

PMX 7/28/00



**Occidental Permian Ltd.**

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

July 10, 2000

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

JUL 13

RE: Expansion of Pressure Maintenance Project  
South Hobbs (GSA) Unit  
Hobbs; Grayburg – San Andres Pool  
Well No. 239  
Letter I, Section 5, T-19-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 the drilling and completion of the subject well as a new water injection well. Administrative Order No. R-4934 authorized Amoco Production Company (Occidental Permian Limited Partnership's predecessor) to conduct the South Hobbs (GSA) 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 (along with a copy of OCD-approved Form C-101)
- A map reflecting the location of the proposed injection well (No. 239). 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



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Houston, TX 77210-4294  
Phone: 281-552-1000

- 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-4934

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 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 10, 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: \_\_\_\_\_

### 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

South Hobbs (G/SA) Unit  
Well No. 239  
Letter I, Section 5, T-19-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        2000 BWPD  
   Maximum Injection Rate       4000 BWPD
  
2. Closed Injection System
  
3. Average Injection Pressure     800 PSIG  
   Maximum Injection Pressure    818 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 completion 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 Well SHU # 239  
**SAMPLED BY**

**DATE TAKEN** 6/19/00

**REMARKS** T19S-R38E-Sec5; Qtr Sec 2,4,3

Barium as Ba	0	
Carbonate alkalinity PPM	44	
Bicarbonate alkalinity PPM	208	
pH at Lab	7.41	
Specific Gravity @ 60°F	1	
Magnesium as Mg	193	
Total Hardness as CaCO3	332	
Chlorides as Cl	113	
Sulfate as SO4	155	
Iron as Fe	0.1	
Potassium	0.1	
Hydrogen Sulfide	0	
Rw	12	@ 24° C
Total Dissolved Solids	900	
Calcium as Ca	139	
Nitrate	11	

Results reported as Parts per Million unless stated

**Langelier Saturation Index** -0.21

Analysis by: Vickie Walker  
Date: 6/20/00



# 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 Well SHU #239  
SAMPLED BY \_\_\_\_\_

DATE TAKEN 6/19/00

REMARKS T19S-R38E-Sec5; Qtr Sec 2,3,4

Barium as Ba	0	
Carbonate alkalinity PPM	24	
Bicarbonate alkalinity PPM	240	
pH at Lab	7.27	
Specific Gravity @ 60°F	1	
Magnesium as Mg	311	
Total Hardness as CaCO <sub>3</sub>	536	
Chlorides as Cl	254	
Sulfate as SO <sub>4</sub>	375	
Iron as Fe	0.4	
Potassium	0.2	
Hydrogen Sulfide	0	
Rw	9.5	@ 24° C
Total Dissolved Solids	1,460	
Calcium as Ca	225	
Nitrate	15.4	

Results reported as Parts per Million unless stated

Langelier Saturation Index -0.13

Analysis by: Vickie Walker  
Date: 6/20/00

DISTRICT I  
P.O. Box 1990, Hobbs, NM 88241-1990

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 88211-0718

DISTRICT III  
1000 Rio Brazos Rd., Artesia, 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 30-025-34946	Pool Code 31920	Pool Name Hobbs; Grayburg - San Andres
Property Code 19552	Property Name SOUTH HOBBS (GSA) Unit	Well Number 239
OGRID No. 157984	Operator Name Occidental Permian Limited Partnership	Elevation 3609

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	5	19 S	38 E		1984	SOUTH	370	EAST	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 40	Joint or Infill I	Consolidation Code U	Order No.
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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 style="text-align: center;">SPC NME NAD 1927 Y=615785 X=860160</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p style="text-align: right;"><u>Mark Stephens</u> Signature</p> <p style="text-align: right;">Mark Stephens Printed Name</p> <p style="text-align: right;">Business Analyst (SG) Title</p> <p style="text-align: right;">July 10, 2000 Date</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p style="text-align: right;">JANUARY 7, 2000 Date Surveyed</p> <p style="text-align: right;">LMP Signature &amp; Seal of Professional Surveyor</p> <p style="text-align: right;"><u>Ronald J. Eidson 01-14-2000</u> 99-11-0003</p>
	<p>Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641 MACON McDONALD 12185</p>

District I  
 PO Box 1980, Hobbs, NM 88241-1980  
 District II  
 811 S. 1st Street, Artesia, NM 88210-2834  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV  
 2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals & Natural Resources Department

**OIL CONSERVATION DIVISION**  
 2040 South Pacheco  
 Santa Fe, NM 87505

Form C-101  
 Revised October 18, 1994  
 Instructions on back  
 Submit to Appropriate District Office  
 State Lease - 6 Copies  
 Fee Lease - 5 Copies

