

CAMPBELL & BLACK, P.A.
LAWYERS

JACK M. CAMPBELL
BRUCE D. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
MARK F. SHERIDAN
J. SCOTT HALL
JOHN H. BEMIS
WILLIAM P. SLATTERY
MARTE D. LIGHTSTONE
PATRICIA A. MATTHEWS

JEFFERSON PLACE
SUITE 1 - 110 NORTH GUADALUPE
POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87504-2208
TELEPHONE: (505) 988-4421
TELECOPIER: (505) 983-6043

May 17, 1989

Mr. Michael E. Stogner
Hearing Examiner
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
State Land Office Building
Santa Fe, New Mexico 87501

RECEIVED
MAY 17 1989
OIL CONSERVATION DIVISION

Re: Case 9646: Application of Sun Exploration and Production
Company for a Waterflood Project, Eddy County, New Mexico

Dear Mr. Stogner:

Pursuant to your directive at the April 12, 1989 hearing in the
above-referenced case, the following information is enclosed for
your consideration:

1. Calculations of the cement tops in the area of review
surrounding the proposed injection well;
2. Return receipts received from offsetting operators in the
area of review; and
3. Waiver letters from Meridian and Chevron (these owners
are more than one-half mile from the injection well but
offset the subject lease and were obtained pursuant to
your request. No waiver was obtained from Mobil for
their interests in this area have recently been acquired
by Sun).

Also enclosed is Sun's proposed Order.

If you need anything further from Sun to proceed with your
consideration of this application, please advise.

Very truly yours,


WILLIAM F. CARR
ATTORNEY FOR SUN EXPLORATION AND PRODUCTION COMPANY

WFC:mlh

Enclosures

cc w/enclosures: Charlie Gray
Chad Dickerson, Esq.



April 13, 1989

Chevron U.S.A. Inc.
P. O. Box 670
Hobbs, New Mexico 88240
Attn: R.C. Anderson

✓ Meridian Oil Inc.
#21 Desta Drive
Midland, Texas 79705
Attn: Bob Bradshaw

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

Mobil Producing Texas & New Mexico Inc.
P. O. Box 633
Environmental Regulatory Dept.
Midland, Texas 79702
Attn: M.E. Sweeney or T.L. Hill

RE: Offset Operators Notification
Signed Waiver Requested
Form C-108 Application for Authorization to Inject
Sun Exploration & Production Co.
Mobil 22 Federal Well No. 5
N, 990' FSL & 2310' FWL
Sec. 22, T-26-S, R-29-E
Brushy Draw-Delaware
Eddy County, New Mexico

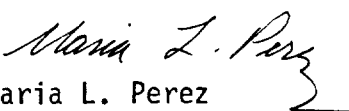
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Enclosed are copies of form C-108 application for authorization to inject and attachments. Because of the time that has already lapsed, we are requesting a signed waiver from the leasehold operators within one-half mile of the well location which were not notified on January 23, 1989.

If you have no objection to this application, please sign the waiver below and return to Sun Expl. & Prod. Co., P. O. Box 1861, Midland, Texas, 79702, Attention: Maria Perez, Proration Dept.

Yours truly,


Maria L. Perez
Accountant
A/C 914-688-0375

Date: April 14, 1989
Company Name: Meridian Oil Inc.

Signature: Dennis Sledge
Title: Area Land Manager



Sun Production
Operations Division
Southwestern District

SUN

April 13, 1989

Chevron U.S.A. Inc.
P. O. Box 670
Hobbs, New Mexico 88240
Attn: R.C. Anderson

Meridian Oil Inc.
#21 Desta Drive
Midland, Texas 79705
Attn: Bob Bradshaw

Sun Exploration and
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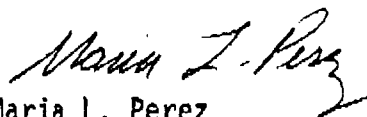
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Yours truly,


Maria L. Perez
Accountant
A/C 914-688-0375

Date: April 14, 1989
Company Name: Chevron U.S.A.

