Querecho Plains Bone Spring Unit

NEW MEXICO
OIL CONSERVATION DIVISION

QUERECHO PLAINS BONE SPRING SAND UNIT LEA COUNTY, NEW MEXICO ROYALTY INTEREST PARTICIPATION FACTORS

ROYALTY INTEREST OWNER	REMAINING PRODUCTION	ULTIMATE PRODUCTION	APPROVED
1 ANADARKO PRODUCTION 1 ANCHOR LAND RESOURCES 1 BALLANTYNE	0.00000000	0.00000431	0.000004311
	0.00273391	0.00567776	0.005677761
	0.00499645	0.00300905	0.003009049
ROYALTY INTEREST OWNER 1 ANADARKO PRODUCTION 1 ANCHOR LAND RESOURCES 1 BALLANTYNE	0.02201935 0.61371568 0.00000000	0.02120301 0.64158409 0.00150962	APPROVED 0.00004311 0.005677761 0.003009049 0.021203012 0.641584090 0.001509623 0.001509623 0.00199665 0.000109665 0.000109665 0.00011163035 0.001912035 0.001912035 0.001912035 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001116300 0.001274518 0.00120578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100578 0.002100573 0.0013067131 0.0013067131 0.013067131 0.013067131 0.013067131 0.013067131 0.013067131 0.013067131
BORGÁARD, RICHARD BROOKS, PAMELA 1 BTA	0.0000000 0.00020279 0.01498935	0.00000000 0.00021854 0.00902715	0 0.009027147
BURLESON, LEWIS BURLESON, STEVE CASEY, WILLIAM COUNTAINED CHARLES & GWEN	0.00106034 0.01055332 0.00000000	0.00086175 0.00862431 0.00000000	0.000861747 0 0 0 0 0
1 CLOUTHIER, ROBERT	0.00010176	0.00010967	0.000109665
1 CLOUTHIER, ADRIAN	0.00040314	0.00043445	0.000434447
1 CLUB O&G	0.00015693	0.00111630	0.001116300
1 COLE, JAMES J.	0.00037644	0.00191204	0.001912035
1 COLE, JIMMIE J.	0.00037644	0.00191204	0.001912035
1 CREWS, KATHERINE D.	0.00025093	0.00127452	0.001274518
1 ESTATE OF WALTER DUNCAN 1 DUNCAN, J. WALTER, JR. 1 JWD 111, INC.	0.00015693 0.00014123 0.00001569	0.00501226 0.00111630 0.00100467 0.00011163	0.003012280 0.001116300 0.001004670 0.000111630
DUNCAN, JOAN R. 1 ELLWADE 1 FERRIS-SPIESS, ELEANOR	0.00015693	0.00413555	0.004135548
	0.00249823	0.00150452	0.001504524
	0.00015271	0.00016456	0.000164563
1 GLOBAL NATURAL RESOURCES	0.00000000	0.00000000	0.014712765
1 GREEN, WILLIAM	0.01751693	0.01471277	
HAYES, NANCY	0.01055332	0.00862431	
1 HEAD, DEBRA JOHNSON 1 HOPSON, DEMAR JOHNSON 1 HOWARD, PATRICIA 1 HUBBARD, JEANNETT	0.00304136 0.00304136 0.00020279	0.00210058 0.00210058 0.00021854	0.002100578 0.002100578 0.000218540 0.000164563
1 HUFF, JACK	0.02211552	0.01824622	0.018246221
1 JAMES, LUCY	0.00030541	0.00032913	0.000329126
1 JOHNSON, COURTENAY C.	0.00025093	0.00127452	0.001274518
1 JOHNSON, F. KIRK III 1 LAWSON, KYLE 1 LITTLE, ANNE 1 LITTLE, BAR(DECEASED)	0.00167288 0.00000000 0.00920893	0.00115541 0.00028420 0.00729190	0.001155407 0.000284203 0.007291903
1 LITTLE, MARJORIE	0.00092089	0.00072919	0.000729190
1 LITTLE, SYLVIA F.	0.00736714	0.00583352	0.005833523
1 MAKINS, JAMES	0.01598987	0.01306713	0.013067131
1 MAKINS, JAMES JR.	0.01598987	0.01306713	0.013067131
1 MAKINS, MICHAEL	0.01598987	0.01306713	0.013067131
1 MAKINS, PATRICK	0.01598987	0.01306713	0.013067131
1 MAKINS, SCOTT	0.01598987	0.01306713	0.013067131
1 MARSHALL & WINSTON MCCURDY, MARGARET JOHNSON 1 MCREYNOLDS, ANN H. JOHNSON 1 MEWBOURNE OIL CO.	0.00471929	0.01283613	0.012836133
	0.00000000	0.00000000	0
	0.00136862	0.00094526	0.000945263
	0.09659416	0.07346623	0.073466232
1 MURJO OIL AND ROYALTY 1 OCHTERBECK, DIANA	0.00912409	0.00630174	0.006301736 0.000164563
1 PANOS, GREGORY P. 1 PANOS INVESTMENT CO. 1 PANOS, PATRICK T.	0.00037491	0.00190424	0.001904235
	0.00150866	0.00766283	0.007662826
	0.00037491	0.00190424	0.001904235
1 PETRO-ATLAS	0.00806372	0.00700718	0.007007176
1 PIAGET, SUSIE CREWS	0.00025093	0.00127452	0.001274518
1 PITTMAN, RAFELITA	0.00030541	0.00032913	0.000329126
1 ROSS FAMILY TRUST	0.00152706	0.00164563	0.001645633
SABONIS, LITA	0.00007635	0.00008228	0.033014 <u>073</u>
SHANNON, GLADYS	0.00000000	0.00000000	
1 SHOGRIN, FRANK	0.02851825	0.03301407	
1 SIMPSON, ADELE 1 SIMPSON, PETER 1 SIMPSON, ROLAND 1 SIMPSON, SAMMY 1 SKEES, W. A.	0.00015271	0.00016456	0.000164563
	0.00007635	0.00008228	0.000082281
	0.00007635	0.00008228	0.000082281
	0.00007635	0.00008228	0.000082281
1 SKEES, W. A. 1 STRIPLING, WESLEY III TRAMMELL, CAROL TRAMMELL, DAVID	0.00000000 0.00685828 0.00000000 0.00000000	0.00028420 0.00526865 0.00000000 0.00000000	0.000284203 0.005268652 0
TRAMMELL, MILDRED 1 WIGZELL 1 WOOD, OLIVIA	0.0000000 0.00249823 0.00015271	0.0000000 0.00150452 0.00016456	0.001504524 0.000164563
	0.99999999	0.999999995	0.981502830



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell District Office
P.O. Box 1397
Roswell, New Mexico 88202-1397



IN REPLY REFER TO:

> NMNM88523X 3180 (065)

> > JUN 23 1993

Mewbourne Oil Company Attention: Mr. K. M. Calvert P. O. Box 7698 Tyler, TX 75711

Gentlemen:

Your application of June 10, 1993, filed with the BLM requests the designation of the Querecho Plains Bone Spring Sand Unit area, embracing 2400 acres, more or less, Lea County, New Mexico, as logically subject to secondary operations under the unitization provisions of the Mineral Leasing Act as amended.

Pursuant to unit plan regulations 43 CFR 3180, the land requested as outlined on your plat marked Exhibit A, Mewbourne Oil Company, Querecho Plains Bone Spring Sand Unit, Lea County, New Mexico, is hereby designated as a logical unit area for the purpose of conducting secondary recovery operations and has been assigned No. NMNM88523X. This designation is valid for a period of one year from the date of this letter.

Waterflooding will be limited to the following interval: That interval underlying the Unit Area commonly known as the Bone Spring Sand, which is described as that certain stratigraphic interval, or its correlative equivalent, encountered between the log depths of 8,328 feet and 8,620 feet in the Mewbourne Oil Company - Federal L No. 4 located in the center NWNE (Proration Unit B) of sec. 23, T. 18 S., R. 32 E., Lea County, New Mexico as shown on the Welex - Laterolog Microguard Log, dated November 28, 1987 and attached hereto as Exhibit D.

Your basis for allocation of unitized substances and your proposed form of unit agreement are acceptable. Corrections that need to be made to the enclosed Exhibits A and B are shown in red.

If conditions are such that further modification of said standard form is deemed necessary, three copies of the proposed modifications with appropriate justification must be submitted to this office for preliminary approval.

In the absence of any type of land requiring special provisions or any objections not now apparent, a duly executed agreement identical with said form, modified as outlined above, will be approved if submitted in approvable status within a reasonable period of time. However, notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which in our opinion, does not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

When the executed agreement is transmitted to the BLM for final approval, include the latest status of all acreage. In preparation of Exhibits "A" and "B", follow closely the format of the sample exhibits attached to the reprint of the aforementioned form. You will also need to submit an initial plan of development.

Sincerely,

Armando A. Lopez Assistant District Manager

Minerals

Enclosures

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ARTICLE 19

EXECUTION

19.1 Original, Counterpart, or Other Instrument. An owner of a Working Interest may become a party to this agreement by signing the original of this instrument, a counterpart thereof, of other instrument agreeing to become a party hereto. The signing of any such instrument shall have the same effect as if all parties had signed the same instrument.

IN WITNESS WHEREOF, the parties hereto have executed this agreement on the dates opposite their respective signatures.

Attest by Secretary, with Corporate Seal, if a Corporation, or Witness, if an Individual

UNIT OPERATOR OPERATOR: DATE: /6/93 MEWBOURNE OIL COMPANY WORKING INTEREST OWNERS ABBY CORP. ATTEST: By: DATE: By: DATE: MARKO PETROLEUM CORPORATION

STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, for, aCorporation.
My Commission Expires:	Notary Public
COUNTY OF Harris	§ (ACKNOWLEDGMENT FOR CORPORATION)
	§ 27-16
The foregoing instrument day of une 19 Anadarko Petrolum Corporati	was acknowledged before me this 25 th 3, by Kek Alman, for on, a belaware corporation.
PATRICIA LEA PEARSON MY COMMISSION EXPIRES June 5, 1997	Notary Public
My Commission Expires: $6/5/9$	7
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
•	Notary Public
My Commission Expires:	

ARTICLE 22

SUCCESSORS AND ASSIGNS

This Agreement shall extend to, be binding upon, and inure to the benefit of the parties hereto and their respective heirs, devisees, legal representatives, successors, and assigns, and shall constitute a covenant running with the lands, leases, and interests covered hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates opposite their respective signatures.

Attest by Secretary, with Corporate Seal, if a Corporation, or Witness, if an Individual

		-				
STATE OF TE	XAS	§				
COUNTY OF SI	HTIM	8				
day of On Standard My Con	DAGE OF TEXAS	FR 5	19 <u>43</u> , by Oil Compan Notary Pul	y James Al y, a Delaw	fore me the llen Brins are Corpor	on, as ation.
My Commission	on Expir	es: <u>5-28-9:</u>				
STATE OF			g (ACKNO	WLEDGMENT	FOR CORPOR	ATION)
COUNTY OF _			§			
The for	regoing	instrument , 19_	_, by	wledged be	fore me th	is _, for tion.
			Notary Pul	hlic		 -
			-	DIIC		
My Commission	on Expir	es:				
STATE OF	exas		§ (ACKNO	OWLEDGMENT	FOR CORPOR	RATION)
COUNTY OF	Hams		§			,
Anadarko Pe	COMMISSION EXPIRITATION S, 1997	(e/~)	5 , by <u>1</u>	elaware a fla	Corpora	, for
		•		!		

WORKING INTEREST OWNERS

DATE:	ABBY CORP.
ATTEST:	
	By:
DATE: June 25, 1993	ANADARKO PETROLEUM CORPORATION
DATE: JUNE 25, 1993 ATTEST: JUNE 25, 1993	By: Dana
DATE:	LARRY ARNOLD
WITNESS:	
	By:
DATE:	KENNETH BARBE, JR.
WITNESS:	
	Ву:
DATE:	BEARING SERVICE & SUPPLY COMPANY, INC.
ATTEST:	INC.
	By:
DATE:	TANZA BRUMFIELD
WITNESS:	
	By:
DATE:	LEWIS BURLESON
WITNESS:	
	By:

STATE OF TEXAS	§	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Harris	g	
The foregoing instrument day of June 19 Church of June 19 Church (Dypovation PATRICIA LEA PEARSON MY COMMISSION EXPIRES June 5, 1997 My Commission Expires: 6/5/9	Nota	acknowledged before me this 25th of Leve Munan, for a Delawave Corporation. Mua Ha Pewbon ary Public
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	9	•
The foregoing instrument day of, 19_	was	acknowledged before me this
My Commission Expires:		ary Public
STATE OF	S	(ACKNOWLEDGMENT FOR INDIVIDUAL)
		acknowledged before me this
My Commission Expires:		ary Public
!		the state of the s

Attest or Witness	<u> Date Signed</u>	<u>Name</u>
Netter Sake	6-22-43	Manuel Malhu-
		Anchor Land Resources
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		1
	•	
STATE OF TEXAS §	•	
COUNTY OF SMITH §		
	urne Oil Compan	owledged before me this by James Allen Brinson, as my, a Delaware Corporation. da D Cauturallelic, State of Texas
my commission Expires:	018-73	
STATE OF	. § (ACKN	OWLEDGMENT FOR CORPORATION)
COUNTY OF	. §	1,
The foregoing instruday of,	ment was acknown 19, by	owledged before me this, for Corporation.
	Notary Pu	ablic
My Commission Expires:		

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STATE OF Lexis	5	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Savant	8	
The foregoing instrument day of fine 195	was 3, D_,	by Corporation.
GWEN HUNT MY COMMISSION EXPIRES October 31, 1996	Not	ary Public
My Commission Expires:		
STATE OF <u>feras</u>	9	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF a concern	9	•.
The foregoing instrument day of, 19	was 93,	by C. Mariel Walkin.
		9 111
GWEN HUNT MY COMMISSION EXPIRES My COMMISSION PROPERTY AND 1998:	Not	ary Public
STATE OF	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	8	
The foregoing instrument day of, 19	was	acknowledged before me this
	Not	ary Public
My Commission Expires:		- '

DATE:	VENTURE RE	SOURCES 1986 GP
ATTEST:		
	By:	
DATE: 6-22-93-		
witness: Mettie Dake	By:	Juice Machen
DATE:	WARREN, IN	c.
ATTEST:	Ву:	
DATE:	RONALD L:	WILBANKS
WITNESS:	Ву:	
	ROYALTY OWNERS	
		Name
	-	
	•	
ing.		1

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	By:
DATE:	WARREN, INC.
ATTEST:	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
J BALLANTYNE ROYALTY CORF	15 FJ 93 J BALLANTYNE ROYALTY CUM-
By: Susanne Brico	By Noth R Bruce
Secretary/Treasurer No Seal Reguires	President

STATE OF TEXAS §		
COUNTY OF SMITH §		
The foregoing ins day of <u>JANUARY</u> Attorney-in-Fact of Mey	trument was , 19 <u>2</u> wbourne Oil	acknowledged before me this 67H 23, by James Allen Brinson, as Company, a Delaware Corporation.
My Commission Expires:		Sue Hearon Sue Hearon Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF Lyas	§	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Courty Mid	land 5	
The foregoing ins day of Achman, Ballantyne Royalty	trument was , 19 <u>93</u> , Corp.	by Hollis R. Brice , for a Lixas Corporation.
My Commission Expires:		LESA A. EMMERT Notary Public, State of Texas Commission Expires: 12-20-94
STATE OF	§	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
day of	, 19,	s acknowledged before me this, for a, Corporation.
My Commission Expires.		ary Public

Attest or Witness	Date Signed	Visit of the second of the sec
J BALLANTYNE ROYALTY CORP	15 Feb 93	J BALLANTYNE RUYALTY CURI
By: Livering Brice Secretary/Treasurer No. Scot. Required	**************************************	President
	. 88:	
<u> </u>	1	
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of <u>JANI/ARY</u>	<u>/</u>	nowledged before me this 4774 by James Allen Brinson, as pany, a Delaware Corporation.
		Public, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF Liyas	§ (AC	KNOWLEDGMENT FOR CORPORATION)
COUNTY OF Midland	§	
The foregoing instr day of Lebruary I Ballantyne Royalty		nowledged before me this 15th olling R. Brice for Lexan Corporation.
	Sesa Notary	a. Emmert Public
My Commission Expires: /	2-20-94	LESA A. EMMERT Notary Public, State of Texas

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	By:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:		
	By:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNER	<u>RS</u>
Attest or Witness	Date Signed	Name
Barbara Mr Roberts	6-15-93	Vi i i a Read
Bachan It Roberts	***************************************	VIRGINIA BERRY
Pachan It Roberts	6-15-93	VIRGINIA BERRY, INDEPENDENT EXECUTRIX
		OF THE ESTATE OF O. H. BERRY
		
		

STATE OF	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF MIDLAND	g	
The foregoing instrument day of, 19	was 93,	acknowledged before me this 15th by VIRGINIA BERRY .
BRENDA K. ARP Notary Public, State of Texas My Commission Expires Aug. 20, 19	Nota	Brenda K. Arp
My Commission Expires: $8-24$	<u> </u>	6
STATE OFTEXAS	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF MIDLAND	§	
of THE ESTATE OF O. H. BERRY.	93,	acknowledged before me this <u>15th</u> by <u>VIRGINIA BERRY, INDEPENDENT EXECUTRIX</u>
		Brenda K. Arp ary Public
My Commission Expires: $8-2$	5-91	<u>6</u>

Attest or Witness	Date Signed	Name
Bachan 4 Roberts	6-15-93	Virginia Berry VIRGINIA BERRY
manas "To wee	6-15-93	VIRGINIA BERRY, INDEPENDENT AXECUTRIX OF THE ESTATE OF O. H. BERRY
STATE OF TEXAS § COUNTY OF SMITH §		d seem d
day of <u>JANUARY</u>	, 19 <u>93</u> ,	nowledged before me this <u>(v77</u>) by James Allen Brinson, as any, a Delaware Corporation.
	Notary I	Public, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. HOV 30, 1993
STATE OF	_ § (ACK	NOWLEDGMENT FOR CORPORATION)
COUNTY OF	_ §	
day of	, 19, by	nowledged before me this, for, Corporation.
My Commission Expires:	Notary F	

STATE OF		§	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF		8	
The fores	going instrume	nt was 9,	acknowledged before me this, for a, Corporation.
		Not	ary Public
My Commission	Expires:		
STATE OF	IEXAS	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	MIDLAND	S	·
The foreday of JUNE	going instrume	nt was 19 <u>93</u> ,	acknowledged before me this 15th by VIRGINIA BERRY
			Brenda K. Arp ary Public
My Commission	Expires: 8-6	20-90	
STATE OF		8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	MIDLAND	8	
day of	going instrume JUNE ATE OF O. H. BERR	19 ⁹³ .	acknowledged before me this 1.5th by VIRGINIA BERRY, INDEPENDENT EXECUTRIX
Notary	EENDA K. ARP Public, State of Texas on Expires Aug. 20, 19	_	Brewla K. Arp ary Public
My Commission	Expires: N -	20-9	6

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DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	By:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	WARREN,	INC.
ATTEST:		
	By:	
DATE:	RONALD I	. WILBANKS
WITNESS:		
	Ву:	
	ROYALTY OWNE	RS
Attest or Witness	Date Signed	Name
E. June Bonne Suy.	1-27-93	by Heracita Brunen Preident
		
		

STATE OF TEXAS	§	
COUNTY OF SMITH	§ .	
day of JANIJAK	eu .	was acknowledged before me this ωTH , 19 93 , by James Allen Brinson, as Oil Company, a Delaware Corporation.
		Sul Hearon Notary Public, State of Texas
My Commission Expire	es:	SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF Jules		g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	ck	§
day of Jam.	9nc. 196	t was acknowledged before me this 37 93 by Aurala, A. Benner, for corporation.
		Notary Public
My Commission Expire	es:	
STATE OF	·····	§ (ACKNOWLEDGMENT FOR CORPORATION) §
day of	, 19	t was acknowledged before me this, for, for, a, Corporation.
		Notary Public
My Commission Expire	es:	

Attest or Witness	Date Signed	Name
E. June Bonner Secy	1-27-93	Mand ROWNER PLUMBING INC
	MI.	
STATE OF TEXAS §		
The foregoing instract of Mewb	ourne 011 Compa	owledged before me this 67H by James Allen Brinson, as any, a Delaware Corporation. What we will be a second seco
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
COUNTY OF Sobock	§ (ACKÌ §	NOWLEDGMENT FOR CORPORATION)
<i>\(\)</i>	rument was ackn , 19 <u>93</u> , by	owledged before me this 27th Curled A Bonney Granded, for Corporation.
	Notary P	ublic Dall
My Commission Expires:	7-18-94	

DATE:	_ VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	_ C. DANIEL WALKER
WITNESS:	
	By:
DATE:	_ WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
witness:	
,	By:
QUERECHO PLAINS (BO	WE SPRINGS) UNIT, LEA COUNTY, NEW MEXI
	ROYALTY OWNERS
Attest or Witness	
tituBu Oleman	14/15/93 Bary Beal
ρβω	FOR BIA OIL PRODUCERS

STATE OF TEXAS	5		
COUNTY OF SMITH	5		
The foregoing is day of Attorney-in-Fact of M	Mewbourne Oi	as acknowledged 9 <u>93</u> , by Jame 1 Company, a De	d before me this (a) s Allen Brinson, a elaware Corporation
GLENDA F. CARTER Notary Public STATE OF TEXAS My Comm. Exp. 5-28-95	<u>N</u> -	Gleda Stary Public, S	Grate of Texas
My Commission Expris	5-28-95		
• .			
		·	
STATE OF	§	(ACKNOWLEDGM	IENT FOR Partnership
COUNTY OF	§		•
The foregoing i	nstrument w , 19 <u>93</u>	as acknowledged, by	d before me this $\frac{5}{5}$, fo Corporation.
KAREN DIETRICH Notary Public, State of Texas My Commission Expires 10-07-1996	1.101	otary Public	wich)
www.commission.Exbire	s: 10/7196		
STATE OF	§	(ACKNOWLEDGM	ENT FOR CORPORATION
COUNTY OF	§	•	
The foregoing i	nstrument w , 19	as acknowledged, by	d before me this, fo , Corporation.
	. N	otary Public	
My Commission Expire	s:		i

Attest or Witness Dat	<u>ę Signed</u>	Name	
April Suthether Ju	28, KB	As Don	
Adrie Sutherlin Jon	ne 28, 1903	Fathiyu X.	Burle on

		- Add Server Construction of the Server Construc	
STATE OF TEXAS 6			
COUNTY OF SMITH §			
The foregoing instrumen day of ALLOLA Attorney-in Fact of Mewbourne Attorney-in Fact of Mewbourne GLENDAF. CARTER Notary Public STATE OF TEXAS My Comm. Exp. 5-28-95 My Commission Expires: 5-38.	, 19 <u>43</u> , by e Oil Compan Notary Pul	y James Allen Br	inson, as poration.
STATE OF	§ (ACKNO	WLEDGMENT FOR COR	PORATION)
COUNTY OF	§		
The foregoing instrument day of, 19	t was acknow	rledged before me	this, for oration.
My Commission Expires:	Post-it ** brand to (co.) Co. Dept.	fax transmittal memo 7671 From California Phone #	
	Fax #	Fax #	

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
	C. DANIEL WALKER
WITNESS:	_
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness	
	2-12-93 Chola E Clouth
Ticin Taklund	

STATE OF New Mexico	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Sanduan	§	
The foregoing instrument day of February , 19	was 93,	acknowledged before me this 12 by Charles E Clouthier.
	Nobe	ary Public
My Commission Expires:		·
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
		acknowledged before me this
	Nota	ary Public
My Commission Evnires:		

Attest or Witness	Date S:			Name	
Tricia J. Oklund	2-1	1-91	Chola	- 5	Clouth

STATE OF TEXAS §	3				
COUNTY OF SMITH					
The foregoing in day of <u>JANUAB</u> Attorney-in-Fact of M	9, 1	9 <u>93</u> , b .1 Compar	y James All	len Br re Cor	inson, as
My Commission Expires			Nota	HEARON bry Public OF TEXA	S
STATE OF	§	(ACKN	OWLEDGMENT F	OR COR	PORATION)
COUNTY OF	§				
The foregoing in day of	nstrument w	as ackno , by _, a	wledged bef	ore me	this, for oration.
		otary Pu			
My Commission Expires	3:				

STATE OF	§ ()	ACKNOWLEDGMENT FOR CORPORATION)	
COUNTY OF	§		
The foregoing instrument day of, 19	was acknowledged before me this, for, for, a, Corporation.		
	Notar	y Public	
My Commission Expires:			
STATE OF New Mexico	§ ((ACKNOWLEDGMENT FOR INDIVIDUAL)	
COUNTY OF Sandvan	§		
•		cknowledged before me this 12 by Charles E. Clouthier.	
	Notar	yre B. Dengéley Y Public	
My Commission Expires: \\\ \0 \cdot \)	94	-	
STATE OF	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)	
COUNTY OF	8		
The foregoing instrument day of, 19		cknowledged before me this	
	Notar	ry Public	
My Commission Expires:			

DATE:	VENTURE RESOURCES 1986 GP	
ATTEST:		
	By:	
DATE:	C. DANIEL WALKER	
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:	WARRIN, INC.	
ATTEST.	By:	
DATE:	RONALD L. WILBANKS	
WITNESS:		
	By:	
	ROYALTY OWNERS	
	ROTALIT OWNERS	
Attest or Witness	Date Signed Name	
Lenda H. Meyer.	1/25/93 Rant Lout	4
My Commission Expires Sept. 20, 1994		

Attest or Witness	Date Signed	Name
Sanda X Meyers	1125/93	Kom & LClonth
My Commission Expires Sept. 20, 1994		
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of	, 19 <u>93</u> , b	wledged before me this 61H y James Allen Brinson, as y, a Delaware Corporation.
	Sue	Hearon
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	§ (ACKN	OWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing ins day of	trument was ackno , 19, by	wledged before me this, for, Corporation.
	, a	Corporation.
	Notary Pu	blic
My Commission Expires.		

DATE:	VENTURE I	RESOURCES 1986 GP
ATTEST:		
	Ву:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	WARREN,	INC.
ATTEST:		
	By:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNER	<u>.s</u>
Attest or Witness	Date Signed	Name
. 0 . 0	2,10-62	al art
Judy Rogers	3-20-93	Who forthe
		
		

Attest or Witness	Date Signed	<u>Name</u>
Judy Rosses	3.20.93	When That To
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of <u>JANUARY</u>	, 19 <u><i>93</i></u> ,	owledged before me this <u>(aTf.</u> by James Allen Brinson, as any, a Delaware Corporation.
My Commission Expires:		SUBLIC. State of Texas SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF		NOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing instr	ument was ackn	owledged before me this, for, Corporation.
	, a	Corporation.
	Notary P	ublic
My Commission Fynires:		

DATE:	_ VENTURE R	ESOURCES 1986 GP
ATTEST:		
	Ву:	
DATE:	_ C. DANIEI	WALKER
WITNESS:		
	By:	
DATE:	WARREN, I	INC.
ATTEST:		
	Ву:	
DATE:	RONALD L,	WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNER	<u>s</u>
Attest or Witness	Date Signed	Name
Bill D. Schwoder	10/15/93	Name Sanis S. Core Figure T. Core

		· · · · · · · · · · · · · · · · · · ·

Attest or Witness	Date Signed	Name
	11-10-	Jame J. Col.
Bill & Schrader	6/15/43	Executor Estate of Junie R. Col
		Journe M. Cole
STATE OF TEXAS §		
COUNTY OF SMITH §		
The foregoing in	strument was acknown	owledged before me this 677
day of <u>JANUAK</u> Attorney-in-Fact of Mo	<u>y</u> , 19 <u>23</u> , k ewbourne Oil Compa	by James Allen Brinson, as my, a Delaware Corporation.
		0/
	<u> Au</u>	e Hearon
	Notary Pu	blic, State of Texas
My Commission Expires	·	SUE HEARON Notary Public
		STATE OF TEXAS
		My Comm. Exp. HOV 30, 1993
STATE OF	§ (ACKN	OWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing in	strument was ackno	owledged before me this
day of	, 19, by	, for
	, a	Corporation.
	Notary Pu	blic
My Commission Expires	·	

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	Ву:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	Ву:	UT
DATE:	WARREN,	INC.
ATTEST:		
	Ву:	
DATE:	RONALD I	. WILBANKS
WITNESS:		
	Ву:	
	ROYALTY OWNE	<u>RS</u>
Attest or Witness	Date Signed	Name
George Hanson	2-2-93	Ka Therine D Crews
·		

STATE OFTexas	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Reeves	8	
The foregoing instrument day of February , 19	was 93,	acknowledged before me this 2nd by Ruthe S. Sherrill .
My Committee of Texas	Not:	ary Public
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

Attest or Witness	Date	Sign	<u>red</u>		Name	
Gloria Hanson		2-9	3	Kath	lune I	Sews
		 				
		 	. <u></u>			
			 .			
	-					
STATE OF TEXAS	§					
COUNTY OF SMITH	S					
The foregoing i day of <u>JANUH</u> Attorney-in-Fact of M	rey .	199	3 . by	James A	Allen Br	inson, as
		Nota		olic, Sta		xas
My Commission Expire	s:		-	STA	SUE HEARON Hotary Public TE OF TEXAS	•
STATE OF		g	(ACKNO	WIEDGMEN	, Exp. NOV 30, 199 To FOR-COR	93 BORATION)
COUNTY OF		§				
The foregoing i	nstrument , 19	was , h ,	acknow y a	rledged b	efore me Corp	this, for oration.
		Nota	ary Pub	olic		
My Commission Expire	s:					

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
	was acknowledged before me this, for, a, Corporation.
RUTHE S. SHERRILL Notary Public, State of Texas My Comm. Exp. 3-31-93 My Commission Expires:	Notary Public
STATE OF Texas	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Reeves	§
	was acknowledged before me this 2nd 93, by Ruthe S. Sherrill .
RUTHE S. SHERRILL Notary Public, State of Texas My Comm. Exp. 3-31-93	Notary Public
My Commission Expires: 3-31-93	-
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this
	Notary Public
My Commission Expires:	

.

.

DATE:	_ VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE :	_ C. DANIEL WALKER
WITNESS:	
	By:
DATE:	_ WARREN, INC.
ATTEST:	
	By:
DATE:	_ RONALD L. WILBANKS
WITNESS:	_ KOMIND II. WINDHIMA
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
Connie Strichland	June 18, 93 (1) Sally N. Ceuras

STATE OF Tends	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF <u>white</u>	§	
sith filly Yaran Smith		acknowledged before me this Bridge Busines. But Smill ary Public
STATE OF	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

Attest or Witness	Date S	Signed	<u>Name</u>
Slean G. Wingert	1/28	93	Joan Pennea
		· · · · · · · · · · · · · · · · · · ·	
amama an muuaa c			
_			
COUNTY OF SMITH § The foregoing instricted to the control of the		19 <u>23</u> , k	y James Allen Brinson, a
COUNTY OF SMITH § The foregoing instr day of <u>JANUACY</u> Attorney-in-Fact of Mewb	ourne 0	19 <u>93</u> , k pil Compan	y James Allen Brinson, a
COUNTY OF SMITH § The foregoing instr day of <u>JANUACY</u> Attorney-in-Fact of Mewb	ourne 0	19 <u>93</u> , k pil Compan	by James Allen Brinson, as my, a Delaware Corporation State of Texas
The foregoing instr day of	ourne O	19 <u>23</u> , hoil Compan	SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
The foregoing instricted of TANUACY Attorney-in-Fact of Mewb My Commission Expires:	ourne O	19 <u>23</u> , hoil Compan	SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
The foregoing instratory of	ourne 0	19 <u>23</u> , kill Company Notary Pu (ACKN	SUE HEARON Notary Public STATE OF TEXAS

DATE:	_ VENTURE	RESOURCES 1986 GP
ATTEST:		
	Ву:	
DATE:	_ C. DANIE	L WALKER
WITNESS:		
	Ву:	
DATE:	WARREN,	INC.
ATTEST:		
	Ву:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	Ву:	
	ROYALTY OWNE	<u>RS</u>
Attest or Witness	Date Signed	Name
Sean a. Wingert	1/28/93	Joan & Dunea
	4-484	

	Attest or Witness	Date Sig	gned	Name
				ESTATE OF WALTER DUNCAN
		1-26-0	73_	By Raymond T. Duncan, Pers. Rep. CLUB OIL & GAS, LAD.
	Edgar J. James Secretary	2-26-9	93 <u>_</u>	Micer & Allean By Club Oil & Gas. Inc.
			-	General Partner Vincent J. Duncan, President
(henry Willand	1-29-	<u>-93</u>	J. WALTER DUNGAN, JR.
	Vart D. And	2-5-	9.3	Michaeles V-Bronce
	A. Marie Co.		-/	JWD, III, INC.
	Kenneth R. Fry, Secretary			By Nicholas V. Duncan, President
	CMAMD OF MOVAC C			
	STATE OF TEXAS §		9	
	COUNTY OF SMITH §			
	The foregoing instruction of TANUARY Attorney-in-Fact of Mewbo	ument was , 19 ourne Oil	s acknown 93, b Compan	wledged before me this <u>6774</u> y James Allen Brinson, as y, a Delaware Corporation.
			Sue	Hearon
		No	tary Pu	blic, State of Texas
	My Commission Expires:		(si	SUE HEARON Notary Public
				STATE OF TEXAS
				EOF 11 My Comm. Exp. NOV 30, 1993
	STATE OFCOLORADO	_ §	(ACKNO	OWLEDGMENT FOR CORPORATION)
CITY &	COUNTY OFDENVER	_ §		
	The foregoing instruction of Club Oil & Gas,	, 199-3,	byV	wledged before me this <u>26</u> incent J. Duncan , for as eral Partner Corporation of
	Club Oil & Gas, Ltd.	inc.		Corporation. of
			- Chr	n Britt Vendery
			tary Pu	blic
	My Commission Expires: /	-25-49		

STATE	OF OKLAHOMA	g	(ACKNOWLEDGMENT FOR CORPORATION)
COUNT	Y OF OKLAHOMA	§	
day o	of phylandes , 19	<u>≥</u> , b	acknowledged before me this 6.4/ y Nicholas V. Duncan for a Corporation.
Му Со	ommission Expires: 6-01		ry Public)
STATE	COLORADO	៩	(ACKNOWLEDGMENT FOR INDIVIDUAL)
			(,
CITY & COUNT	TY OF DENVER	§	
d ay c Person	The foregoing instrument of <u>Sanuary</u> , 19 nal Representative of the Esta	93 , te of	acknowledged before me this Doller by Raymond T. Duncan, as Walter Duncan. Setto A. Senold ary Public
Му Со	ommission Expires: 7-26-9		
STATE	E OF OKLAHOMA	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNT	TY OF OKLAHOMA	9	
day o	The foregoing instrument of annual , 19	,	acknowledged before me this 29th by Level Cheun Try Public
Му Со	ommission Expires: $8-2$	-96	

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	By:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	WARREN,	INC.
ATTEST:		
	Ву:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNE	<u>RS</u>
Attest or Witness	Date Signed	Name ESTATE OF WALTER DUNCAN
40.01.	1-26-93	By Raymond F. Duncan, Pers. Rep. CLUB, OIL & GAS, ATD.
Edgar J. James, Secretary	2-26-93	By Club Oil & Gas, Inc. General Partner
	1-29-93	Vincent J. Duncan, President J. WALTER DUNGAN, JR.
Kouneth R. In	2-5-93	July III, INC.
Kenneth R. Fry, Secretary		By Nicholas V. Duncan, President

	STATE OF TEXAS	9				
	COUNTY OF SMITH	§				
	The foregoing in day of <i>JANVA</i> Attorney-in-Fact of	1R4,	19 <i>93</i>	by James Al.	len Brinson,	as
	My Commission Expire	os:	Notary	STA		
	STATE OFCOLORADO	 	§ (A	KNOWLEDGMENT	FOR CORPORATIO)N)
CITY &	COUNTY OFDENVER	***************************************	§			
	The foregoing is day of white the foregoing is day of white the following of Club Oil & Club Oil & Gas, Ltd. My Commission Expire	, 19 <u>4</u> Gas, Inc.,	Notary	Vincent J. Dunc	can, 	⇒r as
	STATE OF OKLAHOMA		§ (A	KNOWLEDGMENT 1	FOR CORPORATIO)N)
	COUNTY OF OKLAHOMA	······	§			
	The foregoing inday of Selma JWD, III, Inc.	nstrument 19_9	was ac 13 , by , a	knowledged bef Nicholas V. Du	ore me this 5 ncan f Corporation	or
			$\frac{\mathcal{N}}{Notary}$	Public	Martin	
	My Commission Expire	s: 6-21-	94			

	STATE OFCOLORADO	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
CITY &	COUNTY OFDENVER	§	
		19 <u>93</u> ,	acknowledged before me this 2674 by Raymond T. Duncan Walter Duncan. Walter Duncan. Action of the control of
	My Commission Expires: 7-2		
	STATE OFOKLAHOMA	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
	COUNTY OF OKLAHOMA	8	
	The foregoing instrume day of,	19 <u>93</u> ,	acknowledged before me this 29th by by Walter Duncan, Jr
	My Commission Expires: $X = 3$	23-9	6

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	Ву:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	WARREN,	INC.
ATTEST:		
	By:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	Ву:	
	ROYALTY OWNE	RS
Attest or Witness	Date Signed	Name
		ELLWADE CORP.
Lesa a. Emment	2-12-93	John B. Latte, PRES
		

STATE OF TEXAS §	
COUNTY OF SMITH §	
The foregoing inst day of <u>JANVARY</u> Attorney-in-Fact of Mew	rument was acknowledged before me this <u>67H</u> , 19 <u>93</u> , by James Allen Brinson, as ourne Oil Company, a Delaware Corporation.
	Notary Public, State of Texas
My Commission Expires:_	SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF <u>Liyas</u>	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Midland	§
The foregoing inst day of <u>February</u> Elewade Corporation	rument was acknowledged before me this 12th, 1993, by Shir B. Castle, mesident, for corporation.
My Commission Expires:	Notary Public 2-20-94 LESA A. EMMERT Notary Public, State of Text Commission Expires: 12-20
STATE OF	S (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing inst	rument was acknowledged before me this, for, a, Corporation.
My Commission Expires:	Notary Public

Attest or Witness	Date Signed	<u>Name</u>
Lesa a. Emmust	2-12-13	EllWADE CORP John B. Lastle, PRES.
STATE OF TEXAS §		
COUNTY OF SMITH §		
The foregoing instr day of	ourne Oil Compa	nowledged before me this 67H by James Allen Brinson, as any, a Delaware Corporation. Public, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF LYAS	_ § (ACK	NOWLEDGMENT FOR CORPORATION)
county of Midland	§	
The foregoing instr day of <u>Jehruan</u> Elwade Corporation	rument was ackr , $19\underline{73}$, by	nowledged before me this 12 th how B. Castle, president, for Jeans Corporation.
My Commission Expires: //	_	Public LESA A. EMMERT Notary Public, State of Texas Commission Expires: 12-20-94

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
•	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	Ву:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
Millaffauis	44/93 E/Eann Spier-Terrs

Attest or Witness I	Date S	Signed	_	Name	e
Musin Fluis	2/4	4/93	Eleano	Spin ?	tarin
	/ 1		•	,	
					
-			apped time to the control of the time to the		
	· · · · · · · · · · · · · · · · · · ·				
•	· · · · · · · · · · · · · · · · · · ·				
STATE OF TEXAS §					
COUNTY OF SMITH §					
The foregoing instruction of		1993,	by James	s Allen 1	Brinson, as
	<u> </u>	Notary 1	Sublice S	fearo.	
My Commission Expires:			AND THE MAY	SUE HEARON Notary Pub STATE OF TO	lle EXAS
STATE OF	!	S (ACK		· 大学· · · · · · · · · · · · · · · · · ·	ORPORATION)
COUNTY OF		5			
The foregoing instrumeday of,	ment v	was acki _, by _ , a	nowledged	before Co	me this, for rporation.
	ī	Notary 1	Public		
My Commission Evniros:					

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
**************************************	Ву:
	ROYALTY OWNERS
	Date Signed Name
Cynthia Lerry	2-22.93 . Deury
·	<i></i>
· · · · · · · · · · · · · · · · · · ·	

STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, by, for, aCorporation.
	Notary Public
My Commission Expires:	
STATE OF Just	g (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Millians	§
The foregoing instrument day of felicary, 19	was acknowledged before me this 30 71 13, by 11 11 11 11 11 11 11 11 11 11 11 11 11
My Commission Expires:	Notary Public LINNIE TRAVIS
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

Attest or Witness	Date	Signed	Name
Cynthia Lerry	<u>2</u> 2	2-93	* Horung.
STATE OF TEXAS §			
COUNTY OF SMITH §			
The foregoing instruday of	ument urne	was ac 19 <u>23</u> Oil Com	cknowledged before me this 677, by James Allen Brinson, as mpany, a Delaware Corporation.
		Notary	Public, State of Texas
My Commission Expires:			SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	_	g (A	CKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	_	§	
The foregoing instruday of	ment , 19	was ac , by , a	cknowledged before me this, for, Corporation.
		Notary	y Public
My Commission Expires:			

STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19_	was acknowledged before me this, for, a, Corporation.
•	Notary Public
My Commission Expires:	
STATE OF Jules	g (ACKNOWLEDGMENT FOR INDIVIDUAL) g
The foregoing instrument day of filluany, 19	was acknowledged before me thus No
My Commission Expires:	Notary Public LINNIE TRAVIS Notary Public State of Texas Comm. Expires 3-7-96
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

يار ڏليوا ٿيا. نوت بيان	$\mathbf{e}_{\mathbf{r}} = (\mathbf{r}_{1} + \mathbf{r}_{2} + \mathbf{r}_{3}) + (\mathbf{r}_{1} + \mathbf{r}_{2} + \mathbf{r}_{3} + \mathbf{r}_{3}) + (\mathbf{r}_{2} + \mathbf{r}_{3} + \mathbf$	
JUN 29 '93 05:38PM GLOBAL	NATURAL RESOURES	P.1/2
	Post-It* brand fax transmittal memo 767	1 #of pages >
DATE:	To Charles Dickenson Co. G.C. Doppe. Pax (915) GBS-4170 Fax 713	Kuiger
ATTEST:	Dept. Phone :	1880-5464
	PAK 915 685-4170 FAX 713	1865-438E
DATE:	C. DANIEL WALKER	
witness:		
	Ву:	
	~1	
DATE:	WARREN, INC.	
ATTEST:	Y	
	The c	
	By:	
ì		
DATE:	RONALD L. WILBANKS	
witness:		
	By:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed Name	
	GLOBAL NATURAL RECORDORATION OF NEW	OURCES JADA
		m- KI
	Kelly M. Barnes Attorney-in-Fact	

donounts dy.ii a lie ole ii.e typ with this.

