



Occidental Permian Ltd.

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

October 25, 2000

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

OCT 27 2000

RE: Expansion of Pressure Maintenance Project
North Hobbs (Grayburg/San Andres) Unit
Hobbs; Grayburg – San Andres Pool
Well No. 431
Letter I, Section 32, T-18-S, R-38-E
Lea County, NM

SPNO 12-17-82

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. 431 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. 431). 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-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: 10/25/00

* 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. 431
Letter I, Section 32, 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

N/A - No fresh water wells could be found within one-half mile of well no. 431

- 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 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

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

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0718

DISTRICT III
1000 Rio Branco Rd., Asteo, 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 30-025-07537	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 431
OGRID No. 157984	Operator Name Occidental Permian Limited Partnership	Elevation 3638

Surface Location

UL or lot No. 1	Section 32	Township 18 S	Range 38 E	Lot Idn	Feet from the 2310	North/South line SOUTH	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	
										October 24, 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 Edson</u> 1/28/2000	
										9Q-13-0019	
										Certificate No. RONALD J. EIDSON 3239	
										GARY EIDSON 12641	
										MACON McDONALD 12185	

DISTRICT II
P.O. Brewer RD, Artesia, NM 86211-0718

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

DISTRICT IV
P.O. BOX 2068, SANTA FE, N.M. 87504-2068

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-07537	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 431
OGRIID No. 157984	Operator Name Occidental Permian Limited Partnership	Elevation 3638

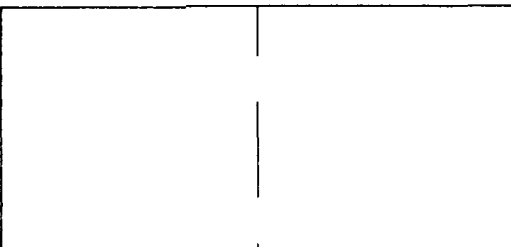
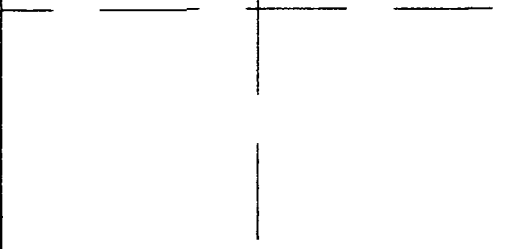
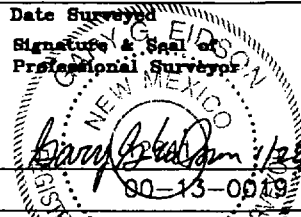
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	32	18 S	38 E		2310	SOUTH	330	EAST	LEA

