



**Sun Exploration and  
Production Company**

No 24 Smith Road  
ClayDesta Plaza  
PO Box 1861  
Midland TX 79702 9970  
915 688 0300

October 26, 1983

State of New Mexico  
Oil Conservation Commission  
P. O. Box 2088  
Santa FE, New Mexico 87501  
ATTN: Dick Stammets

State of New Mexico  
Oil Conservation Commission  
P. O. Box 1980  
Hobbs, New Mexico 88240  
ATTN: Jerry T. Sexton

RE: Form C-108  
Application for authorization to inject water  
for the purpose of secondary recovery.

Dear Mr. Stammets:

Sun Exploration & Production company request approval on the attached application for authorization to inject water.

The following wells are to be drilled for the purpose of water injection for secondary recovery. The wells will be in the Langlie Mattix Seven Rivers Queen Grayburg Field and will be injecting into the Seven Rivers - Queen Reservoir in Lea County, New Mexico.

State "A" A/C - 1

No. 120 WIW  
25' FNL & 1320' FWL, Sec. 10, T-23-S, R-36-E  
Elevation 3485' GR TD 3850'

No. 119 WIW  
1320' FEL & 1320' FSL, Sec. 3, T-23-S, R-36-E  
Elevation 3450' GR TD 3900'

No. 118 WIW  
2640' FWL & 1320' FSL, Sec. 3, T-23-S, R-36-E  
Elevation 3460' GR TD 3900'

*Note well name changes  
on attached letter.*

*ESPQ*

No. 117 WIW  
1320' FSL & 1320' FWL, Sec. 3, T-23-S, R-36-E  
Elevation 3479' GR TD 3900'

*Note well  
name changes  
can  
be attached!  
ESPQ*

State "A" A/C 1 & 3 Co-op

No. 1 WIW	A/C-1 50%
25' FSL & 1460' FEL, Sec. 3, T-23-S, R-36-E	A/C-3 50%
Elevation 3450' GR	TD 3850'

No. 2 WIW	A/C-1 50%
1345' FNL & 2615' FEL, Sec. 10, T-23-S, R-36-E	A/C-3 50%
Elevation 3460' GR	TD 3850'

State "A" A/C-3

No. 10 WIW  
1395' FNL & 1480' FEL, Sec. 10, T-23-S, R-36-E  
Elevation 3470' GR TD 3850'

State "A" A/C 3 Co-op

No. 1 WIW	A/C-1 75%
25' FNL & 2615' FEL, Sec. 10, T-23-S, R-36-E	A/C-3 25%
Elevation 3450'	TD 3850'

The lithology of the Basal Seven Rivers and Queen formation (zone of water injection) is a finely crystalline to sucrosic dolomite (sometimes sandy) with interbedded sandstones fine - very fine grained sometimes dolomitic. The State "A" A/C - 1 & 3 wells will have 400' for 8-5/8" casing set to preserve the fresh water aquifers found in the Ogallala formation. There is no known fresh water aquifers below the proposed water injection zone in this area.

There are no known fresh water wells located within one mile of any of the proposed wells.

Each well will be stimulated with 1500 gallons of 15% NEFE HCL acid.

Attached with this application are the following:

1. Well data sheet for each well.
2. Unit map and plat with 1/2 mile radius circle drawn around each proposed injection well.
3. Newspaper legal notice and affidavit of publication.

4. Well completion sketches.

5. Tabulation of data for wells within the area of review.

Previous water injection project for the State "A" A/C-1 Lease was approved July 9, 1974 under Case No. 5258, Order No. R-4819.

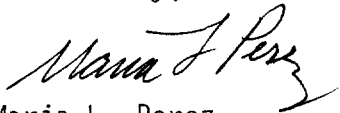
The State "A" A/C-3 wells will be a new project. These will be first water injection wells for this lease. Some of the wells will be Co-op wells or lease line wells with both leases sharing the cost. ~~be~~

Copy of previous order in 1974 is attached.

Offset operators were notified on 10/21/83 by certified mail. Copy of notification letter is attached.

If any additional information is required, please contact me at A/C 915 688-0375.

Yours truly,

A handwritten signature in cursive script, appearing to read "Maria L. Perez".

Maria L. Perez  
Senior Accounting Assistant

MLP:cc

Enclosures



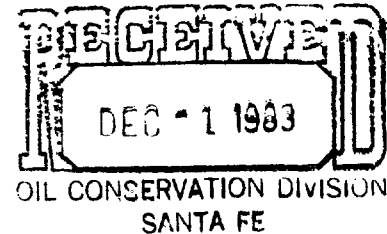
**Sun Exploration and  
Production Company**

No 24 Smith Road  
ClayDesta Plaza  
PO Box 1861  
Midland TX 79702 9970  
915 688 0300

November 22, 1983

State of New Mexico  
Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87501

ATTN: Richard L. Stamets



RE: Application for authorization to  
inject (Form C-108)  
State "A" A/C's 1 and 3 Leases (983-2 & A-983)  
Langlie-Mattix Seven Rivers Queen Grayburg Field  
Lea County, New Mexico

Dear Mr. Stamets:

On October 26, 1983, Sun Exploration and Production Company submitted Form C-108 Application for Authorization to Inject for eight (8) wells to be drilled. Applications for permits to drill were also submitted to your district office in Hobbs, New Mexico.

At the request of your Hobbs District Office, the names and numbers of these eight (8) wells have been changed. The locations are still the same.

Please note changes on the C-108 application to inject.

Formerly Submitted

State "A" A/C's 1 & 3 Coop No. 1 WIW

State "A" A/C 3 Coop No. 1 WIW

State "A" A/C's 1 & 3 Coop No. 2 WIW

New Well Name & Number:

State "A" A/C 1 No. 121  
Unit Ltr. O, 25' FSL & 1460' FEL,  
Sec. 3, T-23-S, R-36-E

State "A" A/C 3 No. 12  
Unit Ltr. B, 25' FNL & 2615' FEL,  
Sec. 10, T-23-S, R-36-E

State "A" A/C 3 No. 11  
Unit Ltr. G, 1345' FNL & 2615' FEL,  
Sec. 10, T-23-S, R-36-E

Page 2

November 22, 1983

State of New Mexico  
Oil Conservation Division

Formerly Submitted

State "A" A/C 3 No. 10 WIW

State "A" A/C 1 No. 120 WIW

State "A" A/C 1 No. 118 WIW

State "A" A/C 1 No. 119 WIW

State "A" A/C 1 No. 117 WIW

New Well Name & Number:

State "A" A/C 3 No. 10  
Unit Ltr. G, 1345' FNL & 1480' FEL,  
Sec 10, T-23-S, R-36-E

State "A" A/C 1 No. 120  
Unit Ltr. C, 25' FNL & 1345' FWL  
Sec. 10, T-23-S, R-36-E

State "A" A/C 1 No. 118  
Unit Ltr. O, 1295' FSL & 2615' FEL,  
Sec. 3, T-23-S, R-36-E

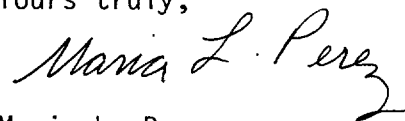
State "A" A/C 1 No. 119  
Unit Ltr. P, 1295' FSL & 1295' FEL  
Sec. 3, T-23-S, R-36-E

State "A" A/C 1 No. 117  
Unit Ltr. N, 1295' FSL & 1345' FWL,  
Sec 3, T-23-S, R-36-E

Form C-102 well location plats are attached. Offset operators are being notified by copy of this letter. Sun request administrative approval to this application.

For additional information, please contact the Proration Department (915) 688-0375.

Yours truly,



Maria L. Perez  
Senior Accounting Assistant.

MLP:gj  
encls.

cc: Hobbs  
Arco Oil and Gas Co.  
Gulf Oil Exploration & Production Co.  
Getty Oil Co.  
John H. Hendrix Corp.

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

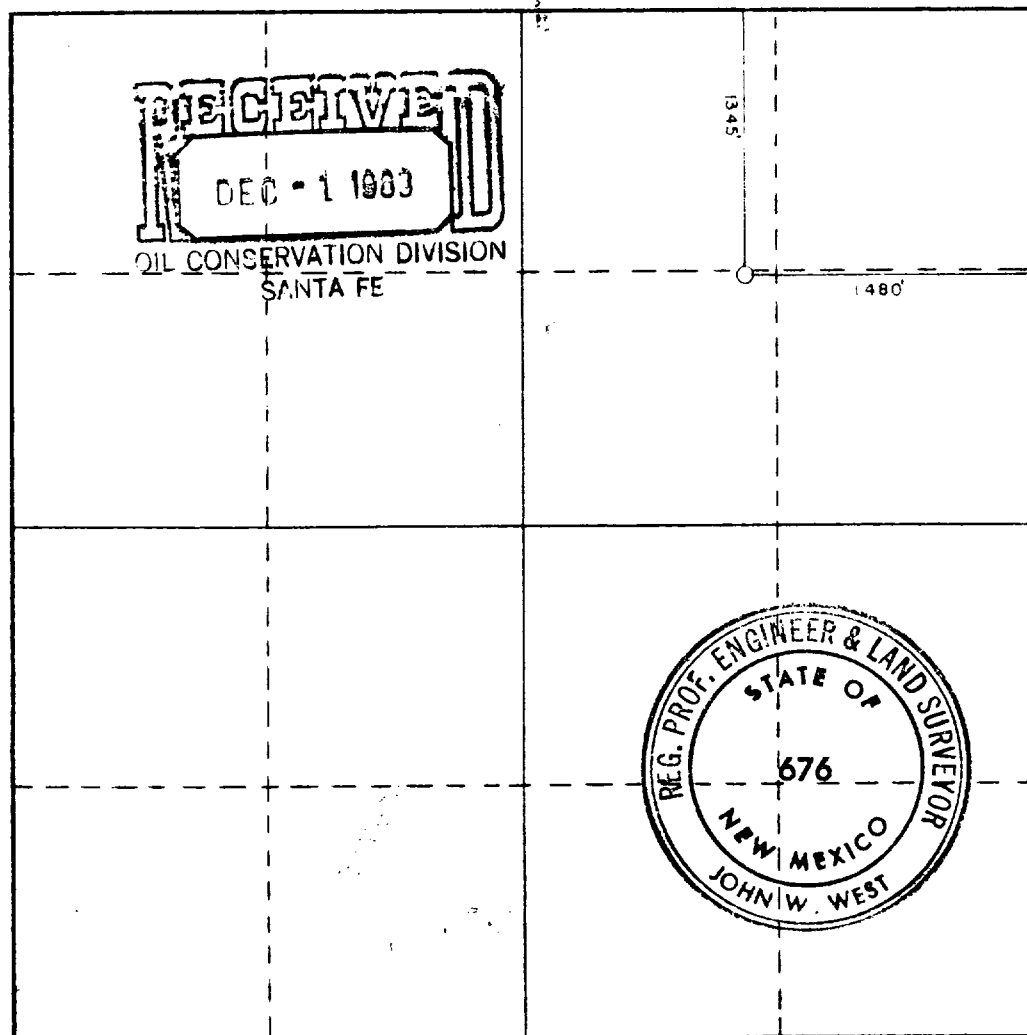
Operator <b>SUN Exploration &amp; Production Co.</b>			Lease <b>STATE "A" A/C-3</b>		Well No. <b>10</b>
Unit Letter <b>G</b>	Section <b>10</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well: <b>1345</b> feet from the <b>North</b> line and <b>1480</b> feet from the <b>East</b> line					
Ground Level Elev. <b>3462.3</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie-Mattix</b>		Dedicated Acreage: <b>None-WIW</b> Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

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

*Maria L. Perez*  
Name

Maria L. Perez

Position

Sr. Acctng. Asst.

Company

Sun Exploration & Production Co

Date

11/7/83

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

Date Surveyed

OCTOBER 25, 1983

Registered Professional Engineer  
and/or Land Surveyor

*John W. West*

Certificate No. JOHN W. WEST, 676

RONALD J. EIDSON, 3239

0 330 660 990 1320 1650 1980 2310 2640 2000 1800 1000 500

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

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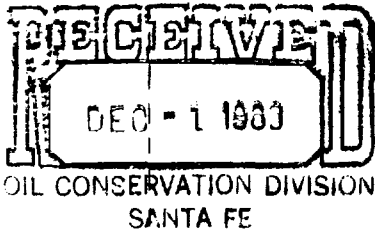
Operator <b>SUN Exploration &amp; Production Co.</b>			Lease <b>STATE "A" A/C 3</b>		Well No. <b>11</b>
Unit Letter <b>G</b>	Section <b>10</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well: <b>1345</b> feet from the <b>NORTH</b> line and <b>2615</b> feet from the <b>EAST</b> line					
Ground Level Elev. <b>3464.8</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie-Mattix</b>		Dedicated Acreage: <b>None-WIW</b> Acres

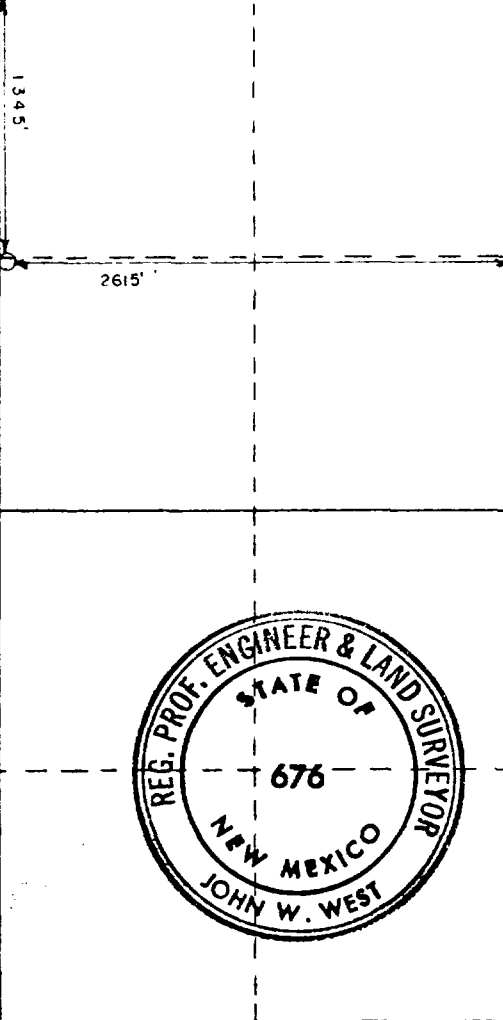
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☐ Yes    ☐ No    If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

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**CERTIFICATION**

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

*Maria L. Perez*  
 Name  
**Maria L. Perez**  
 Position  
**Sr. Acctng. Asst.**  
 Company  
**Sun Exploration & Production**  
 Date  
**11/7/83**

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Date Surveyed  
**OCTOBER 25, 1983**  
 Registered Professional Engineer and/or Land Surveyor

*John W. West*  
 Certificate No. **JOHN W. WEST, 676**  
**RONALD J. EIDSON, 3239**

330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section

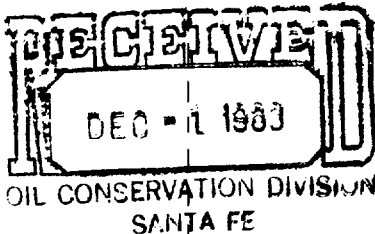
Operator <b>SUN Exploration &amp; Production Co.</b>			Lease <b>STATE "A" A/C-3</b>		Well No. <b>12</b>
Unit Letter <b>B</b>	Section <b>10</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well:					
<b>25</b>	feet from the	<b>NORTH</b>	line and	<b>2615</b>	feet from the <b>EAST</b> line
Ground Level Elev. <b>3465.6</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie Mattix</b>		Dedicated Acreage: <b>None-WIW</b> Acres

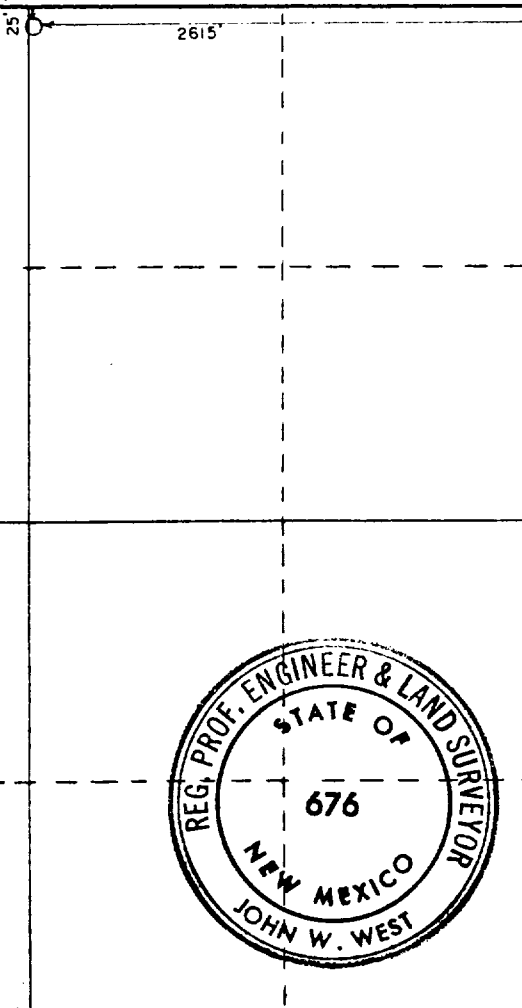
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*Maria L. Perez*  
Name

Maria L. Perez

Position

Sr. Acctng. Asst.

