> KS</u>      |                                              |                |                       |

Ibmit 5 Copies Ippropriate District Office DISTRICT I P.O. Box 1980, Hobbs, NM 88240

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aziec, NM 87410

| State                | of New I | Mexico    |            |
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| Energy, Minerals and | Natural  | Resources | Department |

**OIL CONSERVATION DIVISION** P.O. Box 2088

Santa Fe, New Mexico 87504-2088



REQUEST FOR ALLOWABLE AND AUTHORIZATION

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                       | eneste/MMCF<br>6.6<br>aure (Shut-in)<br>acker<br>OIL CC<br>te Approv                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | PNSER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Gravity of<br>Choke Size<br>ATION<br>APR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Coodenaale<br>55<br>1/4"<br>DIVISI<br>2 6 1993                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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|                                                                                          | New Me<br>Oil<br>Casingheau<br>AND LEA<br>990<br>2 17S<br>SPORTE<br>3 17S<br>SPORTE<br>3 17S<br>SPORTE<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>3 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S<br>1 17S | New Mexico Change in Casinghead Gas Casinghead Gas AND LEASE Well No. 1 | New Mexico       8824         Change in Transpo         Oil       Dry Ge         Casingheed Gas       Conder         AND LEASE       Well No.       Pool N         Well No.       Pool N       N         :       990       Feet P         >       17S       Range         SPORTER OF OIL AN       or Condensate         ghead Gas       or Or Or Condensate         ghead Gas       or Condensate         ghead Gas       or Or Or Or One Sate         from any other lease or pool, gi       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1       Image         - (X)       1 | New Mexico       88241         Change in Transporter of:         Oil       Dry Gas         Casinghead Gas       Condensate         AND LEASE       Well No.         Well No.       Pool Name, Includin         1       N. Illino:         :       990         Feet From The       Image 27E         SPORTER OF OIL AND NATUR       or Condensate         phead Gas       or Ory Gas         Company       Image 27E         SPORTER OF OIL AND NATUR       or Condensate         M       36       17S         Year       Year       Rge.         M       36       17S         Year       Qass       Year         Year       Oil Well       Gas Well         - (X)       X       Date Compl. Ready to Prod.         03/30/93       Name of Producing Formation       Morrow         86'       TUBING, CASING AND         CASING & TUBING SIZE       13-3/8"         9-5/8"       7"         4-1/2"       Liner         ST FOR ALLOWABLE       recovery of total volume of load oil and must         Date of Test       Tubing Pressure         Oil - Bbls.       Oil - | New Mexico       88241         Change in Transporter of:       Othe         Casingheed Gas       Condensate         AND LEASE       Well No.         Well No.       Pool Name, Including Formation         1       N. Illinois Camp         :       990         Feet Prom The       West         p       17S         Range 27E       , NP         SPORTER OF OIL AND NATURAL GAS       Oil Ter         or Condensate       Address (Giv         Oil Ter       P.O. Bo         Unit       Sec.         Yee       17S         Range 27E       N         SPORTER OF OIL AND NATURAL GAS         or Condensate       Address (Giv         Oil Ter       P.O. Bo         Unit       Sec.       Twp.         Yee       17S       27E         from any other lease or pool, give commingling order aum       N         -(X)       X       X         Date Compl. Ready to Prod.       Total Depth         03/30/93       Name of Producing Formation       Top Oil/Gas         MorrOW       86'       13-3/8"         9-5/8"       -1/2"       1 ner         ST FOR ALLOW | New Mexico       88241         Change in Transporter of:       Other (Please explored of a construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the | New Mexico       88241         Change in Transporter of:       Other (Please explain)         Oil       Dry Gas         Casingheed Gas       Condensate         MND LEASE       Well No.         Year       N. 111 inois Camp Morrow         States, 1       N. 111 inois Camp Morrow         :       990         Feet Prom The       West         1       N. 111 inois Camp Morrow         :       990         Feet Prom The       West         In or Condensate       Address (Give address to which approved 0il Tender Dept. Box 7         ghead Gas       or Ory Gas (X)         Address (Give address to which approved 0il Tender Dept. Box 7         ghead Gas       or Dry Gas (X)         Address (Give address to which approved 0il Tender Dept. Box 7         ghead Gas       or Dry Gas (X)         Yes       Image order samber:         Mill Sec.       Twp.       Rge. Is gas schally connected?         When       Yes       Image schall peth         03/30/93       10,060'         Name of Producing Formation       Top Oll/Gas Pay         03/30/93       10,060'         Name of Producing Size       DEPTH SET         13-3/8''       399' | New Mexico       88241         Change in Transporter of:       Other (Please explain)         Oil       Dry Gas         Casingheed Gas       Condenants         Well No.       Pool Name, Including Formation         I       N.         I       N.         IIII inois Camp Morrow         State, XMMANK RM         :       990         Feet From The         .       West Line and         .       660         Feet From The         .       Address (Give address to which approved copy of this fo         0il Tender Dept.       Box 702068 TL         .       Oil Tender Dept.       Box 702068 TL         Company       P.O.       Box 1188 Houston, Texas         Unit       Sec.       Twp.       Res.         Yes       C       Grom any other lease or pool, give commingling order sumber:       C         -(X)       X       I       Depen       Plug Back         .       X       I       Depen       Plug Back         .       X       I       Depen       Plug Back         .       X       I       I       Depen       Plug Back         .       X | New Mexico       88241         Change in Transporter of:       Other (Please explain)         Oil       Dry Ge         Casinghead Gas       Condensate         AND LEASE |  |

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

(505)

04/02/93

Dale April 5,

1993

1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.

2) All sections of this form must be filled out for allowable on new and recompleted wells.

393-5905

Telephone No.

3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.

4) Separate Form C-104 must be filed for each pool in multiply completed wells.

District I PO Box 1980, Hobbs, NM 88241-1980

District II 811 South First, Artesia, NM 88210

District III 1000 Rio Brazos Rd., Aztec, NM 87410

District IV 2040 South Pacheco, Santa Fe, NM 87505

### State of New Mexico Energy, Minerals & Natural Resources Department

Form C-101 Revised October 18, 1994 Instructions on back Submit to Appropriate District Office State Lease - 6 Copies Fee Lease - 5 Copies

## OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505

AMENDED REPORT

## APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

| Mewbourne Oil Company  | Operator Name and Address                |        | 2OGRID Number<br>14744    |
|------------------------|------------------------------------------|--------|---------------------------|
| Hobbs, NM 88241        |                                          | 30 - ( | 3API Number<br>0 15-27286 |
| (Property Code<br>787/ | ₅Property Name<br>Chalk Bluff "36" State |        | ₀Well No.<br>1            |

## Surface Location

| UL or lot no. S | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West Line | County |
|-----------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| м               | 36      | 17S      | 27E   |         | 660           | South            | 990           | West           | Eddy   |

## Proposed Bottom Hole Location If Different From Surface

| UL or lot no. | Section         | Township               | Range                   | Lot Idn | Feet from the | North/South line | Feet from the      | East/West Line | County |
|---------------|-----------------|------------------------|-------------------------|---------|---------------|------------------|--------------------|----------------|--------|
|               | <b>Cump</b> Ato | Proposed<br>oka Gas Po | i Pool 1<br>00 <b> </b> |         |               |                  | 10 <b>Propos</b> e | ed Pool 2      |        |

| 11Work Type Code | 12Well Type Code | 13Cable/Rotary | 14Lease Type Code   | 15Ground Level Elevation |  |  |
|------------------|------------------|----------------|---------------------|--------------------------|--|--|
| Р                | G                | R              | S                   | 3635                     |  |  |
| 16Multiple       | 17Proposed Depth | 18Formation    | 19Contractor        | 20Spud Date              |  |  |
| No               | 10060            | Atoka          | Key Energy Services | 09-15-99                 |  |  |

<sup>21</sup>Proposed Casing and Cement Program

| Hole Size | Casing Size  | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|-----------|--------------|--------------------|---------------|-----------------|---------------|
| 17-1/2"   | 13-3/8"      | 48#                | 399           | 530             | Surface       |
| 12-1/4"   | 9-5/8"       | 36#                | 2603          | 1150            | Surface       |
| 8-3/4"    | 7"           | 26#                | 9253          | 1620            | Surface       |
| 6"        | 4-1/2" Liner | 11.6#              | 10057         | 225             | TOL @ 8439'   |

<sup>22</sup>Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

1) Temporarily abandon Morrow perforations 9842-9856' and 9864-9886' by setting a cast iron bridge plug at 9800' and dumping 20' cement plug on top.

2) Test the Atoka Formation through perforations 9442-9446' and 9452-9464'.

3) File for commingling permit if well conditions warrant.

6" 5000 psi WP dual hydraulic BOP's will be utilized on this project. Any produced fluids will be diverted through a 5000 psi WP adjustable choke to a steel tank via 2" steel lines

| <sup>23</sup> I hereby certify that the information given above is true and complete to the<br>best of my knowledge and belief. | OIL CONSERVATION DIVISION |              |                            |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------|----------------------------|--|--|--|--|
| Signature:                                                                                                                      | Approved By:              | ORIGINAL SIG | NED BY TIM W. GUM          |  |  |  |  |
| Printed name: Jerry Elgin                                                                                                       | Title:                    | UPERVISOR    |                            |  |  |  |  |
| Title: District Manager                                                                                                         | Approval Date:            | 3.17.55      | Expiration Date: 8 - 17-00 |  |  |  |  |

| District I<br>PO Box 1980, Hobi<br>District II<br>811 South First, An<br>District III<br>1000 Rio Brazos R<br>District IV<br>2040 South Pached | 41-1980<br>8210<br>IM 87410<br>ie, NM 87505 | ŴFI             | 1.1.00    | Sta<br>Energy, M<br>OIL CO<br>2<br>S<br>ATION | ate of Ne<br>Inerals & Natural<br>ONSERVA <sup>-</sup><br>040 South<br>Santa Fe, N | W Mexico<br>Resources Department<br>FION DIVISIO<br>Pacheco<br>IM 87505 |                                         | Re<br>Submit to A                                 | evised Oc<br>Instru<br>ppropriate<br>State Le<br>Fee Le                                      | Form C-102<br>tober 18, 1994<br>ctions on back<br>District Office<br>ase - 4 Copies<br>ase - 3 Copies |                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------|-----------|-----------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| ر.<br>30-                                                                                                                                      | API Numi<br>-015-27                         | per<br>286      |           |                                               | 2Pool Code                                                                         | No                                                                      | orth Illinois Camp <sup>A</sup>         | RECEIVEDou                                        |                                                                                              |                                                                                                       |                                                        |
| 4Property Code<br>Chalk Bluff "36" State                                                                                                       |                                             |                 |           |                                               |                                                                                    | sProperty                                                               | Name                                    |                                                   |                                                                                              | Na                                                                                                    | /ell Number<br>1                                       |
| <sup>7</sup> OGRID No.<br>14744 Mewbourne Oil Company                                                                                          |                                             |                 |           |                                               |                                                                                    | ₀Operato                                                                | r Name                                  |                                                   |                                                                                              |                                                                                                       | Elevation<br>3635                                      |
|                                                                                                                                                | · · ·                                       |                 |           |                                               |                                                                                    | <sub>"Surface</sub>                                                     | Location                                |                                                   |                                                                                              |                                                                                                       |                                                        |
| UL or lot no.<br>M                                                                                                                             | Secti<br>36                                 | on Town<br>175  | ship<br>S | Range<br>27E                                  | Lot Idn                                                                            | Feet from the 660                                                       | North/South line<br>South               | Feet from the<br>990                              | East/M                                                                                       | /est Line<br>est                                                                                      | County<br>Eddy                                         |
|                                                                                                                                                |                                             |                 |           | Bottor                                        | n Hole I                                                                           | ocation If                                                              | Different From                          | n Surface                                         | <b>I</b>                                                                                     |                                                                                                       |                                                        |
| UL or lot no.                                                                                                                                  | Secti                                       | on Town         | ship      | Range                                         | Lot Idn                                                                            | Feet from the                                                           | North/South line                        | Feet from the                                     | East/W                                                                                       | /est Lin <del>e</del>                                                                                 | County                                                 |
| +>Dedicated A                                                                                                                                  | cres 1                                      | Jaint or Infill |           | Consolidatio                                  | n Code                                                                             | 15Order No.                                                             |                                         |                                                   | <u> </u>                                                                                     |                                                                                                       |                                                        |
| 320.00                                                                                                                                         |                                             |                 |           | С                                             |                                                                                    |                                                                         |                                         |                                                   |                                                                                              |                                                                                                       |                                                        |
| 16                                                                                                                                             |                                             |                 |           |                                               |                                                                                    |                                                                         |                                         | signature<br>District<br>Title<br>08-13-5<br>Date | RATOR<br>ntify that the inimplete to the l<br>Step Exclusion<br>Igin<br>Ime<br>Manager<br>99 | CERTI<br>formation co<br>best of my kr                                                                | FICATION<br>Interined herein is<br>lowledge and belief |
|                                                                                                                                                | 111                                         | 'X///           | //        | 11/1                                          | 11/1                                                                               | //////                                                                  | * / / / / / / / / / / / / / / / / / / / |                                                   | VEYUR                                                                                        |                                                                                                       |                                                        |



## NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

## **ADMINISTRATIVE ORDER DHC-2464**

Mewbourne Oil Company P.O. Box 7698 Tyler, Texas 75711

Attention: Mr. K. M. Calvert



Chalk Bluff "36" State No. 1 API No. 30-015-27286 Unit M, Section 36, Township 17 South, Range 27 East, NMPM, Eddy County, New Mexico. Wildcat-Atoka (Gas –N/A), and North Illinois Camp-Morrow (Gas – 78890) Pools

Dear Mr. Calvert:

Reference is made to your recent application for an exception to Rule 303.A. of the Division Rules and Regulations to permit the above described well to commingle production from the subject pools in the wellbore.

It appearing that the subject well qualifies for approval for such amendment pursuant to the provisions of Rule 303.C., and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the zones is hereby placed in abeyance.

The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated gas pool as printed in the Division's Southeast Gas Proration Schedule.

Assignment of allowable to the well and allocation of production from the well shall be on the following basis:

| Wildcat-Atoka Gas Pool              | Oil-100% | Gas-73% |       |
|-------------------------------------|----------|---------|-------|
| North Illinois Camp-Morrow Gas Pool | Oil-0%   | Gas-27% | 78891 |

Administrative Order DHC-2464 Mewbourne Oil Company September 21, 1999 Page 2

REMARKS: The operator shall notify the Artesia District Office of the Division upon implementation of the commingling process.

Pursuant to Rule 303.H., the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 21st day of September, 1999.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

have Westerberry by Duc

LORI WROTENBERY Director

SEAL

LW/DRC

cc: Oil Conservation Division - Artesia / State Land Office-Oil & Gas Division

| Submit 3 Copies<br>to Appropriate<br>District Office<br><u>DISTRICT I</u> | State of New M<br>Energy, Minerals and Natural R<br>OIL CONSERVATI(                           | lexico<br>Resources Department                                                                                                                                                                                                     | CIST<br>Form C-103<br>Revised 1-1-89                                                                                                                                                                                   |  |  |  |  |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| P.O. Box 1980, Hobbs, NM 88240                                            | 2040 Pacheco St.<br>Santa Fe, NM 8                                                            | 7505                                                                                                                                                                                                                               | WELL API NO.<br>30-015-27286                                                                                                                                                                                           |  |  |  |  |
| P.O. Drawer DD, Artesia, NM 88210                                         |                                                                                               |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                        |  |  |  |  |
| DISTRICT III<br>1000 Rio Brazos Rd., Aztec, NM 87410                      |                                                                                               |                                                                                                                                                                                                                                    | •State Oil & Gas Lease No.<br>E-379-4                                                                                                                                                                                  |  |  |  |  |
| SUNDRY NC<br>(DO NOT USE THIS FORM FOR P<br>DIFFERENT RES                 | TICES AND REPORTS ON WEL<br>ROPOSALS TO DRILL OR TO DEEPEN<br>ERVOIR. USE "APPLICATION FOR PE | LLS<br>OR PLUG BACK TO A<br>RMIT"                                                                                                                                                                                                  | /Lease Name or Unit Agreement Name                                                                                                                                                                                     |  |  |  |  |
| (FORM                                                                     | C-101) FOR SUCH PROPOSALS.)                                                                   |                                                                                                                                                                                                                                    | Chalk Bluff 36 State                                                                                                                                                                                                   |  |  |  |  |
|                                                                           | OTHER                                                                                         |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                        |  |  |  |  |
| aName of Operator<br>Mewbourne Oil Company                                |                                                                                               | ·······                                                                                                                                                                                                                            | eWell No.<br>1                                                                                                                                                                                                         |  |  |  |  |
| Address of Operator<br>PO Box 5270, Hobbs, New Mexi<br>Well Location      | ico 88240                                                                                     |                                                                                                                                                                                                                                    | Pool name or Wildcat<br>Wildcat Atoka                                                                                                                                                                                  |  |  |  |  |
| Unit Letter <u>M</u> 660                                                  | Feet From The South                                                                           | Line and 990                                                                                                                                                                                                                       | Feet From The West Line                                                                                                                                                                                                |  |  |  |  |
| Section 36                                                                | Township 17s                                                                                  | Range 27e<br>RKB, RT, GR, etc.)                                                                                                                                                                                                    | NMPM Eddy County                                                                                                                                                                                                       |  |  |  |  |
| 11       Check //         PERFORM REMEDIAL WORK                           | Appropriate Box to Indicate Na<br>NTENTION TO:<br>PLUG AND ABANDON<br>CHANGE PLANS            | Ature of Notice, Rep<br>SUBS<br>REMEDIAL WORK<br>COMMENCE DRILLING OF<br>CASING TEST AND CEME<br>OTHER: Test Atoka<br>Pertinent dates, including es<br>34. GIH w/ Pkr & tbg.<br>2 w/ Ball Sealers. Swab<br>000 lbs 20/40 Interprop | ALTERING CASING<br>ALTERING CASING<br>PNS. ALTERING CASING<br>PNS. PLUG AND ANBANDONMENT<br>ENT JOB<br>timated date of starting any proposed<br>A COL<br>NUV CO<br>RECEIVED<br>NUV CO<br>CD - ARTESIA<br>COLBLU-945170 |  |  |  |  |
| TYPE OR PRINT NAME NM YOUN (This space for State Use)                     | Is true and complete to the best of my knowled                                                | Ige and belief.                                                                                                                                                                                                                    | date <u>11-01-99</u><br>505<br>Telephone no: 393-5405                                                                                                                                                                  |  |  |  |  |
| APPROVED BY                                                               | w W. Gum                                                                                      | LE District S                                                                                                                                                                                                                      | apervisor DATE 11-5-59                                                                                                                                                                                                 |  |  |  |  |
| CONDITIONS OF APPROVAL, IF ANY:                                           |                                                                                               |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                        |  |  |  |  |

| Submit to Appropriate<br>District Office<br>State Lease - 6 copies |                                                                                                                                                                        | Energ               | Sta<br>y, Minerals ar      | te of New M<br>nd Natural R | exico<br>esour | ces Depa                | artm en                     | it             | CIZ                                   | pl stry                                  | Form (<br>Revise | 2-105<br>d 1-1-89           |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------|-----------------------------|----------------|-------------------------|-----------------------------|----------------|---------------------------------------|------------------------------------------|------------------|-----------------------------|
| DISTRICT  <br>P.O. Box 1980, Hobbs, I                              | NM 88240                                                                                                                                                               | OIL                 | CONSE                      | RVATI                       | ON             | DIVIS                   | ION                         | W<br>  3       | ELL API NC<br>0-015-272               | ).<br>186                                |                  |                             |
| DISTRICT II<br>P.O. Drawer DD, Artesia                             | NM 88210                                                                                                                                                               |                     | 204<br>San                 | 0 Pacheco<br>ta Fe, N       | St.            | 87505<br>0 21 -         |                             | 5.             | Indicate Ty                           | pe of Lease<br>ST/                       |                  | FEE                         |
| DISTRICT III<br>1000 Rio Brazos Rd. A                              | ztec, NM 8741                                                                                                                                                          | 0                   |                            | 516171                      | 8 (52          | ्र<br>•                 | 23-26                       | 6.<br>E        | . State Oil &<br>-379-4               | Gas Lease I                              | No.              |                             |
| WELL CO                                                            | MPLETIC                                                                                                                                                                | ON OR RE            | COMPLETI                   | ON REPOR                    | RTAN           |                         | 10                          |                | an at i                               | 12.3 <b>3</b> 61752.                     | <b>. 1</b> 4     | And And                     |
| 1a. Type of Well:                                                  |                                                                                                                                                                        | S WELL X            |                            |                             | RECF           | lur.                    | 3<br>A                      | 7              | . Lease Name                          | or Unit Agree                            | ment Nam         | e                           |
| b. Type of Completion:<br>NEW WORK<br>WELL OVER                    |                                                                                                                                                                        |                     |                            |                             | D. AA<br>R     | TESIA                   |                             | / (            | Chalk Bluff                           | "36" State                               |                  |                             |
| 2. Name of Operator                                                |                                                                                                                                                                        |                     |                            |                             | 0              |                         |                             | 8              | . Well No.                            |                                          |                  |                             |
| Mewbourne Oil Co                                                   | ompany                                                                                                                                                                 |                     |                            |                             | 3.6.5          |                         |                             |                | 1                                     | NACIAL CO                                |                  |                             |
| 3. Address of Operator                                             |                                                                                                                                                                        |                     |                            |                             |                |                         |                             | 1              | Nool name o<br><del>Mildcat Atr</del> | n wikicat je<br>ska Ga <del>s Po</del> r | ≥ µrga<br>et     | AtoKo                       |
| P. O. Box 5270, H                                                  | lobbs, NM                                                                                                                                                              | 88241               |                            |                             |                |                         |                             |                |                                       |                                          |                  | 1120119                     |
| 4. Well Location                                                   | м                                                                                                                                                                      | 660 -               |                            | South                       | ı              | line                    | and                         | 990            | Feet                                  | From The                                 | We               | est Line                    |
| Unit Letter                                                        |                                                                                                                                                                        | F                   | eet From The               |                             |                |                         | anu <u> </u>                |                |                                       |                                          |                  | County                      |
| Section                                                            | 36                                                                                                                                                                     | To:                 | wnship 17                  | 7S R                        | ange           | 278                     | E laura di                  | NM             |                                       | R etc 1                                  | LOO<br>14 Elev   | Casinghead                  |
| 10. Date Spudded                                                   | 11. Date T.D                                                                                                                                                           | Reached             | 12. Date Cor               | mpl. (Ready to<br>/00       | Prod.)         | 13                      | . Elevat<br>335' G          | kons (⊔r∹<br>R | G KAD, KI, G                          | r, ec.)                                  |                  | 3635'                       |
| 02/03/93                                                           | 03/19/                                                                                                                                                                 | 93<br>Plug Back T D |                            | 7. If Multiple C            | ompl. H        | low                     | 18.1                        | ntervals       | Rotary To                             | ols                                      | Cable T          | ools                        |
| 10060'                                                             | 10060' 9780' Many Zones? NA Drived by X                                                                                                                                |                     |                            |                             |                |                         |                             |                |                                       |                                          |                  |                             |
| 19. Producing Interval(s<br>9466-9470' & 94                        | 9. Producing Interval(s), of this completion - Top, Bottom, Name     20. Was Direction - Top, Bottom, Name       9466-9470' & 9476-9484', Atoka     22. Was Well Cored |                     |                            |                             |                |                         |                             |                |                                       |                                          |                  |                             |
| 21. Type Electric and O                                            | ther Logs Run                                                                                                                                                          | )                   |                            |                             |                |                         |                             |                | 22. Was V                             | Vell Cored                               | No               |                             |
| 23.                                                                |                                                                                                                                                                        | C                   | ASING RE                   | CORD (                      | Repo           | rt all st               | rinas                       | set in         | well)                                 |                                          |                  |                             |
| AND NO RECORD DEPTH SET HOLE SIZE CEMENTING RECORD AMOUNT PULLED   |                                                                                                                                                                        |                     |                            |                             |                |                         |                             |                |                                       |                                          | MOUNT PULLED     |                             |
| 13-3/8"                                                            |                                                                                                                                                                        | 48#                 | 39                         | 99'                         |                | 17-1/2"                 |                             |                | 530 sks C                             | lass C                                   |                  | None                        |
| 9-5/8"                                                             |                                                                                                                                                                        | 36#                 | 26                         | 2603' 12-1/4"               |                |                         |                             | 1150 sks (     | Class C                               |                                          | None None        |                             |
| 7"                                                                 |                                                                                                                                                                        | 26#                 | 92                         | 9253' 8-3/4"                |                |                         |                             | 1020 565 0     | 2103311                               |                                          |                  |                             |
|                                                                    |                                                                                                                                                                        |                     |                            |                             |                |                         |                             |                |                                       |                                          |                  |                             |
| 24.                                                                |                                                                                                                                                                        | Li                  | NER RECO                   | RD                          |                |                         |                             | 25.            | 25. TUBING RECORD                     |                                          |                  |                             |
| SIZE                                                               | TOF                                                                                                                                                                    |                     | BOTTOM                     | SACKS CEN                   | VENT           | SCR                     | SCREEN SIZE DEPTH SET PACKE |                |                                       |                                          | PACKER SET       |                             |
| 4-1/2"                                                             | 8439                                                                                                                                                                   | <u>ə'</u>           | 10057'                     | 225                         |                |                         |                             |                | 2-3/0                                 |                                          |                  |                             |
| as Perforation reco                                                | l (interval s                                                                                                                                                          | ize and num         | (ber)                      |                             |                | 27. AC                  | ID, S                       | HOT, F         | RACTUR                                | RE, CEME                                 | NT, SQ           | UEEZE, ETC.                 |
| 9466-9484', 0.4                                                    | 4" entry hole                                                                                                                                                          | e diameter,         | 56 holes total             |                             |                | DEPT                    | H INTE                      | RVAL           | AMOU                                  | NT AND KIN                               | D MATE           | RIAL USED                   |
|                                                                    |                                                                                                                                                                        |                     |                            |                             |                | 9                       | 466-9                       | 484'           | Fractu                                | ire stimulate                            |                  | 0000#1P 20/40               |
|                                                                    |                                                                                                                                                                        |                     |                            |                             |                |                         |                             |                | _                                     |                                          |                  |                             |
| 28                                                                 |                                                                                                                                                                        |                     |                            | PRODUC                      | СТІО           | N                       |                             |                |                                       |                                          |                  |                             |
| Date First Production<br>09/24/99                                  |                                                                                                                                                                        | Proc<br>Flowing     | luction Method (F          | lowing, gas lift,           | , pumpir       | ng - Size ar            | id type (                   | oump)          |                                       | Well                                     | Status (P<br>Pro | rod. or Shut-in)<br>oducing |
| Date of Test<br>10/18/99                                           | Hours T                                                                                                                                                                | ested<br>24         | Choke Size<br>24/64"       | Prod'n Fo<br>Test Peri      | or<br>iod      | <b>Oil - B</b> bL.<br>2 |                             | Gas-           | MCF<br>17                             | Water - BbL<br>2                         |                  | 158500                      |
| Flow Tubing Press.                                                 | Casing                                                                                                                                                                 | Pressure            | Calculated 24<br>Hour Rate | - Oil - Bbl                 |                | Gas                     | s - MCF<br>317              |                | /ater - BbL.<br>2                     | Oil G                                    | ravity - AP      | I - (Corr.)<br>63.8         |
| 29. Disposition of Gas                                             | (Sold, used f                                                                                                                                                          | or fuel, vented,    | etc.)                      |                             |                |                         |                             |                | Tes                                   | t Witnessed By<br>Miller                 | y                |                             |
| Sold                                                               |                                                                                                                                                                        |                     |                            |                             |                |                         |                             |                |                                       |                                          |                  |                             |
| 30. List Attachments                                               |                                                                                                                                                                        |                     |                            |                             |                |                         |                             |                |                                       |                                          |                  |                             |
| 31. I hereby certify th                                            | at the informat                                                                                                                                                        | tion shown on i     | both sides of this         | form is true an             | d compl        | ete to the L            | est of n                    | ny knowle      | dge and belie.                        | 1                                        |                  |                             |
| Signature                                                          | Asnon                                                                                                                                                                  | El-                 |                            | Printed _Je<br>Name         | erry Elç       | gin                     |                             |                | Title Distri                          | ct Manager                               | [                | Date                        |
| 7                                                                  | $\int \mathcal{D}$                                                                                                                                                     | $\mathcal{O}^{-}$   |                            |                             |                |                         |                             |                |                                       |                                          |                  |                             |

| District I<br>PO Box 1980, Hobbs, NM 88241-1980<br>District II<br>811 South First, Artesia, NM 88210<br>District III<br>1000 Rio Brazos Rd., Aztec, NM 87410<br>District IV<br>2040 South Pacheco, Santa Fe, NM 87505<br>I. REQUEST FOR ALLOWABLE AN<br>'Operator name and Address |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                     |                           |                  |                                               |                  | e of Ne<br>s & Naturn<br>ERVA<br>0 Sout<br>nta Fe,<br>EAND | New Mexico<br>ural Resources Department<br>ATION DIVISION Submitted<br>th Pacheco<br>NM 87505<br>D AUTHORIZATION TO TRAN |                     |                          | Revise                                  | Form C-104<br>Revised October 18, 1994<br>Instructions on back<br>o Appropriate District Office<br>5 Copies<br>AMENDED REPORT<br>VSPORT<br><sup>2</sup> OGRID Number |               |                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|---------------------------|------------------|-----------------------------------------------|------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|
| P. O. Box 5                                                                                                                                                                                                                                                                        | + Oil Con<br>270<br>1 99241                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ipany V                                             |                           |                  |                                               |                  |                                                            |                                                                                                                          |                     | -                        | • • • • • • • • • • •                   | 14744<br>Peason for F                                                                                                                                                | -illing C     | ode                         |
| Hous, m.                                                                                                                                                                                                                                                                           | 002 <del>4</del> 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                     |                           |                  |                                               |                  |                                                            |                                                                                                                          |                     |                          |                                         | Plug Ba                                                                                                                                                              | ck            |                             |
| 4AF<br>30 - 0 15-2                                                                                                                                                                                                                                                                 | PI Number<br>27286                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ·                                                   |                           | ilduat Atol      | - Gas Per                                     | <br>al j         | 5p                                                         |                                                                                                                          | Α.                  | - 1/4                    | <u> </u>                                | TC                                                                                                                                                                   | 11.9          | ool Code                    |
| 7 Pro                                                                                                                                                                                                                                                                              | operty Cod                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | y et                                                | E                         |                  | ·                                             | <u>' h</u>       | Prof                                                       | perty Narr                                                                                                               | 10 , 11,            | <u>ic 1</u>              | <u> </u>                                | -                                                                                                                                                                    | •₩            | ell Number                  |
| II 10 S                                                                                                                                                                                                                                                                            | 7871                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                     |                           | alk Bluff ":     | 36" State                                     |                  |                                                            |                                                                                                                          | <u></u>             |                          | <u></u>                                 |                                                                                                                                                                      |               | 1                           |
| Ut or lot no.                                                                                                                                                                                                                                                                      | Section                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Township                                            | Ċ                         | Range            | Lot Idn                                       | F                | eet from t                                                 | the                                                                                                                      | North/Sou           | uth Line                 | Feet from the                           | East/Wes                                                                                                                                                             | st line       | County                      |
| M 11.[                                                                                                                                                                                                                                                                             | 36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 175                                                 |                           | 27E              | L                                             |                  | 66                                                         | 0                                                                                                                        | Sout                | th                       | 990                                     | We                                                                                                                                                                   | st            | Eddy                        |
| Uiorkotno.                                                                                                                                                                                                                                                                         | 3ottom<br>Section                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Township                                            | catio                     | ON<br>Range      | Lot Idn                                       | F                | eet from t                                                 | the                                                                                                                      | North/Sou           | th Line                  | Feet from the                           | East/Wes                                                                                                                                                             | st line       | County                      |
| <sup>12</sup> Lse Code                                                                                                                                                                                                                                                             | <sup>13</sup> Produc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | cing Method C                                       | ode                       | 14 Gas (         | Connection D                                  | )ate             | 15 C-1                                                     | 129 Perm                                                                                                                 | it Number           | Τ                        | I<br><sup>16</sup> C-129 Effective [    | Date                                                                                                                                                                 | 17 C-         | 129 Expiration Date         |
| UI Oil ar                                                                                                                                                                                                                                                                          | nd Gar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Transpi                                             | orter                     | '                | 0/24/94                                       |                  | <u> </u>                                                   |                                                                                                                          |                     |                          |                                         | L                                                                                                                                                                    | <b></b> iiii  |                             |
| 1º Transport<br>OGRID                                                                                                                                                                                                                                                              | ter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ) [] wi iej-                                        | 10 Tra<br>a               | Insporter Na     | ame                                           |                  | T                                                          | 20 PO                                                                                                                    | D                   | <sup>21</sup> O/G        | 2                                       | 2 POD ULS<br>and Des                                                                                                                                                 | TR Loc        | ation<br>n                  |
| 139848                                                                                                                                                                                                                                                                             | A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | moco Pipel                                          | ine C                     | Company          |                                               |                  | +                                                          | 19238                                                                                                                    | 40                  | <br>0                    |                                         |                                                                                                                                                                      |               |                             |
|                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ulsa, OK                                            |                           | _                |                                               |                  |                                                            |                                                                                                                          |                     |                          |                                         | orbert 101                                                                                                                                                           | 2036<br>•     |                             |
| 000990                                                                                                                                                                                                                                                                             | , Т<br>,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ranswesterr                                         | n Pip                     | eline Corr       | npany                                         |                  |                                                            | 28195                                                                                                                    | 23                  | G                        | ्र<br>े ह,<br>े र                       | RE                                                                                                                                                                   |               | 2 <b>13</b><br>24           |
|                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                     |                           |                  |                                               |                  |                                                            |                                                                                                                          |                     |                          |                                         | 000                                                                                                                                                                  | SEIVE<br>ARTE | D<br>SIA                    |
|                                                                                                                                                                                                                                                                                    | V beau                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Natar                                               |                           |                  |                                               |                  |                                                            |                                                                                                                          |                     |                          |                                         | 2. O. S. S. S. S. S. S. S. S. S. S. S. S. S.                                                                                                                         | 51.1<br>1     |                             |
| 20                                                                                                                                                                                                                                                                                 | POD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                     |                           |                  | · <u>·········</u> ·························· |                  | 2                                                          | POD UL                                                                                                                   | STR Locati          | ion and E                | Description                             |                                                                                                                                                                      |               |                             |
| 1923                                                                                                                                                                                                                                                                               | 3850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                     |                           |                  |                                               | <del></del>      |                                                            |                                                                                                                          |                     |                          |                                         |                                                                                                                                                                      |               |                             |
| V. VVen v<br><sup>26</sup> Spur                                                                                                                                                                                                                                                    | Compile<br>d Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | etion Dai                                           | .a<br>28 Re:              | ady Date         | <del></del>                                   | 27 -             | TD                                                         | <u> </u>                                                                                                                 | 28 PBT              | D                        | 28 Perfor                               | ations                                                                                                                                                               | T             | <sup>50</sup> DHC, DC, MC   |
| 02/0                                                                                                                                                                                                                                                                               | 13/93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                     | 09/2                      | 24/99            |                                               | 10               | 0060                                                       |                                                                                                                          | 9780                | 0                        | 9466-9                                  | 484'                                                                                                                                                                 |               |                             |
|                                                                                                                                                                                                                                                                                    | <sup>31</sup> Hole St                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20                                                  | $\overline{+}$            | <sup>32</sup> Cr | asing & Tubin                                 | ng Size          | <u>e</u>                                                   | —                                                                                                                        | 33                  | Depth S                  | et<br>0 + -                             |                                                                                                                                                                      | 34 Saci       | ks Cement                   |
| <b> </b>                                                                                                                                                                                                                                                                           | 17-1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ,<br>                                               | $\rightarrow$             |                  | 13-3/0<br>5/8"                                |                  |                                                            |                                                                                                                          |                     | 399                      | 1051 H                                  | D-X                                                                                                                                                                  |               | 1150                        |
| <b> </b>                                                                                                                                                                                                                                                                           | 12-1/4"<br>9-3/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ·                                                   | -+                        | i                | <del></del><br>7"                             |                  |                                                            | +                                                                                                                        |                     | 2000<br>9253'            | 10 +1                                   | 77                                                                                                                                                                   |               | 1620                        |
|                                                                                                                                                                                                                                                                                    | 6-3/-<br>6-1/8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                     | +                         | 1                | 4-1/2"                                        |                  |                                                            | +                                                                                                                        |                     | 10057                    | <u> </u>                                | 1420                                                                                                                                                                 |               | 225                         |
| VI. Wel                                                                                                                                                                                                                                                                            | II Test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Data                                                | ł                         | <u></u>          |                                               |                  |                                                            |                                                                                                                          |                     |                          |                                         |                                                                                                                                                                      |               |                             |
| <sup>36</sup> Date N                                                                                                                                                                                                                                                               | lew Oil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 34 Gas                                              | Deliv                     | very Date        | 37 Te                                         | əst Daʻ          | ite                                                        | 1 1                                                                                                                      | * Test Leng         | jth                      | 3º Tbg. Pre                             | ISSUITE                                                                                                                                                              | Τ             | <sup>40</sup> Csg. Pressure |
| 09/24                                                                                                                                                                                                                                                                              | 1/99<br>Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                     | 9/24/<br>42C              | /99              | 43                                            | ∜1or∋<br>Water   | )9<br>. <del>.</del>                                       |                                                                                                                          | 4 1100.<br>44 Gas   | 18                       | 45 AO                                   | F                                                                                                                                                                    | ╉             | 46 Test Method              |
| 24/                                                                                                                                                                                                                                                                                | 64"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                     | 2                         |                  |                                               | 2                |                                                            |                                                                                                                          | 317                 | ·                        |                                         |                                                                                                                                                                      | L             | Sold                        |
| <sup>47</sup>   hereby ce<br>complied w<br>to the best<br>Signature:                                                                                                                                                                                                               | with and the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of the tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof my known of tof m | he rules of the<br>lat the informa<br>owiedge and b | Oli C<br>tion g<br>elief. | ionservation     | Division hav<br>is true and co                | e beer<br>omplet | n<br>te                                                    | Approve                                                                                                                  | C<br>ol<br>ad by: D | )IL C(<br>RIGIN<br>ISTRN | ONSERVAT<br>Al signed &<br>CT II guperv | ION DI<br>IV TIM V<br>19017                                                                                                                                          | VISION. GU    | DN<br>JM<br>BW              |
| Printed name                                                                                                                                                                                                                                                                       | 7 Jet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Elgin ()                                            |                           |                  |                                               |                  |                                                            | Title:                                                                                                                   |                     |                          |                                         |                                                                                                                                                                      |               |                             |
| Title: Distri                                                                                                                                                                                                                                                                      | ict Mana                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | iger                                                |                           | Terret           |                                               |                  |                                                            | Approva                                                                                                                  | / Date:             |                          | 10-27.                                  | 55                                                                                                                                                                   |               |                             |
| Date: 10                                                                                                                                                                                                                                                                           | )/20/99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | fill in 1                                           |                           | Phone:           | 505-393                                       | J-590            | 15                                                         | morator                                                                                                                  |                     |                          |                                         |                                                                                                                                                                      |               |                             |
| ** IT UIIS IV =                                                                                                                                                                                                                                                                    | jan9a ~. ∙'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | регатот на "                                        | 10 v.                     |                  | ði arna næ                                    | 01               | hieri                                                      | Upon and                                                                                                                 |                     |                          |                                         |                                                                                                                                                                      |               |                             |
|                                                                                                                                                                                                                                                                                    | Previou                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | us Operator Si                                      | gnatu                     | ILE              |                                               | <u></u>          |                                                            | Printer                                                                                                                  | j Name              |                          |                                         | T                                                                                                                                                                    | îtle          | Date                        |

| U<br>=:        | COMPANY<br>UNIT<br>L<br>%CO2<br>d | : M<br>: 9385<br>: 4.586<br>: 1.995 | DURNE OIL (<br>H<br>%N2<br>Fr        | SECTIC<br>: 935<br>: 0.788<br>:0.018231      | : с. в.<br>36<br>L/H<br>H2S<br>GH | 30 ST.<br>: 1<br>:<br>: 6532.0 | WELL NU.<br>TOWNSHIP<br>G/GMIX | : 1<br>: 17<br>: 0.696<br>DATE<br>RANGE | :10 27 99<br>: 27          | Pt2 = 1398.2<br>Pt2 = 1774.8<br>1593.1<br>1388.2<br>1141.1 | Рс2 =<br>Рw =   | 1955.0 *  <br>*  <br>1332.3 *  <br>1262.5 *  <br>1178.8 *  <br>1069.3 * |
|----------------|-----------------------------------|-------------------------------------|--------------------------------------|----------------------------------------------|-----------------------------------|--------------------------------|--------------------------------|-----------------------------------------|----------------------------|------------------------------------------------------------|-----------------|-------------------------------------------------------------------------|
|                | VOL 1<br>VOL 2<br>VOL 3<br>VOL 4  | : 89<br>: 156<br>: 212<br>: 276     | PSIA 1<br>PSIA 2<br>PSIA 3<br>PSIA 4 | : 1332.2<br>: 1262.2<br>: 1178.2<br>: 1068.2 |                                   |                                | RESV.TEMP<br>SHUT-IN PP        | 167.9<br>R= 1398.2                      |                            | Pc2-Pw2= 180.0<br>   361.1<br>   565.5<br>   811.6         | Pw2 =           | *  <br>1775.0 *  <br>1593.9 *  <br>1389.5 *  <br>1143.4 *               |
|                |                                   |                                     |                                      | PCR<br>TCR                                   | : 652<br>: 381                    |                                |                                |                                         |                            | n =                                                        | 0.747           | *  <br>*                                                                |
|                | LINE                              | RATE 1                              |                                      | RATE 2                                       |                                   | RATE 3                         |                                | RATE 4                                  |                            | Pc2/(Pc2-Pw2) =                                            | 10.862<br>5.414 | *  <br>*  <br>*                                                         |
|                |                                   | `1ST                                | ) `2ND                               | 1ST                                          | 1 2ND                             | `1ST                           | 2ND                            | 1ST                                     | `2ND                       |                                                            | 2.409 -         | *                                                                       |
| 1              | QM<br>TW                          | 0.089                               | 0.089                                | 0.156                                        | 0.156                             | 0.212                          | 0.212                          | 0.276                                   | 0.276                      | <br> <br> [Pc2/Pc2-Pw2]n =                                 | 5.936           | *  <br>*  <br>*                                                         |
| 3<br>4         | TS<br>T<br>PP (ost)               | 580.9                               | 627.9<br>580.9                       | 627.9<br>580.9                               | 627.9<br>580.9                    | 627.9<br>580.9                 | 627.9<br>580.9                 | 627.9<br>580.9                          | 627.9<br>580.9             |                                                            | 3.529<br>2.525  | *                                                                       |
| 5<br>6         | Z(est)<br>TZ                      | 0.809                               | 0.793                                |                                              | 0.799                             |                                | 0.807                          | 1.64                                    | 0.819                      |                                                            | 1.928 @         | - *  <br>*                                                              |
| 7<br>8         | GH/TZ<br>eS                       | 13.901                              | 14.185                               | 13.790<br>1.677                              | 14.074                            | 13.650                         | 408.9<br>  13.929<br>  1.686   | 485.3<br>13.458                         | 476.0                      | AOF= Q                                                     | 0.528           | *  <br>*                                                                |
| 9<br>10        | l-e-S<br>Pt                       | <b>0.406</b><br>1332.2              | 0.413                                | 0.404                                        | 0.410                             | 0.401                          | 0.407                          | 0.396                                   | 0.402                      |                                                            | 0.535           | *   *                                                                   |
| 11<br>12       | Pt2 /1000<br>Fr                   | 1774.8                              | <b>1774.8</b><br> 0.018231           | 1593.1<br>0.018231                           | <b>1593.1</b>                     | 1388.2<br>0.018231             | 1388.2<br>0.018231             | 1141.1<br>0.018231                      | 1141.1                     |                                                            |                 | *                                                                       |
| 13<br>14<br>15 | FC=FTTZ<br>FCQm                   | 0.76                                | 8.395<br>0.75                        | 8.636                                        | 8.462                             | 8.724<br>1.85                  | 8.549<br>1.81                  | 8.848<br>2.44                           | 8.677                      |                                                            |                 | *                                                                       |
| 16             | Fw                                | 0.236154                            | 0.230308                             |                                              | 0.714522                          | 3.4                            | 3.3<br>1.336601                | 6.0<br>2.363611                         | 5.7  <br>2.3073869         |                                                            |                 | *  <br>*                                                                |
| 18             | Ps2                               | 2989.4                              | 3021.4                               | 2673.2                                       | 2701.8                            | 1389.5<br>2318.3               | 1389.5<br>2342.6               | 1143.4<br>1894.0                        | 11 <b>43.4</b>  <br>1912.9 |                                                            |                 | *  <br>*                                                                |
| 20<br>21       | P                                 | 1729.0                              | 1/38.2                               | 1035.0                                       | 1643.7                            | 1522.6                         | 1530.6<br>1354.4               | 1376.2<br>1222.2                        | 1383.1  <br>1225.6         |                                                            |                 | *  <br>*                                                                |
| 22             | Tr  <br>Z i                       | 2.35<br>1.52  <br>0.793             | 2.35<br>1.52<br>0.792                |                                              | 2.23<br>1.52<br>0.700             |                                |                                | 1.87<br>1.52                            | 1.88   <br>1.52            |                                                            |                 | *  <br>*                                                                |
| ===            |                                   | ========                            | ==========                           |                                              |                                   |                                | v.ov/                          | V.019                                   | U.819                      | FO:                                                        | RM C122-D       | ) *  <br>=======*                                                       |




Submit in duplicate to appropriate district office See Rule 401 & Rule 1122 State of New Mexico Energy, Minerals and Natural Resources Department

