

KELLAHIN, KELLAHIN and AUBREY

Attorneys at Law

W. Thomas Kellahin
Karen Aubrey

El Patio - 117 North Guadalupe
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Jason Kellahin
Of Counsel

Santa Fé, New Mexico 87504-2265

Fax: 505/982-2047

July 31, 1989

RECEIVED

AUG 1 1989

OIL CONSERVATION DIVISION

Mr. William J. LeMay
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Application of Devon Energy Corporation
for an Amendment to Order R-7926 to
Expand the Existing Etz Waterflood
Project, to Add Additional Injectors,
and to Change Operators, Grayburg
Jackson Pool, Eddy County, New Mexico

Case 9735

Dear Mr. LeMay:

On behalf of Devon Energy Corporation, please find enclosed a completed Division Form C-108 which constitutes our application to expand and modify the previously approved waterflood project referenced above.

I have enclosed a copy of Order R-7926 which was issued on May 20, 1985 to Texas American Oil Corporation.

Devon Energy Corporation is the successor to Texas American Oil Corporation. We desire to add two new injector wells as follows:

Etz "J" State Well No. 22
990' FSL and 2310' FEL
Section 16: T17S, R30E
Collier Federal No. 1 Well
660' FNL and 660' FEL
Section 17: T17S, R30E
Eddy County, New Mexico

Finally, we seek to make the waterflood project area conform to the unit boundary. You will note that we have included with this application our concurrent application for approval of the Etz State Unit.

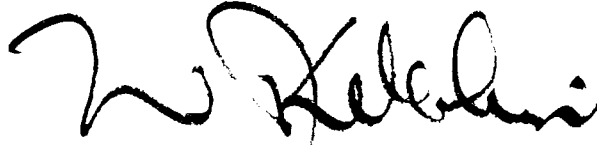
We would appreciate this application being set for hearing at the next available examiner's docket now scheduled for August 23, 1989.

KELLAHIN, KELLAHIN and AUBREY

Mr. William J. LeMay
Oil Conservation Division
July 31, 1989
Page Two

By copy of this letter to all parties, sent certified mail, return-receipt requested, we are notifying them that they have the right to appear at the hearing, to make a statement to the Division, to present evidence and cross-examine witnesses either in support of or in opposition to the application. Those parties are directed to contact the Division or the Applicant's attorney to determine what additional rights they may have.

Very truly yours,



W. Thomas Kellahin

WTK/rs
Encl.

cc: Mr. Carter Muire - Devon Energy Corporation

Certified Mail-Return Receipt Requested:

Anadarko Petroleum Company
Attn: Mr. Bill Griffin
Post Office Box 2497
400 West Illinois
Suite 1300
Midland, Texas 79702

Bearing Service & Supply Company
Attn: Mr. Loy G. Fletcher
Post Office Box 100
Artesia, New Mexico 88210

Bureau of Land Management
Attn: District Manager
Post Office Box 1397
Roswell, New Mexico 88201

Anne Burnett Testamentary Trust
c/o Burnett Oil Company
Attn: Mr. John McPhaul
801 Cherry Street
Fort Worth, Texas 76102

KELLAHIN, KELLAHIN and AUBREY

Mr. William J. LeMay
Oil Conservation Division
July 31, 1989
Page Three

Damson Oil Corporation
Attn: Mr. Charles Gleeson
Post Office Box 4391
Houston, Texas 77210

Hondo Oil and Gas Company
Attn: Mr. Gene Whitworth
Post Office Box 2208
Roswell, New Mexico 88202

C. E. LaRue & B. N. Muncy, Jr.
Post Office Box 470
Artesia, New Mexico 88210

Marbob Energy Corporation
Attn: Ms. Debra Rich
Post Office Drawer 217
Artesia, New Mexico 88210

Phillips Petroleum Company
Attn: Mr. David Brown
4001 Penbrook
Odessa, Texas 79762

Southland Royalty Company
Attn: Mr. Arden Walker
21 Desta Drive
Midland, Texas 79701

State of New Mexico
Attn: Director Oil & Gas Division
Division of State Lands Office
Post Office Box 1148
Santa Fe, New Mexico 87504-1148

Texaco, Inc.
Attn: Mr. S. L. Chandler
Box 3109
Midland, Texas 79702

DEVON
ENERGY
CORPORATION

1500 Mid-America Tower
20 North Broadway
Oklahoma City, Oklahoma 73102-8260

405/235-3611
TWX 910-831-3277

June 5, 1989

RECEIVED

JUN 07 '89

New Mexico Oil Conservation Division
P. O. Box 1148
Santa Fe, New Mexico 87504-1148

C. C. D.
ARTESIA, OFFICE

Attention: Director Oil and Gas Division

District Office New Mexico
Oil Conservation Division
811 South 1st Street
Artesia, New Mexico 88210

Re: Application for Authorization to
Inject, Form C-108
Etz "J" State Well No. 22
990' FSL & 2310' FEL
Section 16: T17S, R30E
Collier Federal No. 1 Well
660' FNL & 660' FEL
Section 17: T17S, R30E
Eddy County, New Mexico

Gentlemen:

Enclosed you will each find one original of the above described Form C-108 as application by Devon Energy Corporation (Nevada) to modify an existing Oil Conservation Division Order No. R-7926 issued in Case No. 8481 on February 13, 1985 to provide for water injection into the Grayburg formation in the two additional wells identified above.