AMENDED REPORT

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator name and Address <b>Altura Energy LTD</b> <b>P.O. Box 4294</b> <b>Houston, TX 77210-4294</b>		<sup>2</sup> OGRID Number <b>157984</b>
<sup>4</sup> Property Code <b>19552</b>	<sup>5</sup> Property Name <b>South Hobbs (GSA) Unit</b>	<sup>3</sup> API Number <b>30-0 25-34946</b>
		<sup>6</sup> Well No. <b>239</b>

<sup>7</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
<b>I</b>	<b>5</b>	<b>19-S</b>	<b>38-E</b>		<b>1984</b>	<b>South</b>	<b>370</b>	<b>East</b>	<b>Lea</b>

<sup>8</sup> Proposed 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
<sup>9</sup> Proposed Pool 1 <b>Hobbs; Grayburg - San Andres</b>					<sup>10</sup> Proposed Pool 2				

<sup>11</sup> Work Type Code <b>N</b>	<sup>12</sup> Well Type Code <b>I</b>	<sup>13</sup> Cable/Rotary <b>R</b>	<sup>14</sup> Lease Type Code <b>P</b>	<sup>15</sup> Ground Level Elevation <b>3609</b>
<sup>16</sup> Multiple <b>No</b>	<sup>17</sup> Proposed Depth <b>4500'</b>	<sup>18</sup> Formation <b>San Andres</b>	<sup>19</sup> Contractor <b>Key Energy</b>	<sup>20</sup> Spud Date <b>April, 2000</b>

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
<b>18</b>	<b>14</b>	<b>Conductor</b>	<b>40</b>	<b>50</b>	<b>Surface</b>
<b>12-1/4</b>	<b>8-5/8</b>	<b>24</b>	<b>1650</b>	<b>775</b>	<b>Surface</b>
<b>7-7/8</b>	<b>5-1/2</b>	<b>15.5</b>	<b>4500</b>	<b>750</b>	<b>Surface</b>

