



580 WestLake Park Blvd.  
Houston, TX 77079  
PO Box 4294  
Houston, TX 77210-4294  
Phone: 281-552-1000

July 17, 2000

State of New Mexico  
Energy, Minerals & Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, NM 87505

JUL 20 2000

RE: Expansion of Pressure Maintenance Project  
North Hobbs (Grayburg/San Andres) Unit  
Hobbs; Grayburg – San Andres Pool  
Well No. 211  
Letter C, Section 33, T-18-S, R-38-E  
Lea County, NM

Gentlemen:

Occidental Permian Limited Partnership respectfully requests administrative approval for expansion of the subject pressure maintenance project by converting North Hobbs (G/SA) Unit Well No. 211 from production to water injection. Administrative Order No. R-6199 granted November 30, 1979, authorized Shell Western E&P Inc. (Occidental Permian Limited Partnership's predecessor) to conduct the North Hobbs (G/SA) Unit pressure maintenance project within the Hobbs; Grayburg – San Andres Pool.

The following data is submitted in support of this request:

- Form C-108 with miscellaneous data attached
- Form C-102
- A map reflecting the location of the proposed injection well (No. 211). The map identifies all wells located within a two-mile radius of the proposed injector and has a one-half mile radius circle drawn around the proposed injection well which identifies the well's Area of Review.
- An injection well data sheet
- A tabulation of data on all wells of public record within the well's Area of Review



**Occidental Permian Ltd.**

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- Schematics of plugged wells of public record within the well's Area of Review
- A list of Offset Operators and Surface Owners (these parties have been notified of this application by certified mail)
- An Affidavit of Publication and copy of the legal advertisement that was published in the county in which the well is located.

Your favorable consideration of our request will be appreciated. If you have any questions of a technical nature, please call David Nelson at (505) 397-8211. Otherwise, please call me at (281) 552-1158.

Very truly yours,

*Mark Stephens*

Mark Stephens  
Business Analyst (SG)

CC: Oil Conservation Division  
Hobbs District Office  
1625 N. French Drive  
Hobbs, NM 88240

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, NM 87504-1148

Offset Operators (see attached list)

Surface Owners (see attached list)

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery  Pressure Maintenance \_\_\_\_\_ Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval?  Yes \_\_\_\_\_ No
- II. OPERATOR: Occidental Permian Limited Partnership  
ADDRESS: P.O. Box 4294, Houston, TX 77210-4294  
CONTACT PARTY: Mark Stephens, Rm. 338-B, WL2 PHONE: (281) 552-1158
- 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-6199 (11/30/79)
- 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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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: Mark Stephens TITLE: Business Analyst (SG)  
SIGNATURE: Mark Stephens DATE: July 17, 2000
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: Hearing October 3, 1979; Case No. 6653, Order No. R-6199

### 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 the 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, 2040 South Pacheco, Santa Fe, New Mexico 87505, within 15 days.

**NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.**

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**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.

Attachment To Form C-108  
Miscellaneous Data

North Hobbs (Grayburg/San Andres) Unit  
Well No. 211  
Letter C, Section 33, T-18-S, R-38-E  
Lea County, New Mexico

III. Well Data

- B.(5) Next higher oil zone -- Grayburg @ +/- 3700'  
Next lower oil zone -- Glorieta @ +/- 5300'

VII. Proposed Operation

1. Average Injection Rate            1500 BWPD  
Maximum Injection Rate        4000 BWPD
2. Closed Injection System
3. Average Injection Pressure        500 PSIG  
Maximum Injection Pressure       805 PSIG (approx.)  
(will not exceed 0.2 psi/ft. to top perforation)
4. Source Water – San Andres Produced Water  
(Mitchell Analytical Laboratory analysis attached)

IX. Stimulation Program

Acid treatment of unitized perforations will be performed during conversion work

- XI. Fresh Water Sample Analysis  
(Laboratory Services, Inc. analysis attached – 2 ea.)

- XII. Occidental Permian Limited Partnership affirms that available geologic and engineering data has been examined resulting in the finding of no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

# MITCHELL ANALYTICAL LABORATORY

2638 Faudree  
Odessa, Texas 79765-8538  
561-5579

## Water Analysis

Company....	Nalco/Exxon Energy Chemicals	Sample Temp...	70.0
Well # ....	WIS DISCHARGE PUMP	Date Sampled..	11/05/1999
Lease.....	ALTURA NHU	Sampled by....	Mike Athey
Location...		Employee # ...	27-008
Date Run...	11/08/1999	Analyzed by...	DANIEL
Lab Ref #..	99-NOV-N05126		

### Dissolved Gasses

		Mg/L	Eq. Wt.	MEq/L
Hydrogen Sulfide	(H <sub>2</sub> S)	486.00	16.00	30.38
Carbon Dioxide	(CO <sub>2</sub> )	Not Analyzed		
Dissovled Oxygen	(O <sub>2</sub> )	Not Analyzed		

### Cations

Calcium	(Ca <sup>++</sup> )	804.00	20.10	40.00
Magnesium	(Mg <sup>++</sup> )	195.20	12.20	16.00
Sodium	(Na <sup>+</sup> )	3,459.66	23.00	150.42
Barium	(Ba <sup>++</sup> )	Not Analyzed		
Manganese	(Mn <sup>++</sup> )	Not Analyzed		

### Anions

Hydroxyl	(OH <sup>-</sup> )	Not Analyzed		
Carbonate	(CO <sub>3</sub> <sup>=</sup> )	0.00	30.00	0.00
Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	1,869.66	61.10	30.60
Sulfate	(SO <sub>4</sub> <sup>=</sup> )	1,700.00	48.80	34.84
Chloride	(Cl <sup>-</sup> )	5,005.50	35.50	141.00
Total Iron	(Fe)	0.30	18.60	0.02
Total Dissolved Solids		13,520.32		
Total Hardness As CaCO <sub>3</sub>		2,810.32		
Conductivity MICROMHOS/CM		23,500		

pH 6.500 Specific Gravity 60/60 F. 1.009

CaSO<sub>4</sub> Solubility @ 80 F. 46.63 MEq/L, CaSO<sub>4</sub> scale is unlikely

### CaCO<sub>3</sub> Scale Index

70.0	0.190
80.0	0.310
90.0	0.530
100.0	0.530
110.0	0.790
120.0	0.790
130.0	1.090
140.0	1.090
150.0	1.370

