Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

Oil Conservation Division
P. O. Box 2088
Sante Fe, New Mexico, 87501

9968

WATER DISPOSAL WELL
STATE SEC. 27 LEASE
WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

MobilExploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc. MPTM), respectfully requests authority to dispose of produced water into the Devonian formation in the subject well.

Conversion of this well to a water disposal well is necessary to economically dispose of lease and off lease water. The same water as permitted for disposal in the State Sec. 27 #2 will be disposed into the #1. The purpose for converting #1 is as back-up capacity to #2. Presently #1 is still P&A'd and we wish to permit the well before Mobil spends money to re-enter it.

The supporting information for this application is organized in accordance with Form C-108.

If any further information is needed concerning this application, please call J. W. Dixon at (915) 688-2452.

Yours very truly,

Guy D. Miller

G. N. Miller
Environmental, Regulatory,
& Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD/spb
attachments

cc: w/attachments
Offset Operators
Surface Owner
New Mexico State Land Office
District Director OCD - Hobbs

bcc: w/attachments
Central Files
Production Eng. Supv.-K. Walters
Reservoir Engr. supv.
Geoscience Supv.
Operations Supv. - R. P. Pratt

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Mobil Producing Texas & New Mexico, Inc.
Address: c/o Mobil Exploration & Producing U.S. Inc., P.O. Box 633, Midland, TX 79702
Contact party: J. W. Dixon Phone: (915) 688-2452

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 _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* 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: J. W. Dixon Title Env, Reg, Technician

Signature: J. W. Dixon Date: 5/8/90

* 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. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

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.

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.

STATE SEC. 27 #1 SWD PERMIT APPLICATION

C-108

I. Disposal

II. Mobil

III. A. 1. State Sec. 27 #1, 660' FNL & 1983' FEL, Sec. 27, T185, R35E

2. 13 3/8" csg @ 360' cmt w/350 sks of cmt, circ to surface
9 5/8" csg @ 3800' cmt w/3500 sks of cmt, circ to surface
7 5/8" csg @ 11,800' cmt w/1165 sks of cmt, TOC by temp survey @ 1715'
7 5/8" csg cmt @ 1689'

3. 3 1/2 or 4 1/2" Duolined tubing (fiberglass lining) set @ ± 11,750'

4. 7 5/8" permanent pkr + seal assembly set @ ± 11,750'

B. 1. Devonian, South Vacuum

2. Proposed, 11,800 - 13,970', open hole
Devonian Formation

3. Originally drilled as Devonian producer

4. Devonian perfs @ 11,650-668' squeezed w/150 sks

5. Bone Springs, ± 8850'

IV. Yes, Division order # R-8645 dated 5-5-88

V. See attached map, Exhibit "A"

VI. Application filed March 2, 1988 for disposal permit for State Sec. 27 #2

VII. 1. Average rate = 10,000 BWPD
Maximum rate = 20,000 BWPD

2. Closed system

3. Average injection pressure = 0 (operate on gravity feed)
Maximum injection pressure = 2390 psi

4. See attached Exhibit "B", plus chemical analysis of source water, statement from previous Reservoir Engineer

5. See attached Exhibit "C"

VIII. 1. Lithologic detail

a) Composition - Devonian, white to tan, medium to course crystalline with vuggy to cavernous porosity
b) Type structure - faulted anticline
c) Average porosity - 13%
d) Average permeability - 5 to 30 md

2. Geologic name - Devonian

3. Thickness - average, 500'

4. Average top of pay - 12,000'

5. Overlying fresh water zones, 10,000 ppm or less TDS:
a) Ogalalla @ 300'
b) Santa Rosa @ 1400'

6. There are no fresh water zones immediately underlying the injection zone.

IX. Acidize Devonian w/2,000 gal 15% HCL acid + 10,000 gal gelled 15% HCL acid + 6000 lbs graded rock salt. Maximum treating rate = 5 BPM, maximum treating pressure = 5000 psi. Flush treatment with 50 bbls biocide-treated fresh water.

X. Well will need to be deepened from present PBTD of 11,752' to proposed new TD of 13,970'.
At that time, open-hole logs will be run and filed with the OCD.

XI. See attached Exhibit "D"

XII. MPTM has examined the available geologic and engineering data and finds no evidence of open faults or other hydrological connection between the Devonian Formation and any underground source of drinking water.

XII. See attached Exhibits "E" and "F" for Proof of Notice

Also attached:
- Proposed sketch
- Map (Exhibit A) with 1/2 mile radius drawn

DATE 4-23-90 WELL NO. 1 LEASE State Section 27

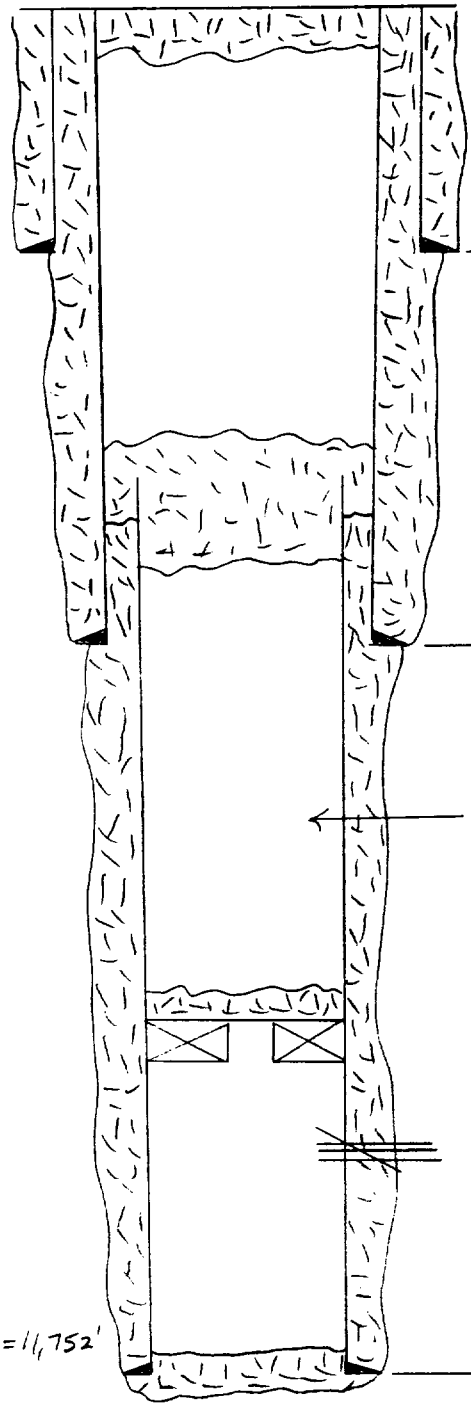
FIELD Vacuum Devonian South LOCATION 660' FNL & 1983' FEL Unit B Sec 27, T18S, R35E

Lea County, New Mexico

SIGNED D G Elwood

GL 3887'
DF 3895'
KB 3896'
ZERO KB (9' AGL)

PRESENT WELLBORE DIAGRAM



20 sk surface cmt plug, csg cut 3' below surface, P&A marker welded on

13 3/8" 48 lb/ft H-40 csg set to 360' w/ 350 sks, cmt circ (17" hole)

7 5/8" csg cut @ 1689', spot 30 sk cmt plug 1740 - 1638'