Form C-122 Revised 4-1-91

#### OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

#### MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

| Try End Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Control Out Co | Opera      | itor Mewit          | nurne               | • 0il      | Compan           |                   |               |                                     | Lease or Unit Name<br>Chalk Bluff 36 State |               |            |                  |                             |                                              |                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------|---------------------|------------|------------------|-------------------|---------------|-------------------------------------|--------------------------------------------|---------------|------------|------------------|-----------------------------|----------------------------------------------|---------------------------------------|
| X Initial         Image         Annual         Dspecial         10/27/99         1         Sec. TWP - Ref.           10/16/99         Tool Deph         9780         35632 CL         Unit Lin - Sec. TWP - Ref.         County           41         11.35         4.000         10060         Profinations:         9484         Poly Signed - Profinations:         County           10/16/99         W. d         Statu         Statu         Participations:         Poly Signed - Profile         County           2.3/8         4.6         1.995         9385         Prom:         Open         To< Ended                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Туре       | Test_               | Journe              |            | compan           | ¥                 |               |                                     |                                            | Test Date     |            | <u>II 50</u>     | Well No.                    |                                              |                                       |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            | X Initia            | ચ                   |            | nnual            |                   | cial          |                                     |                                            | 10            | /27/99     |                  |                             | 1                                            |                                       |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Comp       | 6/90                |                     |            | epth<br>060      |                   | Plug I        | Back TD<br>0790                     |                                            | Elevation     | 621 CT     |                  | Unit Ltr.                   | - Sec T                                      | WP - Rge.                             |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Csg. S     | Size                | Wt.                 | d 10       | <u>5000</u>      | 3 45              | Perfor        | rations:                            | l.                                         |               |            |                  | County                      | 30 1                                         | /s 2/e                                |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | : -<br>    |                     | 11 25               |            | 8                | 439 -             |               | 0.466                               |                                            | _             |            |                  |                             |                                              |                                       |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4 <u>2</u> | 2170                | 11.35               | 4.0        | 00 1             | 0060              | From:         | 9466                                |                                            | To:           | 9484       |                  | Edd                         | y                                            |                                       |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | I Dg. J    | 5126                | ¥¥ L.               | u          | 30               | 2 AI              | reno          | auons.                              |                                            |               |            | 1                | 1001 51                     | E hog                                        | an Jrah                               |
| Type Well- Single - Brachmedred - G. or G.O. Multiple       Production in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second                      | 2 3/       | <u>′8</u>           | 4.6                 | 1.9        | 95               | 9385              | From          | Open                                |                                            | To:           | Ended      |                  | 777                         | inois (                                      | Camp AtoKg                            |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Туре       | Well - Single       | - Braden            | head - G.C | G. or G.O. N     | Aultiple          |               | Packer Set /                        | Ai<br>0.2.0                                | -             |            |                  | Formatio                    | ר<br>י                                       | 1                                     |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Produ      | cine Thru           |                     | r Temp 9   | F Mean A         | nnual Temp        | ٩ç            | Baro Press                          | <u>938</u><br>- P                          | 5             |            |                  | <u>Ato</u>                  | Ka                                           |                                       |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Tb         | g                   | 11050110            | a remp.    |                  | 60                | •             | 2410,11000                          | - 1                                        | 3.2           |            |                  | Elk                         | Horn                                         |                                       |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | L          | Н                   |                     | Gg         | 90               | CO <sub>2</sub>   |               | % N <sub>2</sub>                    | % H <sub>2</sub>                           | S             | Prover     |                  | Meter Ru                    | n                                            | Taps                                  |
| FLOW DATA       CASING DATA       CASING DATA       CASING DATA       CASING DATA       CASING DATA       CASING DATA       Duruion         NO       Prover       Size       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prisi       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Prision       Pris       Prision       Prision                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 9385       | 5 93                | 85                  | 0.         | 696              | 4.5               | 86            | 0.788                               |                                            |               | <u> </u>   | ······           | 3.06                        | 8                                            | FLG                                   |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ,<br>,     |                     | ]                   | FLOW D     | ATA              | <b>D</b>          |               |                                     | TL                                         | <u>BING I</u> | DATA       | CA               | <u>ASING D</u>              | ATA                                          | - Duration                            |
| Size         P = 13.8         "><td>NO.</td><td>Prover<br/>Line X</td><td>Orifi</td><td>ice</td><td>Press.</td><td></td><td>1.</td><td>Temp.</td><td>Press.</td><td></td><td>Temp.</td><td>Press</td><td>.  </td><td>Temp.</td><td>of</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | NO.        | Prover<br>Line X    | Orifi               | ice        | Press.           |                   | 1.            | Temp.                               | Press.                                     |               | Temp.      | Press            | .                           | Temp.                                        | of                                    |
| SI <th.< td=""><td>ļļ</td><td>Size</td><td>Siz</td><td>e</td><td>p.s.i.g.</td><td></td><td>v</td><td>°F</td><td>p.s.i.g</td><td></td><td>۶F</td><td>p.s.i.g</td><td></td><td>•F</td><td>Flow</td></th.<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ļļ         | Size                | Siz                 | e          | p.s.i.g.         |                   | v             | °F                                  | p.s.i.g                                    |               | ۶F         | p.s.i.g          |                             | •F                                           | Flow                                  |
| 1.       3.068 x 0.875       28       10.00       60       1319       "       1 hr         2.       3.068 x 0.875       27       32.00       70       1249       "       1 hr         3.       3.068 x 0.875       27       60.00       77       1165       "       1 hr         4.       3.068 x 0.875       29       95.00       68       1055       "       1 hr         5.          Persure       Plow Temp.       Garviny Factor       Rate of Flow         NO.       (24 HOUR)         P.       Factor FL       Factor FL       Persure       Q.Mcd         1.       3.650       20.30       41.2       1.000       1.199       1.004       89         2.       3.650       49.11       40.2               Mcdbbl.         No.       P.       Temp.*R       Tr.       Z       Gas Liquid Hydrocarbon Ruio_       Dry. <td< td=""><td>SI</td><td></td><td></td><td></td><td></td><td></td><td></td><td>· · · · ·</td><td>138</td><td>5</td><td></td><td></td><td>PACKE</td><td>R</td><td>24 hrs</td></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SI         |                     |                     |            |                  |                   |               | · · · · ·                           | 138                                        | 5             |            |                  | PACKE                       | R                                            | 24 hrs                                |
| 2.       3.068 x 0.875       27       32.00       70       1249       "       1 hr         3.       3.068 x 0.875       27       60.00       77       1165       "       1 hr         4.       3.068 x 0.875       29       95.00       68       1055       "       1 hr         5.           1 hr       1 hr         5.            1 hr         6.00                NO.                   NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.         | 3.068 x             | <u>c 0.87</u>       | 5          | 28               | 10                | .00           | 60                                  | 131                                        | 9             |            |                  |                             |                                              | 1 hr                                  |
| 3. 3.068 x 0.875       27       60.00       77       1165       "       1 hr         4. 3.068 x 0.875       29       95.00       68       1055       "       1 hr         5.         RATE OF FLOW CALCULATIONS       "       1 hr         RATE OF FLOW CALCULATIONS         NO. COEFFICIENT $p_{w_m}^{p_m}$ Pressure       Plow Temp.       Gravity Factor       Super Compress.       Rate of Flow         1. 3.650       20.30       41.2       1.000       1.199       1.004       89         2. 3.650       35.87       40.2               4. 3.650       49.11       40.2                NO.       Pr       Temp.*R       Tr       Z                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.         | <u>3.068 x</u>      | <u> </u>            | <u>'5</u>  |                  | 32                | .00           | 70                                  | 124                                        | 9             |            |                  |                             |                                              | 1 hr                                  |
| 4.       3. 068 x 0.875       29       95.00       68       1055       "       1 hr         5.       COEFFICIENT       Particle       Part of FLOW CALCULATIONS       Rate of Flow       Q. Mc/d         1.       3. 650       20.30       41.2       1.000       1.199       1.004       89         2.       3. 650       35.87       40.2       .9905       1.199       1.004       212         4.       3. 650       63.32       42.2       .9924       1.199       1.004       216         3.       650       63.32       42.2       .9924       1.199       1.004       276         NO.       Pr       Temp.*R       Tr       Z       .9924       1.199       1.004       276         NO.       Pr       Temp.*R       Tr       Z       .9924       .199       1.004       276         NO.       Pr       Temp.*R       Tr       Z       .06       530       1.39       .993       Specific Gravity Eador Gas       .696       .04700       .04700       .04700       .04700       .04700       .04700       .04700       .04700       .04700       .04700       .04700       .04700       .04700       .04700                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.         | 3.068 x             | <u>c 0.87</u>       | 5          |                  | 60                | .00           | 77                                  | 116                                        | 5             |            |                  |                             |                                              | 1 hr                                  |
| RATE OF FLOW CALCULATIONS         RATE OF FLOW CALCULATIONS         COEFFICIENT (24 HOUR)       No. COEFFICIENT (24 HOUR)       Pressure Proved By Division         COEFFICIENT (24 HOUR)       No. COEFFICIENT (24 HOUR)       Super Compress. Factor, F. Fg. Output       Super Compress. Factor, F. P. Q. Meld         1.       3. 650       20. 30       41. 2       1.000       1.199       1.004       89         2.       3. 650       35. 87       40. 2       .9905       1.199       1.004       212         4.       3. 650       63.32       42.2       .9924       1.199       1.004       276         5.                   1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.         | 4. 3.068 x 0.875 29 |                     |            |                  |                   | .00           | 68                                  | 105                                        | 5             |            | ·                |                             |                                              | <u>1 hr</u>                           |
| Rate of FLOW CALCULATION         NO.       COEFFICIENT<br>(24 HOUR)       Pressure<br>Pm       Gravity Factor<br>Factor FL       Gravity Factor<br>Fg       Super Compress.<br>Factor, F. pv.       Q, Mc/d         1.       3.650       20.30       41.2       1.000       1.199       1.004       89         2.       3.650       49.11       40.2       .9905       1.199       1.004       212         4.       3.650       63.32       42.2       .9924       1.199       1.004       276         5.       .       .       .06       520       1.36       .993       AP. I. Gravity of Liquid Hydrocarbons       Dry       .004       276         1.       .06       520       1.36       .993       Specific Gravity Separator Gas       .696       XXXXXX XXX         3.       .06       537       1.40       .993       Critical Pressure * 652       .P.S.I.A       .P.S.I.A         4.       .06       528       1.38       .993       Critical Pressure * 652       .P.S.I.A       .P.S.I.A         5.       .       .       .              1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5.         |                     |                     |            |                  |                   |               |                                     |                                            | TONG          |            |                  |                             |                                              | 1                                     |
| NO.       COEFFICENT $p_{w}p_{m}$ Iteration is the probability of the probability fractor is the properties. Note that the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability fractor is the probability of the probability fractor is the probability of the probability fractor is the probability of the probability fractor is the probability of the probability of the probability of the probability of the probability fractor is the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the probability of the proba                            |            |                     |                     |            |                  | p                 | KAII          | E OF FLOW C.                        |                                            | TIONS         |            |                  |                             |                                              |                                       |
| No.       (1.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)       (2.3,650)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NO         | COEFFIC:            | IENT (              |            | h P              |                   | P             | Flow                                | r Ft                                       | Gna           | Fg.        | Super C          | ompress.                    | Ra                                           | te of Flow                            |
| 1.       3.650       20.30       41.2       1.000       1.199       1.004       89         2.       3.650       35.87       40.2       .9905       1.199       1.004       156         3.       3.650       49.11       40.2       .9840       1.199       1.004       212         4.       3.650       63.32       42.2       .9924       1.199       1.004       276         5.                    1.                                                             .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1          | 2 650               | <i>(</i> <b>(</b> ) | 20         | 20               |                   | <u> </u>      | 1                                   |                                            |               | 100        | 1 1 0            | , г ру.                     |                                              | 2, Micia                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2          | 2 650               |                     | 20         | <u>. 30</u>      | 4                 |               |                                     |                                            |               | 199        |                  | 04                          | 1                                            | <u>89</u>                             |
| 1       3.650       49.11       40.72       .9840       1.199       1.004       212         4.       3.650       63.32       42.2       .9924       1.199       1.004       276         5.       7       Temp. % R       Tr       Z       .9924       1.199       1.004       276         1.       .06       520       1.36       .993       Specific Gravity Claudid Hydrocarbons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3          | 2 650               |                     | 30         | <u>•0/</u><br>11 | 4                 | 0.2           | 9                                   |                                            |               | 199        |                  | 04                          | L                                            | 10                                    |
| S.       1.00       032       42.2       .9924       1.199       1.004       276         NO. $P_r$ Temp.*R $T_r$ Z       Gas Liquid Hydrocarbon Ratio                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4.         | 3 650               |                     | <u> </u>   | •                | 4                 | U.Z.          |                                     | 54U                                        | 1             | 100        | 1.0              | 04                          | 2                                            | 12                                    |
| NO. $P_r$ Temp. ${}^{\circ}R$ $T_r$ Z       Gas Liquid Hydrocarbon RatioDry_GasMcf/bbl.       Mcf/bbl.         1.       .06       520       1.36       .993       A.P. I. Gravity of Liquid HydrocarbonsDryDrg.       DryDrg.       DrgDrg.       gDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgDrgD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5.         |                     |                     |            | •                |                   | <b>4</b>      |                                     | 724                                        | ++-           | 199        | +                | <u>104</u>                  |                                              | 70                                    |
| NO.       1.       .06       520       1.36       .993       A.P. I. Gravity of Liquid Hydrocarbons       Dry       Deg.         2.       .06       530       1.39       .993       Specific Gravity Separator Gas       .696       XXXXXXXX         3.       .06       537       1.40       .993       Specific Gravity Separator Gas       .696       XXXXXX         5.       .06       528       1.38       .993       Specific Gravity Flowing Fluid       XXXXX       XXXXXXX         5.       .06       528       1.38       .993       Critical Pressure * 652       P.S.I.A       P.S.I.A       P.S.I.A         6.       .06       528       1.38       .993       Critical Temperature       * 381       R         7.       .06       528       1.38       .993       Gritical Temperature       * 381       R         8.       .06       528       1.38       .993       Gritical Temperature       * 381       R         9.       .00       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2       P.2 </td <td>NO</td> <td>P<sub>r</sub></td> <td>Tem</td> <td>o.ºR</td> <td>T<sub>r</sub></td> <td>Z</td> <td>(</td> <td>Gas Liquid Hydro</td> <td>carbon Ra</td> <td>tio</td> <td>Drv G</td> <td>as</td> <td></td> <td>• <u></u> · · · · ·</td> <td>Mcf/bbl</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | NO         | P <sub>r</sub>      | Tem                 | o.ºR       | T <sub>r</sub>   | Z                 | (             | Gas Liquid Hydro                    | carbon Ra                                  | tio           | Drv G      | as               |                             | • <u></u> · · · · ·                          | Mcf/bbl                               |
| 1. <th< td=""><td><u>NO.</u></td><td>06</td><td>E 20</td><td></td><td>1 26</td><td></td><td>2</td><td>A.P. I. Gravity of</td><td>Liquid Hy</td><td>drocarbor</td><td><math>15 \_ Dr</math></td><td></td><td></td><td></td><td>Deg.</td></th<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <u>NO.</u> | 06                  | E 20                |            | 1 26             |                   | 2             | A.P. I. Gravity of                  | Liquid Hy                                  | drocarbor     | $15 \_ Dr$ |                  |                             |                                              | Deg.                                  |
| 2.       .06       .530       139       .993       Specific Gravity Flowing Fluid       XXXXX         4.       .06       528       140       .993       Specific Gravity Flowing Fluid       XXXXX         9.       .06       528       138       .993       Specific Gravity Flowing Fluid       XXXXX $P_c$ .06       528       138       .993       Specific Gravity Flowing Fluid       XXXXX $P_c$ .06       528       138       .993       Specific Gravity Flowing Fluid       XXXXX $P_c$ .06       528       138       .993       Specific Gravity Flowing Fluid       XXXXX $P_c$ .06       528       1.38       .993       Specific Gravity Flowing Fluid       XXXXX $P_c$ .06       528       1.38       .993       Specific Gravity Flowing Fluid       XXXXX $P_c$ .06       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .02       .0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1.         | .00                 | 520                 |            | 1.30             | .99               | $\frac{3}{2}$ | Specific Gravity S                  | Separator C                                | Gas           | .696       |                  |                             | XXX                                          | XXXXXX                                |
| J.       J. 30       J. 40       J. 923       Critical Pressure $\star$ 652       P.S.I.A.       P.S.I.A.       P.S.I.A.         4.       .06       528       1.38       .993       Critical Pressure $\star$ 381       R       R         5.       -       -       -       * 381       R       R       R $P_c$ 1398.2 $P_c^2$ 1955.00       -       * 381       R       R         NO. $P_1^2$ $P_w$ $P_w^2$ $P_c^2 \cdot P_w^2$ -       (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.928$ 1.       1332.3       1775.0       180.0       -       - $P_c^2 \cdot P_w^2$ -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2.         | .00                 | 530                 |            | 1 10             | .99               | $\frac{2}{2}$ | Specific Gravity H                  | lowing Flu                                 | uid           |            | XXXXX            | x                           |                                              |                                       |
| R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R       R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | .00                 | 537                 |            | 1 20             | .99               | $\frac{2}{2}$ | Critical Pressure_                  | * 652                                      |               |            |                  | P.S.I.A                     | <u>.                                    </u> | P.S.I.A.                              |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5          | .00                 | 520                 |            |                  | .99               | <b>-</b> ⊣(   | Critical Temperat                   | ure                                        | * 381         |            |                  | F                           |                                              | R                                     |
| NO. $P_{t}^{2}$ $P_{w}^{2}$ $P_{c}^{2} \cdot P_{w}^{2}$ 1) $P_{c}^{2}$ $= 2.409$ (2) $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{c}^{2}$ $P_{$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | P_1        | 398.2               | P 2                 | 1955       | _00              | i                 |               |                                     |                                            |               |            |                  |                             |                                              | · · · · · · · · · · · · · · · · · · · |
| NO.       I       Iw       c       w       c       w $p_c^2 \cdot p_w^2$ $p_c^2 \cdot p_w^2$ 1.       1332.3       1775.0       180.0 $p_c^2 \cdot p_w^2$ $p_c^2 \cdot p_w^2$ $p_c^2 \cdot p_w^2$ $p_c^2 \cdot p_w^2$ 2.       1262.5       1593.9       361.1 $AOF = Q$ $p_c^2 \cdot p_w^2$ $p_c^2 \cdot p_w^2$ 3.       1178.8       1389.5       565.5 $AOF = Q$ $p_c^2 \cdot p_w^2$ $p_c^2 \cdot p_w^2$ 4.       1069.3       1143.4       811.6 $AOF = Q$ $p_c^2 \cdot p_w^2$ $p_c^2 \cdot p_w^2$ Absolute Open Flow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | p 2                 | 1                   |            | P 2              | P <sup>2</sup> -H | 2             | 1) $P_{c}^{2}$                      | =                                          | 2.409         |            | <sup>(2)</sup>   | P <sub>c</sub> <sup>2</sup> | <b>1</b> " =                                 | 1.928                                 |
| 1.       1332.3       1775.0       180.0         2.       1262.5       1593.9       361.1         3.       1178.8       1389.5       565.5         4.       1069.3       1143.4       811.6         5.       1069.3       1143.4       811.6         6.       1069.3       1143.4       811.6         7.       1069.3       1143.4       811.6         7.       1069.3       1143.4       811.6         7.       1069.3       1143.4       811.6         7.       1069.3       1143.4       811.6         7.       1069.3       1143.4       811.6         7.       1069.3       1143.4       811.6         7.       1069.3       1143.4       811.6         8.       1061 @ 15.025       Angle of Slope $\Theta_{$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NO.        | <u> </u>            | 122                 | *          | · w<br>1775 0    | ¢                 | *             | $P^2 - P$                           | 2                                          |               |            | P                | $^{2} - P^{2}$              |                                              |                                       |
| 2.       1202.5       1593.9       301.1         3.       1178.8       1389.5       565.5         4.       1069.3       1143.4       811.6         5.       1069.3       1143.4       811.6         6.       1069.3       1143.4       811.6         Absolute Open Flow       532       Mcfd @ 15.025       Angle of Slope $\Theta$ 53.25         Slope, n       .7467         Remarks:       Well produced no fluid         * Corrected to 4.586% CO2         Approved By Division       Conducted By:<br>Jarrel Services, Inc.       Calculated By:<br>Bob Murray       Checked By:<br>Bob Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.         |                     | 133                 | 2.3        | 1502 0           | 180.              |               | с <sup>-</sup> w                    |                                            |               |            | L <sup>-</sup> ° | - w                         | 1                                            |                                       |
| 3.       1178.8       1389.5       565.5       Not $Q$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2.         |                     | 120                 | 2.5        | 1200 5           | 361.              |               | AOF = O                             | <b>P</b> P                                 | 2 7           | n          | .532             |                             |                                              | İ                                     |
| Absolute Open Flow     532     Mcfd @ 15.025     Angle of Slope 0     53.25     Slope, n     .7467       Remarks:     Well produced no fluid     *     Corrected to 4.586% CO2         Approved By Division     Conducted By:<br>Jarrel Services, Inc.     Calculated By:<br>Bob Murray     Checked By:<br>Bob Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <u> </u>   |                     |                     | 0.0        | 1309.5           | <u> </u>          | <b>D</b>      | 1.01 - Q                            |                                            | <u> </u>      |            |                  |                             |                                              |                                       |
| Absolute Open Flow532       Mcfd@ 15.025       Angle of Slope 053.25       Slope, n7467         Remarks:       Well produced no fluid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4.         |                     | 100                 | 9.5        | 1143.4           | - 011-            | <b>b</b>      |                                     | P 2                                        | · P"* ]       |            |                  |                             |                                              |                                       |
| Remarks:       Well produced no fluid         * Corrected to 4.586% CO2         Approved By Division       Conducted By:         Conducted By:       Calculated By:         Jarrel Services, Inc.       Bob Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Absolu     | ite Open Flov       | v 5                 | 32         |                  | i.                | <br>M         | lcfd @ 15.025                       | Angle                                      | of Slope (    | ə 53.      | 25               | SI                          | ope, n                                       | .7467                                 |
| Kemarks:       Weil produced no filula         * Corrected to 4.586% CO2       *         Approved By Division       Conducted By:       Calculated By:         Conducted By:       Jarrel Services, Inc.       Bob Murray         Bob Murray       Bob Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                     | 1                   | ducod      | no fl            | <br>              |               |                                     |                                            |               |            |                  |                             |                                              |                                       |
| Approved By Division       Conducted By:       Calculated By:       Checked By:         Jarrel Services, Inc.       Bob Murray       Bob Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ! Kemari   | ks: wei             | octod               | to 4       | 5860 /           | <u></u>           |               | ,,, <b>, , , , , , , , , , , , </b> |                                            | <del></del>   |            |                  |                             |                                              | , <u>,</u> ,                          |
| Approved By Division     Conducted By:     Calculated By:     Checked By:       Jarrel Services, Inc.     Bob Murray     Bob Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | i <u></u>  |                     | ected               | 4          |                  |                   |               |                                     |                                            |               |            |                  |                             |                                              |                                       |
| Jarrel Services, Inc. Bob Murray Bob Murray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Approv     | ved By Divis        | ion                 |            | Conduc           | ted By:           | _             | (                                   | Calculated                                 | By:           |            |                  | Checked                     | By:                                          |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |                     |                     |            | Ja               | rrel Se           | rvice         | es, Inc.                            | Bob                                        | Murra         | У          |                  | Bob                         | Murray                                       |                                       |



**OIL CONSERVATION DIVISION** DISTRICT II ARTESIA 811 S. FIRST ST. ARTESIA, NM 88210 (505) 748-1283 FAX (505) 748-9720

Jennifer A. Salisbury CABINET SECRETARY

January 28th, 1999 2000

Mewbourne Oil Company P.O. Box 5270 Hobbs, NM 88241

#### Well Placed In Pool Re:

Gentlemen/Madams:

As the result of Division Order 11300, the following described gas well has been placed in the pool shown below. This change in nomenclature has been made in our files. Please change your records to reflect the proper pool name. All subsequent reports must show this nomenclature until further notice.

## Logan Draw; Atoka, Southeast Gas Pool Chalk Bluff '36' State #1 Unit M, Section 36, Township 17 South, Range 27 East, NMPM Poolcode: 96979

Transporters are advised by copy of this letter, to change their records to reflect the pool name as established by this order, effective October 1, 1999.

Sincerely,

Burgen Aner Bryan Arrant

**District Geologist** 

Cc: Amoco Pipeline Company Transwestern Pipeline Company Santa Fe Mae Well File

| District II<br>811 South First, Artesia, NM 88210    | Energy, Minerais &       | Natural Resources Departi     | Sub            | l<br>mit to Appro | Instructions on back                        |  |
|------------------------------------------------------|--------------------------|-------------------------------|----------------|-------------------|---------------------------------------------|--|
| District III<br>1000 Rio Brazos Rd., Aztec, NM 87410 | OIL CONSE                | RVATION DIVIS                 | ION            | Sta<br>F          | ite Lease - 6 Copies<br>ee Lease - 5 Copies |  |
| District IV<br>2040 South Pacheco, Santa Fe, NM 8750 | <sup>5</sup> 2040 Santa  | South Pacheco<br>Fe, NM 87505 |                |                   |                                             |  |
| APPLICATION FOR                                      | PERMIT TO DRILL,         | RE-ENTER, DEI                 | EPEN PLUGE     | ACK, OF           | ADD A ZONE                                  |  |
|                                                      | 1Operator Name and Addre | ess                           | 50, <u>s</u> í | 2                 | 20GRID Number                               |  |
| Mewbourne Oil Company                                |                          | 5                             | 4              |                   | 14744                                       |  |
| Hobbs, N.M. 88241<br>505-393-5905                    | /                        | 1-18                          | RECEIVED       | 16177 30          | 3API Number<br>- 015-27286                  |  |
| 4Property Code                                       |                          | sProperty Name                | ARICO          | 10                | 6Well No.                                   |  |
| 7871                                                 | Chalk Bluff 36 State 1   |                               | "TESTA         | 3/                | 1                                           |  |
|                                                      | ,S                       | Surface Location              |                |                   |                                             |  |

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West Line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| М             | 36      | 17S      | 28E   |         | 660           | S                | 990           | W              | Eddy   |

## Proposed Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township  | Range  | Lot Idn | Feet from the | North/South line | Feet from the | East/West Line | County |
|---------------|---------|-----------|--------|---------|---------------|------------------|---------------|----------------|--------|
|               |         | ₀Proposec | Pool 1 |         |               |                  | ₁₀Propose     | ed Pool 2      |        |

| 11Work Type Code | 12Well Type Code | 33Cable/Rotary  | 14Lease Type Code | 15Ground Level Elevation |
|------------------|------------------|-----------------|-------------------|--------------------------|
| Р                | G                | R               | S                 | 3625                     |
| 16Multiple       | 17Proposed Depth | 18Formation     | 19Contractor      | 20Spud Date              |
|                  | 9400             | Canyon/Wolfcamp | ТВА               |                          |

#### <sup>2</sup>, Proposed Casing and Cement Program

| Hole Size                                                                                                    | Casing Size                                                                                                                  | Casing weight/foot                                                                                                                              | Setting Depth                                                                          | Sacks of Cernent                                                                | Estimated TOC       |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------|
|                                                                                                              |                                                                                                                              |                                                                                                                                                 |                                                                                        |                                                                                 |                     |
|                                                                                                              |                                                                                                                              |                                                                                                                                                 |                                                                                        |                                                                                 |                     |
|                                                                                                              |                                                                                                                              |                                                                                                                                                 |                                                                                        |                                                                                 |                     |
|                                                                                                              |                                                                                                                              |                                                                                                                                                 |                                                                                        |                                                                                 |                     |
|                                                                                                              |                                                                                                                              |                                                                                                                                                 |                                                                                        |                                                                                 |                     |
| escribe the blowout pre<br>This well has bee<br>above top perfora<br>If results warrant,<br>During operation | wention program, if any. U<br>en producing from the<br>ations. Cap CIBP w/ 3<br>Mewbourne Oil Corr<br>s of plugback & testir | Jse additional sheets if necess<br>Morrow & Atoka format<br>35' cement. Attempt a co<br>npany would like to test t<br>ng, a 7 1/16 x 3000 psi B | tions. Mewbourne O<br>ompletion in the Can<br>he Wolfcamp @ +/-<br>3OP w/ 2 3/8"rams & | il Company would like t<br>yon @ +/- 8550'.<br>7200'.<br>a blinds will be used. | o set a CIBP 100'   |
| <sup>3</sup> I hereby certify that the<br>best of my knowledge an                                            | information given above is<br>d b <del>y</del> lief.                                                                         | true and complete to the                                                                                                                        | BON OIL C                                                                              | ONSERVATION                                                                     | DIVISION            |
| Signature:                                                                                                   | Hart                                                                                                                         |                                                                                                                                                 | Approved By: ORIG                                                                      | INAL SIGNED BY                                                                  | R H. COM            |
| Printed name: N.M. Ye                                                                                        | oung)                                                                                                                        |                                                                                                                                                 | Title:                                                                                 |                                                                                 |                     |
| itle: District Manag                                                                                         | ier                                                                                                                          |                                                                                                                                                 | Approval Date:                                                                         | 2. Q. 2001 Expirati                                                             | on Date: NIG 2 9 21 |

State of New Mexico



District I PQ Box 1980, Hobbs, NM 88241-1980

Submit to Appropriate District Office State Lease - 4 copies Fee Lease - 3 copies

<u>DISTRICT I</u> P.O. Box 1980, Hobbe, NM 88240

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

DISTRICT III 1000 Rio Brazoi Rd., Aziec, NM 87410

State of New Mexico rgy, Minerals and Natural Resources Departm

## **OIL CONSERVATION DIVISION**

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

| Operator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |                                                  |                                   | Lesso                                |                                        |                    |                    | Well No.                                 |                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------|-----------------------------------|--------------------------------------|----------------------------------------|--------------------|--------------------|------------------------------------------|-------------------------|
| MEWBOURNE OIL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | COMPANY                                |                                                  |                                   | CHALK                                | BLUFF 36                               |                    | 1                  |                                          |                         |
| Unit Letter Section                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | )a                                     | Township                                         |                                   | Range                                |                                        |                    | County             | <u> </u>                                 |                         |
| M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 36                                     | 17 SOUT                                          | H                                 | 27 EA                                | ST                                     | NMP                | EDDY               |                                          |                         |
| Actual Footage Location of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Well:                                  |                                                  |                                   |                                      |                                        |                    |                    | ,,,,                                     |                         |
| 990. feet f                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | rom the W                              | EST                                              | line and                          | 660                                  |                                        | feet from          | n the SOUTH        | line                                     |                         |
| Ground level Elev.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Producing                              | g Formation                                      |                                   | Pool                                 |                                        |                    | <u>.</u>           | Dedicated Ac                             | rrage:                  |
| 3635                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |                                                  |                                   | Illinoi                              | s Camp N                               | 1orrow No          | rth                | 320                                      | Acres                   |
| 1. Outline the ac                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | reage dedicated                        | to the subject well h                            | by colored per                    | cil or hachure m                     | arks on the pla                        | t below.           |                    |                                          |                         |
| 2. If more than o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | one lease is ded                       | icated to the well, ou                           | tline each and                    | identify the own                     | ership thereof                         | (both as to worl   | ing interest and i | royalty).                                |                         |
| 3. If more than o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | one lease of diff                      | ferent ownership is d                            | edicated to the                   | well, have the i                     | nterest of all or                      | where been cons    | olidated by comr   | nunitizztion,                            |                         |
| unitization, fo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | re-pooling, etc                        | 17<br>No Marca                                   | un is "was" tu                    | n of consolidation                   |                                        | nunitizat          | ion                |                                          |                         |
| If answer is "no"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ليا<br>list the owneri                 | and tract description                            | as which have                     | actually been co                     | asolidated. (U                         | se reverse side    | of                 |                                          |                         |
| this form if neco                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | essery                                 |                                                  |                                   |                                      | ·                                      |                    | •                  | <del></del>                              | ·                       |
| No allowable wi<br>or until a non-st                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ll be assigned to<br>andard unit, elir | o the well until all in<br>minating such interes | iteresis have b<br>i, has been ap | een consolidated<br>proved by the Di | (by communiti<br>vision.               | ization, unitizati | on, forced-poolin  | g, or otherwise                          | )                       |
| · · · · · · · · · · · · · · · · · · ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1                                      |                                                  |                                   |                                      |                                        |                    | OPERAT             | OR CERTI                                 | FICATION                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | l<br>I                                 |                                                  |                                   | 1                                    |                                        |                    | I hereby           | certify that                             | the information         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                      |                                                  |                                   |                                      |                                        |                    | contained here     | <b>in in true and</b><br>Jodon and balls | l complete to the<br>of |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                      |                                                  |                                   |                                      |                                        |                    | DESI OJ MY DIOW    |                                          | y.                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                      |                                                  |                                   |                                      |                                        |                    | Signahire          | 1/1                                      | }                       |
| -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        | 1                                                |                                   |                                      |                                        |                    | Rill               | 14                                       | ero                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    | Printed Name       | 100                                      |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        | !                  | Rill Dian          | -C0                                      |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    | Position           |                                          |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    | Drilling           | Superint                                 | endent                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    | Company            |                                          |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | I                                      |                                                  |                                   |                                      |                                        |                    | Mewbourne          | e Oil Con                                | np <b>any</b>           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    | Date               |                                          |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                      |                                                  |                                   |                                      |                                        |                    | <u>October</u> 2   | 27, 1992                                 |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    | SURVE              | OR CERT                                  | IFICATION               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    |                    |                                          |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | en (En Salation en St                  |                                                  |                                   |                                      | anna an an Annaichean<br>An Annaichean |                    | I hereby certi     | fy that the we                           | ell location shows      |
| Maria Ang<br>Ang Ang<br>Ang Ang                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      | ļ                                      |                    | actual survey      | e made by i                              | me or under m           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      | · ·                                    |                    | supervison, a      | ed that the s                            | same is true and        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      | 1                                      |                    | correct to th      | e best of m                              | y knowledge and         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                      |                                                  |                                   |                                      |                                        |                    | belief.            |                                          |                         |
| and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se | ł                                      |                                                  |                                   |                                      | l                                      |                    | Date Surveyed      |                                          |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | _!                                     |                                                  |                                   | <u>حہ سے سے</u>                      | ┟                                      |                    | 10/19/9            | 92                                       |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      |                                        |                    | Signature & S      | cal of                                   |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ì                                      |                                                  |                                   |                                      | 1                                      |                    | Professional S     | urveyor                                  |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Í                                      |                                                  |                                   |                                      |                                        |                    |                    |                                          | $\frown$                |
| 990' <b>-</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Ì                                      |                                                  |                                   |                                      | 1                                      |                    | $  \cap  $         |                                          |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                                  |                                   |                                      | 1                                      |                    | Hon no             | #                                        | 1                       |
| <b>Q</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |                                                  |                                   |                                      |                                        | <u> </u>           | Certificate No.    | 3640                                     | mu                      |
| 0 330 650 990                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1320 1650                              | 1980 2310 264                                    | io 20                             | 00 1500                              | 1000                                   | 500 0              |                    |                                          | •• •• ••                |

| Submit 3 Copies<br>to Appropriate<br>District Office                            | Sta<br>Ene Minerals a                                                           | ate of New Meand<br>nd Natural Res                       | kico<br>sources Depa                   | irtment                 | c15                                      | Form<br>Revis                      | C-103<br>ed 1-1-89     |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------|-------------------------|------------------------------------------|------------------------------------|------------------------|
| DISTRICT I<br>P.O. Box 1980, Hobbs, NM 88240                                    | OIL CONSE<br>2040                                                               | ERVATIO<br>Pacheco St.                                   | N DIVISI                               | ON                      | WELL API NO.                             |                                    |                        |
| <u>DISTRICT II</u><br>P.O. Drawer DD, Artesia, NM 88210                         | Santa                                                                           | Fe, NM 87                                                | 505                                    |                         | 3U-U15-27286<br>sIndicate Type of Leas   | se                                 |                        |
| <u>DISTRICT III</u><br>1000 Rio Brazos Rd., Aztec, NM 87410                     |                                                                                 |                                                          |                                        |                         | ₀State Oil & Gas Leas<br>E-379-4         |                                    | FEE                    |
| SUNDRY NOTIO<br>(DO NOT USE THIS FORM FOR PRO<br>DIFFERENT RESER)<br>(FORM C-   | CES AND REPOR<br>POSALS TO DRILL OF<br>VOIR. USE "APPLICA<br>101) FOR SUCH PROF | TS ON WELI<br>R TO DEEPEN O<br>TION FOR PERI<br>POSALS.) | _S<br>DR PLUG BACI<br>MIT"             | K TO A                  | Lease Name or Unit<br>Chalk Bluff 36 St  | Agreement Name<br>tate             |                        |
| Type of Well:<br>OIL GAS<br>WELL WELL A                                         | отн                                                                             | ER                                                       | <u>.</u>                               |                         |                                          |                                    |                        |
| 2Name of Operator<br>Mewbourne Oil Company                                      | <u> </u>                                                                        |                                                          |                                        |                         | sWell No.<br>1                           |                                    |                        |
| Address of Operator<br>PO Box 5270, Hobbs, New Mexico                           | 88241                                                                           |                                                          |                                        |                         | Pool name or Wildca<br>Logan Draw Ato    | it<br>oka                          |                        |
| Unit Letter :660                                                                | Feet From The                                                                   | South                                                    | _ Line and                             | 990                     | Feet From The                            | West                               | Line                   |
| Section 36                                                                      | Township                                                                        | 17S R                                                    | ange                                   | 7, \<br><del>R28E</del> | NMPM                                     | Eddy                               | County                 |
|                                                                                 | 10Elevation (S/<br>3635' GL                                                     | how whether DF, F                                        | RKB, RT, GR, etc                       | .)                      |                                          |                                    |                        |
| <sup>11</sup> Check Ap                                                          | propriate Box to                                                                | Indicate Na                                              | ture of Noti                           | ce, Re                  | port, or Other E                         | Data                               |                        |
| NOTICE OF INT                                                                   | FENTION TO:                                                                     |                                                          |                                        | SUBS                    | SEQUENT RE                               | PORT OF:                           |                        |
| PERFORM REMEDIAL WORK                                                           | PLUG AND ABAN                                                                   |                                                          | REMEDIAL WO                            | RK                      |                                          | ALTERING CAS                       | ING                    |
| TEMPORARILY ABANDON                                                             | CHANGE PLANS                                                                    |                                                          | COMMENCE D                             | RILLING O               | PNS.                                     | PLUG AND ANB                       | ANDONMENT              |
| PULL OR ALTER CASING                                                            |                                                                                 |                                                          | CASING TEST                            | AND CEME                |                                          |                                    |                        |
| OTHER:                                                                          |                                                                                 |                                                          | OTHER: PB /                            | Atoka. Test             | & plug off Canyon. Te                    | est & Produce Wol                  | fcamp X                |
| <sup>12</sup> Describe Proposed or Completed Operations<br>work) SEE RULE 1103. | ; (Clearly state all pertinen                                                   | t details, and give                                      | pertinent dates, i                     | ncluding es             | timated date of starting                 | any proposed                       | <u></u>                |
| 6/28/01 POOH w/ tbg. RIH w/ 4 1<br>Perforate Canyon @ 852                       | ./2" CIBP & set @ 94<br>8-72' (12'. 2 spf. 24 h                                 | 00'. Dump 35'<br>noles). Acidize                         | cement on pl<br>w/ 2100 gals           | lug. New<br>20% Ne-     | PBTD @ 9365'. T<br>Fe & ball sealers. \$ | est to 1000 psi.<br>Swab test.     | OK.                    |
| 7/05/01POOH. RIH & set 7" RBP<br>(29'. 2 spf. 58 holes). GIH                    | @ 8300'. Load & tes<br>w/ tbg. Acidize perfs                                    | st to 1000 psi.<br>w/ 5000 gals 2                        | OK. New PB <sup>-</sup><br>20% Ne-Fe & | TD @ 83<br>ball seak    | 00'. Perforate Wol<br>ers. Swab test.    | fcamp @ 7164-                      | 7277'                  |
| 7/16/01POOH w/ test equipment.                                                  | Run tbg & rods & pi                                                             | ut well on prod                                          | uction.                                |                         | 1                                        | 2345678                            |                        |
|                                                                                 |                                                                                 |                                                          |                                        |                         | 10 C                                     | EP MP1<br>RECEIVED<br>CD - ARTESIA | Contract of the second |
| I hereby certify that the information above is t                                | rue and complete to the b                                                       | est of my knowled                                        | ge and belief.                         |                         | N 1.                                     |                                    | 5. S                   |
| SIGNATURE                                                                       |                                                                                 | TIT                                                      | LE District Ma                         | anager                  |                                          | DATE 08-2-                         | <u>4-01</u>            |
| TYPE OR PRINT NAME N.M. Young                                                   |                                                                                 |                                                          |                                        | <u> </u>                |                                          | TELEPHONE NO. 5                    | 05-393-5905            |
| (This space for State Use<br>APPROVED BY<br>CONDITIONS OF ADDROVAL JE ANY       | IINAL SIGNED BY<br>RICT II SUPERVI                                              | TIM W. GU                                                | M                                      |                         |                                          |                                    | 6 2001                 |

## INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all specific tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

|    | South              | easter   | 'n  | New Mexico                            |          |             | Northwester             | 'n | New Mexico                            |
|----|--------------------|----------|-----|---------------------------------------|----------|-------------|-------------------------|----|---------------------------------------|
| Т. | Anhy               |          | Т.  | Canyon                                | 8327.0   | Т.          | Ojo Alamo               | Г. | Penn. "B"                             |
| Т. | Salt               |          | Τ.  | Strawn                                | 8820.0   | Τ.          | Kirtland-Fruitland      | Γ. | Penn. "C"                             |
| Β. | Salt               |          | T.  | Atoka                                 | 9380.0   | Τ.          | Pictured Cliffs         | Γ. | Penn. "D"                             |
| Τ. | Yates              | 328.0    | Τ.  | Miss                                  | 10040.0  | Τ.          | Cliff House             | ٢. | Leadville                             |
| Τ. | 7 Rivers           | 464.0    | Τ.  | Devonian                              |          | Τ.          | Menefee                 | Γ. | Madison                               |
| Τ. | Queen              | 1008.0   | T.  | Silurian                              |          | Τ.          | Point Lookout           | Γ. | Elbert                                |
| Τ. | Grayburg           | 1360.0   | Τ.  | Montoya                               |          | Τ.          | Mancos                  | Γ. | McCracken                             |
| T. | San Andres         | 1785.0   | Τ.  | Simpson                               |          | Τ.          | Gallup                  | Γ. | Ignacio Otzte                         |
| Τ. | Glorieta           | 3155.0   | T.  | McKee                                 |          | Ba          | ase Greenhorn           | Γ. | Granite                               |
| Τ. | Paddock            |          | Τ.  | Ellenburger                           |          | Τ.          | Dakota                  | Γ. |                                       |
| Τ. | Blinebry           |          | Τ.  | Gr. Wash                              |          | Τ.          | Morrison                | T. | ·                                     |
| T. | Tubb               | 4025.0   | Τ.  | <b>Delaware Sand</b>                  |          | Τ.          | Todilto                 | Γ. |                                       |
| Τ. | Drinkard           | 4855.0   | Τ.  | Bone Springs _                        |          | Τ.          | Entrada                 | Τ. |                                       |
| T. | Abo                | 5120.0   | Τ.  | Morrow                                | 9494.0   | Т.          | Wingate                 | Τ. |                                       |
| Τ. | Wolfcamp           | 6702.0   | T.  | <u> </u>                              |          | Τ.          | Chinle                  | Τ. |                                       |
| Τ. | Penn               | 8210.0   | Τ.  |                                       |          | Τ.          | Permain                 | Γ. | · · · · · · · · · · · · · · · · · · · |
| Τ. | Cisco (Bough C) _  |          | T.  |                                       |          | <u>,</u> Т. | Penn. "A"               | Τ. | ·                                     |
|    |                    |          |     | OIL OR G                              | AS SAN   | ND          | S OR ZONES              |    |                                       |
| N  | o. 1, from         |          | to  |                                       | <b></b>  |             | No. 3, from             |    | to                                    |
| N  | o. 2, from         |          | to  | · · · · · · · · · · · · · · · · · · · |          |             | No. 4, from             |    | to                                    |
|    |                    |          |     | IMPOF                                 | RTANT    | W/          | ATER SANDS              |    |                                       |
| In | clude data on rate | e of wat | ter | inflow and eleva                      | ation to | wh          | ich water rose in hole. |    |                                       |
| Ν  | o. 1, from         |          |     | to                                    |          |             | feet                    |    |                                       |
| Ν  | o. 2, from         |          |     | to                                    |          |             | feet                    |    |                                       |

No. 3, from \_\_\_\_\_\_ to \_\_\_\_\_\_ feet \_\_\_\_\_

#### LITHOLOGY RECORD (Attach additional sheet if necessary)

| From | То | Thickness<br>in Feet | Lithology | From | То | Thickness<br>in Feet | Lithology |
|------|----|----------------------|-----------|------|----|----------------------|-----------|
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |
|      |    |                      |           |      |    |                      |           |

| Submit to Appropriate<br>District Ofce                                                  |                         | S                                | tate of New Me            | exico           | onartmor        |               |                     | l                      | Form C-<br>Revised | 105<br>1-1-89          |  |
|-----------------------------------------------------------------------------------------|-------------------------|----------------------------------|---------------------------|-----------------|-----------------|---------------|---------------------|------------------------|--------------------|------------------------|--|
| State Lease - 6 copies<br>Fee Lease - 5 copies<br>DISTRICT I<br>P.O. Box 1980, Hobbs, N | M 88240                 | OIL CONS                         |                           | ON DIV          | ISION           |               | ELL API NO.         |                        |                    |                        |  |
|                                                                                         | NN 99240                | 20<br>Sa                         | 40 Pacheco<br>Inta Fe, NI | St.<br>M 87505  |                 | 5.            | Indicate Typ        | e of Lease             |                    |                        |  |
| DISTRICT III                                                                            | NM 86210                |                                  |                           |                 |                 | 6.            | State Oil & (       | STATE<br>Gas Lease No. |                    | FEE L                  |  |
| 1000 Rio Brazos Rd, Azt                                                                 | tec, NM 87410           |                                  |                           |                 |                 | E             | -379-4              |                        |                    |                        |  |
| WELL CO                                                                                 | MPLETION OF             | RECOMPLET                        | ION REPOR                 |                 | DG              |               |                     | ne i Init Anzaaman     | • \$low-o          |                        |  |
| b. Type of Completion:                                                                  | GAS WELL                |                                  | OTHER                     | 3               | +567 <u>8</u>   |               | Lease Name          | or Unit Agreemen       | it Name            |                        |  |
|                                                                                         |                         | BACK R                           |                           | <u> </u>        |                 |               |                     |                        |                    |                        |  |
| 2. Name of Operator<br>Mewbourne Oil Cor                                                | mpany /                 |                                  | No.                       | RECE            | IVED            | 8.            | Well No.            |                        |                    |                        |  |
| 3. Address of Operator                                                                  | inputty                 |                                  | <u>       </u>            |                 | RTESIA          | 9.            | Pool name or        | Wildcat                |                    |                        |  |
| PO Box 5270, Hob                                                                        | bs, New Mexico          | 88241                            |                           |                 |                 | L             | ogan Draw           | Wolfcamp               |                    |                        |  |
| 4. Well Location                                                                        |                         |                                  | 0                         |                 |                 | 000           |                     |                        | 10/                |                        |  |
| Unit Letter                                                                             | IVI : 660               | Feet From The _                  | South                     | Li              | neand<br>211    | 990           | Feet F              | rom The                | vves               | Line                   |  |
| Section                                                                                 | 36                      | Township                         | 17S Ra                    | nge 着           | 28E             | NMF           | м                   |                        | Eddy               | County                 |  |
| 10. Date Spudded                                                                        | 11. Date T.D. Reache    | d 12. Date C                     | ompl. (Ready to F         | Prod.)          | 13. Elevati     | ons (DF 8     | RKB, RT, GF         | , etc.) 14.            | Elev. C            | Casinghead             |  |
| 02/03/93                                                                                | 03/19/93                |                                  | 17 If Multinle Co         | mpl How         | 3035 G          | L<br>ntervals | L Rotary Too        |                        | able Too           |                        |  |
| 10060                                                                                   | 10. Flug Back           | 300                              | Many Zones                | ?               | D               | rilled By     |                     |                        | 100                |                        |  |
| 19. Producing Interval(s),<br>7164-7277                                                 | of this completion - T  | op, Bottom, Name                 |                           |                 |                 |               |                     | 20. Was Directi        | ional Su<br>NO     | Irvey Made             |  |
| 21. Type Electric and Oth<br>CBL, DN & DLL                                              | er Logs Run             |                                  |                           |                 |                 |               | 22. Was We          | Il Cored               | 2                  |                        |  |
| 23.                                                                                     |                         | CASING R                         | ECORD (R                  | eport all       | strings         | set in v      | vell)               |                        |                    |                        |  |
| CASING SIZE                                                                             | WEIGHT LB               | FT. DEPT                         | H SET                     | HOLE SI         | ZE              | CE            | MENTING R           | ECORD                  | AMC                | UNT PULLED             |  |
| 13 3/8"                                                                                 | 48#                     | 3                                | 99'                       | 17 1/2          |                 |               | 530 sks             | sks N/A                |                    |                        |  |
| 9 5/8"                                                                                  | 36#                     | 20                               | 503'<br>253               | 12 1/4          | 1               |               | 1150 sk<br>1620 sk  | s                      |                    | N/A                    |  |
|                                                                                         | 2.0#                    |                                  |                           | 0 0/1           |                 |               |                     |                        |                    |                        |  |
|                                                                                         |                         |                                  |                           |                 |                 |               |                     |                        |                    |                        |  |
| 24.                                                                                     | 70.0                    | LINER RECC                       | DRD                       |                 |                 | 25.           |                     | JBING REC              |                    | DACKEDSET              |  |
| SIZE                                                                                    | 8439'                   | 10057'                           | 225                       |                 | REEN            |               | 27/8"               | 7352                   |                    | TAC @ 7190'            |  |
|                                                                                         |                         |                                  |                           |                 |                 |               |                     |                        |                    |                        |  |
| 26. Perforation record                                                                  | (interval, size, and    | number)                          |                           | 27.             | ACID, SH        | HOT, FI       | RACTURE             | , CEMENT,              | SQUE               | EEZE, ETC.             |  |
| 7164-7277'. 58.3                                                                        | 8" diameter hole        | 5                                |                           | DEI             | 7164-72         | RVAL          |                     | Cals 20% No            | Fo & I             | L USED                 |  |
|                                                                                         |                         |                                  |                           |                 | 7104-72         | - 1 r         | 0000                | guis 2070 140          |                    |                        |  |
|                                                                                         | <u> </u>                |                                  |                           |                 |                 |               |                     |                        |                    |                        |  |
| 28.                                                                                     |                         | Deaduration has the state of the | PRODUC                    | TION            | and here -      | ump)          |                     | MAN DIAL               | ID /D              | t or Shut in )         |  |
| Date First Production<br>07/17/01                                                       | Pum                     | ping. 2" x 1 1/2" >              | k 24'                     | niniping - Size | апа туре р      | u((p))        |                     | vven Statt             | Produ              | Joing                  |  |
| Date of Test<br>07/22/01                                                                | Hours Tested<br>24      | Choke Size<br>N/A                | Prod'n For<br>Test Period | Oil - Bl        | 5L.<br>88       | Gas-M<br>88   |                     | Water - BbL.<br>78     | Ga                 | ns - Oil Ratio<br>1000 |  |
| Flow Tubing Press.<br>N/A                                                               | Casing Pressure<br>35   | Calculated 24<br>Hour Rate       | I- Oil - BbL.<br>88       |                 | Sas - MCF<br>88 | Wat           | er - BbL.<br>78     | Oil Gravity            | - API - (<br>3     | Corr.)<br>8            |  |
| 29. Disposition of Gas (S                                                               | Sold, used for fuel, ve | nted, etc.)                      |                           | I               | <u></u>         | l             | Test V              | Vitnessed By           |                    |                        |  |
| Sold                                                                                    |                         |                                  |                           |                 |                 |               | J. C                | apps                   |                    |                        |  |
| 30. List Attachments<br>C-103 & C-104                                                   |                         |                                  |                           |                 |                 |               |                     |                        |                    |                        |  |
| 31. I hereby certify that t                                                             | he information shown    | on both sides of this            | form is true and c        | complete to the | e best of my    | knowledg      | e and belief        |                        | <u> </u>           | <u> </u>               |  |
| Signature 🚽                                                                             | M. Mary                 |                                  | Printed<br>Name N.M       | . Young         |                 | т             | tle <u>District</u> | Manager                | Date               | 08/24/01               |  |
|                                                                                         |                         |                                  |                           |                 |                 |               |                     |                        |                    |                        |  |

| District I<br>PO Box 1980,<br>District II<br>811 South Firs<br>District III<br>1000 Rio Braze<br>District IV<br>2040 South Pa                                                                                                                                                        | Hobbs, NN<br>t, Artesia, I<br>os Rd., Azt<br>checo, Sa | 1 88241-1980<br>NM 88210<br>rec, NM 87410<br>nta Fe, NM 878 | 505                                           | En                   | State<br>ergy, Minerals<br>- CONSI<br>2040<br>San | e of N<br>& Natu<br>ERV/<br>D Sou<br>ta Fe, | ew Me<br>ral Resource<br>ATION<br>th Pach<br>NM 87 | exico<br>rees Depar<br>I DIVIS<br>neco<br>7505 | tment<br>SION     | Submit                                 | Revised C<br>Inst<br>to Appropria          | Form C-104<br>October 18, 1994<br>ructions on back<br>te District Office<br>5 Copies<br>IENDED REPORT |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------|----------------------|---------------------------------------------------|---------------------------------------------|----------------------------------------------------|------------------------------------------------|-------------------|----------------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <u>I.</u>                                                                                                                                                                                                                                                                            | F                                                      | REQUES                                                      | T FOR A                                       | LLO                  | WABLE                                             | ANE                                         | ) AUT                                              | HORIZ                                          | ZATIO             | N TO TRA                               | NSPORT                                     |                                                                                                       |
| Mewbourne                                                                                                                                                                                                                                                                            | e Oil Con                                              |                                                             | <sup>1</sup> Operator na                      | me and               | d Address                                         |                                             |                                                    |                                                |                   |                                        | <sup>2</sup> OGRID Numb<br>14744           | per                                                                                                   |
| PO Box 52<br>Hobbs, Nev                                                                                                                                                                                                                                                              | 70<br>v Mexico                                         | 88241                                                       |                                               |                      |                                                   |                                             |                                                    |                                                |                   | 3 F                                    | Reason for Filing                          | Code                                                                                                  |
|                                                                                                                                                                                                                                                                                      |                                                        |                                                             |                                               |                      |                                                   |                                             |                                                    |                                                |                   | Plug B                                 | Back/Recomp                                | etion                                                                                                 |
| 4A                                                                                                                                                                                                                                                                                   | PI Number                                              | -                                                           |                                               |                      |                                                   | 5                                           | Pool Nam                                           | e                                              |                   | · · · · · · · · · · · · · · · · · · ·  |                                            | Pool Code                                                                                             |
| 30 - 0 15-2<br>7 Pr                                                                                                                                                                                                                                                                  | 27286                                                  | le                                                          | Logan Drav                                    | v Wol                | lfcamp.                                           | 8 Prc                                       | perty Nan                                          |                                                |                   |                                        | <u> </u>                                   | 5960<br>Well Number                                                                                   |
|                                                                                                                                                                                                                                                                                      | 7871                                                   |                                                             | Chalk Bluff                                   | 36 St                | ate                                               |                                             | ,port, rtai                                        |                                                |                   |                                        |                                            | 1                                                                                                     |
| . 10 g                                                                                                                                                                                                                                                                               | Surface                                                | Location                                                    | า                                             |                      |                                                   |                                             |                                                    |                                                |                   |                                        |                                            |                                                                                                       |
| UI or lot no.                                                                                                                                                                                                                                                                        | Section                                                | Township                                                    | Range                                         | Lot                  | ldn Fe                                            | eet from                                    | the                                                | North/Sc                                       | outh Line         | Feet from the                          | East/West line                             | County                                                                                                |
| 11                                                                                                                                                                                                                                                                                   | Bottom                                                 |                                                             |                                               |                      |                                                   | 00                                          |                                                    | 50                                             | uun               | 990                                    | vvesi                                      | Eddy                                                                                                  |
| UI or lot no.                                                                                                                                                                                                                                                                        | Section                                                | Township                                                    | Range                                         | Lot                  | ldn Fe                                            | eet from                                    | the                                                | North/So                                       | outh Line         | Feet from the                          | East/West line                             | County                                                                                                |
| <sup>12</sup> Lse Code <sup>13</sup> Producing Method Code <sup>14</sup> Gas Connection Date <sup>15</sup> C-129 Permit Number <sup>16</sup> C-129 Effective Date <sup>17</sup> C-129 Expiration Date       Pumping     07/17/01     07/17/01     07/17/01     07/17/01     07/17/01 |                                                        |                                                             |                                               |                      |                                                   |                                             |                                                    |                                                |                   |                                        | C-129 Expiration Date                      |                                                                                                       |
| III. Oil a                                                                                                                                                                                                                                                                           | nd Gas                                                 | s Transpo                                                   | orters                                        |                      |                                                   | ·                                           |                                                    |                                                |                   |                                        |                                            |                                                                                                       |
| <sup>18</sup> Transpor<br>OGRID                                                                                                                                                                                                                                                      | ter                                                    |                                                             | <sup>19</sup> Transporter N<br>and Addres     | lame<br>s            |                                                   |                                             | 20 PC                                              | D                                              | <sup>21</sup> O/G | 2                                      | <sup>2</sup> POD ULSTR Lo<br>and Descripti | on                                                                                                    |
| 138648                                                                                                                                                                                                                                                                               | 3 A<br>T                                               | moco Pipeli<br>ulsa, Ok.                                    | ne Company                                    |                      |                                                   |                                             | 19238                                              | 10                                             | 0                 | -                                      |                                            |                                                                                                       |
|                                                                                                                                                                                                                                                                                      |                                                        |                                                             |                                               |                      |                                                   |                                             |                                                    |                                                |                   |                                        |                                            |                                                                                                       |
| 990                                                                                                                                                                                                                                                                                  | E                                                      | <del>lkhom Oper</del><br>rtesia, NM                         | ating Compe                                   | my /                 | ARCO                                              | 22                                          | 3297                                               | 136                                            | G                 |                                        | <u>234507</u> 8<br>★                       | 91011                                                                                                 |
|                                                                                                                                                                                                                                                                                      |                                                        |                                                             |                                               |                      |                                                   |                                             |                                                    |                                                |                   |                                        | SEP 001                                    | 121:                                                                                                  |
| e a stier yn f                                                                                                                                                                                                                                                                       | an an Ann                                              |                                                             |                                               |                      |                                                   |                                             |                                                    |                                                | ngil da nafi      |                                        | RECEIVED                                   | 4                                                                                                     |
|                                                                                                                                                                                                                                                                                      |                                                        |                                                             |                                               |                      |                                                   |                                             |                                                    |                                                |                   |                                        | UU - ANTESI                                | 5 8 1 1 S                                                                                             |
| IV. Prod                                                                                                                                                                                                                                                                             | uced V                                                 | Vater                                                       |                                               |                      |                                                   |                                             |                                                    |                                                |                   | ······································ |                                            |                                                                                                       |
| 23 F                                                                                                                                                                                                                                                                                 | <sup>י0D</sup><br>እሮእ                                  |                                                             |                                               |                      |                                                   |                                             | 24 POD UI                                          | .STR Loca                                      | tion and E        | Description                            |                                            |                                                                                                       |
| V Well                                                                                                                                                                                                                                                                               | Compl                                                  | etion Data                                                  |                                               |                      |                                                   |                                             |                                                    |                                                |                   |                                        | ·····                                      |                                                                                                       |
| <sup>25</sup> Spu                                                                                                                                                                                                                                                                    | d Date                                                 |                                                             | <sup>26</sup> Ready Date                      |                      | 27 7                                              | ſD                                          |                                                    | <sup>28</sup> PB                               | TD                | <sup>29</sup> Perfor                   | ations                                     | <sup>30</sup> DHC, DC, MC                                                                             |
| 02/0                                                                                                                                                                                                                                                                                 | 3/93                                                   |                                                             | 07/17/01                                      |                      | 10                                                | 060                                         |                                                    | 830                                            | )0                | 7164-7                                 | 277                                        | icks Comont                                                                                           |
|                                                                                                                                                                                                                                                                                      | 17 1/2"                                                | 스런<br>                                                      |                                               | Jasing<br>1          | a rubing Size                                     | 2                                           |                                                    |                                                | 399'              |                                        |                                            | 530                                                                                                   |
|                                                                                                                                                                                                                                                                                      | 12 1/4"                                                | •                                                           |                                               |                      | 9 5/8"                                            |                                             | 1                                                  |                                                | 2603'             |                                        |                                            | 1150                                                                                                  |
|                                                                                                                                                                                                                                                                                      | 8 3/4"                                                 |                                                             |                                               |                      | 7"                                                |                                             | 1                                                  |                                                | 9253'             |                                        |                                            | 1620                                                                                                  |
|                                                                                                                                                                                                                                                                                      | 6 1/8"                                                 |                                                             |                                               |                      | 4 1/2"                                            |                                             |                                                    |                                                | 10057'            |                                        |                                            | 225                                                                                                   |
| VI. We                                                                                                                                                                                                                                                                               | ll Test                                                | Data                                                        |                                               |                      |                                                   |                                             |                                                    |                                                |                   |                                        | <b>_</b>                                   |                                                                                                       |
| 35 Date N                                                                                                                                                                                                                                                                            | lew Oil                                                | <sup>36</sup> Gas                                           | Delivery Date                                 |                      | <sup>37</sup> Test Dat                            | e<br>1                                      |                                                    | 38 Test Len<br>24                              | gth               | <sup>39</sup> Tbg. Pre                 | essure                                     | 40 Csg. Pressure<br>.35                                                                               |
| 41 Chok                                                                                                                                                                                                                                                                              | e Size                                                 |                                                             | 42 Oil                                        | +-                   | <sup>43</sup> Water                               |                                             |                                                    | 44 Gas                                         | 1                 | 45 AO                                  | F                                          | <sup>46</sup> Test Method                                                                             |
| N.                                                                                                                                                                                                                                                                                   | Ά                                                      |                                                             | 88                                            |                      | 78                                                |                                             |                                                    | 88                                             |                   |                                        |                                            | Pumping                                                                                               |
| <sup>47</sup> I hereby of<br>complied<br>to the bes<br>Signature:                                                                                                                                                                                                                    | ertify that th<br>with and th<br>t of my kno<br>A ad 1 | he rules of the<br>at the informat<br>owledge and be        | Oil Conservatio<br>tion given above<br>elief. | n Divis<br>e is true | sion have bee<br>e and complet                    | n<br>e                                      | Approve                                            | 3                                              | OIL CO            | ONSERVAT                               | ION DIVIS                                  | ION<br>Gum                                                                                            |
| Printed name                                                                                                                                                                                                                                                                         | <u>41 // / /</u>                                       | MU J                                                        |                                               |                      |                                                   |                                             | Title:                                             |                                                | DISTR             | ICI II BUPEI                           | 1413UR                                     |                                                                                                       |
| Title: Diet                                                                                                                                                                                                                                                                          | ict Mana                                               | noung                                                       | ·····                                         |                      |                                                   |                                             | Approva                                            | al Date:                                       |                   |                                        | SEP 🕅                                      | 2001                                                                                                  |
| Date: 01                                                                                                                                                                                                                                                                             | 3/24/01                                                |                                                             | Phone:                                        | 50                   | 05-393-590                                        | 5                                           |                                                    |                                                |                   |                                        |                                            |                                                                                                       |
| <sup>48</sup> If this is a c                                                                                                                                                                                                                                                         | hange of c                                             | operator fill in t                                          | he OGRID num                                  | ber an               | d name of the                                     | previou                                     | s operator                                         |                                                |                   |                                        | <u></u>                                    |                                                                                                       |
|                                                                                                                                                                                                                                                                                      |                                                        |                                                             |                                               |                      |                                                   |                                             |                                                    |                                                |                   |                                        |                                            |                                                                                                       |
|                                                                                                                                                                                                                                                                                      | Previo                                                 | us Operator Si                                              | ignature                                      |                      |                                                   |                                             | Printe                                             | d Name                                         |                   |                                        | Title                                      | Date                                                                                                  |



NAVAJO REFINING COMPANY, L.L.C. Map ID No. 117 Artificial Penetration Review



#### MAP ID NO. 117

#### MACK ENERGY CORPORATION STATE H NO. 2

API NO. 30-015-35814

CHALK BLUFF; WOLFCAMP GAS

## State of New Mexico Energy, Minerals and Natural Resources



#### **Oil Conservation Division**

## 1220 S. St Francis Dr.

#### Santa Fe, NM 87505

# APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE 1. Operator Name and Address 2. 0GRID Number MACK ENERGY CORP 13837 PO BOX 960 3. API Number ARTESIA , NM 88211 30-015-35814 4. Property Code 5. Property Name 6. Well No. 303847 STATE H 002

#### 7. Surface Location

| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| Н        | 2       | 18S      | 27E   | Н       | 2063      | N        | 441       | E        | EDDY   |

#### 8. Pool Information

96963

#### Additional Well Information

|                                               | 5.2                  | zadidolidi iteli ildolli                 | MINIOTI                                 |                                                          |  |
|-----------------------------------------------|----------------------|------------------------------------------|-----------------------------------------|----------------------------------------------------------|--|
| 9. Work Type<br>New Well                      | 10. Well Type<br>OIL | 11. Cable/Rotary                         | 12. Lease Type<br>State                 | <ol> <li>Ground Level Elevation</li> <li>3590</li> </ol> |  |
| 14. Multiple 15. Proposed Depth<br>N          |                      | 16. Formation 17. Contractor<br>Wolfcamp |                                         | 18. Spud Date<br>9/20/2007                               |  |
| Depth to Ground<br>50                         | water                | Distance from nearest fresh water        | well                                    | Distance to nearest surface water                        |  |
| Pit: Liner: Synthetic [<br>Closed Loop System | mils thick           | Clay Pit Volume: bbls                    | Drilling Method:<br>Fresh Water Brine I | )iesel/Oil-based Gas/Air                                 |  |

#### 19. Proposed Casing and Cement Program

| Туре | Hole Size | Casing Type | Casing Weight/ft | Setting Depth | Sacks of Cement | Estimated TOC |
|------|-----------|-------------|------------------|---------------|-----------------|---------------|
| Surf | 12.25     | 8.625       | 24               | 360           | 400             | 0             |
| Prod | 7.875     | 5.5         | 17               | 7313          | 1300            | 0             |

#### **Casing/Cement Program: Additional Comments**

Mack Energy proposes to drill a 12 1/4 hole to 360', run 8 5/8 casing and cement. Drill a 7 7/8 hole to 7313', run 5 1/2 casing and cement. Note: On production string a fluid caliper will be run and will figure cement with 25% excess, attempt to circ.