Company

Sun Exploration & Production

Date

11/7/83

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OCTOBER 25, 1983

Registered Professional Engineer and/or Land Surveyor

*John W. West*  
Certificate No. JOHN W. WEST, 676

RONALD J. EIDSON, 3239

330 660 990 1320 1650 1980 2310 2640 2000 1800 1600 1400 1200 1000 800 600 400 200 0



**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

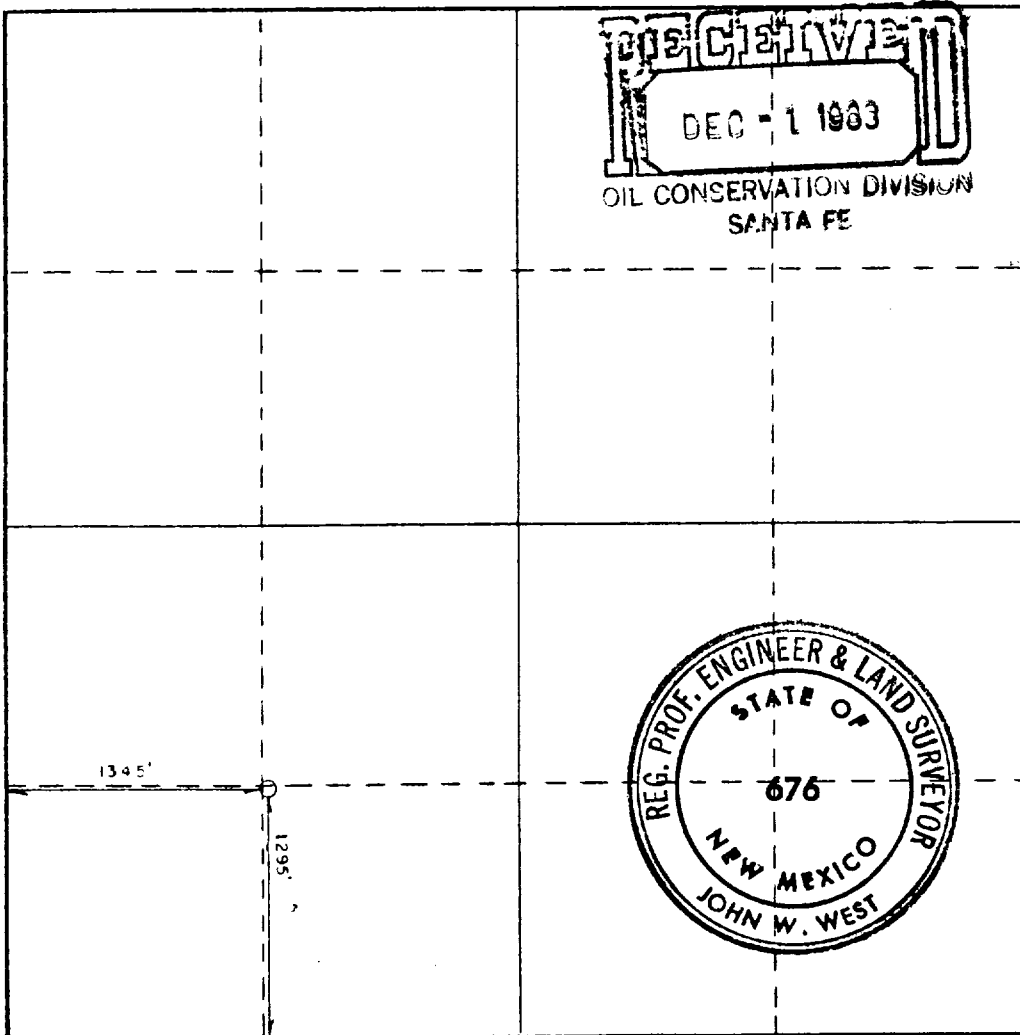
Operator <b>SUN Exploration &amp; Production Co.</b>			Lease <b>STATE "A" A/C 1</b>		Well No. <b>117</b>
Unit Letter <b>N</b>	Section <b>3</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well: <b>1295</b> feet from the <b>SOUTH</b> line and <b>1345</b> feet from the <b>WEST</b> line					
Ground Level Elev. <b>3472.4</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie Mattix</b>		Dedicated Acreage: <b>None - WIW</b> Acres

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*Maria L. Perez*  
Name  
Maria L. Perez  
Position  
Sr. Acctng. Asst.  
Company  
Sun Exploration & Production  
Date  
11/5/83

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Date Surveyed  
**OCTOBER 25, 1983**  
Registered Professional Engineer and/or Land Surveyor

*John W. West*  
Certificate No. **JOHN W. WEST, 676**  
**RONALD J. EIDSON, 3239**



**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-85

All distances must be from the outer boundaries of the Section.

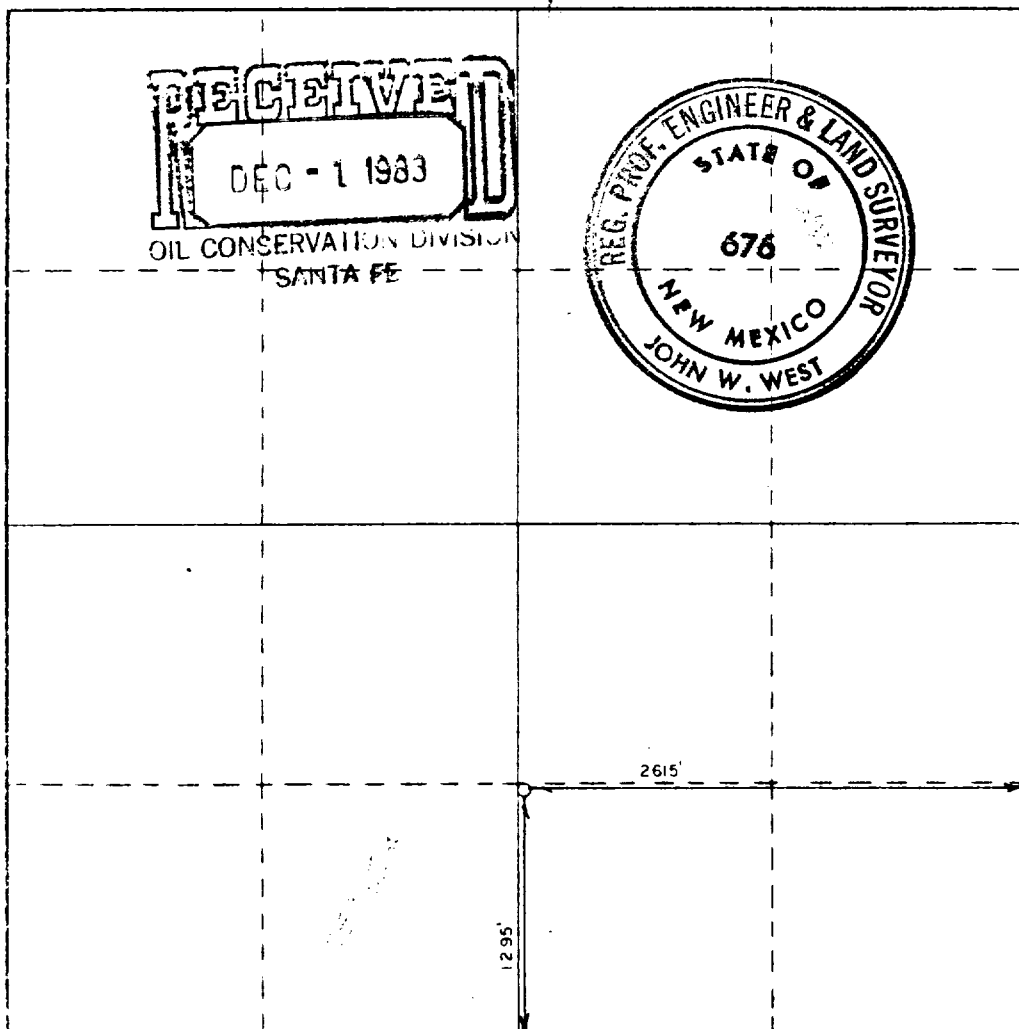
Operator <b>SUN EXPLORATION &amp; PRODUCTION CO.</b>			Lease <b>STATE "A" A/C 1</b>		Well No. <b>118</b>
Tract Letter <b>0</b>	Section <b>3</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well:					
<b>1295</b>		feet from the <b>SOUTH</b>	line and	<b>2615</b>	feet from the <b>EAST</b>
Ground Level Elev. <b>3462.0</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie-Mattix</b>	Dedicated Acreage: <b>None-WIW</b> Acres	

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*Maria L. Perez*  
Name

Maria L. Perez

Position

Sr. Acctng. Asst.

Company

Sun Exploration & Production Co

Date

11/7/83

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Date Surveyed

OCTOBER 26, 1983

Registered Professional Engineer and/or Land Surveyor

*John W. West*

Certificate No JOHN W. WEST, 676

RONALD J. EIDSON, 3239

**NEW MEXICO OIL CONSERVATION COMMISSION  
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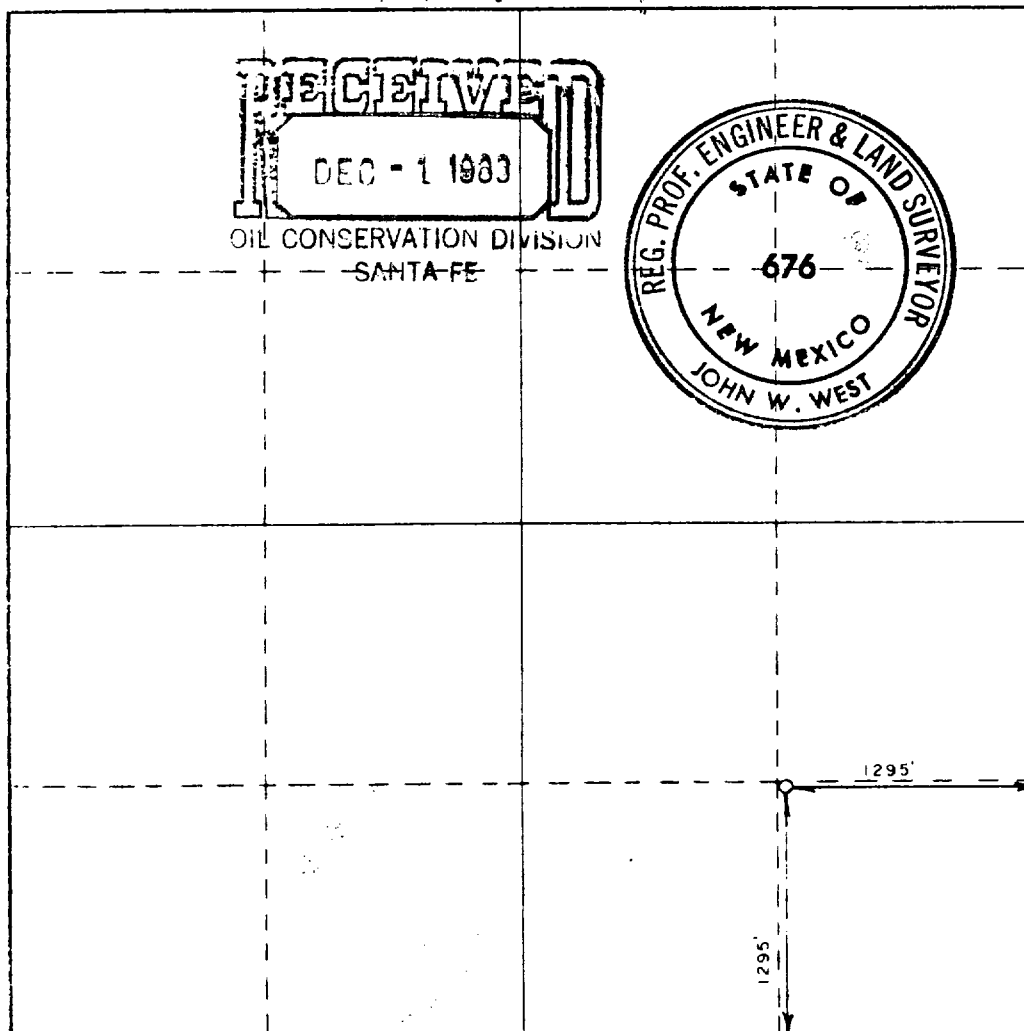
Operator <b>SUN EXPLORATION &amp; PRODUCTION CO.</b>			Lease <b>STATE "A" A/C 1</b>		Well No. <b>119</b>
Unit Letter <b>P</b>	Section <b>3</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well: <b>1295</b> feet from the <b>SOUTH</b> line and <b>1295</b> feet from the <b>EAST</b> line					
Ground Level Elev. <b>3461.1</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie-Mattix</b>		Dedicated Acreage: <b>None-WIW</b> Acres

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*Maria L. Perez*  
Name

Maria L. Perez

Position

Sr. Acctng. Asst.

Company

Sun Exploration & Production

Date

11/7/83

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Date Surveyed

OCTOBER 26, 1983

Registered Professional Engineer  
and/or Land Surveyor

*John W. West*

Certificate No. JOHN W. WEST,

676

RONALD J. EIDSON,

3239

330 660 990 1320 1650 1980 2310 2640 2000 1800 1000 500 0

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
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Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator <b>SUN EXPLORATION &amp; PRODUCTION CO.</b>			Lease <b>STATE "A" A/C 1</b>		Well No. <b>120</b>
Tract Letter <b>C</b>	Section <b>10</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well: <b>25</b> feet from the <b>NORTH</b> line and <b>1345</b> feet from the <b>WEST</b> line					
Ground Level Elev. <b>3482.9</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie-Mattix</b>	Dedicated Acreage: <b>None-WIW</b> Acres	

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*Maria L. Perez*  
Name

**Maria L. Perez**  
Position

**Sr. Acctng. Asst.**

Company  
**Sun Exploration & Production Co**

Date  
**11/7/83**

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**OCTOBER 26, 1983**

Registered Professional Engineer and/or Land Surveyor

*John W. West*  
Certificate No. **JOHN W. WEST, 676**

**RONALD J. EIDSON, 3239**

330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

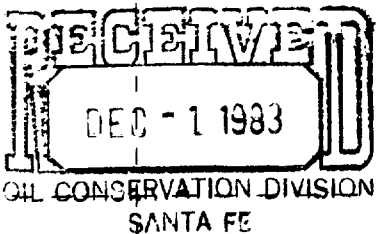
Operator <b>SUN EXPLORATION &amp; PRODUCTION CO.</b>			Lease <b>STATE "A" A/C 1</b>		Well No. <b>121</b>
Section Letter <b>0</b>	Section <b>3</b>	Township <b>23 SOUTH</b>	Range <b>36 EAST</b>	County <b>LEA</b>	
Actual Footage Location of Well: <b>25</b> feet from the <b>SOUTH</b> line and <b>1460</b> feet from the <b>EAST</b> line					
Ground Level Elev. <b>3452.4</b>	Producing Formation <b>Seven Rivers/Queen</b>		Pool <b>Langlie-Mattix</b>	Dedicated Acreage: <b>None-WIW</b> Acres	

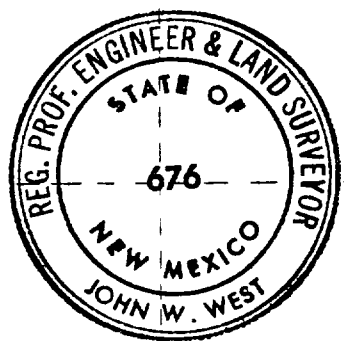
1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes    ☐ No    If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.





**CERTIFICATION**

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

*Maria L. Perez*  
Name

Maria L. Perez

Position

Sr. Acctng. Asst.

Company

Sun Exploration & Production

Date

11/7/83

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

Date Surveyed

OCTOBER 26, 1983

Registered Professional Engineer and/or Land Surveyor

*John W. West*

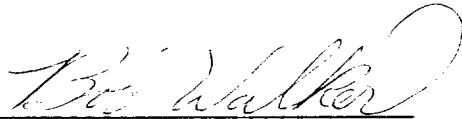
Certificate No. JOHN W. WEST, 676

RONALD J. EIDSON, 3239

330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500

Application to Inject - State "A" A/C - 1 #120, 119, 118, 117  
State "A" A/C - 3 #10, Co-op #1  
State "A" A/C - 1 & 3 Co-op # 1 & 2

I, Bob Walker, 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.



Bob Walker  
Area Geologist  
Sun Exploration & Production Co.

Oct. 25, 1983  
Date

**AFFIDAVIT OF PUBLICATION**

State of New Mexico,

County of Lea.

1, \_\_\_\_\_

Robert L. Summers

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 in a supplement thereof for a period

of \_\_\_\_\_

One day  
\_\_\_\_\_ weeks.

Beginning with the issue dated

October 24, 19 83

and ending with the issue dated

October 24, 19 83

Robert L. Summers  
Publisher.

Sworn and subscribed to before

me this 25 day of

October, 19 83

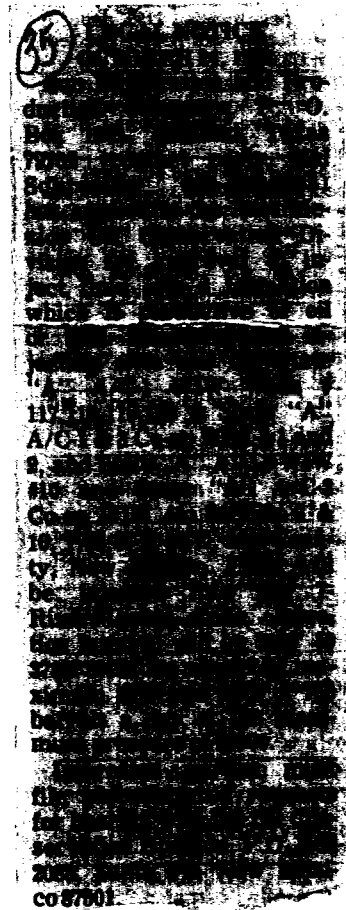
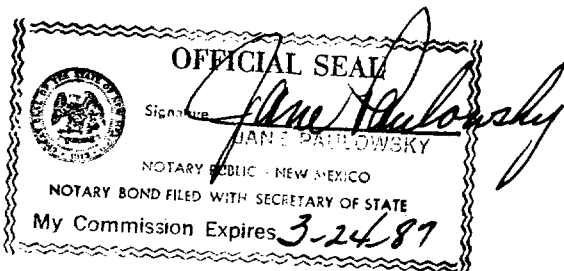
Jane Paulowsky  
Notary Public.

My Commission expires \_\_\_\_\_

3-24, 19 87

(Seal)

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.



OFFSET OPERATORS  
State "A" A/C - 1 and 3

Arco Oil and Gas Company  
P. O. Box 1610  
Midland, Tx 79702

Gulf Oil Exploration and Production Co.  
P. O. Box 1150  
Gulf Bldg.  
Midland, TX 79702

Getty Oil Company  
P. O. Box 730  
Midland, TX 79701

John H. Hendrix Corporation  
525 Midland Tower  
Midland, TX 79701





September 21, 1983

John H. Hendrix Corporation  
525 Midland Tower  
Midland, TX 79701

**Sun Exploration and Production Company**  
No 24 Smith Road  
ClayDesta Plaza  
PO Box 1861  
Midland TX 79702 9970  
915 688 0300

RE: Notification of Application for Authority to Inject

Gentlemen:

Sun Exploration & Production Co. is requesting administrative approval to inject water into the referenced wells. The New Mexico Oil Conservation Commission requests that the offset operators be notified of the application.