Primary TOC (9 5/8 - 7 5/8) @ 1715' (temp survey)

9 5/8" 36 lb/ft J-55 csg set to 3800' w/ 3500 sks, cmt circ (12 1/4" hole)

Wellbore loaded w/ mud

Cmt retainer set @ ± 11,260', squeezed perfs, left 2 bbls cmt on retainer (TOC @ ± 11,216')

Devonian Perfs

11,650 - 11,668', squeezed w/ 150 sks 4 SPF 72 holes

PBTD = 11,752'

7 5/8" 26.4, 29.7, & 33.7 lb/ft N-80 Buttress + X-line csg set to 11,800' w/ 1165 sks

TD: 11,800'
PBTD: 11,752'

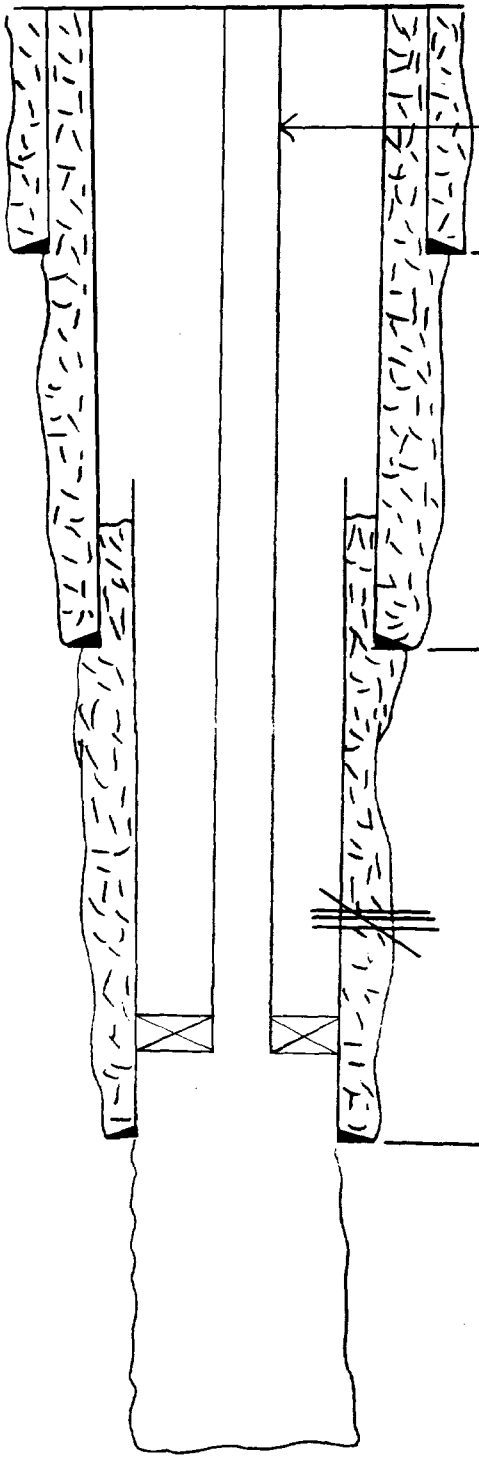
DATE 4-23-90 WELL NO. 1 LEASE State Section 27

FIELD Vacuum Devonian South LOCATION 660' FNL & 1983' FEL Unit B Sec 27, T18S, R3
Lea County, New Mexico

SIGNED D G Elwood

GL 3887'
DF 3895'
KB 3896'
ZERO KB (9' AGL)

PROPOSED WELLBORE DIAGRAM



3½" or 4½" N-80/K-55 Duolined tbg, pkr fluid on annulus

13⅜" 48 lb/ft H-40 csg set to 360' w/350 sks, cmt circ (17" hole)

7⅝" csg cut @ 1689'

Primary TOC (9⅝ - 7⅝) @ 1715' (temp survey)

9⅝" 36 lb/ft J-55 csg set to 3800' w/3500 sks, cmt circ (12¼" hole)

Devonian Perfs

11,650 - 11,668', squeezed w/150 sks cmt 4 SPF 72 holes

Permanent pkr set @ ± 11,750'

7⅝" 26.4, 29.7, & 33.7 lb/ft N-80 Buttress + X-line csg set to 11,800' w/1165 sks

Proposed Devonian Disposal Zone

OH 11,800 - 13,970'

Proposed TD: 13,970'

State of New Mexico

Commissioner of Public Lands

March 10, 1988

W.R. HUMPHRIES
COMMISSIONER

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

Mobil Exploration & Producing U.S., Inc.
P. O. Box 633
Midland, Texas 79702

Re: Water Disposal Well
State Section 27 Lease
Well No. 2
Vacuum Devonian,South Field
Lea County, New Mexico

Attn: Mr. C. A. Moore

Gentlemen:

In connection with the above application submitted to the Oil Conservation Division by Mobil's letter dated March 2, 1988, the Land Commissioner has no objections at this time as to the above application, but reserves the right to refuse to grant an easement if it would be detrimental to the Trust Lands.

Because an oil and gas lessee is entitled to dispose of the Salt Water produced exclusively from wells located on the leased premises, no salt water disposal easement will be needed; however, if any of the salt water to be injected is produced from wells outside of the leased lands, you must apply for a Salt Water Disposal Easement.

Very truly yours,

W. R. Humphries
Commissioner of Public Lands

By: Floyd O. Prando, Director
Oil and Gas Division
A/C 505-827-5744

Copies to:
T L Hill
W. Perry Baree
R C Pyer
A J Alcott
L. Farrar
L. Mlawczynski

WRH:FOP:cw

cc: Oil Conservation Division

RECEIVED
MAR 14 1988
ENV. & REG.

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FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

RECEIVED
JOINT INTEREST
DEC 18 1987
GSS RM
REP CR LB
VP FILE
XC
Orig to ME Sweeney

5A. Indicate Type of Lease: STATE [x] FEE [ ]

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [ ] RE-ENTRY [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: OIL WELL [ ] GAS WELL [ ] OTHER Disposal SINGLE ZONE [x] MULTIPLE ZONE [ ]

7. Unit Agreement Name

8. Farm or Lease Name: State Sec. 27

2. Name of Operator: Mobil Producing Texas & New Mexico, Inc. c/o Mobil Exploration & Producing U.S. Inc.

9. Well No.: 2

3. Address of Operator: P.O.Box 633, Midland, Tx. 79702

10. Field and Pool, or Wildcat: Vacuum Devonian South

4. Location of Well: UNIT LETTER H LOCATED 1980 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE OF SEC. 27 TWP. 18-S RGE. 35-E NMPM

12. County: Lea

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
13,708	Devonian	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
3887 GR	Blanket-on file	Unknown	As soon as possible

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17-1/2"	13-3/8"	48#	0-422'	465	Surf.(Calculation
12-1/4"	9-5/8"	36#	0-3900'	2270	380'
8-3/8"	7"	23#	3824-11,950	476	3850'

Subject well was originally drilled as a Devonian producer. After 9 years of declining production, it was P&A'd. We are requesting permission to re-enter and conduct an injectivity test as follows:

(1) See attached procedure
(2) Conduct injectivity test for a maximum of 5 days, injecting a maximum of 10,000 BWPD at a maximum of .2 psi per linear foot or 2390 psi.
(3) Submit formal disposal application if wellbore is suitable.