Signature: Alan W. Bohling
Title: Division Proration Engineer

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.	
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. <u>The return receipt fee will provide you the name of the person delivered to and the date of delivery.</u> For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.	
1. <input checked="" type="checkbox"/> Show to whom delivered, date, and addressee's address. ↑(Extra charge)↑	2. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑
3. Article Addressed to: J.C. Williams 390 One First City Center Midland, TX 79707	4. Article Number P 750494 749
	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 [®]
	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Addressee X [Signature]	8. Addressee's Address (<u><i>ONLY if requested and fee paid</i></u>) 500 W. Texas St #290
6. Signature — Agent X [Signature]	
7. Date of Delivery 1-24	

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. <u>The return receipt fee will provide you the name of the person delivered to and the date of delivery.</u> For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.	
1. <input checked="" type="checkbox"/> Show to whom delivered, date, and addressee's address. ↑(Extra charge)↑	2. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑
3. Article Addressed to: <div style="font-family: cursive; font-size: 1.2em; padding-top: 10px;"> Exxon Company Box 1600 Midland, Tx 79702-1600 </div>	4. Article Number <div style="font-family: cursive; font-size: 1.2em; padding-top: 10px;"> 975049474 </div>
Type of Service: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Express Mail </div> <div> <input type="checkbox"/> Insured <input type="checkbox"/> COD </div> </div>	
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature -- Addressee <div style="font-family: cursive; font-size: 1.2em; padding-top: 10px;"> X </div>	8. Addressee's Address (<i>ONLY if requested and fee paid</i>)
6. Signature -- Agent <div style="font-family: cursive; font-size: 1.2em; padding-top: 10px;"> X </div>	
7. Date of Delivery <div style="font-family: cursive; font-size: 1.2em; padding-top: 10px;"> 24 JAN 89 CEN </div>	

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<p>3. Article Addressed to:</p> <p>Mallow Oil Company 1099 13th Street Str. 2750 Denver CO 80202-1927</p>	<p>4. Article Number</p> <p>P 750 494 740</p> <p>Type of Service:</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail</p> <p>Always obtain signature of addressee or agent and <u>DATE DELIVERED.</u></p>
<p>5. Signature — Addressee</p> <p>X</p>	<p>8. Addressee's Address (ONLY if requested and fee paid)</p>
<p>6. Signature — Agent</p> <p>X <i>E. Kyle</i></p>	
<p>7. Date of Delivery</p> <p>1/25/89</p>	

PS Form 3811, Mar. 1987

★ U.S.G.P.O. 1987-178-268

DOMESTIC RETURN RECEIPT

<p>SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.</p> <p>Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. <u>The return receipt fee will provide you the name of the person delivered to and the date of delivery.</u> For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.</p> <p>1. <input checked="" type="checkbox"/> Show to whom delivered, date, and addressee's address. 2. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑</p>	
<p>3. Article Addressed to:</p> <p>Kogo Producing Co. Box 61289 600 Travis Station 6000 Houston, TX 77208-1289</p>	<p>4. Article Number</p> <p>P 750 494 739</p> <p>Type of Service:</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail</p> <p>Always obtain signature of addressee or agent and <u>DATE DELIVERED.</u></p>
<p>5. Signature — Addressee</p> <p>X</p>	<p>8. Addressee's Address (ONLY if requested and fee paid)</p>
<p>6. Signature — Agent</p> <p>X <i>E. Kane</i></p>	
<p>7. Date of Delivery</p> <p>JAN 26 1989</p>	

PS Form 3811, Mar. 1987

★ U.S.G.P.O. 1987-178-268

DOMESTIC RETURN RECEIPT

$$H_{\text{cmt}} = \frac{(\text{number of sx pumped})(\text{slurry volume})}{(\text{annular volume})} \times (\text{Field Factor})$$

annular volume = .1733 FT³/FT (5½" csg in 7-7/8" hole)

annular volume = .2278 FT³/FT (4½" csg in 7-7/8" hole)

Slurry volume = 1.32 FT³/SX (Class "C" Cmt)