Attest or Witness Da	te Signed	Name Global Natural Resources Corporation of Nevada
		Kelly M. Barnes, Attorney-in
		1
:	· · · · · · · · · · · · · · · · · · ·	
STATE OF TEXAS §		
COUNTY OF SMITH 5		
day of	_, 19 <u>93</u> , :	owledged before me this 67H by James Allen Brinson, as my, a Delaware Corporation.
	Sul	Hearon
	Notary P	ublic, State of Texas
My Commission Expires:		Notary Public STATE OF TEXAS TO THE My Comm. Esp. NOV 30, 1993
STATE OF		NOWLEDGMENT FOR CORPORATION)
COUNTY OF	g	
The foregoing instrumeday of,	ent was acknowly	owledged before me this, for, Corporation.
	, a	Corporation.
	Notary P	ublic
My Commission Expires:		

DATE:	_ VENTURE RESOURCES 1986 GP
ATTEST:	Ву:
DATE:	_ C. DANIEL WALKER
	By:
DATE:	WARREN, INC.
	Ву:
DATE:WITNESS:	
	ROYALTY OWNERS
	Date Signed Name
Brenda Edward	2/11/93 Lill from
,	

STATE OF <u>TEXAS</u>	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland	§
HINV A DORERTS	was acknowledged before me this 11th 93, by William J. Green. Quella a. Waherts Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

Attest or Witness	Date Signed	Name
Prenda Edward	2/11/93	Will them
STATE OF TEXAS § COUNTY OF SMITH §		
The foregoing instruction of JANUARY	ument was ac , 19 <u>93</u> ourne Oil Com	knowledged before me this ATA , by James Allen Brinson, as pany, a Delaware Corporation.
	Notary	Public, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	_ § (A	CKNOWLEDGMENT FOR CORPORATION)
COUNTY OF		
The foregoing instru	ument was ac	knowledged before me this, for, Corporation.
	Notary	Public

STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19_	was acknowledged before me this, for, a Corporation.
	Notary Public
My Commission Expires:	
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	
STATE OF TEXAS	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland	§
	was acknowledged before me this 11th 93, by Euclium & Freen. Judy A. Raherts Notary Public
Comin. Exp. 04-30-93	03

SOC023C0.WP5

STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, for, corporation.
My Commission Expires:	Notary Public
STATE OF <u>TEXAS</u>	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument day of, 195	was acknowledged before me this 28 # 3, by DEBRA JOHNSON HEAD.
HOLLY S SIFFORD Notary Public STATE OF TEXAS My Comm. Exp. DEC 17, 1006	Notary Public S. Sifferd -96
STATE OF <u>TEXAS</u>	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument	was acknowledged before me this 27 the second by DEMAR JOHNSON HOPSON.
HOLLY S SIFFORD Notary Public STATE OF TEXAS My Countin My Grove, Eqs. ACC. 17 1889 17	Notary Public Siffer

DEBRA JOHNSON HEAD

WITNESS

DEMAR JOHNSON HOPSON

WITNESS

STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
day of . 19	was acknowledged before me this, for, a Corporation.
My Commission Expires:	Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, for, a, Corporation.
	Notary Public
My Commission Expires:	
STATE OF TEXAS COUNTY OF PARKER	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
day of	was acknowledged before me this 28 43, by DEBRA JOHUSON HEAD
HOLLY S SIFFORD Notary Public STATE OF TEXAS My Commission Commission (72-15)	Notary Public - 94

STATE OF TEXAS	S	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF LAMPASAS	§	
The foregoing instrument day of TUNE, 19	was 93,	by DEMAR JOHUSON HOPSON.
HOLLY S SIFFORD Notary Public STATE OF TEXAS	Not	Sally S. Sifford
My Committee 17 1906	7-96	

WITNESS

55

SOC023C0.WP5

STATE OF TEXAS	g (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF PARKER	§
The foregoing instrument da O HOLLT'S SIFFORD Hotary Public STATE OF TEXAS My Comm. Exp. DEC 17 1996	was acknowledged before me this 28th 73, by DEBRA JOANSON HEAD. Notary Public
My Commission Expires: 12-17	-96
STATE OF TEXAS	g (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF CAMPASAS	§44
The foregoing instrument day of, 19	was acknowledged before me this 27th
HOLLY S SIFFORD Notary Public STATE OF TEXAS My Comp. Exp. DEC. 17, 1996	Notary Public

Attest or Witness	Date Signed	Name	
Sunde	1/29/93	Patricia B Hour	aid_
STATE OF TEXAS §			
COUNTY OF SMITH §			
The foregoing instant day of	, 19 <u>93</u> , h wbourne Oil Compa	owledged before me by James Allen Bring, a Delaware Corport of State of Texas	nson, as poration.
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993	TA SOLUTION STATES
STATE OF Colorado COUNTY OF Arapahoe	S (ACKN	OWLEDGMENT FOR CORF	⊶ã 'ORATION)
COUNTY OF Arapahoe	§		
The foregoing instant of Mewblarne Of Com	trument was acknown, 1990, by Fa	owledged before me <u>Fricial Established</u> Tradi Delandre Corpo	racion,
	Notary Pi	ablic	Sheila. Martinez
My Commission Expires:	Commission Expires: 07/21/	/L <u>99</u> §	

My Commission Expires: 07/21/1996 5105 DTC Parkway Englewood, Colorado 80111

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	B y :
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
freme Jules	2-1-43 Jeannette Hubbard
· · · · · · · · · · · · · · · · · · ·	

Attest or Witness Da	te Signed	Name
kene Telen 2	-1-93	Jeannette Hubbard
STATE OF TEXAS §		
COUNTY OF SMITH §		
The foregoing instrumeday of <u>JANUARY</u> Attorney-in-Fact of Mewbour	_, 19 <u>93</u> , by	vledged before me this <i>leTh</i> y James Allen Brinson, as y, a Delaware Corporation.
		Healon Dic, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF		WLEDGMENT FOR CORPORATION)
COUNTY OF	· §	
day of, 1	.9, by	vledged before me this, for, Corporation.
	Notary Pub	olic
Mir Commission Expired.		

DATE:	HILLSIDE SYNDICATE
ATTEST:	
	Ву:
	'
DATE: <u>2-11-93</u>	JACK HUFF
WITNESS:	
Melissa Edwardo	By: getttt Ty
DATE:	FRANCES N. JOHNSON
WITNESS:	
	By:
DATE:	JOYRAN CORP.
ATTEST:	
	By:
DATE:	HAROLD KIOUS
WITNESS:	
	, By:
DATE:	DONALD M. KUTZ
WITNESS:	
	By:
21.00	
DATE:	L.O.G. PARTNERS
ATTEST:	Tree a
	By:

STATE OF <u>Lexas</u> COUNTY OF <u>Midland</u>	S	(ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument	was	acknowledged before me this 11th by fick that,
My Commission Expires:		
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
The foregoing instrument day of, 19_		acknowledged before me this
	Nota	ry Public
My Commission Expires:		

DATE:	HEYNE INVESTMENTS, INC.
ATTEST:	
	By:
DATE:	CHARLES W. & MARGIE HICKS, TRUSTEES OF THE HICKS LIVING TRUST U/A
ATTEST:	By:
	Ву:
DATE:	HILLSIDE SYNDICATE
ATTEST:	By:
DATE: <u>2-/1-93</u>	JACK HUFF
WITNESS:	
Melissatdurids	By:
DATE:	FRANCES N. JOHNSON
WITNESS:	
	Ву:
DATE:	JOYRAN CORP.
ATTEST:	
	By:
DATE:	HAROLD KIOUS
WITNESS:	
	Bv:

.

STATE OR	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	S
The foregoing instrument day of, 19_	was acknowledged before me this, for, for, aCorporation.
Mu Commission Evolution	Notary Public
My Commission Expires:	
STATE OF Midland	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
NANCY NEATHERLIN Notary Public, State of Texas My Comm. Expires: 2-4-96	was acknowledged before me this 12, by Notary Public
My Commission Expires: 2-4-0	16
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	By:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	Ву:	
DATE:	WARREN,	INC.
ATTEST:		
	By:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNE	<u>RS</u>
	=	Name
An Branom	1,26,93	Lucy & James)

STATE OFCOLORADO	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF PUEBLO	§	NA
The foregoing instrument day of <u>January</u> , 19		acknowledged before me this 26 th by Incystames. In Branom ary Public
My Commission Expires: March	4, 1	996
STATE OF	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
		acknowledged before me this
Mar Garantandan Baratan	Nota	ary Public
My Commission Expires:		

Attest or Witness	<u>Date</u>	Signed	Name
an Brasion	1,2	6,93	Lucy & James
			
	.		
		-	
STATE OF TEXAS	8		
COUNTY OF SMITH	§		
day of	9	19 <u>93</u> ,	mowledged before me this 674 by James Allen Brinson, as pany, a Delaware Corporation.
		Notary	Public, State of Texas
My Commission Expire	es:		SUE HEARON Notary Public STATE OF TEXAS My Conum. Exp. NOV 30, 1993
STATE OF	····	§ (AC	KNOWLEDGMENT FOR CORPORATION)
COUNTY OF		§	
The foregoing day of	instrument , 19_	was ac} , by _ , a _	cnowledged before me this, for, Corporation.
		Notary	Public
My Commission Expire	es:		

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, by, for, aCorporation.
My Commission Expires:	Notary Public
STATE OFCOLORADO	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF PUEBLO	§
The foregoing instrument day of, 19	was acknowledged before me this 26. 93, by Lucy James Notary Public Notary Public
My Commission Expires: <u>March</u>	4, 1996
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
The foregoing instrument day of, 19	was acknowledged before me this
My Commission Expires:	Notary Public

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	By:	**************************************
DATE:	C. DANIE	L WALKER
WITNESS:		
	Ву:	
DATE:	WARREN,	INC.
ATTEST:		
	By:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNE	<u>RS</u>
Attest or Witness		Name
Paula almaza	2-2-93	Courtexay C. Johnson
water and the state of the stat		
Market Control of the		

STATE OF <u>TEXAS</u>	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF WILLIAMSON	§
day of FEBRUARY, 199	was acknowledged before me this 2ND 73, by COURTENAY C. JOHNSON. Anda Olmaza Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	9
	was acknowledged before me this, by
My Commission Expires:	Notary Public

Attest or Witness	<u>Date Signed</u>	Name
Paula almaza	- <u>2-2-93</u>	Courteray C. Johns
		
STATE OF TEXAS §		
COUNTY OF SMITH §		
The foregoing inst day of <u>JANUARY</u> Attorney-in-Fact of Mew	bourne Oil Compa	owledged before me this <u>AH</u> by James Allen Brinson, as ny, a Delaware Corporation. <u>ALLACON</u> ublic, State of Texas
My Commission Expires:_	***************************************	SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	§ (ACKN	OWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing inst	rument was acknown, 19, by	owledged before me this, for, Corporation.
	Notary Pu	ublic
My Commission Expires:_		

STATE OF	g	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	9	
The foregoing instrument day of, 19	was , ¹	acknowledged before me this, for a, Corporation.
	Nota	ary Public
My Commission Expires:		
STATE OF TEXAS	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF WILLIAM 800	g	
PAULA ALMAZAN NOTARY PUBLIC STATE OF TEXAS Complise a Expires 2-6-94	Nota	acknowledged before me this 2ND by <u>Courtenay</u> C. Sorthson. Aula Alman ary Public
My Commission Expires:		
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
		acknowledged before me this
	Not	ary Public
My Commission Expires:		

DATE:	DeMAR JOHNSON HOPSON
WITNESS:	
	By:
	DEBRA JOHNSON HEAD
WITNESS	Ву:
DATE: (0/24/93	F. KIRK JOHNSON III
Lisa De tol ofhur	By: Hir Johnsan
DATE:	ANN H. JOHNSON MCREYNOLDS, Managing Conservator for F. Kirk Johnson, IV and Marsland Holt Johnson
WITNESS:	
	Ву:

STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
day of . 19	was acknowledged before me this, for, a, Corporation.
	Notary Public
My Commission Expires:	
STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	8
The foregoing instrument day of, 19_	was acknowledged before me this, for, a, Corporation.
My Commission Expires:	Notary Public
commission suprios.	
STATE OF TOYLOR	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Taylor	§
The foregoing instrument	was acknowledged before me this 28th 93, by Norma L. Gancs.
	Notary Public
My Commission Expires: 2-10-	NORMA L. GANUS Notary Public, State of Texas My Commission Expires 02-10-96

hut dibeanu

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وينه دود طبر

00-21-20 14-10

DATE:	_ VENTURE	RESOURCES 1986 GP
ATTEST:		
	By:	
DATE:	_ C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	_ WARREN,	INC.
ATTEST:		
	By:	
DATE:	_ RONALD I	. WILBANKS
WITNESS:		
**************************************	Ву:	
	ROYALTY OWNE	
Attest or Witness	Date Signed	Name
Joseph M. Reen	2/4/93	Name Ull P. Frum
/		
		

STATE OF Letas	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland	§
The foregoing instrument day of <u>Hebutary</u> , 19	was acknowledged before me this 400,93, by Kyle K. LHWSON. Mildred K. Daehusia Notary Public
My Commission Expires:	
COUNTY OF	§
The foregoing instrument	was acknowledged before me this Notary Public
My Commission Expires:	

Attest or Witness	Daté	Signe	od Name
Joseph M. Riere	7./4	193	MyCR. Lum
			
STATE OF TEXAS §			
COUNTY OF SMITH §			
day of JANUARY	,	1993	cknowledged before me this 677, By James Allen Brinson, as ompany, a Delaware Corporation.
		Notar	Y Public, State of Texas
My Commission Expires:			SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF		§ (1	ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF		§	
The foregoing instruday of,	ment 19	was a	cknowledged before me this, for, corporation.
		, a	corporation.
		Notar	y Public
My Commission Expires:			

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, a Corporation.
My Commission Expires:	Notary Public
STATE OF THEOLO	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland	§ (Northern Education 1997)
The foregoing instrument	was acknowledged before me this 4th 93, by Kyle K. Lachling. Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this , by
	Notary Public
My Commission Expires:	

DATE:	_ VENTURE RESOURCES 1986 GP	
ATTEST:		
	Ву:	
DATE:	_ C. DANIEL WALKER	
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:		
	By:	
DATE:	RONALD L. WILBANKS	
WITNESS:		
	By:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed Name	
	Date Signed Name O127/93 Unne 2. June	0
Altesa Wallson	0/2/195 June 13. Sittle	

STATE OF NEW MEXICO	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF BERWALILLO	g	
The foregoing instrument day of Salvavy, 199	73., Nota	acknowledged before me this 27th by ANNE D. LITTLE.
ry commission Expires. 1772		
STATE OF	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
The foregoing instrument day of, 19		acknowledged before me this by
	Nota	ary Public
My Commission Expires:		

Attest or Witness D	ate	Signed	Name
Theresa Dawson	1/2	7/93	Unne D. Sind
STATE OF TEXAS §			
COUNTY OF SMITH §			
day of JANUARY		1923	knowledged before me this <u>67</u> , by James Allen Brinson, as pany, a Delaware Corporation.
		Notary	Public, State of Texas
My Commission Expires:	·		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF		§ (AC	KNOWLEDGMENT FOR CORPORATION
COUNTY OF		§	
day of,	19	, by _	knowledged before me this, for
		, a _	Corporation.
		Notary	Public
My Commission Expires:			

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, for, a Corporation.
	Notary Public
My Commission Expires:	
STATE OF NEW MEXICO	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
STATE OF NEW MEXICO COUNTY OF BERNAULLO	§
The foregoing instrument day of, 19	was acknowledged before me this 37th 93, by hove to hittle.
	Stephanie Som
My Commission Expires: $4-1-9$	
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

DATE:	VENTURE RESOURCES 19	986 GP
ATTEST:		
	Ву:	
DATE:	C. DANIEL WALKER	
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:		
	By:	
DATE:	RONALD L. WILBANKS	
WITNESS:		
	By:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed	Name
mary an Parisch	3-22-93 Marjon	ie Little
		The Hallands of the Land

My Commission Expires:	
	Notary Public
	was acknowledged before me this
COUNTY OF	§
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
RHONDA WOLFF Notary Public State of Texas My Comm. Exp. 3-29-93 My Semmission Expires:	Notary Public Wolff
RHOUS	26-1-10011
The foregoing instrument day of, 194	was acknowledged before me this 22 3, by Marjorie Little.
county of San Patricio	§
STATE OF <u>Jexas</u>	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

Attest or Witness	Date Signed	Name
Mary an Poenich	3-22-93	Marjorie Little
		
STATE OF TEXAS § COUNTY OF SMITH §		
The foregoing inst day of	<u>2</u> , 19 <u>93</u> ,	nowledged before me this 674 by James Allen Brinson, as any, a Delaware Corporation.
My Commission Expires:_		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	§ (ACK	NOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing inst	rument was ackr , 19, by , a	nowledged before me this, for Corporation.
	Notary 1	Public
My Commission Expires:_		

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, a Corporation.
My Commission Expires:	Notary Public
STATE OF Texas COUNTY OF San Patricio	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
The foregoing instrument day of, 196 RHONDA WOLFF Notary Public State of Texas My Comm. Exp. 3-29-93 My Commission Expires:	was acknowledged before me this 22.3, by Marjorie Little. Rhanda Wolff Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
The foregoing instrument day of, 19_	was acknowledged before me this
My Commission Expires:	Notary Public

- -

	VENTURE RESOURCES 1986 GP
	Зу:
,	C. DANIEL WALKER
	Ву:
	WARREN, INC.
	Ву:
	RONALD L. WILBANKS
	_
	Ву:
ROYA	TY OWNERS
ness Date	Signed Name
	6-93 Dylora J. Litt
<u>^. Ut</u>	(690) Duflica for fact

STATE OF	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
The foregoing instrument day of, 19_		acknowledged before me this by
	Nota	ary Public
My Commission Expires:		
STATE OF Sew Mexico COUNTY OF San Juan	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Oan Juan	g	
The foregoing instrument day of, 19_	was 93,	acknowledged before me this 26 by Sylvia F. Little.
		Carmel Lutiery Public
My Commission Expires: 419	<u>-43</u>	

Attest or Witness Dat	e Signed	N	ame
			· · · · · · · · · · · · · · · · · · ·
Jury Sym R. Cy 3-	26-93 (Deplina	J. State
STATE OF TEXAS §			
COUNTY OF SMITH §			
The foregoing instrument day of GLENDAF. CARTER	_, 19 <i>9</i> 0_, by	[,] James Aller	n Brinson, as
Notary Public STATE OF TEXAS My Comm. Exp. 5-28-95 My Commission Expires: 5-28-	Nøtary Pub	da J. (U) Dic, State o	Cto f Texas
STATE OF	§ (ACKNO	WLEDGMENT FOR	CORPORATION)
COUNTY OF	s S		,
The foregoing instrument day of, 19	nt was acknow	ledged befor	e me this, for
	, a	-	Corporation.
	Notary Pub	lic	
My Commission Expires		-	

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, a
	Notary Public
My Commission Expires:	
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	
STATE OF Son Mexico	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF San Juan	8
The foregoing instrument day of, 19	was acknowledged before me this 36 93, by Sylvia F. Little.
	Notary Public Statione
My Commission Expires: 4-19	

DATE:	VENTURE RESOURCES 1986 GP	
ATTEST:		
	By:	
DATE:	C. DANIEL WALKER	
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:	•	
	By:	
DATE:	RONALD L. WILBANKS	
WITNESS:		
	Ву:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed Name	
Don Juckson	28 Jan 93 Junes 2. 1111.	
Don Jackson	Jana 28,1993 Jana H. Male	ins)
	AND WIFE JAME HI	TVIARTN
		
		····

STATE OF TEXAS	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF DAILAS	§
The foregoing instrument day of JERRY P. WASHAM MY COMMISSION EXPIRES December 2, 1993	was acknowledged before me this 28+6 93, by James L. Makins Notary Public
My Commission Expires: 12-2-9	3
STATE OF TEVAS COUNTY OF DA I las	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
The foregoing instrument day of January , 19	was acknowledged before me this 28", by Jawe H. Mary W.
JERRY P. WASHAM MY COMMISSION EXPIRES December 2, 1993	Notary Public
My Commission Expires: 12.2.	93

Attest or Witness Date	Signed	Name
Don Jackson Jan	Jan 93 _ 98,1993	James E. Mohine DR. JAMES E. MAKINS Jane H. Makins AND WIFE SANE H. MAKINS
STATE OF TEXAS § COUNTY OF SMITH §		
The foregoing instrument day of	19 <u>23</u>	knowledged before me this AH, by James Allen Brinson, as pany, a Delaware Corporation.
My Commission Expires:	Notary	Public, State of Texas SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	§ (AC	CKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing instrument day of, 19_	, by .	
My Commission Expires:	Notary	Public

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, by, for, aCorporation.
	Notary Public
My Commission Expires:	······································
STATE OF TEXAS	g (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF DAILAS	S
The foregoing instrument day of JANUARY , 19 JERRY P. WASHAM MY COMMISSION EXPIRES	was acknowledged before me this 25th gir, by Janes G. Making.
December 2, 1993	Notary Public
My Commission Expires: 12.2	<u>93</u>
T-10	
COUNTY OF DAILAS	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
	§ auth
day of Anum, 19	was acknowledged before me this 1813
JERRY P. WASHAM MY COMMISSION EXPIRES December 2, 1993	Notary Public
My Commission Expires: 12-2	. 43

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
anne B Makins	2-2-93 Janes Makens

STATE OF Veyas	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Sallas	§	
The foregoing instrument day of Jehruary , 19	was <u>93</u> ,	acknowledged before me this 2 mg by Games Es. Making, fu.
	<u>Al</u> Nota	ary Public
My Commission Expires: 10-24-	93_	
STATE OF	9	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
The foregoing instrument day of, 19		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

Attest or Witness I	Date	Sign	<u>ned</u>			Name		
Jone Anakin	Z-2	2-9	3	Mus	ul	hel		$\frac{1}{2}$
		·		·				
-								
		· · · · · · · · · · · · · · · · · · ·						
STATE OF TEXAS §								
COUNTY OF SMITH §								
The foregoing instrumed day of		195	分, by	Jame	s All	en Bri	nson	, as
		Nota	ary Pub.			of Tex		
My Commission Expires:				My	SUE H Notar: STATE (Comm. Exp.	EARON Y Public OF TEXAS		
STATE OF		g	(ACKNOW	VLEDGN	ENT F	ÖR CORE	ORAT	ION)
COUNTY OF		§						
The foregoing instrumeday of,	nent 19_	was ,]	acknow:	ledge	d befo	ore me	this	for
			a		******	_ corpo	ratı	on.
			· · · · · · · · · · · · · · · · · · ·					
		Nota	ary Publ	lic				
Mr. Commission Evniros:								

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION
COUNTY OF	§
day of, 1	nt was acknowledged before me this, for, for, a Corporation.
	Notary Public
My Commission Expires:	
STATE OF elips	§ (ACKNOWLEDGMENT FOR INDIVIDUAL
COUNTY OF Sallas	§
The foregoing instrument day of <u>Jelunary</u> ,	nt was acknowledged before me this 29 1993, by James E. Making, Jr.
	Notary Public
My Commission Expires: 10-20	<i>Y-93</i>
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL
COUNTY OF	§
	nt was acknowledged before me this
	Notary Public
My Commission Expires:	

DATE:	VENTURE RESOURCE	ES 1986 GP
ATTEST:		
	Ву:	
DATE:	C. DANIEL WALKER	R
WITNESS:		
	Ву:	
DATE:	WARREN, INC.	
ATTEST:		
<u> </u>	Ву:	
DATE:	RONALD L. WILBA	NKS
WITNESS:		
	By:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed	Name
Don Jackson	28 Jan 193 MA	ichael Makins
. ————		

STATE OF TEXAS	9	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Dollas	§	
The foregoing instrument day of Javoary, 199 JERRY P. WASHAM MY COMMISSION EXPIRES December 2, 1993		by Michael Makins.
My Commission Expires: 12-2-3		ry Public
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
The foregoing instrument day of, 19_		acknowledged before me this by
	Nota	ry Public
My Commission Expires:		

Attest or Witness	Date Signed	Name
Don Jakson	18 Jan 93	Michael Makins
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of <u>JANUARY</u>	, 19 <u>93</u> , b	wledged before me this 6777 y James Allen Brinson, as ny, a Delaware Corporation.
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS Wy Comm. Exp. NOV 30, 1993
STATE OF		OWLEDGMENT FOR CORPORATION)
COUNTY OF	. §	
The foregoing instruday of	ment was ackno 19, by , a	wledged before me this, for, Corporation.
My Commission Expires:	Notary Pu	

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, for, aCorporation.
•	Notary Public
My Commission Expires:	
_	
	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Dallas	§
The foregoing instrument day of, 19	was acknowledged before me this 28th 93, by Michael MAKING.
JERRY P. WASHAM MY COMMISSION EXPIRES December 2, 1993	Notary Public
My Commission Expires: 12-2.	93
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

.

DATE:	_ VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	_ C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
Is sluth C. Downey	D-2-93 Patrick (Making
_ 0 ' /	
	

STATE OF TEXAS §	
COUNTY OF SMITH §	
The foregoing instrument day of <u>JANUARY</u> , Attorney-in-Fact of Mewbourne	was acknowledged before me this 677, 1993, by James Allen Brinson, as Oil Company, a Delaware Corporation.
My Commission Expires:	Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
	was acknowledged before me this, by, for, a, Corporation.
My Commission Expires:	Notary Public
STATE OFTexas	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OFTom Green	§
The foregoing instrument day of February , 19	was acknowledged before me this 2nd 93, by Patrick C. Makins , for , a Corporation.
My Commission Expires:	Notary Public ELIZABETH C. DOWNEY Notary Public State of Texas My Comm. Exp. 5-12-96

Attest or Witness	Date Signed	Name
Light C. Downey	2-2-93	Patrick C. Makins
		·

STATE OF TEXAS §		
COUNTY OF SMITH §		
day of <u>JANUAKY</u>	, 19 <u>93</u> , 1	owledged before me this 674, by James Allen Brinson, as ny, a Delaware Corporation.
	8	Harron
	Notary Pu	ublic, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OFTexas	§ (ACKN	OWLEDGMENT FOR CORPORATION)
COUNTY OF _Tom Green	§	
The foregoing instr day of <u>February</u>	rument was acknown, 19 <u>93</u> , by	owledged before me this 2nd Patrick C. Makins for Corporation.
My Commission Expires:	< -∨	ELIZABETH C. DOWNEY Notery Public State of Texas My Gonim. Exp. 5-12-96

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
	By:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	WARREN,	INC.
ATTEST:		
**************************************	By:	,
DATE:	RONALD L	. WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNER	<u>RS</u>
Attest or Witness	Date Signed	Name
Debra Lay adman	2-5-93	Purto R. Makins
	<u>, </u>	
P-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		

STATE OF TEXTS	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Brazos	8	
The foregoing instrument day of FEBRURDY, 19	was 93,	acknowledged before me this 5 by Scott Makins.
	Nota	ashley Biker
My Commission Expires:		ASHLEY BAKER Notary Public, State of Texas My Commission Expires My HALF OF A 1995
STATE OF	g	JUNE 25, 1996 (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
The foregoing instrument day of, 19_		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

Attest or Witness	Date Signed	Name
ashleyBaker	2-5-93	Just R. Makins
AshleyBaker Debrakky all na	2-5-93	
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of JANUARY	, 19 <i>93</i> , 1	owledged before me this 67/ by James Allen Brinson, as ny, a Delaware Corporation.
		ublic, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	_ § (ACK	NOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing instr	rument was acknown, 19, by	owledged before me this, for, Corporation.
	Notary P	ublic
My Commission Expires:		

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19_	was acknowledged before me this, for, a Corporation.
	Notary Public
My Commission Expires:	
STATE OF TEXAS	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Brazos	§
The foregoing instrument day of <u>FEBRUARY</u> , 19	was acknowledged before me this 5 93, by Scott Makins .
	ashley Baker
My Commission Expires:	Notary Public ASHLEY BAKER Notary Public, State of Texas My Commission Expires
STATE OF	JUNE 25, 1996 § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

•

....

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	_ C. DANIEL WALKER
WITNESS:	<i>,</i>
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
and the second	ROYALTY OWNERS
	^
Attest Kox XIII Kox XXXIII XXXXIII XXXIII XXXIIXXII XXXIII XXXIII XXXIII XXXIIXXIIXXII XXXIII XXXIII XXXIII XXXIII XXXIII XXXIII XXXIII XXXIII	Date Signed MARSHALL & WINSTON, INC. 2/11/93 By: Chu Ar Lace
Robert H. Ritchie Secretary-Treasurer	William S. Marshall President

STATE OF TEXAS	i						
COUNTY OF SMITH	3						
The foregoing in day of <u>JANVARY</u> Attorney-in-Fact of M	ewbourne	was 19 <u>2</u> Oil (ackn <u>3</u> , Compa	owledge by Jame ny, a D	d befo s Allo elawar	re me en Bri e Corp	this <u>674</u> nson, as poration.
My Commission Expires	3:			ublic,	SUE Nota STATE	HEARON Mry Public OF TEXA	S
STATE OFTEXAS		§	(ACKI	OWLEDGI	MENT F	OR CORI	ORATION)
COUNTY OF MIDLAND		§					
The foregoing in day of	thn, Inc.	93, f	aory P	owledge Willia Nevada ublic,	ms. N	Corpo	pration,
STATE OF		§ §	(ACK	NOWLEDGI	MENT F	OR CORE	PORATION)
The foregoing in day of	nstrument , 19	was , k ,	ackn y a	owledge	d befo	corpo	this, for oration.
My Commission Expires	3:	Nota	ry P	ublic		·	

Attest XXXXXXXXXXX	Date Signed	Name MARSHALL & WINSTON, INC.
for all the	- 2/1/03	11111 11111
Robert H. Ritchie	4/1/93	William S. Marshall
Secretary-Treasurer	1	President
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of JANVARY	, 19 <u><i>93</i></u> , k	owledged before me this <u>OTH</u> by James Allen Brinson, as ny, a Delaware Corporation.
	Notary Pi	ublic, State of Texas
	1	management of the second of th
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OFTEXAS	§ (ACKN	OWLEDGMENT FOR CORPORATION)
COUNTY OF MIDLAND	§	
day of	, 19 <u>93</u> , DY <u>W</u>	wledged before me this \(\frac{1}{\tau}\) william S. Marshall , for Nevada Corporation,
on behalf of said corpo		
GINA L HICKMAN	I huma	Adle Kman
Notary Public	Notary Pi	ablic, State of Texas
State of Texas Commission Expires 10-14-06		

DATE: 6:29-93	Ann H. Johnson McReynolds, Managing Conservator for F. Kirk Johnson, IV and Marsland Holt Johnson
WITNESS:	ann McReyrold
COUNTY OF Dellas	,
The following instrument day of, 1	was acknowledged before me this 7944
My Commission Expires: 5-29	Notary Public 5-96 Sonia Aubé Netary Public, State of Texas My Camm. Expires 05/25/96

DATE:	MANZANO OIL CORPORATION
ATTEST:	
	Ву:
DATE:	MCKAY OIL CORPORATION
	By:
DATE: 1/6/93 WITNESS:	CURTIS W. MEWBOURNE By: Convergence By
DATE: 1/06/93	MEWBOURNE OIL COMPANY
Alufa hrmpm	By: Leades / whomen
DATE:	STEPHEN T. MITCHELL
WITNESS:	By:
DATE:	MARCIA HEYNE MODESETT
WIINESS.	Ву:
DATE:	STEPHEN & LESLIE MONTGOMERY
	By:
	By:

STATE OFTEXAS	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF SMITH	8	
		acknowledged before me this 6th by CURTIS W. MEWBOURNE
		arbara Dunnan
My Commission Expires:		ary Public
STATE OF	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
		acknowledged before me this
	Not	ary Public
My Commission Expires:		

DATE:	DONALD M. KUTZ
WITNESS:	
	By:
DATE:	L.O.G. PARTNERS
ATTEST:	
	Ву:
DATE:	MANZANO OIL CORPORATION
ATTEST:	By:
	БУ:
DATE:	MCKAY OIL CORPORATION
ATTEST:	
	By:
DATE: 1/6/93	CURTIS W. MEWBOURNE
witness:	By: Justis / Juliacume
Darbara Sunnan	By: July fur acure
DATE: 1/06/93	MEWBOURNE O'L COMPANY
ATTEST:	
(leght hmpm)	By: Ledis / lew rousing
DATE	CONTRACTOR OF THE CONTRACTOR O
DATE:	STEPHEN T. MITCHELL
	By:

STATE OF	g	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	g	
The foregoing instrument day of, 19	was , 1	acknowledged before me this, for a, Corporation.
	<i>'</i>	a Corporation.
•	Nota	ary Public
My Commission Expires:		
STATE OFTEXAS	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF SMITH	9	
		acknowledged before me this 6th by CURTIS W. MEWBOURNE.
	Not	Money Dunner ary Public
My Commission Expires:		
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	9	
The foregoing instrument day of, 19_	was	acknowledged before me this
	Nota	ary Public
My Commission Expires:		

DATE:	VENTURE RESOUR	CES 1986 GP
ATTEST:		
	By:	
DATE:	C. DANIEL WALK	ER
WITNESS:	D.	
	By:	
DATE:	WARREN, INC.	
ATTEST:	By:	
DATE:	RONALD L. WILB	ANKS
WITNESS:	By:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed	Name
Foudy Boxé	4-1-93 Jus	Deis Mills

STATE OF New Mexico	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Santa Fe	8	
The foregoing instrument day of April 199	was 93 ,	acknowledged before me this 1st by Ann Spiess Wills.
	Nota	Buole Dena
My Commission Expires: August	9,	1993
STATE OF	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
The foregoing instrument day of, 19	was ,	acknowledged before me this
	Nota	ry Public
My Commission Expires:		

Attest or Witness I	ate S	igned	Name
Fandy Bire	4-/-	93	ann Spies Mills
		<u>.</u>	
STATE OF TEXAS §			
COUNTY OF SMITH §			
day of JANVING	, 1	9 <u>93</u> ,	knowledged before me this <u>67,</u> by James Allen Brinson, as pany, a Delaware Corporation.
	N	otary	W Famon Public, State of Texas
My Commission Expires:			SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	8	(AC	KNOWLEDGMENT FOR CORPORATION
COUNTY OF	§		
The foregoing instrumeday of,	ment w	as ack , by _ _, a _	nowledged before me this, for, Corporation.
	N	otary	Public
My Commission Expires:			

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, aCorporation.
	Notary Public
My Commission Expires:	
STATE OF NEW MEXICO	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Santa Te	
The foregoing instrument day of April , 199	was acknowledged before me this 15th 93, by And Spiess Mills.
	Notary Public Tena
My Commission Expires: August	
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this
,	Notary Public
My Commission Expires:	

DATE: <u>6-22-93</u>	MURJO OIL AND ROYALTY COMPANY
ATTEST: Berky H. Young	By: Bettye B. Davis
DATE:	NEECO, INC.
	By:
DATE:	OXY USA INC.
Allesi.	By:
DATE:	PERMIAN BASIN INVESTMENT CORP.
	By:
DATE:ATTEST:	PETRO ATLAS CORPORATION
	By:
DATE:WITNESS:	KENNETH J. REYNOLDS
	By:
DATE:ATTEST:	SANTA FE ENERGY COMPANY
	Bv:

STATE OF <u>Jekus</u>	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Surrant	g
The foregoing instrument day of, 19, 19, 19, 19, 20, 20	was acknowledged before me this 32 is, by betwee B. Awis , for any a Jexas Corporation.
	Elizabeth ann Jaylor Notary Public
My Commission Expires: 12-21-9	NOTARY PUBLIC STATE OF TEXAS My Comm. Exp. 12-21-96
STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	\$
The foregoing instrument day of, 19	was acknowledged before me this, by, for, a, Corporation.
	Notary Public
My Commission Expires:	
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

DATE: 6-22-93	MURJO OIL AND ROYALTY COMPANY
ATTEST: Beckyth Young	By: Battye B. Devic
DATE:	NEECO, INC.
	By:
DATE:	OXY USA INC.
ATTEST:	By:
DATE:	PERMIAN BASIN INVESTMENT CORP.
AllESI:	p
DATE:ATTEST:	W 1 PORATION Royalty
DATE:	KENNETH J. REYNOLDS
	Ву:
DATE:	SANTA FE ENERGY COMPANY
	B y :

STATE OF TEXAS §			
COUNTY OF SMITH §			
The foregoing ins day of <u>JANVARY</u> Attorney-in-Fact of Me	, 199	23, by James	before me this <u>677</u> Allen Brinson, as aware Corporation.
My Commission Expires:		ary Public, St	ate of Texas SUE HEARON
4		THE REAL PROPERTY.	Notary Public STATE OF TEXAS Comm. Exp. NOV 30, 1993
STATE OF <u>Jekas</u>	§	(ACKNOWLEDGME	NT FOR CORPORATION)
COUNTY OF <u>Jarrant</u>	§		
The foregoing instant day of June. Murjo bil & Royal	strument was 19 <u>43</u> , ty Company,	acknowledged by <u>Settlye B.</u> a <u>Sex ao</u>	before me this <u>33</u> <u>20200</u> , for Corporation.
My Commission Expires:		ary Public	ELIZABETH ANN TAYLOR NOTARY PUBLIC STATE OF TEXAS My Comm. Exp. 12-21-96
STATE OF	§	(ACKNOWLEDGME	MI FOR CORPORATION)
COUNTY OF	§		
The foregoing ins	strument was	acknowledged	before me this, for
	· · · · · · · · · · · · · · · · · · ·	a	Corporation.
My Commission Fynings		ary Public	