Attached for your records is a copy of the application to inject water. Any questions regarding this application please contact Mel Schroeder, (915) 688-0435.

Yours truly,

*Maria L. Perez*  
Maria L. Perez  
Senior Accounting Assistant

MLP:cc

Attachments

<p>● <b>SENDER:</b> Complete items 1, 2, 3, and 4. Add your address in the "RETURN TO" space on reverse.</p> <p><b>(CONSULT POSTMASTER FOR FEES)</b></p> <p>1. The following service is requested (check one).  <input type="checkbox"/> Show to whom and date delivered .....  <input type="checkbox"/> Show to whom, date, and address of delivery ..  <input type="checkbox"/> <b>RESTRICTED DELIVERY</b>  <small>(The restricted delivery fee is charged in addition to the return receipt fee.)</small></p>		<p><b>TOTAL \$</b></p>	
<p>3. <b>ARTICLE ADDRESSED TO:</b> 525 Midland Tower Midland, TX 79701</p>		<p>4. <b>ARTICLE NUMBER:</b> P402612641</p>	
<p>5. <b>TYPE OF SERVICE:</b>  <input type="checkbox"/> REGISTERED <input type="checkbox"/> INSURED  <input type="checkbox"/> CERTIFIED <input type="checkbox"/> COD  <input type="checkbox"/> EXPRESS MAIL</p>		<p>6. <b>DATE OF DELIVERY:</b> 10-24-83</p>	
<p>7. <b>UNABLE TO DELIVER BECAUSE:</b></p>		<p>8. <b>ADDRESSEE'S ADDRESS (Only if requested)</b></p>	
<p>9. <b>SIGNATURE:</b> M. A. McGowan</p>		<p>10. <b>AUTHORIZED AGENT:</b> M. A. McGowan</p>	
<p>11. <b>EMPLOYEE'S INITIALS:</b> WB</p>		<p>12. <b>POSTMARK:</b> MIDLAND TX 915 688 0300</p>	

September 21, 1983



Gulf Oil Exploration and Production Co.  
P. O. Box 1150  
Gulf Bldg.  
Midland, TX 79702

Sun Exploration and  
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No 24 Smith Road  
ClayDesta Plaza  
PO Box 1861  
Midland TX 79702 9970  
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Maria L. Perez  
Senior Accounting Assistant

MLP:cc

Attachments

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<b>(CONSULT POSTMASTER FOR FEES)</b> 1. The following service is requested (check one). <input type="checkbox"/> Show to whom and date delivered ..... <input type="checkbox"/> Show to whom, date, and address of delivery.. <input checked="" type="checkbox"/> <b>RESTRICTED DELIVERY</b> (The restricted delivery fee is charged in addition to the return receipt fee.)	
<b>TOTAL \$</b>	
3. ARTICLE ADDRESSED TO: P.O. Box 1150 Gulf Bldg. Midland, TX 79702	
4. 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	ARTICLE NUMBER P402672639
I have received the article described above. SIGNATURE <input type="checkbox"/> Addressee <input type="checkbox"/> Authorized agent 	
5. DATE OF DELIVERY SEP 27 1983	
6. ADDRESSEE'S ADDRESS (Only if requested)	
7. UNABLE TO DELIVER BECAUSE:	7a. EMPLOYEE'S INITIALS 

September 21, 1983



Getty Oil Company  
P. O. Box 730  
Midland, TX 79701

Sun Exploration and  
Production Company  
No 24 Smith Road  
ClayDesta Plaza  
PO Box 1861  
Midland TX 79702 9970  
915 688 0300

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Senior Accounting Assistant

MLP:cc

Attachments

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<b>(CONSULT POSTMASTER FOR FEES)</b>	
1. The following service is requested (check one). <input type="checkbox"/> Show to whom and date delivered ..... <input type="checkbox"/> Show to whom, date, and address of delivery .. <input type="checkbox"/> <b>RESTRICTED DELIVERY</b> (The restricted delivery fee is charged in addition to the return receipt fee.)	
<b>TOTAL \$</b>	
3. ARTICLE ADDRESSED TO: Getty Oil Company P.O. Box 730 Midland, TX 79701	
4. TYPE OF SERVICE: <input type="checkbox"/> REGISTERED <input type="checkbox"/> INSURED <input type="checkbox"/> CERTIFIED <input type="checkbox"/> COD <input type="checkbox"/> EXPRESS MAIL	ARTICLE NUMBER P402612646
(Always obtain signature of addressee or agent) I have received the article described above: SIGNATURE <input type="checkbox"/> Addressee <input checked="" type="checkbox"/> Authorized agent DATE OF DELIVERY OCT 1983	
6. ADDRESSEE'S ADDRESS (Only if requested)	
7. UNABLE TO DELIVER BECAUSE:	

September 21, 1983



Arco Oil and Gas Company  
P. O. Box 1610  
Midland, Tx 79702

**Sun Exploration and  
Production Company**  
No 24 Smith Road  
ClayDesta Plaza  
PO Box 1861  
Midland TX 79702 9970  
915 688 0300

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Maria L. Perez  
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<p>3. <b>ARTICLE ADDRESSED TO:</b> Arco Oil And Gas P.O. Box 610 Midland, TX 79702</p>		<p>4. <b>TYPE OF SERVICE:</b></p> <p><input type="checkbox"/> REGISTERED <input type="checkbox"/> INSURED <input type="checkbox"/> CERTIFIED <input type="checkbox"/> COD <input type="checkbox"/> EXPRESS MAIL</p>		<p><b>ARTICLE NUMBER</b> P402-612-794</p>	
<p>I have received the article described above.</p> <p><b>SIGNATURE</b> <input type="checkbox"/> Addressee <input type="checkbox"/> Authorized agent</p> <p><i>Eric T. Padilla</i></p>		<p>5. <b>DATE OF DELIVERY</b> OCT 25 1983</p>		<p>6. <b>ADDRESSEE'S ADDRESS (Only if requested)</b></p>	
<p>7. <b>UNABLE TO DELIVER BECAUSE:</b></p>		<p>7a. <b>EMPLOYEE'S INITIALS</b></p>		<p>7b. <b>REASON FOR UNDELIVERABLE</b></p>	

**ORIGINAL**

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Sun Exploration & Production Company  
Address: P. O. Box 1861, Midland, TX 79702  
Contact party: Maria Perez Phone: 915-688-0374
- 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-4819, Case 5258.
- 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, ~~depth of completion~~, and a schematic of any plugged well illustrating all plugging details.
- 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 its 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.
- \* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- \* 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.
- 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

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

Name: Maria L. Perez Title Sr. Acctng Asst

Signature: Maria L. Perez Date: 10/21/83

- \* 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.

## III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

## XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

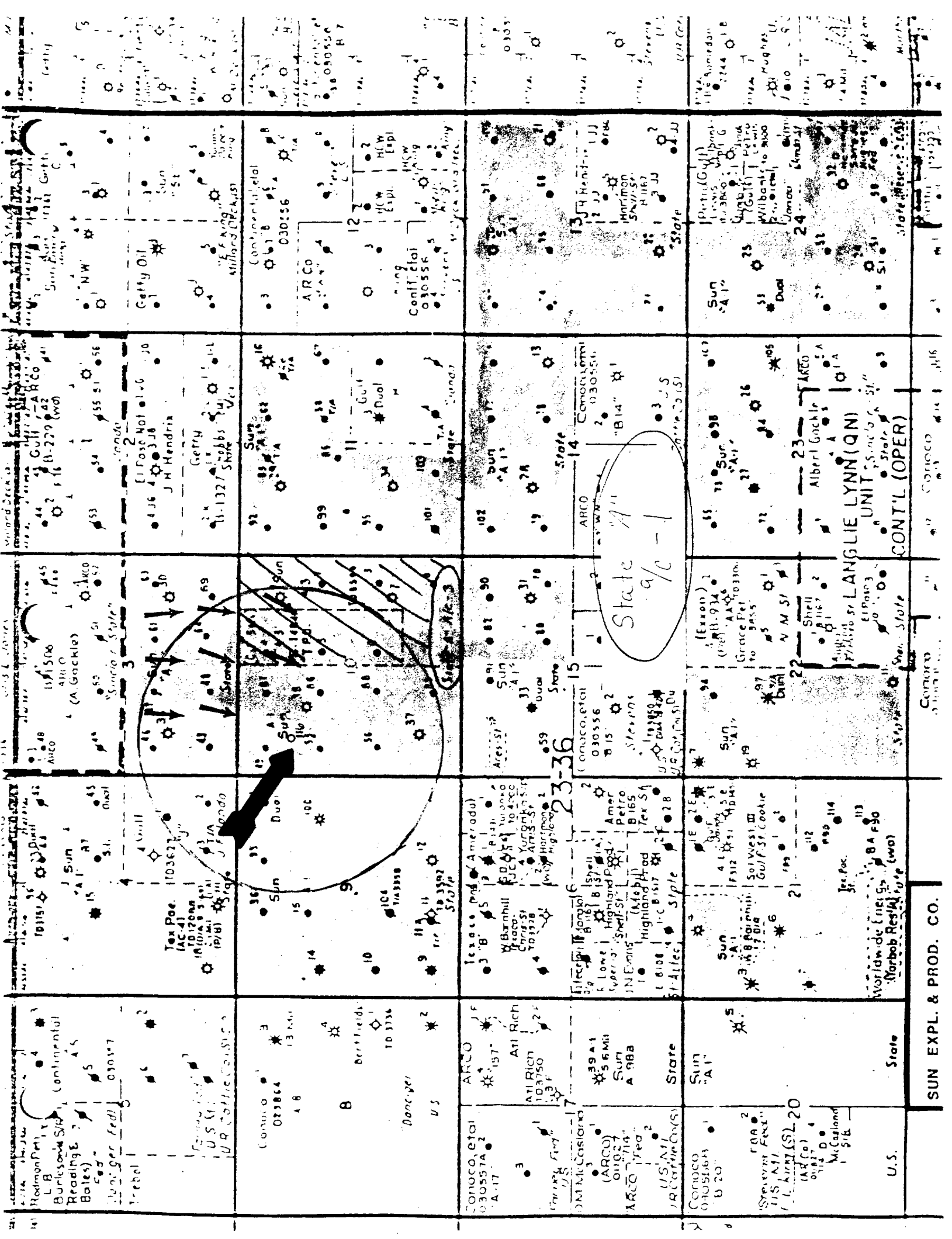
Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



# WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" A/C-1 No. 117 WIW  
State Lease No. 983-2

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 3, Township 23-S, Range 36-E,

Footage 1320' FSL & 1320' FWL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3900'	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth)		Name, Model and Depth of Tubing Packer					
2-3/8" @ 3700'		Otis Perma-Lach @ 3700 +					
Total Depth of Well		Date Well Drilled		API No.		Ground Surface Elevation	
3900'		New		NA yet		3479' GR	
Perforation or Open Hole <input checked="" type="checkbox"/> <input type="checkbox"/>							
List All Cement Squeeze Operations, Giving Interval and Sacks of Cement							
None							
Injection Interval		Name of Reservoir		Injection System Open or Closed			
Top 3629 Bottom 3779		Seven Rivers/Queen		<input type="checkbox"/> <input checked="" type="checkbox"/>			
Anticipated Daily Injection Volume (Bbls)		Injection Pressure (Psi)		Is this well so cased and completed that water can enter no other formation than the above set out injection zone?			
Average 500 Maximum 750		Average 1200 Maximum 1900		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top: Seven Rivers +158' (Subsea)

Expected Top: Queen -260' (Subsea)

Expected Top: Yates +350' (Subsea)



## WELL COMPLETION SKETCHES SUN-5036-4-A

WELL

FIELD

DATE

State "A" A/C-1 #117WJW 7-Rivers - Queen

10-20-83



PRESENT COMPLETION



SUGGESTED COMPLETION

## PERMANENT WELL BORE DATA

## DATA ON THIS COMPLETION

8 5/8" 24# @ 400'  
w/275.sx cmt  
circ'd to surf. 12 1/4"  
hole

5 1/2", 14# @ 3900'  
w/850 sxs cmt  
circ'd to surf. 7 7/8"  
hole

Cmt. lined 2 3/8"  
4.7# +bg Set  
@ 3700'

OTIS PERMA-LACH @  
3700'±

Proposed Perforated  
Interval 3629-3779'

TD 3900'

# WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" A/C-1 No. 118 WIW  
State Lease No. 983-2

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 3, Township 23-S, Range 36-E,

Footage 2640' FWL & 1320' FSL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3900'	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth) 2-3/8" @ 3700'		Name, Model and Depth of Tubing Packer Otis Perma-Lach @ 3700'±					
Total Depth of Well 3900'		Date Well Drilled New		API No. NA yet		Ground Surface Elevation 3460' GR	
Perforation or Open Hole <input checked="" type="checkbox"/> <input type="checkbox"/>							
Lost Air Cement Squeeze Operations, Giving Interval and Sacks of Cement None							
Injection Interval: Top 3610 Bottom 3760		Name of Reservoir Seven Rivers/Queen		Injection System Open or Closed <input type="checkbox"/> <input checked="" type="checkbox"/>			
Anticipated Daily Injection Volume (bbls) - Average 500 Maximum 750		Injection Pressure (Psi) Average 1200 Maximum 1900		Is this well so cased and completed that water can enter no other formation than the above set out injection zone? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top - Seven Rivers +190' (Subsea)

Expected Top - Queen -180' (Subsea)

Expected Top - Yates +390' (Subsea)

## WELL COMPLETION SKETCHES SUN-5036-4-A

WELL State "A" A/C-1 # 118 w/w FIELD 7-Rivers - Queen DATE 10-20-83

☐ PRESENT COMPLETION

☒ SUGGESTED COMPLETION

## PERMANENT WELL BORE DATA

## DATA ON THIS COMPLETION

8 5/8" 24# @ 400'  
w/275sx cmt  
circ'd to surf. 12 1/4"  
hole

5 1/2" 14# @ 3900'  
w/850 sxs cmt  
circ'd to surf. 7 7/8"  
hole.

Cmt. lined 2 3/8"  
4.7# +bg Set  
@ 3700'

OTIS PERMA-LACH @  
3700'

Proposed Perforated  
Interval 3610- 3760

TD 3900'

# WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" AC-1 No. 119 WIW  
State Lease No. 983-2

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 3, Township 23-S, Range 36-E,

Footage 1320' FEL & 1320' FSL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3900	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth)		Name, Model and Depth of Tubing Packer					
2-3/8" @ 3700'		Otis Perma-Lach @ 3700±					
Total Depth of Well	Date Well Drilled	API No.	Ground Surface Elevation		Perforation or Open Hole		
3900'	New	NA yet	3450' GR		<input checked="" type="checkbox"/> <input type="checkbox"/>		
List All Cement Squeeze Operations, Giving Interval and Sacks of Cement							
None							
Injection Interval		Name of Reservoir		Injection System Open or Closed			
Top	Bottom	Seven Rivers/Queen		<input type="checkbox"/> <input checked="" type="checkbox"/>			
3600		3750					
Anticipated Daily Injection Volume (bbbls)		Injection Pressure (Psi)		Is this well so cased and completed that water can enter no other formation than the above set out injection zone?			
Average	Maximum	Average	Maximum	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
500	750	1200	1900				

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top - Seven Rivers +280' (Subsea)

Expected Top - Queen -100' (Subsea)

Expected Top - Yates +460' (Subsea)

## WELL COMPLETION SKETCHES SUN-5036-4-A

WELL

FIELD

DATE

State "A" A/C-1 #119 WJA 7-Rivers - Queen

10-20-83

☐ PRESENT COMPLETION☒ SUGGESTED COMPLETION

## PERMANENT WELL BORE DATA

## DATA ON THIS COMPLETION

8 $\frac{5}{8}$ " 24# @ 400'  
w/275 sx cmt  
circ'd to surf. 12 $\frac{1}{4}$ "  
hole.

5 $\frac{1}{2}$ " 14# @ 3900'  
w/850 sxs cmt  
circ'd to surf. 7 $\frac{7}{8}$ "  
hole.

Cmt. lined 2 $\frac{3}{8}$ "  
4.7# +bg Set  
@ 3700'

OTIS PERMA-LACH set @  
3700'

Proposed Perforated  
Interval 3600' - 3750'

TD 3900'

# WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" AC-1 No. 120 WIW  
State Lease No. 983-2

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 10, Township 23-S, Range 36-E,

Footage 25' FNL & 1320' FWL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3850	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth)		Name, Model and Depth of Tubing Packer					
2-3/8" @ 3650'		Otis Perma-Lach @ 3650±					
Total Depth of Well	Date Well Drilled	API No.	Ground Surface Elevation		Perforation or Open Hole		
3850'	New	NA yet	3485' GR		<input checked="" type="checkbox"/> <input type="checkbox"/>		
List All Cement Squeeze Operations, Giving Interval and Sacks of Cement							
None							
Injection Interval		Name of Reservoir		Injection System Open or Closed			
Top	Bottom	Seven Rivers/Queen		<input type="checkbox"/> <input checked="" type="checkbox"/>			
3635		3785					
Anticipated Daily Injection Volume (Bbls)		Injection Pressure (Psi)		Is this well so cased and completed that water can enter no other formation than the above set out injection zone?			
Average	Maximum	Average	Maximum	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
500	750	1200	1900				

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top - Seven Rivers +175' (Subsea)

Expected Top - Queen -238' (Subsea)

Expected Top - Yates +379' (Subsea)

## WELL

SUN-5036-4-A

WELL

FIELD

DATE \_\_\_\_\_

10-20-83

☐ PRESENT COMPLETION

☒ SUGGESTED COMPLETION

## PERMANENT WELL BORE DATA

### DATA ON THIS COMPLETION

8 5/8" 24# @ 400'  
w/275 sx cmt  
circ'd to surf. 12 1/4"  
hole.

