

NEW MEXICO
OIL CONSERVATION DIVISION

_____ EXHIBIT 4 _____
CASE NO. 10761/10762

#1 definite approval
(withheld)

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	0.00000000	0.00000431	0.000004311
1 ANCHOR LAND RESOURCES	0.00273391	0.00567776	0.005677761
1 BALLANTYNE	0.00499645	0.00300905	0.003009049
*1 BENNETT, GARY	0.00000000	0.00000000	0
1 BERRY, O.H. & VIRGINIA	0.02201935	0.02120301	0.021203012
1 BLM	0.61371568	0.64158409	0.641584090
1 BONNER	0.00000000	0.00150962	0.001509623
BORG, JOHN	0.00020279	0.00021854	0
BORGAARD, RICHARD	0.00000000	0.00000000	0
BROOKS, PAMELA	0.00020279	0.00021854	0
1 BTA	0.01498935	0.00902715	0.009027147
1 BURLESON, LEWIS	0.00106034	0.00086175	0.000861747
BURLESON, STEVE	0.01055332	0.00862431	0
CASEY, WILLIAM	0.00000000	0.00000000	0
1 CLOUTHIER, CHARLES & GWEN	0.00010176	0.00010967	0.000109665
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 CURRAN, THOMAS	0.00456643	0.00501226	0.005012260
1 ESTATE OF WALTER DUNCAN	0.00015693	0.00111630	0.001116300
1 DUNCAN, J. WALTER, JR.	0.00014123	0.00100467	0.001004670
1 JWD III, INC.	0.00001569	0.00011163	0.000111630
1 DUNCAN, JOAN R.	0.00015693	0.00413555	0.004135548
1 ELLWADE	0.00249823	0.00150452	0.001504524
1 FERRIS-SPIESS, ELEANOR	0.00015271	0.00016456	0.000164563
1 FRENCH, L.R.	0.00000000	0.00284204	0.002842035
1 GLOBAL NATURAL RESOURCES	0.00000000	0.00000000	0
1 GREEN, WILLIAM	0.01751693	0.01471277	0.014712765
HAYES, NANCY	0.01055332	0.00862431	0
1 HEAD, DEBRA JOHNSON	0.00304136	0.00210058	0.002100578
1 HOPSON, DEMAR JOHNSON	0.00304136	0.00210058	0.002100578
1 HOWARD, PATRICIA	0.00020279	0.00021854	0.000218540
1 HUBBARD, JEANNETT	0.00015271	0.00016456	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	0.00167288	0.00115541	0.001155407
1 LAWSON, KYLE	0.00000000	0.00028420	0.000284203
1 LITTLE, ANNE	0.00092089	0.00072919	0.000729190
LITTLE, RAE (DECEASED)	0.00092089	0.00072919	0
1 LITTLE, MARJORIE	0.00092089	0.00072919	0.000729190
1 LITTLE, SYLVIA F.	0.00073671	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	0.00471929	0.01283613	0.012836133
MCCURDY, MARGARET JOHNSON	0.00000000	0.00000000	0
1 MCREYNOLDS, ANN H. JOHNSON	0.00136862	0.00094526	0.000945263
1 MEWBOURNE OIL CO.	0.09659416	0.07346623	0.073466232
1 MILLS, ANN	0.00015271	0.00016456	0.000164563
1 MURJO OIL AND ROYALTY	0.00912409	0.00630174	0.006301736
1 OCHTERBECK, DIANA	0.00015271	0.00016456	0.000164563
1 PANOS, GREGORY P.	0.00037491	0.00190424	0.001904235
1 PANOS INVESTMENT CO.	0.00150866	0.00766283	0.007662826
1 PANOS, PATRICK T.	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, RAPELITA	0.00030541	0.00032913	0.000329126
1 ROSS FAMILY TRUST	0.00152706	0.00164563	0.001645633
SABONIS, LITA	0.00007635	0.00008228	0
SHANNON, GLADYS	0.00000000	0.00000000	0
1 SHOGRIN, FRANK	0.02851825	0.03301407	0.033014073
1 SIMPSON, ADELE	0.00015271	0.00016456	0.000164563
1 SIMPSON, PETER	0.00007635	0.00008228	0.000082281
1 SIMPSON, ROLAND	0.00007635	0.00008228	0.000082281
1 SIMPSON, SAMMY	0.00007635	0.00008228	0.000082281
1 SKEES, W. A.	0.00000000	0.00028420	0.000284203
1 STRIPLING, WESLEY III	0.00685828	0.00526865	0.005268652
TRAMMELL, CAROL	0.00000000	0.00000000	0
TRAMMELL, DAVID	0.00000000	0.00000000	0
TRAMMELL, MILDRED	0.00000000	0.00000000	0
1 WIGZELL	0.00249823	0.00150452	0.001504524
1 WOOD, OLIVIA	0.00015271	0.00016456	0.000164563
	0.999999999	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,


FALS Armando A. Lopez
Assistant District Manager
Minerals

Enclosures

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

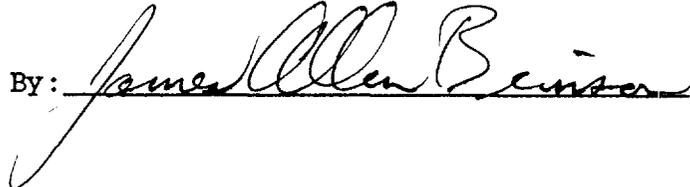
UNIT OPERATOR

OPERATOR:

DATE: 1/6/93

MEWBOURNE OIL COMPANY

ATTEST: 

By: 

WORKING INTEREST OWNERS

DATE: _____

ABBY CORP.

ATTEST: _____

By: _____

DATE: June 25, 1993

ANADARKO PETROLEUM CORPORATION

ATTEST: 

By: 

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

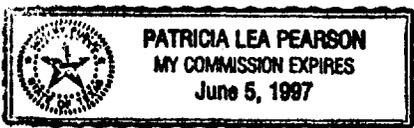
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Harris §

The foregoing instrument was acknowledged before me this 25th day of June, 1993, by Rex Alman, for Anadarko Petroleum Corporation, a Delaware Corporation.



Patricia Lea Pearson
Notary Public

My Commission Expires: 6/5/97

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

UNIT OPERATOR

OPERATOR:

DATE: 1/6/93

MEWBOURNE OIL COMPANY

ATTEST: *Raymond Thompson*

By: *James Allen Brinson*

WORKING INTEREST OWNERS

DATE: _____

ABBY CORP.

ATTEST: _____

By: _____

DATE: June 25, 1993

ANADARKO PETROLEUM CORPORATION

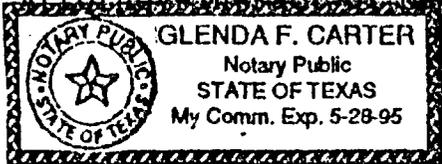
ATTEST: *John Paul*

By: *[Signature]*

STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by James Allen Brinson, as ~~Attorney-in-Fact of~~ Newbourne Oil Company, a Delaware Corporation.



Glenda F. Carter
Notary Public, State of Texas

My Commission Expires: 5-28-95

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

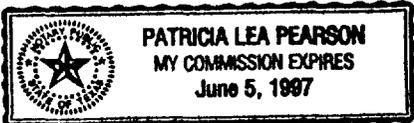
Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Harris §

The foregoing instrument was acknowledged before me this 25th day of June, 1993, by Rex Altman, for Anadarko Petroleum Corporation, a Delaware Corporation.



Patricia Lea Pearson
Notary Public

My Commission Expires: 6/5/97

WORKING INTEREST OWNERS

DATE: _____

ABBY CORP.

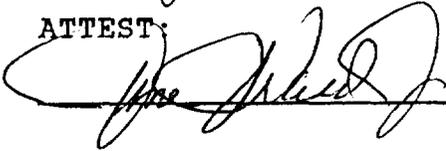
ATTEST:

By: _____

DATE: June 25, 1993

ANADARKO PETROLEUM CORPORATION

ATTEST:

 _____

By:  _____

DATE: _____

LARRY ARNOLD

WITNESS:

By: _____

DATE: _____

KENNETH BARBE, JR.

WITNESS:

By: _____

DATE: _____

BEARING SERVICE & SUPPLY COMPANY,
INC.

ATTEST:

By: _____

DATE: _____

TANZA BRUMFIELD

WITNESS:

By: _____

DATE: _____

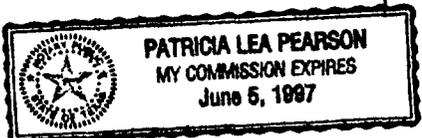
LEWIS BURLESON

WITNESS:

By: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Harris §

The foregoing instrument was acknowledged before me this 25th
day of June, 1993, by Key Alman, for
Quadrant Petroleum Corporation, a Delaware Corporation.



Patricia Lea Pearson
Notary Public

My Commission Expires: 6/5/97

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

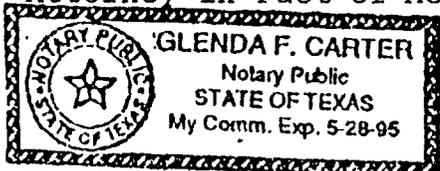
ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>Nettee Saker</u>	<u>6-22-93</u>	<u><i>James Allen Brinson</i></u> ANCHOR LAND RESOURCES
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by James Allen Brinson, as Attorney-in-Fact of Newbourne Oil Company, a Delaware Corporation.



Glenda F. Carter
Notary Public, State of Texas

My Commission Expires: 5-28-95

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

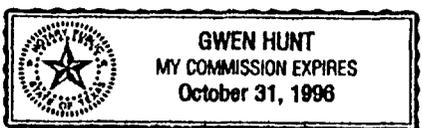
Notary Public

My Commission Expires: _____

STATE OF Texas
COUNTY OF Tarrant

§ (ACKNOWLEDGMENT FOR CORPORATION)
§

The foregoing instrument was acknowledged before me this 22nd day of June, 1993, by C. Daniel Walker, for Architectural Resources, a Texas Corporation.



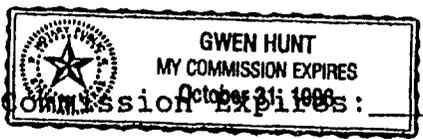
Gwen Hunt
Notary Public

My Commission Expires: _____

STATE OF Texas
COUNTY OF Tarrant

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
§

The foregoing instrument was acknowledged before me this 22nd day of June, 1993, by C. Daniel Walker.



Gwen Hunt
Notary Public

My Commission Expires: _____

STATE OF _____
COUNTY OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
§

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

DATE: _____

VENTURE RESOURCES 1986 GP

ATTEST:

By: _____

DATE: 6-22-93-

C. DANIEL WALKER

WITNESS:

Nettie Baker

By: C. Daniel Walker

DATE: _____

WARREN, INC.

ATTEST:

By: _____

DATE: _____

RONALD L. WILBANKS

WITNESS:

By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

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 CORP By: <u>Suzanne Brice</u> Secretary/Treasurer <i>No Seal Required</i>	<u>15 Feb 93</u>	J BALLANTYNE ROYALTY CORP By: <u>Walter R. Brice</u> President
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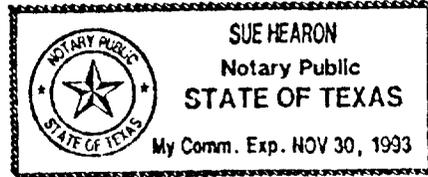
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



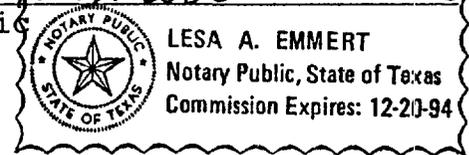
STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF County of Midland §

The foregoing instrument was acknowledged before me this 15th day of February, 1993, by Wallis R. Brice, for S. Ballantyne Royalty Corp., a Texas Corporation.

Lesa A. Emmert
Notary Public

My Commission Expires: 12-20-94



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

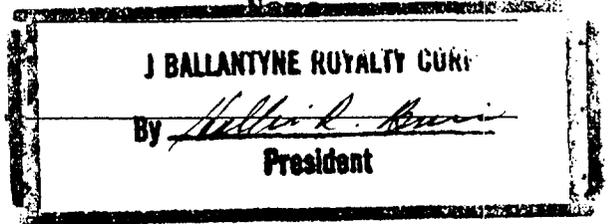
Date Signed

J BALLANTYNE ROYALTY CORP

15 Feb 93

By: Lucianne Brice
Secretary/Treasurer

No Seal Required



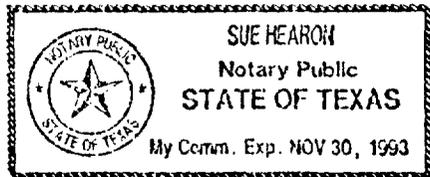
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF Texas §

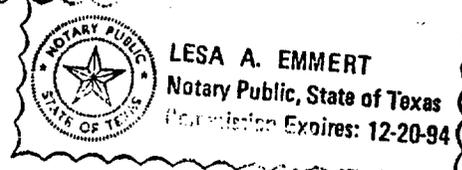
(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 15th day of February, 1993, by Hollis R. Brice, for J Ballantyne Royalty Corp., a Texas Corporation.

Lesia A. Emmert
Notary Public

My 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:

By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Barbara W Roberts

6-15-93

Virginia Berry
VIRGINIA BERRY

Barbara W Roberts

6-15-93

Virginia Berry
VIRGINIA BERRY, INDEPENDENT EXECUTRIX
OF THE ESTATE OF O. H. BERRY

STATE OF TEXAS

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF MIDLAND

§

The foregoing instrument was acknowledged before me this 15th day of JUNE, 19 93, by VIRGINIA BERRY.



BRENDA K. ARP
Notary Public, State of Texas 96
My Commission Expires Aug. 20, 19 96

Brenda K. Arp
Notary Public

My Commission Expires: 8-20-96

STATE OF TEXAS

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF MIDLAND

§

The foregoing instrument was acknowledged before me this 15th day of JUNE, 19 93, by VIRGINIA BERRY, INDEPENDENT EXECUTRIX OF THE ESTATE OF O. H. BERRY.



BRENDA K. ARP
Notary Public, State of Texas 96
My Commission Expires Aug. 20, 19 96

Brenda K. Arp
Notary Public

My Commission Expires: 8-20-96

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Barbara H Roberts

6-15-93

Virginia Berry
VIRGINIA BERRY

Barbara H Roberts

6-15-93

Virginia Berry
VIRGINIA BERRY, INDEPENDENT EXECUTRIX
OF THE ESTATE OF O. H. BERRY

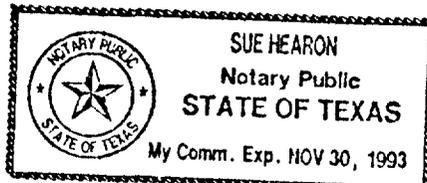
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF .. _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF MIDLAND §

The foregoing instrument was acknowledged before me this 15th day of JUNE, 19 93, by VIRGINIA BERRY.



BRENDA K. ARP
Notary Public, State of Texas
My Commission Expires Aug. 20, 1996

Brenda K. Arp
Notary Public

My Commission Expires: 8-20-96

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF MIDLAND §

The foregoing instrument was acknowledged before me this 15th day of JUNE, 19 93, by VIRGINIA BERRY, INDEPENDENT EXECUTRIX OF THE ESTATE OF O. H. BERRY.



BRENDA K. ARP
Notary Public, State of Texas
My Commission Expires Aug. 20, 1996

Brenda K. Arp
Notary Public

My Commission Expires: 8-20-96

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

E. June Bonner Secy.

1-27-93

*Bonner plly sec.
by Heald Bonner President*

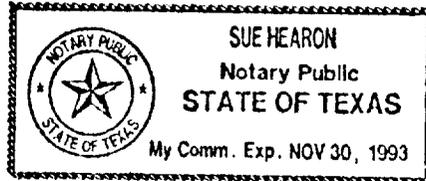
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF Texas §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Lubbock §

The foregoing instrument was acknowledged before me this 27th day of Jan., 1993 by Gerald A. Bonner, for Bonner Alloys, Inc., a Texas Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>E. June Bonner Secy</u>	<u>1-27-93</u>	<u>BONNER PLUMBING INC</u> <u>by James A. Bonner per</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

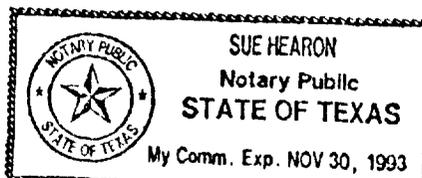
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF Texas §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Lubbock §

The foregoing instrument was acknowledged before me this 27th day of Jan., 1993, by Donald A. Bonner, President, for Bonner Plbg, Inc., a Texas Corporation.

Dorothy DeBell
Notary Public

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 (BONE SPRINGS) UNIT, LEA COUNTY, NEW MEXICO

ROYALTY OWNERS

Attest or Witness _____

Date Signed _____

Name _____

Peter B. Williams
PBW

6/15/93

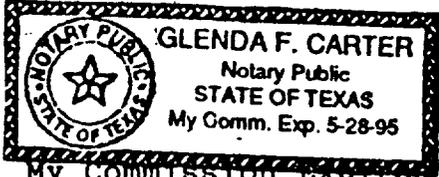
Billy Seal

FOR BTA OIL PRODUCERS

STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by James Allen Brinson, as Attorney-in-Fact of Newbourne Oil Company, a Delaware Corporation.

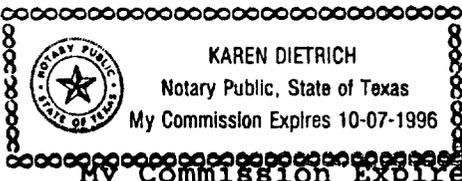


Glenda F. Carter
Notary Public, State of Texas

My Commission Expires: 5-28-95

STATE OF _____ § (ACKNOWLEDGMENT FOR Partnership)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this 15th day of June, 1993, by _____, for _____ Corporation.



Karen Dietrich
Notary Public

My Commission Expires: 10/7/96

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____ Corporation.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Marie Sutherland
Marie Sutherland

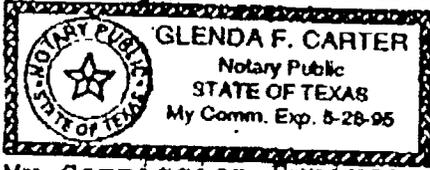
Jun 28, 1993

J. B. Brinson
Kathryn K. Brinson

STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by James Allen Brinson, as Attorney-in-Fact of Newbourne Oil Company, a Delaware Corporation.



Glenda J. Carter
Notary Public, State of Texas

My Commission Expires: 5-28-95

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

My Commission Expires: _____

Post-It™ brand fax transmittal memo 7671		# of pages	7
To	<u>James Brinson</u>	From	<u>Carter</u>
Co.		Co.	<u>Newbourne</u>
Dept.		Phone #	
Fax #		Fax #	

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
 COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____ a _____ Corporation.

 Notary Public

My Commission Expires: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
 COUNTY OF MIDLAND §

The foregoing instrument was acknowledged before me this 28th day of JUNE, 1993, by LEWIS B. BURLISON.



Sharon Beaver
 Notary Public

My Commission Expires: 7-17-96

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
 COUNTY OF MIDLAND §

The foregoing instrument was acknowledged before me this 28th day of JUNE, 1993, by KATHRYN K. BURLISON.



Sharon Beaver
 Notary Public

My Commission Expires: 7-17-96

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

Tina Oakland

2-12-93

Charles E. Clonther

STATE OF New Mexico § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Sanduan §

The foregoing instrument was acknowledged before me this 12 day of February, 1993, by Charles E Clouthier.

Jayne Billingsley
Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

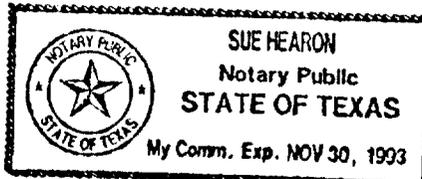
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>Tricia J. Sklund</u>	<u>2-12-93</u>	<u>Chela E Clouthier</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF New Mexico § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF San Juan §

The foregoing instrument was acknowledged before me this 12
day of February, 1993, by Charles E. Clouthier.

Joyce Billingsley
Notary Public

My Commission Expires: 10-15-94

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

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

Sandra H. Meyer
My Commission Expires Sept. 20, 1994

1/25/93

Ronald L. Clonther

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Judith H. Meyer
My Commission Expires Sept. 20, 1994

11/25/93

Robert L. Clonther

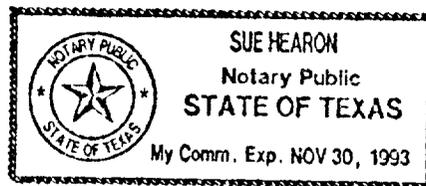
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

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

Judy Rogers

3-20-93

Alvin Carter

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Judy Rogers

3-20-93

[Signature]

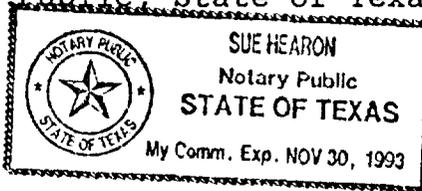
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

[Signature]
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____

§ (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

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

Bill D. Schneider

10/15/93

James J. Cole
Executor Estate
of Jimmie K. Cole

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Bill H. Schrader

6/15/93

James J. Cole
Executor Estate of
Joanne K. Cole

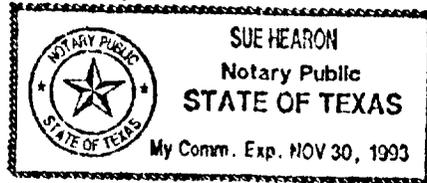
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

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

Gloria Hanson

2-2-93

Katherine D. Orens

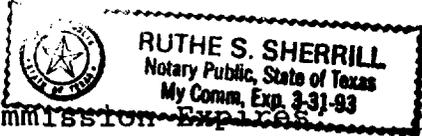
STATE OF Texas

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Reeves

§

The foregoing instrument was acknowledged before me this 2nd day of February, 1993, by Ruthe S. Sherrill.



Ruthe S. Sherrill
Notary Public

My Commission Expires: 3-31-93

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Gloria Hanson

2-2-93

Kathleen D Crews

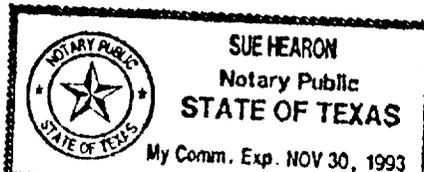
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.



Ruthe S. Sherrill
Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Reeves §

The foregoing instrument was acknowledged before me this 2nd day of February, 1993, by Ruthe S. Sherrill.



Ruthe S. Sherrill
Notary Public

My Commission Expires: 3-31-93

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

(✓) Connie Strickland (✓) June 18, 93 (✓) Sally K. Curran

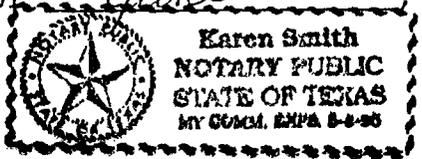
STATE OF Texas

§ (ACKNOWLEDGMENT FOR INDIVIDUAL) (✓)

COUNTY OF Wichita

§

The foregoing instrument was acknowledged before me this 18th
day of June, 1973, by Sally Curran.



Karen Smith
Notary Public

My Commission Expires: 5-8-95

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Alan G. Wingert

1/28/93

Joan R Demea

STATE OF TEXAS §

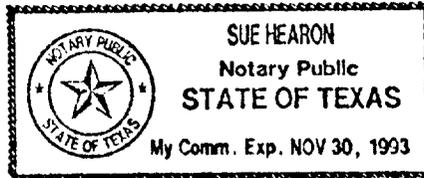
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this *6TH* day of *JANUARY*, 19*93*, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon

Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____

§ (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

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

Sean A. Wingert

1/28/93

Joan A. Duncan

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Edgar J. James
Edgar J. James, Secretary

1-26-93

ESTATE OF WALTER DUNCAN
[Signature]
By Raymond T. Duncan, Pers. Rep.
CLUB OIL & GAS, LTD.

Cheryl Millard

2-26-93

[Signature]
By Club Oil & Gas, Inc.
General Partner
Vincent J. Duncan, President

Kenneth R. Fry
Kenneth R. Fry, Secretary

1-29-93

[Signature]
J. WALTER DUNCAN, JR.

2-5-93

[Signature]
JWD, III, INC.

By Nicholas V. Duncan, President

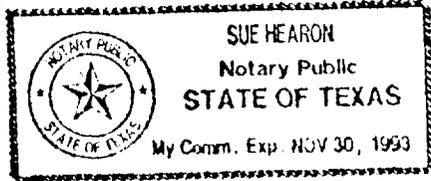
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

[Signature]
Notary Public, State of Texas

My Commission Expires: _____



STATE OF COLORADO §

(ACKNOWLEDGMENT FOR CORPORATION)

CITY & COUNTY OF DENVER §

The foregoing instrument was acknowledged before me this 26 day of February, 1993, by Vincent J. Duncan, for as President of Club Oil & Gas, Inc., a General Partner ~~corporation~~ of Club Oil & Gas, Ltd.

[Signature]
Notary Public

My Commission Expires: 1-25-94

DATE: _____

VENTURE RESOURCES 1986 GP

ATTEST:

By: _____

DATE: _____

C. DANIEL WALKER

WITNESS:

By: _____

DATE: _____

WARREN, INC.

ATTEST:

By: _____

DATE: _____

RONALD L. WILBANKS

WITNESS:

By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

1-26-93

ESTATE OF WALTER DUNCAN

Edgar J. James

Edgar J. James, Secretary

Raymond V. Duncan
By Raymond V. Duncan, Pers. Rep.
CLUB OIL & GAS, LTD.

1-29-93

Vincent J. Duncan
By Club Oil & Gas, Inc.
General Partner

Kenneth R. Fry

Kenneth R. Fry, Secretary

2-5-93

Walter Duncan Jr.
J. WALTER DUNCAN, JR.

Nicholas V. Duncan
JWD, III, INC.

By Nicholas V. Duncan, President

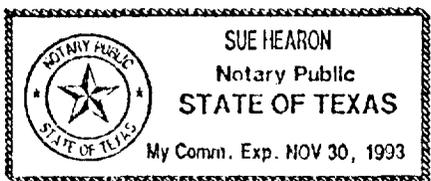
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF COLORADO § (ACKNOWLEDGMENT FOR CORPORATION)

CITY & COUNTY OF DENVER §

The foregoing instrument was acknowledged before me this 26 day of February, 1993, by Vincent J. Duncan, ~~for~~ as President of Club Oil & Gas, Inc., ~~a~~ General Partner ~~Corporation~~ of Club Oil & Gas, Ltd.

Erin Burt Pendergast
Notary Public

My Commission Expires: 1-25-94

STATE OF OKLAHOMA § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF OKLAHOMA §

The foregoing instrument was acknowledged before me this 5th day of February, 1993, by Nicholas V. Duncan, for JWD, III, Inc., a _____ Corporation.

Michelle R. Martiny
Notary Public

My Commission Expires: 6-21-94

STATE OF COLORADO

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

CITY & COUNTY OF DENVER

§

The foregoing instrument was acknowledged before me this 26th day of January, 1993, by Raymond T. Duncan, Personal Representative of the Estate of Walter Duncan.

Betty A. Harold
Notary Public

My Commission Expires: 7-26-94

STATE OF OKLAHOMA

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF OKLAHOMA

§

The foregoing instrument was acknowledged before me this 29th day of January, 1993, by J. Walter Duncan, Jr.

Cheryl Millard
Notary Public

My Commission Expires: 8-23-96

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

ELLWADE CORP.

Lisa A. Emmert

2-12-93

John B. Castle, PRES.

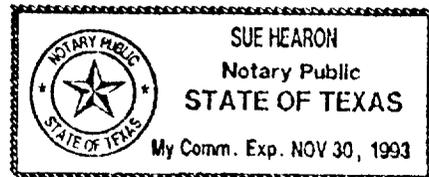
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____

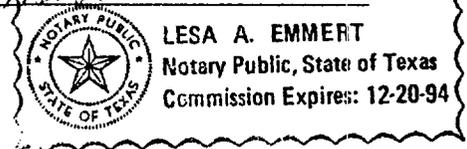


STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 12th day of February, 1993, by John B. Castle, president, for Ellwade Corporation, a Texas Corporation.

Lisa A. Emmert
Notary Public



My Commission Expires: 12-20-94

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

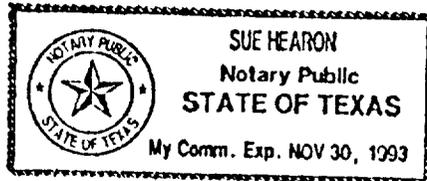
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
_____	_____	<u>ELLWADE CORP</u>
<u>Lesia A. Emmert</u>	<u>2-12-93</u>	<u>John B. Castle, PRES.</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____

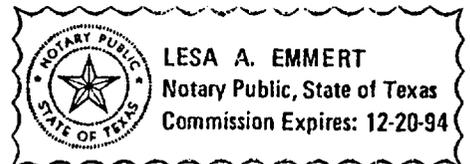


STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 12th day of February, 1993, by John B. Castle, president, for Ellwade Corporation, a Texas Corporation.

Lesia A. Emmert
Notary Public

My 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:

By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Michael Ferris

2/4/93

Eleanor Spies-Ferris

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

[Signature]

2/4/93

Eleanor Spier-Tavis

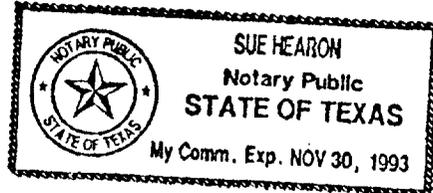
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

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

Cynthia Lerry

2-22-93

R.R. Drury

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

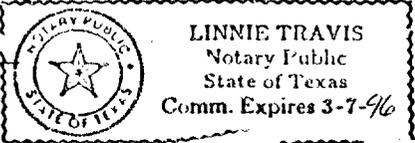
My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 22nd day of February, 1993, by L. K. French, Jr.

Linnie Travis
Notary Public

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Cynthia Perry

2-22-93

J. Brinson

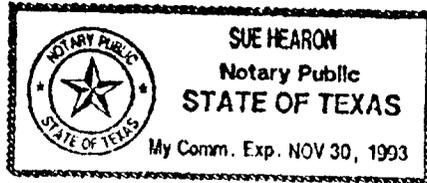
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

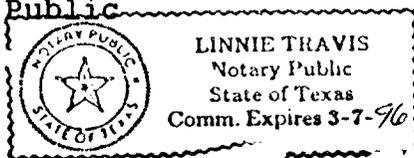
STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 22nd day of February, 1993, by J. K. French, Jr.

Linnie Travis
Notary Public

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____.

Notary Public

My Commission Expires: _____

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 2
To <i>Charles Dickerson</i>	From <i>K. Kuiper</i>	
Co. <i>Mex</i>	Co. <i>G.L.G.L.</i>	
Dept.	Phone <i>(713) 880-5464</i>	
Fax <i>(915) 685-4170</i>	Fax <i>(713) 865-4386</i>	

DATE: _____

ATTEST: _____

DATE: _____

WITNESS: _____

C. DANIEL WALKER

By: _____

DATE: _____

ATTEST: _____

WARREN, INC.

By: _____

DATE: _____

WITNESS: _____

RONALD L. WILBANKS

By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

GLOBAL NATURAL RESOURCES CORPORATION OF NEVADA

Kelly M. Barnes
Kelly M. Barnes
Attorney-in-Fact

KIC

ROYALTY OWNERS

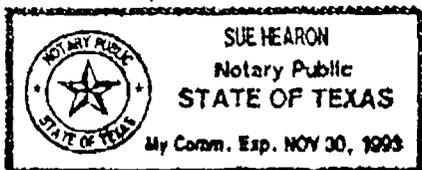
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
		Global Natural Resources Corporation of Nevada
		<i>Kelly M. Barnes</i> Kelly M. Barnes, Attorney-in-Fac KK

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

DATE: _____

VENTURE RESOURCES 1986 GP

ATTEST:

Brenda Edwards

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

Brenda Edwards

2/11/93

William J. ...

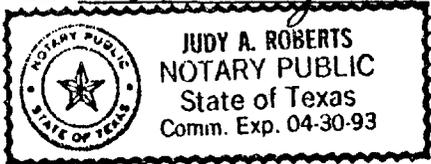
STATE OF TEXAS

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Midland

§

The foregoing instrument was acknowledged before me this 11th
day of February, 1993, by William J. Green.



