

BEFORE EXAMINER CATANACH

OIL CONSERVATION DIVISION

Devon EXHIBIT NO. 7

CASE NO. 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:
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.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.

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.

Devon Energy Corporation
Etz State Unit
Eddy County, New Mexico

C-108 Permit

Section I - See cover sheet.

Section II - See cover sheet.

Section III - See attachment.

Section IV - See cover sheet.

Section V - See attachment.

Section VI - See attachment.

Section VII - See attachment.

Section VIII - Refer to Texas American Oil, Case #8481,
Order #R-7926, dated May 20, 1985.

Section IX - No stimulation program is anticipated.

Section X - Refer to Texas American Oil, Case #8481,
Order #R-7926, dated May 20, 1985.

Section XI - Refer to Texas American Oil, Case #8481,
Order #R-7926, dated May 20, 1985.

Section XII - Not applicable.

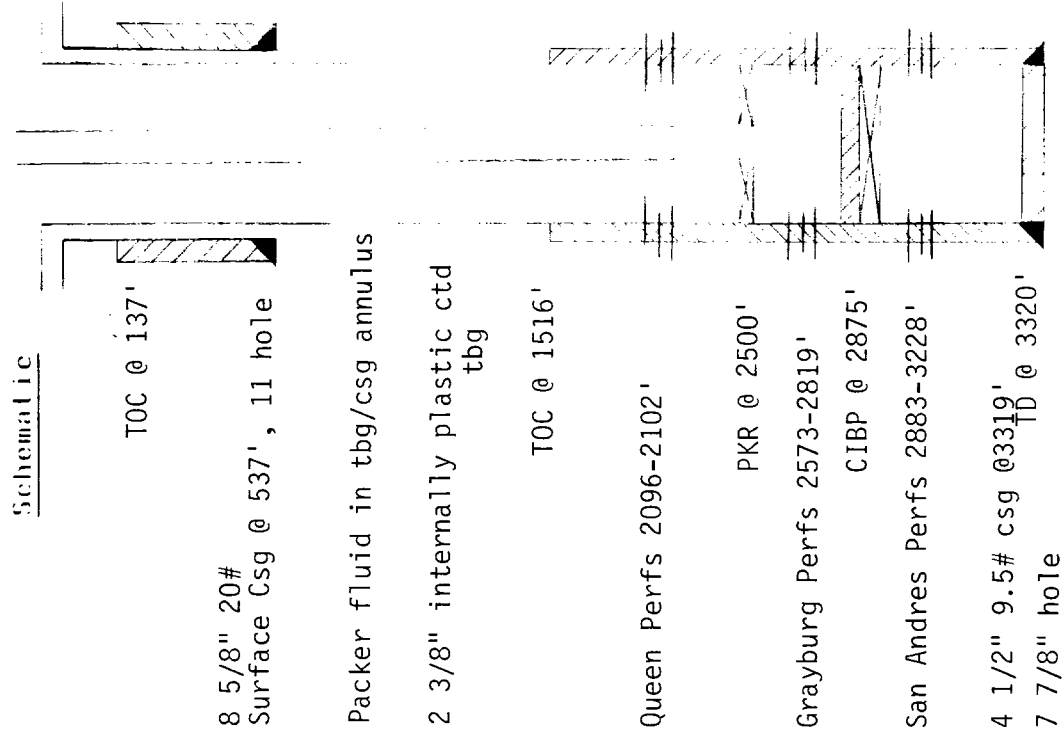
Section XIII - See attachment.

Section XIV - See cover sheet.

SECTION 111

LEASE			
OPERATOR	Devon Energy Corporation		
	Collier Federal		
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP
#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% excess

Hole size 7 7/8"

Total depth 3320

Injection interval

2573 feet to 2819 feet

(perforated or open-hole, indicate which)

Well was sqz'd @ 2096-2102 with 150 sx

INJECTION WELL DATA SHEET -- SIDE 2

Tubing size	2 3/8 4.7# J-55 8 rd	Run with Tuboscope TK-70 plastic coating (material)	set in a

Baker Model AD-1 plastic coated tension packer (brand and model)	packer at 2500 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Grayburg - Jackson

3. Is this a new well drilled for injection? ☐ Yes ☒ No
If no, for what purpose was the well originally drilled? Producing oil well

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes. San Andres 2883-3228, we will set a cast iron bridge plug at 2875' with 25' of cmt on top to seal off. Queen 2096-2102, sqz'd off with 50 sx cmt to 1350 psi. Drilled out and tested to 300 psi.