DRILLING PERMITS

1	SCOUTING
1	PROD. GEO. MGR.
1	RES. ENGR. MGR.
1	FLD. ENGR. SUPV.
1	CENTRAL FILES - MIDLAND
2	DRLG. SUPT.
1	DRLG. ENGR. SEC.
1	LAND MGR.
1	REG. ACCT. - HOUSTON
1	PRORATION ACCT. - HOUSTON
1	DIST. OP. MGR.
1	PROD. SUPV.
1	REGULATORY
1	PROPERTY TAX - DALLAS

12-22-87 George Huff Hobbs Buckeye

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed M E Sweeney Title Environmental & Regulatory Manager Date 12/15/87

Mobil Exploration & Producing U.S.Inc.as Agent for Mobil Producing Texas & New Mexico,Inc.

(This space for State Use)

ORIGINAL SIGNED BY JERRY SEXTON DISTRICT I SUPERVISOR

APPROVED BY ______ TITLE ______ DATE DEC 17 1987

CONDITIONS OF APPROVAL, IF ANY:

Subject to approval of authority to inject

Permit Expires 6 Months From Approval Date Unless Drilling Underway.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-102
Revised 10-1-78

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

Operator	Lease	Well No.
Mobil Producing Texas & New Mexico, Inc.	State Sec. 27	#2

Unit Letter	Section	Township	Range	County
H	27	T-18-S	R-35E	Lea

Actual Footage Location of Well:
1980' feet from the North line and 660' feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3887'	Devonian	South Vacuum	NA 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).

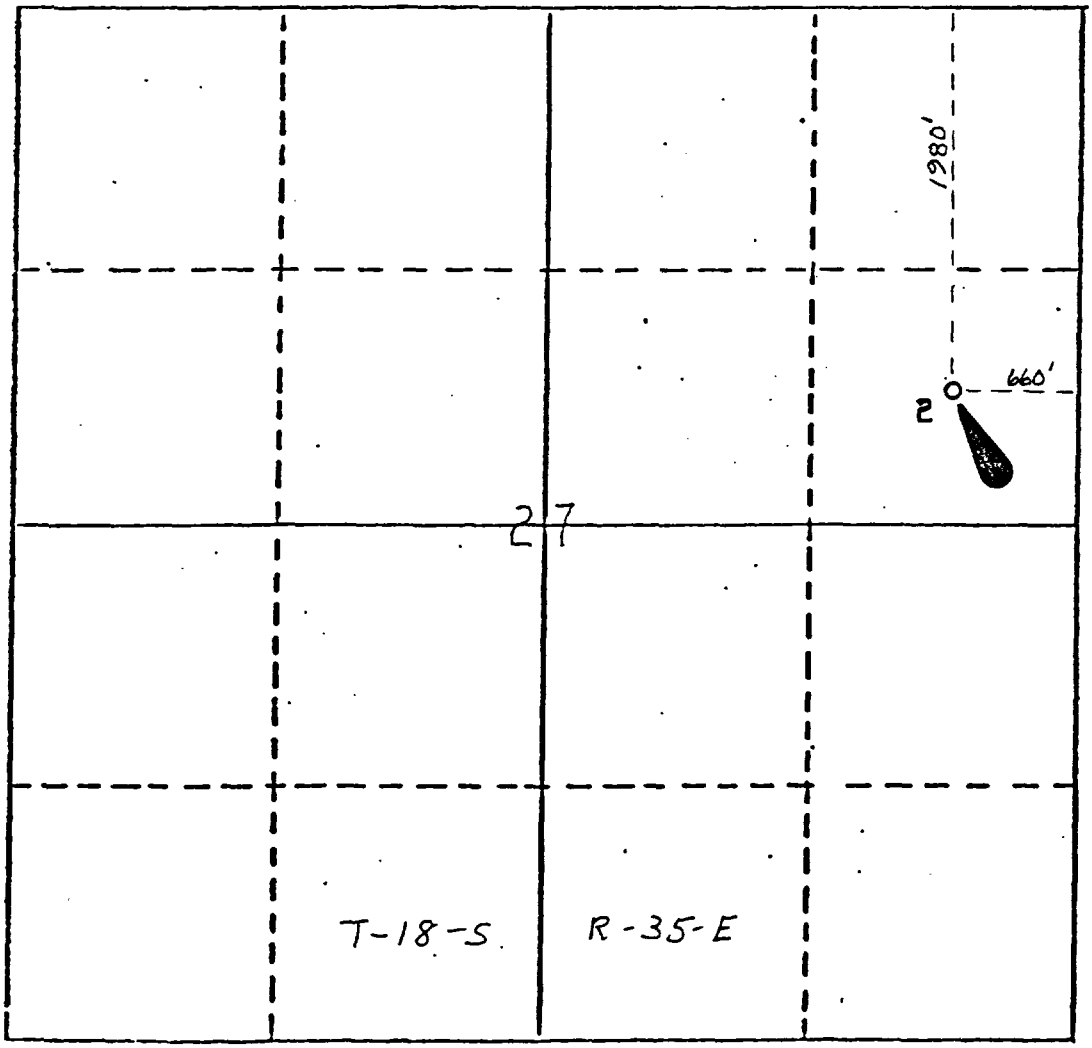
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ 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 Division.

There are no other wells in this quarter-quarter of the Section.