Judy A. Roberts
Notary Public

My Commission Expires: 4-30-93

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Brenda Edwards

2/11/93

[Signature]

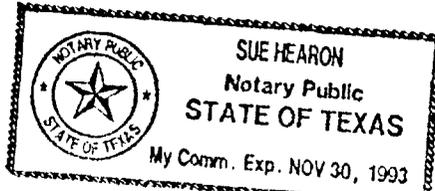
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

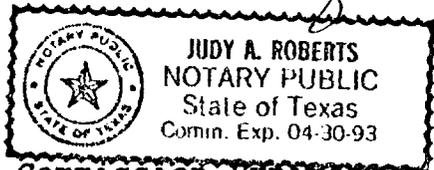
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

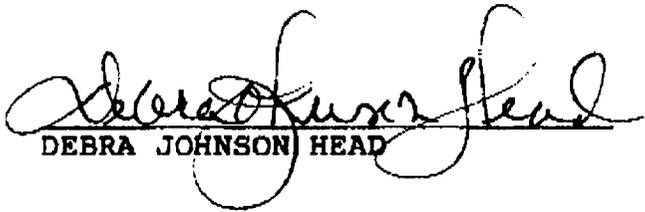
STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 11th day of February, 1993, by William J Green.



Judy A. Roberts
Notary Public

My Commission Expires: 4-30-93


DEBRA JOHNSON HEAD


WITNESS


DEMAR JOHNSON HOPSON


WITNESS

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

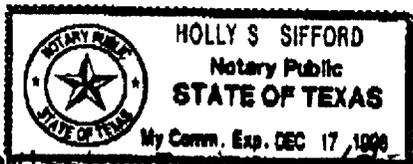
Notary Public

My Commission Expires: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF PARKER §

The foregoing instrument was acknowledged before me this 28th day of JUNE, 1993, by DEBRA JOHNSON HEAD.



Holly S. Sifford
Notary Public

My Commission Expires: 12-17-96

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)

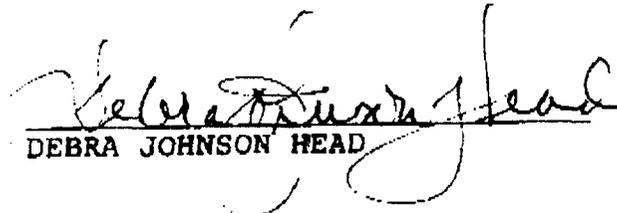
COUNTY OF LAMPASAS §

The foregoing instrument was acknowledged before me this 27th day of JUNE, 1993, by DEMAR JOHNSON HOPSON.

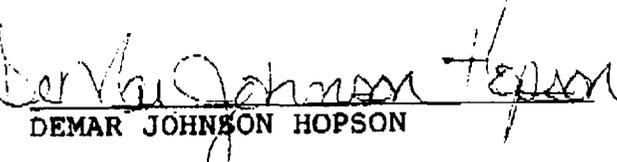


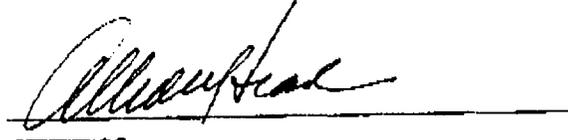
Holly S. Sifford
Notary Public

My Commission Expires: 12-17-96


DEBRA JOHNSON HEAD


WITNESS


DEMAR JOHNSON HOPSON


WITNESS

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

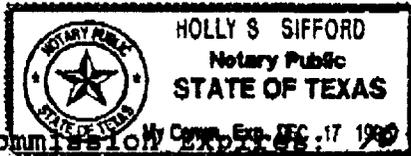
Notary Public

My Commission Expires: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF PARKER §

The foregoing instrument was acknowledged before me this 28th day of JUNE, 1993, by DEBRA JOHNSON HEAD.



Holly S. Sifford
Notary Public

My Commission Expires DEC 17 1996 17-96

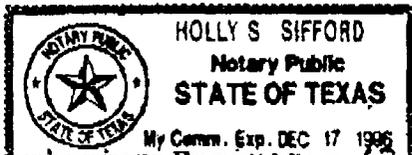
STATE OF TEXAS

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF LAMPASAS

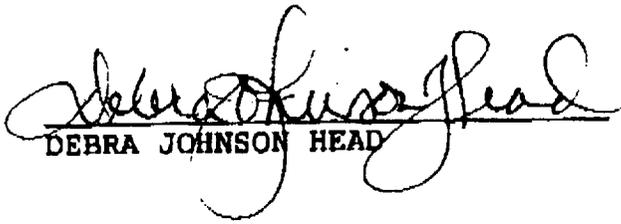
§

The foregoing instrument was acknowledged before me this 27th day of JUNE, 1993, by DEMAR JOHNSON HOPSON.

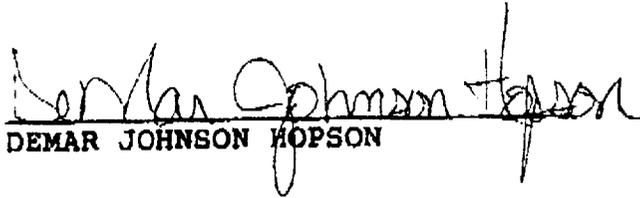


Holly S. Sifford
Notary Public

My Commission Expires 12-17-96


DEBRA JOHNSON HEAD

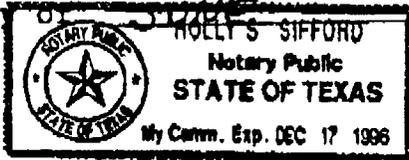

WITNESS


DEMAR JOHNSON HOPSON


WITNESS

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF PARKER §

The foregoing instrument was acknowledged before me this 28th
day of JUNE, 1993, by DEBRA JOHANSON HEAD.

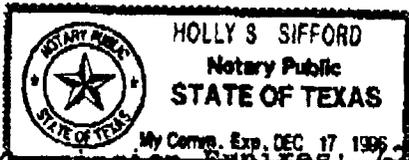


Holly S. Sifford
Notary Public

My Commission Expires: 12-17-96

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF CAMPASAS §

The foregoing instrument was acknowledged before me this 27th
day of JUNE, 1993, by DEMAR JOHANSON HOPSON.



Holly S. Sifford
Notary Public

My Commission Expires: 12-17-96

ROYALTY OWNERS

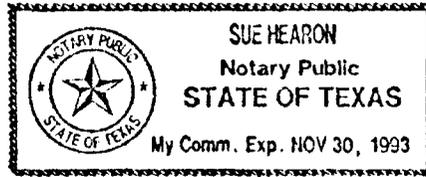
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>[Signature]</u>	<u>1/29/93</u>	<u>Patricia B Howard</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §
 COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

[Signature: Sue Hearon]
 Notary Public, State of Texas

My Commission Expires: _____



STATE OF Colorado § (ACKNOWLEDGMENT FOR CORPORATION)
 COUNTY OF Arapahoe §

The foregoing instrument was acknowledged before me this 29th day of January, 1993, by Patricia B. Howard, for Mewbourne Oil Company, a ~~Delaware~~ Delaware Corporation.

[Signature: Sheila Martinez]
 Notary Public Sheila Martinez

My Commission Expires: _____
 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:

By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Gene Jones

2-1-43

Jeanette Hubbard

ROYALTY OWNERS

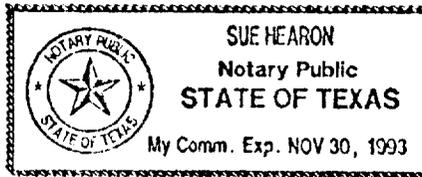
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u><i>Jane Miller</i></u>	<u>2-1-93</u>	<u><i>Jeannette Hubbard</i></u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

DATE: _____

HILLSIDE SYNDICATE

ATTEST:

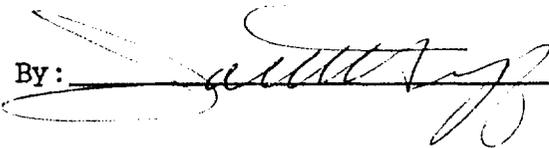
By: _____

DATE: 2-11-93

JACK HUFF

WITNESS:

Melissa Edwards

By: 

FRANCES N. JOHNSON

DATE: _____

WITNESS:

By: _____

DATE: _____

JOYRAN CORP.

ATTEST:

By: _____

DATE: _____

HAROLD KIOUS

WITNESS:

By: _____

DATE: _____

DONALD M. KUTZ

WITNESS:

By: _____

DATE: _____

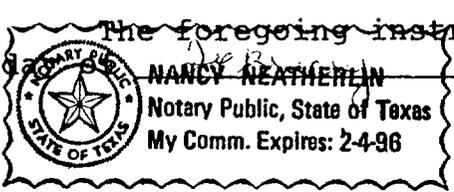
L.O.G. PARTNERS

ATTEST:

By: _____

STATE OF Texas
COUNTY OF Midland

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
§



The foregoing instrument was acknowledged before me this 11th
12th, 1993, by Jack Huff.

Nancy Weatherlin
Notary Public

My Commission Expires: _____

STATE OF _____
COUNTY OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)
§

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary 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: _____

By: _____

DATE: _____

HILLSIDE SYNDICATE

ATTEST:

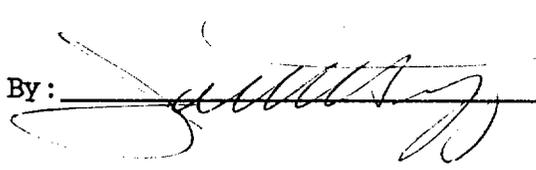
By: _____

DATE: 2-11-93

JACK HUFF

WITNESS:

Melissa Edwards

By: 

DATE: _____

FRANCES N. JOHNSON

WITNESS:

By: _____

DATE: _____

JOYRAN CORP.

ATTEST:

By: _____

DATE: _____

HAROLD KIOUS

WITNESS:

By: _____

STATE OR _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____ Corporation.

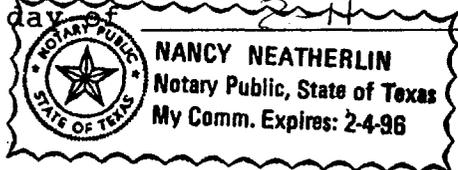
Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Midland §

The foregoing instrument was acknowledged before me this ___ day of 2-14, 1992, by _____.



Nancy Neatherlin
Notary Public

My Commission Expires: 2-4-96

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____.

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

Ann Brannon

1, 26, 93

Lucy S James

STATE OF COLORADO

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF PUEBLO

§

The foregoing instrument was acknowledged before me this 26th
day of January , 1993, by Lucy & James .

Ann Brannon
Notary Public

My Commission Expires: March 4, 1996

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Allen Brinson

1, 26, 93

Lucy S James

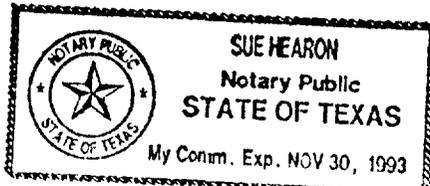
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF COLORADO § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF PUEBLO §

The foregoing instrument was acknowledged before me this 26th day of January, 1993, by Lucy & James.

Ann Branon
Notary Public

My Commission Expires: March 4, 1996

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

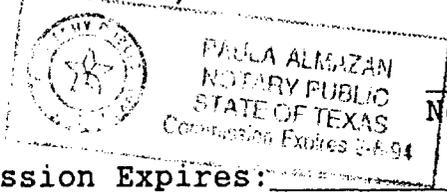
Paula Abaza

2-2-93

Courtenay C. Johnson

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF WILLIAMSON §

The foregoing instrument was acknowledged before me this 2ND
day of FEBRUARY, 1993, by COURTENAY C JOHNSON.



Paula Almazan
Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Paula Almaz

2-2-93

Courtenay C Johnson

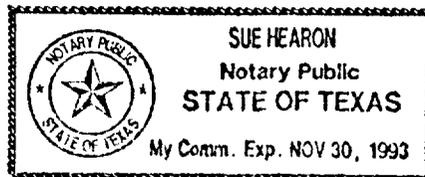
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

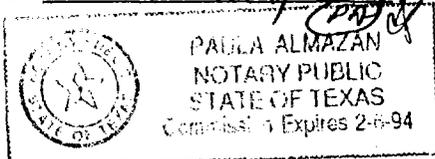
The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF WILLIAMSON §

The foregoing instrument was acknowledged before me this 2ND
day of JANUARY ~~FEBRUARY~~ 1993, by COURTNEY C. JOHNSON.



Paula Almazan
Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

DATE: _____

DeMAR JOHNSON HOPSON

WITNESS:

By: _____

DATE: June 23, 1993

DEBRA JOHNSON HEAD

WITNESS:

By: _____

DATE: 6/24/93

F. KIRK JOHNSON, III

WITNESS:

[Handwritten signature]

By: *[Handwritten signature]*

DATE: _____

ANN H. JOHNSON McREYNOLDS, Managing Conservator for F. Kirk Johnson, IV and Marsland Holt Johnson

WITNESS:

By: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

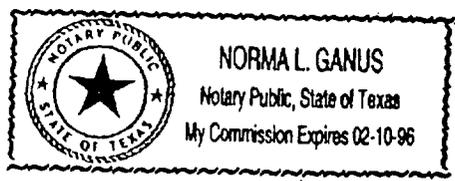
My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Taylor §

The foregoing instrument was acknowledged before me this 28th
day of June, 1993, by Norma L. Ganus.

Norma L. Ganus
Notary Public

My Commission Expires: 2-10-96



~

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

Joseph M. Beck

2/4/93

Neil P. Lunn

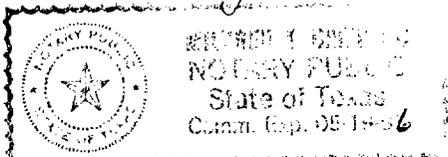
STATE OF Texas

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Midland

§

The foregoing instrument was acknowledged before me this 14th day of February, 1993, by Kyle A. LAWSON.



Mildred K. Daehling
Notary Public

My Commission Expires: _____

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u><i>Joseph M. Reese</i></u>	<u>1-14/93</u>	<u><i>Walter R. Sumner</i></u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

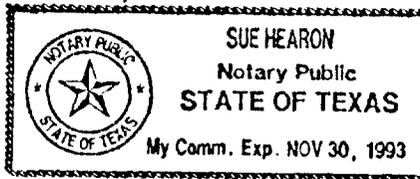
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

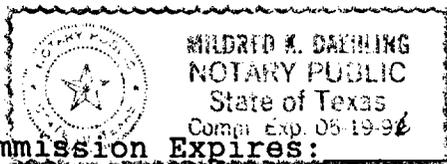
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 4/11 day of February, 1993, by Kyle R. LAWSON.



Mildred K. Saehling
Notary Public

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

Theresa Dawson

01/27/93

Anne B. Lutz

STATE OF NEW MEXICO § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF BERNALILLO §

The foregoing instrument was acknowledged before me this 27th
day of JANUARY, 1993, by ANNE D. LITTLE.

Stephanie Jones
Notary Public

My Commission Expires: 4-1-93

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

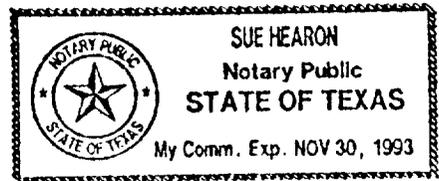
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>Theresa Dawson</u>	<u>01/27/93</u>	<u>Anne B. Little</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF NEW MEXICO § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF BERNALILLO §

The foregoing instrument was acknowledged before me this 27th.
day of January, 1993, by ANNE B. LITTLE.

Stephanie Lantz

Notary Public

My Commission Expires: 4-1-93

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

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

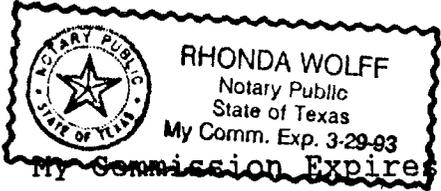
Mary Ann Perovich

3-22-93

Margie Little

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF San Patricio §

The foregoing instrument was acknowledged before me this 22
day of March, 1993, by Marjorie Little.



Rhonda Wolff
Notary Public

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Mary Ann Parnick

3-22-93

Margorie Little

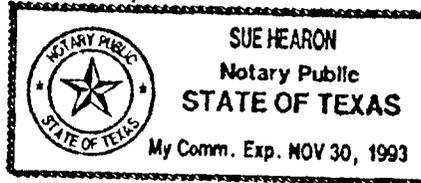
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

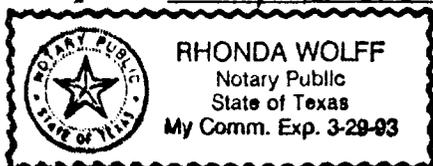
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF San Patricio §

The foregoing instrument was acknowledged before me this 22 day of March, 1993, by Marjorie Little.



Rhonda Wolff
Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

Laura Lynn P. Cox

3-26-93

Sylvia F. Little

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

STATE OF New Mexico § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF San Juan §

The foregoing instrument was acknowledged before me this 26 day of March, 1993, by Sylvia F. Little.

Carmel Gutierrez

Notary Public

My Commission Expires: 4-19-93

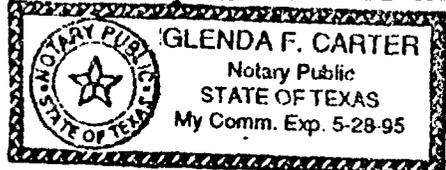
ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

James Allen Brinson 3-26-93 James Allen Brinson

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by James Allen Brinson, as Attorney-in-Fact of Newbourne Oil Company, a Delaware Corporation.



Glenda F. Carter
Notary Public, State of Texas

My Commission Expires: 5-28-95

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

STATE OF New Mexico § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF San Juan §

The foregoing instrument was acknowledged before me this 26 day of March, 1993, by Sylvia F. Little.

Carmel Gutierrez

Notary Public

My Commission Expires: 4-19-93

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

Don Jackson

28 Jan '93

James E. Makins

Don Jackson

Jan 28, 1993

DR. JAMES E. MAKINS

Jane H. Makins
AND WIFE JANE H. MAKINS

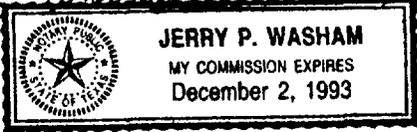
STATE OF TEXAS

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Dallas

§

The foregoing instrument was acknowledged before me this 28th day of JANUARY, 1993, by JAMES E. MALKINS.



[Signature]
Notary Public

My Commission Expires: 12-2-93

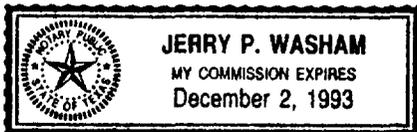
STATE OF TEXAS

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Dallas

§

The foregoing instrument was acknowledged before me this 28th day of JANUARY, 1993, by JANE H. MALKINS.



[Signature]
Notary Public

My Commission Expires: 12-2-93

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Don Jackson

28 Jan 93

James E. Makins

DR. JAMES E. MAKINS

Don Jackson

Jan 28, 1993

Jane H. Makins
AND WIFE JANE H. MAKINS

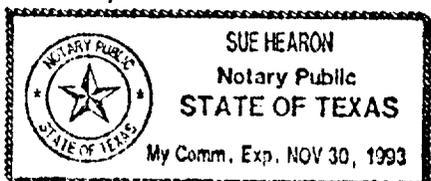
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 28th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

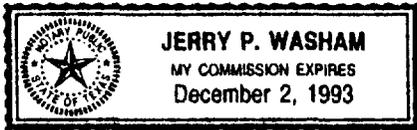
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF DALLAS §

The foregoing instrument was acknowledged before me this 28th day of JANUARY, 1993, by JAMES H. MARLINS.

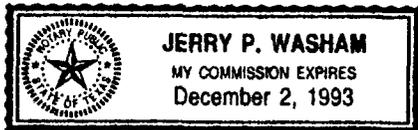


Notary Public

My Commission Expires: 12-2-93

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF DALLAS §

The foregoing instrument was acknowledged before me this 28th day of JANUARY, 1993, by JAMES H. MARLINS.



Notary Public

My Commission Expires: 12-2-93

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. Perkins

2-2-93

James E. Wilbanks

STATE OF Texas

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Dallas

§

The foregoing instrument was acknowledged before me this 2nd day of February, 1993, by James E. Medina, Jr.

Alrothy J. Ballas
Notary Public

My Commission Expires: 10-24-93

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

James A. Makin

2-2-93

James E. [Signature]

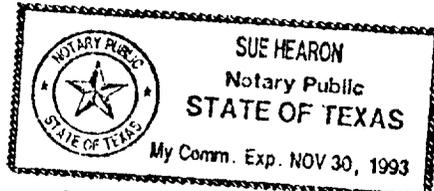
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Dallas §

The foregoing instrument was acknowledged before me this 24 day of February, 1993, by James E. Medina, Jr..

Marethy J. Ballas
Notary Public

My Commission Expires: 10-24-93

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

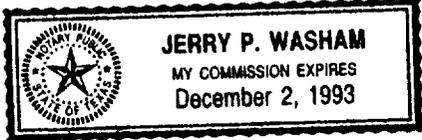
Don Johnson

28 Jan 1993

Michael Marins
MICHAEL MARINS

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Dallas §

The foregoing instrument was acknowledged before me this 28th
day of JANUARY, 1993, by Michael Makins.



[Signature]
Notary Public

My Commission Expires: 12-2-93

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>Don Jackson</u>	<u>18 Jan '93</u>	<u>Michael Makins</u> MICHAEL MAKINS
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

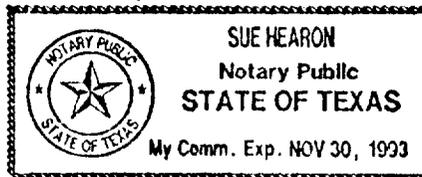
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

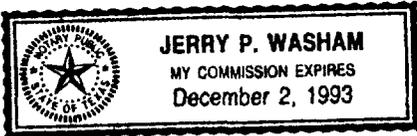
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Dallas §

The foregoing instrument was acknowledged before me this 28th day of JANUARY, 1993, by Michael J. Atkins.



Notary Public

My Commission Expires: 12-2-93

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

Elizabeth P. Downey

2-2-93

Patrick C. Makens

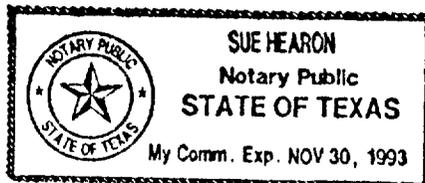
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

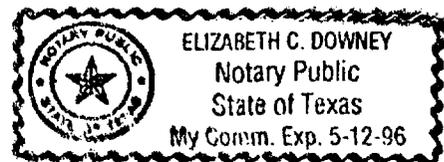
STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Tom Green §

The foregoing instrument was acknowledged before me this 2nd day of February, 1993, by Patrick C. Makins, for _____, a _____ Corporation.

Elizabeth C. Downey
Notary Public

My Commission Expires: _____



ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Elizabeth C. Downey

2-2-93

Patrick C. Makins

STATE OF TEXAS §

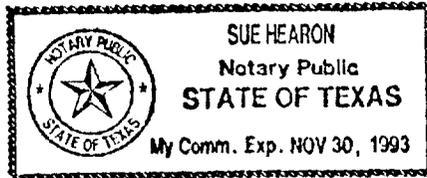
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon

Notary Public, State of Texas

My Commission Expires: _____



STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)

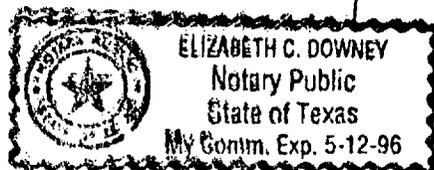
COUNTY OF Tom Green §

The foregoing instrument was acknowledged before me this 2nd day of February, 1993, by Patrick C. Makins, for _____, a _____ Corporation.

Elizabeth C. Downey

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 _____

Robert Kay Selman 2-5-93

Peter R. Mahins

STATE OF TEXAS

§

(ACKNOWLEDGMENT FOR INDIVIDUAL)

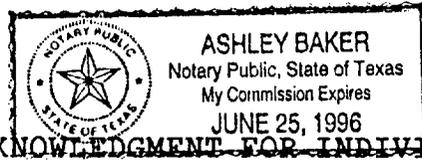
COUNTY OF BRAZOS

§

The foregoing instrument was acknowledged before me this 5 day of FEBRUARY, 1993, by SCOTT MAKINS.

Ashley Baker
Notary Public

My Commission Expires: _____



STATE OF _____

§

(ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>Ashley Baker</u>	<u>2-5-93</u>	<u>Scott R. Makins</u>
<u>Debra Kay Palmer</u>	<u>2-5-93</u>	

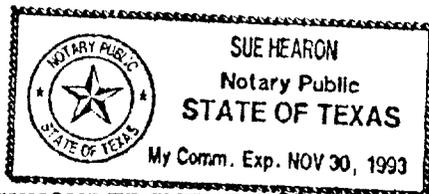
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

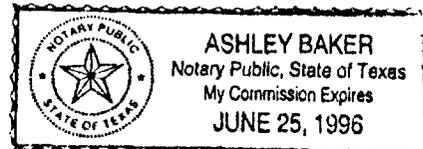
STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF BRAZOS §

The foregoing instrument was acknowledged before me this 5 day of FEBRUARY, 1993, by SCOTT MAKINS.

Ashley Baker

Notary Public

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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: _____

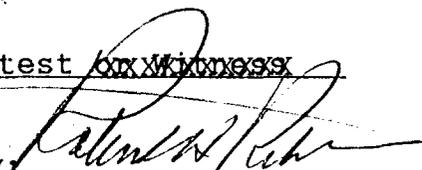
ROYALTY OWNERS

Attest ~~on Witness~~

Date Signed

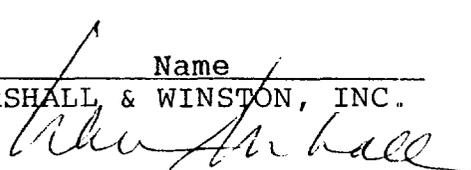
Name

By:


Robert H. Ritchie
Secretary-Treasurer

2/11/93

By:


MARSHALL & WINSTON, INC.
William S. Marshall
President

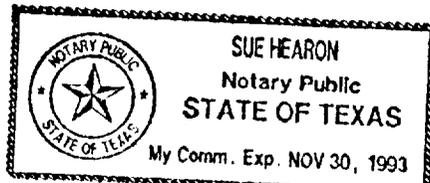
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

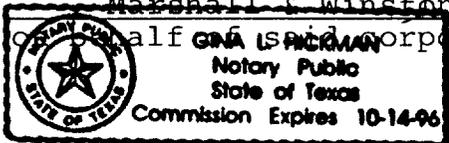
My Commission Expires: _____



STATE OF TEXAS § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF MIDLAND §

The foregoing instrument was acknowledged before me this 11th day of February, 1993, by William S. Marshall, for Marshall & Winston, Inc., a Nevada Corporation, on behalf of GINA ISAACMAN Corporation.



Gina Isaacman
Notary Public, State of Texas

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest ~~XXXXXX~~

Date Signed

Name

By:

Robert H. Ritchie
Secretary-Treasurer

2/11/93

By:

William S. Marshall
President

MARSHALL & WINSTON, INC.

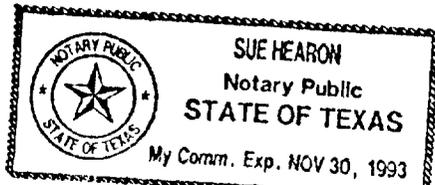
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



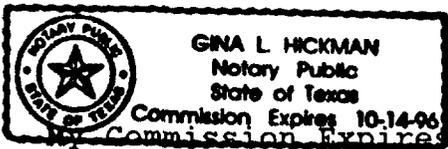
STATE OF TEXAS §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF MIDLAND §

The foregoing instrument was acknowledged before me this 11th day of February, 1993, by William S. Marshall, for Marshall & Winston, Inc., a Nevada Corporation, on behalf of said corporation.

Gina L. Hickman
Notary Public, State of Texas



My Commission Expires: _____

DATE: 6-29-93

Ann H. Johnson McReynolds, Managing Conservator for F. Kirk Johnson, IV and Marsland Holt Johnson

WITNESS:

Carli Dunbar

Ann McReynolds

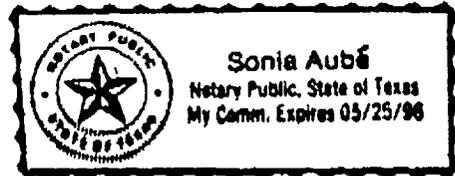
STATE OF Texas

COUNTY OF Dallas

The following instrument was acknowledged before me this 29th day of June, 1993, by Ann McReynolds

Sonia Aubé
Notary Public

My Commission Expires: 5-25-96



DATE: _____

MANZANO OIL CORPORATION

ATTEST:

By: _____

DATE: _____

MCKAY OIL CORPORATION

ATTEST:

By: _____

DATE: 1/6/93

CURTIS W. MEWBOURNE

WITNESS:

Barbara Dunman

By: Curtis Mewbourne

DATE: 1/06/93

MEWBOURNE OIL COMPANY

ATTEST:

Debra Thompson

By: Curtis Mewbourne

DATE: _____

STEPHEN T. MITCHELL

WITNESS:

By: _____

DATE: _____

MARCIA HEYNE MODESETT

WITNESS:

By: _____

DATE: _____

STEPHEN & LESLIE MONTGOMERY

WITNESS:

By: _____

By: _____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by CURTIS W. MEWBOURNE.



Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

DATE: _____

DONALD M. KUTZ

WITNESS:

By: _____

DATE: _____

L.O.G. PARTNERS

ATTEST:

By: _____

DATE: _____

MANZANO OIL CORPORATION

ATTEST:

By: _____

DATE: _____

MCKAY OIL CORPORATION

ATTEST:

By: _____

DATE: 1/6/93

CURTIS W. MEWBOURNE

WITNESS:

Barbara Turner

By: *Curtis Mewbourne*

DATE: 1/06/93

MEWBOURNE OIL COMPANY

ATTEST:

Debra Thompson

By: *Curtis Mewbourne*

DATE: _____

STEPHEN T. MITCHELL

WITNESS:

By: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires:_____

STATE OF TEXAS § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by CURTIS W. MEWBOURNE.

Barbara Dunner

Notary Public

My Commission Expires:_____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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 _____

Randy Bove

4-1-93

Ann Spiess Mills

STATE OF New Mexico § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Santa Fe §

The foregoing instrument was acknowledged before me this 1st
day of April, 1993, by Ann Spiess Mills.

V. Brooke Peña
Notary Public

My Commission Expires: August 9, 1993

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Lundy Bore

4-1-93

Ann Spiess Mills

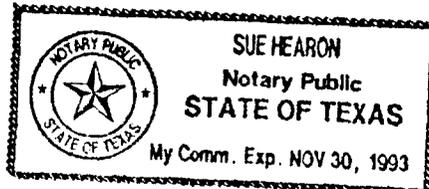
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF NEW MEXICO § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Santa Fe §

The foregoing instrument was acknowledged before me this 1st
day of April, 1993, by Ann Spiess Mills.

V. Brooke Peña

Notary Public

My Commission Expires: August 9, 1993

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

DATE: 6-22-93

MURJO OIL AND ROYALTY COMPANY

ATTEST:

Bucky H. Young

By: Bettye B. Davis

DATE: _____

NEECO, INC.

ATTEST:

By: _____

DATE: _____

OXY USA INC.

ATTEST:

By: _____

DATE: _____

PERMIAN BASIN INVESTMENT CORP.

ATTEST:

By: _____

DATE: _____

PETRO ATLAS CORPORATION

ATTEST:

By: _____

DATE: _____

KENNETH J. REYNOLDS

WITNESS:

By: _____

DATE: _____

SANTA FE ENERGY COMPANY

ATTEST:

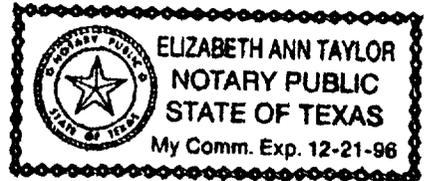
By: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Tarrant §

The foregoing instrument was acknowledged before me this 22
day of June, 1993, by Bettye B. Davis, for
Mundo Oil & Royalty Company a Texas Corporation.