5 1/2", 14# @ 3850'  
w/850 sxs cmt  
circ'd to surf. 7 7/8"  
hole

Cmt. lined 2<sup>3</sup>/<sub>8</sub>"  
4.7# +bg Set.  
@ 3650'

OTIS PERMA-LACH set @  
3650<sup>+</sup>

Proposed Perforated  
Interval 3635'-3785'

TD 3850'

# WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" AC-1 & 3 Co-Op No. 1 WIW  
State Lease No. 983-2

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 3, Township 23-S, Range 36-E,

Footage 25' FSL & 1460' FFL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3850	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth) <u>2-3/8" @ 3650'</u> Name, Model and Depth of Tubing Packer <u>Otis Perma-Lach @ 3650±</u>							
Total Depth of Well <u>3850'</u>		Date Well Drilled <u>New</u>	API No. <u>NA yet</u>		Ground Surface Elevation <u>3450' GR</u>	Perforation or Open Hole <input checked="" type="checkbox"/> <input type="checkbox"/>	
Last Air Cement Squeeze Operations, Giving Interval and Sacks of Cement <u>None</u>							
Injection Interval		Name of Reservoir			Injection System Open or Closed		
Top <u>3600</u>	Bottom <u>3750</u>	<u>Seven Rivers/Queen</u>			<input type="checkbox"/> <input checked="" type="checkbox"/>		
Anticipated Daily Injection Volume (Bbls)		Injection Pressure (Psi)		Is this well so cased and completed that water can enter no other formation than the above set out injection zone? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Average <u>500</u>	Maximum <u>750</u>	Average <u>1200</u>	Maximum <u>1900</u>				

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top - Seven Rivers +295' (Subsea)

Expected Top - Queen - 80' (Subsea)

Expected Top - Yates +480' (Subsea)



WELL COMPLETION SKETCHES SUN-5036-4-A

WELL State "A" A/C-143 Co-op #1 WJW FIELD 7-Rivers - Queen DATE 10-20-83

☐ PRESENT COMPLETION

☒ SUGGESTED COMPLETION

PERMANENT WELL BORE DATA

DATA ON THIS COMPLETION

8 5/8" 24# @ 400'  
w/275 sx cmt  
circ'd to surf. 12 1/4"  
hole.

5 1/2" 14# @ 3850'  
w/850 sxs cmt  
circ'd to surf. 7 7/8"  
hole

Cmt. lined 2 3/8"  
4.7# +bg Set  
@ 3650'

OTIS PERMA-LACH set @  
3650'

Proposed Perforated  
Interval 3600'-3750'

TD 3850'

# WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" AC-3 No. 10 WIW  
State Lease No. A-983

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 10, Township 23-S, Range 36-E,

Footage 1395' FNL & 1480' FEL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3850	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth)		Name, Model and Depth of Tubing Packer					
2-3/8" @ 3650'		Otis Perma-Lach @ 3650±					
Total Depth of Well	Date Well Drilled	API No.	Ground Surface Elevation		Perforation or Open Hole		
3850'	New	NA yet	3470' GR		<input checked="" type="checkbox"/> <input type="checkbox"/>		
List All Cement Squeeze Operations, Giving Interval and Sacks of Cement							
None							
Injection Interval		Name of Reservoir		Injection System Open or Closed			
Top 3620	Bottom 3770	Seven Rivers/Queen		<input type="checkbox"/> <input checked="" type="checkbox"/>			
Anticipated Daily Injection Volume (Bbls)		Injection Pressure (Psi)		Is this well so cased and completed that water can enter no other formation than the above set out injection zone?			
Average 500	Maximum 750	Average 1200	Maximum 1900	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top - Seven Rivers +290' (Subsea)  
Expected Top - Queen - 90' (Subsea)  
Expected Top - Yates +475' (Subsea)

## WELL COMPLETION SKETCHES SUN-5036-4-A

WELL

FIELD

DATE

State "A" 4/C-3 #10 WIW

7-Rivers - Queen

10-20-83

☐ PRESENT COMPLETION☒ SUGGESTED COMPLETION

## PERMANENT WELL BORE DATA

## DATA ON THIS COMPLETION

8 5/8" 24# @ 400'  
w/275 sx cmt  
circ'd to surf. 12 1/4"  
hole.

5 1/2" 14# @ 3850'  
w/850 sxs cmt  
circ'd to surf. 7 7/8"  
hole

Cmt. lined 2 3/8"  
4.7# +bg Set  
@ 3650.

OTIS PERMA-LACH set @  
3650'

Proposed Perforated  
Interval 3620-3720

TD 3850'

# WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" AC-1 &3 Co-op No. 2 WIW  
State Lease No. A-983

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 10, Township 23-S, Range 36-E,

Footage 1345' FNL & 2615' FEL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3850	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth) <u>2-3/8" @ 3650'</u> Name, Model and Depth of Tubing Packer <u>Otis Perma-Lach @ 3650±</u>							
Total Depth of Well <u>3850'</u>		Date Well Drilled <u>New</u>	API No. <u>NA yet</u>		Ground Surface Elevation <u>3460' GR</u>		Perforation or Open Hole <input checked="" type="checkbox"/> <input type="checkbox"/>
List All Cement Squeeze Operations, Graving Interval and Sacks of Cement <u>None</u>							
Injection Interval		Name of Reservoir			Injection System Open or Closed		
Top <u>3610</u>	Bottom <u>3760</u>	<u>Seven Rivers/Queen</u>			<input type="checkbox"/> <input checked="" type="checkbox"/>		
Anticipated Daily Injection Volume (Bbls) -		Injection Pressure (Psi)		Is this well so cased and completed that water can enter no other formation than the above set out injection zone? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Average <u>500</u>	Maximum <u>750</u>	Average <u>1200</u>	Maximum <u>1900</u>				

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top - Seven Rivers +240' (Subsea)

Expected Top - Queen -160' (Subsea)

Expected Top - Yates +420' (Subsea)

## WELL COMPLETION SKETCHES SUN-5036-4-A

WELL

FIELD

DATE

State "A" A/C 1 + 3 Co-op #2

7-Rivers - Queen

10-20-83

☐ PRESENT COMPLETION☒ SUGGESTED COMPLETION

## PERMANENT WELL BORE DATA

## DATA ON THIS COMPLETION

8 5/8" 24# @ 400'  
w/275 sx cmt  
circ'd to surf. 12 1/4"  
hole.

5 1/2", 14# @ 3850'  
w/850 sxs cmt  
circ'd to surf. 7 7/8"  
hole

Cmt. lined 2 3/8"  
4.7# +bg Set  
@ 3650'

OTIS PERMA-LACH set @  
3650 ±

Proposed Perforated  
Interval 3610-3760

TD 3850'

## WELL DATA

This well is to be covered by this application. (to be drilled)

Lease name and Well No.: State "A" AC-1 & 3 Co-op No. ~~P~~ WIW  
State Lease No. A-983

Location: Lea County, New Mexico  
Langlie Mattix Seven Rivers Queen Grayburg Field

Section 10, Township 23-S, Range 36-E,

Footage 25' FNL & 2615' FEL (proposed location)

WELL NO.	WELL CASING AND TUBING						
	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY	HOLE SIZE	CASING WEIGHT
Surface Casing	8-5/8"	400'	275 sx	Surf	Circulation	12-1/4"	24#
Intermediate							
Long String	5-1/2"	3850	850 sx	Surf	Circulation	7-7/8"	14#
Tubing (Size and Depth)		Name, Model and Depth of Tubing Packer					
2-3/8" @ 3650'		Otis Perma-Lach @ 3650±					
Total Depth of Well	Date Well Drilled	API No.		Ground Surface Elevation		Perforation or Open Hole	
3850'	New	NA yet		3450' GR		<input checked="" type="checkbox"/> <input type="checkbox"/>	
Lost Air Cement Squeeze Operations, Giving Interval and Sacks of Cement							
None							
Injection Interval:		Name of Reservoir		Injection System Open or Closed			
Top	Bottom	Seven Rivers/Queen		<input type="checkbox"/> <input checked="" type="checkbox"/>			
3600	3750						
Anticipated Daily Injection Volume (Bbls)		Injection Pressure (Psi)		Is this well so cased and completed that water can enter no other formation than the above set out injection zone?			
Average	Maximum	Average	Maximum	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
500	750	1200	1900				

Depth of next higher and next lower oil or gas zone in the area of the well:

Expected Top - Seven Rivers +235' (Subsea)

Expected Top - Queen -160' (Subsea)

Expected Top - Yates +420' (Subsea)

## WELL COMPLETION SKETCHES SUN-5036-4-A

WELL

FIELD

DATE

State "A" A/C - 1+3 Co-op #1 wtw

7-Rivers - Queen

10-20-83

☐ PRESENT COMPLETION☒ SUGGESTED COMPLETION

## PERMANENT WELL BORE DATA

## DATA ON THIS COMPLETION

8 5/8" 24# @ 400'  
w/275 sx cmt  
circ'd to surf. 12 1/4"  
hole.

5 1/2" 14# @ 3850'  
w/850 sxs cmt  
circ'd to surf. 7 7/8"  
hole

Cmt. lined 2 3/8"  
4.7# +bg Set  
@ 3650'

OTIS PERMA-LACH set @  
3650'±

Proposed Perforated  
Interval 3600-3750

TD 3850'

Subject

Water Compatibility, State A A/C-1 Lease  
Jalmat/Langlie Mattix Field  
Southwestern District

Interoffice  
Correspondence



Date May 17, 1983

Location Richardson

From Johnny Reinschmidt, Production Service Laboratory

To Don Mitchell  
Jal, New Mexico

Enclosed water analysis No. C-8614 representing commingled Seven Rivers and Yates Formation waters produced by the State A A/C-1, Well No. 115 is compatible with Seven Rivers Formation water produced and collected from the same well on 1/21/83 (Water Analysis No. C-7657).

A review of past water analyses (enclosed) representing Seven Rivers, Seven Rivers-Yates and Seven Rivers-Queen Formation waters produced by the unit show the barium, sulfate and total salinity (T.D.S.) contents of the waters fluctuating within the same zone and unit.

If scale material is detected and analyzed during the proposed water injection program, a suitable chemical treatment can be recommended. Review past letter from J. Reinschmidt to C. Osborne (11/18/82) pertaining to water compatibility in this field.

  
Johnny Reinschmidt  
Chemical Engineering Section

OR/ff

attach.

cc: F. Brandes  
T. Fox  
G. Osborne  
B. Shipman  
Corrosion Engr. Sec.  
File: 23-345  
23-405



SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-2983

FILE 23-405

Operator Sun Production Company 668953  
Lease or Well State of N.M. "A" A/C-1 Well #45  
Formation Seven Rivers Queen  
Perfs 3637 To 3750 ; T.D. \_\_\_\_\_  
Method of Collecting Sample well head

District Southwestern Jal. N.M. Segment 25  
Field Langlie Mattix  
County Lea County  
State New Mexico

Treatment Tretolite KP-2420 2 gals wkly  
Date of last acid job \_\_\_\_\_ /batched.

Collected by \_\_\_\_\_  
Date 8-20-81 9-8-81  
Collected Analyzed

Total Prod.	BOPD	BWPD	MCFPD
	8	32	80

Sample No. 10098  
Analyst \_\_\_\_\_ PPI \_\_\_\_\_

Description of Sample 3/4 pt. clear yellowish water with an oil layer.

CONSTITUENTS

	ppm
Sodium	14600
Calcium	1380
Magnesium	836
Barium	0
Strontium	
Potassium	
Iron	0
Chloride	25300
Sulfate	1840
Carbonate	0
Bicarbonate	1290

TOTAL DISSOLVED SOLIDS 45246

OTHER PROPERTIES

pH	7.6
Specific Gravity	1.0323
Resistivity ohm-mtr. @ 75° F	.198
Loss on Ignition, ppm	
Total Solids by Evap., ppm	
Organic acids, ppm	
Hardness as CaCO <sub>3</sub> , ppm	
Sulfide	PRESENT
Mixed Oxides (Qualitative)	
Fluoride, ppm	
Silica, ppm	
Total Iron, ppm	45
Nitrates, ppm	
Phosphate, ppm	

REMARKS:

REPORTED BY:

Johnny Reinschmidt

CHEMICAL ENGINEERING SECTION

Copies to:

SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-7155

FILE 23-405

Operator SUN PROD. DIV. #665464\*  
Lease or Well STATE "A" A/C-3#6  
Formation 7-RIVERS QUEEN  
Perfs 3456 To 3602 : T.D. \_\_\_\_\_  
Method of Collecting Sample WELLHEAD

District SOUTHWESTERN  
Field LANGLIE MATTIX  
County LEA  
State N.M.

Treatment 1GL/WK SUN9 DOWN ANNULUS  
Date of last acid job \_\_\_\_\_

Collected by \_\_\_\_\_  
Date 11-22-82 12-6-82  
Collected Analyzed

Sample No. 10048  
Analyst \_\_\_\_\_ PPI \_\_\_\_\_

Total Prod.	BOPD	BWPD	MCFPD
123	1	122	80

Description of Sample 1 PINT CLOUDY WATER WITH OIL ON SIDES  
AND SEDIMENT.

CONSTITUENTS	ppm
Sodium	3540
Calcium	358
Magnesium	253
Barium	3
Strontium	
Potassium	
Iron	0
Chloride	5800
Sulfate	206
Carbonate	0
Bicarbonate	1520
TOTAL DISSOLVED SOLIDS	11680

OTHER PROPERTIES	
pH	7.7
Specific Gravity	1.0081
Resistivity ohm-mtr. @ 75° F	.602
Loss on Ignition, ppm	
Total Solids by Evap., ppm	
Organic acids, ppm	
Hardness as CaCO <sub>3</sub> , ppm	
Sulfide	PRESENT
Mixed Oxides (Qualitative)	
Fluoride, ppm	
Silica, ppm	
Total Iron, ppm	28
Nitrates, ppm	
Phosphate, ppm	

REMARKS:

Produced water (attached Analysis No. C-7151) from the State A A/C-1 No. 113 well appears to be compatible with water produced by the State A A/C-3 No. 6 well, represented by this analysis. Should you wish to discuss these analyses further, please contact the Lab.

*Johnny Reinschmidt*  
REPORTED BY: Johnny Reinschmidt  
CHEMICAL ENGINEERING SECTION  
Copies to:

- F. Brandes
- T. Fox
- C. Osborne
- B. Shipman
- D. Mitchell
- Corrosion Engr. Sec.
- File ✓

SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-7151

FILE 23-405

Operator SUN PROD. DIV. 668953  
Lease or Well STATE "A" A/C-1#113  
Formation YATES 7 RIVERS OIL  
Perfs 3327 To 3346 ; T.D. \_\_\_\_\_  
Method of Collecting Sample WELLHEAD

District SOUTHWESTERN  
Field JALMAT /Langlie  
County LEA  
State N. M.

Treatment 3GL /WKSUN 9 SP-237 1GL /WK  
Date of last acid job \_\_\_\_\_

Collected by \_\_\_\_\_  
Date 11-22-82 12-6-82  
Collected Analyzed

Total Prod.	BOPD	BWPD	MCFPD
<u>219</u>	<u>2</u>	<u>217</u>	<u>9</u>

Sample No. 10074  
Analyst PPI

Description of Sample 1 PINT CLOUDY WATER WITH OIL LAYER  
AND BLACK SEDIMENT.

CONSTITUENTS	ppm
Sodium	<u>3390</u>
Calcium	<u>665</u>
Magnesium	<u>716</u>
Berium	<u>0</u>
Strontium	_____
Potassium	_____
Iron	<u>0</u>
Chloride	<u>7370</u>
Sulfate	<u>500</u>
Carbonate	<u>0</u>
Bicarbonate	<u>1310</u>
_____	_____
_____	_____
_____	_____
_____	_____
TOTAL DISSOLVED SOLIDS	<u>13951</u>

OTHER PROPERTIES	
pH	<u>6.9</u>
Specific Gravity	<u>1.0101</u>
Resistivity ohm-mtr. @ 75° F	<u>558</u>
Loss on Ignition, ppm	_____
Total Solids by Evap., ppm	_____
Organic acids, ppm	_____
Hardness as CaCO <sub>3</sub> , ppm	_____
Sulfide	<u>PRESENT</u>
Mixed Oxides (Qualitative)	_____
Fluoride, ppm	_____
Silica, ppm	_____
Total Iron, ppm	<u>18</u>
Nitrates, ppm	_____
Phosphate, ppm	_____
_____	_____
_____	_____

REMARKS:

Future records.

Johnny M Reinschmidt  
REPORTED BY:  
Johnny Reinschmidt  
CHEMICAL ENGINEERING SECTION  
Copies to:

SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-6966

FILE 23-405

Operator SUN PROD. CO. 668953  
Lease or Well STATE A A/C-1WELL#114  
Formation YATES - Seven Rivers  
Perfs 3353 To 3406 ; T.D. \_\_\_\_\_  
Method of Collecting Sample WELLHEAD

District SOUTHWESTERN  
Field Langlie Mattix-Jalmat  
County LEA  
State NEW MEXICO

Treatment Sun 9 4 gals/2 wks annulus sp-181\*  
Date of last acid job \_\_\_\_\_

Collected by \_\_\_\_\_  
Date 10-27-82 11-9-82  
Collected Analyzed

Total Prod.	BOPD	BWPD	MCFPD
<u>595</u>	<u>19</u>	<u>576</u>	<u>15</u>

Sample No. 10099  
Analyst PPI

Description of Sample 2/3 PT. TAN WATER WITH  
OIL LAYER

CONSTITUENTS	ppm
Sodium	<u>4430</u>
Calcium	<u>988</u>
Magnesium	<u>1080</u>
Barium	<u>0</u>
Strontium	_____
Potassium	_____
Iron	<u>0</u>
Chloride	<u>10500</u>
Sulfate	<u>717</u>
Carbonate	<u>0</u>
Bicarbonate	<u>1190</u>
_____	_____
_____	_____
_____	_____
_____	_____
TOTAL DISSOLVED SOLIDS	<u>18905</u>

OTHER PROPERTIES	
pH	<u>7.5</u>
Specific Gravity	<u>1.0141</u>
Resistivity ohm-mtr. @ 75° F	<u>.385</u>
Loss on Ignition, ppm	_____
Total Solids by Evap., ppm	_____
Organic acids, ppm	_____
Hardness as CaCO <sub>3</sub> , ppm	_____
Sulfide	<u>PRESENT</u>
Mixed Oxides (Qualitative)	_____
Fluoride, ppm	_____
Silica, ppm	_____
Total Iron, ppm	<u>16</u>
Nitrates, ppm	_____
Phosphate, ppm	_____
_____	_____
_____	_____

\*7 gals/2 wks annulus.

