# UIC - I - 8-1, 2 & 3

WDWs-1, 2 & 3
PERMITS,
RENEWALS,
& MODS (6 of 18)

2017

over a 30 min time interval. The radioactive tracer survey showed no signs of fluid flow out of the permitted interval above 7650 feet. The OCD witnessed the annular pressure test and the first half of the radioactive tracer survey.

The annulus monitoring system was installed and tested. The well was turned over to Navajo for injection.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
\*\*Tict IV\*\*
0 S. St. Francis Dr., Santa Fe, NM 87505

# State of New Mexico rgy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-144 June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Senta Fe office

# Pit or Below-Grade Tank Registration or Closure Is pit or below-grade tank covered by a "general plan"? Yes \( \subseteq No \( \subseteq \)

Type of action: Registration of a pit	or below-grade tank [] Closure of a pit or below-gra	de tank
Operator: Alexan CRET Nieva Com Series Telepho	ne:(505)748-331/ e-mail address:	
Address: SCIENCE MANY STREET AND	CCIO NM 88210	
Facility or well name: WOW #3 API#:	30-015-24575 U/Lor Ott/Ott	Sec / T /8-88 27 E
County: Eddy - Latitude	Longitude	NAD: 1027 [7 1097 [7]
Surface Owner: Federal A State Private Indian	Drightat	17D. 1727 [ 1903 [ ]
Pit	Below-grade tank	
Type: Drilling Production Disposal		
Workover D Emergency	Volume:bbl Type of fluid:	
Lined 12 Unlined	Construction material:	
1	Double-walled, with leak detection? Yes  If not	, explain why not.
Liner type: Synthetic (P) Thickness 22 mil Clay [		
Pit Volumebbl		<del>-</del>
Depth to ground water (vertical distance from bottom of pit to seasonal	Less than 50 feet	(20 points)
high water elevation of ground water.)	50 feet or more, but less than 100 feet	(10 points)
Tigh water devaited of ground water.)	100 feet or more	( 0 points)
	Yes	(20 points)
Wellhead protection area: (Less than 200 feet from a private domestic		/)
water source, or less than 1000 feet from all other water sources.)	(No)	( 0 points)
ristance to surface water: (horizontal distance to all wetlands, playas,	Less than 200 feet	(20 points)
	200 feet or more, but less than 1000 feet	(10 points)
,ation canals, ditches, and perennial and ephemeral watercourses.)	1000 feet or more	( 0 points)
	Dunding Conv. (Total Bring)	1.00
	Runking Score (Total Points)	
If this is a pit closure: (1) Attach a diagram of the facility showing the pit's		
your are burying in place) onsite 🔲 offsite 💢 If offsite, name of facility 🔏	RI . (3) Attach a general de	escription of remedial action taken including
remediation start date and end date. (4) Groundwater encountered: No 11	res If yes, show depth below ground surface	ft. and attach sample results.
(S) Attach soil sample results and a diagram of sample locations and excavat		
Additional Comments: Navalo REFINING Com	DON'T PLANS FO BLOSE DE	- Ullate sit and the
WDW #3 RS DET NEW WEXES OIL	Construction Division	10 2014 41- 21
and D-/	CONSTITUTE DIVISION TO	HE SO IN THE FIF
AND BELOW grade tank Guide In		
Drill cuttings, All cuttings will !		
Disposal and Backfill with onsite.	stockpiled soils. WE Will No	fify O.C.D 48 hours
Prior to Beginning work,		
I hereby certify that the information above is true and complete to the best of	of my knowledge and belief. I further certify that the	a shove described his or helow goods tank
has been/will be constructed or closed according to NMOCD guidelines	[], a general permit [], or an (attached) alternati	ive OCD-approved plan .
Date: 2/14/06 Printed Name/Title Charles Addison Agency	111	
Printed Name/Title Chart Mattheway / Base Not	Signature Land	
Your certification and NMOCD approval of this application/closure does not otherwise endanger public health or the environment. Nor does it relieve the regulations.	ot relieve the operator of liability should the contents of the operator of its responsibility for compliance with an	of the pit or tank contaminate ground water or y other federal, state, or local laws and/or
Anoroval: Jenne W. Green		1.1.7
.cd Name/Title	. Signature	Date: 2/12/67

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT FORM APPROVED OMBNO, 1004-0137 Expires: March 31, 2007 OMPLETION OR RECOMPLETION REPORT AND LOG Lease Serial No. NM - 0557371 oil Well Gas Well Dry Other 6. If Indian, Allottee or Tribe Name New Well Work Over Deepen Plug Back Diff. Resvr,. Unit or CA Agreement Name and No. Other Name of Operator NAVAJO REFINING COMPANY Lease Name and Well No. WDW - 3 3a. Phone No. (include area code) AFI Well No. Address P.O. BOX 159, ARTESIA, NM 88211 30 - 015 - 26575 Field and Pool, or Exploratory Location of Well (Report location clearly and in accordance with Federal requirements)\* At surface 796' FROM THE SOUTH LINE AND 2250' FROM THE WEST LINE Sec., T., R., M., on Block and Survey or Area 91 - T188 - R27E At top prod, interval reported below 7658 AT THE SAME LOCATION AS ABOVE County or Parish 13 State PLUG BACK 10,119' AT THE SAME LOCATION AS ABOVE At total depth EDDY 14. Date Spudded 15. Date T.D. Reached 16. Date Completed Elevations (DF, RKB, RT, GL)\* 01/29/1991 12/22/1990 3609 D&A Ready to Prod. 20. Denth Bridge Plug Set: 19. Plug Back T.D.: MD 9822\* MD 18. Total Depth: MD 10,119' CMT 9051'-9022' TVD TVD 10.119 TVD 90221 CMT 9051'-9022' 21. Type Electric & Other Mechanical Logs Run (Submit copy of each) 22. Was well cored? / No Yes (Submit analysis)
Was DST run? / No Yes (Submit report) CBL/VDL, MULI-ARM CALIPER, TEMP, RADIOACTIVE TRACER (2006) Directional Survey? / No Yes (Submit copy) 23. Casing and Liner Record (Report all strings set in well) Stage Cementer No. of Sks. & Sturry Vol. (BBL) Amount Pulled Wt. (#/ft.) Size/Grade Top (MD) Bottom (MD) Coment Top\* Hole Size Type of Cement Depth 17 1/2" 13 3/8" SURF 54.5 400 486 425 CLASS C SURF NONE 12 1/4" 9 5/8" 36 SURF 2604 2604 1025 °C" SURF NONE 94501 8 3/4" 7۳ 29 & 26 SURF 9450 1350 "H" 9001 NONE 6 1/4" 4 1/2" 9051' 10,119 10,119 175 CLASS H 9051'-TOL NONE 24 Tubing Record Depth Set (MD) Packer Depth (MD) Depth Set (MD) Packer Depth (MD) Depth Set (MD) Packer Depth (MD) Size Size 4 1/2" 7567 7567 25. Producing Intervals Perforation Record Top Formation Bottom Perforated Interval Size No. Holes Perf. Status CISCO 8450 0.5" 7650 7660' - 8450' 1580 2 JSPF / 60° 0.5" CANYON 8548 8620 8540'- 8620' 160 2 JSPF / 60° C) D) 27. Acid, Fracture, Treatment, Cement Squeeze, etc. Depth Interval Amount and Type of Material 7050' - 7102' 80 SKS PREM 14.8 PPG NEAT CMT FOR PERF SQZ ON PREVIOUS PERFORATION 7262' - 7278' 100 SKS PREM 14.2 PPG NEAT CMT FOR PERF SQZ ON PREVIOUS PERFORATION 7304' - 7314' 84 SKS PREM 14.8 PPG NEAT CMT FOR PERF SQZ ON PREVIOUS PERFORATIONS 28. Production - Interval A Test Date Production Method Oil Gravity Corr. API Test Production Oil BBL Gravity Produced NON-HAZAROUS CLASS I WELL Choke Gu The. Press 24 Hr. Oil BBL Water BBL Gas/Oil Well Status Fleg. MCF Sizo WAITING ON STATE APPROVAL TO SUPER SF 28a. Production - Interval B Date Pirst Produced Test Hours Tested T. d Oil BBL Oil Gravity Corr, API Production Method Gree Greevity Produ NON-HARAZOUS CLASS | WELL Choke C=/OI Tbg. Pres 24 Hr. Gas MCF Well States Oil BBL Water BBL Flwg.

WAITING ON STATE APPROVAL TO INJECT

Rete

\*(See instructions and spaces for additional data on page 2)

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Date First	nction - Inte	Hours	Test	Toi	Gar	Water	Oil Gravity	Gas	Production Method	
Produced	Date	Tested	Production	Oil BBL	Gas MCF	BBL	Cor. APT	Gravity	NOOSCHAR PRODUC	
Choke. Size	Thg. Press. Plwg.	Csg. Press.	24 Hr. Rute	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status		<del></del>
	ZI	L		<u> </u>	_			<del></del>		
28c. Prod	Inction - Int Test	ervai D Hours	Test		Gas	Water	0.70	<del> </del>		
Produced	Date	Tested	Production	Oil BBL	MCF	BBL	Oil Gravity Corr. API	Gas Gravity	Production Method	
Choke Size	The Press. Flwg. SI	Cag. Presa	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well States		<del></del>
20 Die	1	e Kald .	used for fuel,	Named of						
•		,	US CLASS		•					
30. Sum	mary of Por	ous Zones	(Include Ag	tifers):				31. Format	on (Log) Markers	***************************************
tests,	w all import, including a recoveries.	ant zones lepth inter	of poronity : val tested, co	and conten shion used	its thereof: , time tool o	Cored interval pen, flowing:	als and all drill-stem and shut-in pressures			
Forn	nation	Тор	Bottom		Desc	riptions, Cont	enis, etc.		Name Top Meas. D	epth
THE REC EXI: SQU	PLUGGI COMPLET STING PL TEEZED C	ED AND A ED THE UGS WE	well fo Re drili II cemen	ED WEI R INJEC LED OUT I AT 705	TING NO TO THE TO 7102	N-HAZARI TOP OF TI P, 7262' TO	DOUS WASTE W. HE LINER PLUG 17278', AND FROI	ATER FROM AT 9022' AN M 7344' TO 7	MPANY BY NAVAJO REFINING. NAV I THEIR REFINERY IN ARTESIA, NM D THE EXISTING PERFORATIONS W 314'. A 4 12" 11.6 #FT TUBING STRIN	. THE ERE
WAS	SSET WI	TH A TE	NSION PA	CKER A	r 756 <b>8</b> ° an	ID BOTTO!	M OF PACKER A	T 7575'. MIT	WAS WITNESSED BY OCD.	
						the appropria	te hovet:	·····		
☑ Ek	ctrical/Med	hanical Lo	gs (1 full seing and cemen	req'd.)	<u></u> □ 04	ide appropria cologic Repor see Analysis		Direction	al Survey	
34. Therei	by certify th	at the fore	going and att	ached info	rmation is co	omplete and c	orrect as determined	from all availal	ole records (see attached instructions)*	TILLING TO
Name (	please prin	ريا	Darre	11 /	Meor	e	TideE	nu. M	gr for Waters Wa	ste
Signat	ure	<u>+</u> )a	ul	IN	love		_ Date	1/24/	7	
Title 18 U States any	S.C Section	n 1001 and ious or fra	i Title 43 U	S.C Secti	on 1212, ma	ike it a crime	for any person know y matter within its	vingly and will	fully to make to any department or agency of t	be United

20 ×	Form Ho (April 10	18 05 18 05	23456		DEPAR BUREAU	TMEN U OF		IE IN	GEMENT						FORM A OMBNO. Expires; Mi	PPROVE! 1004-0137 trch 31, 20	p 107
	\$ C.	& ME	IT CON	APLE	TION O	)R RE	COMPLI	ETIO	N REPO	RT AN	D LOG			5. Leas NM	e Serial No. - 0557371		
13 kg	ia. Be	of Well	[]Oil V		Gas Wel			Xher				<u> </u>		6. If ho	dian, Allotte	e or Tribe l	Name
The many	b. Type Sigit	of Comple		Other		<u>~</u>	/onk Over {		epen	lug Back		f. Resvi,			or CA Agree	ment Nam	ne and No.
	Z Name	of Operat	OF NAVA	JO RI	EFINING	COMI	PANY								e Name and DW - 3	Well No.	
	3. Addre	ess P.O.	BOX 159,	ARTE	SIA, NM	88211	·····		3a Pi	one No.	(inchide a	rea code,	,	9. AFI			
	4. Locat	ion of Wel	(Report lo	cation (	clearly and	in acco	rdance with	Feder	al requireme	nts)*	***************************************		<del>-   1</del>		and Pool, or	····	жу
	At su	rface .	798′ FRO	M THI	E SOUTH	LINE	AND 2250	FRO	M THE W	est lin	ne			II. Sec.,	T., R., M., c	n Block an	nd
	At top	prod. inte	rvai reporte	d belov	765 <b>0</b> ° A	AT TH	E SAME L	OCAT	TION AS A	BOVE					cy of Area sty of Parish		
			PLUG BA		•			CATIC	ON AS AB					EDD	Ý	8	M
	14. Date: 12/2	Spudded <b>2/1990</b>		15.	Date T.D. 1 01/29/19		I		16. Date	Completed & A	***	to Prod	1 1	i7. Elev. <b>3609</b>	ations (DF, 1	RKB, RT, (	3Ł)*
	IR. Total	-	ID 10,11		1	19. Plu	Back T.D.:	MD	9022'		20. De	pub Bride	e Plug Se			CMT 905	31'-9822'
	71 70-0		VD 10,11		al Lore Div	. (O.t	nit copy of c		9922'				- 6 T	TV 715 1		CMT 905	
					•	•	• • • • • • • • • • • • • • • • • • • •	•	TRACER (2	<b>80</b> 6)	Wa	s well co s DST n ectional :	m? 🔽	No L	Yes (Sub	enit analysi enit report) Submit con	
	23. Casin	g and Lin	er Record	(Керо	rt all strii	ngs set	in well)	102						, , , , , , , , , , , , , , , , , , , ,	Insula \-	,	37
	Hole Size			(#/fL)	Тор (М	D) 1	Bettom (MD	Sta	ge Cemente Depth		f Sks. & of Coment		ry Voi.	Come	nt Top*	Amoun	t Pulled
	17 1/2"	13 3/8		5	SURF		466'	48	<del></del>		LASS C			SURI	_	NONE	
	12 1/4" 8 3/4"	9 5/8"		<u>26</u>	SURF		26041 94501		64'  50'	1025		<del> </del>		SURI 960'	F	NONE	
	6 1/4"	4 1/2"			9051'		10,119'		,119'	-	LASS H			9051	-TOL	NONE	
	24 Tubin		L	اـــــــــــــــــــــــــــــــــــــ						.L			*************	<u> </u>			
	Siz <del>c</del> 4 1/2"	7567'	Set (MD)	7567	r Depth (M	D)	Size	Dep	pth Set (MD)	Packer I	Depth (MI	D)	Size	Dept	h Set (MD)	Packer I	Depth (MID)
	25. Produc	-1	als	1301		Ł		26	Perforation	n Record		L	···········		······	<b></b>	
		Formatio	0		Тор		Bottom		Perforated	Interval		Size	No.	Holes		erf. Status	l
,	A) CISC				7650'	84			60' - 8456'			.5"	1580		2 JSPF		
	B) <u>CAN</u> C)	YON		-+	8540'	86	Ľ <b>®</b> *	185	40'- 8628'		- 0	.5*	160	<del></del>	2 JSPF	/ 6 <b>0°</b>	
j	<b>)</b>				·	$\top$		1	······································				<del>                                     </del>		<del>                                     </del>		
				ment S	queeze, etc												
	7050' - 7	Depth Inter 102'	VAL		80 SKS P	REM	IAR PPC N	EAT	CMT FOR	Amount as				PDEYND	ATTON		<del></del>
•	7262' - 7								CMT FO							<del></del>	······································
-	7304' - 7	314'		$\neg$	80 SKS P	REM 1	14.8 PPG N	EAT	CMT FOR	PERFS	QZ ON	PREVI	OUS PE	RFORA	TIONS		
;	8. Produ	ction - Inte	rval A														
-	Date First	Test Date	Hours Tested	Test Product	Oil niona BBL	Ģ	M V	eter BL	Oil Gra Corr. A	vity	Gas		Production	Method			
	Produced			Product	<b>&gt;</b>					ur i	Gnivii		NON-HA	ZARQUS	C7.ASS I WEI	J.	
	Choke Size	Tbg. Press. Flwg. Si	Csgs. Presss.	24 Hr. Rete	Oil BBL		AS V FCF B	nter BL	Gas/Oil Rutio		Well St	ortor	WAITING	G ON STA	TE APPROV	al to inje	ct
3	8a. Produ									······································							<del></del>
	Date First Produced	Test Date	Hours Tested	Test Producti	Oil BBL			etter BL	Oil Gra Cour. A	rity Pf	Gas Gravity		roduction NON-BA		CLASS I WRI	T	
-	Choke Size	Thg. Press. Flwg. SI	Cags. Press.	24 Hz. Rute	Oil BBL	G M	CF B	ater BL	Gas/Oil Ratio		Well St	ćist	WAITING	C ON STA	TE APPROV	יעאו מון גע	cr
-	*(See inst	ructions at	d spaces fo	r addit	ional data e	on page	2)	• • • • • • • • • • • • • • • • • • • •			_1						<del></del>

28b. Produ	oction - Inte	rval C						······································		·····	
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gza Gravity	Production Method		
Choke. Size	Thg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status			
2Rc. Prod	nction - Int	crvai D		<del> </del>	<del> </del>	<u></u>	<u> </u>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method		
Choke Size	Thg. Press. Flug. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well States			
29. Disposition of Gas (Sold, used for fuel, vented, etc.)  N/A (NON-HAZARDOUS CLASS I WELL)											
<del></del>								0 B	4 . 3 . 5		
	•		(Include Aqu	•				33. Pormatio	on (Log) Markers		
testa,							and all drill-stem d shot-in pressures				
Formation Top Bottom Descriptions, Contents, etc.									Name	Top Meas. Depth	
T Addition		re (include	pługging pro								
THE REC EXIS SQU	PLUGGS COMPLET STING PL EEZED O	ED AND A ED THE UGS WE	ABONDON WELL FO RE DRILL II CEMEN	ED WEL R INJEC LED OUT I AT 7056	TING NON TO THE T ' TO 7102'	I-HAZARDO OP OF THE , 7262' TO 7	DUS WASTE WA E LINER PLUG A 278', AND FROM	TER FROM AT 9022' ANI I 7384' TO 73	APANY BY NAVAJO REFIN THEIR REFINERY IN ART THE EXISTING PERFOR 814'. A 4 1/2" 11.6 #/FT TUB WAS WITNESSED BY OCC	FESIA, NM. THE ATIONS WERE ING STRING	
			LL SUMM				<b></b>				
_						e appropriate	_	m <sub>n</sub> .			
==			gs (1 full set ng and cemer	• /	==	ologic Report e Analysis	DST Report Other:	Directions	d Survey		
34. Thereb	y certify th	at the fore	going and att	ached infor	mation is con	opiete and cor	vect as determined fo	om all availab	le records (see attached instructio	ut),	
Name (	please prin	پريا	Darre	11_	Moor	<u>e</u>	Tide E	nu. M	gr for Water.	Waste	
Signat	ure	y)a	ul	IM	sore		Date	1/24/0	7	***************************************	
Title 18U	S.C Section	n 1001 an	d Title 43 U.	S.C Section	o 1212, maj	ceit a crime fo	x any person knowi	ngly and willfi	ally to make to any department o	r agency of the United	

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

#### OCD-ARTESIA Form 3160-5 UNITED STATES FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007 DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT onth Year 5. Lease Serial No. NM-0557371 MAR - 5 2007 SUNDRY NOTICES AND REPORTS ON WELL 6. If Indian, Allottee or Tribe Name OCD - ARTESIA, NM Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160 - 3 (APD) for such proposals. 7. If Unit or CA/Agreement, Name and/or No. SUBMIT IN TRIPLICATE- Other instructions on reverse side. Type o(Weil) (Öil Well Gas Well ✓ Other 8. Well Name and No. Wnw.t 2. Name of Operator NAVAJO REFINIG COMPANY API Well No. 3a Address 3b. Phone No. (include area code) 30 - 015 - 26575 P.O. BOX 159, ARTESIA, NM 88211 10. Field and Pool, or Exploratory Area 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 11. County or Parish, State S1 - T18S - R27E; 790' FROM THE SOUTH LINE AND 2250' FROM THE WEST LINE **EDDY** 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION Acidize Production (Start/Resume) Deepen Waster Shart-Off Notice of Intent Well Integrity Alter Casing Fracture Treat Reclamation Other Casing Repair Subsequent Report New Construction Recomplete Change Plans Phug and Abandon Temporarily Ahandon NON-HAZARDOUS Final Abandonment Notice ✓ Convert to Injection Plug Back Water Disposal CLASS I WELL 13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 10 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filled once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.) THE PLUGGED AND ABONDONED WELL WAS AQUIRED FROM MEWBOURNE OIL COMPANY BY NAVAJO REFINING. NAVAJO RECOMPLETED THE WELL FOR INJECTING NON-HAZARDOUS WASTE WATER FROM THEIR REFINERY IN ARTESIA, NM. 10/1/06 -THE EXISTING PLUGS WERE DRILLED OUT TO THE TOP OF THE LINER PLUG AT 9022' AND THE EXISTING PERFORATIONS WERE SQUEEZED OFF WITH NEAT CEMENT AT 7959' TO 7102', 7262' TO 7278', AND FROM 7304' TO 7314'. 10/13/06 - RAN CBL/VDL AND TEMPERATURE SURVEY, PERFORATED INTERVAL FROM 7650' TO 8450' AND FROM 8540' TO 10/24/06 - A 4 1/2" 11,6 #/FT TUBING STRING WAS SET WITH A TENSION PACKER AT 7568' AND BOTTOM OF PACKER AT 7575'. 11/4/06 - PERFROMED AN INJECTION/FALLOFF TEST ON THE WELL AT 9 TO 10 BPM. 11/15/86 - MECHANICALLY INTEGRITY TEST WERE PERFORMED AND WITNESSED BY THE OCD. THE MECHANICALLY 11/15/96 - MECHANICALLY INTEGRITY TEST WERE PERFORMENT AND AN ANNULUS PRESSURE TEST. SUBJECT TO LIKE INTEGRITY TEST CONSISTED OF RADIOACTIVE TRACER TEST AND AN ANNULUS PRESSURE TEST. SUBJECT TO LIKE I hereby certify that the foregoing is true and correct Name (Printed/Typed) Tide Signatur 1/24

THIS SPACE FOR FEDERAL OR STATE OFFICE USE FOTED

Office

2 8 2007

FREDERICK WINGSHIE United PETROLEUM ENGINEER

FEB

SEE ATTACHED FUR CONDITIONS OF APPROVAL

Conditions of approval, if any, are attached. Approval of this notice does not warrant or

certify that the applicant holds legal or equitable title to those rights in the subject lease

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to. States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

which would entitle the applicant to conduct operations thereon.

(Instructions on page 2)

#### **GENERAL INSTRUCTIONS**

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. Any necessary special instructions 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 office.

#### SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local 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 the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or

present productive zones, or other zones with present significant fluid contents not scaled 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 plugs; amount, size, method of parting of any casing, liner or tubing pulled 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.

#### 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. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: 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 in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

This information is being collected to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

#### **BURDEN HOURS STATEMENT**

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 comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer, (WO-630), Mail Stop 401 LS, 1849 C St., N.W., Washington D.C. 20240

# **SUNDRY NOTICE SPECIAL STIPULATIONS**

- 1. Approval is granted for the water disposal method presented in the sundry subject to the following conditions:
- 2. The operator must provide a water analysis of the water to be injected, together with a copy of the disposal permit granted by the state.

\*\*\*\* Approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Engineering can be reached at 505-706-2779 for any variances that might be necessary.

F Wright 2/28/07

# OCD-ARTESIA

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(Form 3160-4, page 2)

#### INSTRUCTIONS

GENERAL: This form is designed for submitting a complete and correct well completion/recompletion report and log on all types of wells on Federal and Indian leases to a Federal agency, pursuant to applicable Federal laws and regulations. Any necessary special instructions 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 office.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, and all types electric), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal laws and regulations. All attachments should be listed on this form, see item 33.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal office for specific instructions.

ITEM 17: Indicate which reported elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

ITEM 23: Show how reported top(s) of cement were determined, i.e. circulated (CIR), or calculated (CAL), or cement bonding (CBL), or temperature survey (TS).

#### **PRIVACY ACT**

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 the actual operations performed in the drilling, completing and testing of a well on a Federal or Indian lease.

ROUTINE USES: (1) Evaluate the equipment and procedures used during the drilling and completing/recompleting of a well. (2) The review of geologic zones and formation encountered during drilling. (3) Analyze future applications to drill 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 report and disclosure of the information is mandatory once a well drilled on a Federal or Indian lease is completed/recompleted.

The Paperwork Reduction Act of 1995 requires us to inform you that:

This information is being collected to allow evaluation of the technical, safety, and environmental factors involved with drilling and completing/recompleting wells on Federal and Indian oil and gas leases.

This information will be used to analyze operations and to compare equipment and procedures actually used with those proposed and approved.

Response to this request is mandatory only if the operator elects to initiate drilling and completing/recompleting operations on an oil and gas lease.

BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

#### **BURDEN HOURS STATEMENT**

Public reporting burden for this form is estimated to average 60 minutes per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer, (WO-630), MS 401 LS, 1849 C Street, N.W., Washington, D.C. 20240.

# Well Summary

Navajo Refining Company (Navajo) contracted Subsurface Technology, Inc. (Subsurface), to prepare an application for permit and to reenter a plugged and abandoned (P&A) oil and gas well. The Application for Permit to Drill or Reenter and the Sundry Notices and Reports on Wells was submitted to the Department of the Interior, Bureau of Land Management (BLM), on June 29, 2006 and approved. The Application for Permit to Drill, Re-enter, Deepen, Plug Back, or add a Zone was submitted to the State of New Mexico Oil Conservation Commission (OCD) on June 29, 2006 and approved.

Subsurface prepared an engineering plan to reenter the P&A'ed oil and gas well formally owned by Mewbourne Oil Company. The original well name was Caulk Bluff Federal #1 (API number 30-015-26575), and a Change of Operator application was submitted to the OCD on December 5, 2000 and approved under the well name of WDW-3. Under contract to Navajo, Subsurface commenced field operations on September 25, 2006. The existing location was cleared and prepared for reentry operations. An earthen lined reserve pit was dug to catch returns. All depths unless stated are referenced to rig floor at six feet to seven feet above ground level. The rig floor was moved from six feet to seven feet after drilling out the cast iron bridge plugs.

A workover rig and reverse unit was placed on location and the existing wellhead was removed. The first cast iron bridge plug (CIBP) at 7010 feet was drilled and the perforated interval from 7050 feet to 7102 feet was squeezed off with neat cement and successfully pressured tested to six hundred eighty pounds per square inch gauge pressure (680 psig). The second and third CIBP at 7190 feet and 7279 feet was drilled. There appeared to be ten feet of cement on top of the third CIBP. The perforated interval from 7262 feet to 7278 feet and from 7304 feet to 7314 feet was squeezed with neat cement. The squeezed interval was pressure tested to 920 psig and would not hold. A second cement squeeze was performed across the perforated interval from 7262 feet to 7278 feet and from 7304 feet to 7314. The interval was pressured tested to 630 psig and continued to lose pressure at a rate of two pounds per square inch every thirty minutes (2 psi/30 min). The fourth CIBP at 7595 feet was drilled and at 7838 feet a cement plug was encountered and drilled through. Cement was tagged twenty nine (29) feet above the top of the liner at 9022 feet. The hole was circulated clean and prepared for logging.

A Cement Bond Log (CBL), Variable Density Log (VDL), caliper log, and temperature survey were performed. The CBL/VDL showed that the top of the cement (TOC) behind the 7-inch casing was located 900 feet from the surface. The OCD was notified and approved the existing well condition. The casing was perforated from 7660 feet to 8450 feet and from 8540 feet to 8620 feet at 2-JSPF on sixty degree (60°) phasing.

A packer was set at 7546 feet with 2 7/8-inch PH-6 tubing, the well was swabbed back and samples of the formation fluid were recovered. It was estimated that two hundred twenty six barrels (226 bbls) of formation fluid was returned to the surface. A pressure test on the annulus between the 7-inch and 2 7/8-inch was performed at 660 psig with the annulus losing pressure at a rate of 8 psi/hr.

An injection test was performed on the well down the 2 7/8-inch tubing with the annulus open to the bottom of the well. The open annulus will allow for the calculation of the bottom hole pressure while pumping down the 2 7/8-inch tubing with out the influence of tubing friction pressure on the bottom hole calculations. The injection rates were from two barrels per minute (2 bpm) to ten barrels per minute (10 bpm). From the data collected during the injection test it appears that the well will be able to accept an injection rate up to 10 bpm at the permitted pressure of 1550 psig with 4 1/2-inch, 11.6 pound per foot (11.6 lb/ft) tubing in the wellbore.

At the request of the OCD, Subsurface went back into the wellbore with a retrievable bridge plug (RBP) to test the casing and isolate any leaks to within 1000 feet. The RBP was set at 7550 feet and the packer was set at 6985 feet to isolate the squeezed interval from 7050 feet to 7314 feet. The squeezed interval was pressure tested to 490 psig and the annulus to 632 psig. The squeezed interval was losing pressure at a rate of 6 psi/hr and the annulus was gaining pressure due to thermal affects. The RBP was moved up the wellbore to 1255 feet and casing pressure tested to 569 psig. The casing above 1255 feet was losing pressure at a rate of 2 psi/hr. The casing leaks were isolated to the squeezed interval from 7050 feet to 7314 feet and in the interval from surface to 1255 feet. The OCD was called and approved the 300PSI sealing application to stop the casing leaks across the two intervals.

The 4 1/2-inch tubing was run into the wellbore and the Arrow X-1 packer was set at 7575.73 feet with 37,000 lbs of tension. Prior to running the 4 1/2-inch tubing a new Superior hanging spool was installed. Prior to setting the tubing packer, the annulus between the 4 1/2-inch tubing and the 7-inch casing was filled with inhibited brine, with the 300psi sealant across the squeezed perforations and across the upper section of the 7-inch casing. Once the packer was set and casing hung off in the spool a new Superior wellhead was installed and the P-seals were pressure tested to 3000 psig. After the wellhead was assembled the annulus was squeezed at 545 psig for four hours (4 hrs) as specified by the sealant manufacture representative on site. The annulus was then pressure tested to 480 psig overnight with no pressure loss. Workover rig was disassembled and moved off location with all associated equipment.

A 12 hr pump in and falloff test was performed down the 4 1/2-inch tubing. To maintain a surface injection pressure that was below the permitted pressure of 1550 psi the injection rate was lowered to 9 bpm at the end of the pump in procedure. The BHP gauge was placed at 8630 feet for 14 hrs to monitor BHP, when the gauge was pulled five minute (5 min) gradient stops were made every 1000 feet with the first stop at 7000 feet. The analysis of the data showed interference from the adjacent injection wells, which skewed the results for determination of the skin and possibly the permeability. The equipment used to perform the falloff testing was moved off location to prepare for mechanical integrity testing (MIT).

The MIT was performed and witnessed by the OCD. The MIT consisted of an annulus pressure test, and a radioactive tracer survey. The temperature survey was performed during the CBL/VDL logging event and will be used as a baseline for any future temperature surveys. The annulus pressure test was performed at 530 psia and lost 2.5 psi over a one hour period, which was within the OCD requirements of five percent (5%)

over a 30 min time interval. The radioactive tracer survey showed no signs of fluid flow out of the permitted interval above 7650 feet. The OCD witnessed the annular pressure test and the first half of the radioactive tracer survey.

The annulus monitoring system was installed and tested. The well was turned over to Navajo for injection.



# R/A TRACER LOG INTERPRETATION

11/27/2006

PLANT: NAVAJO REFINING CO. C/O: SUBSURFACE TECHNOLOGY

WELL NAME: CHALK BLUFF FEDERAL # 1 WDW # 3

RE: Radioactive Tubing & Packer Survey ran on 11/18/2006

A Pre Base Log was run from 9020' to 7350' to detect and record background gamma counts.

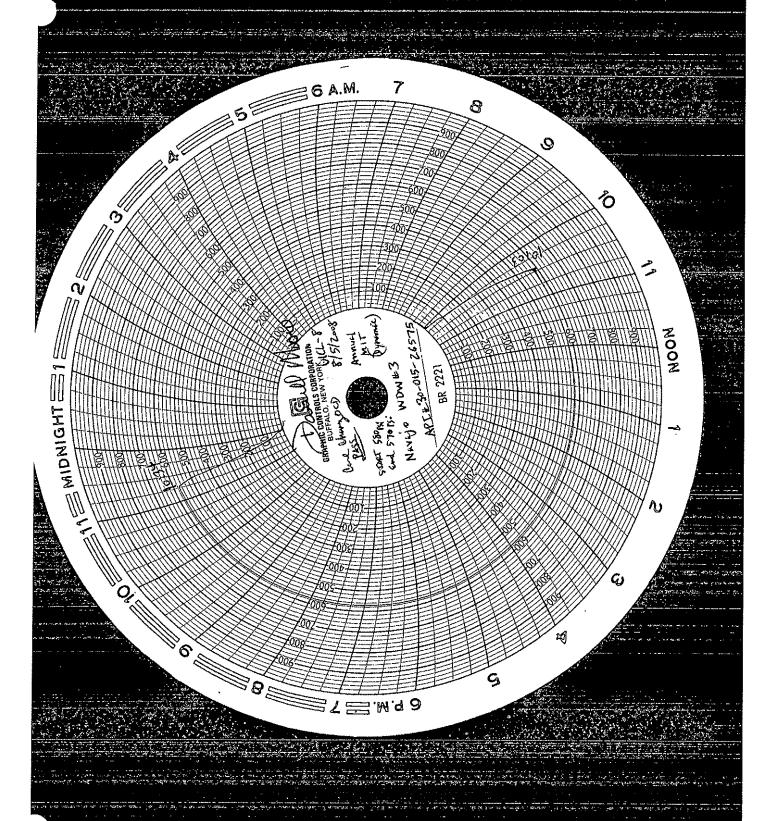
Iodine 131 was then ejected at a depth of 7375' and pumped down the tubing and into the permitted interval. Overlapping logging passes tracked the R/A tracer material as it moved down in the wellbore. The R/A material was seen traveling down the tubing, past the packer, and exiting the permitted injection interval.

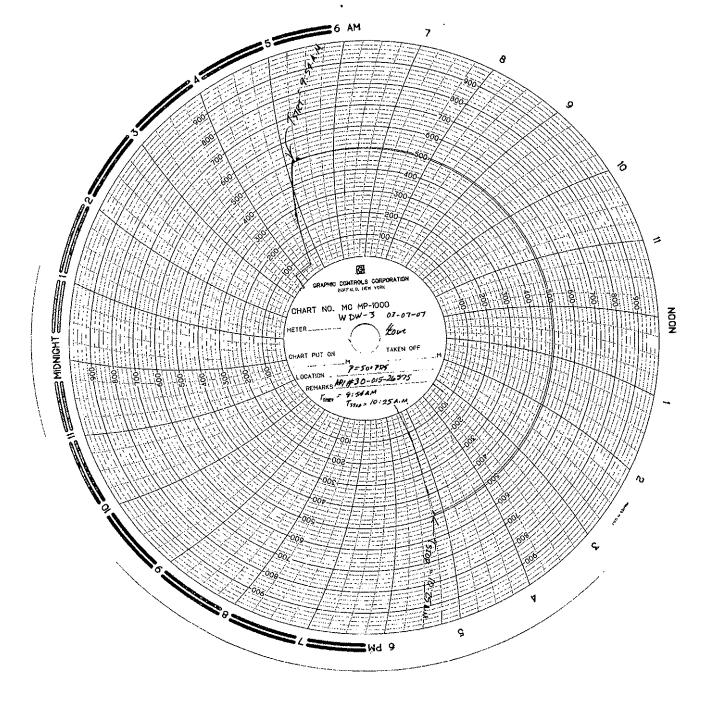
The flow profile log was then repeated and this survey also showed R/A material going out into the permitted interval.

Two Stationary Time Drive surveys were run with the tool at 7640'. No indications of upward migration were recorded.

A Post Base log was then run from 9016' to 7342' and noted that all R/A material was flushed out of the wellbore into the permitted interval.

John Croce



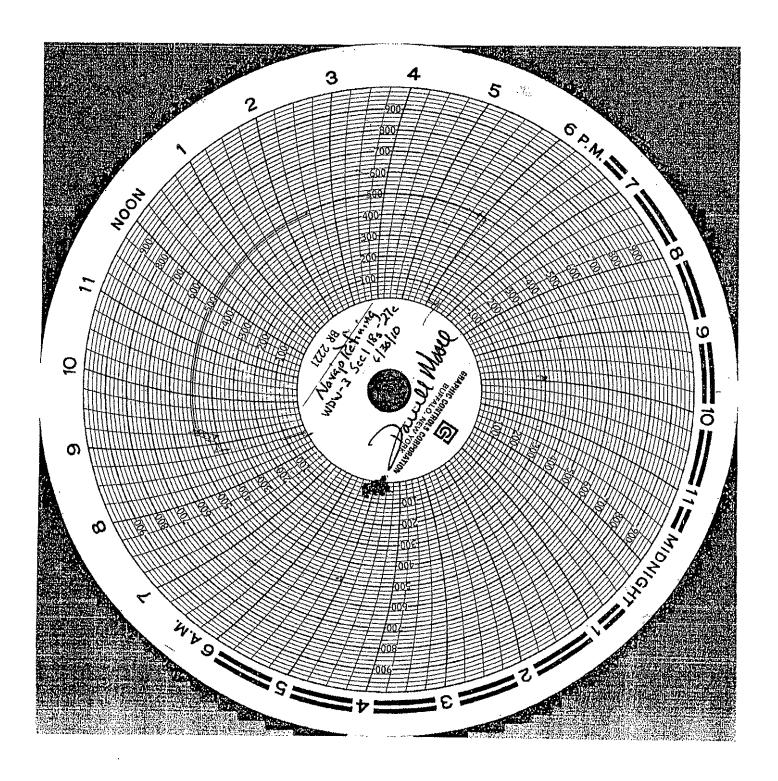


# Oil Conservation Division, Environmental Bureau C/O: Carl Chavez 1220 South St. Francis Drive Santa Fe, New Mexico 87505

# BRADENHEAD TEST REPORT

(Submit 2 copies to above address)

Date of Te	st_June_30	, 2010 (	Operator N	avajo Refining	API #30-0 15-2	6575					
	Property Name WDW Well No. 3 Location: Unit 0 Section 1 Township185 Range27e  Injecting Well Status (Shut-In or Producing) Tubing Intermediate Casing Bradenhead										
OPEN BI	RADENHEAI	O AND INTERME	DIATE TO	ATMOSPHERE INDI	VIDUALLY FOR 1:	MINUTES EACH					
TIME <u>i</u>	BRADENHEAD	PRESSURES: INTERMEDIATE	CASING		BRADENHEAD FLOWED	INTERMEDIATE FLOWED					
5 minutes	0	0		Steady Flow	N/A	N/A					
10 minutes	N/A	N/A		Surges_	N/A	N/A					
15 minutes	N/A	N/A		Down to Nothi	ng immediately	immediately					
20 minutes	N/A	N/A		Nothing	x	xx					
25 minutes_	N/A	N/A		Gas	N/A	N/A					
30 minutes	N/A	N/A		Gas & Water_	N/A	N/A					
				Water	N/A	N/A					
If bradenhea	d flowed water	r, check all of the de	scriptions t	hat apply below:							
CLE	ARF	RESH SAL	TY	SULFURBLAC	K						
5 MINUTE S	HUT-IN B	RADENHEAD 0		INTERMEDIATE 0	····						
REMARKS:	Both the s	urface and int	ermediat	e bradenheads wer	e opened one at	a time. Both					
				he vqalve (from h							
		No pressure.	F			see onen nventing.					
		\	······································	· · · · · · · · · · · · · · · · · · ·	······································	· · · · · · · · · · · · · · · · · · ·					
By Darre	ell Moore	Deu 10/	Moore	Witness							
	Mgr. for W	later & Waste									
E-mail addres	sdarrell.mo	ore@hollycorp.	соп								



# Chavez, Carl J, EMNRD

From:

Moore, Darrell [Darrell.Moore@hollycorp.com]

Sent: To: Friday, March 05, 2010 8:51 AM

Subject:

Chavez, Carl J, EMNRD WDW-3 Qtrl MIT

Carl

Attached, please find the chart for the MIT we did on our WDW-3 on February 24, 2010. We also opened the did a bradenhead test and there was no sustained pressure. There was a slight puff but it dissipated quickly and can be attributed to temperature changes.

If there are any questions concerning this submission, please call me at 575-746-5281.

Darrell Moore

Environmental Manager for Water and Waste

Navajo Refining Company, LLC

Phone Number 575-746-5281

Cell Number 575-703-5058

Fax Number 575-746-5451

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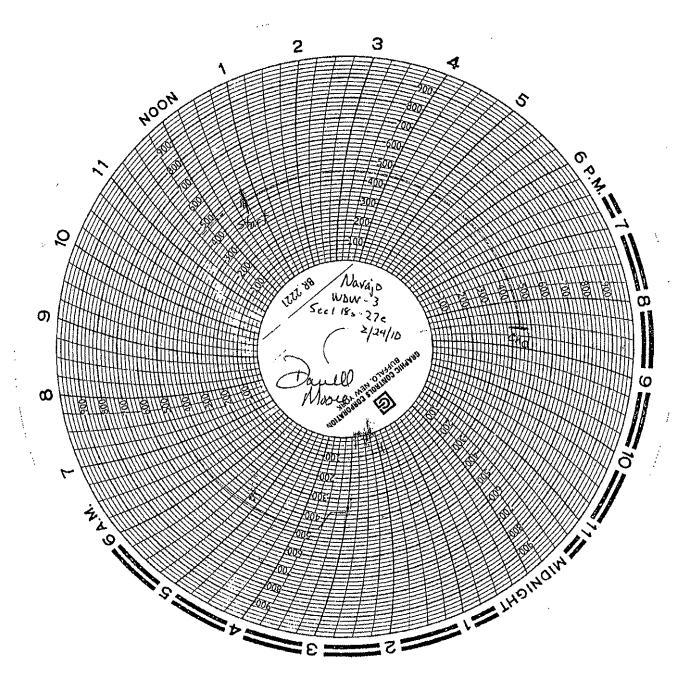


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# Chavez, Carl J, EMNRD

From: Sent: Chavez, Carl J, EMNRD

Sent:

Tuesday, July 06, 2010 9:04 AM

To: Subject: 'Moore, Darrell' RE: Sewer Testing

Darrell:

Thanks for the notification.

Also, the OCD needs Navajo to complete the quarterly Bradenhead information on the form provided to you last week for our records. Let me know if you have any questions. Staff in Artesia questioned the 30 minutes in the form, and I determine that Navajo just needs to use the form to document compliance with our quarterly Bradenhead testing requirement for WDW-3. The MITs for Class I Wells need to be completed by 9/30/2010 along with Annual Fall-Off Test. OCD can use the MIT pressure chart for WDW-3 to satisfy the MIT requirement this season.

Please contact me if you have questions. Thanks.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/index.htm">http://www.emnrd.state.nm.us/ocd/index.htm</a> (Pollution Prevention Guidance is under "Publications")

From: Moore, Darrell [mailto:Darrell.Moore@hollycorp.com]

Sent: Tuesday, July 06, 2010 7:24 AM

To: Chavez, Carl J, EMNRD Subject: Sewer Testing

Carl

We will be testing sewers in the Vacuum Unit at the Artesia Refinery on Friday July 9, 2010 starting at 8 am. If OCD would like to witness let me know.