CERTIFICATION

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

Name M.E. Sweeney

Position Manager, Environmental & Regulatory

Company Mobil Exploration & Producing U.S. Inc. as Agent fo

Date Mobil Producing Texas & New Mexico, Inc. 12/15/87

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

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

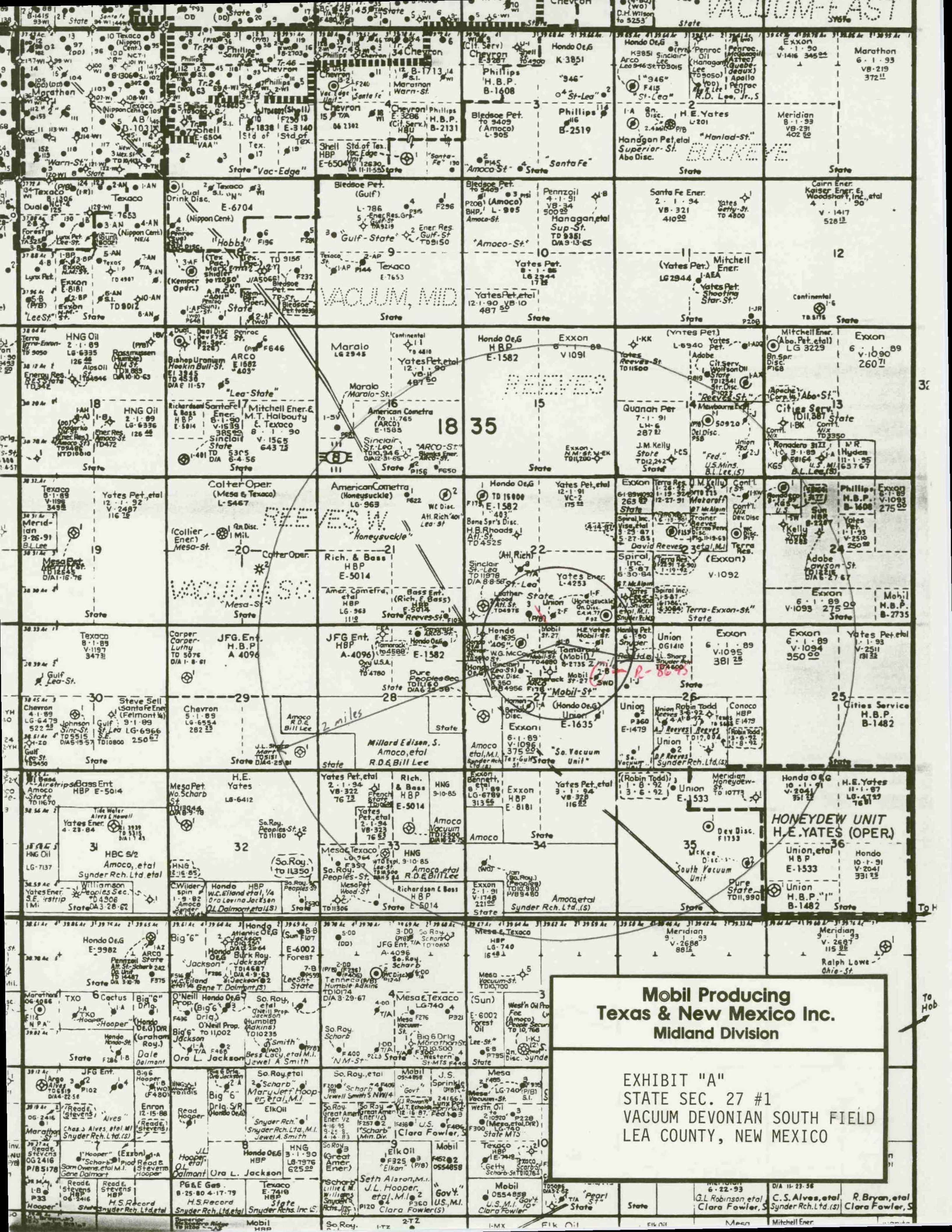

Mobil Producing
Texas & New Mexico Inc.
Midland Division
EXHIBIT "A"
STATE SEC. 27 #1
VACUUM DEVONIAN SOUTH FIELD
LEA COUNTY, NEW MEXICO
VACUUM-EAST
BUCKEYE
VACUUM, MID.
REEVES
REEVES W.
VACUUM SO.
HONEYDEW UNIT
H.E. YATES (OPER.)
18 35
2 miles
R-8695

Exhibit "B"

INTEROFFICE CORRESPONDENCE

DATE: Feb. 15, 1988

TO: Ann Moore CC:

With regards to the water capatability test conducted on fluids to be injected into the State 27 well #2 SWDW, the following statement can be made :

> A composite of produced water which represents the typical injection fluid consists of Abo (46%), San Andres (48%), Glorieta (2%), Pennsylvania (3%), and Blinebry (1%). This water was combined with Devonian produced water in varying amounts. In summary, the Devonian water alone, and mixtures of Devonian from 0 to 50% with the proposed injection fluid formed carbonate scale. Calcium sulfate becomes evident in the high percent composite range of 80 - 100%. Thus a scale prevention program is needed and chemical treatment of the well will be done as required to control both types of scale.

Ann, attached is a copy of the analysis performed by NL Treating Chemicals If you have any questions, please give me a call at ext. 2076.

Thanks

Jack Hamner
RM - 240
Project Reservoir Engineer

NL Treating Chemicals
NL Treating Chemicals/NL Industries, Inc.
P.O. Box 60020, Houston, Texas 77205
Tel. (713) 987-5400 Telex: 4620243 NLOS UI

Water Analysis Repc

SHEET NUMBER: 2

COMPANY: Mobil Producing Texas & New Mexico

DATE:

FIELD: Vacuum

COUNTY OR PARISH: Lea

STATE: New Mexico

LEASE OR UNIT: North Vacuum Abo ~~Bridges State Leases~~ Unit

SAMPLE SOURCE: #235

WATER SOURCE (FORMATION): Abo

DEPTH, FT.	BHT, °F	SAMPLE SOURCE	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY
			64			

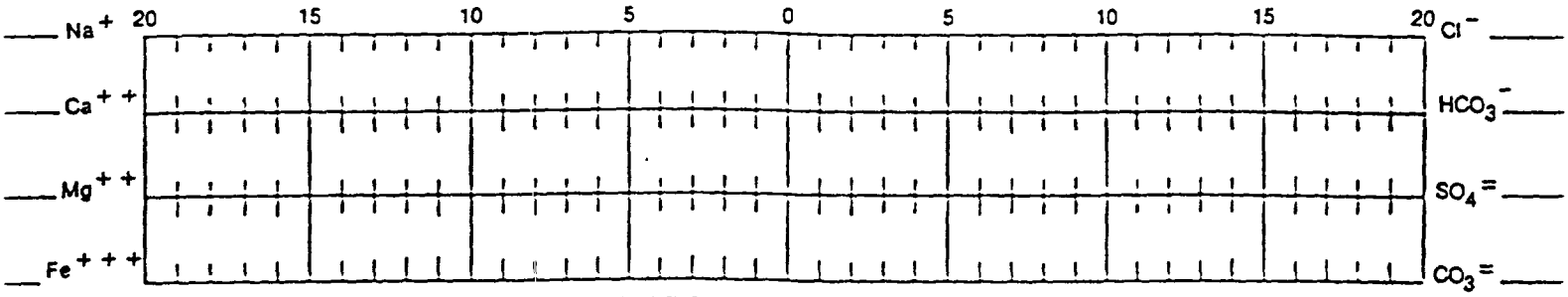
DATE SAMPLED: 12-16-87

TYPE OF WATER: ☐ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSAL

TYPE OF PRODUCTION: ☐ PRIMARY ☐ WATERFLOOD ☐ CO_2 FLOOD ☐ POLYMER FLOOD ☐ STEAMFLOOD

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	128	
Calcium, Ca^{++}	50	1,000
Magnesium, Mg^{++}	78	952
Iron (Total) Fe^{+++}		
Barium, Ba^{++}		
Sodium, Na^{+} (Calc.)	75.1	1,727
ANIONS		
Chloride, Cl^{-}	169.0	6,000
Sulfate, $SO_4^{=}$	30.7	1,475
Carbonate, $CO_3^{=}$		
Bicarbonate, HCO_3^{-}	3.4	207
Hydroxyl, OH^{-}		
Sulfide, $S^{=}$		

DISSOLVED GASES

Hydrogen Sulfide, H_2S		mg/l
Carbon Dioxide, CO_2		mg/l
Oxygen, O_2		mg/l

PHYSICAL PROPERTIES

pH (Field)	7.2	
Eh (Redox Potential)		MV
Specific Gravity		
Turbidity, FTU Units		
Total Dissolved Solids (Calc.)	11,361	mg/l
Stability Index @ 80 °F	+0.81	
@ 100 °F	+0.30	
@ 120 °F	+0.45	
$CaSO_4$ Solubility @ ____ °F		mg/l
@ ____ °F		mg/l
Max. $CaSO_4$ Possible (Calc.)		mg/l
Max. $BaSO_4$ Possible (Calc.)		mg/l
Residual Hydrocarbons		ppm(Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Calcium Sulfate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