*Nalco/Exxon Energy Chemicals*



**Laboratory Services, Inc.**

4016 Fiesta Drive  
Hobbs, New Mexico 88240  
Telephone: (505) 397-3713

**Water Analysis**

**COMPANY** Altura Energy Ltd,

**SAMPLE** Fresh Water Well For Wells 33211, 33534 & 33631

**SAMPLED BY** \_\_\_\_\_

**DATE TAKEN** 5/31/00

**REMARKS** T18S-R38E-Sec 33, Qtr Sec. 2,3,1

Barium as Ba	0	
Carbonate alkalinity PPM	52	
Bicarbonate alkalinity PPM	200	
pH at Lab	7.54	
Specific Gravity @ 60°F	1	
Magnesium as Mg	162	
Total Hardness as CaCO3	280	
Chlorides as Cl	106	
Sulfate as SO4	150	
Iron as Fe	0	
Potassium	0.1	
Hydrogen Sulfide	0	
Rw	9.6	@ 25° C
Total Dissolved Solids	820	
Calcium as Ca	118	
Nitrate	13.2	

Results reported as Parts per Million unless stated

Langelier Saturation Index + 0.11

Analysis by: Vickie Walker  
Date: 6/5/00



**Laboratory Services, Inc.**

4016 Fiesta Drive  
Hobbs, New Mexico 88240  
Telephone: (505) 397-3713

**Water Analysis**

**COMPANY** Altura Energy Ltd,  
**SAMPLE** Fresh Water Well For Wells 33211, 33534 & 33631  
**SAMPLED BY**  
**DATE TAKEN** 5/31/00  
**REMARKS** T18S-R38E-Sec 33, Qtr Sec. 2,3,1

Barium as Ba	0
Carbonate alkalinity PPM	64
Bicarbonate alkalinity PPM	212
pH at Lab	7.43
Specific Gravity @ 60°F	1
Magnesium as Mg	202
Total Hardness as CaCO3	348
Chlorides as Cl	127
Sulfate as SO4	155
Iron as Fe	0
Potassium	0.1
Hydrogen Sulfide	0
Rw	9.5 @ 25° C
Total Dissolved Solids	930
Calcium as Ca	146
Nitrate	8.8

Results reported as Parts per Million unless stated

Langelier Saturation Index -0.5

Analysis by: Vickie Walker  
Date: 6/6/00

DISTRICT I  
P.O. Box 1980, Hobbs, NM 58241-1980

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, NM 58211-0719

DISTRICT III  
1000 Rio Brazos Rd., Artec, NM 87410

**OIL CONSERVATION DIVISION**  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number 30-025-07564	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 211
OGRID No. 157984	Operator Name Occidental Permian Limited Partnership	Elevation 3634

**Surface Location**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	33	18 S	38 E		330	NORTH	2310	WEST	LEA

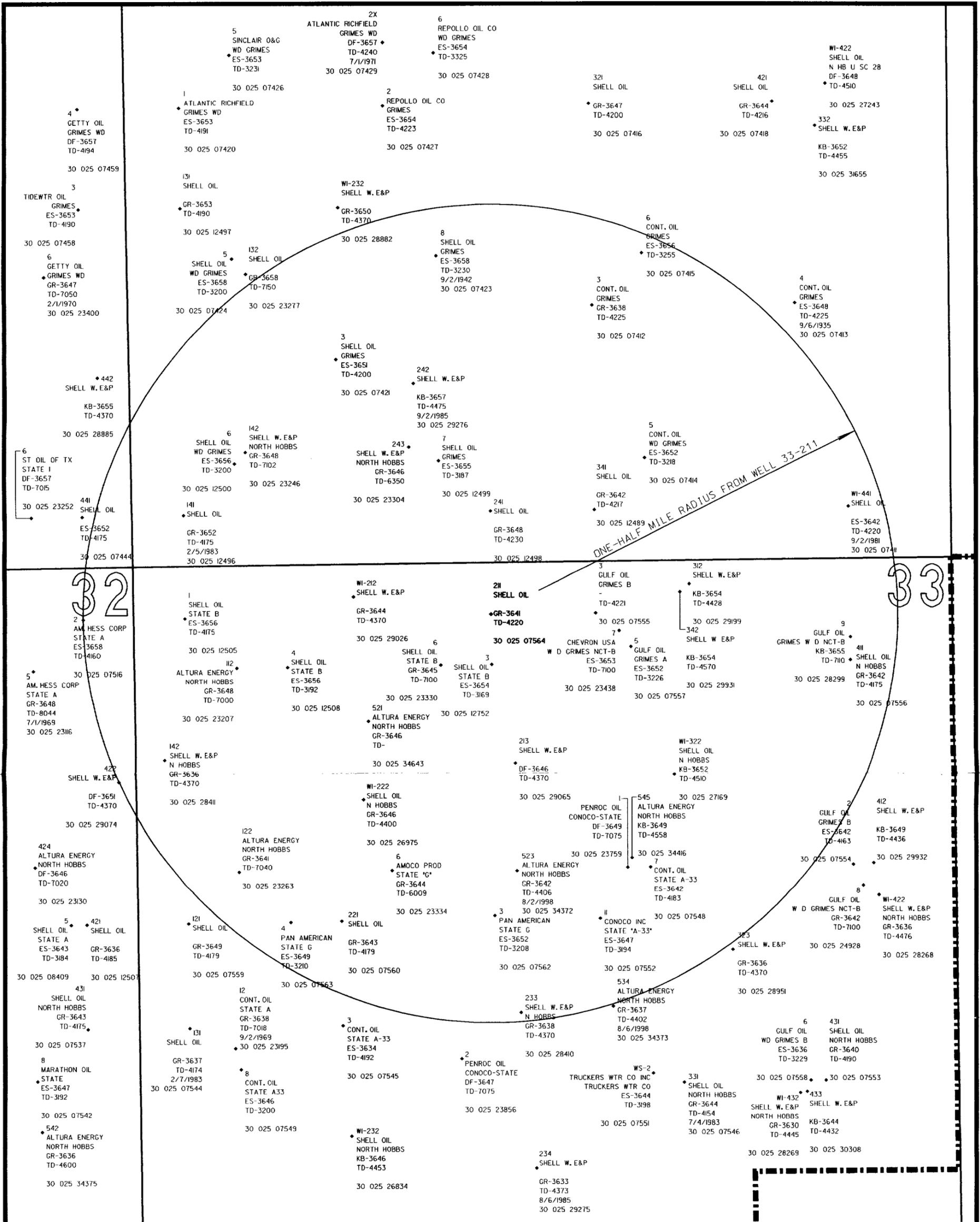
**Bottom Hole Location If Different From Surface**