Darrell Moore

Environmental Manager for Water and Waste Navajo Refining Company, LLC Phone Number 575-746-5281 Cell Number 575-703-5058

Fax Number 575-746-5451

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# Oil Conservation Division, Environmental Bureau C/O: Carl Chavez 1220 South St. Francis Drive Santa Fe, New Mexico 87505

# **BRADENHEAD TEST REPORT**

(Submit 2 copies to above address)

Injecting											
Well Status (Shut-In or Producing) Tubing Intermediate Casing Bradenhead											
OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH											
PRESSURES: BRADENHEAD INTERMEDIATE CASING FLOWED FLOWED	IATE										
5 minutes 0 0 Steady Flow N/A N/A	·····										
10 minutes N/A N/A Surges N/A N/A	<del> </del>										
15 minutes N/A N/A Down to Nothing immediately immediately											
20 minutes N/A N/A Nothing X X											
25 minutes N/A N/A Gas N/A N/A											
30 minutes N/A N/A Gas & Water N/A N/A											
Water N/A N/A											
If bradenhead flowed water, check all of the descriptions that apply below:											
CLEAR FRESH SALTY SULFUR BLACK											
5 MINUTE SHUT-IN BRADENHEAD 0 INTERMEDIATE 0											
REMARKS: Both the surface and intermediate bradenheads were opened one at a time. Bo	th										
had a puff of air upon opening the vgalve (from heat build-up) and then noth											
	LIIX.										
No flow. No pressure.											
Darrell Moore The AO AA	······										
By Darrell Moore Witness Witness	<del></del>										
Env. Mgr. for Water & Waste Navajo Refining (Position)											
E-mail address darrell.moore@hollycorp.com											

# Chavez, Carl J, EMNRD

From: Sent: Moore, Darrell [Darrell.Moore@hollycorp.com]

ent: Wednesday, June 30, 2010 1:47 PM

To:

Chavez, Carl J, EMNRD; Dade, Randy, EMNRD

Subject: Attachments:

WDW-3.pdf

## Gentlemen,

Attached, please find the quarterly MIT for Navajo's WDW-3 Injection well located in Sec 1, 18 south 27 east. If there are any questions concerning this submission, please call me at 575-746-5281.

From: Hernandez, Carrie

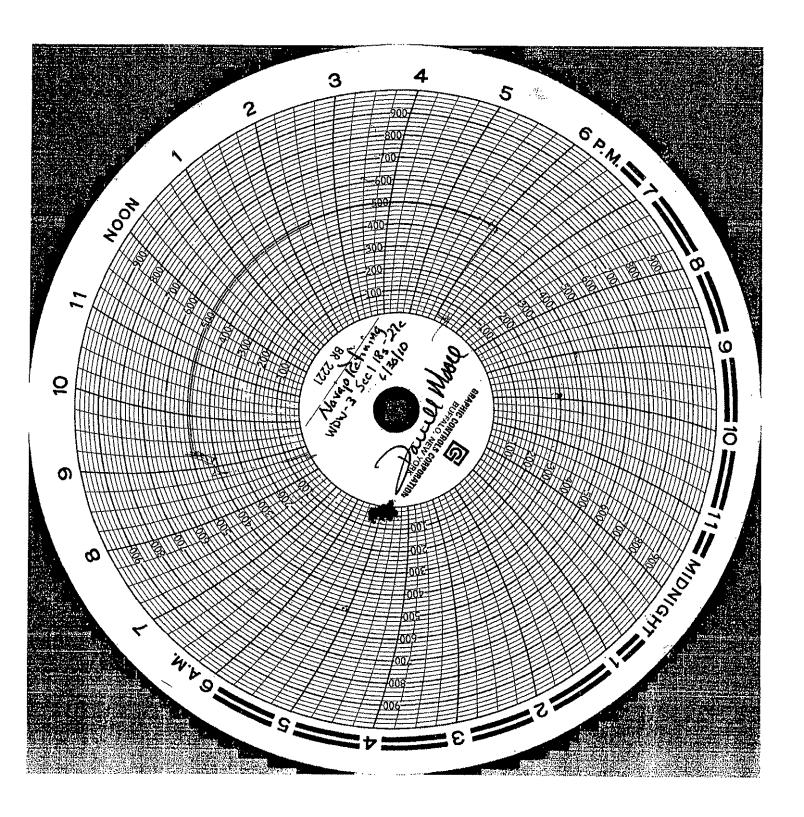
Sent: Wednesday, June 30, 2010 1:44 PM

To: Moore, Darrell

Subject:

Carrie Hemandez
Environmental Administrative Assistant
Navajo Refining Co., LLC
Direct Line 575-748-6733
Direct Fax 575-746-5451
Life is a Journey. Roll down the Windows and Enjoy the Breeze

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Submit I Copy To Appropriate Di Office	istrict .	State of New Me	exico	•	Form C-103
District 1 - (575) 393-6161	<b>U</b>	Minerals and Nati	ırai Resources		Revised August 1, 2011
1625 N. French Dr., Hobbs, NM 8	8240			WELL API NO.	
District II - (575) 748-1283 811 S. First St., Artesia, NM 8821	0 OIL C	ONSERVATION	DIVISION	30-015-26575	
District III - (505) 334-6178	12	220 South St. Fran	ncis Dr.	5. Indicate Type of Le	
1000 Rio Brazos Rd., Aztec, NM 3 District IV – (505) 476-3460	87410	Santa Fe, NM 8'		STATE   6. State Oil & Gas Le	FEE
1220 S. St. Francis Dr., Santa Fe, 1	NM	201110111111111111111111111111111111111		NM-0557371	ase Ivo.
87505	Taxoniona lain	,			······································
(DO NOT USE THIS FORM FOR DIFFERENT RESERVOIR. USE PROPOSALS.)		OR TO DEEPEN OR PL	UG BACK TO A	7. Lease Name or Uni Gaines WDW-3	t Agreement Name
1. Type of Well: Oil Well	☐ Gas Well ☐	Other Injection W	'ell	8. Well Number WD	W-3
2. Name of Operator			······································	9. OGRID Number	
Navajo Refining Company	Υ				
3. Address of Operator				10. Pool name or Wile	dcat: Navajo Permo-
Post Office Box 159, Artes	sia, New Mexico 8821	1		Penn	
4. Well Location					
Unit Letter N	<u> 790</u> f	eet from the South	line and <u>2250</u>	feet from the <u>West</u>	line
Section 01	7	fownship 18S	Range 27E	NMPM	County Eddy
	11. Elevatio	n (Show whether DR			
	3609' GL, '	RKB ·			
•			•		
12. C	heck Appropriate l	Box to Indicate N	ature of Notice.	Report or Other Dat	a
			,	•	
	OF INTENTION :			SEQUENT REPO	RT OF:
PERFORM REMEDIAL WO		_	REMEDIAL WORK		ERING CASING 📋
TEMPORARILY ABANDON	· <u> </u>	<del></del> -	COMMENCE DRI	LLING OPNS.□ PA	ND A
PULL OR ALTER CASING	☐ MULTIPLE (	COMPL	CASING/CEMENT	JOB 🔲	
DOWNHOLE COMMINGLE		•	[		
OTHER PERFORM PRESS	SURE FALL OFF TEST	Г	OTHER:	,	
OTHER: PERFORM PRESS		•	OTHER:		
13. Describe proposed o	r completed operation	s.' (Clearly state all	ertinent details, and	give pertinent dates, in	cluding estimated date
13. Describe proposed o	or completed operation osed work). SEE RUL	s.' (Clearly state all	ertinent details, and	l give pertinent dates, in pletions: Attach wellb	cluding estimated date
13. Describe proposed of starting any proposed completion	or completed operation osed work). SEE RUL or recompletion.	s.' (Clearly state all   LE 19.15.7.14 NMAC	 pertinent details, and C. For Multiple Con	I give pertinent dates, in pletions: Attach wellb 7-3 by 11:45am. Contin	cluding estimated date ore diagram of
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I hereby certify that the information above is true and complete to the best of my knowledge and belief.	
SIGNATURE Tingthy Jones E-mail address: Honese Subsurfacegroup. Co. State Use Only	DATE 10/3/2011
Type or print name	PHONE: 7/3-880-4640
APPROVED BY: Carl . Strang TITLE Environmental Engineer Conditions of Approval (if any).  See &-mil conditions ded 10/1912011 at	DATE 10/19/2011
7,112-11-20	

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## Chavez, Carl J, EMNRD

rom:

Chavez, Carl J, EMNRD

jent:

Wednesday, October 19, 2011 4:06 PM

To:

'Moore, Darrell'

Cc:

Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Dade, Randy, EMNRD

Subject:

Navajo Refining Company UIC Class I (NH) Injection Wells WDWs 1, 2 & 3 (UICI-008) Fall

Off Test Plan (August 2011)

### Darrell:

The New Mexico Oil Conservation Division (OCD) is in receipt of your above subject test plan. OCD has already approved the Fall-Off Test (FOT) Plan with conditions on July 28, 2009. The OCD notes that it is also in the process of reviewing C-103s Sundry Notices for the upcoming FOTs.

OCD observes some changes in this FOT Plan submittal that are not acceptable to the OCD. For example, Exhibit 1 is not an acceptable exhibit to the OCD for reasons specified in the 2010 FOT report review and later during the May 2011 meeting in Santa Fe. However, the operator continues to submit exhibits with certain assumptions that have not been accepted or approved by the OCD, i.e., that the injection wells are show interconnection with the injection zone during past FOTs. Perhaps the operator can conduct the 2011 FOT with the information and exhibits needed to prove the interconnection of injection wells with the injection zone? The Certified PE should provide the exhibits in the 2011 FOT Report with the analysis and conclusions supporting any claims for the OCD to review and consider before approving. This is apparently a FOT frequency per well issue that the operator is attempting to prove.

The OCD provides the following comments, observations, and/or recommendations on the above subject plan below.

#### Comments:

- The OCD approved the original Fall-Off Test (FOT) Plan based on OCD Guidance dated December 3, 2007.
   There should not be any significant changes to this FOT Plan because it is flexible where needed to allow operators to implement it on each injection well.
- OCD likes to be notified to witness the installation of bottom hole gauges and to be present at least one hour before injection shut-off and commencement of FOT monitoring.
- OCD is concerned about the Section VI No. 1(e) WDW-3 Cement Bond Log quality being poor from 900 ft. to 1200 ft- especially at the depths: 2662 – 2160; 4876 – 5372; and 6750 – 7600 ft. micro annulus scenario.

#### Observations:

- Section V No. 2: The objective of the FOT is NOT to achieve or limit a 100 psig pressure differential before vs.
  after FOT injection vs. shut-off, but it is a minimum pressure differential that OCD stipulates in its guidance for a
  successful FOT and injection zone that may still continue to be utilized for disposal, i.e., not too pressured up and
  subject to continued fracturing under daily allowed maximum surface injection pressure operational limits.
- Section V No. 7 and Exhibit 1: OCD observes a bottom hole pressure chart for WDWs 1, 2 and 3 at 7660 feet that
  the operator presented in the 2010 FOT and again during a May 2011 meeting in Santa Fe, New Mexico to show
  the interconnection between injection wells and the injection formation. The OCD had commented that there was
  no explanation or conclusion provided from the Certified PE who conducted and completed the 2010 FOT report
  that supports the operator's claim that all injection wells are interconnected based on Exhibit 1.

Furthermore, the OCD requested a statement or information supporting the operator's claim by the Certified PE, but never received one. At the meeting, the OCD explained that based on Exhibit 1, there was no support for the claim. In order to make the interconnection determination, during each FOT at each well and off-set injection wells (WDWs not being FOT'd) before and throughout the FOT would need bottom hole pressures monitored in tandem at each well location to establish the interconnectivity of the injection wells with the receiving injection formation under a uniform time scale. This would be a chart that could be plotted that would show during the test the interconnectivity of the wells for each FOT. The OCD doubts that the operator can make the case for interconnectivity between injection wells and injection formation because of the significant distance between the injection wells and fact that sedimentation in formation varies laterally and uniformity in sedimentation, saturated porosity and permeability due to variation in sedimentation would by chance make the injection formation aerially extensive and uniform over a 3 to 5 mile radius from each injection well. Also, even if by chance there was

- uniformity over the mileage specified, the distance between injection wells and corresponding pressure would likely not be observed.
- Exhibit 6: OCD observes in Section B a proposed MIT once every 5 years. OCD's UIC Program requires annual MITs and/or after down hole work is performed on a well.

#### Recommendations:

- Operator is running survey logs to the bottom of fill or below USDW (fresh water) zones, which excludes an evaluation of casing in the fresh water zone. Please run logs up to surface.
- Be sure to also record and provide injection flow rate and pressure leading up to shut-off and monitoring throughout the FOT monitoring period. OCD needs to confirm that a pseudo steady-state condition was achieved before shut-off. This data is also needed for software modeling of the FOT.
- Please provide electronic data from the FOTs at each well in order for the OCD to run its software model to confirm the results in the report.
- Section V No. 13: Surface pressure monitoring and Horner Plot during injection should be used to confirm radial flow condition is achieved instead of waiting a set period if operator wishes to reduce the injection period.

**Disclaimer:** Please be advised that OCD has already approved with conditions Navajo Refining Company's Fall-Off Test (FOT) Plan on July 28, 2009, and is not providing approval of this FOT Plan; however, comments, observations and recommendations herein should help Navajo Refining Company understand the OCD's concerns based on the submittal.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Vebsite: http://www.emnrd.state.nm.us/ocd/

Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the

Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

Office	State of New Me		Form C-103
<u>District I</u> – (575) 393-6161 1625 N French Dr., Hobbs, NM 88240	Energy, Minerals and Natu	ral Resources	Revised August 1, 2011 WELL API NO.
District II - (575) 748-1283	OH COMPEDNATION	DRHGION	30-015-26575
811 S. First St., Ariesia, NM 88210 <u>District III</u> – (505) 334-6178	OIL CONSERVATION		5. Indicate Type of Lease
1000 Rio Brazos Rd , Aztec, NM 87410	1220 South St. Fran		STATE FEE
<u>District IV</u> - (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM	Santa Fe, NM 87	505	6. State Oil & Gas Lease No. NM-0557371
87505	PIGER AND DEDODOR ON HELL C		
(DO NOT USE THIS FORM FOR PROP	FICES AND REPORTS ON WELLS OSALS TO DRILL OR TO DEEPEN OR PLU ICATION FOR PERMIT" (FORM C-101) FO	IG BACK TO A R SUCH	7. Lease Name or Unit Agreement Name Gaines WDW-3
1. Type of Well: Oil Well	Gas Well Other Injection We	eil	8. Well Number WDW-3
2. Name of Operator			9. OGRID Number
Navajo Refining Company			
3. Address of Operator Post Office Box 159, Artesia, No	w Mexico 88211		10. Pool name or Wildcat: Navajo Permo-
4. Well Location			
Unit Letter N :	790 feet from the South 1	ine and 2250	feet from the West line
Section 01	Township 18S	Range 27E	NMPM County Eddy
	11. Elevation (Show whether DR,		
	3609' GL, ' RKB		Manufacture 1885
12. Check	Appropriate Box to Indicate Na	nture of Notice,	Report or Other Data
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SIGNATURE Ting thy	Gones TITLE Project	Engineer DATE 10	/3/2011
ype or print name Timothy J	Jones E-mail address: Hones	@ Subsuy Ruegray. (or PHONE: 7	13-880-4640
APPROVED BY: Conditions of Approval (if any):	TITLE	DATÉ	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.



# NAVAJO REFINING COMPANY Map ID No. ☐ Artificial Penetration Review

OPERATOR BP America Pra	d. status Plugged
LEASE Empire ABO Unit	LOCATION Sec. 1T18S-R27E
WELL NUMBER 17A	MUD FILLED BOREHOLE NA
DRILLED 3-26-59	TOP OF INJECTION ZONE $\sim 722.1'$
PLUGGED 12-01-08	API NO30-015- 00703
REMARKS:	
	Plug: 0-1566' w1175 sx
	85/8" @1470' W/7505x
7/1/1/1/ Plug	1:3152'-3416' W/25=x
CIB	7@5420' w/plug 5420'-5179' w/25 sx
CIBI	@ 5770' w125' cmt on top
lu lu	pindow cut in 51/2" @ 5797'-5803'
CIBP@ 5823' Ferfs: 6040'-6080' = 51/2'' @ 6137' w11000 sx  Orig TD: 6137'	
	Directional TD: 7705'

C	6200° to test the Size of Hole  11  7-7/8  HOTE: Please inse	Abo. Casing progres  5ize of Casing  8-5/8  5-1/2  ert lease mamber.  f work must receive approval in wr can Petroleum Corpon  se Bax 68	950 6135 string by the Geological Survey	
C	5200° to test the  51se of Hole  11  7-7/8  HOTE: Please insell understand that this plan of Company  Pan American	Abo. Casing progra  Size of Casing  8-5/8  5-1/2  ert lease mamber.  work must receive approval in wr can Petroleum Corpon	Depth  950  6135  Iting by the Geological Survey	Generat  Circulate 2% Gel wi 100 sacks nest on b 150  before operations may be commenced.
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	Tradesignated (Field)	(County or 8	ubdivision)	(State or Territory)
100	/h SW/h Section 1 (4 Sec. and Sec. No.)	(Twp.) (Ra	7 - Maridia.	, K.
			• ,	$\{ \mathbf{w} \}$ line of sec. 1
	USA MALCO REFINER			
	<b>\</b>			February 16 , 1959
l	(III	NDICATE ABOVE BY CHECK MARK NA	TURE OF REPORT, NOTICE, OR O	THER DATA)
- [	NOTICE OF INTENTION TO PULL NOTICE OF INTENTION TO ABAN		SUPPLEMENTARY WELL HIST	ORY
- 1	NOTICE OF INTENTION TO SHOO	OT OR ACIDIZE	SUBSEQUENT REPORT OF AL	
		RILL OR REPAIR WELL	1 1	
		i	<b>1</b>	DOTING OR ACIDIZING
'	NOTICE OF INTENTION TO CHAP			

GPO 9 18 507

#### FORM C-128 NEW MEXICO OIL CONSERVATION COMMISSION Revised 5 1:57 WELL LOCATION AND ACREAGE DEDICATION PLAT SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE SECTION A Operator U.S.A. Malco Refineries F Pan American Pet. Corp. County Unit Letter Section Township 18 S 27 E Eddy L 1 Actual Footage Location of Well 1980 660 West feet from the South feet from the line and Ground Level Elev. Producing Formation Dedicated Acreage Abo Empire Abo Ю Acres 1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES NO \_\_\_\_\_. ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either forthimself or for himself and another. (65-3-29 (e) NMSA 1035 (omp.) 2. If the answer to question one is "no," have the interests of all the owners been consolidated by community wise? YES\_\_\_\_\_NO\_\_\_\_\_. If answer is "yes," Type of Consolidation \_\_\_\_\_ 3. If the answer to question two is "no," list all the owners and their respective interests below: Owner Land Description EN MEXICO SECTION B CERTIFICATION I hereby certify that the information in SECTION A above is true and complete to the best of my knowledge and belief. Name Original Signed by BROWN Ridld Superintendent Pan American Petroleum Corp Date February 16, 1959 I hereby certify that the well location shown on the plat in SECTION Is was .660'--0 plotted from field notes of actua surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief. 980 Date Surveyed 2-10-59 Registered Professional Engineer and, or Land Surveyor, JOHN W. WEST

330 660 990 1320 1650 1980 2310 2640

Certificate No. N. M. - PE & L.S. NO. 676

500

*1000* 

#### JOHN W. WEST ENGINEERING COMPANY

412 NORTH DAL PASO
HOBBE, NEW MEXICO

February 12, 1959

Pan American Pet. Corp. Hobbs, New Mexico

Gentlemen:

On February 10, 1959, a survey was made to locate your U.S.A. Malco Refineries "H" No. 1 well at a point 1980 feet from the South line and 660 f et from the West line of Sec. 1, Township 18 South, Range 27 East, N.M.J.A., Eddy County, New Mexico.

A Flag was set at the USCLO Quarter corner marker common to Sections 1 and 2 and the the Transit was set up at the U.S. G.L.O. Section corner marker common to Sections 1, 2, 11 and 12. Thence chaining North from the Transit on the West line of Section 1 a distance of 1980 feet, thence East 660 feet to the location site of the USA Malco Refineries "F" No. 1 well. As a check on our survey we chained West from the location site 660 feet and thence North 609.5 feet to the USGLO Quarter corner marker common to sections 1 and 2, checking in within 0.6 feet of the distance as shown on the USGLO Township Plats.

I hereby certify that the foregoing survey was made in the field by me and that the same is true and correct to the best of my knowledge and belief.

Respectfully submitted,

John W. West

- REINEL

FEB 1 8 1959

U. J. GLODESKIE CH.

# N1 MEXICO OIL CONSERVATION COM ASSION Santa Fe, New Mexico

(Form C-104) Revised 7/1/57

## REQUEST FOR (OIL) - 1/9/45/1/ALLOWABLE

New Well

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

				NG AN ALLOWAE					(Date)
Americ	an Per	troleu	m Corp.	- Malco Refine	ries "F"	., Well No1	, in		4SW 1/4
L	Compan	Sec	1	, T. 18 S , R.	27 E	MPM. Emp	re Abo		Poc
Valt E	Letter	,			22	5_50			12059
E				County. Date Spi	iddedRDB	Total Depth	61. 61.	mpleted 37 PRTD	6101
Ple	ease inc	dicate lo	cation:			Name of Prod.			
D	C	В	A	PRODUCING INTERVAL	-		-		
E	P	G	н			Lth 2 shots per		Depth	Long
			-	Open Hole	-	Casing Shoe	61.37	Tubing_	6077
+	K	J	I	OIL WELL TEST -					Choke
T.		• •	-			ls.oil,bbl			min. Size
				Test After Acid of	hit distant	stment (after recover	y of volume	of oil equ	ual to volume of
M	N	0	P	load oil used):	82_bbls,o	il, <u>no</u> bbls wa	ter in	hrs,	_min. Size1
				GAS WELL TEST -					
e. 1,	T-18-	S, R-2	7-E	Natural Prod. Test		MCF/Day; Hours	flowed	Choke	Size
798	MS-	660W	ting Recor			oressure, etc.):			
Size		Feet	Sax			stment:			
				,					
8-5/	8 1	468	750			esting:			
5-1/	2 6	167	1000			amounts of material			water, oil, and
						00 gallons 15%			
2-3/	B   6	077		Casing PKR T	ress. 725	Date first new oil run to tanks	4-20-5	9	<u> </u>
				Oil Transporter	Malco Ref	ineries Inc.	<u> </u>		
				Gas Transporter					
Remarks:	, 		· · • · · · · · · · · · · · · · · · · ·						
	•••••								
T he	rehv ce	-tifu the	t the info	rmation given above	e is true and	complete to the best	of my know	wledge.	
	i I	. my ule	. u.c muu	9, 1	0	PAN AMERICAN PI	TROLEUM	CORPORA	TION
rpproved	I			······ 4		(Co	mpany or U	perator) 💇	iginal Signed , W. BROWN
	OIL C	ONSER	VATION	COMMISSION	Ву		(Signatur	********	
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By: <i>,[l.</i> ]	<u>/                                    </u>	1m	eseros	rg	Ti	Send Commi			vell to:
Title			<u> </u>	/ 		J. W. B			
					Na	4116	- Hobbs		
						MAN LO			

# NEW M ICO OIL CONSERVATION CO 4ISSION Form C-110 SANTA FE, NEW MEXICO Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

# CERTIFICATE OF COMPLIANCE AND AUTHORIZATION; TO TRANSPORT OIL AND NATURAL GAS

Company or Operator Pan American Petrole	um Corp	oration L	ease	Malco Refineries HFH
Well No. 1 Unit Letter L S 1	T_18	SR 27 EPool	Undesi	mated
County Kidy Kind of Lea	se (Sta	ite, Fed. or F	atented	i) Federal
If well produces oil or condensate, give lo	cation	of tanks:Unit_	_ <b>F</b> _S_	1 T 18 SR 27 E
Authorized Transporter of Oil or Condens				
				·
Address Box 660 - Rosvell, New Mexico (Give address to which approv	ed cop	y of this form	is to b	e sent)
Authorized Transporter of Gas				
Address (Give address to which approv	ed cop	y of this form	is to b	e sent)
If Gas is not being sold, give reasons and	also ex	kplain its pres	ent dis	position:
Vented pending market arrangements.				
Reasons for Filing:(Please check proper b		New Well		()
Change in Transporter of (Check One): Oi	1 ( ) I	Orv Gas ( ) C	'head (	) Condensate ( )
Change in Ownership	() 0	ther		( )
Remarks:		(Give	explan	ation below)
ompleted as an oil well 4-21-59.				
				-
The undersigned certifies that the Rules a	nd Reg	gulations of the	e Oil Co	onservation Com-
mission have been complied with.				
Executed this the 24th day of April	19	59		
		<del></del>		
		Ву		Original Signed By
Approved		Title Field S	uperint	
OIL CONSERVATION COMMISSION		Company Par	Americ	ean Petroleum Corporat
By ML armstrong		Address Box	c 68	
· · · · · · · · · · · · · · · · · · ·		87.4		Monday

Las Cruces

U. S. LAND OFFICE LC 062412
SERIAL NUMBER

LEASE OR PERMIT TO PROSPECT

UNITED STATES

DERORTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

LOC	CATE WEL	L CO	RRECTLY		LO	G OF (	OIL OR G	AS V	VELI	L
Compa	ny Par	a Ame	erican	Petrole	um Corp.	Addre	<sub>ss</sub> Box 68 -	Hobbs,	Now He	xico
							Empire Abo		<b>11</b>	Mexico
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$\mathbf{T}$	he <b>inf</b> orm	ation	given h	erewith is	s a complet ailable rec	te and correctords.	ct record of the w	ell and al	Priginal W	floor relative to sea level)
		-		1959			Title	ield Sup	erinte	endent
							l at above date.			
Comm	enced dri	lling		3-26	, 19	<b>59</b> Finish	ned drilling		4-20-	, 19 <b>59</b>
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Size casing	Weight per foot	Th	reads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perfor	ated To—	Purpose
8-5/8	24	This	THE LEVEL	J-55	1,68	1	duial nead, position	and result	or byour	Surface
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				5.33	lasidines Mil	<u> </u>	AS WELL	1-43044-2 s	21/0/55890	PATHETAL CREEKING
				MUDD	ING AND	CEMENT	ING RECORD			
Size casing	Where se	e <b>t</b>	Numb	er sacks of ce	ment	Method used	Mud gravity	Am	ount of m	ud used
A	la 91	70		75	:O	HOMCO				
5-1/	8 14 2 61	37		i		HOWCO				
								-		
	:				<u>'</u>	AND ADAP	TERS	-		
Heavin	g plug—l	Mate	rial		I	ength	I	Depth set		
Adapte	rs—Mate	rial			8	Size				
				:	SHOOT	TING RECO	ORD			
Size	Sh	ell use	d	Explosive us	sed G	Quantity D	Date Depth shot	I	epth clean	ed out
				·						

TOOLS USED

Cable tools were	used from		feet, and from	feet to	feet
The produce emulsion;	water; and cu. ft. per 24 hou	9 <b>59</b> 24 hours was % sediment.	Put to producing	160 was oil;	%
Rock pressu	ire, lbs. per sq. m	EMPI	OYEES		
В. ј.	Wright		R+-B+I	<b>//1.08</b> , Dr	riller
J. W.	Martin	, Driller	W. P.	Cad <b>lock</b> , Di	riller
			ON RECORD		
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It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and it any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or balling.

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Original Signed by Y#088 .W. &

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### FORMATION RECORD—Continued

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#### NEW MEXICO

### OIL CONSERVATION COMMISSION

Post Office Box 2045 Hobbs, New Mexico May 26, 1959

Pan American Petroleum Corporation P. O. Box 68 Hobbs, New Mexico

Re: Undesignated Well Placed in Pool

#### Centlemen:

Please file Form C-110 showing the change in pool designation of this well with the Artesia office of the Oil Conservation Commission.

Yours very truly,
OIL CONSERVATION COMMISSION

R. F. Montgomery Proration Manager

RFM:mg

### NEW 1 XICO OIL CONSERVATION CC MISSION SANTA FE, NEW MEXICO

Form C-110 Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

# CERTIFICATE OF COMPLIANCE AND AUTHORIZATION

TO TRANSPORT OIL AND NATURAL GAS WAY 25%

Company or Operator Pan American Petro	oleum Corporation Lease Malco Rafinerias "F"
Well No. 1 Unit Letter L S 1	
Wind of L	ease (State, Fed. or Patented) Federal
County Eddy Kind of Ed	location of tanks: Unit PS 1 T 183R 27E
If well produces oil or condensate, give	ngate Gambinestel Pine Idne Company
Authorized Transporter of Oil or Conden	nsate Continental Pipe Line Company
Allwage	oved copy of this form is to be sent)
Give address to which appro	oved copy of this form is to be sent)
Authorized Transporter of Gas	
Address	
Address Give address to which appr	oved copy of this form is to be sent)
Give address to which appr If Gas is not being sold, give reasons an	nd also explain its present disposition.
Vented pending market arrangements	
1188000	
Reasons for Filing: Please check proper	r box) New Well ()
Reasons for Filling. (Flease cheek Prop.):	Oil ( ) Dry Gas ( ) C'head ( ) Condensate ( )
Change in Transporter of Check Oney.	
Change in Ownership	( ) Other Change Transporter ( ) (Give explanation below)
Remarks:	(Give explanation below)
Filed to change transporter from Malco effective May 1, 1959.	Refineries Inc. to Continental Pipe Line Company
The undersigned certifies that the Rule mission have been complied with.	s and Regulations of the Oil Conservation Com-
Executed this the 19th day of May	Original Signed by  L. W. BROWN
	By
Approved MAY 2.5 1959	19 Title Area Superintendent
OIL CONSERVATION COMMISSION	ON Company pan American Petroleum Corporati
By Millemitrong	Address Box 68 - Hobbs, New Mexico
Title	

# NEW MEXICO OIL CONSERVATION COMMISSION ROSANTA FE, NEW MEXICO

Form **C-110** Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

# CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

	Lease Malco Refineries "F
ll No. 1 Unit Letter LS1	1 10 K 41 FOOT
Kind of Le	ease (State, Fed. or Patented) Federal
nil produces oil or condensate, give l	ocation of tanks: Unit 7 S 1 T 18 R 27
barized Transporter of Oil or Conden	sate Continental Pipe Line Company
iress Box 367 Artesia, New Mex	dee
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Post Office Box 68 Hobbs, New Mexico

April 16, 1959

File:

JWM-131-986.510.1

Subject: Request for Exeption to Rule 111 Deviation Tests, USA Malco Refineries "F" No. 1. Expire Abo Field

New Mexico Oil Conservation Commission (2) P. O. Box 871 Santa Fe, New Mexico

Attention: Mr. D. S. Nutter, Chief Engineer

Gentlemen:

This has reference to your conversation with Mr. N. S. Whitmore of Pan American on April 14, 1959, concerning the deviation test requirements of Rule 111. It is our understanding that the Commission may grant exceptions to the requirement for running a directional survey where computation of the deviation surveys periodically run in conjunction with drilling operations indicates the bottom of hole could not conceivably be off the lease.

Currently, Pan American Petroleum Corporation is drilling their joint interest USA Malco Refineries "F" No. 1 in the Empire Abo Field. This well was staked 1980 feet from the south line and 660 feet from the west line of Section 1, T-18-5, R-27-E, Eddy County, New Mexico. The projested total depth is approximately 6150 feet. At a depth of 4805 feet a deviation test registered 6-1/20 which was the first deviation recorded above 5°. Since that depth the deviation has varied between 6-1/4° and  $6-1/2^{\circ}$  with the well currently drilling at approximately 5530 feet.

The attached tabulation furnishes the deviation surveys run on the well to date along with a computation of the drift in a continuous direction. The assumption that the drift would remain in a continuous direction was made to analyse the drift under the least desirable condition to determine if the bottom of the hole were possibly approaching a lease line. That drift would be maintained in a continuous straight line is also considered very unlikely to occur under actual drilling conditions.

These data indicate the horizontal drift from the surface to 5500 feet to be approximately 270 feet. Considering the deviation would remain relatively constant for the remaining 650 feet to be drilled, the maximum anticipated horisontal drift would approach 343 feet. Thus it is indicated that deviations to total depth of the magnitude currently encountered would not place the bottom of the well see line for this 660 foot location.

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Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

J. W. Brown Field Superintendent

By: J.W. mak

cs: Mr. M. L. Armstrong
New Mexico Oil Conservation Commission
Artesia, New Mexico

of it therefore respectfully requested that Enn American Petricular of the contraction of granted a sectional correction to granted at tectional correction on their distancements are set in the sector consider of the request will be sincerely appreciated as it is articleaved that continue operations will be completed by april 18, 1859.

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# DEVIATION SURVEYS USA MALCO REFINERIES "F" NO. 1

Depth Totoo Ran	Interval Between Totoos	Drift Indicated By Totco	Horizontal Drift Over Interval	Cumulative Horisontal Drift
5001	5001	3/4°	6.551	6.551
9701	4701	3/4°	6.151	12.70'
13501	3801	3/40	4.971	17.67'
18501	<b>50</b> 01	1-3/40	15.27	32.941
20501	2001	20	6.981	39.921
23801	3301	1-1/20	8.641	48.561
29701	5901	1-3/40	18.02'	66,581
34101	440'	2-3/40	21.11'	87.691
37451	3351	3-1/2°	20.451	108.14
40501	3051	3-1/ <b>2°</b>	18.621	126.761
43501	3001	4-1/2°	23.451	150.21
45551	2051	4-3/40	16.981	167.19'
46501	951	4-3/40	7.871	175.061
48051	1551	6-1/2°	17.551	192.61'
49901	1851	6-1/2°	20.941	213.551
51151	1251	6-1/4°	13.61'	227.16
52451	130'	6-1/40	14.15'	241.31'
53801	135'	6-1/2°	15.281	256.591
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### OIL CONSERVATION COMMISSION

P. O. BOX 871

#### SANTA FE, NEW MEXICO

April 20, 1959

Pan American Petroleum Corporation P. O. Box 68 Hobbs, New Mexico

Attention: J. W. Brown

Re: Request for Exception to Rule 111 Deviation Tests, USA Malco Refineries "F" No. 1, Empire-

Abo Pool.

#### Gentlemen:

Reference is made to your letter of April 16, 1959, concerning the above-captioned subject.

Inasmuch as the deviation survey which you have run establishes conclusively that the USA Malco Refineries "F" No. 1 Well will be bottomed on the lease where it is located, it is my opinion that the requirements of Rule 111 have been fully complied with.

Accordingly a hearing on this matter is unnecessary.

Very truly yours,

A. L. PORTER, Jr., Secretary-Director

### ALP/OEP/ir

cc: Mr. M. L. Armstrong
Oil Conservation Commission
Artesia, New Mexico

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# NEW ME CO OIL CONSERVATION CON ISSION Form C-110 SANTA FE, NEW MEXICO Revised 7/1/55

(File the original and 4 copies with the appropriate district office)

# CERTIFICATE OF COMPLIANCE AND AUTHORIZATION 1959 TO TRANSPORT OIL AND NATURAL GAS

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# NEW MEXICO OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

Form **C-110** Revised 7/1/55

(File the original and 4 copies with the appropriate district office) FIN

CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

SEP 9 1959

Company or Ope	rator Pan American	Petroleum Cor	peration L	ease us walco R	ofineries ?
Well No	Unit Letter L	S_1_T_165	R 278 Pool	Espire Abo	
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	ed certifies that the Reen complied with.	ules and Reg	gulations of th	e Oil Conservati	on Com-
Executed this t	he <b>8</b> day of <b>Sep</b>	tember 19	59	Original Signed by	
			Ву	Original Signo J. W. BROWN	
Approved	<b>SE</b> P <b>1</b> 0 19 <b>59</b>	19	Title Arm 8	uperintendent	
OIL CON	SERVATION COMMI	SSION		American Petrole	um Corporat:
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OIL CONSERVATION COMMISSION
ARTESIA DISTRICT OFFICE

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U. S. G.

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## HEW MEXICO OIL CONSERVATION COMMISSION

Form C-110

SANTA FE, NEW MEXICO

Revised 7/1/55

(File the original and 4 copies with the appropriate district RIFICE IVED NAME CHANGED: FROM: PAN AMERICAN PETR CORP. TO COMPLIANCE AND AUTHORIZATION 1960 TO: AMOCO PRODUCTION CO. TO TRANSPORT OIL AND NATURAL GAS o. c. c. EFFECTIVE: 2-1-71 Company or Operator Restriction Patrolless Corporation Lease This is a second s Fredery Well No. 1 Unit Letter L S 1 Tles R 278 Pool Empire Above County Bddy Kind of Lease (State, Fed. or Patented) If well produces oil or condensate, give location of tanks: Unit Y S 1 T 128 R 278 Authorized Transporter of Oil or Condensate Eff. 4/1/70 name change from 3411 Knoxville Avenue Service to Amoco Pipeline Co. Address Lubbock, Texas 79413 (Give address to which approved copy of this form is to be sent) Authorized Transporter of Gas | Impire Abs Gaseline Plant Address 1 Pen Parison Potes Corps, Box 68, Hobbs, N.M. Date Connected 9-3-60 (Give address to which approved copy of this form is to be sent) If Gas is not being sold, give reasons and also explain its present disposition: Effective 2-1-71 Gas Transporter Name Changed: From: Pan American Petroleum Corp. To: Amoco Production Co., Reasons for Filing:(Please check proper box) New Well Change in Transporter of (Check One): Oil ( ) Dry Gas ( ) C'head (x) Condensate ( ) ( ) Other Give explanation below) Change in Ownership Remarks: The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with. Executed this the 14th day of September 19 60 Original Signed by J. W. BROWN Вy SEP \_5 1960 Title Area Superintendent Approved Company Pon American Petroleum Corporation OIL CONSERVATION COMMISSION Address Box 68 Hebbs, New Mexico ON. 1 - 140 1 - 1802710

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OIL COMSERVATION COMMISSION
ARTESIA DISTRICTORE
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# NEW MEXICO OIL CONSERVATION COMMISSION P. O. DRAWER DD ARTESIA, NEW MEXICO

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March.	7	2	68

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## SUPPLEMENT TO THE OIL PROPATION SCHEDULE

DATE	3/1/68		
PURPOSE:	ALLOWABLE	ASSIGNMENT	(BACK ZLLOWARLE)
Effective	3/1/68, ba	ck allowable	is hereby assigned to the following
Pan Americ	can Pet. Co	rp. wells in	the Empire Abo Pool in accordance
with Commi	ission orde	r No. A-220.	
Halco F Le #1-L, 1-16 #2-R, " #3-H, " #4-P, " #5-R, " #6-B, " #7-G, " #8-C, " #9-H, " #11-A, "	3-27, 18 bb , 18 bb , 18 bb , 15 bb , 16 bb , 18 bb	ls total	#10-D, 1-18-27, 18 bbls total  NAME CHANGED: FROM: PAN AMERICAN PETR. CORP. TO: AMOCO PRODUCTION CO. TO: AMOCO 2-1-71 EFFECTIVE: 2-1-71
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Pan Am. Per	-		OIL CONSERVATION COMMISSION
america	4-1-70		SUPERVISOR, DISTRICT NO. 2

**EXTRA COPY** 

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RE 1972	GEOLOGICAL SURVEY		NM- 0557571
			6. IF INDIAN, ALLOTTEE OR TRIBE NAM
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NAME OF OPERATOR			8. FARM OR LEASE NAME
Amoco Production C	ompany		MALCO"F Fraerial
. ADDRESS OF OPERATOR			9. WELL NO.
BOX 68, HO3BS, N. M. 88	240		
LOCATION OF WELL (Report loc	ation clearly and in accordance with any	State requirements.	10. FIELD AND POOL, OR WILDCAT
See also space 17 below.) At surface		,	EMPIRE HOD
	/ / / / /		11. SEC., T., R., M., OR BLK. AND SULVEY OR AREA
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1500 . 522 650			12. COUNTY OR PARISH 13. STATE
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TEST WATER SHUT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL
FRACTURE TREAT	MULTIPLE COMPLETE	FRACTURE TREATMENT	ALTERING CASING  ABANDONMENT*
SHOOT OR ACIDIZE	ABANDON*	SHOOTING OR ACIDIZING	ABANDON MENT
REPAIR WELL	CHANGE PLANS	(Other)(Note: Report result	s of multiple completion on Well
(Other)	TED OPERATIONS (Clearly state all pertinen	t distiller and sine mouthment detec	pletion Report and Log form.) .
proposed work. If well is nent to this work.) *	directionally drined, give substitute local	tions and measured and trace	
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18. I hereby certify that the for	egoing is true and correct		
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(This space for Federal or S	State office use)		
ADDROUDE PU	TITLE		DATE
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1-1/00/1011 / A	o DISTRIC!		
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INTAFE	REQUEST !	FOR ALLOWABLE	Supersedes Old C-104 and C-110 Effective 1-1-65
11.E 5.G.S.	AUTHOUTATION TO TRA	AND NSPORT OIL AND NATURAL (	GAS
AND OFFICE	AOTHORIZATION TO THE		RECEIVED
I HANSPORTER OIL			KIGEIVED
OPERATOR /			SEP 2 6 1973
PRORATION OFFICE			1070
Atlantic Richt	ield Company		O. C. C.
Address	- MADAWY	10	ARTESIA, OFFICE
P. O. Box 1710	), Hobbs, New Mexico 8824	Other (Please explain) Ti	ncluded in Empire Abo
Reason(s) for filing (Check proper box	Change in Transporter of:	Unit eff: 10-1	-73. Change in lease
Percompletion	Oil Dry Ge	manc from miles	O F Federal #1.
Change in Ownership X	() 2 () () () () () () () () () () () () ()	nsate [	
If change of ownership give name	AMOCO Production Con	mpany P. O. Box 68, Ho	bbs, New Mexico
DESCRIPTION OF WELL AND	Man 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ral or Fee Federal
Empire Abo Unit K	17 Empire Ab	O Sidie, rede	101 01 1 30
Location T. 1	980 Feet From The South Lin	ne and Feet From	n TheWest
Unit Letter L 1			Eddy County
Line of Section 1 Te	ownship 18S Range	27E , NMPM,	2043
bucton asson of TRANSPOR	CVOR OF OIL AND NATURAL G	AS (I which are	roved copy of this form is to be sent)
Name of Authorized Transporter of C AMOCO Pipe Line Co	II I'V	2300 Continental Bk.	Bldg., Ft. Worth, Tex. 7010.
Name of Authorized Transporter of C	asinghead Gas X or Dry Gas 1	Address (Give address to which app	proved copy of this form is to be sent)
AMOCO Production (	Company	P. O. Box 68, Hobbs,	When
If well produces oil or liquids, give location of tanks.	F 1 18S 27E	yes	9-3-60
If this production is commingled v	with that from any other lease or pool	, give commingling order number:	
V. COMPLETION DATA	Oil Weil   Cas Well	New Well Workover Deepen	Plug Back   Same Resty. Diff. Rest
Designate Type of Complete		Total Depth	P.B.T.D.
Date Spudded	Date Compl. Ready to Prod.		
Elevations (DF, RKB, RT, GR, etc.	Name of Producing Formation	Top Oll/Gas Pay	Tubing Depth
			Depth Casing Shoe
Perforations			
		HD CEMENTING RECORD DEPTH SET	SACKS CEMENT
HOLE SIZE	CASING & TUBING SIZE	001111011	
V. TEST DATA AND REQUEST	FOR ALLOWABLE (Test must be	e after recovery of total volume of load	oil and must be equal to or exceed top all
OIL WELL	able for this	depth or be for full 24 hours) Producing Method (Flow, pump, go	as lift, etc.
Date First New Oil Run To Tanks	Data of 10%		Choke Size
Length of Test	Tubing Pressure	Caoing Pressure	Cho. e 3126
	Oll-Bbia.	Water - Sibla.	Gas - MCF
Actual Prod. During Test			
GAS WELL Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
- Acceptant	Tubing Pressure (Elab-in)	Casing Pressure (Shut-in)	Choke Size
Testing Method (pitot, back pr.)			TION COMMISSION
VI. CERTIFICATE OF COMPLE	ANCE	OIL CONSE	RVATION COMMISSION
	a regulations of the Oil Conservati	ion APPROVED	13
I hereby certify that the rules of Commission have been compile	and regulations of the Oil Conservati ed with and that the information ax- the best of my knowledge and beli	of I by	Lisel
above is true and complete to	the best of my should be	TITLE OIL AND GAS II	yspector .
		1116	

D.L.S.	Backelferel
Sr. Acctg.	Clerk
	(Ticle)
9-26-73	
	(Date)

This form is to be filed in comp sance with MODE .....