You will additionally find copies of letters transmitting copies of this same Form C-108 application and related postal mailing receipts to Operators of all oil and gas leases within a one half mile radius of the locations of the above wells, and the State of New Mexico as Surface Owner under the Etz "J" well No. 22 well, and the United States Department of Interior, Bureau of Land Management as Surface owner under the Collier Federal No. 1 location. Upon receipt of receipts from the operators and surface owners we will supply you with copies of same.

If the above foregoing application is sufficient in form and information content, and the enclosures constitute sufficient proof of notice of mailing of copies of the application to parties entitled to notice of same, please advise Devon Energy of the date and time of hearing on this matter. If the above is not sufficient as to form and information content, please advise the undersigned at your earliest opportunity in order that we may correct the application or supply additional information as required. We remain available at your convenience to assist in any way in this process.

Yours very truly,

DEVON ENERGY CORPORATION (NEVADA)



Carter Muire
District Landman

CM/gc

cc: Ms. Karen Aubrey
Kellahin, Kellahin and Aubrey
P. O. Box 2265
Santa Fe, New Mexico 87504-2265

Case 9735

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Devon Energy Corporation (Nevada)
Address: 1500 Mid-America Tower, Oklahoma City, OK 73102
Contact party: J.M. Duckworth Phone: (405) 235-3611
- 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-7926
- 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:
- Proposed average and maximum daily rate and volume of fluids to be injected;
 - Whether the system is open or closed;
 - Proposed average and maximum injection pressure;
 - Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 - 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.

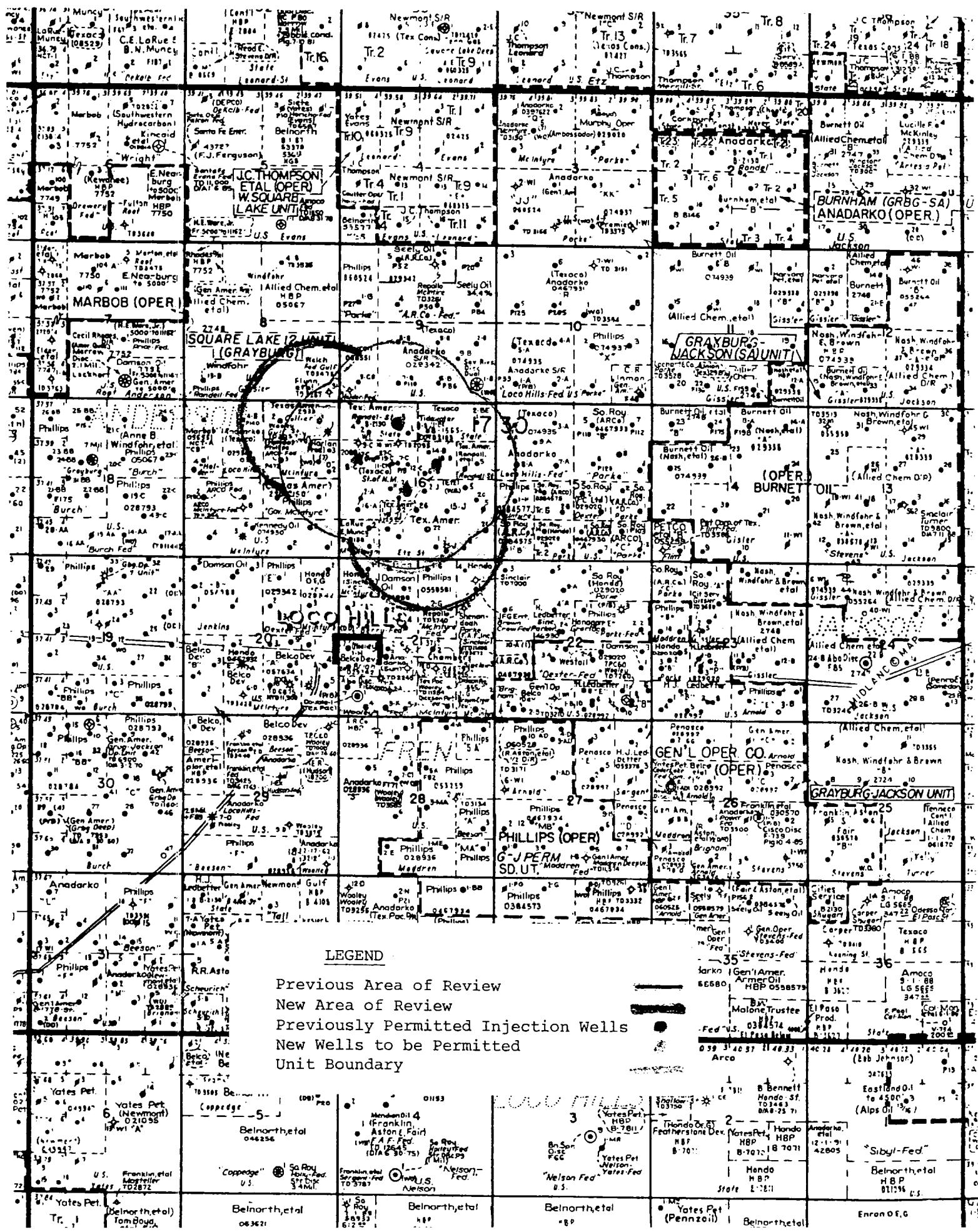
Name: J.M. Duckworth Title District Engineer