H_{cmt} = column of cmt

Field Factor = 65% (Based on comparisons of
measured TOC (by TS) with
100% TOC calculations)

$$H_{\text{cmt}} = \frac{\# \text{ of sx } (1.32 \text{ FT}^3/\text{sx})}{(.1733 \text{ Ft}^3/\text{FT})} \times (65\%)$$

$$= (\# \text{ of sx})(4.95 \text{ FT/sx})$$

$$H_{\text{cmt}} = \frac{\# \text{ of sx } (1.32 \text{ FT}^3/\text{sx})}{.2278 \text{ FT}^3/\text{sx})} \times (65\%)$$

$$= (\# \text{ of sx})(3.76 \text{ FT/sx})$$

$$\text{Csg Seat} - H_{\text{cmt}} = \text{TOC}$$

LEASE NAME	HOLE SIZE	CSG SIZE	CSG SEAT	CMT(SX) USED	CALCULATED TOC
WORTH FEDERAL #1	7-7/8	5-1/2	5173	450	3250**
MOBIL -22- FEDERAL #1	7-7/8	5-1/2	6081	655	2900*
WORTH FEDERAL #2	7-7/8	5-1/2	5140	450	2912
MOBIL -22- FEDERAL #2	7-7/8	5-1/2	6048	675	2800*
MOBIL -22- FEDERAL #3	7-7/8	5-1/2	6170	790	3590*
MOBIL -22- FEDERAL #4	7-7/8	5-1/2	6179	775	2576**
WORTH FEDERAL #4	7-7/8	5-1/2	5147	350	3446*
WORTH FEDERAL #3	7-7/8	5-1/2	5110	350	3660*
MOBIL -22- FEDERAL #6	7-7/8	5-1/2	6213	950	1510
MOBIL -22- FEDERAL #9	7-7/8	5-1/2	6128	715	2588
MOBIL -22- FEDERAL #7	7-7/8	5-1/2	5174	200	4184
MOBIL -22- FEDERAL #8	7-7/8	5-1/2	5241	725	2674**
MOBIL -22- FEDERAL #10	7-7/8	5-1/2	6192	1815	2581*
AMOCO FEDERAL #6	7-7/8	4-1/2	5069	400	3562
AMOCO FEDERAL #7	7-7/8	5-1/2	5130	350	3397
AMOCO FEDERAL #8	7-7/8	5-1/2	5197	350	3464
PECOS FEDERAL #2	7-7/8	4-1/2	5509	3500	SURF
AMOCO FEDERAL #11	7-7/8	5-1/2	6199	725	2609
AMOCO FEDERAL #10	7-7/8	5-1/2	5067	480	2690

* TOC - Obtained from Temperature Survey

** TOC - Obtained from Cement Bond Log

BEFORE THE
OIL CONSERVATION DIVISION
NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

IN THE MATTER OF THE APPLICATION
OF SUN EXPLORATION AND PRODUCTION
COMPANY FOR A WATERFLOOD PROJECT,
EDDY COUNTY, NEW MEXICO.

CASE NO. 9646

ENTRY OF APPEARANCE

COMES NOW CAMPBELL & BLACK, P.A., and hereby enters its
appearance in the above referenced case on behalf of Sun
Exploration and Production Company.

Respectfully submitted,

CAMPBELL & BLACK, P.A.

By: 

WILLIAM F. CARR
Post Office Box 2208
Santa Fe, New Mexico 87504
Telephone: (505) 988-4421

RECEIVED

APR 10 1989

OIL CONSERVATION DIVISION

ATTORNEYS FOR SUN EXPLORATION
AND PRODUCTION COMPANY



April 13, 1989

**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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Attn: R.C. Anderson

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Attn: Bob Bradshaw

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Attn: M.E. Sweeney or T.L. Hill

RE: Offset Operators Notification
Signed Waiver Requested
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Mobil 22 Federal Well No. 5
N, 990' FSL & 2310' FWL
Sec. 22, T-26-S, R-29-E
Brushy Draw-Delaware
Eddy County, New Mexico