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Mark Stephens</u> Signature Mark Stephens Printed Name Business Analyst (SG) Title July 14, 2000 Date</p>	
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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 belief.</p> <p>JANUARY 6, 2000 Date Surveyed DC</p> <p>Signatures &amp; Seal of Professional Surveyor <u>Gary Edson</u> 1/28/2000 00-13-0019</p>	
	<p>Certificate No. RONALD J. EDSON 3239 GARY EDSON 12841 MACON McDONALD 12185</p>	



32

33

ONE-HALF MILE RADIUS FROM WELL 33-211

NOTE:  
WELL DATA DERIVED FROM THE PETROLEUM  
INFORMATION - DATA MANAGEMENT SYSTEM.  
WELL DATA SYSTEM PREPARED FOR AMOCO.



**Altura** **Altura Energy Ltd.**  
ENERGY, LTD.

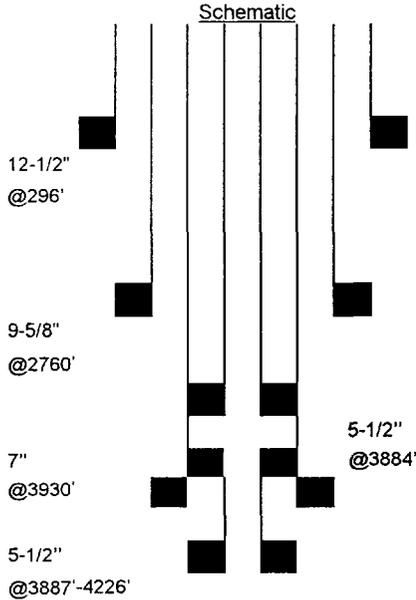
Area of Review Plat  
**NORTH HOBBS (GRAYBURG  
SAN ANDRES) UNIT**  
WELL NO. 33-211  
T-18-S, R-38-E  
Lea County, New Mexico

Scale: 1" = 600' 12-29-99 nm438a00.dgn - 12  
Plat prepared by PJE Drafting, Inc.  
For Horizon Survey, Inc.

LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE

**INJECTION WELL DATA SHEET**

Operator <b>Occidental Permian Limited Partnership</b>	Lease <b>North Hobbs G/SA Unit</b>	County <b>Lea</b>			
Well No. <b>33-211</b>	Footage Location <b>330' FNL &amp; 2310' FWL</b>	Section <b>33</b>	Township <b>18-S</b>	Range <b>38-E</b>	Unit Letter <b>C</b>



Surface Casing		Tubular Data	
Size	<u>12-1/2"</u>	Cemented with	<u>150</u> sxs.
TOC	<u>SURF</u>	Determined by	<u>CALC 50% EFFIC</u>
Hole size	_____		
Intermediate Casing		Tubular Data	
Size	<u>9-5/8"</u>	Cemented with	<u>150</u> sxs.
TOC	<u>3191'</u>	Determined by	<u>CALC-50% EFFIC</u>
Hole size	_____		
Long string Casing		Tubular Data	
Size	<u>7"</u>	Cemented with	<u>250</u> sxs.
TOC	<u>2601'</u>	Determined by	<u>CALC-50% EFFIC</u>
Hole size	_____		
Size	<u>5-1/2"</u>	Cemented with	<u>250</u> sxs.
TOC	_____	Determined by	_____
Hole size	_____		
Total depth	<u>4400'</u>		

Injection interval  
4100 feet to 4300 feet

Completion type Perforated Casing

Tubing size 2-7/8" lined with Duoline (Fiberglass liner) set in a

Guiberson - Uni VI packer at 4000' feet  
(brand and model)

Other Data

1. Name of the injection formation San Andres

2. Name of field or Pool Hobbs

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

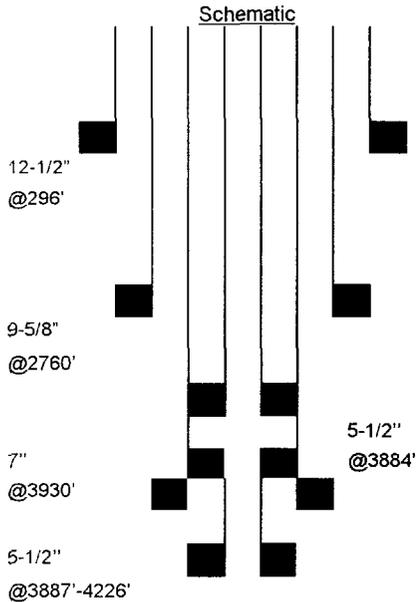
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) San Andres, 4041'-4089', sqz'

5. Give the depth to and name of any overlying and/or underlying oil and gas zones (pools) in this area.

Grayburg - 3270, Glorieta - 5300 There isn't enough room for all of the casing info.

**INJECTION WELL DATA SHEET**

Operator	<b>Occidental Permian Limited Partnership</b>	Lease	<b>North Hobbs G/SA Unit</b>	County	<b>Lea</b>
Well No.	<b>33-211</b>	Section	<b>33</b>	Range	<b>38-E</b>
Footage Location	<b>330' FNL &amp; 2310' FWL</b>	Township	<b>18-S</b>	Unit Letter	<b>C</b>



Surface Casing		Tubular Data	
Size	<u>12-1/2"</u>	Cemented with	<u>150</u> sxs.
TOC	<u>SURF</u>	Determined by	<u>CALC 50% EFFIC</u>
Hole size	_____		
Intermediate Casing			
Size	<u>9-5/8"</u>	Cemented with	<u>150</u> sxs.
TOC	<u>3191'</u>	Determined by	<u>CALC-50% EFFIC</u>
Hole size	_____		
Long string Casing			
Size	<u>7"</u>	Cemented with	<u>250</u> sxs.
TOC	<u>2601'</u>	Determined by	<u>CALC-50% EFFIC</u>
Hole size	_____		
Size	<u>5-1/2"</u>	Cemented with	<u>250</u> sxs.
TOC	_____	Determined by	_____
Hole size	_____		
Total depth	<u>4400'</u>		

Injection interval 4100 feet to 4300 feet

Completion type Perforated Casing

Tubing size 2-7/8" lined with Duoline (Fiberglass liner) set in a Guiberson - Uni VI packer at 4000' feet  
(brand and model)

Other Data

- Name of the injection formation San Andres
- Name of field or Pool Hobbs
- Is this a new well drilled for injection? Yes  No   
If no, for what purpose was the well originally drilled? Producer
- 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) San Andres, 4041'-4089', sqz'
- Give the depth to and name of any overlying and/or underlying oil and gas zones (pools) in this area.