Elizabeth Ann Taylor
Notary Public

My Commission Expires: 12-21-96



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

DATE: 6-22-93

ATTEST:

Becky H. Young

MURJO OIL AND ROYALTY COMPANY

By: Betty B. Davis

DATE: _____

ATTEST:

NEECO, INC.

By: _____

DATE: _____

ATTEST:

OXY USA INC.

By: _____

DATE: _____

ATTEST:

PERMIAN BASIN INVESTMENT CORP.

D- _____

DATE: _____

ATTEST:

W1
+
Royalty CORPORATION

DATE: _____

WITNESS:

KENNETH J. REYNOLDS

By: _____

DATE: _____

ATTEST:

SANTA FE ENERGY COMPANY

By: _____

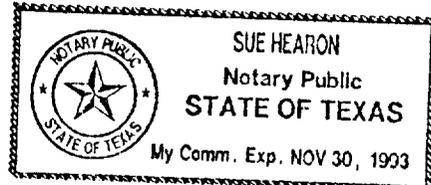
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



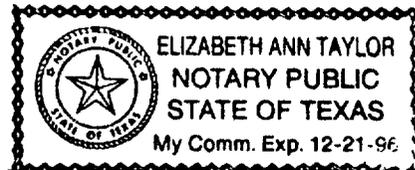
STATE OF Texas § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Tarrant §

The foregoing instrument was acknowledged before me this 22 day of June, 1993, by Bettie B. Davis, for Murphy Oil & Royalty Company, a Texas Corporation.

Elizabeth Ann Taylor
Notary Public

My Commission Expires: 12-21-96



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

DATE: _____

MARCIA HEYNE MODESETT

WITNESS:

By: _____

DATE: _____

STEPHEN & LESLIE MONTGOMERY

WITNESS:

By: _____

By: _____

DATE: 6-22-93

MURJO OIL AND ROYALTY COMPANY

ATTEST:

Becky N. Young

By: Bette B. Davis

DATE: _____

NEECO, INC.

ATTEST:

By: _____

DATE: _____

OXY USA INC.

ATTEST:

By: _____

DATE: _____

PERMIAN BASIN INVESTMENT CORP.

ATTEST:

By: _____

DATE: _____

PETRO ATLAS CORPORATION

ATTEST:

By: _____

ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

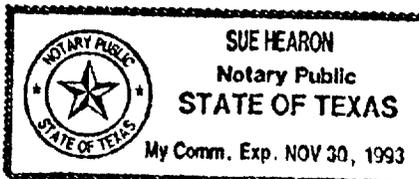
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF Texas §

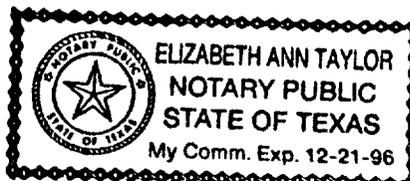
(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF Tarrant §

The foregoing instrument was acknowledged before me this 22 day of June, 1993, by Bette B. Davis, for Murphy Oil & Royalty Company, a Texas Corporation.

Elizabeth Ann Taylor
Notary Public

My Commission Expires: 12-21-96



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

John L. Inodgrass

2/16/93

Diana Ochlerbeck

STATE OF New Mexico § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF San Miguel §

The foregoing instrument was acknowledged before me this 26
day of February, 1993, by Diana Welterbeck.

Aracul' Mace
Notary Public

My Commission Expires: June 25, 1996

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

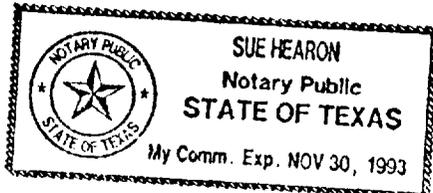
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>John L. Snodgrass</u>	<u>2/16/93</u>	<u>Diana Ochterbeck</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF New Mexico § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF San Miguel §

The foregoing instrument was acknowledged before me this 26 day of February, 1993, by Diana Odterbeck.

Isabel Mals

Notary Public

My Commission Expires: June 25, 1996

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Tom Panos ✓

6-21-93 ✓

Panos Investment Company
By Brad Panos ✓

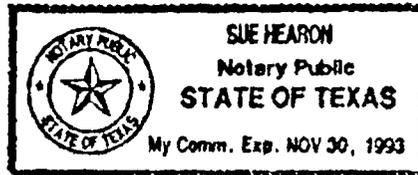
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____

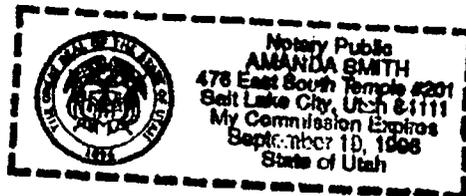


✓ STATE OF Utah § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF SALT LAKE § PARTNERSHIP

The foregoing instrument was acknowledged before me this 21 day of June, 1993, by Brad Panos, for PANOS INVESTMENT COMPANY, a Utah Corporation. Partnership

Amanda Smith
Notary Public

My Commission Expires: 9-19-96



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

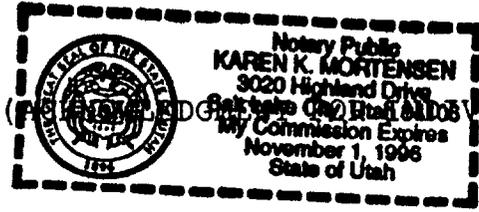
Name

Margaret

6/11/93

Greg Jones *

STATE OF UTAH §
COUNTY OF SALT LAKE §



(ACKNOWLEDGMENT FOR INDIVIDUAL) *

The foregoing instrument was acknowledged before me this 11th day of JUNE, 1993, by GREGORY P. PANOS.

Karen K. Mortensen
Notary Public

My Commission Expires: 11-1-96

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

[Handwritten signature]

6/11/93

[Handwritten signature] *

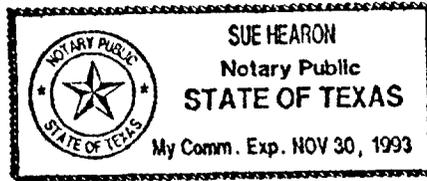
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

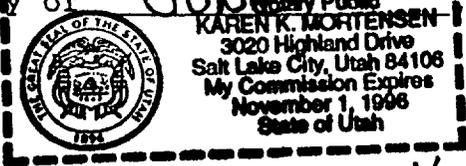
The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF UTAH § (ACKNOWLEDGMENT FOR INDIVIDUAL) *h*
COUNTY OF SALT LAKE §

The foregoing instrument was acknowledged before me this 11th
day of JUNE, 1993, by GREGORY P PANOS.



Karen K Mortensen
Notary Public

My Commission Expires: 11-1-96

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

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

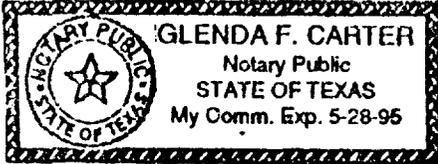
2-12-93

Patrick L. Jones

STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of January, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.



Glenda F. Carter
Notary Public, State of Texas

My Commission Expires: 5-28-95

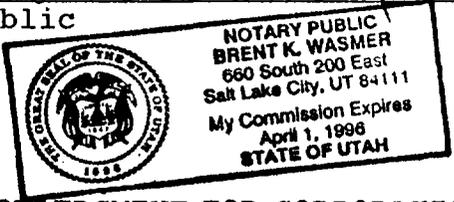
STATE OF Utah § (ACKNOWLEDGMENT FOR ^{Individual} CORPORATION)

COUNTY OF Salt Lake §

The foregoing instrument was acknowledged before me this 12th day of February, 1993, by Patrick T. Paulos, for ~~an~~ INDIVIDUAL, a Corporation. BKW

Brent K. Wasmer
Notary Public

My Commission Expires: 4-1-96



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

DATE: _____

MURJO OIL AND ROYALTY COMPANY

ATTEST:

By: _____

DATE: _____

NEECO, INC.

ATTEST:

By: _____

DATE: _____

OXY USA INC.

ATTEST:

By: _____

DATE: _____

PERMIAN BASIN INVESTMENT CORP.

ATTEST:

By: _____

DATE: June 8, 1993

PETRO ATLAS CORPORATION

ATTEST:


Secretary

By: James L. Harden III
James L. 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 §

The foregoing instrument was acknowledged before me this 8th
day of June, 1993, by James L. Harden III, for
Petro Atlas Corporation, a Colorado Corporation.

Alfonse R. Bravakis
Notary Public

My Commission Expires: _____
My commission expires May 18, 1994.

*1111 Pandora Ct
Lafayette, CO 80026*

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____
day of _____, 19____, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

DATE: _____

MURJO OIL AND ROYALTY COMPANY

ATTEST:

By: _____

DATE: _____

NEECO, INC.

ATTEST:

By: _____

DATE: _____

OXY USA INC.

ATTEST:

By: _____

DATE: _____

PERMIAN BASIN INVESTMENT CORP.

ATTEST:

By: _____

DATE: June 8, 1993

PETRO ATLAS CORPORATION

ATTEST:

Merrill J. Harden
Secretary

By: James L. Harden III
James L. Harden III, President

DATE: _____

KENNETH J. REYNOLDS

WITNESS:

By: _____

DATE: _____

SANTA FE ENERGY COMPANY

ATTEST:

By: _____

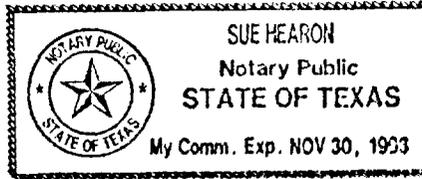
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF COLORADO

§ (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF DENVER

§

The foregoing instrument was acknowledged before me this 8th day of June, 1993, by James L. Harden III, for Petro Atlas Corporation, a Colorado Corporation.

Cherene Ann Bravakis
Notary Public

1111 Pandora Ct.
Lafayette, CO 80026

My Commission Expires: _____

My commission expires May 18, 1994.

STATE OF _____

§ (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____ Corporation.

Notary Public

My Commission Expires: _____

DATE: _____

MARCIA HEYNE MODESETT

WITNESS:

By: _____

DATE: _____

STEPHEN & LESLIE MONTGOMERY

WITNESS:

By: _____

By: _____

DATE: _____

MURJO OIL AND ROYALTY COMPANY

ATTEST:

By: _____

DATE: _____

NEECO, INC.

ATTEST:

By: _____

DATE: _____

OXY USA INC.

ATTEST:

By: _____

DATE: _____

PERMIAN BASIN INVESTMENT CORP.

ATTEST:

By: _____

DATE: June 8, 1993

PETRO ATLAS CORPORATION

ATTEST:

Muriel J. Harden
Secretary

By: James L. Harden III
James L. Harden III, President

ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

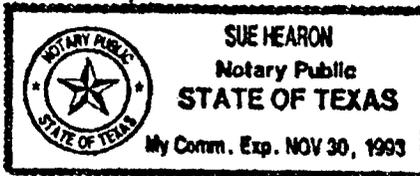
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF COLORADO §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF DENVER §

The foregoing instrument was acknowledged before me this 8th day of June, 1993, by James L. Harden III, for Petro Atlas Corporation, a Colorado Corporation.

Caatherine Ann Brakes
Notary Public
= 1111 Pandora Ct
Lafayette, CO 80026

My Commission Expires: _____

My commission expires May 18, 1994.

DATE: _____

VENTURE RESOURCES 1986 GP

ATTEST:

By: _____

DATE: _____

C. DANIEL WALKER

WITNESS:

By: _____

DATE: _____

WARREN, INC.

ATTEST:

By: _____

DATE: _____

RONALD L. WILBANKS

WITNESS:

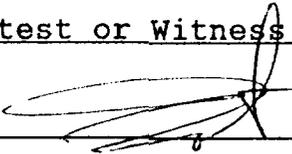
By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name



2/16/93

Susan Brown Head

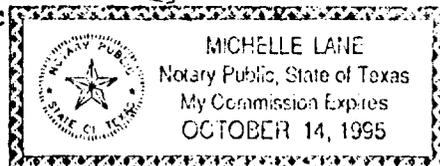
STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Tarrant §

The foregoing instrument was acknowledged before me this 16th
day of FEBRUARY, 1993, by Susie Crews Bryant.

Michelle Lane

Notary Public

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness _____

Date Signed _____

Name _____

[Signature]

2/16/93

Sue Crend Hearon

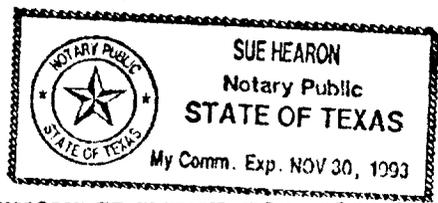
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

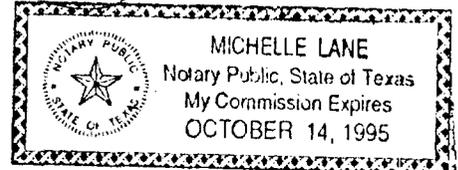
STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Travis §

The foregoing instrument was acknowledged before me this 16th day of February, 1993, by Susie Crews Paquet.

Michelle Lane

Notary Public

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

Charles J. Blayfield

Feb 1st 1993

Rafelita Pittman

STATE OF CALIFORNIA § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF TULARE §

The foregoing instrument was acknowledged before me this 15th
day of February, 1993, by Rafelita Pittman.



Lana M. Neyenhuys
Notary Public

My Commission Expires: May 3, 1994

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

David J. Bradford

Feb 1st 1993

Rafelita Pittman

STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Heaton
Notary Public, State of Texas

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

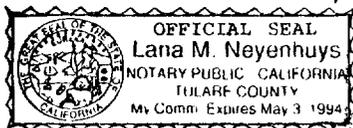
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF California § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Tulare §

The foregoing instrument was acknowledged before me this 10th day of February, 1993, by Catelita Pittman.



Lana M. Neyenhuis
Notary Public

My Commission Expires: May 3, 1994

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

1-25-93

W. K. Ross, Trustee

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

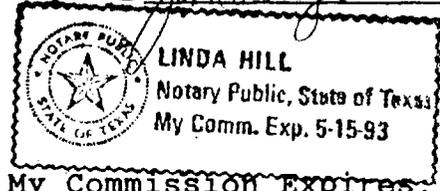
Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 25th day of January, 1992, by Lee R. Ross, Trustee



Linda Hill
Notary Public

My Commission Expires: 5-15-93

ROYALTY OWNERS

<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
_____	<u>1-25-93</u>	<u>Lee K. Ross, Trustee</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

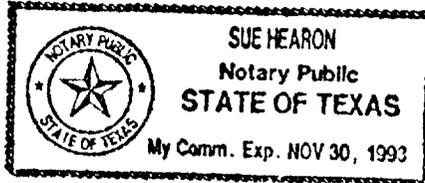
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

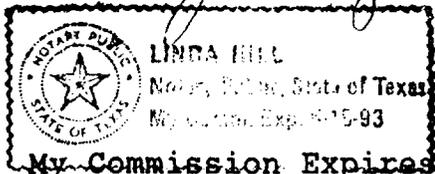
The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 25th day of January, 1992, by Lee R. Ross, trustee



Linda Hill
Notary Public

~~My Commission Expires: _____~~

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

O. L. Elee

Feb. 4, 1993

F. L. Morgan

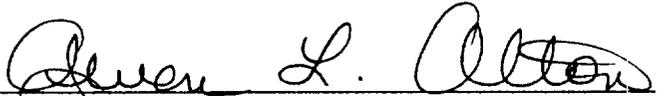
a/k/a

Frank L. Morgan

STATE OF COLORADO § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF BOULDER §

The foregoing instrument was acknowledged before me this 8th day of February, 1993, by F. L. SHOGRIN.



Notary Public

My Commission Expires: 4-19-96

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

C. L. Egan

Feb. 6, 1993

F. L. Shogrin

9/15/93

Frank L. Shogrin

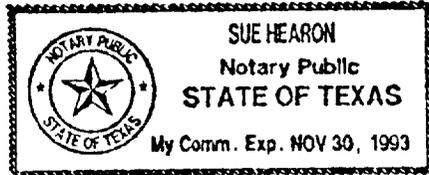
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF COLORADO §

(ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF BOULDER §

The foregoing instrument was acknowledged before me this 6th day of FEB., 1993, by F. L. SHOGRIAN, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

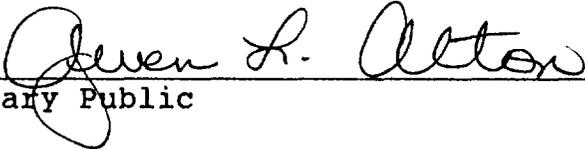
Notary Public

My Commission Expires: _____

STATE OF COLORADO § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF BOULDER §

The foregoing instrument was acknowledged before me this 8th day of February, 1993, by F. L. SHOGRIN.



Notary Public

My Commission Expires: 4-19-96

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

Darlene W. Simpson

1-26-93

Peter J. ...

STATE OF Arizona § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Cochise §

The foregoing instrument was acknowledged before me this 26th
day of January, 1993, by Peter F. Simpson Jr.

[Signature]
Notary Public

My Commission Expires: My Commission Expires Nov. 29, 1995

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Laurane W. Simpson

1-26-93

Peter F. ...

STATE OF TEXAS §

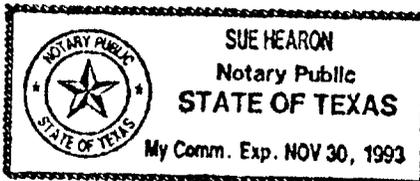
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon

Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF Arizona § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Cochise §

The foregoing instrument was acknowledged before me this 26th day of January, 1993, by Peter F. Simpson Jr.

K. Genie Miller

Notary Public

My Commission Expires: My Commission Expires Nov. 29, 1995

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

Connie ~~Soto~~

3/19/93

Adam D. Dyer

Irene Goodbar

3/19/93

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____.

Notary Public

My Commission Expires: _____

STATE OF California § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Los Angeles §

The foregoing instrument was acknowledged before me this 19th day of March, 1993, by Irene Goodbar.

Irene Goodbar

Notary Public

My Commission Expires: December 17, 1993



ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Connie Scott

3/19/93

Ronald W. Dwyer

Diane Goodlan

3/19/93

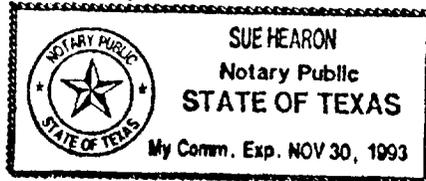
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

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:

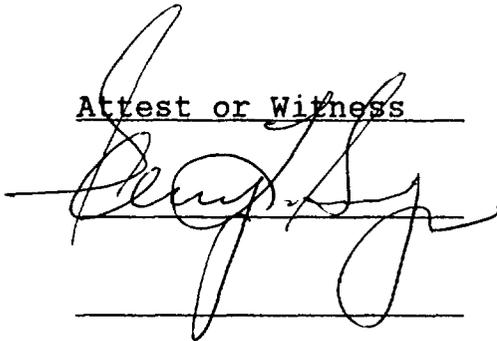
By: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name



2/11/93

Sammy L. Simpson

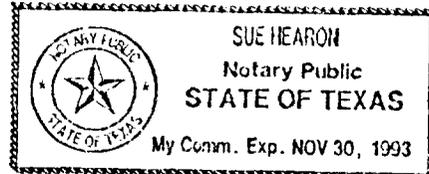
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF Arizona § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Maricopa §

The foregoing instrument was acknowledged before me this 11th day of February, 1993, by Sammy Lu Simpson, for _____, a _____ Corporation.

Kendall
Notary Public

My Commission Expires: 023.95

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

[Handwritten signature]

2/11/93

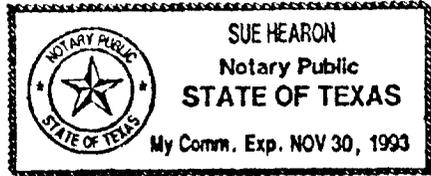
Sammy L. Simpson

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF Arizona § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF Maricopa §

The foregoing instrument was acknowledged before me this 11th day of February, 1993, by Sammy L. Simpson, for _____, a _____ Corporation.

Kunda Hall
Notary Public

My Commission Expires: 5-23-95

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

Randy Biggs

2/19/93

WA Stokes

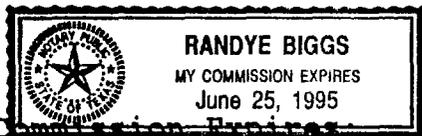
STATE OF Texas

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Midland

§

The foregoing instrument was acknowledged before me this 19th
day of February, 1993, by W.A. Skees.



Randy Biggs
Notary Public

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this _____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Randy Biggs

2/19/93

W.A. Allen

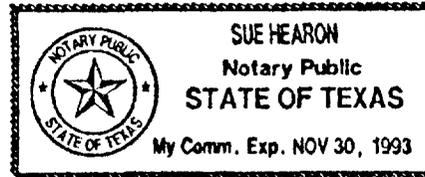
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6th day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

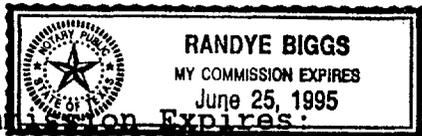
The foregoing instrument was acknowledged before me this ___
day of _____, 19___, by _____, for
_____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 19th
day of February, 1993, by W.A. Skies.



Randye Biggs
Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ___
day of _____, 19___, by _____.

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

Lisa A. Emmert

Feb. 11, 1993

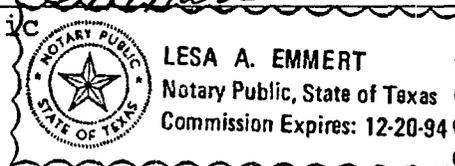
H. Bruce Wiggels

STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 11th
day of February, 1993, by H. Bruce Wiggzell.

Lesa A. Emmert
Notary Public

My Commission Expires: 12-20-94



STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____
day of _____, 19____, by _____.

Notary Public

My Commission Expires: _____

ROYALTY OWNERS

Attest or Witness

Date Signed

Name

Lesa A. Emmert

Feb. 11, 1993

H. Bruce Wiggell

STATE OF TEXAS §

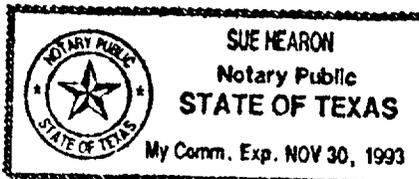
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon

Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____

§ (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this ___ day of _____, 19___, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

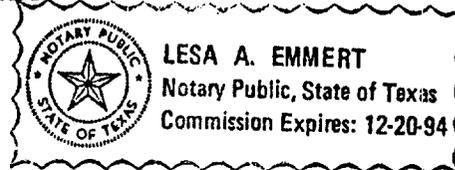
STATE OF Texas § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF Midland §

The foregoing instrument was acknowledged before me this 11th day of February, 1993, by H. Bruce Wiggzell.

Lesa A. Emmert
Notary Public

My Commission Expires: 12-20-94



STATE OF _____ § (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____ §

The foregoing instrument was acknowledged before me this ____ day of _____, 19____, by _____.

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

Susan Strong
Susan Strong

6/17/93
6/17/93

Christa S. Wood
Adele Simpson

STATE OF Hawaii § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Honolulu §

The foregoing instrument was acknowledged before me this 17th
day of June, 1993, by Olivia S. Wood.

LS

Susan Strong
Notary Public

My Commission Expires: 4-3-96

STATE OF Hawaii § (ACKNOWLEDGMENT FOR INDIVIDUAL)
COUNTY OF Honolulu §

The foregoing instrument was acknowledged before me this 17th
day of June, 1993, by Adele Simpson.

LS

Susan Strong
Notary Public

My Commission Expires: 4-3-96

ROYALTY OWNERS

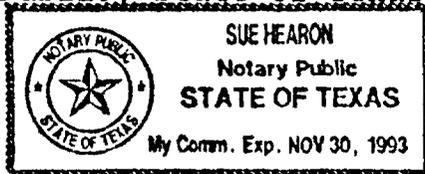
<u>Attest or Witness</u>	<u>Date Signed</u>	<u>Name</u>
<u>Susan Strong</u>	<u>6/17/93</u>	<u>Olivia S. Wood</u>
<u>Susan Strong</u>	<u>6/17/93</u>	<u>Adele Simpson</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF TEXAS §
COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 19 , by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____ § (ACKNOWLEDGMENT FOR CORPORATION)
COUNTY OF _____ §

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Notary Public

My Commission Expires: _____

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Notary Public

My Commission Expires: 4-3-96

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COUNTY OF Honolulu §

The foregoing instrument was acknowledged before me this 17th day of June, 1993, by Adele Simpson.

Susan Strong
Notary Public

My Commission Expires: 4-3-96

NEW MEXICO
OIL CONSERVATION DIVISION

EXHIBIT 15
CASE NO. 10761/10702

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

October 22, 1992

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

1456.05

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

Petresim Integrated Technologies

kw

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.

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.

S U M M A R Y

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 achieved 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 & SECONDARY BY WATER INJECTION	
	PRODUCING AREA	TOTAL RESERVOIR	PRODUCING AREA	TOTAL RESERVOIR
Ultimate Production:				
Oil, MSTB	1,757.4	1,865.6	3,690.0	3,875.0
Gas, MMcf	5,909.9	6,157.6	5,679.4	6,032.4
Water, MSTB	518.1	554.7	15,436	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	---	---	784	789
Date	---	---	6/94	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.
3. 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 porous 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 gas-oil-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 1		LAYER 2		TOTAL	
	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.G. %	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

Querecho Plains Field
Lea County, New Mexico

DATE	DAYS	YEAR	DAILY PRODUCTION			CUMULATIVE PRODUCTION			PRESSURES, PSIA			GAS LIFT		
			WELL STAT	OIL STB/D	GAS MSCF/D	WATER STB/D	GOR SCF/CUT	WATER CUT FRAC.	OIL STB	GAS MMSCF	WATER MSTB	GRID BLOCK	TRP	LIFT RATE MSTB/D
30/ 9/91	5020.0	1991.748	376.40	2291.	146.24	6087	.280	1556.37	4101.64	379.52		0.	0.	0.
31/12/91	5112.0	1992.000	326.62	2039.	135.83	6243	.294	1587.80	4296.23	392.31		0.	0.	0.
31/ 3/92	5203.0	1992.247	280.73	1777.	123.85	6329	.306	1614.65	4465.36	403.93		0.	0.	0.
30/ 6/92	5294.0	1992.496	244.44	1569.	114.31	6420	.319	1637.94	4613.98	414.64		0.	0.	0.
30/ 9/92	5386.0	1992.748	209.73	1358.	105.09	6473	.334	1658.23	4744.94	424.54		0.	0.	0.
31/12/92	5478.0	1993.000	184.91	1199.	95.08	6484	.340	1675.97	4859.93	433.62		0.	0.	0.
30/ 6/93	5659.0	1993.496	154.01	1027.	85.10	6670	.356	1706.19	5058.58	449.90		0.	0.	0.
31/12/93	5843.0	1994.000	129.42	854.63	69.94	6604	.351	1731.79	5228.11	463.84		0.	0.	0.
30/ 6/94	6024.0	1994.496	104.31	694.64	58.96	6659	.361	1752.12	5363.31	475.02		0.	0.	0.
31/12/94	6208.0	1995.000	87.26	592.52	52.81	6790	.377	1769.56	5480.31	485.35		0.	0.	0.
30/ 6/95	6389.0	1995.496	77.19	533.84	45.40	6916	.370	1784.65	5583.46	494.58		0.	0.	0.
31/12/95	6573.0	1996.000	68.49	475.28	43.33	6939	.387	1797.82	5674.62	502.69		0.	0.	0.
30/ 6/96	6755.0	1996.496	50.78	356.72	34.84	7025	.407	1808.89	5751.75	509.97		0.	0.	0.
31/12/96	6939.0	1997.000	44.16	314.20	32.80	7115	.426	1817.28	5811.23	516.09		0.	0.	0.
30/ 6/97	7120.0	1997.496	42.73	305.95	32.33	7160	.431	1825.12	5867.21	521.97		0.	0.	0.
31/12/97	7304.0	1998.000	36.49	258.55	28.28	7086	.437	1832.52	5920.11	527.64		0.	0.	0.
30/ 6/98	7485.0	1998.496	35.64	254.18	28.02	7131	.440	1839.04	5966.44	532.73		0.	0.	0.
31/12/98	7669.0	1999.000	34.81	249.93	27.74	7180	.443	1845.51	6012.75	537.86		0.	0.	0.
30/ 6/99	7850.0	1999.496	33.98	245.56	27.43	7227	.447	1851.72	6057.52	542.85		0.	0.	0.
31/12/99	8034.0	2000.000	33.13	241.17	27.10	7278	.450	1857.88	6102.23	547.86		0.	0.	0.
30/ 6/00	8216.0	2000.496	17.49	120.37	14.63	6883	.455	1862.45	6135.64	551.97		0.	0.	0.
31/12/00	8400.0	2001.000	17.17	118.99	14.53	6929	.458	1865.63	6157.63	554.65		0.	0.	0.