If this is a request for allowable for a newly drilled or despens well, this form must be accompanied by a tabulation of the deviation touts taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allo-able on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owns well name or number, or transporter, or other such change of condition

Separate Forms C-104 must be filed for each pool in multip

15 ( RIB UT 10 N		on commercion	C-102 and C-103 Effective 1-1-65
A HAFE	EM MEXICO OIL CONSERVA	E C E I V E D	Effective 1-1-03
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SUNDRY NOTICE	SAND REPORTS ON WELL	RTERIA, REFRUE.	
DO NOT USE THIS FORM FOR PROCESSES TO AND LOCK MARKETERATION FOR PERM	+ Let proceed to a contract a sea success	. ( )	7. Unit Agreement Home
1.			Empire Abo Unit
TELE X SAD WITCH OTHER-			8. Farm of Lease Name
2 Cong of Operator			
Atlantic Richfield Company			PAU IKI
2. Sept of Cherator			3
	Mexico 88210		10. Field and Fool, or Wildest
P. O. Box 129 Artesis; New			10. Field and 1 dot, of window
	ET FROM THE South LINE	410 66C FEET PRO	Empire Abertanting
mair Letten L 1930 F	ET FROM THE DOUGHT. LINE	AND SALES	
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West Line, Section 1	TOWNSHIP 135 R	ансе <u>27</u> Е нмр	"MHHHHHH
	5. Elevation (Show whether DF, RT,	GR. etc.)	12. County
		on,, .	Eddy (III)
	KB 3581'		
Charle America	e Box To Indicate Nature	of Notice, Report or C	other Data
CHECK MANOLINE	70:	SUBSEQUE	NT REPORT OF:
NOTICE OF INTENTION	10.	•	. —
<del></del>	PLUG AND ABANDON   REMED	IAL WORK	ALTERING CASING
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THE OR ALTER CASING			
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HER	Pic	ing braden head to	surface.
17. Openibe Proposed of Completed Operations (Cl	and the state all pertinent details, and	give pertinent dates, includ.	ng estimated date of starting any proposed
1), conscribe Proposed of Completed Operations (Completed Operatio	euri) eure en perme		
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Piping braden head to surfa	∪e•	•	
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	ue and complete to the best of my k	nowledge and belief.	
10. Thereby certify that the information above is to	•		
	•		DATE 10-31-78
	•	nowledge and belief. rod. Supervisor	DATE 10-31-78
	virue Dist. P	rod. Supervisor	
	virue Dist. P	rod. Supervisor	DATE 10-31-78
	•	rod. Supervisor	
18. Thereby certify that the information above is to section.  Signal R. Weaver	virue Dist. P	rod. Supervisor	

#### DISTRIBUTION NEW MEXICO OIL CONSERVATION COMMISSION Form C -104 Supersedes Old C-104 and C-110 SANTA FE REQUEST FOR ALLOWABLE Effective 1-1-65 FILE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS u.s.g.s. LAND OFFICE OIL KECEIVED : TRANSPORTER GAS OPERATOR 1979 PRORATION OFFICE ARCO Oil and Gas Company -Operator Division of Atlantic Richfield Company <del>a. c. c.</del> Address ARTESIA, OFFICE P. O. Box 1710, Hobbs, New Mexico 88240 Other (Please explain) Reason(s) for filing (Check proper box) New Well Change in Transporter of: Change in Operator Name Dry Gas effective: 4-1-79 Oil Recompletion Condensate Change in Ownership Castnahead Gas If change of ownership give name and address of previous owner I. DESCRIPTION OF WELL AND LEASE Pool Name, Including Formation Kind of Lease ell No State, Federal or Fee Empire Abo Empire Abo Unit Location 660 Unit Lette 27E Eddy County Range NMPM. Township Line of Section 1. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS Address (Give address to which approved copy of this form is to be sent) 2300 Continental National Bank Bldg. Name of Authorized Transporter of Cil 📉 🗼 or Condensate Address (Give address to which approved copy of this form is to be sent) P.O. Drawer A, Levelland, Texas 79336 4001 Penbrook, Odessa, Texas 79760 Amoco Pipeline Company Name of Authorized Transporter of Casinghead Gas [Y] or Dry Gas Amoco Production Company Phillips Petroleum Company P.ge. Is gas actually connected? if well produces oil or liquids, give location of tanks. AMO LP.P give commingling order number: If this production is commingled with that from any other lease or pool, V. COMPLETION DATA Plug Back Same Res'v. Diff. Res'v. Oil Well Gas Well New Well Workover Deepen Designate Type of Completion - (X) P.B.T.D. Date Compl. Ready to Prod. Total Depth Date Spudded No Change Top Oll/Gas Pay Tubing Depth Name of Producing Formation Pool Depth Casing Shoe Perforations TUBING, CASING, AND CEMENTING RECORD SACKS CEMENT CASING & TUBING SIZE DEPTH SET HOLE SIZE (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours) V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL Producing Method (Flow, pump, gas lift, etc.) Date First New Oil Run To Tanks Date of Test No Change Casing Pressure Choice Size Tubing Pressure Water - Bbis. Oil-Bhis. Actual Prod. During Test GAS WELL Bbis. Condensate/MMCF Gravity of Condensate Actual Prod. Test-MCF/D Length of Test Choke Size Casing Pressure

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given shows is true and complete to the best of my knowledge and belief.

Tubing Pressure

Testing Method (pitot, back pr.)

L CERTIFICATE OF COMPLIANCE

OIL CONSERVATION COMMISSION

APR 0 9 19 -APPROVED

District Prod & Drlg Supt.

(Title)

(Date)

TLE SUPERVISOR, DISTRICT I

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

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

Fill out Sections I, II, III, and VI only for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply

District 8
PO Box 1998, Bobbs, NM 88241-1998
State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-104
Revised February 10, 1994
Instructions on back
bmit to Appropriate District Office

Naries II 10 Drewer DD, Naries III			PO Box 2088				te District Office 5 Copies						
1000 Rio Brazos District IV										NDED REPORT			
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VI. Well	l Test	Data					<b></b>			<del></del>			N.C. D.
Date	New Oil	* C	as Deli	very Date	*1	Test Date		" Test L	ength	10g.	Pressure		<sup>30</sup> Cag. Pressure
1					1.								
* Cho	" Choke Size " Oil			1	" Water Ges			•	" AOF			<sup>4</sup> Test Method	

"I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of any knowledge and belief.

OIL CONSERVATION DIVISION

Printed amps: Kellie D. Muri	W. Muush	Tide:	
Tide: Records CLerk	II	Approval Date:	
Date: 6-1-94	Phone: 505-391-1649	30N 0 1994	
" If this is a change of operat	or fill in the OGRID number and name of the p	revious operatur	

For (Ju

NM OIL CONS COMMISSION
Drawer DD FORM APPROVED
Artesia, Newtington No. 1004 010

BUREAU OF LAND MANAGEMENT  SUNDRY NOTICES AND REPORTS ON WELLS  Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  Use "APPLICATION FOR PERMIT -" for such proposals  SUBMIT IN TRIPLICATE  1. Type of Well  X Over Operator  ARCO PERMIT - " for such proposals  SUBMIT IN TRIPLICATE  1. Type of Well  X Over Operator  ARCO PERMIT - " for such proposals  7. If Unit or CA, Agreement Designation  8. Well Name and No.  EMPIRE ABO UNIT "K" 12 17  ARCO PERMIT - " for such proposals  1. Type of Well  X Over Operator  ARCO PERMIT - " for such proposals  7. If Unit or CA, Agreement Designation  8. Well Name and No.  EMPIRE ABO UNIT "K" 12 17  9. ARI Well No.  30-015-00703  30-015-00703  30-015-00703  30-015-00703  30-015-00703  30-015-00703  30-015-00703  10. Field and Pool, or exploratory Area  EMPIRE ABO  II. County or Parish, State  EMPIRE ABO  11. County or Parish, State  EDDY NM  12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  TYPE OF SUBMISSION  TYPE OF ACTION  X Notice of Intent  Recompletion  Plugging Back  Casing Repair  Change of Plass  New Construction  Non-Loutine Fracturing  Water Shut-Off  Convertion to Injection  Dispose Water  (Note: Report Dispose Water  (Note: Proposed or Complete Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally give subsurface locations and measured and true vertical depths for all matters and zones pertinent to this work.)*  PROPOSE TO ADD HORIZONTAL DRAINHOLE AS 1. POH My/PROD CA.  2. SET RETRIEVABLE WHIPSTOCK.	. 01	T OF THE INTERIOR	<b>\$ 1 a.</b> , New 1800 September No. 1004-0135 Expires: March 31, 1993			
Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.    Use "APPLICATION FOR PERMIT -" for such proposals   SUBMIT IN TRIPLICATE	(June 1770)					
SUBMIT IN TRIPLICATE  7. If Unit or CA, Agreement Designation  8. Well Nam: and No.  8.	Do not use this form for proposals to drill of	or to deepen or reentry to a different reservoir.	LC-062412 NM 055937 6. If Indian, Allottee or Tribe Name			
Subsequent Report   Gas   Well   Other		7. If Unit or CA, Agreement Designation				
2. Name of Operator ARCO Permian 3. Address and Telephone No. P.O. BOX 1610, MIDLAND, TX 79702 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1980 FSL & 660 FWL (UNIT LETTER L) 1-18S-27E 12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION    Notice of Intent	1. Type of Well		1			
ARCO Permian  3. Address and Telephone No. P.O. BOX 1610, MIDLAND, TX 79702  4. Location of Well (Pootage, Sec., T., R., M., or Survey Description)  1980 FSL & 660 FWL (UNIT LETTER L)  1-18S-27E  EDDY NM  12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  TYPE OF SUBMISSION  TYPE OF SUBMISSION  TYPE OF SUBMISSION  TYPE OF ACTION  Abandonment Recompletion New Construction Non-Loudine Fracturing Water Shut-Off Conversion to Injection Dispose Water (Note: Report results of multiple completion Tompletion and measured and true vertical depths for all markers and zones pertinent to this work.)*  PROPOSE TO ADD HORIZONTAL DRAINHOLE AS 1. POH W/PROD CA. 2. SET RETRIEVABLE WHIPSTOCK.						
3. Address and Telephone No. P.O.BOX 1610, MIDLAND, TX 79702  4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  1980 FSL & 660 FWL (UNIT LETTER L)  1-18S-27E  12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  TYPE OF SUBMISSION  TYPE OF ACTION    Abandonment   Change of Plans						
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TYPE OF SUBMISSION  X Notice of Intent Abandonment Recompletion Subsequent Report Plugging Back Non-Loutine Fracturing Casing Repair Altering Casing Other ADD HORIZONTAL EXT Dispose Water (Note: Report results of multiple completion on Completion of Recompletion Proposed or Completion of Recompletion Report and Log for Proposed or Completion and measured and true vertical depths for all markers and zones pertinent to this work.)*  PROPOSE TO ADD HORIZONTAL DRAINHOLE AS 1.POH W/PROD CA. 2. SET RETRIEVABLE WHIPSTOCK.						
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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 give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*  PROPOSE TO ADD HORIZONTAL DRAINHOLE AS  1. POH W/PROD CA. 2. SET RETRIEVABLE WHIPSTOCK.		X Other ADD HORIZONTAL EXT	(Note: Report results of multiple completion on Well			
PROPOSE TO ADD HORIZONTAL DRAINHOLE AS 1.POH W/PROD CA.  2. SET RETRIEVABLE WHIPSTOCK.	13. Describe Proposed or Completed Operations (Clearly state al	ll pertinent details, and give pertinent dates, including estimated date of start:				
3. SIDETRACK & DRILL 250' RADIUS CURVE. 4. DRILL 1000' HORIZONTAL LATERAL. MAY - 9 1995 5. RETRIEVE WHIPSTOCK. 6. RIH W/PROD CA. OIL CON. DIV.  DIST. 2  Subject to  Like Approval by State CCD	PROPOSE TO ADD HORIZONTAL DRAIN 1.POH W/PROD CA. 2.SET RETRIEVABLE WHIPSTOCK. 3.SIDETRACK & DRILL 250' RAD 4.DRILL 1000' HORIZONTAL LAT 5.RETRIEVE WHIPSTOCK.	HOLE AS FOLLASCEIVED  DIUS CURVE. FERAL.  MAY - 9 1995  OIL CON. DIV.  DIST. 2  Subject to  Like Approval				

14. I hereby certify that the foregoing is true and correct Signed Ken W Lojnell	Title	AGENT	Date	05-03-95
(This space for Federal or State office use) Approved by (ORIG. SQD.) JOE G. LARA Conditions of approval, if any:	Title	PETROLEUM ENGINEER	Date	5/5/95
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly or representations as to any matter within its jurisdiction.	and wi	lifully to make to any department or agency of the United States	any fals	e fictitious or fraudulent statements

## HORIZONTAL SIDETRACK PROCEDURE

**DATE:** May 1, 1995

COUNTY: Eddy, NM DRILLED: 1959 FIELD: Empire Abo WELL: Empire Abo #K-17

DATUM: 12' KB **PBD:** 6,101' BY: P.N. Drennon **TD:** 6.137'

**GRADE** SX CMT TOC WEIGHT CASING: surf-circ SURFACE: J-55 J-55 1,000 PROD: surf-circ

PERFORATIONS: Open perfs: Abo 6.040'-6.080'

HISTORY AND BACKGROUND: Drilled in 1959, completed as a flowing oil well from the Abo.

SCOPE OF WORK: Set retrievable whipstock, sidetrack and drill 250' radius build curve, 1,000' horizontal lateral, retrieve whipstock, complete as flowing/pumping well from existing Abo perfs and new horizontal lateral.

TARGET INFORMATION:

5,810 Whipstock Depth: Kickoff Point: Same as above E (90º) Azimuth: Target Depth: 6,060

Planned Displacement: Total 1.250'

1,980' FSL, 660' FWL, Sec. 1, T-18-S, R-27-E, Eddy Co., N.M. Surface Lacation:

### **PROCEDURE**

- MIRU PU, pump, swivel, pits. Install H<sub>2</sub>S safety equipment. Pull rods and pump, warehouse same. ND 1. tree, NU BOPE. Pull tubing, LD and warehouse.
- PU 4 3/4" bit and scraper, 10 3-1/2" DC, 2 7/8" AOH DP, TIH to PBTD 6,101, circulate @ TD if 2. necessary. RU & run gyro multi-shot survey via DP. RD survey equipment, TOOH, LD bit and scraper.
- 3. GIH w/ packer and set in vicinity of 5,800'.
- 4. Test casing and stack to 750 psig.
- PU anchor, whipstock assembly w/ starter mill, BHA, TIH, hydraulically set anchor @ 5,810'. 5.

## Note: Oriented assembly, azimuth E (compass 90°) per O/A Engineer (Gary Smallwood).

- Shear off whipstock assembly w/ starter mill. Mill out casing and shear bolt assembly to start 6. window, use Abo produced water for circulation. Use polymer additions for additional lift if necessary.
- TOOH, LD starter mill, PU window mill, 1 it S-135 AOH DP, BHA, TIH. 7.
- Finish cutting window, drill out into open hole, circulate clean. 8.
- TOOH, LD window mill and inspect for proper wear. PU window mill, watermelon mill, 9. BHA.

## Note: Air/foam package to be on location at this point.

TIH, clean and dress window, drill 8-10' formation, circulate clean. 10.

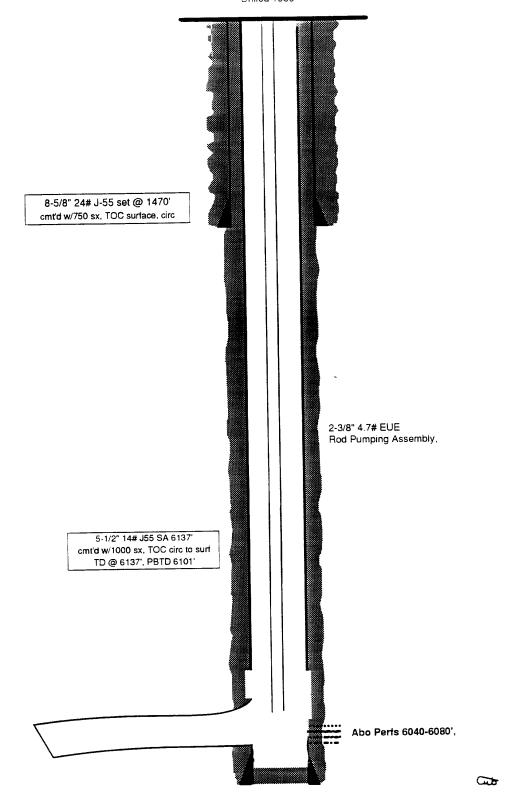
- 11. TOOH, LD window and watermelon mills, check for proper wear. PU 4 ¾" drag bit, bent housing motor, bent sub, non-mag DC, 2 7/8" 8.7# PH-6 tbg DC's (minimum 2 DC's in casing @ TD of build curve), TIH.
- 12. Displace hole w/ stiff foam (expect 700-800 SCF/min w/ 1.75 BPM water w/ 8-10 gal/1000 foamer).
- 13. RU wet connect, steering tool, land same, drill build curve, plan to drill 23º/100' build rate (radius 250') to max angle of 87º- 90º- from vertical.
- 14. RD steering tool/wet connect, TOOH, LD build motor, PU packer on DP, TIH, set packer @ ±5,700'.
- 15. Open by-pass, jet via DP to kick-off and test production from build curve. If necessary, polymer squeeze build curve to shut off excess gas production.
- 16. TOOH, LD packer, PU 4 ¾" bit, hold motor, Monel DC, 2 7/8" tbg. DC's (minimum 9 DC's in casing @ TD), DP, TIH, RU wet connect, steering tool, land same drill lateral ±1,000' due East. All drilling done w/ stiff foam.
- 17. TOOH, LD BHA, PU tbg to go to end of lateral, DP, TIH.
- 18, Stage in and blow hole w/ air to unload foam, @ EOC blow hole dry, load to kill w/ prcduced water, TOOH.
- 19. PU CA and production tubing, TIH.
- 20. Swab to KO well, test.
- 21. Kill well w/ produced water, TOOH w/ CA.
- 22. PU die collar, 4 3 1/2" DC, tubing, TIH, latch and release packer stock, TOOH, LD packer stock, die collar, DC's.
- 23. TIH w/ CA and production tubing.
- 24. Swab to KO well, test.
- 25. If recommended, TIH to EOL w/ 1 1/4" coil tubing, spot 15% HCl w/ adds throughout lateral, POOH w/ coil tubing.
- 26. Swab to KO well, test.
- 27. TOPS

P. N. Drennon	J. E. Shields

## **EMPIRE ABO K-17**

## Proposed Status

Drilled 1959



## OIL CONS COMMISSION

Fo (J

## UNITED STATES

Drawer DD
FOR MAPPROVED
Artesia, NM Bungershirau No. 1004-

orm 3100-3 lune 1990)		OF THE INTERIOR	,	Expires: March 31, 1	
rune 1770)		AND MANAGEMENT	<b>,</b>	case Designation and Seria	al No.
		REPORTS ON WELLS to deepen or reentry to a different rese PERMIT - " for such proposals	6. If	f Indian, Al ottee or Tribe	Name
		IN TRIPLICATE		f Unit or CA, Agreement I 89101380   0	Designation
1. Type of Well  X Oil Gas Well  2. Name of Operator	Other		EMI	/ell Name and No.  PIRE ABO UNIT K	-17
ARCO Permian  3. Address and Telephone	No.		V	90-015-00703	
P.O. Box 1710 Hol	bbs, N.M. 88240	505-391-1649		Field and Pool, or explorat	tory Area
	age, Sec., T., R., M., or Survey Dee FWL, Unit Letter L E	ription)		County or Farish, State	
			EDD		NM
12. CHECK	APPROPRIATE BOX(s)	TO INDICATE NATURE OF NO	ΓΙCE, REPORT, OR	OTHER DATA	
TYPE OF	SUBMISSION	Т	YPE OF ACTION		·
Notic	e of Intent	Abandonment		Change of Plans	
X Subse	equent Report	Recompletion Plugging Back		New Construction  Non-Routine Fracturing	į
	Abandonment Notice	Casing Repair Altering Casing		Water Shut-Off Convers on to Injection	
			·c	Dispose Water    Ote: Report r sults of multiple of Completion or Recompletion Rep	ort and Log form.)
TD: 6137' PBI TOP OF WIND	e locations and measured and true ver b: 6101' PERFS: 6040-6080 OWS @ 5797', BOTTOM OF MATE HORIZONTAL EXTEN	pertinent details, and give pertinent dates, including ical depths for all markers and zones pertinent to this CIBP ABOVE PERFS @ 5823'. WHIPS WINDOW @ 5803'. hORIZONTAL 5800 PION 5800-7705 W/2500 GALS 15% NEFENSATE WHILE MOVING C.T. ALONG	TOCK @ 5782'. )-7705' E ACID AND 2500 GAL	.s	directionally drilled,
CONDENSATE		ACAPPTED FOR		22	
	RECENT SEP 12	1995 Jan	<b>4</b> 995	AC 100 100 100 100 100 100 100 100 100 10	90 70 10
	OIL COI	ON. Contidation	V William Street	<b>%</b>	CVED

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.

Title Administrative Assistant

Title

14. I hereby certify that the foregoing is true and correct
Signed Aultu D. Munust

(This space for Federal or State office use) Approved by \_\_\_\_\_\_\_\_ Conditions of approval, if any:

### **GENERAL INSTRUCTIONS**

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 instructions 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.

### SPECIFIC INSTRUCTIONS

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 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 plugs; amount, size, method of parting of any casing, liner or tubing pulled 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.

### 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 operation, on a Federal or Indian lease.

#### ROUTINE 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 only for the specific types of activities specified in 43 CFR Part 3160.

## **BURDEN HOURS STATEMENT**

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 comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, 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.

CLSF

Form 3160-5 (June 1990)

## UNITED STATES DEPARTMENT OF THE INTERIOR RUBEAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

BUREAU OF LAND MANAGEMENT 5. Lease Designation and Serial No. LC<del>-0624</del>12 N/M -055-737/ SUNDRY NOTICES AND REPORTS ON WELLS 6. If Indian, Allettee or Tribe Name Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT - " for such proposals 7. If Unit or CA. Agreement Designation SUBMIT IN TRIPLICATE 1. Type of Well X Oil Well 8. Well Name and No. EMPIRE ABO UNIT"K" 2. Name of Operator ARCO Permian 9. API Well No. 30-015-00703 3. Address and Telephone No. P.O.BOX 1610, MIDLAND, TX 79702 915 688-5672 10. Field and Pool, or exploratory Area 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) **EMPIRE ABO** 1980 FSL & 660 FWL(UNIT LETTER L) 11. County or Parish, State 1-18S-27E EDDY NM CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12. TYPE OF ACTION TYPE OF SUBMISSION Notice of Intent Abandonment Change of Plans Recompletion New Construction X Subsequent Report Plugging Back Non-Routine Fracturing Casing Repair Water Shut-Off Final Abandonment Notice Altering Casing Conversion to Injection Other ADD HORIZONTAL EXT 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 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.)\* 05-22-95. RUPU. POH W/PROD CA. RIH W/4 3/4 BIT TO 6099 PBD. SET CIBP AT 5830. RIH W/WHIPSTOCK. RAN GYRO SURVEY F/SURF-5798. SET WHIPSTOCK PKR ASSEMBLY AT 5812. CUT 6' WINDOW IN 5 1/2 CSG(5797-5803). DIRECTIONAL DRILLED TO 7705 MD. RIH W/PROD CA:2 3/8 TBG & PKR TO 5906. PKR SET AT 5772. RDPU 06-13-03. DEC 1 8 1995 OIL COM. DIV. DIST. 2 14. I hereby certify that the foregoing is true and correct Title AGENT Date 11-16-95 Signed Xon (4) (This space for Federal or State office use) Title Approved by Conditions of approval, if any:

====== EAGLE DIRECTIONAL SERVICES, INC ======= \_\_\_\_\_\_\_

Date: 6/8/1995 Time: 7:28: 6 PAGE: 1
Filename: "ARCO.SRV" Description: "ARCO PERMIAN EMPIRE ABO UNIT K17 RE-ENTRY
HORIZONTAL WELL NW/4 SW/4 SEC 1 T18S R27E EDDY COUNTY, NEW MEXICO

Target Coordinates: 23.6 N 1064.3 E Target TVD: 6048.600 Using Minimum Curvature Method.

S #	MEASURED DEPTH (feet)	DRIFT ANGLE (deg)	DRIFT DIRECTION (deg)	COURSE LENGTH (feet)	TRUE VERTCAL DEPTH (feet)		RECTANGO COORDINA (feet	ATES -SEVERITY
0	5700.0	5.15	346.670	0.0	5689.8	0.0	210.9 N	168.9 W 0.00
1	5798.0	4.73	350.130	98.0	5787.5	-165.7	219.2 N	170.6 W 0.53
2	5828.0	8.60	48.200	30.0	5817.3	-164.2	221.9 N	169.1 W 24.31
3	5857.0	17.10	64.500	29.0	5845.6	-158.6	225.2 N	163.7 W 31.59
4	5887.0	23.60	76.700	30.0	5873.7	-148.7	228.5 N	153.8 W 25.77
5	5918.0	27.90	93.300	31.0	5901.6	-135.4	229.5 N	140.5 W 26.96
6	5948.0	33.70	97.900	30.0	5927.4	-120.2	228.0 N	125.3 W 20.85
7	5979.0	42.70	97.000	31.0	5951.7	-101.2	225.5 N	106.3 W 29.09
8	6011.0	51.40	95.200	32.0	5973.5	-78.0	223.0 N	83.0 W 27.50
9	6043.0	59.60	96.100	32.0	5991.6	-51.9	220.4 N	56.8 W 25.73
10	6074.0	58.70	97.300	31.0	6007.5	-25.5	217.3 N	30.3 W 4.41
11	6106.0	64.20	100.300	32.0	6022.8	2.1	213.0 N	2.6 W 19.06
12	6136.0	69.40	105.500	30.0	6034.6	28.8	206.8 N	24.3 E 23.54
13	6167.0	76.70	106.200	31.0	6043.7	57.2	198.7 N	52.8 E 23.65
14	6198.0	84.00	104.500	31.0	6048.9	86.4	190.7 N	82.2 E 24.16
15	6230.0	87.00	103.700	32.0	6051.4	117.2	182.9 N	113.2 E 9.70
16	6262.0	87.70	103.200	32.0	6052.8	148.1	175.5 N	144.2 E 2.69
17	6293.0	87.80	103.700	31.0	6054.1	178.1	168.2 N	174.4 E 1.64
18	6323.0	88.10	104.700	30.0	6055.1	207.0	160.9 N	203.4 E 3.48
19	6355.0	87.80	105.200	32.0	6056.3	237.7	152.6 N	234.3 E 1.82
20	6387.0	86.10	103.100	32.0	6058.0	268.5	144.8 N	265.3 E 8.44
21	6418.0	86.00	103.200	31.0	6060.1	298.4	137.8 N	295.4 E 0.46
22	6450.0	85.70	103.200	32.0	6062.4	329.3	130.5 N	326.5 E 0.94
23	6481.0	85.70	103.300	31.0	6064.8	359.2	123.4 N	356.6 E 0.32
24	6512.0	87.20	101.700	31.0	6066.7	389.3	116.7 N	386.8 E 7.07
25	6544.0	87.00	101.000	32.0	6068.3	420.5	110.4 N	418.1 E 2.27
26	6574.0	86.50	100.800	30.0	6070.0	449.8	104.8 N	447.5 E 1.79
27	6604.0	86.50	100.900	30.0	6071.8	479.0	99.1 N	477.0 E 0.33
28	6636.0	88.00	99.300	32.0	6073.4	510.4	93.5 N	508.4 E 6.85
29	6666.0	87.70	99.000	30.0	6074.5	539.9	88.8 N	538.0 E 1.41
30	6697.0	87.40	99.200	31.0	6075.8	570.3	83.9 N	568.6 E 1.16
31	6758.0	88.10	99.400	61.0	6078.2	630.2	74-0 N	628.7 E 1.19
32	6819.0	88.10	100.200	61.0	6080.2	690.1	63.6 N	688.8 E 1.31
33	6848.0	87.90	100.300	29.0	6081.2	718.5	58.5 N	717.3 E 0.77
34	6909.0	88.80	98.400	61.0	6083.0	778.4	48.6 N	777.5 E 3.45
35	6939.0	88.50	98.500	30.0	6083.7	808.0	44.2 N	807.2 E 1.05

					TRUE				
S	MEASURED	DRIFT	DRIFT	COURSE	VERTCAL	VERTCAL	RECTAN	GULAR	DOGLEG
#	DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH	SECTION	COORDI		VERITY
	(feet)	(deg)	(deg)	(feet)	(feet)	(feet)	(fee		/100FT
			. 0,	( /	(1000)	(1000)	(166	t) DG	/10011
36	7001.0	89.60	98.300	62.0	6084.7	869.1	25 1 M	000 5 5	
37	7062.0	86.60	95.700	61.0	6086.8	929.4	35.1 N	868.5 E	
38	7152.0	89.80	96.500	90.0			27.7 N	929.0 E	
39	7214.0	91.30	96.300		6089.6	1018.6	18.1 N	1018.4 E	
40	7276.0			62.0	6089.0	1080.0	11.2 N	1080.0 E	2.44
40	1216.0	92.40	96.100	62.0	6087.0	1141.5	4.5 N	1141.6 E	1.80
41	7220 0	00.00	00 500						
	7336.0	92.60	96.500	60.0	6084.4	1200.9	2.1 S	1201.2 E	0.74
42	7362.0	92.90	96.400	<b>26.</b> 0	6083.1	1226.6	5.0 S	1227.0 E	1.22
43		92.20	97.100	65.0	6080.2	1290.9	12.6 S	1291.5 E	1.52
44	7458.0	90.00	9 <b>7</b> .600	31.0	6079.6	1321.6	16.6 S	1322.3 E	7.28
45	752 <b>0</b> .0	88.30	97.700	62.0	6080.6	1382.8	24.8 S	1383.7 E	2.75
				_		1002.0	24.0 5	1303.7 E	2.75
46	<b>7583.</b> 0	87.10	98.100	63.0	6083.1	1444.9	33.5 S	1440 0 5	0 01
47	7641.0	86.40	98.500	<b>58.</b> 0	6086.4	1502.0		1446.0 E	2.01
48	7672.0	85.80	98.900	31.0		_	41.8 S	1503.3 E	1.39
			rojected to		6088.5	1532.5	46.5 S	1533.9 E	2.32
49	7705.0	85.20			0004				
43	1105.0	65.20	98.900	33.0	6091.1	1564.9	51.6 S	1566.4 E	1.82

<sup>---</sup> Final Closure Direction: 91.887 --- Final Closure Distance: 1567.266 feet

## SCIENTIFIC DRILLING INTERNATIONAL - MIDLAND, TEXAS

Finder Survey for

ARCO OIL & GAS COMPANY MIDLAND, TEXAS

Job Number

: 32F0595215

Well Number

: EMPIRE ABO "K" NO. 17

Site Location

: EDDY COUNTY, NEW MEXICO

Latitude

: 32.750

Survey Date(s)

: 24-MAY-95

S.D.C. personnel : GARY DESPAIN

Calculation Method : Minimum Curvature

Survey Depth Zero : RKB

Proposal Direction: 99.000

Depth Unit

: Feet

Comments:

## Inrun Survey ARCO OIL & GAS COMPANY

page 1

Well number : EMPIRE ABO "K" NO.

Date : 24-MAY-95

						Date . 24-	MMY - 95
Measured	Vertical	Vert.	Inc	Azimuth	Coord	Instes	ъ.,
Depth	Depth	Section	Deg	Deg	Latitude	Departure	
						peharture	- · ·
							*****
0.0			0.00	0.00	0.00	0.00	
100.0	100.00	-0.1	0.26		0.21		
200.0	200.00	-0.3	0.24	338.11		0.05	
300.0	300.00	-0.6		329.92	0.61	-,	
400.0	400.00	-1.1		315.24	1.04 1.53	-0.47	
			• • • • • • • • • • • • • • • • • • • •	010.24	1.53	-0.86	e.14
500.0	499.99	-1.7	0.49	316 (AG	2.08		
500.0	599.99	-2.5	0.50	316.06 3 <b>08.</b> 21	2.08	-1.40	
700.0	599.99 6 <b>99.</b> 98	-3.6	0.00	290.57	2.71	-2.10	
800.0	799.97	~5 1	1 00	201.07	3.27	-3.14	
900.0	799.97 899.94	-7 7	1 47	287.75	3.68	-4.63	
	000.54	-7.5	1.47	287.75	4.24	-6.70	0.49
1000.0	999.90	~10 a	1 70	207 11			
1100.0	1099 95	-12.9	1.75		5.23	-9.33	0.32
1200.0	1199.81	-15 0	1.82	300.33	5.61	~12.06	
1300.0			1.04	301.42 305.46	8.21		
1400.0	1700.70	-71 6	1.04	307.40			
1400.0	1533.71	-21.0	1.85	307.40	11.88	-19.99	
1500.0	1499.66	-24 4		700 15		•	
	1599.60	77 7		309.17			
	1699.55	-27.2	1.84	309.49		-25.03	
1800.0	1799.50	-30.0	1.85	306.69	17.92	-27.56	- · - <del>-</del>
1900 0	1899.44	-32.3	1.90	305.11	19.84 21.55	-30.21	
1 400,0	1000.44	-35.5	1.84	298.32	21.55	-32.98	0.23
2000 0	1999.39	<b>7</b> 0 a	1 00	205 44			
2100.0	2099.34	-33.0	1.80	295.41		-35.82	
2200.0		-42.0		292.14	24.24	-38.66	0.11
2300.0	2199.30		1.63	289.34	25.29 26.14	-41.42	
	2299.26			285.57	25.14	-44.12	
2400.0	2399.22	-50.5	1.65	289.24	26.99	-46.83	0.11
2500 0	2499.18	F7 4		5.55			
					28.06 29.33	-49.61	0.16
	2599.13 2699.07	-56.4	1.81	295.13	29.33	-52.46	0.08
	2799.02			297.43	30.78	-55.38 -58.38	0.13
	2898.95		1.98	299.76	32.38	-58.38	0.07
2300.0	2030.33	-66.6	2.09	300.78	34.14	-61.46	0.13
3000.0	2999 00	C O E	2 10	704 -	36.15	24 22	
3100.0	3098.81	-72.9	2.10		36.15	-64.60	0.17
	3198.72		2 41	3 <b>07</b> .13 3 <b>08</b> .70	38.44 4 <b>0.</b> 96	-67.76	
	3298.63						
3400.0			2.50	310.17	45.71	-74.34	0.16
3400.0	3398.52	-84.2	2.67	310.66	<b>43.</b> 7) <b>46.6</b> 7	-7 <b>7.</b> 81	0.11
3500.0	3498.41	-00 7					
3500.0	3598.27	-00.3 -07.0	2.32 7 An	211 10	49.84	-81.52	
3300.0	3698.12	-07.4			53.27 56.84	-05.48	0.17
3800.0	3797.95	-37.4 -102.2		310.20	56.84	-89.64	0.11
שישטפנ	0121.32	-102.2	3.37	313.04	60.64	-93.91	0.24

Incun Survey ARCO OIL & GAS COMPANY

Wall number : EMPIRE ABO "K" NO.

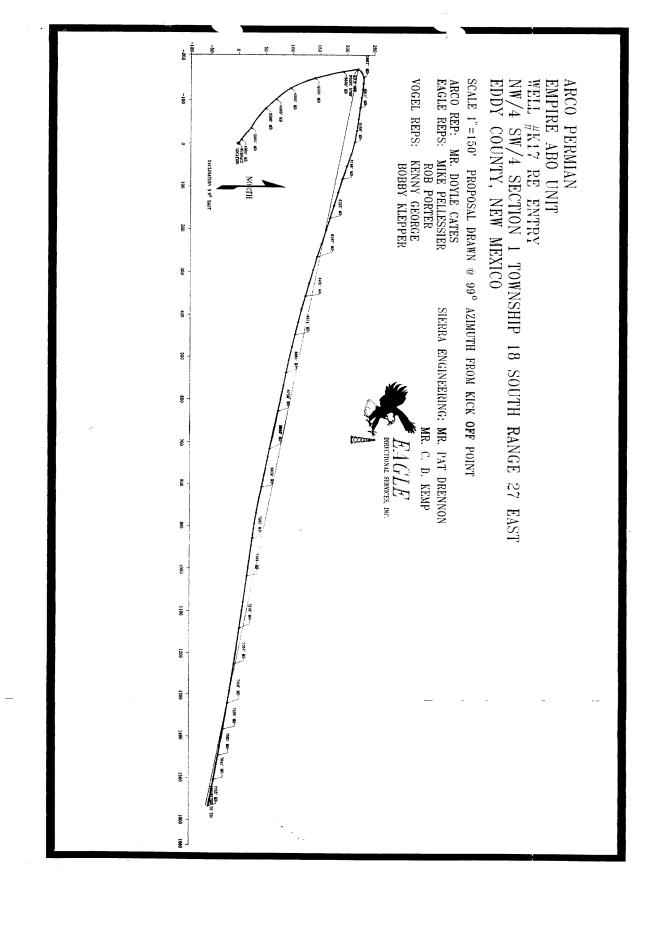
Date : 24-MAY-95

paga 2

	Measured	Vertical	Vert.	Inc	Azimuth	Coordi	nates	D-leg	
	Depth	Depth		Dag	Deg	Latitude	Departure	/100ft	
						North	West	<b></b>	
•	3900.0	3897.77	-107.2	3.50	313.09	64.73	-98.29		
	4000.0	3997.58		3.68	312.42	68.98	-102.89	0.18	
	4100.0	4097.36	-117.9	3.94	312.80	73.48	-107.78	0.26	
	4200.0	4197.11	-123.8	4.17	313.98	78.34	-112.91	0.24	
	4300.0	4296.82	-129.9	4.48	316.34	83.69	-118.23	0.36	
	4400.0	4396.50	-136.1	4.72	319.48	89,64	-123.60	0.35	
	4500.0	4496.15	-142.2	4.80	324.09	96.16	-128.72	0.39	
	4600.0	4595.77	-148.1	5.19	327.23	103.35	-133.62	0.48	
	4700.0	4695.33	-154.1	5.63	332.27	111.50	-138.35	0.65	
	4800.0	4794.80	-159.9	6.14	336.90	120.76	-142.74	0.70	
	4900,0	4894.21	-165.7	6.29	336.37	130.69	-147.03	0.16	
	5000.0	4993.62	-171.3	6.22	339.19	140.78	-151.15	0.32	
	5100.0	5093.05	-176.4	5.04	341.67	150.84	-154.73	0.32	
g james a same	5200.0	5192.48	-181.1	6.11	343.75	160.94	-157.87	0.23	
	5300.0	5291.91	-185.6	6.21	345.12	171.28	-160.75	0.18	
	5400.0	5391.34	-189.5	5.96	348.94	181.60	-163.14	0.49	
	5500.0	5490.80	- <b>192.</b> 9	5.98	351.26	191.84	-164.92	0.24	
	5600.0	5590.29	-195.3	5.64	347.36	201.78	-186.79	<b>0</b> ′.52	4, W + 71
	5700.0	5689.84	-199.8	5.15	346.67	210.95	-158.90	0.49	
	5798.0	5787.48	-202.8	4.73	3 <b>50.</b> 13	219.21	-170.61	0.53	

At Bottom Hole Location: Measured Depth Horiz. Diep1. Closure Dir. = 5798.0 = 277.775 = 322.107

--- --



Form 3160-4 (/uly 1992)

## UNITED STATES SUBMIT IN DUPLICATE\* DEPARTMENT OF THE INTERIOR (See other instructions on experience) - Teveres side)

FORM API'ROVED OMB NO. 1004-0137

Expires: February 28, 1995

		BUREAU	OF LAND M	ANAGEM	ENT	:	: L v' - :	· _Ievel	se side)				1.M-055	737
WELL COM	PLET	ION OF	RECOM	<b>IPLE</b> 1	TION	REPO	ORT A	ND L	OG*				OR TRIBE NAME	
1a. TYPE OF WELL: b. TYPE OF COMPI	LETION:	WEIT [	GAS WELL	DRY		eth NOV		:2. añ	1.17	7. UNIT	AGREEN	MENT NA	NE	
NEW C	WORK C	DEEP.	PLUG BACK	DIFF. RESVI	, 🗌 o	ther HOR	IZONT	AL EXT	- 70 <u> </u>				AME, WELL N	<b>D</b> .
2. NAME OF OPERATOR										EMPI	RE A	BO UI	NIT"K"	17
ARCO PERMI									/	9. API W				
3. ADDRESS AND T			TV 70700			0.1	F 600	F C 7 0				0070		
P.O.BOX 16 4. LOCATION OF WELL	(Report la	DLAND,	and in accordan	ce with any !	State ream		5 688-	-30/2		4	D AND I	-	R WILDCAT	
At surface 1980 FSL 8					•	Í	-				., T., R.,		LOCK AND SURV	EY
At top prod. interval	reported be	low		,						1-1	.8S-2	7E		
At total depth 1928 FSL &	2216	FEL		14. PERMI	T NO.		DATE IS	SUED		12. COUL PART			13. STATE	
5. DATE SPUDDED	I IS DATE	T.D. REACHE	D 17 DATE (	OMPL.(Read	ly to prod	1	18 FLEV	ATIONS (DF.	RKB. RT.	1		19. EL	EV. CASINGHEAD	
05-22-95		·08-95		3-95					, 1020, 101,	0.4 0.7 0.7				
20. TOTAL DEPTH, MD 4		21. PLUG, BA	CK T.D., MD & TV		F MULTIPI OW MANY	E COMPL.		23. INTE	RVALS LED BY	X ROT.	ARY TO	DLS	CABLE TOOLS	
4. PRODUCING INTERV 5797-7705	AL(S), OF THE	HIS COMPLET	ON - TOP, BOTTO!	M, NAME (MI	O AND TVI	K!"		V U.	יעו <sup>ם</sup>			ŀ	WAS DIRECTION. SURVEY MADE	<b>4</b> L
6. TYPE ELECTRIC ANI	D OTHER LO	GS RUN					OFC 1	<del>8 199</del>				27. WAS	WELL CORED	
18.			CASI	NG RECOR	D (Repo	nak shine	s sel in tel	old.	DIV.	0				
CASING SIZE/GRADE	WEI	GHT, LB./FT.	DEPTH S	ET (MD)		E SIZE	,	TOP OF C	EMENT, CE	MENTING	RECORI	<b>.</b>	AMOUNT PUL	LED
3 5/8	24		1470		12 1	<u> </u>		RC. G					0	
5 1/2	14		6137		7 7/8	8	CI	RC					0	
9.			VER RECORD					30.			G REC		DAGKER SET	
SIZE	TOP (M	D) E	OTTOM (MD)	SACKS CE	MENI*	SCRE	EN (MD)	2 3/		906	SET (MI	"	5772	MD)
		1 1 2 2		A CONTRACTOR OF THE CONTRACTOR	لللبيا	1		1						
1. PERFORATION RECO 5797-7705		, size and nu	mber) U 1 U 1			32.	ACI I INTERVAL	ID, SHOT,					E, ETC. TERIAL USED	
3737-7700	011	- Agrana	J.Ja	M			-7705	C (MID)		/1700			I SKIAL COLD	
			JEC 1 4 1	a t		0.0.			1					
							·							
			V									. '		
3.*					RODUCTI									
OATE FIRST PRODUCTION 06-13-95	ON	PRODUCTIO	DN METHOD ( <i>Flow</i>	ring, gas lift,	, pumping	- size and	type of pun	<b>(</b> p)			WELL S	*	Producing or	
DATE OF TEST	HOURS T	ESTED	CHOKE SIZE	PROD'N. TEST PE	. FOR ERIOD	OIL - BBI		GAS - MC	CF.	WATER	R - BBL.	Ι'	GAS - OIL RATIO	
LOW. TUBING PRESS.	CASING F	PRESSURE	CALCULATED 24-HOUR RATE	OIL - BB	L.	G,	AS - MCF.	1	WATER -	BBL.		OIL GRA	NTTY - API (CORR	.)
4. DISPOSITION OF GAS	(Sold, used	for fuel, ven	ted, etc.)						<u> </u>	TEST W	ITNESSE	D BY		
35. LIST OF ATTACHME	NTS		·							1				
DIRECTIONAL					i	all arm#-t-l	u a a mile							
66. I hereby certify that the							ecords							
SIGNED KAN	191) L	losne	ll	TÌ	TLE AGI	ENI					DAT	F 11-	:16−95	

N.M. OH LOTIS. LANG SAME

Form 3160-5 (June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR TOSIS, NW 3821
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

BUREAU OF	LAND MANAGEMENT	5. Lease Designation and Serial No.
SUNDRY NOTICES AN	D REPORTS ON WELLS	NM0557371
Do not use this form for proposals to drill	6. If Indian, Allottee or Tribe Name	
Use "APPLICATION_FOR	PERMIT - * for such proposals	7 KH-h-CA A
	IN TRIPLICATE	7. If Unit or CA, Agreement Designation 8910138010
1. Type of Well    X Oil   Gas   Other		8. Well Name and No.
2. Name of Operator		Empire Abo Unit "K" 17
ARCO Permian		9. API Well No.
3. Address and Telephone No.		30-015-00703
P.O. Box 1089, Eunice, NM 88231	505-394-1649	10. Field and Pool, or exploratory Area
4. Location of Well (Footage, Sec., T., R., M., or Survey Descr	-	Empire Abo
Unit Letter L, 1980' FSL & 660' FWL Section 1, T18S, R27E		11. County or Parish, State
300010H 1, 1103, NE/E		Eddy NM
12. CHECK APPROPRIATE BOX(	s) TO INDICATE NATURE OF NOTICE, REPO	
TYPE OF SUBMISSION	TYPE OF ACTION	I
X Notice of Intent	Abandonment	Change of Plans
	X Recompletion	New Construction
Subsequent Report	Plugging Back	Non-Routine Fracturing
	Casing Repair	Water Shut-Off
Final Abandonment Notice	Altering Casing	Conversion to Injection
	Other	Dispose V/ater
		Dispose V/ater (Note: Report results of multiple completion on We Completion or Recompletion Report and Log form
<ol> <li>Describe Proposed or Completed Operations (Clearly state give subsurfacelocations and measured and true vert</li> </ol>	all pertinent details, and give pertinent dates, including estimated date ical depthsfor all markersand zonespertinentio this work.)*	of starting any proposed work. If well is directional
TD: 6137' PBD: 6101' PERFS: 58	00 <i>-</i> 7705′	
RIH w/4-3/4" bit & scraper to top o RUWL. GIH w/CIBP & set @ 5770'. PO		
	& 2-3/8" tbg. Land SN at +/- 5736'.	AFPROVED
NDBOP. NUWH. Swab for test. GIH	w/GA, pmp & rods. Hang well on. RDPU. RT	P. AFFROVED
	and the state of t	
		1
	•	
14. I hereby certify that the foregoing is true and correct Signed	Title Sr. Administrative Assistant	Date 01/08/02
(This space for Federal or State office use)		
Approved byConditions of approval, if any:	Title	Date
Commons of approval, it dity:		

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 statem or representations as to any matter within its jurisdiction.

