

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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- 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.

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
Well # WIS DISCHARGE PUMP
Lease..... ALTURA NHU
Location...
Date Run... 11/08/1999
Lab Ref #.. 99-NOV-N05126

Sample Temp... 70.0
Date Sampled.. 11/05/1999
Sampled by.... Mike Athey
Employee # ... 27-008
Analyzed by... DANIEL

Dissolved Gasses

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

Cations

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

Anions

Hydroxyl	(OH-)	Not Analyzed		
Carbonate	(CO ₃ =)	0.00	30.00	0.00
Bicarbonate	(HCO ₃ -)	1,869.66	61.10	30.60
Sulfate	(SO ₄ =)	1,700.00	48.80	34.84
Chloride	(Cl-)	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 ₃		2,810.32		
Conductivity MICROMHOS/CM		23,500		

pH 6.500 Specific Gravity 60/60 F. 1.009

CaSO₄ Solubility @ 80 F. 46.63 MEq/L, CaSO₄ scale is unlikely

CaCO₃ 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 CaCO ₃	332	
Chlorides as Cl	113	
Sulfate as SO ₄	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 ₃	536	
Chlorides as Cl	254	
Sulfate as SO ₄	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 1988, Hobbs, NM 88241-1988

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

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

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

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

				SPC NME NAD 1927 Y=615785 X=860160		OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <u>Mark Stephens</u> Signature Mark Stephens Printed Name Business Analyst (SG) Title July 10, 2000 Date	
						SURVEYOR CERTIFICATION 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. JANUARY 7, 2000 Date Surveyed LMP Signature & Seal of Professional Surveyor <u>Ronald J. Eidson</u> 01-14-2000 99-11-0003 Certificate No. RONALD J. EIDSON 3238 GARY EIDSON 12641 MACON McDONALD 12185	
				3610.2' 3609.1' [O] 3608.6' 3607.6' DETAIL		SEE DETAIL 370' 1984'	

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

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

⁷ Surface Location

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

⁸ 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
⁹ Proposed Pool 1 Hobbs; Grayburg - San Andres					¹⁰ Proposed Pool 2				

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

²¹ Proposed Casing and Cement Program

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

²² 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.

