



Occidental Permian Ltd.

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

June 22, 2000

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

26

RE: Expansion of Pressure Maintenance Project
North Hobbs (Grayburg/San Andres) Unit
Hobbs; Grayburg – San Andres Pool
Well No. 411
Letter A, Section 30, 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. 411 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. 411). 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 X Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? X 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? X 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:
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: June 22, 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

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.
- Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.
- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
- (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and 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

North Hobbs (Grayburg/San Andres) Unit
Well No. 411
Letter A, Section 30, 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
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 30-411

SAMPLED BY

DATE TAKEN 5/10/00

REMARKS T18S-R38E-Sec 29, Sec. 1,2,3

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	204	
pH at Lab	7.47	
Specific Gravity @ 60°F	1	
Magnesium as Mg	190	
Total Hardness as CaCO ₃	328	
Chlorides as Cl	136	
Sulfate as SO ₄	120	
Iron as Fe	0	
Potassium	0.03	
Hydrogen Sulfide	0	
Rw	9.1	23.0 C
Total Dissolved Solids	805	
Calcium as Ca	138	
Nitrate	5.3	

Results reported as Parts per Million unless stated

Langelier Saturation Index - 0.19

Analysis by: Rolland Perry
Date: 5/14/00

**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 30-411
SAMPLED BY

DATE TAKEN 5/11/00
REMARKS T18S-R38E-Sec 30, Qtr Sec 2,2.2

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	360	
pH at Lab	6.97	
Specific Gravity @ 60°F	1.001	
Magnesium as Mg	248	
Total Hardness as CaCO3	428	
Chlorides as Cl	200	
Sulfate as SO4	170	
Iron as Fe	0.1	
Potassium	0.13	
Hydrogen Sulfide	0	
Rw	9.5	23.0 C
Total Dissolved Solids	1,205	
Calcium as Ca	180	
Nitrate	33.9	

Results reported as Parts per Million unless stated

Langelier Saturation Index - 0.18

Analysis by: Rolland Perry
Date: 5/14/00

DISTRICT I
P. O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DE, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brancos Rd., Aztec, NM 87410

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

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

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-07470	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 411
OGRED No. 157984	Operator Name Occidental Permian Limited Partnership	Elevation 3652

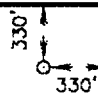
Surface Location

UL or lot No. A	Section 30	Township 18 S	Range 38 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 330	East/West line EAST	County LEA
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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

	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 June 22, 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 6, 2000 Date Surveyed Signature & Seal of Professional Surveyor <u>Gary E. Edson</u> 1/28/2000 00-13-0019 Certificate No. RONALD J. EDSON 3239 GARY EDSON 12541 MACON McDONALD 12185	

DISTRICT I
P.O. Box 1900, Hobbs, NM 88241-1900

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 80, Artesia, NM 88211-0710

DISTRICT III
1000 Rio Branco Rd., Aztec, 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 30-025-07470	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 411
OGRID No. 157984	Operator Name Occidental Permian Limited Partnership	Elevation 3652