CEVEDAR OBJECTIVE 94 9: 09 District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

## State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 copy of the final affected wells list along with 1 copy of this form per number of wells on that list to appropriate District Office

Form C-104A

March 19, 2001

## **Change of Operator**

Previ	ous Operator Information:	Nev	v Operator Information:
	-	Effective Date:	12/31/2001
OGRID:	000900	New Ogrid:	000778
	ARCO Permian		BP America Production Company
Address:	P.O. Box 3092	Address:	P.O. Box 3092
Address:			
City, State, Zip:	Houston, Texas 77253	_ City, State, Zip:	Houston, TX 77253
New Operator Signature:  Printed name:  Title:	Sr. Dogulatory Specialist		RECLIVED OCD ARTESIA
Previous operator	complete below:	]	NMOCD Approval
	ARCO Permian	Signature: 4	in W. Gen?
Previous		Printed	which Sylvinor
OGRID: 0	nnoon	Name:	which spewier
Signature:	Mary Corley	District:	
Printed	/	D	FEB 0 7 2002
Name: N	Mary Corley	Date:	

N.M. Oil Con Toly-Ois FORM APPROVED 1991 V. Gmad UNITED STATES Form 3160-5 Budget Bureau No. 1004-0135 DEPARTMENT OF THE INTERIOR (June 1990) Expires: March 31, 1993 BUREAU OF LAND MANAGEMENT 5. Lease Designation and Serial No. NM0557371 SUNDRY NOTICES AND REPORTS ON WELLS 6. If Indian, Allc ttee or Tribe Name Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION FOR PERMIT - " for such proposals 7. If Unit or CA, Agreement Designation SUBMIT IN TRIPLICATE 8910138010 1. Type of Well 8. Well Name and No. X Oil Well Empire Abo Unit "K" 17 2. Name of Operator BP America Production Company 9. API Well No. 3. Address and Telephone No. 30-015-00703 P.O. Box 1089, Eunice, NM 88231 10. Field and Pool, or exploratory Area 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Empire Abo Unit Letter L, 1980' FSL & 660' FWL Section 1, T18S, R27E 11. County or Parish, State CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12. TYPE OF SUBMISSION TYPE OF ACTION Notice of Intent Abandonment Change of Plans Recompletion New Construction X Subsequent Report Plugging Back Non-Rou ine Fracturing Casing Repair Water Shut-Off Final Abandonment Notice Altering Casing Conversion to Injection Workover 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 pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally give subsurfacelocations and measured and true vertical depths for all markers and zones pertinent to this work.)\* TD: 6137' CIBP: 5770' PERFS: 5472-5736' 05.30.02: Unset pmp & TOH w/rods & pmp. NDWH. NUBOP. Unsetat TAC & POH w/tbg. 05.31.02: TIH w/bit & scraper. Testing tbg to 5000# psi below slips. Tag @ 5780'. TOH. 06.03.02: RU & perf 2 JSPF 5472-79', 5492-94', 5498-5516', 5527-29', 5540-48', 5565-75', 5580-86', 5591-97', 5613-17', 5638-59', 5540-58', 5565-75', 5580-86', 5591-97' 5613-17', 5638-59', 5710-15', 5722-36', 230 holes. TIH w/treating pkr. Set @ 5383'. 06.04.02: Drop SV. RU & pmp 20 bbls 7.5% HCL to pickle tbg. Swab back acid. Fish SV. Pmp 5,150 gals 15% HCL w/350 ball sealers. TOH w/pkr. SION. 06.05.02: TIH w/3-3/4" bailer & recover ball seals. TOH. TIH w/production tbg. Set @ 57/4" ACCEPTED: @ 5720'. NDBOP. Set TAC NUWH. 06.07.02: Load & test to 500# psi. Held OK. In 24 hrs pmp 0 BO, 1 BW, 2 MCF JUN 2 1 2002 LES BABYAK PETROLEUM ENGINEER 14. I hereby certify that the foregoing is true and con Title Sr. Administrative Assistant

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 statem or representations as to any matter within its jurisdiction.

Date 06.18.02

Date

Title

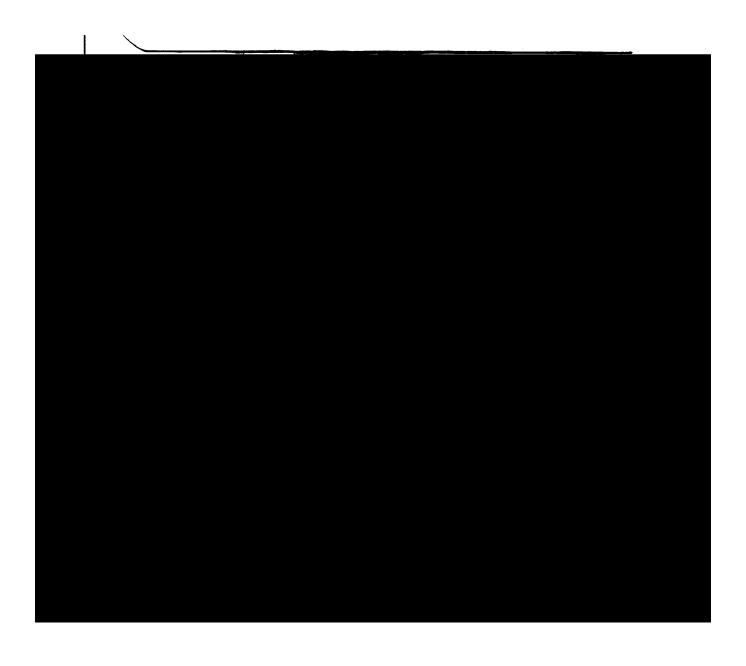
(This space for Federal or State office use)

Conditions of approval, if any:

Approved by.

466850-W 28 11047-G 28 11057-0 28 12373-G

DD-105(H) Appr 1-18-95



	UNITED STATE EPARTMENT OF THE I UREAU OF LAND MANA	NTERIOR OCD-AR	ΓESIA	OMB i Expires: N	I APPROVED NO. 1004-0135 ovember 30, 2000
SUNDRY	5. Lease Serial No. NMNM055737	1			
Do not use the abandoned we	6. If Indian, Allottee	or Tribe Name			
SUBMIT IN TRI	PLICATE - Other instru	ctions on reverse side.		7. If Unit or CA/Agn NMNM70945X	eement, Name and/or No.
Type of Well     ☐ Gas Well ☐ Otl	8. Well Name and No EMPIRE ABO K				
Name of Operator     BP AMERICA PRODUCTION	COntact:	KELLIË D. MURRISH E-Mail: murrikd@bp.com		9. API Well No. 30-015-00703-	00-S1
3a. Address		3b. Phone No. (include area code) Ph: 505.394.1649		10. Field and Pool, o	F Exploratory
HOUSTON, TX 77253 Euro  4. Location of Well (Footage, Sec., 1	ice, Nm 88231	Fx: 505.394.1624			
4. Location of Well (Footage, Sec., 1	C., R., M., or Survey Descriptio	RECE	IVED	11. County or Parish	, and State
Sec 1 T18S R27E NWSW 19	80FSL 660FWL	NÓV 1	9 2004	EDDY COUNT	Y, NM
		<u> </u>	ATESIA		
12. CHECK APPI	ROPRIATE BOX(ES) To	O INDICATE NATURE OF N	OTICE, R	EPORT, OR OTHE	ER DATA
TYPE OF SUBMISSION		TYPE OF	ACTION		
Notice of Intent	☐ Acidize	□ Deepen	☐ Produc	tion (Start/Resume)	☐ Water Shut-Off
_	☐ Alter Casing	☐ Fracture Treat	□ Reclam		☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	□ Recom		Other
☐ Final Abandonment Notice	☐ Change Plans	Plug and Abandon	_	rarily Abandon	
	Convert to Injection	Plug Back	□ Water I		
Attach the Bond under which the wo following completion of the involved	ally or recomplete horizontally, in k will be performed or provided I operations. If the operation re bandonment Notices shall be fi	nt details, including estimated starting, give subsurface locations and measure the Bond No. on file with BLM/BIA sults in a multiple completion or recolled only after all requirements, including	red and true v . Required su mpletion in a	ertical depths of all pert absequent reports shall be new interval, a Form 31	inent markers and zones. be filed within 30 days 60-4 shall be filed once
TD: 6137' PBD: 5770' CIBP	PERFS: 5472-5736'				
SET CIBP @ 5442' W/35' CM CIRC HOLE W/PKR FLUID TEST TO 500# FOR 30 MINS IDLE WELL		* Perform Justificat	MI:	or TA st	t atus.
ATTACHMENT: WELLBORE	SCHEMATIC EAU-N-90	1			
14. I hereby certify that the foregoing is	Electronic Submission	#35932 verified by the BLM Well	Information	n System	
Cor	For BP AMERIC	CA PRODUCTION CO, sent to the cessing by ARMANDO LOPEZ on	e Carlsbad	-	
Name (Printed/Typed) KELLIE D	•		~97	PRESENTATIVE	
Signature (Electronic	Submission)	Date 0940/20	004		
	THIS SPACE E	OR FEDERAL OR STATE (	SERVE II	SE.	

Committed to AFMSS for processing by ARMANDO LOPEZ on 09/10/2004 (04AL0355SE)

Name (Printed/Typed) KELLIE D. MURRISH

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 09/20/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

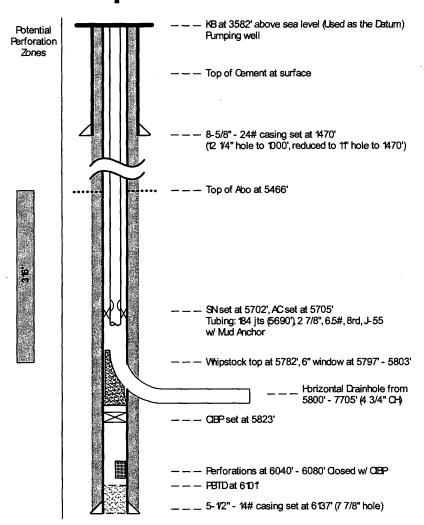
Approved By /s/ Joe G. Lara Title Petroleum Engineer

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

## Empire Abo Unit 'K' 17





# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON** 

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

29-Jul-05

### BP AMERICA PRODUCTION COMPANY

PO Box 1089 Eunice NM 88231-0000

NOTICE OF VIOLATION - Inactive Well(s)

### Dear Operator:

A review of our records and recent inspection(s) indicate that the subject well(s) has been shut-in for an extended period of time. Rule 201 of the Rules and Regulation of the Oil Conservation Division provides that a well may be shut-in no longer than sixty days after suspension of drilling operations, upon determining that ther well is no longer usable (e.g., a dry hole), or one year after last production. To comply with guidelines as established in the Rules and Regulations, corrective actions must be taken immediately and the well(s) brought into compliance.

The detail section below indicates preliminary findings and/or probable nature of the violation.

The following options are available:

- 1. Immediately restore the well(s) to production, injection or disposal as applicable.
- 2. Request 'Temporary Abandoned' status pursuant to Rule 203, which requires that you set a plug and conduct a mechanical integrity test.
- 3. Submit a proposal to 'Plug and Abandon' the well(s) pursuant to Rule 202, proceed with plugging procedures on a timely basis after the proposal has been evaluated, amended and/or approved.

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 Division 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.

## IDLE WELL INSPECTION DETAIL SECTION

**EMPIRE ABO UNIT 017A** L-1-18S-27E 30-015-00703-00-00 Inspection No. iCLB0521037721 7/29/2005 10:28:39 AM Corrective Action Due by: 11/1/2005 Inspection Date: Type Inspection Inspector Violation? \*Significant Non-Compliance? Routine/Periodic Chris Beadle Yes No Comments on Inspection: idle Well (Rule 201). No flowline attached, no production equipment on site. Last reported production

was December 2002. Marker approximately 15 feet from wellhead for new well (AAO Federal 9).

Thank you for your prompt attention to this matter and your efforts in helping to protect our environment and the infrastructure of the oil and gas industry. Sincerely Artesia OCD District Office \* Significant Non-Compliance events are reported directly to the U.S. Environmental Protection Agency, Region VI, Dallas, Texas.

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Form 3160-5 (April 2004)

# UNITED STATES DEPARTMENT OF THE INTERIOR-BUREAU OF LAND MANAGEMENT

1	FORM APPROVED
i	OMB NO. 1004-0137
1	Expires March 31, 2007

## 5. Lease Serial No.

SUNDRY NOTICES AND REPORTS ON WELLS  Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.					ee or Tribe Name
RECEIVED					agreement, Name and/or No
Type of Well      Gas Well     Other      Name of Operator  BP America Production Company			T 1 1 2005	8. Well Name and EMPIRE ABO UK' 9. API Well No.	
3a. Address  P.O. Box 1089 Bunice NM 88231  4. Location of Well (Footage, Sec., T., R., M., or Survey in NWSW, SEC 1, T18S, R27E, 1980 FSL.	3b. Phone No. (include at 505.394.1600	rea code)	30.015.00703 10. Field and Pool EMPIRE ABO  11. County or Par	ol, or Exploratory Area	
12. CHECK APPROPRIATE	BOX(ES) TO IND	CATE NATURE OF	NOTICE, REP	ORT, OR OTHE	
TYPE OF SUBMISSION			PE OF ACTION		
Subsequent Report  Final Abandonment Notice  13. Describe Proposed or Completed Operation (clear) If the proposal is to deepen directionally or recomp	lete horizontally, give s	ils, including estimated start	Recomplet  Temporaril  Water Disp  ing date of any prosured and true ver	y Abandon  posal  posed work and applical depths of all pr	proximate duration thereof.
following completion of the involved operations. I testing has been completed. Final Abandonment Metermined that the final site is ready for final inspection.  TD: 6137' PED: 6101' VERTICAL WHIPSTOCK PERFS: 040-6080'  EP America Production Company required with the New Mexical Company required by the New Mexical Due Date for this notice is	Notices shall be filed or ction.)  PERFS: 5472-5  Quests a 60 day  cico Oil Conserv	ly after all requirements, in 736' CIBP: 5823' extention for the	cluding reclamation	n, have been compl	
The current scope of work include MIRUPU POH RODS & BQUIP REMOVE WHIPSTOCK & CIBP RIH W/PRR ASSY & SET BELOW HORIZO TEST LOWER PERFORATED INTERVAL EVALUATE FINDINGS FROM LOWER ZONE	INTAL SECTION	revious perfs @ 60	_	d for record - P	iMOCD
14. I hereby certify that the foregoing is true and correct Name (Printed Typed)  Kellie D. Murrish		Title Schedu			
August Human	S SDACE FOR FEE				
Approved by	SPACE FUR FEL	ERAL OR STATE OF		Date	
Conditions of approval, if any, are attached. Approval o certify that the applicant holds legal or equitable title to which would entitle the applicant to conduct operations the	those rights in the sub	arrant or Office			

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, 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.

Form 3160-5 (April 2004)

FORM APPROVED OMB NO. 1004-0137 Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR. OIL CONS. DIV-DIST. 2

OMB NO
Expires Mi
BUREAU OF LAND MANAGEMENTS ON WELST A. N.M. 88210

MANOS57371

MANOS57371

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.					Allottee or Tribe Name	
SUBMIT IN TRIPLICATE - Other instructions on reverse SHECEIVED					CA/Agreement, Name and/or No.	
1. Type of Well					e and No.	
BP America Production Company					No.	
3a. Address  3b. Phone No. (include area code)				30.015.00703		
P.O. Box 1089 Eurice NM 88231  4. Location of Well (Footage, Sec., T., R., M., or Survey I	505.394.1600			d Pool, or Exploratory Area		
•				EMPIRE AF	<b>5</b> 0	
NWSW, SEC 1, T18S, R27E, 1980' FSL	≪ 990. IMT				or Parish, State	
12. CHECK APPROPRIATE	BOX(ES) TO INC	DICATE NATURE OF	NOTICE, REPO	DRT, OR O	THER DATA	
TYPE OF SUBMISSION		ΤΥ	PE OF ACTION			
X Notice of Intent	Acidize	Deepen	Production	(Start/Resume)	Water Shut-Off	
Subsequent Report	Alter Casing	Fracture Treat	Reclamation	n	Well Integrity	
Subsequent report	Casing Repair	New Construction	Recomplete	;	X Other IDLE WELL	
Final Abandonment Notice	Change Plans	Plug and Abandon	Temporarily	y Abandon		
	Convert to Injection	on Plug Back	Water Disp	osal		
testing has been completed. Final Abandonment in determined that the final site is ready for final inspection. 6137' PED: 6101' VERTICAL WHIPSTOCK PERFS: 040-6080'  BP America Production Company required by the New Mexical Action Due Date for this notice in the current scope of work includes MIRUPU POH RODS & EQUIP REMOVE WHIPSTOCK & CIEP RIM W/PKR ASSY & SET BELOW HORIZOUTEST LOWER PERFORATED INTERVAL EVALUATE FINDINGS FROM LOWER ZONE	puests a 60 day of cico Oil Conservates 11.01.05.  The stesting the particle of the particle o	736' CTBP: 5823' extention for the ation Commission. revious perfs @ 60	Notice of Vi The Correct 50-6080 by:	olation ive MO	NTH PERIOD	
14. I hereby certify that the foregoing is true and correct Name (Printed Typed)  Rellie D. Murrish		Tále Schedu	ıler		thing for record - PIMOCO	
Ture W. Wlunest		Date 10.07.0	5	Acce		
THIS	S SPACE FOR FED	ERAL OR STATE OF				
Approved by (ORIG. SGD.) ALEXIS C.			EUM ENGI	NEER	OCT 13 2005	
Conditions of approval, if any, are attached. Approval o certify that the applicant holds legal or equitable title to which would entitle the applicant to conduct operations the	those rights in the subj	arrant or Office RF	0			

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, 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.

Approved by

## UNITED STATES

FORM APPROVED ARTSIA

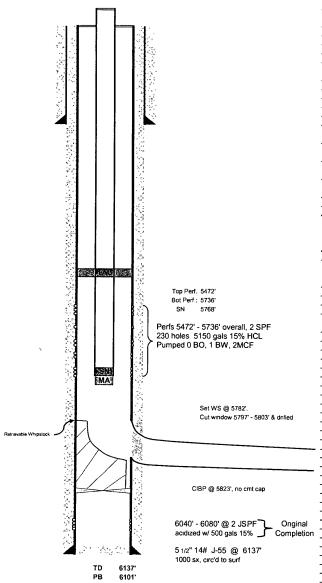
(Aprıl 200	DEPARTME	NT OF THE INTERI	OR n	EC 1 0 2008		NO. 1004-0137 March 31, 2007
	BUREAU OF	LAND MANAGEME	214.1		5. Lease Serial N	
	SUNDRY NOTICES	AND REPORTS	ON WELLS $OC$	D-ARTE	S MAN 10557371	
	Do not use this form for				6. If Indian, Allot	tee or Tribe Name
	abandoned well. Use For					
	SUBMIT IN TRIPLICATE -	Other instruction:	s on reverse side			Agreement, Name and/or No
	CNV II				NIMINIM70945X	
1. Type of					8. Well Name and	No.
<u> </u>					Empire Abo U	
	of Operator				К	
3a. Addres	merica Production Company		3b. Phone No. (include		9. API Well No.	
			•		30-015-00703	
-	Box 1089 Eunice NM 88231 on of Well (Footage, Sec., T., R., M., or Survey	Description)	575-394-1648	5		ol, or Exploratory Area
		Description			Empire Abo	
	Letter L, 1980 FSL & 660 FWL Lon 1, T18S, R27E				11. County or Pa	rish. State
Secti	OH 1, 1105, R2/E		•		Eddy	NM
	12 CUECK ADDRODDIATE	DOV(EQ) TO IN	NOATE MATURE OF	NOTICE DE		
	12. CHECK APPROPRIATE	BOX(ES) TO INL	TOTAL NATURE OF	- NOTICE, REF	OKT, OK OTHE	- K DATA
	TYPE OF SUBMISSION		Т	YPE OF ACTION	1	
	X Notice of Intent	Acidize	Deepen	Production	on (Start/Resume)	Water Shut-Off
		1 💳	Fracture Treat	Reclamat		Well Integrity
	Subsequent Report	Alter Casing	Fracture Freat	Recianiat	1011	i
		Casing Repair	New Construction	Recompl	ete	Other
	Einal Abandonment Notice	Change Plans	X Plug and Abandon	Temporar	rily Abandon	
		Convert to Injection	on Plug Back	Water Di	sposal	
					<del></del>	
If th Atta	cribe Proposed or Completed Operation (clearling proposal is to deepen directionally or recomplich the Bond under which the work will be perfectly the contract of the Bond under which the work will be perfectly the contract of the Bond under which the work will be perfectly the contract of the bond under which the work will be perfectly the contract of the bond under which the bond under the b	plete horizontally, give so formed or provide the l	ubsurface locations and me Bond No. on file with BLI	easured and true ve M/BIA. Required	ertical depths of all p subsequent reports s	ertinent markers and zones. hall be filed within 30 days
follo	owing completion of the involved operations. It is has been completed. Final Abandonment I	f the operation results in	n a multiple completion or	recompletion in a	new interval, a Forn	1 3160-4 shall be filed once
dete	rmined that the final site is ready for final inspe-	ction.) 🛨 Rem	ou e Rothing	ونعاديه طاطه	stock No	ue adequate
C~	of to cap CIBP - To	n of wind	ow wor T	(5	823- 575	27
1.	MIRU PU. Check tubing, casing	and surface pi	pe for pressure -	bleed off i	nto containmen	nt. Kill well
	as necessary. Monitor well a					
V2.	Monitor well and assure it is	stable. ND WH	, NU BOP. Releas	e TAC and TO	н.	
<b>7</b> 3.	TIH with CIBP on 2 3/8" tubir	_	_		_	using 25 sx
	Class C neat. PU to 5150'. I					
4.	TOH to 3400' (Glorieta top =	•				
5.	TIH with bull plug and perf r		-		_	
6.	TOH to 1550' (8 5/8" surface	_	_	ack balanced	.cement plug :	trom 1550' -
7.	1200'. PU and WOC 2 hours. T		_			·.
<i>,</i> •	TOH to 300' (Yates top = 172' TOH LD tubing.	/. F111 5 1/2"	casing from 500.	to surface	WILLIOU SX CI	iss Cheat.
8.	RD PU.			SEE .	ATTACHED	FOR
9.	Dig out WH and cut-off casing	heads to 3' belo	ow GL.	CONI		=
10.	Install regulation dry-hole m			re location	<i>ቸ</i> ባ <b>ዘ</b> ለ ታቸር	APPROVAL
	-	A CONTRACTOR T			_	
14. I hereb	by certify that the foregoing is true and correct	ASCEPTED I	Title	<del></del>		
Name (	(Printed/Typed)					
	Barry C. Price			Operations T	eam Lead	
	(N) - 1 ( # - >	HEU TO	) 2008.	· ·		

THIS SPACE FOR PEDERALICIES STATE OFFICE USE

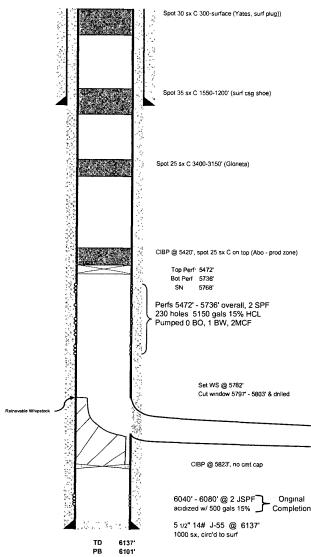
Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to apply to make to apply to make to apply to make to apply the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NIGOCL-District II Artice 314

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.



Existing	WB Dia		Empire Abo Unit K-17		
Status	Prod	ucing	Operator	BP America	
Lease	Empire a	Abo Unit	Zone	C	
Field	- (	)	API	30-015	-00703
NMOCD	Empire Abo Unit K-17 NMOCE				
Location	1980' FSL & 6	60 FWL, S-01	T-18S R-27E		
Reference			,		
KB	3,582	TVD		PBTD	6101'
GL	3,569	MTD		Last CIBP	5770'
Casing	Weight/Grade	Depth	Cmt Sx	Hole	TOC
8 5/8"	24#/J-55	1468	750 sx	11"	surf
5 1/2"	15.5#/J-55	6137	1000 sx	7 7/8"	surf
0	0	0	0	0	0
	Ů		, ,		
Spud	3/26/1959		Top Perf	5472'	
Completion Perforation His	4/20/1959		Bot Perf	5736'	
CIBP @ 5770	s, and Cement				
Current Tub	ulare: Blue h	over use dr	on down hoves	for descripti	ione
			op down boxes	for descripti	ions
Date sket	ulars: Blue b	oxes use dro 2/11/08	by	for descripti	ions
Date sketo Date tubula	ch checked	2/11/08	by by	for descripti	Top of Dept
Date sketo Date tubula	ch checked ars checked	2/11/08 Rod Asser	by by		Top of Dept
Date sketo Date tubula Tu	ch checked ars checked ubing and l	2/11/08 Rod Asser	by by mbly	length, ft	Top of Dept
Date sketo Date tubula Tt	ch checked ars checked ubing and I Description of 2.3/87/4.7#,U-5	2/11/08 Rod Asser FBG Assembly 5 EUE,8 Rnd,7	by by mbly	length, ft 12 00	Top of Dept from KB, ft
Date sketch Date tubula  Tt  # Jnts  173	ch checked ars checked Ubing and I Description of 2.3/8*/4.7#;U.5 2.3/8*(X.5.5*,0	2/11/08 Rod Asser IBG Assembly 5 EUE, 8 Rnd. T	by by mbly RKB	length, ft 12 00 5448 98	Top of Dept from KB, ft
Date sketo Date tubula  Tt  # Jnts  173	Description of 12,3/87/4,7#(U-5) 2,3/87/4,7#(U-5) 2,3/87/4,7#(U-5) 2,3/87/4,7#,U-5	2/11/08 Rod Asser IBG Assembly 5 EUE,8 Rnd.T	by by mbly RKB	length, ft 12 00 5448 98 2 75	Top of Dept from KB, ft 12 00 5460 98
Date sketc Date tubule Tt # Jnts 173 1 9 1	b checked are chec	2/11/08 ROD ASSER IBG ASSEMBLY 5 EUE, 8 R.n.d. T D.TAC 5 EUE 8 R.n.d. T 5 EUE 8 R.n.d. II	by by mbly RKB bg	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10	Top of Depi from KB, fr 12 00 5460 98 5463 73 5736 38 5768.84
Date sketo Date tubula  Tu  # Jnts 173 1 9	ch checked ars checked by the property of 2,3/67/4/7#,U-5 2,3/67/4/1/4/1-5 2,3/67/4/1/4/1-5 2,3/67/4/1/5 2,3/67/4/1/5 2,3/67/4/1/5 3,1/2/1/9.5#,U-5	2/11/08  Rod Asserbly 18G Assembly 5 EUE, 8 Rnd. 7 10 TAC 8 Rnd. 7 5 EUE 8 Rnd. 7 5 EUE 8 Rnd. 7 5 Slotted, MA' v	by by mbly RKB Tog PC Tog WWBull Plug	length, ft 12 00 5448 98 2 75 272 65 32 46	Top of Dep from KB, f 12 00 5460 98 5463 73 5736 38 5768.84 5769 94
Date sketc Date tubule Tt # Jnts 173 1 9 1	ch checked ars checked ars checked ars checked ars checked arbing and I Description of 2,3/87/4/74/U-5 2,3/87/4/74/U-5 2,3/87/4/74/U-5 2,3/87/4/74/U-5 2,3/87/4/74/U-5 2,3/87/4/74/U-5 3,1/27/19,54/14/3/2	2/11/08  ROD ASSER TBG ASSEMBLY 5 EUE, 8 Rnd. T D.TAC. 5 EUE 8 Rnd. T 5 EUE 8 Rnd. II	by by mbly  RKB  Tog  Correction  RKB  RKB  RKB  RKB  RKB  RKB  RKB  RK	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10	Top of Depl from KB, fr 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62
Date sketc Date tubule Tt # Jnts 173 1 9 1	ch checked ars checked bring and I Description of 2,3/87/4/7#,12-5 2,3/87/4/7*/4/7*/4/5/5/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2	2/11/08  Rod Asser FBG Assembly 5 EUE, 8 Rnd.T D.TAC 5 EUE 8 Rnd.T 5 EUE 8 Rnd.II 55 Slotted,MA	by by mbly RKB Tog 1919 PC Tog 1919 WBull RUG 2019	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10	Top of Depl from KB, fi 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62
Date sketc Date tubule Tt # Jnts 173 1 9 1	ch checked ars checked ubing and I Description of 2,3/87/4,7#3-5 2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7#3-2,3/87/4,7/8/4/4/4/4/4/4/4/4/4/4/4/4/4/4/4/4/4/4/	2/11/08  Rod Asser IBG Assembly 5 EUE, 8 Rnd. T D.TAC 5 EUE 8 Rnd. T 5 EUE 8 Rnd. T 5 EUE 8 Rnd. II	by by mbly  RKB Dg % PC (Tog %)  WBull Plug %	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10	Top of Dept from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62 5795 62
Date sketc Date tubule Tt # Jnts 173 1 9 1	ch checked are checked upling and I Description of 2,3/61/47#,U-5 2,3/81/47#,U-5	2/11/08 ROD ASSER IBG ASSEMBLY DITAC 5 EUE 8 Rnd. II	by by mbly RKB Dg Clog WBull Plug WBull Plug	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10	Top of Depi from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62 5795 62 5795 62
Date sketc Date tubule Tt # Jnts 173 1 9 1	ch checked ars checked ars checked ubing and l Description of 2,3/87,4/#1/3-5 2,3/87 4.7#1/	2/11/08 Rod Asser IPG Assembly 5 EUE, 8 Rnd.T D,TAC 5 EUE 8 Rnd.T 5 EUE 8 Rnd.I 5 Slotted,MA 5 Slotted,MA	by by by mbly RKB bg 3334 and bg 150 and bg	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10	Top of Depi from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62 5795 62 5795 62 5795 62
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Date sketu Date ubuku # Jnts 173 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	th checked us checked	2/11/08 Rod Asser [18G Assembly 5 EUE, 8 Rnd.1 5 EUE 8 Rnd.1 5 EUE 8 Rnd.1 5 Slotted MA \ 15 Slotted MA \ 10 TAC  Rod Assembly 18 will(12/X16) with Coupling of Bars \( \)	by by by mbly RKB Dg PG PG PG PG PG PG RKB RKB RR Inter-School	length, ft 12 00 5448 98 2 75 272 85 32 46 1 1 10 25 68	Top of Dept from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62 5795 62 5795 62 5795 62 5795 62
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Date sketu Date tubuk # Jnts 173 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	the checked ars checked are ch	2/11/08  Rod Asser  (Fig Assembly  5 EUE, 8 Rnd. 1  D,TAC  5 EUE 8 Rnd 1  5 EUE 8 Rnd 1  5 EUE 8 Rnd 1  6 EUE 8 EUE 8  6 EUE 8	by by by mbly RKB Dg RKB PG (Tig PC (T	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10 25 66 12 00 22 00 420 000 1000 00 475 00	Top of Dept from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62
Date sketu Date tubuk # Jnts 173 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	the checked ars checked are ch	2/11/08  Rod Asser  [86 Assembly 5 EUE 8 Rnd 1 6 EUE 8 EUE 8 6 EUE 8 6 EUE 8 EUE 8 6 E	by by mbly RKB Dg A A A A A A A A A A A A A A A A A A A	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10 25 66 12 00 22 00 420 000 1000 00 475 00	Top of Dept from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62 5795.62
Date sketu Date tubuk # Jnts 173 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	the checked ars checked ars checked ars checked ars checked ubing and I busington and I busington are checked 2,3/67/4,7/4/3-6 2,3/67/4,7/4/3-6 2,3/67/4/4,7/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/3-6 2,3/67/4/3-6 3,3/67/4/3- 3,3/67/4/3-6 3,3/67/4/3-3/2- 3,3/67/	2/11/08  Rod Asser  [86 Assembly 5 EUE, 8 Rnd.] 0,TAC 5 EUE 8 Rnd.] 5 EUE 8 Rnd. 5 EUE 8 Rnd. 6 Solded MA 6 Solded	by by by mbly RKB Dg RKB Dg RKB PC (Tog RKB) RKB RR line RKB RR line RKB RR line RKB	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10 25 66 12 00 22 00 420 000 100 000 475 00	Top of Dept from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5795 62
Date sketu Date tubuk # Jnts 173 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	the checked ars checked ars checked ars checked ars checked ubing and I busington and I busington are checked 2,3/67/4,7/4/3-6 2,3/67/4,7/4/3-6 2,3/67/4/4,7/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/4,3/67/4/3-6 2,3/67/4/3-6 2,3/67/4/3-6 3,3/67/4/3- 3,3/67/4/3-6 3,3/67/4/3-3/2- 3,3/67/	2/11/08  Rod Asser  [86 Assembly 5 EUE, 8 Rnd.] 0,TAC 5 EUE 8 Rnd.] 5 EUE 8 Rnd. 5 EUE 8 Rnd. 6 Solded MA 6 Solded	by by by mbly RKB Dg	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10 25 66 12 00 22 00 420 000 100 000 475 00	Top of Dept from KB, ft 12 00 5460 98 5463 73 5736 38 5768.84 5769 94 5795 62
Date sketu Date tubuk # Jnts 173 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	the checked ars checked ars checked ars checked ars checked ubing and I busington and I busington are checked 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,747/3-56 2 3/67/4,75/4,76/4,75/4,76/4,76/4,76/4,76/4,76/4,76/4,76/4,76	2/11/08  Rod Asser  [86 Assembly 5 EUE 8 Rnd 1 0,TAC 1 5 EUE 8 Rnd 1 5 EUE 8 Rnd 1 6 EUE 8 Rnd 1 6 Soluted MA	by by by mbly RKB Dg RKB Dg RKB PC (Tog RKB) RKB RR line RKB RR line RKB RR line RKB	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10 25 66 12 00 22 00 420 000 100 000 475 00	Top of Dept from KB, ft 12 00 5460 98 5463 73 5736 38 5786.84 5795 62