²³ 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)**

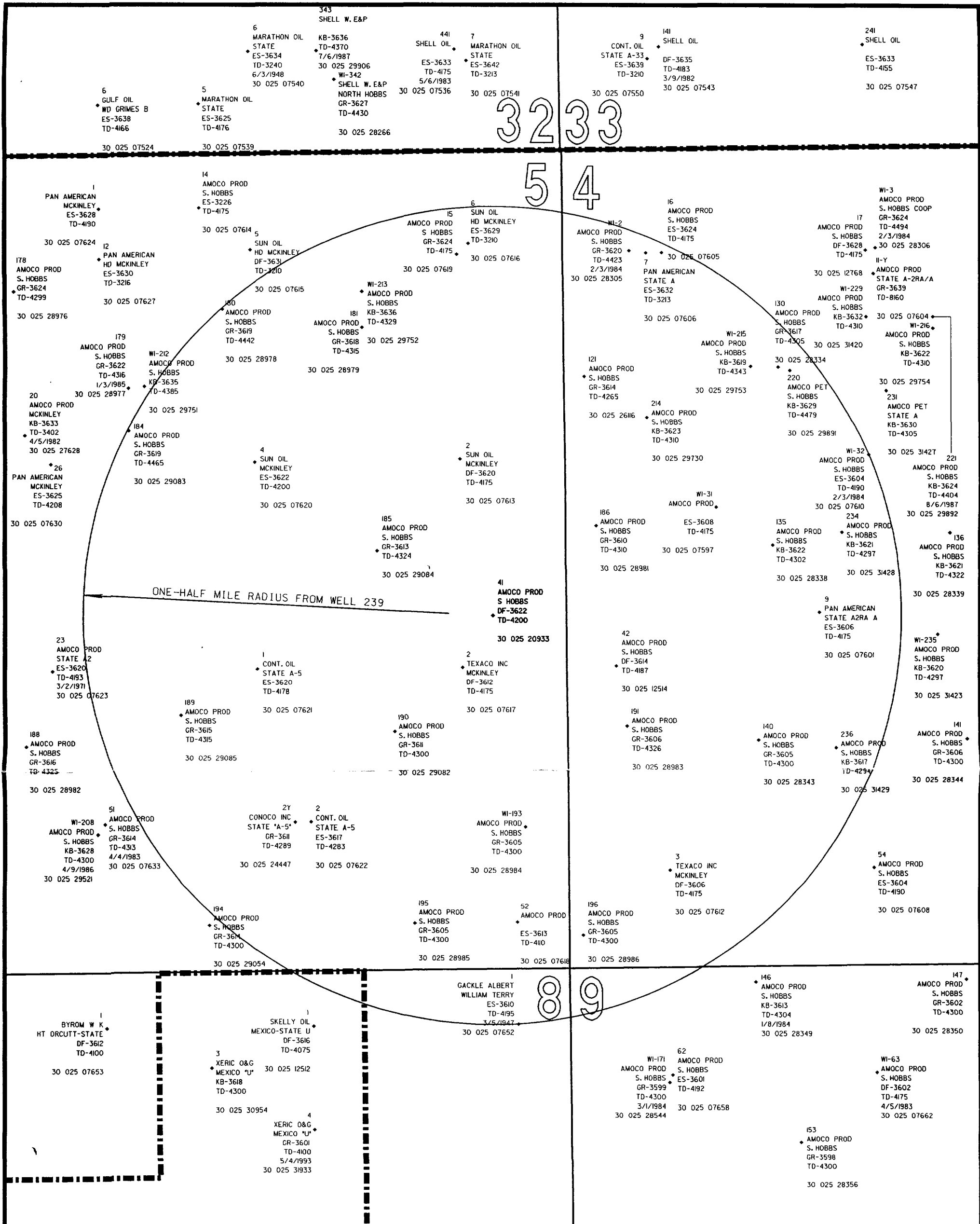
OIL CONSERVATION DIVISION

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

Title:

Approval Date: **MAR 07 2000**

Expiration Date: **MAR 07 2000**



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

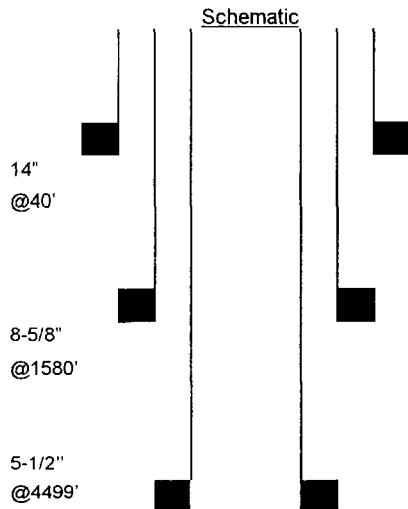
Altura Altura Energy Ltd.
ENERGY, LTD.

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 nm438a00.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		



<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

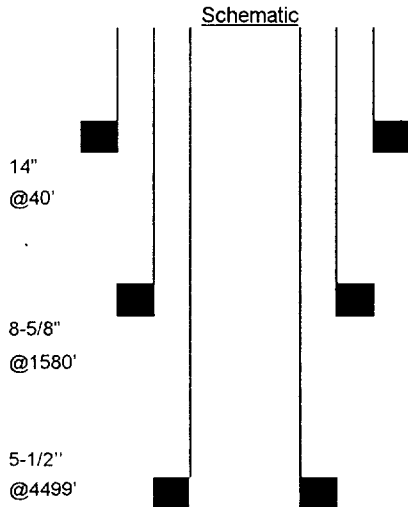
Tubing size 2-7/8" lined with Duoline (Fiberglass liner) set in a
Guiberson - Uni VI packer at 4000' feet
 (brand and model)

Other Data

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? _____
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) None
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