#### Proposed Blowout Prevention Program

| Туре      | Working Pressure | Test Pressure | Manufacturer |
|-----------|------------------|---------------|--------------|
| DoubleRam | 2000             | 2000          |              |

| I hereby certify that the information<br>of my knowledge and belief.<br>I further certify that the drilling | n given above is true and complete to the best | OIL CONSERVATION DIVISION       |                            |  |  |  |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------|----------------------------|--|--|--|
| NMOCD guidelines 🔽, a genera<br>OCD-approved plan 🗌                                                         | l pernit 🔽, or an (attached) alternative       | Approved By: Bryan Arrant       |                            |  |  |  |
| Printed Name: Electronically                                                                                | 7 filed by Jerry Sherrell                      | Title: Geologist                |                            |  |  |  |
| Title: Production Clerk                                                                                     |                                                | Approved Date: 9/19/2007        | Expiration Date: 9/19/2008 |  |  |  |
| Email Address: jerrys@mac.                                                                                  | kenergycorp.com                                |                                 | cuta - calla               |  |  |  |
| Date: 9/11/2007 Phone: 505-748-1288                                                                         |                                                | Conditions of Approval Attached |                            |  |  |  |

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(305) 393-6161 Fax:(305) 393-0720 <u>District II</u> 1301 W. Grand Ave., Artesia, NM 88210 Phone:(505) 748-1283 Fax:(505) 748-9720 <u>District III</u> 1000 Rio Erazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

#### State of New Mexico Energy, Minerals and Natural Resources

Form C-102 Permit 60506

## Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

| 1. API Number    | 2. Pool Code | :            | 3. Pool Name     |
|------------------|--------------|--------------|------------------|
| 30-015-35814     | 96963        | CHALK BLU    | FF; WOLFCAMP GAS |
| 4. Property Code | 5. Propert   | 6. Well No.  |                  |
| 303847           | STAT         | 002          |                  |
| 7. OGRID №.      | 8. Operato   | 9. Elevation |                  |
| 13837            | MACK ENEI    | 3590         |                  |

| 10. Surface Location | 10. | Surface | Location |
|----------------------|-----|---------|----------|
|----------------------|-----|---------|----------|

| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|----------|---------|----------|-------|---------|-----------|----------|-----------|----------|--------|
| Н        | 2       | 18S      | 27E   |         | 2063      | N        | 441       | E        | EDDY   |

11. Bottom Hole Location If Different From Surface

| UL - Lot       | Section                                          | Township | Range | Lot Idn         | Feet From | N/S Line      | Feet From | E/W Line | County |
|----------------|--------------------------------------------------|----------|-------|-----------------|-----------|---------------|-----------|----------|--------|
| H              | 2                                                | 18S      | 27E   | H               | 2300      | N             | 340       | E        | EDDY   |
| 12. Dedi<br>40 | 12. Dedicated Acres 13. Joint or Infill<br>40.00 |          | 14    | . Consolidation | Code      | 15. Order No. |           |          |        |

#### NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|   |  | 0 |
|---|--|---|
| 2 |  |   |
| 5 |  |   |

#### OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

E-Signed By: Jerry Shenell Title: Production Clerk Date: 9/11/2007

#### SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Surveyed By: Ronald Eidson

Date of Survey: 8/28/2007

Certificate Number: 3239

## **Permit Comments**

Operator: MACK ENERGY CORP , 13837 Well: STATE H #002 API: 30-015-35814

| Created<br>By | Comment                                                                                                                | Comment<br>Date |
|---------------|------------------------------------------------------------------------------------------------------------------------|-----------------|
| JWSHERRELL    | H2S concentrations of wells in this area from surface to TD are low enough that a<br>contingency plan is not required. | 9/11/2007       |

## Permit Conditions of Approval

 Operator:
 MACK ENERGY CORP, 13837

 Well:
 STATE H #002

 API:
 30-015-35814

| OCD<br>Reviewer | Condition                                                                                                                                             |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| BArrant         | Pit construction and closure must satisfy all requirements of your approved plan, O.C.D. Rule 19.15.2.50, and the Pit and Below-Grade Tank Guidelines |
| BArrant         | As noted, operator to drill surface hole wfresh water mud.                                                                                            |
| BArrant         | Cement to cover all oil, gas and water bearing zones.                                                                                                 |

SEP 12 2007 OCD-ARTESIA



## Mack Energy Corp.

Eddy County, NM (NAD 27 NME) State H #2 State H #2 Wellbore #1

Plan: Plan #1

## **Standard Planning Report**

11 September, 2007



| Energy Carport                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>C</b><br>tox                                                                                                                        |                                                                                                             |                                                                                                                | Scientific I<br>Planning F                                                                                  | Drilling<br>Teport                                                                                                    |                                                                                                                                                                                                                          | 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Scientific Drilling                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Database: E<br>Company: M<br>Project: E<br>Site: S<br>Well: S<br>Well: S<br>Wellbore: M<br>Design: P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DM 2003.16 S<br>lack Energy Cd<br>ddy County, Ni<br>tafe H.#2<br>tafe H.#2<br>/ellbore #1<br>lan #1                                    | ingle User Db<br>orp.<br>M (NAD 27 MM                                                                       | AE)                                                                                                            | Local Co-or<br>TVD Refere<br>MD Referen<br>North Refer<br>Survey Calc                                       | dinate Reference:<br>nce:<br>ence:<br>Úlation Method:                                                                 | Well State H<br>WELL @ 36<br>WELL @ 36<br>Grid<br>Mmimum Cu                                                                                                                                                              | #2<br>D6 00ft (KB Elev)<br>D6 00ft (KB Elev)<br>rvature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
| Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Eddy Count                                                                                                                             | y, NM (NAD 2                                                                                                | 7 NME)- 52-02                                                                                                  | A state of the                                                                                              | 1997<br>(A.A.)                                                                                                        | and a second second                                                                                                                                                                                                      | Star O Balling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | er tel Antonio (S. S. S.                        |
| Map System:<br>Geo Datum:<br>Map Zone:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | US State Pla<br>NAD 1927 (N<br>New Mexico                                                                                              | ne 1927 (Exac<br>IADCON CON<br>East 3001                                                                    | t solution)<br>US)                                                                                             | System Da                                                                                                   | tum:                                                                                                                  | Mean Sea Le                                                                                                                                                                                                              | evel                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| Site,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | State H #2                                                                                                                             | 1                                                                                                           |                                                                                                                | Charles Alde Lards                                                                                          | X IN STREET, STOR                                                                                                     |                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| Site Position:<br>From:<br>Position Uncertainty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Map<br>r:                                                                                                                              | 0.00 ft                                                                                                     | Northing:<br>Easting:<br>Slot Radius:                                                                          | 640<br>528                                                                                                  | i,629.20ft La<br>i,184.50ft Lo<br>ft Gr                                                                               | titude:<br>ongitude:<br>id Convergence:                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 32° 46′ 39.510 N<br>104° 14′ 29.874 W<br>0.05 ° |
| Well                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | State H #2                                                                                                                             |                                                                                                             |                                                                                                                |                                                                                                             | ( 1. 2). M S. D                                                                                                       | relations the pro-                                                                                                                                                                                                       | Stever Barry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                 |
| Well Position                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| Position Uncertainty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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                                                                                    | Elevation:                                                                                                  | 3,606.00 ft                                                                                                           | Ground Level                                                                                                                                                                                                             | :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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| Wellbore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Wellbore #                                                                                                                             | In the state                                                                                                | 1                                                                                                              | 1. San Galera                                                                                               |                                                                                                                       | an term                                                                                                                                                                                                                  | 1. P.L. S.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Charles Providence                              |
| Wellbore,<br>Magnetics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Wellbore #                                                                                                                             | 1<br>Name                                                                                                   | Sample Date                                                                                                    | Declin                                                                                                      | ıtlon                                                                                                                 | Dip Angle<br>(°)                                                                                                                                                                                                         | Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Střength<br>nT)                                 |
| Wellbore,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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                                                                                    | Decilin<br>(°)                                                                                              | stion<br>8.37                                                                                                         | Dip Angle<br>(*)<br>60.                                                                                                                                                                                                  | Field<br>68                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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| Wellbore<br>Mågnetics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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                                                                                    | Declin.<br>(*)<br>007                                                                                       | stion<br>8.37                                                                                                         | Dip Angle<br>(*)<br>60.                                                                                                                                                                                                  | Fiéld)<br>68                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Wellbore<br>Mågnetičs<br>Design<br>Audit Notes:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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                                                                                    | Declin<br>(°)<br>007                                                                                        | stion<br>8.37                                                                                                         | Díp Angle<br>(*)<br>60.                                                                                                                                                                                                  | Fiéld)<br>68                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Wellbore<br>Mågnetics<br>Design<br>Audit Notes:<br>Version:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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Date<br>9/11/2<br>Phase:                                                                                | Declin<br>(*)<br>D007<br>PLAN                                                                               | tion<br>8.37<br>Tie On                                                                                                | Dip Angle<br>(1)<br>60.                                                                                                                                                                                                  | Field: ( )<br>58<br>0.00                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Wellborg<br>Mågnetics<br>Design<br>Audit Notes:<br>Version:<br>Vértical Séction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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Date<br>9/11/2<br>Phase:<br>h From (TVD)-                                                               | Declin<br>(*)<br>007<br>PLAN<br>+N/-S                                                                       | 8.37<br>Tie On<br>+E/W                                                                                                | Dip Angle<br>(*)<br>60.                                                                                                                                                                                                  | 68<br>0.00<br>%Direction                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Wellbore<br>Mågnetics<br>Design<br>Audit Notes:<br>Version:<br>Version:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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Date<br>9/11/2<br>Phase:<br>h From (TVD),<br>0.00                                                       | Dectin<br>(*)<br>2007<br>PLAN<br>+N/-S<br>(ft)<br>0.00                                                      | 8.37<br>Tie On<br>+E/₩<br>(ft)<br>0.00                                                                                | Dip Angle<br>(*)<br>60.<br>1 Depth:                                                                                                                                                                                      | Field<br>68<br>0.00<br>Direction<br>(1)<br>156.92                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Wellbore<br>Mågnetics<br>Design<br>Audit Notes:<br>Version:<br>Vertical Section<br>Vertical Section<br>Measured<br>Depth<br>(ft)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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Date<br>9/11/2<br>Phase:<br>h From (TVD)<br>0.00<br>                                                    | Declin.<br>(*)<br>2007<br>PLAN<br>+N/-S<br>(ft)<br>0.00<br>.S<br>+E/-W<br>(ft)                              | 8.37<br>Tie On<br>+E/W<br>(ft)<br>0.00<br>Dogleg<br>Rate<br>(*100ft)                                                  | Dip Angle<br>(*)<br>60.<br>• Depth:<br>Build Turn<br>Rate<br>(*/100ft) (*/100ft)                                                                                                                                         | Field:<br>68<br>0.00<br>Direction<br>(*)<br>156.92                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Strength<br>nT)<br>49.259                       |
| Wellbore<br>Mågnetics<br>Design<br>Audit Notes:<br>Version:<br>Vertical Section:<br>Vertical Section:<br>Measured<br>Depth<br>incil<br>(ft)<br>0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Wellbore #<br>Model /<br>IGF<br>Plan #1:<br>Plan #1:<br>netton: Az!<br>(*)<br>0 00                                                     | 14<br>RF 2005 10<br>Dept<br>muth C<br>C<br>O 00                                                             | Sample Date<br>9/11/2<br>Phase:<br>h From (TVD)<br>0.00<br>rtical<br>epiti<br>(ft)<br>(ft)<br>0.00             | Declin.<br>(*)<br>PLAN<br>+N/-S<br>(ft)<br>0.00<br>-S<br>+E/-W<br>(ft)<br>0.00<br>0.00                      | 8.37<br>Tie On<br>+E/W<br>(ft)<br>0.00<br>Dogleg<br>Rate<br>(*/100ft)                                                 | Dip Angle<br>(*)<br>60.<br>• Depth:<br>Build Turn<br>Rate Rate<br>(*/100ft) (*/100ft)                                                                                                                                    | Field:<br>68<br>0.00<br>Direction<br>(*)<br>156.92<br>7FO<br>(*)<br>0.00<br>0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Strength<br>nT)<br>49.269                       |
| Wellborg<br>Magnetics<br>Design<br>Audit Notes:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Measured<br>Depth<br>Incli<br>(ft)<br>0.00<br>460 00<br>768 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Wellbore #           Model           IGF           Plan #1           netion           Azi           0 00           0.00           0.00 | 1<br>RF 2005 10<br>Depti<br>muth C C<br>(*)<br>0 00<br>0.00                                                 | Sample Date<br>9/11/2<br>Phase:<br>h From (TVD)<br>                                                            | Declin<br>(1)<br>007<br>PLAN<br>+N/-S<br>(1)<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.  | 8.37<br>Tie On<br>+E/W<br>(ft)<br>0.00<br>Dogleg<br>Rate<br>((100ft)<br>0.00<br>0.00<br>2.00                          | Dip Angle           (*)           60.           Depth:           Build           Turn           Rate           (*) C(*) O(*)           (*) O(*)           0.00           0.00                                            | Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contemporation Contem | Strength<br>n1)<br>49,269                       |
| Wellbore,<br>Magnetics,<br>Design<br>Audit Notes:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version | Wellbore #<br>Model 1<br>IGF<br>Plan #1:<br>                                                                                           | L<br>Vame<br>P 200510<br>Dept<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi<br>vi | Sample Date<br>9/11/2<br>Phase:<br>h From (TVD)<br>(tt)<br>(tt)<br>(tt)<br>(tt)<br>(tt)<br>(tt)<br>(tt)<br>(t  | Declin<br>(1)<br>007<br>PLAN<br>+N/-S<br>(t)<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.  | 8.37<br>Tie On<br>+€/-W<br>(fi)<br>0.00<br>Dogleg<br>Rate<br>('100ft)<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00 | Dip Angle           (*)           60.           Depth:           Build           Turn:           Rate.           Rate.           (*).00           0.00           0.00           0.00           0.00                      | Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contra | Strength<br>n1)<br>49,269                       |
| Wellbore<br>Magnetics<br>Design<br>Audit Notes:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:<br>Version:  | Wellbore #<br>Model 1<br>IGF<br>Plan #1:<br>Plan #1:<br>0 00<br>0.00<br>6.18<br>6 18<br>0.00                                           | Vame<br>RF200510<br>Depti<br>muth<br>C<br>(*)<br>0 00<br>0.00<br>156.92<br>156.92<br>0.00                   | Sample Date<br>9/11/2<br>Phase:<br>h From (TVD)<br>(ft)<br>(ft)<br>(ft)<br>(ft)<br>(ft)<br>(ft)<br>(ft)<br>(ft | Declin<br>(1)<br>007<br>PLAN<br>+N/-S<br>(ft)<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0. | B.37<br>Tie On<br>+E/-W<br>(ft)<br>0.00<br>Dogleg<br>Rate<br>(/100ft)<br>0.00<br>0.00<br>2.00                         | Dip Angle           010           60.           1 Depth:           Build           Turn-Rate           Rate           (*100ft)           0.00           0.00           0.00           0.00           0.00           0.00 | C.00<br>Direction<br>156.92<br>TFO<br>(1)<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Strength<br>nT)<br>49,269                       |

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COMPASS 2003.16 Build 42



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#### Scientific Drilling Planning Report



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| Database: EDM 20<br>Company: Mack, ET<br>Proječt: Edd CC<br>Site: State H<br>Well: State H<br>Wellbore: Wellbor<br>Design: Plan #1 | 103 16 Single<br>nergy Corp:<br>punty, NM (N<br>#2<br>#2<br>e.#1                                                 | User Db                       |                                  | Local Co-<br>TVD Refer<br>MD Refere<br>North Refe<br>Survey Ca | ordinate Refere<br>ence<br>nce<br>prence:<br>prence:<br>louiation Meth | nce: W<br>W<br>W<br>G<br>od: M | ell State H #2<br>ELL @ 3606.00<br>ELL @ 3606.00<br>id<br>nimum Curvatu | nî (KB Elev)<br>nî (KB Elev)<br>nî (KB Elev) |                    |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------|----------------------------------------------|--------------------|
| Planned Survey                                                                                                                     | Carlor V                                                                                                         |                               |                                  |                                                                | 2-10 A - 10                                                            |                                | C. A. C. M. A.                                                          | 34 M 18 3 3 19 8                             | MIND FRENCH        |
|                                                                                                                                    | 10123                                                                                                            |                               |                                  | A. Salar                                                       |                                                                        |                                | The Carl                                                                |                                              | 3                  |
| Measured                                                                                                                           |                                                                                                                  | No.                           | Vertical                         |                                                                |                                                                        | Vertical                       | Dogleg                                                                  | Build                                        | Turn               |
| Depth                                                                                                                              | lination                                                                                                         | Azimuth                       | Depth                            | +N/-S                                                          | +E/-W                                                                  | Section                        | Rate                                                                    | Rate                                         | Rate               |
| (ft)                                                                                                                               | (°)                                                                                                              | (1)                           |                                  | (ft)                                                           | (ft)                                                                   | (ft))<br>1. 2                  | (°/100ft)                                                               | (°/100ft)                                    | (°/100ft)          |
| 0.00                                                                                                                               | 0.00                                                                                                             | 0.00                          | 0.00                             | 0.00                                                           | 0.00                                                                   | 0.00                           | 0.00                                                                    | 0 00                                         | 0.00               |
| 100.00                                                                                                                             | 0.00                                                                                                             | 0.00                          | 100.00                           | 0.00                                                           | 0.00                                                                   | 0.00                           | 0 00                                                                    | 0.00                                         | 0.00               |
| 300.00                                                                                                                             | 0.00                                                                                                             | 0 00                          | 300.00                           | 0.00                                                           | 0.00                                                                   | 0.00                           | 0.00                                                                    | 0.00                                         | 0.00               |
| 400.00                                                                                                                             | 0.00                                                                                                             | 0.00                          | 400 00                           | 0.00                                                           | 0.00                                                                   | 0.00                           | 0.00                                                                    | 0.00                                         | 0 00               |
| 460.00                                                                                                                             | 0.00                                                                                                             | 0.00                          | 460.00                           | 0.00                                                           | 0.00                                                                   | 0.00                           | 0.00                                                                    | 0.00                                         | 0.00               |
| KOP 460' Start 2.                                                                                                                  | 0°/100'                                                                                                          | S. STATES                     |                                  |                                                                | WAS MEDI                                                               |                                |                                                                         |                                              |                    |
| 500 00                                                                                                                             | 0.80                                                                                                             | 156 92                        | 500.00                           | -0.26                                                          | 0.11                                                                   | 0.28                           | 2.00                                                                    | 2.00                                         | 0.00               |
| 600.00                                                                                                                             | 2.80                                                                                                             | 156.92                        | 599 94                           | -3.15                                                          | 1 34                                                                   | 3.42                           | 2.00                                                                    | 2.00                                         | 0.00               |
| 700 00                                                                                                                             | 4.80                                                                                                             | 156.92                        | 699.72                           | -9.24                                                          | 3.94                                                                   | 10 05                          | 2 00                                                                    | 2.00                                         | 0.00               |
| FOC hold 6 18                                                                                                                      | art these                                                                                                        | 100.02<br>24                  |                                  | CENTRE CORREL                                                  | USAN BELING                                                            | TARGETIN                       | 200                                                                     | MARTIN                                       | ALT WATCHING       |
|                                                                                                                                    | and the second second second second second second second second second second second second second second second | 6-8-94-7266617 <b>19</b> -772 | 347.247.249.9499.944<br>         | and an an an an an an an an an an an an an                     | 2001 + C # 2035" 1, N 2497<br>                                         | Second Strategy ( ) &          | 1944 AP > 1984 AU MA                                                    | 5-12-566999-1-52-<br>                        | ander andered beek |
| 800.00                                                                                                                             | 6.18                                                                                                             | 156.92                        | 799.22                           | -18.38                                                         | / 83                                                                   | 19 98                          | 0.00                                                                    | 0.00                                         | 0.00               |
| 1 000 00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 998.06                           | -38.18                                                         | 16.27                                                                  | 41.50                          | 0.00                                                                    | 0.00                                         | 0.00               |
| 1,100.00                                                                                                                           | 6.18                                                                                                             | 156 92                        | 1,097.48                         | -48.07                                                         | 20 49                                                                  | 52.26                          | 0.00                                                                    | 0.00                                         | 0.00               |
| 1,200.00                                                                                                                           | 6.18                                                                                                             | 156 92                        | 1,196.90                         | -57 97                                                         | 24.70                                                                  | 63.01                          | 0.00                                                                    | 0 00                                         | 0.00               |
| 1,300.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 1,296.32                         | -67.87                                                         | 28 92                                                                  | 73.77                          | 0 00                                                                    | 0.00                                         | 0.00               |
| 1,400.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 1,395 74                         | -77.76                                                         | 33.14                                                                  | 84.53                          | 0 00                                                                    | 0.00                                         | 0.00               |
| 1,500 00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 1,495 16                         | -87.66                                                         | 37.36                                                                  | 95.29                          | 0 00                                                                    | 0 00                                         | 0.00               |
| 1,600.00                                                                                                                           | 6 18                                                                                                             | 156 92                        | 1,594.58                         | -97.55                                                         | 41 57                                                                  | 106.04                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 1,700.00                                                                                                                           | 0.10                                                                                                             | 150 92                        | 1,094.00                         | -107.45                                                        | 45.79                                                                  | 110.00 >                       | 0.00                                                                    | 0.00                                         | 0.00               |
| 1,800.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 1,793 42                         | -117.35                                                        | 50.01                                                                  | 127.56                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 1,900.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 1,892 84                         | -127.24                                                        | 54.23                                                                  | 138.32                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,000.00                                                                                                                           | 6 18                                                                                                             | 156.92                        | 2 091 68                         | -147 04                                                        | 62 66                                                                  | 159.83                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,200.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 2,191.10                         | -156.93                                                        | 66 88                                                                  | 170.59                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2 300 00                                                                                                                           | 6.18                                                                                                             | 156 92                        | 2 290 52                         | -166 83                                                        | 71 10                                                                  | 181 35                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,400.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 2,389.94                         | -176.73                                                        | 75.31                                                                  | 192.10                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,500.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 2,489.36                         | -186.62                                                        | 79 53                                                                  | 202 86                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,600.00                                                                                                                           | 6 18                                                                                                             | 156.92                        | 2,588 78                         | -196.52                                                        | 83.75                                                                  | 213.62                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,700.00                                                                                                                           | 6.18                                                                                                             | 156.92                        | 2,688.20                         | -206.41                                                        | 87,97                                                                  | 224.38                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,800.00                                                                                                                           | 6 18                                                                                                             | 156.92                        | 2,787.62                         | -216.31                                                        | 92.18                                                                  | 235.13                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 2,854.52                                                                                                                           | 618                                                                                                              | 156 92                        | 2,841.82<br>******************** | -221.71<br>1956-00 (1956)                                      | 94.48<br>1947 - 1988 - 324                                             | 241.00                         | 0.00<br>0.000 0.000 0.000 0.000 0.000 0.000 0.000                       | 0.00<br>% 201 200 200 - 700 200              | 0.00               |
| 2 900 00                                                                                                                           | 9 RSAN 29223<br>5 27                                                                                             | 156 92                        | 2 887 07                         | ి సార్టి సినిది సి.వి<br>-225 88                               | (47)35 (47)3 (47)<br>96 26                                             | 245 53<br>245 53               | -¥~1.0%®251.0%<br>2.00                                                  | -2 00                                        | 0.00               |
| 3,000.00                                                                                                                           | 3.27                                                                                                             | 156.92                        | 2,986 79                         | -232.72                                                        | 99.18                                                                  | 252.97                         | 2.00                                                                    | -2.00                                        | 0.00               |
| 3,100.00                                                                                                                           | 1.27                                                                                                             | 156.92                        | 3,086.71                         | -236.36                                                        | 100.73                                                                 | 256.92                         | 2.00                                                                    | -2.00                                        | 0.00               |
| 3 163 30                                                                                                                           | 0 00                                                                                                             | 0.00                          | 3 150.00                         | -237.00                                                        | 101 00                                                                 | 257 62                         | 2.00                                                                    | -2 00                                        | 0.00               |
| EOC hold 0.0°                                                                                                                      | N. ANTINE STREET                                                                                                 | E FARTA                       | WARA DE LAS                      |                                                                | an in the second                                                       | NE SERVICE                     | 0254848235                                                              |                                              |                    |
| 3,200 00                                                                                                                           | 0.00                                                                                                             | 0 00                          | 3,186.70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0.00                                                                    | 0.00                                         | 0 00               |
| 3,300.00                                                                                                                           | 0.00                                                                                                             | 0 00                          | 3,286.70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0.00                                                                    | 0.00                                         | 0 00               |
| 3,400.00                                                                                                                           | 0 00                                                                                                             | 0.00                          | 3,386.70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 3,300.00                                                                                                                           | 0.00                                                                                                             | 0.00                          | 3,400 /0                         | -237.00                                                        | 101.00                                                                 | 201.02                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 3,600.00                                                                                                                           | 0.00                                                                                                             | 0 00                          | 3,586 70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0 00                                                                    | 0 00                                         | 0 00               |
| 3,700,00                                                                                                                           | 0.00                                                                                                             | 0.00                          | 3,786,70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 3,900.00                                                                                                                           | 0.00                                                                                                             | 0.00                          | 3,886.70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0 00                                                                    | 0 00                                         | 0.00               |
| 4,000.00                                                                                                                           | 0.00                                                                                                             | 0 00                          | 3,986 70                         | -237 <sub>.</sub> 00                                           | 101.00                                                                 | 257.62                         | 0.00                                                                    | 0.00                                         | 0.00               |
| 4,100.00                                                                                                                           | 0 00                                                                                                             | 0.00                          | 4,086 70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0.00                                                                    | 0.00                                         | 0 00               |
| 4,200.00                                                                                                                           | 0.00                                                                                                             | 0 00                          | 4,186.70                         | -237.00                                                        | 101 00                                                                 | 257 62                         | 0 00                                                                    | 0.00                                         | 0.00               |
| 4,300.00                                                                                                                           | 0.00                                                                                                             | 0 00                          | 4,286.70                         | -237.00                                                        | 101.00                                                                 | 257 62                         | 0 00                                                                    | 0 00                                         | 0.00               |
| 4,400.00                                                                                                                           | 0 00                                                                                                             | 0.00                          | 4,386.70                         | -237.00                                                        | 101.00                                                                 | 257.62                         | 0.00                                                                    | 0.00                                         | 0 00               |

9/11/2007 10:54:28AM

COMPASS 2003.16 Build 42

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| Erergy Corporation |  |

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#### Scientific Drilling





| Database: EDM.20<br>Company: Mack E<br>Project: Eddy C<br>Site: State H<br>Well: Vellbore: Wellbor<br>Design: Plan #1 | 003:16 Single U:<br>nergy Corp.<br>ounty, NM (NAC<br>#2<br>#2<br>e #1. | ser Db                                   |                                                                                                                 | Local Co-orc<br>TVD Referen<br>MD Referenc<br>North Refere<br>Survey Calc | linate Referenci<br>ice:<br>.e:<br>ince:<br>ulátion Method | e:<br>W<br>W<br>G<br>M | ell State H #2<br>ELL @ 3606.00<br>ELL @ 3606.00<br>id<br>nimum Curvatu                                                                                           | ft (KB Elev)<br>ft (KB Elev)<br>ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Planned Survey                                                                                                        | 1                                                                      |                                          | in the second states of the second states of the second states of the second states of the second states of the |                                                                           |                                                            |                        | Are the second                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |
|                                                                                                                       |                                                                        | 19 19 19 19 19 19 19 19 19 19 19 19 19 1 |                                                                                                                 | Stat State                                                                |                                                            |                        | مىلىمى بىلى ئىلىمىلىمى بىلىمى بىلىمى بىلىمى<br>بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى<br>بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى بىلىمى |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | A Call Strate Party                                                                                            |
| Measured                                                                                                              | 通い人を通う                                                                 |                                          | Vertical                                                                                                        |                                                                           |                                                            | ertical 👘              | Dogleg                                                                                                                                                            | Build                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Turn                                                                                                           |
| Depth                                                                                                                 | clination A                                                            | zimuth                                   | -Depth (fft)                                                                                                    | +N/-S ,                                                                   | +E/-W 5                                                    | ection                 | Rate                                                                                                                                                              | Rate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | (%100ft)                                                                                                       |
| and the second second second second second second second second second second second second second second second      |                                                                        | $\{\mathbf{U}_{i}, j, T_{i}\}$           |                                                                                                                 | (11)                                                                      | . (19                                                      |                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | all others and                                                                                                 |
| 4,500.00                                                                                                              | 0.00                                                                   | 0.00                                     | 4,486 70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 4,600.00                                                                                                              | 0.00                                                                   | 0.00                                     | 4,586.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 4,700.00                                                                                                              | 0.00                                                                   | 0.00                                     | 4,686.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257 62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 4,800.00                                                                                                              | 0.00                                                                   | 0.00                                     | 4,786 70                                                                                                        | -237.00                                                                   | 101 00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 00                                                                                                           |
| 4,900.00                                                                                                              | 0.00                                                                   | 0 00                                     | 4,886.70                                                                                                        | -237 00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,000.00                                                                                                              | 0.00                                                                   | 0.00                                     | 4,986.70                                                                                                        | -237.00                                                                   | 101 00                                                     | 25/ 62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,100 00                                                                                                              | 0 00                                                                   | 0 00                                     | 5,086.70                                                                                                        | -237.00                                                                   | 101 00                                                     | 257.62                 | 0 00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,200 00                                                                                                              | 0 00                                                                   | 0 00                                     | 5,186.70                                                                                                        | -237.00                                                                   | 101 00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,300.00                                                                                                              | 0.00                                                                   | 0 00                                     | 5,286.70                                                                                                        | -237.00                                                                   | 101 00                                                     | 257 62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,400 00                                                                                                              | 0 00                                                                   | 0.00                                     | 5,386 70                                                                                                        | -237.00                                                                   | 101 00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,500 00                                                                                                              | 0 00                                                                   | 0.00                                     | 5,486.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,600,00                                                                                                              | 0.00                                                                   | 0.00                                     | 5,586.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 5,700.00                                                                                                              | 0.00                                                                   | 0.00                                     | 5,686 70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 00                                                                                                           |
| 5,800.00                                                                                                              | 0 00                                                                   | 0.00                                     | 5,786 70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 00                                                                                                           |
| 5,900.00                                                                                                              | 0.00                                                                   | 0 00                                     | 5,886 70                                                                                                        | -237.00                                                                   | 101 00                                                     | 257.62                 | 0 00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 6,000 00                                                                                                              | 0 00                                                                   | 0.00                                     | 5,986 70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ·0 00 ·                                                                                                        |
| 6 100 00                                                                                                              | 0.00                                                                   | 0.00                                     | 6 086 70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 00                                                                                                           |
| 6 200 00                                                                                                              | 0.00                                                                   | 0.00                                     | 6,186,70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257 62                 | 0 00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 6,300.00                                                                                                              | 0.00                                                                   | 0.00                                     | 6,286,70                                                                                                        | -237 00                                                                   | 101.00                                                     | 257.62                 | 0 00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 6,400.00                                                                                                              | 0.00                                                                   | 0.00                                     | 6,386.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257 62                 | 0.00                                                                                                                                                              | 0 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 00                                                                                                           |
| 6,500.00                                                                                                              | 0.00                                                                   | 0.00                                     | 6,486.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| c coo oo                                                                                                              | 0.00                                                                   | 0.00                                     | 6 596 70                                                                                                        | 227.00                                                                    | 101.00                                                     | 257 62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 6,000.00                                                                                                              | 0.00                                                                   | 0.00                                     | 6,586.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257 62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 6,700.00                                                                                                              | 0.00                                                                   | 0.00                                     | 6 786 70                                                                                                        | -237 00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 6 900 00                                                                                                              | 0.00                                                                   | 0.00                                     | 6 886 70                                                                                                        | -237.00                                                                   | 101 00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 7 000 00                                                                                                              | 0 00                                                                   | 0.00                                     | 6,986 70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257 62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
|                                                                                                                       |                                                                        |                                          | 7 000 70                                                                                                        |                                                                           | 404.00                                                     | 057.00                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 7,100.00                                                                                                              | 0.00                                                                   | 0.00                                     | 7,086.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 7,200.00                                                                                                              | 0.00                                                                   | 0.00                                     | 7,100.70                                                                                                        | -237.00                                                                   | 101.00                                                     | 257.02                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 7,300.00                                                                                                              | 0.00                                                                   | 0.00                                     | 7,200.70                                                                                                        | -237 00                                                                   | 101.00                                                     | 257.62                 | 0.00                                                                                                                                                              | 0.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00                                                                                                           |
| 7,313.30                                                                                                              | AL DOUL CASE                                                           | 20 20 20 20 20 20                        | 1,000.00                                                                                                        | -207.00<br>STREET GROUG                                                   | BEN PERSONA                                                | AND DENY               | N WEETWO                                                                                                                                                          | NEXPERT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SALES START                                                                                                    |
| East HL-State H                                                                                                       | #IC FORL-State                                                         | en #18 2000                              | inde State ut #15                                                                                               | a malanti mart                                                            | 化化物料槽板的影响                                                  | 64 XX XX XX XX         | 225、全省1982年5434                                                                                                                                                   | BRALLING TO SEA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 8238 2019 1420 1291                                                                                            |
|                                                                                                                       |                                                                        |                                          |                                                                                                                 |                                                                           |                                                            |                        |                                                                                                                                                                   | the second birth of the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | the second second second second second second second second second second second second second second second s |
| Targets                                                                                                               | Set 1 Alera                                                            | · · · · · · · · · · · · · · · · · · ·    | Ster. Barry                                                                                                     |                                                                           | St. Triberty with                                          | Color Minute An        | "如何""海豚"。                                                                                                                                                         | (学家教会) 计 中国的                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                |
|                                                                                                                       |                                                                        | A 184 18                                 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                                                                           |                                                                           |                                                            |                        | 1                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |
| Target Name                                                                                                           |                                                                        | 1993 - S                                 | 옷 문의 가지 않는                                                                                                      |                                                                           |                                                            |                        | 5.5                                                                                                                                                               | R. 199                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                |
| • hit/miss target                                                                                                     | Dip Angle 👾 Di                                                         | ip Dir. T\                               | /D +N/-S                                                                                                        | <+E/-₩ . ^                                                                | Northing                                                   | Easti                  | ng                                                                                                                                                                | All the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec | 1                                                                                                              |
| - Shape                                                                                                               | ( <b>`:(')</b> :-():-()                                                | , (°) - Y 2 ((                           | ft)                                                                                                             | 리는 ( <b>ft)</b> 등권                                                        | (ft)                                                       | (ft)                   | 1. N. S. S. I.                                                                                                                                                    | atitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Longitude 🖓 👾                                                                                                  |
|                                                                                                                       |                                                                        |                                          |                                                                                                                 |                                                                           |                                                            |                        | 005 50                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1048 441 00 000 11                                                                                             |
| PBHL-State H #1                                                                                                       | 0 00                                                                   | 0.00 7,3                                 | -237.0                                                                                                          | 00 101.00                                                                 | 646,392                                                    | .20 528                | ,285 50 32                                                                                                                                                        | ° 46' 37.164 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 104° 14' 28.693 W                                                                                              |
| - plan hits target                                                                                                    |                                                                        |                                          |                                                                                                                 |                                                                           |                                                            |                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |
| - Circle (radius 10.00)                                                                                               |                                                                        |                                          |                                                                                                                 |                                                                           |                                                            |                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |
| South HL-State H #1                                                                                                   | 0.00                                                                   | 0 00 7,3                                 | 00.00 -247.0                                                                                                    | 00 111 00                                                                 | 646,382                                                    | .20 528                | ,295 50 32                                                                                                                                                        | ° 46' 37.065 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 104° 14' 28.576 W                                                                                              |
| - plan misses by 14.14                                                                                                | 4ft at 7313.30ft M                                                     | MD (7300.00                              | TVD, -237 00 N, 1                                                                                               | 01.00 E)                                                                  |                                                            |                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |
| - Rectangle (sides W0                                                                                                 | 0.00 H200.00 D0                                                        | .00)                                     |                                                                                                                 |                                                                           |                                                            |                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |
| East HL-State H #1                                                                                                    | 0.00                                                                   | 0 00 7.3                                 | -247.0                                                                                                          | 00 111 00                                                                 | 646,382                                                    | 20 528                 | ,295.50 32                                                                                                                                                        | ° 46' 37.065 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 104° 14' 28.576 V                                                                                              |
| - plan misses by 14.14                                                                                                | 4ft at 7313.30ft M                                                     | MD (7300.00                              | TVD, -237.00 N, 1                                                                                               | 01 00 E)                                                                  |                                                            |                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |
| - Rectangle (sides W8                                                                                                 | 00.00 H0.00 D0                                                         | 00)                                      |                                                                                                                 |                                                                           |                                                            |                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                |

| MACK<br>Ewgy Elemen                                                                                                                                                                                                                                                                     | Scientific Drilling<br>Planning Report                                                                                                                     | 9                                                               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--|
| Database:         EDM 2003 16 Single Use           Company:         Mack Energy Corp.           Project:         Eddy County, NM (NAD 2           Site:         State H #2           Well:         State H #2           Wellbore:         Wellbore #1           Design:         Plan #1 | r Db Local Co-ordinate Reference Well State<br>TVD Reference: WELL @<br>MD Reference: WELL @<br>North Reference: Grd<br>Survey Calculation Method: Minimum | e H #2<br>3606 000 (KB Elev)<br>3606 000 (KB Elev)<br>Curvature |  |
| Plan Annotations<br>Measured Vertical                                                                                                                                                                                                                                                   | Local Coordinates                                                                                                                                          |                                                                 |  |

| Design: Plan #1                        |                    |                  |                                            |  |
|----------------------------------------|--------------------|------------------|--------------------------------------------|--|
| Plan Annotations                       |                    | W. Star Marshall |                                            |  |
| Measured Vertical<br>Depth Depth       | Local Coordir      | nates            |                                            |  |
| (ft)<br>(ft)                           | (ft)               | (ft)             | Comment                                    |  |
| 460.00 460.00<br>768.78 768.18         | 0.00<br>-15.29     | 0.00<br>6.52     | KOP 460' Start 2.0'/100'<br>EOC hold 6.18° |  |
| 2,854.52 2,841.82<br>3,163.30 3,150.00 | -221.71<br>-237.00 | 94.48<br>101.00  | Start Drop 2.0°/100'<br>EOC hold 0.0°      |  |

. **. .** 

COMPASS 2003.16 Build 42

Scientific Drilling



| Subtitut 3 Copies To Appropriate District S                                                                                                                        | tate of New Mexico                                                             | Form C-103                                                                                                   |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--|--|
| District I Energy, M                                                                                                                                               | linerals and Natural Resources                                                 | May 27, 2004                                                                                                 |  |  |
| 1625 N French Dr , Hobbs, NM 88240<br>District 11                                                                                                                  | NSERVATION DIVISION                                                            | WELL API NO.<br>30-015-35814                                                                                 |  |  |
| 1301 W Grand Ave, Artesia, NM 88210 OIL CO.<br>District III 122                                                                                                    | 0 South St. Francis Dr                                                         | 5. Indicate Type of Lease                                                                                    |  |  |
| 1000 Rio Brazos Rd , Aztec, NM 87410                                                                                                                               | Santa Fe. NM 87505                                                             | 6 State Oil & Gas Lease No                                                                                   |  |  |
| 1220 S St Francis Dr , Santa Fe, NM                                                                                                                                |                                                                                | 0. State Off & Gas Lease No.                                                                                 |  |  |
| 87505                                                                                                                                                              | NRTS ON WELLS                                                                  | B-9391                                                                                                       |  |  |
| (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OF<br>DIFFERENT RESERVOIR USE "APPLICATION FOR PERM                                                                   | R TO DEEPEN OR PLUG BACK TO A<br>IT" (FORM C-101) FOR SUCH                     | State H                                                                                                      |  |  |
| 1 Type of Well: Oil Well Gas Well 🛛                                                                                                                                | Other                                                                          | 8. Well Number 2                                                                                             |  |  |
| 2. Name of Operator Mask Energy Composition                                                                                                                        |                                                                                | 9. OGRID Number                                                                                              |  |  |
| Mack Energy Corporation                                                                                                                                            |                                                                                | U15657                                                                                                       |  |  |
| P. O. Box 960 Artesia N                                                                                                                                            | M 88211-0960                                                                   | Chalk Bluff Wolfcamp                                                                                         |  |  |
| 4 Well Location                                                                                                                                                    |                                                                                |                                                                                                              |  |  |
| Unit Letter $\underline{H}$ 2063 feet f                                                                                                                            | rom the <u>North</u> line and                                                  | 441feet from theEastline                                                                                     |  |  |
| Section Z Town                                                                                                                                                     | nship <u>188</u> Range <u>27E</u>                                              | NMPM County Eddy                                                                                             |  |  |
| I 1. Elevation (                                                                                                                                                   | Show whether DR, RKB, RT, GR, etc.<br>3590' GR                                 |                                                                                                              |  |  |
| Pit or Below-grade Tank Application or Closure                                                                                                                     | 5550 GK                                                                        |                                                                                                              |  |  |
| Pit typeDepth GroundwaterDistanc                                                                                                                                   | e from nearest fresh water well Dis                                            | stance from nearest surface water                                                                            |  |  |
| Pit Liner Thickness: mil Below-Grade                                                                                                                               | Tank: Volume bb1s; Co                                                          | onstruction Material                                                                                         |  |  |
| 12. Check Appropriate Bo                                                                                                                                           | ox to Indicate Nature of Notice,                                               | , Report or Other Data                                                                                       |  |  |
| NOTICE OF INTENTION TO<br>PERFORM REMEDIAL WORK PLUG AND AN<br>TEMPORARILY ABANDON CHANGE PLA<br>PULL OR ALTER CASING MULTIPLE CO                                  | D: SUE<br>BANDON A REMEDIAL WOP<br>NS A COMMENCE DR<br>DMPL A CASING/CEMEN     | BSEQUENT REPORT OF:<br>RK ALTERING CASING<br>RILLING OPNS. P AND A<br>IT JOB                                 |  |  |
| OTHER. Change casing                                                                                                                                               |                                                                                |                                                                                                              |  |  |
| 13. Describe proposed or completed operations.<br>of starting any proposed work). SEE RULE<br>or recompletion.                                                     | (Clearly state all pertinent details, an<br>1103. For Multiple Completions: At | ad give pertinent dates, including estimated date<br>ttach wellbore diagram of proposed completion           |  |  |
| Mack Energy would like to change the casing strin                                                                                                                  | g approved on this APD.                                                        |                                                                                                              |  |  |
| Drill a 17 1/2" hole to 200', run 13 3/8" 48# H-40<br>Drill a 12 1/4" hole to 1150', run 8 5/8" 24# J-55 c<br>Drill a 7 7/8" hole to approximately 7300', run 5 1/ | casing and cement.<br>asing and cement.<br>2" 17# L-80 casing and cement       |                                                                                                              |  |  |
|                                                                                                                                                                    |                                                                                | OCT 22 2007                                                                                                  |  |  |
|                                                                                                                                                                    |                                                                                |                                                                                                              |  |  |
|                                                                                                                                                                    |                                                                                | OOD-ANTESIA                                                                                                  |  |  |
|                                                                                                                                                                    |                                                                                |                                                                                                              |  |  |
|                                                                                                                                                                    |                                                                                |                                                                                                              |  |  |
|                                                                                                                                                                    |                                                                                |                                                                                                              |  |  |
|                                                                                                                                                                    |                                                                                |                                                                                                              |  |  |
| I hereby certify that the information above is true and grade tank has been/will be constructed or closed according to                                             | complete to the best of my knowledge<br>NMOCD guidelines, a general permit     | and belief. I further certify that any pit or below-<br>] or an (attached) alternative OCD-approved plan [_] |  |  |
| SIGNATURE (Jerry W. Sheneld                                                                                                                                        |                                                                                | DATE <u>10/19/07</u>                                                                                         |  |  |
| Type or print name Jerry W. Sherrell                                                                                                                               | E-mail address:jerrys@macke                                                    | energycorp.com Telephone No (505)748-1288                                                                    |  |  |
| For State Use Only<br>BRYAN G ADDAN                                                                                                                                | ใกลา                                                                           | OCT 2 2 2007                                                                                                 |  |  |
| APPROVED BY: DISTRICT II GEO<br>Conditions of Approval (if any):                                                                                                   | LOGIST <sup>TLE</sup>                                                          | DATE                                                                                                         |  |  |



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## Mack Energy Corp.