Propose	d WB Dia		Empire Ab	o Unit K-17		
Status		Producing Or Empire Abo Unit		BP Ar	nenca	
Lease		Empire Abo Unit Zone 0		-		
Field			API		-00703	
NMOCD	Empire Abo	o Unit K-17	NMOCD	<u> </u>		
Location 1980' FSL & 660 FWL, S-01 T-18S R-27E						
Reference						
KB	-,	TVD	6137	PBTD	6101'	
GL	3,569	MTD		Last CIBP	5770'	
Casing	Weight/Grade	Depth	Cmt Sx	Hole	TOC	
8 5/8"	24#/J-55	1468	750 sx	11"	surf	
5 1/2"	15.5#/J-55	6137	1000 sx	7 7/8"	surf	
0	0	0	0	0	0	
		-				
Spud	3/26/1959		Top Perf	5472'		
Completion	4/20/1959		Bot Perf	5736'		
erforation His						
Vhinstock 578	82-5812" CIRP 6	ก 5823°				
	32-5812*, CIBP (					
Current Tub	ulars: Blue bo	oxes use dro		es for descrip	itions	
Current Tub Date sket	ulars: Blue bo		by:	es for descrip	itions	
Date sketo Date tubula	ulars: Blue bo	oxes use dro 2/11/08	by:	es for descrip	Top of Dep	
Date sketo Date tubula	ulars: Blue both checked	2/11/08 cod Assem	by:	length, ft	Top of Dep	
Date sketo Date tubula Tul	ulars: Blue be th checked ars checked bing and R Description of 1 [2 3/8* 4.7#:J-58	DXES USE dro 2/11/08 COD ASSEMI	by: by:    bly:    RKB		Top of Dep	
Date sketo Date tubula Tul # Jnts	ulars: Blue be th checked ars checked bing and R Description of 1 [2 3/8* 4.7#:J-58	DXES USE dro 2/11/08 COD ASSEMI	by: by:    bly:    RKB	length, ft	Top of Deg from KB,	
Date skete Date tubula Tul # Jnts 173 1 9	ulars: Blue bech checked are checked bing and R Description of 1 2 3/6°, 4.7#, 1-5² 2 3/6°, 2.78, 3-5°, 0 2 3/6°, 4.77#, 3-5°	2/11/08 2/11/08 COD ASSEMBLY DITAC	by: by hbly RKB	length, ft 12 00 5448 98 2 75 272 65	Top of Dep from KB, 12 00 5460 98 5463.73	
Date sketce Date tubula  Tul  # Jnts  173  1  9	ulars: Blue bech checked ars checked bing and R Description of 12 3/8°, 4.7#, J-5°, 2.3/8°, 2.	oxes use dro 2/11/08  Od Assembly 5-EUE'8 Rid.T  D.TAC	by: bly RKB bg	length, ft 12 00 5448 98 2 75 272 65 32 46	Top of Der from KB, 12 00 5460 98 5463.73 5736 38	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue behiched ars checked bing and R Description of 12 3/81, 4.7#, 3-51 2.3/81, 4.7#, 3-52 2.3/81, 4.7#, 3-52 2.3/81, 4.7#, 3-53 2.3/81, 4.7#, 3-53 2.3/81, 4.7#, 3.53	oxes use dro 2/11/08 OOD ASSEM (BG ASSEMBLY 5 EUE'8 R.Nd.T D.TAC	by by albly RKB	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Deg from KB, 12 00 5460 98 5463.73 5736 38 5768 84	
Date sketce Date tubula  Tul  # Jnts  173  1  9	ulars: Blue bitch checked ars checked bring and R Description of 1 2 3/81/4.7#.3-51 2 3/81/4.7#.3-51 2 3/81/4.7#.3-51 3 3/81/4.7#.3-51 3 3/81/4.7#.3-51 3 3/81/4.7#.3-51 3 3/81/4.7#.3-51 3 3/81/4.7#.3-51 3 3/81/4.7#.3-51	OXES USE DO 2/11/08 OOD ASSEM (BG ASSEMBLY 5-EUE'8 ROD.TAC 5-EUE'8 ROD.TAC 5-EUE'8 ROD.TAC 5-EUE'8 ROD.TAC	by: by ably RKB bg C (bg	length, ft 12 00 5448 98 2 75 272 65 32 46	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 84 5769 94	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue beh checked bing and R Description of 12 3/6% 4.7# J-5: 2.3/6%	DOMES USE DOMESTICATION OF THE PROPERTY OF T	by: by ably RKB bg: C (Tbg)	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 84 5769 94 5795 62	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue but checked are checked bring and R Description of 1 2 3/8*, 4.7#, J-5; 2.3/8*, 4.7#, J-5; 2.3/8	DOMES USE DOMESTICATION OF THE PROPERTY OF T	by by ably RKB bg PC (Tog)	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 84 5769 94 5795 62 5795 62	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue be the checked are checked bring and R Description of 1 2 3/6", 4.7#, J-5! 3 3.1/2", 9.5#, J-5	oxes use dro 2/11/08 Od Assembly 5 EUE 9 Rnd T D.TAC 5 EUE 9 Rnd T 5 EUE 9 Rnd T 5 EUE 9 Rnd T	by by hy	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 94 5795 62 5795 62 5795 62	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue but the checked are checked bring and R Description of 0 2 3/8; 4.7#, 3-5; 2.3/8; 4.7#, 3-5; 2.3/8; 4.7#, 3-5; 3.3/8; 3.3/8;	oxes use dro 2/11/08  Od Assembly 5:EUE'8 Rnd.T 5:EUE'8 Rnd.IF 5:EUE'8 Rnd.IF 5:EUE'8 Rnd.IF	by: by ably RKB bg: C(Tbg) V(Bull Plug	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 84 5769 94 5795 62 5795 62 5795 62	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue bith checked ars checked bing and R Description of 12 3/81 4.7#.J-52 2.3/81 4.7#.J-55 2.3	oxes use dro 2/11/08  Od Assemtly  5 EUE'8 Rnd.T  5 EUE'8 Rnd.T  5 Slotted MA, w	by by hbly RKB bg CC (Tbg Section 1981)	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 84 5795 62 5795 62 5795 62 5795 62 5795.62	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue but h checked ars checked bing and R Description of 12 3/86, 4.74, J-55, 2,3/86, 4.74, J-55, 3,1/21, 9,5%, J-5, 3,1	DXES USE dro 2/11/08 2/11/08 OOD ASSEM (BG ASSEMBLY) SEUTE B RIGHT D TACK SEUTE B RIGHT SEUTE B RIGH	by by by hibly RKB bg C (Tbg WBull Rlug	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 94 5795 62 5795 62 5795 62 5795 62 5795.62	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue bith checked ars checked bing and R Description of 1 2 3/81 4.7# J-52 2 3/81 4.7# J-53 2 3/81 4.7# J-53 3 1/21 9.5% J-53 S-53 S-53 S-53 S-53 S-53 S-53 S-53 S	oxes use dro 2/11/08  Od Assem BG Assembly 5 EUE 8 Rnd, T 5 EUE 8 Rnd, T 5 EUE 8 Rnd Rnd, T 6 EUE 8 Rnd, T 7 EUE 8 Rnd, T 7 EUE 8 Rnd, T 8 EU	by by by hibly RKB bg C (Tbg WBull Rlug	length, ft  12 00 5448 98 2 75 272 65 32.46 1 10	Top of Deg from KB, 12 00 5460 98 5463.73 5736 38 5769 94 5795 62 5795 62 5795 62 5795 62 5795.62	
Date sketc Date sketc Date tubula # Jnts 173 1 1 1 1	ulars: Blue buth checked ars checked bing and R Description of 1 2 3/81, 4 7 4 J-5 2 3/81, 4 J	oxes use dro 2/11/08  OOA Assembly  GEUE'S Rid-T D.TAC D.TAC D.TAC EUE'S Rid-T D.TAC SEUE'S RID-T D.TAC SEUE	by by hill by RKB bg All By By All By	length, ft 12 00 5448 98 2 75 272 65 32 46 1 10 25 68	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 94 5795 62 5795 62 5795 62 5795 62 5795.62	
Date sketo Date tubula  Tul  # Jnts  173  1  9  1	ulars: Blue but he checked are checked bing and R Description of 1 2,3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 3	oxes use dro 2/11/08  2/11/08  Ood Assembly  Grade Fraid To TAC  D TAC  D TAC  S EUE'S Rind, To  S EUE's Rind, To  S Sichted MA w  d S Sichted MA w  A S Sichted MA w  To TAC	by by by libly RKB bg ARAB PR	length, ft 12 00 5448 98 2 75 272 65 32 46 1 1 10 25 68	Top of Der from KB, 12 00 5460 98 5463,73 5736 38 5768 94 5795 62 5795 62 5795,62 5795,62 5795,62	
Current Tub Date sketc Date tubuls Tul # Jnts 173 1 9 1 1 1 # Jnts # Rods	ulars: Blue bith checked ars checked bing and R Description of 1 2 3/61,4 7#, J-55 Current RC Description of 1 1,1/47/Dia X 22/8	DXSS USE DIO DE LA COMPANIA DEL COMPANIA DE LA COMPANIA DEL COMPANIA DE LA COMPANIA DEL COMPANIA DE LA COMPANIA DEL COMPANIA DE LA COMPANIA DEL COMPANIA DE LA COMPANIA DEL COMPANIA DE LA COMPANIA DE LA COMPANIA DE LA COMPANIA DE LA	by by by ibly RKB bg Aby	length, ft 12 00 5448 98 2 75 22 65 32.46 1 1 0 25 68	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5768 84 5769 52 5795 62 5795 62 5795.62 5795.62	
Date sketc Date sketc Date tubuls  Tul  # Jnts 173 1 9 1 1 1 1 # Hods 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ulars: Blue but he checked are checked bing and R Description of 1 2,3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,2 3/81,4 7#,3-51,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 ,5#,3 3,1/21,9 3	oxes use dro 2/11/08  OCI ASSERT  BE ABORD  BE EUE 8 Rnd, T  BE EUE 8 Rnd,	by by by hill by RKG bg APA PARA PARA PARA PARA PARA PARA PARA	length, ft 12 00 5448 98 2 75 272 65 32 46 1 1 10 25 68	Top of Der from KB, 12 00 5460 98 5463.73 5736 38 5769 94 5795 62 5795 62 5795 62 5795 62 5795 62	
Current Tub Date sketc Date tubuls Tul # Jints 173 1 9 1 1 1 # Ints 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ulars: Blue but he checked are checked bring and R Description of 1 2,3/61,471,155 2,3/61,371,155 2,3/61,371,155 2,3/61,371,351 2,3/61,371,351 2,3/61,371,351 2,3/61,371,371 3,5/61 3,5/	oxes use dro 2/11/08 2/11/08 Od Assembly GBG Assembly S EUE'8 Rnd, T S EUE'8 Rnd, T S EUE'8 Rnd, T S Solded MA n S Solded MA n Resembly Re	by by by libly RKB bg ARB PR Heric Arts Arts Arts Arts Arts Arts Arts Arts	length, ft 12 00 5448 98 2 75 272 65 32.46 1 10 25 68	Top of Der from KB. 12 00 5460 98 5463.73 5736 84 5768 84 5795 62 5795 62 5795.62 5795.62 5795.62	
Current Tub Date sketc Date tubula Tul # Jnts 173 1 9 1 1 1 1 # Rods 1 112 40	ulars: Blue bith checked ars checked ars checked bring and R Description of 1 2 3/81 4.7#, J-51 2 3/81	Days use dro 2/11/08  2/11/08  Od Assembly  5 EUE 6 Rnd, T  8 EUE 7 Rnd IF  8 EUE 8 Rnd, T  8	by by by individual in	length, ft 12 00 5448 98 2 75 272 65 32.46 11 10 25 68	Top of Der from KB, 12 00 5460 98 5463.73 5768 84 5769 94 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62	
# Rods  # Units  # Rods  # Units  # Rods  # Rods  1 Units  # Rods	ulars: Blue bith checked ars checked bring and R Description of 1 2 3/81 4 .7# J-51 1 3/81 J-51 3/	oxes use dro 2/11/08 2/11/08 OOD ASSEM BG Assembly 5 EUE 9 Rnd, T 5 EUE 9 Rnd, T 5 EUE 9 Rnd, T 5 Stotted MA, N 5 Stotted MA, N 6 Stotted MA, N 7 Stotted MA,	by by by libly RKB bg AMB Plug Plug Plug Plug Plug Plug Plug Plug	length, ft 12 00 5448 98 2 75 272 65 32.46 1 1 10 25 68	Top of Der from KB, 12 00 5460 98 5763 38 5768 84 5768 62 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62 5795 62	
# Rods 1 112 40 119 11	ulars: Blue but he checked are checked are checked bing and R Description of 1 2,3/81, X 5.5 O 2,3/81, A 7 H, J-5 C 2,	oxes use dro 2/11/08  OOA Asserr  OOA Asserr  DO ASSERT   by by hyll Plug	length, ft 12 00 5448 98 2 75 272 65 32.46 1 1 10 25 68	Top of Der from KB, 12 00 5460 98 5460,37 5736 38 5768 84 5795 62 5795 62 5795 62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.02 5795.02 5795.02 5795.02 5795.02 5795.02		
# Rods 1 112 40 119 11	ulars: Blue but h checked are checked are checked bing and R Description of I 2 3/81, A 7 11, J-52 3	oxes use dro 2/11/08  Ood Assemt BG Assembly SEUFS Rod-T DTAC DTAC SEUFS Rod-T	by by by hill by RKG bg Araban	length, ft 12 00 5448 98 2 75 272 65 32.46 1 1 10 25 68	Top of Dep from KB, 12 00 5460 98 5463.73 5768 94 5769 94 5795 62 5795 62	
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# Rods 11 11 40 119 11 11 11 11 11 11 11 11 11 11 11 11	ulars: Blue but he checked ars checked bring and R Description of J 2,3/81,474,J-55 2,3/81,475 2,3/	oxes use dro 2/11/08  OOA Assert  SELE'S Rid-T  D.TAC  D.TAC  D.TAC  S. SICHE'S RID-T  S. SUCH SHOP	by by by state of the state of	length, ft 12 00 5448 98 2 75 272 65 32.46 1 1 10 25 68	Top of Der from KB, 12 00 5460 98 5768 94 5768 94 5795 62 5795 62	
# Rods 11 11 40 119 11 11 11 11 11 11 11 11 11 11 11 11	ulars: Blue bith checked ars checked ars checked bring and R Description of 1 2 3/61 4.7# J-51 1/61 5/61 J-61 1/61 5/61 J-61 1/61 5/61 J-61 1/61 5/61 J-61 J-61 J-61 J-61 J-61 J-61 J-61 J-	oxes use dro 2/11/08  OOA Assert  SELE'S Rid-T  D.TAC  D.TAC  D.TAC  S. SICHE'S RID-T  S. SUCH SHOP	by by by state of the state of	length, ft 12 00 5448 98 2 75 272 65 32.46 1 1 10 25 68	Top of Dey from KB.  12 00 5460 98 5463.73 5768 84 5768 94 5795 62 5795 62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.62 5795.62	

2 0 x 1 5 x 26' w/ gas stinger anchor 1"x10"

5770 00 5770 00 5770.00

## BUREAU OF LAND MANAGEMENT Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220 575-234-5972

### Permanent Abandonment of Federal Wells Conditions of Approval

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plugging operations shall commence within <u>ninety (90)</u> days from the approval date of this Notice of Intent to Abandon.

If you are unable to plug the well by the  $90^{th}$  day provide this office, prior to the  $90^{th}$  day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged. Failure to do so will result in enforcement action.

- 2. <u>Notification:</u> Contact the appropriate BLM office at least 24 hours prior to the commencing of any plugging operations. For wells in Chaves and Roosevelt County, call 575-627-0272; Eddy County, call 575-361-2822; Lea County, call 575-393-3612.
- 3. <u>Blowout Preventers</u>: A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.
- 4. <u>Mud Requirement:</u> Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of water. Minimum nine (9) pounds per gallon.
- 5. <u>Cement Requirement</u>: Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. In lieu of a cement plug in a cased hole, a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement. If a bailer is used to cap this plug, 35 feet of cement shall be sufficient.

Unless otherwise specified in the approved procedure, the cement plug shall consist of either Neat Class "C", for up to 7,500 feet of depth or Neat Class "H", for deeper than 7,500 feet plugs.

- 6. <u>Dry Hole Marker</u>: All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). The well bore shall then be capped with a 4-inch pipe, 10-feet in length, 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: well name and number, name of the operator, lease serial number, surveyed location (quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer such as metes and bounds).
- 7. <u>Subsequent Plugging Reporting:</u> Within 30 days after plugging work is completed, file one original and five copies of the Subsequent Report of Abandonment, Form 3160-5 to BLM. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. **Show date well was plugged.**
- 8. <u>Trash</u>: All trash, junk and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

Following the submission and approval of the Subsequent Report of Abandonment, surface restoration conditions of approval will be developed and furnished to you.

Form 3160-5 (April 2004)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FER 18 2009

FORM APPROVED OMB NO. 1004-0137 Expires March 31, 2007

## 5 Lease Serial No.

SUNDRY NOTICES AND REPORTS ON WELLS					NMNM0557371		
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.					lottee or Tribe Name		
SUBMIT IN TRIPLICATE -	SUBMIT IN TRIPLICATE - Other instructions on reverse side						
1. Type of Well    X Oil Well					8 Well Name and No Empire Abo Unit 17		
BP America Production Company							
a. Address 3b. Phone No. (include area code)			ea code)	9. API Well N			
P.O. Box 1089 Eunice NM 88231 575-394-1648			,	30 - 015 - 007	Pool, or Exploratory Area		
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)				Empire Abo			
Unit Letter L, 1980 FSL & 660 FWL Section 1, T18S, R27E			II. County or	*			
12. CHECK APPROPRIATE	BOX(ES) TO INDI	CATE NATURE OF	NOTICE, REF	PORT, OR OT	NM NER DATA		
TYPE OF SUBMISSION		TY	PE OF ACTION	!			
Notice of Intent	Acidize	Deepen	Productio	n (Start/Resume)	Water Shut-Off		
<u> </u>	Alter Casing	Fracture Treat	Reclamati	ion	Well Integrity		
X Subsequent Report	Casing Repair	New Construction	Recomple	ete	X Other Remove CIBP		
<u></u>	Change Plans	Plug and Abandon	= :	nly Abandon	TOMOVO GIBI		
Final Abandonment Notice	Convert to Injection		Water Dis	-			
determined that the final site is ready for final inspe SUBSEQUENT REPORT FOR THIS WORK WEPORT NOW BEING SUBMITTED TO UPD 7/8' rods, 82 3/4' rods, 10 7/8' laydown prod tbg. 1/24/06: TIH w/ 1/25/06: RU foam air unit break of drlg on CIBP. Plug turned loose in TIH push CIBP to end of horizonta & 4 3 1/2" DC - TIH w/tbg fish for 1/30/06: TIH w/ box tap, BS, Jars whipstock loose kept pulling off. TIH w/ work string & laydown same 5000 psi below slips. 2/2/06: ND rod out load & test to 500 psi-ok psi-ok-still no pump action. 2/3/ Pump 30 bbl while adding 2 jt to 2/8/06: Run pump & rods L&T to 50	WAS INADVERTENTLY DATE BLM RECORDS. rods w/ g & pump. 4 4 3/4' bit pick- sirc w/ air TIP ta in 2 hr. Push to 5 al @ 7700' TOH lay or Whipstock from 5, 4 3 1/2" DC & t TOH WOO. 1/31/06 e - chg out tbg & BOP NUWH. Pickup c - no pump action (06: TOH w/ rods & lower SN to 5769'	1/20/06: MIRUPU. Prep to NU BOP. ing up 66 jt 2 7/a g CIBP @ 5768' b 5779' circ clean o ydown 2 7/8". 1/2' 5736 5862' no bir tbg tag whipstock E Rig down foam BOP rams. 2/1/00 pump & new rod do n - unseat pump f k pump. Run swab	Unseat pum 1/23/06: 8 DP & 2 7/ y our SLM. w/ foam air 7/06: Pick te. TOH w/ @ 5806' wo air unit & 6: Pickup 2 esign space lush 10 bbl to ck fluid	p lay down NDWH NU BOP 8 tbg works RU power sw blow well up hook, bu hook prep t rk over fis power swive 3/8 prod t well out l water - lo level dry. : Swab test	66-1' rods, 69 release TAC tring to 5100'. ivel start down. 1/26/06: mper sub, jars, o run box tap. h try to work l - laydown DC - bg test in hole eft 7' of polish ad test to 500 WOO. 2/6/06: still no fluid.		
14 I hereby certify that the foregoing is true and correct		Title					
Name (Printed/Typed)  87arry C. Price		Area 0	perations, J	eam-Lead : " ?	TOD DECODD		
Danit C. Lu		Date 2/2/09		JUET IEL	TON NEGOTO		
. THIS	S SPACE FOR FEDE	RAL OR STATE OF	FICE USE				
Approved by		Title		FI.B	ate1 6 2009		
Conditions of approval, if any, are attached. Approval o certify that the applicant holds legal or equitable title to which would entitle the applicant to conduct operations the	those rights in the subjec	rant or Office		411	2 AND MANAGEMENT		
Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section States any false, fictitious or fraudulent statements or rep			and willfully to r	ake thany depar	tment or agency of the United		

Form 3160-5 (February 2005)

## UNITED STATES DEPARTMENT OF THE INTERIOR

OCD-ARTESIA
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FORM APPROVED OMB No. 1004-0137 Expires: March 31, 2007

JAMES A. AMOS SUPERVISOR-EPS

	DEPARTMENT OF THE	INTERIOR	MAR 3 0 20	F. Lease Serial No.	OMB No. 1004-0137 Expires: March 31, 2007	
	UREAU OF LAND MAN			PSF Lease Serial No. NMNM(	0557371	
	NOTICES AND REPOSE  Some for proposals			6. If Indian, Allottee	e or Tribe Name	
	l. Use Form 3160-3 (A					
SUB	MIT IN TRIPLICATE - Othe	r instructions on page	2.		reement, Name and/or No.	
1. Type of Well	<del></del>	<u>, , , , , , , , , , , , , , , , , , , </u>		NMNM709		
	s Well Other				BO UNIT K 17	
2. Name of Operator BP AMERI	9. API Well No.	0-015-00703				
3a. Address P.O. BOX 1089, EUNICE	NM 88231	3b. Phone No. (included 575-394-164	,	10. Field and Pool of EMPIRE	•	
4. Location of Well (Footage, Sec.,		1)		11. Country or Paris		
UNIT LETTER 1, 1980 FSL & 660 F	***			EDDY		
12. CH	IECK THE APPROPRIATE B	OX(ES) TO INDICATE	NATURE OF NOTIC	CE, REPORT OR OT	HER DATA	
TYPE OF SUBMISSION			TYPE OF ACT	ION		
Notice of Intent	Acidize Alter Casing	Deepen Fracture Trea	_	uction (Start/Resume) amation	Water Shut-Off Well Integrity	
(7)	Casing Repair	New Constru		mplete	Other	
✓ Subsequent Report	Change Plans	Plug and Aba		oorarily Abandon		
Final Abandonment Notice	Convert to Injection	Plug Back	☐ Wate	r Disposal		
3/13/09: RIH W/ 4 3/4* 3/16/09: KILL WELL W SCRAPER. R 20 SX CMT C TBG. FLUSH 3/17/09: POH W/ TBG WATER. TES TBG. DISPLA FROM 3416* 3/18/09: RIH W/ TBG. CMT FROM 1 3/19/09: DIG OUT AR	nal Abandonment Notices must	be filed only after all re- LAYING DOWN TBG: 5 JTS 2 3/8" TBG TO: 5 STANDS TBG. POH BP @ 5770'. PUMP 2: W/ 20 BBL FRESH W/ ATER ON VACUUM. 6. SET CIBP @ 5420'. D. SPOT 25 SX CMT F SURFACE. POH LAYING ETTING TOOL. RIH W DIG DOWN TBG. ND B FF ALL ANCHORS AF	quirements, including 5787'. POH W/ TBG W/ TBG & SCRAPI 5 BBL FRESH WAT ATER ON VACUUW DISPLACE CSG W FROM 5420' TO 511 NG DOWN TBG TC W/ SLOTTED SUB ( 1566'. MIX & PUMI OP. TOP OFF CSC ND WELL HEAD, W	TO 3523'. ER. LAY DOWN ER ON VACUUM. POH LAYING DO FRESH '9'. LAY DOWN 8. 3416'. SPOT 25 S DN 2 3/8" TBG. EV TO SX EV TO	PUMP DWN 11 JTS JTS X CMT	has
14. I hereby certify that the foregoing Name (Printed/Typed)						
BARRY	C. PRICE	Title	AREA OPERAT	IONS TEAM LEAD	)	
Signature Daugh	1. this	Date	03/23/2009		APPROVED	
	THIS SPACE	FOR FEDERAL	OR STATE OF	FICE USE		
Approved by		1			MAR 2 6 2009	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

Title

Office

Conditions of approval, if any, are attached Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Form 3160-5 (April 2004)

### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

		ı	FORM APPROVEI
		ļ	OMB NO. 1004-013
OCD-	ARTE	SIA	Expires March 31, 20
		5 Le	ase Serial No.
APR	15 20	MMMM	0557371

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for abandoned well. Use For				6. If Indian,	Allottee or Tribe Name	
SUBMIT IN TRIPLICATE - Other instructions on reverse side				7. If Unit or CA/Agreement, Name and/or No NMNM70945X		
1. Type of Well  X Oil Well Gas Well Other  2. Name of Operator BP America Production Company  3a. Address P.O. Box 1089 Eunice NM 88231  4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Unit Letter L, 1980 FSL & 660 FWL Section 1, T18S, R27E		3b. Phone No. ( <i>include area code</i> ) 575 - 394 - 1648		8. Well Name and No. Empire Abo Unit 17 K 9. API Well No. 30-015-00703 10. Field and Pool, or Exploratory Area Empire Abo  11. County or Parish, State Eddy NM		
12. CHECK APPROPRIATE	BOX(ES) TO IND	DICATE NATURE OF	NOTICE, REF			
TYPE OF SUBMISSION	TYPE OF ACTION					
Notice of Intent  Subsequent Report  X Final Abandonment Notice  Describe Proposed or Completed Operation (clearly 1f the proposal is to deepen directionally or recompleted Attach the Bond under which the work will be perfollowing completion of the involved operations.	plete horizontally, give s	ils, including estimated start ubsurface locations and mea Bond No. on file with BLM	Reclamat Recompl Tempora Water Di ing date of any p sured and true v VBIA. Required	rily Abandon sposal roposed work aretical depths of subsequent rep	all pertinent markers and zones orts shall be filed within 30 days	
Per BLM letter referencing this was abandonment.	well, dated Marc	h 27, 2009, all re	quirements		met for final	
				APR JAME SUPE	1 1 2009 ES A. AMOS RVISOR-EPS	
14. I hereby certify that the foregoing is true and correct		Title				
Name (Printed Typed) Barry C. Price		Area C	Area Operations Team Lead			
Barrellin						
THIS	S SPACE FOR FEE	DERAL OR STATE OF	FICE USE			
Approved by	J JFACE FOR PEL	Title	1 102 032	<del>-</del>	Date	
Conditions of approval, if any, are attached. Approval o certify that the applicant holds legal or equitable title to which would entitle the applicant to conduct operations the	those rights in the sub	arrant or Office				

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, 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.



NAVAJO REFINING COMPANY, L.L.C. Map ID No. 50
Artificial Penetration Review

OPERATOR	Mavajo	Refining	Co.
LEASE L	DW 0	1	

WELL NUMBER #2

DRILLED 7 18 73

PLUGGED \_\_\_\_NA

status <u>Active</u>

LOCATION Sec. /2 -T/8s-R 27E

MUD FILLED BOREHOLE \_\_

TOP INJECTION ZONE -3663'

**API NO.** <u>30-015- 20894</u>

REMARKS:

133/4" 6 40'

85/8"@ 1995'w1800 sx

Tubing @ 7523' Packer @ 7528'

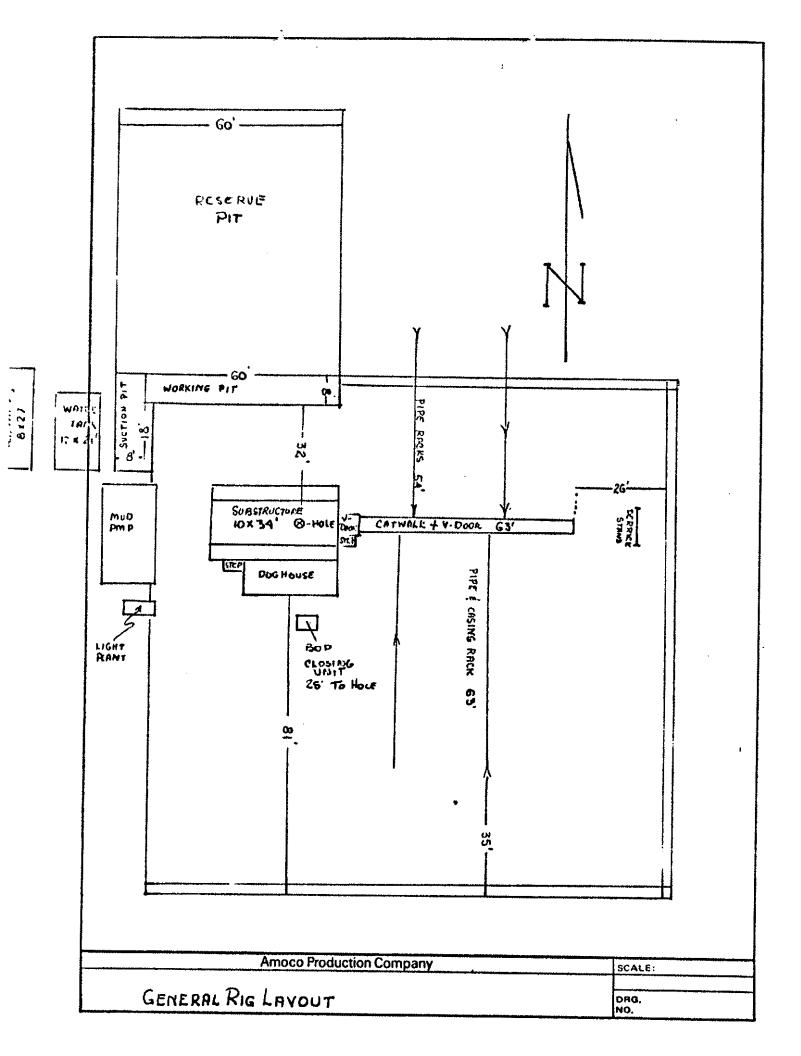
51/2"@ 8869' W/1570 5x

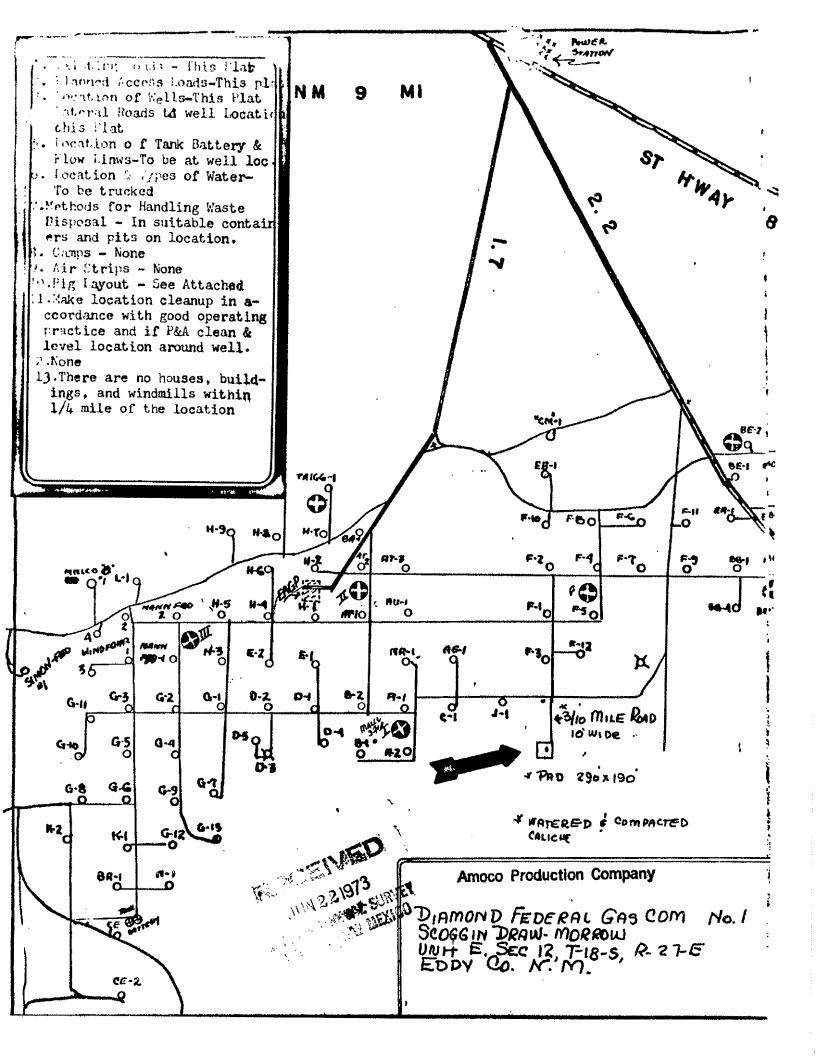
TD: 10,372'

MAP ID NO. 50

NAVAJOR FEFINING COMPANY WASTE DISPOSAL WELL NO. 2

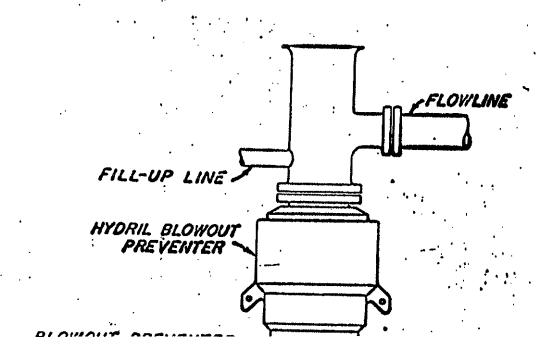
API NO. 30-015-20894





#### BLOWOUT PREVENTER HOOK-UP FOR DRILLING BELOW INTERMEDIATE CASING

- 1. BLOWOUT PREVENTERS AND MASTER VALVE TO BE FLUID OPERATED AND ALL PITTINGS MIST BE IN GOOD CONDITION (MINIMUM: WP 3000 PSI, TEST 6000 PSI).
- 2. EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AS LARGE AS THE INSIDE DIAMETER OF CASING THAT IS BEING DRILLED THROUGH.
- 3. KELLY COCK REQUIRED (MINIMUM: 3000 PSI WP, 6000 PSI TEST)
- 4. OMSCO OR COMPARABLE SAFETY VALVE MUST BE AVAILABLE ON RIG PLOOR AT ALL TIMES WITH PROPER CONNECTION OR SUB. (MINIMUM: 3000 PSI WP. 6000 PSI TEST)



## WELL OF A CONTACT AND ALEREAS DEDICATES AND A

11500 -	PRODUCTION COME	УΝΥ	DIAM	NO FEBERAL GUS CU	m i i
t .	12	ज्यातः	1 27 t ast	EDDY	
1000	North		660	WEST	
36.16,91 1. House the	f MORROW	antijert se	SCOGGIN DRAW	Morkow (Free	320
	er in a series de heared Eric Grit				
The second	le o d'afferent o.	ner thip is d	Amazort the wal	, have the faterests .	d all owners in the con-
ν.	Territor of the same in the	est upent	consolidation		
Harry Comment	of the excepts and	I tract descr	ist insole letere	n thally from a consequence	hate for the second converger.
	will indicate the wi	eH			The state of the s
	NM-6852	al di Alaba, il a garrania. Il di appli il seni	A material of a material of a second contract of a second of the second	1	<b>( € 1</b> ) <b>(</b> , , , , , , , )
0	Amoco 100%			tite ex tured to bose to	e kan sayan yan da ili ya sa
: 1				9-8	. York
6601_1			i	AREA EN	GINEER
	}		;	Amoco Pr	oduction Company
	NM-6853		• · · · · · · · · · · · · · · · · · · ·	SUM 2 1	1973
	Amoco 1000 160 Acres		dilling 1 to	Sheroby  after the state of the	Anton Branching Communication of the Communication
			GT:	krawledge	•
			NW WENCE	JUNE 1	2 <b>0, 1973</b>
( ken.at	Section 1 Towns of the	- O. T. Patrings		John	y W West

drilling into the <u>Wolfcamp formation</u>
and used until production casing is run and cemented. Monitoring
equipment shall consist of the following:

- (1) A recording pit level indicator to determine pit volume gains and losses.
- (2) A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.
- (3) A flow sensor on the flow-line to warn of any abnormal mud returns from the well.
- 6. When coming out of the hole with drill pipe, the annulus shall be filled with mud before the mud level drops below 150 feet. The volume of mud required to fill the hole shall be watched, and any time there is an indication of swabbing, or influx of formation fluids, proper blowout prevention precautions must be taken. The mud shall not be circulated and conditioned except on or near bottom, unless well conditions prevent running the pipe to bottom.
- 7. A copy of these requirements shall be posted on the rig floor or in the dog house during the drilling of the well.

James A. Knauf District Engineer

Lease No. NM-6852

Well Amoco Production Co. 1-Diamond Federal Gas Com.

Drillsite 1980/N 660/W 12-18S-27E

Depth 10,000' Morrow

Approved July 6, 1973

(Other instruction is on reverse sinc.,

proved. Form approved. O Budget Bureau No. 42-R1425.

UTED	STATE	S	
DEPARTMENT OF	THE	INTERIO	R

30-015-20894

•		I OF THE INT OGICAL SURVEY	ERIOR	5. LEASE DESIGNATION AND SERIAL NO.
APPLICATIO	<del></del>		EPEN, OR PLUG	BACK 6. IF INDIAN, ALIOTTEE OR TRIBE NAME
IR. TYPE OF WORK  DR  b. TYPE OF WELL		DEEPEN []	PLUG BA	7. UNIT AGREEMENT NAME  DIAMOND FEDERAL (TAS (N
2. NAME OF OPERATOR	ction Company			
3, ADDRESS OF OPERATOR	Choir Company	JUL 9	1973	9. WELL NO.
BOX 68, HOBBS,	N. M. 88240			7 10. PUBLO AND POOL, OR WILDCAT
At surface	eport location clearly and	ARTREIA	of dette requirements.  OFFICE  LE, SE4 NW/4	SCOGGIN DRAW-MORROW  11. BEC., T., E., M., OR BLK. AND BURYET OR AREA
14. DISTANCE IN MILES	AND DIRECTION FROM NEA	REST TOWN OR POST OF	Fica*	12-18-27 NMPM 12. COUNTY OR FARISH 13. STATE
15. DISTANCE FROM PROP LOCATION TO NEARES		16	. NO. OF ACRES IN LUASU	EDDY N./Y).
PROPERTY OR LEASE ! (Also to nearest dri	LINE, FT. g. unit line, if any)			320
18. DISTANCE FROM PROF TO NEAREST WELL, D OR APPLIED FOR, ON TH	RILLING, COMPLETED,	19.	PROPOSED DEFTH	20. ROTARY OR CABLE TOOLS
21. ELEVATIONS (Show wh		t	10,000	22. APPROX. DATE WORK WILL START*
3607' G	۲۷			7-1-73
23.	F	PROPOSED CASING	AND CEMENTING PROGR	AM
SIZE OF HOLE	BIES OF CASING	WRIGHT PER FOOT	BETTING DEPTH	QUANTITI OF CEMENT
	8 %	32 24	, 1000	arc.
<u> </u>	4 /2	9.5 - 11.6	10000	SUFFICIENT TO FILL
İ				SOD ABOUE UPPERMOST
	am attach am: Notine m	ed. run i water		es ary in attempting
in above space describe sone. If proposal is to d preventer program, if any 24.	irill or deepen directional	proposal is to deepen of the light of the li	a on subsurface locations a	resent productive sone and proposed new productive nd measured and true vertical depths. Give blowout
BIGNED .	E. york	TITLE_	AREA ENGINEER	DATE
(This space for Peder	al or State office use)		APPROVAL DATA	UL 6 1973
APPROVED BY	- Co Kraw	A TITLE	STRICT ENGINEER	JUL 6 1973
USGS- Per	least Yn all	Vachel		

1- DIV r Susp 1- RRY 1- ARCO

Notice" duted 6-22-73
Notice" duted 6-22-73

Copy ESF

RECEIVED

JUL 1 0 1973

P. O. Drawer W Artesia, New Maxico 88210 O. C. C. ARTESIA, OFFICE

July 9, 1973

Mr. Jim York Amoco Production Company Post Office Box 68 Hobbs, New Mexico 88240

Bear Mr. York:

This is to confirm my telephone conversation with you today whereby we requested that the 8-5/8-inch casing string be set in the top of the San Andres formation (approximately 2,000 feet below the surface) in your No. 1 Bismond Federal Gas Com. well on lease NM-6852 in the SWANNA sec. 12, T. 18 S., R. 27 E., N.M.P.M., Eddy County, New Mexico.

Sincerely yours,

SHAR A COMAL WAS AND

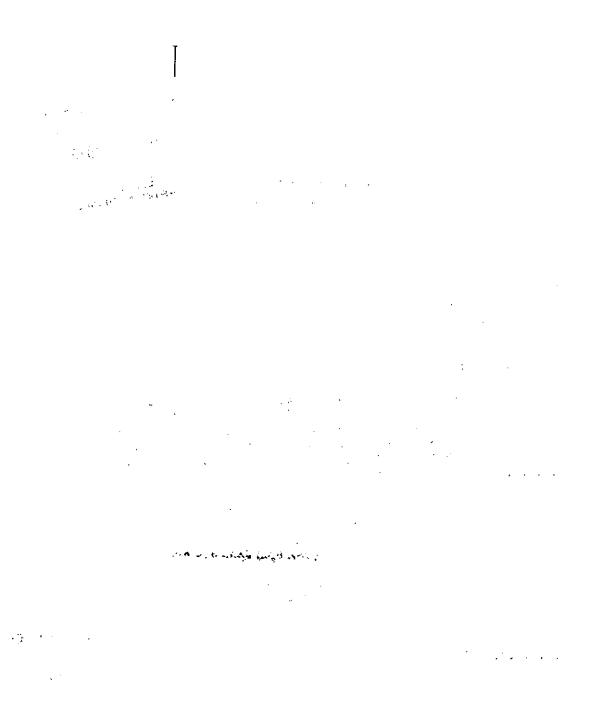
James A. Knauf District Engineer

cc: Roswell N.M.O.C.C. (2)

RECEIVED

JUL 1 0 1973

D. C. C.



1 (m % ) 11		O. C. C. COPY	Copy as
** 2 \$1860	UF ED STATES: EPARTMENT OF THE INTER	RIOR (Other instructions on re-	pp -00 to a five a 50 42 R1424 5. LLVSE at vite share 50
	GEOLOG CAL SURVEY		NM 6852
	Y NOTICES AND REPORTS of or proposals to drill or to deepen or plug-mappelleation for permit of for such		6 IF INDIAN ACTION THE NAME
Amoco Production	Company_	RECEIVED	DIAMOND FEU. JAS CUN
3. ADDRESS OF OPERATOR		JUL 2 5 1973	9, WK1.1. Nej
BOX 68, HOBBS, N. M  Townson of West (Report See also space 17 below.) At surface.	L 88240 t location clearly and a accordance with an	ال الله الله الله الله الله الله الله ا	10 FIFTER AND POOL, OR WILDICAT
	airu a sa lu	ARTESIA, OFFICE	SCOGGIN DRAW- 100 ROW 11. BRC., T., B., M., OR BEK, AND BURVEY OR AREA
1980 FNL× 6	60 FWL SEC. 12 (UNIT	E, SE/4 NW/4)	12-18-27- NMPM
14. PERMIT NO.	3607 G L	3623 R.D.B	EDDY N.M.
16.	Check Appropriate Box To Indicate	Nature of Notice, Report, or O	
	B OF INTENTION TO:		ENT REPORT OF:
TEST WATER SHUT-OFF FRACTURE TREAT	PULL OR ALTER CASING MULTIPUE COMPLETE	WATER SHOT-OFF FRACTURE TREATMENT	REPAIRING WELL,
SHOOT OR ACIDIZE	ABANDON®	SHOOTING ORACIDIZING	ABANDONMENT*
(Other)	CHANGE PLINS	(Other)  (Norn: Report results of Completion or Recomple	of multiple completion on Well
17 he so these through the proposed work. If well near to this work.) *	PLETED OPERATIONS (Clearly state all pertine is directionally drilled, give subsurface loc	ent details, and give pertinent dates, ations and measured and true vertical	including estimated date of starting any depths for all markers and zones perti-
Delta Orlai	O spudded 11"h	de 3: Pm 7-18-	7.3.
//	8% OD 32" 8R	•	
-	2005x Incor 2% Ge	•	_
,		_	
dest O.K.	? 18 hours, tested C		U
$\mathcal{Q}$ .	hole to 178" @ 19	•	
Keauced ,	note to 178 @ 19	55 and Nesus	mid drilling.
			RECEIVE
			U.S. OV. 24 1973
			U. S. GEOLOGICAL SURVEY ARTESIA, MEN MEXICO
×. I hereby certify that the f	fregoing is true and correct		" "ICXICO
SIGNED 216	Joakum TITLE AD!	MINISTRATIVE ASSISTANT	DATE HIL 2 3 1973
This space for Federal or	State office use)		<u> </u>
CONDITION ON APPO	RILANY:		PATE
USGS- ABT	24 1973		
SUS P	BEEKMAN ER See Instruction	s on Revene Side	
- ARCO ACTI	NG DISTRICT		

Form 9-330 (Kev. 5-63)

#### SUBMIT IN DUPLICATE UNITED STATES DEPARTMENT OF THE INTERIOR

(See other instructions on

Form approved, Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND BERIAL NO. GEOLOGICAL SURVEY NM- 6852 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG\* 1a. TYPE OF WELL: DRY A Other 7. UNIT AGREEMENT NAME L TYPE OF COMPLETION: DIAMOND FED. GAS COM RECEIVED WELL . DEEL-PLEG 2. NAME OF OPERATOR Amoco Production Company SEP 2 4 1973 9. WELL NO. 3. ADDRESS OF OPERATOR
BOX 68, HOBBS, N. M. 88240 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements ARTEBIA, OFFICE 10. FIELD AND POOL, OR WILDCAT SCOGGINI DRAW-MORROW At auriace. Al 1980 FNL X 660 FWL Sec 12. (Unit F, SE4 NW4 12-18-27 NMPM At total depth 14. PERMIT NO. DATE ISSUED 12. COUNTY OR 13. STATE EDDY 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (DF, RKB, RT, GR, ETC.) \* 3623'RD IF MULTIPLE COMPL. ROTARY TOOLS CABLE TOOLS **649** 24. PRODUCING INTERVAL(8), OF THIS COMPLETION-TOP, BOTTOM, NAME (MD AND TVD) WAS DIRECTIONAL BURYLY MADE NONE WELL CORED 26. TIPE ELECTRIC AND OTHER LOGS RUN 27. WAS GR-N CASING RECORD (Report all strings set in well) CARING RIZE WRIGHT, LB./FT. DEPTH SET (MD) HOLE SIEE CEMENTING RECORD AMOUNT PULLED クサ NONE 29. LINER RECORD TUBING RECORD SIZE TOP (MD) BOTTOM (MD) SACRE CEMENT SCREEN (MD) RIZE DEPTH SET (MD) PACKER SET (MD) 31. PERFORATION RECORD (Interval, size and number) ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED 33.\* PRODUCTION DATE FIRST PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping-size and type of pump) Producing or DATE OF TEST HOURS TESTED CHOKE SIZE PROD'N. FOR OIL-BBL. QAS--BCF FLOW, TUBING PRESS CASING PRESSURE CALCULATED 24-HOUR BATE GAS-MEP. 34. DISPOSITION OF GAR (Sold, used for fuel, vented, etc.) 35. LIST OF ATTACHMENTS 1. I hereby certify that the toyegoing and attached information is complete and correct as determined from all available records TITLE ADMINISTRATIVE ASSISTANT SIGNED USGS- ART

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

# SNO INSTRU

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal anglor State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practives, either are shown below or will be issued by, or may be obtained from, the local Federal II not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments abound be listed on this form, see item 35.

Went 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local should be intended in accordance with Federal requirements. Consult local should be listed on a applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Indian land should be described in accordance with Federal requirements. Indian land should be described in accordance with Federal requirements. Indian land should be admitted in the same and applicable State requirements, location from more than one luterval zone (multiple completion), so state in item 24 show the producing interval. Or intervals, top (s), bottom(s) and name(s) (if any) for only the interval reported in terval.

Went 25 and 24: If this well is completion report for a location of the cementing tool.