DATE:	MARCIA HEYNE MODESETT
WITNESS:	
	By:
DATE:	STEPHEN & LESLIE MONTGOMERY
WITNESS:	
	By:
	Ву:
DATE: 6-22-93	MURJO OIL AND ROYALTY COMPANY
Becky N. Young	By: Bettye B. Davis
DATE:	NEECO, INC.
ATTEST:	
	Ву:
DATE:	OXY USA INC.
ATTEST:	
w ⁴⁷⁴	By:
DATE:	PERMIAN BASIN INVESTMENT CORP.
ATTEST:	
	By:
DATE:	PETRO ATLAS CORPORATION
ATTEST:	
	Rv ·

Attest or Witness	Date	Signed	Name
,			
	. <u> </u>		
STATE OF TEXAS	S		
	§		
The foregoing i day of <u>JANVARY</u>	nstrument Mewbourne	was ackn 19 <u>93</u> , Oil Compa	owledged before me this <u>Land</u> by James Allen Brinson, as any, a Delaware Corporation.
		Su	V Hearon
My Commission Expire	os:	Notary P	SUE HEARON Notary Public STATE OF TEXAS
STATE OF Jekus		§ (ACK	NOWLEDGMENT FOR CORPORATION)
COUNTY OF Jarrant	·	§	
The foregoing i day of June Murjo Oil & Royall	nstrument , 19 <u>9</u> y_ <i>Compan</i>	was ackn 13, by 23 14, a	owledged before me this 22 thurs, for Corporation.
My Commission Expire	es: <u>12-21-96</u>		ELIZABETH ANN TAYLOR NOTARY PUBLIC STATE OF TEXAS My Comm. Exp. 12-21-96

DATE:	VENTURE RESOURCES 198	6 GP
ATTEST:		
	By:	
DATE:	C. DANIEL WALKER	
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:		
	By:	
DATE:	RONALD L. WILBANKS	
WITNESS:		
	By:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed	Name
70 21		000
followd knodgrass	2/16/53 Drawn	Schleiher

STATE OF Mexico	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF San miguel	§	
The foregoing instrument day of, 19_	was 93,	by Aluna Wehterleek.
<i>Y</i>	12	ary Public
	Nota	ary Public
My Commission Expires: June 25	,199	<u>6</u>
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	
		acknowledged before me this
		Dublia
	NOT	ary Public
My Commission Expires:		

Attest or Witness	Date S	Signed	Name
John L. Snodgrass	2/10	6/93	Dian Ochterheck
			
_			
STATE OF TEXAS §			
COUNTY OF SMITH §			
day of	1RY	19 <u>23</u> ,	knowledged before me this <u>(a/)</u> by James Allen Brinson, as pany, a Delaware Corporation.
My Commission Expires			Public, State of Texas SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF		§ (AC	KNOWLEDGMENT FOR CORPORATION)
COUNTY OF		9	
The foregoing ins	strument v , 19	was acl	nowledged before me this, for, Corporation.
			Public
My Commission Expires	•		

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument lay of, 19_	was acknowledged before me this, for, a, Corporation.
	Notary Public
My Commission Expires:	
STATE OF Meyico	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF San magniel	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
·	was acknowledged before me this 26
,	Isabel Maes Notary Public
My Commission Expires:	25,1996
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this

86/23/30 14:11

Attest or Witness	Date Signed	Name
		Panos Investment Company
Long Hamor	6-21-93	Panos Investment Companions
		
,		
STATE OF TEXAS §		
COUNTY OF SMITH §		
COUNTY OF SMITH §		
		owledged before me this 6TH
Attorney-in-Fact of Mew	bourne Oil Compa	by James Allen Brinson, as ny, a Delaware Corporation.
	0	D 1
	SU	e Hearon
	Notary Pu	ublic, State of Texas
My Commission Expires:		SUE HEARON
•	(.	Notary Public STATE OF TEXAS
	\ \	My Comm. Exp. NOV 30, 1993
	L.	my count. Exp. not 30, 1933
STATE OF	§ (ACKN	OWLEDGMENT FOR CORPORATION PARTNER SHIP
COUNTY OF SALT LA	KE §	(144,401,014)
The foregoing inch		ladaad basana ma shka 2\
day. of Tyne	$\frac{1993}{1993}$	Brad Panos for
PANOS INVESTMENT	COMPANY, a	Utah Corporation.
	CD.	ranthersmp
	<u> </u>	landa Smith
	Notary Pu	iblic
My Commission Expires:	9-19-96	Alberty Public
		478 East South Temple #201
		September 10 100s

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
***************************************	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	·
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
Mary to	6/1/93 Junitarios #
	•

STATE OF <u>UTAH</u> COUNTY OF <u>SALT LAKE</u>	§ §	KAREN K. MORTENSEN 3020 Highland Drive (P.S. Harrer, R.D. Gelt take (No. Braff All DS VI DUAL) My Commission Expres November 1, 1996 State of Utah
The foregoing instrument day of, 199	_ 9	acknowledged before me this 1/2 by GREGORY P PANOS. Taken Andrewser
My Commission Expires: //-/-		ary Public
STATE OF	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
The foregoing instrument day of, 19		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

Attest or Witness	Martin	Date	Sig	ned			Name	
Mury Sin	_	6/1	11/9	3_			am	*
							····	
	_							
								
	_							
_	_							
STATE OF TEXAS	§	•						
COUNTY OF SMITH	§							
The foregoing day of	NUHK	9_,	195	23 , b	y Jame	es All	.en Bri	nson, as
			Not	ary Pu	blic,	eard State	of Tex	
My Commission Expir	es:	- 1 		-	ANT PURE S	SUE HE Notary STATE C	eces trepende	aumanamana
STATE OF			g					PORATION)
COUNTY OF		_	§					
The foregoing day of	instr	ument	was	acknown by	wledge	d bef	ore me	this, for
			·					
			Not	ary Pu	blic			
My Commission Expir	es:							

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, a Corporation.
My Commission Expires:	Notary Public
STATE OF <u>UTAH</u> COUNTY OF <u>SALT LAKE</u>	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument day of United Public 199 KARLEN K. MORTENSEN 3020 Highland Drive Salt Lake City, Utah 84106 My Commission Expires November 1, 1998 State of Utah My Commission Expires:	was acknowledged before me this 11.3, by GREGORY P PANOS. Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument	was acknowledged before me this
	Notary Public

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	•
	By:
DATE:	WARREN, INC.
ATTEST:	•
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
	2-12-93 /atrich 7. Jane

STATE OF TEXAS §	
COUNTY OF SMITH §	
day of <u>accuary</u> ,	was acknowledged before me this 4.1993, by James Allen Brinson, as Oil Company, a Delaware Corporation. Lluda J. Coutu Notary Public, State of Texas
STATE OF Utal	Individual § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Salt LAKE	§
The foregoing instrument day of February, 199	was acknowledged before me this 12th 3, by Patrick T. Paris , for Corporation Bru
My Commission Expires: 4-1-0	Notary Public Notary Public NOTARY PUBLIC BRENT K. WASMER 660 South 200 East Salt Lake City, UT 84111 My Commission Expires April 1, 1996 STATE OF UTAH
STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, a, Corporation.
	Notary Public
My Commission Expires:	

DATE:	MURJO OIL AND ROYALTY COMPANY
ATTEST:	
	By:
DATE:	NEECO, INC.
ATTEST:	
	Ву:
DATE:	OXY USA INC.
ATTEST:	
	Ву:
DATE:	PERMIAN BASIN INVESTMENT CORP.
ATTEST:	
	By:
DATE: June 8, 1993	PETRO ATLAS CORPORATION
ATTEST:	
Musil Hasten Secretary	By: James J. Harden III, President
DATE:	KENNETH J. REYNOLDS
WITNESS:	
	By:
DATE:	SANTA FE ENERGY COMPANY
ATTEST:	
	By:

STATE OF _	COLORADO	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	DENVER	§
day of	June , 19 9	was acknowledged before me this 8th 93, by James L. Harden III , for Colorado Corporation.
		Co Hrusse dan Brawakes
My Commiss	sion Expires: My commission expires May 1	1 al huctie (1)
STATE OF _		§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF		g
The f	Foregoing instrument	was acknowledged before me this, by, for, aCorporation.
		Notary Public
My Commiss	sion Expires:	
STATE OF _		§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	**************************************	§
The day of	foregoing instrument	was acknowledged before me this
		Notary Public
My Commiss	sion Expires:	

DATE:	MURJO OIL AND ROYALTY COMPANY
ATTEST:	
	By:
DATE:	NEECO, INC.
ATTEST:	
	By:
DATE:	OXY USA INC.
ATTEST:	
	Ву:
DATE:	PERMIAN BASIN INVESTMENT CORP.
ATTEST:	
	By:
DATE: June 8, 1993	PETRO ATLAS CORPORATION
ATTEST:	
Muril J. Harlen Secretary	By: James L. Harden III, President
DATE:	KENNETH J. REYNOLDS
WITNESS:	
	By:
DATE:	SANTA FE ENERGY COMPANY
ATTEST:	
	By:

STATE OF	TEXAS	9						
COUNTY OF	SMITH	8						
The day of	foregoing i <i>JANUARY</i> in-Fact of	instrument /, Mewbourne	was 19 <u>9</u> Oil	ack 3, Comp	nowledg by Jam pany, a	ed bef es Al: Delawa	ore me len Br: re Cor	this <u>677</u> inson, as poration.
My Commis:	sion Expire	es:			Public,	SUE Nota STATE	of Te HEARON ary Public OF TEXA p. NOV 30, 19	S S
STATE OF	COLORADO		§	(AC	KNOWLED	SMENT I	FOR COR	PORATION)
COUNTY OF	DENVER		§					
day of Petro At	foregoing : June las Corporat	, 19	93, , Not	a _	James L. Colorado	Harden	_ Corp	this 8th for oration. Museum Cl. 1000000
777 OOMMAD.	My commissio	n expires May 1	8, 199	24.	۷	ajecy	40	
STATE OF			g	(AC	KNOWLEDO	SMENT I	FOR COR	PORATION)
COUNTY OF			§					
The :	foregoing :	instrument , 19	,	by _				this, for oration.
My Commiss	zion Eynire	, .	Not	ary	Public		·	

DATE:	MARCIA HEYNE MODESETT
WITNESS:	
•—————————————————————————————————————	Ву:
DATE:	STEPHEN & LESLIE MONTGOMERY
WITNESS:	
	Ву:
	Ву:
DATE:	MURJO OIL AND ROYALTY COMPANY
ATTEST:	
	Ву:
DATE:	NEECO, INC.
ATTEST:	
	By:
DATE:	OXY USA INC.
ATTEST:	
	By:
DATE:	PERMIAN BASIN INVESTMENT CORP.
ATTEST:	
	Ву:
DATE: June 8, 1993	PETRO ATLAS CORPORATION
ATTEST:	
Muriel J. Harden Secretary	By: James L. Harden III, President

Attest or Witness	Date	Signed	Name
	11 	··	
		·	
			
	-		
STATE OF TEXAS	i		
COUNTY OF SMITH	3		
day of	RY,	1993	knowledged before me this GTH, by James Allen Brinson, as pany, a Delaware Corporation.
		8	10/10/10
		Notary	Public, State of Texas
My Commission Expires	s:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OFCOLORADO		§ (A	CKNOWLEDGMENT FOR CORPORATION)
COUNTY OF DENVER	·	§	
day ofJune	. 19	93 , by	
Petro Atlas Corporatio	n	, a	Colorado Corporation.
			Catherine And Marker
		Notary	Public = 1111 Panday if conduction (of our ette, Co 80020
My Commission Expires		·	1 May Ette, CO 800 de
My commission e	xpires May 1	3, 1994	

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
	3/16/93 Sure Preum Lesal

STATE OF <u>stas</u>	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Traves	9	
The foregoing instrument day of FEBRUAKY, 19		acknowledged before me this 670 by Susia Crews Regard. Nichelle Euro
My Commission Expires:		MICHELLE LANE MICHELLE LANE Notary Public, State of Texas My Commission Expires OCTOBER 14, 1995
STATE OF	9	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§	•
The foregoing instrument day of, 19		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

. .

Attest or Witness 1	Date	Signed		Na.	ıme
	3/1/	63	l	0	w freak
	s4//6	./7.3	flier	<u> </u>	in Tura
-					
-	····				
_					
STATE OF TEXAS §					
COUNTY OF SMITH §					
The foregoing instru day of <u>JANUARY</u> Attorney-in-Fact of Mewbou	,	1923 , k	y James	s Allen	Brinson, as
		Su	v H	earo	W
		Notary Pu	•	tate of	
My Commission Expires:			OST HAY A LOVE	SUE HEA Notary STATE OI Comm. Exp. N	IRON Public F TEXAS
STATE OF		§ (ACKN	GRADE LABORATE KEEK	MAKERIAN SERVED KAN	CORPORATION)
COUNTY OF		5 §			
		was ackno	wledged	before	e me this
The foregoing instruday of,	19_	, by			, for
The foregoing instru	19_	, by			, for
day of,	19_	, by			, for

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, for, a Corporation.
	Notary Public
My Commission Expires:	
STATE OF Texas	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF TRAVIS	§
The foregoing instrument day of February, 19	was acknowledged before me this 164 93, by Susie Crews Raget.
My Commission Expires:	Notary Public MICHELLE LANE Notary Public, State of Texas My Commission Expires OCTOBER 14, 1995
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this
Var Commission Employe	Notary Public
My Commission Expires:	

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
	Feb 1st 1993 Rafelita Pettman

My Commission Evniros.	Nota	ary Public
The foregoing instrument day of, 19_		acknowledged before me this by
COUNTY OF	8	
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
	was	acknowledged before me this 15Th by Atelita rithman. Ana M. Mary Ruyson Ruyson Public 194
COUNTY OF TULARE	g	
STATE OF AUFORNIA	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)

Attest or Witness	<u>Date Signed</u>	<u>Name</u>
eulen z. Blassfuld	Feb 1st 1993	Bafalita Pittman
STATE OF TEXAS	8	
Attorney-in-Fact of M	dewbourne Oil Comp	by James Allen Brinson, any, a Delaware Corporation
My Commission Expires	-	Public, State of Texas
	a	
STATE OF	§ (ACK	NOWLEDGMENT FOR CORPORATIO
STATE OF		NOWLEDGMENT FOR CORPORATIO
COUNTY OF The foregoing in	§ nstrument was ackr	NOWLEDGMENT FOR CORPORATION nowledged before me this, for

STATE OF	§	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	8	
The foregoing instrument day of, 19	was ,	acknowledged before me this, for a, Corporation.
	Not	ary Public
My Commission Expires:		
STATE OF <u>ALIFORNIA</u> COUNTY OF <u>TWARE</u>	8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF TWARE	9	
OFFICIAL SEAL	(acknowledged before me this /or by Catelita Pittman. Lina M. Muruhum ary Public
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
		acknowledged before me this
	Not	ary Public
My Commission Expires:		

DATE:	VENTURE RESOURCES 1986 GP	
ATTEST:		
	By:	
DATE:	C. DANIEL WALKER	
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:		
	By:	
DATE:	RONALD L. WILBANKS	
WITNESS:		
	By:	
	POVAT TV OUNEDC	
	ROYALTY OWNERS	
Attest or Witness	Date Signed Name	
***	1-25-93 The K Rass Fruster	

STATE OF	3	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	8	
The foregoing instrument day of, 19		acknowledged before me this
	Nota	ary Public
My Commission Expires:		
STATE OF Sexus COUNTY OF Midland	§ §	(ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument day of WILL , 19 LINDA HILL Notary Public, State of Texas My Comm. Exp. 5-15-93 My Commission Expires:	12, 	acknowledged before me this 35th by Well Kon, Musical Mary Public

Attest or Witness	<u>Date</u>	Sign	ed		Na	me	_
	1.0	<u> 35-</u>	B	Vec &	Ross, 5	Trustle	
							
							
	 						_
							_
STATE OF TEXAS §							
COUNTY OF SMITH §							
The foregoing instr day of <u>JANUARY</u> Attorney-in-Fact of Mewb		199	3 , b	y James	s Allen	Brinson, a	ıs
		Nota	ry Pu	blic, S	tate of	Texas	
My Commission Expires:				ST	SUE HEARON Notary Public ATE OF TE	c XAS	
STATE OF		§	(ACKNO	OWLEDGM	ENT FOR	CORPORATION	(1
COUNTY OF		§					
The foregoing instr	_, 19_	, b	У			, fo	r
			a		C	orporation.	
		Note	mas Davi	1. 1			
		иоса	ry Pu	DIIC			
My Commission Evniros.							

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, for, a Corporation.
	Notary Public
My Commission Expires:	
county of Midland	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
The foregoing instrument day of Julius, 19	was acknowledged before me this 25th (2), by 100 R. ROW, MUNIOR NOTATY Public
My Commission Expires:	
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this
	Notary Public
My Commission Punisos.	

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
- No.	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
<u></u>	By:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
O. L. Elei	Feb. 4, 1993 F. L. Slergi
	a/K/a Frank J. Shry
**************************************	afit for

STATE OF	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF BOULDER	9	
day of February , 19	93 , Not	acknowledged before me this 8th by F. L.SHOGRIN.
My Commission Expires: 4-19-96		
STATE OF	9	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

Attest or Witness	Date Signed	Name
O. L. Ecen	Feb. 6, 1993	Jo. S. Shogni
		Frank S. Shogu
	-	
		
CMAMP OF MPYAG		
STATE OF TEXAS § COUNTY OF SMITH §		
The foregoing inst day of <u>JANVARY</u> Attorney-in-Fact of Mew	, 19 <u>93</u> , by bourne Oil Company	ledged before me this 67H James Allen Brinson, as , a Delaware Corporation. Alamon lic, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS POT TEXE My Comm. Exp. HOV 30, 1993
STATE OF COLORADO	§ (ACKNO)	VLEDGMENT FOR CORPORATION)
COUNTY OF	S §	
The foregoing inst	, 19 <u>93</u> , by <i>F</i>	ledged before me this L. S. Hog R. N. for Corporation.
	Notary Pub	lic
My Commission Expires:	•	

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)		
COUNTY OF	§		
The foregoing instrument day of, 19	was acknowledged before me this, by, f, corporation		
	Notary Public		
My Commission Expires:			
STATE OFCOLORADO	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)		
COUNTY OF BOULDER	§		
The foregoing instrument day of February , 19			
	Jeven L. alton		
My Commission Expires: 4-19-96	Notary Public		
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)		
COUNTY OF	§		
The foregoing instrument day of, 19	was acknowledged before me this		
	Notary Public		
My Commission Expires:			

Problems and an experience of the second sec

DATE:	_ VENTURE RESOURCES 1986 GP
ATTEST:	
	Ву:
DATE:	_ C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	Ву:
DATE:	RONALD L. WILBANKS
WITNESS:	
	By:
	ROYALTY OWNERS
Attest or Witness Davine N. Smysn	Date Signed Name 1-26-93 Poto 7- Name
	•

county of Cooning	9	(ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument day of, 19_		acknowledged before me this 26th by 1816 F. Simpson JC.
My Commission Expires: My Commission	n Expire:	5 Nov. 29, 1995
STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
The foregoing instrument day of, 19		acknowledged before me this
	Nota	ary Public
My Commission Expires:		

Attest or Witness	<u>Date</u>	Signed	Name
Daviane W. Simpson	<u> </u>	26-93	Poter A J. Fly
STATE OF TEXAS § COUNTY OF SMITH §			
The foregoing instructions of JANUARY	ument ourne	was ackno 19 <u>93</u> , b Oil Compan	wledged before me this <u>67</u> , y James Allen Brinson, as any, a Delaware Corporation
My Commission Expires:		Notary Pu	blic, State of Texas SUE HEARON Notary Public
STATE OF		§ (ACKN	STATE OF TEXAS My Comm. Exp. NOV 30, 1993 OWLEDGMENT FOR CORPORATION
COUNTY OF		§	
day of	, 19_	, by	wledged before me this, for, Corporation.
		Notary Pu	blic

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, by, for, aCorporation.
	Notary Public
My Commission Expires:	
STATE OF #117570	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF COUNTY OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
The foregoing instrument day of, 19_	was acknowledged before me this 200 II. by Heller F. Simpson II.
My Commission Expires: My Commissi	-
CMN MZ OF	
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this
	Notary Public
My Commission Expires:	······

•

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	WARREN, INC.
ATTEST:	By:
DATE:	RONALD L. WILBANKS
WITNESS:	
	Ву:
	ROYALTY OWNERS
Attest or Witness	Date Signed Name
Cornie Tou	3/19/93 Rampo. Dago
0 H 00	Tittes domido contes
Trene Doodla	3/19/93

STATE OF	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	g	
The foregoing instrument day of, 19_		acknowledged before me this by
	Nota	ary Public
My Commission Expires:		_
COUNTY OF <u>Cos dingeles</u>	§	(ACKNOWLEDGMENT FOR INDIVIDUAL)
day of, 19_	$\frac{\text{was}}{43}$,	by
	Nota	Draw Lowellander Public
My Commission Expires December	7,19	IRENE GOODBAR COMM. #856475 Notary Public-California LOS ANGELES COUNTY My confin. expires DEC 17,1969

Attest or Witness Dat	<u>te Sign</u>	<u>ed</u> <u>Name</u>
Connie Ser 3	119/9-	2 Relation
Tiere Foodbar 3,	/19/9	3
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of <u>JANUHKY</u>	_, 19 <u>9</u>	acknowledged before me this 674 2, by James Allen Brinson, as Company, a Delaware Corporation.
My Commission Expires:	Nota	ry Public, State of Texas SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	S	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing instrumer day of, 19	nt was 9, b /	acknowledged before me this, for a, Corporation.
	Nota	ry Public
My Commission Expires:		

DATE:	DATE:	VENTURE RESOURCES 1986 GP
DATE: C. DANIEL WALKER WITNESS: By: DATE: WARREN, INC. ATTEST: By: DATE: RONALD L. WILBANKS WITNESS: By: ROYALTY OWNERS ALVest or Witness Date Signed Name	ATTEST:	
WITNESS: By: WARREN, INC. ATTEST: By: RONALD L. WILBANKS WITNESS: By: ROYALTY OWNERS ATTEST OF WITNESS Date Signed Name		By:
By:	DATE:	C. DANIEL WALKER
DATE:	WITNESS:	
ATTEST:		By:
DATE: RONALD L. WILBANKS WITNESS: By: ROYALTY OWNERS Attest or Witness Date Signed Name	DATE:	WARREN, INC.
DATE: RONALD L. WILBANKS WITNESS: By: ROYALTY OWNERS Attest or Witness Date Signed Name	ATTEST:	
By:		By:
By: ROYALTY OWNERS Attest or Witness Date Signed Name	DATE:	RONALD L. WILBANKS
ROYALTY OWNERS Attest or Witness Date Signed Name	WITNESS:	
Attest or Witness Date Signed Name		By:
Attest or Withers Date Signed Name July Samue Samue Simpson	1	ROYALTY OWNERS
Alley Sammy L. Simpson	Attest or Witness	Date Signed Name
	Demp 1	2/11/93 Samuel L. Simpson

STATE OF TEXAS §		
COUNTY OF SMITH §		
day of <u>UANUAKY</u>	, 19	as acknowledged before me this 67H 9 <u>93</u> , by James Allen Brinson, as 11 Company, a Delaware Corporation.
	No	otary Public, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF ACIDANA	§	E CONTRACTOR CONTRACTO
COUNTY OF MAYICOPA	<u>/</u> §	
The foregoing ins	strument wa , 19 <u>90</u> ,	as acknowledged before me this if of a section as a section of the
	N.	hidadale
My Commission Expires:	Tran.	otary Public
STATE OF	§	(ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing ins	strument wa	as acknowledged before me this, for, a Corporation.
	No	otary Public
My Commission Expires:	·	

Artest or Witness	Date Signed	Name
Augh Ligh		Sammy L. Simps

	,	
_		
STATE OF TEXAS §		
STATE OF TEXAS § COUNTY OF SMITH §		
COUNTY OF SMITH § The foregoing instratory of JANVARY	, 19 <i>93 ,</i>	nowledged before me this by James Allen Brinson, pany, a Delaware Corporati
COUNTY OF SMITH § The foregoing instratory of JANVARY	, 19 <u>93</u> , ourne Oil Com	by James Allen Brinson, pany, a Delaware Corporati
COUNTY OF SMITH § The foregoing instratory of JANVARY	, 19 <u>93</u> , ourne Oil Com	by James Allen Brinson, pany, a Delaware Corporation of the Corporatio
The foregoing instr day of	ourne Oil Composition	pany, a Delaware Corporation, pany, a Delaware Corporation, a Delaware Corporation of Texas Public, State of Texas SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
The foregoing instrator ofANNALY_Attorney-in-Fact of Mewb My Commission Expires:	ourne Oil Composition	by James Allen Brinson, pany, a Delaware Corporation of the Corporatio
The foregoing instrated of	ourne Oil Composition of the Second S	Public, State of Texas SUE HEARON Notary Public STATE OF TEXAS Wy Comm. Exp. NOV 30, 1993 KNOWLEDGMENT FOR CORPORATION STATE OF TEXAS KNOWLEDGMENT FOR CORPORATION KNOWLEDGMENT FOR CORPORATION COMMON LANGUAGE COMMON LANG
The foregoing instrated of	ourne Oil Composition of the Second S	Public, State of Texas SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993 KNOWLEDGMENT FOR CORPORATI

DATE:	VENTURE	RESOURCES 1986 GP
ATTEST:		
• • • • • • • • • • • • • • • • • • • •	By:	
DATE:	C. DANIE	L WALKER
WITNESS:		
	By:	
DATE:	WARREN,	INC.
ATTEST:		
	By:	
DATE:	RONALD L	. WILBANKS
WITNESS:		
	By:	
	ROYALTY OWNE	<u>RS</u>
Attest or Witness	Date Signed	Name
Randye Biggs	2/19/93	WA Spees

STATE OF TOLLAS	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland	§
The foregoing instrument day of Jewing, 199	was acknowledged, before me this 19th
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	S
	was acknowledged before me this
	Notary Public
My Commission Expires:	

Attest or Witness	Date Signed	Name
Randy Biggs	2/19/43	Wa Apriles
<u></u>		
STATE OF TEXAS §		
COUNTY OF SMITH §		
day of JANVARY	, 19 <u>93</u> , l ourne Oil Compa	owledged before me this <u>677</u> by James Allen Brinson, as ny, a Delaware Corporation. Heaven
		ublic, State of Texas
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	_ § (ACKN	OWLEDGMENT FOR CORPORATION)
COUNTY OF	_ §	
The foregoing instr	ument was acknown, 19, by	owledged before me this, for, Corporation.
	Notary Pu	ıblic
My Commission Expires:		

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this, for, a, Corporation.
	Notary Public
My Commission Expires:	
STATE OF Texas	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Mideand	§
The foregoing instrument day of, 19	was acknowledged before me this 19th.
RANDYE BIGGS MY COMMISSION EXPIRES June 25, 1995 My Com Expires:	Randye Brago Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this
	Notary Public
My Commission Expires:	

Attest or Witness	Date Signed	Name
Soull July	6/10/93	WESLED C. STRIPLING. II
Attorney-in-Fact of Mewb GLENDAF. CARTER Notary Public STATE OF TEXAS My Comm. Exp. 5-28-95	ourne Oil Compa	owledged before me this by James Allen Brinson, as my, a Delaware Corporation. An Datumeter Corporation of Texas
	<u>528-95</u>	
STATE OF TEXAS COUNTY OF TARRANT	§ (ACKN §	OWLEDGMENT FOR CORRORATIONX INDIVIDUAL)
day ofJune	ument was ackno	wledged before me this 10th sley C. Stripling, III, . For xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
My Commission Expires:		blie Drennon

DATE:	VENTURE RESOURCES 1986 GP	
ATTEST:		
	By:	
DATE:	C. DANIEL WALKER	
WITNESS:		
	By:	
DATE:	WARREN, INC.	
ATTEST:		
	Ву:	
DATE:	RONALD L. WILBANKS	
WITNESS:		
	By:	
	ROYALTY OWNERS	
Attest or Witness	Date Signed Name	
Lesa a. Emmert	Feb. 11, 1993 N. Brass Wiggel	<u>L</u>
	V	
		

STATE OF Jexas	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland	§
The foregoing instrument day of Helmany, 199	was acknowledged before me this 1/12. 13. by A. Brace Wiggell.
My Commission Expires: 12-20	Notary Public LESA A. EMMERT Notary Public, State of Texas Commission Expires: 12-20-94
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this, by
My Commission Expires:	Notary Public

Attest or Witness	<u>Date</u>	Signed	Name
Lesa a. Emmert	Fels.	11,1993	# - Brace Wiegell
		<u>.</u>	
	 		
			
STATE OF TEXAS §			
COUNTY OF SMITH §			
day of		19 <u>93</u> ,	knowledged before me this <u>& TH</u> , by James Allen Brinson, as pany, a Delaware Corporation.
			Public, State of Texas
My Commission Expires:			SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	-	§ (AC	KNOWLEDGMENT FOR CORPORATION)
COUNTY OF	-	§	
The foregoing instruday of,	ment 19_	was ack	cnowledged before me this, for, Corporation.
		, a _	Corporation.
		Notary	Public
My Commission Evniros:			

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STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
The foregoing instrument day of, 19_	was acknowledged before me this, for, for, aCorporation.
	Notary Public
My Commission Expires:	
STATE OF Lexas	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland	§
The foregoing instrument day of £ebruary , 19	was acknowledged before me this 11th 13, by H. Brace Wigzell
My Commission Expires: /2・20	Lesa O. Emmert Notary Public
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
	was acknowledged before me this
	Notary Public
My Commission Expires:	

DATE:	VENTURE RESOURCES 1986 GP
ATTEST:	
	By:
DATE:	C. DANIEL WALKER
WITNESS:	
	By:
DATE:	WARREN, INC.
ATTEST:	
	By:
DATE:	RONALD L. WILBANKS
WITNESS:	·
	By:
	ROYALTY OWNERS
Attest or Witness	
Susan Strong	6/17/93 (Slina) S. (2)00
Susan Strong	6/17/93 Olisian S. (2) 00 6/17/93 Adels Printer
<i>V</i>	

	STATE OF Jawall	g	(ACKNOWLEDGMENT FOR INDIVIDUAL)
	COUNTY OF Honolulu	g	
	The foregoing instrument day of, 19_	was 93,	acknowledged before me this 17th by Olivia S. Wood.
_5			Susan Strong Try Public
	My Commission Expires: $4-3-$	96	`
		8	(ACKNOWLEDGMENT FOR INDIVIDUAL)
	COUNTY OF Honolulu	8	
			by Adele Simpson.
		Nota	Siesan Strong
	My Commission Expires: 4-3-9	96	_

Attest or Witness	<u>Date Signed</u>	<u>Name</u>
Seesan Strong	6/17/93	Olivias. Woo
Susan Strong	6/17/93	Adele Dimpson
STATE OF TEXAS §		
COUNTY OF SMITH		
day of JANUARY	, 19 ,	by James Allen Brinson, as any, a Delaware Corporation.
My Commission Expires:		SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	§ (ACK	NOWLEDGMENT FOR CORPORATION)
COUNTY OF	§	
The foregoing instant	trument was ackn , 19, by , a	owledged before me this, for Corporation.
	Notary P	Public
My Commission Expires:	_	

	STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
	COUNTY OF	§
	The foregoing instrument day of, 19	was acknowledged before me this, for, for, a, Corporation.
	My Commission Expires:	Notary Public
	STATE OF Alavaii COUNTY OF Honolulu	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) § .
<		was acknowledged before me this 17th B, by Olivia S. Word. Notary Public
	My Commission Expires: $4-3$	
	STATE OF Hawaii	§ (ACKNOWLEDGMENT FOR INDIVIDUAL) §
	The foregoing instrument day of, 19	was acknowledged before me this 17th 13, by dele Simpson.
		Notary Public Strong
	My Commission Expires: $4-3$	96

NEW MEXICO
OIL CONSERVATION DIVISION

EXHIBIT 15

CASE NO. 10761/10762

RESERVOIR ENGINEERING STUDY BONE SPRING RESERVOIR, QUERECHO PLAINS FIELD LEA COUNTY, NEW MEXICO

Prepared for MEWBOURNE OIL COMPANY

October 1992

Petresim Integrated Technologies, Inc. Houston, Texas



3200 Wilcrest, Suite 500 Houston, Texas 77042 (713) 974-6490 Fax (713) 974-6901 Telex 6731838 PET HOU

1456.05

October 22, 1992

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

Dear Mr. Calvert:

Reservoir Engineering Study, Bone Spring Reservoir, Querecho Plains Field

This report presents the results of a reservoir engineering study of the Bone Spring reservoir of Querecho Plains field, Lea County, New Mexico, for Mewbourne Oil Company.

The study was performed to determine the expected reservoir performance by depletion and enhanced oil recovery using water injection. This study was authorized by Ken Calvert of Mewbourne and was conducted at the Houston offices of Petresim.

Basic geological and engineering data for the study was provided by Mewbourne and was accepted as presented.

Petresim Integrated Technologies appreciates this opportunity to be of service to Mewbourne Oil Company and hopes this study will be of great use to you.

Sincerely yours,

PETRESIM INTEGRATED TECHNOLOGIES

Tetrisim Integrated Technologies

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INTRODUCTION

This report presents the results of a reservoir engineering study of the Bone Spring reservoir of Querecho Plains field, Lea County, New Mexico, for Mewbourne Oil Company.

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SUMMARY

A reservoir engineering study of the 1st Bone Spring sand reservoir in the Querecho Plains field located in Lea County, New Mexico, has been completed by Petresim Integrated Technologies (Petresim). The study was performed at the request of Mewbourne Oil Company (Mewbourne Oil) of Tyler, Texas. The purpose of the study was to estimate the primary recovery of hydrocarbons by depletion from the field and to evaluate the feasibility of secondary oil recovery by waterflood from the currently producing area.

The study was conducted using a three-dimensional reservoir model simulator (VIP-ENCORE). The reservoir was modeled as a two-layer, three phase (oil, gas and water) system using a grid of 40 by 41 cells. Basic geological, production, and laboratory data were provided by Mewbourne and accepted as presented.

The original hydrocarbon was characterized as an undersaturated oil with no initial gas cap. The total field original oil-in-place based on the model history match was calculated to be 12.4 MMSTB. Cumulative production as of July 1, 1991, from the field was 1.5 MMSTB of oil, 4.0 Bcf of gas, and 0.4 MMSTB of water.

The original oil-in-place of the currently producing area was determined to be 9.97 MMSTB. Cumulative production as of July 1, 1991, from this area was 1.4 MMSTB of oil, 3.8 Bcf of gas, and 0.4 MMSTB of water.

The geologic description of the field and historical oil rates were input to the simulator and water and gas producing rates, along with shut-in pressure measurements were used to history match each producing well in the reservoir. The history match was acheived by altering reservoir parameters which were unknown or uncertain. After the historical information was matched with the simulator, the total ultimate hydrocarbon recovery from pressure depletion of the reservoir was estimated to be 1.86 MMSTB of oil and 6.1 Bcf of natural gas (1.72 MMSTB of oil and 5.9 Bcf from the currently producing area).

The reservoir model was then used to simulate the reservoir performance for secondary recovery by waterflooding. After preliminary investigations of several injection patterns, the most favorable recovery was obtained from an east-west line drive pattern.

The forecast cases were made assuming waterflood operation would begin July 1, 1992. Producing wells were allowed to produce down to an assumed economic limiting rate of three barrels per day. Water injection rates were limited by a maximum surface pressure of 2000 psia. Individual well rates were based on the wells historical performance. The most favorable water injection case is shown below along with the recovery by depletion:

	PRIMARY [DEPLETION	PRIMARY & S B WATER IN	Y
	PRODUCING AREA	TOTAL RESERVOIR	PRODUCING AREA	TOTAL RESERVOIR
Ultimate Production: Oil, MSTB Gas, MMcf Water, MSTB	1,757.4 5,909.9 518.1	1,865.6 6,157.6 554.7	3,690.0 5,679.4 15,436	3,875.0 6,032.4 15,518
Total Injection: Water, MSTB	0.0	0.0	22,923	22,923
Oil Recovery: % of OIP	17.6	15.1	37.8	31.7
Peak Rate: Oil, STBD Date			784 6/94	789 6/94

The low primary recovery is due to the fact that there is no additional drive mechanism beyond solution gas drive. The aquifer is too limited to provide any effective pressure support. The relatively low secondary oil recovery can be attributed to the displacement characteristics indicated by the special core analysis laboratory data.

Production profiles for each case were provided to Mewbourne. Economic evaluations were not performed by Petresim. Forecast cases include development and engineering limitations which were provided or agreed to by Mewbourne.

CONCLUSIONS

From the reservoir simulation performed on the Bone Spring reservoir of Querecho Plains field, the following conclusions have been made:

- 1. The initial oil in place of the total reservoir was estimated to be 12.38 MMSTB with associated gas in place of 11.12 Bcf. The currently producing area comprises 80.5 percent of the initial reservoir volume (9.972 MMSTB).
- 2. The estimated primary recovery by pressure depletion is 1.86 MMSTB of oil and 6.1 Bcf of natural gas.
- Implementation of a waterflood program will increase the ultimate oil recovery by approximately two million barrels and extend the economic life of the field by an estimated 15 to 20 years.
- 4. The currently producing area wells recover approximately 95 percent of the total reservoir production during waterflood operations.

DISCUSSION

GENERAL

The Querecho Plains field is located in Lea County, New Mexico approximately 40 miles west of Hobbs. Figure 1 is a location plat of Querecho Plains field. The reservoir was discovered in 1958 by the Querecho Plains No. 2 well which produced until the late 1960's. A total of 43 wells have been identified as having produced from the Bone Spring reservoir in the Querecho Plains field. Most of these wells were drilled in the early to mid-1980's on federal leases in the southern portion of Township 18 South, Range 32 East. Development wells have been drilled on 40-acre spacing.

GEOLOGY

The Bone Spring reservoir in the Querecho Plains field is characterized by three sand members locally referred to as the 1st, 2nd, and 3rd Bone Spring sands. The 1st Bone Spring sand can be divided into several members, two of which are targeted for waterflooding, those Mewbourne refers to as the green sand (upper member) and the blue sand (lower member). These two members can be mapped across the field at measured depths of between 8,300 ft and 8,500 ft. The structure, as mapped by Mewbourne Oil, is shown on Figure 2. The Bone Spring has a regional northwest to southeast dip with approximately 260 ft of closure. A zero-capillary-pressure level is estimated at -4,875 ft ss, and is supported by high water-cut wells in the southeast end of the field. The north, east, and west boundaries of the field consist of stratigraphic pinchouts of porosity and/or permeability. The southwestern portion of the field appears to be in a area of lesser dip and is possibly isolated by a lack of net porus rock between Sections 34 and 35.

Net Pay

Net Pay was calculated for each sand member by Mewbourne using downhole logs and the limited amount of core data available. A porosity cutoff of 8 percent was used for determining net pay. A map of net sand thickness for each sand member of the 1st Bone Spring prepared by Mewbourne Oil is presented in Figures 3 and 4, respectively.

Porosity

Porosity values were calculated for each sand member from the available logs, neutron-density and/or sonic logs. Porosity trends appear to conform to depositional trends with higher porosity in the center of the field and decreasing near the edge.

RESERVOIR ROCK AND FLUID CHARACTERISTICS

Permeability

Permeability data were available from core taken in the Mewbourne Federal L-4 well. These data were statistically evaluated and used for estimating an initial permeability distribution. The permeability and porosity values were correlated and initial estimates for permeability were calculated from the porosity distribution. A plot of permeability values versus porosity values is shown in Figure 5. A separate relationship was used for each sand member in the simulation. The average porosity value from the core was 11.4 percent, the geometric average permeability value was 1.2 md, and the arithmetic average permeability was 2.4 md.

Capillary Pressure and Water Saturation

A special core analysis study performed by Core Laboratories on samples from the Mewbourne Federal L-4 well was available for use in the study. Sample permeabilities ranged from .06 md to 9.2 md, and sample porosities ranged from 7.5 percent to 16.5 percent. The laboratory-measured air-brine capillary pressure curves are shown on Figure 6. Water saturation versus height above the water-oil contact was calculated based on the average data from air-brine capillary pressure tests. Water saturations in the tests with porosity greater than 8 percent ranged from 17.1 percent to 48.5 percent at an air-brine capillary pressure of 100 psi. This corresponds to a height above the oil-water contact of approximately 350 ft at reservoir conditions. An average of 28 percent irreducible water saturation was used in the simulation, which is a porosity-weighted average based on the distribution of porosity in the core.