TC ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
Dickerson/Slyker	821			

ALYZED BY | DATE | DISTRIBUTION ☐ CUSTOMER ☐ REGION ☐ DISTRICT

NL Treating Chemicals
NL Treating Chemicals/NL Industries, Inc.
P.O. Box 60020, Houston, Texas 77205
Tel. (713) 987-5400 Telex: 4620243 NLOS UI

Water Analysis Repc

SHEET NUMBER: 1

COMPANY: Mobil Producing Texas & New Mexico

DATE:

FIELD: Vacuum

COUNTY OR PARISH: Lea

STATE: New Mexico

LEASE OR UNIT: Bridges-State Leases

SAMPLE SOURCE: #193

WATER SOURCE (FORMATION): San Andres

DEPTH, FT.	BHT, °F	SAMPLE SOURCE	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY
			70			

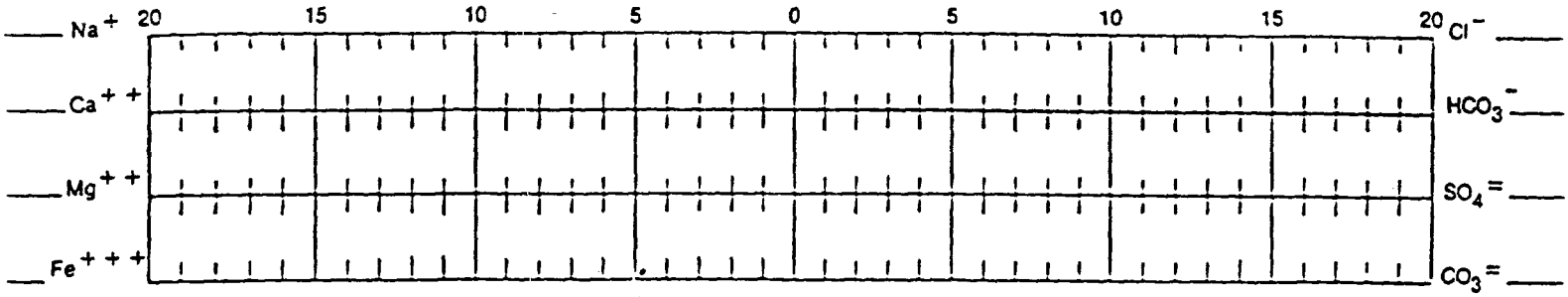
DATE SAMPLED: 12-16-87

TYPE OF WATER: ☐ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSAL

TYPE OF PRODUCTION: ☐ PRIMARY ☐ WATERFLOOD ☐ CO_2 FLOOD ☐ POLYMER FLOOD ☐ STEAMFLOOD

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	282	
Calcium, Ca^{++}	156	3,120
Magnesium, Mg^{++}	126	1,537
Iron (Total) Fe^{+++}		
Barium, Ba^{++}		
Sodium, Na^{+} (Calc.)	974.7	22,418
ANIONS		
Chloride, Cl^{-}	1,193.1	42,000
Sulfate, $SO_4^{=}$	57.3	2,750
Carbonate, $CO_3^{=}$		
Bicarbonate, HCO_3^{-}	12.2	744
Hydroxyl, OH^{-}		
Sulfide, $S^{=}$	4.1	65

DISSOLVED GASES

Hydrogen Sulfide, H_2S		mg/l
Carbon Dioxide, CO_2		mg/l
Oxygen, O_2		mg/l

PHYSICAL PROPERTIES

pH (Field)	6.63	
Eh (Redox Potential)		MV
Specific Gravity		
Turbidity, FTU Units		
Total Dissolved Solids (Calc.)	72,634	mg/l
Stability Index @ 80 °F	+0.21	
@ 100 °F	+0.35	
@ 120 °F	+0.52	
$CaSO_4$ Solubility @ ____ °F		mg/l
@ ____ °F		mg/l
Max. $CaSO_4$ Possible (Calc.)		mg/l
Max. $BaSO_4$ Possible (Calc.)		mg/l
Residual Hydrocarbons		ppm(Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Calcium Sulfate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

NL ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
Dickerson/Slyker	821			

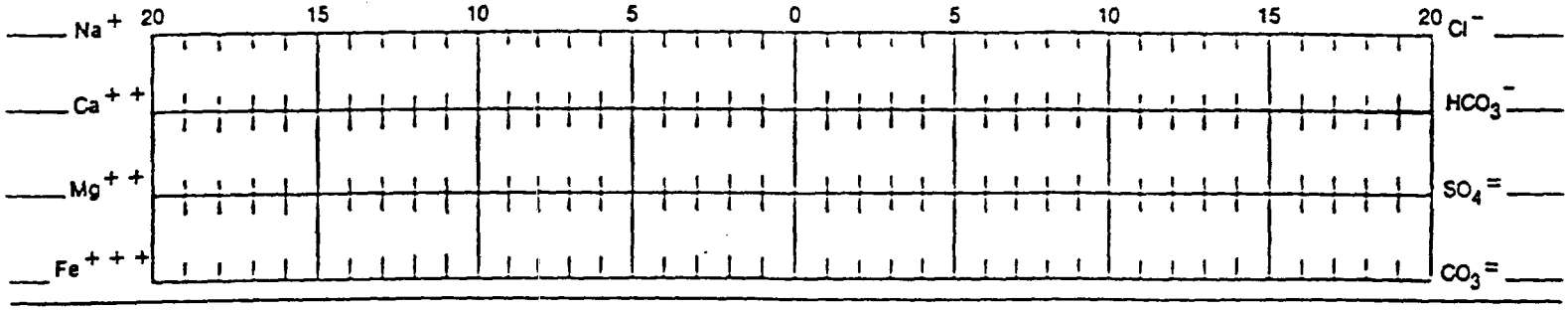
NL Treating Chemicals
NL Treating Chemicals/NL Industries, Inc.
P.O. Box 60020, Houston, Texas 77205
Tel. (713) 987-5400 Telex: 4620243 NLOS UI

Water Analysis Repo

			SHEET NUMBER: 3
COMPANY: Mobil Producing Texas & New Mexico			DATE:
FIELD: Vacuum	COUNTY OR PARISH: Lea		STATE: New Mexico
LEASE OR UNIT: Bridges-State Leases	SAMPLE SOURCE: #114		WATER SOURCE (FORMATION): Glorieta
DEPTH, FT.	BHT, °F	SAMPLE SOURCE	TEMP, °F: 53
WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
DATE SAMPLED: 12-16-87	TYPE OF WATER: ☐ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSAL		
	TYPE OF PRODUCTION: ☐ PRIMARY ☐ WATERFLOOD ☐ CO_2 FLOOD ☐ POLYMER FLOOD ☐ STEAMFLOOD		

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	276	
Calcium, Ca^{++}	188	3,760
Magnesium, Mg^{++}	88	107
Iron (Total) Fe^{+++}		
Barium, Ba^{++}		
Sodium, Na^{+} (Calc.)	3,698.9	85,075
ANIONS		
Chloride, Cl^{-}	3,915.5	139,000
Sulfate, $SO_4^{=}$	47.4	2,275
Carbonate, $CO_3^{=}$		
Bicarbonate, HCO_3^{-}	7.5	458
Hydroxyl, OH^{-}		
Sulfide, $S^{=}$	4.5	72