Grayburg - 3270, Glorieta - 5300 There isn't enough room for all of the casing info.

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

FOR WELL 33211		API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC	
Well Name																		
Operator																		
28141	30-025-12496	28 -18S	-38E	M	9/30	P	4228	4066	4220	4033	4035	4038	4040	12.5	16	236	225	CIRC
Altura														9.625	12	2750	475	CIRC
														7	8.75	3960	350	2450
														5	6.5	4228	65	2990
28142	30-025-23246	28 -18S	-38E	M	10/69	P	4030	3890	3968	NONE				13.375	17.5	372	350	CIRC
Altura														9.625	12.25	3787	1400	CIRC**
														7	8.75	3589-7102	720	CIRC
28241	30-025-12498	28 -18S	-38E	N	9/34	P	4260	4061	4260	4004-4010	4023-4026			12.5	16	256	150	CIRC
Altura														9.625	12	2770	150	3094**
														7	8.75	1800	250	CIRC**
														5.5	7.875	4229	100	3334
28242	30-025-29276	28 -18S	-38E	N	7/85	I	4423	4213	4347	NONE				13.375	17.5	40	NA	NA
Altura														9.625	12	1509	650	CIRC
														7	8.75	4470	1005	CIRC
28243	30-025-23304	28 -18S	-38E	N	10/69	P	6300	5890	5967	4898	4904	4910	4918	13.375	17.5	348	250	CIRC
Altura														9.625	12.25	3805	1400	CIRC**
														7	8.75	3602-6350	500	CIRC
28341	30-025-12489	28 -18S	-38E	O	7/34	P	4262	4084	4258	382	4268-4276	4128-4171		13.375	17.5	222	180	CIRC
														9.625	12.25	1637	300	766
														7	8.75	3975	400	2912-CBL
														5	6.25	3928-4276	100	4009-CBL
28441	30-025-07411	28 -18S	-38E	P	1/35	I	4272	4102	4257	NONE				10.75	13.5	243	150	CIRC
Altura														7.625	9.625	1634	300	185
														5.5	6.25	4015	300	CIRC
33142	30-025-28411	33 -18S	-38E	M	12/83	I	4296	4067	4236	4027				16	20	40	NA	CIRC

\*\* Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz.		Csg. Size	Hole Size	Depth	No. of	
											Perfs					Sxs.	TOC
Altura								PBTD			4040	8.625	12.25	1540	750	CIRC	
											4068-4116	5.5	7.875	4370	910	320-CBL	
33212 Altura	30-025- 29026	33 -18S		-38E	C	12//84	I	4327 PBTD	4029	4231	NONE	13.375	17.5	40	40	CIRC	
												8.625	12.25	1600	875	CIRC	
												5.5	7.875	4370	900	CIRC	
33213 Altura	30-025- 29065	33 -18S		-38E	C	2//85	P	4328 PBTD	4027	4255	NONE	13.375	17.5	40	NA	NA	
												8.625	12.25	1551	675	CIRC	
												5.5	7.875	4370	775	CIRC	
33221 Altura	30-025- 07560	33 -18S		-38E	F	9//30	I	4185 CIBP	4047	4230	606	12.5	16	237	125	CIRC	
											3145-3146	9.625	11.75	2770	400	CIRC	
											4043-4052	7	8.75	4012	275	CIRC	
												5	6.25	4242	100	2850-CBL	
33222 Altura	30-025- 26975	33 -18S		-38E	F	10//80	I	4322 CIBP	4054	4276	4206-4210	16	20	40	40	CIRC	
											4214-4218	8.625	12.25	1600	800	CIRC	
												5.5	7.875	4400	1100	CIRC	
33233 Altura	30-025- 28410	33 -18S		-38E	K	12//83	P	4290 PBTD	4047	4246	NONE	16	20	40	NA	NA	
												8.625	12.25	1582	750	CIRC	
												5.5	7.875	4350	875	65	
33312 Altura	30-025- 29199	33 -18S		-38E	B	6//85	P	4362 PBTD	3945	4270	NONE	13.375	17.5	40	NA	CIRC	
												9.625	12.25	1510	650	CIRC	
												7	8.75	4421	975	CIRC	
33322 Altura	30-025- 27169	33 -18S		-38E	G	1//81	I	4392 PBTD	4058	4230	NONE	16	20	40	40	CIRC	
												8.625	12.25	1600	850	CIRC	
												5.5	7.875	4510	915	CIRC	
33342 Altura	30-025- 28267	33 -18S		-38E	O	10//83	I	4331 PBTD	4068	4256	NONE	16	20	40	40	CIRC	
												8.625	12.25	1565	650	CIRC	
												5.5	7.875	4380	725	CIRC	
33411	30-025- 07556	33 -18S		-38E	A	11//34	P	4256	4095	4256	4020-4058	13.375	17	285	200	CIRC**	