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

**No change in proposed drilling program - change is to well no. only.**

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Mark Stephens*

Printed name: **Mark Stephens (281) 552-1158**

Title: **Business Analyst (SG)**

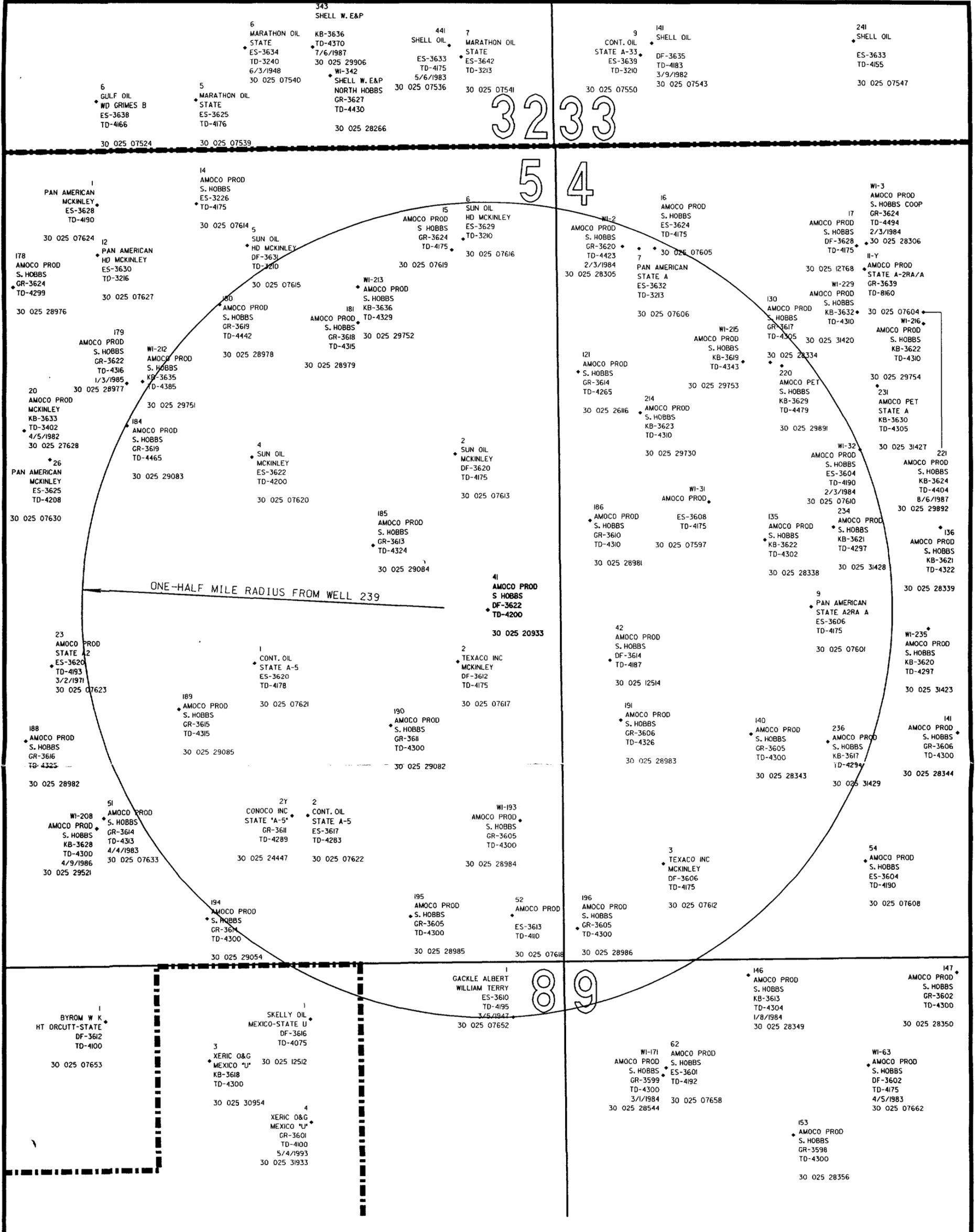
**OIL CONSERVATION DIVISION**

Approved by: ~~ORIGINAL SIGNED BY CHRIS WILLIAMS~~  
**DISTRICT I SUPERVISOR**

Title:

Approval Date: **MAR 07 2000**

Expiration Date: **APR 01 2000**



ONE-HALF MILE RADIUS FROM WELL 239

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

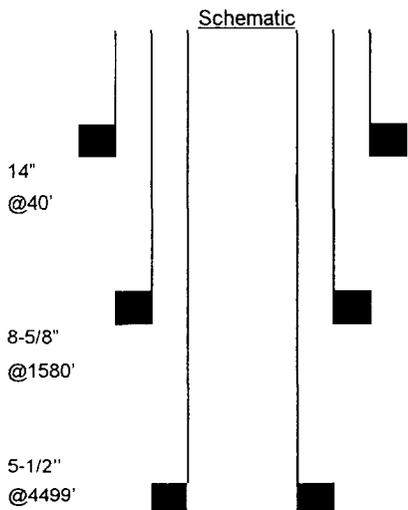
**Altura** Altura Energy Ltd.  
ENERGY, LTD.

Area of Review Plat  
**SOUTH HOBBS (GRAYBURG  
SAN ANDRES) UNIT**  
WELL NO. 239  
T-19-S, R-38-E  
Lea County, New Mexico

Scale: 1" = 600' 03-27-2000 nmJ38a00.dgn - 12  
Plat prepared by PJE Drafting, Inc.  
For Horizon Survey, Inc.

INJECTION WELL DATA SHEET

Operator	Occidental Permian Limited Partnership		Lease	South Hobbs G/SA Unit		County	Lea
Well No.	Footage Location		Section	Township	Range	Unit Letter	
239	1984' FSL x 370' FEL		5	19-S	38-E	I	



Surface Casing		Tubular Data	
Size	14"	Cemented with	50 sxs.
TOC	SURF	Determined by	Circ.
Hole size _____			
Intermediate Casing		Tubular Data	
Size	8-5/8"	Cemented with	750 sxs.
TOC	SURF	Determined by	Circ.
Hole size _____			
Long string Casing		Tubular Data	
Size	5-1/2"	Cemented with	1000 sxs.
TOC	SURF	Determined by	Circ.
Hole size _____			
Liner			
Size	_____	Cemented with	_____ sxs.
TOC	_____	Determined by	_____
Hole size _____			

Total depth 4499'

Injection interval 4100 feet to 4300 feet

Completion type Perforated Casing

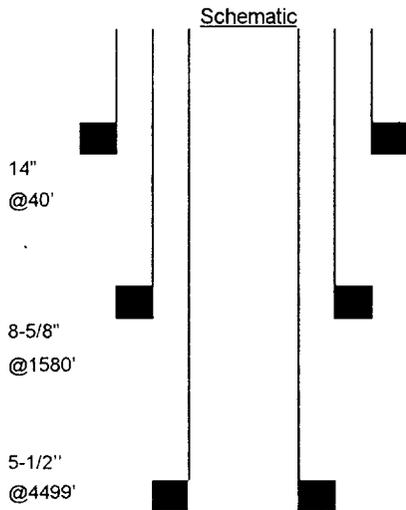
Tubing size 2-7/8" lined with Duoline (Fiberglass liner) set in a Guiberson - Uni VI packer at 4000' feet  
(brand and model)