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		



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

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? _____
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) None
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

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	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.
Operator					Ltr			PBTD							TOC
SHU 2	30-025- 28305		4 -19S	-38E	E	8/32	P	4299	4084	4218	4050-4064	16	20	232	100
Altura								PBTD				10.75	13.5	2776	400
												8.625	12.25	3975	150
												5.5	7.875	3919-4220	188
															3000
SHU 15	30-025- 07619		5 -19S	-38E	A	8/30	P	4212	2750	4175	3982-3990	13.375	18	192	150
Altura								PBTD			4030-4044	9.625	12.25	2746	300
												7	8.875	3984	225
												5.5	6.5	4175	50
															3700-TS
SHU 16	30-025- 07605		4 -19S	-38E	D	8/30	P	4205	4102	4198	3890-3978	16	20	251	135
Altura								PBTD			4053-4085	9.625	12.25	2798	700
												6.625	8.875	3976	200
												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
Altura											1650	9.625	12.25	2744	500
											2720	7	8.75	3932	230
											4000	5.5	6.25	4200	50
											4084-4198				3391**
SHU 30	30-025- 07613		5 -19S	-38E	H	10/30	I	4230	4059	4172	165	13	15	192	150
Altura											4044-4054	9.625	12.25	2750	500
											4150	7	8.75	3950	215
												5.5	6.25	4169	50
															2900-TS
SHU 31	30-025- 07597		4 -19S	-38E	E	8/30	I	4250	4095	4207	3100	13	15	259	106
Altura								PBTD			3975-3998	9.625	12.25	2785	300
											4022-4092	6.625	8.75	3993	135
												5	6.25	3949-4217	75
															2503**
SHU 32	30-025- 07610		4 -19S	-38E	F	8/30	I	4224	4078	4198	3100	13	15	253	80
Altura								PBTD				9.625	12.25	2772	300
												6.625	8.75	3997	135
												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 PBD	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 PBD	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 PBD	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 PBD	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 PBD	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 PBD	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	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
SHU 140	28343	4	-19S	-38E	L	12/83	P	4292	4089	4208	NONE	14	17.375	40	42	CIRC**
Altura								PBTD				8.625	12.25	1507	875	CIRC
												5.5	7.875	4295	1450	CIRC
SHU 180	28978	5	-19S	-38E	A	11/84	P	4307	4155	4305	NONE	14	17.375	40	42	CIRC**
Altura								PBTD				8.625	12.25	1485	875	CIRC
												5.5	7.875	4436	1485	CIRC
SHU 181	28979	5	-19S	-38E	A	10/84	P	4210	4083	4206	1500	14	20	40	9	35**
Altura								PBTD			4214-4242	8.625	12.25	1492	875	CIRC
												5.5	7.875	4315	1100	CIRC**