REMARKS:

First water sample received from this well. Future records.

Johnny M. Reinschmidt  
REPORTED BY:  
Johnny Reinschmidt  
CHEMICAL ENGINEERING SECTION  
Copies to:

SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-7657  
FILE 23-405

Operator SUN PROD. CO. 668953  
Lease or Well STATE "A" A/C-1 #115  
Formation SEVEN RIVERS  
Perfs 3708 To 3768; T.D. \_\_\_\_\_  
Method of Collecting Sample WELLHEAD

District SOUTHWESTERN  
Field LANGLIE MATTIX  
County LEA  
State NEW MEXICO

Treatment \_\_\_\_\_  
Date of last acid job \_\_\_\_\_

Collected by \_\_\_\_\_  
Date 1-21-83 1-31-83  
Collected Analyzed

Sample No. 10070  
Analyst PPI

Total Prod.	BOPD	BWPD	MCFPD
<u>182</u>	<u>1</u>	<u>181</u>	<u>24</u>

Description of Sample 2/3 PT. CLOUDY BLACK OILY WATER WITH OIL FILM

CONSTITUENTS	ppm
Sodium	<u>2380</u>
Calcium	<u>933</u>
Magnesium	<u>554</u>
Barium	<u>3</u>
Strontium	_____
Potassium	_____
Iron	<u>3</u>
Chloride	<u>5660</u>
Sulfate	<u>46</u>
Carbonate	<u>0</u>
Bicarbonate	<u>2130</u>
_____	_____
_____	_____
_____	_____
_____	_____
TOTAL DISSOLVED SOLIDS	<u>11709</u>

OTHER PROPERTIES	
pH	<u>7.3</u>
Specific Gravity	<u>1.0093</u>
Resistivity ohm-mtr. @ 75° F	<u>.673</u>
Loss on Ignition, ppm	_____
Total Solids by Evap., ppm	_____
Organic acids, ppm	_____
Hardness as CaCO <sub>3</sub> , ppm	_____
Sulfide	<u>PRESENT</u>
Mixed Oxides (Qualitative)	_____
Fluoride, ppm	_____
Silica, ppm	_____
Total Iron, ppm	<u>11</u>
Nitrates, ppm	_____
Phosphate, ppm	_____
_____	_____
_____	_____

REMARKS:

First water sample received from this well. Unable to classify at this time. Future records.

REPORTED BY: Johnny M Reinschmidt  
Johnny Reinschmidt  
CHEMICAL ENGINEERING SECTION  
Copies to:

F. Brandes  
T. Fox  
C. Osborne  
B. Shipman  
D. Mitchell  
Corrosion Engr. Sec.  
File

SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-8614

FILE 23-345

23-405

Operator SUN PROD. DIV. 668953  
Lease or Well STATE "A" A/C WELL#115  
Formation SEVEN RIVERS -Yates  
Perfs 3358 To 3396; T.D. \_\_\_\_\_  
Method of Collecting Sample WELLHEAD  
Treatment \_\_\_\_\_  
Date of last acid job \_\_\_\_\_

Total Prod.	BOPD	BWPD	MCFPD
<u>508</u>	<u>0</u>	<u>508</u>	<u>TSTM</u>

District SOUTHWESTERN  
Field JALMAT/Langlie Mattix  
County LEA  
State NEW MEXICO  
Collected by \_\_\_\_\_  
Date 5-3-83 5/13/83  
Collected Analyzed  
Sample No. 10043  
Analyst \_\_\_\_\_ PPI \_\_\_\_\_

Description of Sample 9/10PT. CLOUDY WATER WITH PRECIPITATE

CONSTITUENTS

	ppm
Sodium	<u>11500</u>
Calcium	<u>1440</u>
Magnesium	<u>2820</u>
Barium	<u>0</u>
Strontium	_____
Potassium	_____
Iron	<u>0</u>
Chloride	<u>26600</u>
Sulfate	<u>1990</u>
Carbonate	<u>0</u>
Bicarbonate	<u>802</u>
_____	_____
_____	_____
_____	_____
_____	_____
TOTAL DISSOLVED SOLIDS	<u>45152</u>

OTHER PROPERTIES

pH	<u>6.7</u>
Specific Gravity	<u>1.0323</u>
Resistivity ohm-mtr. @ 75° F	<u>.169</u>
Loss on Ignition, ppm	_____
Total Solids by Evap., ppm	_____
Organic acids, ppm	_____
Hardness as CaCO <sub>3</sub> , ppm	_____
Sulfide	<u>PRESENT</u>
Mixed Oxides (Qualitative)	_____
Fluoride, ppm	_____
Silica, ppm	_____
Total Iron, ppm	<u>2</u>
Nitrates, ppm	_____
Phosphate, ppm	_____

REMARKS:

  
REPORTED BY: Johnny Reinschmidt

CHEMICAL ENGINEERING SECTION

Copies to:

Subject

Water Compatibility: State A A/C 1 and 3 Leases  
Langlie-Mattix/Jalmat Fields, Southwestern District

Interoffice  
Correspondence



Date November 18, 1982

Location Richardson


From Johnny Reinschmidt, Production Service Laboratory

To Coby Osborne  
Midland Office

Enclosed water analyses represent water samples collected from two wells on the State A A/C Nos. 1 and 3 Leases, Langlie-Mattix Field. Analyses were requested for compatibility.

Comparison of the analyses indicate mixing these waters for the proposed secondary recovery program could cause a barium sulfate scaling problem. Present and past analyses also indicate these waters have a calcium carbonate scaling tendency.

If no other source water is available, chemical treatment of these waters probably would control the scaling tendencies. Please contact the Lab should you wish to discuss these analyses further.

  
Johnny Reinschmidt  
Chemical Engineering Section  
JR/js

Enclosures

cc: F. Brandes  
T. Fox  
C. Osborne  
B. Shipman  
D. Mitchell  
Corrosion Engr. Sec.  
File 23-405

SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-6967

FILE 23-405

Operator SUN PROD. CO. #665464\*  
Lease or Well STATE A A/C-3 #3  
Formation 7 RIVERS QUEEN  
Perfs 3552 To 3677 : T.D. \_\_\_\_\_  
Method of Collecting Sample WELLHEAD

District SOUTHWESTERN  
Field LANGLIE MATTIX  
County LEA  
State NEW MEXICO

Treatment Sun-9 3 gal/wk annulus sp-181 \*  
Date of last acid job \_\_\_\_\_

Collected by \_\_\_\_\_  
Date 10-27-82 11-9-82  
Collected Analyzed

Total Prod.	BOPD	BWPD	MCFPD
147	9	138	45

Sample No. 10067  
Analyst \_\_\_\_\_ PPI \_\_\_\_\_

Description of Sample 1 PT. GREENISH OILY CLEAR  
WATER WITH OIL LAYER

CONSTITUENTS	ppm
Sodium	1050
Calcium	350
Magnesium	212
Barium	21
Strontium	
Potassium	
Iron	0
Chloride	1940
Sulfate	23
Carbonate	0
Bicarbonate	1570
TOTAL DISSOLVED SOLIDS	5166

OTHER PROPERTIES	
pH	7.5
Specific Gravity	1.0031
Resistivity ohm-mtr. @ 75° F	1.64
Loss on Ignition, ppm	
Total Solids by Evap., ppm	
Organic acids, ppm	
Hardness as CaCO <sub>3</sub> , ppm	
Sulfide	PRESENT
Mixed Oxides (Qualitative)	
Fluoride, ppm	
Silica, ppm	
Total Iron, ppm	4
Nitrates, ppm	
Phosphate, ppm	

\*Continuous annulus.

REMARKS:

First water sample received from this well. Future records.

Johnny M Reinschmidt  
REPORTED BY  
Johnny Reinschmidt  
CHEMICAL ENGINEERING SECTION  
Copies to:



SUN 5434  
SUN PRODUCTION COMPANY  
PRODUCTION SERVICE LABORATORY

WATER ANALYSIS REPORT

ANALYSIS NO. C-6966

FILE 23-405

Operator SUN PROD. CO. 668953  
Lease or Well STATE A A/C-1WELL#114  
Formation YATES - Seven Rivers  
Perfs 3353 To 3406; T.D. \_\_\_\_\_  
Method of Collecting Sample WELLHEAD

District SOUTHWESTERN  
Field Langlie Mattix-Jalmat  
County LEA  
State NEW MEXICO

Treatment Sun 9 4 gals/2 wks annulus sp-181\*  
Date of last acid job \_\_\_\_\_

Collected by \_\_\_\_\_  
Date 10-27-82 11-9-82  
Collected Analyzed

Sample No. 10099  
Analyst PPI

Total Prod.	BOPD	BWPD	MCFPD
<u>595</u>	<u>19</u>	<u>576</u>	<u>15</u>

Description of Sample 2/3 PT. TAN WATER WITH  
OIL LAYER

CONSTITUENTS	ppm
Sodium	<u>4430</u>
Calcium	<u>988</u>
Magnesium	<u>1080</u>
Barium	<u>0</u>
Strontium	_____
Potassium	_____
Iron	<u>0</u>
Chloride	<u>10500</u>
Sulfate	<u>717</u>
Carbonate	<u>0</u>
Bicarbonate	<u>1190</u>
_____	_____
_____	_____
_____	_____
_____	_____
TOTAL DISSOLVED SOLIDS	<u>18905</u>

OTHER PROPERTIES	
pH	<u>7.5</u>
Specific Gravity	<u>1.0141</u>
Resistivity ohm-mtr. @ 75° F	<u>.385</u>
Loss on Ignition, ppm	_____
Total Solids by Evap., ppm	_____
Organic acids, ppm	_____
Hardness as CaCO <sub>3</sub> , ppm	_____
Sulfide	<u>PRESENT</u>
Mixed Oxides (Qualitative)	_____
Fluoride, ppm	_____
Silica, ppm	_____
Total Iron, ppm	<u>16</u>
Nitrates, ppm	_____
Phosphate, ppm	_____
_____	_____
_____	_____

\*7 gals/2 wks annulus.

REMARKS:

First water sample received from this well. Future records.

REPORTED BY:

Johnny M. Reinschmidt  
JOHNNY REINSCHMIDT  
CHEMICAL ENGINEERING SECTION  
Copies to:

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 5252  
Order No. R-4819

APPLICATION OF TEXAS PACIFIC  
OIL COMPANY FOR TWO WATERFLOOD  
PROJECTS AND DOWNHOLE COMMINGLING,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 19, 1974,  
at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 9th day of July, 1974, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required  
by law, the Commission has jurisdiction of this cause and the  
subject matter thereof.

(2) That the applicant, Texas Pacific Oil Company, seeks  
authority to institute two waterflood projects in its State "A"  
A/C 1 Lease, Jalmat Oil and Langlie Mattix Pools, by the injec-  
tion of water into the Upper Seven Rivers and Lower Seven Rivers  
formations, respectively, through its State "A" A/C 1 Well No. 42  
located in Unit A of Section 4, Township 23 South, Range 36 East,  
NMPM, Lea County, New Mexico.

(3) That the applicant seeks authority to complete the  
proposed injection well as a single completion and to determine  
the volumes of injected fluid to be credited to each zone by  
means of periodic spinner or other surveys.

(4) That the applicant seeks authority to complete its  
State "A" A/C 1 Wells No. 44 and No. 45 located in Units B and  
H, respectively, of said Section 4 in such a manner as to produce  
oil from the Jalmat Oil Pool and oil from the Langlie Mattix Pool  
commingled in the same wellbore.

(5) That the applicant should determine a formula for  
allocation of the commingled production from said wells No. 44  
and 45 in cooperation with the supervisor of the Commission's  
Hobbs District Office.

TEXAS PACIFIC OIL COMPANY  
Filed July 23, 1974

(6) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(7) That the proposed waterflood projects should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(8) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texas Pacific Oil Company, is hereby authorized to institute two waterflood projects in its State "A" A/C 1 lease, Jalmat Oil and Langlie Mattix Pools, by the injection of water into the Upper Seven Rivers and Lower Seven Rivers formations, respectively, in applicant's State "A" A/C 1 Well No. 42 located in Unit A of Section 4, Township 23 South, Range 36 East, NMPM, Lea County, New Mexico;

PROVIDED HOWEVER, that injection into said well shall be through internally coated 2 3/8-inch tubing set in a packer at approximately 3600 feet; that the casing-tubing annulus shall be loaded with an inert fluid and be equipped with an approved leak detection device;

PROVIDED FURTHER, that spinner surveys shall be taken at least once each month for the first six months of active injection and at least once each four months thereafter in order to properly allocate the injected volume to the respective pools being flooded and that the results of each such survey shall be filed with the Hobbs District Office of the Commission with Commission Form C-120.

(2) That the subject waterflood projects are hereby designated the Texas Pacific Oil Company Jalmat State "A" and Texas Pacific Oil Company Langlie Mattix State A Waterflood Projects and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That the applicant is hereby authorized to complete its State "A" A/C 1 Wells No. 44 and No. 45 located in Units B and H, respectively, of said Section 4 in such a manner as to produce oil from the Jalmat Oil Pool and oil from the Langlie Mattix Pool commingled in the same wellbore.

(5) That before commencing any operations to complete, treat, or workover the Jalmat oil zone and/or the Langlie Mattix

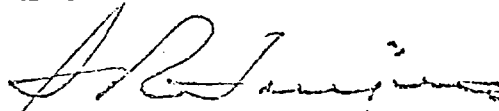
zone in either or both of said wells No. 44 and No. 45, the applicant shall contact the supervisor of the Commission's Hobbs District Office and formulate such plans and procedures as may be necessary and required to determine a formula for the allocation of the commingled production.

(6) That no injection shall be permitted in the subject projects until the formula in Order (5) above has been approved by the Santa Fe office of the Commission.

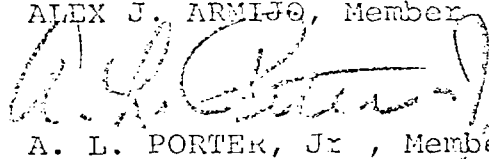
(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
I. R. TRUJILLO, Chairman

ALEX J. ARMISTO, Member

  
A. L. PORTER, Jr., Member & Secretary

S E A L



STATE "A" AC-1 and AC-3  
WELL HISTORIES

Sun Operated wells within a one-half mile radius  
of proposed injection wells to be drilled

Well Name: Sun State A Account 1 #29  
Field: Jalmat  
Location: 1650' FWL and 990' FNL, Section 11,  
Unit letter C, T23S, R36E, Lea County, New Mexico

Spud Date: 8-30-51                      Comp date: 9-22-51  
TD: 3600'                              PBD: 3600'

Casing and Cementing Data:  
  Surf Csg: 9-5/8", 32.5#, C.S. @ 328', cmt to surf with 300sx.  
  Prod Csg: 7", 20-23#, C.S. @ 2885', cmt to surf with 800sx.

Completion Record:  
  Initial Comp: Open hole 2885-3600' Yates- Seven Rivers  
  Initial Potential: 9500 MCFD

Present Comp: same as initial

Present Well Class: Gas Well

Well Name: Sun State 1 Account 1 #30  
Field: Jalmat  
Location: 1650' FSL and 990' FEL, Section 3,  
Unit letter I, T23S, R36E, Lea County, New Mexico

Spud Date: 9-29-51  
TD: 3629

Comp date: 10-20-51  
PBD: 3629

Casing and Cementing Data:

Surf Csg: 9-5/8", 32.5#, C.S. @ 320', cmt to surf with 300sx.

Prod Csg: 7", 20-23#, C.S. @ 2921', cmt to surface with 873sx.

Completion Record:

Initial Comp: open hole Yates- Seven Rivers 2921-3629

Initial Potential: 5210 MCFD

Present Completion: Same as initial

Present Well Class: Gas Well



Well Name: Sun State A Account 1 #34  
Field:Jalmat  
Location:1650' FSL and 1650' FWL, Section 11,  
Unit letter K, T23S, R36E, Lea County, New Mexico

Spud Date:3-1-52  
TD: 3578

Comp date: 3-19-52  
PBD: 3578

Casing and Cementing Data:  
Surf Csg: 9-5/8", 32.3#, C.S. @ 317', cmt to surf with 300sx  
Prod Csg: 7", 20#, C.S. @ 2838', cmt to surf with 643sx.

Completion Record:  
Initial Comp: open hole Yates-Seven Rivers 2838-3578  
Initial Potential: 28,000 MCFD

Present Completion: same as initial

Present Well Class: Gas well- Jalmat

Well Name: Sun State A Account 1 #35

Field:Jalmat

Location:1650' FSL and 990' FWL, Section 3,  
Unit letter L, T23S, R36E, Lea County, New Mexico

Spud Date:10-15-22  
TD: 3625

Comp date: 11-4-52  
PBD: 3625

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, c.s. @ 338', cmt to surf with 300sx.

Prod Csg: 7", 20#, c.s. @ 3017', cmt to surf with 855 sx.

Completion Record:

Initial Comp: open hole Yates-Seven Rivers 3017-3625

Initial Potential: 5210 MCFD

Present Completion: Same as initial

Present Well Class: Gas well-Jalmat

Well Name: Sun State A Account 1 #41  
Field: Langlie Mattix  
Location: 660' FNL and 660' FEL, Section 9,  
Unit letter A, T23S, R36E, Lea County, New Mexico

Spud Date: 11-4-57  
TD: 3800'

Comp date: 11-22-57  
PBD: 3800'

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C.S. @ 309', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C.S. @ 3800', cmt with 200sx, top of cmt.  
2810' temp. survey

Completion Record:

Initial Comp: Perf 3738-64 Queen sand oil treated with 10,000 gal  
oil and 10000# sand.

Initial Potential: 200 BOPD, 0 BWPD, 648 MCFD

Workovers:

#1 3-25-60: Dual complete. Jalmat- Langlie Mattix. Perf Yates  
3276-3400,. Set mod DA packer @ 3440 and run dual strings.

Present Completion: Same as W.O. #1

Present Well Class: TA'd both zones.

Well Name: Sun State A Account 1 #43  
Field:Langlie Mattix  
Location:660' FSL and 660' FWL, Section 3,  
Unit letter M, T23S, R36E, Lea County, New Mexico

Spud Date:12-10-57  
TD: 3825

Comp date: 12-23-57  
PBD: 3825

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C.S. @ 316', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C.S. @ 3824', cmt with 200sx, top of cmt @ 2875'  
temp survey.