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 will originally drilled? \_\_\_\_\_
- 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) None
- Give the depth to and name of any overlying and/or underlying oil and gas zones (pools) in this area.  
Grayburg - 3270, Glorieta - 5300

**INJECTION WELL DATA SHEET**

Operator	<b>Occidental Permian Limited Partnership</b>	Lease	<b>South Hobbs G/SA Unit</b>	County	<b>Lea</b>
Well No.	<b>239</b>	Footage Location	<b>1984' FSL x 370' FEL</b>	Section	<b>5</b>
				Township	<b>19-S</b>
				Range	<b>38-E</b>
				Unit Letter	<b>I</b>



<u>Surface Casing</u>		<u>Tubular Data</u>	
Size	<u>14"</u>	Cemented with	<u>50</u> sxs.
TOC	<u>SURF</u>	Determined by	<u>Circ.</u>
Hole size	_____		
<u>Intermediate Casing</u>			
Size	<u>8-5/8"</u>	Cemented with	<u>750</u> sxs.
TOC	<u>SURF</u>	Determined by	<u>Circ.</u>
Hole size	_____		
<u>Long string Casing</u>			
Size	<u>5-1/2"</u>	Cemented with	<u>1000</u> sxs.
TOC	<u>SURF</u>	Determined by	<u>Circ.</u>
Hole size	_____		
<u>Liner</u>			
Size	_____	Cemented with	_____ sxs.
TOC	_____	Determined by	_____
Hole size	_____		
Total depth	<u>4499'</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? \_\_\_\_\_
- 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) None
- Give the depth to and name of any overlying and/or underlying oil and gas zones (pools) in this area.  
Grayburg - 3270, Glorieta - 5300