Surface Location

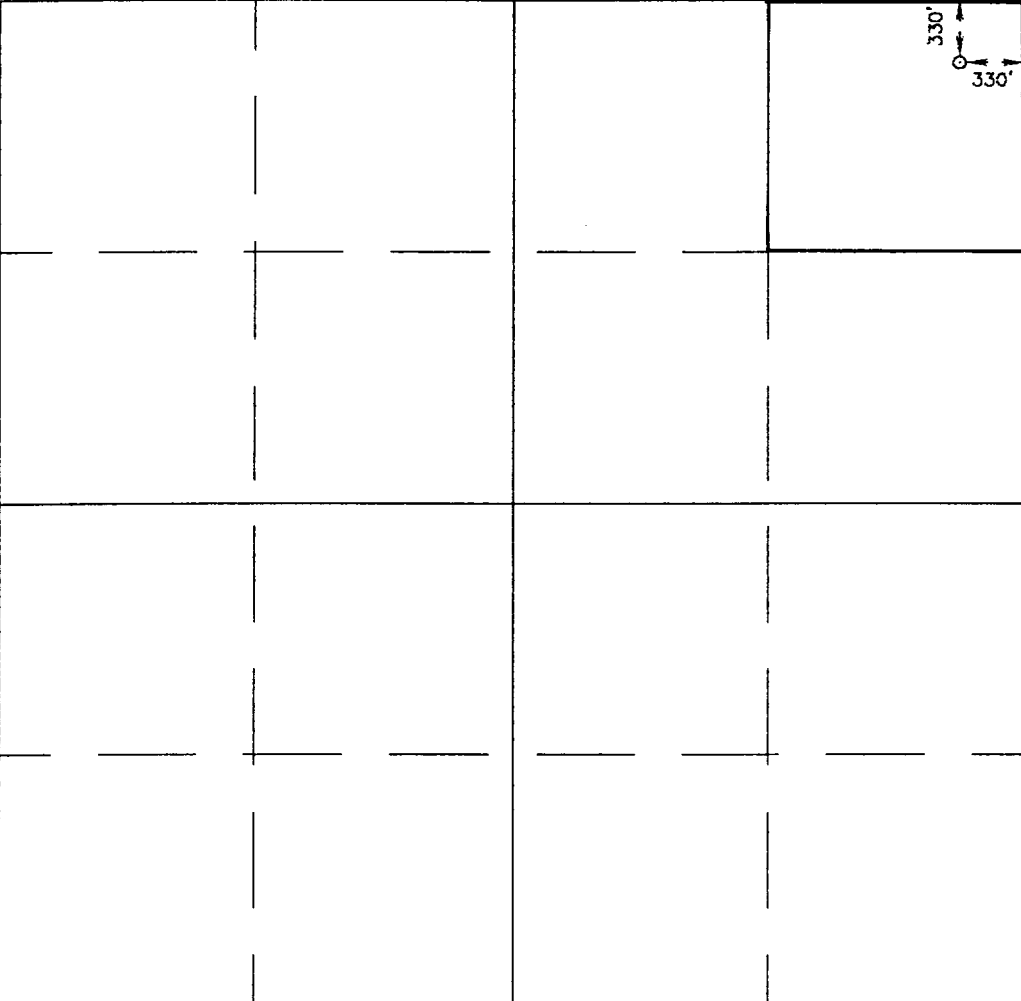
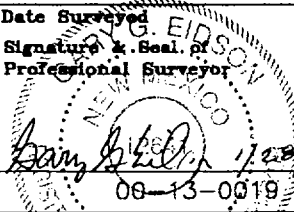
UL or lot No. A	Section 30	Township 18 S	Range 38 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 330	East/West line EAST	County LEA
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
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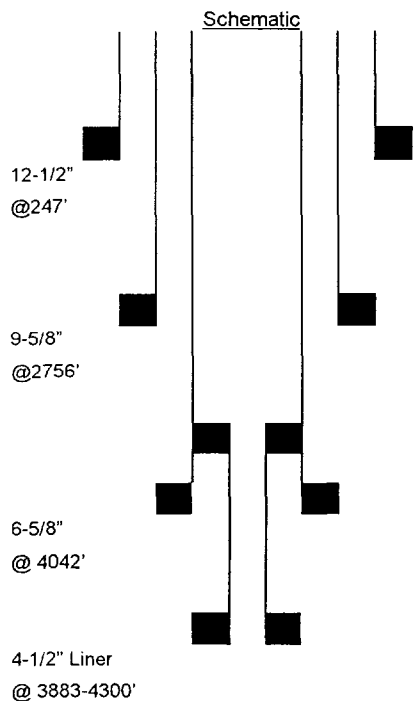
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

				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 June 22, 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 6, 2000 Date Surveyed Signature & Seal of Professional Surveyor  Certificate No. RONALD J. EIDSON 3239 CARY EIDSON 12841 MACON McDONALD 12185
				DC

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

INJECTION WELL DATA SHEET

Operator	Occidental Permian Limited Partnership	Lease	North Hobbs G/SA Unit	County	Lea
Well No.	30-411	Section	30	Township	18-S
Footage Location	330 FNL & 330 FEL	Range	38-E	Unit Letter	A



<u>Surface Casing</u>		<u>Tubular Data</u>	
Size	12-1/2"	Cemented with	250 sxs.
TOC	Circ.	Determined by	Calc. w/ 50% eff.
Hole size	18"		
<u>Intermediate Casing</u>			
Size	9-5/8"	Cemented with	600 sxs.
TOC	554	Determined by	Calc. w/ 50% eff.
Hole size			
<u>Long string Casing</u>			
Size	6-5/8"	Cemented with	250 sxs.
TOC	3210'	Determined by	CBL
Hole size	8-1/4"		
<u>Liner</u>			
Size	4-1/2"	Cemented with	75 sxs.
TOC	3883	Determined by	Calc. w/ 50% eff.
Hole size			
Total depth	4329'		