\*\* Denotes calculated TOC with 50% efficiency



OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBT	Top Perf	Bot. Perf	Sqz.	Csg. Size	Hole Size	Depth	No. of	
															Sxs.	TOC
Operator					Ltr											
Conoco-State #1	30-025-23759	33	-18S	-38E	G	8/71	P	7075	5871	6975	NONE	13.375	17.5	418	410	CIRC
Saga Petroleum												9.625	12.25	3799	350	1089
												7	8.75	7075	900	3658
WD Grimes #6	30-025-12500	28	-18S	-38E	M	7/47	PA	3090	3155	3161	NONE	8.625	11	411	200	CIRC**
Shell								CMT				5.5	7.875	2778	1400	CIRC**
Grimes #7	30-025-12499	28	-18S	-38E	N	8/47	PA	3000	3173	7176	NONE	8.625	11	397	200	CIRC**
Shell								CMT				4.5	7.875	1976	850	CIRC**
Grimes #8	30-025-07423	28	-18S	-38E	K	9/47	PA	3120	3215	3221	NONE	8.625	11	402	200	CIRC**
Shell								CMT				4.5	7.875	2108	850	CIRC**
STATE B #3	30-025-12752	33	-18S	-38E	C	11/47	PA	3169	3158	3166	NONE	8.625	11	428	200	CIRC**
Altura												4.5	7.875	3124	850	CIRC**
STATE B #4	30-025-12508	33	-18S	-38E	D	12/47	PA	3192	3145	3186	NONE	8.625	11	413	200	CIRC**
Altura												4.5	7.875	3120	850	CIRC**
STATE G #3	30-025-07562	33	-18S	-38E	F	11/48	PA	3208	3175	3178	NONE	9.625	12.25	462	250	CIRC
Altura								PBTD				5.5	7.875	3100	1000	CIRC
STATE G #4	30-025-07563	33	-18S	-38E	E	12/49	PA	3210	3187	3190	NONE	10.75	15	448	400	CIRC
Altura								PBTD				5.5	7.375	5.5	800	CIRC
Grimes #5	30-025-07414	28	-18S	-38E	O	12/47	PA	3218	3199	3209	3199-3209	10.75	13.75	422	300	CIRC**
Conoco												5.5	7.375	3204	650	CIRC**
Grimes #6	30-025-07415	28	-18S	-38E	J	12/47	PA	3255	3236	3249	NONE	10.75	12.25	424	350	CIRC**

\*\* Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

Well Name	API No	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole		No. of	
													Size	Depth	Sxs.	TOC
Operator Conoco												7	8.75	3255	550	CIRC**
State A-33 #11 Conoco	30-025-07552	33	-18S	-38E	G	5//49	PA	3194 PBTD	3090	3161	NONE	10.75	15	402	375	CIRC**
Grimes B #5 Gulf	30-025-07557	33	-18S	-38E	B	5//48	PA	3055 CMT	3130	3226	NONE	9.625	13.375	300	250	CIRC
												5.5	7.875	3120	700	CIRC**

\*\* Denotes calculated TOC with 50% efficiency

Shell Oil Co.  
Unit M, SW/4 of SW/4  
Sec 28, T-18S, R-38E

WELL PLUGGED:  
10/24/53

Size: 8.625"  
Depth: 411'  
Hole size: 11"  
Cmt: 200 sxs  
TOC: Circ.- Calc.  
50% efficiency

Spotted 5 sxs plug from 16' to surface

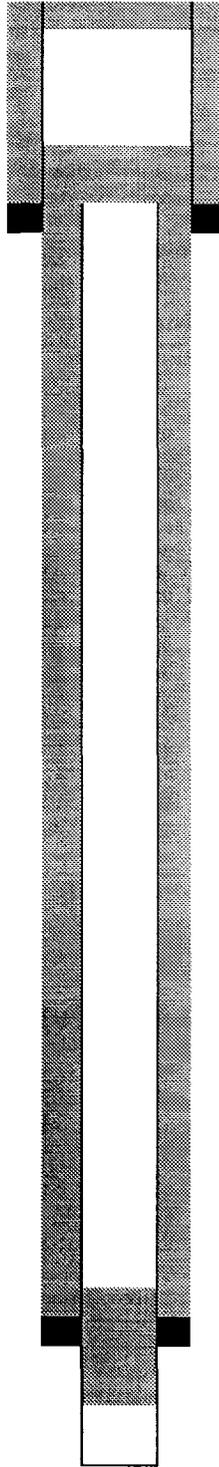
Spotted 5 sxs plug from 370-329'

Pulled 360' of 5.5" csg.

Size: 5.5"  
Depth: 2778'  
Hole size: 7.875"  
Cmt: 1400 sxs  
TOC:

TD: 3200'

Spotted 6 sxs plug 3140-3090'



Shell Oil Co.  
Unit N  
Sec 28, T-18S, R-38E

WELL PLUGGED:  
3/27/51

Size: 8.625"  
Depth: 397'  
Hole size: 11"  
Cmt: 200 sxs  
TOC: Circ.- Calc.  
50% efficiency

Spotted 10 sxs plug 60' to surface.

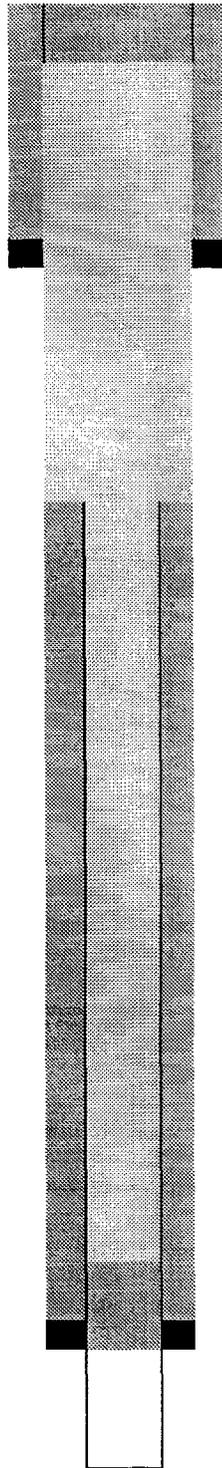
Hole full of heavy mud.

Shot 4.5 csg off at 1150'

Size: 4.5"  
Depth: 3126'  
Hole size: 7.875"  
Cmt: 850 sxs  
TOC:

Spotted 10 sxs plug 3120-3000'

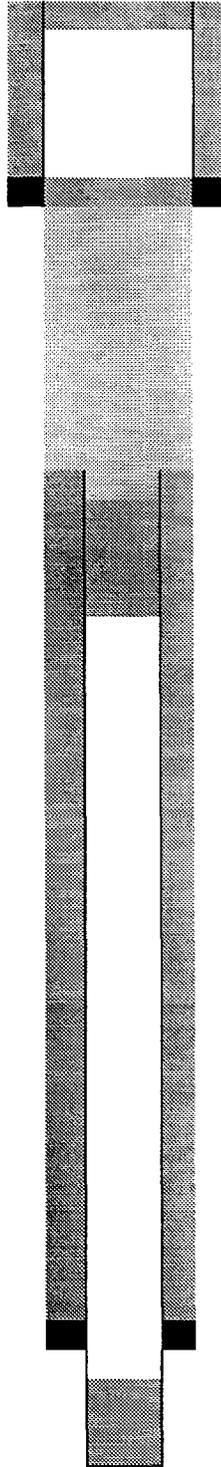
TD: 3187



Shell Oil Co.  
Unit L, NW/4 of SW/4  
Sec 28, T-18S, R-38E

WELL PLUGGED:  
10/3/53

Size: 8.625"  
Depth: 402'  
Hole size: 11"  
Cmt: 200 sxs  
TOC: Circ.- Calc.  
50% efficiency



Spotted 3 sxs plug at surface.