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

FOR WELL SHU 239																
Well Name	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
SHU 2	30-025-28305	4	-19S	-38E	E	8/32	P	4299 PBTD	4084	4218	4050-4064	16	20	232	100	CIRC
Altura												10.75	13.5	2776	400	1985**
												8.625	12.25	3975	150	CIRC
												5.5	7.875	3919-4220	188	3000
SHU 15	30-025-07619	5	-19S	-38E	A	8/30	P	4212 PBTD	2750	4175	3982-3990 4030-4044	13.375	18	192	150	CIRC**
Altura												9.625	12.25	2746	300	2221**
												7	8.875	3984	225	3011**
												5.5	6.5	4175	50	3700-TS
SHU 16	30-025-07605	4	-19S	-38E	D	8/30	P	4205 PBTD	4102	4198	3890-3978 4053-4085	16	20	251	135	36**
Altura												9.625	12.25	2798	700	CIRC**
												6.625	8.875	3976	200	CIRC
												5	6.5	3886-4198	75	CIRC**
SHU 29	30-025-07620	5	-19S	-38E	G	12/30	I	4220	4053	4190	160-350	13	15	175	175	CIRC
Altura												9.625	12.25	2744	500	953**
												7	8.75	3932	230	2867**
												5.5	6.25	4200	50	3391**
SHU 30	30-025-07613	5	-19S	-38E	H	10/30	I	4230	4059	4172	165	13	15	192	150	CIRC
Altura												9.625	12.25	2750	500	CIRC
												7	8.75	3950	215	3092**
												5.5	6.25	4169	50	2900-TS
SHU 31	30-025-07597	4	-19S	-38E	E	8/30	I	4250 PBTD	4095	4207	3100	13	15	259	106	CIRC**
Altura												9.625	12.25	2785	300	2280**
												6.625	8.75	3993	135	3591**
												5	6.25	3949-4217	75	2503**
SHU 32	30-025-07610	4	-19S	-38E	F	8/30	I	4224 PBTD	4078	4198	3100	13	15	253	80	CIRC**
Altura												9.625	12.25	2772	300	2260**
												6.625	8.75	3997	135	3524**
												5	6.5	3936-4199	70	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. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
SHU 42 Altura	30-025-12514	4	-19S	-38E	I	9//30	I	4224 PBTD	3986	4214	2450 2700-2701	12.5 8.25 6.625 4.5	13.75 9.625 7.875 5.625	164 2750 3960 3845-4224	175 600 200 75	CIRC** CIRC** 1932** CIRC**
SHU 43 Altura	30-025-07601	4	-19S	-38E	K	8//30	I	4190 PBTD	4078	4198	3978-4040	13 9.625 6.625 4.5	15.5 12.25 7.875 6.25	250 2779 3988 3914-4214	150 300 200 85	CIRC** CIRC 2988-CBL CIRC**
SHU 52 Altura	30-025-07618	5	-19S	-38E	P	NA	TA	4240 PBTD	4100	4230	3965-3985 4038-4052 4070-4078 4247-4276	13.375 5.5 2.875	15.5 7.875 4.75	259 4109 4290	200 150 50	CIRC** 3559** 4132**
SHU 53 Altura	30-025-07612	4	-19S	-38E	M	10//30	I	4177 PBTD	4083	4177	1550 3984-4078	12.5 9 7 4.5	13.75 12.25 8.75 6.25	196 2778 3965 3702-4220	200 600 200 50	CIRC** 1012** 2965 CIRC
SHU 61 Altura	30-025-07652	8	-19S	-38E	A	3//47	I	4220	3992	4182	4078-4086 4105-4110	8.625 5.5	11 7.875	1598 4195	300 400	59** 1719**
SHU 121 Altura	30-025-26116	4	-19S	-38E	E	12//78	I	4210 PBTD	4050	4240	3972-3988 3998-4008 4018-4030	11.75 8.625 5.5	15 11 7.875	1431 3865 4268	150 1350 700	CIRC CIRC CIRC
SHU 130 Altura	30-025-28334	4	-19S	-38E	F	10//83	P	4298	4070	4194	4203-4244	14 8.625 5.5	17.375 12.25 7.875	40 1496 4298	9 875 1300	29** CIRC CIRC
SHU 135 Altura	30-025-28338	4	-19S	-38E	F	11//83	TA	4050 CIBP	4116	4199	4076-4084 4096-4101 4208-4234	14 8.625 5.5	17.375 12.25 7.875	37 1501 4300	42 480 2100	CIRC** CIRC** 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. Perfs	Csg. Size	Hole Size	Depth	No. of.	
															Sxs.	TOC
SHU 140 Altura	30-025-28343	4	-19S	-38E	L	12//83	P	4292 PBTD	4089	4208	NONE	14 8.625 5.5	17.375 12.25 7.875	40 1507 4295	42 875 1450	CIRC** CIRC CIRC
SHU 180 Altura	30-025-28978	5	-19S	-38E	A	11//84	P	4307 PBTD	4155	4305	NONE	14 8.625 5.5	17.375 12.25 7.875	40 1485 4436	42 875 1485	CIRC** CIRC CIRC
SHU 181 Altura	30-025-28979	5	-19S	-38E	A	10//84	P	4210 PBTD	4083	4206	1500 4214-4242	14 8.625 5.5	20 12.25 7.875	40 1492 4315	9 875 1100	35** CIRC CIRC**
SHU 184 Altura	30-025-29083	5	-19S	-38E	F	1//85	P	4434 PBTD	4216	4406	NONE	14 8.625 5.5	20 12.25 7.875	40 1505 4465	101 875 1000	CIRC** CIRC CIRC**
SHU 185 Altura	30-025-29084	5	-19S	-38E	H	1//85	P	4212 PBTD	4086	4117	4132-4234	14 8.625 5.5	20 12.25 7.875	39 1498 4324	101 981 1400	CIRC** CIRC 535
SHU 186 Altura	30-025-28981	4	-19S	-38E	E	10//84	P	4310	4075	4203	4205-4238	14 8.625 5.5	20 12.25 7.875	39 1479 4310	50 1075 2000	CIRC** CIRC CIRC
SHU 187 Altura	30-025-07621	5	-19S	-38E	J	12//30	I	4184 PBTD	4128	4203	515 2290 3025 3994-4020 4097-4127	15.5 9.625 7 4.5	20 12.25 8.75 6.25	180 2779 3970 4207	250 600 300 400	CIRC** 373** 2002** CIRC
SHU 189 Altura	30-025-29085	5	-19S	-38E	J	2//85	P	4300 PBTD	4160	4228	4155-4170	14 8.625 5.5	20 12.25 7.875	40 1529 4311	112 875 2060	CIRC** CIRC CIRC
SHU 190 Altura	30-025-29082	5	-19S	-38E	I	1//85	P	4275 PBTD	4084	4224	4130-4186	14 8.625 5.5	20 12.25 7.875	40 1529 4300	8 748 1162	37** CIRC 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	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sgz. Perfs	Csg. Size	Hole Size	Depth	No. of	
															Sxs.	TOC
SHU 191 Altura	30-025- 28983	4	-19S	-38E	L	11//84	P	4310 PBTD	4126	4310	4100-4110 4212-4245	14 8.625 5.5	20 12.25 7.875	40 1515 4326	83 875 1000	CIRC** CIRC CIRC
SHU 192 Altura	30-025- 24447	5	-19S	-38E	O	7//73	I	4250 PBTD	4162	4219	1485 4068-4154	8.625 5.5	12.25 7.875	1481 4280	720 430	CIRC 2550
SHU 193 Altura	30-025- 28984	5	-19S	-38E	P	11//84	I	4275 PBTD	4124	4230	NONE	14 8.625 5.5	20 12.25 7.875	40 1450 4300	88 875 1175	CIRC** CIRC CIRC
SHU 195 Altura	30-025- 28985	5	-19S	-38E	P	11//84	TA	4075 CIBP	4124	4234	NONE	14 8.625 5.5	20 12.25 7.875	40 1549 4299	52 875	CIRC** CIRC CIRC
SHU 196 Altura	30-025- 28986	4	-19S	-38E	M	11//84	TA	4050 CIBP	4120	4232	NONE	14 8.625 5.5	20 12.25 7.875	40 1503 4300	8 725 875	37** CIRC** CIRC**
SHU 213 Altura	30-025- 29752	5	-19S	-38E	A	11//86	I	4202 PBTD	4078	4216	NONE	14 8.625 5.5	20 12.25 7.875	40 1482 4329	NA 850 950	NA CIRC CIRC
SHU 214 Altura	30-025- 29730	4	-19S	-38E	E	10//86	P	4300 PBTD	4073	4278	NONE	14 8.625 5.5	20 12.25 7.875	40 1504 4310	8 750 657	37** CIRC CIRC
SHU 215 Altura	30-025- 29753	4	-19S	-38E	E	11//86	I	4293 PBTD	4110	4244	NONE	14 8.625 5.5	20 12.25 7.875	40 1485 4348	8 602 810	37** CIRC CIRC
SHU 220 Altura	30-025- 29891	4	-19S	-38E	C	6//87	P	4465 PBTD	4220	4346	1350 3250	16 10.75 7	20 14.75 9.875	41 1449 4479	13 650 818	29** CIRC CIRC