Injection interval
4171 feet to 4300 feet

Completion type Perforated Casing

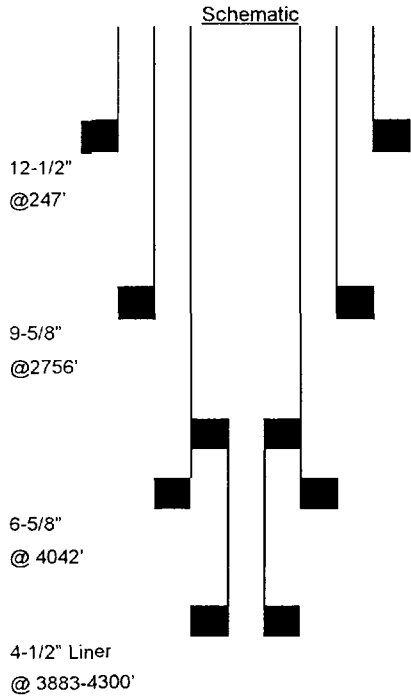
Tubing size 2-7/8" lined with Duoline (Fiberglass liner) set in a
Guiberson - Uni VI packer at 4150' feet
 (brand and model)

Other Data

- Name of the injection formation San Andres
- Name of field or Pool Hobbs (Grayburg/San Andres)
- 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) 4056-4124, squeezed w/ 150 sxs
- 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	North Hobbs G/SA Unit	County	Lea
Well No.	30-411	Section	30	Range	38-E
Footage Location	330 FNL & 330 FEL	Township	18-S	Unit Letter	A



<u>Surface Casing</u>		<u>Tubular Data</u>	
Size	12-1/2"	Cemented with	250 sxs.
TOC	Circ.	Determined by	Calc. w/ 50% eff.
Hole size	18"		
<u>Intermediate Casing</u>			
Size	9-5/8"	Cemented with	600 sxs.
TOC	554	Determined by	Calc. w/ 50% eff.
Hole size			
<u>Long string Casing</u>			
Size	6-5/8"	Cemented with	250 sxs.
TOC	3210'	Determined by	CBL
Hole size	8-1/4"		
<u>Liner</u>			
Size	4-1/2"	Cemented with	75 sxs.
TOC	3883	Determined by	Calc. w/ 50% eff.
Hole size			
Total depth	4329'		

Injection interval
4171 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 4150' feet
 (brand and model)

Other Data

- Name of the injection formation San Andres
- Name of field or Pool Hobbs (Grayburg/San Andres)
- 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) 4056-4124, squeezed w/ 150 sxs
- Give the depth to and name of any overlying and/or underlying oil and gas zones (pools) in this area.
Grayburg – 3270, Glorieta - 5300

[illegible]

** - Denotes calculated TOC with 50% efficiency.

OFFSET WELLS WITHIN A HALF MILE OF PROPOSED INJECTOR

FOR WELL 30411															
Well Name	API No.	Sec.	T	R	Un	Drill	Well	TD or	Top	Bot	Sqz.	Csg.	Hole	Depth	No. of
Operator					Ltr	Date	Type	PBTD	Perf	Perf	Perfs	Size	Size		Sxs
20232	30-025-07384	20	-18S	-38E	K	7/33	TA	4275	4158	4252	4225-4234	15.5	18	243	150
Altura											4253-4258	9.625	12	1615	75
												7	8.75	4089	250
															2839**
29111	30-025-23919	29	-18S	-38E	D	12/71	P	4287	4183	4287	3905-4250	8.625	11	310	150
Altura								PBTD				5.5	7.875	3905	300
29121	30-025-07449	29	-18S	-38E	E	3/47	P	4275	3924	4275	4070-85	9.625	12.25	2739	650
											4110-20	7	8.75	3104	100
											4130-50	4.5 Lnr	6.25	2900-4201	100
															2900
29122	30-025-28953	29	-18S	-38E	E	2/85	I	4215	4154	4211	NONE	13.375	17.5	40	NA
Altura								(CIBP)				8.625	11	1510	785
												5.5	7.875	4370	435
29211	30-025-07433	29	-18S	-38E	C	11/30	TA	4003	4217	4270	4053-4215	12.5	16	243	250
Altura								CIBP				9.625	11.75	2796	400
												7	8.75	4007	500
												5.5	6.125	3957-4228	130
															4145
30211	30-025-07463	30	-18S	-38E	C	8/30	P	4254	4149	4250	4078	9.625	12.25	2647	400
Altura											4086	6.625	7.875	3972	250
											4100	5 Lnr	6.5	3867-4310	100
															CIRC**
29222	30-025-26934	29	-18S	-38E	F	4/81	I	4465	4175	4265	NONE	16	20	40	40
Altura												8.625	12.25	1605	950
												5.5	7.875	4510	1050
															CIRC
30311	30-025-07469	30	-18S	-38E	B	8/30	TA	3950	3998	4121	2601	13.5	16	245	200
Altura								RBP				9.625	11.75	2753	600
												7	8.75	3998	250
															3154
30312	30-025-29197	30	-18S	-38E	B	5/85	P	4380	4215	4333	NONE	13.375	17.5	40	NA
Altura												9.625	12.25	1500	650
												7	8.75	4431	700
															CIRC
30313	30-025-23270	30	-18S	-38E	B	11/69	TA	4065	5871	5951	5805-53	13.375	17.5	382	400
Altura								CIBP				8.625	12.25	3849	1256
															600