Completion Record:

Initial Comp: Perfs 3698-3778 Langlie Mattix. Sand oil treated with  
20000 gal oil and 20000# sand.

Initial Potential: 248 BOPD, 28 BWPD, 110 MCFD

Present Completion: same as initial

Present Well Class: Oil Well

Well Name: Sun State A Account 1 #46  
Field: Langlie Mattix  
Location: 1980' FSL and 660' FWL, Section 3,  
Unit letter L, T23S, R36E, Lea County, New Mexico

Spud Date: 2-11-59  
TD: 3800

Comp date: 2-18-59  
PBD: 3785

Casing and Cementing Data:

Surf Csg: 8-5/8", 28#, C.S. @ 337', cmt to surf. with 300sx.

Prod Csg: 5 1/2", 14#, C.S. @ 3799', cmt with 250 sx, 7-7/8" hole,  
top of cmt @ 2302' calc.

Completion Record:

Initial Comp: Perf 3704-3748 Seven Rivers Queen. Sand oil treated  
with 25000 gal oil and 40000# sand.

Initial Potential: 268 BOPD, 71 BWPD, 91 MCFD.

Workovers: 1 1/13/70 Add perfs 3646-3704' and reperf 3704-3748' and  
acidize.

Present Completion: Perfs 3646- 3748

Present Well Class: Oil well

Well Name: Sun State A Account 1 #47

Field:Langlie Mattix

Location:1980' FSL & 1980' FWL, Section 3,  
Unit letter K, T23S, R36E, Lea County, New Mexico

Spud Date:2-22-59

Comp date: 3-4-59

TD: 3800'

PBTD: 3790'

PBTD: 3790

Casing and Cementing Data:

Surf Csg: 8-5/8", 24-28#, C.S. @ 324', cmt to surf with 300 sxs.

Prod Csg: 5½", 14#, C.S. @ 3799', cmt with 250sx, 7-7/8" hole, top  
of cmt @ 2302' calc.

Completion Record:

Initial Comp: Perfs 3650-3740 Seven Rivers-Queen

Initial Potential: 280 BOPD, 28 BWPD, 179 MCFD

Workovers:

#1 Converted to a water injection well, set pkr @ 3565'. Injection  
into Seven Rivers-Queen perfs 3650-3740.

Present Completion: Same as W.O. #1

Present Well Class: T.A. Injection well

Well Name: Sun State A Account 1 #48  
Field: Langlie Mattix  
Location: 1980' FSL and 1980' FWL, Section 3,  
Unit Letter K, T23S, R36E, Lea County, New Mexico

Spud Date:2-22-59  
Comp date: 3-4-59  
TD: 3800

Comp. Date: 3-4-59  
PBTB: 3790

Casing and Cementing Data:

Surf Csg: 8-5/8", 28#, C.S. @ 325', cmt. to surf with 300 sxs.

Prod Csg: 5½", 14# C.S. @ 3799', cmt with 250 sx., top of cmt @ 2575 temp. survey.

Completion Record:

Initial Comp: Perf 3670-3760 Seven Rivers-Queen Sand oil treated  
with 25000 gal oil and 40000 #sand.

Initial Potential: 398 BOPD, 136 BWPD, 562 MCF.

Present Completion: same as initial

Present Well Class: Oil well

Well Name: Sun State A Account 1 #49  
Field: Langlie Mattix  
Location: 660' FNL and 660' FWL, Section 10, Unit Letter D, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 3/16/79  
TD: 3800'

Comp date: 3/23/59  
PBD: 3789'

Casing and Cementing Data:

Surf Csg: 8-5/8", 24#, C. S. @ 330', cmt to surf with 300 sx.

Prod Csg: 5-1/2", 14#, C. S. @ 3799', cmt with 250 sx, top of cmt @  
2665' temp survey.

Completion Record:

Initial Comp: Perfs 3690-3766 Seven Rivers Queen Sand Oil treated  
with 25,000 gal oil and 50,000# sand

Initial Potential: 77 BOPD, 11 BWPD, 237 MCFD

Present Completion: Same as initial

Present Well Class: Oil Well



Well Name: Sun State A Account 1 #55  
Field: Langlie Mattix  
Location: 1980' FNL and 660' FWL, Section 10, Unit Letter E, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 3/25/59  
TD: 3800'

Comp date: 4/3/59  
PBDT: 3725 mod k ret

Casing and Cementing Data:

Surf Csg: 8-5/8", 24#, C. S. @ 333', cmt to surf with 300 sx.

Prod Csg: 5-1/2", 14#, C. S. @ 3799', cmt with 250 sx, 7-7/8" hole,  
top of cmt @ 2302' calc.

Completion Record:

Initial Comp: Perf Seven Rivers-Queen 3678-3754

Sand oil treated with 25,000 gal oil and 50,000# sand  
Set mod.k ret. @ 3725 and sqz perfs 3730-54 with 17  
sx cmt.

Initial Potential: 63 BOPD, 94 BWPD

Present Completion: Perfs 3678-3718

Present Well Class: T.A.'d oil well

Well Name: Sun State A Account 1 #56

Field: Langlie Mattix

Location: 1980' FSL and 660' FWL, Section 10, Unit Letter L, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 4/5/59  
TD: 3765'

Comp date: 4/13/59  
PBD: 3688' ref

Casing and Cementing Data:

Surf Csg: 8-5/8", 24#, C. S. @ 340', cmt to surf with 300 sx.

Prod Csg: 5-1/2", 14#, C. S. @ 3764', cmt. with 250 sx., top of cmt  
@ 2635' temp survey.

Completion Record:

Initial Comp: Perfs 3638-3682

Sand oil treated with 25,000 gal oil and 50,000 #  
sand set ret @ 3688 and sqzd perfs 3693-3721

Initial Potential: 75 BOPD, 245 BWPD

Present Completion: Perfs 3638-3682

Present Well Class: T.A.'d oil well

Well Name: Sun State A Account 1 #61  
Field: Langlie Mattix  
Location: 1980'FWL and 1980' FEL, Section 3, Unit Letter J, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 5/4/59  
TD: 3719'

Comp date: 5/19/59  
PBD: 3719'

Casing and Cementing Data:

Surf Csg: 9-5/8", 36#, C. S. @ 320', cmt with 300' sx to surf

Prod Csg: 7", 20#, C. S. @ 3642', cmt with 250 sx, 8-3/4" hole, top  
of cmt @ 1813' calc.

Completion Record:

Initial Comp: Open hole 3642-3719' Seven Rivers-Queen. Sand oil  
treated with 25,000 gal oil and 50,000# sand.

Initial Potential: 131 BOPD, 24 BWP, 71 MCFD

Present Completion: Same and initial

Present Well Class: Oil Well

Well Name: Sun State A Account 1 #61  
Field: Langlie Mattix  
Location: 1980'FWL and 1980' FEL, Section 3, Unit Letter J, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 5/4/59  
TD: 3719'

Comp date: 5/19/59  
PBD: 3719'

Casing and Cementing Data:

Surf Csg: 9-5/8", 36#, C. S. @ 320', cmt with 300' sx to surf

Prod Csg: 7", 20#, C. S. @ 3642', cmt with 250 sx, 8-3/4" hole, top  
of cmt @ 1813' calc.

Completion Record:

Initial Comp: Open hole 3642-3719' Seven Rivers-Queen. Sand oil  
treated with 25,000 gal oil and 50,000# sand.

Initial Potential: 131 BOPD, 24 BWPD, 71 MCFD

Present Completion: Same and initial

Present Well Class: Oil Well

Well Name: Sun State A Account 1 #63

Field: Langlie Matix

Location: 1980' FSL and 660' FEL, Section 3, Unit Letter I, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 7/27/59  
TD: 3691'

Comp date: 8/9/59  
PBSD: 3635 CIBP

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 322', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3654', cmt with 250 sx. top of cmt @  
1920' temp survey

Completion Record:

Initial Comp: Open hole 3654'-3691'

Sand oil treated with 15,000 gal oil and 30,000# sand

Initial Potential: 159 BOPD, 81 BWPD, 789 MCFD

Work Overs: #1 5/16/70 Set CIBP @ 3625' Perf upper Langlie Matix  
3446-3609

Present Completion: Same as W. O. #1

Present Well Class: Oil Well

Well Name: Sun State A Account 1 #64  
Field: Langlie Mattix  
Location: 710' FSL and 1880' FEL, Section 3, Unit Letter O, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 8/5/59  
TD: 3682'

Comp date: 8/17/59  
PBD: 3682'

Casing and Cementing Data:

Surf Csg: 9-5/8", 36#, C. S. @ 340', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3639', cmt with 250 sx, top of cmt @  
2260 temp survey

Completion Record:

Initial Comp: Open hole 3639'-3682' Queen Sand oil treated with  
15,000 gal oil and 15,000# sand

Initial Potential: 310 BOPD, 0 BWPD, 112 MCFD.

Present Completion: Same as initial

Present Well Class: Oil Well

Well Name: Sun State A Account 1 #69  
Field: Langlie Mattix  
Location: 660' FSL and 990' FEL, Section 3, Unit Letter P, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 10/9/59  
TD: 3675'

Comp date: 10/21/59  
PBD: 3630' CIBP

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 336', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3648', cmt with 250 sx, top of cmt @  
2210' temp survey

Completion Record:

Initial Comp: Open hole Queen 3648-3675

Sand oil treated with 10,000 gal oil and 10,000# sand

Initial Potential: 36 BOPD, 24 BWPD, 327 MCFD

Workover: #1 Set CIBP @ 3630' Perf upper Langlie Mattix 3440-3566

Present Completion: Same as W. O. #1 Perfs 3440'-3566'

Present Well Class: T. A. Oil

Well Name: Sun State A Account 1 #81

Field: Langlie Mattix

Location: 1980' FWL and 660' FNL, Section 10, Unit Letter C, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 1/21/60  
TD: 3754'

Comp date: 1/28/60  
PBSD: 3754'

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 326', cmt to surf with 300 sx

Prod Csg: 7", 20#, C. S. @ 3681', cmt with 250 sx, top of cement @  
2180' temp survey

Completion Record:

Initial Comp: Open hole Seven Rivers-Queen 3681-3754'. Sand oil  
treated with 10,000 gal oil and 10,000# sand

Initial Potential: 142 BOPD, 8 BWPB, 164 MCFD

Present Completion: Same as initial

Present Well Class: Oil well



Well Name: Sun State A Account 1 #82  
Field: Langlie Mattix  
Location: 660' FNL and 1980' FEL, Section 15 Unit Letter B, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 1/31/60  
TD: 3634'

Comp date: 2/6/60  
PBSD: 3634'

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 329', cmt to surf with 300 sx

Prod Csg: 7", 20#, C. S. @ 3602', cmt with 250 sx, top of cmt.  
2090' temp survey

Completion Record:

Initial Comp: Open hole 3602-3634' Seven Rivers Queen. Sand oil  
treated with 10,000 gal oil and 10,000# sand.

Initial Potential: 103 BOPD, 17 BWPD

Present Completion: Same as initial

Present Well Class: T. A.'d oil well

Well Name: Sun State A Account 1 #85  
Field: Langlie Mattix  
Location: 2310' FNL and 2310' FWL, Section 11, Unit Letter F, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 3/10/60  
TD: 3704'

Comp date: 3/17/60  
PBD: 3630 CIBP

Casing and Cementing Data:  
Surf Csg: 9-5/8", 36#, C. S. @ 335', cmt to surf with 300 sx  
Prod Csg: 7", 20#, C. S. @ 3636' cmt. 250 sx, top of cmt. 2475'  
temp survey

Completion Record:  
Initial Comp: Open hole 3636-3704' Queen. Sand oil treated with  
10,000 gal oil and 9,000# sand.

Initial Potential: 42 BOPD, 18 BWPD, 880 MCFD

Workovers: #1 3/3/66 Set CIBP @ 3630'. Perf upper Langlie Mattix  
3472-3608'. Sand oil treated with 20,000 gal  
oil and 20,000# sand

Present Completion: Perfs 3472-3608' Langlie Mattix

Present Well Class: Oil well

Well Name: Sun State A Account 1 #86  
Field: Langlie Mattix  
Location: 1980' FNL and 1980' FWL, Section 10, Unit Letter F, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 3/20/60  
TD: 3696'

Comp date: 3/29/60  
PBD: 3696'

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 314, cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3660', cmt with 250 sx, top of cmt @  
2215 temp survey

Completion Record:

Initial Comp: Open hole Seven Rivers-Queen 3660-3696'

Initial Potential: 67 BOPD, 29 BWPD, 498 MCFD

Present Completion: Same as initial

Present Well Class: T. A.'d oil well

Location: 1980' FSL and 1980' FWL, Section 10, Unit Letter K, T23S,  
R36E, Lea Co., New Mexico

Comp date: 5/2/60  
PBTD: 3678'

Surf Csg: 9-5/8", 32#, C. S. @ 320', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3625', cmt with 250 sx, top of cmt @ 2106' temp survey

Initial Comp: Open hole Queen 3625-3678'

Sand oil treated with 10,000 gal oil and 10,000# sand

Initial Potential: 96 BOPD, 20 BWPD, 213 MCFD

Present Completion: Same as initial

Present Well Class: Oil well



Well Name: Sun State A Account 1 #90  
Field: Langlie Mattix  
Location: 660' FNL and 990' FEL, Section 15, Unit Letter A, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 7/23/60  
TD: 3635'

Comp date: 6/30/60  
PBD: 3635'

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 314', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3616, cmt with 250 sx., top of cmt @  
2000', temp survey

Completion Record:

Initial Comp: Open hole Queen 3616-3635'.  
Sand oil treated with 1,000 gal oil and 10,000 #  
sand.

Initial Potential: 58 BOPD, 15 BWPD, 920 MCFD

Workovers: #1 10/13/71 Perf upper Langlie Mattix 3476'-3590'

Present Completion: Perfs 3476'-3590' and open hole 3616-3635' Langlie  
Mattix

Present Well Class: Oil well

Well Name: Sun State A Account 1 #91  
Field: Langlie Mattix  
Location: 660' FNL and 2310' FWL, Section 15, Unit Letter C, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 7/27/60                      Comp date: 8/3/60  
TD: 3675'                                  PBTD: 3675'

Casing and Cementing Data:  
Surf Csg: 9-5/8", 32#, C. S. @ 308', cmt to surf with 300 sx.  
Prod Csg: 7", 20# C. S. @ 3662, cmt with 200 sx, top of cmt. @  
1635' temp survey

Completion Record:  
Initial Comp: Open hole Queen 3662-3675'.  
Sand oil treated with 10,000 gal oil and 10,000# sand.

Initial Potential: 86 BOPD, 0 BWPD, 279 MCFD.

Present Completion: Same as initial

Present Well Class: Oil Well

Well Name: Sun State A Account 1 #92  
Field: Langlie Mattix  
Location: 660' FNL and 660' FWL, Section 11, Unit Letter D, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 9/3/60  
TD: 3693'

Comp date: 9/10/60  
PBD: 3630' CIBP

Casing and Cementing Data:

Surf Csg: 8-5/8", 24#, C. S. @ 303', cmt with 300 sx to surf.

Prod Csg: 5-1/2", 14#, C. S. @ 3643, cmt with 250 sx, top of cmt @  
2250' temp survey

Completion Record:

Initial Comp: Open hole Queen 3643-3693'  
Sand oil treated with 10,000 gal oil and 10,000#  
sand.

Initial Potential: 232 BOPD, 348 BWP, 172 MCFD

Workovers: #1 3/20/62 PB to 3635' with pen gravel and perf  
3621-3625'.

#2 4/64 CO to 3630', Set CIBP @ 3630'. Sqz perfs  
3621-25', Perf 3573-3624' and sand oil treat  
with 25,000 gal oil and 25,000# sand.

#3 Perf Upper Langlie Mattix 3450-3552

Present Completion: Same as W0. #3 perfs 3450-3624'

Present Well Class: Oil well



Well Name: Sun State A Account 1 #95

Field: Langlie Mattix

Location: 1980' FSL and 660' FWL, Section 11, Unit Letter L, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 10/12/60  
TD: 3707'

Comp date: 10/19/60  
PBD: 3625' BP

Casing and Cementing Data:

Surf Csg: 8-5/8", 24#, C. S. @ 316', cmt with 300 sx to surf.

Prod Csg: 5-1/2", 14#, C. S. @ 3707', cmt with 250 sx., top of cmt  
@ 2670' temp survey

Completion Record:

Initial Comp: Perfs Queen 3655-3696' Vibro fraced and sand oil  
treated with 10,000 gals oil and 10,000# sand

Initial Potential: 60 BOPD, 0 BWPD, 90 MCFD

Workovers: #1 Set BP @ 3625' Perf Upper Langlie Mattix 3436-3595'

Present Completion: Same as W0. #1 Perf 3436-3595'

Present Well Class: Oil well

Well Name: Sun State A Account 1 #99  
Field: Langlie Mattix  
Location: 1980' FNL and 660' FWL, Section 11, Unit Letter E, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 8/31/62  
TD: 3737'

Comp date: 9/8/62  
PBD: 3690' ret.

Casing and Cementing Data:

Surf Csg: 8-5/8", 24#, C. S. @ 342', cmt to surf with 300 sx.

Prod Csg: 5-1/2", 14#, C. S. @ 3737', cmt with 250 sx., top of cmt  
@ 2710' temp survey

Completion Record:

Initial Comp: Perf 3700-3721', test and sqz, ret @ 3690' Perf  
3627-3659' Queen

Initial Potential: 20 BOPD, 0 BHPD, 1013 MCFD

Workovers: #1 Perf upper Langlie Mattix 3484-3609'

Present Completion: Perfs 3484-3659'

Present Well Class: Oil well

Well Name: Sun State A Account 1 #100  
Field: Langlie Mattix  
Location: 1980' FWL and 990' FEL, Section 9, Unit Letter H, T23S, R36E,  
Lea Co., New Mexico

Spud Date: 11/28/60  
TD: 3760'

Comp date: 12/4/60  
PBD: 3698' ref

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 318', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3705', cmt with 250 sx, top of cmt @  
2220' temp survey

Completion Record:

Initial Comp: Open hole Queen 3705-3760 Vibro fraced and sand oil  
treated with 10,000 gal and 10,000# sand.

Initial Potential: 72 BOPD, 18 BWPD, 25 MCFD

Workovers: #1 6/24/69 Set cmt ret @ 3698', sqz open hole with 75 sx  
class "C" cement Perf 3638-3690' Langlie Mattix and perf  
3191-3452 Jalmat. Frac both sets, set pkr @ 3598', Run  
dual tbg strings.