DISSOLVED GASES

Hydrogen Sulfide, H_2S	mg/l
Carbon Dioxide, CO_2	mg/l
Oxygen, O_2	mg/l

PHYSICAL PROPERTIES

pH (Field)	6.45
Eh (Redox Potential)	MV
Specific Gravity	
Turbidity, FTU Units	
Total Dissolved Solids (Calc.)	231,712 mg/l
Stability Index @ 80 °F	+0.77
@ 100 °F	+0.96
@ 120 °F	+1.21
$CaSO_4$ Solubility @ ____ °F	mg/l
@ ____ °F	mg/l
Max. $CaSO_4$ Possible (Calc.)	mg/l
Max. $BaSO_4$ Possible (Calc.)	mg/l
Residual Hydrocarbons	ppm(Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Calcium Sulfate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

TC ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
Dickerson/Slyker	821			
ALYZED BY	DATE	DISTRIBUTION ☐ CUSTOMER		

NL Treating Chemicals/NL Industries, Inc.
P.O. Box 60020, Houston, Texas 77205
Tel. (713) 987-5400 Telex: 4620243 NLOS UI

Water Analysis Repor

SHEET NUMBER: 5

COMPANY: Mobil Producing Texas & New Mexico

DATE:

IELD: Vacuum

COUNTY OR PARISH: Lea

STATE: New Mexico

EASE OR UNIT: Bridges-State Leases

SAMPLE SOURCE: #120

WATER SOURCE (FORMATION): Upper Penn

EPTH. FT.	EHT. °F	SAMPLE SOURCE	TEMP. °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY
			72			

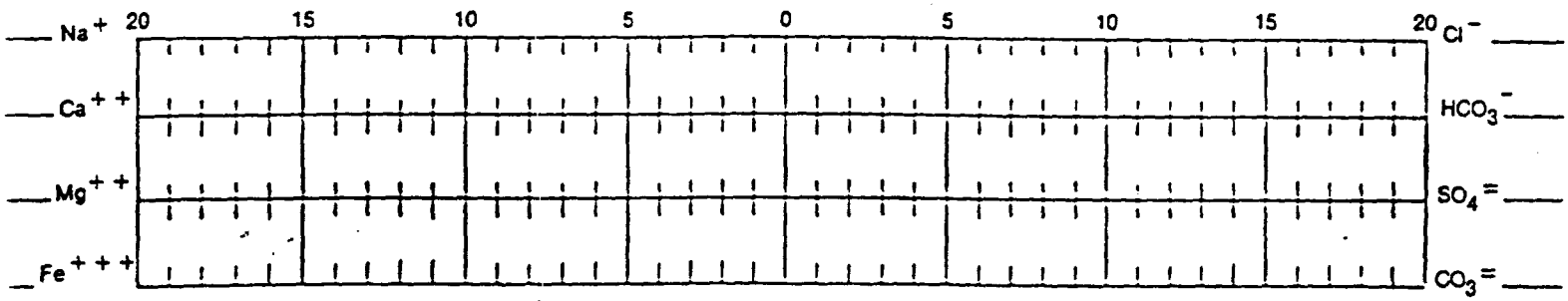
ATE SAMPLED: 12-16-87

TYPE OF WATER: ☐ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSAL

TYPE OF PRODUCTION: ☐ PRIMARY ☐ WATERFLOOD ☐ CO_2 FLOOD ☐ POLYMER FLOOD ☐ STEAMFLOOD

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l SCALE UNIT)



ISSOLVED SOLIDS

ATIONS	me/l	mg/l
tal Hardness	246	
alcium, Ca^{++}	132	2,640
agnesium, Mg^{++}	114	1,391
on (Total) Fe^{+++}		
rium, Ba^{++}		
dium, Na^{+} (Calc.)	2,197	50,531
IIONS		
loride, Cl^{-}	2,366.2	84,000
lfate, $SO_4^{=}$	46.4	3,225
rbonate, $CO_3^{=}$		
carbonate, HCO_3^{-}	12	732
droxyl, OH^{-}		
lfide, $S^{=}$	18.4	294

DISSOLVED GASES

Hydrogen Sulfide, H_2S		mg/l
Carbon Dioxide, CO_2		mg/l
Oxygen, O_2		mg/l

PHYSICAL PROPERTIES

pH (Field)	6.16	
Eh (Redox Potential)		MV
Specific Gravity		
Turbidity, FTU Units		
Total Dissolved Solics (Calc.)	141,813	mg/l
Stability Index @ 80°F	+0.13	
@ 100°F	+0.03	
@ 120°F	+0.22	
$CaSO_4$ Solubility @ °F		mg/l
@ °F		mg/l
Max. $CaSO_4$ Possible (Calc.)		mg/l
Max. $BaSO_4$ Possible (Calc.)		mg/l
Residual Hydrocarbons		ppm(Vol/Vol)

SPENDED SOLIDS (QUALITATIVE)

Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Calcium Sulfate ☐ Acid Insoluble ☐

MARKS AND RECOMMENDATIONS:

ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
ickerson/Slyker	821			

LYZED BY	DATE	DISTRIBUTION	☐ CUSTOMER	☐ REGION	☐ DISTRICT
	12/17/87		☐ NLTC SALES ENGINEER		

NL Treating Chemicals
NL Treating Chemicals/NL Industries, Inc.
P.O. Box 60020, Houston, Texas 77205
Tel. (713) 987-5400 Telex: 4620243 NLOS UI

Water Analysis Repo

SHEET NUMBER: 7

COMPANY: Mobil Producing Texas & New Mexico

DATE:

FIELD: Vacuum

COUNTY OR PARISH: Lea

STATE: New Mexico

LEASE OR UNIT: Bridges-State Leases

SAMPLE SOURCE: #165

WATER SOURCE (FORMATION): Middle Penn

DEPTH, FT.	BHT, °F	SAMPLE SOURCE	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY

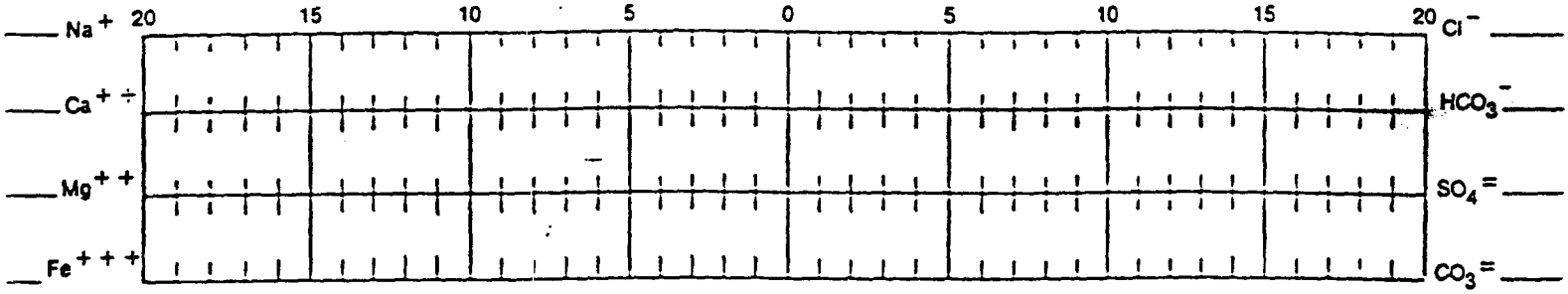
DATE SAMPLED: 12-16-87

TYPE OF WATER: ☐ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSAL

TYPE OF PRODUCTION: ☐ PRIMARY ☐ WATERFLOOD ☐ CO_2 FLOOD ☐ POLYMER FLOOD ☐ STEAMFLOOD

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	172	
Calcium, Ca^{++}	100	2,000
Magnesium, Mg^{++}	72	878
Iron (Total) Fe^{+++}		
Barium, Ba^{++}		
Sodium, Na^{+} (Calc.)		