TABLE 1

T A B L E 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 BHPD.
- C. Minimum rates before wells are shut-in:
 - Oil producers: 3 BOPD or 98% watercut
 - Water injectors: 10 BHPD
- 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

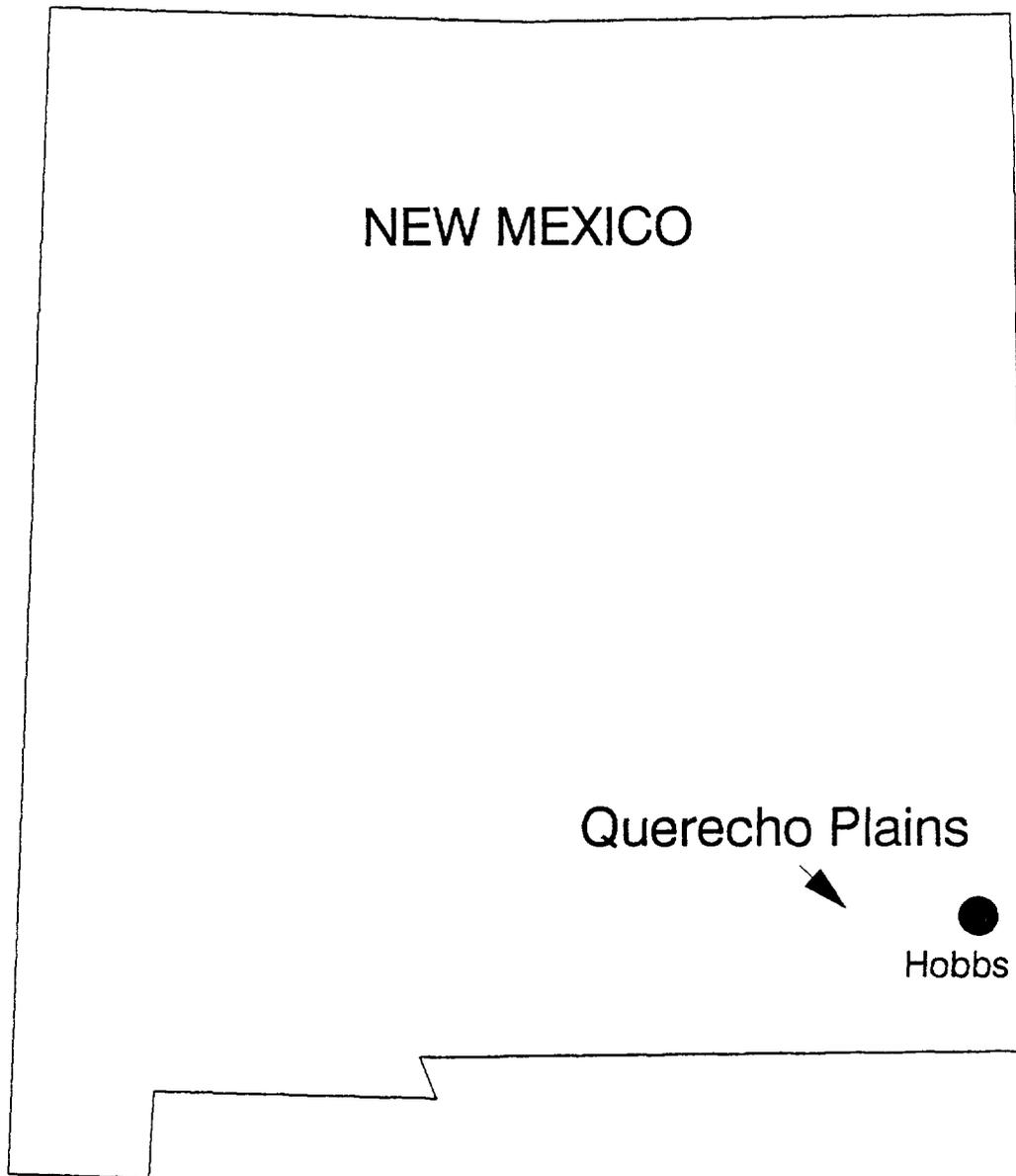
CASE 23A (LINE DRIVE - Shinnery Fed 3 & 4 Injectors)
L-8 WELL NOT DRILLED, FED "E" 10 AS INJECTOR
18 Producers, 16 Injectors

DATE	AVG. OIL		AVG. WI		AVG. WATERCUT		-- -- PRODUCTION -- --			-- -- PRODUCTION -- --			-- -- PRODUCTION -- --									
	STB/D	STB/D	STB/D	STB/D	FRAC.	OIL	GAS	WATER	ANNUAL	ANNUAL	ANNUAL	OIL	GAS	WATER	CUM	CUM	CUM	OIL	GAS	WATER		
						MSIB	MMSCF	MSIB	MSIB	MSIB	MSIB	MSIB	MMSCF	MSIB	MSIB	MSIB	MSIB	MSIB	MMSCF	MSIB	MSIB	
7/1/92																						
1992(6 mo.)	142.1	6981.0	0.347	26.1	161.7	13.9	1,284.5	1646.9	4693.6	416.5	0.0											
1993	313.4	5739.5	0.499	114.4	172.5	113.8	2,094.9	1673.0	4855.2	430.4	1284.5											
1994	748.0	4027.6	0.615	273.0	110.5	436.9	1,470.1	1787.4	5027.8	544.2	3379.4											
1995	707.5	3196.1	0.700	258.2	108.1	602.3	1,166.6	2060.4	5138.2	981.0	4849.5											
1996	568.6	2963.4	0.763	207.5	91.1	668.0	1,081.6	2318.7	5246.4	1583.3	6016.1											
1997	458.1	2825.9	0.808	167.2	76.9	704.4	1,031.5	2526.2	5337.4	2251.4	7097.7											
1998	385.5	2739.2	0.838	140.7	67.7	730.0	999.8	2693.4	5414.4	2955.8	8129.2											
1999	329.3	2672.8	0.862	120.2	58.9	748.6	975.6	2834.1	5482.0	3685.8	9129.0											
2000	286.5	2627.0	0.880	104.6	52.9	765.8	958.8	2954.3	5540.9	4434.5	10104.6											
2001	252.0	2578.1	0.894	92.0	48.3	775.8	941.0	3058.8	5593.8	5200.3	11063.4											
2002	228.2	2546.4	0.904	83.3	46.8	785.8	929.4	3150.8	5642.1	5976.1	12004.4											
2003	209.5	2522.0	0.912	76.5	43.5	794.1	920.5	3234.1	5688.9	6761.8	12933.8											
2004	193.1	2510.0	0.919	70.5	38.9	799.9	916.1	3310.6	5732.4	7555.9	13854.3											
2005	177.8	2422.9	0.922	64.9	35.1	771.5	884.4	3381.1	5771.3	8355.8	14770.5											
2006	165.3	2377.4	0.927	60.3	32.0	761.3	867.7	3445.9	5806.4	9127.3	15654.8											
2007	149.4	2205.3	0.926	54.5	29.0	685.5	805.0	3506.3	5838.4	9888.6	16522.6											
2008	137.8	2105.0	0.931	50.3	26.4	683.0	768.3	3560.8	5867.4	10574.0	17327.5											
2009	129.4	2082.2	0.935	47.2	24.7	685.0	760.0	3611.1	5893.8	11257.0	18095.8											
2010	120.7	2069.8	0.939	44.1	22.8	681.0	755.5	3658.3	5918.4	11942.0	18855.9											
2011	111.9	2003.9	0.942	40.9	21.2	660.0	731.4	3702.4	5941.2	12623.0	19611.3											
2012	105.9	1987.6	0.945	38.7	20.1	666.0	725.5	3743.2	5962.5	13283.0	20342.8											
2013	94.6	1874.6	0.944	34.5	18.3	583.0	684.2	3781.9	5982.5	13949.0	21068.2											
2014	86.3	1685.9	0.946	31.5	16.9	556.0	615.4	3816.4	6000.8	14532.0	21752.5											
2015	74.2	1520.4	0.941	27.1	14.8	430.0	554.9	3847.9	6017.7	15088.0	22367.8											
								3875.0	6032.4	15518.0	22922.8											

TABLE 3

LOCATION PLAT

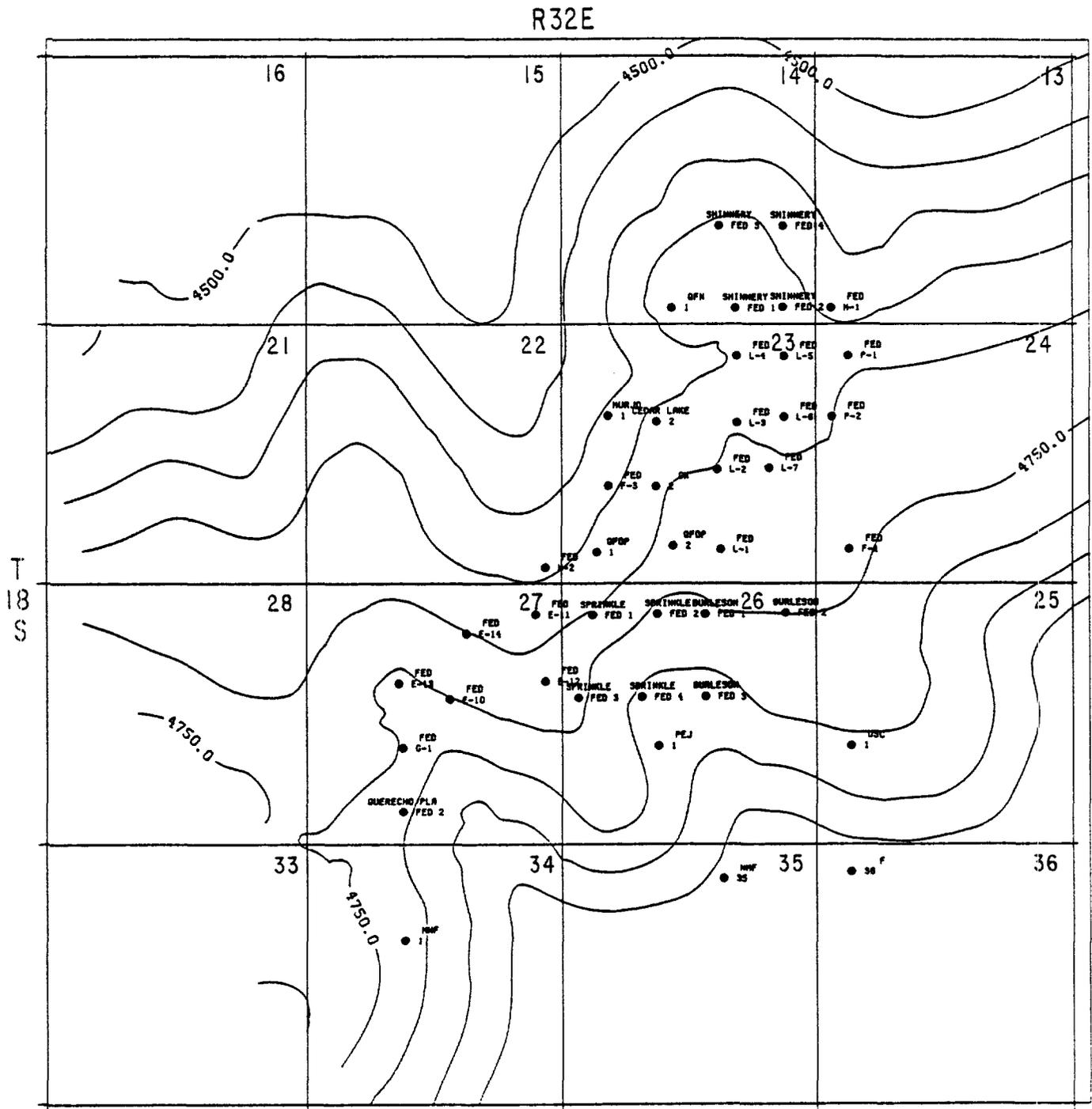
Querecho Plains Field
Lea County, New Mexico



Petresim Integrated Technologies
February, 1992

FIGURE 1

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



QUERECHO PLAINS - ZONE 1 (SURFACE)

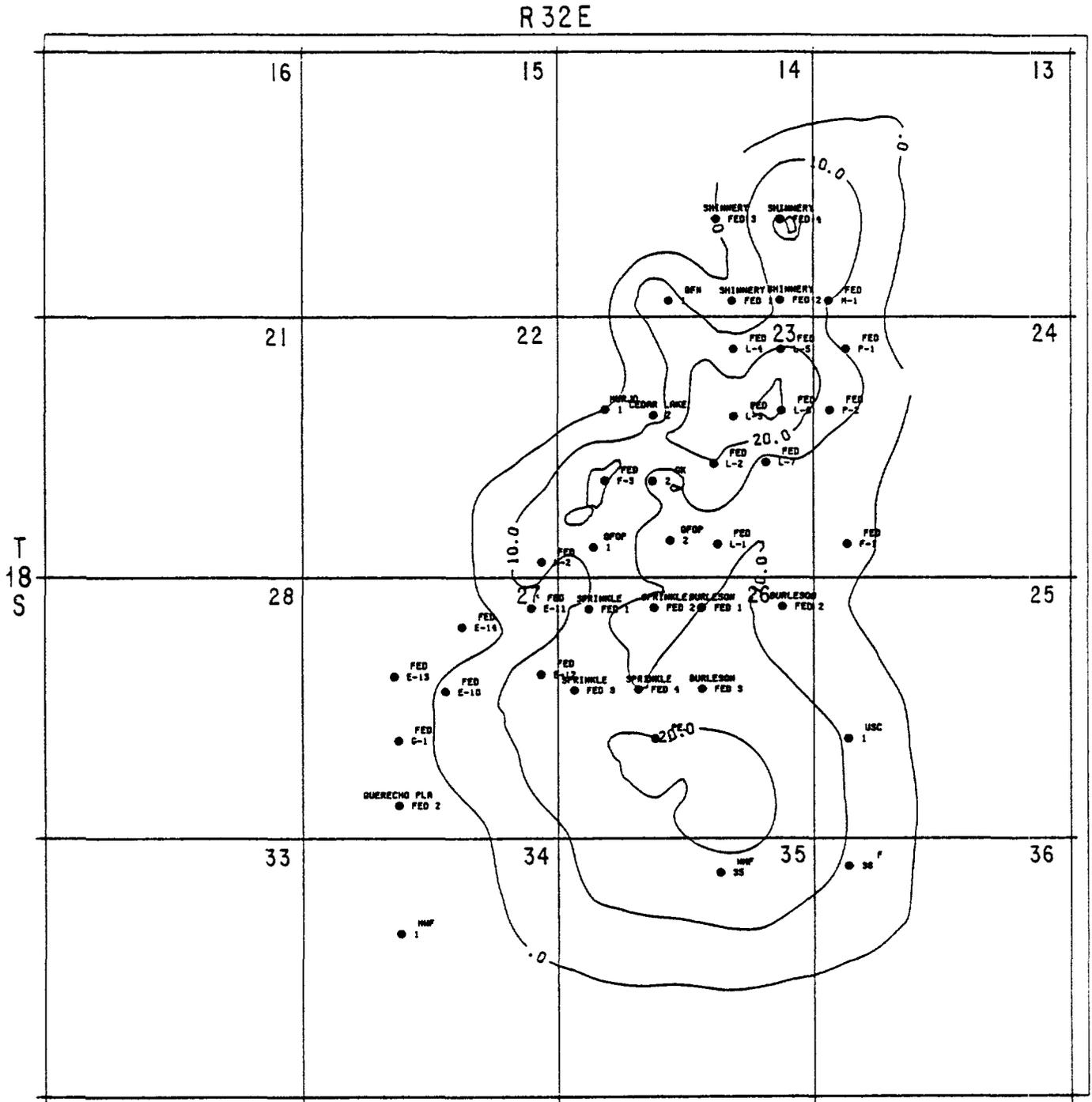


FIGURE 2

QUERECHO PLAINS FIELD

LEA CO., NEW MEXICO

NET SAND-GREEN ZONE



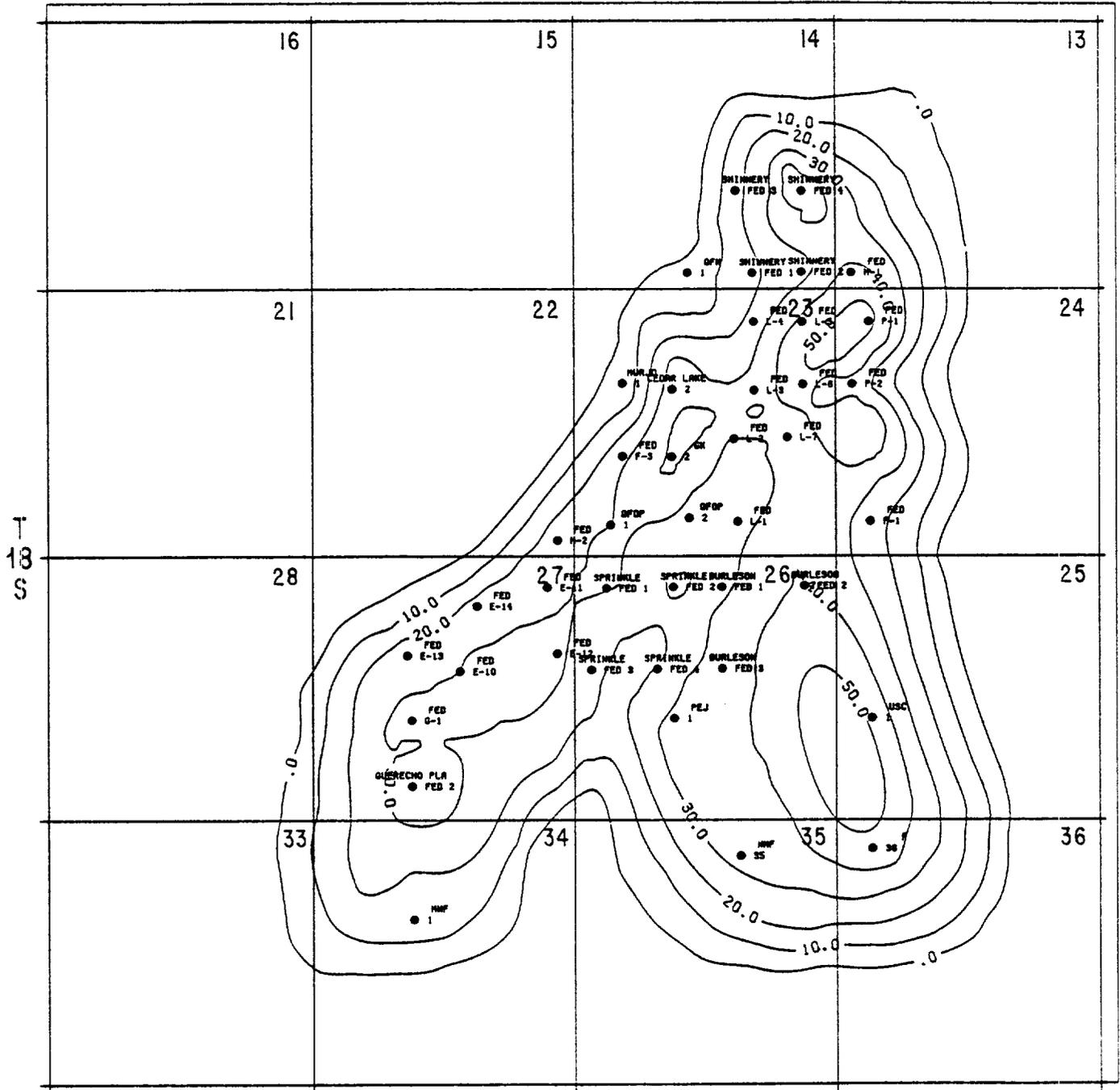
QUERECHO PLAINS - ZONE 1 (GROSS)



FIGURE 3

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

R 32 E



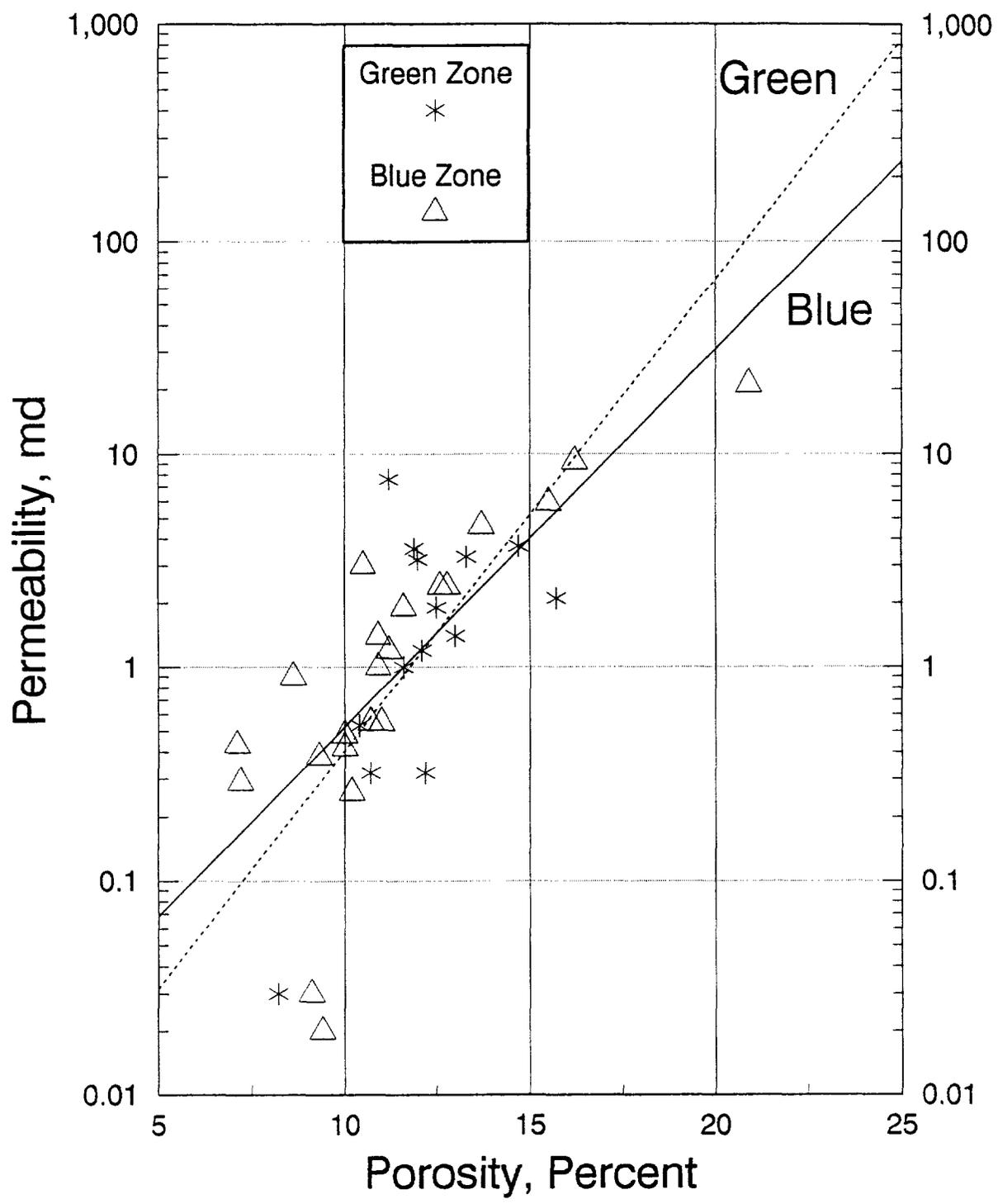
QUERECHO PLAINS - ZONE 2 (NET)



FIGURE 4

PERMEABILITY Vs. POROSITY

Federal "L" No. 4
Querecho Plains Field, Lea Co., New Mexico



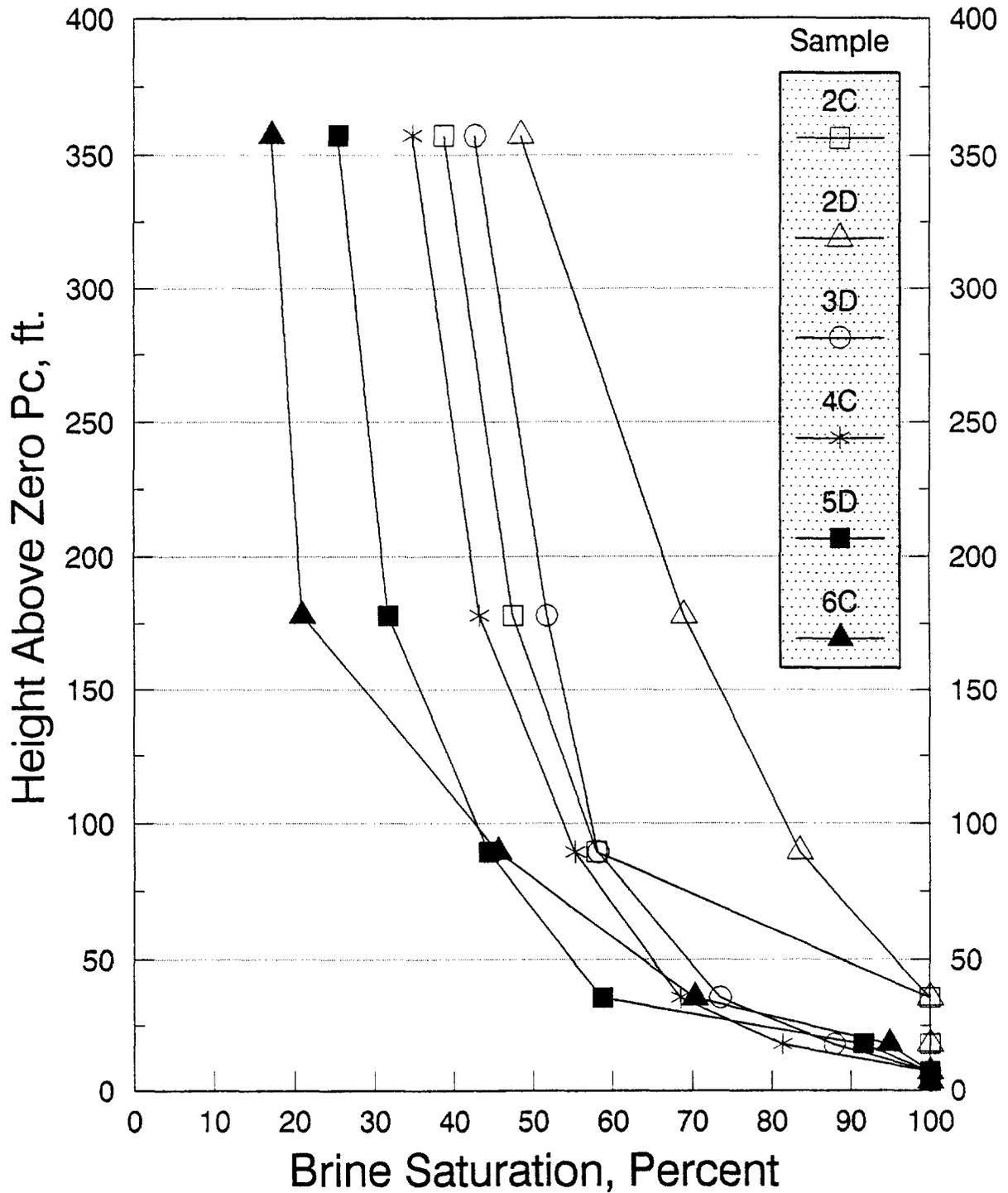
Petresim Integrated Technologies
February, 1992