Spotted 6 sxs plug at 430'

Hole full of heavy mud.

Shot and pulled 1060' of 4.5" csg.

Spotted plug from 1320 to 1260

Size: 4.5"  
Depth: 2108'  
Hole size: 7.875"  
Cmt: 850 sxs  
TOC:

TD: 3230'

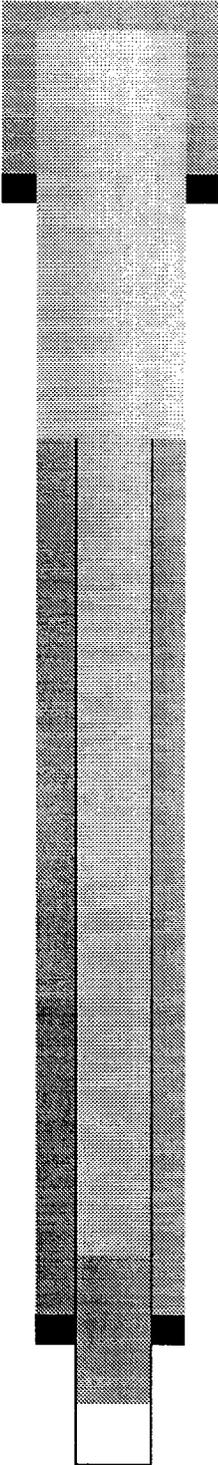
Spotted 6 sxs plug from 3180-3120'

**Shell**  
**Unit C, NW/4**  
**Sec 33, T-18S, R-38E**

WELL PLUGGED:  
3/30/51

Size: 8.625"  
Depth: 428'  
Hole size: 11"  
Cmt: 200 sxs  
TOC: Circ.- Calc.  
50% efficiency

Spotted 10 sxs plug from 47 to surface.



Shot 4.5" off at 1250'

Hole filled with heavy mud.

Size: 4.5"  
Depth: 3124'  
Hole size: 7.875"  
Cmt: 850 sxs  
TOC:

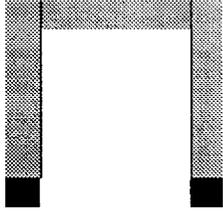
Spot 10 sxs plug from 3135 to 3000'

TD: 3169'

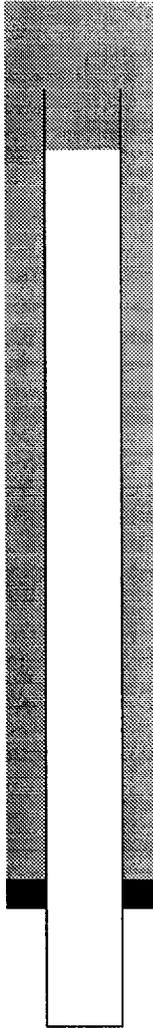
**Shell**  
**Unit D, 660 FNL & 990 FWL**  
**Sec 33, T-18S, R-38E**

WELL PLUGGED:  
6/19/50

Size: 8.625"  
Depth: 413'  
Hole size: 11"  
Cmt: 200 sxs  
TOC: Circ.- Calc.  
50% efficiency



Spotted 5 sxs at surface



Spotted 8 sxs from 1225 to 1150'

Shot 4.5" csg off at 1215

Size: 4.5"  
Depth: 3120'  
Hole size: 7.875"  
Cmt: 850 sxs  
TOC:

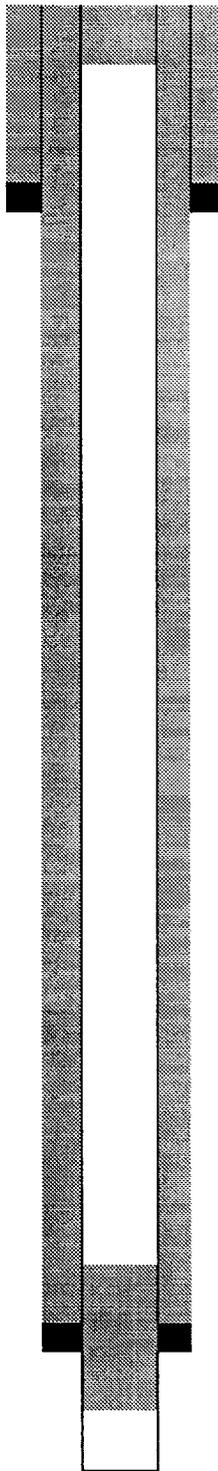
TD: 3192'

Amoco  
Unit F, 2285 FNL & 2310 FWL  
Sec 33, T-18S, R-38E

WELL PLUGGED:  
3/11/71

Size: 9.625"  
Depth: 462'  
Hole size: 12.25"  
Cmt: 250 sxs  
TOC: Circ.

Spotted 10 sxs plug at surface



Size: 5.5"  
Depth: 3100'  
Hole size: 7.875"  
Cmt: 1000 sxs  
TOC: Circ.

Spotted 25 sxs plug from 3208-3100

TD: 3208'

Amoco  
Unit E, 2310 FNL & 990 FWL  
Sec 33, T-18S, R-38E

WELL PLUGGED:  
3/9/71

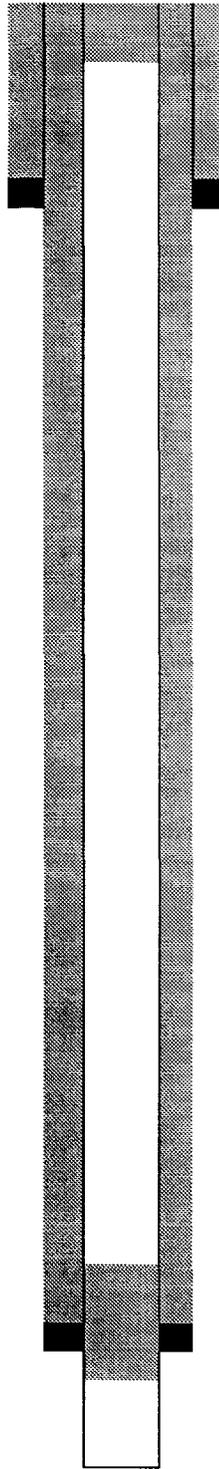
Size: 10.75"  
Depth: 448'  
Hole size: 15"  
Cmt: 400 sxs  
TOC: Circ.