Went 37: "Socks Ceneral": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

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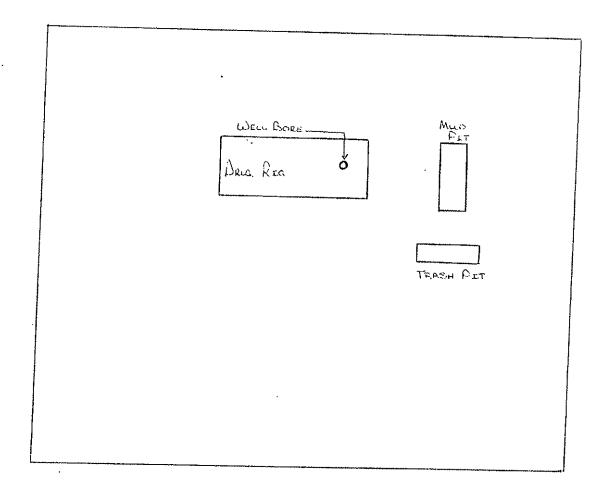
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	3	623 R.D.B.	<b>_</b>	EDDY N	(.M
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SHOOT OR ACIDIZE	ABANDON®		OR ACIDIZING	ABANDONMENT*	
Other)	CHANGE PLANS	(Other) _ (Nor	Report results of mi	altiple completion on Wel	-   
. 10 SCRIBE PROPOSED OR COMPL. proposed work. If well is neat to this work.) *	ETED OPERATIONS (Clearly states directionally drilled, give sub-	all pertinent details and mix	pietion or Recompletion e pertinent dates, included d and true vertical depi	filme autimoted date of the	arting any
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				ARTESIA, BEG	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Pursuant to	Mr. Lion Bu	kmans verv	el approvi	xl 8-25-73	3.
I hereby certify that the for-	egolog is true and correct		*		
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Acco 1	TING OIST				

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### EXHIBIT "D" SKETCH OF WELL PAD

FRED POOL DRILLING, INC.
Well #2 Chukka Federal
SW4NW4, Sec. 12: T-18-S, R-27-E



### EXHIBIT "D" SKETCH OF WELL PAD

FRED POOL DRILLING, INC. Well #2 Chukka Federal SW<sup>1</sup>4NW<sup>1</sup>4, Sec. 12: T-18-S, R-27-E

DRIA REA	Mus FIT TRASH PIT

### STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

### DIL CONSERVATION DIVISIC P. O. BOX 2088

SANTA FE, NEW MEXICO 37501

Form C-102 Revised 10-1-78

All distances must be from the outer boundaries of the Section. Leose Well No. red Pool Drilling, Inc. Chukka Federal 2 Unit Letter Section Township Range County 18~S 27-E Eddy Actual Footage Location of Well: North 660 feet from the line and feet from the West Ground Level Elev. Producing Formation Pool Dedicated Acreages 3607 Artesia 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc? Yes X No If answer is "yes," type of consolidation \_ If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.). No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division. CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. 980 Position President 660' Fred Pool Drilling, Inc. Date 8-16-85 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 knowledge and belief. Date Surveyed Registered Professional Engineer and/or Land Surveyor Certificate No. 1320 1680 1980 2310 1000

Form 9+331 C	,	NM OIL CONS.	COMMISSIONIT IN	. LICATE	• •	
RECEIVED BY	IINI	Drawer DD TED tSTATES.	(Other inst	ruetions on	Form approv Budget Buren	ed. u No. 42-R1425.
	DEPARTMEN	T OF THE INT	£ <sup>9</sup> f6 <del>9</del> k	. 0,40,	30-115-2 5. LEASE DESIGNATION	1894
AUG 3 0 1985	GEOLG	OGICAL SURVEY			NM-6852	AND SERIAL NO.
APPLICATIO	N OR PERMIT	TO DRILL, DEE	PEN, OR PLUG	BACK	6. IF INDIAN, ADLOTTE	E OR TRIBE NAME
ARTESIA, OFFICE	W. X	DEEPEN 🗀	PLUG BA	\CK []	7. UNIT AGREEMENT N	AME
b. Type of Well		_	UINCI D COM SERIE			
2. NAME OF GPERATOR	WELL OTHER	Pe entry	ZONE LX ZONE		8. FARM OR LEASE NAT	
Fred Pool Dri	illing, Inc.				Chukka Feder	al
3. ADDRESS OF OPERATOR		/ 90001			2	
4. LOCATION OF WELL (I At surface	3, Roswell, N.A. Report location clearly an	f. 88201 d in accordance with any	State requirements.*)		Artocia	WILDCAT
1980' FNL & 6	60' FWT.				Artesia Cit.  11. sec., t., e., m., or and survey or an	FOOL BLE.
At proposed prod. zo	ne		(Unit E)			
	AND DIRECTION FROM NEA				Sec. 12, T-1	8-S, R-27-
11 air miles	east-southeast				Eddy	NM
LOCATION TO NEARES	I LINE ET	660'	NO. OF ACRES IN LEASE.	TO TH	F ACRES ASSIGNED IN WELL	
(Also to nearest dri 18. DISTANCE FROM PROD TO NEAREST WELL	g. Unit line, if any) POSED LOCATION* PRILLING, COMPLETED,		PROPOSED DEPTH		Y OR CABLE TOOLS	
OR APPLIED FOR, ON TH	iis lease, pt.	1650'	1945 '	R	lotary	
21. ELEVATIONS (Show who 3607	•				22. APPROX. DATE WO 8-31-85	RK WILL START*
23.		PROPOSED CASING AS	ID CEMENTING PROGI	RAM	1 0-21-02	
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	OCCUPANT DESCRIPTION OF THE PARTY OF THE PAR			
		} """""""""""""""""""""""""""""""""""""	SETTING DEPTH	1	QUANTITY OF CEMEN	
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	8 5/8"	· [		Circ.	QUANTITY OF CRMEN	
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12/4" psp Colf, s	8 5/8".	32#	#1 plugged and	abandon		
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12/4" psp CSJ, s	in pla	32#	#1 plugged and	abandon		
12/4" psp.  Col. 1  This is a re-	entry of Diamon	32# d Fed. Gas Com	#1 plugged and	abandon	ed 8-31-73.	
12/4" pip	in pla	32# d Fed. Gas Com  Well location	#1 plugged and OTO:	abandon	ed 8-31-73.	
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\*See Instructions On Reverse Side

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

	<del></del> .	<b></b> . •		
Form 9-331 (May 1963)	LTED STATES	SUBMIT IN TR. 1CA	TE. Form approved.	•
DEPA	RTMENT OF THE UNIT		re- Budget Bureau  5. LEASE DESIGNATION AN	No. 42-R142- D SERIAL NO.
	GEOLOGICAL SURVEY		NM 6852	
SUNDRY N	IOTICES AND REPORT	S_ON_WELLS	6. IF INDIAN, ALLOTTEE C	R TRIBE NAME
(Do not use this form for pure "AP)	proposais to drill or to deepen or p PLICATION FOR PERMIT—" for su	ig backets a different reservoir.	7	
1. on Grages			7. UNIT AGREEMENT NAME	i
WELL KX WELL OTH  2. NAME OF OPERATOR	<b>B</b> R	SEP 11 1985		
FRED POOL DRIL	LING INC	O. C. D.	8. FARM OR LEASE NAME	
3. ADDRESS OF OPERATOR	2110,1110.	ARTESIA, OFFICE	Chukka Feder	al
P.O.Box 1393	Roswell, N.M.	38201	2	
<ol> <li>LOCATION OF WELL (Report locat See also space 17 below.)</li> <li>At surface</li> </ol>	ion clearly and in accordance with	any State requirements.*	10. FIELD AND POOK OR W	HEDCAT A
·	17617		Artesia Oil	Pool-
1980 DNL 660 Unit E SW表 1			11. SEC., T., R., M., OR BLE SURVEY OR AREA	
			Sec.12-T 18S	- R 27E
14. PERMIT NO.	15. ELEVATIONS (Show whether	er DF, RT, GR, etc.)	12. COUNTY OR PARISH 1	3. STATE
	3607 GR		Eddy	NM
6. Check	Appropriate Box To Indicate	e Nature of Notice, Report, o	or Other Data	
NOTICE OF I	NTENTION TO:	SUB	SEQUENT REPORT OF:	
TEST WATER SECT-OFF	PULL OR ALTER CASING	WATER SHUT-OFF	SEPARRING WEL	L
FRACTURE TREAT	MULTIPLE COMPLETE	FRACTURE TREATMENT	ALTERING CASIN	ra
SHOOT OR ACIDIZE	ABANDON* CHANGE PLANS	SHOOTING OR ACIDIZING	ABANDONMENT*	
(Other)	CHANGE I LIANS	(Other)(Note: Report res	uits of multiple completion on empletion Report and Log form.)	Well
ያ 1 የ	Stringers of cemer Tagged No. 2 plug back to 1804 ft.; Vater.	t of surface from ht to 50 ft. at 1912 ft. Púll circulated hole w and perforate well	ed tubing with fresh	
			Stoog	
3. I hereby certify that the foregoin	g is true and correct		of the following services	
SIGNED Senta (This space for Federal or State	Soal TITLE	Clerk	DATE 9-6-85	
APPROVED BY	risk kördülü			
CONDITIONS OF APPROVAL, IE	JUNQ_		DATE	***
SEP	10 1985	<b>n</b> • •		

\*See Instructions on Reverse Side

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(May 1963) DEF	U TED STATES DEPARTMENT OF THE INTE	AWAR DIOTHE Instruction of	Form approved.  Budget Bureau No. 42-R1424
	GEOLOGICAL SURVEY	resia, NM 88210	5. LEASE DESIGNATION AND SERIAL NO. NM 6852
(1)0 not use this form to Use "/	NOTICES AND REPORTS or proposals to drill or to deepen or plus proposals to drill or to deepen or plus prication for PERMIT—" for suc	ON WELLS  back tREGENERBERY.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
	rnem re-entry	SEP 18 1985	7. UNIT AGREEMENT NAME
Fred Pool Drill 3. ADDRESS OF OPERATOR	ling, Inc.	O. C. D. ARTESIA, OFFICE	8. FARM OR LEASE NAME Chukka Federal
	Roswell, N.M. 88201 cation clearly and in accordance with a		9. WELL NO.  2 10. FIELD AND POOL, OR WILDCAT
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14. PERMIT NO. 3001520894	15. ELEVATIONS (Show whether	DF, RT, GR, etc.)	Sec, 12-T18S-R27E  12. COUNTY OR PARISH 13. STATE
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Chec Notice of	ck Appropriate Box To Indicate	i	
TEST WATER SEUT-OFF	PULL OR ALTER CASING	WATER SHUT-GP#	QUBNT REPORT OF:
FRACTUBE TREAT	MULTIPLE COMPLETE	FRACTURE TREATMENT	ALTERING CASING
AEPAIR WELL	ADANDON* CHANGE PLANS	. SHOUTING OR ACIDIZING	·····
(Other)		(Other)	ts of multiple completion on Well pletion Report and Log form.) s. including estimated date of starting any cal depths for all markers and zones perti-
Septembe	r 8,1985		
Perforat	ions: 1446-56 ft. a 14 shots.	nd 1459-62	
Acidized gallons	with 1000 gallons 1 Versagel; 30,000# 20 10/20 sand.	NE 15% and30 000	•
Pumping v	well back to test.		Sto
		?	7.37.00 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
3. I hereby certify that the foregol			144
SIGNED Anla		ce - president	DATE 9-11-85
(This space for Federal or State	•		
APPROVED BY ACCEPTED CONDITIONS OF APPROVAL,	TOR RECORD TITLE		DATE
	16 1985		

\*See Instructions on Reverse Side

#### SUPPLEMENTAL DRILLING DATA

FRED POOL DRILLING, INC.
WELL #2 CHUKKA FEDERAL
SWANW4, SEC. 12, T-18-S, R-27-E
EDDY COUNTY, NEW MEXICO

- 1. SURFACE FORMATION: Artesia Group of Permian Age. (Elev. 3607)
- 2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Yates 275' Grayberg 1650' Seven Rivers 475' Queen 1225'

3. ANTICIPATED POROSITY ZONES:

Water - Above 300' 0il - 1500-2500'

4. CASING DESIGN:

 $\frac{\text{Size}}{85/8"} \qquad \frac{\text{Interval}}{0-2000}, \qquad \frac{\text{Weight}}{32\#} \qquad \frac{\text{Grade}}{}$ 

- 5. SURFACE CONTROL EQUIPMENT: Control head.
- 6. CIRCULATING MEDIUM: KCL water.
- 7. AUXILIARY EQUIPMENT: None considered necessary on this shallow development well.
- 8. TESTING, LOGGING AND CORING PROGRAM: No coring or DST's are planned. Electric logs will include an cement bond log and a Compensated Neutron Log with Gamma Ray.
- 9. ABNORMAL PRESSURES, TEMPERATURES OR GASES: None anticipated.
- 10. ANTICIPATED STARTING DATE: It is planned that operations will commence about August 31, 1985. Duration of drilling, completion and testing operations should be one to five days.
- 11. RE-ENTRY DETAILS: Drill out cement plug at top of casing. Clean hole to plug at 1945' with tubing. Pressure test casing to be sure it does not leak. Run cement bond log from 1945' to surface. Perforate the Penrose section from 1450' to 1470' acidize and swab test.

roim 9-320	-	~		Tanet.			~~				73
RECEIVED	ву	iiTi	ED STÂ	TES	a, NM sub	3219	N DU	CATE*	1	Form ap	proved.
RECLIVE		RTMENT					(Sec	other in-	1		proved. Sureau No. 42-R&55.5.
SEP 23 198	35	GEOLOG			-	איל		ctions on rse side)	5. lease di NM 68		ON AND SERIAL NO.
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	OMPLETIO			NON				G T			
13 RTESTA POM	,	ELL K AEI	.c 🗌	DRY	Other RE	<u>-en</u>	try		7. UNIT ACE	EEMENT	NAME
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WELL X	OVER L. F	N BAC	K DIE	SVR.	Other				S. FARM OR	LEASE N	AME
2. NAME OF OPER			/				•		Chukl	ca Fe	ederal
3. ADDRESS OF O	Pool Dr	llling, l	nc.			·			9. WELL NO.	•	
		n	_ T 1 B7	M 00	0001		٠. ا			2	
4. LOCATION OF W	Box 1393	KOSW	211, 10.	M. 86	92U1			·	10. FIELD A	ND PO	OR WILDOLT
At surface	980 FNL66	CO ELLI	en accordant	. II.	ну былы теди . :	uremer		(.,*	Artes	la tu	ur Poor
			owa nwa	t ur	IIC E				OR AREA	R., M., OR	BLOCK AND SULVEY
1446- f	nterval reported    -	below							0. 10		
At total depth	· .						,		Sec. 12	2-118	3S-R27E
1912 ft			14. 11	RMIT NO	),	DATE	ISSUED		12. COUNTY	on	13. STATE
			300	1520	894	9-:	30-85		Eddy		l <sub>NM</sub>
15. DATE SPUNDED		REACHED 17.	DATE COMPL.	(Ready	A			OF, REB, E	T, GR, ETC.)	19. EL	EV. CASINGHEAD
8-30-85	9-6-85	(	-10-85				07 GR			36	07 GR
20. TOTAL DEPTH, M	Į.	UG, BACK T.D., M	1	2. IF MU	LTIPLE COMPI	Ĺ.,	23. INT	ERVALS LLED BY	ROTARY TOO		CABLE TOOLS
1912 ft 24. PRODUCING INT	. 1	912 ft						<b>→</b>	x	}	
1446-14	ERVAL(S), OF THE とつ モニ	s completion-	TOP, BOTTOM.	NAME (	MD AND TVD)	•				25.	WAS DIRECTIONAL SURVEY MADE
										ļ	
Penrose		m2(1)								1.	No
									]	27. WAS	WELL CORED
compens:	ated Neut								<u> </u>		no
CASING SIZE	WEIGHT, LS		SET (MD)		port all string	ra set i		CENTING 1	NCODO.		····
8 5/8	32#				1"			~	<del></del>		AMOUNT PULLED
0 110	32#	2000				-	circu	lated	1	-	0
	~-[								·····		
						-	····		·····		
20.		LINER RECO	RD.			<u> </u>	30.	т	UBING RECO	וואס ל	
SIZE	TOP (MD)	BOTTOM (MD)	BACKS CE	*TKEM	SCREEN (M	(0)	BIZE		EPTH SET (MI		ACKER SET (MB)
				····			2 3/	j	1804 Fr		
						<u> </u>			* ~ ~	·	
31. PERFORATION BE	cond (Interval, 8	ize and number			82.	AC	id, shot,	FRACTU	RE. CEMENT	SQUEE	ZE, ETC.
1446-56	ft				DEPTH IN	TERVAL	(010)	AMO	UNT AND KIND	OF MAT	CORU JAIRON
1459-62		holes			1446-	-56		1000	) gal.	NE 1º	5%, 30,000
					1459-	62		_gal.	Versa	gel:	30,000 #
								20/4	0 sand	12,0	000# 10/20
33.*	· · · · · · · · · · · · · · · · · · ·			nnc-	7700705			sanc			
DATE : IRST PRODUCT	TON PROD	CCTION METHOD	(Flowing, ag		OUCTION imping—size	and to	ipe at num	n)	1 10011 1	mante (	Producing or
9-12-8		mping		4-7 20	Emily worth		, po oj pani	r1	Bhut-	-in)	
DATE OF TEST	HOURS TESTED	CHOFE SIZ			011,BBL.		GASMC	P.	WATER-BBL.	<u>duc i</u>	Ng OITER MO-8
9-12-85	24	none	TEST I		31	-	TST		()	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	MOLLU
FLOW. TUBING PRESS.	CASING PRESSU			BL.		arge a				OIL GRAV.	FTT-API (CORR.)
<u>40#</u>	40#	>	.   .	31		ŜŦM		NTEC	CND	35	
34. DISPOSITION OF G	An (Sold, used for	fuel, vented, etc	:.)				Au		TEST WITNESS		
vented		· · · · · · · · · · · · · · · · · · ·				SI	EP 10	1000	Fred Po	01.	Jr.
25. LIST OF ATTACH		ron las	ma:1-	a 0	10-05		3.0	COCI		<del></del>	
36 Thereby costice	ted Neut	TOIL LOB	malle	u y-	τΩ <u>"</u> ΩΟ	··		·			
36. I hereby certify	THE THE FORESOIL	g und attached	information	ів сошрі	ete and child	icit, @at	der er in find	from al	l arailable rec	ords	
SIGNED Z	rta So	a.l	TIT	LE Vi	ce Pres	side	ent		DATE	9-1	3-85
		•									<del></del>

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be and/or State office. See instructions on items 22 and 24, and 33, below regarding separate completions.

If not field into the line this summary record is submitted, copies of all currently available logs (diplers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 33.

Hem 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.

Hen 18: Indicate a system which elevations.

Hen 21: Indicate a system which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Hens 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval.

For each additional interval to be separately produced, showing the additional data jertinent to such interval.

Hen 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Hen 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

		TOP	TRUE VERT, DEPTH	·		***************************************	 		
GEOLOGIC MARKEDS	Cup warmens		MEAS. DEFTE						
38. GEOLOG		NANG			å				
MARY OF POROUS ZONES: SHOW ALE HOPETANT ZONES OF PURUSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLODING DELTH INTERVAL TENTED, CUSHIGN UNKO, TIME TOOL OPEN, FLOWING AND SHUTHIN PRESSURES.	DESCRIPTION, CONTENTS 540		Caliche and red bed Salt, red bed and anhydrite. Dolomite and anhydrite	Sand dolomite dolomite					
DROSITE AND CONTE	HOTTOM		65 1100 1365	1970					
HOUS ZONES: HIANT ZONES OF INTESTED, CUBRICON	10.P		0 65 1100	1570					
37. SUMMARY OF POROUS ZONES: SHOW ALE IMPORTANT ZONES OF POROSITY AND CONTENTS THERE DEPTH INTERNAL TESTED, CURHIN UNE, THAT TOOL OPEN, FLOY	FORMATION		A reerl	ልበ				***************************************	

THE STATE OF THE S	RECEIVERNAYA FE N	FOR ALLOWABLE AND	1		m C-104 fsed 10-1-78
Fred Pool Drill	ing Inc		<del></del>	<u> </u>	<del></del>
Address	~	7.1			
P.O. Box 1393 Recoon(s) for bling (Check proper bo			se explains		Terrent a many sap in standards
Necompletion , Re-elli	OII 📋 5-y	Cos 🔲		HEAD GAS MU	
Change in Ownershir	Casinghend Cas Con	densate [_]		AFTER : 10 - E	
If change of ownership give name and address of previous owner			THE B. L.	M. IS OBTAINE	D
I. DESCRIPTION OF WELL AND	LEASE   Well No.   Pool Nome, Including	Formation	Kind of Leu		
Chukka Federal	2 Artesia <del>Oil</del>			alorF** Feder	al 6852
i	80 Feet From The Narth t	.in• and _660	Feel From	The West	
	onahip 185 Bange			ldy	Co
. DESIGNATION OF TRANSPOR	TER OF OIL AND NATURAL G	:AS	······································		
Navajo Crude Oi	or Condensale	Box 159 Art			ir to be sent)
Phillips Petrol	tinghend Gos ( ) of Ory Gas ( )	Address (Give address	to which appro	oved copy of this form	its so be sens)
If well produces off or liquide,	Unit , Sec.   Twp.   Rge.	Bartlesvill	e, Okla.	ień	
If this production is commingled wi	' E 12 185 27E		<u> </u>		
COMPLETION DATA	COLL Well Core Next	New Weil Warkover	Deepen	Ping Sack Same	Hesto, Stall H
Designate Type of Completic	Dote Compl. Rendy to Prod.	Total Depth		1	<u> : X</u>
8-30-85	9-10-85	1912 fc.		P.B.T.O. 1912 ft.	
GR 3607	Penrose	Top On/Gas Pay 1446 ft.		Tubing Depth	
1459-62	••			Depth Casing Shoe	
HOLF SIZE	TUBING, CASING, AN	D CEMENTING RECOR	1	EACHE	
11"	87/	300 C		3,40,30	EMENT
					est ID-2
TEST DATA AND REQUEST FO	RALLOWABLE Test must be a	free recovery of total value	me of load oil	and must be equal to	<u>9-27-85</u> 0.545.8:100.6
CIL WELL,	nble for this de	epth or be for full 24 hours Producing Method (Flow	}		
9-12-85	9-12-95 Tubing Pressure	pumping Casing Pressure		Choke Size	(X)
24 hrs.	40#	40#		none	
Actual Prod. During Test 31 bbls	он-вы. 31	Water-Bbls.		TSTM	
GAS WELL					•
Actual Frod. Test-MCF/D TSTM	Length of Teet 24hrs.	Bble. Condensate/AMCF		Gravity of Condense	110
Testing Method (pHot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-	in)	Choke Size	
CERTIFICATE OF COMPLIANCE	E	OIL CC	INSERVATI	ON DIVISION	
i hereby certify that the rules and re-		APPROVED	SEP 24	4 1985	19
Division have been complied with a above is true and complete to the i		.вү	_	al Signed By . Clements	
		TITLE		isor District II	
Penta Pon	el	If this is a requi	at for allows	ompliance with Mul ble for a newly dri	Hed or deepr
(Signatu Vice Pres:	rej	well, this form must tests taken on the w	be accompani all in accord	ed by a tabulation ance with MULE 1	of the devir
9-16-85		use line wen no elde	implated well		
7 · 10 - 03		well name or mumber.	or tentrahutte:	III, and VI for cha gor other such cha be filed for each	Ullu es count

KELEIVED BY

OCT 3 - 1985

O. C. D.

FRED POOL, JR.

September 25,1985

P. O. Box 1393 Roswell, NM 88201

New Mexico Energy and Resources Board P.O.Box 2088 Santa Fe, N.M. 87501

RE: Chukka Federal No. 2° Lease No. 6852 SW/4 NW/4 Sec. 12-18S-27E Eddy County, N.M.

Gentlemen,

Please be advised that the above well was spudded on 8-3-85 and completed as a producing well on September 10,1985. This well was potentialed at 31 barrels per day of oil and gas was TSTM.

All necessary records and logs have been filed with the appropriate offices.

Sincerely,

Penta Pool

#### STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

#### **OIL CONSERVATION DIVISION**

Drawer DD

Artesia, MM.

DISTRICT OFFICE #2

Sept. thru Dec. 1985 NO. 2058 N -

#### SUPPLEMENT TO THE OIL PRORATION SCHEDULE

DATE September 24, 1985

PURPOSE ALLOWARLE ASSIGNMENT - MEW OIL

Effective September 12, 1985 an allowable of 31 barrels of oil per day is hereby assigned to Fred Pool Drilling, Incorporated, Chukke Federal #2-E-12-18-27 in the Artesia Queen Grayburg San Andres Pool.

L - F

MP - P

Sept. Total - 589 bbls. Oct. Total - 961 bbls. Nov. Total - 930 bbls. Dec. Total - 961 bbls.

Form. - Penrose Perfs. - 1446' - 1462' Comp. - 9-10-85 TD - 1912'

LAC: fc

Fred Pool Drlg., Inc.

NRC PP

OIL CONSERVATION DIVISION

DISTRICT SUPERVISOR

THE RESIDENCE OF THE PROPERTY OF THE PARTY O

1 20 20 1 But 180

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. 14. 전 전화 17. 연**수 14.** 보호를 보고 있다.

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And the second of the second o

N. P. C. H. March March Narra No. 2

and the control of the second of the control of the

SUNDRY NOTICES AND REPORTS ON WELLS  (10) not use this force for composite to doll or to delive or or place have to a different reservoir.  (10) not use this force for composite to doll or to delive or place have to a different reservoir.  (11) not use the force for composite to doll or to delive or place have to a different reservoir.  (12) noted to organize to organize the composite of the place of the		STATES SUBMIT IN THE ICATE OF THE INTERIOR Verse alde)  OF MANAGEMENT	Dudget Bureau No. 1004-0135 Expires August 31, 1985  5. LEASE DESIGNATION AND BERIAL NO. NM 6852
THE EASTLAND OIL COMPANY  P. O. DRAWER 3488, MIDLAND, TX 79702  1. Inchestor to relative the company of the control co	SUNDRY NOTICES AND	D REPORTS ON WELLS to deepen or plug back to a different reservoir.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
THE EASTLAND OIL COMPANY  Sociation or organization P. O. DRAWER 3488, MIDLAND, TX 79702 1. Individuo for wear, 18 shows, 19 shows a show of the any State requirement of the angle of the	01L [7] GAS [7]	RECEIVED	7. UNIT AGREEMENT NAME
P. O. DRAWER 3488, MIDLAND, TX 79702  1. Incremos for will Report location cleanly and in accordance with any State requirement of Markets, OFFICE AND STATE AND STATE AND STATE AND STATE AND OFFICE AND STATE  THE EASTLAND OIL COMPANY	OCT 19 '90	CHUKKA FEDERAL	
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data  Notice of intention to:  TEST WATER SHUP-OFF PLACE REPORT  NUMBER OF INTENTION TO:  THE WATER SHUP-OFF PLACE REPORT  SHOOTING OR ACTIVITE TO PREATE ALABANDAN  HEPARK WELL  (INDIFE)  17. INSCRIBE FOOUNER OR ACTIVITE OF SHARTHUS (Clearly state all pertinent dictalls, and site pertinent acts and tones acts and tones ac	P. O. DRAWER 3488, MIDLAND, TX  4. LOCATION OF WELL (Report location clearly and in as See also space 17 below.) At surface  UNIT LETTER E, 1980 FT. FNL AND	ccordance with any State requirements.  ARTESIA, OFFICE	2 10. FIELD AND FOOL, OR WILDCAT  ARTESIA Q-G-SA 11. SEC., T., E., M., OR BLE. AND SURVEY OR ARMA
NOTICE OF INTENTION TO:  THEST WATER SHIPLOFF	· · · · · · · · · · · · · · · · · · ·	vs (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH 13. STATE
THAT WATER SHUT-OFF PRACTURE TREAT SHOOT ON ACIDIER SHOOT	16. Check Appropriate Bo	x To Indicate Nature of Notice, Report, or O	
18. I hereby certify that the foregoing is true and correct  SIGNED_LOUIS   TITLE PRODUCTION SUPERINTENDENT DATE 10/11/90  (This space for Federal or State office use)	FRACTURE TREAT  SHOOT OR ACIDIZE  REPAIR WELL  (Other)  17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly proposed work. If well is directionally drilled, givent to this work.)	SHOOTING OR ACTOIZING  (Other) CHANGE OF OP  (Note: Report results of Completion or Recompletion or Recompleti	ALTERING CASINO ABANDONMENT®  ERATOR  of multiple completion on Welltion Report and Log form.)
SIGNED			ECEIVED
	18. I hereby certify that the foregoing is true and correct SIGNED-LISUIS Locales	DDODISCTTON CURED INTENDEN	T DATE 10/11/90
	•		

#### \*See Instructions on Reverse Side

Submit 5 Copies
Appropriate District Office
DISTRICT 1
P.O. Box 1980, Hobbs, NM 88240

State of New Mexico Energy, Minerals and Natural Resources Department

RECEIVED

Form C-104 Revised 1-1-89 See Instruction: at Buttom of Page

OCT 18'90 OIL CONSERVATION DIVISION

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

DISTRICT II P.O. Drawer DD, Artesia, NM 88210 P.O. Box 2088 Santa Fe, New Mexico 87504-2088 c. c. o. REQUEST FOR ALLOWABLE AND AUTHORIZATION RESIA, OFFICE TO TRANSPORT OIL AND NATURAL GAS Well API No. Operator 30-015-20894 THE EASTLAND OIL COMPANY Address P. O. DRAWER 3488, MIDLAND, TEXAS 79702 Other (Please explain) Reason(s) for Filing (Check proper box) Change in Transporter of: New Well Dry Cas Oil Recompletion **EFFECTIVE 09/01/90**  $\overline{\boxtimes}$ Casinghead Gas Condennate Change in Operator FRED POOL DRILLING, INC., P. O. DRAWER 1393, ROSWELL, NM 88201 If change of operator give name and address of previous operator II. DESCRIPTION OF WELL AND LEASE Kind of Lease Milte, Federal MAREN Lease No. 6852 Well No. Pool Name, Including Formation Lease Name ARTESIA Q-G-SA 2 CHUKKA FEDERAL Location West 660 1980 Feet From The Feet From The Unit Letter . EDDY 18S County 12 Township III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS Address (Give address to which approved copy of this form is to be sent) NAVAJO CRUDE OIL PURCHASING or Condensate Name of Authorized Transporter of Oil BOX 159, ARTESIA, NM 88210 Address (Give address to which approved copy of this form is to be sent)
BARTLESVILLE, OK Name of Authorized Transporter of Casinghead Gas or Dry Gas .... X PHILLIPS PETROLEUM ls gas actually connected? When? Twp. 188 If well produces oil or liquids, Unit Sec 27E 12 NO zive location of tanks. E If this production is commingled with that from any other lease or pool, give commingling order number; IV. COMPLETION DATA Deepen Plug Back Same Res'v Diff Res'v New Well Workover Gas Weli Oil Well Designate Type of Completion - (X) P.B.T.D. Date Compl. Ready to Prod. Date Spudded Top Oil/Gas Pay Tubing Depth Name of Producing Formation Elevations (DF, RKB, RT, GR, etc.) Depth Casing Shoe Perforations TUBING, CASING AND CEMENTING RECORD SACKS CEMENT

_					=		1 1 1 1 1 1 TO
7	TEST DA	ጥል ልኮ	IN REC	MEST	FOR.	$\mathbf{ALLU}$	IWABLE

HOLE SIZE

OIL WELL (Test must be of	ter recovery of total volume of load	oil and must be equal to or exceed top allow	able for this depth or be for full 24 hows.)
Date First New Oil Run To Tank	Date of Test	Producing Method (Flow, puri	p, gas lift, etc.)  Choke Size 10-26-90
Length of Tex	Tubing Pressure	Casing Pressure	Choke Size 10-26-90
Actual Prod. During Test	Oii - Bbls.	Water - Dbla	Gas-MCF Chg OP

DEPTH SET

Date Approved

GAS WELL		Bbls, Condensate/MMCF	Gravity of Condensate
Actual Prod. Test • MCF/D	Length of Test	Hols. Condensate/MIMCF	Olavity of Colorada
		Casing Pressure (Shut-in)	Choke Size
Cesting Method (pitot, back pr.)	Tubing Pressure (Shut-in)	Casing Freesure (Smorth)	
			<u></u>

#### VI. OPERATOR CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Annies L.	cel .	_
SINAWIS REED	PRODUCTION SUPERINTENDENT	
Printed Name 10/08/90	Title 915/683-6293	_
Date	Telephone No.	

#### OIL CONSERVATION DIVISION

OCT 2 3 1990

By. **CRIGINAL SIGNED BY** MIKE WILLIAMS SUPERVISOR DISTRICT I Title

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 with Rule 111.
- All sections of this form must be filled out for allowable on new and recompleted wells.

CASING & TUBING SIZE

- 3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.
- d) Senarate Form C-104 must be filed for each pool in multiply completed wells.

District I 1625 N. French Dr., Hobbs, NM 88740 State of New Mexico Energy, Minerals & Natural Resources

POIN CHAUL Revised March 12, 1999

Dharlet II

811 South First, Artesia, NM 88210

District III

CONSERVATION DIVISION S 2040 South Pacheco 620 2122 23 24

Submit to Appropriate District Office State Lease - 6 Copies

V) itin Brates	10 Itin Braum Rd., Azice, NM 87410 Shnta Fe.					nta Fe. N	M 87505		189	\	Fee	: Lease - 5 Copies
<u>Act IV</u> 2040 South Pache	een, Santu Fe	, NM 87	505				2025	APR :	1909	$\square$ $\not \!$	AMEN	ided report
APPLIC	ATION	FOF	R PE	RMIT	TO DRI	LL. RE-E	NTER, DEE			ick, o	R AD	D A ZONE
711 1 1212	*****					ne unil Address.		U · AR	TESIA ,	8/	, 00	GRID Number
Navajo R	efining (	Comp	any						<u>چ</u> ر		15	694
Post Offic	-	-					- C	ି/ ១૬		ſ	١.	API Number
Artesia, N			3821	1				7. NA		1	30 - 0	15-20894
	erty Code			<u> </u>			Property Name	t de la constitución de la const				* Well No.
夕	359	又					WDW K					2
	***************************************					<sup>7</sup> Surfac	e Location					
UL or lot no.	Section	Towns	hip	Runge	Lor (da	Feet from the	North/South lin	c Fe	et from the	East/Wes		County
E	12	18	S	27E		1980	North		660	W	est	Eddy
		A 1.0-1-	8 P	roposed	Bottom	Hole Loc	ation If Diffe	rent F	rom Surf	ace		
UI, or lot no.	Section	Tuwns		Kunge	Lat idn	Feet from the	North/South lin		et from the	East/Wa	it linu	County
	<u> </u>	, l,	гирижее	l'onl t			<u> </u>		<sup>18</sup> Ртеро	sed Puol 2		969/8
Lewer	Wolfea	m <del>p C</del>	isco	Canyo	n Injectio	m Zone.	Navajo	/ni	PC.Tion	Per	MO-	
			<del></del>			···	4			,		
" Work "	Type Code		11	Well Type	Çnde	<sup>13</sup> Cul	, , , , , , , , , , , , , , , , , , , ,				ind Level Elevation	
E-Re	entry			ss I Inj			R		Federal			3R, 3623' KB
<sup>av</sup> Mi	shiple		11	Proposed 1	=	1	ormation		" Contractor			Spud Date
, <u> </u>	lo			9200			trawn				5/15/99	
							and Cement Program					
llok S			Cusing			g weight/foot	Setting De		<del></del>	f Cement		Estimated TOC
11'			8-5/			12 lb/ft	1995 fo				Surface	
7-7/8	3"		5-1/			7 lb/ft	9200 f		Caliper			Surface
To 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 blowned prevention program, if any. Use additional sheets if necessary.  Proposed Reentry of The Eastland Oil Company (originally Fred Pool Drilling, Inc.) Chukka Federal No. 2 (PBTD 1912 feet, September 10, 1985) formerly Amoco Production Company Diamond Federal Gas Com. No. 1 (OTD 10,372 feet, P&A August 31, 1973). The well currently produces oil and gas from perforations from 1446 feet to 1462 feet (Penrose.)  Navajo will squeeze the perforations from 1446 feet to 1462 feet, drill out cement plugs, and clean out the well to 9200 feet, set 5-1/2 inch easing at 9200 feet and cement to the surface, perforate porous intervals in the Lower Wolfcamp, Cisco, and Canyon Formations between 7270 feet and 9200 feet, and conducted injectivity tests.												
Attached are	e the Wel	Loca	lio <del>n</del> P	lat and l	Drilling Po	ogram.						
<sup>13</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.					OI	L CO	NSERVA	TION	DIVIS	ION		
Signature: David Marce						Approved by: Jegy W. Germ. B6X					2. B6X	
Printed name:	Darrel	M	0016	2			Tills: Nutret Supervisor					visor
Title: Env.	Mar.			1 4 W	aste		Approval Date:	5 - 3	-99	Expiration	1300: 5	3-0c
Date: 4/21/				Muna:	5-748-3	1311	Conditions of Appro Attached	val :			·	

. THE CO THE TOTAL THE TEN GOD SELECTION

<u>District I</u> 1625 N. French Dr., Hubbs, NM 88240 State of New Mexico Energy, Minerals & Natural Resources Department Form C-102 Revised March 17, 1999

DigHet II

South First, Artesta, NM 88210

ici III

1000 Rio Brazos Rd., Azioc, NM 87410 District IV OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe. NM 87505 Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

2040 South Pacheto, Sunta Fe, NM 87505
WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool		
30 <b>-</b> 01 <i>5-</i> 20894	1	Lower Wolfcamp-Cisco	-Canyon Injection Zone	
Property Cude	• • • • • • • • • • • • • • • • • • • •	Property Name		
	•	WDW-2		
OGRID No.	'(	Operator Name Navajo Refining Company		
	Navajo R			

10 Surface Location

UL or lot no.	Section	Township	Kunge	Lot Idu	Feet from the	North/South line	Feet from the	Fint/West line	County
E	12	18S	27E		1980	North	660	West	Eddy
					<u> </u>				

11 Bottom Hole Location If Different From Surface

Dottoffi Hole Pocknott it Different Low outloo									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
				i				<u> </u>	•
" Dedicated Acres	Joint of	Infill "C	изовідаціон Со	de la Ord	er No.			, .	İ
	1			1					

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A

MOM-21VM	Daku unii has bee	IL WELKOAMO DI III	
<b>一</b>		·	"OPERATOR CERTIFICATION
			I hereby certify that the hyformation contained herein is true and
			complete to the best of my knowledge and belief
1000			
1980'			
			Printed Name Derrell Moore
¥ .			Dringert Name 1
<b>€ 660'→•</b>			Lecrell Hoore
			TILL Env. Mgr. for Water + Waste
			INU 1741. Tor Water 4 Waste
			Date 4/21/99
			"SURVEYOR CERTIFICATION
			f hereby certify that the well location shown on this plat was
<u> </u>		3	placed from field notes of actual surveys mude by me
	[	l (	or under my supervision, and that the same is thus and correct to
			the best of my belief.
	]	;	
			Date of Survey Signature and Smi of Professional Surveyor:
			Well is active. Location was not re-surveyed by
			Navajo.
•			
	1		
1			Certificate Number

### OIL CONSERVATION DIVISION

2040 South Pacheco Santa Fe, NM 87505 (505) 827-7133 Fax: (505) 827-8177



### (PLEASE DELIVER THIS FAX)

To: 7	IM GUMM- ARTESIA OCO JAX 748-9720
From: 2	AYNE PRICE - OCD SE
Date:	4/30/99
Number o	f Pages (Includes Cover Sheet)
Message:_	APPRIVED BOND FOR MAUNTO WOW #2
C4155 1	INSECTION WELL (COPY)
If you	have any trouble receiving this, please call:

(505) 827-7133

# NEW MEX DENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION 2049 South Pacheco Street Santa Fa, New Mexico 87505 (585) 227-7131

April 19, 1999

### CERTIFIED MAIL RETURN RECEIPT NO. Z 559 573 590

J.S. Ward & Son, Inc. 104 South Fourth Street Artesia, New Mexico 88210-2195

Attention:

Mr. Gary Sims

Re:

Navajo Refining Company Discharge Plan UIC-CLI-008-2

Bond No. 58 96 12

\$ 95,000.00 One-Weil Plugging Bond

to the State of New Mexico for Class I Injection Well WDW#2 1980' FNL and 660' FWL - Sec 12-Ts18s-R27e N.M.P.M.

Eddy, County, New Mexico J.S. Ward & Son, Inc., Principal

Gulf Insurance Company, Surety Bond 58 96 12

The New Mexico Oil Conservation Division hereby approves the above-captioned One-Well Plugging Bond.

SiAcerely

RAND CARROLL,

Legal Counsel

RC/wp

cc:

OCD Artesia Office

Gulf Insurance Company

#### PROJECT BILLING INFORMATION SHEET

Proposal No. 71Z5678	Project No. 70De	5806	Original Proposal/Project Submittal Date: 4/23/12	
CLIENT INFORMATION				
Company Name: *	Bio-Lab Inc.		Is this a revision: Yes 🗌 No 🛛	
Attention Line: *	Steve Marr		Revision Date:	
"Billing" Address: *	1400 East Michigan Stre	et		
	Adrian, Michigan 4922	21		
Project Manager: *	Joe Thatcher			
"Main" Telephone No: *	(517) 265-6138 Ext. 253	(Steve Marr)	Fax No.	
Project Manager's Tele. No.*	(517) 605-0908 (Joe That	cher's Cell #)	Fax No.	
Physical (Delivery) Address: '	k		Salesperson (One Only):	
Email Address			Taxable Nontaxable	
Client's PO/Contract No.	P.O. 4500349691		PO/Contract Date: 04/23/12	
Description of Work (TO BE PRII	,		and Falloff Survey	
Subsurface Project Manager:	RWS St	ate Work Performed	d (One Only): MI	
BILLING METHOD: (You must	complete only one of the f	following billing me	thods):	
(1) X 2011 Price List Les				
(2) 2004 Price List Less				
(2) Lump-Sum (Project				
(3) Special Billing (Des		Ü	,	
(4) Standard Governm	nent Billing:% Overh	ead,% Fixed I	Fee (Attach Form OF-60)	
APPROVED PROJECT BUDGET:	:	CRITICA	AL DEADLINES:	
Amount to be Billed: (A)	\$ 11,670	Proposal	Due Date: 3/20/2012	
Subsurface Project Cost: (B)	\$	Project S	tart-up Date:	
Gross Profit: (C=A-B)	\$	Project C	Completion Date:	
Gross Profit: (D=C/A)	%			
PROJECT CODES (One Code Per	Line): **	PREPAR	ATION: ***	
Industry Sector Code:	,		eived: Yes 🗌 No 🦳	
Business Line Code:			en 🗌 Verbal 🧻	
Service Type Code:			ared By: RWS	
Project Type Code:		•	•	

- $\star$  Maximum of 30 characters. This description will appear on all client billing information. Be concise.
- \*\* See back of Project Billing Information Sheet for Business Line/Service Type/Project Type codes.

<sup>\*\*\*</sup> A completed (i) RFP for a proposal or (ii) manpower summary and cost estimate for a project should be attached. Revised 7-27-01



### J. S. Ward & Son, Inc.

101 South Fourth Street (505) 746-2796 FAX (505) 746-4244 Artesia, New Mexico 88210-2195

Insurance Bonds

April 22, 1999

... 26

State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505-5472

Attention: Mr. Roger Anderson

Re: Navajo Refining Company
Bond No. 58 96 12
\$95,000 One-Well Plugging Bond
to the State of New Mexico for
Class I Injection Well
Chukka Federal #2

Dear Mr. Anderson:

Enclosed please find the captioned bond through Gulf Insurance Company which we trust you find in order and acceptable for filing.

Very truly yours,

J. S. WARD & SON, INC.

By S. Dary Simpa

SGS:emb

**Enclosure** 

cc: Navajo Refining Company Post Office Box 159 Artesia, New Mexico 88211-0159

Attention: Mr. Joe Akins - Copy of Bond & Invoice

Navajo Rel ing Company	Gulf Insurance Company
PRINCIPAL Post Office Box 159	SURETY 101 Court William
Artesia, New Mexico 88211-	101 South Fourth Street 0159 Artesia. New Maxico 88210-2195
Address	//Address /
By Significan	Atome Arms
Signifure	Attorney-In-Fact
President	/
(Note: Principal, if corporation, affix	(Mote: Corporate surety affix corporate sesi
corporate seal here.)	here.)
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ACRONALEDGESENCE	FORM FOR NATURAL PERSONS
STATE OF	
COUNTY OF	
On thisday of	, 19 before me personally appeared
to se	
free set and deed,	newledged that he (they) executed the same as his (their)
IN WITHESS UNERSOY, I have becomen se	it my band and seal on the day and year in this carrificate
first above written.	was on the ony and year in this certificate
	Notary Public
Hy Commission Empires	,
	behalf of said corporation by authority of its board of to be the free act and deed of said corporation.  Hy hand and saal on the day and year in this certificate
1.11.200	Hotary Public Agent CATHOLAL STAR
/-/6-200) Hy Commission Expires	NOTARY PUBLIC STATE OF THE
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ACKNOSERDGENERY ROBOL P	UN CEMPURATE SURFY
STAIR OF New Mexico	
On this 22nd day of April	19 99, before me appeared S. Gary Sims
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	aled on behalf of said corporation by sutherity of its atrument to be the free set and deed of said corporation.
IN WITHERS WHEREOF, I have because satirst above written.	my hand and seal on the day and year in this certificate
TYTE WEALLESS	Chinas you be - 1 H
7-10-01	Hotary Public
y Comission Expires	EDWINA M. BRAMLETT
	NOTARY PUBLIC
Note: Corporate surety attack power of atto	Promy.) Ny Commister Expired (**)
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011. O



#### POWER OF ATTORNEY

## KNOW ALL MEN BY THESE PRESENTS:

That GULF INSURANCE COMPANY, a corporation of the State of Missouri, hereinalter called "Company," does hereby appoint

CHARLENE M. WARD or S. GARY SIMS or JOHN C. KNIGHT

ARTESIA, NEW MEXICO

its true and lawful Attorney-in-fact to make, execute, seal and deliver on its behalf, as surety, any and all bonds and undertakings of suretyship. to exceed \$250,000.00 or any bond where the penalty is not stated in the bond form. authority is granted where the attorney in fact is a party at interest in the bond.