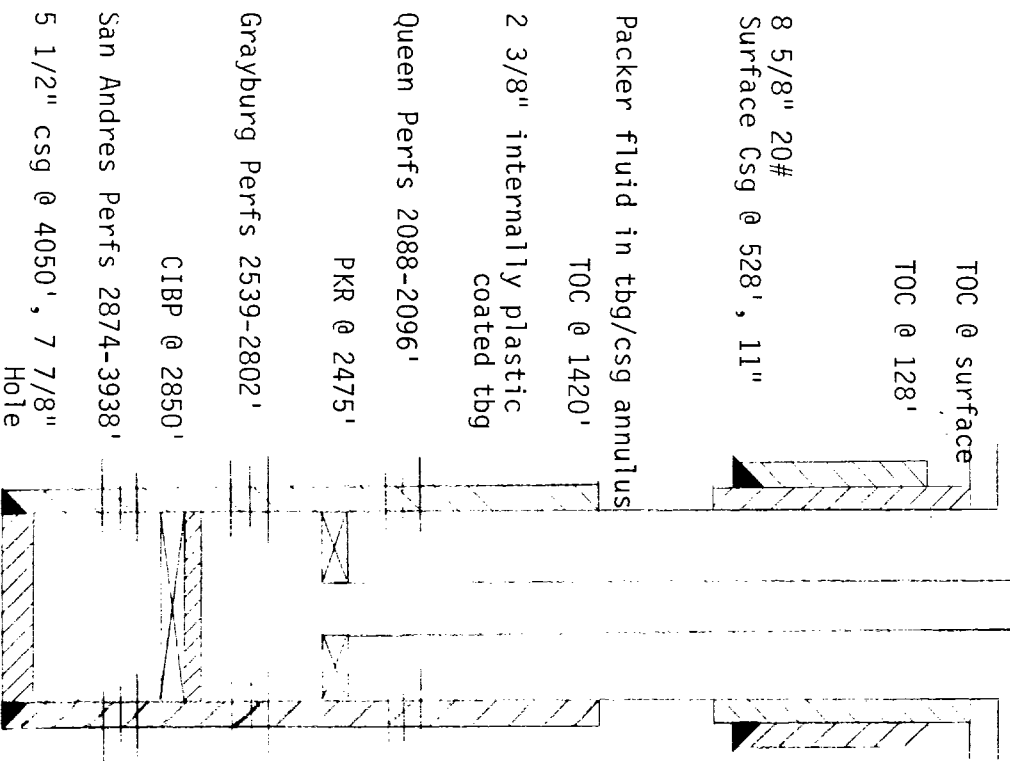
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Morrow - 10700 ft, Seven Rivers - 1800 ft, Queen - 2070 ft

INJECTION WELL DATA SHEET

SID# 1

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

Schematic



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.
100'1420 original/surface feet determined by acoustic log/visual	
Hole size 7 7/8"	Sqz'd Queen @ 2088-2096 with 150 sx. Sqz'd @ 535' & 183' with 150 sx. Cmt circ.
Total depth 4050'	
Injection interval	
2539	feet to 2802 feet
(perforated or open-hole, indicate which)	

INJECTION WELL DATA SHEET -- SIDE 2

Tubing size 2 3/8" 4.7# J-55 8rd EU lined with Tuboscope TK-70 plastic coating set in a
 Baker Model AD-1 plastic coated tension packer (material) 2475 feet
 (brand and model) packer at

(or describe any other casing-tubing seal).