SHU 184	29083	5	-19S	-38E	F	1/85	P	4434	4216	4406	NONE	14	20	40	101	CIRC**
Altura								PBTD				8.625	12.25	1505	875	CIRC
												5.5	7.875	4465	1000	CIRC**
SHU 185	29084	5	-19S	-38E	H	1/85	P	4212	4086	4117	4132-4234	14	20	39	101	CIRC**
Altura								PBTD				8.625	12.25	1498	981	CIRC
												5.5	7.875	4324	1400	535
SHU 186	28981	4	-19S	-38E	E	10/84	P	4310	4075	4203	4205-4238	14	20	39	50	CIRC**
Altura												8.625	12.25	1479	1075	CIRC
												5.5	7.875	4310	2000	CIRC
SHU 187	07621	5	-19S	-38E	J	12/30	I	4184	4128	4203	515	15.5	20	180	250	CIRC**
Altura								PBTD			2290	9.625	12.25	2779	600	373**
											3025	7	8.75	3970	300	2002**
											3994-4020	4.5	6.25	4207	400	CIRC
											4097-4127					
SHU 189	29085	5	-19S	-38E	J	2/85	P	4300	4160	4228	4155-4170	14	20	40	112	CIRC**
Altura								PBTD				8.625	12.25	1529	875	CIRC
												5.5	7.875	4311	2060	CIRC
SHU 190	29082	5	-19S	-38E	I	1/85	P	4275	4084	4224	4130-4186	14	20	40	8	37**
Altura								PBTD				8.625	12.25	1529	748	CIRC
												5.5	7.875	4300	1162	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	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
SHU 191 Altura	30-025- 28983	4 -19S	-38E	L	11//84	P	4310	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	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	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	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	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	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	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	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	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	API No.	Sec.	T	R	Un	Drill	Well	TD or	Top	Bot	Sqz.	Csg.	Hole	Depth	No. of	TOC
Operator					Ltr	Date	Type	PBTD	Perf	Perf	Perfs	Size	Size		Sxs.	
SHU 234	30-025- 31428	4	-19S	-38E	F	12/91	P	4285	4085	4242	NONE	16	20	40	NA	NA
Altura								PBTD				10.75	14.75	1435	720	CIRC
												7	9.875	4314	1454	CIRC
SHU 236	30-025- 31429	4	-19S	-38E	K	11/91	P	4291	4134	4264	NONE	10.75	14.75	1517	952	CIRC
Altura								PBTD				7	9.75	4301	1257	CIRC
SHU 41	30-025- 29033	5	-19S	-38E	I	7/64	PA	4232	4088	4232	3942-3947	10.75	15.5	419	300	CIRC
Altura											4050-4054	4.5	6.75	4088	200	2908
State A-5 #2	30-025- 07622	5	-19S	-38E	O	9/48	PA	4252	4180	4216	NA	10.75	13.75	348	300	CIRC**
Conoco								PBTD				5.5	8.75	4290	650	1337**
State A #7	30-025- 07606	4	-19S	-38E	D	2/49	PA	3213	3165	3210	NA	9.625	12.25	432	250	CIRC**
Pan American												5.5	7.375	3092	800	
HD McKinley #6	30-025- 07616	5	-19S	-38E	A	8/48	PA	3210	3154	3200	NA	9.625	13.75	276	150	CIRC**
Sun												5.5	7.375	3103	675	
McKinley #2	30-025- 07617	5	-19S	-38E	I	10/30	PA	4175	3167	3197	NA	12.5	16	210	175	CIRC**
Texaco												9	12.25	2795	600	1037**
												7	8.75	3956	200	3298**