The execution of such bonds or undertakings in pursuance of these presents shall be as binding upon the Company as if they had been executed and acknowledged by the regularly elected officers of the Company.

This Power of Attorney is issued pursuant to and by authority of the following resolution of the Board of Directors of the Company, adopted effective July 1, 1983, and now in full force and effect:

ed that the Previous, or any Senior Vice Presiscent, or any Vice Prepieted, or the Scorectry, or any Appleted Secretary may appoint Alternatys-in-fact in any state, lentingly or Indexes Cliented to of the Company and to accoming being when the poppe of the earliering granted to them, in review, which authority stay include the power to make, a recode, seel and deliver on hertall of this Compa As Surely, and on its act and doed, any and all bends and underprinings of amoly: acres linel day ordinary course of surely business may require, including actionsy to appoint agents by the service of process in any jurisdiction, stone or federal, and authority to wheal to the signature of the President, or any Senior Vice President, or any Wice President, or the Se and reliables to the functional, and to country to a copy of any of the bytens of the Company and to any resolutions adopted by its Board of Directors; and any ou and to verify any stilidavid or other states by in-lack may be removed and the authority granted him seveled by the President, or any Servicy Vice President, or any Yes President, or me Secretary, or my Assistant Secretary, or by the Secret

This Power of Attorney and Certificate are signed and sealed by facsimile under and by authority of the following resolution of the Board of Directors of the Company, adopted effective July 1, 1983, and now in full force and effect:

"Resolved that the signature of the President, or of any Senior Vice President, or of the Secretary, or of any Assistant Secretary, and the sept of the Company resy be affined by the Secretary and alternative and other septiments to any persident resolvents and other volunts collegately in the service of alternative and secretary and control of the service of process in any purection, including any such power of alternative and control of process in any purection, by and conficule revening the surferity of the integraing Atlanteys in-fact, as well as for the approximent of agents for the pervise of process in any jurisdiction, bey and conficule revening the surferity of such agents; and any such power of alternay or conflicture boaring such facts made separate or inclinate sent shall such power of attending or perfected an executed and conflicted by such facts made affects and facts made and binding upon the Company at the in the Company and any such course of attenney or conflicate so executed and earthers by su and criticity are describe and in the future with respect to proy band or unspectating to which dray are effected."

> of, the Company has caused this Power of Attorney to be signed and its corporate seal to be affixed by its authorized officer this April I2 , 19<sub>0 ]</sub> .

Cliffer R. Beard

ONY OF A TO THE STATE WHICH THE STATE OF THE hig leature, clied classes and say that his is then collect of the FIG. What the known this soul of said company; that the soul affined is such inem

ma June

CERTIFICATE

I, the undersigned, do hereby certify that the original Power of Attorney of which the foregoing is a true and correct copy is in full force and effect, and the original resolutions are true and correct transcripts from the records of GULF INSUPANCE COMPANY and that the above named officer was on the date cloregoing Power of Altomay authorized to execute this Power of Altomay.

fact the corporate sent of Gull Insurance Company the

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Vice President

YOF DALUKS

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#### STATE OF HEW HEXICO

#### ONE-WELL PLUGGENG BOND

FOR CHAVES, CODY, LEA, MCKEMLEY, RIO ARRIBA, ROOSEVELT, SANDOVAL, AND EAR JUAN COUNTIES ONLY

> воко но. <u>58 96 12</u> Анопит от воио <u>\$95,000.0</u>0 социту <u>Eddy</u>

MOTE: For wells less than 5,000 feet deep, the minimum bond is \$3,000.000 For wells 5,000 to 10,000 feet deep, the minimum bond is \$7,500.000 For wells more than 10,000 feet deep, the minimum bond is \$10,000.00

\*Under certain conditions, a well being drilled under a \$5,000.00 or \$7,500 bond may be permitted to be drilled as such as 500 feet deeper them the normal maximum depth, i.e., a well being drilled under a \$5,000.00 bond may be permitted to go to \$,500 feet, and a well being drilled under a \$7,500.00 bond may be parmitted to go to 10,500 feet. (See Rule 101)

File with 011 Conservation Division, P. O. Box 2028, Sents Po 87501

TWA	ALL.	HEN	ΒY	THESE	PRESENTS:
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HIR 00 00 181 16-00 111

That Navajo Refir	ing Company		22 T-10 av av avenue.	
(a corporation organized in the Stat	of New Mex	leo	WALKSHAME THE	THE THE PERSON NAMED IN COLUMN
of Artesia , Stat	or New Mex	ico.	h its priocipal	l office in the city
In the State of New Mexico), as FRIM	CIPAL and Co	16 Y	and author	ized to do business
a corporation organized as	d existing	III Insurance		,
•	e extactua	under the 1	ante of	the State of
Missouri Mexico, as SUMETY, are hald firmly be		ma authorized to	do business i	s the State of Hew
Conservation Division of New Hexics	Burrient to See	* OI MAY MEXICO, F	or the use sed	benefit of the Oil
Conservation Division of New Mexico Compilation, as amended, in the sum of States, for the naveent of inter-	Ninety-Fiv	e Thousand	nd no/100t	48 Abnotated, 1978 Ins
States, for the payment of which,	well and train t	O be sede	ollers lawful :	stacy of the United
themselves, their successors and sesi	ans, jointly and	overally, first- b	MINITIFE AND	SURERY hereby bind
The conditions of this obligation	e are such that:	over-only, killing is	A russa biases	ts.
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MREREAS, The above principal has dioxide (CO <sub>2</sub> ) gas leases, or halium; States of America to private individu	heratofore or may gas lesses, or br mls, and on lands	hereafter antar i ine mineral lesses otherwise owned by	nto oil and gar on lands pate private indivi	s leases, or carbon used by the United Iduals; and
MIPRIAS. The above principal, i commenced or any commence the drillinfest, to prospect for and produce of may acquire, own or operate such well		to exceed a dibita	ot9200	
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(Here state exact legal footage of	Séct	ton 12 Tour	ehin 18	being being
NOW, THEREFORE, If the above bouterigns, or any of them, shell ping or egulations, and orders of the Oil Corps, brine, and water in the strate intrate;	nden principal an	f surety or either or when abandone	of them or the in secondance	• With the rules.
THEM, THEREFORE, This obligation compliance with any and all of said ob	n shall be oull ligations, the sam	and void; otherwise shall remain in	or and in def full force and	fault of complete
Signed and scaled this	22nd	day of	April	, 1999
· ·				·

#### ATTACHMENT A

## Sunday, May 9, 1999

Pressure testing the 8-5/8 inch Surface Casing from 1922 feet (KB) to 30 feet (KB) using a fresh water fluid. Pressure testing was performed after the perforations between 1446 feet and 1462 feet were squeezed with cement.

#### Pressure Test No. 1

Time	Cumulative Time	Pressure		Delta Pressure
(hrs.)	(minutes)	(psig)	(psi)	
1303	0	660		21 w w 24
1308	5	660		0
1313	10	660		0
1318	15	660		0
1323	20	660		0
1328	25	659		<b>-1</b>
1333	30	659		0

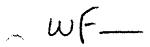
Total =-1 psi per 30 minutes

#### Pressure Test No. 2

Time	Cumulative Time	Pressure	Delta Pressure	
(hrs.)	(minutes)	(psig)	(psi)	
1333	0	659		4
1338	5	659		0
1343	10	659		0
1348	15	658		-1
1353	20	658		0
1358	25	657		-1
1303	30	657		0

Total =-2 psi per 30 minutes





~5) 748-3311

EASYLINK 62905278



## REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 748-4438 P / L

May 10, 1999

Mr. Tim Gumm State of New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division 811 South First Street Artesia, New Mexico 88210



RE: Re-Entry for Navajo Refining Company's Waste Disposal Well No. 2

Dear Mr. Gumm:

Navajo Refining Company (Navajo) has contracted Subsurface Technology, Inc. to re-enter, test and complete Waste Disposal Well No. 2 (WDW-2), formerly the Chukka Federal No. 2 operated by The Eastland Oil Company. The United States Department of the Interior, Bureau of Land Management approved the Application for Permit to Drill or Deepen on April 27, 1999. Subsequent approval from the State of New Mexico Oil Conservation Commission (OCD) was granted on Tuesday, May 4, 1999.

Navajo initiated field operations on Wednesday, May 5, 1999. The existing pumping equipment, rods, and tubing were removed from the wellbore. The perforations from 1446 feet to 1462 feet were squeezed using 100 sacks of Class 'H' cement (approximately 50 sacks of cement were displaced into the perforated interval). The cement was allowed to cure and drilled out to a total depth of 1922 feet (KB)(1911 feet below ground level).

On Sunday, May 9, 1999, the 8-5/8 inch surface casing, set from 1955 feet (KB) to surface, was pressure tested for internal mechanical integrity between 1922 feet (KB) and 30 feet (KB) using a packer set at 30 feet. The 8-5/8 inch surface casing was pressure tested to 660 pounds per square inch and monitored at the surface for one hour (Attachment A). The fluid used for testing was a clean fresh water fluid. A pressure loss of 1 psi (0.15%) was observed during the first 30 minutes of the test. A pressure loss of 2 psi (0.30%) was observed during the last 30 minutes of the test. The results from the pressure test confirmed internal mechanical integrity of the 8-5/8 inch surface casing from 1922 feet (KB) to 30 feet (KB).

The 8-5/8 inch surface casing was originally set in an 11 inch open-hole to a depth of 1955 feet (KB) and cemented to surface using 700 sacks of Class 'H' cement with 2% gel and 100 sacks of Class 'H' neat. A total of 200 sacks of cement was recorded circulated to surface. The calculated volume between an 11 inch hole and 8-5/8 inch casing is (0.2407 cubic feet per foot X 1955 feet) 471 cubic feet. The volume of cement pumped is (1.18 cubic feet per sack X 800 sacks) 944 cubic feet for an excess of 473 cubic feet or 400 sacks circulated to surface. The calculated volume of cement and apparent volume of actual cement pumped indicated excess cement was circulated to surface.

On Sunday, May 9, 1999, Halliburton Logging Services completed a cement bond and microsiesmogram (same as a variable density log) logging survey within the 8-5/8 inch casing from a wireline total depth of 1919 feet (KB) to the surface (Attachment B). The results from the survey indicate a continuous column of cement from 1922 feet to surface with good bonding characteristics. The cement behind the 8-5/8 inch casing will provide an effective hydraulic seal to prevent the movement of groundwater fluids into the underground source of drinking water with a base at 473 feet.

Please review and approve the pressure testing and cement bond log results at your earliest convenience. Navajo will proceed with the mobilization of the drilling rig Wednesday, May 12, 1999 and begin re-entry of the WDW-2 wellbore according to the approved drilling program. Navajo will periodically contact the OCD, Artesia office with a status update of the re-entry operations. The Bureau of Land Management will be notified in sufficient time for a representative to witness the cementing of the 5-1/2 inch protection casing.

Should you have any questions or concerns, please call me at (505) 748-3311.

Sincerely yours,

Darrell Moore

Environmental Manager for Water and Waste

c: Mr. David Glass
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

aull Moore

Mr. Brian Rogers Subsurface Technology, Inc. 7020 Portwest, Suite 100 Houston, Texas 77024

File: Injection Wells

## *ENVIROCORP*

March 30, 1999

Mr. Barry Hunt Bureau of Land Management Carlsbad Resource Area 620 East Greene Street Carlsbad, New Mexico 88220-6292

RE: Navajo Refining Company Proposed WDW-2, Eddy County, New Mexico Request for On-Site Inspection of Wellsite Subsurface Project No. 60A4937

Dear Mr. Hunt:

Navajo Refining Company (Navajo) is purchasing an existing well in Eddy County, New Mexico for planned use as a Class I nonhazardous effluent disposal well, and plans to reenter and test the well in the next few months. The well is on federal land. Subsurface Technology, Inc. (Subsurface), formerly Envirocorp Services & Technology, Inc., on behalf of Navajo, requests your participation in an on-site inspection of the wellsite as soon as possible.

Pertinent information about the existing well is provided below:

Lease Number:

NM 6852

Current Operator:

The Eastland Oil Company (September 1990 to present)

Lease:

Chukka Federal No. 2

Former Operator:

Fred Pool Drilling Company (August 1985 to September

1990)

Former Operator:

Amoco Production Company (July 1973 to August 1985)

Former Lease:

Diamond Federal Gas Com. No. 1

Location:

1980' FNL, 660' FWL (SW/4 NW/4, Unit Letter E) 12-

T18S-R27E

Topographic Map (Attachment A)

Original Total Depth:

10,372 feet

Plugged-Back Total Depth: 1912 feet

Well Schematic (Attachment B)

Status:

The well is producing from the Penrose from perforations of

between 1446 feet and 1462 feet. Navajo is convent?

negotiating to purchase the well from Eastland Oil Company. The purchase should be completed by April 1, 1999.

Navajo proposes to reenter the well, squeeze the perforations from 1446 feet to 1462 feet, drill out the plugs and clean out the well to approximately 9200 feet, set 5-1/2 inch casing at 9200 feet and cement it to the surface, and conduct one or more injectivity tests. The proposed injection intervals are porous zones in the lower portion of the Wolfcamp Formation (7270 feet to 7645 feet), the Cisco Formation (7645 feet to 8390 feet), and the Canyon Formation (8390 feet to 8894 feet). Navajo's proposed reentry, testing, and recompletion procedure is included as Attachment C. A schematic of the well after recompletion is included as Attachment D.

Subsurface is currently preparing a discharge plan application for the Class I well for Navajo to submit to the New Mexico Oil Conservation Division and the BLM Roswell office near the end of April 1999. Subsurface is also preparing BLM Form 3160-3 (Application for Permit to Drill) for Navajo to submit to the BLM Roswell office.

Please contact me at (713) 880-4640 to schedule an on-site inspection of the wellsite. Do not hesitate to call me if you need additional information or if you have questions.

Sincerely,

Nancy L. Niemann Senior Geologist

NLN/paf

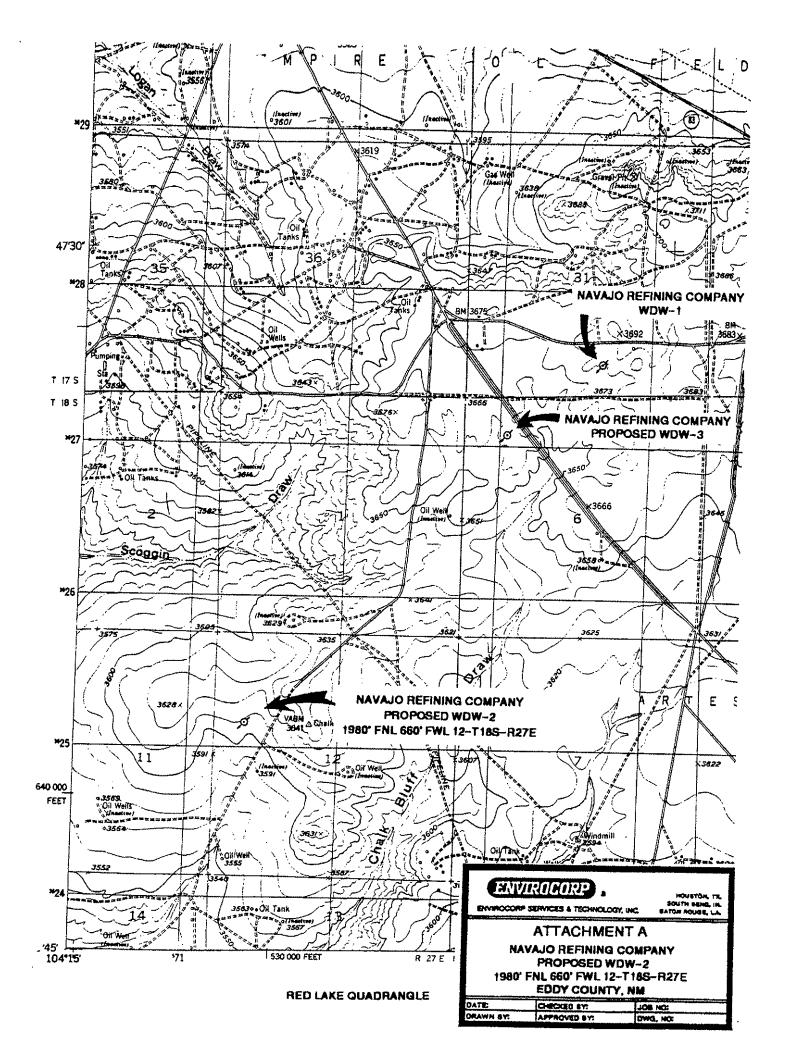
Attachments

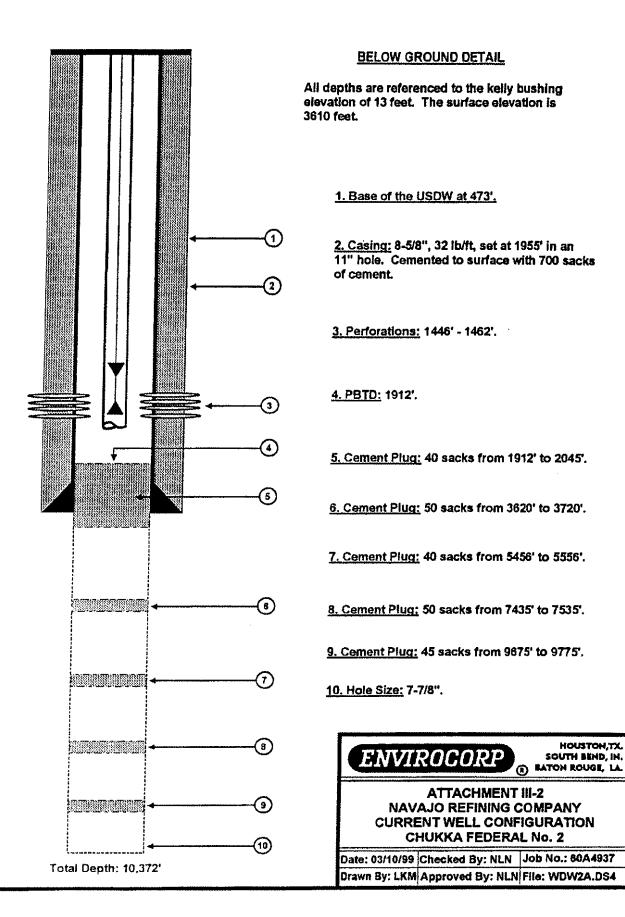
c: Joe Lara – BLM, Carlsbad
David Glass – BLM, Roswell
Wayne Price – OCD, Santa Fe
Tim Gum – OCD, Artesia
Phil Youngblood – Navajo
Darrell Moore – Navajo
George Walbert – Holly Petroleum, Inc.

naucy L. niemann

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#### ATTACHMENT C

## DRILLING AND RECOMPLETION PROCEDURE FOR NAVAJO REFINING COMPANY'S PROPOSED WDW-2

- 1. Obtain all permits and approvals for the reentry, testing and completion of a currently existing well.
- 2. Move in and rig up a workover unit. Remove the pumping equipment and pull the tubing out of the well.
- 3. Go in the hole with a squeeze packer and squeeze the perforations from 1446 feet to 1462 feet with 100 sacks of Class "H" cement. Allow the cement to cure.
- 4. Drill out the cement, circulate the well clean and pressure test the squeezed perforations at 500 psig for 30 minutes. Pull the squeeze tools out of the hole.
- 5. Conduct a CBL/VDL survey from 1912 feet to the surface. Submit the results of the pressure test and CBL/VDL survey to the OCD and the BLM for their review and approval prior to mobilizing the drilling rig.
- 6. After receiving approval from the OCD and the BLM to continue the reentry, prepare the location for the selected drilling rig. Construct the lined reserve pits, dig out the cellar, and install a mousehole and rathole.
- 7. Move in and rig up the rotary drilling rig and install the blowout preventers.
- 8. Drill out the following cement plugs and conduct deviation surveys every 1000 feet or on trips:
  - a. 1912 feet to 2045 feet, 40 sacks
  - b. 3620 feet to 3720 feet, 50 sacks
  - c. 5456 feet to 5556 feet, 40 sacks
  - d. 7435 feet to 7535 feet, 50 sacks
- 9. Clean the well out to a depth of 9200 feet and circulate and condition the hole for logging. Make a wiper trip to the base of the 8-5/8 inch surface casing while strapping the drillpipe.
- 10. Conduct a formation microimager (FMI) survey with gamma ray from the well's total depth to 4000 feet. Continue the four-arm caliper survey to the 8-5/8 inch

1

Subsurface Technology, Inc.



## ATTACHMENT C (Continued)

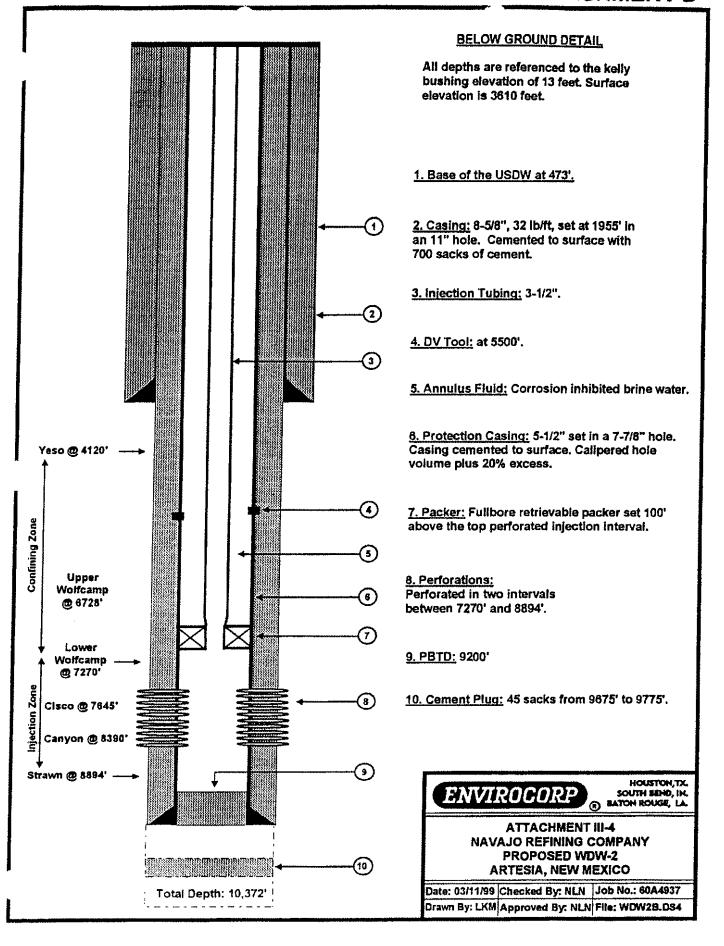
casing shoe. Process the FMI for fracture identification over the lower 200 feet of the confining zone and zones of interest in the injection zone, if warranted.

- 11. Spot a gelled pill at 9200 feet and lay down the drillpipe.
- 12. Run the 5-1/2 inch casing with a packoff shoe and float collar to 9200 feet. Install a "DV" tool at 5500 feet. Run centralizers at approximately 120-foot intervals.
- 13. Cement the 5-1/2 inch casing in place. Use a minimum of 20% excess cement as calculated from the caliper log. Circulate cement to the surface and allow to cure.
- 14. Clean out the mud pits and release the drilling rig 12 hours after cementing the 5-1/2 inch casing in place.
- 15. Stabilize the 5-1/2 inch casing at the surface using ready-mix cement.
- 16. Move in and rig up the completion rig pump, tank, power swivel, and work string. Install the blowout preventer.
- 17. Run in the well with a 4-3/4 inch bit to the "DV" tool and test the casing to 1500 psig for 30 minutes.
- 18. Drill out the "DV" tool and clean out the wellbore to the float collar. Test the casing to 1500 psig for 30 minutes. Circulate the wellbore with clean brine, preceded by 15% HCL to clean the casing. Trip the work string out of the well.
- 19. Conduct the casing inspection, CBL/VDL, and differential temperature surveys.
- 20. Perforate the selected injection interval as determined from the open hole logs. (Zone 1).
- 21. Run in the well with a packer and tailpipe. Set the packer above the top perforation and swab test the perforated interval. Recover at minimum two tubing volumes of the reservoir fluid for analysis (Note: Set up H<sub>2</sub>S monitoring equipment prior to swabbing operations).
- 22. Acidize the zone using diverters. Pull the packer out of the well.
- 23. Perforate the next selected injection interval as determined from the open hole logs (Zone 2).

## ATTACHMENT C (Continued)

- 24. Run a retrievable bridge plug and packer into the well and isolate Zone 2.
- 25. Acidize Zone 2 using diverters. Pull the retrievable bridge plug and packer out of the well, laying down the work string.
- 26. Conduct an injection test down the 5-1/2 inch casing at 420 gpm for 12 hours followed by a pressure falloff test.
- 27. Conduct a differential temperature survey and radioactive tracer survey to determine the injection profile.
- 28. Run the injection tubing and packer. Fill the annulus with corrosion inhibited brine.
- 29. Wait for the well system to come to thermal stabilization (approximately 24 hours).
- 30. Conduct an annulus pressure test witnessed by the OCD.
- 31. Rig down and move out all equipment and close the reserve pit.
- 32. Install the annulus monitoring system and return the well to the client.





#### CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Navajo Refining Company Well No. 2 - WDW Location: 1980' FNL & 660' FWL sec. 12, T. 18 S., R. 27 E.

Lease: NM-6852

#### I. DRILLING OPERATIONS REQUIREMENTS: [Deepening]

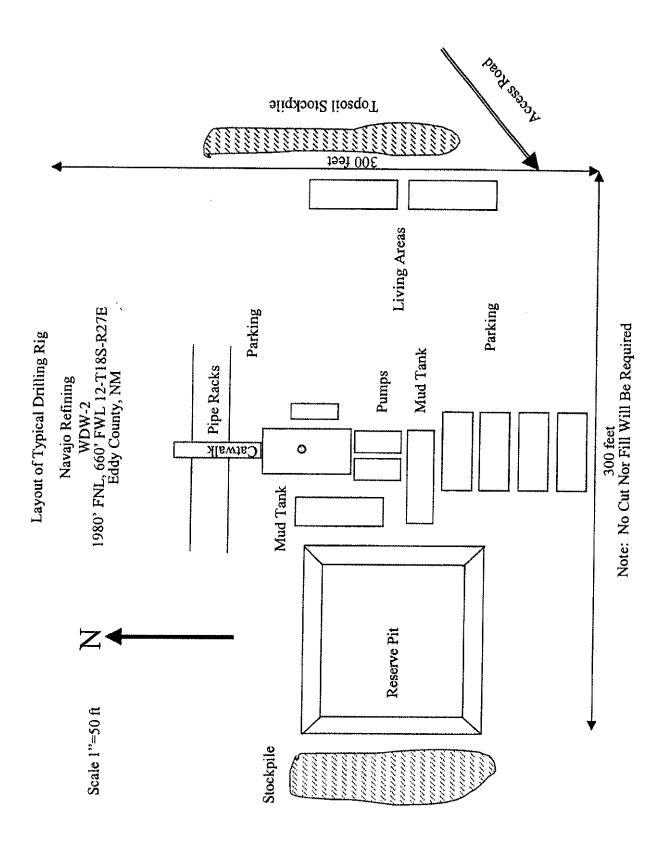
- 1. The Bureau of Land Management (BLM) is to be notified at (505) 887-6544 in sufficient time for a representative to witness:
- A. Cementing casing: 5-1/2 inch
- 2. Unless the injection casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

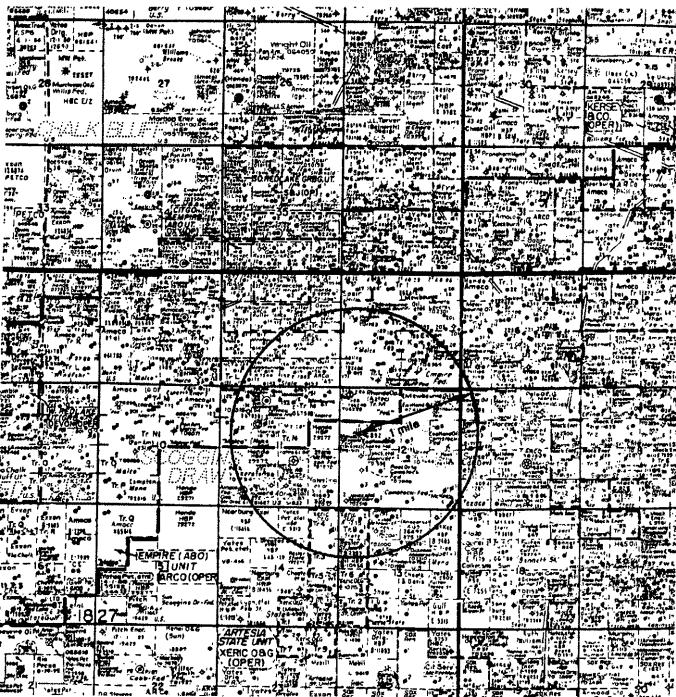
#### II. CASING:

1. Minimum required fill of cement behind the <u>5-1/2</u> inch injection casing is <u>sufficient to circulate to the surface.</u>

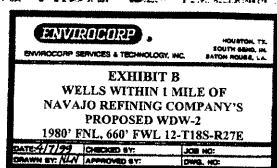
#### III. PRESSURE CONTROL:

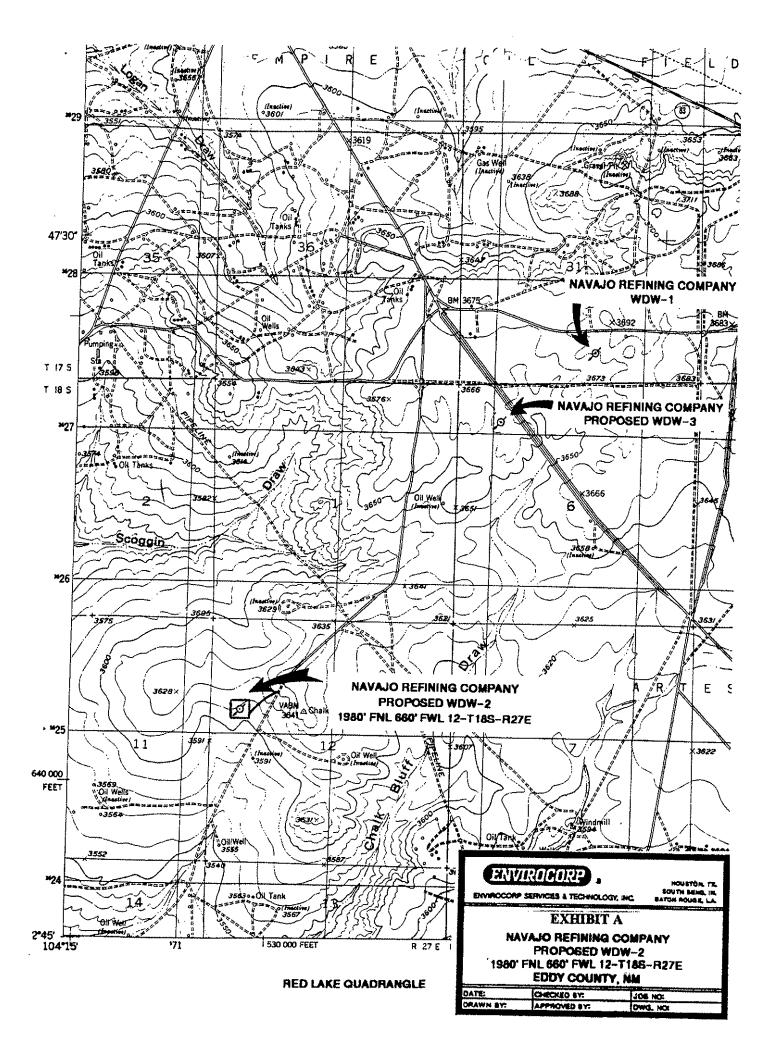
- 1. Before drilling into the 100 foot 8-5/8 inch surface casing shoe cement plug at approximately 1912 feet, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.
- 3. After drilling into the 100 foot 8-5/8 inch surface casing shoe cement plug at approximately 1912 feet and before drilling into the 100 foot Abo cement plug at approximately 5450 feet, the BOPE shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- A. The results of the test will be reported to the BLM Carlsbad Resource Area office at 620 East Greene Street, Carlsbad, New Mexico 88220-6292.
- B. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- C. Testing must be done in a safe workman like manner. Hard line connections shall be required.





Map courtesy of Midland Map Company





#### SURFACE USE PLAN

## NAVAJO REFINING COMPANY PROPOSED WDW-2 1980' FSL, 660' FWL of 12-T18S-R27E EDDY COUNTY, NEW MEXICO

- 1. Existing Roads: Existing roads that lead to the proposed drillsite are shown on Exhibit A.
- 2. Access Roads To Be Constructed: No new access road is proposed.
- 3. Location of Existing Wells: Existing wells within one mile of proposed WDW-2 are shown on Exhibit B.
- 4. <u>Location of Proposed Facilities If Well Is Completed</u>: The well will be shut in after completion and testing.
- 5. <u>Location and Type of Water Supply</u>: Water for reentry, testing, and completion operations will be purchased from a commercial water hauler.
- 6. Source of Construction Materials: Materials required for construction of the site will be taken from a state-owned pit.
- 7. 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 the pits are dry.
  - C. Water produced during tests will be disposed of in the drilling pits.
  - D. Trash, waste paper, garbage, and junk will be buried in a trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of the trash pit is shown on Exhibit C.



- E. All trash and debris will be buried or removed form the wellsite after finishing drilling and/or completion operations.
- 8. Ancillary Facilities: None anticipated.

#### 9. Wellsite Layout:

- A. The wellsite will be surveyed, and a 400' x 400' area will be staked and flagged.
- B. The dimensions and relative location of the drill pad, mud pit, and trash pit, with respect to the wellbore, are shown on Exhibit C.
- C. Existing topsoil to a depth of 6 inches will be lifted and stockpiled at the northeastern (uphill) end of the well pad. The stockpiled topsoil will be located uphill to avoid mixing with subsurface materials.
- D. The well pad will be surfaced with material found in place.
- E. The pits for mud and cuttings will be lined with 6-mil plastic.

#### 10. Plans for Restoration of Surface:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and the location cleaned of all trash and junk.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. After abandonment, all equipment, trash, and junk will be removed and the location cleaned.
- D. The stockpiled topsoil will be spread over the surface of the location.
- 11. Surface Ownership: U.S. Department of Interior, Bureau of Land Management.

- 12. Archaeological Survey: An archaeological survey of the drill pad was submitted to the BLM on July 31, 1985, on behalf of Fred Pool Drilling Company. An archeological survey was conducted by Navajo Refining Company and will be submitted by Navajo under separate cover.
- 13. Operator's Representatives: Representatives responsible for assuring compliance with the approved Surface Use Plan:

Mr. Darrell Moore Navajo Refining Company Post Office Box 159 Artesia, New Mexico 88211 505/748-3311 Mr. Jim Bundy Subsurface Technology, Inc. 7020 Portwest Drive, Suite 100 Houston, Texas 77024 713/880-4640

#### **Exhibits**

- A. Topographic Map
- B. Oil and Gas Map
- C. Sketch of Well Pad

## 14. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions that 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 Navajo Refining Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

4/15/99	Davil More			
Date	Dariell Moore			
	Env. Mgs. S. Water - Waste			
	Navajo Refining Company Company			

## **BOP Minimum Requirements**

- a. 11-inch, 3000-psi working pressure double-hydraulic BOP.
- b. 11-inch, 3000-psi working pressure annular BOP.
- c. 3-inch, 3000-psi working pressure manual choke manifold.

A schematic of the BOP stack is included as Exhibit A.

- 8. Drill out the following cement plugs and conduct deviation surveys every 1000 feet or on trips:
  - a. 1912 feet to 2045 feet, 40 sacks
  - b. 3620 feet to 3720 feet, 50 sacks
  - c. 5456 feet to 5556 feet, 40 sacks
  - d. 7435 feet to 7535 feet, 50 sacks

#### **Estimated Tops of Geologic Formations**

San Andres	2005'	Lower Wolfcamp	7270'
Yeso	4210'	Cisco	7645'
Abo	5506'	Canyon	8390'
Wolfcamp	6728'	Strawn	8894'

No fresh water or hydrocarbons are expected to be encountered.

## **Expected Bottom-Hole Pressure and Hazards**

The expected bottom-hole pressure is 3500 psia at the total depth of 9200 feet. The bottom-hole pressure was determined from the pressure measured in Navajo's WDW-1, or 2928 psia, at 7924 feet. Navajo's WDW-1 is completed in the same interval proposed for WDW-2 and is located 11,000 feet northeast of WDW-2 in 31-T17S-R28E. The average specific gravity of the fluid between 7924 feet and 9200 feet is expected to be 1.034, which is the specific gravity of the fluid swabbed from the interval between 8220 feet and 8476 feet in WDW-1. The expected bottom-hole pressure at 9200 feet in proposed WDW-2 is calculated below:

BHP (9200 feet) = 
$$2928 \text{ psia} + (9200 \text{ feet} - 7924 \text{ feet}) \times 0.433 \text{ psi/ft} \times 1.034$$
  
=  $3500 \text{ psia}$ 



No abnormal pressures or temperatures or other hazards are expected while drilling or testing the well. Hydrogen sulfide monitoring equipment will be set up prior to swabbing operations.

- 9. Clean the well out to a depth of 9200 feet and circulate and condition the hole for logging. Make a wiper trip to the base of the 8-5/8 inch surface casing while strapping the drillpipe.
- 10. Conduct a formation microimager (FMI) survey with gamma ray from the well's total depth to 4000 feet. Continue the four-arm caliper survey to the 8-5/8 inch casing shoe. Process the FMI for fracture identification over the lower 200 feet of the confining zone and zones of interest in the injection zone, if warranted.
- 11. Spot a gelled pill at 9200 feet and lay down the drillpipe.
- 12. Run the 5-1/2 inch, 17-lb/ft, J-55, LT&C casing with a packoff shoe and float collar to 9200 feet. Install a "DV" tool at approximately 5800 feet. Run centralizers at approximately 120-foot intervals.
- 13. Cement the 5-1/2 inch casing in place. Use a minimum of 20% excess cement as calculated from the caliper log. Circulate cement to the surface and allow to cure.

#### Cement Program

- a. Stage 1 Cement (total depth to 5800 feet): Lightweight Class H with fly ash, gel, friction reducer, and salt mixed with fresh water.
- b. Stage 2 Lead Cement (5200 feet to the surface): Lightweight Class C with gel and bridging agents mixed with fresh water.
- c. Stage 2 Tail Cement (5800 feet to 5200 feet): Class C mixed with fresh water.
- 14. Clean out the mud pits and release the drilling rig 12 hours after cementing the 5-1/2 inch casing in place.
- 15. Stabilize the 5-1/2 inch casing at the surface using ready-mix cement.

- 16. Move in and rig up the completion rig pump, tank, power swivel, and work string. Install the blowout preventer.
- 17. Run in the well with a 4-3/4 inch bit to the "DV" tool and test the casing to 1500 psig for 30 minutes.
- 18. Drill out the "DV" tool and clean out the wellbore to the float collar. Test the casing to 1500 psig for 30 minutes. Circulate the wellbore with clean brine, preceded by 15% HCL to clean the casing. Trip the work string out of the well.
- 19. Conduct the casing inspection, CBL/VDL, and differential temperature surveys.
- 20. Perforate the selected injection interval as determined from the open hole logs. Depending on the height of the perforated interval, the interval may be perforated in two stages, as Zone Nos. 1 and 2.
- 21. Run in the well with a packer and tailpipe. Set the packer above the top perforation and swab test the perforated interval. Recover at minimum two tubing volumes of the reservoir fluid for analysis (Note: Set up H<sub>2</sub>S monitoring equipment prior to swabbing operations).
- 22. Acidize the perforated zone (Zone 1) using diverters. Pull the packer out of the well.
- 23. Perforate the next selected injection interval (Zone 2) as determined from the open hole logs.
- 24. Run a retrievable bridge plug and packer into the well and isolate Zone 2.
  - 25. Acidize Zone 2 using diverters. Pull the retrievable bridge plug and packer out of the well, laying down the work string.
  - 26. Conduct an injection test down the 5-1/2 inch casing at 420 gpm for 12 hours, followed by a pressure falloff test.
  - 27. Conduct a differential temperature survey and radioactive tracer survey to determine the injection profile.

- 28. Run the injection tubing and packer. Fill the annulus with corrosion inhibited brine.
- 29. Wait for the well system to come to thermal stabilization (approximately 24 hours).
- 30. Conduct an annulus pressure test witnessed by the OCD.
- 31. Rig down and move out all equipment and close the reserve pit.
- 32. Install the annulus monitoring system and return the well to the client.

## Logging, Testing, And Coring Program

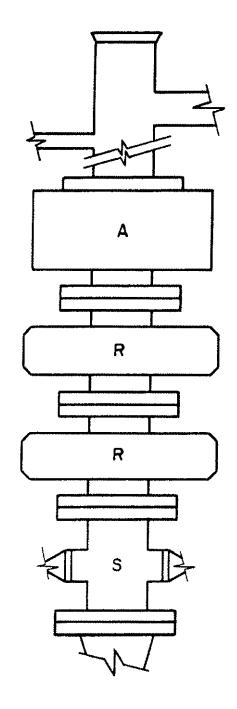
A formation fluid sample will be retrieved from the proposed injection zone in proposed WDW-2. Navajo will conduct injectivity testing in the injection zone of proposed WDW-2.

No coring is planned.

The proposed logging program is described below:

HOLE/CASING	OPEN-HOLE LOGS	CASED-HOLE LOGS							
	Proposed WDW-2								
11 inch Surface Borehole (8-5/8 inch Casing) 1995 feet		Logs Run in 1973: Gamma Ray  Logs Proposed on Reentry: Cement Bond/Variable Density Casing Inspection Log							
7-7/8 inch Long-String Borehole (5-1/2 inch Casing) 9200 feet	Logs Run on August 27, 1973: Dual Induction-Laterolog/ Spontaneous Potential Compensated Neutron/ Formation Density Caliper Gamma Ray  Logs Proposed on Reentry: Fracture Identification Log 4-Arm Caliper	Logs Proposed on Reentry: Cement Bond/Variable Density Casing Inspection Log Differential Temperature Log Radioactive Tracer Survey							

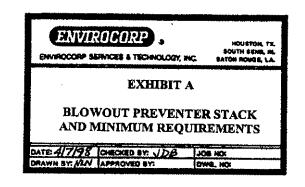




- A = ANNULAR-TYPE BLOWOUT PREVENTER 11-inch throughbore, 3000-psi working pressure
- R = RAM-TYPE BLOWOUT PREVENTER 11-inch throughbore, 3000-psi working pressure
- S = DRILLING SPOOL WITH SIDE OUTLET CONNECTIONS FOR CHOKE AND KILL LINES

MANUAL CHOKE MANIFOLD 3-inch throughbore, 3000-psi working pressure

Source: API RP 53: Recommended Practices for Blowout Prevention Equipment Systems



APPROVED BY ...