** - Denotes calculated TOC with 50% efficiency.

OFFSET WELLS WITHIN A HALF MILE OF PROPOSED INJECTOR

FOR WELL 30411															
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
Operator					Ltr										TOC
												5.5	7.875	6047	570
30411	30-025-07470	30 -18S	-38E	A	12/32	TA	4000	4177	4287	4056-4124	12.5	16	247	250	CIRC
Altura							CIBP				9.625	12	2756	600	CIRC**
											6.625	8.75	4042	250	3284**
30412	30-025-23384	30 -18S	-38E	A	1/70	P	4440	4009	4261	4142-4200	13.375	17.5	379	400	CIRC
Altura							PBTD				9.625	12.25	3848	1200	75
											7	8.75	7106	865	3400
30421	30-025-07468	30 -18S	-38E	H	7/30	P	4258	4114	4258	NONE	12.5	16	251	200	CIRC
Altura											9.625	11.75	2756	600	554
											7	8.75	3858	250	CIRC
											5	6.25	4202	450	CIRC
30422	30-025-27059	30 -18S	-38E	H	5/81	I	4477	4110	4265	4108-23	16	20	40	40	CIRC
Altura											8.625	12.25	1524	850	CIRC
											5.5	7.875	4510	1000	2500 CBL
Bowers A Fed. #9	30-025-07446	29 -18S	-38E	E	8/30	PA	4259	3222	3227	2400	12.5	16	213	650	CIRC**
Exxon										3736-3741	9.625	12	2736	650	2011**
											7	8.75	3976	300	CIRC**
Bowers Fed. A #CT24	30-025-21963	29 -18S	-38E	E	1/67	PA	35				No data in State records				
Humble															
Bowers A Fed. #CT25	30-025-21964	29 -18S	-38E	D	1/67	PA	35				No data in State records				
Exxon															
Bowers A Fed. #CT27	30-025-21970	30 -18S	-38E	H	1/67	PA	35				No data in State records				
Exxon															
Bowers A Fed. #31	30-025-23176	29 -18S	-38E	E	6/69	PA	7050	6075	6991		8.625	11	3836	500	1858**
Exxon											5.5	7.875	7038	650	3125**
											2	7.875	7005	NA	NA

** - Denotes calculated TOC with 50% efficiency.

OFFSET WELLS WITHIN A HALF MILE OF PROPOSED INJECTOR

FOR WELL 30411																
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
Operator					Ltr											
Bowers A Fed. #33	30-025-23222	29	-18S	-38E	D	7//69	PA	3970	4144	5953	4256-66	13.375	17	416	400	CIRC**
Exxon								CIBP			5939	9.625	12.25	5988	350	6768**
												7	8.75	NA	550	NA
Bowers A-B #1	30-025-07453	29	-18S	-38E	D	9//48	PA	3238	3179	3238		8.625	11	260	150	CIRC**
Exxon									OH			5.5	7.625	3179	1050	CIRC**
B.A. Bowers #6	30-025-07475	30	-18S	-38E	I	11//30	PA	3190	No data	No data		12.5	18	217	200	CIRC
Exxon												9.625	12	2750	650	CIRC**
												7	8.75	3147	120	3139**
Bowers Fed. B #1	30-025-07452	29	-18S	-38E	D	9//32	PA	4239	4181	4239		15.5	18	235	225	CIRC**
Exxon									OH			9.625	12	2716	650	CIRC**
												7	8.75	3987	300	2027**
G.O. McKinley #3	30-025-07461	30	-18S	-38E	H	7//30	PA	3199	NONE	NONE		7	8.25	3166	100	2844**
Marathon/Getty																
G.O. McKinley #6	30-025-07488	30	-18S	-38E	G	6//47	PA	3200	1453	No data		8.625	11	1474	400	CIRC**
Marathon/Getty												5.5	5.875	3178	200	CIRC**
G.O. McKinley #7	30-025-07489	30	-18S	-38E	B	7//47	PA	3224	No data	No data		8.625	11	1504	400	CIRC**
Marathon/Getty												5.5	6.5	3192	200	CIRC**