\*\* Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

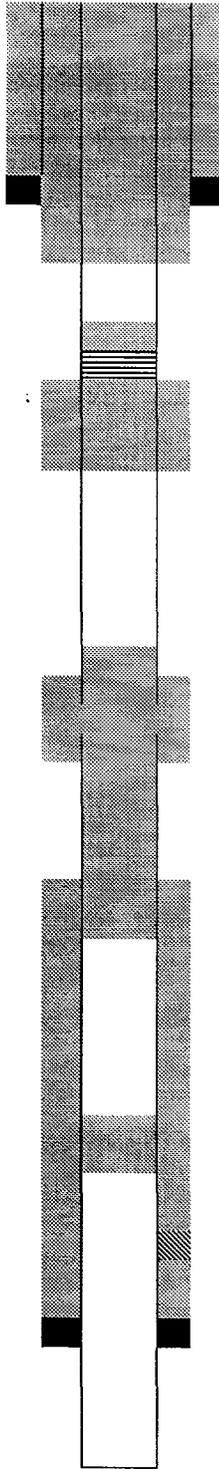
Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
SHU 234 Altura	30-025-31428	4	-19S	-38E	F	12/91	P	4285 PBTD	4085	4242	NONE	10.75 7	14.75 9.875	1435 4314	720 1454	CIRC CIRC
SHU 236 Altura	30-025-31429	4	-19S	-38E	K	11/91	P	4291 PBTD	4134	4264	NONE	10.75 7	14.75 9.75	1517 4301	952 1257	CIRC CIRC
SHU 41 Altura	30-025-29033	5	-19S	-38E	I	7/64	PA	4232	4088	4232	3942-3947 4050-4054	10.75 4.5	15.5 6.75	419 4088	300 200	CIRC 2908
State A-5 #2 Conoco	30-025-07622	5	-19S	-38E	O	9/48	PA	4252 PBTD	4180	4216	NA	10.75 5.5	13.75 8.75	348 4290	300 650	CIRC** 1337**
State A #7 Pan American	30-025-07606	4	-19S	-38E	D	2/49	PA	3213	3165	3210	NA	9.625 5.5	12.25 7.375	432 3092	250 800	CIRC**
HD McKinley #6 Sun	30-025-07616	5	-19S	-38E	A	8/48	PA	3210	3154	3200	NA	9.625 5.5	13.75 7.375	276 3103	150 675	CIRC**
McKinley #2 Texaco	30-025-07617	5	-19S	-38E	I	10/30	PA	4175	3167	3197	NA	12.5 9 7	16 12.25 8.75	210 2795 3956	175 600 200	CIRC** 1037** 3298**

\*\* Denotes calculated TOC with 50% efficiency

Altura  
Unit I, 2310 FSL & 460 FEL  
Sec. 5, T-19S, R-38E

WELL PLUGGED:  
11/7/99

Size: 10.75"  
Depth: 419'  
Hole size: 15.5"  
Cmt: 300 sxs  
TOC: CIRC



Perforated at 465 and circulated 255 sxs  
cement to surface. Left 4.5" full of cmt.