Relative Permeability

Six core samples were used to test the water-oil relative permeability relationships for the Bone Spring. Two differing tests were conducted, one an unsteady-state relative permeability measurement where water was displacing oil, and one a basic waterflood test conducted with an assumed reservoir water-oil viscosity ratio. The results of the laboratory tests are presented on Figure 7. The samples were used to generate average curves for use in the simulator. Since waterflood evaluation was the goal of the study, pseudorelative permeability relationships for water and oil were calculated based on waterflood performance in a layered material balance model. Calculations were performed using Dykstra-Parson's method and Hearne's method. This accounts for the variation in permeability, initial water saturation, and residual oil saturation observed in the samples used in core analysis. In general, oil recovery from the basic waterflood tests at actual reservoir viscosity ratios was 5 percent of oil in place higher than the recoveries in the relative permeability tests, since the relative permeability tests were conducted using oil with a viscosity of approximately 20 centipoise.

No tests were available for evaluating the relative permeability relationship between gas and oil.

A typical relationship was assumed and adjusted where necessary to match the historical gasoil-ratio performance from the wells.

Reservoir Fluid Properties

A recombined separator sample from the Federal L-3 well was analyzed by Core Laboratories in 1987. The sample was recombined to a producing gas-oil ratio and found to have a saturation pressure greater than the estimated original reservoir pressure. The sample was subsequently recombined to have a saturation pressure equal to the original pressure in the reservoir. The fluid characteristics were then determined by differential liberation and the properties are shown on Figure 8. The solution gas-oil ratio was 1,135 scf/STB at a saturation pressure of 3338 psig at a temperature of 130°F. The oil formation volume factor was 1.562 by differential liberation. A separator test of the sample yielded a gas-oil ratio of 1,111 scf/STB and a flash-formation-volume factor of 1.557 reservoir barrels per stock tank barrel. The residual oil had an API gravity of 40.4. While the saturation pressure determined from this lab study is approximately equal to the original reservoir pressure, no gas cap has been found.

RESERVOIR SIMULATION

Model Initialization

The Bone Spring reservoir was modeled using the VIP-ENCORE black oil simulator developed by Western Atlas Integrated Software of Houston. A slightly irregular grid system was chosen to accommodate well locations and lease boundaries. A 40 by 41 grid with a total of 1,640 grid blocks (1,103 active), composed of approximately 4.5 acres each over most of the field area, was used to describe the reservoir. A schematic layout of the grid system is shown in Figure 9. The reservoir was described as two layers representing each of the 1st Bone Spring's two sand members. Since most of the wells were fraced, the two sand members were assumed to be in communication with the wellbore in most wells. Maps prepared by Mewbourne Oil were digitized, and values were calculated for each grid cell. Maps included structure of the top of the main sand, net Bone Spring sand, and porosity. Permeability was calculated from the permeability-porosity relationship for each sand member based on core analysis values.

Fluid properties were based on the properties of the Federal L-3 sample, and the water properties at reservoir conditions were estimated from correlations. The original fluids in place, calculated by the model initialization before any adjustments, were 23.6 MMSTB of oil and 26.6 Bscf of gas.

History Match

The history period included all field oil production from the initial discovery date through June 1991. One well produced from 1958 through 1966, and its production was incorporated in the 2 years prior to start of production of the McKay West Federal No. 1, which began sustained production in early 1980. The method used in the history match was to input historical oil

production rates of each well and match the gas-oil-ratio behavior, water cut, and reservoir pressure determined by the simulator to the measured historic values. Since no pressure information was available for the field except on certain Mewbourne-operated wells where November 1991 pressure surveys were available, pressure was not a major matching parameter. Once the match of historical production was accomplished, the reservoir model contained a reasonable representation of the oil and gas distribution which existed in the reservoir at the end of the history match period.

To achieve a history match, several parameters were adjusted. Well-cell permeabilities were increased to account for fracture treatments during completion. In addition, overall reservoir permeability was increased above the original values estimated from the core analysis data. This was possibly due to the minimum number of samples analyzed, which could give a less-than-representative profile of the entire reservoir. Producing data from the southwest portion of the field indicates less water production in the wells than expected from the structural position. For this area, a zero-capillary pressure level of -4,900 ft ss was used, and a zero- capillary pressure level of -4,875 ft ss used for the rest of the field.

During history matching, the oil in place was reduced substantially from the oil in place calculated from initial parameters to match the measured gas-oil-ratio data and pressure data. In addition, upon review of initial gas-oil ratios in many wells and the production of the Federal L-3 well prior to sampling, the initial saturation pressure was decreased to 2715 psig. This is based on the fact that no original gas cap has been discovered in the field, and the producing gas-oil ratio initially for many wells was less than 1,000 scf/STB. Well Federal L-3 was sampled after a month of production at rates of greater than 100 bbl/D; thus, it was likely that the bottomhole flowing pressure was below the original bubblepoint when the well was sampled. If this was true, the producing GOR was above the solution GOR when the fluid sample was collected. A saturation pressure of 2715 psi was used, which corresponds to a solution gas-oil ratio of 911 scf/STB.

The gas-oil relative permeability relationships were adjusted to match the gas-oil-ratio performance, since there was no data from the special core analysis on gas-oil relative permeability. Figure 10 presents the final data used. Water-oil relative permeability relationships were based on the layered pseudorelative permeability relationships discussed earlier. The residual oil saturations were adjusted to account for the displacable oil volume, which averaged 55 percent of oil in place, indicated by the waterflood susceptibility tests at reservoir conditions. Residual oil saturations were also adjusted slightly (reduced 3 saturation percent) for a reduction in residual oil saturation due to waterflooding with free-gas saturation present.

The field history match through June 30, 1991, was achieved with an original oil in place of 12.4 MMSTB and solution gas of 11.1 Bcf. The total reservoir pore volume was 35.4 MM reservoir barrels with an average water saturation of the entire modeled area of 49.6 percent. The average water saturation in the current producing area was 33 percent. Permeabilities in the model ranged from 0.4 md to 21 md, with 98 percent of the cells below 10 md. The grid-block average porosity ranged from 8 to 16 percent.

The initial fluids in place calculated by the model for the history match are shown as follows:

	LAYER	11	LAYE	۹2	TOTA	VL.
	Producing Area	Total Zone	Producing Area	Total Zone	Producing Area	Total Zone
Oil MMSTB	2.928	3.880	7.044	8.500	9.972	12.379
Solution gas, Bcf	2.629	3.483	6.324	7.630	8.953	11.113
Water, MMSTB	1.916	5.202	5.141	12.341	7.057	17.544

The field history match is shown on Figure 11.

FORECAST CASES

Primary Recovery

Wells producing at the end of the history match (June 30, 1991) were allowed to produce under pressure-depletion conditions to an assumed economic limit of 5 BOPD. Ultimate recovery from primary recovery was projected by the model to be 1.9 MMSTB of oil and 6.1 Bcf of natural gas through the year 2000, or 15 percent of the original oil in place. The hydrocarbon average pore-volume-weighted reservoir pressure at the end of depletion is 806 psia for the field and 705 psia for the current producing area. Figure 12 shows the field production performance for the depletion case of the Bone Spring reservoir and the projection is tabulated in Table 1.

Waterflood Performance Projections

Once an acceptable history match was obtained, the reservoir simulator was used to project future performance of the reservoir under different water injection patterns. Wells producing at the end of the history match were allowed to produce under current depletion conditions until July 1, 1992, when water injection operations were assumed to begin. Certain wells which had watered out or been recompleted to other zones were not included in the waterflood cases.

Preliminary analyses of prospective injection patterns were made to determine which injection pattern could yield the best results for waterflood operations. A total of seven injection/production well arrangements were evaluated. The seven patterns included horizontal line-drives oriented east-west, horizontal line-drives oriented diagonally southwest to northeast, a seven-spot pattern, and a peripheral flood. In most cases, the ultimate oil recovery was within 5 percent of the other cases. The case selected, based on recovery and operational considerations, was an east-west horizontal line-drive with 16 injectors and 18 producers.

Forecast guidelines shown in Table 2 were used in each case. All producing wells are assumed to be equipped with pumping units by 1992 and capable of maintaining an average BHFP of 85 psi. Water injection is limited by a 2000 psi surface injection pressure and by a maximum rate per well of 600 BWPD. Each case was forecast for a period of approximately 20 years, with a unit minimum production rate of 100 STB/D.

Selected Case

The selected case is a horizontal (east to west) line-drive with 16 existing wells converted to injectors. There is a total of 18 production wells in this case. A diagram showing the well pattern is presented on Figure 13. A maximum injection rate of 8,613 BWPD occurs in July 1992. A peak oil production rate of 784 BOPD is observed in the quarter ending September 1994. Figure 14 is a graph of the field performance, and Table 3 is a year by year list of the rates. A summary of this case is presented below:

SUMMARY OF SELECTED CASE

INJ TIME	YEAR	OIL STB/D	W.C. %	INJ STB/D	CUM. OIL MSTB	CUM INJ MSTB	SEC* REC MSTB
1 Year	1993	270	.465	5,769	1,708	2,382	
3 Years	1995	715	.698	3,189	2,195	5,444	330
10 Years	2002	229	.904	2,547	3,193	12,467	1,328
20 Years	2012	108	.944	1,982	3,763	20,704	1,898

^{*} Secondary Recovery Oil

It should be noted that sensitivity cases were run to quantify the effect of shutting in production in the field for a period of 1 year while injecting water, in order to repressure the reservoir before production was begun. This resulted in an increase of oil recovery by a small amount while increasing the peak rate. The economic impact and practical feasibility of this option are beyond the scope of this study.

TABLE 1

FIELD PERFORMANCE RATES FOR DEPLETION CASE

Ouerecho Plains Field Lea County, New Mexico

				DAILY	DAILY	PRODUCTION	110N	1	CUMULAT IVE	;	PRODUCTION	PRESSURES,	PSIA	/9	GAS LIFT
			VELL	110	GAS	WATER	GOR 1 SCF/	WATER	011	SVD	WATER	GRID BHP Block	d H L	LIFT	CUM LIFT GAS LIF
DATE	DAYS	YEAR	1418	SIB/D MSCF	MSCF/D	0/818	818	FRAC.	MSTB	MMSCF	MSTB	DATUM DATUM		MSTB/D	MMSCF STATU
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	:		:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	:	:		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 1 1 1	1 1 1 1 1	
30/ 9/91	5020.0	1991.748		376.40	2291.	146.24	2809	.280	1556.37	4101.64	379.52			0	. 0
31/12/91	5112.0	1992.000		326.62	2039.	135.83	6243	. 294	1587.80	4296.23	392.31			0.	.0
31/ 3/92	5203.0	1992.247		280.73	1777.	123.85	6359	306	1614.65	4465.36	403.93			0	0.
30/ 6/92	5294.0	1992.496		244.44	1569.	114.31	6420	.319	1637.94	4613.98	414.64			•	.0
30/ 9/92	5386.0	1992.748		209.73	1358.	105.09	6473	.334	1658.23	76.7725	454.54				0.
31/12/92	5478.0	1993.000		184.91	1199.	95.08	9879	.340	1675.97	4859.93	433.62				0.
30/ 6/93	5659.0	1993.496		154.01	1027.	85.10	0299	.356	1706.19	5058.58	06.677				.0
31/12/93	5843.0	1994.000		129.42	854.63	96.69	9099	.351	1731.79	5228.11	463.84			•	0.
30/ 6/94	6024.0	1994.496		104.31 694.	79.769	58.96	6599	.361	1752.12	5363.31	475.02			•	0.
31/12/94	6208.0	1995.000		87.26	87.26 592.52	52.81	0619	.377	1769.56	5480.31	485.35				.0
30/ 6/95	6389.0	1995.496		77.19	77.19 533.84	45.40	9169	.370	1784.65	5583.46	494.58			•	.0
31/12/95	6573.0	1996.000		68.49	68.49 475.28	43.33	6669	.387	1797.82	5674.62	502.69			•	0.
30/ 6/96	6755.0	1996.496		50.78	50.78 356.72	34.84	7025	707	1808.89	5751.75	206.605				0.
31/12/96	6939.0	1997.000		44.16	44.16 314.20	32.80	7115	.426	1817.28	5811.23	516.09			0	. 0
30/ 6/97	7120.0	1997.496		42.73	42.73 305.95	32.33	7160	.431	1825.12	5867.21	521.97			•	.0
31/12/97	7304.0	1998.000		36.49	36.49 258.55	28.28	7086	.437	1832.52	5920.11	527.64			•	.0
30/ 6/98	7485.0	1998.496		35.64	35.64 254.18	28.02	7131	077	1839.04	5966.44	532.73			•	0.
31/12/98	0.6997	1999.000		34.81	34.81 249.93	27.74	7180	.443	1845.51	6012.75	537.86		٠	•	.0
30/ 6/99	7850.0	1999.496		33.98	33.98 245.56	27.43	7227	277	1851.72	6057.52	542.85			0	0.
31/12/99	8034.0	2000.000		33.13	33.13 241.17	27.10	7278	.450	1857.88	6102.23	547.86			0	•
30/ 6/00	8216.0	2000.496		17.49	17.49 120.37	14.63	6883	.455	1862.45	6135.64	551.97			0.	0.
31/12/00	8400.0	2001.000		17.17	17.17 118.99	14.53	66569	.458	1865.63	6157.63	554.65			0.	0.

TABLE 2

FORECAST GUIDELINES

Bone Spring Reservoir Querecho Plains Field Lea County, New Mexico

- A. Water injection beginning at July 1, 1992.
- B. Maximum injection surface pressure = 2000 psi, with a maximum rate per well of 600 BWPD.
- C. Minimum rates before wells are shut-in:

Oil producers: 3 BOPD or 98% watercut

Water injectors: 10 BWPD

- D. Injectors are completed in both sand members.
- E. Forecast cases are for 20 years.
- F. All producing wells are on pump and capable of maintaining an average BHWP of 85 psi.

TABLE 3

FIELD PERFORMANCE RATES FOR INJECTION CASE

Querecho Plains Field Lea County, New Mexico

CASE 23A (LINE DRIVE - Shinnery Fed 3 & 4 Injectors) L-8 WELL NOT DRILLED, FED "E" 10 AS INJECTOR 18 Producers, 16 Injectors

AVG.		ANNUAL ANNUAL AN	NUAL	ANNUAL WATER	CUM	PRODUCTION CUM CUM	OUM CUM	CUM WATER
FRAC.		MMSCF	STB	MSTB	MSTB	MMSCF	MSTB	MSTB
					1646.9	4693.6	416.5	0.0
0.347	26.1	·	13.9	1,284.5	1673.0	4855.2	430.4	1284.5
0.499	114.4		113.8	2,094.9	1787.4	5027.8	544.2	3379.4
0.615	273.0		436.9	1,470.1	2060.4	5138.2	981.0	4849.5
0.700	258.2		602.3	1,166.6	2318.7	5246.4	1583.3	6016.1
0.763	207.5		668.0	1,081.6	2526.2	5337.4	2251.4	7.097.7
0.808	167.2		704.4	1,031.5	2693.4	5414.4	2955.8	8129.2
0.838	140.7		730.0	8.666	2834.1	5482.0	3685.8	9129.0
0.862	120.2		748.6	975.6	2954.3	5540.9	4434.5	10104.6
0.880	104.6		765.8	958.8	3058.8	5593.8	5200.3	11063.4
0.894	92.0		775.8	941.0	3150.8	5642.1	5976.1	12004.4
0.904	83.3		785.8	929.4	3234.1	5688.9	6761.8	12933.8
0.912	76.5		794.1	920.5	3310.6	5732.4	7555.9	13854.3
0.919	70.5		799.9	916.1	3381.1	5771.3	8355.8	14770.5
0.922	64.5		771.5	884.4	3445.9	5806.4	9127.3	15654.8
0.927	60.3		761.3	867.7	3506.3	5838.4	9888.6	16522.6
0.926	54.5		685.5	805.0	3560.8	5867.4	10574.0	17327.5
0.931	50.3	26.4	683.0	768.3	3611.1	5893.8	11257.0	18095.8
0.935	47.2		685.0	0.097	3658.3	5918.4	11942.0	18855.9
0.939	44.1		681.0	755.5	3702.4	5941.2	12623.0	19611.3
0.942	40.9		0.099	731.4	3743.2	5962.5	13283.0	20342.8
0.945	38.7		0.999	725.5	3781.9	5982.5	13949.0	21068.2
0.944	34.5		583.0	684.2	3816.4	80009	14532.0	21752.5
0.946	1:: >		556.0	615.4	3847.9	6017.7	15088.0	22367.8
0.941	31.5							0 00000

LOCATION PLAT

Querecho Plains Field Lea County, New Mexico

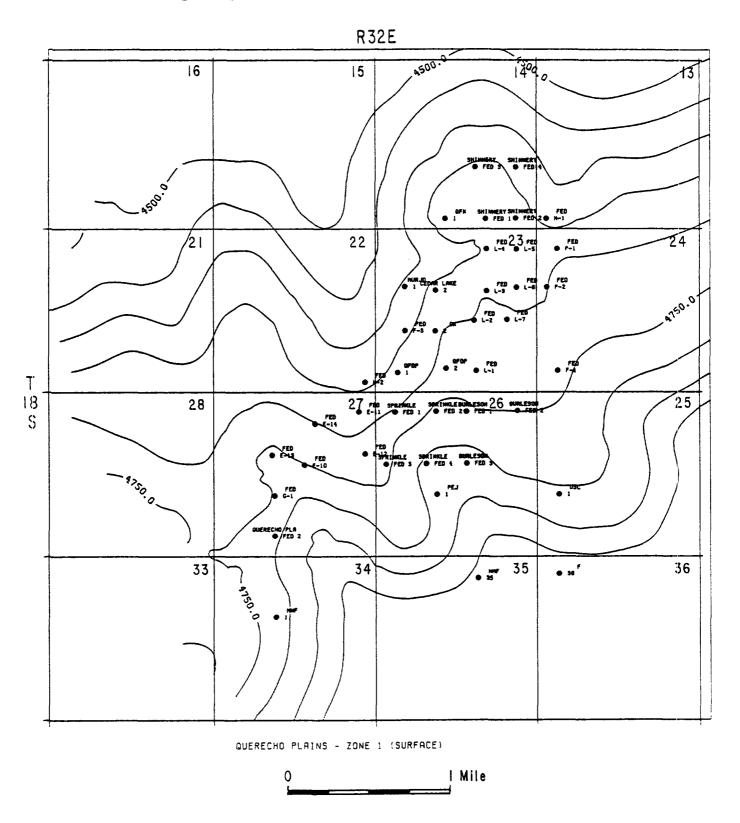
NEW MEXICO

Querecho Plains

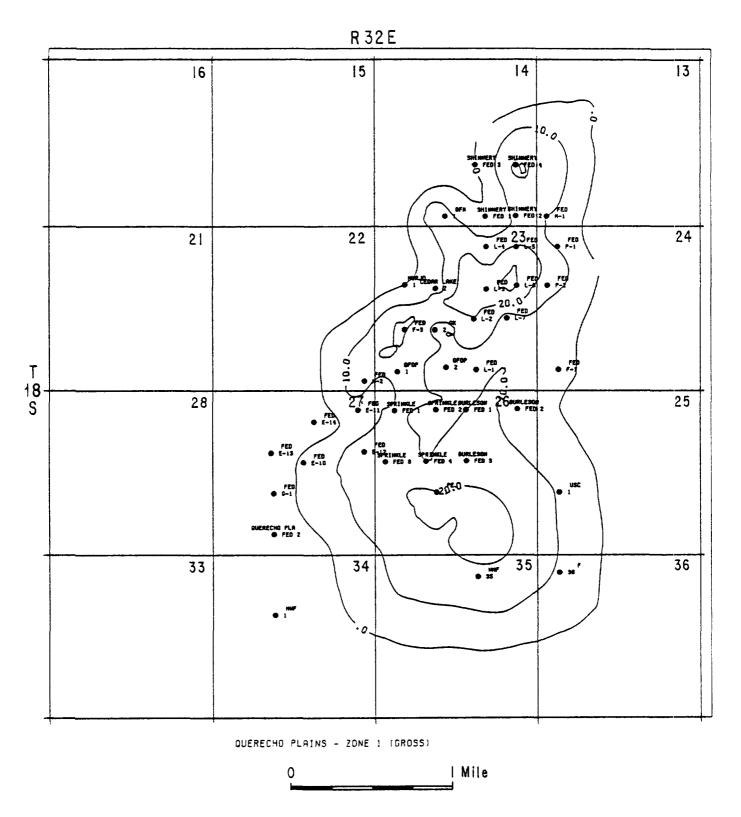
Hobbs

Petresim Integrated Technologies February, 1992

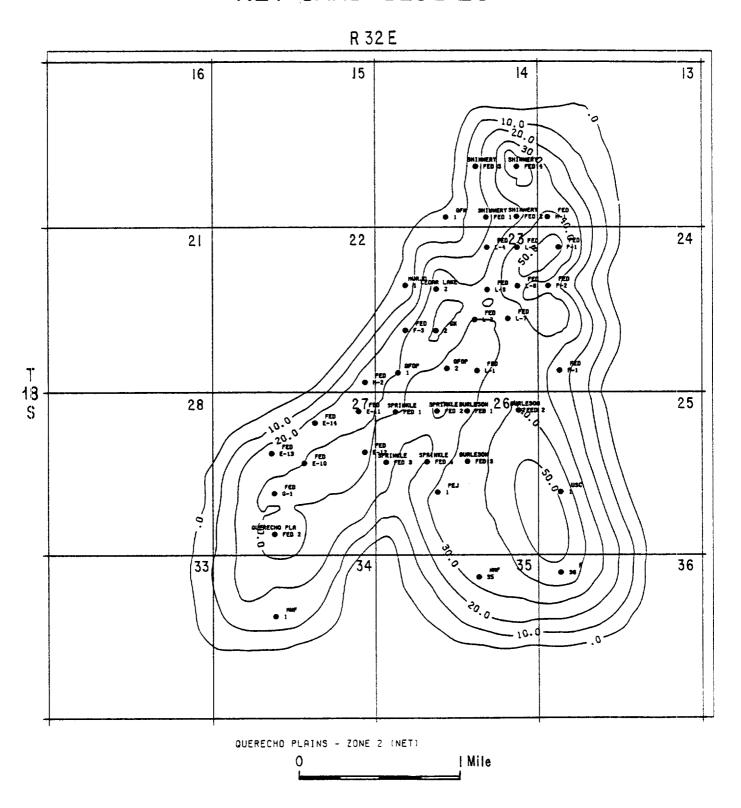
QUERECHO PLAINS FIELD LEA CO., NEW MEXICO STRUCTURE-TOP OF BLUE ZONE

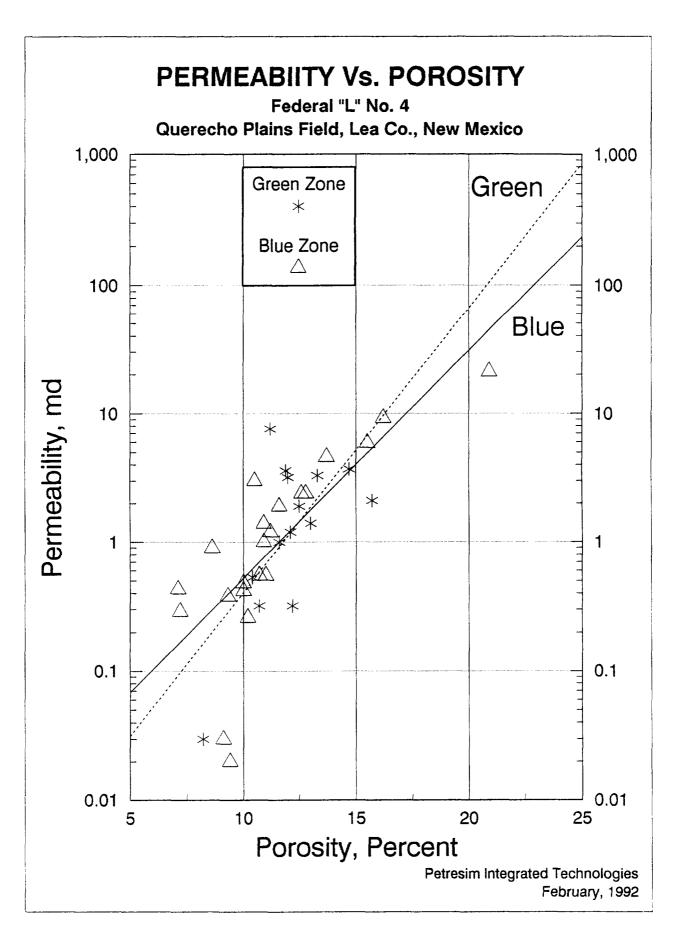


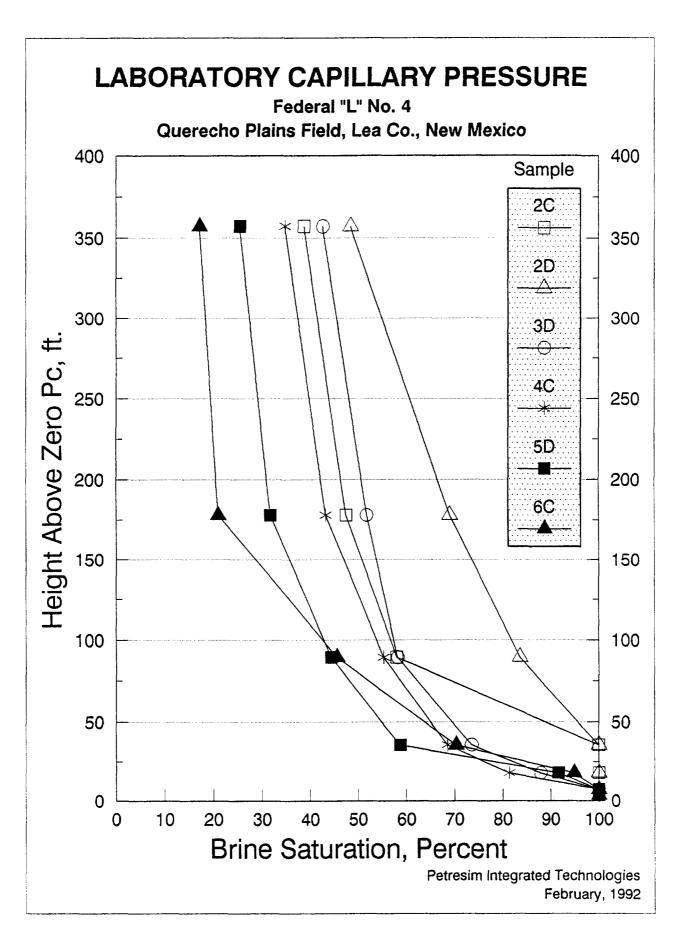
QUERECHO PLAINS FIELD LEA CO., NEW MEXICO NET SAND-GREEN ZONE

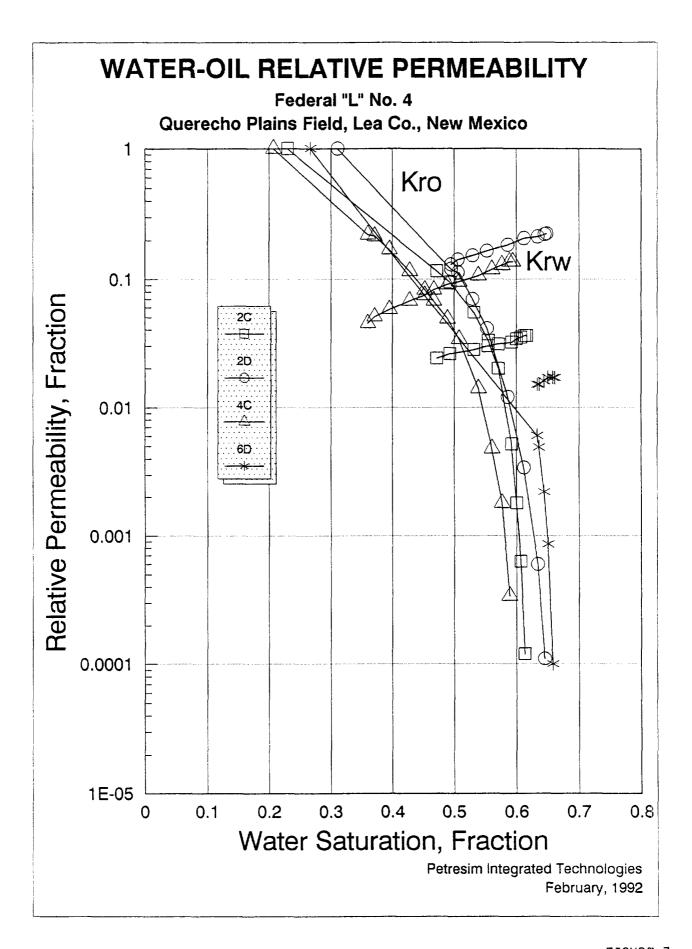


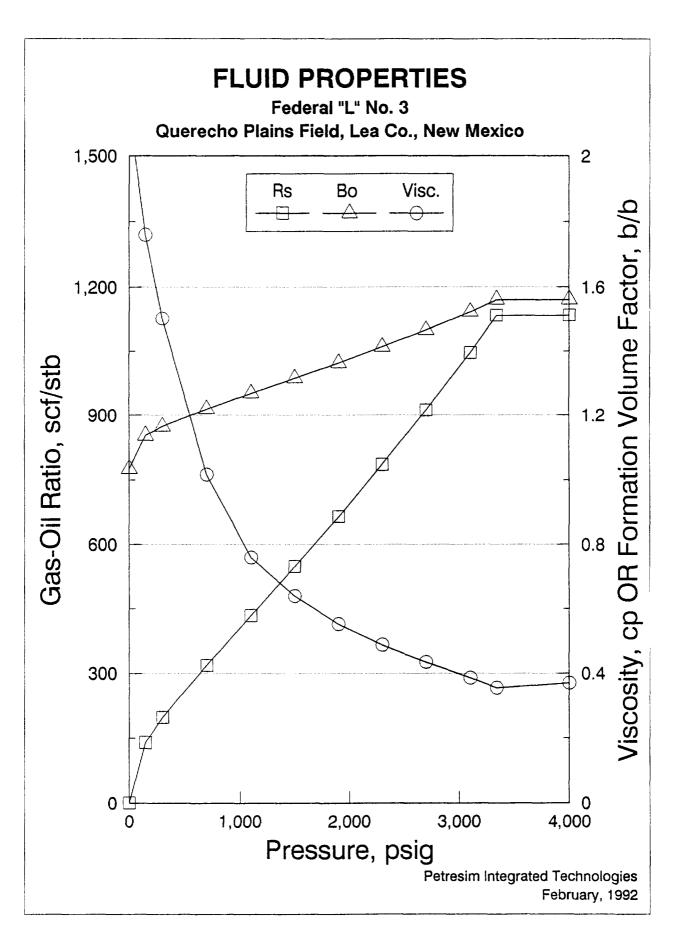
QUERECHO PLAINS FIELD LEA CO., NEW MEXICO NET SAND-BLUE ZONE



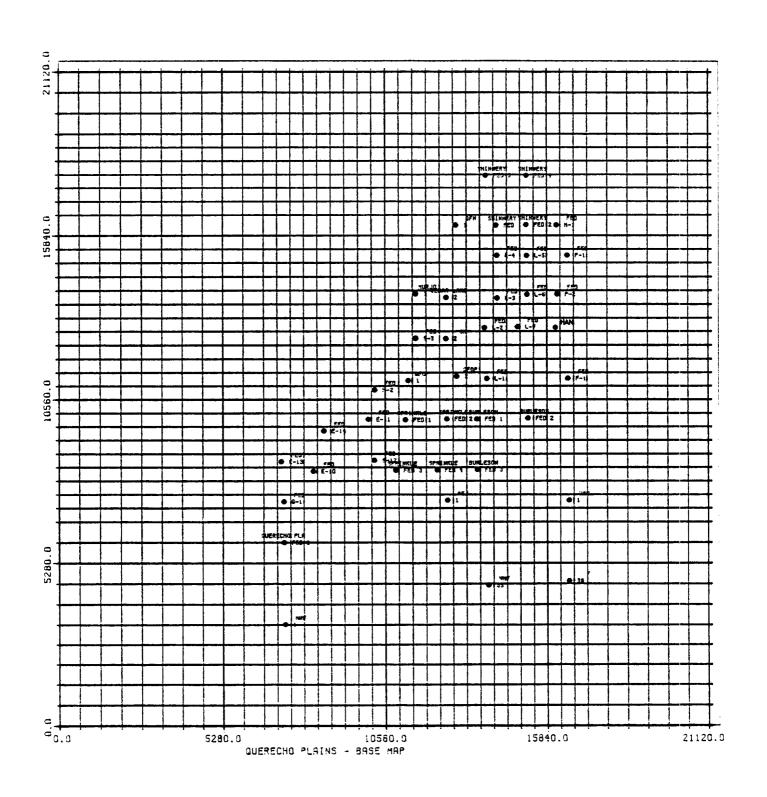


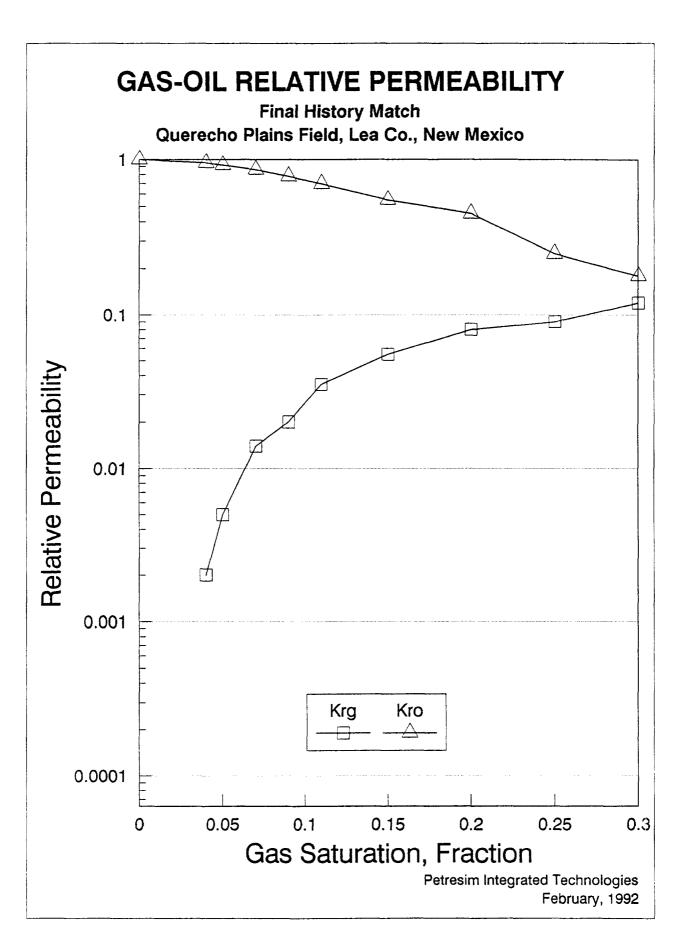


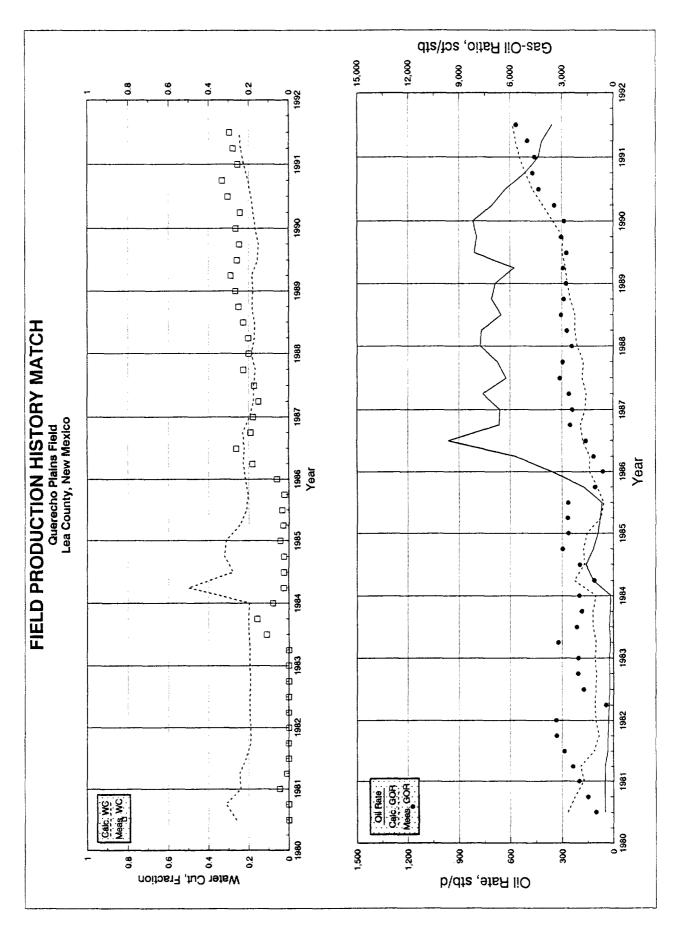


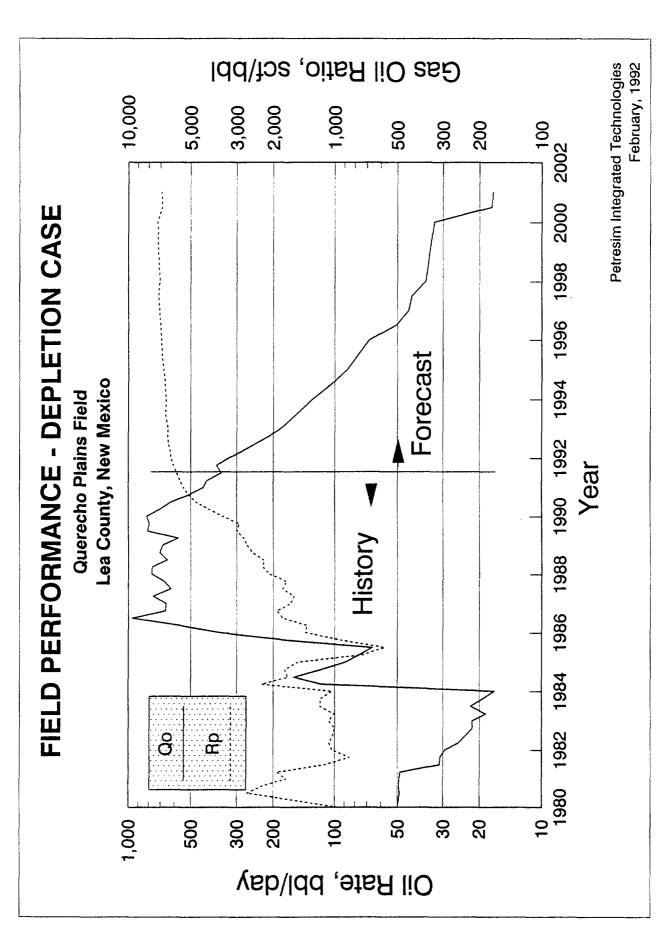


QUERECHO PLAINS FIELD LEA CO., NEW MEXICO GRID PATTERN MAP

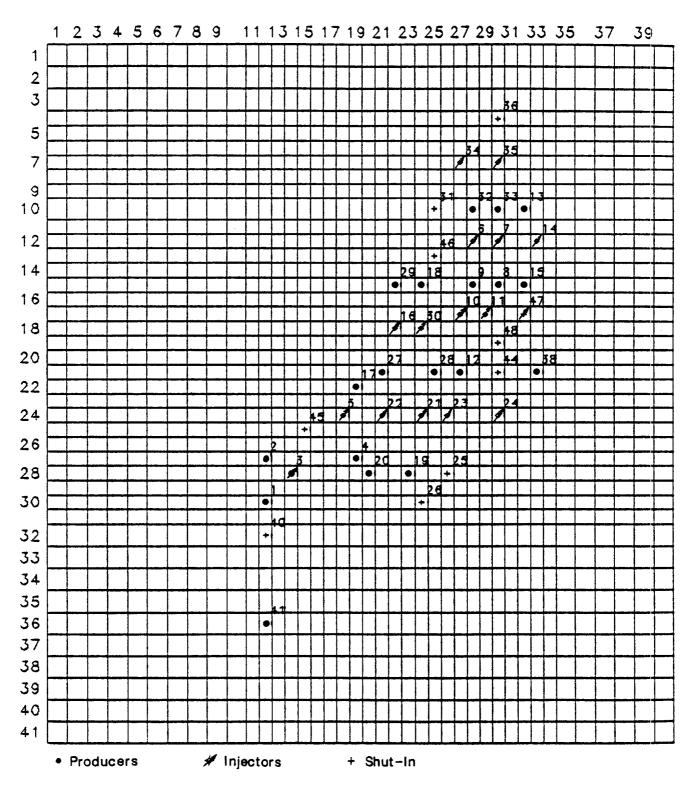


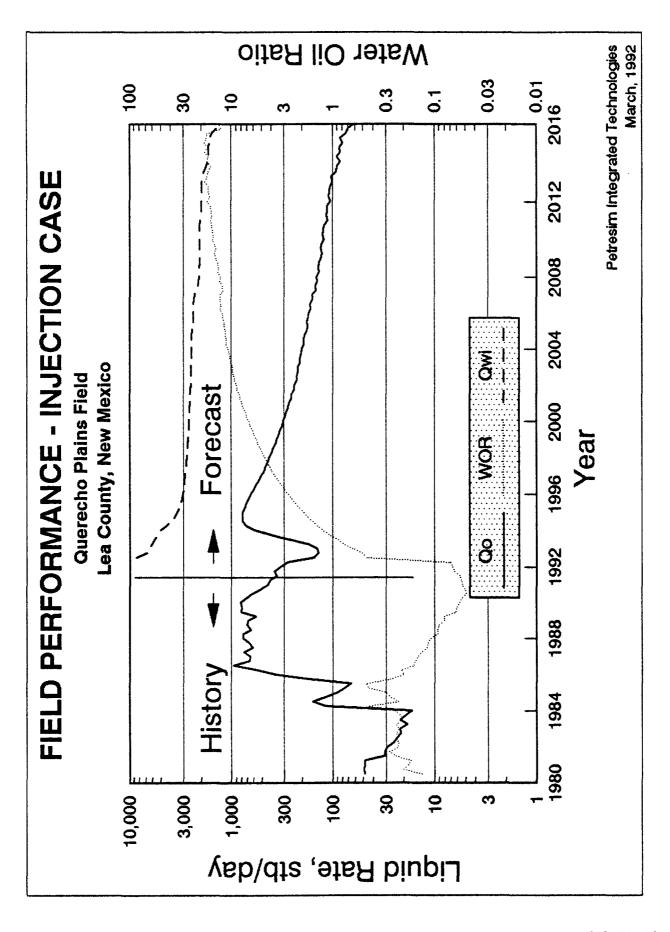






QUERECHO PLAINS FIELD LEA CO., NEW MEXICO WELL PATTERN-INJECTION CASE





QUERECHO PLAINS BONE SPRING SAND UNIT LEA COUNTY, NEW MEXICO

INITIAL CAPITAL INVESTMENT

Installation	\$2,050,000
Pre-Unitization	422,000
Government K #2 Injection Test	180,000
Federal E#11 Injection Test	148,000
	\$2,850,000

INCREMENTAL ECONOMIC EVALUATION

	Present Worth Undisc. (M\$)	<u>ROI</u> <u>Undiscounted</u>	Present Worth Discounted @ 10% (M\$)	<u>ROI</u> Disc. @ 10%	<u> RR (%)</u>
Working Int. (Total Group)	13,820	5.9:1	7,030	3.5:1	52
Royalty Int. (BLM)	2,410	N/A	1,270	N/A	N/A
ORRI Interests (Total Group)	3,020	N/A	1,590	N/A	N/A

NEW MEXICO
OIL CONSERVATION DIVISION
EXHIBIT 23
CASE NO. 1076//10762

STATE OF NEW MEXICO

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OIL CONSERVATION DIVISIO

ENERGY AND MINERALS DEPARTMENT STATE LAND OFFICE INHLIBRO SANTA FE, NEW MEXICO 8/501

EXHIBIT NO. 2	FORM C-108 Revised 7-1-81

R-9737

APPLICATION	FUR	AUTHOR174	MULT	TΩ	INJECT
APPI ILAIJUN	F 12/1	MULHURIER		10	1113661

I.	Purpose: Applicati	Secondary Recovery Pressure Maintenance Disposal Storage on qualifies for administrative approval? yes Xno
1.	Operator: _	MEWBOURNE OIL COMPANY
	Address:	3901 S. BROADWAY, TYLER, TEXAS 75701
	Contact part	y: K. MAYES/K.CALVERT Phone: (903) 561-2900
Ι.	Well data:	Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an e	expansion of an existing project? 🔀 yes 🔲 no

- If yes, give the Division order number authorizing the project Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- Attach a tabulation of data on all wells of public record within the area of review which VI. penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
 - Attach data on the proposed operation, including: VII.
 - Proposed average and maximum daily rate and volume of fluids to be injected;
 - Whether the system is open or closed; 2.
 - Proposed average and maximum injection pressure; 3.
 - Sources and an appropriate analysis of injection fluid and compatibility with 4. the receiving formation if other than reinjected produced water; and
 - If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- Attach appropriate geological data on the injection zone including appropriate lithologic *VIII. detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval. NEW MEXICO
 - IX. Describe the proposed stimulation program, if any. OIL CONSERVATION DIVISION
- Attach appropriate logging and test data on the well. (If well logs have been flilled with the Division they need not be resubmitted.) EXHIBIT
- Attach a chemical analysis of fresh water from two or more fresh water wells, (if, XI. available and producing) within one mile of any injection or disposal folly sowing 76 location of wells and dates samples were taken.