** - Denotes calculated TOC with 50% efficiency.

**WELL SCHEMATIC:
EXXON BOWERS A FED #9**

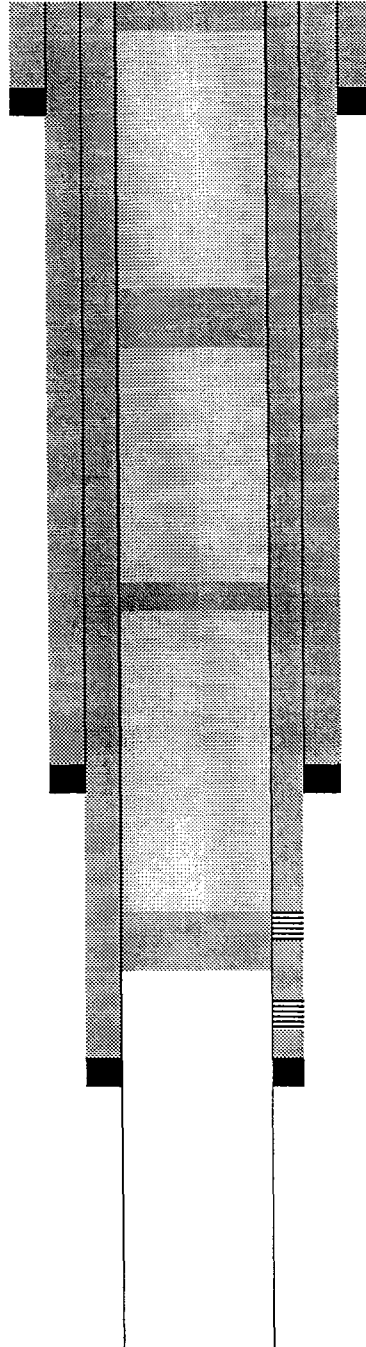
WELL PLUGGED:
12/3/70

12.5"
213'
650 SX
TOC: SURF (C)

9 5/8"
2736'
650 SX
TOC: SURF (C)

7"
3970'
300 SX
TOC: 2000(C)

TD: 4259'



Spotted 10 sx cmt plug from
0' to 25'.

Hole was loaded with mud
Laden fluids.

Spotted 20 sx cmt plug from
1400' to 1550'.

Spotted 40 sx cmt plug from
2300' to 2400'.

Perf's at 3220'-3227'.

Spotted 50 sx cmt plug from
3000' to 3250'.

Squeezed perf's at 3726'
To 3741'.

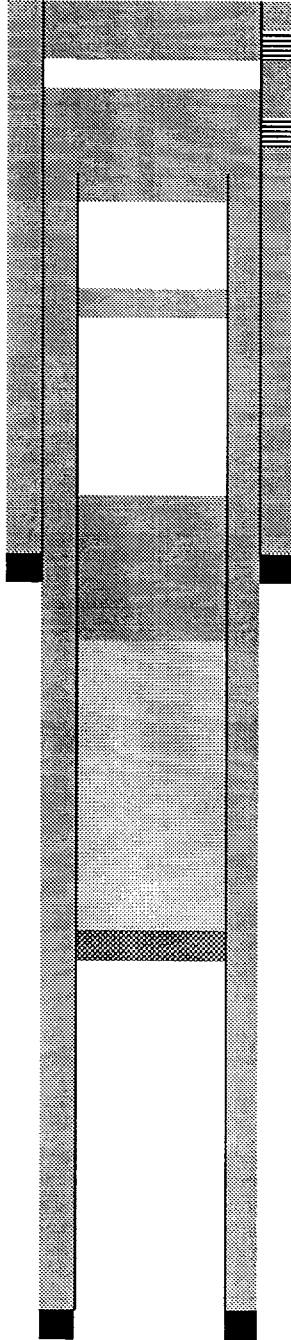
**WELL SCHEMATIC:
EXXON BOWERS A FED #31**

WELL PLUGGED:
8/30/90

8 5/8"
3836'
500 SX
TOC:1858' CALC

5 1/2"
7038'
650 SX
TOC:3125' CALC

TD: 7050'



Perf'd @ 450'. Pump 211 sx
Down 8 5/8" csg to surf.
Spot 77 sx from 1490-1200'
Perf'd at 1485'.
Cut off 5 1/2" csg at 1500'.

Spotted 25 sx cmt plug at
2716'.

Spot 50 sx cmt from 4100' to
3600'.

Displaced hole with salt gel
Mud.

Tagged CIBP w/35' cmt cap
At 5710'.

