

Mobil Exploration & Producing U.S. Inc.

October 16, 1998

P.O. BOX 633
MIDLAND, TEXAS 79702-0633

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

MIDLAND SITE
ENVIRONMENTAL, REGULATORY &
LOSS PREVENTION

Attention: Ben Stone

**Re: WATER DISPOSAL WELL
STATE SEC. 27 LEASE - WELL #1
VACUUM DEVONIAN, SOUTH FIELD
LEA COUNTY, NEW MEXICO**

Dear Mr. Stone:

Mobil Exploration & Producing U.S. Inc., as agent for Mobil Producing Texas & New Mexico, Inc. (MPTM), is hereby requesting the OCD to reissue authority to dispose of produced water into the Devonian formation in the subject well. The original Permit was approved in April, 1991 and authorized by R-9474

Conversion of this well to be 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 Plugged and Abandoned and we wish to permit the well before Mobil spends money to reenter 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 Shirley Houchins at (915) 688-2585.

Yours very truly,



Doug Fant
Environmental, Regulatory, & Loss Prevention Supervisor

Mobil Exploration & Producing U.S. Inc.
as agent for
Mobil Producing TX & NM, Inc.

sm
attachments

cc: w/attachments
Offset Operators
Surface Owner
New Mexico State Land Office
P. O. Box 1148, Santa Fe, NM 87501
District Director OCD - Hobbs



**Environmental
Awareness**

Surface Owners

New Mexico State Land Office
P. O. Box 1148
Santa Fe, NM 87501

Snyder Ranches, Inc.
P. O. Box 2158
Hobbs, NM 88240

Offset Operators

Tamarack Petroleum Co. Inc.
Attn: Judy Johnson
500 West Texas, Suite 1495
Midland, TX 79701

Capataz Operating Inc.
Attn: Davis Scott
P. O. Box 2083
Midland, Texas 79702-2083

Devon Energy Corp.
Attn: Steve Cromwell
20 N. Boradway, Suite 1500
Oklahoma City, OK 73102

Arco
Attn: Peggy Kerr
P. O. Box 1610
Midland, Tx 79702

Spirit Energy 76
P. O. Box 3100
Midland, TX 79702

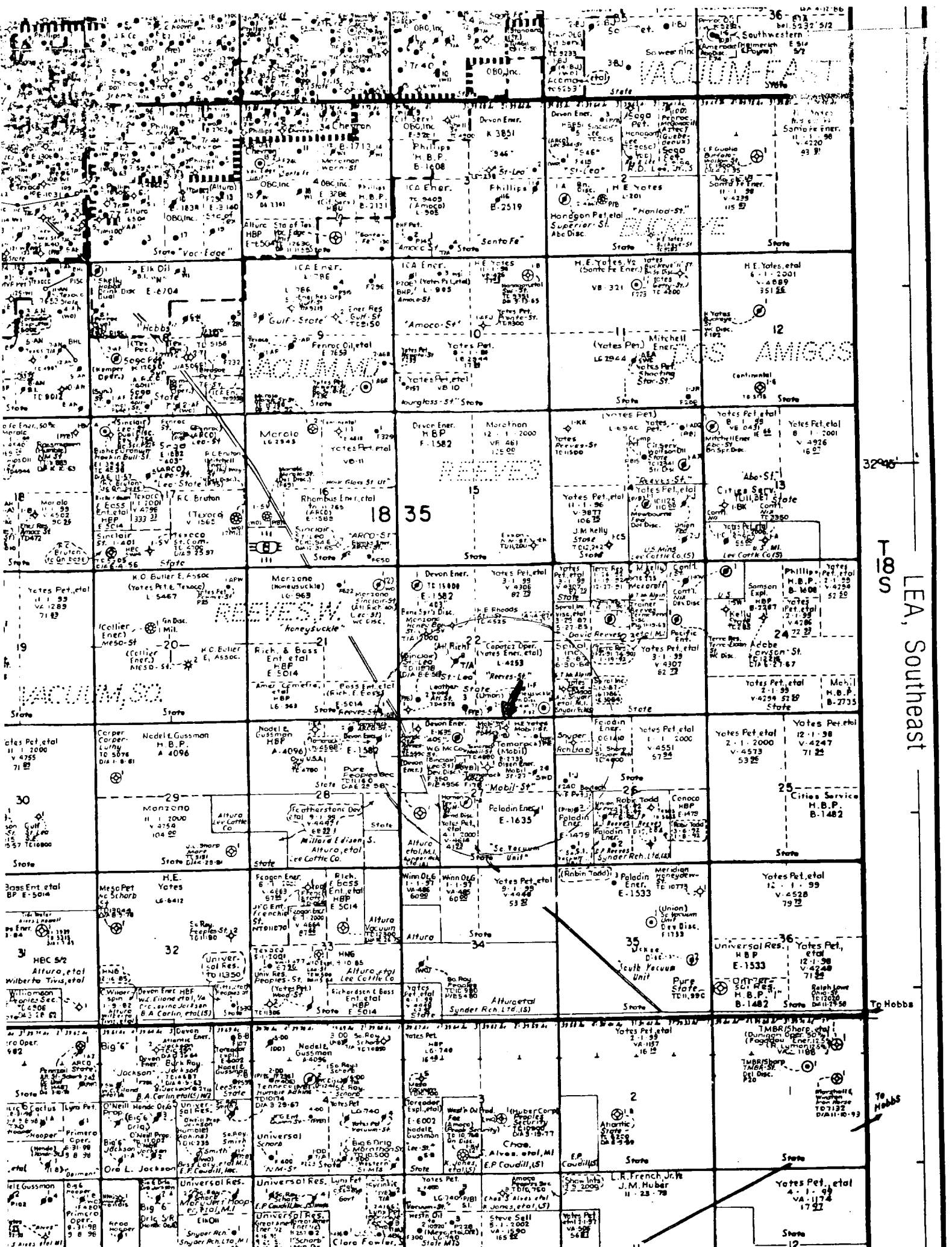
Yates Petroleum Corp.
Attn: Robert Bullock
105 South 4th Street
Artesia, NM 88210

Paladin Energy Corporation
10290 Monroe Drive
Dallas, TX 75229

Olsen Energy Incorporated
16414 San Pedro, Suite 470
San Antonio, TX 78232



**Environmental
Awareness**



LEA, Southeast

1895

To Hobbs

To Hobbs

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State "Vac-Edge"

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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, R3!
 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 BWP
Maximum rate = 20,000 BWP
 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 coarse 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 EPM, 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, T18:
Lea County, New Mexico

SIGNED D G Elwood

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

PROPOSED WELLBORE DIAGRAM