Eddy County, NM (NAD 27 NME) State H #2 State H #2 Wellbore #1

OCT 22 2007 OCD-ARTESIA

Plan: Plan #2

## **Standard Planning Report**

19 October, 2007





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#### **Scientific Drilling**

Planning Report



| r                                     |             |                 |                                         |                                       | ·····                    |                      | -            |                |                 |                    |
|---------------------------------------|-------------|-----------------|-----------------------------------------|---------------------------------------|--------------------------|----------------------|--------------|----------------|-----------------|--------------------|
| Database:                             | EDM 2003    | 16 Single User  | Db                                      |                                       | Local Co-ord             | inate Referenc       | e: (W        | ell State H #2 |                 | ,                  |
| Company:                              | Mack Energ  | y Corp          |                                         |                                       | TVD Reference            | :e: ,                | t w          | ELL @ 3606 00f | 't (KB Elev)    | 1                  |
| Project:                              | Eddy Count  | ty, NM (NAD 27  | NME)                                    |                                       | MD Reference             | e:                   | , w          | ELL @ 3606 00f | 't (KB Elev)    |                    |
| Site:                                 | State H #2  |                 |                                         |                                       | North Refere             | nce:                 | G            | nd             |                 |                    |
| Well:                                 | State H #2  |                 |                                         |                                       | Survey Calcu             | lation Method        | : M          | nimum Curvatur | e               |                    |
| Wellbore <sup>.</sup>                 | Wellbore #1 | I               |                                         |                                       | 1                        |                      | 1            |                |                 |                    |
| Design:                               | Plan #2     |                 |                                         |                                       |                          |                      | Ĺ.           |                |                 | 1                  |
| · · · · · · · · · · · · · · · · · · · |             |                 |                                         |                                       |                          |                      |              |                |                 | ······             |
| Project                               | Eddy C      | County, NM (NA  | D 27 NME)                               | · · · · ·                             | - ma i v av ., tanan i v |                      | ·····        |                |                 |                    |
| Map System:                           | US State    | e Plane 1927 (E | Exact solution)                         |                                       | System Date              | um:                  | M            | ean Sea Level  |                 |                    |
| Geo Datum:                            | NAD 192     | 27 (NADCON C    | ONUS)                                   |                                       | -                        |                      |              |                |                 |                    |
| Map Zone:                             | New Me      | xico East 3001  |                                         |                                       |                          |                      |              |                |                 |                    |
|                                       |             |                 |                                         |                                       |                          |                      | -            | -              |                 |                    |
| Site                                  | State       | 1 #2            |                                         |                                       |                          |                      |              |                |                 | <u> </u>           |
| Site Position:                        |             |                 | Northi                                  | ng:                                   | 646,                     | 629 20 <sub>ft</sub> | Latitude:    |                |                 | 32° 46' 39 510 N   |
| From:                                 | Ma          | o               | Eastin                                  | g:                                    | 528,                     | 184 50 ft            | Longitude:   |                |                 | 104° 14' 29 874 W  |
| Position Uncerta                      | inty:       | 0 00 ft         | Slot Ra                                 | adlus:                                |                          | ft                   | Grid Converg | ence:          |                 | 0 05 °             |
| Well                                  | State H     | #2              |                                         |                                       |                          |                      |              |                |                 |                    |
| Well Position                         | +N/-S       | 0.0             | 0 ft No                                 |                                       |                          | 646 629 20           | ft lat       | itudo:         |                 | 32° 46' 39 510 N   |
| Weint Osidon                          | +=/ \/      | 0.0             |                                         | ting.                                 |                          | 539 194 ED           |              |                |                 | 104º 14/ 20 974 \/ |
|                                       | +E/-VV      | 00              | Juli Eas                                | sting:                                |                          | 526,164 50           | LOI          | igitude:       |                 | 104 14 29 674 VV   |
| Position Uncerta                      | linty       | 0 0             | 00 ft We                                | llhead Elevat                         | ion:                     | 3,606 00             | ft Gro       | ound Level:    |                 | 0 00 ft            |
| Wellbore                              | Wellbo      | ore #1          |                                         |                                       |                          |                      |              |                |                 |                    |
|                                       |             |                 |                                         |                                       |                          |                      |              |                |                 |                    |
| Magnetics                             | Mo          | del Name        | Sample                                  | Date                                  | Declinat                 | tion                 | Dip /        | Angle          | Field S         | Strength           |
|                                       |             |                 |                                         |                                       | (°)                      |                      | (            | ²)             | ()              | nT)                |
|                                       |             | IGRF200510      | 1                                       | 0/19/2007                             |                          | 8 36                 |              | 60 68          |                 | 49,259             |
| Design                                | Plan #2     | 2               |                                         |                                       | Anna an an a             |                      |              |                |                 |                    |
| Audit Nataa                           | (1,21,22)   |                 | and the set of a longer setting the set |                                       |                          |                      |              |                | · · · · · · · · |                    |
| Audit Notes:                          |             |                 |                                         | _                                     |                          |                      |              |                |                 |                    |
| Version:                              |             |                 | Phase                                   | : F                                   | PLAN                     | Tie                  | On Depth:    |                | 0 00            |                    |
| Vertical Section:                     |             | 0               | epth From (TV                           | D)                                    | +N/-S                    | +E/                  | -W           | Dir            | ection          |                    |
|                                       |             |                 | (ft)                                    |                                       | (ft)                     | (f                   | t)           |                | <u>(°)</u>      |                    |
|                                       |             |                 | 0.00                                    |                                       | 0 00                     | 0 0                  | 00           | 15             | 56 92           |                    |
| Plan Sections                         |             |                 |                                         | · · · · · · · · · · · · · · · · · · · |                          |                      |              |                |                 |                    |
| Measured                              |             |                 | Vertical                                |                                       |                          | Dogleg               | Build        | Turn           |                 |                    |
| Depth I                               | inclination | Azimuth         | Depth                                   | +N/-S                                 | +F/.W                    | Rate                 | Rate         | Rate           | TEO             |                    |
| (ft)                                  | (°)         | (°)             | (ft)                                    | (ft)                                  | (ft)                     | (°/100ft)            | (°/100ft)    | (°/100ft)      | (°)             | Target             |
| 0 00                                  | 0 00        | 0 00            | 0.00                                    | 0.00                                  | 0.00                     | 0.00                 |              | 0.00           | 0.00            |                    |
| 1,250.00                              | 0.00        | 0.00            | 1 250 00                                | 0.00                                  | 0.00                     | 0.00                 | 0.00         | 0.00           | 0.00            |                    |
| 1,785.00                              | 10 70       | 156 92          | 1 781 89                                | .45.82                                | 10 52                    | 2 00                 | 2 00         | 0.00           | 156.00          |                    |
| 2 636 01                              | 10 70       | 156.02          | 2 619 11                                | -101 19                               | 91 47                    | 2 00                 | 2 00         | 0.00           | 100 92          |                    |
| 3 171 04                              | 10 70       | 100,92          | 2,01011                                 | -131 10                               | 014/                     | 0.00                 | 0.00         | 0.00           | 100.00          |                    |
| 7 221 04                              | 0.00        | 0.00            | 3,130,00                                | -237 00                               | 101.00                   | 2 00                 | -2 00        | 0.00           | 180 00          |                    |
| 1,52101                               | 0.00        | 0.00            | 7,300.00                                | -237.00                               | 101.00                   | 0.00                 | 0.00         | 0.00           | 0.00            |                    |



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#### **Scientific Drilling**

Planning Report



| Database:<br>Company:<br>Project:<br>Site:<br>Well:<br>Wellbore:<br>Design: | EDI<br>Mac<br>Edd<br>Stat<br>Vel<br>Plan | EDM 2003 16 Single User Db<br>Mack Energy Corp<br>Eddy County, NM (NAD 27 NME)<br>State H #2<br>State H #2<br>Wellbore #1<br>Plan #2 |                |                           |               | 2003 16 Single User Db     Local Co-ordinate Reference:       Energy Corp     TVD Reference:       County, NM (NAD 27 NME)     MD Reference:       H #2     North Reference:       H #2     Survey Calculation Method:       ore #1     #2 |                             |                             |                            | Well State H #2<br>WELL @ 3606.00ft (KB Elev)<br>WELL @ 3606 00ft (KB Elev)<br>Grid<br>Minimum Curvature |  |  |  |
|-----------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|----------------------------|----------------------------------------------------------------------------------------------------------|--|--|--|
| Planned Surv                                                                | /ey                                      |                                                                                                                                      |                |                           |               |                                                                                                                                                                                                                                            |                             |                             |                            |                                                                                                          |  |  |  |
| Meas<br>De<br>(1                                                            | sured<br>epth<br>ft)                     | Inclination<br>(°)                                                                                                                   | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft)                                                                                                                                                                                                                              | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) | Build<br>Rate<br>(°/100ft) | Turn<br>Rate<br>(°/100ft)                                                                                |  |  |  |
|                                                                             | 0 00                                     | 0 00                                                                                                                                 | 0 00           | 0 00                      | 0 00          | 0 00                                                                                                                                                                                                                                       | 0 00                        | 0.00                        | 0 00                       | 0 00                                                                                                     |  |  |  |
|                                                                             | ,150 00                                  | 0 00                                                                                                                                 | 0 0 0          | 1,150 00                  | 0 00          | 0 00                                                                                                                                                                                                                                       | 0.00                        | 0 00                        | 0 00                       | 0.00                                                                                                     |  |  |  |
| 8 5/                                                                        | 8" Casing                                | ]                                                                                                                                    |                | 4 050 00                  |               |                                                                                                                                                                                                                                            | 0.00                        |                             |                            |                                                                                                          |  |  |  |
| 1,<br>                                                                      | ,250 00                                  | 0 00                                                                                                                                 | 0.00           | 1,250 00                  | 0.00          | 0.00                                                                                                                                                                                                                                       | 0.00                        | 0.00                        |                            |                                                                                                          |  |  |  |
| , KO                                                                        | 200.00                                   | tart 2.0-/100                                                                                                                        | 156 02         | 1 200 00                  |               | 0.17                                                                                                                                                                                                                                       | 0.44                        | 2.00                        |                            | 0.00                                                                                                     |  |  |  |
| 1,                                                                          | 400.00                                   | 3.00                                                                                                                                 | 156 92         | 1,299 99                  | -0 40         | 1 54                                                                                                                                                                                                                                       | 3 93                        | 2.00                        | 2 00                       | 0.00                                                                                                     |  |  |  |
| ',                                                                          | ,400 00                                  | 0.00                                                                                                                                 | 100 02         | 1,000 00                  | 001           | 104                                                                                                                                                                                                                                        | 0,00                        | 200                         | 2.00                       |                                                                                                          |  |  |  |
| 1,                                                                          | ,500 00                                  | 5.00                                                                                                                                 | 156.92         | -1,499 68                 | -10 03        | 4.27                                                                                                                                                                                                                                       | 10 90                       | 2 00                        | 2 00                       | 0 00                                                                                                     |  |  |  |
| 1,                                                                          | ,600 00                                  | 7 00                                                                                                                                 | 156 92         | 1,599 13                  | -19 64        | 837                                                                                                                                                                                                                                        | 21 35                       | 2.00                        | 2 00                       | 0.00                                                                                                     |  |  |  |
| 1,                                                                          | 785.00                                   | 9 00                                                                                                                                 | 156.92         | 1,090 15                  | -32 43        | 10.00                                                                                                                                                                                                                                      | 35 27                       | 2 00                        | 2.00                       | 0.00                                                                                                     |  |  |  |
|                                                                             | 703 00                                   | 700                                                                                                                                  | 130.32         |                           | -45 02        | 19.00                                                                                                                                                                                                                                      | 43 01                       |                             |                            |                                                                                                          |  |  |  |
| 1                                                                           | 800.00                                   | 10.70                                                                                                                                | 156 92         | 1 796 63                  | -48.38        | 20.62                                                                                                                                                                                                                                      | 52 59                       | 0.00                        | 0.00                       | 0.00                                                                                                     |  |  |  |
| 1,                                                                          |                                          | 1070                                                                                                                                 | 100 02         | 1,700.00                  | 40.00         | 20 02                                                                                                                                                                                                                                      | 02.00                       | 0.00                        | 0.00                       | 0.00                                                                                                     |  |  |  |
| 1,                                                                          | ,900 000                                 | 10 70                                                                                                                                | 156 92         | 1,894 89                  | -65 46        | 27 90                                                                                                                                                                                                                                      | 71 16                       | 0 00                        | 0 00                       | 0 00                                                                                                     |  |  |  |
| 2,                                                                          | 100 00                                   | 10 70                                                                                                                                | 156 92         | 1,993 15                  | -82 54        | 35 18                                                                                                                                                                                                                                      | 89/3                        | 0.00                        | 0.00                       | 0.00                                                                                                     |  |  |  |
| 2,                                                                          | 200.00                                   | 10.70                                                                                                                                | 156 92         | 2,09141                   | -99 03        | 42 40                                                                                                                                                                                                                                      | 126.86                      | 0.00                        | 0.00                       | 0.00                                                                                                     |  |  |  |
| 2.                                                                          | ,300.00                                  | 10.70                                                                                                                                | 156.92         | 2,287 94                  | -133 79       | 57.01                                                                                                                                                                                                                                      | 145 43                      | 0 00                        | 0.00                       | 0 00                                                                                                     |  |  |  |
| 2                                                                           | 400.00                                   | 10 70                                                                                                                                | 156.00         | 2 386 20                  | 150.97        | 64 30                                                                                                                                                                                                                                      | 163.00                      | 0.00                        | 0.00                       | 0.00                                                                                                     |  |  |  |
| 2,                                                                          | 500.00                                   | 10 70                                                                                                                                | 156.92         | 2,300 20                  | -150 0/       | 04.29                                                                                                                                                                                                                                      | 182 56                      | 0.00                        | 0.00                       | 0.00                                                                                                     |  |  |  |
| 2,                                                                          | 599 99                                   | 10.70                                                                                                                                | 156 92         | 2,404 40                  | -185.03       | 78.85                                                                                                                                                                                                                                      | 201 13                      | 0.00                        | 0.00                       | 0 00                                                                                                     |  |  |  |
| 2                                                                           | 636 01                                   | 10 70                                                                                                                                | 156 92         | 2,618 11                  | -191 18       | 81 47                                                                                                                                                                                                                                      | 207 81                      | 0 00                        | 0 00                       | 0.00                                                                                                     |  |  |  |
| Sta                                                                         | rt Drop 2.                               | 0°/100'                                                                                                                              |                |                           |               |                                                                                                                                                                                                                                            |                             |                             |                            |                                                                                                          |  |  |  |
| 2                                                                           | ,699 99                                  | 9.42                                                                                                                                 | 156.92         | 2,681 11                  | -201 46       | 85 85                                                                                                                                                                                                                                      | 218 99                      | 2 00                        | -2 00                      | 0 00                                                                                                     |  |  |  |
| 2                                                                           | 700 00                                   | 7 4 2                                                                                                                                | 156 02         | 2 780 03                  | -21/ 93       | 01 50                                                                                                                                                                                                                                      | 233 63                      | 2 00                        | -2.00                      | 0.00                                                                                                     |  |  |  |
| 2,                                                                          | 899 99                                   | 5 4 2                                                                                                                                | 156.92         | 2,70003                   | -214 33       | 91 59                                                                                                                                                                                                                                      | 233 63                      | 2 00                        | -2 00                      | 0.00                                                                                                     |  |  |  |
| Ζ,                                                                          | ,039 99                                  | 0.4Z                                                                                                                                 | 100,82         | 2,019 39                  | -225 22       | 90,90                                                                                                                                                                                                                                      | 244 01                      | 2 00                        | -2 00                      | 0.00                                                                                                     |  |  |  |

| 2,999 99      | 3 42 | 156 92 | 2,979 09 | -232 31 | 99 00  | 252 52 | 2 00 | -2 00 | 0 00 |
|---------------|------|--------|----------|---------|--------|--------|------|-------|------|
| 3,099 99      | 1 42 | 156 92 | 3,079 00 | -236 19 | 100 65 | 256 74 | 2 00 | -2 00 | 0.00 |
| 3,171.01      | 0.00 | 0.00   | 3,150 00 | -237 00 | 101 00 | 257,62 | 2 00 | -2 00 | 0 00 |
| EOC hold 0.0° |      |        | ·····    |         |        |        |      |       | -    |
| 7 221 01      | 0.00 | 0.00   | 7 200 00 | 227.00  | 101.00 | 257 62 | 0.00 | 0.00  | 0.00 |

| Targets                                                          | and a set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set o |                                  |                           |                           | · · · · · · · · · · · · |                  |                 |                  |                   |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------|---------------------------|-------------------------|------------------|-----------------|------------------|-------------------|
| Target Name<br>- hit/miss target<br>- Shape                      | Dip Angle<br>(°)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Dip Dir.<br>(°)                  | TVD<br>(ft)               | +N/-S<br>(ft)             | +E/-W<br>(ft)           | Northing<br>(ft) | Easting<br>(ft) | Latitude         | Longitude         |
| PBHL-State H #1<br>- plan hits target<br>- Circle (radius 10 f   | 0 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0 00                             | 7,300 00                  | -237 00                   | 101.00                  | 646,392 20       | 528,285 50      | 32° 46' 37 164 N | 104° 14' 28.693 W |
| South HL-State H #1<br>- plan misses by 14<br>- Rectangle (sides | 0 00<br>4 14ft at 7321.0<br>W0 00 H200.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0 00<br>1ft MD (7300<br>0 D0.00) | 7,300 00<br>0.00 TVD, -23 | -247 00<br>37 00 N, 101.0 | 111 00<br>00 E)         | 646,382 20       | 528,295 50      | 32° 46' 37 065 N | 104° 14' 28 576 W |
| East HL-State H #1<br>- plan misses by 14<br>- Rectangle (sides  | 0 00<br>4 14ft at 7321 0<br>W800 00 H0 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0 00<br>1ft MD (7300<br>0 D0 00) | 7,300 00<br>0 00 TVD, -23 | -247 00<br>37.00 N, 101.( | 111 00<br>00 E)         | 646,382.20       | 528,295 50      | 32° 46' 37 065 N | 104° 14' 28.576 W |



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#### **Scientific Drilling**

Planning Report



| Company:        | Mack Eporgy Corp                      | TVD Reference:             | WEI Gate II #2                                                                                                 |
|-----------------|---------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------|
| Company.        | Eddy County NM (NAD 27 NME)           | ND Reference.              |                                                                                                                |
| Project:        | Eddy County, NM (NAD 27 NME)          | MD Reference.              |                                                                                                                |
| Site:           | State H #2                            | North Reference:           | Grid                                                                                                           |
| Well:           | State H #2                            | Survey Calculation Method: | Minimum Curvature                                                                                              |
| Wellbore:       | Wellbore #1                           | 1                          | ,                                                                                                              |
| Design:         | Plan #2                               | ءَ<br>د<br>ليب -           | م میں میں میں میں اور اور اور اور اور اور اور اور اور اور                                                      |
| Occile a Delate | · · · · · · · · · · · · · · · · · · · |                            |                                                                                                                |
| Casing Points   |                                       |                            | ها الهيد المادة معلماتها والتي المتنب بالماليون ويوارد الماليون ويواردو وورادي ويواردو ويواردو ويواردو ويواردو |
|                 | Measured Vertical                     |                            | Casing Hole                                                                                                    |
| 1               | Denth Denth                           |                            | Diamotor Diamotor                                                                                              |

|                | Depth<br>(ft) | Depth<br>(ft) |               | Name    |                           | Diameter<br>(ft) | Diameter<br>(ft) |
|----------------|---------------|---------------|---------------|---------|---------------------------|------------------|------------------|
|                | 1,150 0       | 0 1,150 00    | 8 5/8" Casing |         |                           | 8 62500          | 12.25000         |
| Plan Annotatio | ns            |               |               |         |                           |                  |                  |
|                | Measured      | Vertical      | Local Coor    | dinates |                           |                  |                  |
|                | Depth         | Depth         | +N/-S         | +E/-W   |                           |                  |                  |
|                | (ft)          | (ft)          | (ft)          | (ft)    | Comment                   |                  |                  |
|                | 1,250 00      | 1,250 00      | 0 00          | 0 00    | KOP 1250' Start 2 0°/100' |                  |                  |
| }              | 1,785 00      | 1,781 90      | -45 82        | 19.53   | EOC hold 10.70°           |                  |                  |
|                | 2,636 01      | 2,618 11      | -191 18       | 81 47   | Start Drop 2 0°/100'      |                  |                  |
|                | 3,171 01      | 3,150 00      | -237 00       | 101 00  | EOC hold 0 0°             |                  |                  |

10/19/2007 3.34.17PM

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| District I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Stat                                                                                                                        | e of New I                                                                                       | Iexico                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                  |                                                 |                                        |                                        | Form                                      | n C-103                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------|----------------------------------------|----------------------------------------|-------------------------------------------|-----------------------------------|
| 1625 N. French Dr., Hobbs, NM 88240<br>Phone (505) 393-6161 Fax (505) 393-0720                                                                                                                                                                                                                                                                                                                                                                                                                | Energy, Mir                                                                                                                 | nerals and Nat                                                                                   | ural Resour                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ces –                                                            |                                                 |                                        |                                        | Permi                                     | it 65781                          |
| District I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             | ncomotion                                                                                        | Dirician                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2973                                                             | WELL AP                                         | I NUME                                 | BER                                    |                                           |                                   |
| 1301 W. Grand Ave., Artesia, NM 88210<br>Phone:(505) 748-1283 Fax:(505) 748-9720                                                                                                                                                                                                                                                                                                                                                                                                              | 1220                                                                                                                        | S. St Fra                                                                                        | i Division<br>icis Dr.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                  | -                                               | 80-015-                                | 35814                                  | t –                                       |                                   |
| District III<br>1000 Rio Brazos Rd., Aztec, NM 87410<br>Phone:(505) 334-6178 Fax:(505) 334-6170                                                                                                                                                                                                                                                                                                                                                                                               | San                                                                                                                         | ta Fe, NM                                                                                        | 87505                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                                                                | 5. Indicate                                     | Type of<br>S                           | Lease                                  |                                           |                                   |
| District IV<br>1220 S. St Francis Dr., Santa Fe, NM 87505<br>Phone:(505) 476-3470 Fax:(505) 476-3462                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                             |                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  | 5. State Oi                                     | 1 & Gas                                | Lease 1                                | ٩o.                                       |                                   |
| SUNDRY NOTIC<br>(DO NOT USE THIS FORM FOR PROPO<br>A DIFFRENT RESERVIOR. USE "APPL<br>PROPOSALS.)                                                                                                                                                                                                                                                                                                                                                                                             | ES AND REPOR'<br>SALS TO DRILL OR<br>ICATION FOR PERM                                                                       | TS ON WELL<br>2 TO DEEPEN C<br>MIT" (FORM C-1                                                    | .S<br>r plug baci<br>101) for suci                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | K TO<br>H                                                        | 7. Lease N<br>3. Well Ni                        | ame or U<br>ST <i>I</i><br>mber        | Jnit Ag<br>ATE H                       | reement.<br>[                             | Name                              |
| 1. Type of Well:()                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  |                                                 |                                        | JU2                                    |                                           |                                   |
| 2. Name of Operator<br>MACk                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ENERGY CORP                                                                                                                 |                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2                                                                | 9. OGRID                                        | Number<br>11                           | 3837                                   |                                           |                                   |
| 3. Address of Operator<br>PO BOX 960 , , 11352 LOV                                                                                                                                                                                                                                                                                                                                                                                                                                            | NGTON HWY AR                                                                                                                | TESIA , NM 88                                                                                    | 211                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | l                                                                | 10. Pool n                                      | anne or V                              | Wildcat                                |                                           |                                   |
| 4. Well Location<br>Unit Letter <u>H</u> : 2063 feet fr<br>Section <u>2</u> Township                                                                                                                                                                                                                                                                                                                                                                                                          | om the <u>N</u> 18S                                                                                                         | line and44<br>Range                                                                              | 1 feet from<br>27E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | n the<br>NMPM                                                    | E<br>Ed                                         | line<br>ldy                            | Co                                     | unty                                      |                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 11. Elevation (Show                                                                                                         | w whether DR, KB                                                                                 | , BT, GR, etc.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  |                                                 | 5112                                   |                                        |                                           |                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Υ.e.                                                                                                                        | 3590 GR                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  |                                                 |                                        |                                        |                                           |                                   |
| Pit or Below-grade Tank Application _ or Clo                                                                                                                                                                                                                                                                                                                                                                                                                                                  | nne 🔽                                                                                                                       | allandi 1450 alba 196                                                                            | - 31 - 87.502                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                  | - 10 - 11                                       |                                        |                                        |                                           |                                   |
| Pit Type Depth to Groundwater                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Distance from nea                                                                                                           | arest fresh water wel                                                                            | l Dista                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | nce from 1                                                       | nearest suid                                    | áce wate                               | r                                      |                                           |                                   |
| Pit Liner Thickness: mil                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Below-Grade Tank: Volu                                                                                                      | me                                                                                               | bbls; Canstr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | uction Ma                                                        | terial                                          |                                        |                                        | <u></u> 2                                 |                                   |
| 12. Check Appr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | opriate Box to Ind                                                                                                          | licate Nature (                                                                                  | of Notice, R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | eport of                                                         | r Other                                         | Data                                   | _                                      |                                           |                                   |
| NOTICE OF INTENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ION TO:                                                                                                                     |                                                                                                  | SUBSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | QUEN.                                                            | r repo                                          | RT C                                   | )F:                                    |                                           | _                                 |
| TENDORADU Y ADANDON                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UG AND ABANDON                                                                                                              | CONTRACTOR                                                                                       | AL WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CODIC                                                            |                                                 | TERC                                   | ASINC                                  |                                           | N                                 |
| DULL OF ALTER CASING                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ANGE OF PLANS                                                                                                               |                                                                                                  | TEMENT IOP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | GOPNS.                                                           |                                                 | OG AN                                  | D AD                                   | ANDO.                                     | 14                                |
| POLL OR ALTER CASING   MI                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | JETIPLE COMPL                                                                                                               | CASINGA                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  | 67                                              |                                        |                                        |                                           | N                                 |
| Other:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                             | Other: Dr                                                                                        | uung/Cemen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | u                                                                |                                                 |                                        |                                        |                                           | X                                 |
| <ol> <li>Describe proposed or completed operations. (<br/>work.) SEE RULE 1103. For Multiple Complet<br/>10/31/2007 Spud 17 1/2 hole @ 10:00 pm<br/>11/1/2007 TD @ 201. Ran 5jts 13 3/8 H-<br/>1800# 30min, OK.</li> <li>11/4/2007 TD 12 1/4 hole @ 1165'.</li> <li>11/5/2007 Ran 27jts 8 5/8 J-55 32# @ 11<br/>30min, OK.</li> <li>11/20/2007 TD @ 7545'.</li> <li>11/22/2007 Ran 177jts 5 1/2 J-55 17# @<br/>WOC 12hrs test to 600# 20min, OK.</li> <li>10/31/2007 Spudded well.</li> </ol> | Clearly state all pertinent<br>ions: Attach wellbore dia<br>40 48# @ 201', Cmt<br>70'. Cmt w/475sx C,<br>7495', Cmt w/530sx | t details, and give p<br>gram of proposed c<br>w/250sx C+2%<br>200sx C+2%CC<br>C, circ 217sx. 2: | ertinent dates, in<br>completion or reco<br>CC, circ 104sx<br>C, circ 218sx, p<br>nd stage 365sx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | winding es<br>ampletion.<br>c, plug dc<br>olug dow<br>: C, 520s: | uimated da<br>own 12:2<br>n 3:00an<br>x C, plug | te of stat<br>Opm. V<br>1. WOC<br>down | tting an<br>VOC 1<br>C 12hrs<br>6:55pi | y propo<br>Shrs to<br>s test t<br>m, circ | sed<br>est to<br>o 600#<br>200sx. |
| Casing and Cement Program                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |                                                                                                  | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                  |                                                 |                                        |                                        |                                           | _                                 |
| Date String Type Siz                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | e Usg Weight<br>e Size Ib/ft                                                                                                | Grade TOC                                                                                        | Set Sacks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | s Yield                                                          | Class                                           | 1"<br>Dpth                             | Held                                   | Drop                                      | Upen<br>Hole                      |
| 11/01/07 Surf FreshWater 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5 13.375 48                                                                                                                 | H-40 0                                                                                           | 201 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0                                                                | С                                               |                                        | 1800                                   | 0                                         | Y                                 |
| 11/U5/07 Int1 FreshWater 12.2<br>11/22/07 Prod CutBrine 7.87                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5 8.625 32<br>5 5.5 17                                                                                                      | : J-55 0<br>: J-55 0                                                                             | 1170 675<br>7495 1415                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5                                                                | с<br>с                                          |                                        | 600<br>600                             | 0<br>0                                    | Y<br>Y                            |
| Ihereby certify that the information above is true<br>been/will be constructed or closed according to F<br>SIGNATURE Electronically Signed<br>Type or print name Levy Shevell                                                                                                                                                                                                                                                                                                                 | and complete to the best<br>MOCD guidelines [], a<br>TITLI<br>F-mail add                                                    | of my knowledge<br>general permit<br>E Production C<br>tress jerrors@me                          | md belief. I furths<br>or an (attached) al<br>lerk<br>ackenerozoooc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | er certify th<br>hemative (<br>com Te                            | at any pit<br>DCD-appro<br>DAT<br>lenhone       | or belov<br>ved plar<br>E 12/1<br>No S | v-grade<br>∖<br>1/2001<br>05-741       | tank has<br>7<br>8_1089                   | 5                                 |
| For State Use Only:                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             | a coo ferrasconte                                                                                | and the rest of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the local participation of the l |                                                                  | optione                                         | 10.2                                   | 55-14                                  | -1200                                     |                                   |
| APPROVED BY: Bryan Arrant                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | TITLE                                                                                                                       | C Geologist                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                                                                | DATE                                            | 12/12/2                                | 007 7:                                 | 46:02                                     | AM                                |

| Subtitut 3 Copies To Appropriate District                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | State of New Mey                                                                                                                                                                                                                                                                                                                                                                         | kico                                                                                                                                                                                        |                                                                                                                       | Form C-1                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| District I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Energy, Minerals and Natur                                                                                                                                                                                                                                                                                                                                                               | al Resources                                                                                                                                                                                | WELLAPINO                                                                                                             | May 27, 2                                                                   |
| 1625, N French Dr , Hobbs, NM 88240<br>District 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | OU CONSERVATION                                                                                                                                                                                                                                                                                                                                                                          | DIVISION                                                                                                                                                                                    | 30-015-35814                                                                                                          |                                                                             |
| 1301 W. Grand Ave , Artesia, NM 88210<br>District III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1220 South St. Fran                                                                                                                                                                                                                                                                                                                                                                      | DIVISION                                                                                                                                                                                    | 5. Indicate Type of Leas                                                                                              | e                                                                           |
| 1000 Rio Brazos Rd , Aztec, NM 87410                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Santa Fe, NM 87                                                                                                                                                                                                                                                                                                                                                                          | 505                                                                                                                                                                                         | STATE X                                                                                                               | FEE                                                                         |
| District IV<br>1220 S St Francis Dr , Santa Fe, NM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Sunta 1 0, 1001 07.                                                                                                                                                                                                                                                                                                                                                                      | 505                                                                                                                                                                                         | D. State Off & Gas Lease                                                                                              | NO.                                                                         |
| 87505                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | CES AND DEPODTS ON WELLS                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                             | B-9391<br>7 Lesse Name or Unit A                                                                                      | greement Nam                                                                |
| (DO NOT USE THIS FORM FOR PROPOS<br>DIFFERENT RESERVOIR USE "APPLIC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ALS TO DRILL OR TO DEEPEN OR PLU<br>ALS TO DRILL OR TO DEEPEN OR PLU<br>ATION FOR PERMIT" (FORM C-101) FO                                                                                                                                                                                                                                                                                | G BACK TO A<br>R SUCH                                                                                                                                                                       | State H                                                                                                               | greement ivan                                                               |
| PROPOSALS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Gas Well Other <b>FCD</b>                                                                                                                                                                                                                                                                                                                                                                | 2 6 2008                                                                                                                                                                                    | 8. Well Number 2                                                                                                      |                                                                             |
| 2. Name of Operator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Sus Well D Other FED                                                                                                                                                                                                                                                                                                                                                                     | ADTERIA                                                                                                                                                                                     | 9. OGRID Number                                                                                                       |                                                                             |
| Mack Ener                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | gy Corporation                                                                                                                                                                                                                                                                                                                                                                           | ARIESIA                                                                                                                                                                                     | 0                                                                                                                     | 13837                                                                       |
| 3. Address of Operator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                             | I 0. Pool name or Wildca                                                                                              | it<br>                                                                      |
| P. O. Box                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 960 Artesia, NM 88211-0960                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                             | Red Lake; Glorieta-Yeso                                                                                               | NE                                                                          |
| 4. Well Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2063 fast from the North                                                                                                                                                                                                                                                                                                                                                                 | line and                                                                                                                                                                                    | 441 foot from the                                                                                                     | East 1                                                                      |
| Section 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Township 18S Par                                                                                                                                                                                                                                                                                                                                                                         | mic and<br>nge 27E                                                                                                                                                                          |                                                                                                                       | ty Eddy                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 11 Elevation (Show whether DR                                                                                                                                                                                                                                                                                                                                                            | RKB_RT_GR_etc.                                                                                                                                                                              |                                                                                                                       | ty                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3590'                                                                                                                                                                                                                                                                                                                                                                                    | GR                                                                                                                                                                                          |                                                                                                                       |                                                                             |
| Pit or Below-grade Tank Application o                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Closure                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                             |                                                                                                                       |                                                                             |
| Pit typeDepth Groundwa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | terDistance from nearest fresh wa                                                                                                                                                                                                                                                                                                                                                        | ater well Dis                                                                                                                                                                               | stance from nearest surface wate                                                                                      | r                                                                           |
| Pit Liner Thickness: mil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Below-Grade Tank: Volume                                                                                                                                                                                                                                                                                                                                                                 | bb1s; Co                                                                                                                                                                                    | nstruction Material                                                                                                   |                                                                             |
| 12. Check A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ppropriate Box to Indicate Na                                                                                                                                                                                                                                                                                                                                                            | ature of Notice,                                                                                                                                                                            | Report or Other Data                                                                                                  |                                                                             |
| NOTICE OF IN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                          | SUE                                                                                                                                                                                         | SEQUENT REPORT                                                                                                        | OF.                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                          | REMEDIAL WOR                                                                                                                                                                                |                                                                                                                       |                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                             |                                                                                                                       |                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                          | CASING/CEMEN                                                                                                                                                                                |                                                                                                                       |                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                             |                                                                                                                       |                                                                             |
| OTHER:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                          | OTHER: Comple                                                                                                                                                                               | etion                                                                                                                 |                                                                             |
| 13. Describe proposed or compl<br>of starting any proposed we                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | eted operations. (Clearly state all performed operations) SEE RULE 1103 For Multiple                                                                                                                                                                                                                                                                                                     | ertinent details, an<br>e Completions: At                                                                                                                                                   | d give pertinent dates, inclu<br>tach wellbore diagram of p                                                           | iding estimated                                                             |
| or recompletion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ······································                                                                                                                                                                                                                                                                                                                                                   | <b>-</b>                                                                                                                                                                                    |                                                                                                                       |                                                                             |
| 12/15/2007 Perforated from 6134 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5-6434' 57 holes.                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                             |                                                                                                                       |                                                                             |
| 12/13/2007 I UNUMUUU NUM UNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | • • • • • • • • • • • • • • • • • • • •                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                             |                                                                                                                       |                                                                             |
| 12/17/2007 Acidized w/4500 gals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 15%.                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                             |                                                                                                                       |                                                                             |
| 12/17/2007 Acidized w/4500 gals 1<br>12/18/2007 RIH w/203 joints 2 7/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2                                                                                                                                                                                                                                                                                                                                                   | "x2"x20' pump.                                                                                                                                                                              |                                                                                                                       |                                                                             |
| 12/17/2007 Acidized w/4500 gals 1<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57                                                                                                                                                                                                                                                                                                              | "x2"x20' pump.<br>89.5-5957.5' 52 h                                                                                                                                                         | noles.                                                                                                                |                                                                             |
| 12/17/2007 Acidized w/4500 gals<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>5%.                                                                                                                                                                                                                                                                                                       | "x2"x20' pump.<br>89.5-5957.5' 52 h                                                                                                                                                         | noles.                                                                                                                |                                                                             |
| 12/17/2007 Acidized w/4500 gals 1<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals 1<br>12/28/2007 Perforated from 5391-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>15%.<br>5700.5' 83 holes. Acidized w/5000<br>tubing SN @ 5065'. DUI = /2 1/2                                                                                                                                                                                                                              | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' access                                                                                                                       | noles.                                                                                                                |                                                                             |
| 12/17/2007 Acidized w/4500 gals 1<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals 1<br>12/28/2007 Perforated from 5391-5<br>12/29/2007 RIH w/188 joints 2 7/8<br>1/7/2008 Set CIBP @ 5300' w/35'                                                                                                                                                                                                                                                                                                                                                                                                        | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000</li> <li>tubing SN @ 5965'. RIH w/2 1/2</li> <li>sement cap. Perforated from 4118</li> </ul>                                                                                                                                   | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>5-4197' 40 boles                                                                                                    | noles.                                                                                                                |                                                                             |
| 12/17/2007 Acidized w/4500 gals 1<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals 1<br>12/28/2007 Perforated from 5391-5<br>12/29/2007 RIH w/188 joints 2 7/8<br>1/7/2008 Set CIBP @ 5300' w/35' 6<br>1/8/2008 Acidized w/2000 gals 156                                                                                                                                                                                                                                                                                                                                                                 | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000</li> <li>tubing SN @ 5965'. RIH w/2 1/2</li> <li>cement cap. Perforated from 4118</li> <li>%.</li> </ul>                                                                                                                       | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes                                                                                                   | noles.                                                                                                                |                                                                             |
| 12/17/2007 Acidized w/4500 gals 1<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals 1<br>12/28/2007 Perforated from 5391-3<br>12/29/2007 RIH w/188 joints 2 7/8<br>1/7/2008 Set CIBP @ 5300' w/35' of<br>1/8/2008 Acidized w/2000 gals 155<br>1/9/2008 Frac w/8130# liteprop, 68                                                                                                                                                                                                                                                                                                                          | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000 tubing SN @ 5965'. RIH w/2 1/2</li> <li>cement cap. Perforated from 4118</li> <li>5,890# 16/30 sand, 14,046# siberp</li> </ul>                                                                                                 | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>prop, 91,292 gals 1                                                                            | noles.<br>30/40# gel.                                                                                                 |                                                                             |
| 12/17/2007 Acidized w/4500 gals 12/18/2007 RIH w/203 joints 2 7/8 12/26/2007 Set CIBP @ 6020' w/3 12/27/2007 Acidized w/4500 gals 12/28/2007 Perforated from 5391-5 12/29/2007 RIH w/188 joints 2 7/8 1/7/2008 Set CIBP @ 5300' w/35' d 1/8/2008 Acidized w/2000 gals 155 1/9/2008 Frac w/8130# liteprop, 68 1/11/2008 RIH w/134 joints 2 7/8"                                                                                                                                                                                                                                                                                                                     | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000</li> <li>tubing SN @ 5965'. RIH w/2 1/2</li> <li>cement cap. Perforated from 4118</li> <li>%.</li> <li>3,890# 16/30 sand, 14,046# siberp</li> <li>tubing SN @ 4243'. RIH 2 1/2 x 3</li> </ul>                                  | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>prop, 91,292 gals 1<br>2 x 20' Pump.                                                           | noles.<br>30/40# gel.                                                                                                 |                                                                             |
| 12/17/2007 Acidized w/4500 gals 12/18/2007 RIH w/203 joints 2 7/8 12/26/2007 Set CIBP @ 6020' w/3 12/27/2007 Acidized w/4500 gals 12/28/2007 Perforated from 5391-5 12/29/2007 RIH w/188 joints 2 7/8 1/7/2008 Set CIBP @ 5300' w/35' d 1/8/2008 Acidized w/2000 gals 155 1/9/2008 Frac w/8130# liteprop, 68 1/11/2008 RIH w/134 joints 2 7/8"                                                                                                                                                                                                                                                                                                                     | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000</li> <li>tubing SN @ 5965'. RIH w/2 1/2</li> <li>cement cap. Perforated from 4118</li> <li>%.</li> <li>\$,890# 16/30 sand, 14,046# siberp</li> <li>tubing SN @ 4243'. RIH 2 1/2 x 3</li> </ul>                                 | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>rop, 91,292 gals 1<br>2 x 20' Pump.                                                            | noles.<br>30/40# gel.                                                                                                 | ~                                                                           |
| 12/17/2007 Acidized w/4500 gals 1<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals 1<br>12/28/2007 Perforated from 5391-5<br>12/29/2007 RIH w/188 joints 2 7/8<br>1/7/2008 Set CIBP @ 5300' w/35' of<br>1/8/2008 Acidized w/2000 gals 155<br>1/9/2008 Frac w/8130# liteprop, 68<br>1/11/2008 RIH w/134 joints 2 7/8"                                                                                                                                                                                                                                                                                     | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000 tubing SN @ 5965'. RIH w/2 1/2</li> <li>cement cap. Perforated from 4118 %.</li> <li>3,890# 16/30 sand, 14,046# siberp tubing SN @ 4243'. RIH 2 1/2 x 3</li> </ul>                                                             | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>prop, 91,292 gals 1<br>2 x 20' Pump.                                                           | noles.<br>30/40# gel.                                                                                                 | ~                                                                           |
| 12/17/2007 Acidized w/4500 gals<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals<br>12/28/2007 Perforated from 5391-5<br>12/29/2007 RIH w/188 joints 2 7/8<br>1/7/2008 Set CIBP @ 5300' w/35' d<br>1/8/2008 Acidized w/2000 gals 159<br>1/9/2008 Frac w/8130# liteprop, 68<br>1/11/2008 RIH w/134 joints 2 7/8"                                                                                                                                                                                                                                                                                          | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>15%.<br>5700.5' 83 holes. Acidized w/5000<br>tubing SN @ 5965'. RIH w/2 1/2<br>cement cap. Perforated from 4118<br>%.<br>5,890# 16/30 sand, 14,046# siberp<br>tubing SN @ 4243'. RIH 2 1/2 x 3                                                                                                            | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>prop, 91,292 gals 1<br>2 x 20' Pump.                                                           | noles.<br>30/40# gel.                                                                                                 | ~                                                                           |
| 12/17/2007 Acidized w/4500 gals<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals<br>12/28/2007 Perforated from 5391-5<br>12/29/2007 RIH w/188 joints 2 7/8<br>1/7/2008 Set CIBP @ 5300' w/35' d<br>1/8/2008 Acidized w/2000 gals 155<br>1/9/2008 Frac w/8130# liteprop, 68<br>1/11/2008 RIH w/134 joints 2 7/8"                                                                                                                                                                                                                                                                                          | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>15%.<br>5700.5' 83 holes. Acidized w/5000<br>tubing SN @ 5965'. RIH w/2 1/2<br>cement cap. Perforated from 4118<br>%.<br>5,890# 16/30 sand, 14,046# siberp<br>tubing SN @ 4243'. RIH 2 1/2 x 3                                                                                                            | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>rop, 91,292 gals 1<br>2 x 20' Pump.                                                            | noles.<br>30/40# gel.                                                                                                 | ~                                                                           |
| 12/17/2007 Acidized w/4500 gals<br>12/18/2007 RIH w/203 joints 2 7/8<br>12/26/2007 Set CIBP @ 6020' w/3<br>12/27/2007 Acidized w/4500 gals<br>12/28/2007 Perforated from 5391-5<br>12/29/2007 RIH w/188 joints 2 7/8<br>1/7/2008 Set CIBP @ 5300' w/35' o<br>1/8/2008 Acidized w/2000 gals 155<br>1/9/2008 Frac w/8130# liteprop, 68<br>1/11/2008 RIH w/134 joints 2 7/8"                                                                                                                                                                                                                                                                                          | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000 tubing SN @ 5965'. RIH w/2 1/2</li> <li>cement cap. Perforated from 4118 %.</li> <li>3,890# 16/30 sand, 14,046# siberp tubing SN @ 4243'. RIH 2 1/2 x</li> </ul>                                                               | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>rop, 91,292 gals 1<br>2 x 20' Pump.                                                              | and belief. I further certify t                                                                                       | hat any pit or b                                                            |
| 12/17/2007 Acidized w/4500 gals         12/18/2007 RIH w/203 joints 2 7/8         12/26/2007 Set CIBP @ 6020' w/3         12/27/2007 Acidized w/4500 gals         12/28/2007 Perforated from 5391-5         12/29/2007 RIH w/188 joints 2 7/8         1/7/2008 Set CIBP @ 5300' w/35' d         1/8/2008 Acidized w/2000 gals 155         1/9/2008 Frac w/8130# liteprop, 68         1/11/2008 RIH w/134 joints 2 7/8"         1         hereby certify that the information a grade tank has been/will be constructed or                                                                                                                                          | <ul> <li>15%.</li> <li>tubing SN @ 6439'. RIH w/2 1/2</li> <li>5' cement cap. Perforated from 57</li> <li>15%.</li> <li>5700.5' 83 holes. Acidized w/5000</li> <li>tubing SN @ 5965'. RIH w/2 1/2</li> <li>cement cap. Perforated from 4118</li> <li>%.</li> <li>8,890# 16/30 sand, 14,046# siberp</li> <li>tubing SN @ 4243'. RIH 2 1/2 x</li> </ul>                                    | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>rop, 91,292 gals 2<br>2 x 20' Pump.                                                              | and belief. I further certify t<br>] or an (attached) alternative O(                                                  | hat any pit or b<br>D-approved plar                                         |
| 12/17/2007 Acidized w/4500 gals         12/17/2007 Acidized w/4500 gals         12/18/2007 RIH w/203 joints 2 7/8         12/26/2007 Set CIBP @ 6020' w/3         12/27/2007 Acidized w/4500 gals         12/28/2007 Perforated from 5391-5         12/29/2007 RIH w/188 joints 2 7/8         1/7/2008 Set CIBP @ 5300' w/35' d         1/8/2008 Acidized w/2000 gals 155         1/9/2008 Frac w/8130# liteprop, 68         1/11/2008 RIH w/134 joints 2 7/8"         I hereby certify that the information a grade tank has been/will be constructed or         SIGNATURE       Comm. U.                                                                         | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>15%.<br>5700.5' 83 holes. Acidized w/5000<br>tubing SN @ 5965'. RIH w/2 1/2<br>cement cap. Perforated from 4118<br>%.<br>8,890# 16/30 sand, 14,046# siberp<br>tubing SN @ 4243'. RIH 2 1/2 x .<br>bove is true and complete to the best<br>closed according to NMOCD guidelines<br>TITLE Pro              | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>prop, 91,292 gals<br>2 x 20' Pump.                                                             | and belief. I further certify t<br>] or an (attached) alternative OC<br>DAT                                           | hat any pit or be<br>CD-approved plan<br>E 2/25/08                          |
| 12/17/2007 Acidized w/4500 gals         12/17/2007 RIH w/203 joints 2 7/8         12/26/2007 Set CIBP @ 6020' w/3         12/27/2007 Acidized w/4500 gals         12/28/2007 Perforated from 5391-5         12/29/2007 RIH w/188 joints 2 7/8         1/7/2008 Set CIBP @ 5300' w/35' d         1/8/2008 Acidized w/2000 gals 155         1/9/2008 Frac w/8130# liteprop, 68         1/11/2008 RIH w/134 joints 2 7/8"         1 hereby certify that the information a grade tank has been/will be constructed or         SIGNATURE         Compute         Jerry W. Sherre                                                                                        | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>15%.<br>5700.5' 83 holes. Acidized w/5000<br>tubing SN @ 5965'. RIH w/2 1/2<br>cement cap. Perforated from 4118<br>%.<br>8,890# 16/30 sand, 14,046# siberp<br>tubing SN @ 4243'. RIH 2 1/2 x 1<br>bove is true and complete to the best<br>closed according to NMOCD guidelines<br><u>TITLE Pro</u><br>II | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>rop, 91,292 gals<br>2 x 20' Pump.<br>t of my knowledge<br>, a general permit<br>oduction Clerk | and belief. I further certify t<br>]or an (attached) alternative OC<br>DAT                                            | hat any pit or be<br>CD-approved plan<br>E 2/25/08                          |
| 12/17/2007 Acidized w/4500 gals         12/17/2007 Acidized w/4500 gals         12/18/2007 RIH w/203 joints 2 7/8         12/26/2007 Set CIBP @ 6020' w/3         12/27/2007 Acidized w/4500 gals         12/28/2007 Perforated from 5391-5         12/29/2007 RIH w/188 joints 2 7/8         1/7/2008 Set CIBP @ 5300' w/35' of         1/8/2008 Acidized w/2000 gals 155         1/9/2008 Frac w/8130# liteprop, 68         1/11/2008 RIH w/134 joints 2 7/8"         I hereby certify that the information a         grade tank has been/will be constructed or         SIGNATURE         Type or print name         Jerry W. Sherre         For State Use Only | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>15%.<br>5700.5' 83 holes. Acidized w/5000<br>tubing SN @ 5965'. RIH w/2 1/2<br>cement cap. Perforated from 4118<br>%.<br>8,890# 16/30 sand, 14,046# siberp<br>tubing SN @ 4243'. RIH 2 1/2 x<br>bove is true and complete to the best<br>closed according to NMOCD guidelines<br>                         | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>rop, 91,292 gals<br>2 x 20' Pump.<br>t of my knowledge<br>a general permit<br>oduction Clerk     | and belief. I further certify t<br>30/40# gel.<br>]or an (attached) alternative OC<br>DAT<br>energycorp.com Telephon  | hat any pit or b<br>2D-approved plar<br>E 2/25/08<br>ne No. <u>(575)7</u> 2 |
| 12/17/2007 Acidized w/4500 gals         12/17/2007 RIH w/203 joints 2 7/8         12/26/2007 Set CIBP @ 6020' w/3         12/27/2007 Acidized w/4500 gals         12/28/2007 Perforated from 5391-3         12/29/2007 RIH w/188 joints 2 7/8         17/2008 Set CIBP @ 5300' w/35' d         1/8/2008 Acidized w/2000 gals 159         1/9/2008 Frac w/8130# liteprop, 68         1/11/2008 RIH w/134 joints 2 7/8"         I hereby certify that the information a grade tank has been/will be constructed or         SIGNATURE         Type or print name         Jerry W. Sherre         For State Use Only                                                   | 15%.<br>tubing SN @ 6439'. RIH w/2 1/2<br>5' cement cap. Perforated from 57<br>15%.<br>5700.5' 83 holes. Acidized w/5000<br>tubing SN @ 5965'. RIH w/2 1/2<br>cement cap. Perforated from 4118<br>%.<br>8,890# 16/30 sand, 14,046# siberp<br>tubing SN @ 4243'. RIH 2 1/2 x<br>bove is true and complete to the best<br>closed according to NMOCD guidelines<br>                         | "x2"x20' pump.<br>89.5-5957.5' 52 h<br>) gals 15%.<br>"x2"x20' pump.<br>.5-4197' 40 holes<br>prop, 91,292 gals<br>2 x 20' Pump.                                                             | and belief. I further certify t<br>30/40# gel.<br>]or an (attached) alternative OC<br>DAT.<br>energycorp.com Telephon | hat any pit or bo<br>CD-approved plan<br>E 2/25/08<br>ne No. (575)74        |

District I 1625 N. French Dr., Hobbs, NM 88240 State of New Mexico Energy, Minerals & Natural Resource **FEB 2 6 2008** Revised Feb. 26, 2007 District 11 1301 W Grand Avenue, Artesia. NM 88210 OCD-ARTESMIN to Appropriate District Office District III 1000 Rio Brazos Rd , Aztec, NM 87410 Oil Conservation Division 1220 South St. Francis Dr. District IV 1220 S. St. Francis Dr., Santa Fe. NM 87505 Santa Fe, NM 87505 □ AMENDED REPORT 1. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT Operator name and Address Mack Energy Corporation 2 OGRID Number 013837 3 Reason for Filing Code/ Effective Date P.O. Box 960 Artesia, NM 88211-0960 NW + API Number 30-015-35814 Pool Name 6 Pool Code 51120 96831 Red Lake; Glorieta-Yeso, NE 7 Property Code 303847 \* Property Name 9 Well Number

H. Surface Location Lot Idn Feet from the North/South line Section Township Range East/West line County Feet from the UL or lot no 2 18S 27E 2063 North East Н 441 Eddy Bottom Hole Location

State H

Form C-104

5 Copies

2

Township East/West line Section Range Feet from the County UL or lot no. Lot Idn Feet from the North/South line 18S 27E 340 2300 North East Eddy Н Producing Method Cod Gas Connection Dat C-129 Permit Number 17 C-129 Expiration Date 16 C-129 Effective Date 12 Lse Code Р S 1/11/08

| IN CH and Ods H<br>IN Transporter<br>OGRID | 19 Transporter Name<br>and Address            | <sup>20</sup> O/G/W |
|--------------------------------------------|-----------------------------------------------|---------------------|
| 015694 Nava<br>PO E<br>Artes               | ujo Refining<br>Box 159<br>sia, NM 88211-0159 | 0                   |
| 036785 DCP<br>4001<br>Odes                 | Midstream LP<br>Penbrook<br>ssa, TX 79762     | G                   |
|                                            |                                               |                     |
|                                            |                                               |                     |

IV. Well Completion Data

| 21 Spud Date | oud Date 22 Ready Date |                      | <sup>23</sup> TD | <sup>24</sup> PBTD | <sup>25</sup> Perforations | <sup>26</sup> DHC, MC |
|--------------|------------------------|----------------------|------------------|--------------------|----------------------------|-----------------------|
| 10/31/2007   | 11/                    | 23/2007              | 7545'            | 5265'              | 4118.5-4197'               |                       |
| 27 Hole Siz  | e                      | <sup>28</sup> Casing | & Tubing Size    | 29 Depth Sc        | et                         | 30 Sacks Cement       |
| 17 1/2       |                        |                      | 13 3/8           | 201                |                            | 250                   |
| 12 1/4       |                        |                      | 8 5/8            | 1170               |                            | 675                   |
| 7 7/8        | 7 7/8                  |                      | 5 1/2 7495       |                    |                            | 1415                  |
|              |                        |                      | 2 7/8            | 4243               |                            |                       |

| <u>V.</u> | <u>Well</u> | Test | Data |
|-----------|-------------|------|------|
| D         |             | 0.11 | a pu |

| 11 Date New Oil                                                                                                                    | 32 Gas Delivery Date                                                                                               | n Test Date                                                    | 34 Test Length       | <sup>15</sup> Tbg. Pressure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <sup>36</sup> Csg. Pressure |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 1/14/2008                                                                                                                          | 1/14/2008                                                                                                          | 1/30/08                                                        | 24 hours             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |
| <sup>37</sup> Choke Size                                                                                                           | <sup>38</sup> Oil                                                                                                  | 39 Water                                                       | 40 Gas               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 41 Test Method              |
|                                                                                                                                    | 8                                                                                                                  | 30                                                             | 30                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Р                           |
| <sup>42</sup> I hereby certify th<br>been complied with<br>complete to the best<br>Signature:<br>Printed name<br>Jerry W. Sherrel1 | at the rules of the Oil Conse<br>and that the information giv<br>of my knowledge and belie<br>any Markowledge Show | ervation Division have<br>yen above is true and<br>of<br>lemal | Approved-by:         | congervation division of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s | ilson                       |
| Title:<br>Production Clerk                                                                                                         |                                                                                                                    |                                                                | Approval Date: 3-5-6 | 08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |
| E-mail Address:<br>jerrys@mackener                                                                                                 | gycorp.com                                                                                                         |                                                                |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |
| Date:<br>2/25/08                                                                                                                   | Phone: (575)748-12                                                                                                 | 88                                                             |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |

| Submit to Appropriate<br>District Office<br>• State Lease - 6 copies |                    | Energ                                  | s<br>y, Minerals | State of Nev<br>s and Natur | v Mexi<br>al Reso  | co<br>ources | Departr                               | nent       |                            |                            | Form<br>Revi           | C-105<br>sed 1-1-89 |
|----------------------------------------------------------------------|--------------------|----------------------------------------|------------------|-----------------------------|--------------------|--------------|---------------------------------------|------------|----------------------------|----------------------------|------------------------|---------------------|
| Fee Lease - 5 copies                                                 |                    |                                        |                  |                             |                    |              |                                       |            | WELL API NO                |                            |                        | an, an              |
| P O Box 1980, Hobbs, 1                                               | NM 88240           | OIL                                    | CONS             |                             |                    | DI           | VISIO                                 | JN         | 30-015-3581                | 4                          |                        |                     |
| DISTRICT II<br>811 South First, Artesia                              | , NM 88210         |                                        | Santa F          | e, New M                    | Mexic              | :0 87        | 505                                   | F          | 5 Indicate Ty              | pe of Lease<br>STA         | ге 🗙                   | FEE                 |
| <u>DISTRICT III</u><br>1000 R10 Brazos Rd , Az                       | ztec, NM 87410     |                                        |                  |                             |                    |              |                                       |            | 6 State Oil & G<br>B-9391  | as Lease No                |                        |                     |
| WELL C                                                               | OMPLETIO           | N OR RE                                | COMPLE           | TION REF                    | PORT               | AND          | LOG                                   |            |                            |                            | <b>N</b> a 12          |                     |
| 1 Type of Well<br>OIL WELL                                           | GAS WE             |                                        | DRY              | OTHER                       |                    |              | · · · · · · · · · · · · · · · · · · · |            | 7 Lease Name               | e or Unit Agree            | ment N                 | ame                 |
| b Type of Completion<br>NEW WORK<br>WELL OVER                        | Deepen             | PLUG<br>BACK                           |                  | DIFF<br>RESVR 01            | HER                |              |                                       |            | State H                    |                            |                        |                     |
| 2 Name of Operator                                                   |                    |                                        |                  |                             |                    | 0.0          | 2008                                  | [L         | 8 Well No                  |                            |                        | <u> </u>            |
| Mack Energy Corpor                                                   | ation              |                                        |                  |                             | FE                 | B 20         | ) [[[]]                               |            | 2                          |                            |                        |                     |
| <sup>3</sup> Address of Operator<br>P.O. Box 960, Artesia            | , NM 88211         | -0960                                  |                  |                             | OC                 | D-AP         | RIFO                                  | M          | 9 Pool name<br>Red Lake; G | or Wildcat<br>lorieta-Yesc | , NE                   |                     |
| 4. Well Location                                                     |                    | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                  | ,                           |                    |              |                                       |            |                            |                            | ,                      |                     |
| Unit Letter                                                          | <u>H</u> : 206     | 53 Feet                                | From The         | Noi                         | th                 | Lı           | ne and                                | 441        | Feet F                     | rom The                    | Ea                     | Line                |
| Section                                                              | 2                  | Том                                    | nship            | 185                         | Range              | •            | 27E                                   | N          | мрм                        | Eddv                       |                        | County              |
| 10 Date Spudded 1                                                    | 1 Date TD Re       | ached                                  | 12 Date Co       | mnl (Ready t                | o Prod )           |              | 13 Elev                               | ations (DF | & RKR RT G                 | $R_{etc}$ 14               | 1 Elev                 | Casurghead          |
| 10/31/2007                                                           | 11/21/20           | 007                                    |                  | 1/11/08                     | 017000)            |              | 15 2.00                               | 3:<br>3:   | 590' GR                    |                            | Lie.                   | Cashighead          |
| 15 Total Depth                                                       | 16. Plug           | Back TD                                |                  | 17 If Multiple Con          | mpl How            |              | 18                                    | Intervals  | Rotary Too                 | ls /                       | Cable                  | Fools               |
| 7545'                                                                |                    | 5265'                                  |                  | Many Zones'                 |                    | •            |                                       | Drilled By | Y                          | es                         |                        |                     |
| 19 Producing Interval(s),<br>4118.5-4197'                            | of this completi   | on - Top, B                            | ottom, Name      |                             |                    |              |                                       |            | :                          | 20 Was Directi             | onal Su<br>Yes         | rvey Made           |
| 21 Type Electric and Othe                                            | er Logs Run        |                                        |                  |                             |                    |              |                                       |            | 22 Was We                  | ell Cored                  |                        |                     |
| Gamma Ray, Neutron                                                   | , Density, La      | teralog, S                             | pectral Gai      | nma Ray                     |                    |              |                                       |            |                            | N                          | 0                      |                     |
|                                                                      |                    | CAS                                    | SING RE          | CORD (I                     | Repor              | t all s      | strings                               | set in     | well)                      |                            |                        |                     |
| CASING SIZE                                                          | WEIGHT             | LB./FT.                                | DEPT             | 'H SET                      | <u> </u>           | OLE SI       | ZE                                    | CE         | MENTING R                  | ECORD                      | AM                     | IOUNT PULLEE        |
|                                                                      | 48                 | 3                                      | 2                | 01                          |                    | 17 1/2       | 2                                     |            | 250 sx                     |                            |                        | None                |
| 5 1/2                                                                | 32                 | !                                      |                  | 105                         | -                  | 12 1/2       | •                                     |            | 6/3 sx<br>1/15 cr          | ,                          |                        | None                |
|                                                                      | 17                 |                                        |                  |                             |                    | 1 110        |                                       |            | 1415 52                    | <u> </u>                   |                        |                     |
|                                                                      |                    |                                        |                  |                             |                    |              |                                       |            |                            |                            |                        |                     |
| 24                                                                   |                    | LIN                                    | ER RECO          | RD                          |                    |              |                                       | 25         | TU                         | BING REC                   | ORD                    |                     |
| SIZE                                                                 | ТОР                | BC                                     | оттом            | SACKS CE                    | MENT               | S            | CREEN                                 |            | SIZE                       | DEPTH S                    | SET                    | PACKER SET          |
|                                                                      |                    |                                        |                  |                             |                    |              | <u>.</u>                              |            | 2 7/8                      | 4243                       | ·                      |                     |
| 26 De fontio                                                         |                    | <u> </u>                               |                  |                             |                    |              | ACID                                  | SUOT       |                            |                            |                        | EFZE FTO            |
| 6134 5 64                                                            | 3 (Interval, SI    | ize, and ה<br>רופם האו                 | (umber)          | omt con                     |                    | DE           | PTH INT                               | FRVAL      |                            | NT AND KINI                | , <u>SQ</u> L<br>D МАТ | FRIAL USED          |
| 5391-5957                                                            | 7.5'42, 92 C       | CIBP $@ 5$                             | 300' w/35'       | emt cap                     |                    |              |                                       |            | See C-103                  | for detail                 |                        |                     |
|                                                                      | 4118.5-4           | 197', .42,                             | 40               | <i>r</i>                    |                    |              |                                       |            |                            |                            |                        |                     |
|                                                                      | . <u></u>          |                                        |                  |                             |                    |              |                                       |            |                            |                            |                        |                     |
| 28                                                                   |                    |                                        |                  | PRODU                       | CTIC               | <u> N</u>    |                                       |            |                            | (                          |                        |                     |
| Date First Production                                                |                    | Productio                              | on Method (F     | lowing, gas li<br>2 1/2     | ft, pumpi<br>      | ng - Siz     | e and typ                             | e pump)    |                            | Well Statu                 | s (Prod.<br>Drodu      | or Shut-in)         |
| 1/14/2008                                                            | Hours Tested       |                                        | hoke Size        | Z 1/Z                       | x2x20 <sup>°</sup> | Pump         |                                       | Gas - M    |                            | Vater- Bhl                 | Piodu                  | Gas - Oil Ratio     |
| 1/30/08                                                              | 24 hour            | s                                      |                  | Test Perio                  | - ∖<br>>d          | 2 D0<br>8    | -                                     | 210-10     | )                          | 30                         |                        | 3750                |
| Flow Tubing Press                                                    | Casing Pressur     | re C                                   | alculated 24-    | Oıl - Bbl                   |                    | Ga           | s - MCF                               | w w        | ater- Bbl.                 | Oil Gravi                  | ty - AP                | - (Corr.)           |
|                                                                      |                    | H                                      | lour Rate        | 8                           |                    | 30           |                                       | 30         |                            |                            |                        |                     |
| 29 Disposition of Gas (Sol                                           | ld, used for fuel, | vented, etc                            | )                |                             |                    | <u> </u>     |                                       |            | Test W                     | itnessed By                |                        |                     |
| Sold                                                                 |                    |                                        |                  |                             |                    |              |                                       |            |                            | Robert                     | C. Ch                  | ase                 |
| 30 List Attachments                                                  | _                  |                                        |                  |                             |                    |              |                                       |            |                            |                            |                        |                     |
| Deviation Survey and                                                 | Logs               |                                        | he4L -> 3        | a of this f                 | . ia +:            | and i        |                                       | to the 1   | 4 of unit 1                | - d +                      |                        |                     |
| 51. I nereby certity that                                            | ine informatio     | on snown c                             | on ooth side.    | s oj this forn              | ı is true          | and co       | omplete l                             | io the bes | t of my knowl              | eage and belt              | ej                     |                     |
| Signature (                                                          | , W.               | Shee                                   | Pr               | inted                       | Ierry '            | W. Sh        | errell                                | Teel       | . Produc                   | tion Clerk                 | Det                    | 2/25/08             |

•



PO Box 1370 Artesia, NM 88211-1370 (505) 748-1288 FEB 2 6 2008 OCD-ARTESIA

November 30, 2007

Mack Energy Corporation PO Box 960 Artesia, NM 88211-0960

RE: State H #2 2310' FNL & 990' FEL Sec. 2, T18S, R27E Eddy County, New Mexico

Dear Sir,

The attached is the Deviation Survey for the above captioned re-entered well.