<u>ican</u>ts for disposal wells must make an affirmative statement that they have XII. transport vailable geologic and engineering data and time no evidence of the hydrologic connection between the disposal zone and any underground source of this water. exailable geologic and engineering data and find no evidence of open faults

METEROS XIII must complete the "Proof of Notice" section on the reverse side of this form. \cap Certification #

11576 W herely centery that the information submitted with this application is true and correct oor g y knowledge and belief.

Name: Name: Revin Maxes Project Engineer Title

If the Information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

ITEM III OF NEW MEXICO OCD FORM C-108

SANTA MEWBOU	FE ENERGY INSE JRNE OIL CO. *		FEDERAL	
DPERATOR 14-4	1980 FSL, 660 F	EL 14	18S	32E
WELL NO.	FOOTAGE ENGATION	2551104	10002011	пинс
Sche	matic	<u>1</u> 6	abular Data	
M 1 1 1 1 1 1 1 1 1 1	Ą	Size 13 3/8	" Cemented wil	in 500
	₹ 3 415'	oc Surface	feet determined by	Circ.
	7413	Hole size	/2"	
		Intermediate Casing		1500
	•	Size 8 5/8	." Cemented wi feet determined b	
		Hale eize 12	. 1/4"	
S:	2723'	Lang string		
	1.08 cuft/sx	Size		th <u>1325</u>
	No collars	\10c2632	feet determined b	<u>v Calcn.</u>
	25% excess_	Hote eize	3" 3F	E interp. of IT OK @ 276
		Total depth 8750'		•
		Injection interval		
月日展		8412 feet	to <u>8490</u>	feet
(4)				
	•			· ·
	-			
N F	-			
(lardy	87401			•
TD = 87	'50 '			
Tubing siz	• <u>2 7/8"</u> 11n	ed with <u>Bare S</u>	teel	eet in a
Otis	s Permalatch	•===	orial) ot 8312	feet
(6	rand and model)			
•	be any other casing-tuhi	ng seel).		
Other Date	l of the injection formetio	1st Bone Spri	ing Sand	
	of field or fool (if sppl			
•	is a new wall delifed for			
•	, for what purpose was th			luction
and g	he well ever been perfore ive plugging dotail (suck	ited in any other zone(s is of cement or bridge p)? List all such lug(s) used)	perforated inter-
N				
5. Give	the depth to and name of	any overlying and/or un	derlying oil or ga	s zones (paula)
_0v	verlying - San An	dres Top at $\stackrel{+}{-}$ 48	001	
Ü	nderlying - Lowe	r Bone Spring at	± 8650¹	

* After Unitization

ITEM III OF NEW MEXICO OCD FORM C-108

	NE OIL	CO. *	SHINNERY	14 FE	DERAL	
ortrator 14-3	1000	ECI 10	BO FEL 14		18S	32E
	TOOTAGE L					RANGE
Schoo	natic			Tabula	r Duta	
			Surface Casing			
11			Size 13 3/8			
	4441		10c Surface		determined by	Circ.
	444		Hole size 17	1/2"		
			Intermediate Casi	ng		
\$1111B			Size 8 5/8"		Cemented with	1550
			roc Surface	feet	determined by	Circ.
MIIM			Hole eize 12	1/4"		
	2727'		Long string			
31117			Size 5 1/2		Cemented with	1600
ALLIA			10c 2112		determined by	Calcn.
			Hole size	7 7/8	SFE CMT	OK @ 274
			Total depth			O
			Injection interve	1		
			8478	Teet to	8504	_ feet
\$11115			(perforated			
\$1111						
₹						
(] (((()))	94891				•	
	_					
TD = 950	υ.					
	υ.					
TD = 950		11	ned withB	are St	eel	eet in
TD = 950 Tubing size Otis	2 7/8'	ch	ned with B	(watering	. ,	eet in
TD = 950 Tubing size Otis (br	2 7/8 Permalat	ch	pac	(watering	,,	
TD = 950 Tubing size Otis (br (or describ	2 7/8 Permalat	ch	pac	(watering	. ,	
TD = 950 Tubing size Otis (br (or describ Other Data	2 7/81 Permalat and and and a any other	ch casing-tub	ing seei).	cker at	8378	
TD = 950 Tubing size Otis (br (or describ Other Data 1. Name of	2 7/8 Permalated and end end end end end end end end end e	casing-lub	ing seel).	Spring	8378 g Sand	
Tubing size Otis Object Other Data 1. Name of	2 7/8 Permalated and and and and and the any other the inject.	ch oi) casing-tub ion formati ool (if app	ing seel). on1st Bone	Spring	8378 Sand	
TD = 950 Tubing size Otis (br (or describ Other Data 1. Name of 2. Name of 3. Is this	2 7/81 Permalated and and and and and and and and and an	ch ei) casing-lub ion formati ool (if app drillad fo	ing seel).	Spring	8378 g Sand lains	feet
TD = 950 Tubing size Otis (br (or describ Other Data 1. Name of 2. Name of 3. Is this if no,	2 7/81 Permalated and and and and and and and and and an	casing-tub ion formati ool (if app drillad fo	ing seel). on 1st Bone licable) Quer rinjection? 77 y he well originally d ated in any other zo ka of cement or brid	Spring echo P en /X/ rilled?	8378 Sand lains Oil Produ	ction
TD = 950 Tubing size Otis (br (or describ Other Data 1. Name of 2. Name of 3. Is this If no, 4. Has the end give	2 7/81 Permalated and and and and and and and and and an	casing-tub ion formati ool (if app drillad fo	ing seei). on 1st Bone licable) Quer r injection? 77 volume well originally d	Spring echo P en /X/ rilled?	8378 Sand lains Oil Produ	ction
TD = 950 Tubing size Otis (or describ Other Data 1. Name of 2. Name of 3. Is this If no, A. Has the and giv No 5. Give the	2 7/8 Permalated and and and and and and and and and an	casing-tub ion formati ool (if app drillad fo rpose was t heen perfor dotail (sec	ing seei). on 1st Bone licable) Quer r injection? 77 v. he well originally d ated in any other zoo ka of cement or brid	Spring echo P rilled? rilled? ge plug(a	8378 Sand lains Oil Produ	ction
TD = 950 Tubing size Otis (br (or describ Other Data 1. Name of 2. Name of 3. Is this If no, 4. Has the end giv No 5. Give the this are Ov	Permalated and and and and and and and and and an	casing-lub ion formati ool (If app drilled for rpose was t heen perfor dotail (sec	ing seel). on 1st Bone liceble) Quer rinjection? / ? You he well originally d ated in any other zoo ka of cement or brid	Spring echo P echo P rilled? ne(s)? ge plug(s) r underly:	8378 Sand lains Oil Produ ist all such per) used)	ction

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHELL

MEWBO	OURNE OIL CO.	FEDERAL L		
		FEL 23		32E RANGE
Sche	matic	Iabu	itar Dota	
		Surface Casing		1100
	1	sire 13 3/8 "		
411111	460'	10c Surface		Circ.
		Hole size17 1		₩ m.
	{	Intermediate Casing		
	•	size <u>8 5/8</u> "		
)	Toc Surface ro		·Circ
	4330'	Hole size12_1/41	·	
YIIII		Long string		4000
图目图		size 5 1/2 " roc 2763 co		
		Hote size		
		Total depth 8650'	· (CMT OK -@ 477
		Injection interval		
			8574	foot
4111		(perforated		
				···
	<u> </u>			e verification
الصحال TD = 86	8650' 550'			
Tubing siz	•2 7/8 ¹¹	lined withBare_Ste	el	et in a
		(maler	1017	feet
	rend and model) be any other casing-t			
Other Date		aning seeis.		
	•	Lion 1st Bone Spring	g Sand	
		opplicable) Querecho P		
		for injection? / Yes		
if no,	, for what purpose was	the well originally drilled?	Oil Produ	ction
4. lise ti and gi	ive plugging detail (Forated in any other zone(a)? sucka of cement or bridge plud)(s) used)	perforated interval
		of any available sadder to		
thin	eree	of any overlying and/or under		roues (bools) (v
		Andres top at - 4800		
<u>Un</u>	iderlying - Low	er Bone Spring top a	at - 8650'	

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHELL

MEWBOL	JRNE OIL CO.	F	EDERAL L		
OPERATOR	660 FNL. 1650			185	32E
WELL NO.	660 FNL, 1650	<u></u>	SCETTON	ากันพิธีการ	RANGE
Sche	metic		<u> </u>	abular Data	
		Surfa	ce Casing		
491 1 119.	<u>k</u>	Size	13 3/8	" Cemented wit	h 400
334 1112	{ 	100	Surface	- _ feat determined by	Circ.
	438'	_	size 17_1/	-	
- \$111118			<u> </u>		
	1	-	mediate Casing		4.000
		Size	8 5/8 Surface	Cemented ut	6 1600 se.
)		oire 12	feet determined by	Circ.
	4318'	itale	eire	1/4	
<u> </u>	4310		string		
- XIII (" Cemented with	
		10C _	2642	feet determined b	, <u>Calcn.</u> L 8683'-4300'
21111/		ilole	•ize	CM	T OK @ 4656'
		Total	depth 876	00'	•
-6110		Injec	tion interval		
ΣΙΙΙΣ			131 feet	to <u>8506</u>	feet
		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			~1
MIII			**		
- ans					-
11 13					-
付け	ı				
1 単	· - -				
a li	•				
الاستانا	8760'				
TD = 876	60'				
Tubing size	2 7/8" 1:	ined with	Bare 9	Steel	met in a
Otis I	Permalatch		(me: pocker	nt 8331	feet
• -	rand and model)				
•••	be any other casing-tul	bing seal)) .		
Other Data	f the injection format	1et	t Rone Spri	na Sand	
	f the injection format f field or Pool (if ap				
•	s a new wall defilled to				
	for what purpose was				tion
110,	tor will harpose was		originally drill	ear <u>On Froduc</u>	
4. How th	e well ever been perfo	rated in a	any other zone/a)? liet all such a	esforated total and
and gi	ve plugging detail (so	cks of ce	ment or bridge p	lug(s) used)	er. Draced Intelegati
<u>No</u>	······································		 		
	•				
5. Give t	he depth to and name o	f any over	rlying end/or un	derlying oil or gas	souss (bonja) iu
	erlying - San Ar	ndres t	op at + 480	0'	
	derlying - Lower				
	~ <u> </u>				

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHEET

OPERATOR 7 WELL NO.	2310 FSL, 990 F	FEL 23	18S TOWNSHIP	32E RANGE
<u>5eh</u> EU 133	enetic	Surface Casing Size 8 5/8 -	bular Duta Cemented wi	th <u>250</u>
	356'	10c Surface Hole size 1116 Intermediate Casing	feat determined b	y <u>Circ.</u>
		TOC	feet determined in	
	D.V. Tool @ 3035'	size 5 1/2 " toc Surface Hole mize 7 7/ Total depth 8670	RH CBL	Calcn. & Ci
		Injection interval 8485 feet t	8552	feet
				े व्य ् च्युक्त
TD = 8	8670' 8670'			
Tubing wi		ed withBare_Ste		et in a
Otis	Permalatch	(met	8385	feet
(or descr	ibe eny other casing-lubi			
Other Date	<u>m</u> of the injection formetio	, 1st Bone Spri	ng Sand	
2. Name	of Field or Pool (if appl	Querecho	Plains	
	ie a new well drilled for , for what purpose wee ti			uction
A: ilee t end g No	he well ever been performive plugging dotail (such	ited in any other zone(s) is of cement or bridge pi	ug(s) used)	perforated interval
	the depth to and name of	any overlying and/or und	erlying ail ar ge	e zones (paula) in
Ov	erlying - San And			
<u>Un</u>	derlying - Lower	Bone Spring top	at + 8650'	

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WILL DATA SHELT

operator 2		FSL, 2030	FEL	23		18S	32E
TELL NO.	COULCE	LOCATION		SECTION		TÖWNSILLP	RANGE
Schan	untic				Tabular	Dota	
				e Casing			
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			_				th <u>450</u> ***
	4411					determined by	<u>Circ.</u>
			llole i	17 1	1/2"		
			Inter	ediate Casing	2		
			Size	8 5/8	•	Cemented ui	in <u>1800</u>
			10C _	Surface	feet	determined b	Circ.
			Hole (1201	12 1/4	lt	
	4293 '		Lang	string			
<i>),</i>				5 1/2			
			100 _	4479	feet	determined b	, <u>Calcn.</u> 8652'-3000' OK @ 3538'
			Hole	120	7/8"	CMT	OK @ 3538'
			Total	depth <u>8750</u>	0'		•
(1111)			Injec	tion interval			
81117				8458 (**	• t to	8531	feet
			(perf	orated			
MIII							
MIIK							
MILM							-
MHR							
化进	.						
U 拼							
للصل	87501						
TD = 875	50'						
Tubino size	2 7/8	line	d with	Bare S	Steel		eet in e
		latch		(4	unferinj)	feet
(br	end end mo	del)					
dissemb and	e any othe	r casing-tubin	g seel)	•			
Other Data		tion formation	1 e	t Rone Sn	orina '	Sand	
		tion formation Pool (if appli					
•		rooi (ir mppii 1 deillad for					
		uspose was the					uction
ir no,	tar what p						
and giv	e well ever	heem nerforst	ed in	ony other zone	(a)? Li	st all such	perforated interva
<u>No</u>		<u> </u>					
this s	f		-		•	ng oil or ga	m zones (paula) ir
Ô۷	erlying	- San And	ires	top at $\frac{+}{-}$ 4	1800'		
. <u> </u>		- lower	Rone	Spring to	on at	+ 00501	

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

MEWBOU	RNE OIL CO.	GOVERNMEN'	тк	· · · · · · · · · · · · · · · · · · ·
operator 2	1950 FSL, 1980	FWL 23	18 S	32E
WELL NO.	TOOTAGE LOCATION	SCCTION	TOWNSHIP	RANCE
Sche	matic	<u>Tal</u>	bulnr Duta	
		Surface Casing		700
4	}	Size 13 3/8 "		
	700'	10c Surface		, <u>Circ.</u>
집 11 [[Hale sire17	1/2"	· ·
		Intermediate Casing		
	•	Size 8 5/8 "	Cemented wi	th 3100
	Top of liner = 44	08 ^{10c} Surface	feet determined b	, <u>Circ.</u>
銀日股	4800°	Hole size 12 1/	(481	
711117	Perfs @ 4859'	tong string		
ALLE	16115 6 4033	Size 5 1/2*		
$N \square N$		100 4408	feet determined to	Calcn.
$M \cap M$				OK @ 4876'
		Total depth 8901		•
WIII W		Injection interval		
引目以		8343 feet t	8515	feet
		(101.01.01.01.0		ان ا
<i>स</i> । । । ।				7.01
	<u>.</u>	Note: Already c		
		in August 1992 R-9737.	per Division	Order
التحقيق	8900'			
Tubing size	. 2 7/8"	ed withBare Stee	.i	set in a
	Permalatch		eriul)	
	rend and model)	packer :	st <u>8365</u> 1	reet
(or describ	be any other casing-tubl	ng seel).		
Other Date		lat Dama Carata	Ca	
		n Ist Bone Sprin		
•	• •	Querecho Querecho		
	e a one wall drilled for	· —	<u>/</u> X7 №	tion
Ir no,	TOP WHAT PURPOSE WES LI	e well originally drille	ar On Froduc	11011
4. Han th	e well ever been nectors	ited in any other zone(a)	2 tiet all such	necforeted totacent
end gi	ve plugging doteil (suck	m of cement or bridge pl	ug(s) used)	
		9'. Squeeze with 2	225 sxs. Pre	ssure test
	1700 psi OK.			
5. Give t	he depth to and name of	any everlying and/or und	erlying oil or ga	zones (paels) in
Ove	erlying - San And	dres top at $\frac{1}{2}$ 4800) '	
Und	derlying - Lower	Bone Spring to a	t ⁺ 8650'	

ITEM III OF NEW MEXICO OCD FORM C-108 INJUSTION WELL DATA SHEET

MEWBOU	IRNE OIL CO	. FEDI	ERAL F		
3		990 FWL		18S	32 E
WELL NO.	rodiace Lucatio	N SE	YTON	TOWNSHIP	RANGE
Scher	natic		Yabul	nr Dolo	·
		Surface Co	pnies		
MI HES)	Size 1	3 3/8	Cemented wi	th <u>275</u> **
		ioc Su	rface (ee	t determined b	, <u>Circ.</u>
	480'	Hole mize	17	1/2"	
		• • • • • • • • • • • • • • • • • • • •	ate Casing		
					th 1700 -
$SH \cap H$					Circ.
		Hale mize	12 1/4	411	
	4285'	<u>Long stri</u>	ng		
		Size5	1/2	Cemented vi	th <u>1375</u>
- XI		10c <u>1</u>	713 ree	et determined t	Calcn.
		Hote size	7 7/8	" CBL 8	430'-7000'
		Total dep	th <u>8570'</u>	——————————————————————————————————————	VK @ 1000
		Injection	intervel		
[1] [7]		8362		8436	fest
		(perforat	ed Carried		
- 18					
M 1 1 17					•
Y					
- (H H K					
上					
N H					
(PREST)	8570 '				
TD = 857	70'				
Tubing mize	2 7/8"	lined with	Bare_St	teel	eet in e
	ermalatch		packer ot		feet
(br	(lebom bne bne				
(or describ	e any other coain	y-tubing seei).			
Other Data		1-4 5	·	C1	
	f the injection fo				
2. Name of	f Fleld or Pool (i	[spplicable)	Querecno P	lains	
	e a naw wall drill	-			
If no,	for what purpose	was the well orig	inally drilled?	Oil Produ	uction
4. Hem the	e well ever been p	(sacks of cement	or bridge plug(m) used)	perforsted interv
<u>No</u>		· · · · · · · · · · · · · · · · · · ·	····	- 	
	•			·	
this s	he depth to and no			ying oil or go	e zones (paula) i
_0v	erlying - San	Andres top	at ⁺ 4800'		
	derlying - Lo			± 86501	

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHIEL

MEWBOL	JRNE OIL CO	FEDERAI	_ P	
KNERLIKA		1715		
1	660 FNL, 660	FWL 24	185	
WELL NO.	FOOTAGE LICATION	SECTION	TOWNSILL	PRANCE
Sche	matic		Tabular Outa	
		Surface Coming		
纽门门门	}			led with 450 ex.
	452'	10c Surface	feet determi	Ined by <u>Circ.</u>
	,	Hole size	17_1/2"	
341 H	l	Intermediate Cas	ina	
- 24 4	•			ted with 1600 sk.
				ined by Circ.
		Hole size 1		Theo my
WII	4347'	11016 8116	2 17 7	
周日以		Long string	_	
				ted with <u>1425</u>
				ined by <u>Calcn.</u>
		Hole size		
(1111)		Total depth	8680'	•
		Injection interv	o i	
$-M \square R$			feet to 8545	5feet
XI X		(perforated		
<u> </u>				:
				* 3:
一刀目展				
- 41 11 13)			
- (I `` ₽	-	•		
	<u>-</u>			•
المصحا	8680'			,
TD = 86	80'			
Tubing miz	. 2 7/8" 1	ined withBa	are Steel	set in a
Otis	Permalatch		(muteriul) ocker et 83	73 feet
(L	rand and model)			
(or descri	be any other cosing-tu	bing seei).		
Other Date	•	<u>-</u>		
1. Name o	of the injection format	ion 1st Bone	Spring Sand	
2. Name o	of Field or Pool (if my	piicable) Quer	<u>echo Plains</u>	
3. In thi	le a now wall delited (or injection? 💯	Yen <u>/X</u> / No	
If no	, for what purpose was	the well originally	drilled? Oil	Production
4. Hee then and gi	he well ever been perfo ive plugging detail (so	rated in any other z ckm of cement or bri	one(a)? List all dge plug(a) used)	such perforated intervals
N	<u> </u>			
this	eree			or gas zones (pouls) in
	<u>verlying - San</u>			
<u> </u>	nderlying - Low	er Bone Spring	top at - 86	501

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WILL DATA SHEET

MEWBOL	JRNE OIL CO.	BURLESON FED	ERAL	
WELL NO.	660 FNL, 660 FEL	26 SCCTTON	18S TOWNSHITP	32E RANGE
Sch	enstic		nr Dala	
e411	·	Surface Casing		100
	{ }	Size 11 3/4 "		
41111	349'	Note size 15"	et determined by	CIFC.
- SI I I I I I I I		Intermediate Casing		
	•	Size 8 5/8 -	Cemented wit	h <u>2100</u> 11
		inc Surface rec	et determined by	<u>Circ.</u>
	2806¹	Hale size 11"		
711111	2000	Long string		
- } }		Size 4 1/2 "		
		10C 4149 red		Calcn
		Tatel depth 8700		•
		Injection interval		
11113		8515 feet to	8584	feel
41114		(perforuled		7
11111		_		
MILIA		•		
				-
	Ē			
	07001			
TD = 870	8700' 00'			•
	• 2 3/8 ¹¹ lined			set in a
Otis (6	Permalatch	packer at	8415	feet
	be any other casing-tubing			
Other Data	1			
1. Name o	f the injection formation	1st Bone Spring	Sand	
-	ffield or fool (if applic			
•	. a now wall drilled for t		•	
If no,	for what purpose was the	weil originally drilled?	Oil Product	tion
end gi	ne well over been perforate two plugging detail (secks	of cement or bridge plug(a) used)	erformled interva
Nc				
5. Give t	the depth to and name of a	ny ovoriying and/or underi	ying oil or gee	zones (poola) in
	verlying - San And	ires top at + 4800'		
	nderlying - Lower			

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHEET

MEWBOL	JRNE OIL CO.	BURLESON F	EDERAL	
operator 1	660 FNL, 2310	FEL 26	18S	32E
WELL NO.	COOLAGE LOCATION	SECTION	TOWNSHIP	RANCE
Schi	enstic		bular Outa	
VEH 1 1 1 1 1 1	·(Surface Casing Size 11 3/4 "	Cemented wi	th 485 av.
州川川	3	oc Surface		
	2 350'	Hole stre 15"		,
		Intermediate Cosing		*
	•	Size 8 5/8 -	Cemented u	th 2250 sx.
		roc Surface		
911116	}	Hale eize		•
31117	2800'	Long string		
()		Size 4 1/2 "	Cemented wi	us <u>1205</u> ••.
311115		10c 4130		v <u>Calcn.</u>
		Hole size		
		lotal depth 8700	•	•
9111		Injection interval		
		8512 feet t	• <u>8572</u>	feet
		•		.e-w.
9117				: -विकेटी
411 N				
	_			
	Ε			
(Level)	8700'			
TD = 870	00'			
Tubing siz	• <u>2 3/8"</u> 11	ned with Bare Sto	eel	set in a
	Permalatch	pecker s	01.40	fael
• -	rand and model) be any other casing-tub	ing seel).		
Other Date	<u> </u>	-		
1. Name o	f the injection formats	on 1st Bone Sprin	g Sand	
2. Name a	ffield or Pool (if app	Querecho Querecho	<u>Plains</u>	
		or injection? / Yes		
If no,	, for what purpose was (the well originally drilled	Oil Produ	ction
4. Hee to	- · · · · · · · · · · · · · · · · · · ·	rated in any other zone(s)?		
end gi	ive plugging dotail (see	cka of cement or bridge pic	og(s) used)	periorated interval
<u>No</u>				
5. Give (the depth to and name o	f any overlying and/or unde	orlying all or ga	m zones (poula) in
thia	eree	dres top at + 4800		
		Bone Spring top a		
		zone zpinig top e	<u> </u>	

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHEET

MEWBOURNE OIL CO.	SPRINKLE FED	ERAL	
		18S	32E
WELL NO. POOTAGE LUCATION	STETTON	TOWNSHIP	RANCE
	SECTION	Cemented with the control of the con	th 400 st. y Circ. ththththththtr. ythtr.
Tubing eize 2 7/8" line			sat in a
Otis Permalatch	(muto	8442	feet
(brend and model) (or describe any other casing-tubin			
Other Data 1. Name of the injection formation	_	s Sand	
2. Name of Field or Pool (if appli			
3. Is this a new well drilled for		/* No	
If no, for what purpose was the	well originally drilled	Oil Produ	uction
4. Has the well over been perforated give plugging detail (secks	ed in any other zone(a)? of cement or bridge plu	g(a) used)	perforated intervals
5. Give the depth to and name of a this area.	ny overlying and/or unde	riying oil or gas	zones (paul4) in
Overlying - San Andr			
Underlying - Lower E			

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHITE!

MEWE	OURNE OIL	_ CO.	SPRINKLE F	EDERAL	
1	•	L. 6 60 FW	L 26	18S	32E
WELL NO	. FOOTAGE LE	ICATION	SECTION	TOWNSHIP	RANGE
CMILL	Schematic		Surface Casing	Tobular Outs " Cemented wit	500 ax.
	}{			feet determined by	
	536'		Hole size17	1/2"	
(4111	₩.		Intermediate Cusing	" Cemented wit	th 2825 se.
			· · · · · · · · · · · · · · · · · · ·	feet determined by	
	4814		liale size1	2 1/4"	
<u>} </u>				Cemented vi	
. }}	1)			feet determined b	, <u>Calcn.</u>
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	 }		Note the		•
}[[]	1			330	
1111			Injection interval 8507 fee	. to <u>8532</u>	Cont
	}		(perforated		5
	3				
Ϋ́,	8439'-847	-			ee '
A	squeeze	with 100	SXS		•
	TOC @ 1				
	The state of the s	10175			
<u> </u>	10635'				
{	}				
TD≌	T3350'				
Tubing	120 2 3/8	311 11ned	MILLI Rare St	teel	set in a
_Oti	S Permalatch	•	pecke	F st 8407	feet
•	cribe any other	cesing-tubing	scal).		
Other C	 -	ion formation	1st Bone Sp	ring Sand	
			able) Quere		
3. 18	this a new well	drilled for 4	njection? / Yes		
ır	no, for what pur	rpoma wma Llio	weil originally dril	11ed7 <u>Oil Produ</u>	iction
and	d give plugging o	dotail (sacka	of cement or bridge		perforated interval
			h 20' cement a th 100 sxs cem		
5. G1				underlying oil or gas	zones (poula) in
			es top at $\frac{+}{-}$ 48		
<u>_ L</u>	<u> Inderlying</u> -	Lower B	one Spring top	at - 8650'	

ITEM III OF NEW MEXICO OCD FORM C-108 INJECTION WELL DATA SHEET

	660 FNL, 530	FEDERAL E LEASE FEL 27 SCOTTON	18S township	
Schem	etic	Ţo	bular Datu	
		Surface Casing		
111111111111111111111111111111111111111		size 13 3/8 "	Cemented wi	ith 1120 ***
	1125'-shoe	100 <u>Surface</u>	fest determined i	y Circ.
WH	31100	Hole size17_1/	2"	
		Tatanadista Caston		
制118.		Intermediate Casing	• • • • • • • • • • • • • • • • • • • •	2400
湖日的		Size <u>8 5/8</u>		
		roc Surface		by <u>Circ.</u>
期日期。	4480¹-shoe	Hole size11		
741117	1480'-Snoe	Long etring		
		Size 5 1/2 -		
741118		inc Surface	feet determined t	Ly Calcn.
N 1 1 18		Hole eize 7	7/8" CB	L 8869'-4650'
} }		Total depth 89	72'	1 04 6 4020
$M \cap M$		Injection interval	9388	
(IIII K		(bettathfaq	to 8388	/eet
<i>H</i> [1] [5]		and 8450 feet to	o 8486 feet.	
	•			
1.00	Perfs 8360'-8486	•		
	CIBP @ 8800'	** * * * 1		
AL 1.7		Note: Alread	y converted	to injection
	8972'-shoe	in August 199 R-9737.	2 per Divisi	on Order
رکتی TD = 897	7 1	R-9/3/.		•
	_			
Tubing size	2 7/8" 11n	ed with Bare Ste	eel	set in s
Otis Pe	ermalatch	packer		feel
(pt	end and model)			
•••	a any other casing-tubi	ng seel).		
Other Date		1st Pons Soui	na Cand	
		n 1st Bone Spri		
2. Hame of	Field or Pool (if appi	Querecho Querecho	Plains	
		r injection? 💯 Yes		
If no,	for what purpose was li	no well originally drille	oil Prod	uction
				
		ated in any other zone(a)		perforated interval
_		ks of cement or bridge pi		looloted for
		ite 8826'-70' (non-	-productive)	. isolated from
	e perfs by CIBP			· · · · · · · · · · · · · · · · · · ·
5. Give ti thin o		any overlying and/or und	inclying oil ar gr	e zones (posta) in
<u>Over</u>	lying - San And	res top at 48361		
	erlying - Lower		at 8660'	

ITEM III OF NEW MEXICO OCD FORM C-108

INJECTION WELL DATA SHEET

	IRNE OIL CO.	FEDERAL E		 -
operator	2210 5111 2210	LEASE	100	205
TO WELL NO.	2310 FNL, 2310	SCOTION SCOTION	18S TOWNSHITE	32E
WLLL NO.	TOUTAGE COEATTON	2551104	***************************************	WANT.
				
Sche	metic	Tobs	ilar Dota	
		Surface Casing		
341 I I I I I I I I		Size 13 3/8 "	Cemented wil	th <u>475</u> **•
		tor Surface re	eet determined b	Circ.
411117	456'		1/2"	,
MILL				
7A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Intermediate Casing		
M N	•	Size8 5/8	Cemented wi	th <u>2600</u> av
		TOC Surface	est determined h	V <u>Circ.</u>
图目图		Hote eize 12	1/4"	
51111/	1542'	<u>Long</u> etring		
(1) 1		Size 5 1/2 -	Cemented ut	th 1400
		10c 2038 r		
		Hole size 7 7/8	au CBL	89221-26001
41111		Total depth 9020	100	3118'
				
		Injection interval		
41111		8501 feet to	8530	feet
AHR		•		A*.
y				
<i>M</i> 11 W				
N F	:	•		
	_			
				•
المصلحت	9020'			•
TD = 902	201			
lubing size	2 7/8" line	d with Bare St	eel	set in a
Otis Po	ermalatch	pocker at	,	feat
•-•	rend and model)			
•	se any other casing-tubin	g seel).		
Other Date		1at Dame Coult	. C 1	
	f the injection formation			
	f Field or Pool (if appli			
	e a new wall drilled for			
if no,	for what purpose was the	well originally drilled?	Oil Produ	iction
				
4. Hea the	e well ever been perforat ve plugging deteil (secks	ed in any other zone(s)? of cement or bridge nice	List all such p	erforated interva
No		in lines	,, -2 -2 ,	
5. Give t	he death to and some of	any avertutes and for		
this a				i souse (bonja) ju
	erlying - San And			
Une	derlying - Lower	Bone Spring top a	t + 8650'	
			7070	·

ITEM V OF NEW MEXICO OCD FORM C-108 MAP OF ALL WELLS WITHIN 2 MILES OF INJECTORS QUERECHO PLAINS BONE SPRING SAND UNIT

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Alerthan Trip (All) for (a) and the first of the first o
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About 1 1000 7 1719 10 12 12 12 12 12 12 12 12 12 12 12 12 12
A of them Other Amora Chell-Landy
Colorina Chi (MARCON (COLOR)
Trant 18 340 LUSKI SEV RIV'S. LUNITI Selection S
101 101 101 101 101 101 101 101 101 101
10 September 10 September 11 - Transport 11 - Trans
LUSKISTR. DRJ UNIT

TD COMPLETION & COMMENTS	8975 CMT PLUGS 8450'-8650' 6550'-6650' 5550 W/ 70 SX 5460 W/ 30 SX OPEN PERFS 4990'-5017	12500' PERF & PROD 11200*-11204' CIBP @ 11140' PERF & TEST 9710*-9752' RET @ 8540' PERF & TEST 5012*-5076' PERF & PROD 4006*-4552' SOZ 4006*-4552', 5012*-5076', 9710*-9752', OPEN PERFS 10882*-11426'	8670' OPEN PERFS 8424'-8514'	13430' PERF & TEST 13226-13317 CIBP @ 13115' PERF & TEST 12334-12354' PERF & TEST 10598-10606' PERF & TEST 4962'-4980' P&A	8782' PERF & TEST 8660'-8694' CIBP @ 8550' OPEN PERFS 4990'-6790'	8750 OPEN PEHFS 8412'8490' DOTAS (2017)	9500 OPEN PERFS 9478-8504' PUMELLY	11243' PERF & TEST 10818'-10860' BRPG 10800' PERF & TEST 10216'-10244' BRPG 10200' PERF & TEST 10008'-10029' BRPG 9900' PERF & TEST 9714'-9822'
DATE	08/2/90	3,6/88	√2/16/89	Jó 11/82	10/31/89	6/22/89	4/05/89	824/88
TOP OF CEMENT	SURFACE ⁽⁾ 2178 2807	SURFACE SURFACE SURFACE	SURFACE(V) SURFACE(V) SURFACE(V)	(SEE ATTACH) A 611/82	SURFACE(V) / 10/31/89 SURFACE(V) 2555(CBL)	SURFACE(V) SURFACE(V) 2760(CBL)	SURFACE(V) V SURFACE(V) 2746(CBL)	SURFACE SURFACE 1718
CONSTRUCTION	13 3/8 @ 400' CMT W/ 600SX 8 5/8 @ 3140' CMT W/ 375 SX 5 1/2 @ 5350' CMT W/ 510 SX	13 3/8 @ 383' CMT W/ 350 SX 9 5/8 @ 2904' CMT W/ 1655 SX 5 1/2 @ 12498' CMT W 2965 SX	13 3/8 @ 450' CMT W/ 200 SX 8 5/8 @ 4332 CMT W/ 1320 SX 5 1/2 @ 8670' CMT W/ 1425 SX	13 3/8 & 674' CMT W/ 700 SX 9 5/8 @ 4900' CMT W/ 2950 SX 5 1/2 @ 13430' CMT W/ 3270 SX	13 38 @ 410' CMT W/ 500 SX 8 58 @ 2744 CMT W/ 1300 SX 5 1/2 @ 8781' CMT W/ 1376 SX	13 38 @ 415' CMT W/ 500 SX 8 5/8 @ 2723' CMT W/ 1500 SX 5 1/2 @ 8740' CMT W/ 1325 SX	13 3/8 @ 444' CMT W/ 500 SX 8 5/8 @ 2727' CMT W/ 1550 SX 5 1/2 @ 9489' CMT W/ 1600 SX	13 3/8 @ 423 CMT W/ 395 SX 8 5/8 @ 3001 CMT W/ 1225 SX 5 1/2 @ 11243 CMT W/ 1910 SX
TYPE	ਲ	ਰੋ	OIF	D &A		정	OIF	OF.
LOCATION	T18S, R32E, SEC 13 800 FNL, 660 FWL.	T18S, R32E, SEC 13 1980 FSL, 1980 FWL	T18S, R22E, SEC 13 330 FSL, 330 FWL	718S, R32E, SEC 14 660 FNL, 1980 FEL	T18S, R32E, SEC 14 2310 FNL, 660 FEL	T18S, R32E, SEC 14 1980 FSL, 660FEL	T18S, R32E, SEC 14 1980 FSL, 1980 FEL	T18S, R32E, SEC 14 330 FSL, 2310 FML
LEASEMELL	ERIE FED #1	SHINNERY FED #1	FED M #1	FED BY #1	SANTA FE ENERGY OPRTN SHINNERY FED 14 #5	SANTA FE ENERGY OPRTN SHINNERY FED 14#4	SANTA FE ENERGY OPRTN SHINNERY FED 14#3	QUANAH FED #1
OPERATOR	SIETE O&G	MERIDIAN OIL CO	MEWBOURNE OIL CO.	AMOCO	SANTA FE ENERGY OPR	SANTA FE ENERGY OPR	SANTA FE ENERGY OPR	SIETE O&G

	COMPLETION & COMMENTS	BRPG 9110' PERF & TEST 8681':9014' BRPG 8665' PERF & PROD 8448'-8516' CLEAN OUT TO 9900' CIBP @ 9420' PERF & TEST 9252':9400' RETR BP @ 5970' OPEN PERFS 4850':5871'	PERF & TEST 9776'-9790' RET @ 9770; SOZ W/42 SX PERF & TEST 9734'-9757' RET @ 9600', SOZ W// 50 SX REPERF & TEST 9735'-9745' BRPG 9642' OPEN PERFS 8481'-8510'	PERF & TEST 9726'-9732' BRPG 9615' OPEN PERFS 8496'-8526'	OPEN PERFS 8396'-8460'	OPEN PERFS 8430'-8574'	OPEN PERFS 8431'-8506'	PEHF & TEST 10648-10726 PEHF & TEST 10172-10223' PEHF & TEST 10172-10223' PEHF & TEST 9619'-9670' SOZ PEHF'S 9619'-9670' W/ 1150 TOC CALC @ 3933' PEHF & TEST 9726'-974' PEHF & TEST 9192'-9210' CIBP @ 9560' OPEN PEHF'S 8283'-8426' RETH BP @ 8566'	OPEN PERFS 8435'-8501'
	£		10241	9931,	8960,	8650'	8760'	11780	8700
	DATE		11/19/88	3/10/89	2/18/86	4/17/88	11/3/87	582587	/11/10/86
	TOP OF CEMENT		SURFACE SURFACE 1267	SURFACE SURFACE 3305	SURFACE(V) SURFACE(V) SURFACE(V)	SURFACE(V) SURFACE(V) 2763	SURFACE(V) √) 11/3/87 SURFACE(V) 2642	SURFACEN) SURFACEN 7559	SURFACE(N) //11/10/86 SURFACE(N)
QUERECHO PLAINS BONE SPRINGS SAND LINIT	CONSTRUCTION		13 3/8 @ 423 CMT W/ 500 SX 8 5/8 @ 2745' CMT W/ 1400 SX 5 1/2 @ 10241' CMT W/ 1800 SX	13 38 @ 435' CMT W/ 500 SX 8 5/8 @ 2750' CMT W/ 2875 SX 5 1/2 @ 9910' CMT W/ 1325 SX	13 3/8 @ 440' CMT W/ 400 SX 8 5/8 @ 4472' CMT W/ 2100 SX 5 1/2 @ 8960' CMT W/ 1700 SX	13 3/8 @ 460' CMT W/ 400 SX 8 5/8 @ 4330' CMT W/ 1575 SX 5 1/2 @ 8650' CMT W/ 1275 SX	13 3/8 @ 438' CMT W/ 400 SX 8 5/8 @ 4318' CMT W/ 1600 SX 5 1/2 @ 8760' CMT W/ 1325 SX	13.3/8 @ 350' CMT W/ 350 SX 8 5/8 @ 2777' CMT W/ 1200 SX 5 1/2 @ 10800' CMT W/ 650 SX	13 3/8 @ 478' CMT W/ 500 SX 8 5/8 @ 4286' CMT W/ 1400 SX
AINS BONE SI	TYPE		OF	ఠ	d O	OF	ol	ਰੋ	Ħ O
QUERECHO PL	LOCATION		T16S, R32E, SEC 14 330 FSL, 1650 FEL	T18S, R32E, SEC 14 330 FSL, 660 FEL	716S, R32E, SEC 22 330 FSL, 330 FEL	T18S, R32E, SEC 23 660 FNL, 660 FEL	T18S, R32E, SEC 23 660 FNL, 1650 FEL	T18S, R32E, SEC 23 1850 FNL, 990 FWL	T18S, R32E, SEC 23 1980 FNL, 1980 FWL
	LEASEMELL		N SHINNERY FED 14#1	N SHINNERY FED 14#2	FED H #2	FED L#S	FEDL#4	MURJO FED#1	CEDAR LAKE FED #2
	OPERATOR		SANTA FE ENERGY OPRITN SHINNERY FED 14#1	SANTA FE ENERGY OPRTN SHINNERY FED 14#2	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MANDENDOILCO. Membersone Change of Change of State 153.5.00	MEWBOURNE OIL CO.