Present Completion: Same as W0. #1 dual Jalmat Langlie Mattix

Present Well Class: Shut in

Well Name: Sun State A Account 1 #101  
Field: Langlie Mattix  
Location: 660' FSL and 660' FWL, Section 11, Unit Letter M, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 11/27/62  
TD: 10,241

Comp date: 1/17/63  
PBSD: 5100'

Casing and Cementing Data:

Surf Csg: 13-3/8", 48#, C. S. @ 368', cmt to surf with 350 sx.

Prod Csg: 9-5/8", 36-40#, C. S. @ 4000', cmt with 3420 sx, top of  
cmt @ 300'

Completion Record:

Initial Comp: Perf 3670-3714 Queen  
Sand oil treat with 10,000 gal oil and 10,000# sand.

Initial Potential: 68 BOPD, 270 BWPD, 192 MCFD

Workovers: #1 Cleaned out to 5100'. Converted to water disposal  
well. Ran tbg and pkr to 3950'. Injection into open hole  
4000-5100' San Andres.

Present Completion: Open hole 4000-5100' San Andres

Present Well Class: Salt Water Disposal Well

Well Name: Sun State A Account 1 #102  
Field: Langlie Mattix  
Location: 660' FNL and 660' FWL, Section 14, Unit Letter D, T23S,  
R36E, Lea Co., New Mexico

Spud Date: 11/12/63  
TD: 3710'

Comp date: 11/20/63  
PBSD: 3680'

Casing and Cementing Data:

Surf Csg: 9-5/8", 32#, C. S. @ 322', cmt to surf with 300 sx.

Prod Csg: 7", 20#, C. S. @ 3710', cmt with 250 sx. top of cmt @  
2720 temp survey

Completion Record:

Initial Comp: Perf 3639-3693 Queen Sand oil treated with 10,000  
gal oil and 10,000# sand

Initial Potential: 36 BOPD, 68 BWPD

Workovers: #1 2/11/64 Sqz perfs 3639-3693', Do to 3680', perf  
3578-3667'. Sand Oil treat with 10,000 gal  
oil and 10,000# sand.

#2 8/20/69 Perf 3444-3549' and sand water frac

Present Completion: Perfs 3444-3667'

Present Well Class: Oil Well

## OFFSET OPERATED WELL HISTORIES

Operators:

Arco

Gulf

Getty

John H. Hendrix Corporation

Offset Operated wells within a one-half mile radius  
of proposed injection wells to be drilled

Well Name: John H. Hendrix State J. G. #4  
Field: Langlie Mattix  
Location: 1980' FSL and 660' FWL, Section 2, Unit Letter L,  
T23S, R36E, Lea County, New Mexico

Spud Date: 11-21-60 Comp date: 12-5-60  
TD: 3772 PBD:

Casing and Cementing Data:

Surf Csg: 8-5/8", C. S. @ 257', cmt to surface with 200 sx

Prod Csg: 4-1/2", C. S. @ 3770, cmt with 250 sx, 7-7/8" hole top  
of cmt. @ 2510' calc.

Completion Record:

Initial Comp: Perf and frac Queen 3653-3675'

Initial Potential: 167 BOPD, 9 BWPD

Workovers:

Present Well Class: Gas Well

X

P.I. COMPLETION REPORT 30025 SEC 2 TWP 23S RGE 36E

NMEX LEA 1980 FS 660 FM WELL CLASS D DO  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN

HENDRIX, JOHN H-----WELL NUMBER-LEASE NAME-----JG  
OPERATOR-----

OPER ELEVATIONS--DISTRICT/SURVEY-----1  
FIELD/POOL/AREA--

COMMERCIAL ELEV-----LEASE NO-----30-025-09219-00  
API NUMBER-----

11/21/1960 12/05/1960 ROTARY OIL  
SPUD DATA---COMP DATE--TYPE TOOL-----TYPE HC-----STATUS

3772  
DRLR'S TD-----LOG TD-PLUGBACK-----OLD TD-FORMATION AT TD

CASING DATA

CSG 8 5/8 @ 257 W/ 200 4 1/2 @ 3770 W/ 250 01 02

LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

INITIAL POTENTIAL

IPFD 1678 PD 9BM 3653- 3675 024HRS  
453QUEN PERF  
PERF 3653- 3653A 3666- 3666A 3675- 3675A  
ACID 3653- 3675 200GALS  
FRAC 3653- 3675 1100GALS 16500LBS SAND  
TP 525 CP 700  
LANGLIE-MATTIX SEV RIV-QN 11 365300 51897A  
GTY 32.1 GOR 4689

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEPTH  
LOG 454ANDR 1320 453YES 2981 453SVRY 3167  
LOG 453QUEN 3526  
LOG 454SALT 2814

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
GRDL  
GRSL

P.I. COMPLETION REPORT 30025 SEC 2 TWP 23S RGE 36E

NMEX LEA 660 FN 1980 FE WELL CLASS D DO  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN

GULF OIL CORP-----WELL NUMBER-LEASE NAME-----JF JANDA I  
OPERATOR-----

OPER ELEVATIONS--DISTRICT/SURVEY-----1  
FIELD/POOL/AREA--

COMMERCIAL ELEV-----LEASE NO-----30-025-09220-00  
API NUMBER-----

08/22/1958 09/24/1958 ROTARY OIL  
SPUD DATA---COMP DATE--TYPE TOOL-----TYPE HC-----STATUS

3800  
DRLR'S TD-----LOG TD-PLUGBACK-----OLD TD-FORMATION AT TD

CASING DATA

CSG 8 5/8 @ 308 W/ 325 5 1/2 @ 3800 W/ 925 01 02

LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

INITIAL POTENTIAL

IPFD 1208 PD 21/64CK  
453QUEN PERF  
PERF 3642- 3644A 3658- 3660A 3671- 3673A 3682- 3684A  
PERF 3690- 3692A 3740- 3742A 3748- 3750A 3759- 3761A  
PERF 3774- 3776A 3783- 3785A  
ACID 3642- 3785 500GALS  
FRAC 3642- 3785 40000GALS SAND  
TP 750 CP 120

LANGLIE-MATTIX SEV RIV-QN 11 2 0A 51897A  
GTY 35.8 GOR 575 PBD 3796

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEPTH  
LOG 453YES 3020 453SVRY 3275 453QUEN 3640

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
GRNL

MISCELLANEOUS DRILLING DATA

P&A 07/14/1966 453QUEN 1

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Well Name: Getty Hobbs State 2-K  
Field: Langlie Mattix  
Location: 660' FSL and 660' FWL, Section Z, Unit Letter M,  
T23S, R36E, Lea Co., New Mexico

Spud Date: 3/1/60                      Comp date: 3/19/60  
TD: 3700                                PBD: 3699

Casing and Cementing Data:  
Surf. Csg: 8-5/8", C. S. @ 300', cmt to surf with 200 sx  
  
Prod. Csg: 5-1/2", C. S. @ 3700', 7-7/8" hole, cmt with 275 sx,  
top of cmt @ 2050' calc.

Completion Record:  
Initial Comp: Perf and frac Queen 3648-3681  
  
Initial Potential: 162 BOPD, 6 BWPD

Work Overs:  
#1 8/6/70 perf and frac 3514-3606  
  
Present Comp: Perfs 3514-3681 Langlie Mattix

Present Well Class: Oil Well Langlie Mattix

P.I. COMPLETION REPORT 30025 SEC 2 TWP 23S RGE 36E

NMEX LEA 660 FS 660 FM WELL CLASS  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN

SKELLY OIL COMPANY 2 HOBS  
OPERATOR-----WELL NUMBER-LEASE NAME----- K

COMMERCIAL ELEV-----LEASE NO-----API NUMBER-----  
30-025-09226-00

SPUD DATA---08/06/1970 RECOMPL OIL-MD  
---COMP DATE---TYPE TOOL---TYPE HC---STATUS

3700  
DRLR'S TD---LOG TD-PLUGBACK---OLD TD-FORMATION AT TD

LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

INITIAL POTENTIAL

IPPM 6B PD 10BM 3514-3681 024HRS

453QUEEN PERF 3520A 3532- 3534A 3536- 3538A 3541- 3543A

PERF 3514- 3547A 3550- 3553A 3556- 3558A 3566- 3570A

PERF 3577- 3580A 3581- 3583A 3593- 3596A 3600- 3602A

PERF 3604- 3606A 1250GALS

ACID 3514- 3606 47000GALS

FRAC 3514- 3606 70500LBS SAND

Well Name: Gulf J. F. Janda "J" #1  
Field: Langlie Mattix  
Location: 1650' FSL and 990' FEL, Section 4, Unit Letter I, T23S,  
R36E, Lea County, New Mexico

Spud Date:                      Comp date:  
TD: 3750                        PBTD:

Casing and Cementing Data:  
Surf Csg:

Inter Csg:

Prod Csg:

Completion Record:  
Initial Comp:

Initial Potential:

Workovers:

Present Well Class:

FORMATION TEST DATA

GAS TS IN SM AT 289 MCFD  
REC 270FT GCM  
FINAL OP 1H30M FFF 175  
ISIP FSIP 1110 15M  
TCK 064/64 BCK 040/64

DST 05 3642- 3750  
GAS TS IN 7M AT 27 MCFD  
REC 50FT OGCM  
FINAL OP 1H30M 560FT 0  
ISIP FFP 325  
TCK 064/64 BCK 040/64

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
GRNL

MISCELLANEOUS DRILLING DATA

P&A 08/MM/1962 1

NMEX LEA 1650 FS 990 FE WELL CLASS  
STATE-COUNTY-----FOOTAGE-----D X DG  
SPOT--INIT-FIN

GULF OIL CORP 1 JF JANDA  
OPERATOR-----WELL NUMBER-LEASE NAME-----

OPER ELEVATIONS--DISTRICT/SURVEY-----JALMAT  
FIELD/POOL/AREA--

COMMERCIAL ELEV-----LEASE NO-----30-025- 09251-00  
API NUMBER-----

SPUD DATA---COMP DATE--TYPE TOOL---TYPE HC-----GAS-MD  
ROTARY

DRLR'S TD---LOG TD-PLUGBACK---OLD TD-FORMATION AT TD  
3750 3750

LOCATION DESCRIPTION  
MEASURED FROM FULL SECTION

Well Name: Gulf J. F. Janda "J" #2  
Field: Langlie Mattix  
Location: 660' FSL and 660' FEL, Section 4, Unit Letter P, T23S, R36E,  
Lea County, New Mexico

Spud Date: 3/29/57                      Comp. Date: 5/28/57  
TD: 3825                                  PBD: 3821

Casing and Cementing Data:

Surf Csg: 8-5/8", C. S. @ 427', cmt to surf with 325 sx.

Prod Csg: 5-1/2", C. S. @ 3824', cmt to surf with 1250 sx.

Completion Record:

Initial Comp: Perf and acidize Langlie Mattix 3694-3816

Initial Potential: 65 BOPD, 9 BWPD

Workovers:

Present Well Class: Oil Well Langlie Mattix

6

P.I. COMPLETION REPORT 30025 SEC 4 TWP 23S RGE 36E

P.I. COMPLETION REPORT 30025 SEC 4 TWP 23S RGE 36E

NMEX LEA 660 FS 660 FE WELL CLASS  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN  
D DO

GULF OIL CORP  
OPERATOR-----WELL NUMBER-LEASE NAME-----  
2 JF JANDA J

OPER ELEVATIONS--DISTRICT/SURVEY-----LANGLIE-MATTIX SE  
FIELD/POOL/AREA--

COMMERCIAL ELEV-----LEASE NO-----API NUMBER-----  
30-025- 09252-00

03/29/1957 05/28/1957 ROTARY OIL  
SPUD DATA---COMP DATE--TYPE TOOL---TYPE HC---STATUS

3825  
DRLR/S TD-----LOG TD-PLUGBACK-----OLD TD-FORMATION AT TD

CASING DATA

CSG 8 5/8 @ 427 W/ 325 5 1/2 @ 3824 W/ 1250 01 02

LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

INITIAL POTENTIAL

IPPO 65B PD 9BM 024HRS  
PERF 3694- 3700A 3716- 3723A 3734- 3742A 3748- 3774A  
PERF 3782- 3798A 3808- 3816A  
ACID 3694- 3816 2000GALSA

LANGLIE-MATTIX SEV RIV-QN 11 369400 51897A  
GTY 34.8 GOR 477 PBTD 3821

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEP TH  
LOG 454ANDR 1295 453YTES 3100 453SVRY 3400  
LOG 453QUEN 3665

CORE DATA

CORE 3700- 3750 REC 50.00FT OIL  
DQSD J OM 0

CORE 3750- 3800 REC 50.00FT  
DQSD

CORE 3800- 3825 REC 25.00FT O&G  
SDDO S GM 0

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
LOGS GRNL

Well Name: Arco Seven Rivers Queen Unit #49  
(Albert Gackle Sinclair State #9)

Field:

Location: 1980' FNL and 660' FWL, Section 3, Unit Letter E, T23S,  
R36E, Lea County, New Mexico

Spud Date: 9/21/59  
TD: 3800

Comp Date: 10/6/59  
PBD: 3770

Casing and Cementing Data:

Surf. Csg.: 8-5/8", C. S. @ 315, cmt to surf with 225 sx.

Prod. Csg.: 4-1/2", C. S. @ 3800', cmt to surf with 1800 sx.

Completion Record:

Initial Comp: Perf and frac Queen 3678-3744

Initial Potential: F336 BOPD

Workovers:

Present Well Class: Water Injection Well Langlie Mattix

P.I. COMPLETION REPORT 30025 SEC 3 TWP 23S RGE 36E

Area #49

NAME: LEA 1980 FN 660 FM WELL CLASS  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN

GACKLE ALBERT 9 SINCLAIR-STATE  
OPERATOR-----WELL NUMBER-LEASE NAME-----

OPER ELEVATIONS--DISTRICT/SURVEY-----LANGLIE-MATTIX SE  
FIELD/POOL/AREA--

COMMERCIAL ELEV-----LEASE NO-----API NUMBER-----  
30-025-09242-00

09/21/1959 10/06/1959 ROTARY  
SPUD DATA---COMP DATE--TYPE TOOL---TYPE HC-----STATUS

3800  
DRLR'S TD---LOG TD-PLUGBACK---OLD TD-FORMATION AT TD

### CASING DATA

CSG 8 5/8 @ 315 W/ 225 1/2 @ 3800 W/ 1800 01 02

### LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

### INITIAL POTENTIAL

IPFD 336B PD 20/64CK 024HRS  
453SVRQ PERF 3678- 3682A 3684- 3693A 3696- 3704A 3708- 3714A  
PERF 3736- 3744A  
ACID 3678- 3744 2250GALSA  
FRAC 3678- 3744 20000GALS 20000LBS SAND  
TP 250 CP 800  
LANGLIE-MATTIX SEV RIV-QN 11 367800 51897A  
GT 36.0 PBTD 3770

TYPE	FORMATION	DEPTH	FORMATION	DEPTH	FORMATION	DEPTH
LOG	454ANDR	1405	453YTES	3176	453SVRV	3369
LOG	453QUEN	3736				
LOG	8454SALT	3015				

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/

LOGS GRNL



Well Name: Arco Seven Rivers Queen Unit #50  
(Albert Gackle Sinclair State #10)  
Field: Langlie Mattix  
Location: 1980' FNL and 1980' FWL, Section 3, Unit Letter F,

Spud Date: 10/3/59                      Comp. Date: 10/22/59  
TD: 3850                                  PBD:

Casing and Cementing Data:  
  Surf Csg: 8-5/8", C. S. @ 300', cmt to surf with 225 sx.  
  Prod Csg: 4-1/2", C. S. @ 3850', cmt to surf with 1800 sx.

Completion Record:  
  Initial Comp: Perf and frac Queen 36791-3766  
  Initial Potential: 294 BOPD, 60 BWPD

Workovers:

Present Well Class: Oil Well Langlie Mattix

*Area #51*

P.I. COMPLETION REPORT 30025 SEC 3 TWP 23S RGE 36E  
 NMEX LEA 1980 FN 1980 FE WELL CLASS  
 STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN

GACKLE ALBERT 11 SINGLAIR-STATE B  
 OPERATOR-----WELL NUMBER-LEASE NAME-----

OPER ELEVATIONS--DISTRICT/SURVEY-----FIELD/POOL/AREA--  
 1

COMMERCIAL ELEV-----LEASE NO-----API NUMBER-----  
 30-025- 09240-00

09/02/1960 09/17/1960 ROTARY OIL  
 SPUD DATA---COMP DATE--TYPE TOOL-----TYPE HC-----STATUS

3856  
 DRLR'S TD---LOG TD-PLUGBACK---OLD TD-FORMATION AT TD

CASING DATA

CSG 8 5/8 @ 313 W/ 250 4 1/2 @ 3856 W/ 1110 01 02

LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

INITIAL POTENTIAL

IPFD 7928 PD 24/64CK 024HRS  
 453QUEN PERF 3686- 3770  
 PERF 3686- 3718A 3726- 3730A 3736- 3744A 3748- 3754A  
 PERF 3764- 3770A  
 ACID 3686- 3770 500GALSA  
 FRAC 3686- 3770 29000GALS 27500LBS SAND  
 TP 670 CP 1025  
 LANGLEIE-MATTIX SEV RIV-QN 11 368600 51897A  
 GTY 33.0 GOR 1465 PRD 3825

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEP TH  
 DRLR 454ANDR 1334 454SALT 1425 453ITES 3094  
 DRLR 453SVRY 3295 453QUEN 3734  
 DRLR 454SALT 2950

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
 LOGS GRNL

*Area #50*

P.I. COMPLETION REPORT 30025 SEC 3 TWP 23S RGE 36E  
 NMEX LEA 1980 FN 1980 FM WELL CLASS  
 STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN

GACKLE ALBERT 10 SINGLAIR-STATE  
 OPERATOR-----WELL NUMBER-LEASE NAME-----

OPER ELEVATIONS--DISTRICT/SURVEY-----FIELD/POOL/AREA--  
 1

COMMERCIAL ELEV-----LEASE NO-----API NUMBER-----  
 30-025- 09241-00

10/03/1959 10/22/1959 ROTARY OIL  
 SPUD DATA---COMP DATE--TYPE TOOL-----TYPE HC-----STATUS

3850  
 DRLR'S TD---LOG TD-PLUGBACK---OLD TD-FORMATION AT TD

CASING DATA

CSG 8 5/8 @ 300 W/ 225 4 1/2 @ 3850 W/ 1800 01 02

LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

INITIAL POTENTIAL

IPFD 2948 PD 60BW 20/64CK 008HRS  
 453QUEN PERF 3691- 3765  
 PERF 3691- 3701A 3732- 3742A 3748- 3752A 3756- 3766A  
 PERF 3691- 3765 2250GALSA  
 ACID 3691- 3765 20000GALS 20000LBS SAND  
 FRAC 3691- 3765  
 TP 340 CP 880  
 LANGLEIE-MATTIX SEV RIV-QN 11 369100 51897A  
 GTY 35.0

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEP TH  
 LOG 454ANDR 1320 454SALT 1425 453ITES 3160  
 LOG 453SVRY 3346 453QUEN 3734  
 LOG 454SALT 3002

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
 LOGS GRNL

Well Name: Arco Seven Rivers Queen Unit #51  
(Albert Gackle Sinclair State B #11)  
Field: Langlie Mattix  
Location: 1980' FNL and 1980' FEL, Section 3, Unit Letter G, T23S,  
R36E, Lea County, New Mexico

Spud Date: 9/2/60                      Comp date: 9/17/60  
TD: 3856                                  PBD: 3825

Casing and Cementing Data:

Surf Csg: 8-5/8", C. S. @ 313', cmt to surf with 250 sx.