Very truly yours,

Leroy Curry

Drilling Superintendent

State of New Mexico } County of Eddy }

The foregoing was acknowledged before me this 30<sup>th</sup> day of November, 2007.

anne Notary Public



| Date       | Donth   | Dev   | Dir    |
|------------|---------|-------|--------|
|            | 122.00  |       |        |
| 11/01/2007 | 133.00  | 0.50  | 0.00   |
| 11/02/2007 | 431.00  | 0.75  | 0.00   |
| 11/03/2007 | 700.00  | 0.50  | 0.00   |
| 11/04/2007 | 975 00  | 1 00  | 0.00   |
| 11/04/2007 | 973.00  | 1.00  | 0.00   |
| 11/04/2007 | 1134.00 | 0.50  | 0.00   |
| 11/06/2007 | 1301.00 | 1.66  | 164.90 |
| 11/06/2007 | 1396.00 | 3 41  | 161.90 |
| 11/07/2007 | 1402.00 | 5.11  | 150 10 |
| 11/07/2007 | 1492.00 | 5.19  | 159.10 |
| 11/07/2007 | 1587.00 | 7.21  | 156.40 |
| 11/07/2007 | 1683.00 | 8.51  | 155.20 |
| 11/07/2007 | 1778 00 | 0 04  | 158 10 |
| 11/07/2007 | 1072 00 | 0.56  | 157.60 |
| 11/0//2007 | 10/3.00 | 9.50  | 157.00 |
| 11/08/2007 | 1968.00 | 10.53 | 159.60 |
| 11/08/2007 | 2064.00 | 9.83  | 160.00 |
| 11/08/2007 | 2159.00 | 9 69  | 160 50 |
| 11/08/2007 | 2155.00 | 10.70 | 156.00 |
| 11/06/2007 | 2350.00 | 10.78 | 150.20 |
| 11/08/2007 | 2445.00 | 10.67 | 156.40 |
| 11/08/2007 | 2540.00 | 10.54 | 155.40 |
| 11/08/2007 | 2604 00 | 10.43 | 156 30 |
| 11/00/2007 | 2001.00 | 10.15 | 150.50 |
| 11/09/2007 | 2099.00 | 8.56  | 120.20 |
| 11/09/2007 | 2794.00 | 7.39  | 158.60 |
| 11/09/2007 | 2984.00 | 4.30  | 162.00 |
| 11/09/2007 | 3080.00 | 2.86  | 157 10 |
| 11/00/2007 | 2175.00 | 1.50  | 150.00 |
| 11/09/2007 | 31/5.00 | 1.50  | 150.00 |
| 11/09/2007 | 3270.00 | 0.67  | 256.70 |
| 11/09/2007 | 3365.00 | 0.82  | 280.50 |
| 11/10/2007 | 3460.00 | 0.48  | 176.00 |
| 11/10/2007 |         | 0.40  | 101.00 |
| 11/10/2007 | 3556.00 | 0.51  | 181.00 |
| 11/10/2007 | 3651.00 | 0.65  | 173.10 |
| 11/10/2007 | 3746.00 | 0.67  | 157.20 |
| 11/10/2007 | 3841 00 | 0.50  | 154 20 |
| 11/10/2007 | 2026.00 | 0.55  | 200.20 |
| 11/10/2007 | 3936.00 | 0.24  | 309.30 |
| 11/11/2007 | 4031.00 | 0.30  | 302.30 |
| 11/11/2007 | 4126.00 | 0.45  | 322.60 |
| 11/11/2007 | 4222 00 | 1.06  | 337 40 |
| 11/11/2007 | 7222.00 | 1.00  | 337.40 |
| 11/11/2007 | 4602.00 | 1.01  | 348.10 |
| 11/12/2007 | 4666.00 | 1.10  | 18.68  |
| 11/12/2007 | 4729.00 | 0.53  | 71.05  |
| 11/12/2007 | 4824 00 | 0.27  | 38 14  |
| 11/12/2007 | 4020.00 | 0.27  | 12.04  |
| 11/12/2007 | 4920.00 | 0.71  | 12.94  |
| 11/12/2007 | 5015.00 | 1.19  | 5.48   |
| 11/12/2007 | 5110.00 | 0.82  | 20.33  |
| 11/12/2007 | 5206.00 | 0.28  | 132.80 |
| 11/12/2007 | 5200.00 | 0.20  | 102.00 |
| 11/13/2007 | 5301.00 | 0.54  | 23.07  |
| 11/13/2007 | 5396.00 | 0.34  | 49.15  |
| 11/13/2007 | 5491.00 | 1.12  | 153.70 |
| 11/13/2007 | 5586.00 | 2 14  | 189 30 |
| 11/12/2007 | 5560.00 | 1 21  | 100.00 |
| 11/13/2007 | 5000.00 | 1.51  | 109.40 |
| 11/13/2007 | 5681.00 | 1.09  | 194.70 |
| 11/13/2007 | 5745.00 | 0.67  | 318.40 |
| 11/13/2007 | 5839.00 | 0.24  | 221.30 |
| 11/14/2007 | 5035.00 | 1 / 1 | 161 10 |
| 11/14/2007 | 5955.00 | 1.41  | 101.10 |
| 11/15/2007 | 5998.00 | 1.01  | 182.35 |
| 11/16/2007 | 6188.00 | 0.34  | 306.90 |
| 11/16/2007 | 6474.00 | 0.11  | 334.80 |
| 11/16/2007 | 6570.00 | 0.15  | 211 EA |
| 11/10/2007 | 00/0.00 | 0.15  | 214.20 |
| 11/1//2007 | 0004.00 | 0.27  | 304.50 |
| 11/17/2007 | 6759.00 | 0.45  | 295.50 |
| 11/17/2007 | 6854.00 | 0.46  | 296 60 |
| 11/17/2007 | 6040.00 | 0.10  | 200.40 |
| 11/1/2007  | 0949.00 | 0.59  | 290.10 |
| 11/1//2007 | /044.00 | 1.09  | 134.40 |
| 11/18/2007 | 7140.00 | 0.38  | 89.52  |
| 11/18/2007 | 7235.00 | 0.57  | 122 40 |
| 11/10/2007 | 7202 00 | 0.01  | 175 40 |
| 11/10/2007 | 1302.00 | 0.01  | 123.40 |

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### **MACK ENERGY**

Field: Chalk Bluff
Site: Eddy County, NM
Well: State H #2
Wellpath: DH - Job #32D11071006
Survey: 11/05/07-11/14/07

This survey is correct to the best of my knowledge and is supported by actual field data.

Notorized this date <u>19th</u> of <u>lecember</u>, 2007.

leboral Sue Bynum

Notary Signature County of Midland State of Texas





# Scientific Drilling International Survey Report

| Company:<br>Field:<br>Site:<br>Well:<br>Wellpath: | MACK ENERGY<br>Chalk Bluff<br>Eddy County, NM<br>State H #2<br>VH - Job #32K11071013 | Date: 12/16/2007 T<br>Co-ordinate(NE) Reference:<br>Vertical (TVD) Reference:<br>Section (VS) Reference:<br>Survey Calculation Method: | ime: 18:34.47 Page: 1<br>Site: Eddy County, NM, Grid North<br>SITE 0.0<br>Well (0.00N,0.00E,156.92Azi)<br>Minimum Curvature Db: Sybase |
|---------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Survey:                                           | 11/06/07                                                                             | Start Date:                                                                                                                            | 11/06/2007                                                                                                                             |
| Company:<br>Tool:                                 | KSRG 0'-1143'<br>Scientific Drılling Internatio<br>Keeper;Keeper Gyro                | Engineer:<br>Tied-to:                                                                                                                  | Madrid w/P&M<br>From Surface                                                                                                           |

Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 0 00     | 0.00        | 359.95      | 0.00      | 0.00     | 0.00      | 0.00      | 0.00             | 0.00       | 0.00        |
| 100.00   | 0.62        | 77.45       | 100.00    | 0.10     | 0.12      | 0.53      | 0.62             | 0.54       | 77.4        |
| 200.00   | 0.42        | 110.33      | 199.99    | 0 45     | 0.11      | 1.40      | 0.35             | 1.40       | 85.60       |
| 300.00   | 0.37        | 96.72       | 299.99    | 0.86     | -0.06     | 2.06      | 0.11             | 2.07       | 91.59       |
| 400.00   | 0.38        | 143.78      | 399.99    | 1.35     | -0.36     | 2.58      | 0.30             | 2.61       | 98.00       |
| 500.00   | 0.26        | 212.14      | 499.99    | 1.80     | -0.82     | 2.66      | 0.37             | 2.78       | 107.20      |
| 600.00   | 0.28        | 250.72      | 599.99    | 1.91     | -1.10     | 2.30      | 0.18             | 2.55       | 115 4       |
| 700.00   | 0.44        | 271.18      | 699.99    | 1.74     | -1.17     | 1.69      | 0.20             | 2.05       | 124.6       |
| 800.00   | 0.40        | 74.03       | 799.98    | 1.62     | -1.06     | 1.64      | 0.83             | 1.96       | 122.9       |
| 900.00   | 1.01        | 96.02       | 899.98    | 2.09     | -1.06     | 2.85      | 0.66             | 3.04       | 110.3       |
| 1000.00  | 0.95        | 87.15       | 999.96    | 2.81     | -1.11     | 4.56      | 0.16             | 4.69       | 103.7       |
| 1100.00  | 0.56        | 76.15       | 1099.95   | 3.17     | -0.95     | 5.86      | 0.41             | 5.94       | 99.2        |
| 1143.00  | 0.26        | 86.43       | 1142.95   | 3.24     | -0.90     | 6.16      | 0.72             | 6.23       | 98.2        |


## Scientific Drilling International Survey Report

| Company: MACK<br>Field: Chalk<br>Site: Eddy (<br>Well: State J<br>Wellpath: DH - J | ENERGY<br>Bluff<br>County, NM<br>H #2<br>ob #32D1107 | 1006        |                                       | Date:12/16/2007Time:19:33:59Page:1Co-ordinate(NE) Reference:Site:Eddy County, NM, Grid NorthVertical (TVD) Reference:SITE 0.0Section (VS) Reference:Well (0.00N,0.00E,156.92Azi)Survey Calculation Method:Minimum Curvature |                    |               |                               |                  |             |  |  |
|------------------------------------------------------------------------------------|------------------------------------------------------|-------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------|-------------------------------|------------------|-------------|--|--|
| Survey: 11/0                                                                       | 5/07-11/14/07                                        |             | · · · · · · · · · · · · · · · · · · · | Start                                                                                                                                                                                                                       | Date:              | 11/           | 05/2007                       |                  |             |  |  |
| MW                                                                                 | D 1206'-7367'                                        |             |                                       |                                                                                                                                                                                                                             | Dutt               | • • •         |                               |                  |             |  |  |
| Company: Scier<br>Tool: MWI                                                        | ntific Drilling Ir<br>D;MWD                          | nternatio   |                                       | Engi<br>Tied-                                                                                                                                                                                                               | neer:<br>to:       | Her<br>Fro    | mandez/Biggs<br>m: Definitive | s/Elger<br>Path  |             |  |  |
| Survey                                                                             |                                                      |             |                                       |                                                                                                                                                                                                                             |                    |               |                               |                  |             |  |  |
| MD<br>ft                                                                           | Incl<br>deg                                          | Azim<br>deg | TVD<br>ft                             | VS<br>ft                                                                                                                                                                                                                    | N/S<br>ft          | E/W<br>ft     | DLS<br>deg/100ft              | ClsD<br>ft       | ClsA<br>deg |  |  |
| 1143.00                                                                            | 0.26                                                 | 86.43       | 1142.95                               | 3.24                                                                                                                                                                                                                        | -0.90              | 6.16          | 0.00                          | 6.23             | 98.28       |  |  |
| 1206.00                                                                            | 0.17                                                 | 46.81       | 1205.95                               | 3.26                                                                                                                                                                                                                        | -0.82              | 6.37          | 0.27                          | 6.43             | 97.37       |  |  |
| 1301.00                                                                            | 1.66                                                 | 164.91      | 1300.94                               | 4.5/                                                                                                                                                                                                                        | -2.06              | 6.83          | 1.84                          | 7.14             | 106.75      |  |  |
| 1396.00                                                                            | 5.41<br>5.19                                         | 161.92      | 1395.64                               | 0.70<br>15.93                                                                                                                                                                                                               | -0.07<br>-12 84    | 0.07<br>10.50 | 1.65                          | 16.59            | 140.73      |  |  |
| 1402.00                                                                            | 0.10                                                 | 100.14      | 1451.57                               | 10.00                                                                                                                                                                                                                       | 12.04              | 10 00         | 1.07                          | 10.00            | 110.70      |  |  |
| 1587.00                                                                            | 7.21                                                 | 156.46      | 1586.01                               | 26.19                                                                                                                                                                                                                       | -22.32             | 14.41         | 2.15                          | 26.57            | 147.15      |  |  |
| 1682.00                                                                            | 8.51                                                 | 155.25      | 1680.11                               | 39.18                                                                                                                                                                                                                       | -34.17             | 19.74         | 1.38                          | 39.46            | 149.99      |  |  |
| 1778.00                                                                            | 9 94                                                 | 158.14      | 1774.87                               | 54.56                                                                                                                                                                                                                       | -48.32             | 25 80         | 1.57                          | 54.77            | 151.90      |  |  |
| 1873.00                                                                            | 9 56                                                 | 157.67      | 1868.50                               | 70.65                                                                                                                                                                                                                       | -63.22             | 31.85         | 0.41                          | 70.79            | 153.26      |  |  |
| 1968.00                                                                            | 10.53                                                | 159.64      | 1962.04                               | 87.21                                                                                                                                                                                                                       | -78.66             | 37.86         | 1.08                          | 87.30            | 154.30      |  |  |
| 2064.00                                                                            | 9 83                                                 | 160.07      | 2056.53                               | 104.15                                                                                                                                                                                                                      | -94.59             | 43.71         | 0.73                          | 104.20           | 155.20      |  |  |
| 2159.00                                                                            | 9.69                                                 | 160.58      | 2150.15                               | 120.23                                                                                                                                                                                                                      | -109.75            | 49.13         | 0.17                          | 120.25           | 155.88      |  |  |
| 2255.00                                                                            | 10 79                                                | 160.25      | 2244.62                               | 137.26                                                                                                                                                                                                                      | -125.83            | 54.86         | 1.15                          | 137.27           | 156.45      |  |  |
| 2350.00                                                                            | 10.78                                                | 156.23      | 2337.95                               | 155.02                                                                                                                                                                                                                      | -142.33            | 61.44         | 0.79                          | 155.02           | 156.65      |  |  |
| 2445.00                                                                            | 10.67                                                | 156.45      | 2431.29                               | 172.70                                                                                                                                                                                                                      | -158.52            | 68.54         | 0.12                          | 172.70           | 156.62      |  |  |
| 2540.00                                                                            | 10 54                                                | 155 44      | 2524.66                               | 190 18                                                                                                                                                                                                                      | -174 49            | 75.66         | 0.24                          | 190 18           | 156.56      |  |  |
| 2604.00                                                                            | 10.43                                                | 156.37      | 2587.60                               | 201.82                                                                                                                                                                                                                      | -185.12            | 80.42         | 0.32                          | 201.83           | 156.52      |  |  |
| 2699.00                                                                            | 8.58                                                 | 156.51      | 2681.29                               | 217.51                                                                                                                                                                                                                      | -199.50            | 86.69         | 1.95                          | 217.52           | 156.51      |  |  |
| 2794.00                                                                            | 7.39                                                 | 158.65      | 2775.36                               | 230.71                                                                                                                                                                                                                      | -211.69            | 91.74         | 1.29                          | 230.71           | 156.57      |  |  |
| 2889.00                                                                            | 5.58                                                 | 158.12      | 2869.75                               | 241 43                                                                                                                                                                                                                      | -221.66            | 95.68         | 1.91                          | 241.43           | 156.65      |  |  |
| 2984 00                                                                            | 4 30                                                 | 167 04      | 2964 40                               | 249 55                                                                                                                                                                                                                      | -229 42            | 98 20         | 1 57                          | 249 55           | 156 83      |  |  |
| 3080.00                                                                            | 2.86                                                 | 157 16      | 3060.21                               | 255.49                                                                                                                                                                                                                      | -235.14            | 99.94         | 1.63                          | 255.49           | 156.97      |  |  |
| 3175.00                                                                            | 1.50                                                 | 150.04      | 3155.14                               | 259.10                                                                                                                                                                                                                      | -238.40            | 101.48        | 1.46                          | 259.10           | 156.94      |  |  |
| 3270.00                                                                            | 0.67                                                 | 256.00      | 3250 13                               | 260.24                                                                                                                                                                                                                      | -239.61            | 101.56        | 1.90                          | 260.24           | 157.03      |  |  |
| 3365.00                                                                            | 0.82                                                 | 280 00      | 3345.12                               | 259.79                                                                                                                                                                                                                      | -239.63            | 100.35        | 0.36                          | 259.79           | 157.28      |  |  |
| 3460.00                                                                            | 0.48                                                 | 176.03      | 3440.12                               | 259.79                                                                                                                                                                                                                      | -239.90            | 99.71         | 1.10                          | 259 80           | 157.43      |  |  |
| 3556.00                                                                            | 0.51                                                 | 181.08      | 3536.11                               | 260 56                                                                                                                                                                                                                      | -240.73            | 99.73         | 0.06                          | 260.57           | 157.50      |  |  |
| 3651.00                                                                            | 0.65                                                 | 173.19      | 3631.11                               | 261.46                                                                                                                                                                                                                      | -241.69            | 99.79         | 0.17                          | 261.48           | 157.57      |  |  |
| 3746.00                                                                            | 0.67                                                 | 157.21      | 3726.10                               | 262.54                                                                                                                                                                                                                      | -242.74            | 100.07        | 0.19                          | 262.55           | 157.60      |  |  |
| 3841.00                                                                            | 0.59                                                 | 154.21      | 3821.10                               | 263.58                                                                                                                                                                                                                      | -243.69            | 100.50        | 0.09                          | 263.60           | 157 59      |  |  |
| 3936.00                                                                            | 0 24                                                 | 309 36      | 3916 09                               | 263 89                                                                                                                                                                                                                      | -244 00            | 100 55        | 0.86                          | 263 91           | 157 60      |  |  |
| 4031.00                                                                            | 0.30                                                 | 302.31      | 4011 09                               | 263.51                                                                                                                                                                                                                      | -243.74            | 100.19        | 0.07                          | 263.53           | 157.66      |  |  |
| 4126.00                                                                            | 0.45                                                 | 322.60      | 4106.09                               | 262.95                                                                                                                                                                                                                      | -243.32            | 99.75         | 0.21                          | 262.97           | 157.71      |  |  |
| 4222.00                                                                            | 1.06                                                 | 337.45      | 4202.08                               | 261.69                                                                                                                                                                                                                      | -242.20            | 99.18         | 0.66                          | 261.72           | 157.73      |  |  |
| 4317.00                                                                            | 0.86                                                 | 37.93       | 4297.07                               | 260.47                                                                                                                                                                                                                      | -240.82            | 99.29         | 1.03                          | 260.49           | 157.59      |  |  |
| 4412.00                                                                            | 0.59                                                 | 7 90        | 4392.06                               | 259 70                                                                                                                                                                                                                      | -239 78            | 99.79         | 0.48                          | 259 71           | 157 40      |  |  |
| 4507.00                                                                            | 1 14                                                 | 0.19        | 4487.05                               | 258.42                                                                                                                                                                                                                      | -238.35            | 99.86         | 0.59                          | 258.42           | 157.27      |  |  |
| 4602.00                                                                            | 1 01                                                 | 346 16      | 4582.04                               | 256.72                                                                                                                                                                                                                      | -236.59            | 99.66         | 0.31                          | 256.72           | 157.16      |  |  |
| 4667.00                                                                            | 1.10                                                 | 18.68       | 4647.03                               | 255.69                                                                                                                                                                                                                      | -235.44            | 99.73         | 0.92                          | 255.69           | 157.04      |  |  |
| 4729.00                                                                            | 0.53                                                 | 71.05       | 4709.02                               | 255.27                                                                                                                                                                                                                      | -234.78            | 100.19        | 1.42                          | 255.27           | 156.89      |  |  |
| 1924 00                                                                            | 0.00                                                 | 30 1/       | 4804 02                               | 265 40                                                                                                                                                                                                                      | 224 46             | 100 75        | 0.25                          | 255 10           | 156 75      |  |  |
| 4024.00                                                                            | 0.20                                                 | 12 0/       | 4004.02                               | 250.19                                                                                                                                                                                                                      | -204 40<br>-233 60 | 100.75        | 0.33                          | 200.19           | 156.62      |  |  |
| 5015.00                                                                            | 1 19                                                 | 5 48        | 4995 00                               | 254.59                                                                                                                                                                                                                      | -232.09            | 101.03        | · 0.49                        | 254.00           | 156.02      |  |  |
| 5110.00                                                                            | 0.82                                                 | 20.33       | 5089.99                               | 251 89                                                                                                                                                                                                                      | -230 52            | 101.58        | 0.47                          | 251 91           | 156 22      |  |  |
| 5206.00                                                                            | 0.28                                                 | 132.80      | 5185.98                               | 251.60                                                                                                                                                                                                                      | -230.03            | 101.99        | 1.00                          | 251.63           | 156.09      |  |  |
| E204.00                                                                            | 0 E 4                                                | 70 07       | E300 00                               | 054 F4                                                                                                                                                                                                                      | 000 70             | 100.04        | 0.70                          | 054 54           | 155.00      |  |  |
| 5301.00                                                                            | 0.54                                                 | 23.07       | 520U.90                               | 201.01                                                                                                                                                                                                                      | -229.10<br>200.40  | 102.34        | 0.72                          | 251.54           | 155.99      |  |  |
| 5390.00                                                                            | 0.04                                                 | 49.10       | 5375.90<br>5470.07                    | 201.11                                                                                                                                                                                                                      | -229.10<br>-220.92 | 102.73        | 0.29                          | 201.10<br>252.00 | 100.00      |  |  |
| 5586.00                                                                            | 2 14                                                 | 189.33      | 5565.94                               | 254.38                                                                                                                                                                                                                      | -232 42            | 103.35        | 1.32                          | 254 41           | 156.00      |  |  |
| 0000.00                                                                            | Am. ( T                                              | 100.00      | 0000.04                               | 204.00                                                                                                                                                                                                                      | 202.72             | 100.47        | 1.40                          | 2VT.71           | 100.00      |  |  |



## Scientific Drilling International Survey Report

| Company: MACk<br>Field: Chalk<br>Site: Eddy<br>Well: State<br>Wellpath: DH | CENERGY<br>Bluff<br>County, NM<br>H #2<br>Iob #32D1107 | 1006                                 |                                                     | Date:<br>Co-ordin<br>Vertical<br>Section (<br>Survey C | 12/16/2007<br>ate(NE) Refe<br>(TVD) Refere<br>VS) Referenc<br>'alculation M | Time<br>rence: S<br>ence: S<br>e: N<br>ethod: 1 | : 19:33:59<br>Site: Eddy Co<br>SITE 0.0<br>Well (0 00N,0<br>Minimum Curv | Pa<br>unty, NM, Grid N<br>.00E,156.92Azi)<br>/ature Dt | ge: 2<br>lorth<br>: Sybase                     |
|----------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------|
| Survey                                                                     |                                                        |                                      |                                                     |                                                        |                                                                             |                                                 |                                                                          |                                                        |                                                |
| MD<br>ft                                                                   | Incl<br>deg                                            | Azim<br>deg                          | TVD<br>ft                                           | VS<br>ft                                               | N/S<br>ft                                                                   | E/W<br>ft                                       | DLS<br>deg/100ft                                                         | ClsD<br>ft                                             | ClsA<br>deg                                    |
| 5681.00                                                                    | 1.09                                                   | 194.79                               | 5660.90                                             | 256.59                                                 | -235.04                                                                     | 102.96                                          | 1.12                                                                     | 256.60                                                 | 156.34                                         |
| 5745.00<br>5839.00<br>5935.00<br>5998.00                                   | 0.67<br>0.24<br>1.41<br>1.01                           | 318.43<br>221.30<br>161.10<br>182.35 | 5724.89<br>5818.89<br>5914.88<br>5977.87            | 256.71<br>256.28<br>257.54<br>258 82                   | -235.35<br>-235.08<br>-236.35<br>-237.64                                    | 102.55<br>102.06<br>102.31<br>102.54            | 2.44<br>0.79<br>1.36<br>0.94                                             | 256.72<br>256.28<br>257.55<br>258.82                   | 156.45<br>156.53<br>156.59<br>156.66           |
| 6093.00                                                                    | 0.20                                                   | 294.46                               | 6072.86                                             | 259.45                                                 | -238.41                                                                     | 102.35                                          | 1.16                                                                     | 259.45                                                 | 156.77                                         |
| 6284.00<br>6379.00<br>6474.00<br>6570.00                                   | 0.34<br>0.45<br>1.01<br>0.11<br>0.15                   | 287.60<br>331.75<br>334 85<br>314 50 | 6168.86<br>6263.86<br>6358.85<br>6453.84<br>6549.84 | 259.08<br>258.59<br>257.51<br>256.59<br>256.38         | -236.17<br>-237 89<br>-237.04<br>-236.22<br>-236.04                         | 101.97<br>101.39<br>100.64<br>100.20<br>100.07  | 0.18<br>0.18<br>0.79<br>0.95<br>0.06                                     | 259.08<br>258.59<br>257.51<br>256.59<br>256.38         | 156.82<br>156.92<br>157.00<br>157.01<br>157.02 |
| 6665.00<br>6760.00<br>6855.00<br>6950.00                                   | 0.27<br>0.45<br>0.46<br>0.51                           | 304.58<br>295.56<br>296.68<br>281.73 | 6644.84<br>6739.84<br>6834.84<br>6929.83            | 256.08<br>255.61<br>255.04<br>254.50                   | -235.83<br>-235.54<br>-235.21<br>-234.95                                    | 99.80<br>99.28<br>98.60<br>97.85                | 0.13<br>0.20<br>0.01<br>0.14                                             | 256.08<br>255.61<br>255.04<br>254 51                   | 157.06<br>157.14<br>157.26<br>157.39           |
| 7046.00                                                                    | 1.09                                                   | 134.41                               | 7025.83                                             | 255.10                                                 | -235.50                                                                     | 98.08                                           | 1.61                                                                     | 255.11                                                 | 157.39                                         |
| 7140.00<br>7235.00<br>7330.00<br>7367.00                                   | 0.38<br>0.57<br>0.81<br>0.87                           | 89.52<br>122.42<br>125.40<br>128 12  | 7119.82<br>7214.82<br>7309.81<br>7346.81            | 256.05<br>256.56<br>257.52<br>257.99                   | -236.13<br>-236.38<br>-237.02<br>-237.35                                    | 99.03<br>99.75<br>100.69<br>101.13              | 0.92<br>0.34<br>0.26<br>0.19                                             | 256.05<br>256.56<br>257.52<br>257.99                   | 157.25<br>157.12<br>156.98<br>156.92           |



### Wilson, Kimberly M, EMNRD

| From:       | Jerry Sherrell [jerrys@mackenergycorp.com] |
|-------------|--------------------------------------------|
| Sent:       | Wednesday, March 05, 2008 3:37 PM          |
| То:         | Wilson, Kimberly M, EMNRD                  |
| Subject:    | FW: Financial Assurance/Rule 40- Mack      |
| Importance: | High                                       |

From: Altomare, Mikal, EMNRD [mailto:Mikal.Altomare@state.nm.us]
Sent: Tuesday, March 04, 2008 11:03 AM
To: Mull, Donna, EMNRD
Cc: Rebecca Groh; Jerry Sherrell; Phillips, Dorothy, EMNRD
Subject: Financial Assurance/Rule 40- Mack
Importance: High

Donna –

Q

I have received a pdf version of what appears to be a properly and fully executed single well bond for the state h no. 001, 03-015-00745, which Mack has assured me that they are overnighting to our office. Everything appears to be in order, and I expect that, upon receipt of the original in our office, it will be reviewed and accepted and Mack will no longer be listed as being out of compliance with financial assurance requirements. That being said, and given that Mack has posted all other necessary financial assurances for all other properties, if there are no other violations or issues with approval of pending Mack applications, consider them to be in compliance for purposes of pending permit applications with your office. Please contact me if you have any questions.

Thanks,

Mikal

× \_\_\_\_Mikal M. Altomare

Assistant General Counsel Oil Conservation Division Energy, Minerals & Natural Resources Department 1220 South St. Francis Drive Santa Fe, NM 87505 Tel 505.476.3480 ~ Fax 505.476.3462 <u>mikal.altomare@state.nm.us</u>

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#### Appendix C Seismic Activity 1999 - 2011

| time                     | latitude | longitude | depth | mag | magType | nst | gap   | rms  | net | id          | updated                  | place      | type       | magNst | status   | locationSource | magSource |
|--------------------------|----------|-----------|-------|-----|---------|-----|-------|------|-----|-------------|--------------------------|------------|------------|--------|----------|----------------|-----------|
| 2011-09-28T21:46:37.550Z | 32.521   | -104.659  | 5     | 2.7 | mblg    | 8   | 102.1 | 0.83 | us  | usp000j8pv  | 2014-11-07T01:45:57.965Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2010-05-31T21:58:19.170Z | 32.524   | -104.607  | 5     | 4   | ml      | 16  | 83.8  | 1.09 | us  | usp000hdec  | 2014-11-07T01:41:34.416Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2010-02-21T09:55:39.770Z | 32.571   | -104.613  | 5     | 2.8 | mblg    | 21  | 51.7  | 1.07 | us  | usp000h7hr  | 2014-11-07T01:40:44.022Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2008-05-23T18:03:05.860Z | 32.504   | -104.596  | 5     | 2.7 | mblg    | 11  | 90.5  | 0.98 | us  | usp000g7k8  | 2014-11-07T01:36:04.867Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2006-03-20T17:55:29.120Z | 32.6     | -104.563  | 5     | 3   | ml      | 7   | 98    | 0.75 | us  | usp000ecjj  | 2014-11-07T01:28:33.765Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2006-02-04T19:55:10.680Z | 32.575   | -104.617  | 5     | 2.7 | ml      | 9   | 148.1 | 1.13 | us  | usp000e9fv  | 2014-11-07T01:28:16.284Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2006-01-27T16:07:45.840Z | 32.551   | -104.577  | 5     | 3.1 | mblg    | 9   | 148.3 | 0.91 | us  | usp000e8yn  | 2014-11-07T01:28:10.026Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2006-01-27T10:04:56.450Z | 32.589   | -104.549  | 5     | 2.7 | mblg    | 8   | 127.9 | 1.44 | us  | usp000e8ya  | 2014-11-07T01:28:10.009Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2005-12-22T14:30:11.670Z | 32.583   | -104.566  | 5     | 3.6 | mblg    | 15  | 52    | 0.98 | us  | usp000e6mh  | 2014-11-07T01:27:55.770Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2005-12-19T20:27:40.370Z | 32.528   | -104.549  | 5     | 4.1 | mwr     | 45  | 54.4  | 0.85 | us  | usp000e6f9  | 2015-03-24T01:48:26.590Z | New Mexico | earthquake |        | reviewed | us             | slm       |
| 2004-10-28T02:59:04.820Z | 32.604   | -104.499  | 5     | 3   | mblg    | 11  | 140.2 | 0.52 | us  | usp000d77p  | 2014-11-07T01:23:49.973Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2004-08-26T18:45:18.620Z | 32.582   | -104.505  | 5     | 3.4 | ml      | 11  | 131.8 | 0.67 | us  | usp000d2x7  | 2014-11-07T01:23:16.071Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2004-06-22T08:55:28.230Z | 32.528   | -104.584  | 5     | 3.7 | mblg    | 12  | 82.5  | 0.65 | us  | usp000cygp  | 2014-11-07T01:22:40.419Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2004-05-23T09:22:05.280Z | 32.525   | -104.566  | 5     | 4   | mb      | 19  | 68.2  | 0.74 | us  | usp000cvz7  | 2015-03-24T01:59:38.918Z | New Mexico | earthquake | 2      | reviewed | us             | us        |
| 2003-06-21T02:03:09.560Z | 32.665   | -104.505  | 5     | 3.6 | mblg    | 15  | 130.9 | 0.94 | us  | usp000c0e4  | 2014-11-07T01:18:58.170Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 2002-09-17T23:34:19.350Z | 32.576   | -104.631  | 10    | 3.1 | md      | 17  |       |      | us  | usp000bchy  | 2014-11-07T01:16:32.406Z | New Mexico | earthquake |        | reviewed | snm            | snm       |
| 2002-09-17T15:45:14.470Z | 32.581   | -104.63   | 10    | 3.4 | md      | 23  |       |      | us  | usp000bcgs  | 2014-11-07T01:16:32.321Z | New Mexico | earthquake |        | reviewed | snm            | snm       |
| 2000-02-02T07:14:20.260Z | 32.582   | -104.629  | 5     | 2.7 | mblg    |     |       | 0.88 | us  | usp0009my c | 2014-11-07T01:09:25.504Z | New Mexico | earthquake |        | reviewed | us             | us        |
| 1999-08-09T06:51:22.970Z | 32.568   | -104.591  | 5     | 2.9 | md      |     |       | 0.64 | us  | usp0009ctq  | 2014-11-07T01:08:15.290Z | New Mexico | earthquake |        | reviewed | us             | snm       |
| 1999-05-30T19:04:25.600Z | 32.575   | -104.664  | 10    | 3.9 | md      |     |       |      | us  | usp000991w  | 2014-11-07T01:07:44.921Z | New Mexico | earthquake |        | reviewed | snm            | snm       |
| 1999-03-17T12:29:23.110Z | 32.582   | -104.672  | 1     | 3.5 | md      |     |       |      | us  | usp00094ny  | 2014-11-07T01:07:14.229Z | New Mexico | earthquake |        | reviewed | snm            | snm       |
| 1999-03-14T22:43:17.970Z | 32.591   | -104.63   | 1     | 4   | md      |     |       |      | us  | usp00094hc  | 2014-11-07T01:07:13.801Z | New Mexico | earthquake |        | reviewed | snm            | snm       |
| 1999-03-01T08:00:23.500Z | 32.573   | -104.656  | 1     | 2.7 | md      |     |       |      | us  | usp00093nw  | 2014-11-07T01:07:07.639Z | New Mexico | earthquake |        | reviewed | snm            | snm       |



# **NEIC: Earthquake Search Results**

U. S. GEOLOGICAL SURVEY

EARTHQUAKE DATA BASE

FILE CREATED: Mon Jun 4 16:13:25 2012 Circle Search Earthquakes= 225 Circle Center Point Latitude: 32.772N Longitude: 104.233W Radius: 321.860 km Catalog Used: PDE Data Selection: Historical & Preliminary Data

| CAT   | YEAR | MO | DA | ORIG TIME | LAT   | LONG    | DEP | MAGNITUDE | IEM<br>NFO<br>TF | DTSVNWG | DIST<br>km |
|-------|------|----|----|-----------|-------|---------|-----|-----------|------------------|---------|------------|
| PDE   | 1973 | 09 | 22 | 233835.80 | 34.47 | -106.95 | 5   | 3.1 MLGS  |                  |         | 314        |
| PDE   | 1974 | 11 | 28 | 033520.50 | 32.31 | -104.14 | 5   | 3.7 MLGS  | • • •            |         | 51         |
| PDE   | 1975 | 08 | 01 | 072757.30 | 31.42 | -104.01 | 5   | 3.0 LgTUL | .F.              |         | 150        |
| PDE   | 1976 | 01 | 19 | 040330.50 | 31.90 | -103.08 | 1   | 3.5 MDGS  | .F.              |         | 145        |
| PDE   | 1976 | 01 | 22 | 072157    | 31.90 | ~103.07 | 1   | 2.8 MDGS  |                  |         | 145        |
| PDE   | 1976 | 01 | 25 | 044827,90 | 31.90 | -103.08 | 2   | 3.9 MDGS  | 5F.              |         | 145        |
| PDE   | 1977 | 01 | 04 | 183137,60 | 32,36 | -106.92 | 5   | 3.2 MLGS  | 5F.              |         | 256        |
| PDE   | 1977 | 04 | 26 | 090307.30 | 31.90 | -103.08 | 4   | 3.3 MLGS  | .F.              |         | 144        |
| PDE   | 1977 | 11 | 28 | 014050.50 | 32,95 | -100.84 | 5   | 3.5 MLGS  |                  |         | 318        |
| PDE   | 1978 | 03 | 02 | 100452.70 | 31.56 | -102.51 | 11  | 3.5 MLGS  | .F.              |         | 210        |
| PDE   | 1979 | 07 | 05 | 010501    | 32.95 | -100.89 | 4   | 2.7 UKTUL | .н.              |         | 312        |
| PDE   | 1980 | 03 | 22 | 004912.50 | 34.60 | -105.92 | 5   | 3.4 MLGS  | 4F.              |         | 255        |
| PDE   | 1981 | 05 | 09 | 123550.80 | 33.99 | ~107.03 | 5   | 3.1 MLGS  | 5F.              |         | 293        |
| PDE   | 1982 | 01 | 04 | 165608.05 | 31.18 | -102.49 | 5   | 3.9 LgTUL | 3F.              |         | 240        |
| PDE   | 1982 | 03 | 16 | 110302.67 | 35.36 | -103.27 | 5   | 3.1 LgTUL | 3F.              |         | 300        |
| PDE   | 1982 | 04 | 26 | 083147.79 | 33.02 | -100.84 | 5   | 2.8 LgGS  |                  |         | 318        |
| PDE . | 1982 | 05 | 18 | 060008.50 | 34.17 | -106.95 | 9   | 2.8 MLGS  | .F.              |         | 296        |
| PDE   | 1982 | 05 | 18 | 060838.40 | 34.20 | -106.90 | 6   | 2.8 MLGS  | .F.              |         | 293        |
| PDE   | 1982 | 05 | 24 | 063251.70 | 34.17 | -106.95 | 6   | 2.9 MLGS  | .F.              |         | 295        |
| PDE   | 1982 | 09 | 20 | 035517.20 | 33.95 | -107.06 | 11  | 3.5 LqTUL | 4F.              |         | 293        |
| PDE   | 1982 | 10 | 07 | 124125.99 | 34,31 | -106.82 | 4   | 2.4 MLGS  | .F.              |         | 294        |
| PDE   | 1982 | 11 | 28 | 023648.51 | 33.00 | -100.84 | 5   | 3.3 LgTUL | 4F.              |         | 318        |
| PDE   | 1983 | 03 | 02 | 232219.40 | 34.30 | -106,89 | 8   | 4.3 LgTUL | 6D.              |         | 299        |
| PDE   | 1983 | 04 | 30 | 073420.18 | 33.32 | -106.44 | 7   | 3.5 MLGS  |                  |         | 214        |
| PDE   | 1983 | 09 | 15 | 232536.05 | 35.14 | -104.39 | 5   | 3.2 LgTUL | 5F.              |         | 263        |
| PDE   | 1983 | 09 | 29 | 074408.43 | 35.24 | ~104.30 | 5   | 2.7 MDGS  |                  |         | 274        |
| PDE   | 1984 | 05 | 21 | 133113.54 | 35.07 | -102.23 | 5   | 3.1 LqTUL |                  |         | 314        |
| PDE   | 1984 | 08 | 26 | 021954    | 34.31 | -106.80 | 5   | 2.9 MLGS  | .F.              |         | 292        |
| PDE   | 1984 | 12 | 04 | 203636.02 | 32.26 | ~103.56 | 5   | 2.9 MLGS  |                  |         | 84         |
| PDE   | 1985 | 06 | 05 | 103600.60 | 32.56 | -106.92 | 6   | 2.9 MLGLD | 4F.              |         | 252        |
| PDE   | 1985 | 06 | 27 | 182000.03 | 33.62 | -106.47 | 0   | 3.4 LaGS  |                  | E       | 229        |
| PDE   | 1985 | 08 | 16 | 145652.96 | 34.13 | -106.83 | 7   | 4.1 MLGS  | 6D.              |         | 284        |

| PDE             | 1985   | 09        | 06   | 052246 20  | 32 54 | <b>"106 9</b> 4 | Б        |           | ਸ          |                 | 255  |
|-----------------|--------|-----------|------|------------|-------|-----------------|----------|-----------|------------|-----------------|------|
| םמת             | 1005   |           |      | 052240.20  | 52.54 | ~100.94         | 5        | 2.6 MDGLD | .r.        | • • • • • • •   | 255  |
| PDE             | 1905   | 12        | 15   | 071452.23  | 35.28 | ~104.64         | 5        | з.6 ьдтоь | . F.       | • • • • • • •   | 280  |
| PDE             | T 38 6 | 04        | 17   | 210430.30  | 32.59 | -106.91         | 5        | 2.7 MDGLD | .F.        |                 | 251  |
| PDE             | 1986   | 04        | 28   | 130016     | 34.01 | ~106.82         | 5        | 2.6 MDGLD | .F.        |                 | 276  |
| PDE             | 1986   | 08        | 27   | 180656.38  | 35.16 | -105.09         | 5        | 3.2 MLGS  | .F.        |                 | 276  |
| PDE             | 1987   | 05        | 14   | 155958.46  | 33.54 | -106.52         | 0        | 2.9 MLGS  |            | E               | 229  |
| PDE             | 1988   | 12        | 25   | 075233.93  | 35.12 | -105.96         | ō        | 2 8 MDSNM | <br>ਸ      |                 | 304  |
| PDE             | 1989   | 01        | 29   | 050715 33  | 35 22 | -104 09         | ž        |           | • - •      | • • • • • • • • | 201  |
| 707             | 1989   | 11        | 20   | 065439 50  | 31 46 | 104.09          | 10       | A 7 MDCNM | ···        | • • • • • • • • | 271  |
|                 | 1990   | <br>      | 20   | 121610 60  | 24.40 | -106.89         | 10       | 4.7 MDSNM | SF.        | • • • • • • • • | 309  |
| PDE             | 1000   | 01        | 29   | 131610.68  | 34,46 | -106.88         | 12       | 4.8 LgTUL | 6D.        | • • • • • • •   | 308  |
| PDE             | 1990   | UL        | 31   | 010819.29  | 34.44 | -106.86         | 10       | 4.0 LgTUL | 5F.        |                 | 306  |
| PDE             | 1990   | 02        | 21   | 120219.34  | 34.01 | -106.54         | 5        | 3.6 MLGS  | .F.        |                 | 255  |
| PDE             | 1990   | 02        | 27   | 132322     | 33.95 | -106.59         | 5        | 3.9 MDSNM | 4F.        |                 | 255  |
| PDE             | 1990   | 05        | 05   | 162622.89  | 34.45 | -106.88         | 6        | 3.6 MDSNM | .F.        |                 | 307  |
| PDE             | 1990   | 07        | 21   | 192822.79  | 34.46 | -106.86         | 11       | 3.0 MDSNM |            |                 | 306  |
| PDE             | 1990   | 07        | 21   | 203031.34  | 34.46 | -106.86         | 7        | 3 1 MDSNM |            |                 | 306  |
| PDE             | 1990   | 07        | 21   | 234804 92  | 34 45 | -106 85         | ,<br>7   | 3 2 MDSNM | • • •      |                 | 300  |
| שרכ             | 1990   | 07        | 22   | 212705 12  | 34.94 | 106.00          | 10       | 2 7 MDGNM | • • •      | • • • • • • • • | 200  |
| פתת             | 1000   | 07        | 22   | ATA705.15  | 24.04 | -106.01         | 10       | 3.7 MDSNM | •••        | • • • • • • • • | 281  |
| PDE             | 1000   |           | 21   | 0/3240.18  | 34.46 | -106.86         | 7        | 3.3 MDSNM | . F        | ••••            | 307  |
| PDE             | 1990   | 11        | 08   | 104653.77  | 34.45 | -106.86         | 6        | 4.3 MDSNM | 4F.        |                 | 306  |
| PDE             | 1990   | 11        | 08   | 110346.51  | 34.45 | -106.86         | 8        | 3.1 MDSNM | ,F.        |                 | 306  |
| PDE             | 1990   | 11        | 10   | 121816.85  | 34.45 | -106.85         | 7        | 3.1 MDSNM | • • •      |                 | 305  |
| PDE             | 1990   | 11        | 15   | 072524.38  | 34.46 | ~106.86         | 6        | 3.6 MDSNM | 4F.        |                 | 306  |
| PDE             | 1990   | 12        | 05   | 033644.30  | 34.45 | -106.86         | 8        | 2.6 MDSNM |            |                 | 306  |
| PDE             | 1991   | 03        | 05   | 201711.40  | 34.44 | -106.87         | 9        | 2.9 MDSNM | 3F.        |                 | 306  |
| PDE             | 1991   | 03        | 06   | 143659.07  | 34 44 | -106 88         | 7        | 2 5 MDSNM |            |                 | 307  |
| ਤਰੁਬ            | 1991   | 06        | 05   | 184414 90  | 34 45 | -106 95         | ,        | 2.0 MDGNM | · · ·<br>E |                 | 205  |
| שחמ             | 1991   | 00        | 20   | 1605       | 22.22 | 106.05          | 4        | D E MLGO  |            |                 | 305  |
| פסס             | 1001   | 10        | 20   | 10/01/0 00 | 33.64 | -106.47         |          | 3.5 MLGS  | • • •      | ····E··         | 229  |
| PDE             | 1991   | 12        | 09   | 124/16.50  | 34.85 | -106.55         | 14       | 3.1 LgTUL | 3F.        | • • • • • • •   | 314  |
| PDE             | 1992   | 01        | 02   | 114535.61  | 32.33 | -103.10         | 5        | 5.0 LgTUL | 5F.        | • • • • • • •   | 116  |
| PDE             | 1992   | 02        | 23   | 161752.51  | 30.65 | -105.51         | 5        | 3.4 LgTUL |            |                 | 264  |
| PDE             | 1992   | 08        | 24   | 012535.20  | 34.01 | -106.86         | 5        | 2.6 MDSNM | .F.        |                 | 280  |
| PDE             | 1992   | 08        | 26   | 032452.67  | 32.17 | ~102.71         | 5        | 3.0 LgGS  |            |                 | 157  |
| PDE             | 1993   | 03        | 24   | 023203.50  | 35.39 | -104.19         | 5        | 3.0 LgGS  | 2F,        |                 | 290  |
| PDE             | 1993   | 06        | 10   | 1510       | 33.62 | -106.47         | 0        | 3.2 MLGS  |            | . <i>.</i>      | 229  |
| PDE             | 1993   | 06        | 23   | 032312.28  | 31.35 | ~102.51         | 5        | 2 8 MDSNM |            |                 | 226  |
| PDE             | 1993   | 12        | 22   | 192511 39  | 22.22 | -105 68         | 10       | 3 2 MDSNM | • • •      |                 | 1/0  |
| קתק             | 1994   | 01        | 01   | A25121 29  | 21 11 | 106.00          | 10       | 2 E MDCNM | • • •      | • • • • • • •   | 2140 |
| בנים ב<br>קירות | 1005   | 01        | 10   | 102041.29  | 24.44 | -100.98         | TO       | 2.5 MDSNM | •••        |                 | 314  |
| PDE             | 1005   | 03        | 19   | 183643.97  | 35.00 | -104.21         | 5        | 3.3 LgGS  |            | • • • • • • •   | 246  |
| PDE             | 1995   | 04        | ⊥4   | 003256.17  | 30.28 | ~103.35         | 17       | 5.7 MwGS  | 6CM        |                 | 287  |
| PDE             | 1995   | 04        | 14   | 011148.40  | 30.30 | -103.35         | 10       | 2.7 LgGS  | • • •      |                 | 286  |
| PDE             | 1995   | 04        | 14   | 021426     | 30.30 | -103.35         | 10       | 2.8 LgGS  |            |                 | 286  |
| PDE             | 1995   | 04        | 14   | 021938.50  | 30.30 | ~103.35         | 10       | 3.3 LgGS  | .F.        |                 | 286  |
| PDE             | 1995   | 04        | 14   | 034842     | 30.30 | ~103.35         | 10       | 2.6 LgGS  | .F.        |                 | 286  |
| PDE             | 1995   | 04        | 14   | 041116     | 30.30 | -103.35         | 10       | 2.4 LqGS  | .F.        |                 | 286  |
| PDE             | 1995   | 04        | 14   | 055339     | 30 30 | ~103 35         | 10       | 2 7 Lags  |            |                 | 286  |
| PDE             | 1995   | <u>04</u> | 14   | 073936 50  | 30 30 | -103 35         | 10       | 2 4 LaCe  | <br>E      |                 | 200  |
| ביבי<br>קיום    | 1995   | 04        | 14   | 010000.00  | 20.20 | -102.25         | 10       |           | · · · ·    | ••••            | 200  |
| שמת             | 1005   | 04        | 14   | 1002712.50 | 20.20 | -103.35         | 10       |           | .r.<br>-   |                 | 286  |
| PDE             | 1995   | 04        | 14   | 100258     | 30.30 | -103.35         | 10       | 2.9 LgGS  | . F.       | • • • • • • •   | 286  |
| PDE             | 1992   | 04        | 14   | 105720.40  | 30.30 | -103.35         | 10       | 2.3 LgGS  | .F.        |                 | 286  |
| PDE             | 1995   | 04        | 15   | 031805     | 30.30 | -103.35         | 10       | 2.4 LgGS  | .F.        |                 | 286  |
| PDE             | 1995   | 04        | 15   | 143329.51  | 30.27 | -103.32         | 10       | 4.0 LgGS  | 6D.        |                 | 290  |
| PDE             | 1995   | 04        | 16   | 004043.30  | 30.30 | -103.35         | 10       | 2.3 LgGS  |            |                 | 286  |
| PDE             | 1995   | 04        | 16   | 102625.50  | 30.30 | -103.35         | 10       | 2.5 LqGS  |            |                 | 286  |
| PDE             | 1995   | 04        | 16   | 161609.60  | 30.30 | -103.35         | 10       | 2.4 LaGS  |            |                 | 286  |
| PDE             | 1995   | 04        | 17   | 085000.50  | 30.30 | -103 35         | 10       | 2 5 Lags  |            |                 | 200  |
|                 | 1995   | 04        | 21   | 044144     | 30.30 | -103 35         | 10<br>10 | 2 9 Lace  | ייי<br>סבי | • • • • • • • • | 200  |
| <br>קרוס        | 1995   | 04        | <br> | 010616 70  | 20.20 | -103.35         | 10       |           | эг.<br>45  | •••••           | 200  |
| - DE<br>DNF     | 1005   | 00        | 0 T  | 020015.70  | 30.30 | -103.35         | ±U<br>10 | on rear   | 4F.        |                 | 286  |
| FVB<br>DDD      | 100-   | 07        | 06   | 024151     | 30.30 | -103.35         | T U      | ∠.7 LgGS  | . ť.       |                 | 286  |
| FDR             | エンスラ   | 07        | 06   | 024704     | 30.30 | -103.35         | 10       | 2.6 LgGS  | .F.        |                 | 286  |