ANIONS	me/l	mg/l
Chloride, Cl^-	647.9	23,000
Sulfate, $SO_4=$	33.9	1,625
Carbonate, $CO_3=$		
Bicarbonate, HCO_3^-		
Hydroxyl, OH^-		
Sulfide, $S=$		

DISSOLVED GASES

Hydrogen Sulfide, H_2S	mg/l
Carbon Dioxide, CO_2	mg/l
Oxygen, O_2	mg/l

PHYSICAL PROPERTIES

pH (Lab)	7.7
Eh (Redox Potential)	MV
Specific Gravity	
Turbidity, FTU Units	
Total Dissolved Solids (Calc.)	mg/l
Stability Index @ °F	
@ °F	
@ °F	
$CaSO_4$ Solubility @ °F	mg/l
@ °F	mg/l
Max. $CaSO_4$ Possible (Calc.)	mg/l
Max. $BaSO_4$ Possible (Calc.)	mg/l
Residual Hydrocarbons	ppm(Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Calcium Sulfate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

Note: Small sample of water obtained.

TC ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
Dickerson/Slyker	821			

ANALYZED BY: DATE: DISTRIBUTION: ☐ CUSTOMER ☐

NL Treating Chemicals
NL Treating Chemicals/NL Industries, Inc.
P.O. Box 60020, Houston, Texas 77205
Tel. (713) 987-5400 Telex: 4620243 NLOS UI

Water Analysis Repo

SHEET NUMBER: 4

COMPANY: Mobil Producing Texas & New Mexico

DATE:

FIELD: Vacuum

COUNTY OR PARISH: Lea

STATE: New Mexico

LEASE OR UNIT: Bridges-State Leases

SAMPLE SOURCE: #27

WATER SOURCE (FORMATION): Blinebry

DEPTH, FT.	BHT, °F	SAMPLE SOURCE	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY
			52			

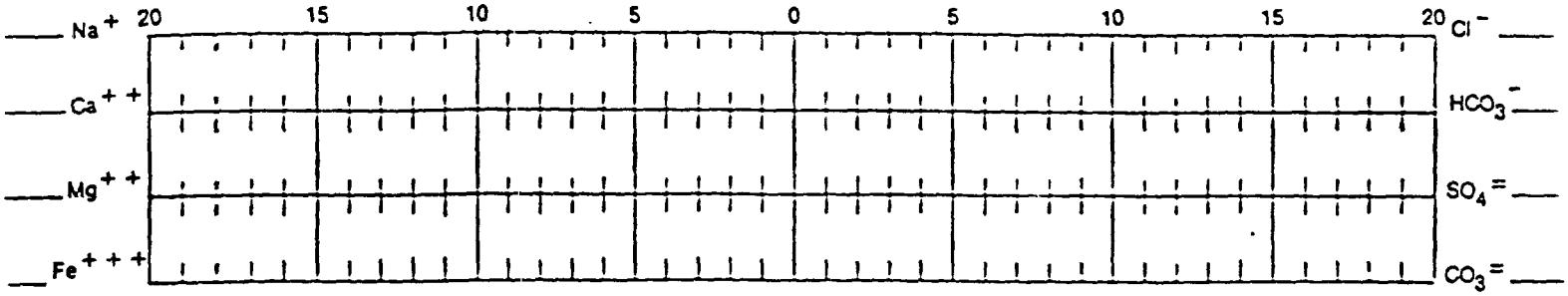
DATE SAMPLED: 12-16-87

TYPE OF WATER: ☐ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSAL

TYPE OF PRODUCTION: ☐ PRIMARY ☐ WATERFLOOD ☐ CO_2 FLOOD ☐ POLYMER FLOOD ☐ STEAMFLOOD

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	734	
Calcium, Ca^{++}	546	10,920
Magnesium, Mg^{++}	188	2,294
Fe^{+++}		
$+$		
Sodium, Na^{+} (Calc.)	2,665.7	61,311
ANIONS		
Chloride, Cl^{-}	3,352.1	119,000
Sulfate, $SO_4^{=}$	41.7	2,000
Carbonate, $CO_3^{=}$		
Bicarbonate, HCO_3^{-}	5.9	360
Hydroxyl, OH^{-}		
Sulfide, $S^{=}$		

DISSOLVED GASES

Hydrogen Sulfide, H_2S		mg/l
Carbon Dioxide, CO_2		mg/l
Oxygen, O_2		mg/l

PHYSICAL PROPERTIES

pH (Field)	7.05	
Eh (Redox Potential)		MV
Specific Gravity		
Turbidity, FTU Units		
Total Dissolved Solids (Calc.)	195,885	mg/l
Stability Index @ 80°F	+1.55	
@ 100°F	+1.74	
@ 120°F	+1.97	
$CaSO_4$ Solubility @ ____°F		mg/l
@ ____°F		mg/l
Max. $CaSO_4$ Possible (Calc.)		mg/l
Max. $BaSO_4$ Possible (Calc.)		mg/l
Residual Hydrocarbons		ppm(Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Calcium Sulfate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

TC ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
Dickerson/Slyker	821			

ANALYZED BY	DATE	DISTRIBUTION ☐ CUSTOMER	☐ REGION	☐ DISTRICT

Exhibit "C"

NL Treating Chemicals
A Division of EXXON CHEMICAL COMPANY

January 20, 1988

Mr. David Howell
Mobil Producing Texas & New Mexico
P. O. Box 1800
Hobbs, New Mexico 88240

Subject: Vacuum Area Waters - Compatibility Study with Devonian Brine

Dear Mr. Howell:

Appended are individual produced water analyses pertaining to those Mr. Dickerson and I took with you on December 16, 1987. Also included is the Union's Devonian water analysis.

A mixture of your produced water was made as follows:

Abo	46%
San Andres	48%
Glorieta	2%
Pennsylvania	3%
Blinebry	1%

That mixture was blended with Devonian water in 10% increments. Samples were placed in an oven for 5 days at 100°.

The "Compatibility" appendage describes how samples reacted. Brief general summary comments are these:

1. No major initial incompatibility was seen at the time of mixing.

2. Moderate calcium carbonate deposition was found in the Devonian by itself (100%).

3. Mixtures were stable and stayed clear in the 90%-60% Devonian range.

4. Calcium carbonate deposition was seen in all samples from 50% Devonian to 0% (or 100% composite produced water mixture).

5. Calcium sulfate deposition was observed in the 80%-100% composite produced water ratios.

In summary, the Devonian alone, and mixtures of Devonian from 50% to 0% formed carbonate scale. Calcium sulfate becomes a known in the high percent composite mixture range.

In other words, scale prevention treatment is advisable throughout most of the mixing range. One treatment can handle both kinds of scale.