Other Data

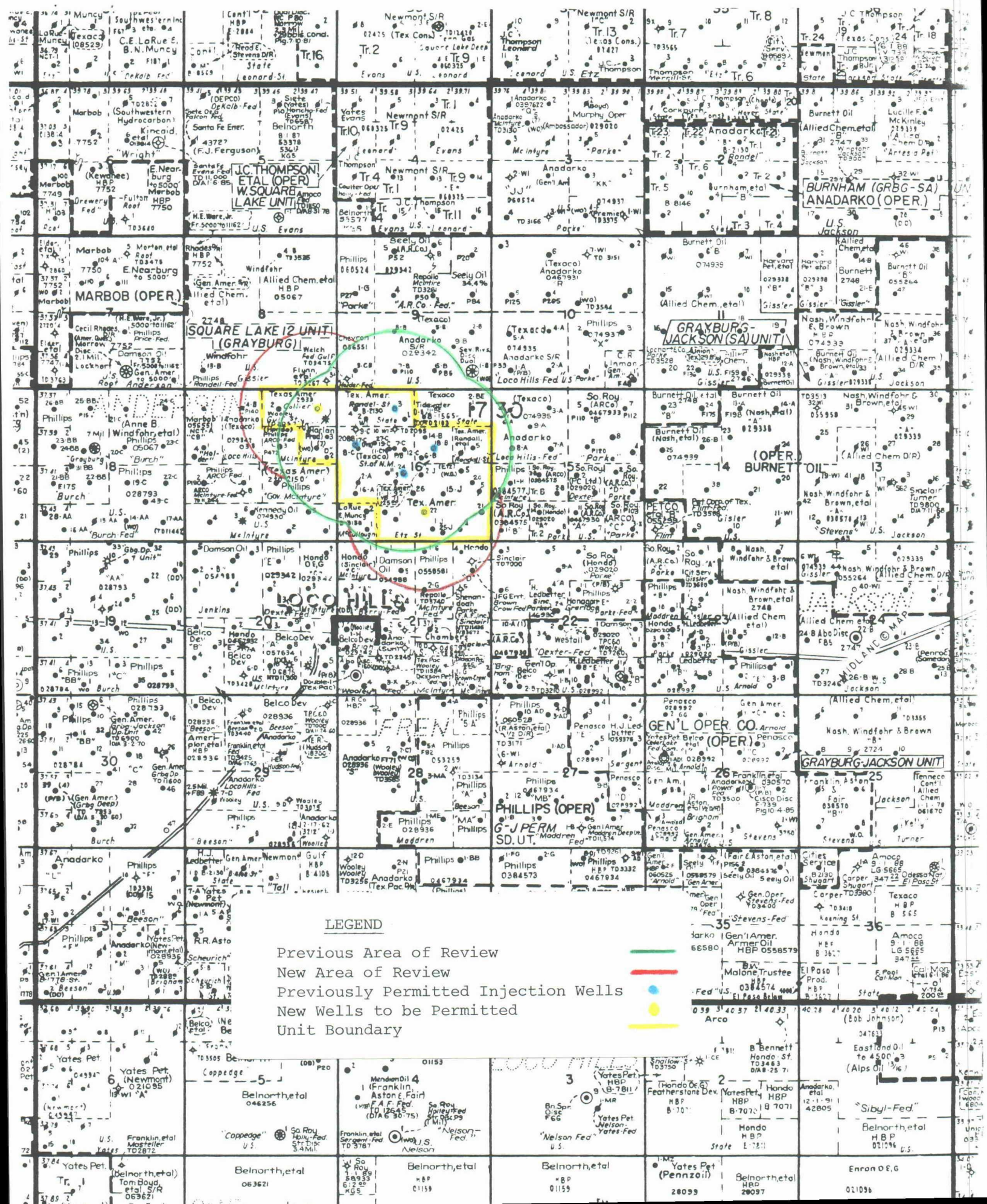
1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Grayburg - Jackson
3. Is this a new well drilled for injection? ☐ Yes ☒ No
 If no, for what purpose was the well originally drilled? Producing oil well

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes. San Andres 2874-3938 ft.

We will set a cast iron bridge plug at 2850' with 20 ft of cmt on top to seal off San Andres. Queen 2088-2096,
sqz'd off with 150 sx cmt.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Morrow - 10700 ft. Seven Rivers - 1800 ft. Queen - 2070 ft.