| PDE           | 1995 | 08   | 3 28     | 151339.05 | 34.21 | -106.94       | 3        | 2.8 LqG              | S 5F                                  | 297          |
|---------------|------|------|----------|-----------|-------|---------------|----------|----------------------|---------------------------------------|--------------|
| PDE           | 1995 | 11   | . 12     | 174559.40 | 30.30 | -103.35       | 10       | 3.6 LqG              | 5 .F                                  | 286          |
| PDE           | 1996 | 03   | 15       | 131757.22 | 33.59 | -105.69       | 10       | 2.9 LqG              | S .F                                  | 163          |
| PDE           | 1996 | 03   | 24       | 201612.70 | 34.26 | -105.68       | 10       | 3.5 LgG8             |                                       | 212          |
| PDE           | 1996 | 03   | 24       | 201923.10 | 34.27 | -105.69       | 10       | 3.7 LaG              | ч                                     | 214          |
| PDE           | 1996 | 07   | 22       | 100614 98 | 34 20 | $\sim 105 71$ | 10       | 3 5 Lac              | 2 0                                   | 211          |
| PDE           | 1997 | 05   | 20       | 094105 82 | 3/ 10 | -105 74       | 10       |                      | ,                                     | 209          |
|               | 1997 | 12   | 21       | 132930 05 | 24 62 |               | т0<br>Т0 |                      | , r                                   | 210          |
| פתפ           | 1997 | 12   |          | 122030.03 | 34.55 | ~106.15       | 5        | 3.5 MLGa             | , F                                   | 264          |
| FDE           | 1997 | 10   |          | 12226.60  | 34.00 | -106.15       | 5        | 3.5 MLG:             | 5                                     | 265          |
| PDE           | 1000 | - 12 | - 3 I    | 133358.90 | 34.55 | -106.15       | 5        | 3.4 MLGS             | 5                                     | 265          |
| PDE           | 1998 | 01   | . 04     | 080531.87 | 34.55 | -106.19       | 5        | 4.0 MLGS             | S.F                                   | 268          |
| PDE           | 1998 | 04   | 15       | 103342.42 | 30.19 | -103.30       | 10       | 3.6 LgGS             | 5.F                                   | 299          |
| PDE           | 1998 | 07   | 14       | 053848,75 | 35.34 | -103.47       | 5        | 3.0 MDS1             | VM .F                                 | 293          |
| PDE           | 1999 | 03   | 01       | 080023.50 | 32.57 | -104.66       | 1        | 2.9 LgGS             | 3                                     | 45           |
| PDE           | 1999 | 03   | 14       | 224317.97 | 32.59 | -104.63       | 1        | 4.0 MDSN             | ∛M .F                                 | 42           |
| PDE           | 1999 | 03   | 17       | 122923.11 | 32.58 | -104.67       | 1        | 3.5 MDSN             | JM                                    | 46           |
| PDE           | 1999 | 05   | 30       | 190425.60 | 32.58 | -104.66       | 10       | 3.9 MDSN             | ۳M                                    | 45           |
| PDE           | 1999 | 08   | 09       | 065122.97 | 32.57 | -104.59       | 5        | 2.9 MDSN             | IM                                    | 40           |
| PDE           | 2000 | 02   | 02       | 071420.26 | 32.58 | -104.63       | 5        | 2.7 LqGS             | 3                                     | 42           |
| PDE           | 2000 | 02   | 26       | 030100.83 | 30.24 | -103.61       | 5        | 2.8 LaGS             | 5 .F                                  | 286          |
| PDE           | 2001 | 06   | 02       | 015553.72 | 32.33 | -103.14       | 5        | 3.3 LaGS             | 3                                     | 113          |
| PDE           | 2001 | 11   | 22       | 000708.02 | 31 79 | -102 63       | 5        | 3 1 Lage             | ····                                  | 106          |
| PDE           | 2002 | 0.9  | 17       | 154514 47 | 32 58 | -104 63       | 10       | 3 5 LaGe             | · · · · · · · · · · · · · · · · · · · | 100          |
| PDE           | 2002 | 09   | 17       | 233419 35 | 32.50 | -104 63       | 10       | 3.5 Lgga             | , , , , , , , , , , , , , , , ,       | 42           |
| PDE           | 2002 | 05   | 21       | 020309 56 | 22.00 | 104.63        | т0<br>Т0 |                      | · · · · · · · · · · · · · · · ·       | 43           |
|               | 2003 | 00   | 21       | 020309.50 | 34,07 | -104.50       | )<br>-   | 3.6 LGG2             | ····                                  | 28           |
| PDE           | 2004 | 05   | 23       | 092205.28 | 32.53 | -104.57       | 5        | 4.0 mbGS             | 3 3F                                  | 41           |
| PDE           | 2004 | 05   | 24       | 213628.56 | 34.47 | ~106.90       | 5        | 3.5 MLGS             | .F                                    | 310          |
| PDE           | 2004 | 06   | 22       | 085528.23 | 32.53 | -104.58       | 5        | 3.7 LgGs             | 5 .F                                  | 42           |
| PDE           | 2004 | 08   | 26       | 184518,62 | 32.58 | ~104.50       | 5        | 3.4 MLGS             |                                       | 33           |
| PDE           | 2004 | 10   | 28       | 025904.82 | 32.60 | -104.50       | 5        | 3.0 LgGS             |                                       | 31           |
| PDE           | 2004 | 11   | 14       | 212749.90 | 33.25 | -106.20       | 5        | 3.5 LgGS             |                                       | 191          |
| PDE           | 2005 | 10   | 30       | 025734.81 | 34.07 | -106.98       | 5        | 2.4 MLGS             | .F                                    | 292          |
| PDE           | 2005 | 12   | 19       | 202740.37 | 32.53 | ~104.55       | 5        | 4.1 MwSL             | M 3FM                                 | 40           |
| PDE           | 2005 | 12   | 22       | 143011.67 | 32.58 | -104.57       | 5        | 3.6 LgGS             | .F                                    | 37           |
| PDE           | 2006 | 01   | 27       | 100456.45 | 32.59 | -104.55       | 5        | 2.7 LgGS             |                                       | 35           |
| PDE           | 2006 | 01   | 27       | 160745.84 | 32.55 | -104.58       | 5        | 3.1 LaGS             |                                       | 40           |
| PDE           | 2006 | 02   | 04       | 195510.68 | 32.58 | -104.62       | 5        | 2.7 MLGS             |                                       | 42           |
| PDE           | 2006 | 03   | 04       | 171458.25 | 30.29 | ~103.67       | 5        | 2.7 Lags             |                                       | 280          |
| PDE           | 2006 | 03   | 20       | 175529.12 | 32.60 | -104 56       | 5        | 3 0 MLGS             |                                       | 36           |
| PDE           | 2006 | 04   | 08       | 180835.23 | 31 95 | -101 42       | 5        | 2 9 MLCS             |                                       | 279          |
| PDE           | 2006 | 0.8  | 12       | 104909 67 | 32 90 | ~100.89       | 5        |                      | ·········                             | 210          |
| PDE           | 2007 | 05   | 23       | 051655 15 | 34 07 | -106.94       | 5        | 2.0 D905             |                                       | 314          |
| בום ז<br>קרוס | 2007 | 01   | 20       | 102452 24 | 33 90 | 100.94        | 5        |                      | JF                                    | 289          |
| פסס           | 2000 | 01   | 10       | 1415      | 32,90 | -100.84       | 5        |                      | · · · · · · · · · · · · · · · · · · · | 317          |
| PDE           | 2008 | 02   | 10       | 1415      | 34.21 | -101.42       | 0        | 2.1 LgGS             | .CE                                   | 269          |
| PDE           | 2008 | 04   | 10       | 090604.36 | 33.66 | -106.06       | 5        | 2.7 MLGS             | • • • • • • • • • • • •               | 196          |
| PDE           | 2008 | 05   | 23       | 180305,86 | 32.50 | -104.60       | 5        | 2.7 LgGS             | ••• ••••••                            | 45           |
| PDE           | 2008 | 07   | 18       | 173109.40 | 32.89 | -100.84       | 5        | 2.7 LgGS             | ••• ••••••                            | 317          |
| PDE           | 2008 | 12   | 28       | 205659.99 | 30.44 | -103.36       | 5        | 2.6 MLGS             | • • • • • • • • • • • •               | 271          |
| PDE           | 2009 | 01   | 30       | 014121.66 | 32.50 | ~104.61       | 5        | 2.7 LgGS             | • • • • • • • • • • •                 | 46           |
| PDE           | 2009 | 06   | 05       | 171732.94 | 31.35 | -105.98       | 0        | 2.4 MLEP             | T .F                                  | 227          |
| PDE           | 2009 | 06   | 05       | 181023.63 | 31.35 | ~105.98       | 0        | 2.6 MLEP             | T.F                                   | 227          |
| PDE           | 2009 | 08   | 20       | 015723.10 | 34.03 | ~106.87       | 5        | 2.7 MLGS             | 3F                                    | 282          |
| PDE           | 2009 | 08   | 30       | 003100.29 | 34,22 | -106.89       | 5        | 2.5 MLGS             | .F.                                   | 293          |
| PDE           | 2009 | 08   | 30       | 063947.47 | 34.16 | -106.86       | 5        | 2.6 MLGS             | .F                                    | 289          |
| PDE           | 2009 | 08   | 30       | 070943.72 | 34.19 | ~106.88       | 5        | 2.1 MLGS             | .F.                                   | 291          |
| PDE           | 2009 | 11   | 17       | 185306 84 | 32.43 | -104 64       | -<br>5   | 3 0 1.409            |                                       | ت د <u>د</u> |
| PDE           | 2010 | 01   | 27       | 045933 05 | 32 90 | -100 93       | 5        | 3.0 цуса<br>3.1 т~сс | ··· ······                            | 54<br>510    |
| PDE           | 2010 | 02   | 21       | 095539 77 | 32.50 | -104 61       | 5        |                      | ·F· ·····                             | οTC<br>ΔΤC   |
| PDE           | 2010 | 02   | 28       | 000355 00 | 32.27 | -104 50       | 2        |                      |                                       | 4 L          |
| שתק           | 2010 | 03   | 20<br>17 | 195620 62 | 22.44 | -101.00       | 4        | HWRM                 | 1 3FM                                 | 44           |
| e D Ci        | 2010 | 04   | ᆂᆂ       | 199097101 | J∠.41 | ~TOT'00       | 5        | ∠.> LgGS             | · · · · · · · · · · · ·               | 300          |

| PDE             | 2010 | 04  | 12  | 002005.97 | 32.94 | -100.88 | 5      | 2.8 LgGS    |              |                 | 314 |
|-----------------|------|-----|-----|-----------|-------|---------|--------|-------------|--------------|-----------------|-----|
| PDE             | 2010 | 05  | 09  | 071807.37 | 34.04 | ~106.83 | 5      | 2.1 MLGS    | .F.          |                 | 279 |
| PDE             | 2010 | 05  | 27  | 204721.87 | 31.11 | -105.58 | 5      | 3.7 MLGS    |              |                 | 223 |
| PDE             | 2010 | 05  | 31  | 215819.17 | 32.52 | -104.61 | 5      | 4.0 MLGS    |              |                 | 44  |
| PDE             | 2010 | 08  | 08  | 011238.07 | 32.90 | -100,85 | 5      | 3.4 MwRMT   | 2FM          |                 | 316 |
| PDE             | 2010 | 08  | 25  | 020514.32 | 32.95 | -100.86 | 5      | 2.8 LaGS    |              |                 | 315 |
| PDE             | 2010 | 0.8 | 29  | 124836.61 | 32 91 | -100 92 | 5      | 2.6 LaGS    | • • •        |                 | 310 |
| PDE-W           | 2010 | 10  | 0.9 | 074227.63 | 32.93 | -100 89 | 5      | 3 1 LaGS    | •••          |                 | 212 |
| PDE-W           | 2010 | 10  | 26  | 065629 79 | 32.20 | -100.85 | 5      | 3 1 LaGS    |              |                 | 316 |
| PDE-W           | 2010 | 11  | 01  | 091058 42 | 33 00 | -100.82 | 5      | 2 8 LgGS    | •••          |                 | 330 |
| PDE-W           | 2011 | 01  | 11  | 043415 77 | 34 39 | -106 99 | 5      | 2.0 MICC    |              |                 | 210 |
|                 | 2011 | 02  | 17  | 182534 41 | 20 11 | -103.30 | 5      |             | • • •        | • • • • • • • • | 207 |
|                 | 2011 | 02  | 01  | 033012 76 | 30.17 | -100.94 | 5      | 3.3  LgGS   | ••••<br>Э.ए. | • • • • • • • • | 207 |
| אי-טעז<br>אי-עת | 2011 | 03  | 01  | 063150 00 | 22.00 | 100.84  | 5<br>E | 3.I LYGS    | ZF,          | • • • • • • • • | 317 |
| א-מעז<br>ש-פתמ  | 2011 | 03  | 10  | 163135.05 | 22,04 | -100.80 | р<br>С |             | •••          |                 | 321 |
| PDE-W           | 2011 | 03  | 12  | 152200.86 | 32,88 | -100.90 | 5      | 3.0 LgGS    | •••          |                 | 312 |
| PDE~W           | 2011 | 03  | 14  | 001948.80 | 32.96 | -100.81 | 5      | 3.0 LgGS    | • • •        | • • • • • • • • | 320 |
| PDE-W           | 2011 | 03  | 28  | 091211.95 | 32.91 | -100.82 | 5      | 3.0 LgGS    | • • •        | • • • • • • • • | 320 |
| PDE-W           | 2011 | 04  | 06  | 233835.45 | 34.40 | ~107.02 | 5      | 3.2 MLGS    | • • •        | • • • • • • • • | 315 |
| PDE~W           | 2011 | 04  | 25  | 165631.88 | 32.82 | -100.84 | 5      | 2.5 LgGS    | • • •        |                 | 317 |
| PDE-W           | 2011 | 04  | 28  | 010341.97 | 30.74 | -105.71 | 6      | 4.4 mbGS    | .F.          |                 | 264 |
| PDE-W           | 2011 | 04  | 28  | 035625.61 | 30,74 | -105.78 | 10     | 4.0 mbGS    | • • •        | • • • • • • • • | 268 |
| PDE-W           | 2011 | 04  | 28  | 045834.59 | 30.68 | -105.75 | 9      | 3.6 MwRMT   | .FM          |                 | 272 |
| PDE-W           | 2011 | 04  | 28  | 074903.45 | 30.82 | -105.80 | 5      | 3.1 LgGS    |              |                 | 262 |
| PDE-W           | 2011 | 04  | 28  | 075418.94 | 30.58 | -105.85 | 5      | 2.7 LgGS    | • • •        |                 | 286 |
| PDE - W         | 2011 | 04  | 30  | 010716.82 | 30.76 | -105.75 | 10     | 4.6 MDUNM   |              |                 | 265 |
| PDE-W           | 2011 | 05  | 02  | 114328.24 | 30.73 | -105.72 | 10     | 4.2 MwRMT   | 2FM          |                 | 266 |
| PDE-W           | 2011 | 05  | 02  | 115836.35 | 30.74 | ~105.70 | 10     | 3.3 MLGS    |              |                 | 264 |
| PDE-W           | 2011 | 05  | 02  | 134032,64 | 30.69 | -105.75 | 10     | 3.3 MLGS    |              |                 | 271 |
| PDE-W           | 2011 | 05  | 02  | 135536.79 | 30.73 | -105.67 | 5      | 4.4 mbGS    | 2F.          |                 | 264 |
| PDE-W           | 2011 | 05  | 03  | 025830.18 | 30.67 | -105,73 | 10     | 3.8 MwRMT   | . FM         |                 | 273 |
| PDE-W           | 2011 | 05  | 03  | 114203.84 | 30.49 | ~105.68 | 10     | 2.8 MLGS    |              |                 | 287 |
| PDE-W           | 2011 | 05  | 04  | 162627.03 | 30.71 | -105.79 | 10     | 3.7 MwRMT   | M            |                 | 271 |
| PDE-W           | 2011 | 05  | 05  | 052010.02 | 30.79 | -105.76 | 10     | 3,6 MLGS    |              |                 | 262 |
| PDE-W           | 2011 | 05  | 06  | 002426.09 | 30.75 | -105.73 | 10     | 2.8 MLGS    |              |                 | 264 |
| PDE-W           | 2011 | 05  | 06  | 004559.26 | 30.81 | -105.71 | 10     | 2.8 MLGS    |              |                 | 258 |
| PDE-W           | 2011 | 05  | 07  | 045100.88 | 30.64 | -105.73 | 10     | 4 1 MIDIINM | 2 F          |                 | 275 |
| PDE-W           | 2011 | 05  | 08  | 132449 65 | 30 75 | ~105 81 | 10     | 3 1 MLGS    |              |                 | 269 |
| W-309           | 2011 | 05  | 08  | 134616 49 | 30 72 | -105.76 | 10     | 3 2 MLCS    |              |                 | 269 |
| PDE-W           | 2011 | 05  | 08  | 135758 52 | 30.71 | -105.75 | 10     | 2 9 MLGS    | • • •        |                 | 269 |
| PDE-W           | 2011 | 05  | 08  | 190732 13 | 30.81 | -105 31 | 10     | 3 0 MLGS    | • • •        |                 | 202 |
| PDE-W           | 2011 | 05  | 08  | 225459 93 | 30.74 | -105 74 | 10     | 3 3 MLGS    | • • •        | • • • • • • • • | 255 |
| PDE-W           | 2011 | 05  | 09  | 064019 15 | 30 76 | ~105 69 | 10     |             | ייי<br>ש     |                 | 260 |
| PDE-W           | 2011 | 05  | 10  | 184118 44 | 30.70 | -105.00 | 10     | 3 4 MLGS    | • 1• •       |                 | 201 |
| PDE-W           | 2011 | 05  | 13  | 124916 26 | 30.72 | -105.45 | 10     | 2 6 MLCS    | • • •        | • • • • • • • • | 267 |
|                 | 2011 | 05  | 14  | 220751 11 | 30.20 | -105 74 | 10     |             | ···          | • • • • • • •   | 250 |
|                 | 2011 | 05  | 17  | 220731.11 | 20.02 | 105.74  | 10     |             |              |                 | 259 |
| PDE-W           | 2011 | 05  | 10  | 200820    | 30.75 | -105.74 | 10     | 4.2 MDONM   |              | • • • • • • • • | 265 |
| PDE-W           | 2011 | 05  | 19  | 115640 00 | 30,80 | -105.69 | 10     | 3.4 MWRMI   | M            |                 | 258 |
| PDE-W           | 2011 | 05  | 19  | 115649.90 | 30.72 | ~105.59 | 10     | 2.9 MLGS    | • • •        | • • • • • • •   | 260 |
| PDE-W           | 2011 | 05  | 20  | 231419.06 | 30.20 | -105.55 | 10     | 2.7 MLGS    | • • •        | • • • • • • •   | 310 |
| PDE~W           | 2011 | 05  | 25  | 100301.09 | 30.70 | -105.63 | 10     | 2.8 MLGS    | • • •        | • • • • • • •   | 264 |
| PDE-W           | 2011 | 05  | 27  | 014128.20 | 30.80 | -105.76 | 10     | 3.6 MLGS    | • • •        | • • • • • • • • | 261 |
| FDR-M           | 2011 | 05  | 27  | 014908.92 | 30.98 | ~105.78 | 10     | 3.0 MLGS    | • • •        | • • • • • • •   | 246 |
| FDE-M           | 2011 | 07  | ⊥4  | 102913.60 | 32.93 | -100.81 | 5      | 2.5 LgGS    | •••          | • • • • • • •   | 321 |
| PDE-W           | 2011 | 09  | 11  | 183635.11 | 32.74 | -100.84 | 5      | 2.5 LgGS    | ЗF.          | • • • • • • •   | 318 |
| PDE-M           | 2011 | 09  | 11  | 203158.11 | 32.89 | ~100.85 | 5      | 2.8 LgGS    | 2F.          | • • • • • • •   | 316 |
| PDE-W           | 2011 | 09  | 12  | 003149.11 | 32.80 | -100.88 | 5      | 2.7 LgGS    | 2F.          |                 | 314 |
| PDE-W           | 2011 | 09  | 12  | 022931.34 | 32.73 | -100.85 | 5      | 2.5 LgGS    | .н.          |                 | 317 |
| PDE-W           | 2011 | 09  | 12  | 091946.71 | 32.85 | -100.85 | 5      | 2.6 LgGS    |              |                 | 316 |
| PDE-W           | 2011 | 09  | 12  | 092612.90 | 32.76 | -100.84 | 5      | 2.7 LgGS    | 2F.          |                 | 317 |
| PDE-W           | 2011 | 09  | 12  | 141834.05 | 32.82 | -100.87 | 7      | 3.4 LgGS    | 3F.          |                 | 314 |

| PDE-W | 2011 | 09 28 | 214637.55 | 32.52 | -104.66 | 5 | 2.7 LgGS |                         | 48  |
|-------|------|-------|-----------|-------|---------|---|----------|-------------------------|-----|
| PDE-W | 2011 | 11 24 | 064959.99 | 32.95 | -100.81 | 5 | 2.8 LgGS |                         | 320 |
| PDE-W | 2011 | 11 24 | 231549.01 | 32.94 | ~100.85 | 5 | 3.1 LgGS |                         | 317 |
| PDE-W | 2011 | 12 09 | 184733.24 | 32.94 | ~100.86 | 5 | 3.5 LgGS | 3F                      | 315 |
| PDE-W | 2011 | 12 17 | 144658.46 | 32.81 | -100.85 | 5 | 3.2 LgGS | 3F                      | 316 |
| PDE-W | 2011 | 12 29 | 061907.64 | 32.81 | -100.91 | 5 | 2.5 LgGS | · · · · · · · · · · · · | 311 |
| PDE-W | 2011 | 12 29 | 114808.28 | 32.88 | -100.83 | 5 | 2.5 LgGS | .F                      | 318 |
| PDE-W | 2012 | 01 15 | 092901.68 | 31.23 | -103.61 | 5 | 2.7 LgGS | 2F                      | 181 |
| PDE~W | 2012 | 01 24 | 182102.61 | 30.32 | -103.38 | 5 | 3.6 LgGS | 4F                      | 283 |
| PDE-W | 2012 | 02 06 | 040024.75 | 32.09 | -104.91 | 5 | 2.7 LgGS | • • • • • • • • • • •   | 98  |
| PDE-W | 2012 | 03 06 | 031149.71 | 31.81 | -106.31 | 5 | 2.5 MLGS | 3F                      | 223 |
| PDE-W | 2012 | 03 18 | 105722.43 | 32.28 | -103.89 | 5 | 3.1 LgGS |                         | 63  |
| PDE~Q | 2012 | 04 05 | 091115.95 | 31.57 | ~106.09 | 5 | 2.9 MLGS | .F                      | 219 |
|       |      |       |           |       |         |   |          |                         |     |

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APPENDIX D

INJECTION FLUID ANALYTICAL DATA



29-Mar-2013

Aaron Strange Navajo Refining Company PO Box 159 Artesia, NM 88211

Tel: (575) 748-6733 Fax: (575) 746-5421

Re: Injection Well Quarterly

Work Order: 1303855

Dear Aaron,

ALS Environmental received 2 samples on 22-Mar-2013 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 40.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Sonia West

Electronically approved by: Jumoke M. Lawal

Sonia West Project Manager



Certificate No: T104704231-12-10

ADDRESS 10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

Environmental 🕽

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Navajo Refining Company **Client:** Injection Well Quarterly **Project:** Work Order: 1303855

### Work Order Sample Summary

| Lab Samp ID | <u>Client Sample ID</u> | <u>Matrix</u> | Tag Number | <b>Collection Date</b> | Date Received   | Hold |
|-------------|-------------------------|---------------|------------|------------------------|-----------------|------|
| 1303855-01  | WW Effluent             | Liquid        |            | 3/21/2013 14:55        | 3/22/2013 09:30 |      |
| 1303855-02  | Trip Blank - 021813-56  | Water         |            | 3/21/2013              | 3/22/2013 09:30 | ✓    |

Date: 29-Mar-13

| Client:     | Navajo Refining Company  |                |
|-------------|--------------------------|----------------|
| Project:    | Injection Well Quarterly | Case Narrative |
| Work Order: | 1303855                  |                |

The result for pH is flagged with H indicating that the holding time was exceeded. Per 40CFR136, the holding time for pH is "immediate."

The analysis for specific gravity was performed at Texas Oil Tech located in Houston, Texas.

Batch 68699, Total Metals, Sample 1303846-05D: MS/MSD is for an unrelated sample.

Batch 68756, Semivolatile Organics 8270, Sample SLCSDW2-130327: Insufficient sample was received for MS/MSD.

Batch R144692, Volatile Organics 8260, Sample 1303880-02A: MS/MSD is for an unrelated sample.

#### Client: Navajo Refining Company

Project: Injection Well Quarterly

Sample ID: WW Effluent

Collection Date: 3/21/2013 02:55 PM

#### Work Order: 1303855 Lab ID: 1303855-01 Matrix: LIQUID

|                         |        |      | Descrit |        |                    |           |                    |
|-------------------------|--------|------|---------|--------|--------------------|-----------|--------------------|
| Analyses                | Result | Qual | Limit   | Units  | Dilution<br>Factor | Date Prep | Date Analyzed      |
| MERCURY-SW7470A         |        |      | SW747   | 0      |                    |           | Analvst: OFO       |
| Mercury                 | ND     |      | 0.00020 | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 01:13 PM |
| METALS                  |        |      | SW602   | 20     |                    |           | Analyst: ALR       |
| Aluminum                | 1.34   |      | 0.020   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Arsenic                 | 0.0404 | *    | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Barium                  | 0.0860 |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Beryllium               | ND     |      | 0.0040  | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Boron                   | 0.722  |      | 0.10    | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Cadmium                 | ND     |      | 0.0040  | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Calcium                 | 110    |      | 1.0     | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Chromium                | ND     |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Cobalt                  | ND     |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Copper                  | ND     |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Iron                    | 0.793  |      | 0.40    | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Lead                    | ND     |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Magnesium               | 37.2   |      | 0.40    | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Manganese               | 0.0832 |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Molybdenum              | 0.182  |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Nickel                  | 0.0153 |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Potassium               | 107    |      | 0.40    | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Selenium                | 0.924  | *    | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Silver                  | ND     |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Sodium                  | 1,400  |      | 4.0     | 0 mg/L | 10                 | 3/26/2013 | 3/27/2013 07:09 PM |
| Vanadium                | 0.0221 |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| Zinc                    | 0.0737 |      | 0.010   | 0 mg/L | 1                  | 3/26/2013 | 3/27/2013 06:39 PM |
| SEMIVOLATILES - SW8270D |        |      | SW827   | 0      |                    |           | Analyst: JLJ       |
| 1,2,4-Trichlorobenzene  | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 2,4,5-Trichlorophenol   | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 2,4,6-Trichlorophenol   | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 2,4-Dinitrotoluene      | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 2-Methylnaphthalene     | ND     |      | 0.005   | ) mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 2-Methylphenol          | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 2-Nitroaniline          | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 2-Nitrophenol           | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 3&4-Methylphenol        | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 3-Nitroaniline          | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 4-Nitroaniline          | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| 4-Nitrophenol           | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Acenaphthene            | ND     |      | 0.005   | 0 mg/L | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |

### Client: Navajo Refining Company

**Project:** Injection Well Quarterly

Sample ID: WW Effluent

Collection Date: 3/21/2013 02:55 PM

### Work Order: 1303855 Lab ID: 1303855-01 Matrix: LIQUID

| Analyses                   | Result | Qual | Report<br>Limit U | U <b>nits</b> | Dilution<br>Factor | Date Prep | Date Analyzed      |
|----------------------------|--------|------|-------------------|---------------|--------------------|-----------|--------------------|
| Acenaphthylene             | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Aniline                    | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Anthracene                 | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Benz(a)anthracene          | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Benzidine                  | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Hexachlorobenzene          | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Hexachloroethane           | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Indeno(1,2,3-cd)pyrene     | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Isophorone                 | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Naphthalene                | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Nitrobenzene               | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| N-Nitrosodimethylamine     | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| N-Nitrosodi-n-propylamine  | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| N-Nitrosodiphenylamine     | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Pentachlorophenol          | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Phenanthrene               | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Phenol                     | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Pyrene                     | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Pyridine                   | ND     |      | 0.0050            | mg/L          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Surr: 2,4,6-Tribromophenol | 114    |      | 42-124            | %REC          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Surr: 2-Fluorobiphenyl     | 73.5   |      | 48-120            | %REC          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Surr: 2-Fluorophenol       | 69.2   |      | 20-120            | %REC          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Surr: 4-Terphenyl-d14      | 87.7   |      | 51-135            | %REC          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Surr: Nitrobenzene-d5      | 67.3   |      | 41-120            | %REC          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| Surr: Phenol-d6            | 75.7   |      | 20-120            | %REC          | 1                  | 3/27/2013 | 3/27/2013 07:55 PM |
| VOLATILES - SW8260C        |        |      | SW826             | ט             |                    |           | Analyst: PC        |
| 1,1,1-Trichloroethane      | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 1,1,2,2-Tetrachloroethane  | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 1,1,2-Trichloroethane      | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 1,1-Dichloroethane         | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 1,1-Dichloroethene         | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 1,2-Dichloroethane         | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 2-Butanone                 | ND     |      | 0.010             | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 2-Chloroethyl vinyl ether  | ND     |      | 0.010             | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 2-Hexanone                 | ND     |      | 0.010             | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| 4-Methyl-2-pentanone       | ND     |      | 0.010             | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| Acetone                    | 0.016  |      | 0.010             | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| Benzene                    | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| Bromodichloromethane       | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |
| Bromoform                  | ND     |      | 0.0050            | mg/L          | 1                  |           | 3/27/2013 02:05 PM |

#### Client: Navajo Refining Company

Project: Injection Well Quarterly

Sample ID: WW Effluent

Collection Date: 3/21/2013 02:55 PM

### Work Order: 1303855 Lab ID: 1303855-01 Matrix: LIQUID

| Analyses                                         | Result       | Qual | Report<br>Limit | Units | Dilution<br>Factor | Date Prep | Date Analyzed                    |
|--------------------------------------------------|--------------|------|-----------------|-------|--------------------|-----------|----------------------------------|
| Bromomethane                                     | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Carbon disulfide                                 | ND           |      | 0.010           | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Carbon tetrachloride                             | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Chlorobenzene                                    | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Chloroethane                                     | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Chloroform                                       | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Chloromethane                                    | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| cis-1,3-Dichloropropene                          | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Dibromochloromethane                             | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Ethylbenzene                                     | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| m,p-Xylene                                       | ND           |      | 0.010           | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Methylene chloride                               | ND           |      | 0.010           | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Styrene                                          | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Tetrachloroethene                                | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Toluene                                          | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| trans-1,3-Dichloropropene                        | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Trichloroethene                                  | ND           |      | 0.0050          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Vinyl acetate                                    | ND           |      | 0.010           | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Vinyl chloride                                   | ND           |      | 0.0020          | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Xylenes, Total                                   | ND           |      | 0.015           | mg/L  | 1                  |           | 3/27/2013 02:05 PM               |
| Surr: 1,2-Dichloroethane-d4                      | 104          |      | 70-125          | %REC  | 1                  |           | 3/27/2013 02:05 PM               |
| Surr: 4-Bromofluorobenzene                       | 98.1         |      | 72-125          | %REC  | 1                  |           | 3/27/2013 02:05 PM               |
| Surr: Dibromofluoromethane                       | 108          |      | 71-125          | %REC  | 1                  |           | 3/27/2013 02:05 PM               |
| Surr: Toluene-d8                                 | 101          |      | 75-125          | %REC  | 1                  |           | 3/27/2013 02:05 PM               |
| REACTIVE CYANIDE                                 |              |      | SW-846          |       |                    |           | Analyst: HN                      |
| Reactive Cyanide                                 | See Attached |      | 40.0            | mg/Kg | 1                  |           | 3/28/2013 09:45 AM               |
| REACTIVE SULFIDE                                 |              |      | SW-846          | i     |                    |           | Analyst: HN                      |
| Reactive Sulfide                                 | See Attached |      | 40.0            | mg/Kg | 1                  |           | 3/28/2013 09:45 AM               |
| MISCELLANEOUS ANALYSIS<br>Miscellaneous Analysis | See Attached |      | NA              |       | 1                  |           | Analyst: <b>SUB</b><br>3/28/2013 |
| ANIONS - EPA 300.0 (1993)                        |              |      | E300            |       |                    |           | Analyst: JKP                     |
| Bromide                                          | 2.60         |      | 0.500           | mg/L  | 5                  |           | 3/28/2013 05:02 PM               |
| Chloride                                         | 647          |      | 50.0            | mg/L  | 100                |           | 3/28/2013 05:23 PM               |
| Fluoride                                         | 22.8         |      | 0.500           | mg/L  | 5                  |           | 3/28/2013 05:02 PM               |
| Sulfate                                          | 2,630        |      | 50.0            | mg/L  | 100                |           | 3/28/2013 05:23 PM               |
| Surr: Selenate (surr)                            | 97.3         |      | 85-115          | %REC  | 100                |           | 3/28/2013 05:23 PM               |
| Surr: Selenate (surr)                            | 111          |      | 85-115          | %REC  | 5                  |           | 3/28/2013 05:02 PM               |
| ALKALINITY-SM2320B                               |              |      | SM2320          | B     |                    |           | Analyst: KL                      |

#### Client: Navajo Refining Company

Project: Injection Well Quarterly

Sample ID: WW Effluent

Collection Date: 3/21/2013 02:55 PM

### Work Order: 1303855 Lab ID: 1303855-01 Matrix: LIQUID

| Analyses                                        | Result | Qual | Report<br>Limit Units | Dilution<br>Factor Da | ate Prep Date Analyzed |
|-------------------------------------------------|--------|------|-----------------------|-----------------------|------------------------|
| Alkalinity, Bicarbonate (As CaCO3               | 366    |      | 6.00 mg/L             | 1                     | 3/26/2013 11:18 AM     |
| Alkalinity, Carbonate (As CaCO3)                | ND     |      | 6.00 mg/L             | 1                     | 3/26/2013 11:18 AM     |
| Alkalinity, Hydroxide (As CaCO3)                | ND     |      | 6.00 mg/L             | 1                     | 3/26/2013 11:18 AM     |
| Alkalinity, Total (As CaCO3)                    | 366    |      | 6.00 mg/L             | 1                     | 3/26/2013 11:18 AM     |
| SPECIFIC CONDUCTIVITY                           |        |      | M2510 B               |                       | Analyst: KL            |
| Specific Conductivity                           | 8,110  |      | 1.00 µmhos/c          | <b>m</b> 1            | 3/26/2013 02:07 PM     |
| IGNITIBILITY                                    |        |      | SW1010                |                       | Analyst: KL            |
| Ignitability                                    | > 212  |      | 50.0 °F               | 1                     | 3/27/2013 12:00 PM     |
| PH - SW9040C                                    |        |      | SW9040                |                       | Analyst: KL            |
| рН                                              | 7.98   | Н    | 0.100 pH units        | 1                     | 3/26/2013 11:18 AM     |
| TOTAL DISSOLVED SOLIDS                          |        |      | M2540C                |                       | Analyst: KAH           |
| Total Dissolved Solids (Residue,<br>Filterable) | 5,500  |      | 10.0 mg/L             | 1                     | 3/26/2013 06:05 PM     |

| Client:     | Navajo Refining Company  |
|-------------|--------------------------|
| Work Order: | 1303855                  |
| Project:    | Injection Well Quarterly |

#### Date: 29-Mar-13

## QC BATCH REPORT

| Batch ID: 686 | 699       | Instrument ID ICP7500 |                       | Method    | : SW602          | 20                |         |                  |           |              |         |
|---------------|-----------|-----------------------|-----------------------|-----------|------------------|-------------------|---------|------------------|-----------|--------------|---------|
| MBLK          | Sample ID | MBLKW2-032613-68699   |                       |           |                  | Units: mg/        | L       | Analy            | sis Date: | 3/26/2013 0  | 9:30 PM |
| Client ID:    |           | Run                   | n ID: ICP7500_130326A |           |                  | SeqNo: 315        | 3091    | Prep Date: 3/2   | 26/2013   | DF: <b>1</b> |         |
| Analista      |           | Decult                | DOI                   |           | SPK Ref<br>Value |                   | Control | RPD Ref<br>Value | 0/ 000    | RPD<br>Limit | Qual    |
| Analyte       |           | Result                | PQL                   | SPR Val   | 10.00            | %REC              |         | 10100            | %RPL      | )            | Quai    |
| Aluminum      |           | ND                    | 0.010                 |           |                  |                   |         |                  |           |              |         |
| Arsenic       |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Barium        |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Beryllium     |           | ND                    | 0.0020                |           |                  |                   |         |                  |           |              |         |
| Boron         |           | ND                    | 0.050                 |           |                  |                   |         |                  |           |              |         |
| Cadmium       |           | ND                    | 0.0020                |           |                  |                   |         |                  |           |              |         |
| Calcium       |           | ND                    | 0.50                  |           |                  |                   |         |                  |           |              |         |
| Chromium      |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Cobalt        |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Copper        |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Iron          |           | ND                    | 0.20                  |           |                  |                   |         |                  |           |              |         |
| Lead          |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Magnesium     |           | ND                    | 0.20                  |           |                  |                   |         |                  |           |              |         |
| Manganese     |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Molybdenum    |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Nickel        |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Potassium     |           | ND                    | 0.20                  |           |                  |                   |         |                  |           |              |         |
| Silver        |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Sodium        |           | ND                    | 0.20                  |           |                  |                   |         |                  |           |              |         |
| Vanadium      |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| Zinc          |           | ND                    | 0.0050                |           |                  |                   |         |                  |           |              |         |
| MBLK          | Sample ID | MBLKW2-032613-68699   |                       |           |                  | Units: <b>mg/</b> | L       | Analy            | sis Date: | 3/27/2013 0  | 4:53 PM |
| Client ID:    |           | Run                   | ID: ICP750            | 0_130327A |                  | SeqNo: 3154       | 4491    | Prep Date: 3/2   | 26/2013   | DF: 1        |         |

| Client ID. | Run    | ID. ICF/50 | 0_130327A |                  | Seque. 313 | 4431             |                  | 0/2013 | DI. I        |      |
|------------|--------|------------|-----------|------------------|------------|------------------|------------------|--------|--------------|------|
| Analyte    | Result | PQL        | SPK Val   | SPK Ref<br>Value | %REC       | Control<br>Limit | RPD Ref<br>Value | %RPD   | RPD<br>Limit | Qual |
| Selenium   | ND     | 0.0050     |           |                  |            |                  |                  |        |              |      |
|            |        |            |           |                  |            |                  |                  |        |              |      |

Batch ID: 68699

Instrument ID ICP7500

Method: SW6020

| LCS        | Sample ID: MLCSW2-032613-68699 |                      |           |                  | ι              | Jnits: <b>mg/</b> | L                | Analysis Date: 3/26/2013 09:35 PM |            |              |         |
|------------|--------------------------------|----------------------|-----------|------------------|----------------|-------------------|------------------|-----------------------------------|------------|--------------|---------|
| Client ID: | Ru                             | ın ID: <b>ICP750</b> | 0_130326A |                  | SeqNo: 3153092 |                   |                  | Prep Date: 3/2                    | 6/2013     | DF: <b>1</b> |         |
| Analyte    | Result                         | PQL                  | SPK Val   | SPK Ref<br>Value |                | %REC              | Control<br>Limit | RPD Ref<br>Value                  | %RPD       | RPD<br>Limit | Qual    |
| Aluminum   | 0.1068                         | 0.010                | 0.1       |                  | 0              | 107               | 80-120           | 0                                 |            |              |         |
| Arsenic    | 0.046                          | 0.0050               | 0.05      |                  | 0              | 92                | 80-120           | 0                                 |            |              |         |
| Barium     | 0.05079                        | 0.0050               | 0.05      |                  | 0              | 102               | 80-120           | 0                                 |            |              |         |
| Beryllium  | 0.05012                        | 0.0020               | 0.05      |                  | 0              | 100               | 80-120           | 0                                 |            |              |         |
| Boron      | 0.501                          | 0.050                | 0.5       |                  | 0              | 100               | 80-120           | 0                                 |            |              |         |
| Cadmium    | 0.05025                        | 0.0020               | 0.05      |                  | 0              | 100               | 80-120           | 0                                 |            |              |         |
| Calcium    | 4.655                          | 0.50                 | 5         |                  | 0              | 93.1              | 80-120           | 0                                 |            |              |         |
| Chromium   | 0.04537                        | 0.0050               | 0.05      |                  | 0              | 90.7              | 80-120           | 0                                 |            |              |         |
| Cobalt     | 0.04537                        | 0.0050               | 0.05      |                  | 0              | 90.7              | 80-120           | 0                                 |            |              |         |
| Copper     | 0.04618                        | 0.0050               | 0.05      |                  | 0              | 92.4              | 80-120           | 0                                 |            |              |         |
| Iron       | 4.768                          | 0.20                 | 5         |                  | 0              | 95.4              | 80-120           | 0                                 |            |              |         |
| Lead       | 0.04924                        | 0.0050               | 0.05      |                  | 0              | 98.5              | 80-120           | 0                                 |            |              |         |
| Magnesium  | 5.105                          | 0.20                 | 5         |                  | 0              | 102               | 80-120           | 0                                 |            |              |         |
| Manganese  | 0.04744                        | 0.0050               | 0.05      |                  | 0              | 94.9              | 80-120           | 0                                 |            |              |         |
| Molybdenum | 0.04742                        | 0.0050               | 0.05      |                  | 0              | 94.8              | 80-120           | 0                                 |            |              |         |
| Nickel     | 0.04539                        | 0.0050               | 0.05      |                  | 0              | 90.8              | 80-120           | 0                                 |            |              |         |
| Potassium  | 5.074                          | 0.20                 | 5         |                  | 0              | 101               | 80-120           | 0                                 |            |              |         |
| Silver     | 0.05002                        | 0.0050               | 0.05      |                  | 0              | 100               | 80-120           | 0                                 |            |              |         |
| Sodium     | 5.057                          | 0.20                 | 5         |                  | 0              | 101               | 80-120           | 0                                 |            |              |         |
| Vanadium   | 0.04575                        | 0.0050               | 0.05      |                  | 0              | 91.5              | 80-120           | 0                                 |            |              |         |
| Zinc       | 0.04974                        | 0.0050               | 0.05      |                  | 0              | 99.5              | 80-120           | 0                                 |            |              |         |
| LCS        | Sample ID: MLCSW2-032613-68699 |                      |           |                  | ι              | Jnits: <b>mg/</b> | L                | Analys                            | is Date: 3 | /27/2013 0   | 4:58 PM |
| Client ID: | Ru                             | un ID: <b>ICP750</b> | 0_130327A |                  | Se             | qNo: <b>315</b> 4 | 1492             | Prep Date: 3/2                    | 6/2013     | DF: <b>1</b> |         |
| Analyte    | Result                         | POI                  | SPK Val   | SPK Ref<br>Value |                | %REC              | Control<br>Limit | RPD Ref<br>Value                  | %RPD       | RPD<br>Limit | Qual    |
|            |                                |                      | 0 11 10   |                  | •              |                   |                  |                                   |            |              | ~~~~    |
| Selenium   | 0.04697                        | 0.0050               | 0.05      |                  | 0              | 93.9              | 80-120           | 0                                 |            |              |         |

Batch ID: 68699

Instrument ID ICP7500

Method: SW6020

| MS         | Sample ID: 1303846-05DMS |                      |           |                  | Units: <b>mg</b> / | L                | Analysis Date:        | 3/27/2013 0  | 6:04 PM |
|------------|--------------------------|----------------------|-----------|------------------|--------------------|------------------|-----------------------|--------------|---------|
| Client ID: | Ru                       | ın ID: <b>ICP750</b> | 0_130327A | Se               | eqNo: <b>315</b> 4 | 4505             | Prep Date: 3/26/2013  | DF: <b>2</b> |         |
| Analyte    | Result                   | PQL                  | SPK Val   | SPK Ref<br>Value | %REC               | Control<br>Limit | RPD Ref<br>Value %RP[ | RPD<br>Limit | Qual    |
| Aluminum   | 0.1684                   | 0.020                | 0.1       | 0.0651           | 103                | 80-120           | 0                     |              |         |
| Arsenic    | 0.04742                  | 0.010                | 0.05      | 0.002868         | 89.1               | 80-120           | 0                     |              |         |
| Barium     | 0.06544                  | 0.010                | 0.05      | 0.021            | 88.9               | 80-120           | 0                     |              |         |
| Beryllium  | 0.0481                   | 0.0040               | 0.05      | 0.0003478        | 95.5               | 80-120           | 0                     |              |         |
| Boron      | 1.671                    | 0.10                 | 0.5       | 1.231            | 88.1               | 80-120           | 0                     |              |         |
| Cadmium    | 0.06756                  | 0.0040               | 0.05      | 0.0228           | 89.5               | 80-120           | 0                     |              |         |
| Calcium    | 88.26                    | 1.0                  | 5         | 79.32            | 179                | 80-120           | 0                     |              | SO      |
| Chromium   | 0.04292                  | 0.010                | 0.05      | 0.0008358        | 84.2               | 80-120           | 0                     |              |         |
| Cobalt     | 0.04426                  | 0.010                | 0.05      | 0.001916         | 84.7               | 80-120           | 0                     |              |         |
| Copper     | 0.04364                  | 0.010                | 0.05      | 0.000758         | 85.8               | 80-120           | 0                     |              |         |
| Iron       | 4.544                    | 0.40                 | 5         | 0.05926          | 89.7               | 80-120           | 0                     |              |         |
| Lead       | 0.04498                  | 0.010                | 0.05      | 0.002284         | 85.4               | 80-120           | 0                     |              |         |
| Magnesium  | 98.7                     | 0.40                 | 5         | 90.9             | 156                | 80-120           | 0                     |              | SO      |
| Manganese  | 0.7488                   | 0.010                | 0.05      | 0.6738           | 150                | 80-120           | 0                     |              | SO      |
| Molybdenum | 15.33                    | 0.010                | 0.05      | 14.64            | 1380               | 80-120           | 0                     |              | SEO     |
| Nickel     | 0.04574                  | 0.010                | 0.05      | 0.004562         | 82.4               | 80-120           | 0                     |              |         |
| Potassium  | 7.952                    | 0.40                 | 5         | 3.454            | 90                 | 80-120           | 0                     |              |         |
| Selenium   | 0.0572                   | 0.010                | 0.05      | 0.002686         | 109                | 80-120           | 0                     |              |         |
| Silver     | 0.04278                  | 0.010                | 0.05      | 0.000395         | 84.8               | 80-120           | 0                     |              |         |
| Sodium     | ND                       | 0.40                 | 5         | 0                | 0                  | 80-120           | 0                     |              | SX      |
| Vanadium   | 0.07002                  | 0.010                | 0.05      | 0.0257           | 88.6               | 80-120           | 0                     |              |         |
| Zinc       | 0.04656                  | 0.010                | 0.05      | 0.002674         | 87.8               | 80-120           | 0                     |              |         |

Batch ID: 68699

Instrument ID ICP7500

Method: SW6020

| MSD        | Sample ID: 1303846-05DMSD |               |            | Units: mg/       | L                  | Analysis Date: 3/27/2013 06:09 PM |                  |            |               |         |
|------------|---------------------------|---------------|------------|------------------|--------------------|-----------------------------------|------------------|------------|---------------|---------|
| Client ID: |                           | Run ID: ICP75 | 00_130327A | S                | eqNo: <b>315</b> 4 | 4506                              | Prep Date: 3/26  | /2013      | DF: <b>2</b>  |         |
| Analyte    | Res                       | ult PQL       | SPK Val    | SPK Ref<br>Value | %REC               | Control<br>Limit                  | RPD Ref<br>Value | %RPD       | RPD<br>Limit  | Qual    |
| Aluminum   | 0.10                      | 67 0.020      | 0.1        | 0.0651           | 102                | 80-120                            | 0.1684           | 0.811      | 15            |         |
| Arsenic    | 0.04                      | 97 0.010      | 0.05       | 0.002868         | 93.7               | 80-120                            | 0.04742          | 4.7        | 15            |         |
| Barium     | 0.064                     | 48 0.010      | 0.05       | 0.021            | 87.6               | 80-120                            | 0.06544          | 0.983      | 15            |         |
| Beryllium  | 0.0479                    | 98 0.0040     | 0.05       | 0.0003478        | 95.3               | 80-120                            | 0.0481           | 0.25       | 15            |         |
| Boron      | 1.6                       | 73 0.10       | 0.5        | 1.231            | 88.6               | 80-120                            | 1.671            | 0.132      | 15            |         |
| Cadmium    | 0.068                     | 0.0040        | 0.05       | 0.0228           | 90.5               | 80-120                            | 0.06756          | 0.737      | 15            |         |
| Calcium    | 85                        | .4 1.0        | 5          | 79.32            | 122                | 80-120                            | 88.26            | 3.29       | 15            | SO      |
| Chromium   | 0.041                     | 78 0.010      | 0.05       | 0.0008358        | 81.9               | 80-120                            | 0.04292          | 2.69       | 15            |         |
| Cobalt     | 0.042                     | 29 0.010      | 0.05       | 0.001916         | 82                 | 80-120                            | 0.04426          | 3.12       | 15            |         |
| Copper     | 0.041                     | 32 0.010      | 0.05       | 0.000758         | 81.1               | 80-120                            | 0.04364          | 5.46       | 15            |         |
| Iron       | 4.42                      | 24 0.40       | 5          | 0.05926          | 87.3               | 80-120                            | 4.544            | 2.68       | 15            |         |
| Lead       | 0.044                     | 68 0.010      | 0.05       | 0.002284         | 84.8               | 80-120                            | 0.04498          | 0.669      | 15            |         |
| Magnesium  | 96.                       | 64 0.40       | 5          | 90.9             | 115                | 80-120                            | 98.7             | 2.11       | 15            | 0       |
| Manganese  | 0.72                      | 56 0.010      | 0.05       | 0.6738           | 104                | 80-120                            | 0.7488           | 3.15       | 15            | 0       |
| Molybdenum | 15.0                      | 0.010         | 0.05       | 14.64            | 840                | 80-120                            | 15.33            | 1.78       | 15            | SEO     |
| Nickel     | 0.044                     | 36 0.010      | 0.05       | 0.004562         | 80.6               | 80-120                            | 0.04574          | 1.94       | 15            |         |
| Potassium  | 7.82                      | 0.40          | 5          | 3.454            | 87.4               | 80-120                            | 7.952            | 1.65       | 15            |         |
| Selenium   | 0.050                     | .0.010        | 0.05       | 0.002686         | 96.4               | 80-120                            | 0.0572           | 11.7       | 15            |         |
| Silver     | 0.041                     | 92 0.010      | 0.05       | 0.000395         | 83                 | 80-120                            | 0.04278          | 2.03       | 15            |         |
| Sodium     | Ν                         | ID 0.40       | 5          | 0                | 0                  | 80-120                            | 0                | 0          | 15            | SX      |
| Vanadium   | 0.068                     | 0.010         | 0.05       | 0.0257           | 84.8               | 80-120                            | 0.07002          | 2.81       | 15            |         |
| Zinc       | 0.04                      | 62 0.010      | 0.05       | 0.002674         | 87.1               | 80-120                            | 0.04656          | 0.776      | 15            |         |
| DUP        | Sample ID: 1303846-05DDUP |               |            |                  | Units: <b>mg/</b>  | L                                 | Analysi          | s Date: 3/ | 27/2013 0     | 5:08 PM |
| Client ID: |                           | Run ID: ICP75 | 00_130327A | S                | eqNo: <b>315</b> 4 | 4494                              | Prep Date: 3/26  | /2013      | DF: <b>10</b> | 0       |
| Analyte    | Res                       | ult PQL       | SPK Val    | SPK Ref<br>Value | %REC               | Control<br>Limit                  | RPD Ref<br>Value | %RPD       | RPD<br>Limit  | Qual    |
| Molybdenum | 13.9                      | 95 0.50       | 0          | 0                | 0                  | 0-0                               | 13.56            | 2.84       | 25            |         |
| Sodium     | 18                        | 74 20         | 0          | 0                | 0                  | 0-0                               | 1846             | 1.51       | 25            |         |