Spotted 10 sxs plug at surface

Size: 5.5"  
Depth: 3108'  
Hole size: 7.375"  
Cmt: 800 sxs  
TOC: Circ.

Spotted 25 sxs plug from 3210 to 3108

TD: 3210'

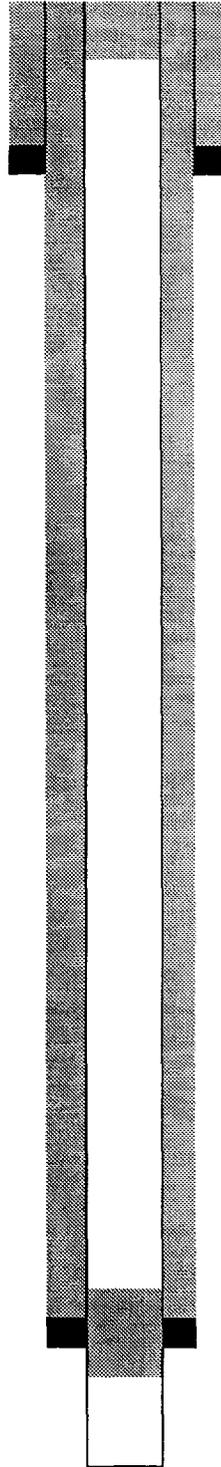


W. D. ...  
**Conoco**  
**Unit O, 1980 FEL & 660 FSL**  
**Sec 28, T-18S, R-38E**

WELL PLUGGED:  
1/20/71

Size: 10.75"  
Depth: 422'  
Hole size: 13.75"  
Cmt: 300 sxs  
TOC: Circ.- Calc.  
50% efficiency

Spotted 10 sxs plug at surface.



Size: 5.5"  
Depth: 3204'  
Hole size: 7.375"  
Cmt: 650 sxs  
TOC: Circ.- Calc.  
50% efficiency

TD: 3218'

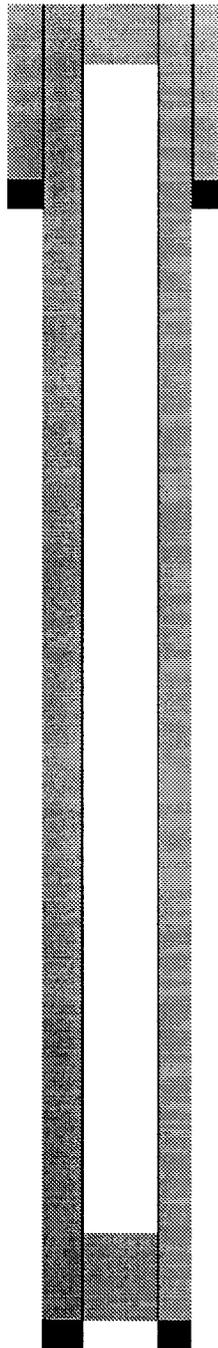
Spotted 40 sxs plug 3209-3199'

W. D. ...  
**Conoco**  
**Unit J, 1980 FEL & 1980 FSL**  
**Sec 28, T-18S, R-38E**

WELL PLUGGED:  
1/20/71

Size: 10.75"  
Depth: 424'  
Hole size: 12.25"  
Cmt: 350 sxs  
TOC: Circ.- Calc.  
50% efficiency

Spotted 10 sxs plug at surface.



Size: 7"  
Depth: 3255'  
Hole size: 8.75"  
Cmt: 550 sxs  
TOC: Circ.- Calc.  
50% efficiency

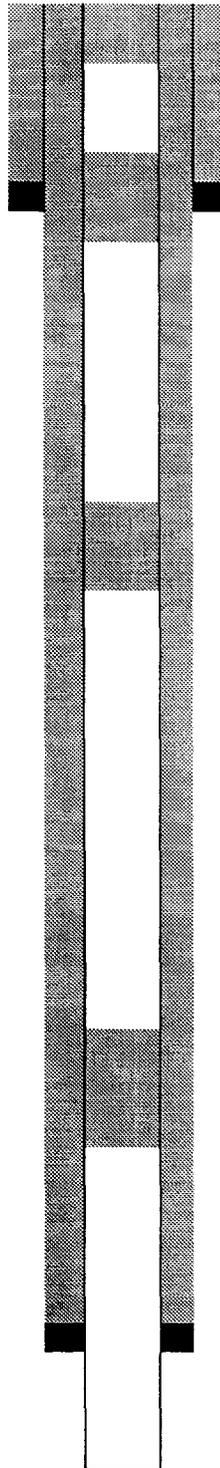
TD: 3255'

Spotted 40 sxs plug from 3249-3236'

Conoco  
Unit G, 2310 FNL & 2310 FEL  
Sec 33, T-18S, R-38E

WELL PLUGGED:  
3/18/87

Size: 10.75"  
Depth: 402'  
Hole size: 15"  
Cmt: 375 sxs  
TOC: Circ.- Calc.  
50% efficiency



Spotted 20 sxs plug from 100' to surface

Spotted 20 sxs plug from 470-290'

Spotted 20 sxs plug from 1620-1370'

Spotted 35 sxs plug from 2850-2600'

Size: 5.5"  
Depth: 3190'  
Hole size: 7.875"  
Cmt: 1200 sxs  
TOC: Circ.- Calc.  
50% efficiency

TD: 3194'

Gulf  
Unit B,  
Sec 33, T-18S, R-38E

WELL PLUGGED:  
4/18/60

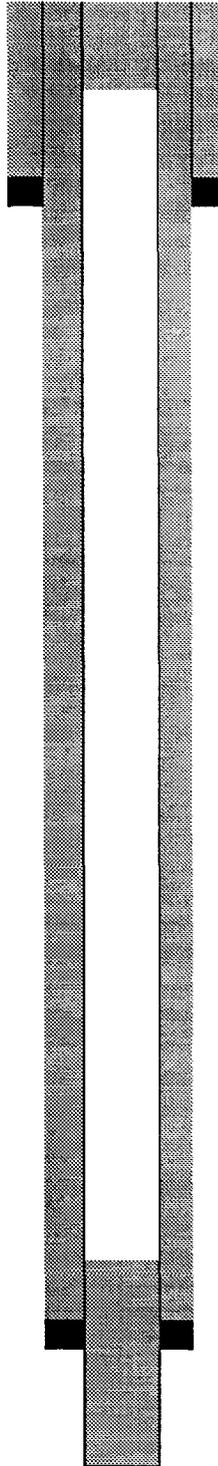
Size: 9.625"  
Depth: 300'  
Hole size: 13.375"  
Cmt: 250 sxs  
TOC: Circ.