Signature:  Date: May 23, 1989

- * 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. Texas American Oil submitted data previously when obtaining

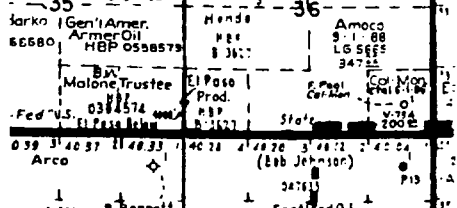
order number R-7926, May, 20, 1985, Case #8481

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



LEGEND

- Previous Area of Review
- New Area of Review
- Previously Permitted Injection Wells
- New Wells to be Permitted
- Unit Boundary



Devon Energy Corporation
Etz State Unit
Eddy County, New Mexico

C-108 Permit

Section VII

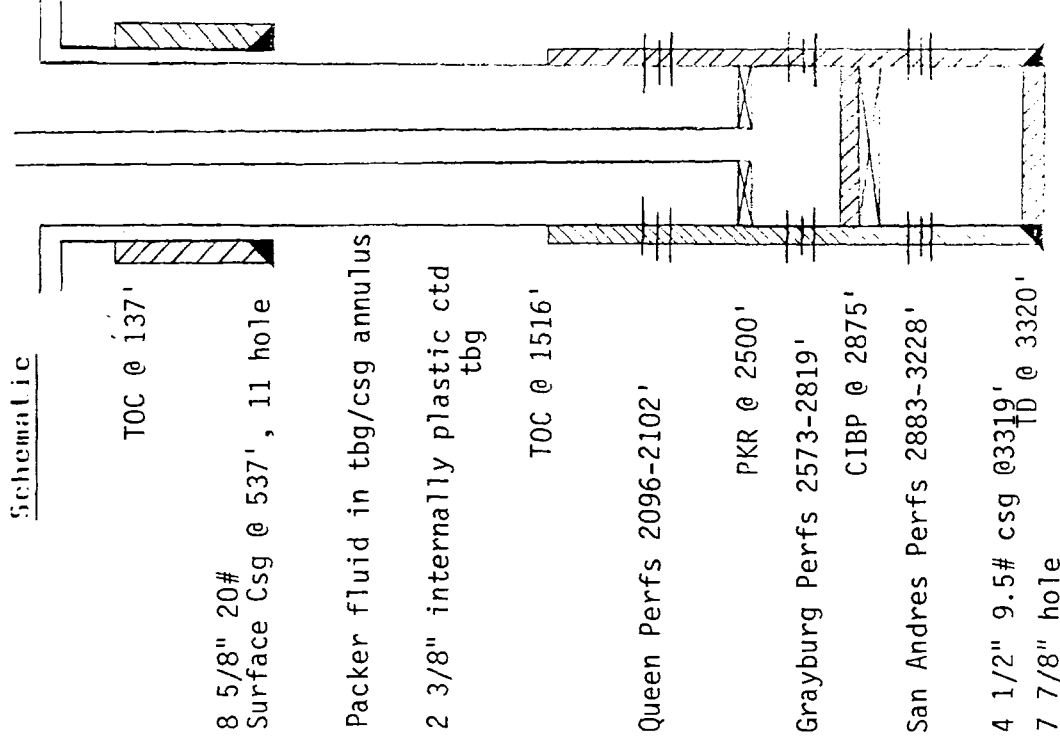
1. The proposed rates are as follows:
 - a. Proposed average daily injection rates:
 1. 1200 BWPD for the project
 2. 200 BWPD per well
 - b. Proposed maximum daily injection rates:
 1. 2400 BWPD for the project
 2. 400 BWPD per well
 - c. Proposed volumes:
 1. 36,000 bbls of water per month for the project
 2. 6,000 bbls of water per month per well

Note: All 'Project' rates and volumes include the two new injection wells sought by this permit, and the four injection wells previously permitted.
2. The system is a closed system.
3. The proposed injection pressures are as follows:
 - a. Maximum allowed pressure: 450 psi above unit average frac pressure, as determined by step rate tests on all unit injection wells. Please reference Anadarko's Ballard GSA Unit Waterflood Project, Case #9364, Order #R-7773-A, which concerns the same formation and field, and in which Devon Energy has a working interest. The four existing injection wells have an average frac point of 1142 psi wellhead pressure; therefore, the proposed maximum pressure is 1592 psi.
 - b. Proposed average injection pressure: 1142 psi.
4. Addressed by previous application. No change.
5. Not applicable.