FIGURE 5

LABORATORY CAPILLARY PRESSURE

Federal "L" No. 4

Querecho Plains Field, Lea Co., New Mexico

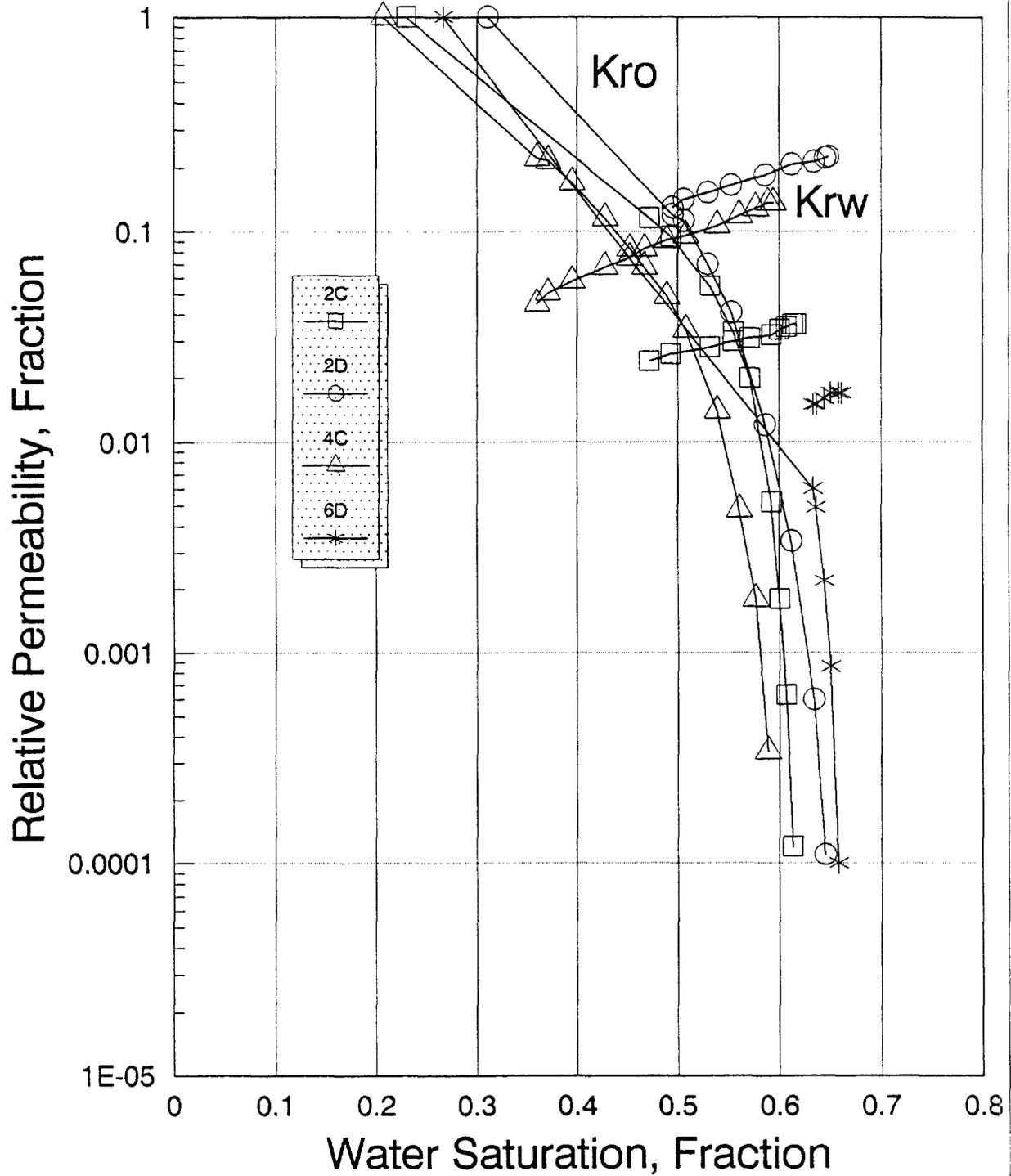


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February, 1992

FIGURE 6

WATER-OIL RELATIVE PERMEABILITY

Federal "L" No. 4
Querecho Plains Field, Lea Co., New Mexico

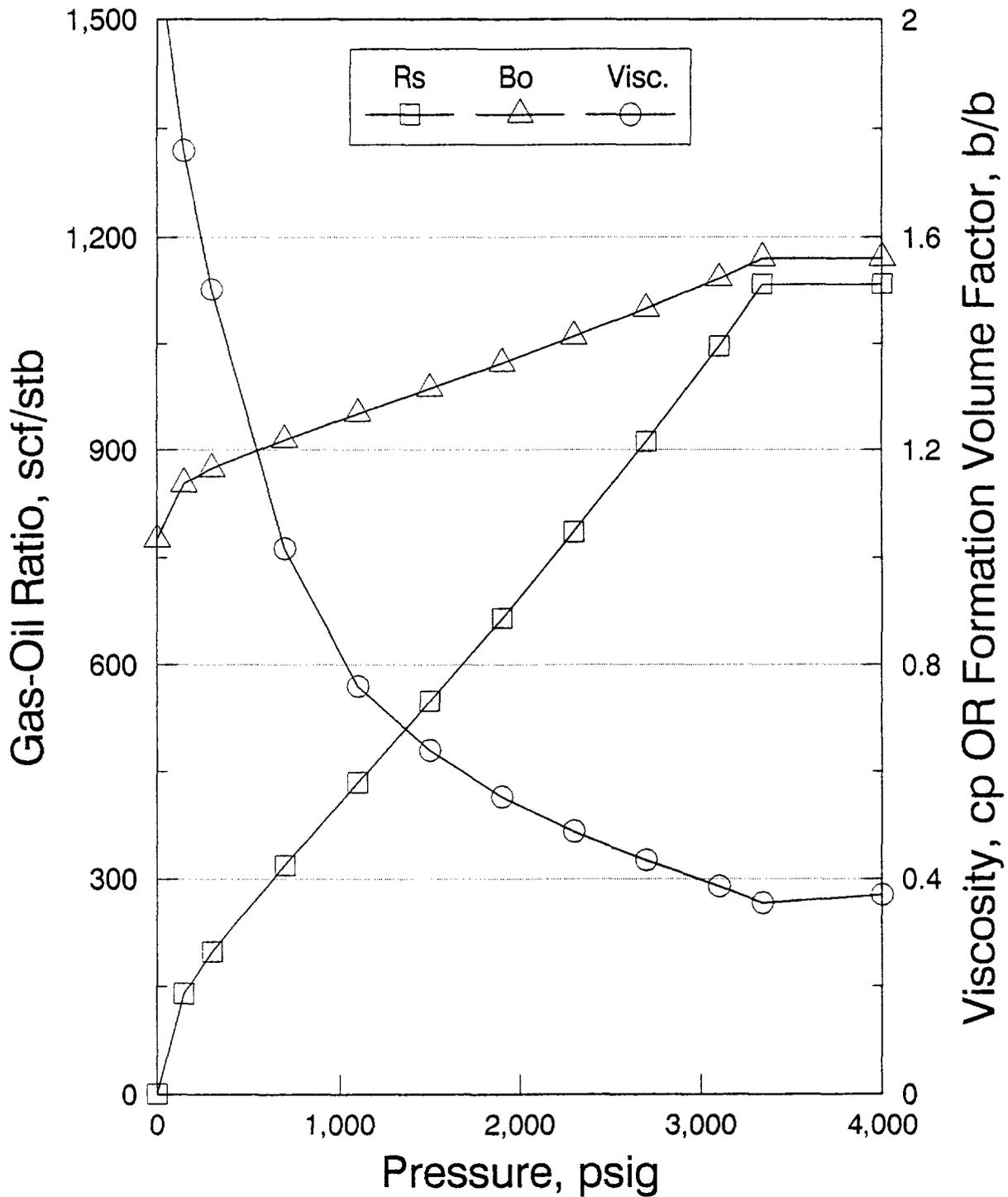


Petresim Integrated Technologies
February, 1992

FIGURE 7

FLUID PROPERTIES

Federal "L" No. 3
Querecho Plains Field, Lea Co., New Mexico



Petresim Integrated Technologies
February, 1992

FIGURE 8

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

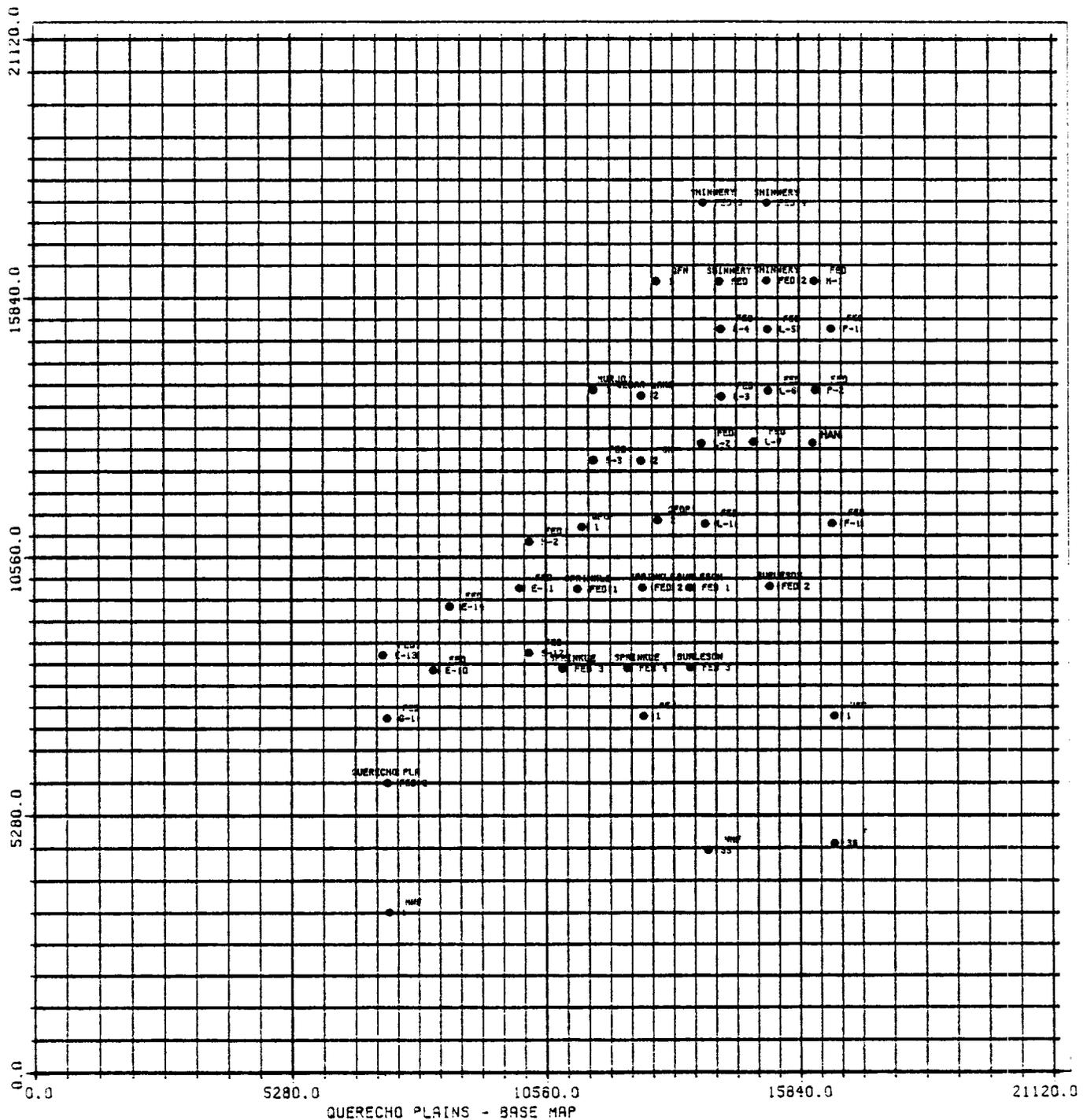
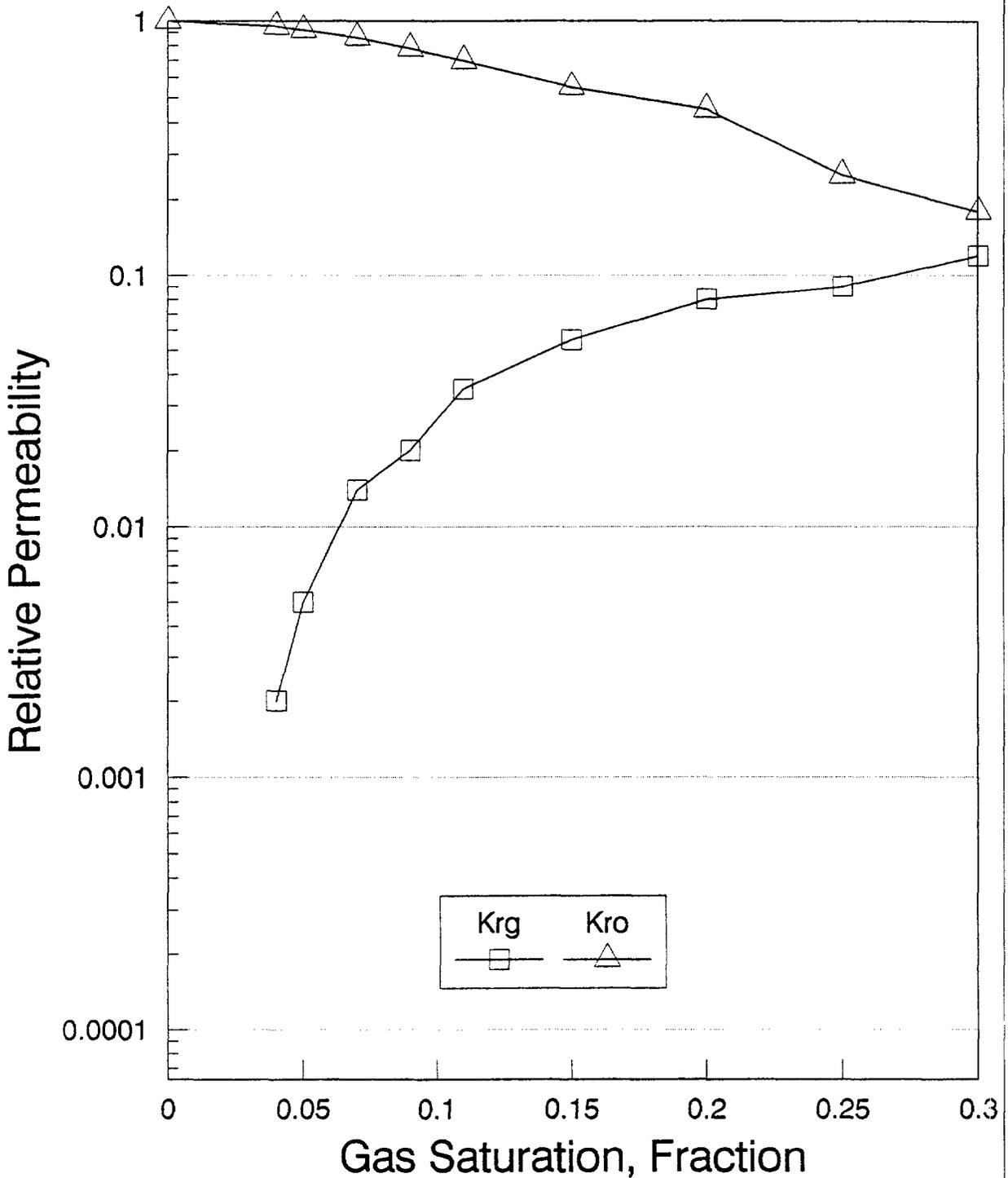


FIGURE 9

GAS-OIL RELATIVE PERMEABILITY

Final History Match

Querecho Plains Field, Lea Co., New Mexico



Petresim Integrated Technologies
February, 1992

FIGURE 10

FIELD PRODUCTION HISTORY MATCH

Querecho Plains Field
Lea County, New Mexico

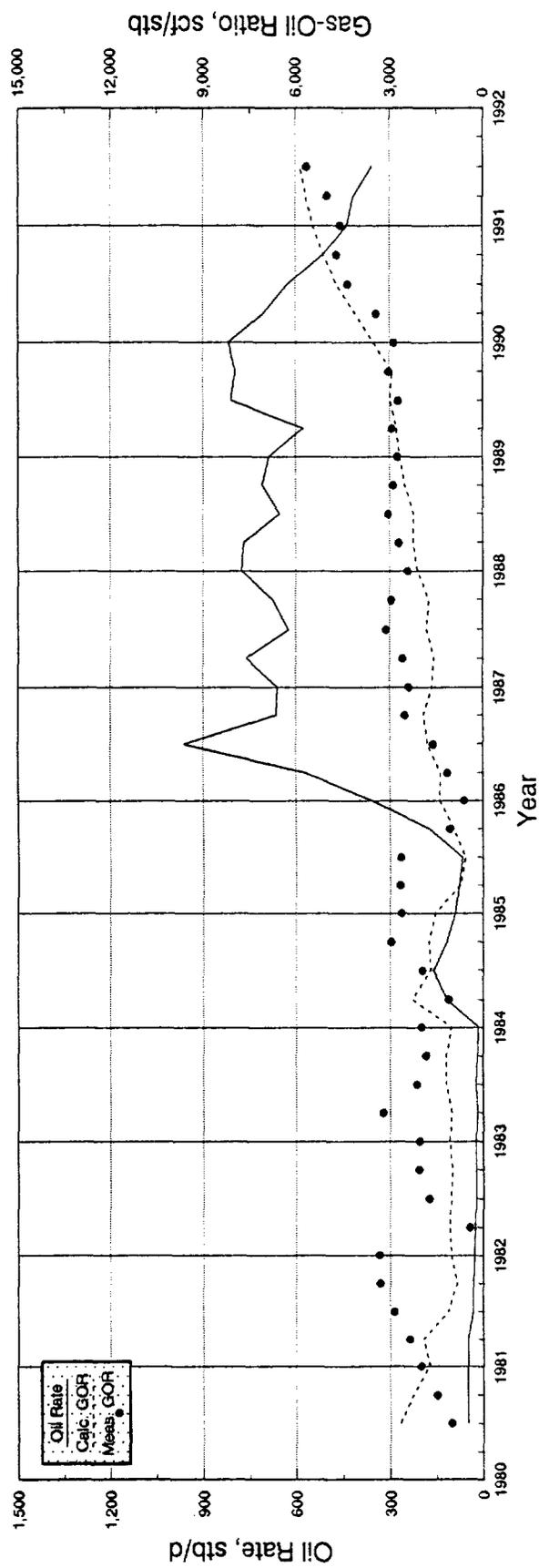
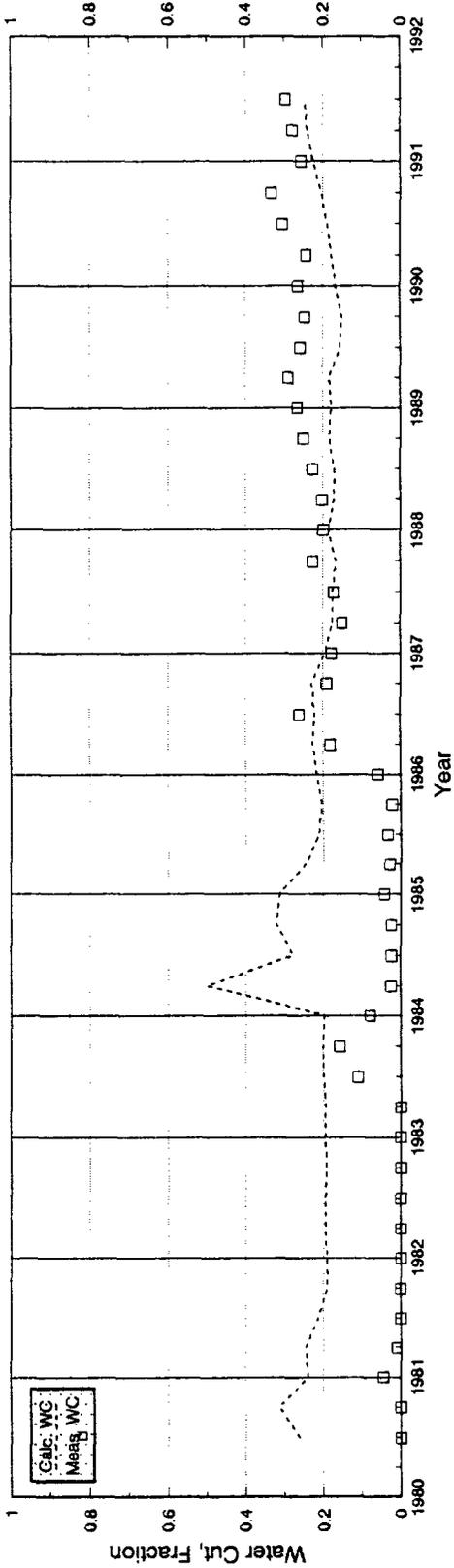
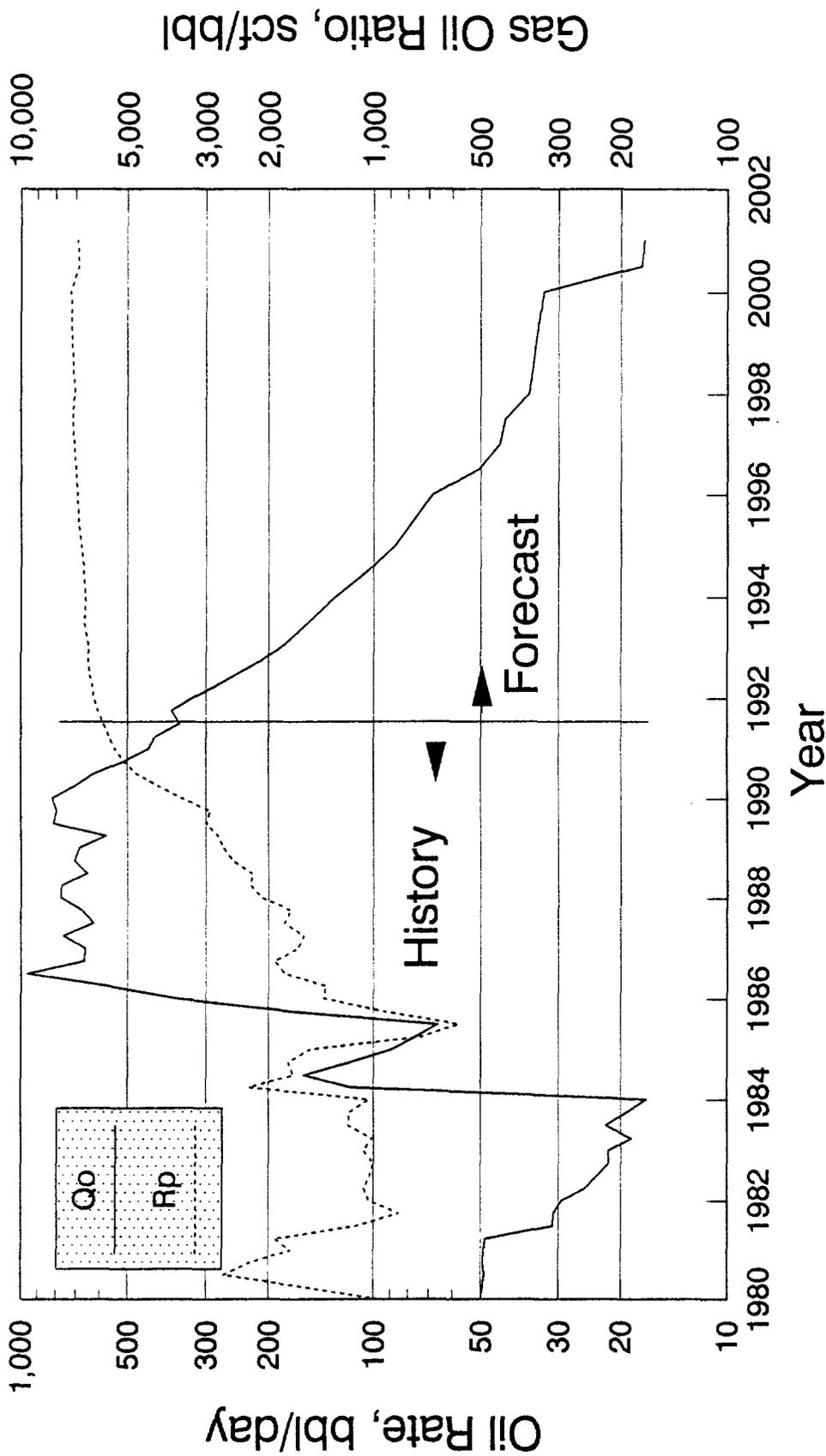


FIGURE 11

FIELD PERFORMANCE - DEPLETION CASE

Querecho Plains Field
Lea County, New Mexico



Petresim Integrated Technologies
February, 1992

FIGURE 12

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

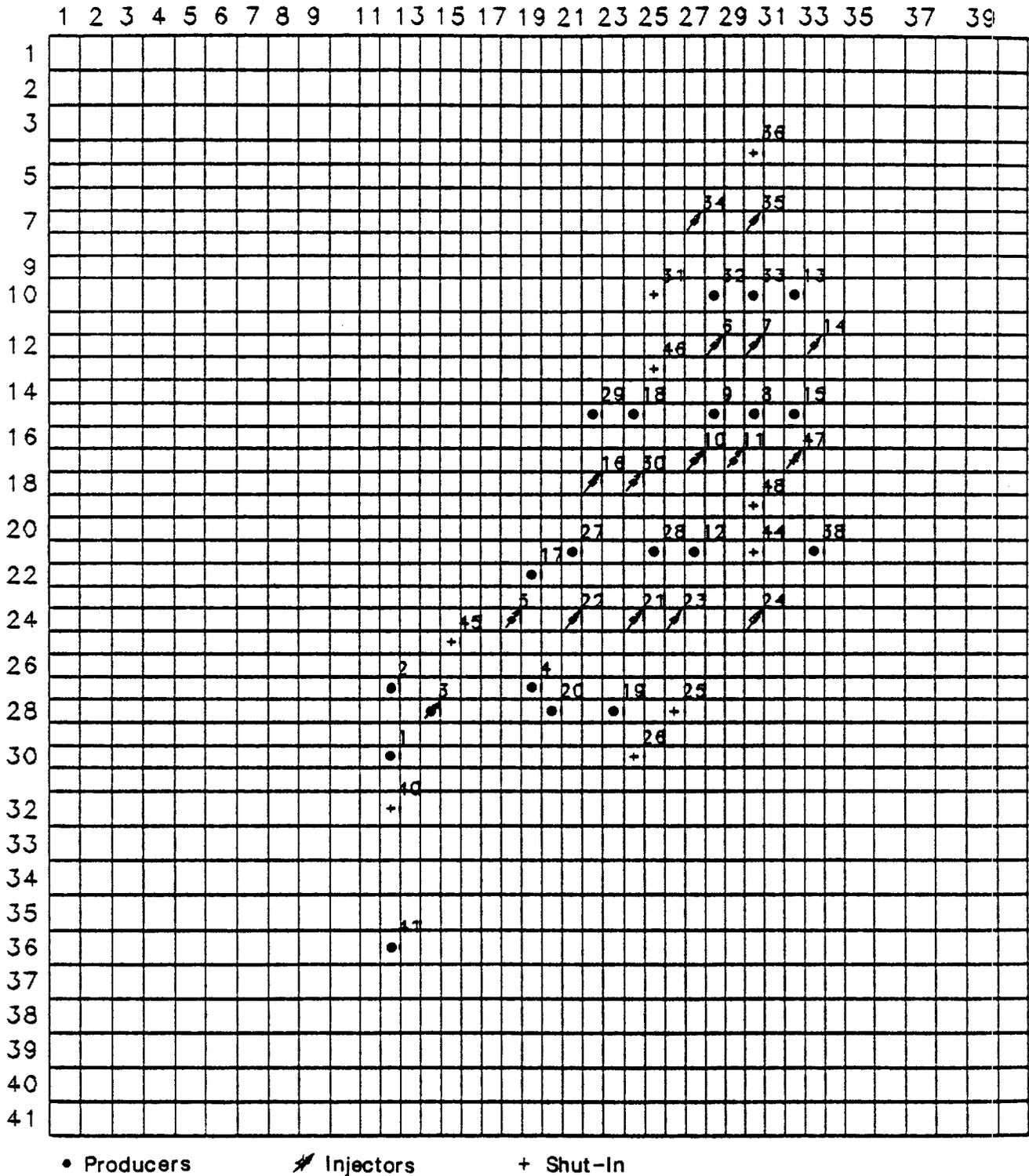
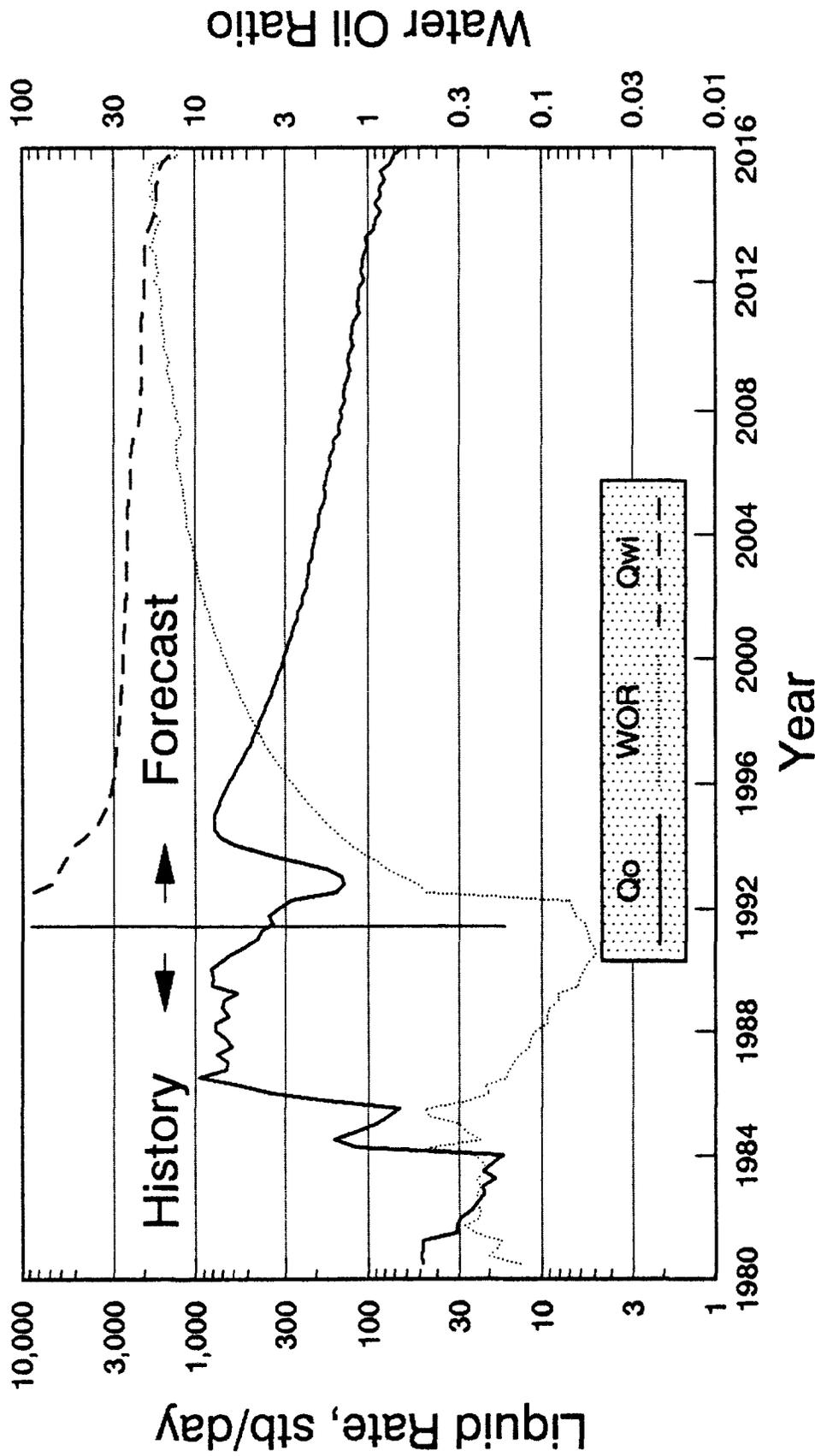


FIGURE 13

FIELD PERFORMANCE - INJECTION CASE

Querecho Plains Field
Lea County, New Mexico



Petresim Integrated Technologies
March, 1992

FIGURE 14

QUERECHO PLAINS BONE SPRING SAND UNIT

LEA COUNTY, NEW MEXICO

INITIAL CAPITAL INVESTMENT

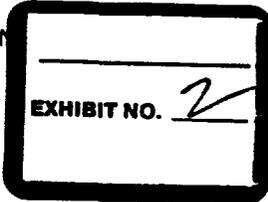
Installation	\$2,050,000
Pre-Unitization	422,000
Government K #2 Injection Test	180,000
Federal E #11 Injection Test	<u>148,000</u>
	\$2,850,000

INCREMENTAL ECONOMIC EVALUATION

	<u>Present Worth</u> <u>Undisc. (M\$)</u>	<u>ROI</u> <u>Undiscounted</u>	<u>Present Worth</u> <u>Discounted @</u> <u>10% (M\$)</u>	<u>ROI</u> <u>Disc. @ 10%</u>	<u>IRR (%)</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. 10761/10762



APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no

II. Operator: MEWBOURNE OIL COMPANY

Address: 3901 S. BROADWAY, TYLER, TEXAS 75701

Contact party: K. MAYES/K. CALVERT Phone: (903) 561-2900

III. 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 expansion of an existing project? yes no
If yes, give the Division order number authorizing the project R-9737

V. 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.

* VI. Attach a tabulation of data on all wells of public record within the area of review which 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.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. 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.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic 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.

IX. Describe the proposed stimulation program, if any. NEW MEXICO
OIL CONSERVATION DIVISION

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.) EXHIBIT 2

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken. CASE NO. 10764/10762

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

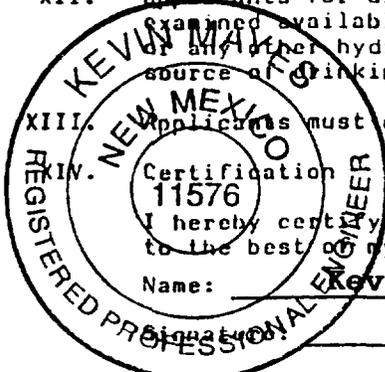
XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification
11576
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Kevin Mayes Title: Project Engineer

Date: 5/28/83

* 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

INJECTION WELL DATA SHEET

SANTA FE ENERGY

MEWBOURNE OIL CO. *

SHINNERY 14 FEDERAL

OPERATOR

LEASE

14-4

1980 FSL, 660 FEL

14

18S

32E

WELL NO.

FOOTAGE LOCATION

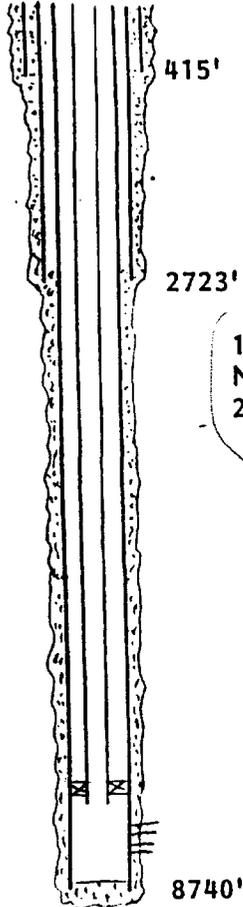
SECTION

TOWNSHIP

RANGE

Schematic

Tabular Data



Surface Casing

Size 13 3/8 " Cemented with 500 cu.
 TOC Surface feet determined by Circ.
 Hole size 17 1/2"

Intermediate Casing

Size 8 5/8 " Cemented with 1500 cu.
 TOC Surface feet determined by Circ.
 Hole size 12 1/4"

Long string

Size 5 1/2 " Cemented with 1325 cu.
 TOC 2632 feet determined by Calc.
 Hole size 7 7/8" SFE interp. of C
CMT OK @ 2760'
 Total depth 8750'

Injection interval

8412 feet to 8490 feet
 (perforated ~~material~~)

TD = 8750'

Tubing size 2 7/8" lined with Bare Steel set in a
 (material)
Otis Permalatch packer at 8312 feet
 (brand and model)

(or describe any other casing-tubing seal).

Other Data

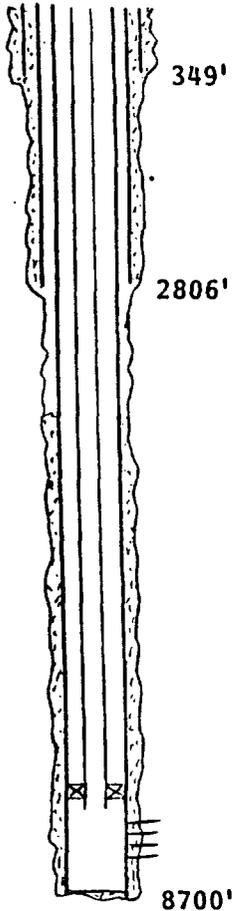
1. Name of the injection formation 1st Bone Spring Sand
2. Name of field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? Oil Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Overlying - San Andres Top at \pm 4800'
Underlying - Lower Bone Spring at \pm 8650'

* After Unitization

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

MEWBOURNE OIL CO.		BURLESON FEDERAL		
<small>OPERATOR</small>	<small>LEASE</small>			
2	660 FNL, 660 FEL	26	18S	32E
<small>WELL NO.</small>	<small>PORTAGE LOCATION</small>	<small>SECTION</small>	<small>TOWNSHIP</small>	<small>RANGE</small>

Schematic



TD = 8700'

Tabular Data

Surface Casing

Size 11 3/4 " Cemented with 485 ex.
 TOC Surface feet determined by Circ.
 Hole size 15"

Intermediate Casing

Size 8 5/8 " Cemented with 2100 ex.
 TOC Surface feet determined by Circ.
 Hole size 11"

Long string

Size 4 1/2 " Cemented with 1200 ex.
 TOC 4149 feet determined by Calc.
 Hole size 7 7/8"
 Total depth 8700'

Injection Interval

8515 feet to 8584 feet
(perforated)

Tubing size 2 3/8" lined with Bare Steel set in a
(material)
Otis Permalatch packer at 8415 feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? Oil Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Overlying - San Andres top at \pm 4800'
Underlying - Lower Bone Spring top at \pm 8650'

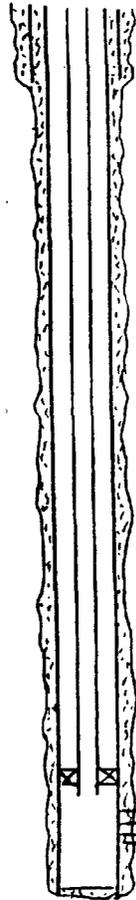
ITEM III OF NEW MEXICO OCD FORM C-108
INJECTION WELL DATA SHEET

MEWBOURNE OIL CO.

SPRINKLE FEDERAL

OPERATOR	LEASE		
2	660 FNL, 1980 FWL	26	18S 32E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP RANGE

Schematic



547'

D.V. tool @ 1192'

8711'

TD = 8711'

Tabular Data

Surface Casing

Size 8 5/8 " Cemented with 400 sv.
 TOC Surface feet determined by Circ.
 Hole size Assume 11"

Intermediate Casing

Size _____ " Cemented with _____ sv.
 TOC _____ feet determined by _____
 Hole size _____

Long string

Size 5 1/2 " Cemented with 1950 sv.
 TOC Surface feet determined by Calc.
 Hole size 7 7/8" 2nd stage circ.
 Total depth 8711'

Injection interval

8542 feet to 8574 feet
 (perforated ~~_____~~)

Tubing size 2 7/8" lined with Bare Steel set in a
 (material)
Otis Permalatch packer at 8442 feet
 (brand and model)

(or describe any other casing-tubing seal).