**WELL SCHEMATIC:
EXXON BOWERS A FED #33**

WELL PLUGGED:
10/3/72

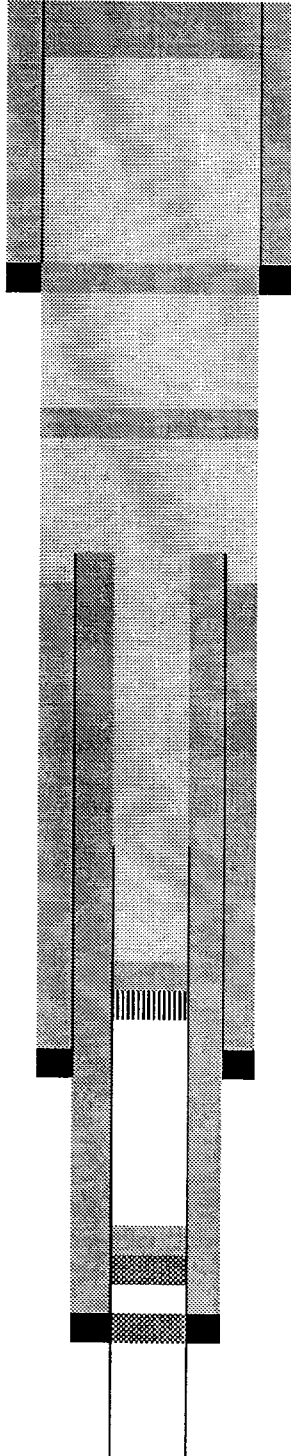
13 3/8"
416'
400 sxs.
TOC: Circ.

9 5/8"
3836'
350 sxs
TCO: 2555' T.S.

CIBP at 3970'

7"
5988'
550 sxs
TOC: 2900' T.S.

TD: 6000'



Spot 20' cmt plug at surf

Spot 100' cmt plug at 416'

Run tbg to 1400' & spot 100'
cmt plug

Cut & pull 9 5/8" csg from
1889'

Cut & pull 7" csg from 2560'

Spot 100' cmt on top of CIBP

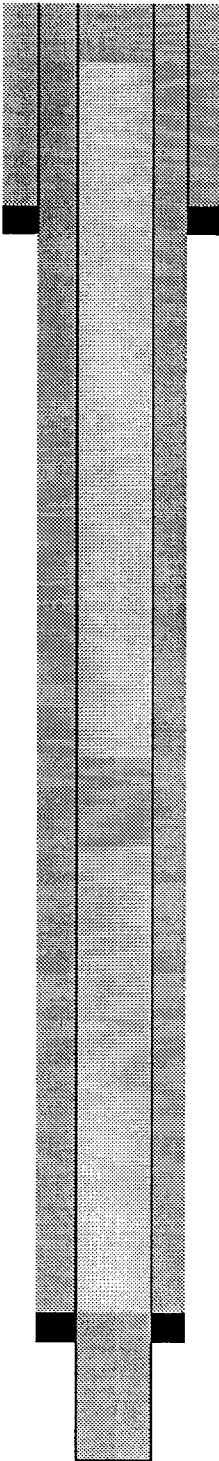
Set CIBP at 5800' and
Capped with cmt.

Set CIBP at 5900'.

**WELL SCHEMATIC:
EXXON BOWERS AB FED #1**

WELL PLUGGED:
11/26/48

8 5/8"
260'
150 SX
TOC: CIRC



Spotted 20 sx cmt plug from
160' to surface.

All intervals between plugs
Was filled with mud laden
Fluid.

5 1/2"
3179'
1050 SX
TOC: CIRC

Spotted 40 sx cmt plug from
1800' to 1480'.

TD: 3238'

Spotted 15 sx cmt plug from
3238' to 3136'.

**WELL SCHEMATIC:
EXXON BOWERS A FED #6**

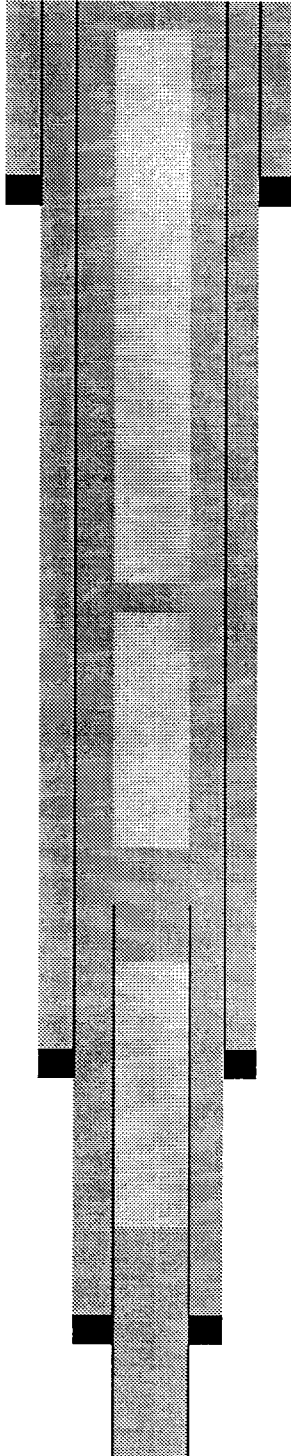
WELL PLUGGED:
5/10/71

12 1/2"
217'
200 SX
TOC: NA

9 5/8"
2750'
650 SX
TOC: NA

7"
3147'
120 SX
TOC: 2470 TS

TD: 3190'



Spotted 10 sx cmt plug from
35' to top.