Prod Csg: 4-1/2", C. S. @ 3856', cmt to surf with 1110 sx

Completion Record:

Initial Comp: Queen perms 3686-3770 frac'ed

Initial Potential: 792 BOPD

Workovers:

Present Well Class: Water Injection Well Langlie Mattix

Well Name: Arco Seven Rivers Queen UT #52  
(Albert Gackle Sinclair State B12)  
Field: Langlie Mattix  
Location: 1980' FNL and 660' FEL, Section 3, Unit Letter H, T23S,  
R36E, Lea County, New Mexico

Spud Date: 9/14/60                      Comp. Date: 9/23/60  
TD: 3866                                  PBD: 3848

Casing and Cementing Data:

Surf Csg: 8-5/8", C. S. @ 270', cmt to surf with 200 sx

Prod Csg: 4-1/2", C. S. @ 3865', cmt with 1535 sx, cmt circ. to  
surf.

Completion Record:

Initial Comp: Perf Queen 3656-3692 and frac

Initial Potential: F300 BOPD

Workovers:

Present Well Class: Oil Well Langlie Mattix

W Aco #52

P.I. COMPLETION REPORT 30025 SEC 3 TWP 23S RGE 36E  
NMEX LEA 1650 FS 990 FE WELL CLASS D DG  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN  
TEXAS PACIFIC OIL CO 30 STATE A/C-1-A  
OPERATOR-----WELL NUMBER-LEASE NAME-----

OPER ELEVATIONS--DISTRICT/SURVEY-----JALMAT  
COMMERCIAL ELEV-----LEASE NO-----30-025-09238-00  
API NUMBER-----

09/29/1951 10/30/1951 ROTARY GAS  
SPUD DATA--COMP DATE--TYPE TOOL--TYPE HC--STATUS  
3624  
DRLR'S TD--LOG TD-PLUGBACK--OLD TD-FORMATION AT TD

CASING DATA  
CSG 9 5/8 @ 309 W/ 300 7 @ 2920 W/ 1500 01 02

LOCATION DESCRIPTION  
MEASURED FROM FULL SECTION

INITIAL POTENTIAL  
IPFG OPENHOLE 4500MCFD 2920-3624 024HRS  
JALMAT 11 2920GG 45982B

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEP TH  
SPL 454ANDR 1360 453TNSL 2885 453YTES 3011  
SPL 453SVRY 3203

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
GRNL

P.I. COMPLETION REPORT 30025 SEC 3 TWP 23S RGE 36E  
NMEX LEA 1980 FN 660 FE WELL CLASS D DO  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN  
GACKLE ALBERT 12 SINCLAIR-STATE B  
OPERATOR-----WELL NUMBER-LEASE NAME-----

OPER ELEVATIONS--DISTRICT/SURVEY-----LANGLIE-MATTIX SE  
COMMERCIAL ELEV-----LEASE NO-----30-025-09239-00  
API NUMBER-----

09/14/1960 09/23/1960 ROTARY OIL  
SPUD DATA--COMP DATE--TYPE TOOL--TYPE HC--STATUS  
3866  
DRLR'S TD--LOG TD-PLUGBACK--OLD TD-FORMATION AT TD

CASING DATA  
CSG 8 5/8 @ 270 W/ 200 4 1/2 @ 3865 W/ 1535 01 02

LOCATION DESCRIPTION  
MEASURED FROM FULL SECTION

INITIAL POTENTIAL  
IPFG 300B PD 20/64CK 024HRS  
453QUEN PERF 3656-3692  
PERF 3656-3662A 3678-3684A 3688-3692A  
ACID 3656-3692 500GALS  
FRAC 3656-3692 15000GALS 26000LBS SAND  
TP 300 CP 500  
LANGLIE-MATTIX SEV RIV-QN 11 365600 51897A  
GTY 36.0

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEP TH  
LOG 454ANDR 1348 454SALT 1518 453YTES 3014  
LOG 453SVRY 3230 453QUEN 3600  
LOG 454SALT 2893

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/  
LATL GR

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Area #4

COMPLETION REPORT 30025 SEC 3 TWP 23S RGE 36E  
NMEX LEA 1650 FN 990 FE WELL CLASS  
STATE-COUNTY-----FOOTAGE-----SPOT--INIT-FIN  
D DG

CLAY RG  
OPERATOR-----WELL NUMBER-LEASE NAME-----  
4 SINCLAIR-STATE

OPER ELEVATIONS--DISTRICT/SURVEY-----JALMAT  
FIELD/POOL AREA--

COMMERCIAL ELEV-----LEASE NO-----30-025-09247-00  
API NUMBER-----

11/03/1949 11/21/1949 ROTARY GAS  
SPUD DATE---COMP DATE---TYPE TOOL---TYPE HC---STATUS

3325  
DRLR'S TD---LOG TD-PLUGBACK---OLD TD-FORMATION AT TD

CASING DATA

CSG 8 5/8 @ 1257 W/ 225 5 1/2 @ 3045 W/ 550 01 02

LOCATION DESCRIPTION

MEASURED FROM FULL SECTION

INITIAL POTENTIAL

IPFG 5000MCFD 3045- 3325 024HRS

JALMAT OPENHOLE 11 3045GG 45982B

TYPE FORMATION DEPTH FORMATION DEPTH FORMATION DEPTH

SPL 453YTES 3080

LOGS AND SURVEYS/INTERVAL, TYPE, COMPANY/

LOGS GRNL

STATE "A" A/C-1 and A/C-3  
WELL HISTORIES

Wells within 1/2 mile of pilot area that  
do not penetrate the Langlie Mattix

State A Acct. 3 #1  
History

Location: 990' FNL and 990' FEL  
Sec 10 T-23-S R-36-E  
Lea County, New Mexico

Elevations: GL 3457 DF 3466

TD: 3168

Casing: Surface - 9-5/8" set at 312'  
Production - 7", 20# set at 2855 TOC at surface

Original Completion: 7-12-53 Sandfraced OH 2855-3168 (Tansill/Yates) w/3000  
gals. oil IP: Flow 8200 MCFPD thru 2" tbg. w/FTP of  
1060 psi.

Present Completion: Same as original

Workovers: 6/22/77 CO OH to 3165'. Acdz. w/500 gals 15% HCl. No increase  
in production. Test: 216 MCFPD

Cumulative production: 1128 MMCF (1/83)



State A Acct. 3 #2  
Well History

Location: 1650' FSL and 990' FEL  
Sec. 10 T-23-S, R-36-E  
Lea County, New Mexico

Elevations: GL 3447 DF 3455

TD: 3170

Casing: Surface 9-5/8" set at 329'  
Production: 7", 20# at 2847 TOC at surface

Original Completion: 8/12/53 IP: 5850 MCFPD thru 2" chk. w/1050 psi  
FTP. Completed in OH 2847-3170 (Tansill/Yates/Seven  
Rivers)

Present Completion: Same as original

Workovers: 10/12/73 Install pmp. unit.  
Before: No flow  
After: 255 MCF, 10 BW in 24 hrs.

Cumulative Production: 854 MMCF (1/83)

State A Acct. 3 #3  
Well History

Location: 1980' FSL and 660' FEL  
Sec. 10, T-23-S R-36-E  
Lea County, New Mexico

Elevations: GL 3453 DF 3464

TD: 8500' PBTD: 3803

Casing: 13-3/8" @ 341'  
8-5/8", 32# @ 3846 TOC @ 350' (est)

Original Completion: 8/5/59 Perf 3652, 3663, 3669, and 3677 (Queen). Frac  
w/10,000 gals. oil plus 10000 lbs. sand. IP: 11 B0,  
124 BW, and 2172 MCFG in 24 hrs. flowing thru 20/64" chk.  
w/FTP of 975 psi.

Present Completion: Same as original

Workovers: 8/29/66 Install pmp. unit due to flow ceasing.

Cumulative Production: 57529 B0 (1/82) 1075156 BW 276 MMCF

State A Acct. 3 #4  
Well History

Location: 660' FNL and 2310' FEL  
Sec. 10 T-23-S R-36-E  
Lea County, New Mexico

Elevations: GL 3469 DF 3479

TD: 3729

Casing: 9-5/8" @ 320'  
5½", 14# @ 3677 TOC @ 2380 (temp. log)

Original Completion: 3/4/60 OH 3677-3729. Vibra-frac 3686-94. Frac OH  
w/10000 gals oil plus 10000 lbs. sand. IP: Flow 86 B0,  
7 BW, 381 MCF in 8 hrs. on 20/64: chk. w/FTP of 650 psi.

Present Completion: Same as original

Workovers: None

Cumulative Production: (1/83) 11328 B0 35548 BW 226 MMCF

State A Acct. 3 #5  
Well History

Location: 1980' FNL and 2310' FEL  
Sec. 10 T-23-S R-36-E  
Lea County, New Mexico

Elevations: GL 3461 DF 3471

TD: 3698 PBTD: 3625

Casing: 8-5/8" @ 320  
5½", 14# @ 3638, cmt. w/250 sxs.

Original Completion: 5/29/60 OH 3638-3698 (Queen) Vibra-Frac 3682-86.  
Frac w/10000 gals. oil plus 10000 lbs. sand. IP:  
42 BO, 72 BW, 1475 MCF in 24 hrs. thru 20/64" chk. w/  
FTP of 800 psi.

Present Completion: Seven Rivers/Queen perfs 3502-3611.

Workovers: 5/26/71 set CIBP @ 3625'. Perf 3502,07,19,26,39,42,47,55,62,  
68,71,81,85,87,90,94,3603, and 11 (18 holes). Acdz. w/1500  
gals. 15%. Frac w/25000 gals. gelled brine plus 30000 lbs.  
20/40 sand. Test: 4 BO, 30 MCF, 147 BW in 24 hrs. pumping.

Cumulative Production: (1/83) 76 BO 2793 BW 872 MCF

State A Acct. 3 #6  
Well History

Location: 1980' FSL and 2310' FEL  
Sec. 10 T-23-S R-36-E  
Lea County, New Mexico

Elevations: GL 3435 DF 3445

TD: 3695 PBTD: 3610

Casing: 8-5/8" @ 300'  
5½", 14# @ 3621' TOC 2140 (temp. log)

Original Completion: 8/9/60 OH 3621-3695 (Queen) Vibra-Frac 3685-90'.  
Frac OH w/10000 gals. oil and 10000 lbs. sand.  
IP: 80 B0, 200 BW in 12 hrs. thru 24/64" chk.  
w/FTP 275 psi.

Present Completion: Seven Rivers/Queen perfs 3456-3602.

Workovers: 1/29/71 Set CIBP at 3610'. Perf Seven Rivers/Queen 3456,66,70,  
77,87,92,97,3508,14,29,38,46,53,62,66,72,80,83,94 and 3602  
(20 holes). Acdz. w/1500 gals. 15%. Frac w/25000 gals.  
gelled brine plus 30000 lbs. 20/40 sand. Test: 3 B0,  
211 MCF, 40 BW in 24 hrs. pumping.

Cumulative production: (1/83) 9073 B0 322208 BW 1062 MMCF

State A Acct. 3 #7  
Well History

Location: 1980' FNL and 660' FEL  
Sec. 10 T-23-S R-36-E  
Lea County, New Mexico

Elevations: GL 3468 DF 3479

TD: 3753 PBTD: 3670

Casing: 8-5/8" @ 347  
5½", 14# @ 3753 TOC 2650 (temp. log)

Original Completion: 9/25/62 Perf 3692, 3705, 10, 14, 23, and 31 (Queen) 1  
JSPF. Acdz. w/1000 gals. MA. Frac w/10000 gals oil plus  
10000 lbs. sand. IP: Flow 64 B0, 96 BW in 8 hrs. thru  
32/64" chk. w/FTP of 150 psi. GOR 422.

Present Completion: Seven Rivers/Queen perfs 3466-3638.

Workovers: 6/23/71 Set CIBP at 3670. Perf Seven Rivers/Queen 3466, 67, 72, 76,  
79, 84, 97, 3500, 06, 20, 27, 32, 43, 47, 57, 68, 75, 79, 86, 92, 3606, 16, 20, 24, 32,  
and 3638 (18 holes). Acdz. w/2000 gals. 15%. Frac w/30000 gals.  
gelled brine plus 35000 lbs. 20/40 sand. Test 3 B0, 924 MCF, 28 BW  
in 24 hrs. pumping.

Cumulative Production: (1/83) 11596 B0 37228 BW 1037 MMCF

State A Acct. 3 #8  
Well History

Location: 660' FSL and 660' FEL  
Sec. 10, T-23-S, R-36-E  
Lea County, New Mexico

Elevations: GL 3420 DF 3431

TD: 3725' PBSD: 3600

Casing: 8-5/8" @ 327  
5½", 14# @ 3725 TOC @ 2680 (temp. log)

Original Completion: 2/26/64 Perf Queen 3610,17,26,35,39,53 (6 holes).  
Acdz. w/1000 gals. MA. Frac w/10000 gals. oil plus  
1000 lbs. sand. IP: Flow 75 B0, 19 BW, 465 MCF in  
24 hrs. on 24/64" chk. w/FTP of 225 psi.

Present Completion: Queen perfs 3452-3573

Workovers: 1/4/67 CO and acdz. perfs 3610-3653 w/500 gals.

Before: No production

After: 2 B0, 24 BW, and 29 MCF in 24 hrs. on pmp.

11/17/72 Set CIBP @ 3600'. Perf Queen 3452,55,58,70,86,89,92,3508,16,27,  
30,45,53,62,68, and 73 (16 holes). Acdz. w/1750 gals 15%. Frac  
w/25000 gals gelled brine plus 29000 lbs. 20/40 and 1000 lbs.  
10/20 sand.

Before: Pmp. 1 B0, 8 BW, 124 MCF/day

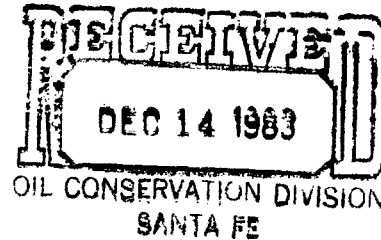
After: Pmp. 4 B0, 20 BW, 408 MCF/day

Cumulative Production: (1/83) 10690 B0, 43726 BW, 507 MMCF



December 9, 1983

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, NM 87501



**Sun Exploration and  
Production Company**  
No 24 Smith Road  
ClayDesta Plaza  
PO Box 1861  
Midland TX 79702-9970  
915 688 0300

ATTN: Gilbert Quiantana

RE: Exception to Rule 902 Ratable Take

Dear Mr. Quiantana:

Sun Exploration & Production Company request administrative approval for an exception to Rule 902 ratable take so El Paso Natural Gas Company can continue wells on 100% basis.

The following wells are "hardship" wells. We are unable to take annual gas well shut-in pressure test's as they load up and die.

B. A. Christmas No. 2, 2310' FSL and 330' FEL, Unit Letter "I", Sec. 28, T-22, R-36, Lea County, New Mexico

Mattie James No. 1, 1980' FNL and 1980' FEL, Unit Letter "G", Sec. 10, T-22-S, R-36-E, Lea County, New Mexico

Lynch Christmas Com. No. 5, 330' FSL and 330' FWL, Unit Letter "M", Sec. 1, T-22-S, R-37-E, Lea County, New Mexico

If you require further information, please contact me at (915) 688-0374.

Yours truly,

Dee Ann Kemp  
Senior Accounting Assistant

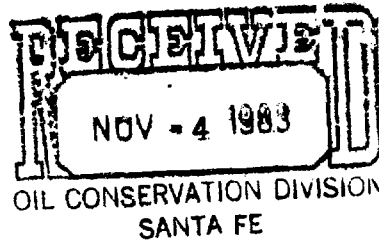
Copy to: State of New Mexico  
Oil Conservation Commission  
Hobbs, NM 88240  
ATTN: Jerry Sexton

xc: Ron Wingo - District Gas Coordinator  
Elmer Teel - Foreman  
Coby Osborne - Engineering  
Proration Clerk  
Well File  
El Paso Natural Gas Company

1F7/78 - (1)



OIL CONSERVATION DIVISION  
DISTRICT 1



OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

DATE October 28, 1983

RE: Proposed MC \_\_\_\_\_  
Proposed DHC \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed HSP \_\_\_\_\_  
Proposed SWD \_\_\_\_\_  
Proposed WFX X \_\_\_\_\_  
Proposed PHX \_\_\_\_\_

Gentlemen:

I have examined the application for the:

Sun Exploration & Production Co.      \*See Below

Operator      Lease and Well No.      Unit, S - T - R

and my recommendations are as follows:

O.K.----J.S.

\*State "A" A/C 1 #120, #119, #118, #117, State "A" A/C 1 & 3 Co-op #1, #2.

State "A" A/C 3 #10, State "A" A/C 3 Co-op #1

Yours very truly,

A handwritten signature in cursive script, appearing to read "Jerry L. Smith", written over a horizontal line.

/mc