Other Data

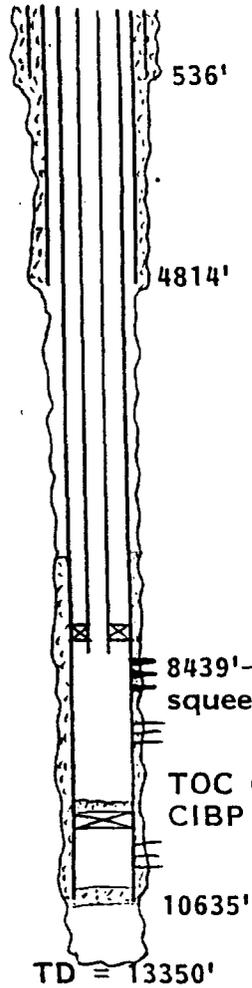
- Name of the injection formation 1st Bone Spring Sand
- Name of field or pool (if applicable) Querecho Plains
- Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? Oil Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Overlying - San Andres top at \pm 4800'
Underlying - Lower Bone Spring top at \pm 8650'

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

MEWBOURNE OIL CO. **SPRINKLE FEDERAL**
OPERATOR LEASE

1 **660 FNL, 660 FWL** **26** **18S** **32E**
WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Schematic



Tabular Data

Surface Casing
 Size 13 3/8 " Cemented with 500 sv.
 TOC Surface feet determined by Circ.
 Hole size 17 1/2"

Intermediate Casing
 Size 8 5/8 " Cemented with 2825 sv.
 TOC Surface feet determined by Circ.
 Hole size 12 1/4"

Long string
 Size 4 1/2 " Cemented with 735 sv.
 TOC 7847 feet determined by Calc.
 Hole size 7 7/8"
 Total depth 13350'

Injection Interval
8507 feet to 8532 feet
(perforated)

Tubing size 2 3/8" lined with Rare Steel set in a
(material)
Otis Permalatch pecker at 8407 feet
(brand and model)

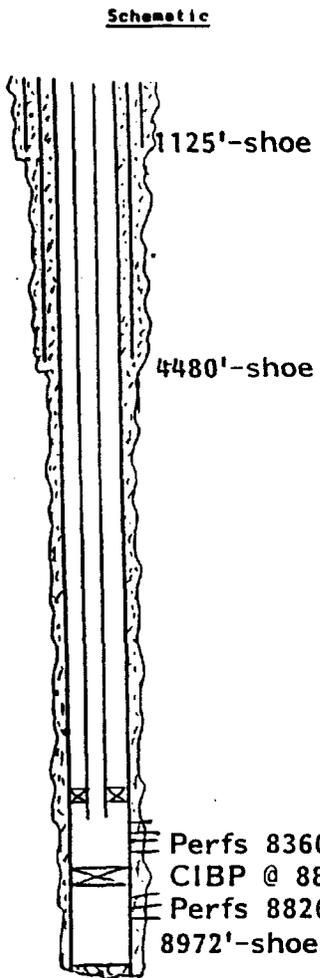
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation 1st Bone Spring Sand
2. Name of field or Pool (if applicable) Querecho Plains
3. Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? Oil Production
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s))
10196'-10350' CIBP with 20' cement at 10175'
8439'-8478' squeeze with 100 sxs cement
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Overlying - San Andres top at + 4800'
Underlying - Lower Bone Spring top at - 8650'

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

MEWBOURNE OIL CO. **FEDERAL E**
OPERATOR LEASE
11 **660 FNL, 530 FEL** **27** **18S** **32E**
WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE



Tabular Data

Surface Casing
 Size 13 3/8 " Cemented with 1120 sv.
 TOC Surface feet determined by Circ.
 Hole size 17 1/2"

Intermediate Casing
 Size 8 5/8 " Cemented with 2400 sv.
 TOC Surface feet determined by Circ.
 Hole size 11"

Long string
 Size 5 1/2 " Cemented with 1625 sv.
 TOC Surface feet determined by Calc.
 Hole size 7 7/8" CBL 8869'-4650'
 GMT OK @ 4650'
 Total depth 8972'

Injection interval
8360 feet to 8388 feet
 (perforated) ~~8360 to 8388~~
 and 8450 feet to 8486 feet.

Note: Already converted to injection in August 1992 per Division Order R-9737.

TD = 8972'

Tubing size 2 7/8" lined with Bare Steel set in a
(material)
Otis Permalatch packer at 8270 feet
(brand and model)
 (or describe any other casing-tubing seal).

- Other Data
- Name of the injection formation 1st Bone Spring Sand
 - Name of field or pool (if applicable) Querecho Plains
 - In this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? Oil Production
 - Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Bone Spring Carbonate 8826'-70' (non-productive). Isolated from above perfs by CIBP at 8800'.
 - Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Overlying - San Andres top at 4836'
Underlying - Lower Bone Spring top at 8660'

ITEM VI OF NEW MEXICO FORM C-108
 WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
 QUERRECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASEWELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
SIETE O&G	ERIE FED #1	T18S, R32E, SEC 13 800 FNL, 660 FWL	OIL	13 3/8 @ 400' CMT W/ 600SX 8 5/8 @ 3140' CMT W/ 375 SX 5 1/2 @ 5350' CMT W/ 510 SX	SURFACE 2178' 2807'	6/2/90	8975'	CMT PLUGS 8450'-8650' 6550'-6650' 5550 W/ 70 SX 5460 W/ 30 SX OPEN PERFS 4990'-5017'
MERIDIAN OIL CO	SHINNERY FED #1	T18S, R32E, SEC 13 1980 FSL, 1980 FWL	OIL	13 3/8 @ 383' CMT W/ 350 SX 9 5/8 @ 2904' CMT W/ 1655 SX 5 1/2 @ 12498' CMT W/ 2965 SX	SURFACE SURFACE SURFACE	3/6/88	12500'	PERF & PROD 11200'-11204' CIBP @ 11140' PERF & TEST 9710'-9752' RET @ 8540' PERF & TEST 5012'-5076' RET @ 4944' PERF & PROD 4006'-4552' SOZ 4006'-4552', 5012'-5076', 9710'-9752' OPEN PERFS 10882'-11426'
MEWBOURNE OIL CO.	FED M #1	T18S, R32E, SEC 13 330 FSL, 330 FWL	OIL	13 3/8 @ 450' CMT W/ 200 SX 8 5/8 @ 4332' CMT W/ 1320 SX 5 1/2 @ 8670' CMT W/ 1425 SX	SURFACE(V) SURFACE(V) SURFACE(V)	2/21/89	8670'	OPEN PERFS 8424'-8514'
AMOCO	FED BY #1	T18S, R32E, SEC 14 660 FNL, 1980 FEL	D&A	13 3/8 @ 674' CMT W/ 700 SX 9 5/8 @ 4900' CMT W/ 2850 SX 5 1/2 @ 13430' CMT W/ 3270 SX	(SEE ATTACH)	11/182	13430'	PERF & TEST 13226'-13317' CIBP @ 13115' PERF & TEST 12334'-12354' PERF & TEST 10598'-10606' PERF & TEST 4962'-4980' P&A
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #5	T18S, R32E, SEC 14 2310 FNL, 660 FEL		13 3/8 @ 410' CMT W/ 500 SX 8 5/8 @ 2744' CMT W/ 1300 SX 5 1/2 @ 8781' CMT W/ 1376 SX	SURFACE(V) SURFACE(V) 2555'(CBL)	10/31/89	8782'	PERF & TEST 8660'-8694' CIBP @ 8550' OPEN PERFS 4990'-6790'
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #4	T18S, R32E, SEC 14 1980 FSL, 660FEL	OIL	13 3/8 @ 415' CMT W/ 500 SX 8 5/8 @ 2723' CMT W/ 1500 SX 5 1/2 @ 8740' CMT W/ 1325 SX	SURFACE(V) SURFACE(V) 2760'(CBL)	6/22/89	8750'	OPEN PERFS 8412'-8490' <i>perforated in.</i>
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #3	T18S, R32E, SEC 14 1980 FSL, 1980 FEL	OIL	13 3/8 @ 444' CMT W/ 500 SX 8 5/8 @ 2727' CMT W/ 1550 SX 5 1/2 @ 9489' CMT W/ 1600 SX	SURFACE(V) SURFACE(V) 2746'(CBL)	4/05/89	9500'	OPEN PERFS 8478'-8504' <i>Reperforating.</i>
SIETE O&G	CUJANAH FED #1	T18S, R32E, SEC 14 330 FSL, 2310 FWL	OIL	13 3/8 @ 423' CMT W/ 395 SX 8 5/8 @ 3001' CMT W/ 1225 SX 5 1/2 @ 11243' CMT W/ 1910 SX	SURFACE SURFACE 1718'	8/24/89	11243'	PERF & TEST 10818'-10860' BRPG 10800' PERF & TEST 10216'-10244' BRPG 10200' PERF & TEST 10008'-10029' BRPG 9900' PERF & TEST 8714'-9822'

ITEM VI OF NEW MEXICO FORM C-108
 WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
 QUIERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASEWELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #1	T18S, R32E, SEC 14 330 FSL, 1650 FEL	OIL	13 3/8 @ 423' CMT W/ 500 SX 8 5/8 @ 2745' CMT W/ 1400 SX 5 1/2 @ 10241' CMT W/ 1800 SX	SURFACE SURFACE 1287	11/19/88	10241'	BRFG 9110' PERF & TEST 8681'-9014' BRFG 8665' PERF & PROD 8448'-8516' CLEAN OUT TO 9900' CIBP @ 9420' PERF & TEST 9252'-9400' RETR BP @ 5970' OPEN PERFS 4850'-5871'
SANTA FE ENERGY OPRTN	SHINNERY FED 14 #2	T18S, R32E, SEC 14 330 FSL, 660 FEL	OIL	13 3/8 @ 435' CMT W/ 500 SX 8 5/8 @ 2750' CMT W/ 2875 SX 5 1/2 @ 9910' CMT W/ 1325 SX	SURFACE SURFACE 3305	3/10/89	9931'	PERF & TEST 9776'-9790' RET @ 9770', SOZ W/ 42 SX PERF & TEST 9734'-9757' RET @ 9600', SOZ W/ 50 SX REPERF & TEST 9735'-9745' BRFG 9642' OPEN PERFS 8481'-8510'
MEMBOURNE OIL CO.	FED L #2	T18S, R32E, SEC 22 330 FSL, 330 FEL	OIL	13 3/8 @ 440' CMT W/ 400 SX 8 5/8 @ 4472' CMT W/ 2100 SX 5 1/2 @ 8960' CMT W/ 1700 SX	SURFACE(V) SURFACE(V) SURFACE(V)	2/18/86	8960'	PERF & TEST 9726'-9732' BRFG 9615' OPEN PERFS 8496'-8526' OPEN PERFS 8396'-8460'
MEMBOURNE OIL CO.	FED L #5	T18S, R32E, SEC 23 660 FNL, 660 FEL	OIL	13 3/8 @ 460' CMT W/ 400 SX 8 5/8 @ 4330' CMT W/ 1575 SX 5 1/2 @ 8650' CMT W/ 1275 SX	SURFACE(V) SURFACE(V) 2763	4/17/88	8650'	OPEN PERFS 8430'-8574'
MEMBOURNE OIL CO.	FED L #4	T18S, R32E, SEC 23 660 FNL, 1650 FEL	OIL	13 3/8 @ 438' CMT W/ 400 SX 8 5/8 @ 4318' CMT W/ 1600 SX 5 1/2 @ 8760' CMT W/ 1325 SX	SURFACE(V) SURFACE(V) 2642	11/3/87	8760'	OPEN PERFS 8431'-8506'
MANZANO OIL CO.	MURJO FED #1	T18S, R32E, SEC 23 1850 FNL, 990 FWL	OIL	13 3/8 @ 350' CMT W/ 350 SX 8 5/8 @ 2777' CMT W/ 1200 SX 5 1/2 @ 10800' CMT W/ 650 SX	SURFACE(V) SURFACE(V) 7559	6/25/87	11780'	PERF & TEST 10648'-10726' PERF & TEST 10172'-10223' PERF & TEST 9619'-9670' SOZ PERFS 9619'-9670' W/ 1150 TOC CALC @ 3935' PERF & TEST 9726'-9743' PERF & TEST 9192'-9210' CIBP @ 9560' OPEN PERFS 8283'-8426' RETR BP @ 8506'
MEMBOURNE OIL CO.	CEDAR LAKE FED #2	T18S, R32E, SEC 23 1860 FNL, 1860 FWL	OIL	13 3/8 @ 478' CMT W/ 500 SX 8 5/8 @ 4286' CMT W/ 1400 SX	SURFACE(V) SURFACE(V)	11/10/86	8700'	OPEN PERFS 8435'-8501'

Manzano
 Change of
 Ownership
 1/31/88
 5/1/93

ITEM VI OF NEW MEXICO FORM C-108
 WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
 QUERRECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASEWELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
MEMBOURNE OIL CO.	FED L#3	T18S, R32E, SEC 23 1880 FNL, 1650 FEL	OIL	5 1/2 @ 8708' CMT W/ 1075 SX 13 3/8 @ 450' CMT W/ 416 SX 8 5/8 @ 4315' CMT W/ 1700 SX 5 1/2 @ 8698' CMT W/ 1475 SX	3347 SURFACE(V) SURFACE(V) 1342'	6/19/87	8698'	PERF & TEST 8598'-8610' CIBP @ 8585' OPEN PERFS 8446'-8530'
MEMBOURNE OIL CO.	FED L#6	T18S, R32E, SEC 23 1880 FNL, 660 FEL	OIL	13 3/8 @ 448' CMT W/ 475 SX 8 5/8 @ 4330' CMT W/ 1575 SX 5 1/2 @ 8650' CMT W/ 1400 SX	SURFACE(V) SURFACE(V) SURFACE(V)	7/24/88	8650'	OPEN PERFS 8436'-8520'
MEMBOURNE OIL CO.	FED L#7 OX(EDITH FED #1)	T18S, R32E, SEC 23 2310 FSL, 990 FEL	OIL	8 5/8 @ 356' CMT W/ 250 SX 5 1/2 @ 8670' CMT W/ 4630 SX	SURFACE(V) SURFACE(V)	5/14/88	8670'	DEEPEN FROM O/D @ 4281' (1 OPEN PERFS 8485'-8552'
MEMBOURNE OIL CO.	FED L#2	T18S, R32E, SEC 23 2310 FSL, 2030 FEL	OIL	13 3/8 @ 441' CMT W/ 450 SX 8 5/8 @ 4293' CMT W/ 1800 SX 5 1/2 @ 8750' CMT W/ 925 SX	SURFACE(V) SURFACE(V) 3538'(CBL)	10/14/86	8750'	OPEN PERFS 8458'-8531'
MEMBOURNE OIL CO.	GOVERNMENT K #2	T18S, R32E, SEC 23 1950 FSL, 1980 FWL	INJ	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	SURFACE(V) SURFACE(V) 4408'	9/19/86	8900'	PERF & PROD 8343'-8515' CIBP @ 5059' PERF & TEST 4859' SOZ 4859' W/ 225 SX CLEAN OUT OPEN PERFS 8343'-8515'
MEMBOURNE OIL CO.	FED F#3	T18S, R32E, SEC 23 1880 FSL, 990 FWL	OIL	13 3/8 @ 480' CMT W/ 275 SX 8 5/8 @ 4285' CMT W/ 1700 SX 5 1/2 @ 8570' CMT W/ 1375 SX	SURFACE(V) SURFACE(V) 1713'	12/31/86	8570'	OPEN PERFS 8362'-8448'
MEMBOURNE OIL CO.	QUERRECHO FED #1	T18S, R32E, SEC 23 610 FSL, 760 FWL	OIL	13 3/8 @ 354' CMT W/ 385 SX 8 5/8 @ 3047' CMT W/ 1475 SX 5 1/2 @ 8565' CMT W/ 1250 SX	SURFACE SURFACE 2331'	12/31/85	9580'	OPEN PERFS 8414'-8447'
MEMBOURNE OIL CO.	QUERRECHO FED #2	T18S, R32E, SEC 23 760 FSL, 2310 FWL	OIL	13 3/8 @ 374' CMT W/ 385 SX 8 5/8 @ 3010' CMT W/ 1300 SX 5 1/2 @ 8703' CMT W/ 1100 SX	SURFACE SURFACE 3217'	5/6/86	8100'	OPEN PERFS 8459'-8526'
MEMBOURNE OIL CO.	FED L#1	T18S, R32E, SEC 23 660 FSL, 1980 FEL	OIL	13 3/8 @ 459' CMT W/ 400 SX 8 5/8 @ 4345' CMT W/ 1700 SX 5 1/2 @ 9050' CMT W/ 1050 SX	SURFACE(V) SURFACE(V) 3814'	4/22/86	9050'	OPEN PERFS 8474'-8538'
BTA	CINCO DE MAYO FED #1	T18S, R32E, SEC 24 660 FNL, 1980 FWL	P&A	13 3/8 @ 757' CMT W/ 1050 SX 9 5/8 @ 4657' CMT W/ 1500 SX 5 1/2 @ 14700' CMT W/ 4000 SX	SURFACE(V) SURFACE(V) SURFACE(V)	3/29/81	14905'	PB 4400' PERF & PROD 4014'-4090' P&A
MEMBOURNE OIL CO.	FED P#1	T18S, R32E, SEC 24 660 FNL, 660 FWL	OIL	13 3/8 @ 452' CMT W/ 450 SX 8 5/8 @ 4347' CMT W/ 1600 SX	SURFACE(V) SURFACE(V)	3/31/89	8680'	OPEN PERFS 8473'-8545'

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ITEM VI OF NEW MEXICO FORM C-108
 WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
 QUERECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASE/WELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
MEMBOURNE OIL CO.	FED P#2	T18S, R32E, SEC 24 1980 FNL, 330 FWL	OIL	5 1/2 @ 8680' CMT W/ 1425 SX 13 3/8 @ 430' CMT W/ 450 SX 8 5/8 @ 4330' CMT W/ 1950 SX 5 1/2 @ 8725' CMT W/ 1425 SX	2100' SURFACE ✓ SURFACE 1618'	8/05/88	8725'	OPEN PERFS 8468'-8524'
HANLEY PETRO.	HANLEY 24' FED #1	T18S, R32E, SEC 24 2310 FSL, 330 FWL	P&A	13 3/8 @ 410' CMT W/ 400 SX 8 5/8 @ 3015' CMT W/ 1125 SX 4 1/2 @ 8700' CMT W/ 1930 SX	SURFACE ✓ SURFACE 1380'	12/30/80	8700'	PERF & PROD 8492'-8567' P&A
MEMBOURNE OIL CO.	FRENCH FED #1	T18S, R32E, SEC 24 660 FSL, 660 FWL	OIL	11 3/4 @ 350' CMT W/ 725 SX 8 5/8 @ 2800' CMT W/ 2000 SX 4 1/2 @ 8700' CMT W/ 780 SX	SURFACE ✓ SURFACE 5742'	2/15/86	8700'	PERF & PROD 8534'-8568' CIBP @ 8440' OPEN PERFS 6650'-6670' SQZ 6650'-6670' W/ 219 SX CLEAN OUT TO 8654' OPEN PERFS 8534'-8568'
HAYCO	SWEENEY FED #1	T18S, R32E, SEC 25 660 FNL, 1980 FWL	OIL	13 5/8 @ 1533' CMT W/ 100 SX 8 5/8 @ 1534' CMT W/ 150 SX 7 @ 2747' CMT W/ 100 SX 4 1/2 @ 8890' CMT W/ 265 SX	1381' 1150' 997' 6658'	1/25/68	9583'	PERF & TEST 8651'-8655' SQZ 8651'-8655' W/ 505 SX PERF & TEST 8612'-8620' SQZ 8612'-8620' W/ 755 SX OPEN PERFS 6860'-6875'
ENRON	U.S. 25 FED COM #1	T18S, R32E, SEC 25 1980 FSL, 660 FWL	OIL	13 3/8 @ 492' CMT W/ 550 SX 8 5/8 @ 4539' CMT W/ 1320 SX 5 1/2 @ 13747' CMT W/ 500 SX	SURFACE(V) SURFACE(V) 11253'	12/3/83	13750'	PERF & TEST 13186'-13530' SQZ HOLES @ 8650 W/ 200 SX RET @ 8820', PB 8777 TOC @ 7853' OPEN PERFS 8604'-8644'
MEMBOURNE OIL CO.	BURLESON FED #2	T18S, R32E, SEC 26 660 FNL, 660 FEL	OIL	11 3/4 @ 349' CMT W/ 485 SX 8 5/8 @ 2805' CMT W/ 2100 SX 4 1/2 @ 8700' CMT W/ 1200 SX	SURFACE ✓ SURFACE 4149'	1/2/86	8700'	OPEN PERFS 8515'-8554'
MEMBOURNE OIL CO.	BURLESON FED #1	T18S, R32E, SEC 26 660 FNL, 2310 FEL	OIL	11 3/4 @ 350' CMT W/ 485 SX 8 5/8 @ 2800' CMT W/ 2250 SX 4 1/2 @ 8700' CMT W/ 1205 SX	SURFACE(V) SURFACE(V) 4130'	11/2/85	8700'	OPEN PERFS 8512'-8572'
MEMBOURNE OIL CO.	SPRINKLE FED #2 old(WALKER FED #1)	T18S, R32E, SEC 26 660 FNL, 1980 FWL	OIL	8 5/8 @ 547' CMT W/ 400 SX 5 1/2 @ 8711' CMT W/ 1950 SX	SURFACE(V) SURFACE(V)	10/3/85	8711'	RE-ENTRY OF D&A WELL OPEN PERFS 8542'-8574'
MEMBOURNE OIL CO.	SPRINKLE FED #1	T18S, R32E, SEC 26 660 FNL, 660 FWL	OIL	13 3/8 @ 536' CMT W/ 500 SX 8 5/8 @ 4814' CMT W/ 2825 SX 4 1/2 @ 10635' CMT W/ 735 SX	SURFACE(V) SURFACE(V) 7847'	5/11/85	13350'	PERF & TEST 10196'-10350' PB 10175' PERF & TEST 8439'-8532' SQZ 8439'-8478' OPEN PERFS 8507'-8532'
MEMBOURNE OIL CO.	SPRINKLE FED #3	T18S, R32E, SEC 26	OIL	11 3/4 @ 350' CMT W/ 485 SX	SURFACE	3/9/86	8710'	OPEN PERFS 8502'-8568'

[Handwritten signatures and initials in the right margin of the table]

ITEM VI OF NEW MEXICO FORM C-108
 WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
 QUERRECHO PLAINS BONE SPRINGS SAND UNIT

OPERATOR	LEASEWELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
SANTA FE ENERGY	SPRINKLE FED #4	2310 FNL, 330 FWL	OIL	8 5/8 @ 2767' CMT W/ 1700 SX 5 1/2 @ 8710' CMT W/ 700 SX	SURFACE 5219'	1/28/87	9700'	PERF & PROD 8823'-8836' CIBP @ 8805' OPEN PERFS 8541'-8587' RBP W/ 20'SAND @ 8500' OPEN PERFS 826'-5638'
ANADARKO PETRO. CORP.	BURLESON FED#3	T18S, R32E, SEC 26 2310 FNL, 2310 FEL	OIL	11 3/4 @ 350' CMT W/ 485 SX 8 5/8 @ 2804' CMT W/ 2000 SX 4 1/2 @ 8729' CMT W/ 1700 SX	SURFACE SURFACE 2281'	1/28/86	8730'	PERF & TEST 8547'-8616' RET @ 8566' PROD 8547'-8557' PB TO 8475' OPEN PERFS 5652'-5667'
ANADARKO PETRO. CORP.	PE-JE-AN #1	T18S, R32E, SEC 26 1980 FSL, 1980 FWL	OIL	13 3/8 @ 352' CMT W/ 350 SX 8 5/8 @ 3008' CMT W/ 1500 SX 5 1/2 @ 10779' CMT W/ 600 SX	SURFACE(V) SURFACE(V) 7122'	2/25/88	11150'	PERF & TEST 10471'-10584' BP @ 10455' PERF & TEST 9876'-9952' BP @ 9605' PERF & TEST 8536'-8606' SOZ 8536'-8606' PERF & PROD 8374'-9567' CIBP @ 9309' OPEN PERFS 5620'-5632'
MEWBOURNE OIL CO.	FED E#11	T18S, R32E, SEC 27 660 FNL, 530 FEL	INJ	13 3/8 @ 1125' CMT W/ 1120 SX 8 5/8 @ 4480' CMT W/ 2400 SX 5 1/2 @ 8872' CMT W/ 1625 SX	SURFACE SURFACE 868'	11/30/85	8971'	OPEN PERFS 8360'-8488' PERF & TEST 8826'-8870' CIBP @ 8800'
MEWBOURNE OIL CO.	FED E#1	T18S, R32E, SEC 27 660 FNL, 1980 FEL	OIL	13 3/8 @ 650' CMT W/ 650 SX 8 5/8 @ 4540' CMT W/ 2975 SX 5 1/2 @ 12898' CMT W/ 550 SX	SURFACE(V) SURFACE(V) 10327'	10/31/76	12898'	OPEN PERFS 12625'-12791'
MEWBOURNE OIL CO.	FED E#13	T18S, R32E, SEC 27 1980 FNL, 1980 FWL	OIL	13 3/8 @ 460' CMT W/ 485 SX 8 5/8 @ 4248' CMT W/ 1500 SX 5 1/2 @ 9020' CMT W/ 1225 SX	SURFACE(V) SURFACE(V) 2911'	8/12/87	9020'	OPEN PERFS 8504'-8534'
MEWBOURNE OIL CO.	FED E#10	T18S, R32E, SEC 27 2310 FNL, 2310 FEL	OIL	13 3/8 @ 456' CMT W/ 475 SX 8 5/8 @ 4542' CMT W/ 2600 SX 5 1/2 @ 9020' CMT W/ 1400 SX	SURFACE(V) SURFACE(V) 3118(CBL)	5/14/85	9020'	OPEN PERFS 8501'-8530'
MEWBOURNE OIL CO.	FED E#12	T18S, R32E, SEC 27 1980 FNL, 330 FEL	OIL	13 3/8 @ 440' CMT W/ 450 SX 8 5/8 @ 4310' CMT W/ 1800 SX 5 1/2 @ 9052' CMT W/ 835 SX	SURFACE(V) SURFACE(V) 4888'	3/16/86	9050'	OPEN PERFS 8470'-8532'
MEWBOURNE OIL CO.	FED G#1	T18S, R32E, SEC 27 1980 FSL, 1980 FWL	OIL	13 3/8 @ 441' CMT W/ 550 SX 8 5/8 @ 4505' CMT W/ 1500 SX	SURFACE SURFACE	6/23/78	13081'	PERF & PROD 12683'-12814' PERF & TEST 9910'-8978'

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ITEM VI OF NEW MEXICO FORM C-108
 WELLS WITHIN REVIEW AREA WHICH PENETRATE THE 1ST BONE SPRING SAND
 QUERECHO PLAINS BONE SPRINGS SAND UNIT

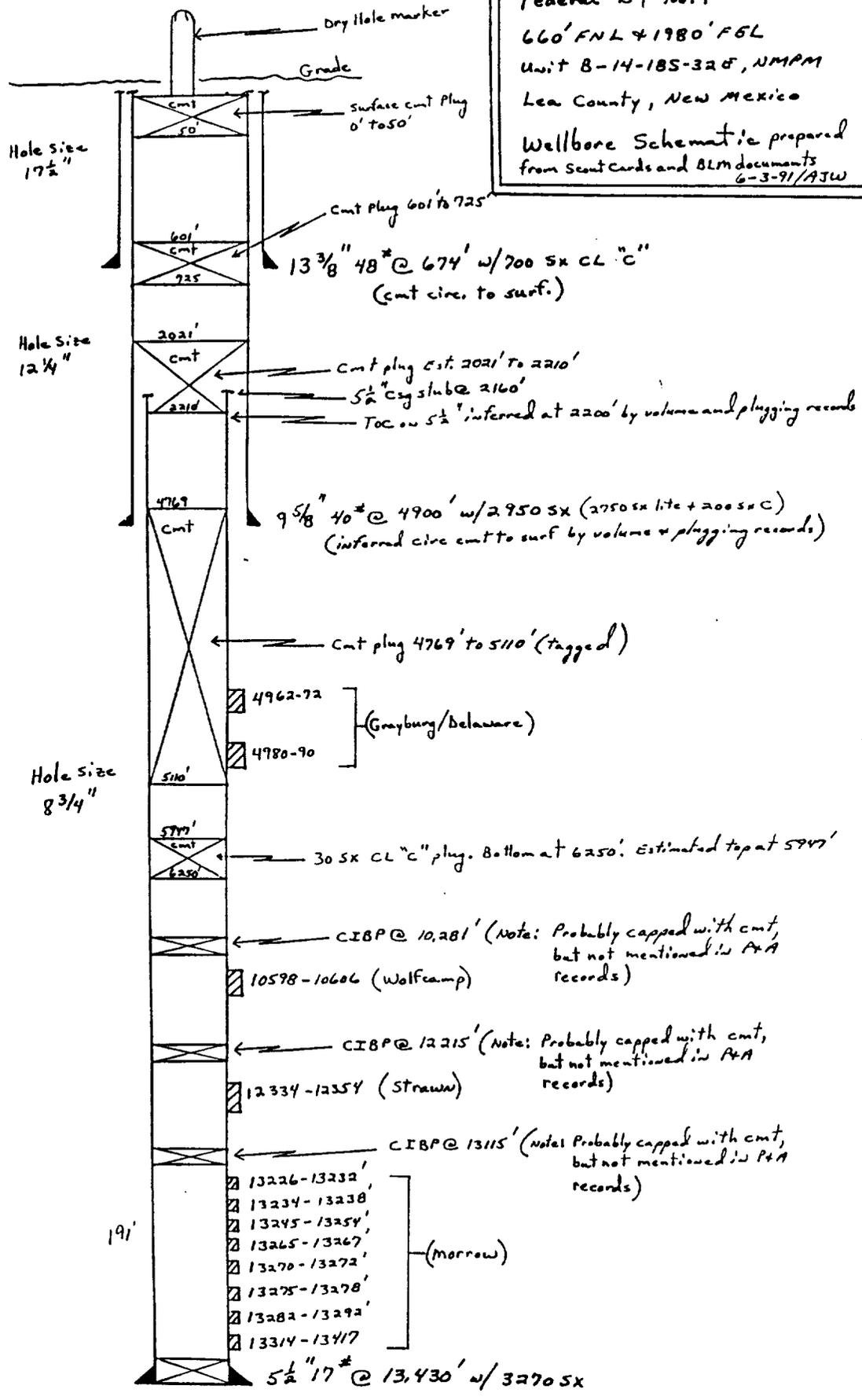
OPERATOR	LEASEWELL	LOCATION	TYPE	CONSTRUCTION	TOP OF CEMENT	DATE DRILLED	TD	COMPLETION & COMMENTS
MEMBOURNE OIL CO.	ANADARDO #1 øø(Q. P. UNIT #2)	T18S, R32E, SEC 27 660 FSL, 1980 FWL	P&A	5 1/2 ø 13061' CMT W/ 1395 SX	6831'	2/7/58	14330'	RET @ 9950' CIBP @ 9850' W/ 10SX PERF & PROD 9750'-9778' CIBP @ 9700' PERF & PROD 8862'-8924' CIBP @ 8900' W/ 15' CMT OPEN PERFS 8506'-8538'
				13 3/8 ø 753' CMT W/ 750 SX 9 5/8 ø 4548' CMT W/ 1300 SX 5 1/2 ø 13004' CMT W/ 1750 SX 5 1/2 ø 8700' CMT W/ 600 SX	SURFACE SURFACE 7284' 6419'		PERF & TEST 12723'-12838' PERF & TEST 11922'-11935' CUT 5 1/2 & RESET @ 8700' PERF & PROD 8538'-8560' CIBP @ 6400' PERF & TEST 6254'-6277' CIBP 4200' PERF & PROD 3910'-4035' P&A	



ad 4-11-82
 P&A'd 5-27-83

Amoco Production Co,
 Federal BY No. 1
 660' FNL & 1980' FGL
 Unit B-14-185-328, NMPM
 Lea County, New Mexico

Wellbore Schematic prepared
 from scout cards and BLM documents
 6-3-91/AJW



ITEM VI OF NEW MEXICO OCD FORM C-108

Plugged Well Detail

Cinco De Mayo Federal

BTA

OPERATOR

LEASE

1
WELL NO.

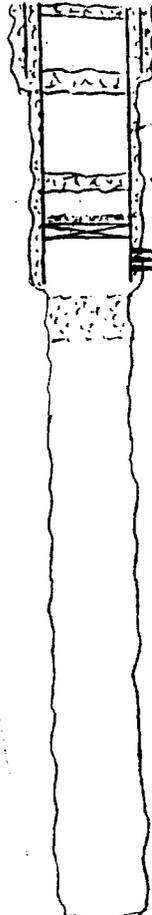
660' FNL & 1980' FWL
FOOTAGE LOCATION

24
SECTION

18S
TOWNSHIP

32E
RANGE

Schematic



15 sx. @ 50'
757'
50 sx. @ 810'
50 sx. @ 2000'
CIBP @ 3900'
4014'-4290' sqz.
w/30 sx.
Shoe @ 4657'
Cement 4667'-4767'

TD 14,905'

Tabular Data

Surface Casing

Size 13-3/8 " Cemented with 1050 sv.
TOC Surface feet determined by circ.
Hole size 16"

Intermediate Casing

Size 9-5/8 " Cemented with 1500 sv.
TOC Surface feet determined by circ.
Hole size 10-3/4"

Long string

Size N.A. " Cemented with _____ sv.
TOC _____ feet determined by _____
Hole size _____

Total depth 14,905'

Injection Interval

_____ feet to _____ feet
(perforated or open-hole, indicate which)

Tubing size _____ lined with _____ (material) set in a
_____ (brand and model) pecker at _____ feet

(or describe any other casing-tubing seal).