SECTION V



SECTION VI

SECTION VI - FORM C-108, NEW MEXICO OIL CONSERVATION DIVISION

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

WELL NAME & NUMBER	OPERATOR	LOCATION	STATUS	SPUD COMPLETION		YD	PBLD	CASING	T.O.C.	ZONES & PERFORATIONS	HOLE SIZE
				DATE	DATE						
1 LOCO HILLS 'A' FEDERAL #8	AMADARKO	E SECTION 15-T17S-R30E, SW NW 1980' FNL & 660' FWL	INJECTION	5-4-72	5-15-72	2846	2842	8 5/8" @ 472 W/150 SX 5 1/2" @ 2845 W/450 SX BRADEN HEAD SQZ, 300 SX	103, CALC 1130/SURFACE	GRAYBURG: 2591-99, 2601-03, 2705-08, 2711-15, 2817-22	12.250 7.875
2 PARKB 'B' #1	SOUTHLAND ROYALTY	N SECTION 15-T17S-R30E, SW SW SW 330' FSL & 330' FWL	INACTIVE INJECTION	?-?-38	UNKNOWN	3270	3265	9 5/8" @ 523 W/50 SX 7" @ 2943 W/100 SX 4 1/2" LINER 2750-3270 W/100 SX	342, CALC 1702, CALC 2750, TRMP	GRAYBURG: 2810-2820 SAN ANDRES: 3158-80, 3170-73, 3206-10, 3228-36, 3248-50, 3257-64	12.000 8.000
3 BIZ STATE #4	DEVON ENERGY	P SECTION 16-T17S-R30E, SW SE SE 330' FSL & 990' FSL	PRODUCING	10-13-37	1-5-38	3350	3350	8 1/4" @ 480 W/25 SX 7" @ 2550 W/50 SX	343, CALC 1929, CALC	GRAYBURG & SAN ANDRES OPEN HOLE FROM 2550 TO 3350	10.000 8.000
4 BIZ STATE #21	DEVON ENERGY	P SECTION 16-T17S-R30E, SW SE SE 990' FSL & 330' FSL	PRODUCING	10-25-72	11-18-72	4050	4011	8 5/8" @ 543 W/100 SX 5 1/2" @ 4049 W/600 SX	144, CALC 1935, LOG	UBBEN: 2124-30 GRAYBURG: 2571-2756 SAN ANDRES: 2807-3784	11.000 7.875
5 MCINTYRE 'D' #2	DEVON ENERGY	B SECTION 17-T17S-R30E, NW NE 2310' FNL & 330' FSL	PRODUCING	5-6-74	11-27-74	2850	2833	8 5/8" @ 475 W/150 SX 4 1/2" @ 2850 W/450 SX	SURFACE, CALC 935, CALC	UBBEN: 2071-78	10.000 8.000
6 LOCO HILLS 'B' FEDERAL #4	AMADARKO	C SECTION 17-T17S-R30E, NE NW 660' FNL & 1980' FWL	PRODUCING	6-6-72	6-24-72	3700	3693	8 5/8" @ 478 W/150 SX 5 1/2" @ 3699 W/850 SX	109, CALC SURFACE, CALC	UBBEN: 2070-80 GRAYBURG: 2538-56, 2600-06, 2638-52, 2676-82, 2742-52 SAN ANDRES: 3038-48, 3338-40, 3348-52, 3354-80, 3343-51, 3616-64	12.250 7.875
7 BROWN CROW FEDERAL #1	JPG ENTERPRISES	A SECTION 21-T17S-R30E, S/2 NE NE 990' FNL & 660' FSL	PRODUCING	5-7-85	6-3-85	3600	3592	8 5/8" @ 474 W/430 SX 5 1/2" @ 3595 W/925 SX	SURFACE, VIS 1035, LOG	SAN ANDRES: 3265-89, 3288-95, 3309-20, 3370-74, 3484-5510	12.250 7.875
8 MCINTYRE 'E' #4	ARCO	A SECTION 21-T17S-R30E, NW NE NE 330' FNL & 990' FSL	PLUGGED 3-26-76	?-?-38	UNKNOWN	3265		SURFACE 9 5/8" @ 520 W/50 SX 7" @ 2918 W/100 SX	339, CALC 1677, CALC	SAN ANDRES: OPEN HOLE 2918-3265	12.000 8.000
9 MCINTYRE 'D' #11	SINCLAIR OIL & GAS	A SECTION 21-T17S-R30E, NE NE 660' FNL & 660' FSL	PLUGGED 1-12-61	12-9-60	1-12-61	7000		SURFACE 8 5/8" @ 1240 W/400 SX	SURFACE, VIS		11.000