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COMPLETION & COMMENTS		PERF & TEST 8598'-8610' CIBP @ 8585' OPEN PERFS 8446'-8530'	OPEN PERFS 8436'-8520'	DEEPEN FROM OTD @ 4281' (1 / OPEN PERFS 8485'8552'	OPEN PERFS 8458'-8531'	PERF & PROD 8343*8515* CIBP @ 5059* PERF & TEST 4859 SOZ 4859 W/ 225 SX CLEAN OUT OPEN PERFS 8343*8515*	OPEN PERFS 8362'-8448'	OPEN PERFS 8414'-8447'	OPEN PERFS 8459'-8526'	OPEN PERFS 8474'-8538'	PB 4400' PERF & PROD 4014'-4090' P&A	OPEN PERFS 8473'-8545'
P		8698	8650	8670	8750	8900,	8570'	9580	9100,	9050	14905	9690,
DATE	_ ~	6/19/87	7/24/88	5/14/88	10/14/86	9/19/86	4231/86	12/31/85	5/6/86	4722/86	3/29/61	8/31/89
TOP OF CEMENT	3347	SURFACE(V) SURFACE(V) 1342	SURFACE(V) SURFACE(V) SURFACE(V)	SURFACE(V) ^J 5/14/88 SURFACE(V)	SURFACE(V) [√] 10/14/86 SURFACE(V) 3538'(CBL)	SURFACE(V) ⁽⁾ 9/19/86 SURFACE(V) 4408'	SURFACE(V) SURFACE(V) 1713	SURFACE SURFACE 2331'	SURFACE SURFACE 3217	SURFACE(N) [§] 4/22/86 SURFACE(N) 3814'	SURFACE(V) \$ 329/61 SURFACE(V) SURFACE(V)	SURFACE(V)
CONSTRUCTION	5 1/2 @ 8706' CMT W/ 1075 SX	13.38 @ 450 CMT W/ 416 SX 8 58 @ 4315 CMT W/ 1700 SX 5 1/2 @ 8698' CMT W/ 1475 SX	13 3/8 @ 448' CMT W/ 475 SX 8 5/8 @ 4330' CMT W/ 1575 SX 5 1/2 @ 8650' CMT W/ 1400 SX	8 5/8 @ 356' CMT W/ 250 SX 5 1/2 @ 8670' CMT W/ 4630 SX	13 3/8 @ 441' CMT W/ 450 SX 8 5/8 @ 4293' CMT W/ 1800 SX 5 1/2 @ 8750' CMT W/ 925 SX	13 3/8 @ 700 CMT W/ 700 SX 8 5/8 @ 4800 CMT W/ 3100 SX 5 1/2 // 4408*8900' CMT W/ 900 SX	13 3/8 @ 480' CMT W/ 275 SX 8 5/8 @ 4285' CMT W/ 1700 SX 5 1/2 @ 8570' CMT W/ 1375 SX	13 3/8 @ 354' CMT W/ 385 SX 8 5/8 @ 3047 CMT W/ 1475 SX 5 1/2 @ 8565' CMT W/ 1250 SX	13 3/8 @ 374' CMT W/ 385 SX 8 5/8 @ 3010' CMT W/ 1300 SX 5 1/2 @ 8703' CMT W/ 1100 SX	13 3/8 @ 459' CMT W/ 400 SX 8 5/8 @ 4345' CMT W/ 1700 SX 5 1/2 @ 8050' CMT W/ 1050 SX	13 3/8 @ 157 CMT W/ 1050 SX 9 5/8 @ 4857 CMT W/ 1500 SX 5 1/2 @ 14700 CMT W/4000 SX	13 3/8 @ 45/2 CMT W/ 45/0 SX 8 5/8 @ 4347 CMT W/ 1600 SX
TYPE		io	텅	oll	OIF	2	JIO	OIF	히	히	P&A	ㅎ
LOCATION		718S, R32E, SEC 23 1980 FNL, 1650 FEL	T18S, R32E, SEC 23 1880 FNL, 660 FEL	T18S, R32E, SEC 23 2310 FSL, 990 FEL	T18S, R32E, SEC 23 2310 FSL, 2030 FEL	T18S, R32E, SEC 23 1950 FSL, 1980 FWL	T18S, R32E, SEC 23 1980 FSL, 990 FWL	T18S, R32E, SEC 23 610 FSL, 760 FWL	T18S, R32E, SEC 23 760 FSL, 2310 FWL	T18S, R32E, SEC 23 660 FSL, 1980 FEL	T18S, R32E, SEC 24 660 FNL, 1980 FML	T18S, R32E, SEC 24 660 FNL, 660 FML
LEASEMELL		FED L#3	FED L#6	FED L#7 okd(EDITH FED #1)	FED L#2	GOVERNMENT K #2	FED F#3	QUERECHO FED #1	QUERECHO FED #2	FED L#1	CINCO DE MAYO FED #1	FED P#1
OPERATOR		MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEMBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	вта	MEWBOURNE OIL CO.

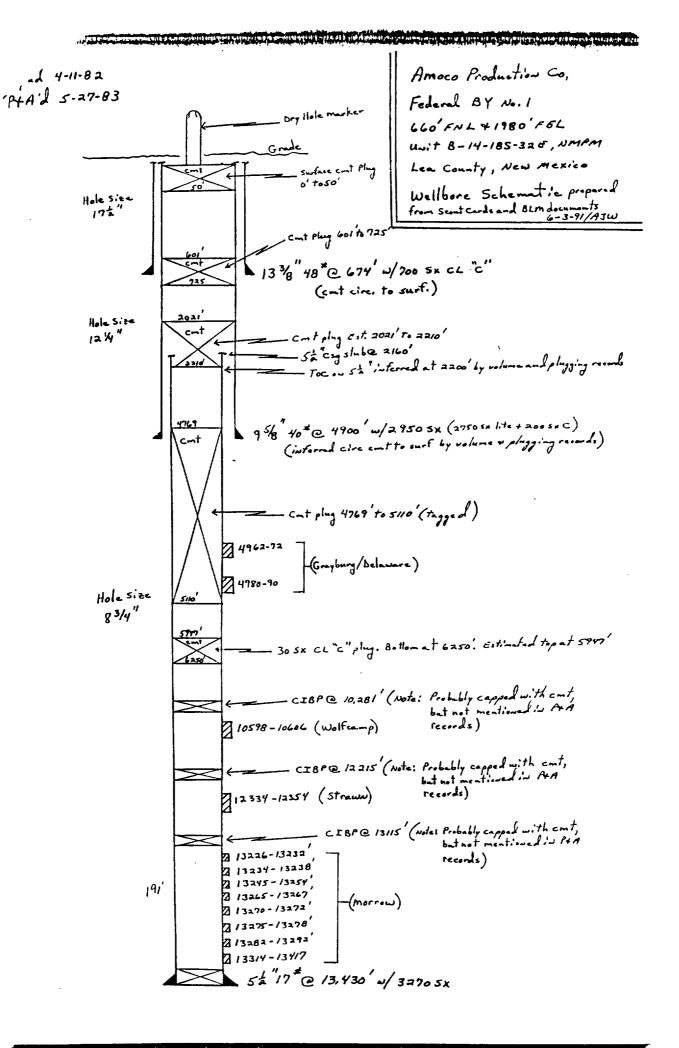
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COMPLETION & COMMENTS		OPEN PERFS 8468'-8524'	PERF & PROD 8492'-8567 P&A	PERF & PROD 8534'-8568' CIBP @ 8440' OPEN PERF'S 6650'-6670' SQZ 6650'-6670' W/ 219SX CLEAN OUT TO 8654' OPEN PERF'S 8534'-8568'	PERF & TEST 8651-8655 SQZ 8651-8655 W/ 505X PERF & TEST 8612-8620 SQZ 8612-8620 W/ 75SX OPEN PERFS 6860-6875	PERF & TEST 13186'-13530' SQZ HOLES & 8850 W/ 200 SX RET @ 8820', PB 8777' TOC @ 7853' OPEN PERFS 8604'-8644'	OPEN PERFS 8515'-8554'	OPEN PERFS 8512'-8572'	RE-ENTRY OF D&A WELL OPEN PERFS 8542'-8574'	PERF & TEST 10196: 10350' PB 10175' PERF & TEST 8439'-8532' SQZ 8439'-8478' OPEN PERFS 8507-8532'	OPEN PERFS 8502'-8568'
₽		8725'	8700	8700	9593'	13750'	8700	8700	8711'	13350'	8710
DATE		8/05/89	12/30/90	2/15/86	1/25/58	12/3/83	1/2/86	11/2/85	10/3/85	5/11/85	38/86
TOP OF CEMENT	2100	SURFACE V SURFACE 1618	SURFACE ^V SURF ACE 1380	SURFACE V SURFACE 5742	1381' \(\sqrt{1150'} \) 1150' 997' 665g'	SURFACE(N) - SURFACE(N) - 11253'	SURFACE C SURFACE 4149	SURFACE(V) / 11/2/85 SURFACE(V) 4130	SURFACE(V) SURFACE(V)	SURFACE(V) SURFACE(V) 7847	SURFACE
CONSTRUCTION	5 1/2 @ 8680' CMT W/ 1425 SX	13 3/8 @ 430' CMT W/ 450 SX 8 5/8 @ 4330' CMT W/ 1850 SX 5 1/2 @ 8725' CMT W/ 1425 SX	13 38 @ 410' CMT W/ 400 SX 8 58 @ 3015' CMT W/ 1125 SX 4 1/2 @ 8700' CMT W/ 1930 SX	11 3/4 @ 350' CMT W/ 725 SX 8 5/8 @ 2800' CMT W/ 2000 SX 4 1/2 @ 8700' CMT W/ 780 SX	13 5/8 @ 1533' CMT WI 100 SX 8 5/8 @ 1534' CMT WI 150 SX 7 @ 2747' CMT WI 100 SX 4 1/2 @ 8890' CMT WI 265 SX	13 3/8 @ 492' CMT W/ 550 SX 8 5/8 @ 4539' CMT W/ 1320 SX 5 1/2 @ 13747' CMT W/ 500 SX	11 34 @ 349' CMT W/ 485 SX 8 5/8 @ 2806' CMT W/ 2100 SX 4 1/2 @ 8700' CMT W/ 1200 SX	11 3/4 @ 350' CMT W/ 485 SX 8 5/8 @ 2800' CMT W/ 2250 SX 4 1/2 @ 8700' CMT W/ 1205 SX	8 5/8 @ 547 CMT W/ 400 SX 5 1/2 @ 8711' CMT W/ 1950 SX	13 3/8 @ 536' CMT W/ 500 SX 8 5/8 @ 4814' CMT W/ 2625 SX 4 1/2 @ 10635' CMT W/ 735 SX	11 <u>24 @ 250</u> ° CMT W/ 485 SX
TYPE		성	P&A	ĕ	텅	덩	OF	OIF	TIO	io of	륑
LOCATION		T18S, R32E, SEC 24 1980 FNL, 330 FWL	T18S, R32E, SEC 24 2310 FSL, 330 FWL	718S, R32E, SEC 24 660 FSL, 660 FWL	718S, R32E, SEC 25 660 FNL, 1980 FWL	T18S, R32E, SEC 25 1980 FSL, 660 FML	T18S, R32E, SEC 26 660 FNL, 660 FEL	718S, R32E, SEC 26 660 FNL, 2310 FEL	T18S, R32E, SEC 26 660 FNL, 1960 FWL	T16S, R32E, SEC 26 660 FNL, 660 FWL	T185, P22E, SEC 26
LEASEMELL		FED P#2	HANLEY "24" FED #1	FRENCH FED#1	SWEENY FED #1	U.S. 25 FED COM #1	BURLESON FED #2	BURLESON FED #1	SPRINKLE FED #2	SPRINKLE FED #1	SPRINKLE PED #3
OPERATOR		MEWBOURNE OIL CO.	HANLEY PETRO.	MEWBOURNE OIL CO.	HAYGO	ENFON	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.

					July.		Jan.	1		
COMPLETION & COMMENTS		PERF & PROD 8823-8836' CIBP @ 8805' OPEN PERFS 8541-8587' RBP W/ 20'SAND @ 8500' OPEN PERFS 5626-5638'	PERF & TEST 8547-9616' RET @ 8566' PHOD 8547-8557 PB TO 8475' OPEN PERFS 5652-5667	PERF & TEST 10471'-10584' BP @ 10455' PERF & TEST 8876'-9952' BP @ 9805' PERF & TEST 8836'-9606' SQZ 8536'-9606' PERF & PROD 9374'-9567' CIBP @ 9309' OPEN PERFS 5620'-5632'	OPEN PERFS 8360'-8486'	OPEN PERFS 12625':12791'	OPEN PERFS 8504'-8534'	OPEN PERFS 8501'-8530'	OPEN PERFS 8470'-8532'	PERF & PROD 12693·12814' PERF & TEST 9810'-9978'
6		9700	8730	11150	8971'	12898'	9020	,0206	. 0506	13061
DATE		1/28/87	1/26/86	925.86	11/30/85	10/31/76	.8/12/87	5/14/85	3/16/86	623/78
TOP OF CEMENT	SURFACE S219	SURFACE V SURFACE 5212	SURFACE V	SURFACE(V) SURFACE(V) 7122	SURFACE SURFACE SURFACE	SURFACE(M) SURFACE(M) 10327	SURFACE(V) SURFACE(V) 2911'	SURFACE(V) SURFACE(V) 3118(CBL)	SURFACE(V) SURFACE(V) 4888	SURFACE .
CONSTRUCTION	8 5/8 @ 2767 CMT W/ 1700 SX 5 1/2 @ 8710' CMT W/ 700 SX	13 3/8 @ 353' CMT W/ 370 SX 8 5/8 @ 2810' CMT W/ 1050 SX 5 1/2 @ 9700' CMT W/ 900 SX	113/4 @ 350' CMT W/ 485 SX 8 5/8 @ 2804' CMT W/ 2000 SX 4 1/2 @ 8729' CMT W/ 1700 SX	13.38 @ 352' CMT W/ 350 SX 8 58 @ 3008' CMT W/ 1500 SX 5 1/2 @ 10779' CMT W/ 600 SX	13.38 @ 1125' CMT W/ 1120 SX 8 58 @ 4480' CMT W/ 2400 SX 5 1/2 @ 8972' CMT W/ 1625 SX	13 3/8 @ 650' CMT W/ 650 SX 9 5/8 @ 4540' CMT W/ 2975 SX 5 1/2 @ 12898' CMT W/ 550 SX	13 3/8 @ 460' CMT W/ 485 SX 8 5/8 @ 4248' CMT W/ 1500 SX 5 1/2 @ 9020' CMT W/ 1225 SX	13 3/8 @ 4542' CMT W/ 475 SX 8 5/8 @ 4542' CMT W/ 2600 SX 5 1/2 @ 9020' CMT W/ 1400 SX	13 3/8 @ 440' CMT W/ 450 SX 8 5/8 @ 4310' CMT W/ 1800 SX 5 1/2 @ 8052' CMT W/ 835 SX	13.38 @ 441' CMT W/ 550 SX 8 5/8 @ 4505' CMT W/ 1500 SX
TYPE		J	OIF	팅	₹	엉	OIL	OIF	ol.	5
LOCATION	2310 FNL, 330 FWL	T18S, R32E, SEC 26 2310 FNL, 1650 FM.	T18S, R32E, SEC 26 2310 FNL, 2310 FEL	T18S, R32E, SEC 26 1980 FSL, 1980 FWL	T18S, R32E, SEC 27 660 FNL, 530 FEL	T18S, R32E, SEC 27 660 FNL, 1980 FEL	T18S, R32E, SEC 27 1980 FNL, 1980 FWL	T18S, R32E, SEC 27 2310 FNL, 2310 FEL	T18S, R32E, SEC 27 1980 FNL, 330 FEL	T18S, R32E, SEC 27 1980 FSL, 1980 FWL
LEASEMELL		SPRINKLE FED #4	P. BURLESON FED#3	P. PELEAN*1	FED E#11	FED E#1	FED E#13	FED E#10	FED E#12	FED G#1
OPERATOR		SANTA FE ENERGY	ANADARKO PETRO. CORP. BURLESON FED#3	ANADAPKO PETRO. CORP. PEJE-AN #1	MEWBOURNE OIL CO.	MEMBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.	MEWBOURNE OIL CO.
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COMPLETION & COMMENTS	RET @ 9950' CIBP @ 9850' W/ 105X PERF & PROD 9750'-9776' CIBP @ 9700' PERF & PROD 8862'-8924' CIBP @ 8800' W/ 15' CMT OPEN PERFS 8506'-8538'	PERF & TEST 12723*12838* PERF & TEST 11822*11935* CUT 5 1/2 & RESET @ 8700* PERF & PROD 8538*850* CIBP @ 6400* PERF & TEST 6254*6277* CIBP 4200* PERF & PROD 3910*4035* P&A
£		14330
DATE		/ <i>2715</i> 8
TOP OF CEMENT		SURFACE SURFACE 7284' 6419'
CONSTRUCTION	5 1/2 @ 13061' CMT W/ 1395 SX	13.38 6 753° CMT W/ 750 SX 9.58 6 4548° CMT W/ 1300 SX 5.12 6 13004° CMT W/ 1750 SX 5.12 6 8700° CMT W/ 600 SX
TYPE		Q .
LOCATION		T18S, R22E, SEC 27 660 FSL, 1880 FML
LEASEMELL		ANADARDO#1 od(Q. P. UNIT #2)
OPERATOR		MEWBOURNE OIL CO.



ITEM VI OF NEW MEXICO OCD FORM C-108 Plugged Well Detail

1	вта		well Detail Mayo Fe <u>deral</u>		
15 sx. @ 50'	orenation 1		LEASE		
15 sx. @ 50'	Sche	matic	Ta	bular Data	
		757' 50 sx. @ 810' 50 sx. @ 2000' CIBP @ 3900' 4014'-4290' sqz. w/30 sx. Shoe @ 4657' Cement 4667'-4767	Size 13-3/8 TOT Surface Hole size 16" Intermediate Casing Size 9-5/8 TOT Surface Hole size 10-3/4" Long string Size N.A. THOC Total depth 14, Injection interval	Cemented with feet determined by Cemented with feet determined by	1500 circ.
nankan ah	Tubing aire	lined	with	(-)	eet in a
pecket ac			packer	afiai, at	feat
(brend and model) (or describe any other casing-lubing seel). Other Data 1. Name of the injection formation 2. Name of Field or Pool (if applicable) 3. In this a new well drilled for injection? /7 Yes /7 No					

ITEM VI OF NEW MEXICO OCD FORM C-108 PLUGGED WELL DETAIL

HANLEY PETRO, INC. HANLEY 24 FEDERAL	_
III EROTUI	
1 2310 FSL, 330 FWL 24 18S 32E WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE	
Schematic Tabular Outa	
20 SXS @ 55' 12 3/9	
Size 13 370 " Cemented with 400	
410' tor Surface reet determined by Calcn.	
35 sxs @ 460' Hole size	
CMT 1981'-1825' Intermediate Casing	
Size 8 5/8 - Cemented with 1125	5×.
Toc Surface feet determined by Calco	
25 sxs @ 3000' Hole size	
(3) 3015'	
tong string	
Size 4 1/2 " Cemented with 1930 THE 1380' feet determined by Calch.	
25 sxs @ 4900' Hole size 7 7/8"	
Tatel depth 87001	
CI CI	
Injection interval	
(perforated or open-hole, indicate which)	
$\langle \cdot \cdot \rangle$	
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£) }	. 5%
\mathcal{G}	
\{\bar{\}\}	
CIRD & CATEL with 20 and	
CIBP @ 8375' with 20 sxs cement Perfs 8492'-8567'	
المسيال 8700 ' عام 1986 - المسيال	
NOTE: Cut and pulled 1932' of 4 1/2"	
Tubing sizelined with(metarial) set	in .
(meterial)	
(brand and model)	••
(or describe any other casing-tubing seal).	
Other Data	
1. Name of the injection formation	
2. Name of field or Pool (if applicable)	
3. In this a new well drilled for injection? 17 Year 17 No.	
If no, for what purpose was the well originally drilled?	
4. Hee the well ever been perforeted in any other zone(a)? List all such perforated in and give plugging detail (socks of cement or bridge plug(a) used)	i crvale
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (poul	
this erse.	

ITEM VI OF NEW MEXICO OCD FORM C-108 PLUGGED WELL DETAIL

	MEWBOU	IRNE OIL CO.	ANADARKO F	EDERAL	· · · · · · · · · · · · · · · · · · ·
		660 FSL, 1980 FV		18S	32E
	WELL NO.	FOOTAGE LOCATION	SECTION	10MNSH1P	RANGE
	<u>Sch</u>	emetic	1	Tabular Duta	
BURLESON MEWBOURNE		20 sxs plug 64' to surf 753'-shoe 45 sxs cement plug @ 650' BP @ 3650' with 15 sxs on top Perf 3910'-4035' BP @ 4200' 4589'-shoe 5½" stub, depth?, plugging info? Perf 6254'-77' BP @ 6400'	Surface Casing Size 13 3/8 100 Surface Hole size 16 Intermediate Casing Size 9 5/8 100 Surface Hole size 10 Long string (See Size 100 Hole size 100 Injection interval	feat determined b	th 1300 sx. y Calcn.
SHELL OIL		Perf 8538'-60' 5½" @ 8700' cement with 600 5½" stub, depth? Perf 11922'-35' Perf 12723-12838' 5½" @ 13004' cement	plug information	n. @ 5947' n? (Shell Oil (
	TD =	14337'			
	Tubing siz	relinea			set in a
	(or deecr	brand and model) iba any other casing-tubing			
	•	of Field or Pool (if appli is a new well drilled for		/7 No	
		, for what purpose was the	- -		
		he well ever been perforat ive plugging detail (sucks		plug(s) used)	
		the depth to and name of a	ny overlying and/or u	nderlying oil or ge	e zones (poula) in
		 		·····	

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ITEM VII OF NEW MEXICO OCD FORM C-108 DATA ON PROPOSED OPERATIONS QUERECHO PLAINS BONE SPRING SAND UNIT

- ITEM VII (1) Anticipated average injection rate is 650 bwpd/injector.

 Proposed maximum injection rate is 10000 bwpd for the unit.
- ITEM VII (2) The injection system will be operated as a closed system.
- ITEM VII (3) As a result of no detrimental results from injecting a heavy (.50 psi/ft) Delaware water in test injection wells Federal E#11 and Government K#2, Mewbourne requests a maximum injection pressure of 2000 psi. A less heavy (.45 psi/ft) mixture of Double Eagle, Bone Spring and Delaware water is planned for the full flood. Anticipated average injection pressure is 1800 psi.
- ITEM VII (4) The source of injection water for the subject unit will be fresh water supplied by the City of Carlsbad's Double Eagle system, Delaware produced water and Bone Spring produced water. Agreement has been secured with the City of Carlsbad for the rights of up to 12000 BWPD. A copy of this water rights agreement, as well as a copy of the water analysis and core test results using this water is attached.
- ITEM VII (5) Not applicable.

ITEM VIII OF NEW MEXICO OCD FORM C-108 GEOLOGIC DATA ON THE INJECTION ZONE & UNDERGROUND DRINKING WATER QUERECHO PLAINS BONE SPRINGS SAND UNIT

The zone being targeted for water injection at Querecho Plains is the First Bone Spring sand at depths from 8328'-8620' in the well Federal L NO. 4, Section 23, T18S, R32E. The First Bone Spring sands are a sequence of well consolidated sandstone, siltstone, and shale strata, with localized carbonate deposition, of Permian age cemented with calcareous material. An eight percent porosity cut off is used to determine net pay as porosity less than eight percent is considered impermeable at the existing and proposed reservoir pressure and reservoir fluid regimes. Net pay isopach maps contained in the engineering report portion of the unit plan show the areal extent of the targeted sands. Impermeable carbonate deposits exist above and below the targeted sands thus defining the permeable limits of the reservoir. All injected fluids should remain in the reservoir with the exception of cycling to the surface though wellbores.

Based on communications with the New Mexico State Engineer's Roswell office (Ken Fresquez) and OCD files at Hobbs there appears to be only one fresh water well within T18S & R32E. This well's total depth was 270' and is located in the NW, NW, SE, SE, NW of section 20 (3 miles away from the nearest proposed injector). The source strata tapped by this well is the Triassic "Red Beds" and the only other strata Mr. Fresquez referred to as potentially fresh was the Alluvium which is shallower than the "Red Beds". There are no known fresh water strata underlying the Bone Spring.

ITEMS IX THROUGH XII OF NEW MEXICO OCD FORM C-108 OUERECHO PLAINS BONE SPRING SAND UNIT

- ITEM IX. All wells of the proposed unit have an existing fracture stimulation. It is anticipated that all wells will be treated with acid at least once during the life of the unit.
- ITEM X. All logging and test data for the existing wellbores exist on file with the state of New Mexico Oil Conservation Division (OCD) and will not be resubmitted with this application.
- ITEM XI. As stated in ITEM VIII, it appears the only strata within one mile of our proposed unit which contains water of possible drinking quality is confined to 270' and shallower. No contamination of this drinking water should occur as all existing wellbores which penetrate the Bone Spring have surface casing set at a minimum depth of 350' with cement completely circulated behind this casing from setting depth to surface. In addition and to the best of my knowledge there are no fresh water wells within one mile of our proposed injectors.
- ITEM XII. After reviewing the geology of the Bone Spring Sand strata in a one and one-half mile radius around the proposed unit area, no evidence appears of fractures or any hydrologic connection between the target sands and any overlying or underlying strata.

CAPROCK LABORATORIES, INC. 3312 BANKHEAD HIGHWAY MIDLAND, TEXAS 79701 (915) 689 - 7252

May 21, 1992

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

Attention: Kevin Mays

Subject: Water Compatibility Study

Gentlemen:

Presented in this report are the final results of a water compatibility study performed on 5 samples of produced water provided to this laboratory by Core Laboratory on behalf of Mewburne Oil Company. API Water Analysis was performed on each of the samples to determine their ionic characteristics. Based on these analyses, the scaling tendency with respect to cacium carbonate and calcium sufate were calculated and reported on May 19, 1992 (our Job Number 9205032). The samples were physically mixed to determine if precipitates would form. Turbidity was measured as percent transmittance on each of the combinations at 420 nanometers wavelength on a Milton Roy Model 601 Spectrophotometer.

The turbidity data are presented in this report and indicated that the water from the Federal "E" #5 tank battery (Queen Formation) and the water from the Cedardrake Federal #4 well formed precipitates whe combined in the ratios tested (very slight decreaces in transmittance were observed). Additional analyses were performed on the waters to determine their barium concentrations and are also presented in this report. Based on calculations from theoretical combinations, all of the waters have a tendency to form both calcium carbonate and calcium sulfate scale on their own and these tendencies do not increase when mixed. The fresh water from Double Eagle and the Delaware produced water from the Cedardrake Federal #4 well both have barium and therefore presents the possibility of barium sulfate scale formation when combined with waters high in sulfate.

In conclusion, based on all of the analyses and physical combinations of these waters, the Delaware produced water from the Jewitt Feed #1 appears to be the most compatible water to the Bone Springs water from the Federal "L" lease.

Respectfully yours,

≾ames L. Pritchard, Lab Manager

Caprock Laboratories, Inc.

Jun 2 Rith



Well No.:

Job No.:

APROCK ABORATORIES,

3312 Bankhead Hwy. Midland, Texas 79701 (915) 689-7252 FAX # (915) 689-0130

WATER ANALYSIS REPORT

MANZANO OIL Dil Co. : Lease :

JEWITT FEED # 1

9205032

Sample Loc. Date Sampled: DELAWARE PROD.

*MEQ/L

EQ. WT.

Attention

Analysis No. : 2 MG/L

ANALYSIS

6.550 pH Specific Gravity 60/60 F. CaCO₃ Saturation Index @ F. 1.165 @ 80 F. +1.052 @ 140 F. +2.812

Dissolved Gasses

Hydrogen Sulfide Carbon Dioxide Dissolved Oxygen Not Determined Not Determined

Cations

7.	Calcium	(Ca**)		24,529	/ 20.1 =	1,220.35
в.	Magnesium	(Mg**)		2,772	/ 12.2 =	227.21
9.	Sodium	(Na·)	(Calculated)	52, 982	/ 23.0 ≈	2,303.57
10.	Barium	(Ba'')		0.0		•

Anions

12. 13. 14.	Hydroxyl (OH ⁻) Carbonate (CO ₃ ·) Bicarbonate (HCO ₃ ·) Sulfate (SO ₄ ·) Chloride (Cl ⁻)	0 0 61 750 132,594	/ 17.0 = / 30.0 = / 61.1 = / 48.8 = / 35.5 =	0.00 0.00 1.00 15.37 3,735.04
17.	Total Dissolved Solids Total Iron (Fe) Total Hardness As CaCO,	213,688 15 72,665	/ 18.2 =	0.84

19. Resistivity @ 75 F. (Calculated) 0.001 /cm.

LOGARITHMIC WATER PATTERN

	/med/ C:								
la	 	 	;!!!!! i -	 					Cl
а	1111111	 	<u> </u>	#11111-1	<(11 111	1-1111111	+- + + + + i }}}	~++++	нсоз
lg	hiiii + 1 -	 	<u> </u> -	111111111	-+++	- i 	-+++ ;#	-+ : ++++ 	S04
Oo		 	ÖÖ Eq	10 1	1 1	0 10 per	00 10	000 1	C03 0000
C	alcu	lated	[Cạ l	cium	Sulf	ate	solub	nil <u>i</u> t	y in

brine

Na HCO₃ NaSO, NaC1

Ca(HCO₃)₂

Mg (HCO₃)₂

CaSO.

CaCl2

MgSO.

MgCL

60.19 47.62 84.00

71.03

58.46

81.04

68.07

55.50

73.17

PROBABLE MINERAL COMPOSITION

227.21 10,820 0.00

EQ. WT. $X \times meq/L = mg/L$.

1,203,98

1.00

15.37

0.00

0.00

0 0.00 0 2,303.85 134,683

81

0

1,046

66.821

Remarks and Comments:

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CAPROCK LABORATORIES, INC.

7 3312 Bankhead Hwy. Midland, Texas 79701 (9151 689-7252 FAX 1 (9151 689-0130

WATER ANALYSIS REPORT

SAMPLE

Dil Co. : Lease : DOUBLE FACLE. Well No.: FRESH WATER Job No.: 9205032 Sample Loc. : Date Sampled : Attention : Analysis No. : 3

ANALYSIS

MG/L EQ. WT. *MEQ/L

1.	рН			(9.	100)
2	Specific Gravity	60760	F.		- On 9	196
3.	CaCO ₃ Saturation	Index	(d	80	F.	+1.540
			@	140	F.	+2.388

Dissolved Gasses

4.	Hydrogen Sulfide	0.0
5.	Carbon Dioxide	Not Determined
6.	Dissolved Oxvgen	Not Determined

Cations

7.	Calcium	(Ca**)		200	/ 20.1 =	9.95
8.	Magnesium	(Mg**)		304	/ 12.2 =	24.92
9.	Sodium	(Mg**) (Na*)	(Calculated)	2,507	/ 23.0 =	109.00
10.	Barium	(Ba'')		6	/ 68.7 =	0.09

Anions

12. 13. 14.	Carbonate Bicarbonate	(HCO ₃ -) (SO ₄ -)	0 183	11	17.0 30.0 61.1 48.8 35.5	=======================================	0.00 0.00 3.00 1.02 139.80
	Total Dissol		8,213	,	18 2	=	0.05

17. Total Iron (Fe)
18. Total Hardness As CaCO.

10.	lotal Hardness As CaCU ₃	1,752
19.	Resistivity @ 75 F. (Calculated)	0.685 /cm.

	LOGARITHMIC		PATTERN			
¥meq/L.						

					•				
Na	 	(!!!!!! 	- 	 	 	اللانسا	- 	- 	Cl
Са	 	 	- 	Hittit I	- jettiili	- ++++++	~ i 4++111	-1+1111	нсоз
Mg	 	 	- 1111114	L 31 11111	111111	-++++;;		- i - i - i - i i	S04
Fe	 		- 	THINK THE	-1-111111	. , , , , , , , , , , , , , , , , , , ,			CD3
*Milli Equivalents per Liter									
_									_

Calculate	ed Calcium S	Sulfate so	lubility in
this bri	ine is 2.81	14 mg/L. a	ubility in 20 F.

	KD, 2	
Analyst		

PROBABI COMPOUND	LE MINERAL. EQ. WT. X	COMPOSIT	10N
	rapie are v	xmeq/L ~	mg/L.
Ca(HCO ₃) ₂	81.04	3.00	243
CaSO₄	68.07	0.94	64
CaCl ₂	55. 50	6.02	334
Mg(HCO ₃) ₂	73.17	0.00	0
MgSO.	60.19	0.00	c
MgCL ₂	47.62	24.92	1,187
NaHCO ₃	84.00	0.00	C
NaSO ₄	71.03	0.00	C
NaC1	58.46	108.87	6,364

Remarks and Comments:



潮 CAPROCK 製 LABORATORIES, INC.

3312 Bankhead Hwy. Midland, Texas 79701 (915) 689-7252 FAX (1915) 689-0130

WATER ANALYSIS REPORT

AMPLE

Sample Loc. : BONE SPRINGS PROD. WATER 1 Co. : MEWBOURNE OIL CO. Lease : FEDERAL L LEASE

Date Sampled : Attention : Analysis No. : 5 11 No.: ob No.: 9205032

NALYSIS

MG/L EQ. WT. *MEQ/L

pH 7.550 / Specific Gravity 60/60 F. 1.110 CaCO₃ Saturation Index @ 80 F. +0.842 @ 140 F. +1.722

Dissolved Gasses

Hydrogen Sulfide 0.0 Not Determined Not Determined Carbon Dioxide Dissolved Dxygen

Cations

7.	Calcium	(Ca'')	3,527 1,556	/ 20.1 = / 12.2 =	
в.	Magnesium	(Mg · ·)	1,000		127.54
9.	Sodium	(Mg'') (Na')	(Calculated) 52,547	/ 23.0 =	2,284.65
10.	Barium	(Ba**)	Not Determined		

Anions

					
	Hydroxyl Carbonate Bicarbonate Sulfate Chloride	(OH-) (CO ₃ -) (HCO ₃ -) (SO ₄ -)	0 0 159 1,300 90.760	/ 17.0 = / 30.0 = / 61.1 = / 48.8 = / 35.5 =	0.00 0.00 2.60 26.64
16.	Total Disso	lved Solids	149,849	\supset	2,556.62
17.	Total Iron	(Fe)	28	/ 18.2 =	1.51

17. 18.

Total Iron (Fe)

Total Hardness As CaCO,

Resistivity @ 75 F. (Calculated) 0.037 /cm.

LOGARITHMIC	WATER	PATTERN
*mc	*(3 /	

	To be the to the total and the								
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υū	} ###+	 	WILL !	1111111		} 	- 		S04
e On			HILL I	1	1111	Z- Huili		11111	C03
*Milli Equivalents per Liter									
С	Calculated Calcium Sulfate solubility in this brine is 4,032 mg/L. at 90 F.								