Batch ID: 68699

Instrument ID ICP7500

Method: SW6020

| DUP        | Sample ID: 1303846-05DDUP |              |              |                  |                | Jnits: <b>ma</b> / | L                | Analysis Date: 3/27/2013 05:54 PM |        |              |      |
|------------|---------------------------|--------------|--------------|------------------|----------------|--------------------|------------------|-----------------------------------|--------|--------------|------|
| Client ID: | Ru                        | n ID: ICP750 | 0 130327A    |                  | SeqNo: 3154503 |                    |                  | Prep Date: 3/26                   | /2013  | DF: 2        |      |
| Analyte    | Result                    | PQL          | -<br>SPK Val | SPK Ref<br>Value |                | %REC               | Control<br>Limit | RPD Ref<br>Value                  | %RPD   | RPD<br>Limit | Qual |
| Aluminum   | 0.06508                   | 0.020        | 0            |                  | 0              | 0                  | 0-0              | 0.0651                            | 0.0307 | 25           |      |
| Arsenic    | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.002868                          | 0      | 25           |      |
| Barium     | 0.01995                   | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.021                             | 5.15   | 25           |      |
| Beryllium  | ND                        | 0.0040       | 0            |                  | 0              | 0                  | 0-0              | 0.0003478                         | 0      | 25           |      |
| Boron      | 1.222                     | 0.10         | 0            |                  | 0              | 0                  | 0-0              | 1.231                             | 0.701  | 25           |      |
| Cadmium    | 0.02212                   | 0.0040       | 0            |                  | 0              | 0                  | 0-0              | 0.0228                            | 3.03   | 25           |      |
| Calcium    | 79.3                      | 1.0          | 0            |                  | 0              | 0                  | 0-0              | 79.32                             | 0.0252 | 25           |      |
| Chromium   | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.0008358                         | 0      | 25           |      |
| Cobalt     | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.001916                          | 0      | 25           |      |
| Copper     | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.000758                          | 0      | 25           |      |
| Iron       | ND                        | 0.40         | 0            |                  | 0              | 0                  | 0-0              | 0.05926                           | 0      | 25           |      |
| Lead       | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.002284                          | 0      | 25           |      |
| Magnesium  | 90.02                     | 0.40         | 0            |                  | 0              | 0                  | 0-0              | 90.9                              | 0.973  | 25           |      |
| Manganese  | 0.6718                    | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.6738                            | 0.297  | 25           |      |
| Nickel     | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.004562                          | 0      | 25           |      |
| Potassium  | 3.424                     | 0.40         | 0            |                  | 0              | 0                  | 0-0              | 3.454                             | 0.872  | 25           |      |
| Selenium   | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.002686                          | 0      | 25           |      |
| Silver     | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.000395                          | 0      | 25           |      |
| Vanadium   | 0.02582                   | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.0257                            | 0.466  | 25           |      |
| Zinc       | ND                        | 0.010        | 0            |                  | 0              | 0                  | 0-0              | 0.002674                          | 0      | 25           |      |

The following samples were analyzed in this batch:

1303855-01B

Project: Injection Well Quarterly

| 8749 Instrument ID Mercury           | у                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Metho                                                                                                                                                                                                                         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| Sample ID: GBLKW1-032713-6874        | 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                               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| Resul                                | lt PG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | L SPK Val                                                                                                                                                                                                                     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                                                                                   | %REC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Control<br>Limit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                                                                                                                                                        | Qual                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| NE                                   | 0.0002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20 0                                                                                                                                                                                                                          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| ing samples were analyzed in this ba | atch:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1303855-01E                                                                                                                                                                                                                   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| i                                    | 3/49         Instrument ID Mercury           Sample ID:         GBLKW1-032713-68744           Resul         Nt           Sample ID:         GLCSW1-032713-68744           Sample ID:         GLCSW1-032713-68744           Resul         0.00534           Sample ID:         1303777-01DMS           Sample ID:         1303777-01DMS           Sample ID:         1303777-01DMSD           Sample ID:         1303777-01DMSD           Sample ID:         1303777-01DMSD           F         Resul           0.00511         Sample ID:           Sample ID:         1303777-01DMSD           F         Resul           0.00511         Sample ID:           Sample ID:         1303777-01DDUP           F         Resul           0.00511         Sample ID: | Sample ID:         GBLKW1-032713-68749           Run ID:         MEF           Result         PC           ND         0.0002           Sample ID:         GLCSW1-032713-68749           Run ID:         MEF           Result         PC           0.00536         0.0002           Sample ID:         1303777-01DMS           Run ID:         MEF           Result         PC           0.00519         0.0002           Sample ID:         1303777-01DMSD           Run ID:         MEF           Result         PC           0.00519         0.0002           Sample ID:         1303777-01DMSD           Run ID:         MEF           Result         PC           0.00517         0.0002           Sample ID:         1303777-01DDUP           Run ID:         MEF           Result         PC           0.00517         0.0002           Sample ID:         1303777-01DDUP           Run ID:         MEF           ND         0.0002 | 3/49         Instrument ID Mercury         Metric           Sample ID:         GBLKW1-032713-68749         Run ID:         MERCURY_13032           Result         PQL         SPK Val         ND         0.00020           Sample ID:         GLCSW1-032713-68749         Run ID:         MERCURY_13032           Result         PQL         SPK Val         0.00536         0.00020         0.005           Sample ID:         1303777-01DMS         Run ID:         MERCURY_13032         Result         PQL         SPK Val           0.00519         0.00020         0.005         Sample ID:         1303777-01DMSD         Run ID:         MERCURY_13032           Result         PQL         SPK Val         0.00519         0.00020         0.005           Sample ID:         1303777-01DMSD         Run ID:         MERCURY_13032         Result         PQL         SPK Val           0.00517         0.00020         0.005         Sample ID:         1303777-01DDUP         Run ID:         MERCURY_13032           Result         PQL         SPK Val         0.00020         0         0           0.00517         0.00020         0         0         0         0         0           Sample ID:         1303777-01DD | 3/49         Instrument ID Mercury         Method:         SW/4           Sample ID:         GBLKW1-032713-68749         SPK Ref         SPK Ref           Result         PQL         SPK Val         Value           ND         0.00020         Sample ID:         GLCSW1-032713-68749           Run ID:         MERCURY_130326A         SPK Ref           Result         PQL         SPK Val         Value           0.00536         0.00020         0.005         Sample ID:         1303777-01DMS           Sample ID:         1303777-01DMS         Run ID:         MERCURY_130326A         SPK Ref           Result         PQL         SPK Val         Value         0.00020         0.005         -0.0000           Sample ID:         1303777-01DMSD         Run ID:         MERCURY_130326A         SPK Ref         Value         0.00020         0.005         -0.0000           Sample ID:         1303777-01DMSD         Run ID:         MERCURY_130326A         SPK Ref         Value         0.000517         0.00020         0.005         -0.0000           Sample ID:         13033777-01DDUP         Run ID:         MERCURY_130326A         SPK Ref         Value           0.000517         0.00020         0.005         -0.0000< | 3749         Instrument ID Mercury         Method:         SW7470           Sample ID:         GBLKW1-032713-68749         Ui           Run ID:         MERCURY_130326A         Sec           Sample ID:         GLCSW1-032713-68749         Ui           ND         0.00020         SPK Ref           Sample ID:         GLCSW1-032713-68749         Ui           Run ID:         MERCURY_130326A         Sec           Sample ID:         GLCSW1-032713-68749         Ui           Run ID:         MERCURY_130326A         Sec           Sample ID:         GLCSW1-032713-68749         Ui           0.00536         0.00020         0.005         0           Sample ID:         1303777-01DMS         Ui         SPK Ref           Result         PQL         SPK Val         SPK Ref           Value         0.00519         0.0020         0.005         -0.000005           Sample ID:         1303777-01DMSD         Ui         Run ID:         MERCURY_130326A         Sec           Sample ID:         1303777-01DMSD         Ui         Run ID:         MERCURY_130326A         Sec           Sample ID:         1303777-01DDUP         Ui         Run ID:         MERCURY_130326A         Sec | 3743         Instrument ID Mercury         Method:         SW/470           Sample ID:         GBLKW1-032713-68749         Units: mg/<br>Run ID:         MERCURY_130326A         SeqNo: 315           Result         PQL         SPK Val         Value         %REC           ND         0.00020         SPK Val         Value         %REC           Sample ID:         GLCSW1-032713-68749         Units: mg/<br>Run ID:         MERCURY_130326A         SeqNo: 315           Sample ID:         GLCSW1-032713-68749         Units: mg/<br>Run ID:         MERCURY_130326A         SeqNo: 315           Sample ID:         GLCSW1-032713-68749         Units: mg/<br>Run ID:         MERCURY_130326A         SeqNo: 315           Sample ID:         1303777-01DMS         Units: mg/<br>Run ID:         MERCURY_130326A         SeqNo: 315           Sample ID:         1303777-01DMSD         Units: mg/<br>Run ID:         MERCURY_130326A         SeqNo: 315           Result         PQL         SPK Val         SPK Ref<br>Value         %REC           0.00517         0.00020         0.005         -0.000005         104           Sample ID:         1303777-01DDUP         Units: mg/<br>Value         %REC           Run ID:         MERCURY_130326A         SeqNo: 315           Sample ID:         1 | Sample ID:         GBLKW1-032713-68749         Units:         mg/L           Run ID:         MERCURY_130326A         SeqNo:         3153512           Sample ID:         GBLKW1-032713-68749         Units:         mg/L           ND         0.00020         SPK Ref         Control           Sample ID:         GLCSW1-032713-68749         Units:         mg/L           Run ID:         MERCURY_130326A         SeqNo:         3153513           Sample ID:         GLCSW1-032713-68749         Units:         mg/L           Run ID:         MERCURY_130326A         SeqNo:         3153513           Sample ID:         GLCSW1-032713-68749         Units:         mg/L           Run ID:         MERCURY_130326A         SeqNo:         3153513           Sample ID:         1303777-01DMS         Units:         mg/L           Result         PQL         SPK Val         SeqNo:         3153516           Sample ID:         1303777-01DMSD         Units:         mg/L         Imit           Run ID:         MERCURY_130326A         SeqNo:         3153517           Sample ID:         1303777-01DMSD         Units:         mg/L           Run ID:         MERCURY_130326A         SeqNo:         3153515 | Sample ID:         GBLKW1-032713-68749         Units: mg/L         Analysi           Run ID:         MERCURY_130326A         SeqNo: 3153512         Prep Date: 3/27           ND         0.00020         SPK Ref         Control         RPD Ref           Sample ID:         GLCSW1-032713-68749         Units: mg/L         Analysi           Run ID:         MERCURY_130326A         SeqNo: 3153513         Prep Date: 3/27           Sample ID:         GLCSW1-032713-68749         Units: mg/L         Analysi           Run ID:         MERCURY_130326A         SeqNo: 3153513         Prep Date: 3/27           Result         PQL         SPK Val         Value         %REC         Control         RPD Ref           0.00536         0.00020         0.005         0         107         85-115         0           Sample ID:         1303777-01DMS         Units: mg/L         Analysi           Run ID:         MERCURY_130326A         SeqNo: 3153516         Prep Date: 3/27           Result         PQL         SPK Val         %REC         Control         RPD Ref           Multis:         MQL         SPK Ref         Control         RPD Ref         Limit         Value         %REC         Control         RPD Ref         Value | Sample ID:         GBLKW1-032713-68749<br>Run ID:         MERCURY_130326A         SeqNo:         S153512         Prep Date:         3/27/2013           Result         PQL         SPK Val         SPK Ref         Control         RPD Ref         Value         %RPD           ND         0.00020         SPK Val         SPK Ref         Control         RPD Ref         Value         %RPD           Sample ID:         GLCSW1-032713-68749         Units: mg/L         Analysis Date:         3/2           Run ID:         MERCURY_130326A         SeqNo:         SeqNo:         3153513         Prep Date:         3/27/2013           Sample ID:         GLCSW1-032713-68749         Units: mg/L         Analysis Date:         3/2           Run ID:         MERCURY_130326A         SeqNo:         3153513         Prep Date:         3/27/2013           Sample ID:         1303777-01DMS         Units: mg/L         Analysis Date:         3           Run ID:         MERCURY_130326A         SeqNo:         SeqNo:         3153516         Prep Date:         3/27/2013           Sample ID:         1303777-01DMS         Units: mg/L         Analysis Date:         3           Run ID:         MERCURY_130326A         SeqNo:         3153517         Prep Date:         3/ | Sample ID:         GBLKW1-032713-68749<br>Run ID:         Units:         mg/L         Analysis Date:         3/27/2013         DF: 1           Sample ID:         GBLKW1-032713-68749<br>Result         PQL         SPK Val         SPK Ref         Control         RPD Ref         %RPD         RPD         RPD         RPD         Ref         %RPD         Value         %RPD         Limit         ND         0.00020         DF: 1         ND         0.00020         SPK Ref         Control         RPD Ref         %RPD         Ref         Write         %RPD         Ref         Value         %RPD         Ref         Value         %RPD         Limit         DF: 1         SPK Ref         Control         RPD Ref         %RPD         Ref         Value         %RPD         Ref         Value         %RPD         Limit         DF: 1         SPK Ref         Control         RPD Ref         %RPD         Limit         DF: 1         SPK Ref         Control         RPD Ref         %RPD         Limit         MPD         Limit         DF: 1         SPK Ref         Control         RPD Ref         %RPD         Limit         MPD         Limit         MPD         Limit         ND         0.0005         QL         SPK Ref         Control         RPD Ref         %RPD |

Batch ID: 68756

Instrument ID SV-3

Method: SW8270

| MBLK Sample ID:           | SBLKW2-130327-68756 |                      |         |         | Units: µg/I | L       | Analy          | /sis Date: | 3/27/2013 (  | )7:00 PM |
|---------------------------|---------------------|----------------------|---------|---------|-------------|---------|----------------|------------|--------------|----------|
| Client ID:                | R                   | un ID: <b>SV-3_1</b> | 30327A  |         | SeqNo: 315  | 5049    | Prep Date: 3/2 | 27/2013    | DF: <b>1</b> |          |
|                           |                     |                      |         | SPK Ref |             | Control | RPD Ref        |            | RPD          |          |
| Analyte                   | Result              | PQL                  | SPK Val | Value   | %REC        | Limit   | Value          | %RPD       | Limit        | Qual     |
| 1,2,4-Trichlorobenzene    | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 2,4,5-Trichlorophenol     | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 2,4,6-Trichlorophenol     | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 2,4-Dinitrotoluene        | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 2-Methylnaphthalene       | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 2-Methylphenol            | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 2-Nitroaniline            | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 2-Nitrophenol             | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 3&4-Methylphenol          | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 3-Nitroaniline            | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 4-Nitroaniline            | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| 4-Nitrophenol             | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Acenaphthene              | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Acenaphthylene            | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Aniline                   | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Anthracene                | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Benz(a)anthracene         | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Benzidine                 | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Hexachlorobenzene         | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Hexachloroethane          | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Indeno(1,2,3-cd)pyrene    | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Isophorone                | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Naphthalene               | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Nitrobenzene              | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| N-Nitrosodimethylamine    | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| N-Nitrosodi-n-propylamine | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| N-Nitrosodiphenylamine    | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Pentachlorophenol         | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Phenanthrene              | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Phenol                    | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Pyrene                    | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Pyridine                  | ND                  | 5.0                  |         |         |             |         |                |            |              |          |
| Surr: 2,4,6-Tribromophe   | enol 94.74          | 5.0                  | 100     |         | 0 94.7      | 42-124  | !              | 0          |              |          |
| Surr: 2-Fluorobiphenyl    | 107                 | 5.0                  | 100     |         | 0 107       | 48-120  | )              | 0          |              |          |
| Surr: 2-Fluorophenol      | 79.61               | 5.0                  | 100     |         | 0 79.6      | 20-120  | )              | 0          |              |          |
| Surr: 4-Terphenyl-d14     | 94.22               | 5.0                  | 100     |         | 0 94.2      | 51-135  | i              | 0          |              |          |
| Surr: Nitrobenzene-d5     | 91.09               | 5.0                  | 100     |         | 0 91.1      | 41-120  | )              | 0          |              |          |
| Surr: Phenol-d6           | 70.94               | 5.0                  | 100     |         | 0 70.9      | 20-120  | )              | 0          |              |          |

Project: Injection Well Quarterly

Batch ID: 68756

Instrument ID SV-3

Method: SW8270

| LCS Sample ID: S          | SLCSW2-130327-68756 |               |         |         | ι  | Jnits: µg/L     |         | Analys          | is Date: 3 | /27/2013     | 05:34 PM |
|---------------------------|---------------------|---------------|---------|---------|----|-----------------|---------|-----------------|------------|--------------|----------|
| Client ID:                | Ru                  | in ID: SV-3_1 | 30327A  |         | Se | qNo: <b>315</b> | 5047    | Prep Date: 3/27 | 7/2013     | DF: <b>1</b> |          |
|                           |                     |               |         | SPK Ref |    |                 | Control | RPD Ref         |            | RPD          |          |
| Analyte                   | Result              | PQL           | SPK Val | Value   |    | %REC            | Limit   | Value           | %RPD       | Limit        | Qual     |
| 1,2,4-Trichlorobenzene    | 49.68               | 5.0           | 50      |         | 0  | 99.4            | 50-120  | 0               |            |              |          |
| 2,4,5-Trichlorophenol     | 88.8                | 5.0           | 100     |         | 0  | 88.8            | 50-120  | 0               |            |              |          |
| 2,4,6-Trichlorophenol     | 87.66               | 5.0           | 100     |         | 0  | 87.7            | 50-120  | 0               |            |              |          |
| 2,4-Dinitrotoluene        | 40.23               | 5.0           | 50      |         | 0  | 80.5            | 50-120  | 0               |            |              |          |
| 2-Methylnaphthalene       | 39.69               | 5.0           | 50      |         | 0  | 79.4            | 55-120  | 0               |            |              |          |
| 2-Methylphenol            | 71.05               | 5.0           | 100     |         | 0  | 71.1            | 50-120  | 0               |            |              |          |
| 2-Nitroaniline            | 48.2                | 5.0           | 50      |         | 0  | 96.4            | 55-125  | 0               |            |              |          |
| 2-Nitrophenol             | 88.78               | 5.0           | 100     |         | 0  | 88.8            | 55-120  | 0               |            |              |          |
| 3&4-Methylphenol          | 101.7               | 5.0           | 150     |         | 0  | 67.8            | 45-120  | 0               |            |              |          |
| 3-Nitroaniline            | 19.35               | 5.0           | 50      |         | 0  | 38.7            | 25-120  | 0               |            |              |          |
| 4-Nitroaniline            | 34.79               | 5.0           | 50      |         | 0  | 69.6            | 50-120  | 0               |            |              |          |
| 4-Nitrophenol             | 64.27               | 5.0           | 100     |         | 0  | 64.3            | 45-120  | 0               |            |              |          |
| Acenaphthene              | 45.43               | 5.0           | 50      |         | 0  | 90.9            | 55-120  | 0               |            |              |          |
| Acenaphthylene            | 45.76               | 5.0           | 50      |         | 0  | 91.5            | 55-120  | 0               |            |              |          |
| Aniline                   | 18.75               | 5.0           | 50      |         | 0  | 37.5            | 30-120  | 0               |            |              |          |
| Anthracene                | 46.49               | 5.0           | 50      |         | 0  | 93              | 55-120  | 0               |            |              |          |
| Benz(a)anthracene         | 49.81               | 5.0           | 50      |         | 0  | 99.6            | 55-120  | 0               |            |              |          |
| Benzidine                 | 20.46               | 5.0           | 50      |         | 0  | 40.9            | 10-120  | 0               |            |              |          |
| Hexachlorobenzene         | 46.03               | 5.0           | 50      |         | 0  | 92.1            | 55-120  | 0               |            |              |          |
| Hexachloroethane          | 41.25               | 5.0           | 50      |         | 0  | 82.5            | 55-120  | 0               |            |              |          |
| Indeno(1,2,3-cd)pyrene    | 47.39               | 5.0           | 50      |         | 0  | 94.8            | 55-120  | 0               |            |              |          |
| Isophorone                | 43.91               | 5.0           | 50      |         | 0  | 87.8            | 55-120  | 0               |            |              |          |
| Naphthalene               | 44.86               | 5.0           | 50      |         | 0  | 89.7            | 55-120  | 0               |            |              |          |
| Nitrobenzene              | 44.14               | 5.0           | 50      |         | 0  | 88.3            | 55-120  | 0               |            |              |          |
| N-Nitrosodimethylamine    | 36.13               | 5.0           | 50      |         | 0  | 72.3            | 45-120  | 0               |            |              |          |
| N-Nitrosodi-n-propylamine | 34.59               | 5.0           | 50      |         | 0  | 69.2            | 50-120  | 0               |            |              |          |
| N-Nitrosodiphenylamine    | 48.17               | 5.0           | 50      |         | 0  | 96.3            | 55-120  | 0               |            |              |          |
| Pentachlorophenol         | 86.13               | 5.0           | 100     |         | 0  | 86.1            | 55-120  | 0               |            |              |          |
| Phenanthrene              | 45.79               | 5.0           | 50      |         | 0  | 91.6            | 55-120  | 0               |            |              |          |
| Phenol                    | 73.5                | 5.0           | 100     |         | 0  | 73.5            | 50-120  | 0               |            |              |          |
| Pyrene                    | 50.95               | 5.0           | 50      |         | 0  | 102             | 55-120  | 0               |            |              |          |
| Pyridine                  | 30.36               | 5.0           | 50      |         | 0  | 60.7            | 35-120  | 0               |            |              |          |
| Surr: 2,4,6-Tribromopher  | nol 81.62           | 5.0           | 100     |         | 0  | 81.6            | 42-124  | 0               |            |              |          |
| Surr: 2-Fluorobiphenyl    | 95.81               | 5.0           | 100     |         | 0  | 95.8            | 48-120  | 0               |            |              |          |
| Surr: 2-Fluorophenol      | 86.76               | 5.0           | 100     |         | 0  | 86.8            | 20-120  | 0               |            |              |          |
| Surr: 4-Terphenyl-d14     | 94.07               | 5.0           | 100     |         | 0  | 94.1            | 51-135  | 0               |            |              |          |
| Surr: Nitrobenzene-d5     | 95.81               | 5.0           | 100     |         | 0  | 95.8            | 41-120  | 0               |            |              |          |
| Surr: Phenol-d6           | 77.52               | 5.0           | 100     |         | 0  | 77.5            | 20-120  | 0               |            |              |          |

Injection Well Quarterly **Project:** 

Batch ID: 68756

Instrument ID SV-3

Method: SW8270

| LCSD Sa           | ample ID: <b>S</b> | LCSDW2-130327-68756 |                     |         |         | Units: µg/l      | -       | Analysi         | s Date: <b>3/</b> | 27/2013 0    | 5:55 PM |
|-------------------|--------------------|---------------------|---------------------|---------|---------|------------------|---------|-----------------|-------------------|--------------|---------|
| Client ID:        |                    | Ru                  | n ID: <b>SV-3_1</b> | 30327A  | S       | eqNo: <b>315</b> | 5048    | Prep Date: 3/27 | /2013             | DF: <b>1</b> |         |
|                   |                    |                     |                     |         | SPK Ref |                  | Control | RPD Ref         |                   | RPD          |         |
| Analyte           |                    | Result              | PQL                 | SPK Val | Value   | %REC             | Limit   | Value           | %RPD              | Limit        | Qual    |
| 1,2,4-Trichlorob  | enzene             | 46.64               | 5.0                 | 50      | 0       | 93.3             | 50-120  | 49.68           | 6.3               | 20           |         |
| 2,4,5-Trichlorop  | henol              | 85.18               | 5.0                 | 100     | 0       | 85.2             | 50-120  | 88.8            | 4.16              | 20           |         |
| 2,4,6-Trichlorop  | henol              | 84.54               | 5.0                 | 100     | 0       | 84.5             | 50-120  | 87.66           | 3.63              | 20           |         |
| 2,4-Dinitrotoluer | ne                 | 39.66               | 5.0                 | 50      | 0       | 79.3             | 50-120  | 40.23           | 1.44              | 20           |         |
| 2-Methylnaphtha   | alene              | 37.18               | 5.0                 | 50      | 0       | 74.4             | 55-120  | 39.69           | 6.52              | 20           |         |
| 2-Methylphenol    |                    | 65.48               | 5.0                 | 100     | 0       | 65.5             | 50-120  | 71.05           | 8.17              | 20           |         |
| 2-Nitroaniline    |                    | 44.48               | 5.0                 | 50      | 0       | 89               | 55-125  | 48.2            | 8.04              | 20           |         |
| 2-Nitrophenol     |                    | 84.41               | 5.0                 | 100     | 0       | 84.4             | 55-120  | 88.78           | 5.05              | 20           |         |
| 3&4-Methylpher    | lor                | 92.04               | 5.0                 | 150     | 0       | 61.4             | 45-120  | 101.7           | 9.99              | 20           |         |
| 3-Nitroaniline    |                    | 19.94               | 5.0                 | 50      | 0       | 39.9             | 25-120  | 19.35           | 3.03              | 20           |         |
| 4-Nitroaniline    |                    | 34.39               | 5.0                 | 50      | 0       | 68.8             | 50-120  | 34.79           | 1.15              | 20           |         |
| 4-Nitrophenol     |                    | 63.61               | 5.0                 | 100     | 0       | 63.6             | 45-120  | 64.27           | 1.04              | 20           |         |
| Acenaphthene      |                    | 43.04               | 5.0                 | 50      | 0       | 86.1             | 55-120  | 45.43           | 5.41              | 20           |         |
| Acenaphthylene    | ;                  | 43.25               | 5.0                 | 50      | 0       | 86.5             | 55-120  | 45.76           | 5.66              | 20           |         |
| Aniline           |                    | 17.91               | 5.0                 | 50      | 0       | 35.8             | 30-120  | 18.75           | 4.58              | 20           |         |
| Anthracene        |                    | 44.23               | 5.0                 | 50      | 0       | 88.5             | 55-120  | 46.49           | 4.99              | 20           |         |
| Benz(a)anthrace   | ene                | 45.91               | 5.0                 | 50      | 0       | 91.8             | 55-120  | 49.81           | 8.15              | 20           |         |
| Benzidine         |                    | 20.73               | 5.0                 | 50      | 0       | 41.5             | 10-120  | 20.46           | 1.31              | 20           |         |
| Hexachlorobenz    | ene                | 44.09               | 5.0                 | 50      | 0       | 88.2             | 55-120  | 46.03           | 4.3               | 20           |         |
| Hexachloroetha    | ne                 | 38.38               | 5.0                 | 50      | 0       | 76.8             | 55-120  | 41.25           | 7.2               | 20           |         |
| Indeno(1,2,3-cd   | )pyrene            | 42.28               | 5.0                 | 50      | 0       | 84.6             | 55-120  | 47.39           | 11.4              | 20           |         |
| Isophorone        |                    | 40.17               | 5.0                 | 50      | 0       | 80.3             | 55-120  | 43.91           | 8.9               | 20           |         |
| Naphthalene       |                    | 42.22               | 5.0                 | 50      | 0       | 84.4             | 55-120  | 44.86           | 6.07              | 20           |         |
| Nitrobenzene      |                    | 41.46               | 5.0                 | 50      | 0       | 82.9             | 55-120  | 44.14           | 6.27              | 20           |         |
| N-Nitrosodimeth   | nylamine           | 36.24               | 5.0                 | 50      | 0       | 72.5             | 45-120  | 36.13           | 0.308             | 20           |         |
| N-Nitrosodi-n-pr  | opylamine          | 30.03               | 5.0                 | 50      | 0       | 60.1             | 50-120  | 34.59           | 14.1              | 20           |         |
| N-Nitrosodiphen   | nylamine           | 47.01               | 5.0                 | 50      | 0       | 94               | 55-120  | 48.17           | 2.44              | 20           |         |
| Pentachlorophe    | nol                | 82.01               | 5.0                 | 100     | 0       | 82               | 55-120  | 86.13           | 4.9               | 20           |         |
| Phenanthrene      |                    | 43.58               | 5.0                 | 50      | 0       | 87.2             | 55-120  | 45.79           | 4.96              | 20           |         |
| Phenol            |                    | 69.04               | 5.0                 | 100     | 0       | 69               | 50-120  | 73.5            | 6.26              | 20           |         |
| Pyrene            |                    | 47.14               | 5.0                 | 50      | 0       | 94.3             | 55-120  | 50.95           | 7.76              | 20           |         |
| Pyridine          |                    | 30.05               | 5.0                 | 50      | 0       | 60.1             | 35-120  | 30.36           | 1.02              | 20           |         |
| Surr: 2,4,6-Tr    | ribromophen        | ol 76.73            | 5.0                 | 100     | 0       | 76.7             | 42-124  | 81.62           | 6.18              | 20           |         |
| Surr: 2-Fluoro    | obiphenyl          | 89.6                | 5.0                 | 100     | 0       | 89.6             | 48-120  | 95.81           | 6.7               | 20           |         |
| Surr: 2-Fluoro    | ophenol            | 82.43               | 5.0                 | 100     | 0       | 82.4             | 20-120  | 86.76           | 5.11              | 20           |         |
| Surr: 4-Terph     | enyl-d14           | 87.05               | 5.0                 | 100     | 0       | 87.1             | 51-135  | 94.07           | 7.74              | 20           |         |
| Surr: Nitrober    | nzene-d5           | 87.58               | 5.0                 | 100     | 0       | 87.6             | 41-120  | 95.81           | 8.97              | 20           |         |
| Surr: Phenol-     | d6                 | 71.04               | 5.0                 | 100     | 0       | 71               | 20-120  | 77.52           | 8.73              | 20           |         |

| Client:<br>Work Order:<br>Project: | Navajo Refining Company<br>1303855<br>Injection Well Quarterly |                | QC BATCH REPORT |
|------------------------------------|----------------------------------------------------------------|----------------|-----------------|
| Batch ID: 68756                    | Instrument ID SV-3                                             | Method: SW8270 |                 |
| The following sar                  | nples were analyzed in this batch:                             | 1303855-01F    |                 |

The following samples were analyzed in this batch:

Instrument ID VOA1

### **QC BATCH REPORT**

**Project:** 

Batch ID: R144692

Method: SW8260

| MBLK Sample ID: VBLKW-130327-R144692 |        |     |         |       | Units: ua/ | L         | Analysis Date: 3/27/2013 12:01 PM |      |       |      |  |
|--------------------------------------|--------|-----|---------|-------|------------|-----------|-----------------------------------|------|-------|------|--|
| Client ID:                           | Run l  |     | 130327A |       | SeaNo: 315 | -<br>3674 | Prep Date: DF: 1                  |      |       |      |  |
|                                      |        |     |         |       | 004.00.010 | Orantari  |                                   |      |       |      |  |
| Analyte                              | Result | PQL | SPK Val | Value | %REC       | Limit     | Value                             | %RPD | Limit | Qual |  |
| 1,1,1-Trichloroethane                | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| 1,1,2,2-Tetrachloroethane            | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| 1,1,2-Trichloroethane                | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| 1,1-Dichloroethane                   | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| 1,1-Dichloroethene                   | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| 1,2-Dichloroethane                   | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| 2-Butanone                           | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| 2-Chloroethyl vinyl ether            | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| 2-Hexanone                           | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| 4-Methyl-2-pentanone                 | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| Acetone                              | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| Benzene                              | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Bromodichloromethane                 | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Bromoform                            | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Bromomethane                         | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Carbon disulfide                     | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| Carbon tetrachloride                 | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Chlorobenzene                        | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Chloroethane                         | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Chloroform                           | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Chloromethane                        | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| cis-1,3-Dichloropropene              | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Dibromochloromethane                 | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Ethylbenzene                         | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| m,p-Xylene                           | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| Methylene chloride                   | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| Styrene                              | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Tetrachloroethene                    | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Toluene                              | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| trans-1,3-Dichloropropene            | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Trichloroethene                      | ND     | 5.0 |         |       |            |           |                                   |      |       |      |  |
| Vinyl acetate                        | ND     | 10  |         |       |            |           |                                   |      |       |      |  |
| Vinyl chloride                       | ND     | 2.0 |         |       |            |           |                                   |      |       |      |  |
| Xylenes, Total                       | ND     | 15  |         |       |            |           |                                   |      |       |      |  |
| Surr: 1,2-Dichloroethane-d4          | 48.56  | 5.0 | 50      |       | 0 97.1     | 70-125    | i                                 | 0    |       |      |  |
| Surr: 4-Bromofluorobenzene           | 49.7   | 5.0 | 50      |       | 0 99.4     | 72-125    | i                                 | 0    |       |      |  |
| Surr: Dibromofluoromethane           | 50.63  | 5.0 | 50      |       | 0 101      | 71-125    | i                                 | 0    |       |      |  |
| Surr: Toluene-d8                     | 50.65  | 5.0 | 50      |       | 0 101      | 75-125    | i                                 | 0    |       |      |  |

Injection Well Quarterly **Project:** 

Batch ID: R144692

Instrument ID VOA1

Method: SW8260

| LCS Sample ID: VLCSW-130327-R144692 |        |         |         |         | Units:  | ug/L       | Analysis Date: 3/27/2013 10:47 AM |      |              |      |
|-------------------------------------|--------|---------|---------|---------|---------|------------|-----------------------------------|------|--------------|------|
| Client ID:                          | Run IE | : VOA1_ | 130327A | :       | SeqNo:: | 3153673    | Prep Date:                        |      | DF: <b>1</b> |      |
|                                     |        |         |         | SPK Ref |         | Control    | RPD Ref                           |      | RPD          |      |
| Analyte                             | Result | PQL     | SPK Val | Value   | %R      | EC Limit   | Value                             | %RPD | Limit        | Qual |
| 1,1,1-Trichloroethane               | 53.72  | 5.0     | 50      | (       | 0 1     | 07 80-120  | ) C                               | )    |              |      |
| 1,1,2,2-Tetrachloroethane           | 51.85  | 5.0     | 50      | (       | 0 1     | 04 72-120  | ) C                               | )    |              |      |
| 1,1,2-Trichloroethane               | 53.1   | 5.0     | 50      | (       | 0 1     | 06 80-120  | ) C                               | )    |              |      |
| 1,1-Dichloroethane                  | 50.79  | 5.0     | 50      | (       | 0 1     | 02 76-120  | ) C                               | )    |              |      |
| 1,1-Dichloroethene                  | 53.7   | 5.0     | 50      | (       | 0 1     | 07 73-124  | L C                               | )    |              |      |
| 1,2-Dichloroethane                  | 56.13  | 5.0     | 50      | (       | 0 1     | 12 78-120  | ) C                               | )    |              |      |
| 2-Butanone                          | 102    | 10      | 100     | (       | 0 1     | 02 58-132  | 2 0                               | )    |              |      |
| 2-Chloroethyl vinyl ether           | 110.8  | 10      | 100     | (       | 0 1     | 11 74-120  | ) C                               | )    |              |      |
| 2-Hexanone                          | 95.73  | 10      | 100     | (       | 0 95    | .7 61-130  | ) C                               | )    |              |      |
| 4-Methyl-2-pentanone                | 100.9  | 10      | 100     | (       | 0 1     | 01 65-127  | , C                               | )    |              |      |
| Acetone                             | 100.7  | 10      | 100     | (       | 0 1     | 01 59-137  | , C                               | )    |              |      |
| Benzene                             | 55.45  | 5.0     | 50      | (       | 0 1     | 11 73-121  | C                                 | )    |              |      |
| Bromodichloromethane                | 57.11  | 5.0     | 50      | (       | 0 1     | 14 80-120  | ) C                               | )    |              |      |
| Bromoform                           | 54.58  | 5.0     | 50      | (       | 0 1     | 09 79-120  | ) C                               | )    |              |      |
| Bromomethane                        | 63.78  | 5.0     | 50      | (       | 0 1:    | 28 60-145  | 5 C                               | )    |              |      |
| Carbon disulfide                    | 107.4  | 10      | 100     | (       | 0 1     | 07 68-141  | C                                 | )    |              |      |
| Carbon tetrachloride                | 52.32  | 5.0     | 50      | (       | 0 1     | 05 75-124  | н с                               | )    |              |      |
| Chlorobenzene                       | 48.25  | 5.0     | 50      | (       | 0 96    | .5 80-120  | ) (                               | )    |              |      |
| Chloroethane                        | 63.88  | 5.0     | 50      | (       | 0 1:    | 28 70-130  | ) C                               | )    |              |      |
| Chloroform                          | 56.86  | 5.0     | 50      | (       | 0 1     | 14 80-120  | ) C                               | )    |              |      |
| Chloromethane                       | 56.47  | 5.0     | 50      | (       | 0 1     | 13 67-123  | з с                               | )    |              |      |
| cis-1,3-Dichloropropene             | 56.88  | 5.0     | 50      | (       | 0 1     | 14 80-120  | ) C                               | )    |              |      |
| Dibromochloromethane                | 52.37  | 5.0     | 50      | (       | 0 10    | 05 80-120  | ) C                               | )    |              |      |
| Ethylbenzene                        | 50.83  | 5.0     | 50      | (       | 0 1     | 02 80-120  | ) C                               | )    |              |      |
| m,p-Xylene                          | 107.3  | 10      | 100     | (       | 0 1     | 07 78-121  | C                                 | )    |              |      |
| Methylene chloride                  | 58.65  | 10      | 50      | (       | 0 1     | 17 65-133  | з с                               | )    |              |      |
| Styrene                             | 54.45  | 5.0     | 50      | (       | 0 1     | 09 80-120  | ) C                               | )    |              |      |
| Tetrachloroethene                   | 48.75  | 5.0     | 50      | (       | 0 97    | .5 79-120  | ) C                               | )    |              |      |
| Toluene                             | 51.05  | 5.0     | 50      | (       | 0 1     | 02 80-120  | ) C                               | )    |              |      |
| trans-1,3-Dichloropropene           | 57.12  | 5.0     | 50      | (       | 0 1     | 14 80-120  | ) C                               | )    |              |      |
| Trichloroethene                     | 53.05  | 5.0     | 50      | (       | 0 1     | 06 80-120  | ) C                               | )    |              |      |
| Vinyl acetate                       | 112.6  | 10      | 100     | (       | 0 1     | 13 67-139  | ) C                               | )    |              |      |
| Vinyl chloride                      | 61.31  | 2.0     | 50      | (       | 0 12    | 23 70-127  | , c                               | )    |              |      |
| Xylenes, Total                      | 160.3  | 15      | 150     | (       | 0 1     | 07 80-120  | ) C                               | )    |              |      |
| Surr: 1,2-Dichloroethane-d4         | 52.17  | 5.0     | 50      | (       | 0 1     | 04 70-125  | 5 C                               | )    |              |      |
| Surr: 4-Bromofluorobenzene          | 49     | 5.0     | 50      | (       | 0       | 98 72-125  | 5 C                               |      |              |      |
| Surr: Dibromofluoromethane          | 53.46  | 5.0     | 50      | (       | 0 1     | 07 71-128  | 5 C                               | )    |              |      |
| Surr: Toluene-d8                    | 49.09  | 5.0     | 50      | (       | 98      | 8.2 75-125 | 5 0                               | )    |              |      |

Client:Navajo Refining CompanyWork Order:1303855Project:Injection Well Quarterly

## **QC BATCH REPORT**

Batch ID: R144692

Instrument ID VOA1

Method: SW8260

| MS Sample ID: 1303880-02AMS |        |           |         |         | Units: µg/I | _       | Analysis Date: 3/27/2013 04:07 PM |      |              |      |
|-----------------------------|--------|-----------|---------|---------|-------------|---------|-----------------------------------|------|--------------|------|
| Client ID:                  | Run    | ID: VOA1_ | 130327A | S       | SeqNo: 315  | 4160    | Prep Date:                        |      | DF: <b>1</b> |      |
|                             |        |           |         | SPK Ref |             | Control | RPD Ref                           |      | RPD          |      |
| Analyte                     | Result | PQL       | SPK Val | Value   | %REC        | Limit   | Value                             | %RPD | Limit        | Qual |
| 1,1,1-Trichloroethane       | 53.16  | 5.0       | 50      | 0       | 106         | 80-120  | 0                                 |      |              |      |
| 1,1,2,2-Tetrachloroethane   | 50.78  | 5.0       | 50      | 0       | 102         | 72-120  | 0                                 |      |              |      |
| 1,1,2-Trichloroethane       | 53.3   | 5.0       | 50      | 0       | 107         | 80-120  | 0                                 |      |              |      |
| 1,1-Dichloroethane          | 55.4   | 5.0       | 50      | 0       | 111         | 76-120  | 0                                 |      |              |      |
| 1,1-Dichloroethene          | 49.99  | 5.0       | 50      | 0       | 100         | 73-124  | 0                                 |      |              |      |
| 1,2-Dichloroethane          | 51.09  | 5.0       | 50      | 0       | 102         | 78-120  | 0                                 |      |              |      |
| 2-Butanone                  | 118.8  | 10        | 100     | 0       | 119         | 58-132  | 0                                 |      |              |      |
| 2-Chloroethyl vinyl ether   | ND     | 10        | 100     | 0       | 0           | 74-120  | 0                                 |      |              | S    |
| 2-Hexanone                  | 112.2  | 10        | 100     | 0       | 112         | 61-130  | 0                                 |      |              |      |
| 4-Methyl-2-pentanone        | 122.2  | 10        | 100     | 0       | 122         | 65-127  | 0                                 |      |              |      |
| Acetone                     | 105    | 10        | 100     | 0       | 105         | 59-137  | 0                                 |      |              |      |
| Benzene                     | 48.55  | 5.0       | 50      | 0       | 97.1        | 73-121  | 0                                 |      |              |      |
| Bromodichloromethane        | 52.48  | 5.0       | 50      | 0       | 105         | 80-120  | 0                                 |      |              |      |
| Bromoform                   | 53.38  | 5.0       | 50      | 0       | 107         | 79-120  | 0                                 |      |              |      |
| Bromomethane                | 40.05  | 5.0       | 50      | 0       | 80.1        | 60-145  | 0                                 |      |              |      |
| Carbon disulfide            | 99.1   | 10        | 100     | 0       | 99.1        | 68-141  | 0                                 |      |              |      |
| Carbon tetrachloride        | 46.5   | 5.0       | 50      | 0       | 93          | 75-124  | 0                                 |      |              |      |
| Chlorobenzene               | 48.96  | 5.0       | 50      | 0       | 97.9        | 80-120  | 0                                 |      |              |      |
| Chloroethane                | 57.33  | 5.0       | 50      | 0       | 115         | 70-130  | 0                                 |      |              |      |
| Chloroform                  | 53.98  | 5.0       | 50      | 0       | 108         | 80-120  | 0                                 |      |              |      |
| Chloromethane               | 41.3   | 5.0       | 50      | 0       | 82.6        | 67-123  | 0                                 |      |              |      |
| cis-1,3-Dichloropropene     | 48.53  | 5.0       | 50      | 0       | 97.1        | 80-120  | 0                                 |      |              |      |
| Dibromochloromethane        | 54.02  | 5.0       | 50      | 0       | 108         | 80-120  | 0                                 |      |              |      |
| Ethylbenzene                | 46.34  | 5.0       | 50      | 0       | 92.7        | 80-120  | 0                                 |      |              |      |
| m,p-Xylene                  | 97.8   | 10        | 100     | 0       | 97.8        | 78-121  | 0                                 |      |              |      |
| Methylene chloride          | 59.97  | 10        | 50      | 0       | 120         | 65-133  | 0                                 | 1    |              |      |
| Styrene                     | 52.33  | 5.0       | 50      | 0       | 105         | 80-120  | 0                                 |      |              |      |
| Tetrachloroethene           | 42.49  | 5.0       | 50      | 0       | 85          | 79-120  | 0                                 |      |              |      |
| Toluene                     | 50.72  | 5.0       | 50      | 0       | 101         | 80-120  | 0                                 |      |              |      |
| trans-1,3-Dichloropropene   | 52.03  | 5.0       | 50      | 0       | 104         | 80-120  | 0                                 |      |              |      |
| Trichloroethene             | 45.51  | 5.0       | 50      | 0       | 91          | 80-120  | 0                                 |      |              |      |
| Vinyl acetate               | 118.1  | 10        | 100     | 0       | 118         | 67-139  | 0                                 |      |              |      |
| Vinyl chloride              | 50.68  | 2.0       | 50      | 0       | 101         | 70-127  | 0                                 |      |              |      |
| Xylenes, Total              | 147.4  | 15        | 150     | 0       | 98.3        | 80-120  | 0                                 |      |              |      |
| Surr: 1,2-Dichloroethane-d4 | 51.5   | 5.0       | 50      | 0       | 103         | 70-125  | 0                                 |      |              |      |
| Surr: 4-Bromofluorobenzene  | 52.78  | 5.0       | 50      | 0       | 106         | 72-125  | 0                                 |      |              |      |
| Surr: Dibromofluoromethane  | 54.24  | 5.0       | 50      | 0       | 108         | 71-125  | 0                                 |      |              |      |
| Surr: Toluene-d8            | 50.68  | 5.0       | 50      | 0       | 101         | 75-125  | 0                                 |      |              |      |

Client:Navajo Refining CompanyWork Order:1303855Project:Injection Well Quarterly

## **QC BATCH REPORT**

Batch ID: R144692

Instrument ID VOA1

Method: SW8260

| MSD Sample ID: 1303880-02   |        | Units: µg/L | -       | Analysis Date: 3/27/2013 04:32 PM |                    |         |            |        |       |      |
|-----------------------------|--------|-------------|---------|-----------------------------------|--------------------|---------|------------|--------|-------|------|
| Client ID:                  | Run II | D: VOA1_    | 130327A | Se                                | eqNo: <b>315</b> 4 | 4161    | Prep Date: |        | DF: 1 |      |
|                             |        |             |         | SPK Ref                           |                    | Control | RPD Ref    |        | RPD   |      |
| Analyte                     | Result | PQL         | SPK Val | Value                             | %REC               | Limit   | Value      | %RPD   | Limit | Qual |
| 1,1,1-Trichloroethane       | 52.35  | 5.0         | 50      | 0                                 | 105                | 80-120  | 53.16      | 1.53   | 20    |      |
| 1,1,2,2-Tetrachloroethane   | 47.84  | 5.0         | 50      | 0                                 | 95.7               | 72-120  | 50.78      | 5.97   | 20    |      |
| 1,1,2-Trichloroethane       | 55.66  | 5.0         | 50      | 0                                 | 111                | 80-120  | 53.3       | 4.33   | 20    |      |
| 1,1-Dichloroethane          | 53.79  | 5.0         | 50      | 0                                 | 108                | 76-120  | 55.4       | 2.97   | 20    |      |
| 1,1-Dichloroethene          | 49.14  | 5.0         | 50      | 0                                 | 98.3               | 73-124  | 49.99      | 1.72   | 20    |      |
| 1,2-Dichloroethane          | 52.85  | 5.0         | 50      | 0                                 | 106                | 78-120  | 51.09      | 3.38   | 20    |      |
| 2-Butanone                  | 106.7  | 10          | 100     | 0                                 | 107                | 58-132  | 118.8      | 10.7   | 20    |      |
| 2-Chloroethyl vinyl ether   | ND     | 10          | 100     | 0                                 | 0                  | 74-120  | 0          | 0      | 20    | S    |
| 2-Hexanone                  | 116.6  | 10          | 100     | 0                                 | 117                | 61-130  | 112.2      | 3.85   | 20    |      |
| 4-Methyl-2-pentanone        | 119.3  | 10          | 100     | 0                                 | 119                | 65-127  | 122.2      | 2.36   | 20    |      |
| Acetone                     | 94.96  | 10          | 100     | 0                                 | 95                 | 59-137  | 105        | 10.1   | 20    |      |
| Benzene                     | 48.8   | 5.0         | 50      | 0                                 | 97.6               | 73-121  | 48.55      | 0.498  | 20    |      |
| Bromodichloromethane        | 51.3   | 5.0         | 50      | 0                                 | 103                | 80-120  | 52.48      | 2.29   | 20    |      |
| Bromoform                   | 54.41  | 5.0         | 50      | 0                                 | 109                | 79-120  | 53.38      | 1.92   | 20    |      |
| Bromomethane                | 43.99  | 5.0         | 50      | 0                                 | 88                 | 60-145  | 40.05      | 9.37   | 20    |      |
| Carbon disulfide            | 99.03  | 10          | 100     | 0                                 | 99                 | 68-141  | 99.1       | 0.0691 | 20    |      |
| Carbon tetrachloride        | 49.81  | 5.0         | 50      | 0                                 | 99.6               | 75-124  | 46.5       | 6.88   | 20    |      |
| Chlorobenzene               | 46.31  | 5.0         | 50      | 0                                 | 92.6               | 80-120  | 48.96      | 5.56   | 20    |      |
| Chloroethane                | 54.21  | 5.0         | 50      | 0                                 | 108                | 76-121  | 57.33      | 5.6    | 20    |      |
| Chloroform                  | 53.92  | 5.0         | 50      | 0                                 | 108                | 80-120  | 53.98      | 0.111  | 20    |      |
| Chloromethane               | 41.96  | 5.0         | 50      | 0                                 | 83.9               | 67-123  | 41.3       | 1.59   | 20    |      |
| cis-1,3-Dichloropropene     | 52.97  | 5.0         | 50      | 0                                 | 106                | 80-120  | 48.53      | 8.74   | 20    |      |
| Dibromochloromethane        | 54.57  | 5.0         | 50      | 0                                 | 109                | 80-120  | 54.02      | 1.01   | 20    |      |
| Ethylbenzene                | 50.09  | 5.0         | 50      | 0                                 | 100                | 80-120  | 46.34      | 7.76   | 20    |      |
| m,p-Xylene                  | 102.8  | 10          | 100     | 0                                 | 103                | 78-121  | 97.8       | 4.98   | 20    |      |
| Methylene chloride          | 55.34  | 10          | 50      | 0                                 | 111                | 65-133  | 59.97      | 8.03   | 20    |      |
| Styrene                     | 52.71  | 5.0         | 50      | 0                                 | 105                | 80-120  | 52.33      | 0.717  | 20    |      |
| Tetrachloroethene           | 45.86  | 5.0         | 50      | 0                                 | 91.7               | 79-120  | 42.49      | 7.61   | 20    |      |
| Toluene                     | 52.2   | 5.0         | 50      | 0                                 | 104                | 80-120  | 50.72      | 2.88   | 20    |      |
| trans-1,3-Dichloropropene   | 52.07  | 5.0         | 50      | 0                                 | 104                | 80-120  | 52.03      | 0.0724 | 20    |      |
| Trichloroethene             | 46.98  | 5.0         | 50      | 0                                 | 94                 | 80-120  | 45.51      | 3.18   | 20    |      |
| Vinyl acetate               | 107.9  | 10          | 100     | 0                                 | 108                | 67-139  | 118.1      | 9.06   | 20    |      |
| Vinyl chloride              | 51.41  | 2.0         | 50      | 0                                 | 103                | 70-127  | 50.68      | 1.42   | 20    |      |
| Xylenes, Total              | 152.2  | 15          | 150     | 0                                 | 101                | 78-121  | 147.4      | 3.18   | 20    |      |
| Surr: 1,2-Dichloroethane-d4 | 52.3   | 5.0         | 50      | 0                                 | 105                | 70-125  | 51.5       | 1.54   | 20    |      |
| Surr: 4-Bromofluorobenzene  | 55.23  | 5.0         | 50      | 0                                 | 110                | 72-125  | 52.78      | 4.54   | 20    |      |
| Surr: Dibromofluoromethane  | 52.95  | 5.0         | 50      | 0                                 | 106                | 71-125  | 54.24      | 2.41   | 20    |      |
| Surr: Toluene-d8            | 51     | 5.0         | 50      | 0                                 | 102                | 75-125  | 50.68      | 0.633  | 20    |      |

| Client:<br>Work Order:<br>Project: | Navajo Refining Company<br>1303855<br>Injection Well Quarterly |                | QC BATCH REPORT |
|------------------------------------|----------------------------------------------------------------|----------------|-----------------|
| Batch ID: R144692                  | Instrument ID VOA1                                             | Method: SW8260 |                 |
| The following sam                  | ples were analyzed in this batch:                              | 1303855-01A    |                 |

The following samples were analyzed in this batch:

(Dissolve)