SECTION VI - FORM C-108, NEW MEXICO OIL CONSERVATION DIVISION

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

WELL NAME & NUMBER	OPERATOR	LOCATION	STATUS	SPUD COMPLETION		TD	PBD	CASING	T.O.C.	ZONE & PERFORATIONS	HOLE SL. LOG
				DATE	DATE						
10 MCINTYRE 'G' FEDERAL #1	PHILLIPS	B SECTION 21-T17S-R30E, NW NW NE 330' FWL & 2310' FEL	PRODUCING	UNKNOWN	UNKNOWN	2591	2591	8 5/8" Ø 526' W/? SX 7" Ø 2526 W/? SX	UNKNOWN UNKNOWN	GRAYBURG; OPEN HOLE 2526-2591	10.00 8.25
11 BERRY 'A' FEDERAL #1	DANSON	C SECTION 21-T17S-R30E, NW NE NW 330' FWL & 1650' FWL	PRODUCING	3-12-36	6-6-36	3170	3170	8 1/2" Ø 515 W/50 SX 7" Ø 2620 W/100 SX	1521, CALC 1190, CALC	GRAYBURG; OPEN HOLE 2620-3170	
12 BERRY 'A' FEDERAL #5	DANSON	C SECTION 21-T17S-R30E, SE NE NW 990' FWL & 2200' FWL	PRODUCING	6-14-80	8-5-80	3642	3610	8 5/8" Ø 516 W/350 SX 4 1/2" Ø 3642 W/475 SX SQZ'D W/6950 SX Ø 2168	SURFACE, VIS 1525, CALC	SAN ANDRES; 2897-2930 3218-36, 3284-3321	12.25 7.87
13 MCINTYRE 'C' #1	HONDU	D SECTION 21-T17S-R30E, NE NW NW 330' FWL & 990' FWL	PRODUCING	UNKNOWN	10-8-36	3218	3218	10" Ø 516 W/? SX 7" Ø 2600 W/? SX SQZ'D W/1700 SX Ø 1500'	SURFACE, VIS SURFACE, VIS	GRAYBURG; OPEN HOLE 2600-3218	
14 MCINTYRE FEDERAL #2-6	PHILLIPS	G SECTION 21-T17S-R30E, NW SW NE 1650' FWL & 2310' FEL	PRODUCING	5-29-72	6-20-72	3624	2600	8 5/8" Ø 560 W/100 SX 4 1/2" Ø 3625 W/500 SX SQZ'D W/150 SX	314, CALC 1396, CALC	SEVEN RIVERS; 1764-86, 1784-86 SQZ'D OFF GRAYBURG & SAN ANDRES 2600-3532	12.25 7.87