Spotted 10 sxs plug from 80' to surface

Size: 5.5"  
Depth: 3120'  
Hole size: 7.875"  
Cmt: 700 sxs  
TOC: Circ.- Calc.  
50% efficiency

Spotted 35 sxs plug from 3226 to 2946'

TD: 3226



## LIST OF OFFSET OPERATORS & SURFACE OWNERS

---

North Hobbs (Grayburg/San Andres) Unit  
Well No. 211  
Letter C, Section 33, T-18-S, R-38-E  
Lea County, New Mexico

### Offset Operators

---

Occidental Permian Limited Partnership  
P.O. Box 4294  
Houston, TX 77210-4294

Texland Petroleum-Hobbs, LLC  
500 Throckmorton, Suite 3100  
Ft. Worth, TX 76102-3818

Saga Petroleum LLC  
415 W. Wall, Suite 835  
Midland, TX 79701

### Surface Owner

---

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, NM 87504-1148

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address

2.  Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Texland Petroleum-Hobbs, LLC  
500 Throckmorton, Suite 3100  
Ft. Worth, TX 76102-3818

4a. Article Number  
P 436 313 654

4b. Service Type

Registered  Certified

Express Mail  Insured

Return Receipt for Merchandise  COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

Thank you for using Return Receipt Service.

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1.  Addressee's Address

2.  Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Saga Petroleum LLC  
415 W. Wall, Suite 835  
Midland, TX 79701

4a. Article Number  
P 436 313 658

4b. Service Type

Registered  Certified

Express Mail  Insured

Return Receipt for Merchandise  COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

Thank you for using Return Receipt Service.

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1.  Addressee's Address

2.  Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, NM 87504-1148

4a. Article Number  
P 436 313 660

4b. Service Type

Registered  Certified

Express Mail  Insured

Return Receipt for Merchandise  COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

Thank you for using Return Receipt Service.

AFFIDAVIT OF PUBLICATION

State of New Mexico,  
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1 weeks.

Beginning with the issue dated December 31 1999

and ending with the issue dated December 31 1999

Kathi Bearden  
Publisher

Sworn and subscribed to before me this 3rd day of

January 2000

Godi Henson  
Notary Public.

My Commission expires  
October 18, 2000  
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE  
December 31, 1999

Notice is hereby given of the application of Altura Energy LTD, Attn: Mark Stephens, P.O. Box 4294, Rm. 338-B, Houston, TX 77210-4294 (281/552-1158), to the Oil Conservation Division, New Mexico Energy, Minerals and Natural Resources Department, for approval of the following injection wells for the purpose of secondary recovery:

- Pool Name: Hobbs; Grayburg-San Andres
- Lease/Unit Name: North Hobbs G/SA Unit
- Well No. 231
- Loc.: 2310' FSL & 2310' FWL, Unit Letter K, Sec. 19, T-18-S, R-38-E, Lea Co., NM
- Well No. 422
- Loc.: 2310' FNL & 330' FWL, Unit Letter H, Sec. 24, T-18-S, R-37-E, Lea Co., NM
- Well No. 431
- Loc.: 2310' FSL & 330' FEL, Unit Letter I, Sec. 25, T-18-S, R-37-E, Lea Co., NM
- Well No. 131
- Loc.: 2310' FSL & 330' FWL, Unit Letter L, Sec. 28, T-18-S, R-38-E, Lea Co., NM
- Well No. 332
- Loc.: 2470' FNL & 1800' FEL, Unit Letter G, Sec. 28, T-18-S, R-38-E, Lea Co., NM
- Well No. 231
- Loc.: 2310' FSL & 1650' FWL, Unit Letter K, Sec. 29, T-18-S, R-38-E, Lea Co., NM
- Well No. 321
- Loc.: 2310' FNL & 1650' FEL, Unit Letter G, Sec. 29, T-18-S, R-38-E, Lea Co., NM
- Well No. 223
- Loc.: 1770' FNL & 2405' FWL, Unit Letter F, Sec. 30, T-18-S, R-38-E, Lea Co., NM
- Well No. 411
- Loc.: 330' FNL & 3300' FEL, Unit Letter A, Sec. 30, T-18-S, R-38-E, Lea Co., NM
- Well No. 211
- Loc.: 440' FNL & 2310' FWL, Unit Letter C, Sec. 31, T-18-S, R-38-E, Lea Co., NM
- Well No. 144
- Loc.: 765' FSL & 1175' FWL, Unit Letter M, Sec. 32, T-18-S, R-38-E, Lea Co., NM
- Well No. 312
- Loc.: 210' FNL & 1400' FEL, Unit Letter B, Sec. 32, T-18-S, R-38-E, Lea Co., NM
- Well No. 431
- Loc.: 2310' FSL & 330' FEL, Unit Letter I, Sec. 32, T-18-S, R-38-E, Lea Co., NM
- Well No. 111
- Loc.: 330' FNL & 330' FWL, Unit Letter D, Sec. 33, T-18-S, R-38-E, Lea Co., NM
- Well No. 211
- Loc.: 330' FNL & 2310' FWL, Unit Letter C, Sec. 33, T-18-S, R-38-E, Lea Co., NM

The injection formation is the Hobbs; Grayburg - San Andres Pool between the intervals of +/- 3700' and +/- 5300' below the surface of the ground. Expected maximum injection rate is 4000 BWPD and the expected maximum injection pressure is approximately 805 psi. Interested parties must file objections or requests for hearing with the Oil Conservation Division, 2040 S. Pacheco, Santa Fe, NM 87505 within fifteen (15) days.  
#17073

02101173000      02533892  
altura  
P. O. Box 4294  
Houston, TX 77210-4294