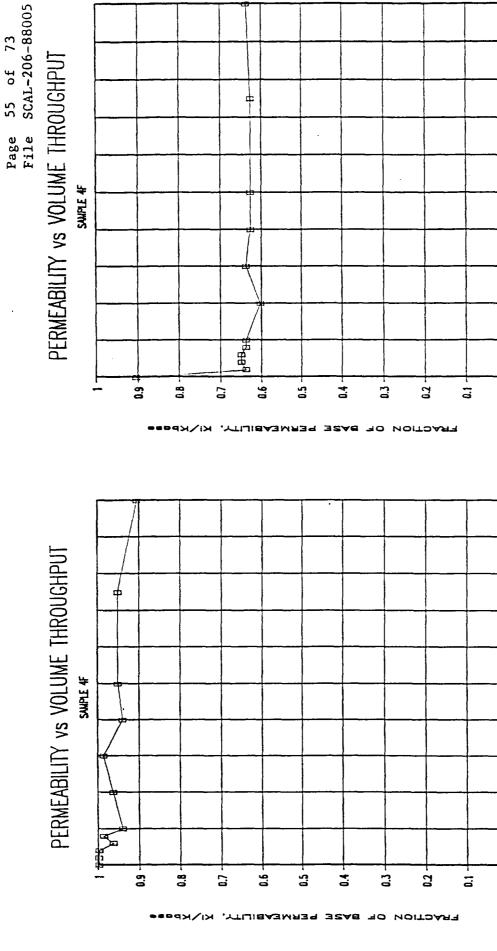
Calculated Calcium Sulfate solubility in this brine is 4,032 mg/L. at 90 F.	

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	4	Ke	0			 _
lyst						 _

PROBAB COMPOUND	LE MINERA	AL COMPOSI X *meq/L	TION = mg/L.
Ca (HCO ₃) ₂	81.04	2:60	211
CaSO.	68.07	26.64	1,813
CaClz	55.50	146.23	8,116
Mg (HCO ₃) ₂	73.17	0.00	0
MgSO.	60.19	0.00	0
MgCL ₂	47.62	127.54	6,074
Na.HCO ₃	84.00	0.00	0
NaSO.	71.03	0.00	0
NaC1	58,46	2,282.85	133,455

naly

emarks and Comments:



VOLINE THROUGHPUT, Pore Volumes ID SIM. CAPROCK WATER

2

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3

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2

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8

8

2

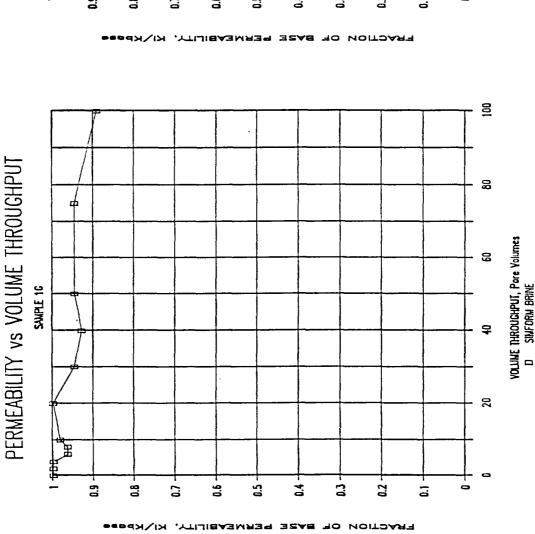
VOLUME THROUGHPUT, Pore Volumes

SINFORM BRINE

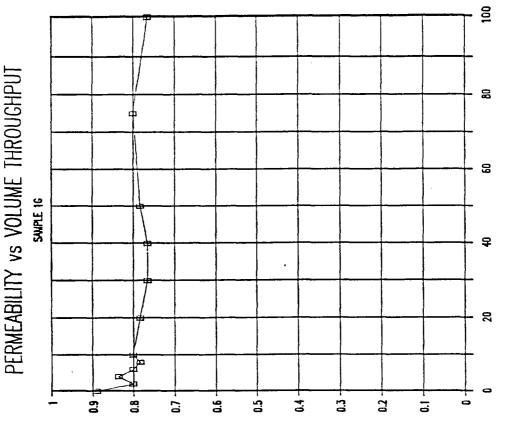
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Western Atlas International



SCAL-206-88005 54 of 73 File Page



VOLLINE THROUGHPUT, Pore Volumes SIN. CAPROCK WATER

WATER CONTRACT

This agreement made and entered into as of the <u>lst</u> day of <u>January</u>,1993, by and between the City of Carlsbad, New Mexico hereinafter referred to as "Seller," and Mewbourne Oil Company, P. O. Box 7698, Tyler, TX 75711, hereinafter referred to as "Buyer,"

WITNESSETH:

WHEREAS. Buyer is the owner and/or operator of certain oil and gas leases covering lands situated in Lea County, New Mexico, and being more particularly described in Exhibit "A" attached hereto and made a part hereof for all purposes, and hereinafter referred to as "the property:" and desires to purchase water from Seller for use in waterflood operations on "the property" upon and subject to the terms and conditions hereinafter set forth, to-wit:

ARTICLE I

Initial Term

Section 1. Buyer agrees that for a period of three (3) years from date of first delivery of water hereunder, herein referred to as "initial term," Buyer will purchase from Seller all water required by Buyer (up to the "maximum daily 12,000 bbls) in Buyer's waterflood operations of "the property." Seller agrees to sell and deliver to Buyer such water as Buyer's waterflood operations require, said water to be supplied from Seller's water leases and water rights situated in Lea and Eddy Counties, New Mexico.

Section 2. Buyer is aware of the costs and expenses incurred and to be incurred by Seller in securing a sufficient supply of water for Buyer's needs and transporting the same to the delivery point, and in consideration of such costs and expense Buyer agrees to purchase exclusively from Seller all water, up to the maximum daily quantity, required by Buyer for the waterflood operations of "the property" during the initial term of this contract, provided Seller is not in default of the terms of this contract.

ARTICLE II

<u>Price</u>

During the initial term of this contract Buyer agrees to pay to Seller for all water delivered to Buyer under the terms of this agreement the sum of \$0.15 (15¢) per barrel of water delivered (a barrel being defined as 42 U.S. gallons), such payments to be made on a monthly basis. The price shall be adjusted on the same percentage basis as the rate per 1,000 gallons is adjusted for the citizens of the City of Carlsbad, New Mexico. A minimum billing of \$150/month will be required during the initial term of this contract.

ARTICLE III

Delivery Point

Delivery of water to Buyer by Seller shall be at the following location:

Section 20, Township 18 South, Range 3 East

Title to such water shall pass from Seller to Buyer at the delivery point.

The above mentioned delivery point shall be changed only by the mutual agreement of Seller and Buyer.

ARTICLE IV

Delivery Obligations

Buyer agrees to notify Seller immediately if sufficient water to meet its requirements (but not in excess of the maximum daily quantity) is not being supplied and Seller agrees that upon receipt of such notice it will promptly take measures to remedy such condition. Buyer agrees to give Seller thirty (30) days written notice if Buyer intends to increase the amount of water which it will require by more than 20% of the average amount required during the previous calendar month. Upon receipt of such notice by Seller, Seller will within thirty (30) days from such receipt have available for Buyer an amount of water sufficient to meet Buyer's requirements up to the maximum daily quantity per day.

ARTICLE V

Option to Purchase Additional Water

At such time as Buyer shall have purchased water for the initial term provided in Article I and shall not be otherwise in default hereunder, Buyer shall have the option to continue to purchase water from Seller on a consecutive year to year basis for a period not to exceed fifteen (15) years from the date of this agreement for waterflood purposes in connection with "the property." Such additional purchases shall not exceed (unless otherwise mutually agreed to by Buyer and Seller) the maximum daily quantity per day. The buyer shall have the option to terminate this agreement during this option period with thirty (30) days notice. However, as long as a meter connection is maintained a minimum billing of \$150/month will be required.

ARTICLE VI

Metering

Seller shall install at its sole cost and expense a valve and totalizing meter at the delivery point to measure the water so delivered. Buyer may, at

its option and expense, install and maintain a check meter or meters downstream from Seller's meter. Buyer shall have the right to inspect Seller's meter in the presence of Seller's representatives. If the accuracy of Seller's meter is questioned, the metering instruments shall be tested and properly adjusted upon the demand of Buyer or Seller, but the measurement shall not be considered inaccurate for accounting purposes unless it is in error by more than five percent (5%). Should any test show an error in excess of 5%, correction shall be made for volumes delivered for one-half of the period elapsed since the last test; but in no event shall the correction be applied for a period in excess of thirty (30) days. In the event any test demanded by Buyer shows an error of more than 5%, the cost of such test shall be borne by the Seller; however, if any error is less than 5%, such cost shall be borne by the Buyer.

ARTICLE VII

Law, Regulations and Force Majeure

Section 1. This agreement shall be subject to all valid and applicable laws, orders, rules and regulations of any duly constituted governmental authority.

Except for Buyer's obligations to make payments for water delivered hereunder, neither party hereto shall be liable for any failure to perform the terms of this agreement when such failure is due to "force majeure" as hereinafter defined, provided that the party claiming "force majeure" which results in a substantial failure of performance shall give the other prompt written notice thereof. The term "force majeure" as employed in this agreement shall mean acts of God, strikes, lockouts, or industrial disturbances, civil disturbances, arrests and restraints from rules and people, interruptions by government or court orders, present and future valid orders of any regulatory body having proper jurisdiction, acts of the public enemy, wars, riots, blockades, insurrections, inability to secure labor or materials, including inability to secure materials as a result of allocations promulgated by authorized governmental agencies, epidemics, landslides, earthquakes, fires, storms, floods, washouts, explosions, breakage or accident to machinery or lines of pipe, freezing of wells or pipe lines, partial or entire failure of water supply, or any other cause, whether of the kind herein enumerated or otherwise, not reasonably within the control of the party claiming "force majeure." Nothing herein contained; however, shall be construed to require either party to settle a labor dispute against its will.

ARTICLE VIII

Use of Water

The water furnished by Seller to Buyer is to be used only for waterflooding and repressuring on "the property." In this connection, the Buyer shall have the exclusive right to transport water sold under this agreement from the delivery point to any portion of "the property" for the uses specified herein.

ARTICLE IX

Notices

All notices permitted or required to be given under the provisions hereof shall be sent by certified or registered mail, or by Western Union Telegram prepaid, addressed to the parties hereto as follows:

City of Carlsbad, New Mexico P. O. Box 1569 Carlsbad, New Mexico 88221

> Mewbourne Oil Company P. O. Box 7698 Tyler, TX 75711

ARTICLE X

Miscellaneous

i de

Section 2. Buyer agrees to pay to Seller all sums due for water delivered under this contract to Buyer within twenty (20) days after receipt of Seller's invoice. If payment is not made within thirty (30) days after receipt of Seller's invoice the unpaid balance shall bear interest at the rate of eight percent (8%) per annum from due date until paid and Seller shall have the right to suspend the delivery of any further water to Buyer until payment in full without liability of any kind. Seller is hereby granted a lien upon all equipment and property of Buyer on "the property" and upon the working interest and leasehold estate of Buyer therein to secure the payment of all sums due under the terms of this contract.

- Section 3. The Buyer agrees to pay the Seller a \$200.00 connection fee.
- Section 4. The Buyer agrees to install an air gap at its point of intake and allow representatives of the Seller to inspect to assure compliance.
- Section 5. Seller reserves the right to suspend service temporarily to make necessary repairs or improvements to its water system, provided, however,

Seller shall notify Buyer of any such interruptions and shall prosecute the work with due diligence and with the least possible delay in service.

Section 6. This agreement may be assigned by either party hereto, provided, however, that no assignment or transfer shall relieve either party of its obligations hereunder unless the prior consent of the party is first obtained in writing.

Section 7. This contract will not be considered legal and binding on Mewbourne Oil Company unless or until they obtain a legal right-of-way access to the delivery point on the Carlsbad City System.

IN WITNESS WHEREOF, this instrument is executed as of the day and year first above written.

ATTEST:

CITY OF CARLSBAD, NEW MEXICO

Number & Butter

By: 10

SELLER

ATTEST:

- 5 -

Musbourne Oil Co. B-27-185-3212

Federal E#1

OIL COMEDINA EN ENTENN

10761/10762

Top of Cement Calculation

Final mud properties = 11.8 ppg, 45 visc., FL 4, FC 1/32, pH 10.5

Casing 5-1/2" 23# set at 12,898'

Cement 550 sx. Class H w/.04 of 1% CFR2 (Fluid less additive)

Slurry Volume = 1.06 cu.ft./sx. = 583 cu. ft. of cement

Caliper averages:

	8-5/8"	12,898'-11,782' @ .2407 cu. ft./ft.	268 cu. ft 28 * .019	267 cu. ft.
]	10-1/2"	11,782'-11,756' @ .4363		11 cu. ft.
	8-5/8"	11,756'-11,526'	55 cu. ft≈ 0	55 cu. ft.
	9-1/2"	11,526'-11,504 @ .3272	7 cu. ft≈ 0	7 cu. ft.
	9"	11,504'-11,410' @ .2768	26 cu. ft.	26 cu. ft.
	9-1/2"	11,410'-11,180'	75 cu. ft.	75 cu. ft.
	9"	11,180'-10,666'	142 cu. ft.	<u>141</u> cu. ft.
				582 cu. ft.

Displacement of couplings = .019 cu. ft./coupling.

TOC = 10,666'

Hydrostatic Pressure due to 11.8 ppg mud column @ top of Bone Spring Formation (8335') =

5106 psi

Predicted maximum reservoir pressure in the Bone Spring

@ the E #1 wellbore while waterflooding =

3971 psi

annular have

Proposal For 2000 psi Surface Injection Pressure

1) While testing injectivity of Bone Spring in the Federal E #11 and Government K #2, a very heavy (.51 psi/ft.) water was injected as a source. While keeping the surface pressure @ a maximum of 1650 psi per Order R-9737, a gradient of .70 was achieved.

Gradient =
$$\frac{1650 + 8500' * .51}{8500'} = .70$$

- All injection was contained to the 1st Bone Spring Sand during these 2) tests as evidenced by injection profile logs run in both wells.
- 3) The average frac gradient for the Querecho Plains Bone Spring is equal to .74 as determined by the ISIP of 17 fracture stimulation jobs which Mewbourne pumped at the field.
- 4) A significantly less heavy (.45 psi/ft.) water is proposed for injection water during full flood operations.
- As a result of the less heavy water, a 2000 psi surface pressure will 5) generate a gradient of .69 and should result in all injection staying contained to the unitized formation.

NEW MEXICO.

Memberine FINHER 26

(ASENO 10761/10762

OMPANY: Mewbourne Oil Company

DEPTH: 8500 ft

LEASE: Government K
FIELD: Querecho Plains

ERFORATIONS FROM: O ft

STATUS: Injecting

COUNTY: LEB

JARREL SERVICES, INC. Box 1230 Hobbs, New Mexico 88240

<<Flowing Gradient Survey>>

Date: 11/20/92 @ 10:15 am

CONTACT: Rob Jones

WELL: #2

ZONE: Bone Springs

STATE: New Mexico

OPERATOR: Standefer

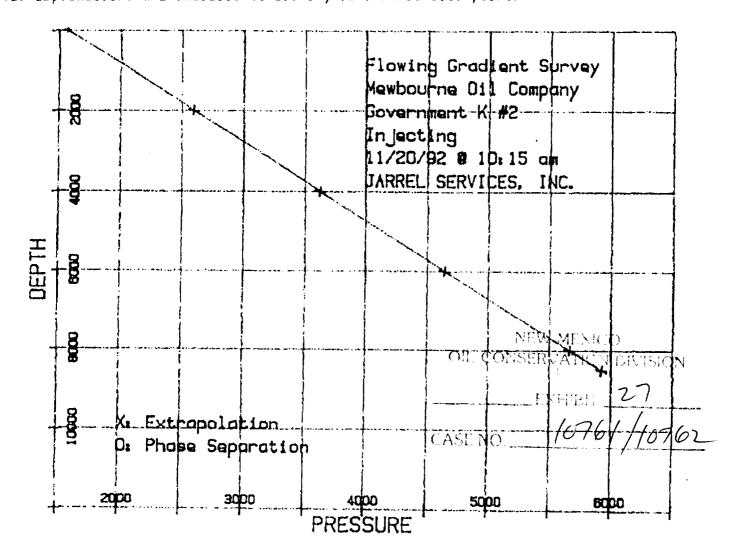
TO: O ft

TEMPERATURE: 143'F

TABULAR DATA

日刊日本日日刊四日日日日日日日日日日	经保证银银 计电子记录 经基本股份 医电子性	医非复数性性 医多种性 医多种性 医多种性 医多种性 医多种性 医多种性 医多种性 医多	电影性的 化聚氯化苯酚 化水流 医水流 医水流 医水流 医水流 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基		
DEPTH	PRESSURE	BRADIENT	EXPLANATIONS		
(ft)	(psi)	(psi/ft)			
		, , , , , , , , , , , , , , , , , , ,	. 医多种性原体性性性性性性性性性性性性性		
0	157 i				
2000	2598	0.514	a ¹		
4000	2598 36247 Wt Avs 4611 0.511	0.513	0.691		
6000	4611 6	0.509	A * *		
8000	5662(0.51	0.511	$\mathcal{Q}_{\mathfrak{C}}$		
8500	5922 <u>)</u>	0.520	7.5		
3300	UILL	0.020			

TE: Explanations are included to clarify calculated data points.





CARDINAL SURVEYS COMPANY

INJECTION PROFILE

COMPANY MEMBOURNE	OIL COMPANY	File No. 11,506				
WELL GOVERNMENT	"K" NO. 2					
FIELD QUERECHO PLAT	SPRINGS					
COUNTY LEA	STATE	NEW MEXICO				
LOCATION: 1950' FSL						
SEC TWP	32-3					
Permanent Datum		. <u>3770'</u> кв <u>3781.3'</u>				
Log Measured From	R 113 ru	Above Perm. Datum DF N/A				
_	C.B.	GL 37701				
Drining Moddard 17041						
Date	10-29-92 & 1	1-27-92				
Depth - Driller	8900'					
Depth — Plug Back	8780 t					
Depth - Logger	87801					
Bottom Logged Interval	8780'					
Top Logged Interval	8100'					
Recorded By	GEUTHER					
Witnessed By	JONES/THURMA	N				
Base Location	ODES <u>SA, TEXA</u>	.5				
Unit No.	8725					
Equip. Operator	SANCHEZ_					
Size Wgt. From	То	Type of Well INJECTION				
13 3/8" 48# SURFAC	E 700'	StatusINJECTING				
8 5/81 32# SURFAC		Type of Fluid WATER				
5 1/2" 15.5# 4408"		Fluid LevelFULL				
& 17#						
Tubing						
2 7/8" 6.5# SURF/	NCE 8257'					
		Injection Rate 822 BPD				
		Surface Pressure 1500 PS1				
Borehole NIW MENIC	00	Surface Temp				
OIL CONSERVATIO	N DIVISION	Bottom Hole Temp. 133.20				

ASENO 10761 /10762

	1	1
E-VECTOR Serial 286 T. DEIECTOR No. 2108 B. DETECTOR 2121 CCL 2314 IEMPERATURE 270		TOWN TACK
Configuration EJECTOR Serial 286. 1. DETECTOR No. 210. 1. DETECTOR 212. CCL 231. IEMPERATURE 270.	Performions: 8342'-49', 60'-63', 8384'-8410', 8412'-15', 54'-56', 73'-96', 99'-8501', 8507'-15'	- ATAG
1 3/8" SCINT. 5'	8384,-8410,	u C
1/11 Tool Size Type Detector Type Det. Specing	8343'-49', 60'-63', 8384'-8411 73'-96', 99'-8501', 8507'-15'	MOLITON
G\R Bose Scole 100 CPS/1" Tool Size Temp. Scole 50 = 1" Type Defecte Caliper Scole Desth Corrected To:	8343'-4 73'-96'	SULVETTED SULVE
G\R Bose Sc Temp. Scale Callper Scale	Perforotion	91.10

PERCENTAGE	100° DROP SHOT PACKER CHECK			31				UPWD, CHANNEL CK.	100+		100*		93**	93**	85%	85	85	85%	62"	52"	NO FLOW"	
RATE BPD	816	937	937	1041	1041	1041	1041	1	1041	1041]	937	1041	937	937	852	852	852	852	625	520	!	
но L E S12E	5 1/2" LINER	=	=	=	=	=	1	=	:	:	=	=	:	:	:	=	:	=	=	:	=	T PROFILE
REACTION TIME (SEC.)	61 N/A	10	10	6	6	6	6	DO NOT USE	6	6	10	6	10	10	11	11	11	11	15	18	DO NOT USE	* USED TO PLOT PROFILE
DETECTOR DEPTH	7460	8300	8310	8310	8320	8320	8330	8375	8358	8380	8392	8410	8425	8452	8471	8485	8485	8485	2643	8505	8535	
SLUG NO.	23	21	2.0	19	18	17	16	15	14	13	1.2	11	1.0	0	20	7	9	7	†	r	2	

CONCLUSION:

REPORTED INJECTION RATE 822 BPD @ 1500 PSI.

CONLCUSION CONTINUED:

AVERAGED SLUG NO'S. 16-21 TO ONTAIN 100% RATE. USED RATE OBTAINED, 1006 BPD, FOR 100% RATE TO CALCULATE VELOCITY PROFILE.

USED RUN 2, 2.60 SQUARE INCHES, FOR 100% AREA TO CALCULATE INTENSITY PROFILE.

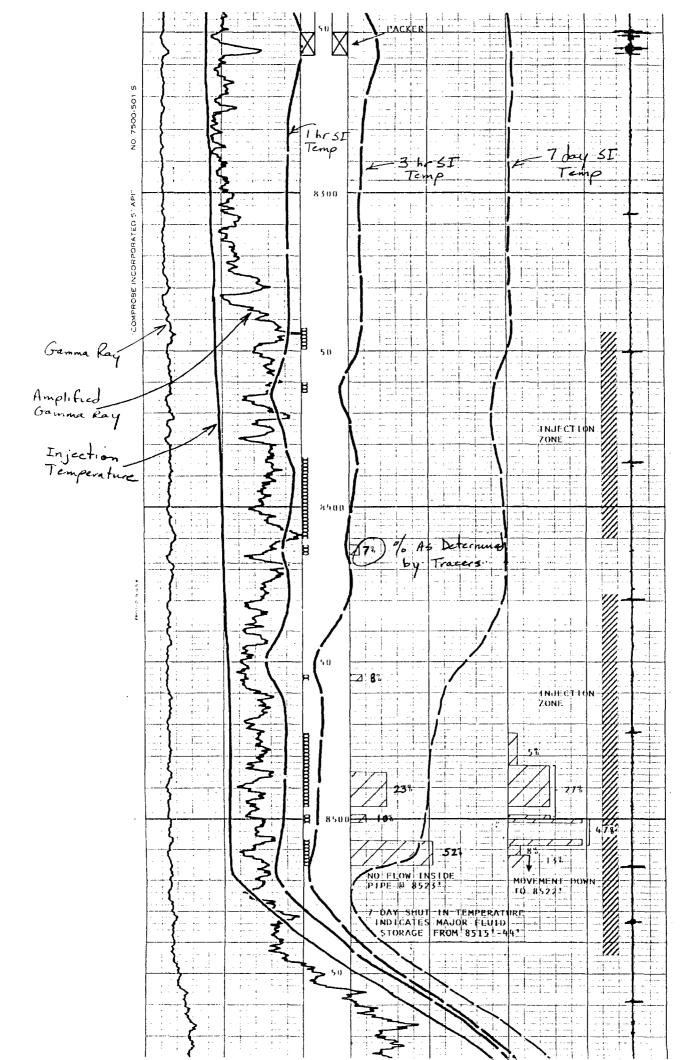
INTENSITIES INDICATE MOVEMENT DUNN TO 8522'. RUNS 12 & 13. NO FLOW INSIDE PIPE @ 8523". S.UG NO. 2, RUNS 15-17.

NO CHANNEL UP FROM TOP OF PERFS INDICATED. SLUG NO. 15, RUN 19. NO PACKER LEAK INDICATED. SLUG NO. 22. DOWNWARD CROSSFLOW FROM 8454'-56' TO 8507'-15'. SLUG NO'S. 27 &

7 DAY SHUT IN TEMPERATURE RUN ON 11-27-92.

7 DAY SHUT IN TEMPERATURE INDICATES INJECTION ZONE FROM 8344'-8410' AND 8428'-8544', WITH MAJOR FLUID STORAGE FROM 8515'-44'.

TEMPERATURES INDICATE CHANNEL DOWN TO 8707".





CARDINAL SURVEYS COMPANY

INJECTION PROFILE

COMPANY MEWB	OURNE OII	L COMPANY		File No. 11,608		
WELL FEDE	RAL "E" I	WELL NO. 11		-		
FIELD QUERECH	O PLAINS	UPPER BONE	SPRINGS	-		
COUNTY LEA		STATE	NEW MEXICO			
LOCATION: 660	FNL & 5	30' FEL				
SEC27	32-E					
Permanent Datum Log Measured From Drilling Measured From	K.B.	<u>17</u> Ft.		KB 3773.51 DF 3772.51 GL 3756.51		
Date Depth - Driller		2-14-92 979*				
Depth - Plug Back	8	8001				
Depth - Logger		775 ' 775'				
Bottom Logged Interval Top Logged Interval		100'	\			
Recorded By	S	COTT				
Witnessed By	P	OUNDS				
Base Location		OBBS, NEW N				
Unit No.		723				
Equip. Operator	<u>G</u>	RANADOS				
Size Wgt.	From	To	Type of Well .	INJECTION		
	SURFACE	44801	Status	INJECTING		
5 1/2" 17#	SURFACE	89091	Type of Fluid	WATER		
			Fluid Level	FULL		
LL Tubing		<u> </u>	ł			
2 7/8"	SURFACE	ì				
		Injection Rate	788 BPD			
		Surface Pressure 1550 PS1				
Borehole	~		Surface Temp. 44.90			
:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Bottom Hole Te	mp. <u>131.8°</u>		
	N 4123774373	Į.	1			

OIL CONSERVATION OF ISION

10761/10762

Serial 2308 No. 291 CTOR 2109 EET. 2110			
Configuration CCL Serial 2 FJECTOR No. 2 TOP DETECTOR 2 BOTTOM DET. 2 TEMPERATURE			
1 3/8" Configuration SCINT.			
G/R Base Scale $\frac{100~{\rm CPS/J^{11}}}{2^{\alpha}=1^{11}}$ Tool Size Temp. Scale Coliper Scale	To: WELEX 1-10-86	Perforations: 83601-881, 84501-861	
G/R Base Scale Temp. Scale Collper Scale	Depth Corrected To:	Perforations:	

•																		
	PERCENTAGE		50' DROP SHOT	PACKER CHECK	100*	106%	100%	1001	UPWARD CHANNEL CHECK	91*	83%	83	33*	71:	53**	22#	DOWNWARD CHANNEL CK.	NO FLOW*
	RATE	BPD	692	1	925	925	925	925	1 1 1	841	771	771	771	661	187	201	ł t	1 1
			7/8" TUBING	=	CASING	=	=	=	=	=	=	=	=	=	=	=	E	=
	HOLE	S 1 2 E	2 7/8"	=	5 1/2" C	=	=	=	=	=	=	=	=	=	=	=	=	:
	REACTION	TIME (SEC.)	AVERAGE	4/x	10	10	10	10	DO NOT USE	11	12	12	1.2	14	19	9 †	DO NOT USE	A/A
	DETECTOR	DEPTH	7905	8230	8275	8300	8320	8355	8365	8370	8380	0048	8450	8460	8470	8480	8488	8500
	SLUG	ON	17	16	15	14	13	1.2	11	10	6	∞	7	9	5	4	2	٣

CONCLUSION:

REPORTED INJECTION RATE @ 788 BPD @ 1550 PSI.

USED SLUG NO'S. 12-15, 925 BPD, FOR 100% RATE TO CALCULATE VELOCITY PROFILE.

AVERAGED RUNS 5 & 6 TO OBTAIN 100% AREA. USED AREA OBTAINED, 4.51 SQUARE INCHES, TO CALCULATE INTENSITY PROFILE.

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CONCLUSION CONTINUED...

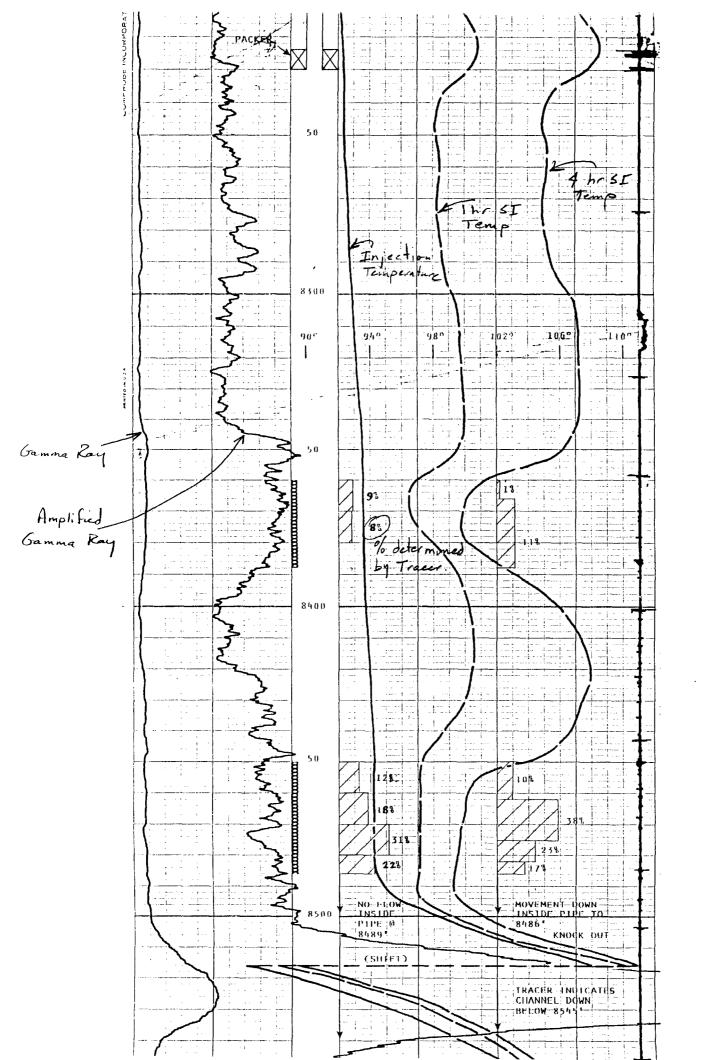
INTENSITIES INDICATE MOVEMENT DOWN INSIDE PIPE TO 8486'. PUNS 13 & 14.

NO FLOW INSIDE PIPE @ 84891. SLUG NO. 3, RUN 18.

TRACER INDICATES CHANNEL DOWN BELOW 8545'. RUNS 15 & 16.
NO CHANNEL UP FROM TOP OF PERFS INDICATED. SLUG NO. 11, RUN 19.

NO PACKER LEAK INDICATED. SLUG NO. 16.

DOWNWARD CROSSFLOW FROM 8360'-63' TO 8470'-82'. SLUG NO'S. 19-21.



SPECIAL OPERATING RULES AND REGULATIONS FOR THE QUERECHO PLAINS BONE SPRING UNIT

Rule 1. Each well completed or recompleted in the Querecho Plains Bone Spring Unit shall be drilled, operated, and produced in accordance with the Special Operating Rules and Regulations hereinafter set forth.

Rule 2. The Director of the Division shall have the authority to approve expansion of the waterflood project by administratively approving the drilling of a new injection well or the conversion of a producing well to an injection well. To obtain administrative approval, the unit operator shall file a Form C-108 with the Santa Fe and Hobbs offices of the Division, and give notice as required by said form. The operator shall furnish proof to the Division that notice has been given. Upon receipt of written waivers from all notified parties, if no objection is received by the Division within 15 days following receipt of the Form C-108 by the Division, the Division may grant approval.

Rule 3. Each producing well shall be located no nearer than 330 feet to the outer boundary of the Querecho Plains Bone Spring Unit, and no nearer than 20 feet to a quarter-quarter section line.

Rule 4. The Director of the Division shall have the authority to administratively approve a well location closer than 330 feet to the outer boundary of the Querecho Plains Bone Spring Unit. The operator shall file the application for permit to drill with the Division, and notify the operators or unleased mineral interest owners in the proration units outside the unit boundary immediately. OIL CONSERVATION DIVISION JGB5\93369.d

EXHIBIT 30

CASE NO. 10761 /10762

offsetting the proposed well, by certified mail. The operator shall furnish to the Division proof that notice has been given. If written waivers are received from all notified parties, or if no objection is received within 20 days after the Director has received the application, the application may be approved.

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF MEWBOURNE OIL COMPANY FOR A WATERFLOOD PROJECT AND QUALIFICATION FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO.

No. 10,762

AFFIDAVIT REGARDING NOTICE

STATE (OF 1	NEW	MEX	ICO)
) ss
COUNTY	OF	SAN	ATI	FE	•)

Kevin Mayes, being duly sworn upon his oath, deposes and states:

- 1. I am over the age of 18 and have personal knowledge of the matters stated herein.
 - 2. I am an employee of Applicant herein.
- 3. Applicant has conducted a good faith, diligent effort to find the correct addresses of interest owners entitled to receive notice of the Application herein.
- 4. Notice of the Application was provided to the interest owners at their correct addresses by mailing each of them, by certified mail, a copy of the Form C-108. Copies of the certified return receipts are attached hereto.

	5.	The	notice	provisions	of	Form	C-108	and	Rule	1207	have
been	compl	lied	with.		1/	/	Va-		,		

Kevin Mayes

SUBSCRIBED AND SWORN TO before me this 30 day of June, 1993, by Kevin Mayes.

Notary Public

Myscomhission expires: 1994.

31

ASI NO 10761/10762

JGB5\93247.d

SENDER: Complete items 1 and 2 when additional	services are desired, and complete items
3 and 4. Put your address in the "RETURN TO" Space on the reverse card from being returned to you. The return receipt fee will	nrovide you the name of the nerson delivered.
to and the date of delivery. For additional fees the followin for fees and check box(es) for additional service(s) reque: 1. Show to whom delivered, date, and addressee's a	g services are available. Consult postmaster sted. ddress. 2. Restricted Delivery
(Extra charge)	(Extra charge)
3. Article Addressed to:	4. Article Number
BLM	P 814 262 883
P. O. Box 1397	Type of Service:
Roswell, NM 88220	Registered Insured
	Certified COD Return Receipt
	Express Mail Ineturn Receipt for Merchandise
	Always obtain signature of addressee
	or agent and DATE DELIVERED.
5. Signature — Address	8. Addressee's Address (ONLY if
X // , /	requested and fee paid)
6. Signature - Agent	1
x/////h/me	
7. Date of Delivery	-
1/2/9/92	
4 6/3/12	<u></u>
P\$ Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212	2-865 DOMESTIC RETURN RECEIPT
والمناسبة المناسبة ا	
SENDER: Complete items 1 and 2 when additional	services are desired, and complete items
3 and 4. Put your address in the "RETURN TO" Space on the reve	rse side. Failure to do this will prevent this
card from being returned to you. The return receipt fee will t	provide you the name of the person delivered
to and the date of delivery. For additional fees the followin for fees and check box(es) for additional service(s) reques	g services are available. Consuit postmaster sted.
 Show to whom delivered, date, and addressee's a 	ddress. 2. Restricted Delivery
(Extra charge) 3. Article Addressed to:	(Extra charge) 4. Article Number
Herschel & Gary Caviness, d/b/a	P 814 262 880
Caviness Cattle Company	Type of Service:
East Star Route	Registered Insured Certified COD
Maljamar, NM 88264	COD Express*Mail Return Receipt for Merchandise
17	Always obtain signature of addressee
//	or agent and DATE DELIVERED.
5. Signature — Address	8. Addressee's Address (ONLY if requested and fee paid)
× day (averas	requesieu una see paias
6. Sighature — Agent	
X '	
7. Date of Delivery	7
10-3-42 PB101101	
PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212	2-865 DOMESTIC RETURN RECEIPT
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SENDER: Complete items 1 and 2 when additions	I services are desired, and complete items
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(Extra charge)	(Extra charge)
3. Article Addressed to:	4. Article Number
James Virgil Linam Estate	P 814 262 881
P. O. Box 743	Type of Service:
Hobbs, NM 88240	Registered Insured
	COD Return Receipt
United NM Toust Co	Express Mail Return Receipt for Merchandise
Administra Sav	Always obtain signature of addressee
Managing Trustee for Estate	or agent and DATE DELIVERED.
5. Signature - Address	8. Addressee's Address (ONLY if
X .	requested and fee paid)
	- Hustand of one of
I The sail	Gnam children.
7. Date of Delivery	Jor Bulasto
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Williams & Son Cattle Co.	P 814 262 882
P. O. Box 30	Type of Service:
Maljamar, NM 88264	Registered Insured
,	COD Return Receipt
	Express Mail Return Receipt for Merchandise
	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature Address	8. Addressee's Address (ONLY if requested and fee paid)
x Belly Williams	- vequence and jee pain,
6. Signature dgent	
7. Date of Delivery	4
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PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212	-865 DOMESTIC RETURN RECEIPT
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for fees and check box(es) for additional service(s) reques 1. Show to whom delivered, date, and addressee's ad	ted. dress. 2. □ Restricted Delivery
(Extra charge)	(Extra charge)
3. Article Addressed to:	4. Article Number
Manzano Oil Corp.	P 814 262 864
1801 W. Second	Type of Service:
Roswell, NM 88201	Registered Insured
	COD Express Mail Express Mail For Merchanding
	TOT Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5 Signature Address	8. Addressee's Address (ONLY if
J. Signature — Aggress	
5. Signature — Address X	requested and fee paid)
x	requested and fee paid)
x	requested and fee paid)
X 6. Signature Agent	requested and fee paid)
X 6. Signature — Agent X	requested and fee paid)
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X 6. Signature - Agent X 7. Date of Delivery	
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3. Article Addressed to:	4. Article Number
Anadarko Petroleum Corp.	P 814 262 863
P. O. Drawer 130	Type of Service:
Artesia, NM 88211-0130	Registered Insured
	Certified COD Express Mail Return Receipt
	for Merchandise
43	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address	8. Addressee's Address (ONLY if
X	requested and fee paid)
6. Signature - Agent	7
x Brucy Walley	
7. Date of Delivery	7
6-2-12	
PS Form 3811, Mar. 1988 + U.S.G.P.O. 1988-21	2-865 DOMESTIC RETURN RECEIP
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and check box(es) for additional service(s) requested. 1. Show to whom delivered, date, and addressee's a	
(Extra charge) 3. Article Addressed to:	(Extra charge) 4. Article Number
Anadarko Petroleum Corp.	P 503 635 857
P. O. Box 1330	Type of Service:
Houston, Texas 77251-1330	Registered Insured
Att: Mike Bridges	☐ COD
Att. Mike Bridges	Express Mail Return Receipt for Merchandise
	Always obtain signature of addressee
	or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature Agent	_
7. Date o UNY 0 3 1993	
PS Form 3811, Apr. 1989 + U.S.G.P.O. 1989-238-8	DOMESTIC RETURN RECEIP
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for fees and check box(es) for additional service(s) request 1. Show to whom delivered, date, and addressee's ad	ted.
(Extra charge)	(Extra charge)
3. Article Addressed to:	4. Article Number
C. W. Stumhoffer	P 503 635 858
Suite 1007, Ridglea Bank Bldg.	Type of Service:
Fort Worth, Texas 76116	│
	Express Mail Return Receipt for Merchandise
	Always obtain signature of addressee
	or agent and DATE DELIVERED.
5. Signature – Address	8. Addressee's Address (ONLY if
x C.W. Stunkoff	requested and fee paid)
6. Signature — Agent	
X 7. Date of Delivery	
7. Date of Delivery	·
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SENDER: Complete items 1 and 2 when additions 3 and 4. Put your address in the "RETURN TO" Space on the rev	
card from being returned to you. The return receipt fee wil to and the date of delivery. For additional fees the following for fees and check box(es) for additional service(s) requipments. Show to whom delivered, date, and addressee's	I provide you the name of the person delivered ng services are available. Consult postmaster ested.
(Extra charge)	(Extra charge)
3. Article Addressed to: Enron Oil & Gas Corp.	4. Article Number P 814 262 867
P. O. Box 2267	Type of Service:
Midland, TX 79702	Registered Insured Cortified COD Express Mail Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5 Signature - Address X // Aurto Ca	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	
PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-2	12-865 DOMESTIC RETURN RECEIP
SENDER: Complete items 1 and 2 when additions 3 and 4.	al services are desired, and complete items
Put your address in the "RETURN TO" Space on the recard from being returned to you. The return receipt fee will to and the date of delivery. For additional fees the following for fees and check box(es) for additional service(s) required.	I provide you the name of the person delivered ing services are available. Consult postmaster ested
1. \Box Show to whom delivered, date, and addressee's (Extra charge)	address. 2. Restricted Delivery (Extra charge)
3. Article Addressed to:	4. Article Number
ВТА	
	P 814 262 879
104 South Pecos	Type of Service:
Midland, TX 79701	Certified COD Express Mail Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X	8. Addressee's Address (ONLY if requested and fee puid)
6. Signature – Agent X	
7. Date of Delivery	
JUN - 9 1993	
² S Form 3811, Mar. 1988 → U.S.G.P.O. 1988-2 ⁻¹	12-865 DOMESTIC RETURN RECEIP
SENDER: Complete items 1 and 2 when addition 3 and 4.	al services are desired, and complete items
Put your address in the "RETURN TO" Space on the recard from being returned to you. The return receipt fee witto and the date of delivery. For additional fees the follow for fees and check box(es) for additional service(s) required. Show to whom delivered, date, and addressee's (Extra charge)	Il provide you the name of the person delivered ling services are available. Consult postmaster rested.
3. Article Addressed to:	4. Article Number
Siete Oil & Gas Corp.	P 814 262 865
P. O. Box 2523	Type of Service:
Roswell, NM 88202-2523	Registered Insured
,	Contified COD Express Mail Receipt for Merchandise
	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent	
X (A) A A A A A A A A A A A A A A A A A A	
* 11 Helich 24 - 22 Charles - 2	
7. Date of Delivery	
Little Control	