Cmt Ret. at 1423, sqz'd 75 sxs and capped  
retainer with 20 sxs

Spotted 70 sxs plug 2233-3210'

4.5" csg parted at 2321' pumped 350 sxs  
to stabilize casing.

Spotted 9 sxs 3710-3832

Sqz'd perms 3942-47, 4050-54

Size: 4.5"  
Depth: 4088'  
Hole size: 6.75"  
Cmt: 200  
TOC: 2908'

TD: 4232'

Conoco  
Unit O, 990 FSL & 1650 FEL  
Sec 5, T-19S, R-38E

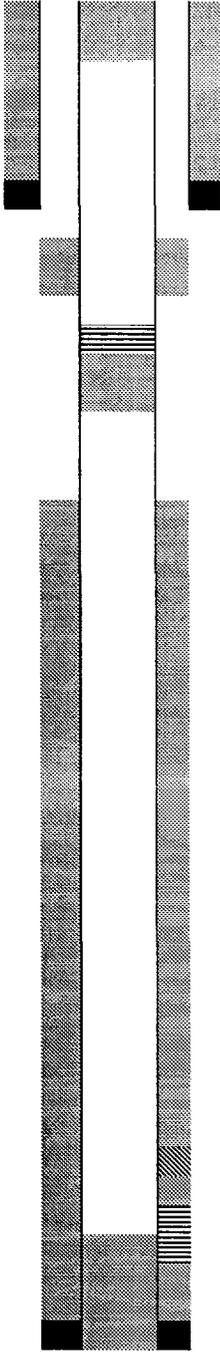
WELL PLUGGED:  
7/31/73

Size: 10.75"  
Depth: 348'  
Hole size: 13.75"  
Cmt: 300 sxs  
TOC: CIRC - Calc  
50% efficiency

20' surface cmt. plug.

Csg. repair at 985, sqz'd w/ 80 sxs

Cmt. Ret at 995 + 100 sxs



Size: 5.5"  
Depth: 4290'  
Hole size: 8.75"  
Cmt: 650 sxs  
TOC: 1337' - Calc  
50% efficiency

Sqz'd perms 3956-4044 w/ 137 sxs

Perfs 4124-4216

PBTD w/ cmt to 4206'

Pan American  
Unit D, NW/4 of NW/4  
Sec 4, T-19S, R-38E

WELL PLUGGED:  
6/16/53

Size: 9.625"  
Depth: 432'  
Hole size: 12.25"  
Cmt: 250 sxs  
TOC: CIRC - Calc  
50% efficiency

Spotted 20' surface plug

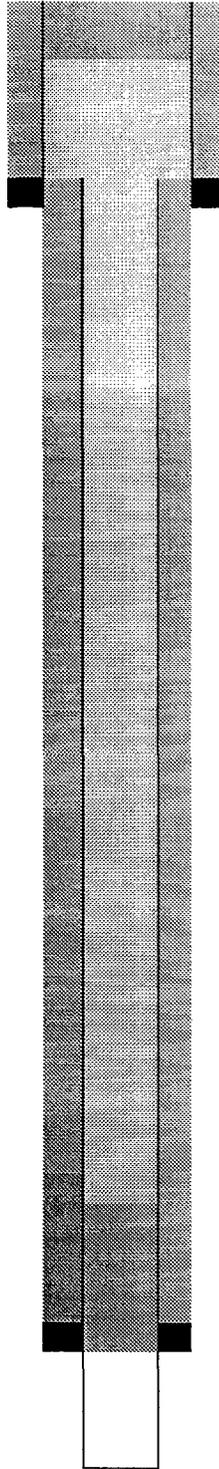
Shot 5.5" off at 323'

Heavy mud in hole

Size: 5.5"  
Depth: 3092'  
Hole size: 7.375"  
Cmt: 800 sxs  
TOC:

Spotted 25 sxs plug from 2892-3092

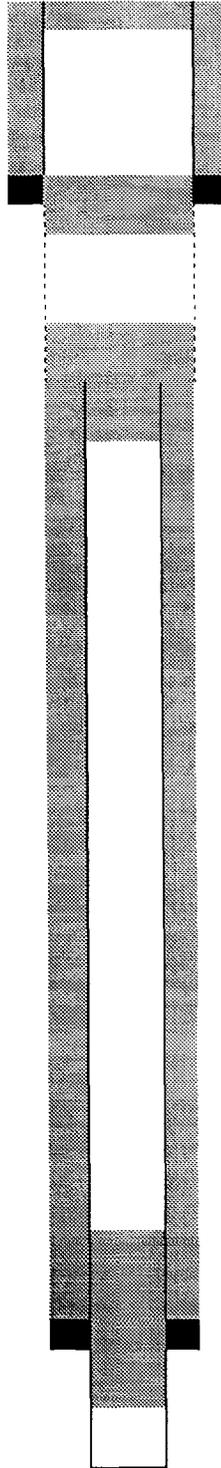
TD: 3213'