SECTION III

OPERATOR LEASE
 Devon Energy Corporation Collier Federal
WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE
 #1 660' FNL & 660' FEL 17 17S 30E

Schematic



Tabular Data

Surface Casing
 Size 8 5/8" 20# @ 537' " Cemented with 110 sx.
 TOC 137 feet determined by calc., 30% excess
 Hole size 11"

Intermediate Casing
 Size N/A " Cemented with sx.
 TOC feet determined by
 Hole size

Long string
 Size 4 1/2" 9.5# @ 3319' cemented with 475 sx.
 TOC 1690' original/1516' feet determined by acoustic log / calc. 100% exc
 Hole size 7 7/8"
 Total depth 3320

Injection interval
 2573 feet to 2819 feet
 (perforated or open-hole, indicate which)

TOC @ 137'
 8 5/8" 20#
 Surface Csg @ 537', 11 hole

Packer fluid in tbg/csg annulus
 2 3/8" internally plastic ctd
 tbg

TOC @ 1516'

Queen Perfs 2096-2102'

PKR @ 2500'

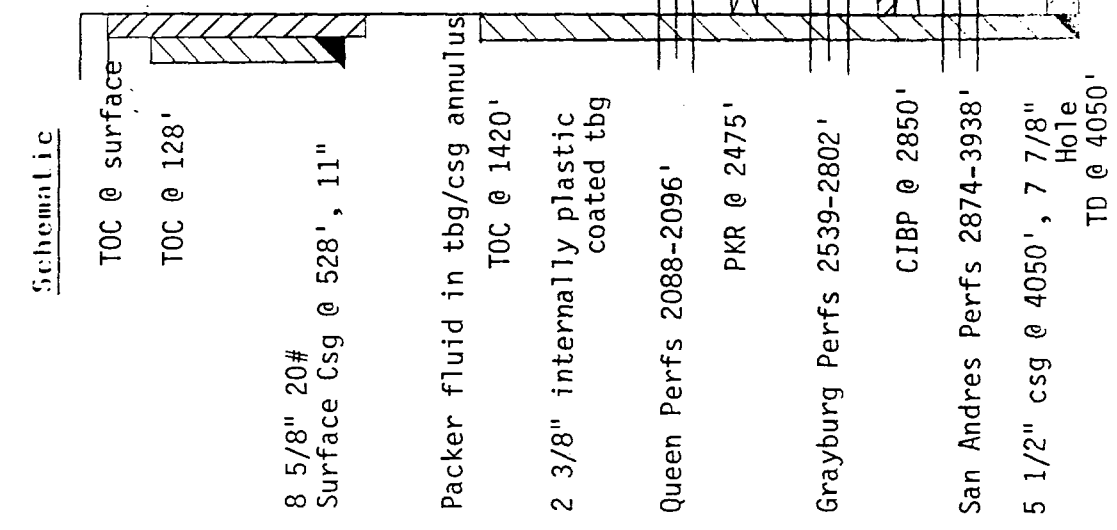
Grayburg Perfs 2573-2819'

CIBP @ 2875'

San Andres Perfs 2883-3228'

4 1/2" 9.5# csg @ 3319'
 TD @ 3320'
 7 7/8" hole

OPERATOR LEASE
 Devon Energy Corporation Etz 'J' State SECTION 16 TOWNSHIP 17S RANGE 30E
 Well No. FOOTAGE LOCATION
 #22 990' FSL & 2310' FEL



Schematic

TOC @ surface
 TOC @ 128'
 8 5/8" 20#
 Surface Csg @ 528', 11"
 Packer fluid in tbg/csg annulus
 TOC @ 1420'
 2 3/8" internally plastic
 coated tbg
 Queen Perfs 2088-2096'
 PKR @ 2475'
 Grayburg Perfs 2539-2802'
 CIBP @ 2850'
 San Andres Perfs 2874-3938'
 5 1/2" csg @ 4050', 7 7/8"
 Hole
 TD @ 4050'

Tabular Data

Surface Casing
 Size 8 5/8" 20# @ 528' " Cemented with 100 sx.
 TOC 128 feet determined by calc., 30% excess
 Hole size 11"
Intermediate Casing
 Size N/A " Cemented with sx.
 TOC feet determined by
 Hole size
Long string
 Size 5 1/2" 14 & 17# @ 4050' Cemented with 600 sx.
 100% original/surface feet determined by acoustic log/visual
 Hole size 7 7/8"
 Total depth 4050'
 Injection interval
 2539 feet to 2802 feet
 (perforated or open-hole, indicate which)

Sqz'd Queen @ 2088-2096
 with 150 sx. Sqz'd @ 535'
 & 183' with 150 sx. Cmt circ

SECTION V

SECTION VI

SECTION VI - FORM C-100, NEW METHOD OIL CONSERVATION DIVISION

INTERVAL OF INDUCTION: 2474-2772 FT. FROM TYPE LOG

WELL NAME & NUMBER	OPERATOR	LOCATION	STATUS	SPUD DATE	COMPLETION DATE	TD	PHD	CASING	L.D.C.	ZONE & PERMEATIONS	WELL SIZE
1 LOCO HILLS 'A' FEDERAL #8	ANADARKO	B SECTION 15-T178-R308, SW NW 1980' PHL & 660' FEL	INDUCTION	5-4-72	5-15-72	2846	2842	8 5/8" R 472 W/150 SX 5 1/2" R 2845 W/450 SX BRADEN HEAD 802, 300 SX	101, CALC	GRAYBORG: 2545-99, 2601-03, 2705-08, 2711-15, 2817-22	12.250 1.875
2 PARKER 'B' #1	SOUTHLAND ROYALTY	H SECTION 15-T178-R308, SW SW SW 330' PSL & 330' PHL	INACTIVE	2-2-38	UNKNOWN	3270	3165	9 5/8" R 523 W/50 SX 7" R 2943 W/100 SX 4 1/2" LINER 2750-3270 W/100 SX	342, CALC	GRAYBORG: 2810-2820	12.000 8.000
3 ETZ STATE #4	DEVON ENERGY	P SECTION 16-T178-R308, SW SW SW 330' PSL & 990' FEL	PRODUCING	10-13-37	1-5-38	3350	3350	8 1/4" R 480 W/25 SX 7" R 2550 W/50 SX	343, CALC	GRAYBORG & SAN ANDREAS OPEN HOLE FROM 2550 TO 3350	14.000 8.999
4 ETZ STATE #21	DEVON ENERGY	P SECTION 16-T178-R308, SW SW SW 990' PSL & 330' FEL	PRODUCING	10-25-72	11-18-72	4030	4011	8 5/8" R 543 W/100 SX 5 1/2" R 4089 W/600 SX	144, CALC	DOBBS: 2124-30 GRAYBORG: 2571-2756 SAN ANDREAS: 2807-3784	11.000 7.875
5 MCINTYRE 'D' #2	DEVON ENERGY	B SECTION 17-T178-R308, NW NW 2310' PHL & 330' FEL	PRODUCING	5-6-74	11-27-74	2830	2833	8 5/8" R 475 W/150 SX 4 1/2" R 2850 W/450 SX	109, CALC	DOBBS: 2071-78	10.000 8.000
6 LOCO HILLS 'B' FEDERAL #4	ANADARKO	C SECTION 17-T178-R308, NW NW 660' PHL & 1980' PHL	PRODUCING	6-6-72	6-24-72	3700	3693	8 5/8" R 478 W/150 SX 5 1/2" R 3699 W/850 SX	109, CALC	DOBBS: 2070-80 GRAYBORG: 2538-56, 2600-08, 2638-52, 2678-82, 2742-52 SAN ANDREAS: 3038-48, 3138-46, 3346-52, 3354-80, 3384-51, 3416-64	12.250 7.875
7 BROWN CROW FEDERAL #1	JFG SINTERBRISSES	A SECTION 21-T178-R308, 8/2 NW NW 990' PHL & 660' FEL	PRODUCING	5-7-85	6-3-85	3600	3592	8 5/8" R 474 W/430 SX 5 1/2" R 3595 W/925 SX	1035, LOG	SAN ANDREAS: 3265-49, 3288-95, 3308-26, 3370-74, 3484-3510	12.250 7.875
8 MCINTYRE 'E' #4	ANCO	A SECTION 21-T178-R308, NW NW NW 330' PHL & 990' FEL	PLUGGED	2-2-38	UNKNOWN	3265		9 5/8" R 520 W/50 SX 7" R 2918 W/100 SX	339, CALC	SAN ANDREAS: OPEN HOLE	12.000 8.000
9 MCINTYRE 'D' #11	SINCLAIR OIL & GAS	A SECTION 21-T178-R308, NW NW 660' PHL & 660' FEL	PLUGGED	12-9-60	1-12-61	7000		8 5/8" R 1240 W/400 SX	SURFACE, VIS		11.000

SECTION VI - FROM C-106, NEW METHOD OIL CONSERVATION DIVISION

INTERNAL OF INJECTION: 2474-2772 FT. FROM TYPE LOG

WELL NAME & NUMBER	OPERATOR	LOCATION	STATUS	SPUD DATE	COMPLETION DATE	TD	PROD	CASING	T.O.C.	ZONE & PENETRATIONS	POD SIZE
10 MCINTYRE 'C' FEDERAL #1	PHILLIPS	B SECTION 21-T7S-R30E, NW NW NE 330' PML & 2310' PBL	PRODUCING	UNKNOWN	UNKNOWN	2591	2591	8 5/8" # 528' W/7 SX 7" # 2526 W/7 SX	UNKNOWN	GRATINGS: OPEN HOLE 2526-2591	8.450
11 BERRY 'A' FEDERAL #1	DANSON	C SECTION 21-T7S-R30E, NW NE NW 330' PML & 1650' PML	PRODUCING	3-12-76	6-6-76	3170	3170	8 1/2" # 515 W/50 SX 7" # 2620 W/100 SX	1324, CALC	GRATINGS: OPEN HOLE 2870-3170	
12 BERRY 'A' FEDERAL #5	DANSON	C SECTION 21-T7S-R30E, SE NE NW 990' PML & 2200' PML	PRODUCING	6-14-80	8-5-80	3642	3613	8 5/8" # 516 W/250 SX 4 1/2" # 3642 W/475 SX 302' D W/6950 SX # 2108	SURFACE: VIS 1325, CALC	SAN ANDRAS: 2697-2920 3218-36, 3284-3321	12.250 1.675
13 MCINTYRE 'C' #1	HUMBU	D SECTION 21-T7S-R30E, NE NW NE 330' PML & 990' PML	PRODUCING	UNKNOWN	10-8-76	3218	3218	10" # 518 W/7 SX 7" # 2600 W/7 SX 302' D W/1700 SX # 1500'	SURFACE: VIS SURFACE: VIS	GRATINGS: OPEN HOLE 2800-3218	
14 MCINTYRE FEDERAL #2-6	PHILLIPS	G SECTION 21-T7S-R30E, NW SW NE 1650' PML & 2310' PBL	PRODUCING	5-29-72	6-20-72	3624	2600	8 5/8" # 560 W/100 SX 4 1/2" # 3625 W/500 SX 302' D W/150 SX	314, CALC 1396, CALC	SHEEN KIYKES: 1764-66, 1764-66 302' D OFF GRATINGS & SAN ANDRAS	12.250 1.675

McIntyre 'D' #11
Sinclair Oil & Gas Co.
'A' Section 21-T17S-R30E

660' FNL & 660' FEL

P&A'd 1-12-61

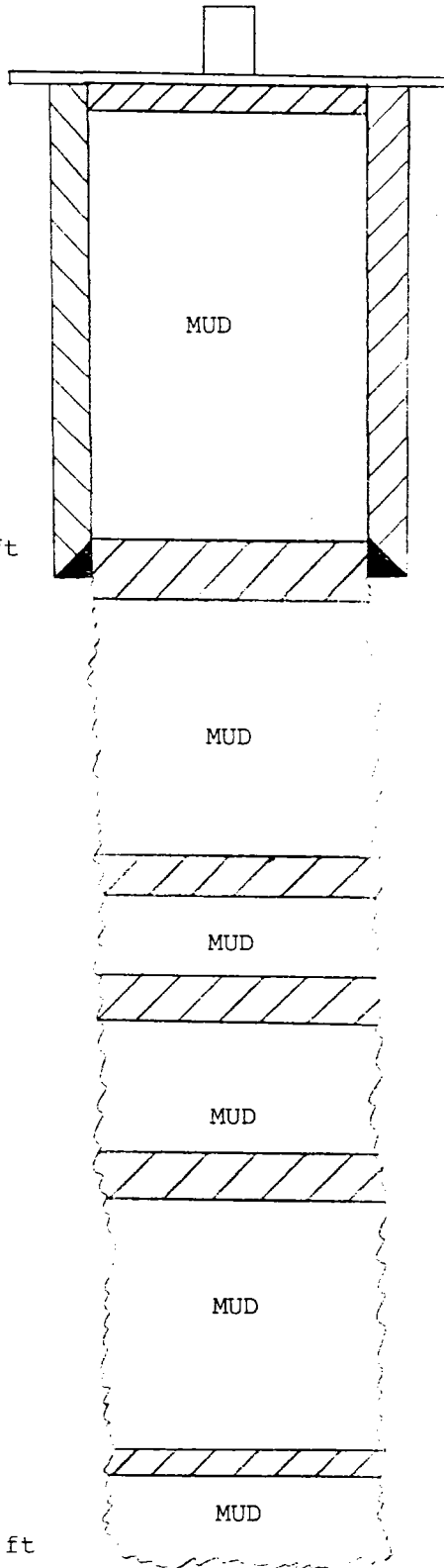
Dry Hole Marker

Cmt circulated on surface casing job

15 sx cmt plug at top

8 5/8" surface csg @ 1240 ft
cmt'd with 400 sx

31 sx plug from 1200 to
1300 ft, 100 ft plug



31 sx plug from 2100 to
2200 ft, 100 ft plug

31 sx plug from 2800 to
2900 ft, 100 ft plug

31 sx plug from 4300 to
4400 ft, 100 ft plug

31 sx plug from 6635 to
6735 ft, 100 ft plug

TD @ 7000 ft

McIntyre 'E' #4
ARCO
'A' Section 21-T17S-R30E

330' FNL & 990' FEL

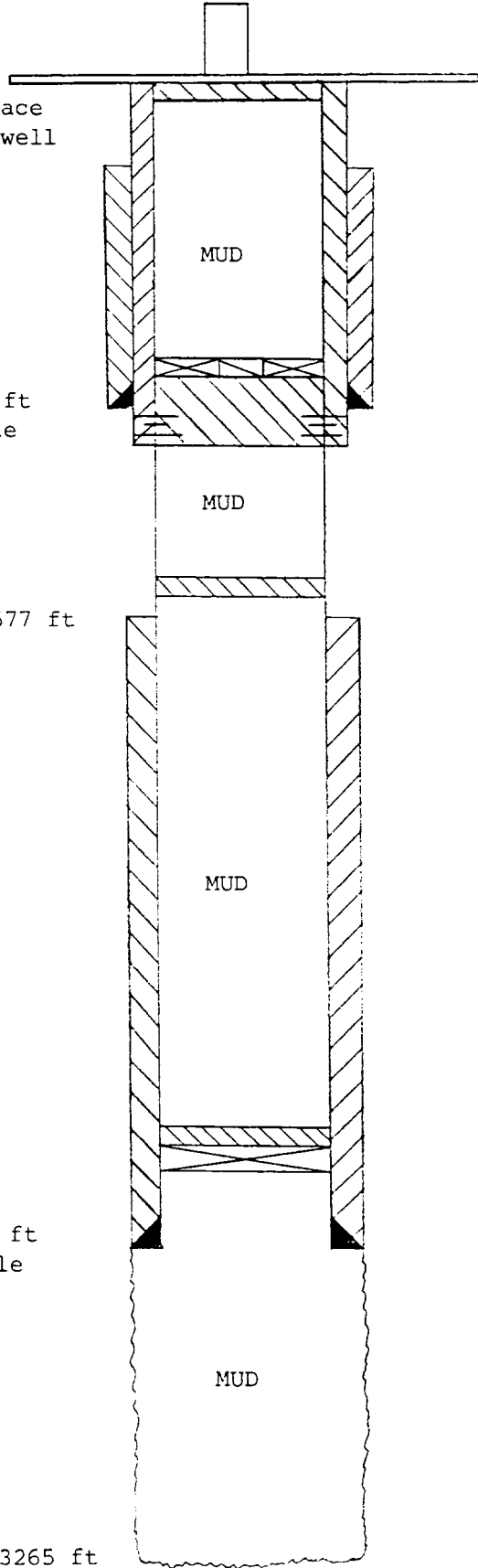
Cement circulated to surface
between 9 5/8" & 7" when well
was P & A'd

9 5/8" surface csg @ 520 ft
cmt'd with 50 sx, 12" hole

TOC @ 1677 ft

7" production csg @ 2918 ft
cmt'd with 100 sx, 8" hole

TD @ 3265 ft



P & A'd 3-26-76
P & A Marker

10 sx cmt at surface

TOC @ 339 ft, surface job

Cmt retainer @ 460 ft

Shot 4 sqz holes @ 520 ft
Pumped 70 sx cmt, circ to
surface

Spotted 20 sx cmt, 100 ft
from 1500 to 1600 ft

CIBP @ 2850 ft with 10 sx
cmt on top

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 8481
Order No. R-7926

APPLICATION OF TEXAS AMERICAN
OIL CORPORATION FOR A WATERFLOOD
PROJECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8 a.m. on February 13, 1985, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 20th day of May, 1985, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Texas American Oil Corporation, seeks authority to institute a cooperative waterflood project in the Grayburg Jackson Pool by the injection of water into the Grayburg and San Andres formations through selected perforated intervals from approximately 2525 feet to 2850 feet in four existing wells, as described in Exhibit "A" attached hereto and made a part hereof, all located on the applicant's Etz State, Etz "B" State, Etz "C" State, and Randel State leases, located in portions of Section 16, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.
- (3) The wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) The proposed cooperative waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(6) The injection wells or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi, per foot of depth to the top of the uppermost perforation, but the Division Director should have authority to increase said pressure limitation, should circumstances warrant.

(7) The subject application should be approved and the cooperative project should be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Texas American Oil Corporation, is hereby authorized to institute a cooperative waterflood project on its Etz State, Etz "B" State, Etz "C" State, and Randel State leases, Grayburg Jackson Pool, by the injection of water into the Grayburg and San Andres formations through four existing wells, as described in Exhibit "A" attached hereto and made a part hereof, in Eddy County, New Mexico.

(2) Injection into each of said wells shall be through internally coated tubing, set in a packer which shall be located as near as practicable to the uppermost perforation; the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(3) The operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(4) The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth to the uppermost perforation of

-3-
Case No. 8481
Order No. R-7926

each well, provided however, the Division Director may authorize a higher surface injection pressure upon application and satisfactory showing that such pressure will not result in fracturing of the confining strata.

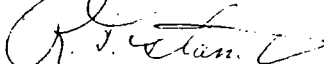
(5) The subject cooperative waterflood project is hereby designated the Etz-Randel State Cooperative Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

(6) Monthly progress reports of the cooperative waterflood project herein authorized shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


R. L. STAMETS
Director

S E A L

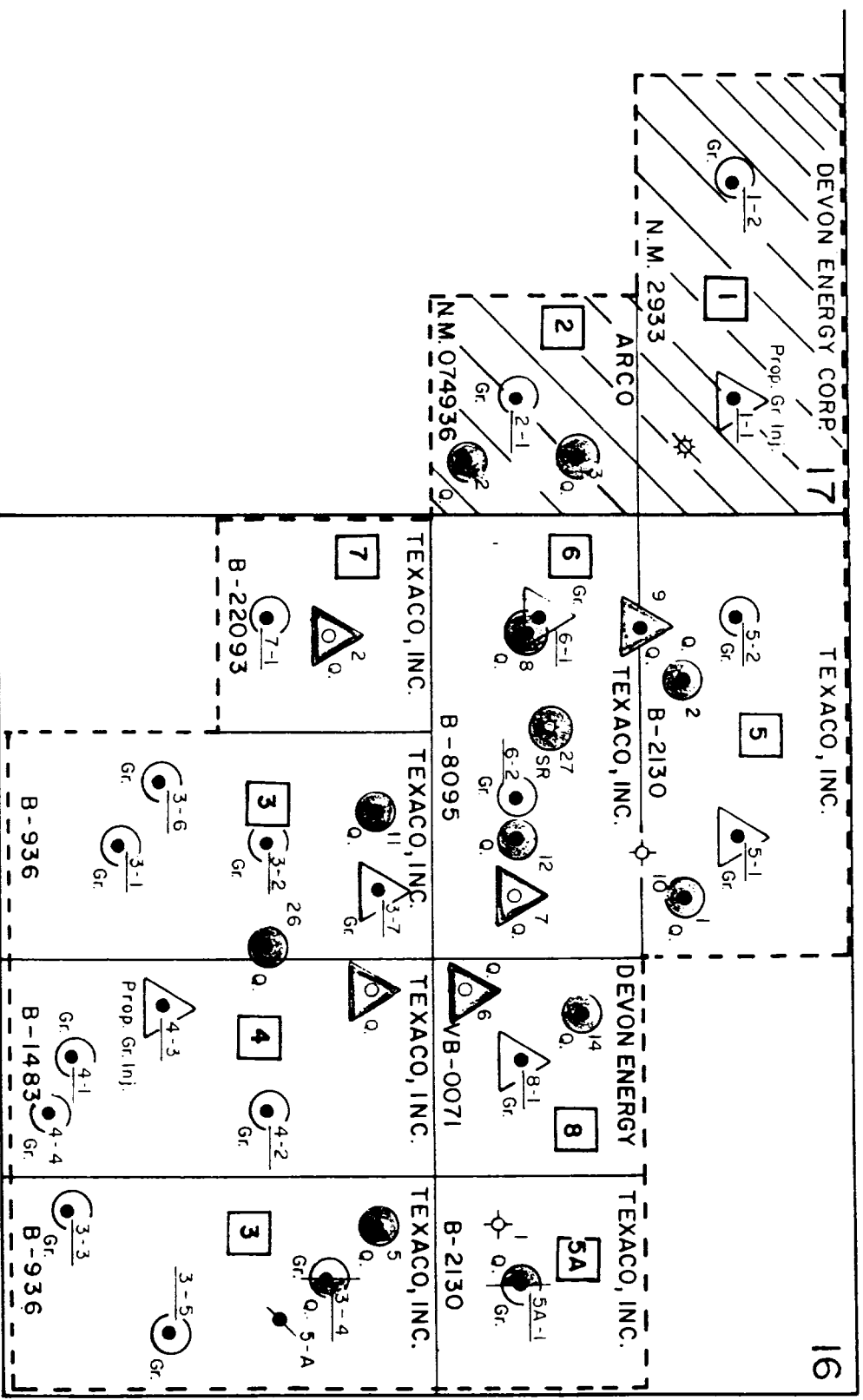
Ed/

ETZ-RANDEL STATE
COOPERATIVE WATERFLOOD

<u>Well Name and No.</u>	<u>Footage Location (Unit)</u>	<u>Section, Township, Range</u>
Texas American Etz "B" State Well No. 18	1980' FNL & 1980' FEL (G)	16-17S-30E
Texas American Etz State Well No. 24	2310' FSL & 2310' FWL (K)	16-17S-30E
Texas American Etz "C" State Well No. 17	1880' FNL & 660' FWL (E)	16-17S-30E
Texas American Randel State Well No. 3	660' FNL & 1980' FWL (C)	16-17S-30E

EXHIBIT "A"
CASE NO. 8481
ORDER NO. R-7926

T
17
S



R-30-E

- Gr. INJECTOR WITH ZONE NOTED
- FEDERAL LANDS
- STATE LANDS
- UNIT OUTLINE
- TRACT NUMBER
- Q. QUEEN PRODUCER
- Gr. GRAYBURG PRODUCER

DEVON ENERGY CORPORATION **EXHIBIT A**

ETZ - STATE UNIT
Eddy Co., New Mexico

UNIT DETAIL MAP:

1" = 1,000'

5-89

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 8481
Order No. R-7926

APPLICATION OF TEXAS AMERICAN
OIL CORPORATION FOR A WATERFLOOD
PROJECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8 a.m. on February 13, 1985, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 20th day of May, 1985, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) The applicant, Texas American Oil Corporation, seeks authority to institute a cooperative waterflood project in the Grayburg Jackson Pool by the injection of water into the Grayburg and San Andres formations through selected perforated intervals from approximately 2525 feet to 2850 feet in four existing wells, as described in Exhibit "A" attached hereto and made a part hereof, all located on the applicant's Etz State, Etz "B" State, Etz "C" State, and Randel State leases, located in portions of Section 16, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

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

(4) The proposed cooperative waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(6) The injection wells or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi, per foot of depth to the top of the uppermost perforation, but the Division Director should have authority to increase said pressure limitation, should circumstances warrant.

(7) The subject application should be approved and the cooperative project should be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Texas American Oil Corporation, is hereby authorized to institute a cooperative waterflood project on its Etz State, Etz "B" State, Etz "C" State, and Randel State leases, Grayburg Jackson Pool, by the injection of water into the Grayburg and San Andres formations through four existing wells, as described in Exhibit "A" attached hereto and made a part hereof, in Eddy County, New Mexico.

(2) Injection into each of said wells shall be through internally coated tubing, set in a packer which shall be located as near as practicable to the uppermost perforation; the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(3) The operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(4) The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth to the uppermost perforation of

each well, provided however, the Division Director may authorize a higher surface injection pressure upon application and satisfactory showing that such pressure will not result in fracturing of the confining strata.

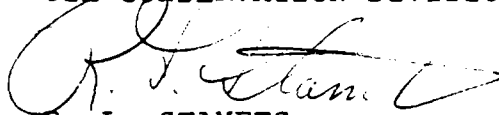
(5) The subject cooperative waterflood project is hereby designated the Etz-Randel State Cooperative Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

(6) Monthly progress reports of the cooperative waterflood project herein authorized shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



R. L. STAMETS
Director

S E A L

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ETZ-RANDEL STATE
COOPERATIVE WATERFLOOD

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