Circulated well bore with 9#
Mud.

Spotted 20 sx cmt plug from
1500' to 1400'.

7" csg shot loose at 2435'.
Spotted 50 sx cmt plug from
2485' to 2340'.

Spotted 50 sx cmt plug from
3190' to 2950'.

**WELL SCHEMATIC:
EXXON BOWERS B FED #1**

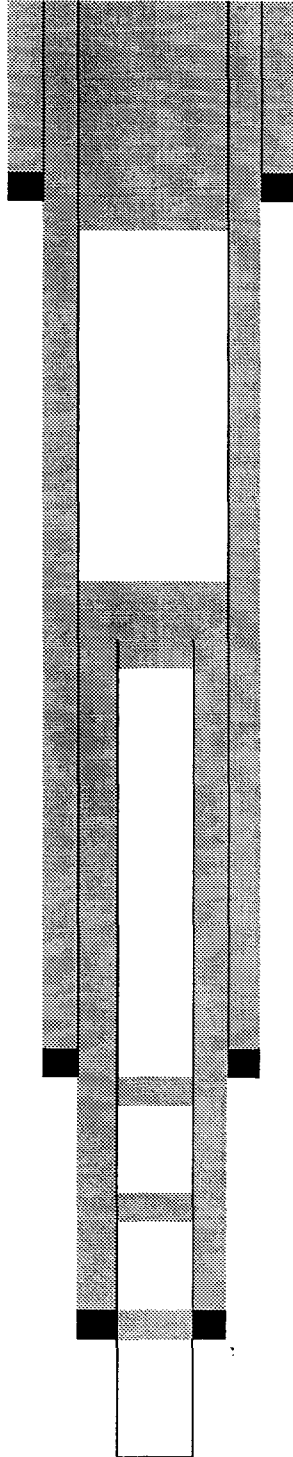
WELL PLUGGED:
12/21/71

15 1/2"
235'
225 SX
TOC: NA

9 5/8"
2716'
650 SX
TOC: SURF (C)

7"
3987'
300 SX
TOC: 2027 (C)

TD: 4239



Set 120 sx cmt plug at 250'
And circulate.

Cut off 7" csg. at 1500' and
Pull out of hole. Pump 60 sx
Cmt plug at 1500'.

Set plug at 2800'.

Spotted 25 sx cmt plug at
3355'.

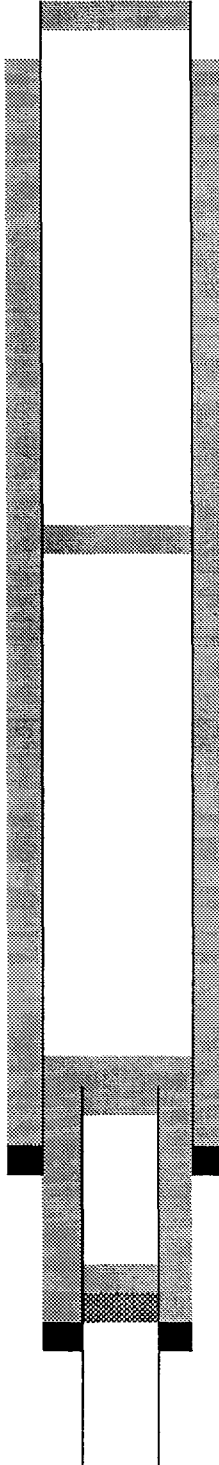
Spotted 28 sx cmt plug at
3970'.

**WELL SCHEMATIC:
GETTY G.O. MCKINLEY #3**

WELL PLUGGED:
8/26/75

9 5/8"
2755'
600 SX
TOP: 337' CALC

7"
3166'
100 SX
TOC: 2595' CALC
TD: 3199'



Laid 10 sx cmt plug in top.

Laid 37 sx cmt plug from
1575' to 1475'.

Ran 2 3/8" tbg to 3000'.
Circulated hole with 123 bbls.
Brine water w/23 sx salt gel.
Pulled tbg.
Shot csg at 2547'. Pulled and
Laid down 84 joints(2555') 7"
Csg. Ran tbg to 2616' and
Laid 28sx cmt plug from
2616' to 2516'.