We would be pleased to discuss this report with you at a mutually agreeable time.

Very truly yours,

Wayne Dickerson John V. Slyker

Wayne Dickerson
Sales Engineer

John V. Slyker
Sales Representative

/cg

cc: W. Reeves
D. Seale

NL Treating Chemicals/NL Industries, Inc.
P. O. Box 4305 Houston, Texas 77210

REPORT OF TEST

			SHEET NUMBER
COMPANY: Mobil Producing Texas & New Mexico			DATE: 12-16-87
FIELD OR PLANT: Vacuum Area Leases		COUNTY OR PARISH: Lea	STATE: New Mexico
LEASE OR UNIT	WELL(S) NAME & NO.	SAMPLE SOURCE: See Below	
TYPE SAMPLE		TYPE TEST: Compatibility of Devonian with Mix	

REASON FOR TEST: Possible Salt Water Disposal

RESULTS:

Compatibility Mixture %		Observations (100°F)	
Devonian	Composite Produced Waters	Initial Appearance	5 days
100	0	Clear	Moderate calcium carbonate Deposition
90	10	Clear	No deposition
80	20	Clear	No deposition
70	30	Clear	No deposition
60	40	Slightly hazy	No deposition
50	50	Slightly hazy	Moderate calcium carbonate deposition
40	60	Slightly hazy; slight gray cast	Slight calcium carbonate deposition
30	70	Slightly hazy, slight gray cast	Slight calcium carbonate deposition
20	80	Slightly hazy, slight gray cast	Moderate calcium sulfate & slight calcium carbonate depositions; slight iron compounds precipitated.
10	90	Slightly hazy; slight gray cast	Heavy calcium sulfate deposition; moderate calcium carbonate formed, + moderate iron compounds deposited.
0	100	Slightly hazy, slight gray cast	Heavy calcium sulfate deposited; moderate calcium carbonate precipitatic moderate amount of insoluble iron compounds formed

REMARKS & RECOMMENDATIONS:

Composite Produced Water Ratios

Source	Mixture %
Abo	46
San Andres	48
Glorieta	2
Pennsylvania	3
Blinebry	1

SALES ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE

Exhibit "D"

ILLEGIBLE 

EXHIBIT "E"

NEWSPAPER ADVERTISEMENT
WILL BE FORTHCOMING

MOBIL PRODUCING TEXAS & NEW MEXICO, INC.
STATE SEC. 27, WELL #1
SOUTH VACUUM (DEVONIAN) FIELD
LEA COUNTY, TEXAS

EXHIBIT "F"

OFFSET OPERATORS

Arco Oil & Gas Co.
P. O. Box 1710
1515 Caller Service
Hobbs, New Mexico 88240

Exxon Company, USA
P. O. Box 1600
Midland, Texas 79702

Hanley Petroleum
1500 Wilco Bldg.
Midland, Tx. 79702

Hondo Oil & Gas
P. O. Box 2819
Dallas, Tx.

UNOCAL Corporation
P. O. Box 671
Midland, Texas 79702

Yates Energy
Southwest Centre
Suite 1010
Roswell, N.M. 88201

SURFACE OWNER

Snyder Ranches, Inc.
P. O. Box 726
Lovington, New Mexico 88260

Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Arco Oil & Gas Co.
P. O. Box 1710
1515 Caller Service
Hobbs, New Mexico 88240

NOTICE OF APPLICATION FOR
WATER DISPOSAL WELL
STATE SEC. 27 LEASE, WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc., (MPTM), has made application to the Oil Conservation Division of New Mexico for authority to dispose of produced water into a reservoir not productive of oil or gas in the above captioned well.

A copy of this application is furnished to you for your information.

Yours very truly,

G. N. Miller
Environmental, Regulatory &
Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD:spb
attachments

xc: Oil Conservation Division

Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Hanley Petroleum
1500 Wilco Bldg.
Midland, Texas 79701

**NOTICE OF APPLICATION FOR
WATER DISPOSAL WELL
STATE SEC. 27 LEASE, WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO**

Gentlemen:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc., (MPTM), has made application to the Oil Conservation Division of New Mexico for authority to dispose of produced water into a reservoir not productive of oil or gas in the above captioned well.

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Yours very truly,

Guy D. Miller

G. N. Miller
Environmental, Regulatory &
Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD:spb
attachments

xc: Oil Conservation Division

Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

UNOCAL Corporation
P. O. Box 671
Midland, Texas 79702

NOTICE OF APPLICATION FOR
WATER DISPOSAL WELL
STATE SEC. 27 LEASE, WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc., (MPTM), has made application to the Oil Conservation Division of New Mexico for authority to dispose of produced water into a reservoir not productive of oil or gas in the above captioned well.

A copy of this application is furnished to you for your information.

Yours very truly,

Guy D. Miller

G. N. Miller
Environmental, Regulatory &
Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD:spb
attachments

xc: Oil Conservation Division

Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Exxon Company, USA
P. O. Box 1600
Midland, Texas 79702

**NOTICE OF APPLICATION FOR
WATER DISPOSAL WELL
STATE SEC. 27 LEASE, WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO**

Gentlemen:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc., (MPTM), has made application to the Oil Conservation Division of New Mexico for authority to dispose of produced water into a reservoir not productive of oil or gas in the above captioned well.

A copy of this application is furnished to you for your information.

Yours very truly,

Gary D. Miller

G. N. Miller
Environmental, Regulatory &
Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD:spb
attachments

xc: Oil Conservation Division

Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Hondo Oil & Gas
P. O. Box 2819
Dallas, Texas 75205

**NOTICE OF APPLICATION FOR
WATER DISPOSAL WELL
STATE SEC. 27 LEASE, WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO**

Gentlemen:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc., (MPTM), has made application to the Oil Conservation Division of New Mexico for authority to dispose of produced water into a reservoir not productive of oil or gas in the above captioned well.

A copy of this application is furnished to you for your information.

Yours very truly,

Gary D. Miller

G. N. Miller
Environmental, Regulatory &
Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD:spb
attachments

xc: Oil Conservation Division

Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Snyder Ranches, Inc.
P. O. Box 726
Lovington, New Mexico 88260

**NOTICE OF APPLICATION FOR
WATER DISPOSAL WELL
STATE SEC. 27 LEASE, WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO**

Gentlemen:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc., (MPTM), has made application to the Oil Conservation Division of New Mexico for authority to dispose of produced water into a reservoir not productive of oil or gas in the above captioned well.

A copy of this application is furnished to you for your information.

Yours very truly,

G. N. Miller
Environmental, Regulatory &
Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD:spb
attachments

xc: Oil Conservation Division

Mobil Exploration & Producing U.S. Inc.

May 22, 1990

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Yates Energy
Southwest Centre
Suite 1010
Midland, Texas 79701

NOTICE OF APPLICATION FOR
WATER DISPOSAL WELL
STATE SEC. 27 LEASE, WELL NO. 1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc., (MPTM), has made application to the Oil Conservation Division of New Mexico for authority to dispose of produced water into a reservoir not productive of oil or gas in the above captioned well.

A copy of this application is furnished to you for your information.

Yours very truly,

for Judy Dixon

G. N. Miller
Environmental, Regulatory &
Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing Texas & New Mexico, Inc.

JWD:spb
attachments

xc: Oil Conservation Division