SENDER: Complete items 1 and 2 when additional	services are desired, and complete items
Put your address in the "RETURN TO" Space on the reve	erse side. Failure to do this will prevent this
card from being returned to you. The return receipt fee will to and the date of delivery. For additional fees the following	provide you the name of the person delivered g services are available. Consult postmaster
for fees and check box(es) for additional service(s) reque 1. Show to whom delivered, date, and addressee's a (Extra charge)	sted.
3. Article Addressed to: Meridian Oil, Incorporated	4. Article Number P 174 147 380
21 Desta Drive	Type of Service:
Midland, TX 79705	Registered Insured Cortified COD
1	Express Mail Return Receipt for Merchandise
MERCIDIAN OIL 6-14-93	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature – Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent	
7. Date of Delivery	-
6-14-93	
PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-21	2-865 DOMESTIC RETURN RECEIPT
0.0.0.7 .0. 1900 21	. 000 Domizono inzvenio vizezii v
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SENDER: Complete items 1 and 2 when additional	services are desired, and complete items
■ 3 and 4.	·
Put your address in the "RETURN TO" Space on the reve card from being returned to you. The return receipt fee will r	rovide you the name of the person delivered
to and the date of delivery. For additional fees the following for fees and check box(es) for additional service(s) reques	services are available. Consult postmaster ited.
 \(\subset\) Show to whom delivered, date, and addressee's ac 	idress. 2. 🗀 Hestricted Delivery
(Extra charge)	(Extra charge)
3. Article Addressed to:	4. Article Number
Mack Energy Corp.	P 174 147 381
P. O. Box 276	Type of Service:
Artesia, NM 88210	Registered Insured
	Certified COD Express Mail Return Receipt
	for Merchandise
	Always obtain signature of addressee
5. Signature — Address	or agent and <u>DATE DELIVERED</u> . 8. Addressee's Address (ONLY if
X A A	requested and fee paid)
6. Signature /- Agent	-
X Stuc Sandles 7. Date of Delivery	
6-3-93	
	DOMESTIC DETURN DESCRIPT
PS Form 3811 Mar. 1988 * U.S.G.P.O. 1988-212	-865 DOMESTIC RETURN RECEIPT
SENDER: Complete items 1 and 2 when additional	carriege are decired and complete items
Put your address in the "RETURN TO" Space on the rever card from being returned to you. The return receipt fee will p	rovide vou the name of the herson delivered. I
to and the date of delivery. For additional fees the following for fees and check box(es) for additional service(s) reques	services are available. Consult postmaster
 Tor fees and check box(es) for additional service(s) reques Show to whom delivered, date, and addressee's ad 	dress. 2. 🗆 Restricted Delivery
(Extra charge)	(Extra charge)
3. Article Addressed to:	4. Article Number
Yates Petroleum Corp.	P 503 635 859
207 S. 4th Street	Type of Service:
Artesia, NM 88210	Registered Insured
	Express Mail Interest Receipt for Merchandise
	Always obtain signature of addressee
	or agent and <u>DATE DELIVERED</u> .
5. Signature - Address	LO ALL CONTRIC
1 7 9 11 4 2// 1	8. Addressee's Address (ONLY if
X / / A/H / //AA/	8. Addressee's Address (UNLY if requested and fee paid)
6. Signature — Apent	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

 and the date of delivery. For additional fees the follow or fees and check box(es) for additional service(s) req . Show to whom delivered, date, and addressee's (Extra charge) 	ving services are available. Consult postmaster uested. s address. 2. Restricted Delivery (Extra charge)
Article Addressed to: Hanley Petroleum, Inc. 115 W. Wall, Suite 1500 Midland, TX 79701	4. Article Number P 814 262 878 Type of Service: Registered Insured Cortified COD Express Mail Return Receipt for Merchandise Always obtain signature of addressee
Sįgnature – Address	or agent and DATE DELIVERED. 8. Addressee's Address (ONLY if
Signature – Agent	requested and fee paid)
Date of Delivery	
Form 3811, Mar. 1988 * U.S.G.P.Q. 1988-2	212-865 DOMESTIC RETURN RECEIPT
SENDER: Complete items 1 and 2 when addit 3 and 4. Put your address in the "RETURN TO" Space on the refrom being returned to you. The return receipt fee will be the date of delivery. For additional fees the following stand check box(es) for additional service(s) requested. Show to whom delivered, date, and addressed (Extra charge)	verse side. Failure to do this will prevent this card rovide you the name of the person delivered to and ervices are available. Consult postmaster for fees
3. Article Addressed to: Oxy USA, Inc.	4. Article Number P 503 635 860
P. O. Box 50250	Type of Service:
Midland, Texas 79710	Registered Insured COD
Att: Terry Lundquist	Express Mail Return Receipt for Merchandise
	Always obtain signature of addressee
5. Signature — Addressee	PAddressee's Address (ONLY if
X 6. Signature – Agent	
x J. Wolay	2
7. Date of Delivery	
PS Form 3811 , Apr. 1989 + U.S.G.P.O. 1989	DOMESTIC RETURN RECEIPT
·	•
b" space on the went this card from sipt fee will provide to and the date of wing services are and check boxics). Set Co.	Type of Service: Article Number Registered Insured OBOSTY Express Mail COD Express Mail

PS Form 3811, July 1983 447-845 DOMESTIC RETURN RECEIPT

ROYALTY OWNERS

Attest or Witness Day	re signed Name
April Sutherlin 7	1-1-93 Ital
	·
	BEFORE EXAMINER STOGNER
	OIL CONSERVATION DIVISION
	Mulowerse EXHIBIT NO.
STATE OF TEXAS §	CASE NO. 10761/10762
COUNTY OF SMITH 5	
day of JANUARY	ent was acknowledged before me this 67, 1943, by James Allen Brinson, as ne Oil Company, a Delaware Corporation.
	Notary Public State of Toyas
My Commission Expires:	SUE HEARON Notary Public STATE OF TEXAS My Comm. Exp. NOV 30, 1993
STATE OF	g (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	g
The foregoing instrumeday of	ent was acknowledged before me this, for
	19, by, for, corporation.
	Notary Public
My Commission Expires:	

STATE OF	§ (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF	§
day of . 19	was acknowledged before me this, for, a, Corporation.
	Notary Public
My Commission Expires:	
STATE OF EYA:3	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF MIDLAND	9
The foregoing instrument day of, 19	was acknowledged before me this 157 ds, by STEVEN L. BUPLESON
SHARON BEAVER House of Temp Ny Comm. Expires 7-17-95	Notary Public Source
My Commission Expires:	7-96
STATE OF	§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF	§
The foregoing instrument day of, 19	was acknowledged before me this
	Notary Public
My Commission Expires:	

.

Querecho Plains Prospect
Waterflood Project
Bone Spring Sand Unit
T18S-R32E
Lea County, New Mexico

NMOCD Case No. 10761

Working Interest Owners Contact Report

NEW MEXICO
OIL CONSERVATION DIVISION

____EXHIBIT 5a

CASE NO. 10761/10762

Lewis B. Burleson P.O. Box 2479 Midland, TX 79702 (915)683-4747

- 10-16-91 Left Message Steve Burleson to call back (Geologist).
- 10-16-91 Steve said to talk to his father, Lewis go ahead and send offer.
- 10-18-91 Sent offer letter.
- 11-19-91 Out of town will call me back on Friday.
- 11-22-91 Left message.
- 12-16-91 Rec'd letter from Burleson.
- 1-7-92 Sent Assignment form and draft.
- 1-8-92 Talked to Steve Burleson.
- 1-9-92 Sent offer letter for other interest.
- 1-21-92 Meeting with Lewis Burleson.
- 1-21-92 Tele w/ Lewis.
- 1-24-92 Paperwork to Lewis.
- 2-13-92 Will let me know within a week.
- 2-17-92 Sent request for copies.
- 2-26-92 Received copies.
- 3-10-92 Tele w/ Lewis.
- 3-16-92 Tele w/ Lewis.
- 3-23-92 Sent revised paperwork.
- 4-8-92 Tele w/ Lewis.
- 4-14-92 Tele w/ Lewis.
- 4-15-92 Sent copies to Allen Harvey.
- 4-30-92 Allen Harvey sent changes to Lewis Burleson.
- 5-6-92 Out of office.

Lewis B. Burleson (915) 683-4747 Page 2

- 5-19-92 Tele w/ Lewis.
- 6-26-92 Left message.
- 6-30-92 Left message.
- 6-30-92 Tele w/ Lewis.
- 1-8-93 Sent Agreement.
- 4-7-93 Rec'd letter from Lewis dated April 2, 1993.
- 4-26-93 Left message. Per Steve Dad is out of town until Thursday.
- 5-18-93 Told him we are reviewing his interests.
- 5-18-93 Picked up files at Lewis Burleson's office.
- 6-3-93 Made offer.
- 6-4-93 Sent revised data.
- 6-7-93 Said he is reviewing will let us know.
- 6-7-93 Sent follow-up letter.
- 6-15-93 Left message.
- 6-16-93 Left message.
- 6-17-93 Made offer.
- 6-22-93 Made revised offer.
- 6-25-93 Made deal to buy N/2 of 26 and he keeps Sec. 14 ORI. Delivered agreement.
- 6-28-93 Tele w/Lewis.

Ann McReynolds c/o John McReynolds Thirty-Two Hundred 2001 Bryan Tower Dallas, Texas 75201 (214)979-3043

- 5-3-93 Sent offer.
- 6-2-93 Tele with Mr. McReynolds send offer.
- 6-3-93 Sent offer.
- 6-4-93 Sent revised data.
- 6-7-93 Sent follow-up letter.
- 6-10-93 Sent Agreements for sale to be reviewed.
- 6-21-93 CED spoke with John McReynolds law office & sec'y, Sonja Aube who advises Mr. McReynolds had corresponded w/Steve Cobb since Steve did not receive ltr. I requested Ms. Aube to xerox & send copy of letter to S. Cobb.
- 6-25-93 Phoned the McReynolds firm to learn that Ms. Aube and Mr. McReynolds are both out of the office until Monday. Re the captioned interest & status of execution.
- 6-28-93 Tele w/ Ms. Aube: advised they visit today and will probably sign today.

Clarence Stumhoffer & Frieda, wife P. O. box 100416 Ft. Worth, Texas 76185-0416

- 12-11-92 Contacted re-unit proposal.
- 1-27-93 Ltr from Tyler, Ken Calvert asking Stumhoffer to execute signature pages to Unit Agmt.
- 3-25-93 Steve Cobb offer to purchase.
- 5-28-93 Copy of application to reject water into Bone Springs interval. Sent to Stumhoffer.
- 6-2-93 Tele with Clarence.
- 6-4-93 Revisions of Exhibits sent by Tyler office to Stumhoffer.
- 6-7-93 Advise to Stumhoffer from S. Cobb/Midland office, inviting parties once again to join Unit by execution.
- 6-15-93 C. E. Dickenson contracts person secured verbal agreement from Stumhoffer to accept.
- 6-21-93 Ass'mt prepared by Allen Harvey, Attorney sent to Stumhoffer for execution of interests into MOC.
- 6-25-93 CED talked to Mrs. Stumhoffer via telephone.

Querecho Plains Prospect Waterflood Project Bone Spring Sand Unit T18S-R32E Lea County, New Mexico

NMOCD Case No. 10761

Overriding Royalty Interest Contact Report

NEW MEXICO
OIL CONSERVATION DIVISION

EXHIBIT 56

CASE NO. 10761/10762

Gary L. and Candace Jo Bennett P. O. Box 16844 Lubbock Texas 79490

Telephone # 806-794-3368

- 6-3-93 Sent revised data
- 6-7-93 Sent follow-up letter
- 6-11-93 Telephone with Mr. Bennett asked to talk to engineer
- 6-11-93 Ken Calvert telephoned Mr. Bennett will probably sign
- 6-11-93 CED talked to Mr. Bennett on 6-11 and he requested CED to have Ken Calvert call him re-proposed unit. Mr. Calvert did so and CED was advised that Mr. Bennett would probably ratify unit.
- 6-23-93 Telephoned to ascertain if joinder to unit and lien executed. No answer.

John Borg III 324 Henkel Lane Mesa, Arizona 85201-6201 (602)964-8812

John Borg II (602)834-5268

10-1-85	Division	Order	sent -	- not	returned
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- 5-1-86 Follow-up letter
- 3-2-88 Follow-up letter
- 1-8-93 Sent Agreement
- 1-25-93 Sent follow-up letter
- 6-3-93 Sent revised data
- 6-7-93 Sent follow-up letter
- 6-8-93 Left message
- 6-11-93 We are holding monies in suspense no response
- 6-15-93 Sent follow-up letter & was advised by Ken Calvert that Mr. Borg will participate.
- 6-23-93 Telephoned to ascertain if joinder to unit had been executed as stated he would! No Answer!
- 6-28-93 Ditto.
- 6-28-93 Left message with John Borg II.

Richard D. Borgaard P. O. Box 9220 Bend, Oregon 97708

- 6-3-93 Sent revised data
- 6-7-93 Sent follow-up letter
- 6-11-93 Anadarko Division Order Analyst will try to get address
- 6-14-93 Tele with a Borgaard in Bend, Oregon wrong one never heard of Richard Borgaard.
- 6-21-93 Anadarko D. O. Analyst cannot advise of any forwarding address for Ms. Borgaard. At a stalemate at this point as to making personal contact with him.

Pamela Brooks 2545 Tyler Street Eugene, Oregon

1-8-93	Sent Agre	ement							
1-25-93	Sent foll	.ow-up	letter						
6-3-93	Sent revi	sed d	ata						
6-7-93	Sent foll	.ow-up	letter						
6-8-93	Tele with	Ms.	Brooks -	reviewing	not	sure	at	this	time
6-15-93	Sent foll	.ow-up	letter						

Stephen Burleson (son of Lewis) P. O. Box 2479 Midland, Texas 79702-2479

(915)683-4747

6-3-93 Verbal offer to Lewis for S	tephens	ORI
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- 6-4-93 Sent revised data to Stephen
- 6-7-93 Sent follow-up letter to Stephen

SEE WI FILE ON LEWIS BURLESON FOR ADDITIONAL INFORMATION

William J. Casey

Address Unknown

- 5-13-93 Called other interest owners as depicted on Title Opinion and ask if anyone knew whereabouts of Mr. Casey no luck.
- 6-2-93 Check public records of Lea County, New Mexico. Last known address was 1973 in N.Y, N.Y. Found a William Casey but was not the one we are looking for.
- 6-3-93 Tele with Sue Michaels at Anadarko (operator of tract). She advised that Mr. Casey is in suspense "address unknown" for the Anadarko Querecho Plains Deep Unit.
- 6-4-93 Talked to secretary at Margaret Johnson McCurdy's office: she said the last known address was New York in 1953.
- 6-11-93 Called Anadarko again to double check the address of Mr. Casey again, no luck
- 6-21-93 This party's interest is "suspensed" as stated 6-3-93 with no change on his whereabouts! Anadarko D. O. Analyst cannot "enlighten" Mewboune as to current forwarding address.

Ruis Burlium daughter

Nancy Hayes
P. O. Box 2479
Midland, Texas 79702-2479
(915)683-4747

1-8-93	Sent Agreement
1-25-93	Sent follow-up letter
6-3-93	Sent revised data
6-3-93	Verbal offer to Lewis Burleson (father) for Nancy's ORI
6-7-93	Sent follow-up letter

- Rae I. Little, Deceased c/o Raymond Rix 916 S. 9th Stree Kenedy, Texas (210) 583-3739
- 3-28-85 Notified Joye Rix of money in suspense. Need curative instruments to release money.
- 9-4-95 Ditto.
- 6-11-86 Ditto.
- 3-27-87 Ditto.
- 3-8-88 Ditto.
- 6-13-88 Notified Causey Quillian, Attorney handling estate to provide curative instruments.
- 6-24-88 Ditto.
- 1-8-93 Sent Agreement
- 1-12-93 Rec'd "Return to Sender"
- 2-93 Ken Calvert numerous conversations with Little family 5-93
- 3-25-93 Letter to Sylvia Little. Research of Little estate. Money in suspense.
- 3-26-93 Notified Anne Little that we have \$4,976 in suspense. Said they would get back with us
- 6-3-93 Sent revised data to Raymond Rix "in charge of estate"
- 6-11-93 Tele with Mr.Rex requested new package be mailed
- 6-11-93 Sent Agreement
- 6-21-93 Telephoned Raymond Rix residence but rec'd no response attempting to reach him to ascertain if he rec'd Unit Agreement and his places for Rae I. Little interests within unit.

Ann H. Johnson McReynolds

See WI report for Ann H. Johnson McReynolds

www.

Margaret Johnson McCurdy McCurdy Oil Company 2525 Ridgemar Blvd., Suite 300 Ft Worth, Texas 76116

Attn: Mr. L. E. Beardea (817)732-3291

- 6-3-93 Sent package to McCurdy Oil converting of Unit Agmt & Unit Op. Agmt. Requested they review and execute
- 6-7-93 Return receipt rec'd by McCurdy Oil and re-directed to Mewbourne Oil Co., Tyler
- 6-21-93 CED visited by telephone w/Melba Ellis, asst to Mr. Beardea. She acknowledged receipt of package but with Mr. Beardea away until July 2, it will not be executed she (Mrs. Ellis) will call it to the principal's att. execution ASAP @ July 2, 1993

Lita Sabonis

- 312-276-9432
- 1-8-93 Sent agreement
- 1-25-93 Sent follow-up letter
- 2-1-93 Rec'd "Return to Sender"
- 2-1-93 Left message with Peter F. Simpson in Flagstaff, Arizona for whereabouts
- 2-2-93 Got address from Peter: same as we have in our system we have monies in suspense trying to contact since 1985
- 6-11-93 CD checking with Anadarko nothing
- 6-15-93 We are advised by phone conversation with relatives that are joining the Unit, that she will not accept calls or mail from anyone!

Gladys Shannon 1101 Clara Street Ft Worth, Texas 76119 (817)924-9448

- 6-3-93 Sent revised data
- 6-11-93 Per tele. with Ms. Shannon she will do what the two Trammell Estates do.
- 6-11-93 Sent agreement.
- 6-21-93 CED spoke with Ms. Shannon via telephone who advises that she will not execute the joinder since her ORR interest is small.

 Advised Ms. Shannon via letter as to the amount of her ORR and in what tract she retains the ORR.

Nations Bank Texas, N.A., Trustee Under Will of David B. Trammell P. O. Box 2546 Ft. Worth, Texas 70113 Attn: Paul Midkiff

Nations Bank Texas, N.A., Trustee Under Will of Mildred M. Trammell Same address as above

6-3-93 Packages sent to revised Ft. Worth Bank address and rec'd

NOTE: Ms. Gladys Shannon is a signing party for bank if they participate

- 6-15-93 Nations Bank Texas, N.A., advised CED (Midland) & Ken Calvert (Tyler) that package had been rec'd for Wills of (1) David Trammell & (2) Margaret Trammell
- 6-16-93 Rec'd ltr from Nations Bank wherein they will <u>not</u> join with either of these interests due to being to small! Not contesting unit however.

Carol David Trammell, Separate Property P. O. Box 5081 Walnut Creek, California 94596 (510)686-5671

- 6-3-93 Sent revised data
- 6-14-93 Per telephone will review
- 6-14-93 Sent Agreement
- 6-21-93 Per telephone conversation does not want to sign agreement interest too small same as Nations Bank under David & Mildred Trammell

AFFIDAVIT OF PUBLICATION

State of New Mexico, County of Lea.

I, Kathi Bearden

General Manager

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of
weeks.
Beginning with the issue dated
June 13 , 19 93 and ending with the issue dated
June 20 ,19 93
General Manager
Sworn and subscribed to before
me this day of
June , 1993
Charles Ferre
Notary Public.

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

My Commil sion expires

March 15, 1997

(Seal)

LEGAL NOTICE June 13, 20, 1993 NOTICE TO: The following persons, or their unknown heirs: William J. Casey
Gragory P. Panos
Litta Sabonis Please take notice that Mewbourne Oil Company has applied to the New Mexico Oil Conservation Division for statutory (compul-sory) unitization of the Quer-echo Plains Bone Spring Unit, comprised of the following lands: Township 18 South, Range 32 East, N.M.P.M. Section 13: S1/2SW1/4 Section 14: SE1/4 Section 22: E1/2SE1/4, SW1/4SE1/4 Section 23: All Section 24: W1/2NW1/4, SW1/4SW1/4 Section 26: N1/2 Section 27: All Section 28: E1/2 containing 2,400 acres, more or less. Records indicate you own an interest in the above-described lands. This Application will be heard before the Oil Conservation Division at 8:15 a.m. on July 1, 1993, at the Division's offices at 310 Old Santa Fe Trail, Santa Fe, New Mexico. Failure to appear at that time will preclude you from contesting this matter at a later time. HINKLE, COX, EATON, COFFIELD & HENSLEY James Bruce Post Office Box 2068 Santa Fe, New Mexico 87584-2068 (505) 982-4554 Attorneys for Mewbourne

Oil Company

NEW MEXICO
OIL CONSERVATION DIVISION

_____EXHIBIT 6

CASE NO. 10761 /10762

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF MEWBOURNE OIL COMPANY FOR STATUTORY UNITI-ZATION, LEA COUNTY, NEW MEXICO.

No. 10,761

AFFIDAVIT REGARDING NOTICE

STATE	OF	NEW	MEX	(ICO)
)ss
COUNTY	OF	SAI	ATV	FE)

Steven Cobb, being duly sworn upon his oath, deposes and states:

- 1. I am over the age of 18 and have personal knowledge of the matters stated herein.
 - 2. I am a landman for Applicant herein.
- 3. Applicant has conducted a good faith, diligent effort to find the correct addresses of interest owners entitled to receive notice of the Application herein.
- 4. Notice of the Application was provided to the interest owners at their correct addresses by mailing each of them, by certified mail, a copy of the Application. Copies of the notice letters and certified return receipts are attached hereto.
- 5. The notice provisions of Rule 1207 have been complied with.

Steven Cobb

SUBSCRIBED AND SWORN TO before me this 31 Hday

June, 1993, by Steven Cobb.

Notary Public

NEW MEXICO
OIL CONSERVATION DIVISION

JGB5\93B48.d

CASE NO. 10761 /10762

HINKLE, COX, EATON, COFFIELD & HENSLEY

FRED W. SCHWENDIMANN
JAMES M. HUDSON
JEFFREY S. BAIRD*
REBECCA NICHOLS JOHNSON

WILLIAM P JOHNSON STANLEY K. KOTOVSKY JR MARGARET CARTER LUDEWIG

S BARRY PAISNER STEPHEN M CRAMI MARTIN MEYERS MARTIN MEYERS
GREGORY S. WHEELER
ANDREW J. CLOUTIER
JAMES A. GILLESPIE
GARY W. LARSON
STEPHANIE LANDRY
JOHN R. KULSETH. J.R
MARGARET R. MCNETT
BRIAN T. CARTWRIGHT
LISA K. SMITH*
GORERT H. BETHEA: ROBERT H. BETHEAT BRADLEY W HOWARD CHARLES A SUTTON NORMAN D EWART DARREN T GROCE* DARREN T GROCE*
MOLLY MCINTOSH
MARCIA B. LINCOLN
SCOTT A SHUART*
DARREN L BROOKS
CHRISTINE E. LALE

ATTORNEYS AT LAW

ZIB MONTEZUMA

POST OFFICE BOX 2068

SANTA FE, NEW MEXICO 87504-2068

(505) 982-4554

FAX (505) 982-8623

CLARENCE E. HINKLE (190H985) ROY C. SNODGRASS, JR. (1914-1987)

> MACK EASLEY RICHARD S. MORRIS

SPECIAL COUNSEL

June 7, 1993

700 UNITED BANK PLAZA POST OFFICE BOX 10 ROSWELL, NEW MEXICO 88202 (505) 622-6510 FAX (505) 623-9332

2800 CLAYDESTA CENTER 6 DESTA DRIVE POST OFFICE BOX 3580 MIDLAND, TEXAS 79702 (915) 683-4691 FAX (915) 683-6518

1700 TEAM BANK BUILDING POST OFFICE BOX 9238 AMARILLO, TEXAS 79105 (806) 372-5569 FAX (806) 372-9761

500 MARQUETTE N.W., SUITE 800 POST OFFICE BOX 2043 ALBUQUERQUE, NEW MEXICO 87/03 (505) 768-(500 FAX (505) 768-1529

*NOT LICENSED IN NEW MEXICO

LEWIS C. COX
PAUL W EATON
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR
STUART D SHANOR

C. D. MARTIN
ROBERT P TINNIN, JR.
MARSHALL G. MARTIN
OWEN M LOPEZ
DOUGLAS L LUNSFORD
JOHN J. KELLY

NICHOLAS J. NOEDING

T CALDER EZZELL, JR

WILLIAM B. BURFORDS

WILLIAM B. BURFORD'
RICHARD E. OLSON
RICHARD R. WILFONG'
THOMAS J. MCBRIDE
JAMES J. WECHSLER
NANCY S. CUSACK
JEFFREY D. HEWETT
JEFFREY D. HEWETT

JEFFREY D. HEWETT
JAMES BRUCE
JERRY F SHACKELFORD*
JEFFREY W. HELLBERG*
ALBERT L. PITS*
THOMAS M. HINASKO
JOHN C. CHAMBERS*
GARY D. COMPTON*
MICHAEL A. GENSS

MICHAEL A. GROSS THOMAS D. HAINES, JR. GREGORY J NIBERT

DAVID T. MARK MARK C. DOW

ERIC D. LANPHERE

CERTIFIED MAIL RETURN RECEIPT REQUESTED

TO: Persons on Exhibit A

Dear Sirs:

Mewbourne Oil Company has applied to the New Mexico Oil Conservation Division for statutory (compulsory) unitization of the Querecho Plains Bone Spring Unit. A copy of the Application (without Exhibits C, and D) is enclosed, together with a copy of Mewbourne's Application for the Recovered Oil Tax Rate. Agreement and/or Unit Operating Agreement have previously been mailed to you by Mewbourne. Mewbourne's records indicate that you own an interest within the proposed Unit Area, and that you have not agreed to voluntarily commit your interest to the Unit. This Application will be heard at 8:15 a.m. on July 1, 1993, at the Division's offices at 310 Old Santa Fe Trail, Santa Fe, New Mexico. Failure to appear at that time will preclude you from contesting this matter at a later date.

Very truly yours,

HINKLE, COX, EATON, COFFIELD

& HENSLEY

James Bruce

Attorneys for Mewbourne Oil Company

Enclosure

JGB5\93992.c

EXHIBIT A

Anchor Land Resources 6729 Brandt Lane Fort Worth, Texas 76116	P	108	736	798
Gary L. and Candace Jo Bennett Post Office Box 16844 Lubbock, Texas 79490	P	108	736	797
O. H. Berry Suite 188 One Marienfeld Place Midland, Texas 79702	P	108	736	799
John Borg III 324 Henkel Lane Mesa, Arizona 85201-6201	P	108	736	753
Richard D. Borgaard Post Office Box 9220 Bend, Oregon 97708	P	108	736	754
Pamela Brooks 2545 Tyler Street Eugene, Oregon 97405-2266	P	133	800	806
BTA Oil Producers 104 S. Pecos Midland, Texas 79701-5021	P	133	801	018
Steven L. Burleson Post Office Box 2479 Midland, Texas 79702-2479	P	133	801	019
James J. Cole Post Office Drawer K Mesilla, New Mexico 88046	P	133	801	021
James J. Cole, Personal Representative of Jimmie Cole Post Office Drawer K Mesilla, New Mexico 88046	P	133	801	020
Thomas Curran 1582 Singleton Wichita Falls, Texas 76302	P	133	801	022

Global Natural Resources Corporation of Nevada Post Office Box 4682 Houston, Texas 77210	P	108	736	755
Nancy Hayes Post Office Box 2479 Midland, Texas 79702-2479	P	108	736	756
Rae I. Little, Deceased c/o Raymond Rix Rt. 2, Box 12 Kenedy, Texas 78119-2713	P	108	736	75 7
Margaret Johns McCurdy, Trustee 2525 Ridgeway Blvd., Room 300 Fort Worth, Texas 76116	P	108	736	758
Meridian Oil, Inc. Building 6 3300 North "A" Street Midland, Texas 79705 Attention: Dennis Sledge	P	108	736	759
Ann Mills 2276 Calle Cuesta Santa Fe, New Mexico 87504-5238	P	108	736	760
Panos Investment Company Post Office Box 2151 Salt Lake City, Utah 84110	P	108	736	761
Gladys Shannon 1101 Clara Street Walnut Creek, California 94596	P	108	736	762
Adele Simpson 2345 Ala Wai Blvd. #1817 Honolulu, Hawaii 96815-2905	P	108	736	763
Wesley C. Stripling III Suite 614 4200 S. Hulen Fort Worth, Texas 76109	P	108	736	764
Carol David Trammell Post Office Box 5081 Walnut Creek, California 94596	P	108	736	765

NationsBank Texas, N.A., Trustee under the will of David B. Trammell Post Office Drawer 848703 Dallas, Texas 75284	P	108	736	766
NationsBank Texas, N.A., Trustee under the Will of Margaret Ruth Trammell Post Office Drawer 848703 Dallas, Texas 75284	P	108	736	767
Olivia S. Wood 2345 Ala Wai Blvd. #1817 Honolulu, Hawaii 96815-2905	P	108	736	768
Anadarko Petroleum Corporation 17001 Northchase Post Office Box 1330 Houston, Texas 77251-1330 Attention: Mike Bridges	P	108	736	769
Lewis Burleson Post Office Box 2479 Midland, Texas 79701-2479	P	108	736	770
Debra Johnson Head Suite 28 1400 Rankin Highway Midland, Texas 79701	P	108	736	771
Charles A. Heyne 4979 Grouse Court Evergreen, Colorado 80439	P	108	736	772
Fred J. Heyne III Suite 100 3820 W. Alabama Houston, Texas 77027-5204	P	108	736	773
Heyne Investments Ltd. Oil & Gas Investment Trust Suite 100 3820 W. Alabama Houston, Texas 77027-5204	P	108	736	774
DeMar Johnson Hopson Suite 28 1400 Rankin Highway Midland, Texas 79701	P	108	736	775

F. Kirk Johnson III 1832 Hillcrest Fort Worth, Texas 76107	P	108	736	776
Harold Kious Post Office Drawer L Albuquerque, New Mexico 87103	P	108	736	777
Ann McReynolds c/o John W. McReynolds Northsham, Forsythe, Samples & Wooldridge Thirty-Two Hundred 2001 Bryan Tower Dallas, Texas 75201	P	108	736	778
Marcia Heyne Modesett Suite 100 3820 W. Alabama Houston, Texas 77027-5204	P	108	736	779
Leslie Montgomery Post Office Box 1025 Roswell, New Mexico 88202-1025	P	108	736	780
Stephen Montgomery 101 N. Missouri Roswell, New Mexico 88210	P	108	736	781
Murjo Oil and Royalty Company Box 121818 Fort Worth, Texas 76121-1818 Attention: Bettye Davis	P	108	736	782
OXY USA Inc. Post Office Box 50250 Midland, Texas 79710 Attention: Terry Lundquist	P	108	736	783
Petro Atlas Corporation Suite 2590 999 Eighteenth Street Denver, Colorado 80202-2440	P	108	736	784
Clarence W. & Freida Stumhoffer Suite 1007 1 Ridglea Bank Building Fort Worth, Texas 76116	P	108	736	785

Complete items 1 and/or 2 for additional services, Complete items 3, and 4s & b. Print your name and address on the reverse of this form so the	
 Attach this form to the front of the mailpiece, or on the back does not permit. Write "Return Receipt Requested" on the mailpiece below the art The Return Receipt will show to whom the article was delivered a delivered. 	if space 1. Addressee's Address
· ·	Consult postmaster for fee.
3. Article Addressed to: Gary L. And Candace Jo Bennett	4a. Article Number P 108 736 797
Post Office Box 16844 Lybbock, Texas 79490	4b. Service Type □ Registered □ Insured
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Signature (Addressee)	8. Addressee's Address (Only if requested
Signature (Agent)	and fee is paid)
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SENDER: Complete items 1 and/or 2 for additional services. Complete items 3, and 4a & b. Print your name and address on the reverse of this form so the return this card to you. Attach this form to the front of the mailpiece, or on the back is does not permit. Write "Return Receipt Requested" on the mailpiece below the article was delivered a delivered.	I also wish to receive the following services (for an extra feel: 1. Addressee's Address Cle number 2. Restricted Delivery
3. Article Addressed to: John Borg III 324 Henkel Lane Mesa, Arizona 85201-6201	4a. Article Number P 108 736 753 4b. Service Type Registered Insured Certified COD Express Mail IX Return Receipt for Merchandise 7. Date of Pelivery 1903
6. Signature (Agent) PS Form 3811, December 1991 *U.S. GPO: 1992-323	8. Addressee's Address (Only if requested and fee is paid) DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and/or 2 for additional services. Complete items 3, and 4a & b. Print your name and address on the reverse of this form so the return this card to you. Attach this form to the front of the mailpiece, or on the back is does not permit. Write "Return Receipt Requested" on the mailpiece below the article. The Return Receipt will show to whom the article was delivered a	f space cle number.	I also wish to receive the following services (for an extra fee): 1. Addressee's Address 2. Restricted Delivery
delivered. 3. Article Addressed to:	4a. Arti	Consult postmaster for fee.
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Post Office Box 9220 Bend, Oregon 97708	☐ Regia ☐ Certi ☐ Expr	vice Type stered
5. Signature (Addressee)		ressee's Address (Only if requested fee is paid)
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Pamela Brooks 2545 Tyler Street Eugene, Gregon 97405-2266	4b. Service Type
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5. Signature (Addressee)	8. Addressee's Address (Only if requested and fee is paid)
6. Signature (Agent)	

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3. Article Addressed to: Lewis Burleson Post Office Box 2479	P 10	cle Number 08 73 6 9 70
Post Office Box 2479 Midland, Texas 79701-2479	4b. Sen	vice_Type tered
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4b. Service Type Registered Insured COD Express Mail Return Receipt for Merchandise
7. Date of Delivery 6 - 10 - 23
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3. Article Addressed to: Rae I. Little, Deceased	4a. Article Number P 108 736 757
c/o Raymond Rix, Rt. 2, Box 12	4b. Service Type ☐ Registered ☐ Insured X Certified ☐ COD
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Signature (Agent)

SENDER: • Complete items 1 and/or 2 for additional services. • Complete items 3, and 4a & b. • Print your name and address on the reverse of this form so that return this card to you. • Attach this form to the front of the mailpiece, or on the back if does not permit. • Write "Return Receipt Requested" on the mailpiece below the artice. • The Return Receipt will show to whom the article was delivered and delivered. 3. Article Addressed to: Gladys Shannon 1101 Clara Street Walnut Creek, Calf. 94596	space 1. Addressee's Address le number d the date Consult postmaster for fee. 4a. Article Number P 108 736 762 4b. Service Type Registered Insured Certified COD Express Mail Return Receipt for Merchandise 7. Date of Delivery
5. Signature (Agent) 6. Signature (Agent)	8. Addressee's Address (Only if requested and fee is paid)
PS Form 3811 , December 1991 *u.s. GPO: 1992-323	DOMESTIC RETURN RECEIPT

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3. Article Addressed to: Carol David Trammell Post Office Box 5081 Walnut Creek, Calf. 94596	P 108 736 765 4b. Service Type Registered Insured COD Express Mail Return Receipt for Merchandise
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Signature (Addressee) Signature (Agent) (7)	Addressee's Address (Only if requested and fee is paid)

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NationsBank Tecas, N.A., Truster under the Will of Margaret Ruth Trammell P.O. Drawer 848703 Dallas, Texas 75284	P 108 736 767 4b. Service Type Registered Insured Certified COD Express Mail Return Receipt for Merchandise 7. Date of Pelivery
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PS Form 3811 , December 1991 / AU.S. GPO: 1992—323-	DOMESTIC RETURN RECEIPT

P 108 736 785



Receipt for Certified Mail No Insurance Coverage Provided Do not use for International Mail (See Reverse)

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Fort Worth, Texas 76116						
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PS Form **3800**, June 1991

OH CONSERVATION DIVISION
EXHIBIT

8

- ASE NO 10761/10762

entitled to collect and receive from the Purchaser the proceeds from such Working Interest Owner's share of the Unitized Substances in satisfaction of such debt. Further, all Working Interest Owners covenant and agree to save all purchasing companies harmless from any and all liability by reason of paying such proceeds to Unit Operator. Each purchaser shall be entitled to rely on Unit Operator's written statement of amounts in default. All credits to any such defaulting Working Interest Owner on account of the sale or other disposal of Unit Equipment, or otherwise, shall also be applied against the unpaid share of Unit Operating Expense charged against such Working Interest Owner.

required for Unit Operations, after approval by the Operating Committee, shall be billed to the individual Working Interest Owners. If any Working Interest Owner fails to pay its proportionate share of such Capital Expenditure within ninety (90) days of billing thereof, any such defaulting Working Interest Owner shall not be entitled to participate in, nor shall its account be credited with, any share of the proceeds of Unitized Substances and instead such defaulting Working Interest Owner shall be deemed to have relinquished to Unit Operator, or, at the option of Unit Operator, all non-defaulting Working Interest Owners who shall carry and pay such defaulted Capital Expenditure until such Capital

foregoing provisions of this Section II, or in Section III, and which is incurred by the Unit Operator in the necessary and proper conduct of the Unit Operations.

III. OVERHEAD

1. Overhead - Drilling and Producing Operations

- 1.1 As compensation for administrative, supervision, office services and warehousing costs, Unit Operator shall charge drilling and producing operations on a fixed rate basis as defined in Paragraph 1.3.
 - Unless otherwise agreed to by the Parties, such charge shall be in lieu of costs and expenses of all offices and salaries or wages plus applicable burdens and expenses of all personnel, except those directly chargeable under Paragraph 2.1, Section II.
- 1.2 The salaries, wages and Personal Expenses of Technical Employees and/or the cost of professional consultant services and contract services of technical personnel directly employed on the Joint Property, exclusive of reservoir management engineering, shall be covered by the Overhead rates.
- 1.3 Overhead Fixed Rate Basis

 - 1.3.2 Application of Overhead Fixed Rate Basis shall be as follows:

- shall be considered as a one-well charge for the entire month.
- (2) A one-well charge may be made for the month in which plugging and abandonment operations are completed on any well.
- (3) All other inactive wells (including but not limited to inactive wells covered by unit allowable, lease allowable, transferred allowable, etc.) shall not qualify for an overhead charge.
- (4) The central production and injection facility serving Joint Unit Operations shall receive a one well count for application of one Producing Well Rate.
- 1.3.3 The well rates shall be adjusted as of the first day of April each year following the effective date of the agreement to which this Accounting Procedure is attached. The adjustment shall be computed by multiplying the rate currently in use by the percentage

EXHIBIT "D"



SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

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