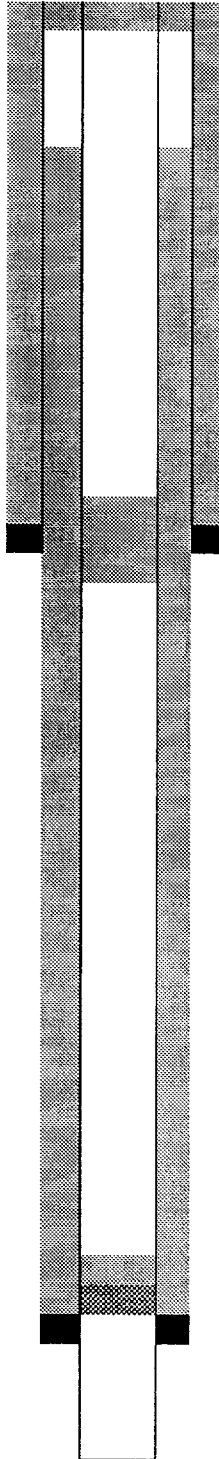
Set Titan CIBP at 3095'.
Dumped 7 sx cmt on top of
CIBP.

**WELL SCHEMATIC:
GETTY G.O. MCKINLEY #6**

WELL PLUGGED:
8/26/75

8 5/8"
1474'
400 SX
TOC: CIRC

Laid 10 sx cmt plug in top.



Laid 20 sx cmt plug from
1542' to 1374'.

5 1/2"
3178'
200 SX
TOC: 498 (C)

TD:3200'

Set CIBP at 3100'. Dumped
5 sx cmt on top of CIBP.

**WELL SCHEMATIC:
GETTY G.O. MCKINLEY #7**

WELL PLUGGED:
10/14/75

8 5/8"
1504'
400 SX
TOC: SURF (C)

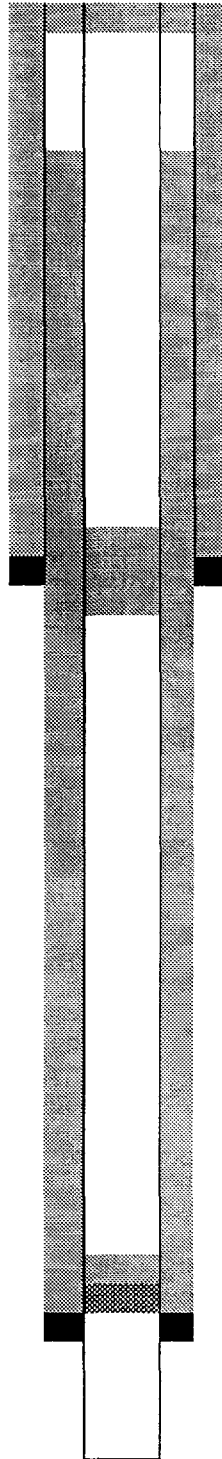
Laid 10 sx cmt plug in top.

Laid 24 sx cmt plug from
1514' to 1346'.

5 1/2"
3192'
200 SX
TOC: 918 (C)

TD:3224'

Laid 5 sx cmt plug on top of
CIBP.(38' plug)
Set CIBP at 3100'.



LIST OF OFFSET OPERATORS & SURFACE OWNERS

North Hobbs (Grayburg/San Andres) Unit
Well No. 411
Letter A, Section 30, T-18-S, R-38-E
Lea County, New Mexico

Offset Operators

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

Texaco E&P Inc.
P.O. Box 3900
Midland, TX 79702

Rice Operating Company
122 West Taylor
Hobbs, NM 88240

Surface Owners

John Wayne Ivory
P.O. Box 2291
Hobbs, NM 88240

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. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.
3. Article Addressed to: <div style="text-align: center;"> Texaco E&P Inc. P.O. Box 3900 Midland, TX 79702 </div>	4a. Article Number <div style="text-align: center;">P 436 313 781</div>	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) <div style="text-align: center;">X</div>		
PS Form 3811 , December 1994 102595-97-B-0179 Domestic Return Receipt		

Thank you for using Return Receipt Service.

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. <input type="checkbox"/> Addressee's Address 2. <input type="checkbox"/> Restricted Delivery Consult postmaster for fee.
3. Article Addressed to: <div style="text-align: center;"> Rice Operating Company 122 West Taylor Hobbs, NM 88240 </div>	4a. Article Number <div style="text-align: center;">P 436 313 783</div>	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) <div style="text-align: center;">X</div>		
PS Form 3811 , December 1994 102595-97-B-0179 Domestic Return Receipt		

Thank you for using Return Receipt Service.

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3. Article Addressed to: <div style="text-align: center;"> John Wayne Ivory P.O. Box 2291 Hobbs, NM 88240 </div>	4a. Article Number <div style="text-align: center;">P 436 313 784</div>	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) <div style="text-align: center;">X</div>		
PS Form 3811 , December 1994 102595-97-B-0179 Domestic Return Receipt		

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 Benson
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 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