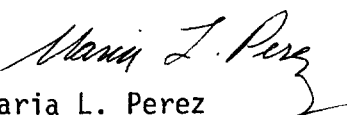
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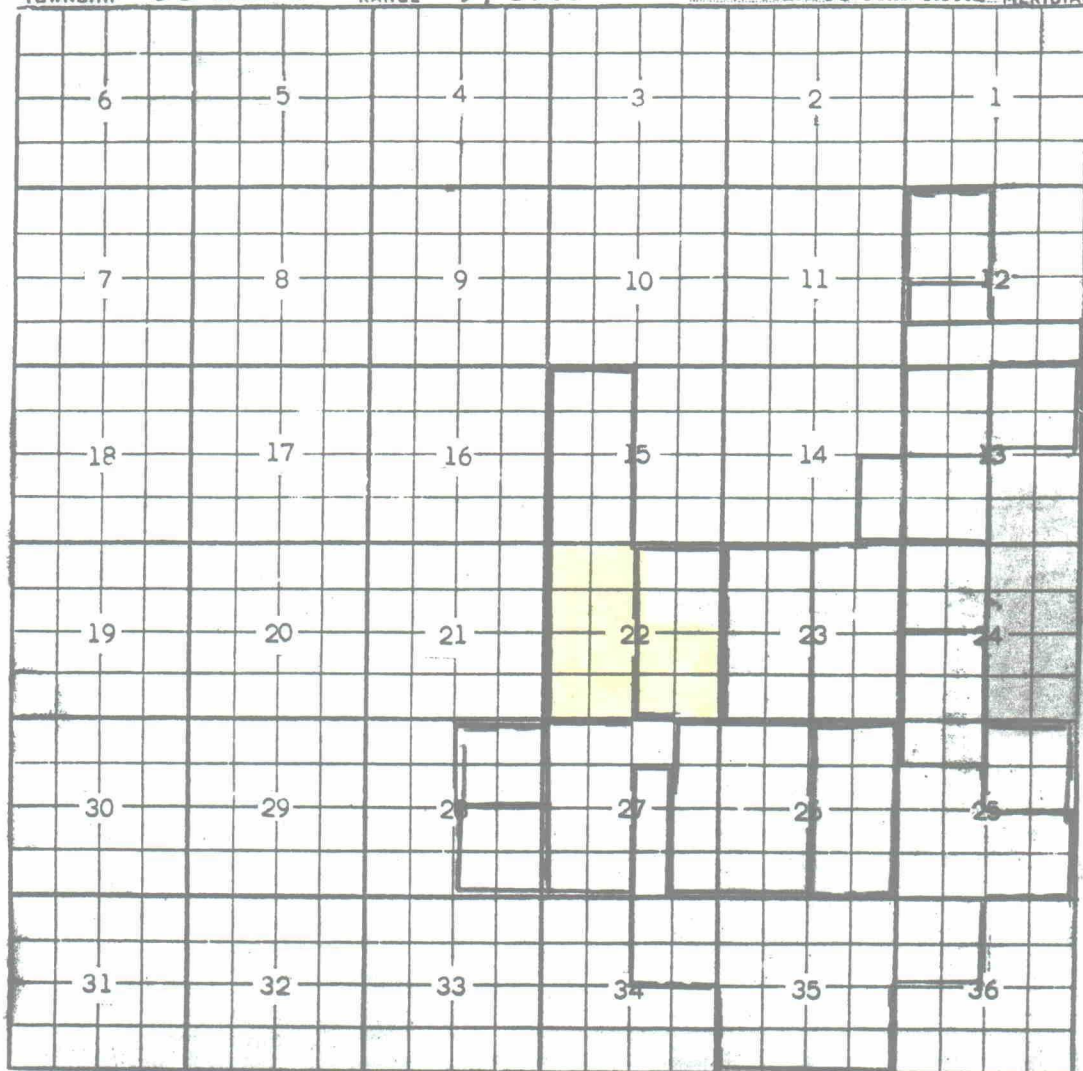
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Yours truly,


Maria L. Perez
Accountant
A/C 914-688-0375

Date: April 14, 1989
Company Name: Meridian Oil Inc.