Other Data

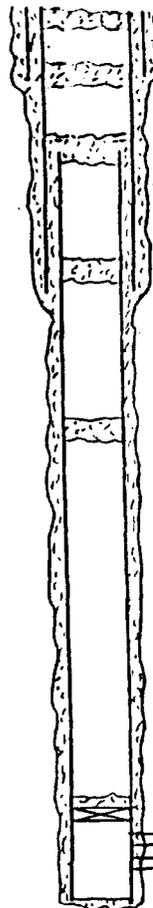
1. Name of the injection formation _____
2. Name of Field or Pool (if applicable) _____
3. Is this a new well drilled for injection? Yes No
If no, for what purpose was the well originally drilled? _____
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (socks of cement or bridge plug(s) used) _____
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

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

HANLEY PETRO. INC. **HANLEY 24 FEDERAL**
OPERATOR LEASE

1 **2310 FSL, 330 FWL** **24** **18S** **32E**
WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Schematic



20 sxs @ 55'
 410'
 35 sxs @ 460'
 CMT 1981'-1825'
 25 sxs @ 3000'
 3015'
 25 sxs @ 4900'
 8700'
 CIBP @ 8375' with 20 sxs cement
 Perfs 8492'-8567'

Tabular Data

Surface Casing
 Size 13 3/8 " Cemented with 400 sv.
 TOC Surface feet determined by Calc.
 Hole size 17 1/2"

Intermediate Casing
 Size 8 5/8 " Cemented with 1125 sv.
 TOC Surface feet determined by Calc.
 Hole size 11"

Long string
 Size 4 1/2 " Cemented with 1930 sv.
 TOC 1380' feet determined by Calc.
 Hole size 7 7/8"
 Total depth 8700'

Injection interval
 _____ feet to _____ feet
 (perforated or open-hole, indicate which)

NOTE: Cut and pulled 1932' of 4 1/2"

Tubing size _____ lined with _____ (material) set in a
 _____ packer at _____ feet
 (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. Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? _____
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

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 through 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
QUERECHO 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:

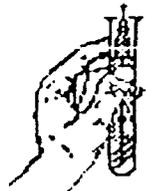
Presented in this report are the final results of a water compatibility study performed on 5 samples of produced water provided to this laboratory by Core Laboratory on behalf of Mewburne Oil Company. API Water Analysis was performed on each of the samples to determine their ionic characteristics. Based on these analyses, the scaling tendency with respect to calcium carbonate and calcium sulfate 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~~ that the water from the Federal "E" #5 tank battery (Queen Formation) and the water from the Cedar drake Federal #4 well formed precipitates when combined in the ratios tested (very slight decreases 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 Cedar drake 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,


James L. Pritchard, Lab Manager
Caprock Laboratories, Inc.



CAPROCK LABORATORIES, INC.

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

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : MANZANO OIL
Lease : JEWITT FEED
Well No. : #1
Job No. : 9205032

Sample Loc. : DELAWARE PROD.
Date Sampled :
Attention :
Analysis No. : 2

ANALYSIS

- | | |
|---|-----------------|
| 1. pH | 6.550 |
| 2. Specific Gravity 60/60 F. | 1.165 |
| 3. CaCO ₃ Saturation Index @ 80 F. | +1.052 |
| | @ 140 F. +2.812 |

MG/L EQ. WT. *MEQ/L

Dissolved Gasses

- | | |
|---------------------|----------------|
| 4. Hydrogen Sulfide | 0.0 |
| 5. Carbon Dioxide | Not Determined |
| 6. Dissolved Oxygen | Not Determined |

Cations

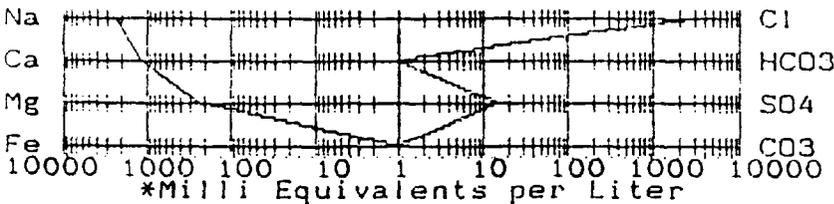
- | | | | |
|---|--------|----------|----------|
| 7. Calcium (Ca ⁺⁺) | 24,529 | / 20.1 = | 1,220.35 |
| 8. Magnesium (Mg ⁺⁺) | 2,772 | / 12.2 = | 227.21 |
| 9. Sodium (Na ⁺) (Calculated) | 52,982 | / 23.0 = | 2,303.57 |
| 10. Barium (Ba ⁺⁺) | 0.0 | | |

Anions

- | | | | |
|--|---------|----------|----------|
| 11. Hydroxyl (OH ⁻) | 0 | / 17.0 = | 0.00 |
| 12. Carbonate (CO ₃ ⁻) | 0 | / 30.0 = | 0.00 |
| 13. Bicarbonate (HCO ₃ ⁻) | 61 | / 61.1 = | 1.00 |
| 14. Sulfate (SO ₄ ⁻) | 750 | / 48.8 = | 15.37 |
| 15. Chloride (Cl ⁻) | 132,594 | / 35.5 = | 3,735.04 |
| 16. Total Dissolved Solids | 213,688 | | |
| 17. Total Iron (Fe) | 15 | / 18.2 = | 0.84 |
| 18. Total Hardness As CaCO ₃ | 72,665 | | |
| 19. Resistivity @ 75 F. (Calculated) | 0.001 | /cm. | |

LOGARITHMIC WATER PATTERN

*meq/L.



Calculated Calcium Sulfate solubility in this brine is 590 mg/L. at 90 F.

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L =	mg/L.
Ca(HCO ₃) ₂	81.04	1.00		81
CaSO ₄	68.07	15.37		1,046
CaCl ₂	55.50	1,203.98		66,821
Mg(HCO ₃) ₂	73.17	0.00		0
MgSO ₄	60.19	0.00		0
MgCl ₂	47.62	227.21		10,820
NaHCO ₃	84.00	0.00		0
NaSO ₄	71.03	0.00		0
NaCl	58.46	2,303.85		134,683

K. Pea

Analyst

Remarks and Comments:



CAPROCK LABORATORIES, INC.

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

WATER ANALYSIS REPORT

SAMPLE

Oil Co. :
Lease : DOUBLE EAGLE
Well No. : FRESH WATER
Job No. : 9205032

Sample Loc. :
Date Sampled :
Attention :
Analysis No. : 3

ANALYSIS

- | | | |
|---|----------|--------|
| 1. pH | | 9.100 |
| 2. Specific Gravity 60/60 F. | | 0.996 |
| 3. CaCO ₃ Saturation Index @ 80 F. | | +1.548 |
| | @ 140 F. | +2.388 |

Dissolved Gasses

- | | | |
|---------------------|----------------|-----|
| 4. Hydrogen Sulfide | | 0.0 |
| 5. Carbon Dioxide | Not Determined | |
| 6. Dissolved Oxygen | Not Determined | |

Cations

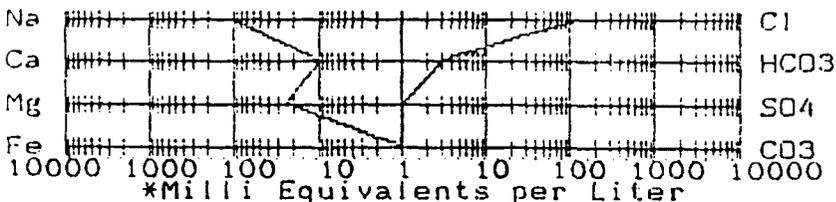
7. Calcium (Ca ⁺⁺)		200	/	20.1 =	9.95
8. Magnesium (Mg ⁺⁺)		304	/	12.2 =	24.92
9. Sodium (Na ⁺)	(Calculated)	2,507	/	23.0 =	109.00
10. Barium (Ba ⁺⁺)		6	/	68.7 =	0.09

Anions

11. Hydroxyl (OH ⁻)		0	/	17.0 =	0.00
12. Carbonate (CO ₃ ⁻)		0	/	30.0 =	0.00
13. Bicarbonate (HCO ₃ ⁻)		183	/	61.1 =	3.00
14. Sulfate (SO ₄ ⁻)		50	/	48.8 =	1.02
15. Chloride (Cl ⁻)		4,963	/	35.5 =	139.80
16. Total Dissolved Solids		<u>8,213</u>			
17. Total Iron (Fe)		1	/	18.2 =	0.05
18. Total Hardness As CaCO ₃		1,752			
19. Resistivity @ 75 F. (Calculated)		0.685	/cm.		

LOGARITHMIC WATER PATTERN

*meq/L.



Calculated Calcium Sulfate solubility in this brine is 2,814 mg/L. at 90 F.

PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L	= mg/L.
Ca(HCO ₃) ₂	81.04		3.00	243
CaSO ₄	68.07		0.94	64
CaCl ₂	55.50		6.02	334
Mg(HCO ₃) ₂	73.17		0.00	0
MgSO ₄	60.19		0.00	0
MgCl ₂	47.62		24.92	1,187
NaHCO ₃	84.00		0.00	0
NaSO ₄	71.03		0.00	0
NaCl	58.46		108.87	6,364

Analyst: K. P. R.

Remarks and Comments:



CAPROCK LABORATORIES, INC.

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

WATER ANALYSIS REPORT

SAMPLE

Client Co. : MEWBOURNE OIL CO.
Lease : FEDERAL L LEASE
Well No. :
Job No. : 9205032

Sample Loc. : BONE SPRINGS PROD. WATER
Date Sampled :
Attention :
Analysis No. : 5

ANALYSIS

- | | |
|---|-----------------|
| 1. pH | 7.550 ✓ |
| 2. Specific Gravity 60/60 F. | 1.110 |
| 3. CaCO ₃ Saturation Index @ 80 F. | +0.842 |
| | @ 140 F. +1.722 |

MG/L EQ. WT. *MEQ/L

Dissolved Gasses

- | | |
|---------------------|----------------|
| 4. Hydrogen Sulfide | 0.0 |
| 5. Carbon Dioxide | Not Determined |
| 6. Dissolved Oxygen | Not Determined |

Cations

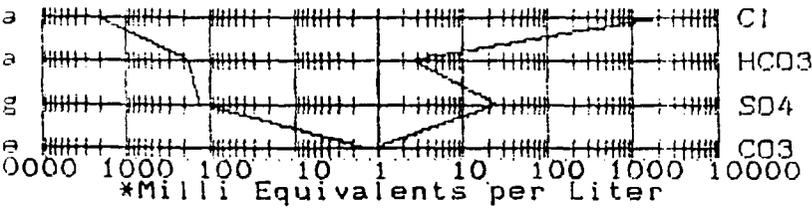
- | | | | |
|---|----------------|----------|----------|
| 7. Calcium (Ca ⁺⁺) | 3,527 | / 20.1 = | 175.47 |
| 8. Magnesium (Mg ⁺⁺) | 1,556 | / 12.2 = | 127.54 |
| 9. Sodium (Na ⁺) (Calculated) | 52,547 | / 23.0 = | 2,284.65 |
| 10. Barium (Ba ⁺⁺) | Not Determined | | |

Anions

- | | | | |
|--|------------|----------|----------|
| 11. Hydroxyl (OH ⁻) | 0 | / 17.0 = | 0.00 |
| 12. Carbonate (CO ₃ ⁻) | 0 | / 30.0 = | 0.00 |
| 13. Bicarbonate (HCO ₃ ⁻) | 159 | / 61.1 = | 2.60 |
| 14. Sulfate (SO ₄ ⁻) | 1,300 | / 48.8 = | 26.64 |
| 15. Chloride (Cl ⁻) | 90,760 | / 35.5 = | 2,556.62 |
| 16. Total Dissolved Solids | 149,849 | | |
| 17. Total Iron (Fe) | 28 | / 18.2 = | 1.51 |
| 18. Total Hardness As CaCO ₃ | 15,214 | | |
| 19. Resistivity @ 75 F. (Calculated) | 0.037 /cm. | | |

LOGARITHMIC WATER PATTERN
*meq/L.

PROBABLE MINERAL COMPOSITION
COMPOUND EQ. WT. X *meq/L = mg/L.



Cl	Ca(HCO ₃) ₂	81.04	2.60	211
HCO ₃	CaSO ₄	68.07	26.64	1,813
SO ₄	CaCl ₂	55.50	146.23	8,116
CO ₃	Mg(HCO ₃) ₂	73.17	0.00	0
	MgSO ₄	60.19	0.00	0
	MgCl ₂	47.62	127.54	6,074
	NaHCO ₃	84.00	0.00	0
	NaSO ₄	71.03	0.00	0
	NaCl	58.46	2,282.85	133,455

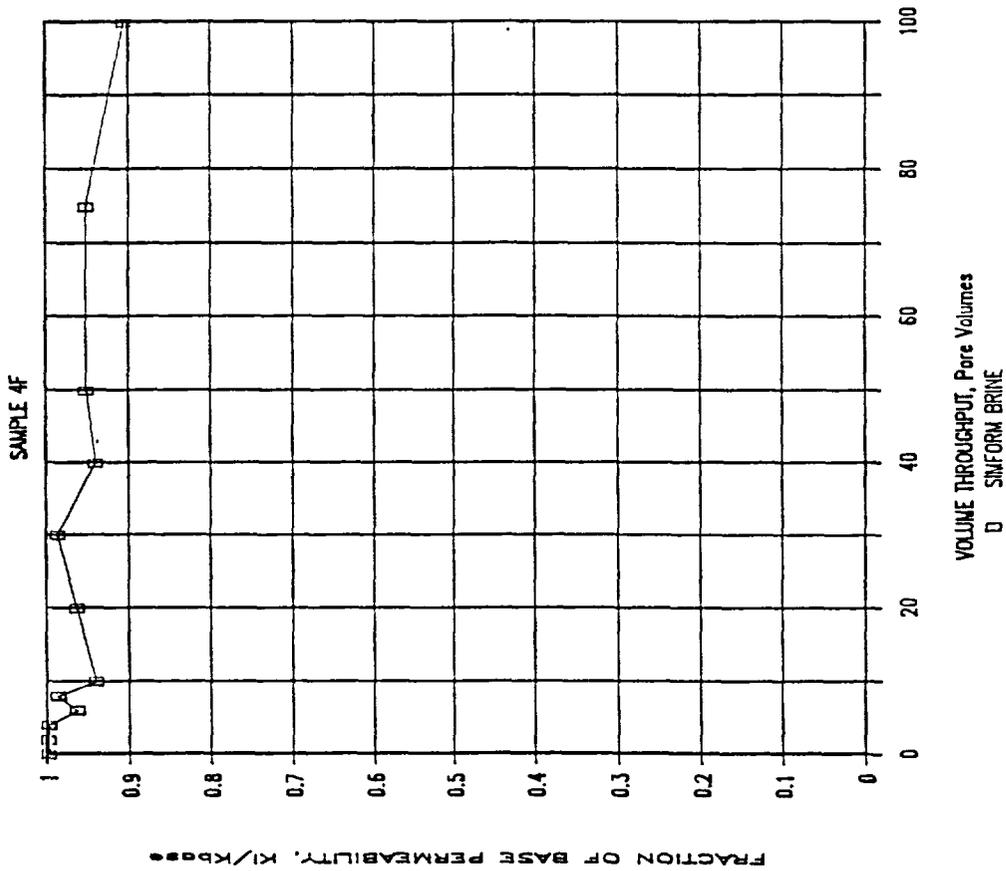
Calculated Calcium Sulfate solubility in this brine is 4,032 mg/L. at 90 F.

K. P. ...

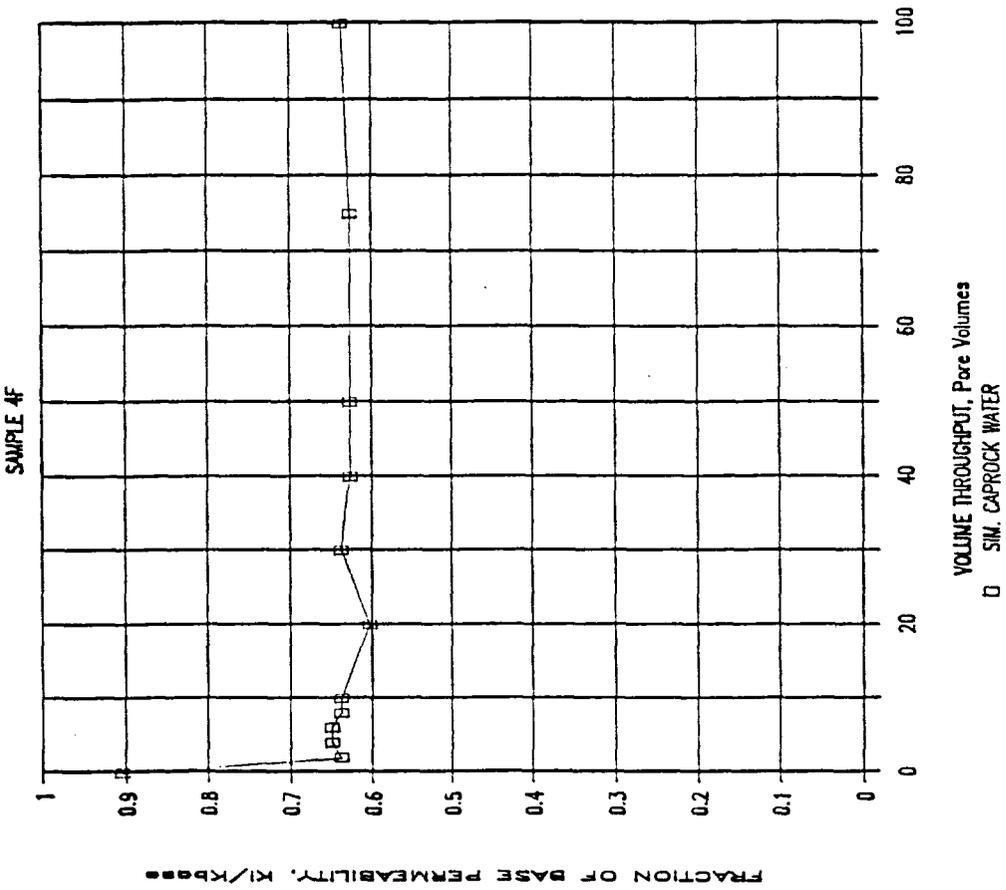
Analyst _____

Remarks and Comments:

PERMEABILITY vs VOLUME THROUGHPUT

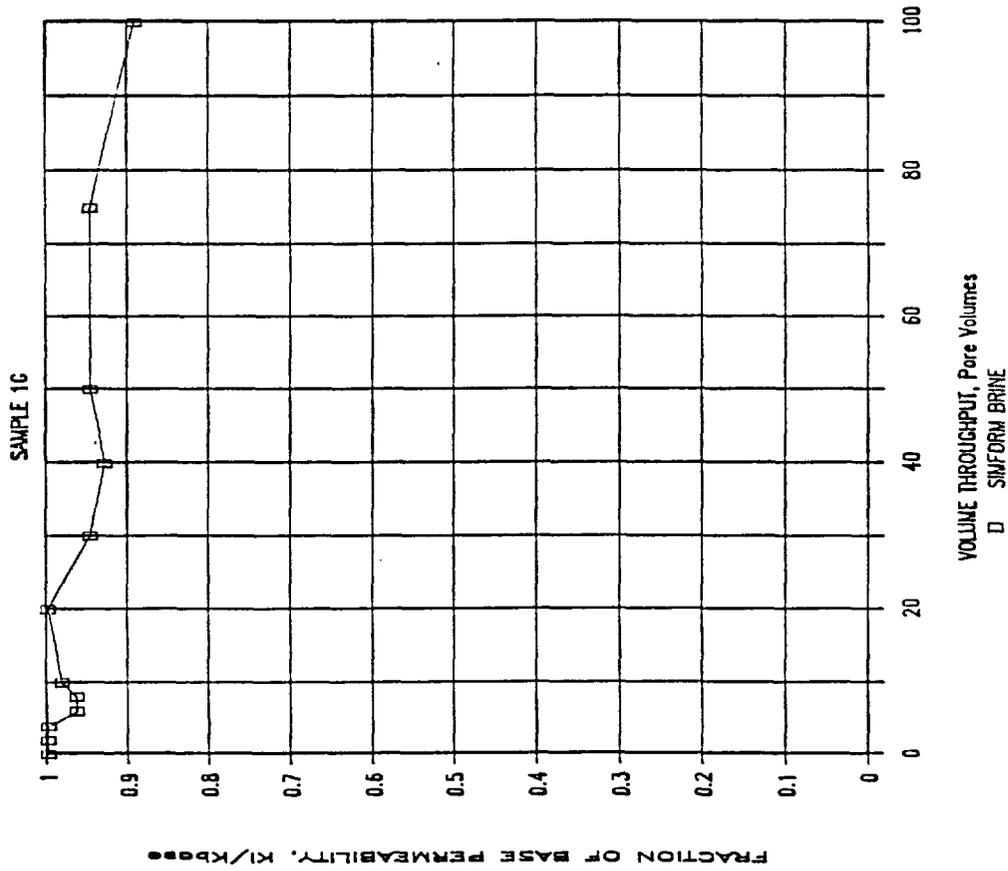


PERMEABILITY vs VOLUME THROUGHPUT

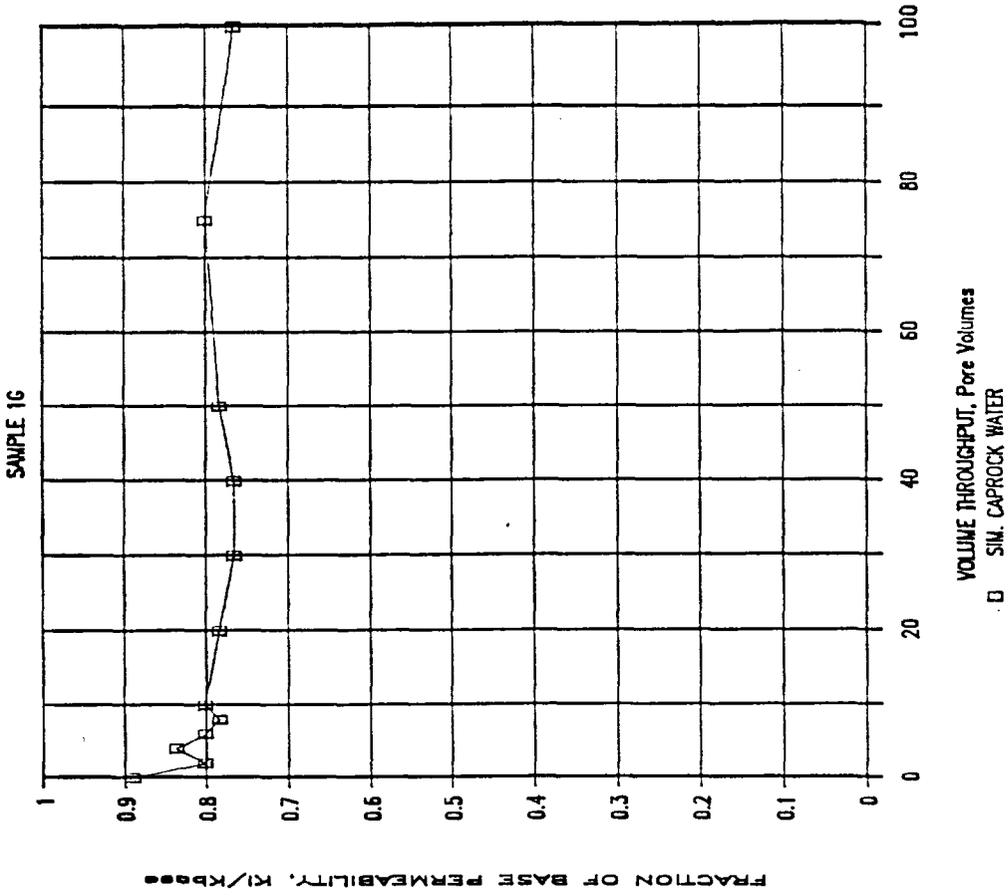


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PERMEABILITY VS VOLUME THROUGHPUT



PERMEABILITY VS VOLUME THROUGHPUT



The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed represent the best judgement of Core Laboratories. Core Laboratories assumes no responsibility, express or implied, as to the productivity, proper operations, or profitability however of any oil, gas, coal or other material, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever.

WATER CONTRACT

This agreement made and entered into as of the 1st day of January, 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 requirement" of 12,000 ^{gals} ~~20,000~~ 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

Price

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 ~~31~~³² East *POP*

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.

Section 2. 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, lightning, 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

Section 1. Buyer agrees to maintain storage facilities adequate to hold not less than a ^{six (6)} ~~twelve (12)~~ hour supply of water for the properties to be waterflooded. *JOE*

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

Armando S. Butler

By: *Bob Sant*
Mayor

SELLER

ATTEST:

Raymond Thompson

By: *James Allen Brinson*
Attorney-In-Fact
BUYER

Marathon Oil Co.
B-27-185-32E

Federal E #1

MEMPHIS
OIL COMPANY DIVISION

DATE 11/2/57 ²⁵
CASE NO 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 seal
has been made*

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.

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

- 2) All injection was contained to the 1st Bone Spring Sand during these 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.
- 5) As a result of the less heavy water, a 2000 psi surface pressure will generate a gradient of .69 and should result in all injection staying contained to the unitized formation.

$$\text{Gradient} = \frac{2000 + 8500' * .45}{8500'} = .69$$

NEW MEXICO
OIL CONSERVATION COMMISSION

Mewbourne EXHIBIT 26

CASE NO 10761/10762

*(.74 is
frac gradient
for prod.)*

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

<<Flowing Gradient Survey>>

COMPANY: Mewbourne Oil Company
 LEASE: Government K
 FIELD: Querecho Plains
 COUNTY: Lea
 STATUS: Injecting
 PERFORATIONS FROM: 0 ft
 DEPTH: 8500 ft

Date: 11/20/92 @ 10:15 am
 CONTACT: Rob Jones
 WELL: #2
 ZONE: Bone Springs
 STATE: New Mexico
 OPERATOR: Standefer
 TD: 0 ft
 TEMPERATURE: 143°F

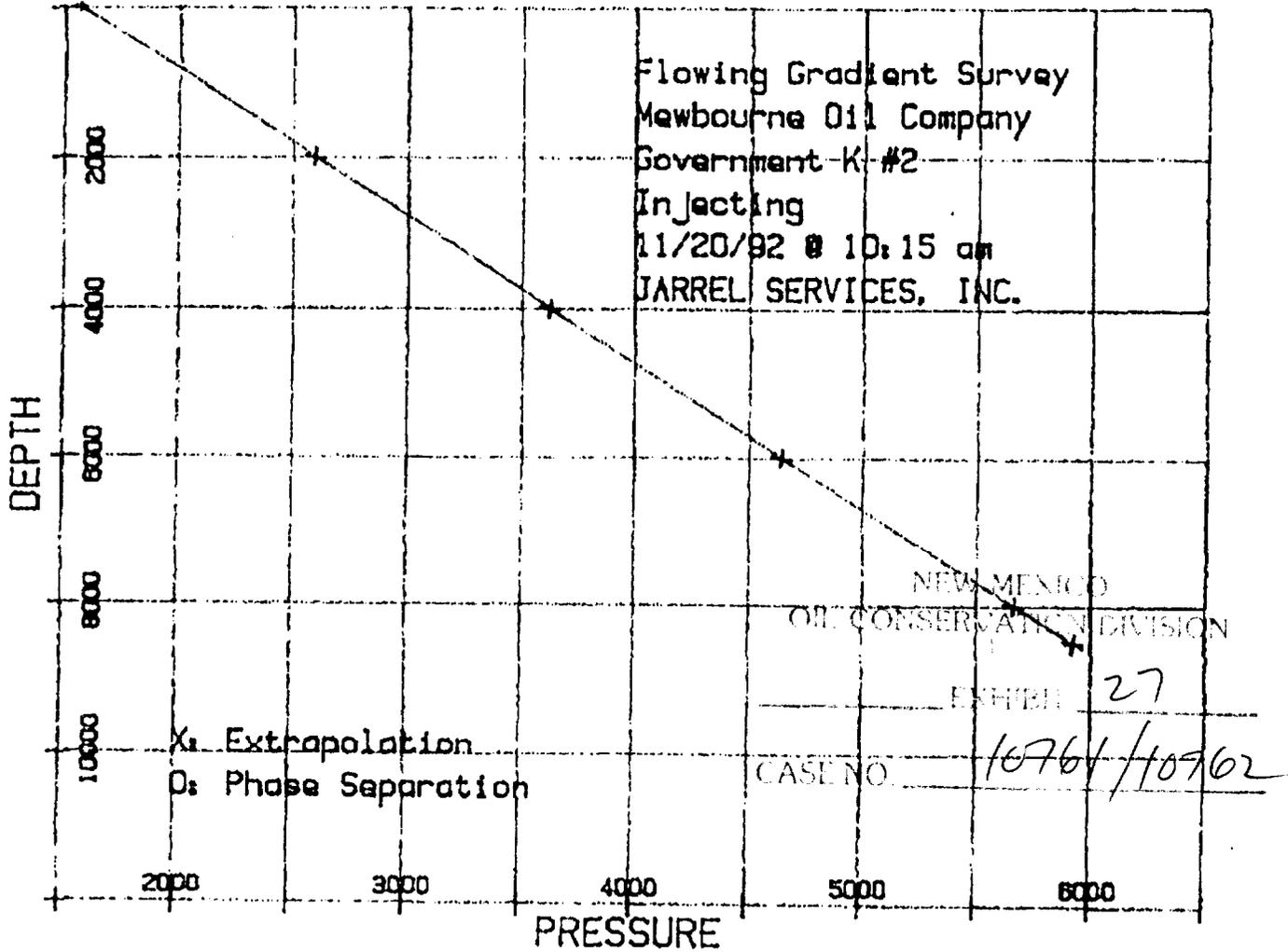
TABULAR DATA

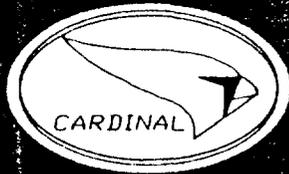
DEPTH (ft)	PRESSURE (psi)	GRADIENT (psi/ft)	EXPLANATIONS
0	1571		
2000	2598	0.514	
4000	3624	0.513	
6000	4641	0.509	
8000	5662	0.511	
8500	5922	0.520	

wt Avg Grad = 0.511

$\Delta \rho = 0.697$

NOTE: Explanations are included to clarify calculated data points.