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

330' FNL & 990' FEL

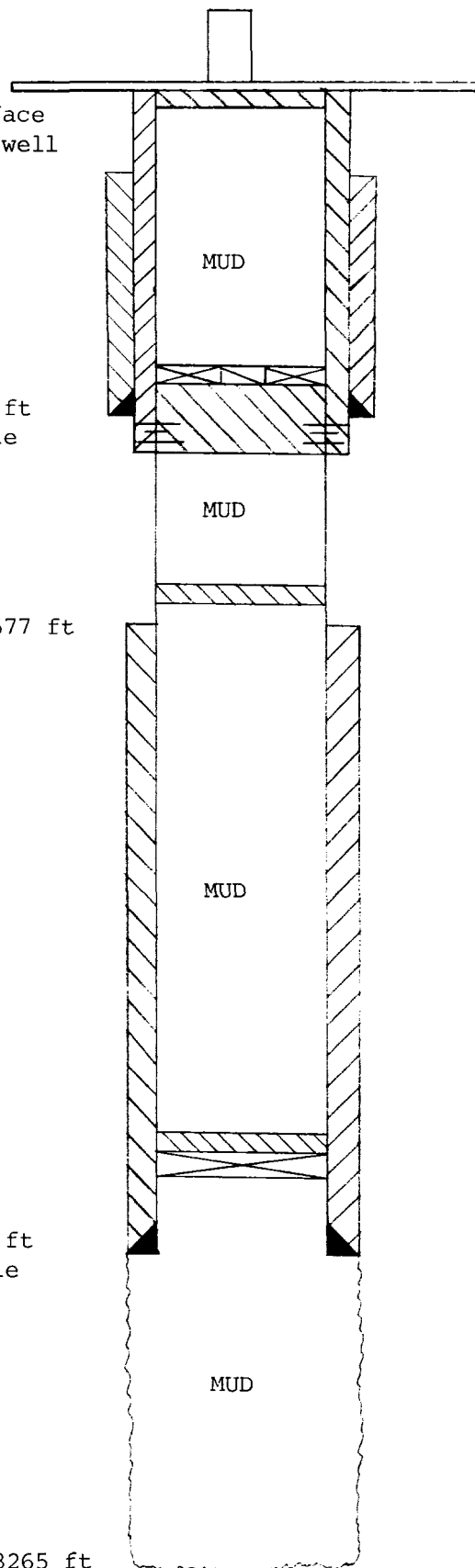
Cement circulated to surface
between 9 5/8" & 7" when well
was P & A'd

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

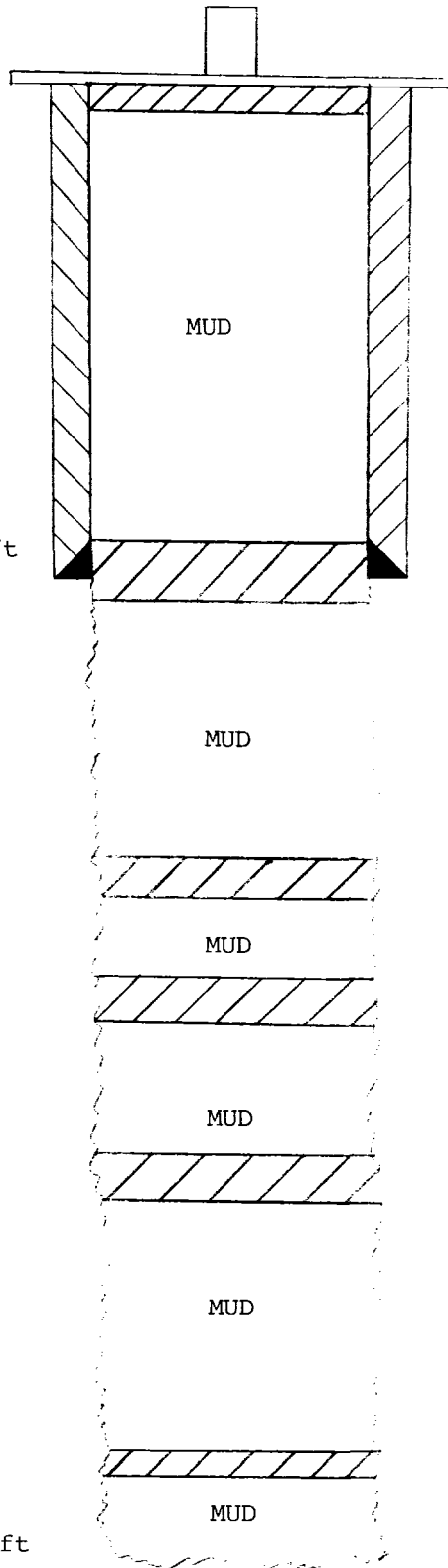
McIntyre 'D' #11
Sinclair Oil & Gas Co.
'A' Section 21-T17S-R30E

660' FNL & 660' FEL

Cmt circulated on surface
casing job

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

TD @ 7000 ft



P&A'd 1-12-61

Dry Hole Marker

15 sx cmt plug at top

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

SECTION VII

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.