Signature: Dennis Sledge
Title: Area Land Manager

County EddyPool Brushy Draw - DelawareTOWNSHIP 26 South RANGE 29 East NEW MEXICO PRINCIPAL MERIDIANDescription: SW 1/4 Sec. 13 (R-1355, 4-1-59)Ext: NW 1/4 Sec. 24 (R-1681, 6-1-60) - NW 1/4 Sec. 13 (R-1720, 8-1-60)- 3/2 S 1/2 Sec. 12 (R-1942, 5-1-61) - SW 1/4 Sec. 24, N 1/2 NW 1/4 Sec. 25 (R-2062, 10-1-61)- 1/2 1/4 Sec. 14 (R-2393, 1-1-63). Ext: E 1/2 sec 26 (R-6912, 3-5-82)Ext: 1/2, 1/2 NW 1/4 Sec. 25, SW 1/4 NE 1/4, W 1/2 SE 1/4 Sec. 27, NE 1/4 Sec. 34, All Sec. 35, NW 1/4 Sec. 36(A-7307, 6-11-83) Ext: E 1/2 Sec. 23 (R-7322, 8-1-83)Ext: W 1/2 Sec. 26, E 1/2 E 1/2 Sec. 27 (R-7334, 8-19-83)Ext: W 1/2 Sec. 23 (A-7668, 9-21-84) Ext: E 1/2 Sec. 22 (A-7758, 12-13-84)Ext: NW 1/4 NE 1/4 and W 1/2 Sec. 27 (R-7875, 4-11-85)Ext: W 1/2 Sec. 15, W 1/2 Sec. 22 (R-8065, 10-31-85)Ext: N 1/2 W 1/4 Sec. 12 (R-8229, 5-19-86) Ext: NE 1/4 Sec. 13 (R-8257, 7-8-86)Ext: NW 1/4 Sec. 12 (R-8562, 12-4-87) Ext: NE 1/4 Sec. 25, NE 1/4 Sec. 28 (R-8627, 4-1-88)Ext: SE 1/4 Sec. 28 (R-8747, 9-19-88)

COUNTY Eddy POOL Brushy Draw - Delaware

TOWNSHIP 26 South RANGE 30 East NMFM

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Ext: NW 1/4 Sec. 18 (R-8252, 2-8-86)



**Sun Exploration and
Production Company**

Four NorthPark East
5656 Blackwell
P O Box 2880
Dallas TX 75221-2880
214 890 6000

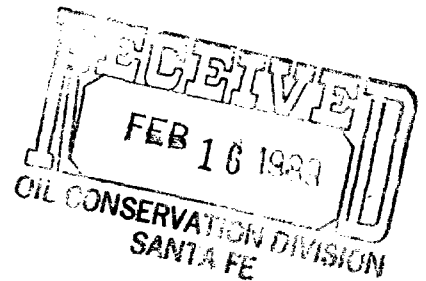
Case 9646

February 13, 1989

New Mexico Oil Conservation Commission
Room 206
310 Old Santa Fe Trail
Santa Fe, NM 87503

Attn: David R. Catanach
Commission Engineer

RE: Brushy Draw (Delaware) Pool
Mobil 22 Federal Lease Well No. 5
Section 22-T26S-R29E
Eddy County, New Mexico



Dear Mr. Catanach:

Sun Exploration and Production Company respectfully requests the Commission to set April 12th, 1989, as the date of hearing for our application to inject produced water into a zone productive of hydrocarbons.

Contrary to Mr. J. C. Williamson's letter to the Commission dated January 24, 1989, this application is for secondary recovery and not for salt water disposal.

Sun is of the opinion that significant additional reserves of hydrocarbons will be obtained by secondary recovery methods.

Please advise if this request is not acceptable to the Commission.

Respectfully submitted,

Charles A. Gray
Conservation Representative

CAG:vak

cc: NMOCC
324 West Main Street
P. O. Drawer DD
Artesia, NM 88210

J. C. Williamson
P. O. Box 16
Midland, TX 79701