** Denotes calculated TOC with 50% efficiency

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

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

Sqz'd perfs 3942-47, 4050-54

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

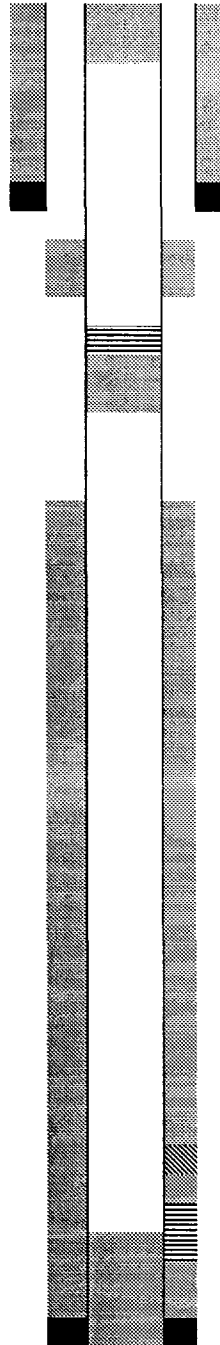
Cmt. Ret at 995 + 100 sxs

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

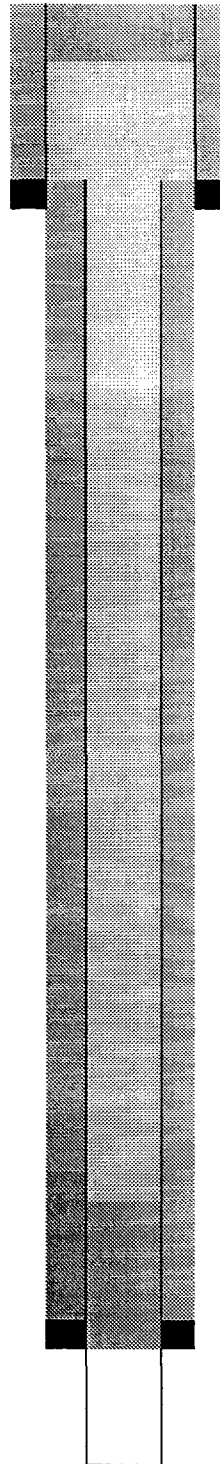
Shot 5.5" off at 323'

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'

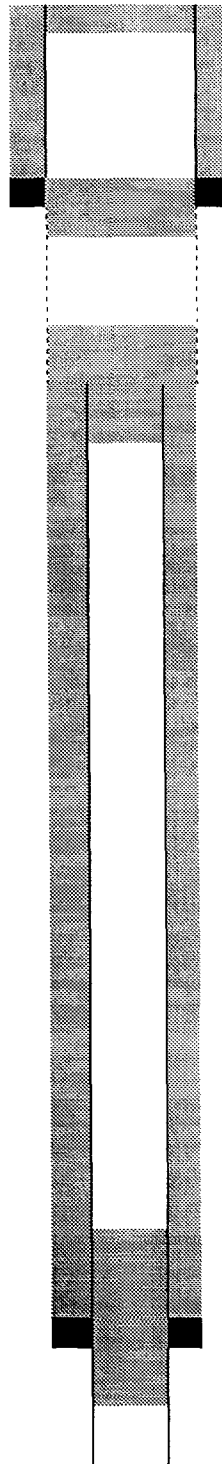
Spotted 45 sxs plug at 1049'

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'

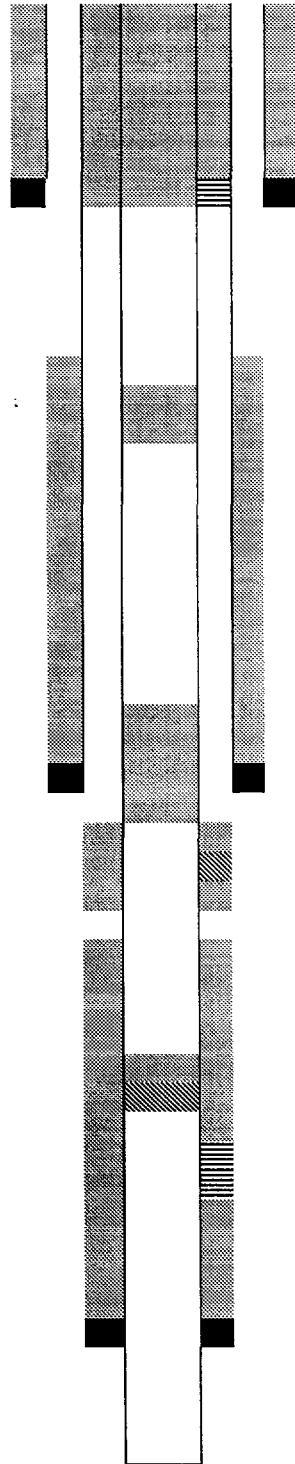
Sqz'd perfs 3167-3236 w/ 100 sxs

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

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

Offset Operator

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?

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:

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

4a. Article Number

P 436 313 785

4b. Service Type

- | | |
|--|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input checked="" type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> 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, 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



Publisher

Sworn and subscribed to before

me this 16th day of

March 2000



Notary Public.

My Commission expires
October 18, 2000
(Seal)

This newspaper is duly qualified
to publish legal notices or adver-
tisements 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 Depart-
ment, for approval of the fol-
lowing to be drilled injection
well for the purpose of second-
ary 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' be-

low 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 Conser-

vation Division, 2040 S. Pa-

checo, 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