Batch ID: R144618 Instrument ID ManTech01 Method: M2510 B

| MBLK        | Sample ID: WBLKW1-130326-R144618 |                   |     |            |                  | Units: µmhos/cm       |                 |                  | Analysis Date: 3/26/2013 02:02 PM |              |              |          |
|-------------|----------------------------------|-------------------|-----|------------|------------------|-----------------------|-----------------|------------------|-----------------------------------|--------------|--------------|----------|
| Client ID:  |                                  | Run ID:           |     | ECH01_1303 | 326B             | SeqNo: <b>3152044</b> |                 | Prep Date:       |                                   | DF: <b>1</b> |              |          |
| Analyte     |                                  | Result            | PQL | SPK Val    | SPK Ref<br>Value |                       | %REC            | Control<br>Limit | RPD Ref<br>Value                  | %RPD         | RPD<br>Limit | Qual     |
| Specific Co | nductivity                       | ND                | 1.0 |            |                  |                       |                 |                  |                                   |              |              |          |
| LCS         | S Sample ID: LCS-COND-R144618    |                   |     |            |                  |                       | nits: µmł       | nos/cm           | Analysis Date: 3/26/2013 02:03 P  |              |              |          |
| Client ID:  |                                  | Run ID:           |     | ECH01_1303 | 326B             | See                   | qNo: <b>315</b> | 2045             | Prep Date:                        |              | DF: <b>1</b> |          |
| Analyte     |                                  | Result            | PQL | SPK Val    | SPK Ref<br>Value |                       | %REC            | Control<br>Limit | RPD Ref<br>Value                  | %RPD         | RPD<br>Limit | Qual     |
| Specific Co | nductivity                       | 1440              | 1.0 | 1413       |                  | 0                     | 102             | 80-120           |                                   | 0            |              |          |
| DUP         | Sample ID: 1303819-01            | HDUP              |     |            |                  | U                     | nits: µmh       | ios/cm           | Ana                               | lysis Date:  | 3/26/2013    | 02:06 PM |
| Client ID:  |                                  | Run ID:           |     | ECH01_1303 | 326B             | Sec                   | qNo: <b>315</b> | 2047             | Prep Date:                        |              | DF: <b>1</b> |          |
| Analyte     |                                  | Result            | PQL | SPK Val    | SPK Ref<br>Value |                       | %REC            | Control<br>Limit | RPD Ref<br>Value                  | %RPD         | RPD<br>Limit | Qual     |
| Specific Co | nductivity                       | 225.8             | 1.0 | 0          |                  | 0                     | 0               |                  | 225                               | 5.8          | 0 20         |          |
| The follow  | ing samples were analyz          | ed in this batch: | 1:  | 303855-01C |                  |                       |                 |                  |                                   |              |              |          |
### **QC BATCH REPORT**

Qual

Qual

Qual

Batch ID: R144619 Instrument ID ManTech01 Method: SM2320B (Dissolve) Units: mg/L Analysis Date: 3/26/2013 10:41 AM MBLK Sample ID: WBLKW1-130326-R144619 SeqNo: 3151868 Client ID: Prep Date: DF: 1 Run ID: MANTECH01\_130326C RPD Ref RPD SPK Ref Control Value Limit Value Limit Analyte Result PQL SPK Val %REC %RPD Alkalinity, Bicarbonate (As CaCO3) ND 6.0 Alkalinity, Carbonate (As CaCO3) ND 6.0 ND Alkalinity, Hydroxide (As CaCO3) 6.0 Alkalinity, Total (As CaCO3) ND 6.0 LCS Sample ID: WLCSW1-130326-R144619 Units: mg/L Analysis Date: 3/26/2013 10:47 AM Client ID: Run ID: MANTECH01\_130326C SeqNo: 3151869 Prep Date: DF: 1 RPD SPK Ref Control RPD Ref Value Limit Value Limit %REC %RPD Analyte Result PQL SPK Val 1091 Alkalinity, Total (As CaCO3) 6.0 1000 0 109 80-120 0 DUP Sample ID: 1303819-01HDUP Units: mg/L Analysis Date: 3/26/2013 11:12 AM Client ID: Run ID: MANTECH01\_130326C SeqNo: 3151875 Prep Date: DF: 1 RPD SPK Ref Control **RPD** Ref Limit SPK Val Value %REC Limit Value %RPD Analyte Result PQL

| The following samples were analyzed in th | is batch: | 1303855-0 | 01D |   |   |     |       |     |    |  |
|-------------------------------------------|-----------|-----------|-----|---|---|-----|-------|-----|----|--|
| Alkalinity, Total (As CaCO3)              | 93.73     | 6.0       | 0   | 0 | 0 | 0-0 | 92.43 | 1.4 | 20 |  |
| Alkalinity, Hydroxide (As CaCO3)          | ND        | 6.0       | 0   | 0 | 0 | 0-0 | 0     | 0   | 0  |  |
| Alkalinity, Carbonate (As CaCO3)          | ND        | 6.0       | 0   | 0 | 0 | 0-0 | 0     | 0   | 0  |  |
| Alkalinity, Bicarbonate (As CaCO3)        | 93.73     | 6.0       | 0   | 0 | 0 | 0-0 | 92.43 | 1.4 | 0  |  |
|                                           |           |           |     |   |   |     |       |     |    |  |

Note: See Qualifiers Page for a list of Qualifiers and their explanation. Client:Navajo Refining CompanyWork Order:1303855Project:Injection Well Quarterly

# **QC BATCH REPORT**

| Batch ID: F | R144637     | Instrument ID ManT    | ech01     |       | Method:     | SW904            | 0  |                    | (Dissolve        | e)               |              |              |         |
|-------------|-------------|-----------------------|-----------|-------|-------------|------------------|----|--------------------|------------------|------------------|--------------|--------------|---------|
| LCS         | Sample ID   | : LCS-PH-R144637      |           |       |             |                  | ι  | Jnits: <b>pH เ</b> | units            | Anal             | ysis Date: : | 3/26/2013 1  | 0:50 AM |
| Client ID:  |             |                       | Run ID: N | IANTE | ECH01_13032 | 6D               | Se | qNo: <b>315</b> 2  | 2391             | Prep Date:       |              | DF: <b>1</b> |         |
| Analyte     |             | Res                   | ult       | PQL   | SPK Val     | SPK Ref<br>Value |    | %REC               | Control<br>Limit | RPD Ref<br>Value | %RPD         | RPD<br>Limit | Qual    |
| pН          |             | 6.                    | 51        | 0.10  | 6           |                  | 0  | 108                | 90-110           |                  | 0            |              |         |
| DUP         | Sample ID   | : 1303819-01ZDUP      |           |       |             |                  | ι  | Jnits: <b>pH เ</b> | units            | Anal             | ysis Date: 3 | 3/26/2013 1  | 1:12 AM |
| Client ID:  |             |                       | Run ID: N | IANTE | ECH01_13032 | 6D               | Se | qNo: <b>315</b> 2  | 2396             | Prep Date:       |              | DF: <b>1</b> |         |
| Analyte     |             | Res                   | ult       | PQL   | SPK Val     | SPK Ref<br>Value |    | %REC               | Control<br>Limit | RPD Ref<br>Value | %RPD         | RPD<br>Limit | Qual    |
| рН          |             | 8.                    | 27        | 0.10  | 0           |                  | 0  | 0                  | 0-0              | 8.:              | 28 0.12      | 1 20         |         |
| The follow  | ing samples | were analyzed in this | patch:    | 13    | 303855-01C  |                  |    |                    |                  |                  |              |              |         |

Client:Navajo Refining CompanyWork Order:1303855Project:Injection Well Quarterly

# **QC BATCH REPORT**

| Batch ID: R  | 144691 Ins      | trument ID WetChem |          | Method     | : SW101          | 0  |                   | (Dissolve        | e)               |               |              |          |
|--------------|-----------------|--------------------|----------|------------|------------------|----|-------------------|------------------|------------------|---------------|--------------|----------|
| LCS          | Sample ID: WLC  | SW1-130327-R144691 |          |            |                  | ι  | Jnits: ° <b>F</b> |                  | Ana              | lysis Date: 3 | 3/27/2013    | 12:00 PM |
| Client ID:   |                 | Run ID             | WETCH    | IEM_130327 | D                | Se | qNo: <b>315</b> : | 3656             | Prep Date:       |               | DF: <b>1</b> |          |
| Analyte      |                 | Result             | PQL      | SPK Val    | SPK Ref<br>Value |    | %REC              | Control<br>Limit | RPD Ref<br>Value | %RPD          | RPD<br>Limit | Qual     |
| Ignitability |                 | 85                 | 50       | 84         |                  | 0  | 101               | 80-120           |                  | 0             |              |          |
| DUP          | Sample ID: 1303 | 824-01DDUP         |          |            |                  | ι  | Jnits: ° <b>F</b> |                  | Ana              | lysis Date: 3 | 3/27/2013    | 12:00 PM |
| Client ID:   |                 | Run ID             | : WETCH  | IEM_130327 | D                | Se | qNo: <b>315</b> : | 3660             | Prep Date:       |               | DF: <b>1</b> |          |
| Analyte      |                 | Result             | PQL      | SPK Val    | SPK Ref<br>Value |    | %REC              | Control<br>Limit | RPD Ref<br>Value | %RPD          | RPD<br>Limit | Qual     |
| Ignitability |                 | ND                 | 50       | 0          |                  | 0  | 0                 | 0-0              |                  | 0             | 0 25         |          |
|              |                 |                    | <b>—</b> |            |                  |    |                   |                  |                  |               |              |          |

Client:Navajo Refining CompanyWork Order:1303855

# **QC BATCH REPORT**

Project: Injection Well Quarterly

| Batch ID: F | R144712 Instrument        | ID Balance1      |          | Metho      | d: <b>M2540</b>  | С   |                   | (Dissolve        | e)               |                       |              |          |
|-------------|---------------------------|------------------|----------|------------|------------------|-----|-------------------|------------------|------------------|-----------------------|--------------|----------|
| MBLK        | Sample ID: WBLK-0326      | 13-R144712       |          |            |                  | U   | nits: <b>mg</b> / | L                | Analy            | /sis Date: <b>3</b> / | 26/2013 (    | 06:05 PM |
| Client ID:  |                           | Run II           | D: BALAN | ICE1_13032 | 26C              | Sec | qNo: <b>315</b> 4 | 4077             | Prep Date:       |                       | DF: <b>1</b> |          |
| Analyte     |                           | Result           | PQL      | SPK Val    | SPK Ref<br>Value |     | %REC              | Control<br>Limit | RPD Ref<br>Value | %RPD                  | RPD<br>Limit | Qual     |
| Total Disso | lved Solids (Residue, Fil | ND               | 10       |            |                  |     |                   |                  |                  |                       |              |          |
| LCS         | Sample ID: WLCS-0326      | 13-R144712       |          |            |                  | U   | nits: <b>mg/</b>  | L                | Analy            | /sis Date: <b>3</b> / | 26/2013 (    | 06:05 PM |
| Client ID:  |                           | Run II           | D: BALAN | ICE1_13032 | 26C              | Sec | qNo: <b>315</b> 4 | 4078             | Prep Date:       |                       | DF: 1        |          |
| Analyte     |                           | Result           | PQL      | SPK Val    | SPK Ref<br>Value |     | %REC              | Control<br>Limit | RPD Ref<br>Value | %RPD                  | RPD<br>Limit | Qual     |
| Total Disso | lved Solids (Residue, Fil | 1022             | 10       | 1000       |                  | 0   | 102               | 85-115           |                  | 0                     |              |          |
| DUP         | Sample ID: 1303714-01F    | DUP              |          |            |                  | U   | nits: <b>mg</b> / | L                | Analy            | /sis Date: 3/         | 26/2013 (    | 06:05 PM |
| Client ID:  |                           | Run II           | D: BALAN | ICE1_13032 | 26C              | Sec | qNo: <b>315</b> 4 | 4070             | Prep Date:       |                       | DF: 1        |          |
| Analyte     |                           | Result           | PQL      | SPK Val    | SPK Ref<br>Value |     | %REC              | Control<br>Limit | RPD Ref<br>Value | %RPD                  | RPD<br>Limit | Qual     |
| Total Disso | lved Solids (Residue, Fil | 464              | 10       | 0          |                  | 0   | 0                 | 0-0              | 45               | 6 1.74                | 20           |          |
| DUP         | Sample ID: 1303876-01F    | DUP              |          |            |                  | U   | nits: <b>mg</b> / | L                | Analy            | /sis Date: <b>3</b> / | 26/2013 (    | )6:05 PM |
| Client ID:  |                           | Run II           | D: BALAN | ICE1_13032 | 26C              | Sec | qNo: <b>315</b>   | 5604             | Prep Date:       |                       | DF: <b>1</b> |          |
| Analyte     |                           | Result           | PQL      | SPK Val    | SPK Ref<br>Value |     | %REC              | Control<br>Limit | RPD Ref<br>Value | %RPD                  | RPD<br>Limit | Qual     |
| Total Disso | lved Solids (Residue, Fil | 472              | 10       | 0          |                  | 0   | 0                 | 0-0              | 47               | 6 0.844               | 20           |          |
| The follow  | ing samples were analyze  | d in this batch: | 13       | 303855-01D |                  |     |                   |                  |                  |                       |              |          |

# **QC BATCH REPORT**

| Batch ID: R1 | 144819       | Instrument ID ICS3K2 |            | Metho    | d: <b>E300</b>   |    |                    | (Dissolve        | )                |             |              |         |
|--------------|--------------|----------------------|------------|----------|------------------|----|--------------------|------------------|------------------|-------------|--------------|---------|
| MBLK         | Sample ID:   | WBLKW1-R144819       |            |          |                  | ι  | Jnits: <b>mg</b> / | L                | Analy            | sis Date: 3 | /28/2013 1   | 2:15 PM |
| Client ID:   |              | Run                  | ID: ICS3K2 | _130328A |                  | Se | qNo: <b>315</b>    | 6592             | Prep Date:       |             | DF: <b>1</b> |         |
|              |              |                      |            |          | SPK Ref          |    |                    | Control          | RPD Ref          |             | RPD          |         |
| Analyte      |              | Result               | PQL        | SPK Val  | Value            |    | %REC               | Limit            | Value            | %RPD        | Limit        | Qual    |
| Bromide      |              | ND                   | 0.10       |          |                  |    |                    |                  |                  |             |              |         |
| Chloride     |              | ND                   | 0.50       |          |                  |    |                    |                  |                  |             |              |         |
| Fluoride     |              | ND                   | 0.10       |          |                  |    |                    |                  |                  |             |              |         |
| Sulfate      |              | ND                   | 0.50       |          |                  |    |                    |                  |                  |             |              |         |
| Surr: Sele   | enate (surr) | 4.899                | 0.10       | 5        |                  | 0  | 98                 | 85-115           | (                | )           |              |         |
| LCS          | Sample ID:   | WLCSW1-R144819       |            |          |                  | ι  | Jnits: <b>mg</b> / | L                | Analy            | sis Date: 3 | /28/2013 1   | 2:37 PM |
| Client ID:   |              | Run                  | ID: ICS3K2 | _130328A |                  | Se | qNo: <b>315</b>    | 6593             | Prep Date:       |             | DF: <b>1</b> |         |
| Analyte      |              | Result               | PQL        | SPK Val  | SPK Ref<br>Value |    | %REC               | Control<br>Limit | RPD Ref<br>Value | %RPD        | RPD<br>Limit | Qual    |
| Bromide      |              | 3.848                | 0 10       | 4        |                  | 0  | 96.2               | 90-110           | (                | )           |              |         |
| Chloride     |              | 20.42                | 0.50       | 20       |                  | 0  | 102                | 90-110           | (                | )           |              |         |
| Fluoride     |              | 3.645                | 0.10       | 4        |                  | 0  | 91.1               | 90-110           | (                | )           |              |         |
| Sulfate      |              | 19.09                | 0.50       | 20       |                  | 0  | 95.5               | 90-110           | (                | )           |              |         |
| Surr: Sele   | enate (surr) | 4.847                | 0.10       | 5        |                  | 0  | 96.9               | 85-115           | (                | )           |              |         |
| MS           | Sample ID:   | 1303813-45DMS        |            |          |                  | ι  | Jnits: <b>mg</b> / | L                | Analy            | sis Date: 3 | /28/2013 0   | 4:18 PM |
| Client ID:   |              | Run                  | ID: ICS3K2 | _130328A |                  | Se | qNo: <b>315</b>    | 6599             | Prep Date:       |             | DF: 5        |         |
| Analyte      |              | Result               | POI        | SPK Val  | SPK Ref<br>Value |    | %RFC               | Control<br>Limit | RPD Ref<br>Value | %RPD        | RPD<br>Limit | Qual    |
| Bromido      |              | 10.62                | 0.50       | 10       |                  | 0  | 106                | 80 120           |                  | )           |              |         |
| Chloride     |              | 72.64                | 2.5        | 50       | 24.9             | 99 | 95.3               | 80-120           | (                | )           |              |         |
| Fluoride     |              | 8.866                | 0.50       | 10       | 0.13             | 39 | 87.3               | 80-120           | (                | )           |              |         |
| Sulfate      |              | 155.8                | 2.5        | 50       | 10               | 06 | 99.6               | 80-120           | (                | )           |              |         |
| Surr: Sele   | enate (surr) | 22.85                | 0.50       | 25       |                  | 0  | 91.4               | 85-115           | (                | )           |              |         |
| MSD          | Sample ID:   | 1303813-45DMSD       |            |          |                  | ι  | Jnits: <b>mg</b> / | L                | Analy            | sis Date: 3 | /28/2013 0   | 4:40 PM |
| Client ID:   | ·            | Run                  | ID: ICS3K2 | _130328A |                  | Se | qNo: <b>315</b>    | 6600             | Prep Date:       |             | DF: 5        |         |
|              |              |                      |            |          | SPK Ref          |    |                    | Control          | RPD Ref          |             | RPD          |         |
| Analyte      |              | Result               | PQL        | SPK Val  | Value            |    | %REC               | Limit            | Value            | %RPD        | Limit        | Qual    |
| Bromide      |              | 10.65                | 0.50       | 10       |                  | 0  | 106                | 80-120           | 10.62            | 2 0.244     | 20           |         |
| Chloride     |              | 72.71                | 2.5        | 50       | 24.9             | 99 | 95.4               | 80-120           | 72.64            | 4 0.1       | 20           |         |
| Fluoride     |              | 8.976                | 0.50       | 10       | 0.13             | 39 | 88.4               | 80-120           | 8.860            | 5 1.23      | 20           |         |
| Sulfate      |              | 156.8                | 2.5        | 50       | 10               | 06 | 101                | 80-120           | 155.8            | 3 0.582     | 20           |         |
| Surr: Sele   | enate (surr) | 23.07                | 0.50       | 25       |                  | 0  | 92.3               | 85-115           | 22.8             | 5 0.949     | 20           |         |
|              |              |                      |            |          |                  |    |                    |                  |                  |             |              |         |

The following samples were analyzed in this batch:

1303855-01D

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

### Date: 29-Mar-13

# **ALS Environmental**

| Client:               | Navajo Refining Company                                           | QUALIFIERS,     |
|-----------------------|-------------------------------------------------------------------|-----------------|
| Project:              | Injection Well Quarterly                                          | ACRONYMS, UNITS |
| WorkOrder:            | 1303855                                                           |                 |
| Qualifier             | Description                                                       |                 |
| *                     | Value exceeds Regulatory Limit                                    |                 |
| а                     | Not accredited                                                    |                 |
| В                     | Analyte detected in the associated Method Blank above the Reporti | ng Limit        |
| Е                     | Value above quantitation range                                    |                 |
| Н                     | Analyzed outside of Holding Time                                  |                 |
| J                     | Analyte detected below quantitation limit                         |                 |
| М                     | Manually integrated, see raw data for justification               |                 |
| n                     | Not offered for accreditation                                     |                 |
| ND                    | Not Detected at the Reporting Limit                               |                 |
| О                     | Sample amount is > 4 times amount spiked                          |                 |
| Р                     | Dual Column results percent difference > 40%                      |                 |
| R                     | RPD above laboratory control limit                                |                 |
| S                     | Spike Recovery outside laboratory control limits                  |                 |
| U                     | Analyzed but not detected above the MDL                           |                 |
| Acronym               | Description                                                       |                 |
| DCS                   | Detectability Check Study                                         |                 |
| DUP                   | Method Duplicate                                                  |                 |
| LCS                   | Laboratory Control Sample                                         |                 |
| LCSD                  | Laboratory Control Sample Duplicate                               |                 |
| MBLK                  | Method Blank                                                      |                 |
| MDL                   | Method Detection Limit                                            |                 |
| MQL                   | Method Quantitation Limit                                         |                 |
| MS                    | Matrix Spike                                                      |                 |
| MSD                   | Matrix Spike Duplicate                                            |                 |
| PDS                   | Post Digestion Spike                                              |                 |
| PQL                   | Practical Quantitation Limit                                      |                 |
| SD                    | Serial Dilution                                                   |                 |
| SDL                   | Sample Detection Limit                                            |                 |
| TRRP                  | Texas Risk Reduction Program                                      |                 |
| <b>Units Reported</b> | Description                                                       |                 |
| °F                    | Farenheit degrees                                                 |                 |
| µmhos/cr              | n                                                                 |                 |
| mg/Kg                 | Milligrams per Kilogram                                           |                 |
| mg/L                  | Milligrams per Liter                                              |                 |
| pH units              |                                                                   |                 |

### ALS Environmental

### Sample Receipt Checklist

| Client Name: NAVAJO REFINING                            |                   | Date/Time I  | Received:              | <u>22-Mar-13</u> | <u>3 09:30</u> |                   |
|---------------------------------------------------------|-------------------|--------------|------------------------|------------------|----------------|-------------------|
| Work Order: 1303855                                     |                   | Received by  | y:                     | <u>RDN</u>       |                |                   |
| Checklist completed by Paresh M. Giga<br>eSignature     | 25-Mar-13<br>Date | Reviewed by: | Sania Wa<br>eSignature | est              |                | 26-Mar-13<br>Date |
| Matrices:WaterCarrier name:FedEx                        |                   |              |                        |                  |                |                   |
| Shipping container/cooler in good condition?            | Yes 🗹             | No 🗌         | Not Prese              | ent 🗌            |                |                   |
| Custody seals intact on shipping container/cooler?      | Yes 🗹             | No 🗌         | Not Prese              | ent 🗌            |                |                   |
| Custody seals intact on sample bottles?                 | Yes               | No 🗌         | Not Prese              | ent 🗹            |                |                   |
| Chain of custody present?                               | Yes 🗹             | No 🗌         |                        |                  |                |                   |
| Chain of custody signed when relinquished and received? | Yes 🗹             | No 🗌         |                        |                  |                |                   |
| Chain of custody agrees with sample labels?             | Yes 🗹             | No 🗌         |                        |                  |                |                   |
| Samples in proper container/bottle?                     | Yes 🖌             | No 🗌         |                        |                  |                |                   |
| Sample containers intact?                               | Yes 🔽             | No 🗌         |                        |                  |                |                   |
| Sufficient sample volume for indicated test?            | Yes 🔽             | No 🗌         |                        |                  |                |                   |
| All samples received within holding time?               | Yes 🗹             | No 🗌         |                        |                  |                |                   |
| Container/Temp Blank temperature in compliance?         | Yes 🔽             | No 🗌         |                        |                  |                |                   |
| Temperature(s)/Thermometer(s):                          | <u>2.1c C/U</u>   |              | IR1                    | -                |                |                   |
| Cooler(s)/Kit(s):                                       | 2896              |              |                        |                  |                |                   |
| Date/Time sample(s) sent to storage:                    | 3/25/13 16:       | 50           |                        |                  |                |                   |
| Water - VOA vials have zero headspace?                  | Yes 🖌             | No           | No VOA vials           | submitted        |                |                   |
| Water - pH acceptable upon receipt?                     | Yes 🗹             | No 🗌         | N/A                    |                  |                |                   |
| pH adjusted?<br>pH adjusted by:                         | Yes 🗌             | No 🗌         | N/A                    |                  |                |                   |

Login Notes:

| Client Contacted: | Date Contacted: | Person Contacted: |
|-------------------|-----------------|-------------------|
| Contacted By:     | Regarding:      |                   |
|                   |                 |                   |
| Comments:         |                 |                   |
|                   |                 |                   |
| CorrectiveAction: |                 |                   |
|                   |                 | SI                |

\_\_\_\_\_

| Ś                       | <ul> <li>ALS Laboratory Group<br/>10450 Stancliff Rd, #2</li> </ul> | р<br>210             | Chain                 | of Cust         | tody Fo      | ·····         |           |           | $\sim$                | $\tilde{\sim}$  | S                   | LC           |        |          |    |
|-------------------------|---------------------------------------------------------------------|----------------------|-----------------------|-----------------|--------------|---------------|-----------|-----------|-----------------------|-----------------|---------------------|--------------|--------|----------|----|
|                         | Houston, Texas 77099<br>(Tel) 281.530 5656                          | 0                    | Page                  | 1               |              | 1 1           | NAVA.     | O REF.    |                       | : Nava          | jo Refi             | ning C       | ompany |          |    |
| A LIN                   | (Fax) 281.530.5887                                                  |                      |                       |                 |              |               |           | Projec    | tt Injec              | tion W          | ell Qui             | arterly      |        |          |    |
| *                       |                                                                     |                      | LS Project Manac      | Jor. Pat I voch |              | . <b>F</b>    |           |           |                       |                 |                     |              |        |          |    |
| Cust                    | omer Information                                                    |                      | Project Inform        | nation          |              | <b>71.</b>    |           |           |                       |                 |                     |              |        |          |    |
| Purchase Order          |                                                                     | Project Nai          | me Injection Well     | Quarterly       | -            | A Voc         | (8260) S  | elect     |                       |                 |                     |              |        |          |    |
| Work Order              |                                                                     | Project Numt         | Jer                   |                 |              | B SVO         | C (8270)  | Select    |                       |                 |                     |              |        |          |    |
| Company Name I          | Navajo Refining Company                                             | Bill To Compa        | ny Navajo Refini      | ng Company      |              | C Tota        | Metals    | (6020 / 7 | WN (000               | GW Met          | als + Ca            | , K, Mg,     | Va     |          |    |
| Send Report To /        | Aaron Strange                                                       | Invoice At           | tn. Aaron Strange     | a               |              | D R.C.I       | . Profile |           |                       |                 |                     |              |        |          |    |
| Address F               | <sup>2</sup> . O. Box 159                                           | Addre                | ss 501 East Main      |                 |              | E Anio        | ns (300)  | F, CI, SC | )4, Br                |                 |                     |              |        |          |    |
|                         |                                                                     |                      |                       |                 |              | F             | inity     |           |                       |                 |                     |              |        |          |    |
| City/State/Zip /        | Artesia, New Mexico 88211-0159                                      | City/State/2         | tip Artesia, New I    | Mexico 88210    |              | G pH          |           |           |                       |                 |                     |              |        |          |    |
| Phone (                 | 575) 748-3311                                                       | Pho                  | ne (575) 748-3311     | _               |              | H Conc        | luctivity |           |                       |                 |                     |              |        |          |    |
| Fax (                   | 575) 746-5451                                                       |                      | ax (575) 746-5451     |                 |              | 1 TDS         |           |           |                       |                 |                     |              |        |          |    |
| e-Mail Address д        | Aaron.Strange@hollyfrontier.com                                     | e-Mail Addre         | ss Aaron Strange      | @hollvfrontier  | - mos        | J Spec        | ific Gra  | vitv      |                       |                 |                     |              |        |          |    |
| No.                     | Sample Description                                                  | Date                 | Time                  | atrix Pres      | # Bottles    | •             | 8         | o<br>N    | ш                     | <u>u</u>        | U                   | н            |        | H        | 20 |
| 10 WW Effluent          |                                                                     | 3/21/13              | 14:55 Li              | quid Yes        | 10           | ×             |           | ×         | ×                     | ×               | ×                   | ×            | ×      |          | 3  |
| F 2 Temperature         | Blank                                                               |                      |                       |                 | -            |               |           | +         |                       | ;               | :                   |              | •<br>• |          |    |
| £40                     |                                                                     |                      |                       |                 |              |               |           |           |                       |                 |                     |              | -      |          |    |
|                         |                                                                     |                      |                       |                 |              |               |           |           |                       |                 |                     |              | -      | -        |    |
| 2                       |                                                                     |                      |                       |                 |              |               |           |           |                       |                 |                     |              |        |          |    |
| 9                       |                                                                     |                      |                       |                 |              |               |           |           |                       |                 |                     |              |        |          | -  |
|                         |                                                                     |                      |                       |                 |              | -             |           |           |                       |                 |                     | _            |        |          | Τ  |
| 8                       |                                                                     |                      |                       |                 |              |               | -         |           |                       |                 | _                   |              |        |          |    |
| 6                       |                                                                     |                      |                       |                 |              |               | -         |           |                       |                 |                     |              | +      |          |    |
| 10                      |                                                                     |                      |                       |                 |              | -             |           |           |                       |                 |                     |              |        |          | Ţ  |
| Sampler(s): Please Pril | nt & Sign                                                           | Shipmen              | t Method:             | Required Ti     | urnaround Ti | me:           | _         |           |                       |                 | Rect                | ilte Dria I  | lato.  |          |    |
| Aaron Strange           |                                                                     | FedE                 | ×                     | 고 STD 10 W      | k Days       | 5 Wk Days     |           | Wk Days   |                       | Hour            |                     |              |        |          |    |
| Relinquished by:        | 3/21/2013                                                           | Time: Rec<br>16:15   | ceived by:            |                 |              | Notes:<br>See | attachn   | toi       | more                  | datail          |                     |              |        |          |    |
| Relinquished by:        | Contract 1                                                          | Time.                |                       |                 |              | 2             |           |           |                       | uctall.         |                     |              |        |          |    |
|                         | 3122/2                                                              | 00/ ) C              | ceived by (Laboratory | <u></u>         |              | Coole         | r Temp.   | QC Pact   | age: (Cl              | ieck Bo         | ( Below)            |              |        |          |    |
| Logged by (Laboratory): | Date (                                                              | Che Che              | reted build about the |                 |              | _             |           | <u>-</u>  | svel II:              | Standar         | 100                 | _            | TRRP-C | hecklist |    |
|                         |                                                                     |                      |                       |                 |              |               |           |           | evel III:<br>evel IV: | Std QC<br>SW846 | + Raw  <br>CI P-1 ; | Data  <br>ke | TRRP L | evel IV  |    |
| Preservative Key: 1-    | 4CE 2-HNO3 3-H2SO4 4-N                                              | 4a0H 5-Na2S203       | 6-NaHSO4              | -Other 8-4      | degrees C    | 9-5035        |           |           | ther:                 |                 |                     |              |        |          |    |
| Note: Any changes must  | be made in writing once samples and                                 | I COC Form have been | submitted to ALS L    | aboratory Grou  | чр.          |               |           |           | opyright              | 2008 by /       | VLS Labo            | ratory Gr    | dno    |          | ]  |

1303831-01 1303855-01H

3/21/2013 14:55 3/26/2013 09:30

| Client:<br>Project:<br>Work Order: | ALS Environmental<br>1303855<br>1303831 |        |            | Work Order S    | Sample Sumi   | nary |
|------------------------------------|-----------------------------------------|--------|------------|-----------------|---------------|------|
| Lab Samp ID C                      | Client Sample ID                        | Matrix | Tag Number | Collection Date | Date Received | Hold |

Liquid

| Client:    | ALS Environmental |
|------------|-------------------|
| Project:   | 1303855           |
| WorkOrder: | 1303831           |

### QUALIFIERS, ACRONYMS, UNITS

Date: 28-Mar-13

| Qualifier      | Description                                                               |
|----------------|---------------------------------------------------------------------------|
| *              | Value exceeds Regulatory Limit                                            |
| а              | Not accredited                                                            |
| В              | Analyte detected in the associated Method Blank above the Reporting Limit |
| E              | Value above quantitation range                                            |
| Н              | Analyzed outside of Holding Time                                          |
| J              | Analyte detected below quantitation limit                                 |
| n              | Not offered for accreditation                                             |
| ND             | Not Detected at the Reporting Limit                                       |
| 0              | Sample amount is > 4 times amount spiked                                  |
| Р              | Dual Column results percent difference > 40%                              |
| R              | RPD above laboratory control limit                                        |
| S              | Spike Recovery outside laboratory control limits                          |
| U              | Analyzed but not detected above the MDL                                   |
| <u>Acronym</u> | Description                                                               |
| DUP            | Method Duplicate                                                          |
| LCS            | Laboratory Control Sample                                                 |
| LCSD           | Laboratory Control Sample Duplicate                                       |
| MBLK           | Method Blank                                                              |
| MDL            | Method Detection Limit                                                    |
| MS             | Matrix Spike                                                              |
| MSD            | Matrix Spike Duplicate                                                    |
| RPD            | Relative Percent Difference                                               |
| TDL            | Target Detection Limit                                                    |
| А              | APHA Standard Methods                                                     |
| D              | ASTM                                                                      |
| Е              | EPA                                                                       |
| SW             | SW-846 Update III                                                         |
| Units Reported | Description                                                               |

mg/Kg M

Milligrams per Kilogram

Client:ALS EnvironmentalProject:1303855

**Sample ID:** 1303855-01H

**Collection Date:** 3/21/2013 02:55 PM

### Work Order: 1303831 Lab ID: 1303831-01 Matrix: LIQUID

| Analyses          | Result | Qual | Report<br>Limit | Units | Dilution<br>Factor | Date Analyzed      |
|-------------------|--------|------|-----------------|-------|--------------------|--------------------|
| CYANIDE, REACTIVE |        |      | SW7.3.          | 3.2   |                    | Analyst: EE        |
| Cyanide, Reactive | ND     |      | 40.0            | mg/Kg | 1                  | 3/28/2013 09:45 AM |
| SULFIDE, REACTIVE |        |      | SW7.3.          | 4.2   |                    | Analyst: EE        |
| Sulfide, Reactive | ND     |      | 40.0            | mg/Kg | 1                  | 3/28/2013 09:45 AM |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

| Client:     | ALS Environmental |
|-------------|-------------------|
| Work Order: | 1303831           |
| Project:    | 1303855           |

# **QC BATCH REPORT**

| Batch ID: R   | 118051     | Instrument ID WET     | СНЕМ   |          | Method     | d: SW7.3.        | .4.2 |                   |                  |                 |             |                          |                          |
|---------------|------------|-----------------------|--------|----------|------------|------------------|------|-------------------|------------------|-----------------|-------------|--------------------------|--------------------------|
| MBLK          | Sample ID: | WBLKW1-032813-R       | 118051 |          |            |                  | Ur   | nits: <b>mg/l</b> | Kg               | An              | alysis Date | e: 3/28/20               | 013 09:45 AM             |
| Client ID:    |            |                       | Run IE | D: WETCH | IEM_130328 | 31               | Seq  | No: 2252          | 2596             | Prep Date:      |             | D                        | F: <b>1</b>              |
| Analyte       |            | Re                    | esult  | PQL      | SPK Val    | SPK Ref<br>Value |      | %REC              | Control<br>Limit | RPD Re<br>Value | f<br>%RF    | RPI<br>PD Lim            | )<br><sup>iit</sup> Qual |
| Sulfide, Rea  | octive     |                       | ND     | 40       |            |                  |      |                   |                  |                 |             |                          |                          |
| LCS           | Sample ID: | WLCSW1-032813-R       | 118051 |          |            |                  | Ur   | nits: <b>mg/l</b> | Kg               | An              | alysis Date | e: 3/28/20               | 013 09:45 AM             |
| Client ID:    |            |                       | Run IE | D: WETCH | IEM_130328 | BI               | Seq  | No: 2252          | 2597             | Prep Date:      |             | D                        | F: <b>1</b>              |
| Analyte       |            | Re                    | esult  | PQL      | SPK Val    | SPK Ref<br>Value |      | %REC              | Control<br>Limit | RPD Re<br>Value | f<br>%RF    | RPI<br>PD <sup>Lim</sup> | D<br><sup>iit</sup> Qual |
| Sulfide, Rea  | ictive     | 6                     | 99.2   | 40       | 1075       |                  | 0    | 65                | 60-120           |                 | 0           |                          |                          |
| The following | ng samples | were analyzed in this | batch: | 13       | 03831-01A  |                  |      |                   |                  |                 |             | ]                        |                          |

Batch ID: R118052 Instrument ID WETCHEM Method: SW7.3.3.2

| MBLK        | Sample ID: WBLKW1-0328      | 13-R118052  |         |           |                  | Ur  | nits: mg/l         | Kg               | Ana              | lysis Date: 3 | /28/2013 0   | 9:45 AM |
|-------------|-----------------------------|-------------|---------|-----------|------------------|-----|--------------------|------------------|------------------|---------------|--------------|---------|
| Client ID:  |                             | Run ID      | WETCH   | IEM_13032 | BJ               | Seq | No: 2252           | 2608             | Prep Date:       |               | DF: <b>1</b> |         |
| Analyte     |                             | Result      | PQL     | SPK Val   | SPK Ref<br>Value |     | %REC               | Control<br>Limit | RPD Ref<br>Value | %RPD          | RPD<br>Limit | Qual    |
| Cyanide, Re | active                      | ND          | 40      |           |                  |     |                    |                  |                  |               |              |         |
| LCS         | Sample ID: WLCSW1-03281     | I3-R118052  |         |           |                  | Ur  | nits: <b>mg/</b> l | Kg               | Ana              | lysis Date: 3 | /28/2013 0   | 9:45 AM |
| Client ID:  |                             | Run ID      | : WETCH | IEM_13032 | BJ               | Seq | No: 2252           | 2609             | Prep Date:       |               | DF: <b>1</b> |         |
| Analyte     |                             | Result      | PQL     | SPK Val   | SPK Ref<br>Value |     | %REC               | Control<br>Limit | RPD Ref<br>Value | %RPD          | RPD<br>Limit | Qual    |
| Cyanide, Re | active                      | 234.9       | 40      | 250       |                  | 0   | 94                 | 75-125           |                  | 0             |              |         |
| MS          | Sample ID: 1303827-01A M    | S           |         |           |                  | Ur  | nits: <b>mg/</b> l | Kg               | Ana              | lysis Date: 3 | /28/2013 0   | 9:45 AM |
| Client ID:  |                             | Run ID      | WETCH   | IEM_13032 | BJ               | Seq | No: 2252           | 2611             | Prep Date:       |               | DF: <b>1</b> |         |
| Analyte     |                             | Result      | PQL     | SPK Val   | SPK Ref<br>Value |     | %REC               | Control<br>Limit | RPD Ref<br>Value | %RPD          | RPD<br>Limit | Qual    |
| Cyanide, Re | active                      | 218.9       | 40      | 250       |                  | 0   | 87.6               | 50-150           |                  | 0             |              |         |
| MSD         | Sample ID: 1303827-01A M    | SD          |         |           |                  | Un  | nits: <b>mg/</b> l | Kg               | Ana              | lysis Date: 3 | /28/2013 0   | 9:45 AM |
| Client ID:  |                             | Run ID      | WETCH   | IEM_13032 | BJ               | Seq | No: 2252           | 2612             | Prep Date:       |               | DF: <b>1</b> |         |
| Analyte     |                             | Result      | PQL     | SPK Val   | SPK Ref<br>Value |     | %REC               | Control<br>Limit | RPD Ref<br>Value | %RPD          | RPD<br>Limit | Qual    |
| Cyanide, Re | eactive                     | 233.5       | 40      | 250       |                  | 0   | 93.4               | 50-150           | 218              | 3.9 6.45      | 35           |         |
| The followi | ng samples were analyzed in | this batch: | 13      | 03831-01A |                  |     |                    |                  |                  |               |              |         |

| 130383 | 1 |
|--------|---|
|--------|---|

| (ALS)           | Subcontractor:<br>ALS Laboratory Group<br>3352 128th Ave.<br>Holland, MI 49424<br>Salesperson | Mala H. R | TEL: (6<br>FAX: (6<br>Acct#: | 516) 399-6070<br>516) 399-6185 | CH                  | AIN- | OF-C     | CUS       | TOD<br>Page 1 o | Y RI   | ECO    | RD        | Date:<br>COC ID<br>Due Dat | <u>25-M</u><br><u>1371</u><br>e <u>28-N</u> | <u>lar-13</u><br><u>7</u><br>/lar-1: |
|-----------------|-----------------------------------------------------------------------------------------------|-----------|------------------------------|--------------------------------|---------------------|------|----------|-----------|-----------------|--------|--------|-----------|----------------------------|---------------------------------------------|--------------------------------------|
| Cu              | stomer Information                                                                            |           | F                            | Project Inform                 | ation               |      |          | Pa        | rameter/        | Method | Reques | t for Ana | lysis                      | $e^{-1}$ $e^{-1}$                           |                                      |
| Purchase Order  |                                                                                               | Projec    | t Name                       | 1303855                        |                     | A Re | active C | yanide (  | SW-846          | )      |        |           |                            |                                             |                                      |
| Work Order      |                                                                                               | Projec    | t Number                     |                                |                     | B Re | active S | ulfide (S | W-846)          |        |        |           |                            |                                             |                                      |
| Company Name    | ALS Group USA, Corp.                                                                          | Bill To   | Company                      | ALS Group                      | USA, Corp.          | C    |          |           |                 |        |        |           |                            |                                             |                                      |
| Send Report To  | Sonia West                                                                                    | Inv At    | tn                           | Accounts                       | Payable             | D    |          |           |                 |        |        |           | · ·                        |                                             |                                      |
| Address         | 10450 Stancliff Rd, Suite 210                                                                 | Addre     | SS                           | 10450 Star                     | cliff Rd, Suite 210 | E    |          |           |                 |        |        | -         |                            |                                             |                                      |
| Citv/State/Zip  | Houston, Texas 77099-4338                                                                     | City/S    | state/Zip                    | Houston, T                     | exas 77099-4338     | G    |          |           |                 |        | -      |           |                            |                                             |                                      |
| Phone           | (281) 530-5656                                                                                | Phone     | 9                            | (281) 530-                     | 5656                | Н    |          |           |                 |        |        |           |                            |                                             |                                      |
| Fax             | (281) 530-5887                                                                                | Fax       | -                            | (281) 530-                     | 5887                | 1    |          |           |                 |        |        |           |                            |                                             |                                      |
| eMail Address   | Sonia.West@alsglobal.com                                                                      | eMail     | CC                           |                                |                     | J    |          |           |                 |        |        |           |                            |                                             |                                      |
| Sample ID       |                                                                                               | Matrix    | Collectio                    | n Date 24hr                    | Bottle              | A    | В        | C         | D               | E      | F      | G         | H                          | 17                                          | J                                    |
| 1303855-01H (WM | V Effluent)                                                                                   | Liquid    | 21/Mar/2                     | 2013 14:55                     | (1) 250PNEAT        | X    | X        |           |                 |        |        |           |                            |                                             |                                      |

| Please ana       | lyze for reactive cyanide & | reactive sulfide. Due o | on <u>3/28/13. Send</u> | report to sonia.west@a | lsglobal.com & cc : res | ults to         |
|------------------|-----------------------------|-------------------------|-------------------------|------------------------|-------------------------|-----------------|
| jumøke.la        | wal@alsglobal.com & luke    | hernandez(a)alsglobal.c | com                     |                        |                         |                 |
|                  |                             |                         |                         |                        |                         |                 |
| F                | $\wedge$                    |                         |                         |                        |                         |                 |
| Polinguished by  | Date/Time                   | Received hv:            |                         | Date/Time              | Cooler IDs              | Report/OC Level |
| Kennquisned by   | 13/25/13 18                 | 5D.                     |                         |                        |                         | Std             |
| Relinquished by: | Date/Time                   | Received by:            | $O_1$                   | Date/Time /            |                         |                 |
| reiniquinieu oy: |                             | KLS1                    | X                       | 3/26/13 0930           | n                       |                 |
|                  |                             | $\sim$                  | 37 of 40                |                        | 2 2'(                   |                 |
|                  |                             |                         |                         |                        | 3-6-6                   |                 |

### Sample Receipt Checklist

| Client Name: ALS - HOUSTON                              |                   | Date/Time    | Received:                | <u>26-Mar-13</u> | <u>3 09:30</u> |                   |
|---------------------------------------------------------|-------------------|--------------|--------------------------|------------------|----------------|-------------------|
| Work Order: 1303831                                     |                   | Received b   | y:                       | <u>DS</u>        |                |                   |
| Checklist completed by Jiane Shaw<br>esignature         | 26-Mar-13<br>Date | Reviewed by: | Bill Carey<br>eSignature | 4                |                | 26-Mar-13<br>Date |
| Matrices:LiquidCarrier name:FedEx                       |                   |              |                          |                  |                |                   |
| Shipping container/cooler in good condition?            | Yes 🗸             | No 🗌         | Not Pres                 | ent 🗌            |                |                   |
| Custody seals intact on shipping container/cooler?      | Yes 🗹             | No 🗌         | Not Pres                 | ent 🗌            |                |                   |
| Custody seals intact on sample bottles?                 | Yes               | No 🗌         | Not Pres                 | ent 🗹            |                |                   |
| Chain of custody present?                               | Yes 🗸             | No 🗌         |                          |                  |                |                   |
| Chain of custody signed when relinquished and received? | Yes 🗸             | No 🗌         |                          |                  |                |                   |
| Chain of custody agrees with sample labels?             | Yes 🗸             | No 🗌         |                          |                  |                |                   |
| Samples in proper container/bottle?                     | Yes 🗸             | No 🗌         |                          |                  |                |                   |
| Sample containers intact?                               | Yes 🗸             | No 🗌         |                          |                  |                |                   |
| Sufficient sample volume for indicated test?            | Yes 🗸             | No 🗌         |                          |                  |                |                   |
| All samples received within holding time?               | Yes 🖌             | No 🗌         |                          |                  |                |                   |
| Container/Temp Blank temperature in compliance?         | Yes 🗸             | No 🗌         |                          |                  |                |                   |
| Temperature(s)/Thermometer(s):                          | <u>3.2 c</u>      |              |                          |                  |                |                   |
| Cooler(s)/Kit(s):                                       |                   |              |                          |                  | ]              |                   |
| Date/Time sample(s) sent to storage:                    | 3/26/2013         | 1:31:30 PM   |                          |                  |                |                   |
| Water - VOA vials have zero headspace?                  | Yes               | No           | No VOA vials             | s submitted      | $\checkmark$   |                   |
| Water - pH acceptable upon receipt?                     | Yes               | No 🗌         | N/A                      |                  |                |                   |
| pH adjusted?                                            | Yes               | No           | N/A                      |                  | _              |                   |
| pH adjusted by:                                         | -                 |              |                          |                  |                |                   |
|                                                         |                   |              |                          |                  |                |                   |

Login Notes:

| Client Contacted: | Date Contacted: | Person Contacted: |
|-------------------|-----------------|-------------------|
| Contacted By:     | Regarding:      |                   |
|                   | <br>            |                   |
| Comments:         |                 |                   |
|                   |                 |                   |
| CorrectiveAction: |                 |                   |
|                   |                 |                   |
|                   | 00 ( 10         |                   |

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# **Certificate of Analysis**



SINCE 1985

10630 FALLSTONE RD. HOUSTON, TEXAS 77099 P.O. BOX 741905, HOUSTON, TEXAS 77274

Quality Controlled Through Analysis

TEL: (281) 495-2400 FAX: (281) 495-2410

| CLIENT:         | ALS Group USA, Corp.      | REQUESTED BY:      | Ms. Sonia West |
|-----------------|---------------------------|--------------------|----------------|
| CLIENT PROJECT: | 1303855-01G               | PURCHASE ORDER NO: | 10-2125597     |
| LABORATORY NO:  | 70395                     | REPORT DATE:       | March 28, 2013 |
| SAMPLE:         | 1303855-01G (WW Effluent) |                    |                |
| SAMPLE:         | 1303855-01G (WW Effluent) |                    |                |

#### API Gravity of Petroleum Products, Hydrometer Method (Density, Relative Density, Specific Gravity), ASTM D 1298

|                               | Results |
|-------------------------------|---------|
| Specific Gravity @ 60°F(15°C) | 0.9998  |
| Density, g/cm <sup>3</sup>    | 0.9958  |

Respectfully submitted For Texas OilTech Laboratories, L.P.

A. Phillip Sorurbakhsh **Director of Laboratory Operations** 

1



Cert. No. 0005085 Quality Management System Certified to ISO 9001:2008 These analyses, opinions or interpretations are based on material supplied by the client to whom, and for whose exclusive and confidential use this report is made. Texas Oiltech Laboratories, Inc. and its officers energy assume no responsibility and make no warranty for proper operations of any petroleum, oil, gas or any other material in connection with which this report is used or relied on.





#### **PREDICTW - RESERVOIR PRESSURE INCREASE PROGRAM**

The pressure response for radial flow of a slightly compressible fluid in a planar (porous) injection layer with spatially-constant properties is determined by the well-known diffusivity equation (Lee, 1982):

$$\frac{\partial^2 p}{\partial r^2} + \frac{1}{r} \frac{\partial p}{\partial r} = \frac{\phi \mu c_t}{0.000264k} \frac{\partial p}{\partial t} , \qquad \text{Equation 1}$$

where  $\phi, \mu, c_t$ , and k refer to porosity, viscosity (cp), compressibility (psi<sup>-1</sup>), and permeability (md), respectively. The pressure, p, is expressed in psi; radial distance, r, is in feet; and time, t, is indicated in hours. For an infinite reservoir of thickness h (ft) with  $p \rightarrow p_o$  (initial pressure) as  $r \rightarrow \infty$ , the transient pressure, p (r, t), for a single line source injector at r = 0 is determined from Equation 1 as (Muskat, 1937):

$$p(r,t) = p_o - \frac{70.6 \text{ q}\mu}{\text{kh}} \text{ Ei}\left(\frac{-39.5\phi\mu c_t r^2}{\text{kt}}\right), \qquad \text{Equation 2}$$

where Ei represents the exponential integral defined by:

Ei 
$$(-x) = -\int_{x}^{\infty} \frac{e^{-\varepsilon}}{\varepsilon} d\varepsilon$$
,

and q represents the (constant) injection rate in barrels per day (bbl/day). Time, t, in Equation 2 is expressed in days.

For the general case of multiple wells in a single layer, in which injection from each is represented by a succession of piece-wise constant flow rate intervals, the pressure response is readily obtained by superposition of elementary solutions given by Equation 1. In terms of Cartesian coordinates, the pressure transient at an arbitrary point (x, y) is given by:

$$p(x,y,t) = p_{o} + \sum_{j=1}^{N} \frac{70.6 q_{i}^{j} \mu}{kh} \operatorname{Ei} \left( \frac{-39.5 \phi \mu c_{t} \left[ (x-x_{j})^{2} + (y-y_{j})^{2} \right]}{kt} \right) \\ + \sum_{j=1}^{N} \sum_{i=1}^{n_{j-1}} \frac{70.6 \left[ (q_{i+1}^{j} - q_{i}^{j}) \mu \right]}{kh} \operatorname{Ei} \left( \frac{-39.5 \phi \mu c_{t} \left[ (x-x_{j})^{2} + (y-y_{j})^{2} \right]}{k(t-t_{i}^{j})} \right)$$

Equation 3

for all  $t_i^j < t$ . In Equation 3, the following notation is employed:

Equation 3 forms the basis for determining the cone of influence for a general multi-well system.

To determine shutin or flowing pressures at a generic wellbore location, Equation 3 is modified to include a dimensionless skin factor,  $s_b$ , which reflects the effects of altered properties in the near-wellbore region (Van Everdingen, 1953). The associated augmentation,  $\Delta p_{skin}^{b}$ , of the theoretical flowing pressure is assumed to be of the form:

$$\Delta p_{skin}^{b} (psi) = 141.2 \frac{q_{i}^{b} \mu}{kh} s_{b}$$
 Equation 4

Incorporation of Equation 4 into Equation 3 and replacement of the quantity  $[(x-x_b)^2 + (y-y_b)^2]$  in the Ei-function argument by  $r_{w,b}^2$  (wellbore radius squared) leads to the following expression for the transient flowing pressure at a generic wellbore (b):

$$p_{wf}^{b}(x_{b}, y_{b}, t) = p_{o} + \sum_{j=1}^{N} \frac{70.6 q_{i}^{j} \mu}{kh} \operatorname{Ei}\left(\frac{-39.5 \phi \mu c_{t} [(x_{b} - x_{j})^{2} + (y_{b} - y_{j})^{2}]}{kt}\right)$$

$$+ \sum_{j=1(j \neq b)}^{N} \sum_{i=1}^{n_{j-1}} \frac{70.6 (q_{i+1}^{j} - q_{i}^{j}) \mu}{kh} \operatorname{Ei}\left(\frac{-39.5 \phi \mu c_{t} [(x_{b} - x_{j})^{2} + (y_{b} - y_{j})^{2}]}{k(t - t_{i}^{j})}\right)$$

$$+ \frac{70.6 q_{i}^{b} \mu}{kh} \left[\operatorname{Ei}\left(\frac{-39.5 \phi \mu c_{t} r_{w,b}^{2}}{kt}\right) - 2s_{b}\right]$$

$$+ \sum_{i=1}^{n_{j-1}} \frac{70.6 (q_{i+1}^{b} - q_{i}^{b}) \mu}{kh} \left[\operatorname{Ei}\left(\frac{-39.5 \phi \mu c_{t} r_{w,b}^{2}}{k(t - t_{i}^{b})}\right) - 2s_{b}\right]$$

Equation 5

where  $x_b$ ,  $y_b$  denote the wellbore coordinates at well b where the pressure response is evaluated.

Application of Equations 3 and 5 to address actual operational conditions often requires inclusion of many wells (including image injectors), each having several hundred flow rate increments. Accordingly, a Visual Basic computer program, PREDICTW, was created to evaluate these equations. When isobaric contours at a given time in a given injection zone are desired, Equation 3, actually  $p - p_o$ , is evaluated at each node of a predefined uniform grid. The resulting  $\Delta p$ -x-y array is then input into a 3-D graphics routine, SURFER ( ® Golden Software, Inc.), to generate selected isobaric contours. When transient wellbore responses are desired to determine flowing pressures at a given well or to simulate pressure falloff tests, Equation 5 is utilized. The output for this case consists of a record of  $\Delta p = p - p_o$  at a single well location over a specified time interval.

#### **REFERENCES**:

Lee, J., 1982, <u>Well Testing</u>: SPE Textbook Series, Vol. 1, Dallas, Texas.

Muskat, M., 1937, The Flow of Homogeneous Fluids Through Porous Media: McGraw Hill.

Van Everdingen, A. F., 1953, The Skin Effect and Its Influence on the Productive Capacity of a Well: SPE, Presented at the Petroleum Branch Fall Meeting, Fall 1953.