CARDINAL SURVEYS COMPANY

INJECTION PROFILE

COMPANY <u>MEWBOURNE OIL COMPANY</u>	File No. <u>11,506</u>
WELL <u>GOVERNMENT "K" NO. 2</u>	
FIELD <u>QUERECHO PLAINS UPPER BONE SPRINGS</u>	
COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u>	
LOCATION: <u>1950' FSL & 1980' FWL</u>	
SEC <u>23</u> TWP <u>18-5</u> RGE <u>32-3</u>	

Permanent Datum <u>G.L.</u> Elev. <u>3770'</u>	KB <u>3781.3'</u>
Log Measured From <u>K.B. 11.3</u> Ft. Above Perm. Datum	DF <u>N/A</u>
Drilling Measured From <u>K.B.</u>	GL <u>3770'</u>

Date	<u>10-29-92 & 11-27-92</u>
Depth - Driller	<u>8900'</u>
Depth - Plug Back	<u>8780'</u>
Depth - Logger	<u>8780'</u>
Bottom Logged Interval	<u>8780'</u>
Top Logged Interval	<u>8100'</u>
Recorded By	<u>GEUTHER</u>
Witnessed By	<u>JONES/THURMAN</u>
Base Location	<u>ODESSA, TEXAS</u>
Unit No.	<u>8725</u>
Equip. Operator	<u>SANCHEZ</u>

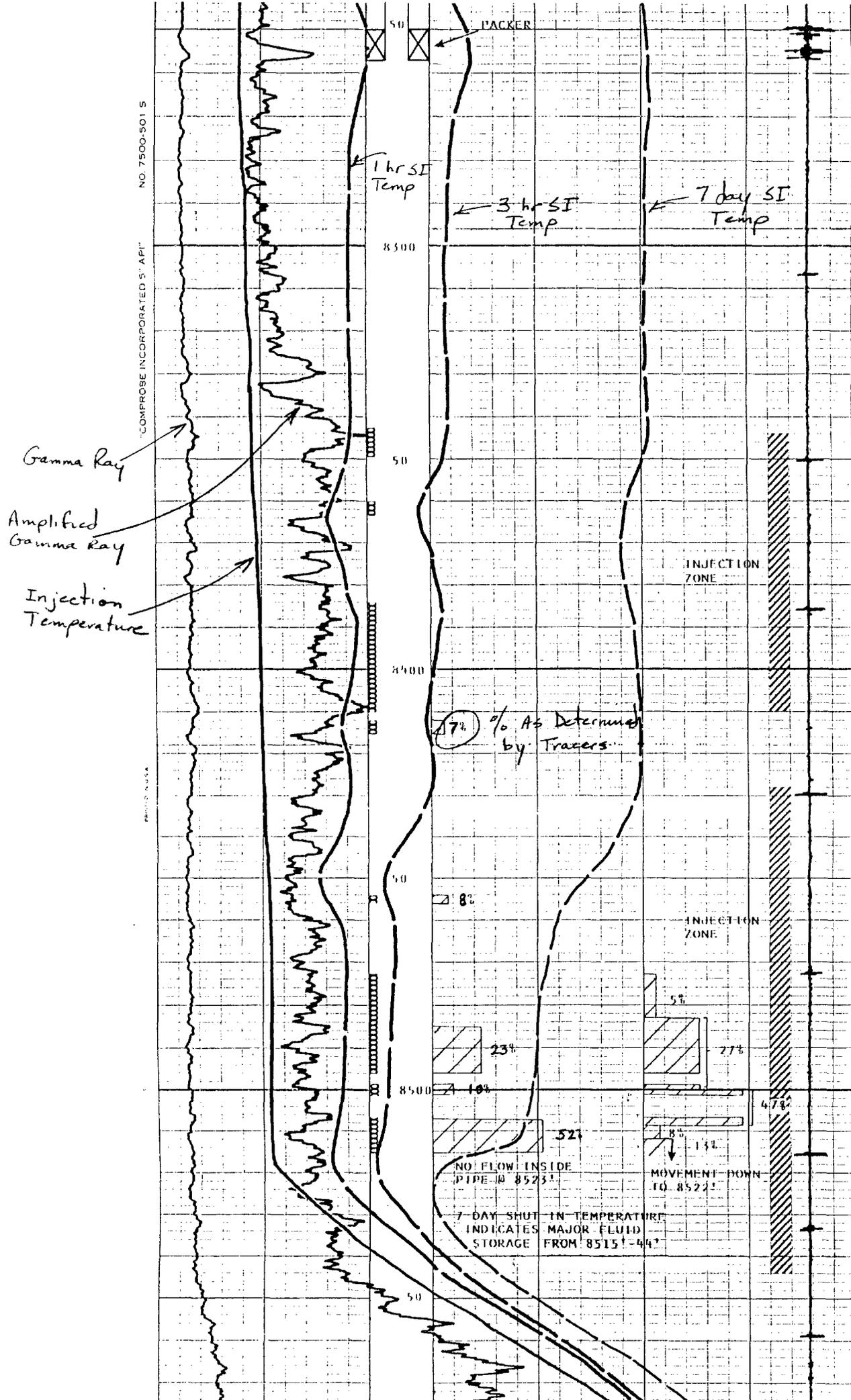
Size	Wgt.	From	To	Type of Well
13 3/8"	48#	SURFACE	700'	INJECTION
8 5/8"	32#	SURFACE	4800'	Status <u>INJECTING</u>
5 1/2"	15.5#	4468'	8900'	Type of Fluid <u>WATER</u>
	& 17#			Fluid Level <u>FULL</u>
Tubing				
2 7/8"	6.5#	SURFACE	8257'	
Borehole <u>NEW MEXICO</u>				Injection Rate <u>822 BPD</u>
<u>OIL CONSERVATION DIVISION</u>				Surface Pressure <u>1500 PSI</u>
				Surface Temp. _____
				Bottom Hole Temp. <u>133.2°</u>

EXHIBIT 28

CASE NO. 10761/10762

COMPROBE INCORPORATED 5" API

REVISION NO. 1



Gamma Ray
 Amplified Gamma Ray
 Injection Temperature

1 hr SI Temp
 3 hr SI Temp
 7 day SI Temp

27% As Determined by Tracers

8%

23%

18%

52%

NO FLOW INSIDE PIPE @ 8523'

7-DAY SHUT-IN TEMPERATURE INDICATES MAJOR FLUID STORAGE FROM 8515' - 442'

INJECTION ZONE

INJECTION ZONE

5%
27%

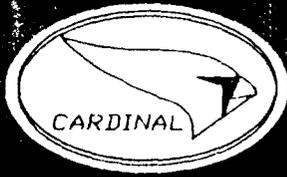
8%
14%
MOVEMENT DOWN TO 8523'

LACKER

INJECTION ZONE

INJECTION ZONE

4732'



CARDINAL SURVEYS COMPANY

INJECTION PROFILE

COMPANY <u>MEWBOURNE OIL COMPANY</u>	File No. <u>11,608</u>
WELL <u>FEDERAL "E" WELL NO. 11</u>	
FIELD <u>QUERECHO PLAINS UPPER BONE SPRINGS</u>	
COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u>	
LOCATION: <u>660' FNL & 530' FEL</u>	
SEC <u>27</u> TWP <u>18-S</u> RGE <u>32-E</u>	

Permanent Datum <u>G.L.</u> Elev. <u>3756.5'</u>	KB <u>3773.5'</u>
Log Measured From <u>K.B.</u> <u>17</u> Ft. Above Perm. Datum	DF <u>3772.5'</u>
Drilling Measured From <u>K.B.</u>	GL <u>3756.5'</u>

Date	<u>12-14-92</u>
Depth - Driller	<u>8979'</u>
Depth - Plug Back	<u>8800'</u>
Depth - Logger	<u>8775'</u>
Bottom Logged Interval	<u>8775'</u>
Top Logged Interval	<u>8100'</u>
Recorded By	<u>SCOTT</u>
Witnessed By	<u>POUNDS</u>
Base Location	<u>HOBBS, NEW MEXICO</u>
Unit No.	<u>8723</u>
Equip. Operator	<u>GRANADOS</u>

Size	Wgt.	From	To	Type of Well	INJECTION
8 5/8"		SURFACE	4480'	Status	INJECTING
5 1/2"	17#	SURFACE	8909'	Type of Fluid	WATER
				Fluid Level	FULL
Tubing				Injection Rate	788 BPD
2 7/8"		SURFACE	8230'	Surface Pressure	1550 PSI
Borehole				Surface Temp.	114.9°
				Bottom Hole Temp.	131.8°

NEW MEXICO
OIL CONSERVATION DIVISION

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CASE NO. 10761/10762

G/R Base Scale	100 CPS/1"	Tool Size	1 3/8"	Configuration	CCL	Serial	2308
Temp. Scale	2" = 1"	Type Detector	SCINT.		FJECTOR	No.	291
Caliper Scale		Det. Spacing	5'		TOP DETECTOR		2109
					BOTTOM DET.		2110
					TEMPERATURE		273

Depth Corrected To: WELEX 1-10-86

Perforations: 8360'-88', 8450'-86'

SLUG NO.	DETECTOR DEPTH	REACTION TIME (SEC.)	HOLE SIZE	RATE BPD	PERCENTAGE
17	7905	AVERAGE	2 7/8" TUBING	769	50' DROP SHOT
16	8230	N/A	" "	---	PACKER CHECK
15	8275	10	5 1/2" CASING	925	100%
14	8300	10	" "	925	100%
13	8320	10	" "	925	100%
12	8355	10	" "	925	100%
11	8365	DO NOT USE	" "	---	UPWARD CHANNEL CHECK
10	8370	11	" "	841	91%
9	8380	12	" "	771	83%
8	8400	12	" "	771	83
7	8450	12	" "	771	83%
6	8460	14	" "	661	71%
5	8470	19	" "	487	53%
4	8480	46	" "	201	22%
2	8488	DO NOT USE	" "	---	DOWNWARD CHANNEL CK.
3	8500	N/A	" "	---	NO FLOW

⊘ USED TO PLOT PROFILE

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.

CONCLUSION CONTINUED...

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

NO FLOW INSIDE PIPE @ 8489'. 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.



COMPFIDE INCORPORATED

PACKER

50

8500

90°

50

8400

50

8500

Injection Temperature

1 hr SI Temp

4 hr SI Temp

94° 98° 102° 106° 110°

9%
8%
% determined by Tracer

13
1.1%

12%
18%
31%
22%

10%
38%
25%
17%

NO FLOW INSIDE PIPE @ 8489'

MOVEMENT DOWN INSIDE PIPE TO 8486'

KNOCK OUT

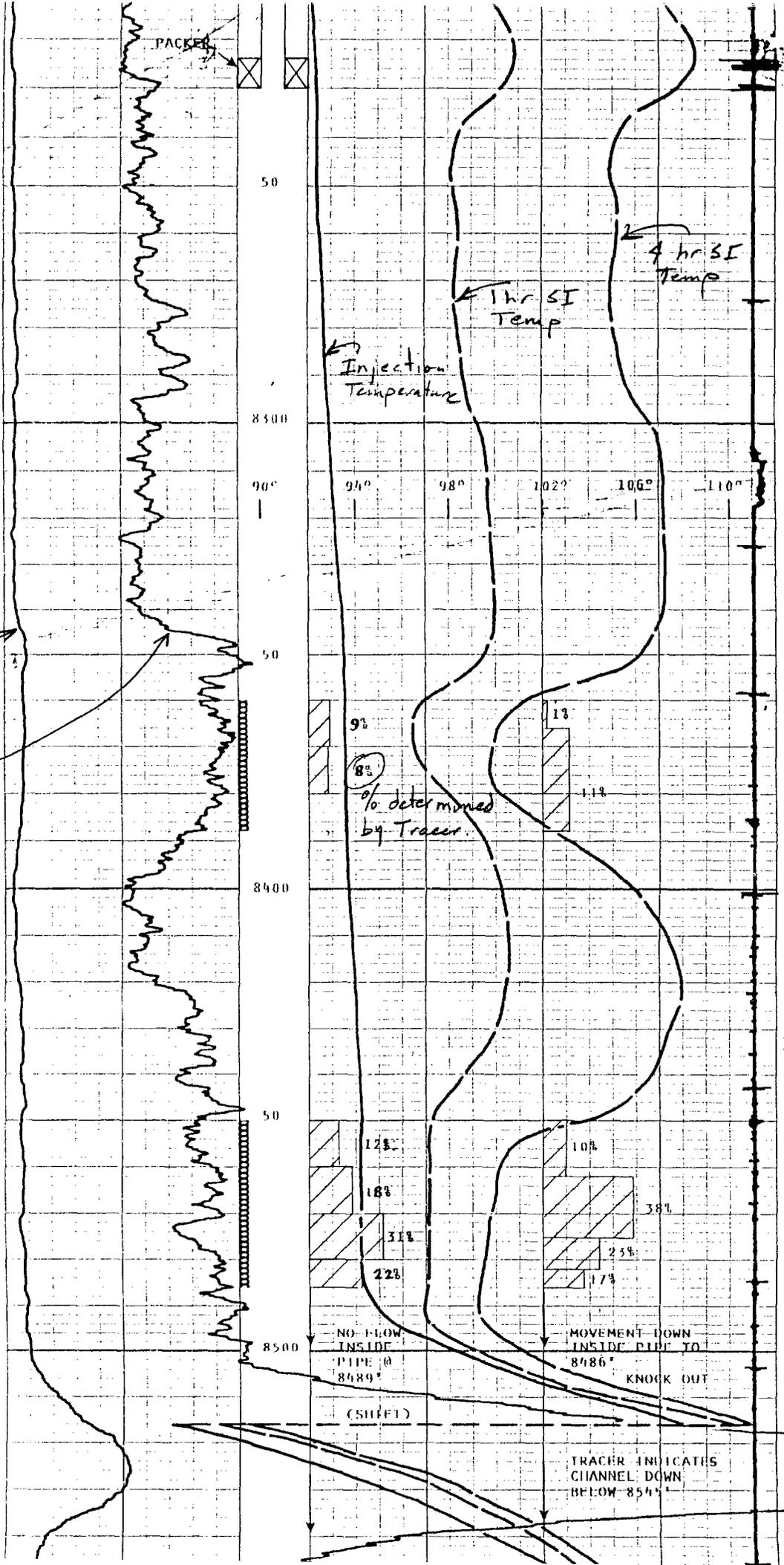
(SHIFT)

TRACER INDICATES CHANNEL DOWN BELOW 8540'

Gamma Ray

Amplified Gamma Ray

PROYON U.S.A.



**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.

JGB5\93369.d

NEW MEXICO
OIL CONSERVATION DIVISION

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 NEW MEXICO)
) ss.
COUNTY OF SANTA 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 complied with.

Kevin Mayes
Kevin Mayes

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

Frances R. Souers
Notary Public

My commission expires: September 25, 1994.

NEW MEXICO
OIL CONSERVATION DIVISION
31
CASE NO 10761/10762

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: BLM P. O. Box 1397 Roswell, NM 88220	4. Article Number P 814 262 883
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> 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 paid)
6. Signature - Agent X <i>[Signature]</i>	
7. Date of Delivery <i>6/3/93</i>	

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Herschel & Gary Caviness, d/b/a Caviness Cattle Company East Star Route Maljamar, NM 88264	4. Article Number P 814 262 880
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Address X <i>[Signature]</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery <i>6-3-93 P. Brown</i>	

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

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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: James Virgil Linam Estate P. O. Box 743 Hobbs, NM 88240 <i>United NM Trust Co Managing Trustee for Linam Estate</i>	4. Article Number P 814 262 881
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> 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 paid) <i>Husband of one of Linam children. 6-3-93 Joy Burdette</i>
6. Signature - Agent X <i>[Signature]</i>	
7. Date of Delivery <i>6-3-93</i>	

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

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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Williams & Son Cattle Co. P. O. Box 30 Maljamar, NM 88264	4. Article Number P 814 262 882 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature - Address X <i>Billy Williams</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery <i>6-7-93 RB</i>	

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

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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Manzano Oil Corp. 1801 W. Second Roswell, NM 88201	4. Article Number P 814 262 864 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return 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 <i>J. also</i>	
7. Date of Delivery <i>6/23/93</i>	

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

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Santa Fe Energy 500 West Illinois, Suite 500 Midland, Texas 79701	4. Article Number P 814 262 866 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return 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 <i>H. Wallis</i>	
7. Date of Delivery <i>6-3-93</i>	

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

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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Anadarko Petroleum Corp. P. O. Drawer 130 Artesia, NM 88211-0130	4. Article Number P 814 262 863
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return 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 Bruce Wainwright	
7. Date of Delivery 6-3-93	

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

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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Anadarko Petroleum Corp. P. O. Box 1330 Houston, Texas 77251-1330 Att: Mike Bridges	4. Article Number P 503 635 857
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature -- Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature -- Agent X	
7. Date of Delivery JUN 03 1993	

PS Form 3811, Apr. 1989 * U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: C. W. Stumhoffer Suite 1007, Ridglea Bank Bldg. Fort Worth, Texas 76116	4. Article Number P 503 635 858
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature -- Address X C.W. Stumhoffer	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature -- Agent X	
7. Date of Delivery 6-5-93	

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

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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Enron Oil & Gas Corp. P. O. Box 2267 Midland, TX 79702	4. Article Number P 814 262 867
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and DATE DELIVERED .	
5. Signature — Address X <i>Mano R. Quinto</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery JUN - 1993	

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: BTA 104 South Pecos Midland, TX 79701	4. Article Number P 814 262 879
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> 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 paid)
6. Signature — Agent X <i>[Signature]</i>	
7. Date of Delivery JUN - 9 1993	

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Siete Oil & Gas Corp. P. O. Box 2523 Roswell, NM 88202-2523	4. Article Number P 814 262 865
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> 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 paid)
6. Signature — Agent X <i>[Signature]</i>	
7. Date of Delivery 6-3-93	

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Meridian Oil, Incorporated 21 Desta Drive Midland, TX 79705	4. Article Number P 174 147 380
rec'd MERIDIAN OIL 6-14-93	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X <i>Lesly Swire</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 6-14-93	

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mack Energy Corp. P. O. Box 276 Artesia, NM 88210	4. Article Number P 174 147 381
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> 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 paid)
6. Signature - Agent X <i>Steve Sanders</i>	
7. Date of Delivery 6-3-93	

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Yates Petroleum Corp. 207 S. 4th Street Artesia, NM 88210	4. Article Number P 503 635 859
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X <i>[Signature]</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 6-3-93	

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to:
 Hanley Petroleum, Inc.
 415 W. Wall, Suite 1500
 Midland, TX 79701

4. Article Number
P 814 262 878

Type of Service:
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee
 X *M. Wilson*

6. Signature - Agent
 X

7. Date of Delivery
 6-3-93

8. Addressee's Address (ONLY if requested and fee paid)

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

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 side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to:
 Oxy USA, Inc.
 P. O. Box 50250
 Midland, Texas 79710
 Att: Terry Lundquist

4. Article Number
P 503 635 860

Type of Service:
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee
 X

6. Signature - Agent
 X *K. Woodard*

7. Date of Delivery
 6-4-93

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989 * U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.
 Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. Show to whom, date and address of delivery. (Extra charge) 2. Restricted Delivery. (Extra charge)

3. Article Addressed to:
 United New Mexico Trust Co.
 200 East Broadway
 Hobbs, NM 88240
 ATT: Joy Buhalts

4. Type of Service:
 Registered Insured
 Certified COD
 Express Mail

Article Number
 08053079

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee
 X *Joy Buhalts*

6. Signature - Agent
 X

7. Date of Delivery
 6/15/93

8. Addressee's Address (ONLY if requested and fee paid)

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

ROYALTY OWNERS

Attest or Witness

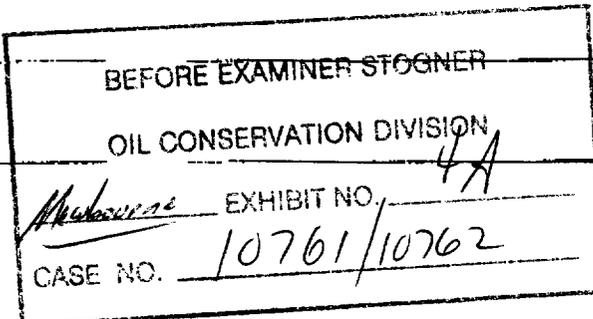
Date Signed

Name

John S. ...

7-1-93

[Signature]



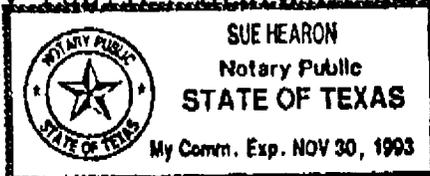
STATE OF TEXAS §

COUNTY OF SMITH §

The foregoing instrument was acknowledged before me this 6TH day of JANUARY, 1993, by James Allen Brinson, as Attorney-in-Fact of Mewbourne Oil Company, a Delaware Corporation.

Sue Hearon
Notary Public, State of Texas

My Commission Expires: _____



STATE OF _____

§ (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF _____

§ (ACKNOWLEDGMENT FOR CORPORATION)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____, for _____, a _____ Corporation.

Notary Public

My Commission Expires: _____

STATE OF TEXAS

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF MIDLAND

§

The foregoing instrument was acknowledged before me this 1ST day of JULY, 1993, by STEVEN L. BURLISON.



Sharon Beaver
Notary Public

My Commission Expires: 7-17-96

STATE OF _____

§ (ACKNOWLEDGMENT FOR INDIVIDUAL)

COUNTY OF _____

§

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by _____.

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 ²²⁶ 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
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. Borggaard
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 Borggaard in Bend, Oregon - wrong one never heard of Richard Borggaard.
- 6-21-93 Anadarko D. O. Analyst cannot advise of any forwarding address for Ms. Borggaard. At a stalemate at this point as to making personal contact with him.

Pamela Brooks
2545 Tyler Street
Eugene, Oregon

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 Tele with Ms. Brooks - reviewing, not sure at this time
6-15-93 Sent follow-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 Stephens ORI

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 "suspended" as stated 6-3-93 - with no change on his whereabouts! Anadarko D. O. Analyst cannot "enlighten" Mewbounne as to current forwarding address.

Lewis Burlison 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 Burlison (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

signed


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 not join with either of these interests due to being too 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 _____

two weeks.

Beginning with the issue dated

June 13, 19 93

and ending with the issue dated

June 20, 19 93

Kathi Bearden

General Manager

Sworn and subscribed to before

me this 22 day of

June, 19 93

Charlene Perrin

Notary Public.

My Commission expires

March 15, 1997

(Seal)

LEGAL NOTICE
June 13, 20, 1993
NOTICE

TO: The following persons, or their unknown heirs:

William J. Casey
Gregory P. Panos
Lita Sabonis

Please take notice that Mewbourne Oil Company has applied to the New Mexico Oil Conservation Division for statutory (compulsory) unitization of the Querecho 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

87504-2068

(505) 982-4554

Attorneys for Mewbourne

Oil Company

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.

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 UNITIZATION, LEA COUNTY, NEW MEXICO.

No. 10,761

AFFIDAVIT REGARDING NOTICE

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA 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
Steven Cobb

SUBSCRIBED AND SWORN TO before me this 30th day of June, 1993, by Steven Cobb.

Frances R. Louers
Notary Public

My commission expires: September 25, 1994.

NEW MEXICO
OIL CONSERVATION DIVISION

HINKLE, COX, EATON, COFFIELD & HENSLEY

ATTORNEYS AT LAW

218 MONTEZUMA

POST OFFICE BOX 2068

SANTA FE, NEW MEXICO 87504-2068

(505) 982-4554

FAX (505) 982-8623

CLARENCE E. HINKLE (1904-1985)
W. E. BONDURANT, JR. (1913-1973)
ROY C. SNODGRASS, JR. (1914-1987)

OF COUNSEL
O. M. CALHOUN*
MACK EASLEY
JOE W. WOOD
RICHARD S. MORRIS

WASHINGTON, D.C.
SPECIAL COUNSEL
ALAN J. STATMAN*

700 UNITED BANK PLAZA
POST OFFICE BOX 10
ROSWELL, NEW MEXICO 86202
(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 87103
(505) 768-1500
FAX (505) 768-1529

LEWIS C. COX
PAUL W. EATON
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
STUART D. SHANDR
ERIC D. LANPHERE
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. BURFORD*
RICHARD E. OLSON
RICHARD R. WILFONG*
THOMAS J. MCBRIDE
JAMES J. WECHSLER
NANCY S. CUSACK
JEFFREY L. FORNACIARI
JEFFREY D. HEWETT
JAMES BRUCE
JERRY F. SHACKELFORD*
JEFFREY W. HELLBERG*
ALBERT L. PITTS
THOMAS M. HNASKO
JOHN C. CHAMBERS*
GARY D. COMPTON*
MICHAEL A. GROSS
THOMAS D. HAINES, JR.
GREGORY J. NIBERT
DAVID T. MARKETTE*
MARK C. DOW

FRED W. SCHWENDIMANN
JAMES M. HUDSON
JEFFREY S. BAIRD*
REBECCA NICHOLS JOHNSON
WILLIAM P. JOHNSON
STANLEY K. KOTOVSKY JR.
H. R. THOMAS
ELLEN S. CASEY
MARGARET CARTER LUDEWIG

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

*NOT LICENSED IN NEW MEXICO

June 7, 1993

CERTIFIED MAIL **RETURN RECEIPT REQUESTED**

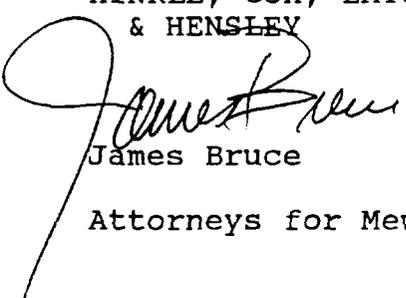
TO: Persons on Exhibit A

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. The Unit 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. Borggaard 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 108 736 757
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 Kiouss 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

Is your RETURN ADDRESS completed on the reverse side?

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 we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Gary L. And Candace Jo Bennett
Post Office Box 16844
Lubbock, Texas 79490

4a. Article Number
P 108 736 797

4b. Service Type

Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery JUN 10 1993

5. Signature (Addressee)
Gary L. Bennett

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

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 we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

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 Return Receipt for Merchandise

7. Date of Delivery JUN 12 1993

5. Signature (Addressee)
John Borg III

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER: <ul style="list-style-type: none"> • 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 we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space does not permit. • Write "Return Receipt Requested" on the mailpiece below the article number. • The Return Receipt will show to whom the article was delivered and the date delivered. 		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Richard D. Borgaard Post Office Box 9220 Bend, Oregon 97708		4a. Article Number P 108 736 754	
		4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise	
		7. Date of Delivery 6-14-93	
5. Signature (Addressee)		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature (Agent) <i>R.D. Borgaard</i>			

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER: <ul style="list-style-type: none"> • 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 we can return this card to you. • Attach this form to the front of the mailpiece, or on the back if space does not permit. • Write "Return Receipt Requested" on the mailpiece below the article number. • The Return Receipt will show to whom the article was delivered and the date delivered. 		I also wish to receive the following services (for an extra fee): 1. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.	
3. Article Addressed to: Pamela Brooks 2545 Tyler Street Eugene, Oregon 97405-2266		4a. Article Number P 133 800 806	
		4b. Service Type <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise	
		7. Date of Delivery	
5. Signature (Addressee) <i>P. Brooks</i>		8. Addressee's Address (Only if requested and fee is paid)	
6. Signature (Agent)			

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

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 we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Lewis Burluson
Post Office Box 2479
Midland, Texas 79701-2479

4a. Article Number
P 108 738 970

4b. Service Type

Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
6-10-97

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Sharon Beave

PS Form 3811, December 1991 *U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

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 we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Steven L. Burluson
Post Office Box 2479
Midland, Texas 79702-2479

4a. Article Number
P 133 801 019

4b. Service Type

Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
6-10-93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Sharon Beave

PS Form 3811, December 1991 *U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
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- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Nancy Hayes
Post Office Box 2479
Midland, Texas 79702-2479

4a. Article Number

P 108 736 756

4b. Service Type

- Registered Insured
- Certified COD
- Express Mail Return Receipt for Merchandise

7. Date of Delivery

6-10-93

5. Signature (Addressee)

6. Signature (Agent)

Sharon Beaver

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 *U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

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- Complete items 3, and 4a & b.
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- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Rae I. Little, Deceased
c/o Raymond Rix,
Rt. 2, Box 12
Kenedy, Texas 78119-2713

4a. Article Number

P 108 736 757

4b. Service Type

- Registered Insured
- Certified COD
- Express Mail Return Receipt for Merchandise

7. Date of Delivery

JUN 9 1993

5. Signature (Addressee)

6. Signature (Agent)

R. B. Rix

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 *U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
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- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Margaret Johns McCurdy, Trustee
 2525 Ridgeway Blvd., Room 300
 Fort Worth, Texas 76116

4a. Article Number
 P 108 736 758

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
 6/19/93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

Melba Ellis

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

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 we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Ann McReynolds
 c/o John W. McReynolds
 Northsham, Forsythe, Samples
 & Wooldridge
 Thirty-Two Hundred
 2001 Bryan Tower
 Dallas, Texas 75201

4a. Article Number
 P 108 736 778

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
 6-10-93

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

Joe Bradford

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

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 we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
 - 2. Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:
 Gladys Shannon
 1101 Clara Street
 Walnut Creek, Calif. 94596

4a. Article Number
 P 108 736 762

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
 6/22/93

5. Signature (Addressee)
Gladys Shannon

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form 3811, December 1991 ☆U.S. GPO: 1992-323-402 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

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 we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
 - 2. Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:
 Carol David Trammell
 Post Office Box 5081
 Walnut Creek, Calif. 94596

4a. Article Number
 P 108 736 765

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

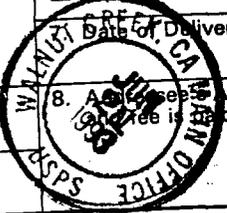
Date of Delivery

5. Signature (Addressee)
CD Trammell

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form 3811, December 1991 ☆U.S. GPO: 1992-323-402 **DOMESTIC RETURN RECEIPT**



Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

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- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

NationsBank Texas, N.A., Trustee
 under the will of David B.
 Trammell
 Post Office Drawer 848703
 Dallas, Texas 75284

4a. Article Number

P 108 736 766

4b. Service Type

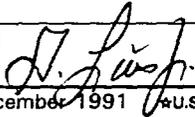
- Registered Insured
- Certified COD
- Express Mail Return Receipt for Merchandise

7. Date of Delivery

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)



PS Form 3811, December 1991

U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
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- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

NationsBank Texas, N.A., Trustee
 under the Will of Margaret Ruth
 Trammell
 P.O. Drawer 848703
 Dallas, Texas 75284

4a. Article Number

P 108 736 767

4b. Service Type

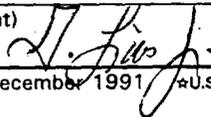
- Registered Insured
- Certified COD
- Express Mail Return Receipt for Merchandise

7. Date of Delivery

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)



PS Form 3811, December 1991

U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

P 108 736 785



Receipt for Certified Mail

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

Sent to Clarence W. & Freida Stunhoffer		
Street and No. Suite 1007, 1 Ridglea Bank Bldg.		
P.O., State and ZIP Code Fort Worth, Texas 76116		
Postage	X	\$
Certified Fee	X	1.00
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered	X	1.00
Return Receipt Showing to Whom, Date, and Addressee's Address		
TOTAL Postage & Fees		\$
Postmark or Date		

PS Form 3800, June 1991

EXHIBIT 8
CASE 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.

10.5 Payment of Capital Expenditures. Capital expenditures 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

1.3.1 Unit Operator shall charge the Joint Account at the following rates per well per month:

Drilling Well Rate \$ 5,400

Producing Well Rate \$ 680

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

COMPANY WELL FIELD COUNTY		COMPANY MEMBOURNE OIL COMPANY			
		WELL FEDERAL L NO. 4			
		FIELD QUERECHO PLAINS UPPER BONE SPRINGS			
		COUNTY LEA		STATE NM	
		API NO.		OTHER SERVICES	
		LOCATION		DL-MG	
		660 FNL X 1650 FEL			
		SEC. 23		TWP 18-S RGE 32-E	
		PERMANENT DATUM G.L.		ELEV. 3789.2	
		LOG MEASURED FROM K.B. 15.5 FT. ABOVE PERM. DATUM		ELEV.: K.B. 3804.	
		DRILLING MEASURED FROM K.B.		D.F. NA	
				G.L. 3789.	
DATE		11/28/87			
RUN NO.		ONE			
DEPTH-DRILLER		8760			
DEPTH-WELEX		8760			
BTM. LOG INTER.		8723			
TOP LOG INTER.		SURFACE			
CASING-DRILLER		8 5/8 4318		• • •	
CASING-WELEX		4315			
BIT SIZE		7.875			
TYPE FLUID IN HOLE		SALT MUD			
DENS. : VISC		9.5 133		: : :	
PH : FLUID LOSS		9 17		: : :	
SOURCE OF SAMPLE		PIT			
RM • MEAS. TEMP.		.13 • 52		• • •	
RMF • MEAS. TEMP.		.13 • 46		• • •	
RMC • MEAS. TEMP.		NA • NA		• • •	
SOURCE RMF : RMC		MEAS : NA		: : :	
RM • BHT		.05 • 135		• • •	
TIME SINCE CIRC.		8 HOURS			
TIME ON BOTTOM		21:00			
MAX. REC. TEMP.		135 • B.H.		• • •	
EQUIP. : LOCATION		3414 : HOBBS		: : :	
RECORDED BY		KVETON			
WITNESSED BY		OVERTON			