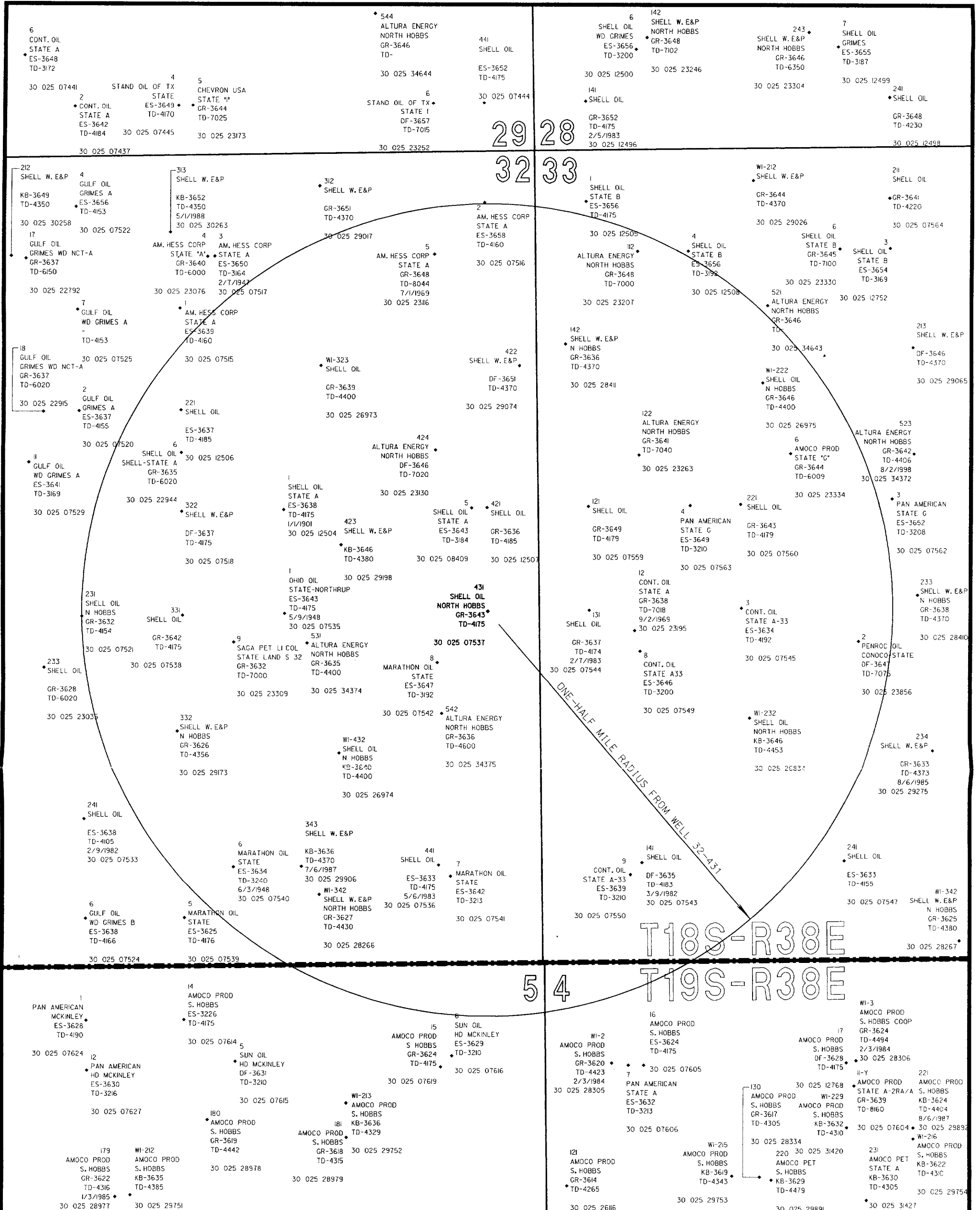
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	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>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i> <u>Mark Stephens</u> Signature Mark Stephens Printed Name Business Analyst (SG) Title October 24, 2000 Date
	SURVEYOR CERTIFICATION <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> JANUARY 6, 2000 Date Surveyed DC Signature & Seal of Professional Surveyor  Certificate No. RONALD L. EDSON 3239 CARY EBBSON 12641 MACON McDONALD 12185

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



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





Altura Energy Ltd.
ENERGY, LTD.

Area of Review Plat

**NORTH HOBBS (GRAYBURG
SAN ANDRES) UNIT**

WELL NO. 32-431

T-18-S, R-38-E

Lea County, New Mexico

Scale: 1" = 600'

01-05-00 nm438a00.dgn - 12

Plat prepared by PJE Drafting, Inc.

For Horizon Survey, Inc.

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

INJECTION WELL DATA SHEET

Operator Occidental Permian Limited Partnership		Lease North Hobbs G/SA Unit		County Lea	
Well No. 32-431	Footage Location 2310' FSL & 330' FEL	Section 32	Township 18-S	Range 38-E	Unit Letter I

Schematic

12-1/2"
@205'

9-5/8"
@2750'

7"
@3968'

5-1/2"
@4244'

Tubular Data

Surface Casing
 Size 12-1/2" Cemented with 225 sxs.
 TOC SURF Determined by CIRC.
 Hole size _____

Intermediate Casing
 Size 9-5/8" Cemented with 475 sxs.
 TOC _____ Determined by _____
 Hole size _____

Long string Casing
 Size 7" Cemented with 350 sxs.
 TOC _____ Determined by _____
 Hole size _____

Liner
 Size 5-1/2" Cemented with 65 sxs.
 TOC 2850' Determined by NA
 Hole size _____

Total depth 4245'

Injection interval
4100 feet to 4300 feet

Completion type Perforated Casing

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

Other Data

1. Name of the injection formation San Andres

2. