KELLAHIN, KELLAHIN and AUBREY

Attorneys at Law

W. Thomas Kellahin Karen Aubrey

Jason Kellahii Of Counsel El Patio - 117 North Guadalupe Post Office Box 2265

Santa Fé, New Mexico 87504-2265

Telephone 982-4285 Area Code 505

Fax: 505/982-2047

July 31, 1989

RECEIVED

AUG 1 1980

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

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.

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.

co: 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. Muncey, 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 CORFORATION

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. Fox 1148
Santa Fe, New Mexico 87504-1148

C. C. D.

Attention: Director Oil and Gas Division

District Office New Mexico Oil Corservation 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

Sarta Fe, New Mexico 87504-2265

#### STATE OF NEW MEXICO-ENERGY AND MINERALS DEPARTMENT

# UIL CUNSERVATION DIVISION STATE LAND OFFICE BUILDING SANTA FE NEW MEXICO 07501

Revised 7-1-41

Case 9735

APPLICATION FOR AUTHORIZATION TO INJECT

I.	Purpose: Secondary Recovery Pressure Maintenance Dissoul Storage Application qualifies for administrative approval? Les XIII
II.	Operator: Devon Energy Corporation (Nevada)
	Address: 1500 Mid-America Tower, Oklahoma City, OK 73102
	Contact party: J.M. Duckworth Phone: (405) 235-3611
111.	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.
ΙV.	Is this an expansion of an existing project?
٧.	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:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and</li> <li>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 exicting literature, studies, nearby wells, etc.).</li> </ol>
*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 frosh 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
submi	te information required under Sections VI, VIII, X, and XI above has been previously tted, it need not be duplicated and resubmitted. Please show the date and circumstance earlier submittal. Texas American Oil submitted data previously when obtaining

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

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

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Devon Energy Corporation Etz State Unit Eddy County, New Mexico

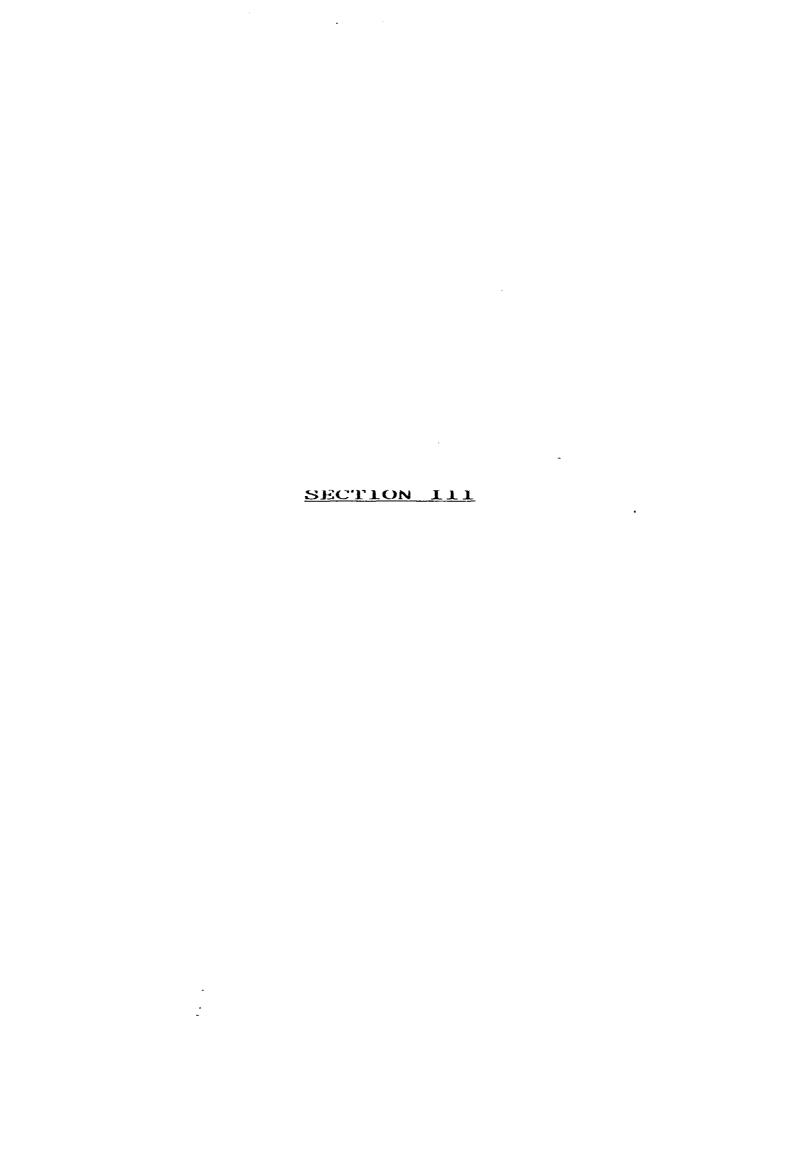
C-108 Permit

#### Section V11

- 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

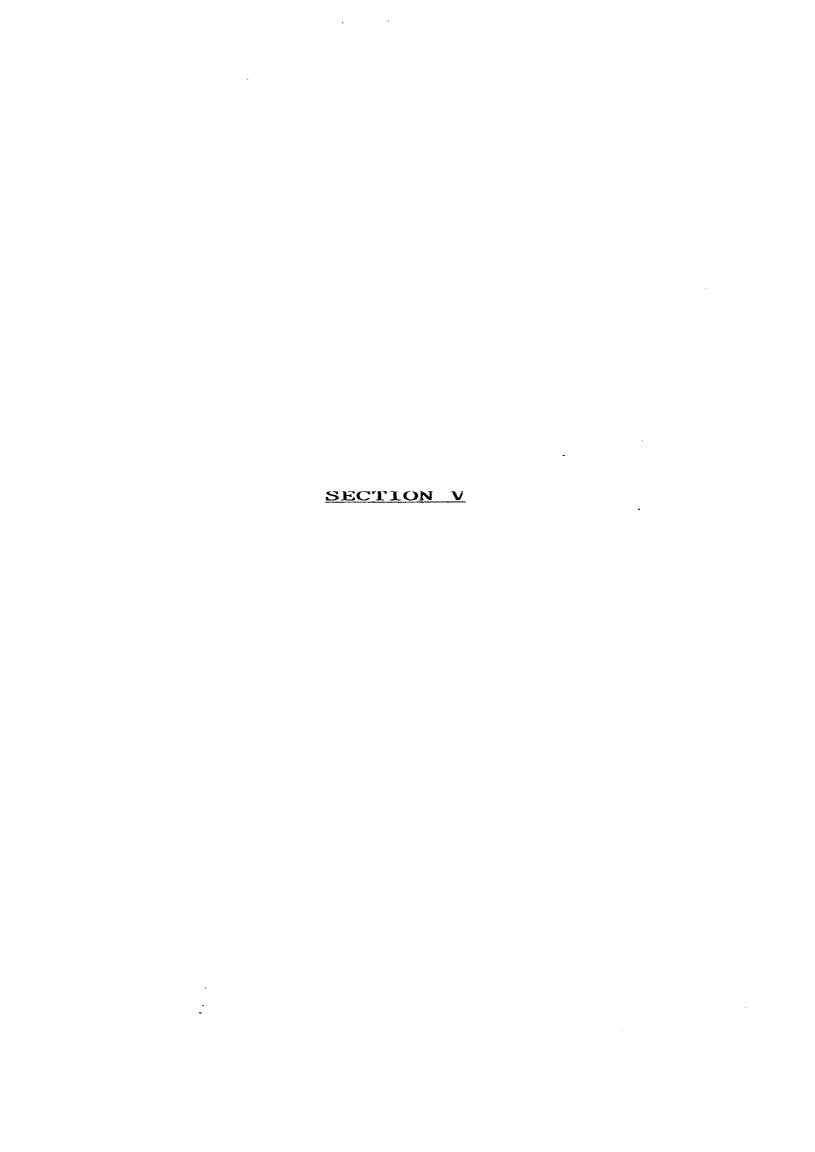
Note: All 'Project' rates and volumes include the two new injection wells sought by this permit, and the four injection wells previously permitted.

- 2. The system is a closed system.
- 3. The proposed injection pressures are as tollows:
  - maximum allowed pressure: 450 psi above unit average fraction 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.



	TOWNSHIP RANGE	17S 30E	Tabular Data	" Cemented with 110 sx.	feet determined by <u>calc.</u> , 30% excess	" Cemented with sx.	feet determined by		Femented with 475 sx.	feet determined by	Well was sqz'd @ 2096-2102 with 150 sx		to 2819 role, indicate which)
LEASE	Collier Federal SECTION	17		ing 20# @ 537'	10C 137 Hole size 11"	Intermediate Casing Size N/A	7110	Hole size	long string Size 4 1/2" 9.5# @ 3319*	rigi	Hole size 77/8"  Total depth 3320	Injection interval	(perforated or open-hole,
OPTRATOR	Devon Energy Corporation WILL NO. 1001AGE 100ATION	#1 660' FNL & 660' FEL	Schematic	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'

	TOWNSHIP	17S 30E	r Data	Cemented with 100 sx.	determined by <u>calc, 30% excess</u>		Cemented with	feet determined by		Cemented with 600 sx.	1001420 original/surface feet determined by acoustic log/visual	Sqz'd Queen @ 2088-2096 with 150 sx. Sqz'd @ 535' & 183' with 150 sy Cmt circ		2802 [feet	indicate which)
LEASE	Etz 'J' State SFCTION	16	Tabular Data	Surface Casing Size 8 5/8" 20# @ 528' "	10C   128   Feet	Intormediate Casing	o N/A		long string	Size 5 1/2" 14 & 17# 04050'	Tuc1420 original/surface feet	Hole size 77/8"	) ( 	2539	hole,
BELRAIOR	Devon Energy Corporation WILL NO. INDIAGE LUCATION	#22 990' FSL & 2310' FEL	Schematic	TOC @ surface TOC @ 128'	8 5/8" 20#	rface	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'



SECTION VI

SECTION AT - FORM C-108. WEN HEXICO OIL CONSERVATION DIVISION

-
HTERVAL
₹:
9
INJECTION
2474-2772 FT, PROM TYPE LOG
7
FROM
TÝPĒ
901

_	1 LOCO HILLS 'A' FEDERAL #8	2 PANKS '8' #1	3 ETZ STAIE #4	4 ETZ STATB #21	5 MCINITAR D' #2	5 LOCO HILLS 'B' FEBRRAL #4	7 BRUWN CRUW FEDERAL #1	3 McINTYRE 'E' #4	9 McINTYRE 'D' #11
OPERATOR	:	SOUTHLAND ROYALTY	DEVON ENERGY	DEVON ENERGY	DRACH RARKCA	ÁNÁUÁRKU	JEG BMTBRFRISES	ARCO	SINCLAIN OIL & GAI
LOCATION	8 38CTION 15-T178-R308, SW NW 1980' PNL & 660' PNL	SOUTHLAND ROYALTY H SECTION 15-T178-R308, SW SW SW SW SW	P SECTION 16-T178-R30B, SW 9B 9B 330' F8L & 990' FEL	P BECTION 16-T175-R30B, MM 3B 3B 990' F8L 6 330' FBL	B 35crion 17-fi78-8308, NW ME 2310' FML & 330' FBL	C 3ECT10# [7-T179-R308, #8 ## 660' FWL & 1980' FWL	A SECTION 21-T178-R30B, 3/2 WE WE 990' FML & 660' FEL	A SECTION 21-T178-R30E, NW HE HE 330' FML & 990' FEL	SUNCLAIN OIL & GAS A SECTION 21-TI7S-R3OB, MB NB 660' FML & 660' FEL
Sulvis	INJECTION	INJECTION	PRODUCING	PRODUCING 10-25-72 11-18-72	PRODUCING	PRODUCTN6	PRODUCING	PLUGGED 3-26-76	PLUGGED 1-12-61
BATE	5-4-72	?-?-38	10-13-37	10-25-72	5-6-74	6-6-72	5-7-85	?-?-38	12-9-60
COMPLETION TO	5-15-72	UNKNUWH	10-13-37 1-5-38	11-18-72	11-17-74	6-24-72	6-3-85	HENOME	1-11-61
10	2846	3270	3350	<b>4</b> 050	2850	3700	3600	3265	7008
PHLD	2842	3265	3350	1104	2833	J693	3592	SURPACE	SURFACE
CASTRG	8 5/8" # 472 w/150 sr 5 1/2" # 2845 w/450 sr BRADEN HEAD SO2, 300 sr	9 5/8" @ 523 w/50 sx 7" @ 2943 w/100 sx 4 1/2" LINBR 2750-3270 w/100 sx	8 1/4" # 480 w/25 sr 7" # 2550 w/50 sr	5 1/2" @ 4049 W/600 ST	8 5/8" pt 475 w/150 sr 4 1/2" pt 2850 w/450 sr	8 5/8" # 478 w/150 st 5 1/2" # 3699 w/850 st	8 5/8" pt 474 m/430 sx 5 1/2" pt 3595 m/925 sx	7" # 2918 m/100 sx	8 5/8" # 1240 m/400 sr
1.0.0.	103. CAJA 1130/SURFACE	342. CALC 1702. CALC 2750. TRMP	343. CALC 1929. CALC	1935, LOG	BURFACE, CALC	SUMPACE, CALL	SURFACE. VIS	339. CALC 1677. CALC	SURFACE, VIS
CONE & PERFORATIONS	8 5/8"   1472 w/150 st 103. CALT GRAYPURG: 2595-99, 2601-03, 12.450 5 1/2"   12 345 w/450 st 1130/SURFACE 2705-08, 2711-15, 2817-22 (.875 BRADEN HRAD 802, 300 st	GRAFBURG: 2810-2820 SAN ANDRES: 3156-60, 3170-73, 3216-10, 3228-36, 3248-50, 3257-64	GRAPBURG 6 SAN ANDRES OPEN HOLE ERON 1550 TO 3350	00868: 2124-30 Grafburg: 2571-2756 San Andres: 2807-3784	BUNHACE, CALC DUBBN: ZU/1-78 935, CALC	OUREM: 2070-00  GRAYBURG: 2538-56, 2600-06, 2638-52, 2676-82, 2744-52  SAN ANDRES: 3038-40, 3048-51, 3348-32, 3358-60, 3348-51, 5616-64	344 ANDRES: 3265-69, 3288-95, 3349-26, 3370-74, 3484-3510	SAN ANDRE: (1768 1916) 1918-3265	
HULE 314E	1.875	12.000 (	is.000 8.999	11.000 7.875	10.000 8.000	7.875	12.250 7.875	12.00 <b>0</b> 8.000	11.000

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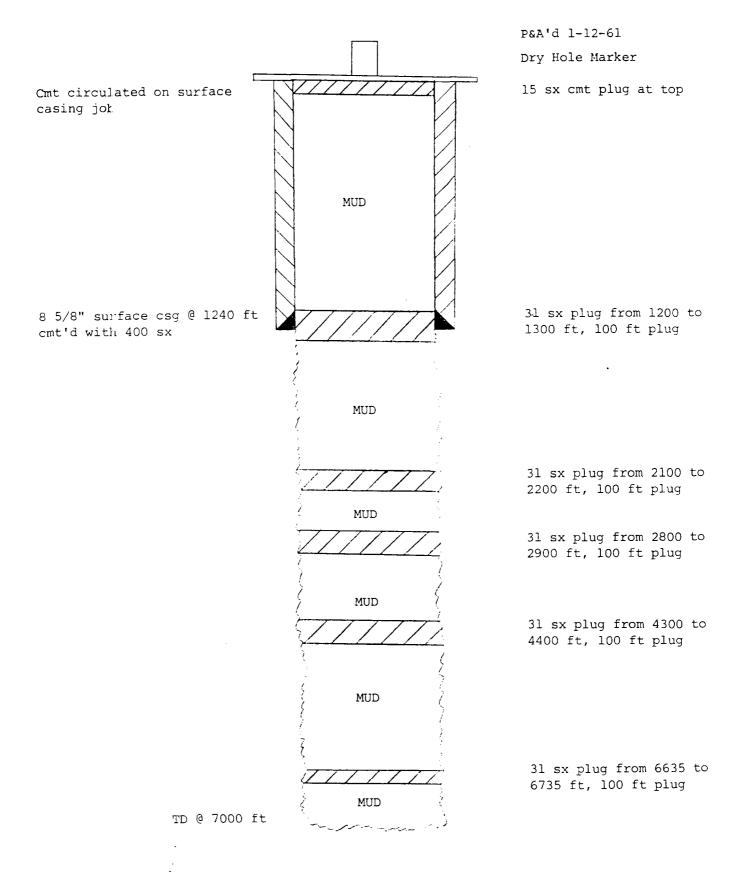
SECTION OF - FORM C-100. WEN MEXICO OIL CONSERVATION DIVISION

INTERVAL OF INJECTION: 2474-2772 PT. FROM TYPE LOG

MELL WARE & BURBER	OPBRATOR	LOCATION	SULVIS	u tru	BARR 10H	U.I.	PBID	CANING	T.v.C.	ZUNK & PERFORATIONS	kULn 3166
10 NCINTYRB 'G' FEDEKAL #1	PH1LL1PS	B SECTION '21-T178-RAUE, WM WM WE 330' FWL & 2310' FBL	PKODUCING		UNKNOSM UNKNOSM	1991	7541 8 9 1457	2591 8 5/8" (4 526" w/: sx 7" (4 2526 w/: sx		5/8° (4 526° 14/2 S.X. UNKNOWN OKATBUKS: UPBN HULE 10.400 (4 2526 14/2 S.X. UNKNOWN 2520-259)	0.47.9
11 BERKY 'A' FEOBRAL #1	MOSHVA	C SECTION 21-T178-R30R, NW ME WA	PRODUCING	3-12-36	3-12-36 6-6-36 3170	3174	3170	8 1/2" # 515 #/50 sx	1190, CALC	GKAYDUKG: UPBB NULE 2020-3170	
13 PRHRA .V. ANHRA 71	NOSHAU	C SECTION 21-F178-K30E, SK HE WE 990' FML & 2200' PML	PRUDUCING	0-14-80 8-5-80	8-5-80	3642	J01)	8917 # X9 8569/# 8,705 X8 525/# 7595 # "Z/1 5 X8 656/# 616 # "8/5 B	BÜRFACE, VIA 1525, CALC	3AN ABUKES: 2017-2130 3216-30, 3264-3321	12,430 1,975
13 HCINTYKE 'C' #1	OUNDH	D SECTION 21-TITS-K308, ME NW MW 330' FWL & 990' FWL	РКОВОСТИС ИМКИОМЯ IU-8-36	UNKNOWN	:	3418	3218	10" # 2600 #/? SI 7" # 2600 #/? SI 302' B 71700 EX # 1500'	SURFACE, VIS	FRATOURG: OPEN HULE 2500-3218	
14 MCHTYRE FEDERAL #2-6	SATTTERA	G SECTION 21-T178-R30E, NY SW NE 10581 RNI & 23101 EEL	PRODUCING	5-29-72	5-29-72 6-20-72	3624	2000	8 5/8"# 560 #/100 sr Ji4, CALC 4 1/2" # 1625 #/500 sr 1395, CALC 302'0 #/150 sr		SBYBN RIYDKS: 1764-66, 1764-86 SUZ'D UFF GRAYDURG & SAN ANDRES ZGUD-353Z	1.015

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

660' FNL & 660' FEL



McIntyre 'E' #4 ARCO

'A' Section 21-T17S-R30E

MUD

MUD

MUD

MUD

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 <u>20th</u> 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
- (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

Links

-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 water-flood 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.  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

R. L. STAMETS

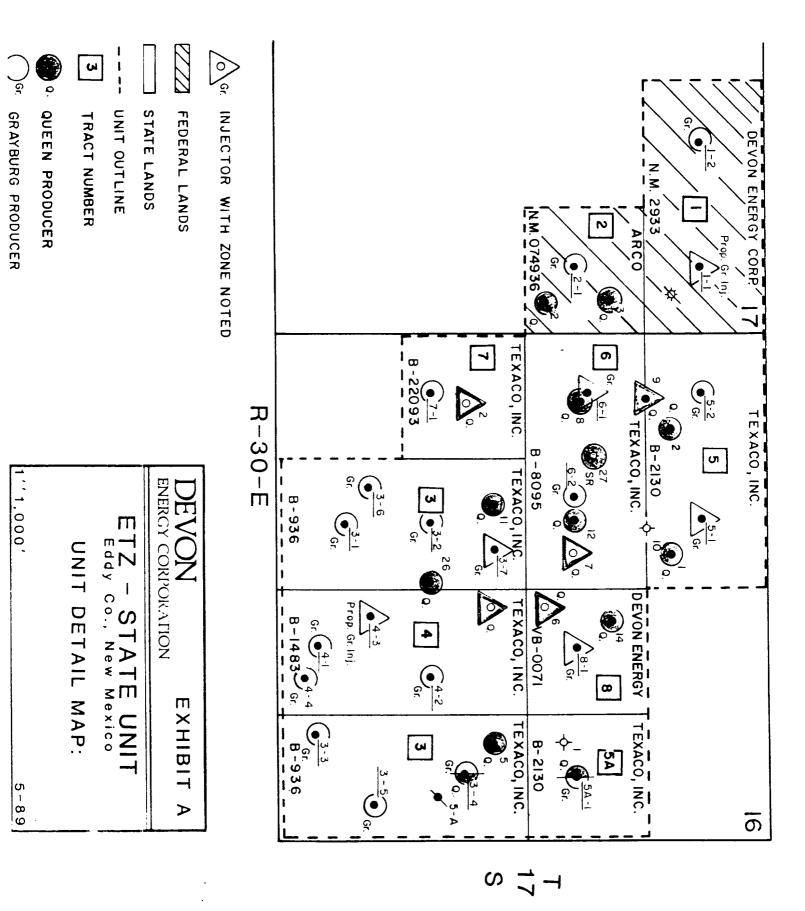
Director

S E A L

# ETZ-RANDEL STATE COOPERATIVE WATERFLOOD

Well Name and No.	Footage Location (Unit)	Section, Township, Range
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, ENT 7 1380, EMT (C)	16-17S-30E

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



# 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.

Case No. 8481 Order No. R-7926

- (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 cn 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 water-flood 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

SEAL

# ETZ-RANDEL STATE COOPERATIVE WATERFLOOD

Well Name and No.	Footage Location (Unit)	Section, Township, Range
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