160

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\_ TITLE \_

\_ DATE \_

District I

1625 N. French Dr., Hobbs, NM 88240

State of New Mexico Energy, Minerals & Natural Resources Depart at Form C-102 Revised March 17, 1999

District II

811 South First, Artesia, NM 88210

District III

District [V

1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe. NM 87505 Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

AMENDED REPORT

2040 South Pacheco, Santa Fe, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number Pool Code		Pool Name			
30-015-20894		Lower Wolfcamp-Cisco-Canyon	Lower Wolfcamp-Cisco-Canyon Injection Zone		
* Property Code		Property Name	* Well Number		
	,	WDW-2			
'OGRID No.	• (	Operator Name			
	Navajo R	lefining Company	3607' GR		

<sup>10</sup> Surface Location

ſ	UL or lot so.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
	E	12	18S	27E		1980	North	660	West	Eddy

11 Bottom Hole Location If Different From Surface

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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A

	NON-STANDARD UNIT HAS BEE		
		<sup>17</sup> OPERATOR CERTIFICATIO  I hereby certify that the information contained herein is true  complete to the best of my knowledge and belief	
1980'		Doub Mari	
<b>←</b> 660'→•		Daud More Signate Signate Printed Name	
		Tide EAU. MAT.  Die 4/18/49	<u>_</u>
		<sup>18</sup> SURVEYOR CERTIFICATIO  I hereby certify that the well location shown on this plat was plotted from fleid notes of actual surveys made by me  or under my supervision, and that the same is true and corn the best of my belief.	•
		Date of Survey Signature and Seal of Professional Surveyor:	
		Well is active. Location was not re-surveyed by Navajo.	
		Certificate Number	

## 14. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions that 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 Navajo Refining Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

4/16/99	Darull More				
Date	Darrell Moore				
	Env. Mgs. & Water a Waste				
	Navajo Refining Company				

TELÉPHONE (505) 748-3311

> EASYLINK 62905278



# N.M. Oil Cons. Division 811 S. 1st Street ARMENINGSUCCESOMPANY

FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P/L

501 EAST MAIN STREET • P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159

May 10, 1999

Mr. Tim Gumm
State of New Mexico
Energy, Minerals and Natural
Resources Department
Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210





RE: Re-Entry for Navajo Refining Company's Waste Disposal Well No. 2

Dear Mr. Gumm:

Navajo Refining Company (Navajo) has contracted Subsurface Technology, Inc. to re-enter, test and complete Waste Disposal Well No. 2 (WDW-2), formerly the Chukka Federal No. 2 operated by The Eastland Oil Company. The United States Department of the Interior, Bureau of Land Management approved the Application for Permit to Drill or Deepen on April 27, 1999. Subsequent approval from the State of New Mexico Oil Conservation Commission (OCD) was granted on Tuesday, May 4, 1999.

Navajo initiated field operations on Wednesday, May 5, 1999. The existing pumping equipment, rods, and tubing were removed from the wellbore. The perforations from 1446 feet to 1462 feet were squeezed using 100 sacks of Class 'H' cement (approximately 50 sacks of cement were displaced into the perforated interval). The cement was allowed to cure and drilled out to a total depth of 1922 feet (KB)(1911 feet below ground level).

On Sunday, May 9, 1999, the 8-5/8 inch surface casing, set from 1955 feet (KB) to surface, was pressure tested for internal mechanical integrity between 1922 feet (KB) and 30 feet (KB) using a packer set at 30 feet. The 8-5/8 inch surface casing was pressure tested to 660 pounds per square inch and monitored at the surface for one hour (Attachment A). The fluid used for testing was a clean fresh water fluid. A pressure loss of 1 psi (0.15%) was observed during the first 30 minutes of the test. A pressure loss of 2 psi (0.30%) was observed during the last 30 minutes of the test. The results from the pressure test confirmed internal mechanical integrity of the 8-5/8 inch surface casing from 1922 feet (KB) to 30 feet (KB).

1. A.

The 8-5/8 inch surface casing was originally set in an 11 inch open-hole to a depth of 1955 feet (KB) and cemented to surface using 700 sacks of Class 'H' cement with 2% gel and 100 sacks of Class 'H' neat. A total of 200 sacks of cement was recorded circulated to surface. The calculated volume between an 11 inch hole and 8-5/8 inch casing is (0.2407 cubic feet per foot X 1955 feet) 471 cubic feet. The volume of cement pumped is (1.18 cubic feet per sack X 800 sacks) 944 cubic feet for an excess of 473 cubic feet or 400 sacks circulated to surface. The calculated volume of cement and apparent volume of actual cement pumped indicated excess cement was circulated to surface.

On Sunday, May 9, 1999, Halliburton Logging Services completed a cement bond and microsiesmogram (same as a variable density log) logging survey within the 8-5/8 inch casing from a wireline total depth of 1919 feet (KB) to the surface (Attachment B). The results from the survey indicate a continuous column of cement from 1922 feet to surface with good bonding characteristics. The cement behind the 8-5/8 inch casing will provide an effective hydraulic seal to prevent the movement of groundwater fluids into the underground source of drinking water with a base at 473 feet.

Please review and approve the pressure testing and cement bond log results at your earliest convenience. Navajo will proceed with the mobilization of the drilling rig Wednesday, May 12, 1999 and begin re-entry of the WDW-2 wellbore according to the approved drilling program. Navajo will periodically contact the OCD, Artesia office with a status update of the re-entry operations. The Bureau of Land Management will be notified in sufficient time for a representative to witness the cementing of the 5-1/2 inch protection casing.

Should you have any questions or concerns, please call me at (505) 748-3311.

Sincerely yours,

Duell Moore

Darrell Moore

Environmental Manager for Water and Waste

c:

Mr. David Glass
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

Mr. Brian Rogers Subsurface Technology, Inc. 7020 Portwest, Suite 100 Houston, Texas 77024

File: Injection Wells

**APPROVED** 

JUN 02 1999

(ORIG SGD) DAVID R. GLASS
AUTHORIZED OFFICER, MINERALS
BUREAU OF LAND MANAGEMENT

SUBJECT TO LIKE APPROVAL BY STATE



## Patterson Drilling Company 410 N. Loraine Street - (915) 682-9401

Midland, Texas 79701

RECEIVED

JUN 0 4 1999

June 2, 1999

SUBSURFACE TECHNOLOGY, INC.

**Drilling Department** Subsurface Construction Corporation 7020 Port West, Ste 100 Houston, TX 77024

RE:

Inclination Report Navajo WDW-2

Sec 12; T-18-S; R-27-E

#### Gentlemen:

The following is an inclination survey on the above referenced well located in Eddy County, New Mexico:

2898' - 0.253838' - 0.254783' - 0.50 6106' - 0.756633' - 0.50

Sincerely,

Rebecca Edwards

Rebecca A. Edwards Administrative Assistant

STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing was acknowledged before me this 2nd day of June, 1999 by Rebecca A. Edwards.

MY COMMISSION EXPIRES:

TREVA FORRESTER NOTARY PUBLIC STATE OF TEXAS My Comm. Exp. 9-2-2000

## **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 ned 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 acted, 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.

	Couthoost	FION TOPS IN CONFOR em New Mexico	MANCE WII	נט תו					
T 4			Northwestern New Mexico						
T. Anhy		T. Canyon 8390	T. Ojo Ala	amo		T. Penn. "B"			
T. Salt		T. Strawn 8894	T. Kirtlan	d-Fruit	land	T. Penn. "C"			
B. Salt		T. Atoka	T. Picture	d Cliffs	5	T. Penn. "D"			
T. Yates		T. Miss	T. Cliff H	ouse		T. Leadville			
T. 7 Rivers	······································	T. Devonian T. Silurian	T. Menefe	ee		_ T. Madison			
T. Queen	T. Point L	.ookout	İ.	T. Elbert					
1. Grayburg	I. Grayburg T. Montoya					T. McCracken			
	T. San Andres 2005 T. Simpson					T. Ignacio Otzte			
T. Glorieta		T. McKee	Dase Gree	плоги		1. Oranite			
I. Paddock		T. Ellenburger	T. Dakota			T			
T. Blinebry		T. Gr. Wash	I. Morrisc	on		T.			
T.Tubb		T. Delaware Sand	T.Todilto			±			
T. Drinkard		T. Bone Springs	I. Entrada	l		T			
T. Abo	5506	T	T. Wingate	e		Т.			
T. Wolfcamp	6728	T	I. Chinle			Τ,			
T. Penn		_ 1,	T. Permiar	n		Т.			
T. Cisco (Bough	.C)_7645	T	T. Penn "A	ላ"		Т,			
		IMPORTAL	NT WATER S	AND		OIL OR GAS SANDS OR ZONESto			
No. 1, from		inflow and elevation to whichto			feet	********			
No. 2, from		to	· · · · · · · · · · · · · · · · · · ·		feet				
No. 3, from		to			feet	***************************************			
•		THOLOGY RECOR							
From To	Thickness In Feet	Lithology	From	То	Thickness	Lithology			
	m rect				In Feet				
	COLUMN TO THE TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE	·							

Submit To Appropriate State Lease - 6 copies	District Office			State of New I							Form C-105		
Energy, Minerals and Natural Resources								Revised March 25, 1999					
1625 N. French Dr., Hol Dodgigt H	obs, NM 87240	s, NM 87240							WELL API NO.				
833 South First, Artesia.	NM 87210	OIL CONSERVATION DIVISION							30-015-20894				
a) Brazos Rd A.	etec, NM 87410 🔣							5. Indicate Type of Lease					
	2040 South 1 actieco 2040 South Pacheco. Sama Fe, NM 87505 Santa Fe, NM 87505							STATE   FEET   Federa					
)A/ELL O				· · · · · · · · · · · · · · · · · · ·				State Oil & Gas Lease No. NM 6852					
la Type of Well:	OMPLETION	OR RECO	JMPL	ETION REPO	RIANL	LOG					144		
	II GAS WE	u 🗆 nav		OTHER Class I V	Vactor Prin	macal W	الد	7. Lease Name	or Unit Agi	eement N	ante		
OII. WELL GAS WELL DRY OTHER Class I Waste Disposal Well						Navajo Refining Company							
b. Type of Completion: LNJecting							7	WDW-2					
NEW WORK DEEPEN BACK RESVR. X OTHER RECENTY													
2. Name of Operato					00	,	-1-31	8. Well No.					
	fining Company			. 0	20°CC.	1800	Ċ	WDW-2	2	•			
3 Address of Oper					1000	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	X	9. Pool name or					
4. Well Location	Box 159, Arte	ia, New Mex	cico 88	3211	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<del>,</del>	انبر.				on Injection Zone		
4. Well Location					Ų	A = A	$\langle \cdot / \cdot \rangle$	\\la	vajo	ermi	1-PEKM		
Unit Letter	E : 198	0 Feet Fron	n The	North Line an	d66	$0$ . $^{\circ N}$	Teet	From The	West	Liı	nc 96918		
Contina	12	Township 1	0 0 0 0 11	oh n.	27 F		45	 					
Section 10. Date Spudded	11. Date T.D. Rea			npl. (Ready to Prod.)	27 East			PM Eddy 2 R(B. RT, GR, e	•• \ T	14 11-	County		
July 18, 1973	August 27,	I		une 8, 1999	13.	3607 fee	et Gl	., 3623 feet R	KR		Casinghead 609 feet GL		
15. Total Depth	16. Plug Ba			Multiple Compl. How	Many	18. Interv		Rotary Tools	1120	Cable T			
10,372 feet		0 feet	Zo	nes?		Drilled B	у	All			N/A		
19. Producing Inter	val(s), of this comp							20	). Was Dire	ctional Su	rvey Made		
21. Type Electric ar	od Othur Lago Dan	L. Wolfd	camp-(	Cisco-Canyon				Yes Yes					
	nder and Calipe	Loge Dual	Induct	tion Lateralaa				22. Was Well Cored					
	ed Neutron For			non battroing,				]		No			
23.				CASING REC	$\frac{1}{2}$	(Pano	ســــــــــــــــــــــــــــــــــــ	L atringa a		.117			
CASING SIZE	WEIGH	T LB./FT.		DEPTH SET		LE SIZE	ı i aı	CEMENTING			MOUNT PULLED		
13-3/8"		I/A		40'		N/A		N/A	~	1 1	None		
8-5/8" 32				1995'	11"		800 sacks c		<del> </del>	None			
5-1/2" 17		17	8869'		7-7/8"		1570 sacks circulated		None				
						•••••							
											······		
24.			LINER RECORD		25.		TUBING RE		CORD				
SIZE	ТОР	BOTTOM	OTTOM SACKS CE		SCREEN		SIZ		DEPTH SI		PACKER SET		
								3-1/2"	752	8.	7528'		
26. Perforation red	and three at air-						<u></u>						
26. Perioration fee	coru (micryai, size,	and number)			DEDILIT	UTCD VAL		LANCOUNT AND	D KINIO M	ATERIAL	Hern		
7570' to 7620',	7676' to 7736',	7826' to 783	4', 78:	58' to 7880',		DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED  10,000 gallons of 15% HCl, plus 4600							
7886' to 7904',					7570	' to 8399	,	of rock salt			ius 4000 poulius		
8096' to 8116',		8304' to 831	91, 839	95' to 8399'	**					·			
(2 jspf for total o	of 598 holes).												
28					DUC								
Date First Production		roduction Meth	od (Flor	wing, gas lift, pumping N/A	z - Size and	type pump)	)	Well Status (	Prod. or Shu	it-in) N/A			
Date of Test	Hours Tested	Choke Size	T	Prod'n For	Oil - Bbl		Gas	- MCF	Water - Bb		Gas - Oil Ratio		
N/A Flow Tubing Press.	N/A Casing Pressure	N/A Calculated 2		Test Period Oil - Bbl.	Cac	MCE	· · · · · · · · · · · · · · · · · · ·			anader A.F	N //2 - )		
Flow Tubing Press.   Casing Pressure   Calculated 24- Oil - Bbl.   Gas - MCF   Water - Bbl.   Oil Gravity - API - (Corr.)   Hour Rate							(c tit.)						
29 Disposition of G	as (Sold. used for fu	el, vented, etc.)	1		<u> </u>		<u> </u>	7	est Witness	ed By			
			N/A	A									
30. List Attachments													
Deviation Report													
31 I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief													
: are Darell Mode Printed Darrell Moorerite Env Mgr. Date 7/14/99													
	- We	<u> </u>	1 401116		1(	_ ~ ~		1	เวลเ				

N.M. Oil Cons. Division FORM APPROVED OMB NO. 1004-0137 SUBMIT IN PURSICAST Street Expires: February 28, 1995 om 3160-4 Artesia, MM-88210 UNITED STATES July 1992 DEPARTMENT OF THE INTERIOR NM 6852 6. IF INDIAN, ALLOTTES OR TRIBE NAME BUREAU OF LAND MANAGEMENT WELL COMPLETION OR RECOMPLETION REPORT AND LOG\* T LINIT AGREEMENT NAME Class I Waste GAS Other TYPE OF WELL Disposal Well WELL WELL B FARM OR LEASE NAME, WELL NO. TYPE OF COMP Reentry X Other DIFF-PLUG WDW-2 NEW GENVR TRACK WELL 9. API WELL NO. NAME OF OPERATOR Y 30-015-20894 Navejo Refining Company 10. FIELD AND POOL OR PILOCAT COORESS AND TELEPHONE NO. Artesia, New Mexico 88211 office Box 159, Post 11. SEC, T.,R.,M., OR BLOCK AND SURVEY OR AREA 1980' FNL and 660' FWL Unit Letter E Section 12, Township 18 South Range 27 East, Unit Letter E At top prod, internal reported below Same 12 COUNTY OR DATE ISSUED 14 PERMIT NO. At total depth New Mexico April 27, 1999 - Eddy WDW-2 Same 9. ELEV. CASINGHEAD 16. ELEVATIONS (DF. RKB, RT, GR, ETC.)\* 17. DATE COMP (Ready to prod 16. DATE T.D. REACHED 15 DATE SPUCCED 3609' GL RKB 3607' GL; 8-27-73 6-8-99 7-18-73 CABLE TOOLS ROTARY TOOLS 23. INTERVALS 22. IF MULTIPLE COMPL., 21, PLUG, BACK T.D., MD & TVD TOTAL DEPTH, MD & TVD DRILLED BY HOW MANY A11 87701 10.372' TVD 25. WAS DIRECTIONAL SURVE MADE? 24 PRODUCING INTERVAL (S), OF THIS COMPLETION - TOP, BOTTOM NAME (MD AND TVO)\* Yes L. Wolfcamp-Cisco-Canyon 27. WAS WELL CORED? 20 TYPE ELECTRIC AND OTHER LOGS RUN Fracture Finder and Caliper Logs, Formation Density No Compensated Neutron Dual Induction Laterlog. (Report all strings set in well) CASING RECORD TOP OF CEMENT, CEMENTING RECORD AMOUNT PULLED HOLE SIZE DEPTH SET WEIGHT, LB.FT. ING SIZE/GRADE None Surface 40' N/A13-3/8" N/A 800 sx ClH None Surface. 19951 32 8-5/8" 1570 sx ClH 7-7/8" Surface. 88691 5-1/2" 17 and ClC TUBING RECORD LINER RECORD DEPTH SET (MD PACKER SET (MO) SIZE SACKS CEMENT SCREEN (MD) BOTTOM (MD) TOP (MD) 75281 3-1/2" 75281 ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC (Interval, size and number) PERFORATION RECORD AMOUNT AND KIND OF MATERIAL USED DEPTH INTERVAL (MD) 7570'-7620', 7676'-7736', 7826'-7834' 7570' to 8399' 10,000 gallons 15% HCl. 7886'-7904', 7916'-7936 4600 pounds of rock salt as 7858'-7880'. 7944'-7964', 7990'-8042', 8096'-8116' diverter 8191'-8201', 8304'-8319', 8395'-8399' ispf for total PRODUCTION WELL STATUS (Producing or (Flowing, ges lift, pumping-size and type of pump) PRODUCTION METHOD DATE FIRST PRODUCTION and of N/A N/A N/A WATER-BBL GAS-OIL RATIO GAS-MCF. CIL BBL PROON, FOR CHOKE SIZE HOURS TESTED DATE OF TEST TEST PER N/A a**cc**epted for record N/A

N/A

35. LIST OF ATTACHMENTS

Deviation Report

Thereby certify that the foregoing and attached information is complete and correct as determined from all available records.

TITLE

OIL-BBL

24-HOUR RATE

CALCULATED

CASING PRESSURE

N/A

34. DISPOSITION OF (Sold, used for fuel, versed, etc.)

FLOW, TUBING PRESS

JED)

N/A

Env. Mair

OIL GRAVITY-API (CORE)

EST WITNESSED BY

DATE



Patterson Drilling Company
Fig. 10N. Toraine Street — (915) 682-9401

Migland Texas 79701

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Migland Texas 79701

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Fig. 10N. Toraine Street — (915) 682-9401

RECEIVED

JUN 0 4 1999

June 2, 1999

SUBSURFACE TECHNOLOGY, INC.

**Drilling Department** Subsurface Construction Corporation 7020 Port West, Ste 100 Houston, TX 77024

RE:

Inclination Report Navaio WDW-2

Sec 12; T-18-S; R-27-E

Gentlemen:

The following is an inclination survey on the above referenced well located in Eddy County, New Mexico:

2898' - 0.253838' - 0.25

4783' - 0.50

6106' -- 0.75

6633' - 0.50

Sincerely,

Rebecca Edwards

Rebecca A. Edwards Administrative Assistant

STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing was acknowledged before me this 2<sup>nd</sup> day of June, 1999 by Rebecca A. Edwards.

MY COMMISSION EXPIRES:

TREVA FORRESTER **NOTARY PUBLIC** STATE OF TEXAS My Comm. Exp. 9-2-2000

TELEPHONE (\*\*05) 748-3311

EASYLINK 62905278



# REFINING COMPANY

FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P/L

501 EAST MAIN STREET • P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159

July 19, 1999

Mr. James Amos
United States Department of the Interior
Bureau of Land Management
P.O. Box 1778
Roswell, NM 88220

RE: Well Completion Report for Navajo's WDW-2i in E-12-T18S, R27E

Dear Mr. Amos,

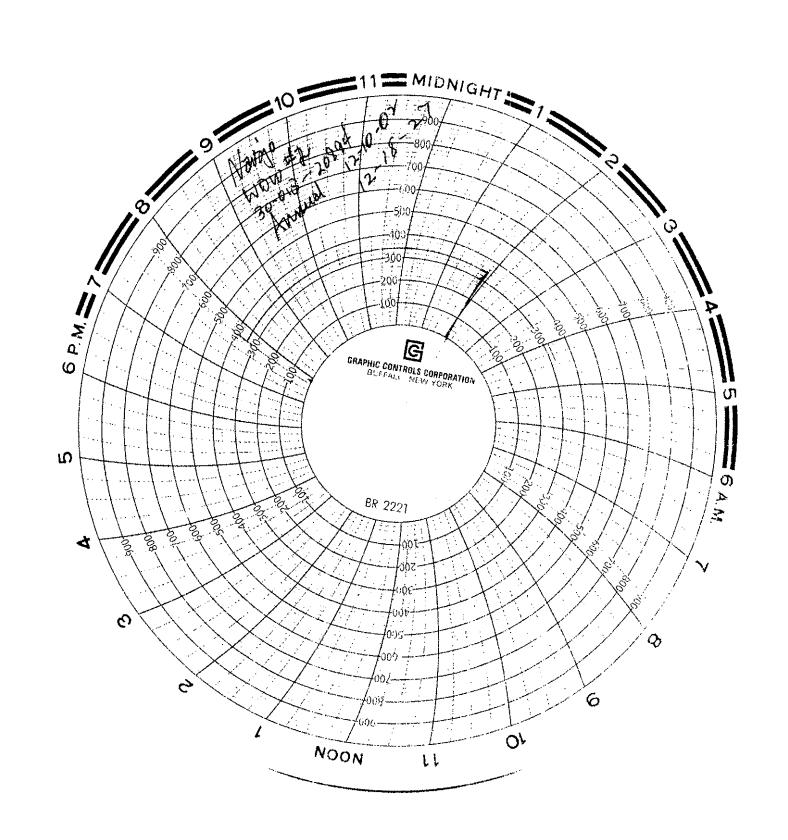
Enclosed, please find two (2) copies of form OMB Form 1004-0137 pertaining to our WDW-2 injection well. If there are any questions concerning this submission, please call me at 505-748-3311. Thank you for your time in this matter.

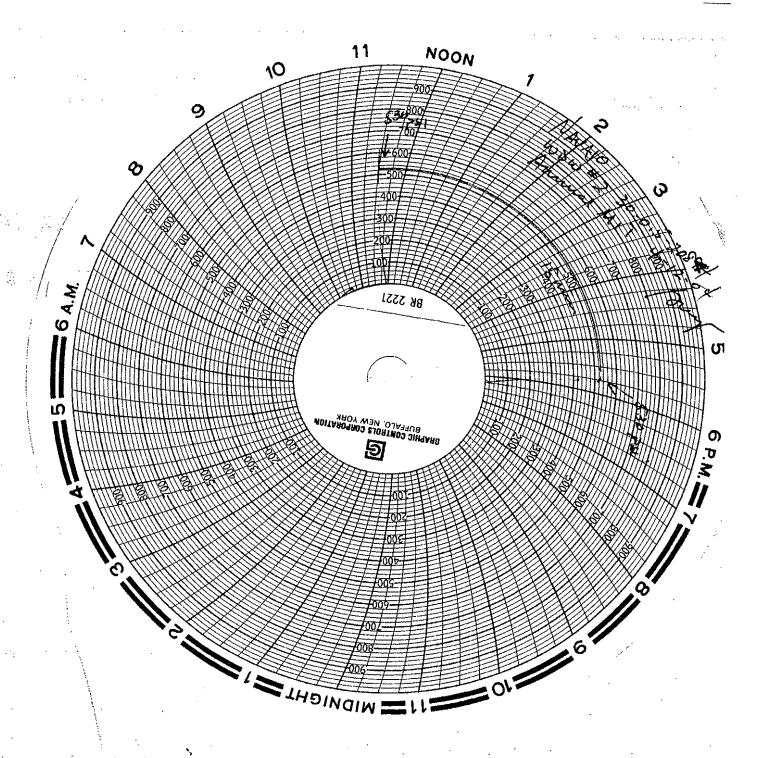
Sincerely, NAVAJO REFINING COMPANY

Darrell Moore

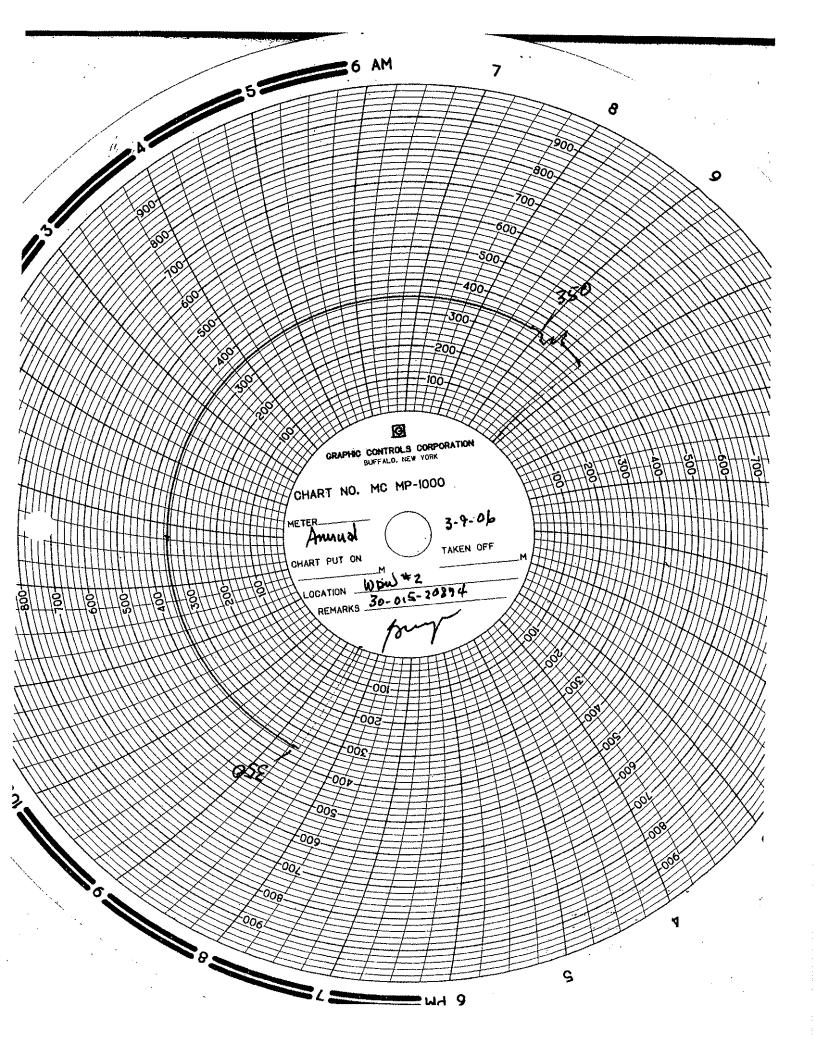
Environmental Mgr. for Water and Waste

Encl.





RECEIVED 6 7004



## Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Thursday, August 12, 2010 1:55 PM 'Moore, Darrell'; Dade, Randy, EMNRD

Cc:

Lackey, Johnny

Subject:

**RE: Mechanical Integrity Tests** 

Darrell:

OCD confirms that the annual MITs performed on WDW-1 (UICI-8) and WDW-2 (UICI-8-1) passed.

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 - Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: <a href="http://www.emnrd.state.nm.us/ocd/">http://www.emnrd.state.nm.us/ocd/</a>index.htm (Pollution Prevention Guidance is under "Publications")

From: Moore, Darrell [mailto:Darrell.Moore@hollycorp.com]

**Sent:** Thursday, August 12, 2010 10:39 AM **To:** Chavez, Carl J, EMNRD; Dade, Randy, EMNRD

Cc: Lackey, Johnny Subject: MIT's

Carl

Attached, please find the charts for the MIT's that were performed on our Injection wells WDW-1 and WDW-2 today. Both wells passed the Mechanical Integrity Tests with no drop off in pressure. As you know, the MIT on WDW-3 was performed earlier in the year and was submitted to OCD. In addition, there was no pressure on either of the well's bradenhead. If there are any questions concerning this submission, please call me or email me. Thank you.

## Darrell Moore

Environmental Manager for Water and Waste Navajo Refining Company, LLC Phone Number 575-746-5281 Cell Number 575-703-5058 Fax Number 575-746-5451

#### CONFIDENTIAL

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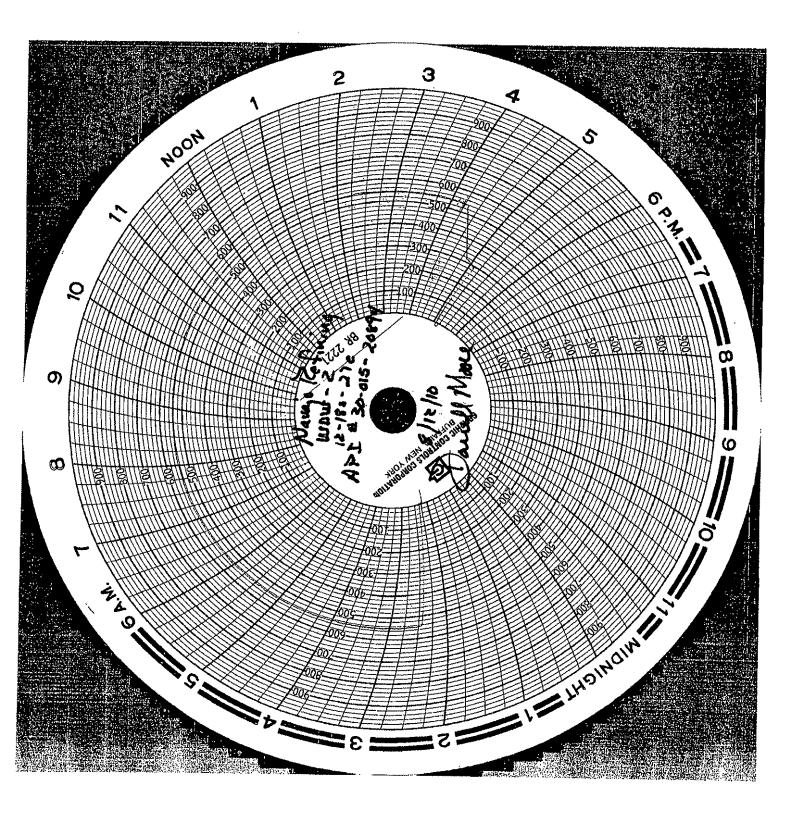


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Office	State of New Me		Form C-103
<u>District 1</u> – (575) 393-6161 1625 N French Dr., Hobbs, NM 88240	Energy, Minerals and Natu	rai Resources	Revised August 1, 2011 WELL API NO.
District II ~ (575) 748-1283	OIL CONSERVATION	DIVIGION	30-015-20894
811 S. First St., Artesia, NM 88210 District III - (505) 334-6178			5. Indicate Type of Lease
1000 Rio Brazos Rd, Aztec, NM 87410	1220 South St. Francis Dr.		STATE FEE
1220 S St Francis Dr., Santa Fe, NM 87505			6. State Oil & Gas Lease No. 6852
(DO NOT USE THIS FORM FOR PROP DIFFERENT RESERVOIR USE "APPL	NCES AND REPORTS ON WELLS OSALS TO DRILL OR TO DEEPEN OR PLL ICATION FOR PERMIT" (FORM C-101) FO	JG BACK TO A	7. Lease Name or Unit Agreement Name Chukka WDW-2
PROPOSALS)  1. Type of Well: Oil Well	Gas Well  Other Injection We	ell	8. Well Number WDW-2
2. Name of Operator			9. OGRID Number
Navajo Refining Company		<u>-</u> -	
3. Address of Operator Post Office Box 159, Artesia, No.	w Mexico 88211		10. Pool name or Wildcat Navajo Permo- Penn 96918
4. Well Location	W WICKES BODY		renn 90918
Unit Letter E:	1980 feet from the North	line an	d 660 feet from the West line
Section 12	Township 18S	Range 27E	NMPM County Eddy
	11. Elevation (Show whether DR,		
	3607' GL, 3623' RKB		
12 Check	Appropriate Box to Indicate Na	otumo of Matica	Barrant and Other Date
12. Check	Appropriate box to indicate Na	ature of Notice,	Report of Other Data
	NTENTION TO:	SUBS	SEQUENT REPORT OF:
PERFORM REMEDIAL WORK	. <del></del>	REMEDIAL WORK	
TEMPORARILY ABANDON  PULL OR ALTER CASING	- · · · · · · · · · · ·	COMMENCE DRIIL CASING/CEMENT	
DOWNHOLE COMMINGLE	<del>-</del>	ONO MATORIALIA I	308
OTHER: PERFORM PRESSURE PRESSURE TEST	FALLOFF TEST, ANNULUS	OTHER:	
13 Describe proposed or com	nleted operations. (Clearly state all n	ertinent details and	give pertinent dates, including estimated date
	protect operations, (Creatly state an p	criment detans, and	give beithen dates, inclining estimated date
of starting any proposed w	ork). SEE RULE 19.15.7.14 NMAC	. For Multiple Con	pletions: Attach wellbore diagram of
of starting any proposed w proposed completion or re	ork). SEE RULE 19.15.7.14 NMAC completion.	. For Multiple Con	pletions: Attach wellbore diagram of
of starting any proposed w proposed completion or re October 17, 2011 – Perfor	completion. on an annulus pressure test with an in	. For Multiple Con  . itial pressure of 600	opletions: Attach wellbore diagram of Disigrand run the test for 30 minutes. Install
of starting any proposed w proposed completion or re October 17, 2011 – Perform bottomhole gauges into W	completion. m an annulus pressure test with an in DW-1, WDW-2, and WDW-3 by 11:	. For Multiple Con  . itial pressure of 600	opletions: Attach wellbore diagram of Disigrand run the test for 30 minutes. Install
of starting any proposed we proposed completion or re  October 17, 2011 – Perform bottomhole gauges into We October 18, 2011 – Continuous October 19, 2011 – At 12	completion.  m an annulus pressure test with an in DW-1, WDW-2, and WDW-3 by 11: nue injection into all three wells.  15pm, the offset wells WDW-1 and V	For Multiple Condition  itial pressure of 600 45am. Continue inj  WDW-3 will be shu	pletions: Attach wellbore diagram of psig and run the test for 30 minutes. Install jection into all three wells.
of starting any proposed we proposed completion or re  October 17, 2011 – Perform bottomhole gauges into We October 18, 2011 – Conticution Cotober 19, 2011 – At 12 established for WDW-2 ar	completion.  orn an annulus pressure test with an in DW-1, WDW-2, and WDW-3 by 11: nue injection into all three wells.  15pm, the offset wells WDW-1 and videontinue for a 30 hour injection per	For Multiple Con itial pressure of 600 45am. Continue in WDW-3 will be shu	ppletions: Attach wellbore diagram of psig and run the test for 30 minutes. Install jection into all three wells.  It-in. A constant injection rate will be 1000 psig wellhead pressure.
of starting any proposed we proposed completion or re  October 17, 2011 – Perform bottomhole gauges into We October 18, 2011 – Conticutor 19, 2011 – At 12 established for WDW-2 ar October 20, 2011 – At 7:0	completion.  The an annulus pressure test with an in DW-1, WDW-2, and WDW-3 by 11: nue injection into all three wells.  15pm, the offset wells WDW-1 and videontinue for a 30 hour injection per 10pm, WDW-2 will be shut in for a 30 hour injection per 10pm, WDW-2 will be 10pm, WDW-2 will be shut in for a 30 hour injection per 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm, WDW-2 will be 10pm,	itial pressure of 600 45am. Continue in WDW-3 will be shution. Do not exceed	ppletions: Attach wellbore diagram of psig and run the test for 30 minutes. Install fection into all three wells.  It-in. A constant injection rate will be 1000 psig wellhead pressure.  I. WDW-1 and WDW-3 will remain shut-in
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I hereby certify that the information above is true and	complete to the best of my knowledge and belief.	
SIGNATURE Tinthy Jones	_TITLE Project Engineer	DATE 10/3/2011
Type or print name Timothy Jones For State Use Only	E-mail address: Times esubsurfacegroup.com	
APPROVED BY:  Conditions of Approval (if any):		DATE

Office	y To Appropriate District	On avai	State of New M., Minerals and Nat				Form C-103
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13. Desc	cribe proposed or com	pleted operation	is. (Clearly state all	pertinent de	tails, and	give pertinent da	tes, including estimated date
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I hereby certify that the information above is true and complete to the best of my knowledge and belief.
SIGNATURE Tinth Jones TITLE Project Engineer DATE 10/3/2011
Type or print name Timothy Jones E-mail address: Hones esubsurfacegroup.com PHONE: 713-580-4640
APPROVED BY: Conditions of Approval (if any):  See E-mail Conditions Stated 10/19/2011 attribut to WOW-I.
See E-mail Conditions_ dated 10/19/2011 attached to WOW_I.

## Chavez, Carl J, EMNRD

rom:

Chavez, Carl J. EMNRD

ತent:

Wednesday, October 19, 2011 4:06 PM

To:

'Moore, Darrell'

Cc:

Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Dade, Randy, EMNRD

Subject:

Navajo Refining Company UIC Class I (NH) Injection Wells WDWs 1, 2 & 3 (UICI-008) Fall

Off Test Plan (August 2011)

## Darrell:

The New Mexico Oil Conservation Division (OCD) is in receipt of your above subject test plan. OCD has already approved the Fall-Off Test (FOT) Plan with conditions on July 28, 2009. The OCD notes that it is also in the process of reviewing C-103s Sundry Notices for the upcoming FOTs.

OCD observes some changes in this FOT Plan submittal that are not acceptable to the OCD. For example, Exhibit 1 is not an acceptable exhibit to the OCD for reasons specified in the 2010 FOT report review and later during the May 2011 meeting in Santa Fe. However, the operator continues to submit exhibits with certain assumptions that have not been accepted or approved by the OCD; i.e., that the injection wells are show interconnection with the injection zone during past FOTs. Perhaps the operator can conduct the 2011 FOT with the information and exhibits needed to prove the interconnection of injection wells with the injection zone? The Certified PE should provide the exhibits in the 2011 FOT Report with the analysis and conclusions supporting any claims for the OCD to review and consider before approving. This is apparently a FOT frequency per well issue that the operator is attempting to prove.

The OCD provides the following comments, observations, and/or recommendations on the above subject plan below.

## Comments:

- The OCD approved the original Fall-Off Test (FOT) Plan based on OCD Guidance dated December 3, 2007.
   There should not be any significant changes to this FOT Plan because it is flexible where needed to allow operators to implement it on each injection well.
- OCD likes to be notified to witness the installation of bottom hole gauges and to be present at least one hour before injection shut-off and commencement of FOT monitoring.
- OCD is concerned about the Section VI No. 1(e) WDW-3 Cement Bond Log quality being poor from 900 ft. to 1200 ft- especially at the depths: 2662 – 2160; 4876 – 5372; and 6750 – 7600 ft. micro annulus scenario.

#### Observations:

- Section V No. 2: The objective of the FOT is NOT to achieve or limit a 100 psig pressure differential before vs.
  after FOT injection vs. shut-off, but it is a minimum pressure differential that OCD stipulates in its guidance for a
  successful FOT and injection zone that may still continue to be utilized for disposal, i.e., not too pressured up and
  subject to continued fracturing under daily allowed maximum surface injection pressure operational limits.
- Section V No. 7 and Exhibit 1: OCD observes a bottom hole pressure chart for WDWs 1, 2 and 3 at 7660 feet that
  the operator presented in the 2010 FOT and again during a May 2011 meeting in Santa Fe, New Mexico to show
  the interconnection between injection wells and the injection formation. The OCD had commented that there was
  no explanation or conclusion provided from the Certified PE who conducted and completed the 2010 FOT report
  that supports the operator's claim that all injection wells are interconnected based on Exhibit 1.

Furthermore, the OCD requested a statement or information supporting the operator's claim by the Certified PE, but never received one. At the meeting, the OCD explained that based on Exhibit 1, there was no support for the claim. In order to make the interconnection determination, during each FOT at each well and off-set injection wells (WDWs not being FOT'd) before and throughout the FOT would need bottom hole pressures monitored in tandem at each well location to establish the interconnectivity of the injection wells with the receiving injection formation under a uniform time scale. This would be a chart that could be plotted that would show during the test the interconnectivity of the wells for each FOT. The OCD doubts that the operator can make the case for interconnectivity between injection wells and injection formation because of the significant distance between the injection wells and fact that sedimentation in formation varies laterally and uniformity in sedimentation, saturated porosity and permeability due to variation in sedimentation would by chance make the injection formation aerially extensive and uniform over a 3 to 5 mile radius from each injection well. Also, even if by chance there was

uniformity over the mileage specified, the distance between injection wells and corresponding pressure would likely not be observed.

• Exhibit 6: OCD observes in Section B a proposed MIT once every 5 years. OCD's UIC Program requires annual MITs and/or after down hole work is performed on a well.

## Recommendations:

- Operator is running survey logs to the bottom of fill or below USDW (fresh water) zones, which excludes an
  evaluation of casing in the fresh water zone. Please run logs up to surface.
- Be sure to also record and provide injection flow rate and pressure leading up to shut-off and monitoring throughout the FOT monitoring period. OCD needs to confirm that a pseudo steady-state condition was achieved before shut-off. This data is also needed for software modeling of the FOT.
- Please provide electronic data from the FOTs at each well in order for the OCD to run its software model to confirm the results in the report.
- Section V No. 13: Surface pressure monitoring and Horner Plot during injection should be used to confirm radial flow condition is achieved instead of waiting a set period if operator wishes to reduce the injection period.

**Disclaimer:** Please be advised that OCD has already approved with conditions Navajo Refining Company's Fall-Off Test (FOT) Plan on July 28, 2009, and is not providing approval of this FOT Plan; however, comments, observations and recommendations herein should help Navajo Refining Company understand the OCD's concerns based on the submittal.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Yebsite: http://www.emnrd.state.nm.us/ocd/

Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the

Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at: <a href="http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental">http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental</a>)



NAVAJO REFINING COMPANY, L.L.C. Map ID No. 95 Artificial Penetration Review

operator Apache Corp. LEASE Federal T	STATUS ACTIVE  LOCATION Sec. 12 -T 18s-R27E
WELL NUMBER ON DRILLED 9 13 90 PLUGGED NA	MUD FILLED BOREHOLE NA TOP INJECTION ZONE -3731' API NO. 30-015-26404

REMARKS:

MAP ID NO. 95

APACHE CORPORATION FEDERAL T NO. 001

API NO. 30-015-26404

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Grayburg 1712
San Andres 2063

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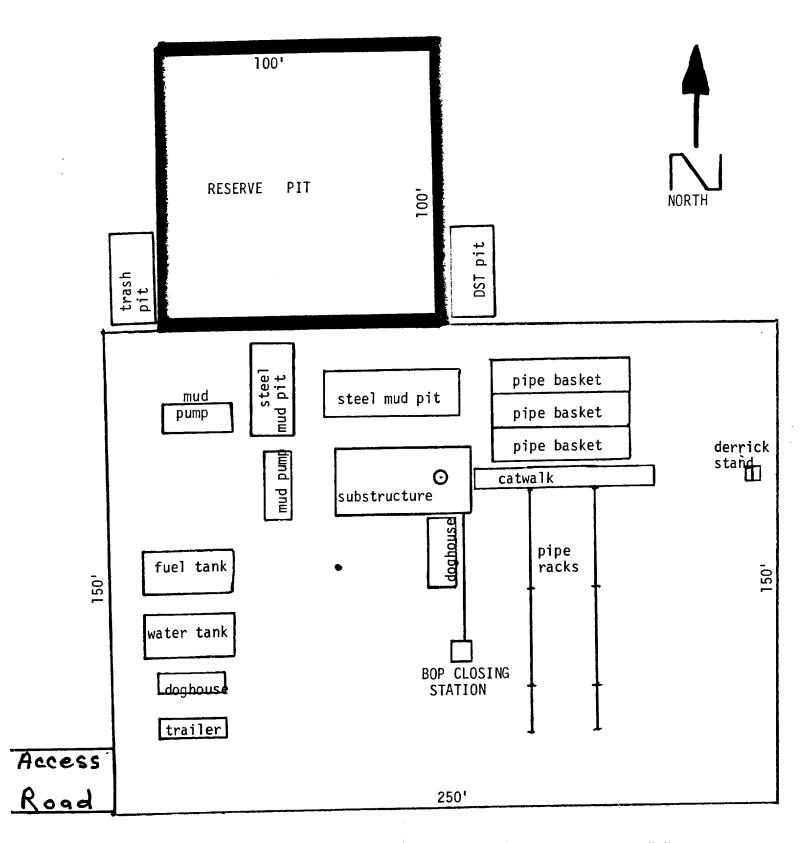
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# EXHIBIT "C"

MEWBOURNE OIL COMPANY FEDERAL "T" # 1 LEASE # NM-42410 990' FEL & 660' FNL SEC. 12-T18S-R27E EDDY COUNTY, NEW MEXICO