H. D. McKinley Co  
Sun Oil Co.  
Unit A, 585 FNL & 585 FEL  
Sec 5, T-19S, R-38E

WELL PLUGGED:  
1/30/74

Size: 9.625"  
Depth: 276'  
Hole size: 13.75"  
Cmt: 150 sxs  
TOC: CIRC - Calc  
50% efficiency



Spotted 5 sxs plug at surface

Spotted 45 sxs at 340'

Spotted 45 sxs plug at 1049'

Shot 5.5" off at 1016'

Size: 5.5"  
Depth: 3103'  
Hole size: 7.375"  
Cmt: 675 sxs  
TOC:

Spotted 45 sxs plug 2900-3150'

TD: 3210'

Texaco  
Unit I, 1980 FSL & 660 FEL  
Sec 5, T-19S, R-38E

WELL PLUGGED:  
11/7/91

Size: 12.5"  
Depth: 210'  
Hole size: 16"  
Cmt: 175 sxs  
TOC: CIRC - Calc  
50% efficiency

Perforated 7" at 200', pumped and  
circulated 100 sxs to surface.

Spotted 20 sxs plug, 1425-1545'

Size: 9"  
Depth: 2795'  
Hole size: 12.25"  
Cmt: 600 sxs  
TOC: 1037' - Calc  
50% efficiency

Spotted 30 sxs plug, 2740-2893'

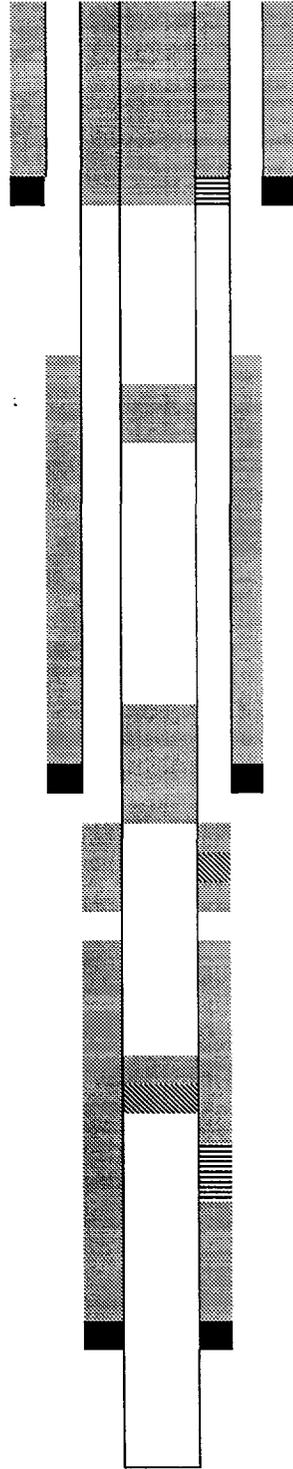
Sqz'd perfs 3167-3236 w/ 100 sxs

Size: 7"  
Depth: 3956'  
Hole size: 8.75"  
Cmt: 200 sxs  
TOC: 3298' - Calc  
50% efficiency

CIBP at 3510' + capped w/ 35' cmt.

Perfs 3574-3755'

TD: 4175'



LIST OF OFFSET OPERATORS & SURFACE OWNERS

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South Hobbs (GSA) Unit  
Well No. 239  
Letter I, Section 5, T-19-S, R-38-E  
Lea County, New Mexico

Offset Operator

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

Surface Owner

---

Texaco Exploration and Production Inc.  
P.O. Box 3109  
Midland, TX 79702

Is your RETURN ADDRESS completed on the reverse side?

<b>SENDER:</b> ■ 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. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery  Consult postmaster for fee.
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AFFIDAVIT OF PUBLICATION

State of New Mexico,  
County of Lea.

I, 03112000

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 March 16 2000

and ending with the issue dated March 16 2000

Kathi Benson  
Publisher

Sworn and subscribed to before me this 16th day of

March 2000

Jodi 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

March 16, 2000

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 to be drilled injection well for the purpose of secondary recovery:

Pool Name: Hobbs;  
Grayburg-San Andres Lease Unit Name: South Hobbs (GSA) Unit  
Well No. 239

Loc.: 1984' FSL & 370' FEL, Unit Letter I, Sec. 5, T-19-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 818 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.

#17264

02101173000 02536115

Altura Energy LTD.  
P. O. Box 4294  
Houston, TX 77210-4294

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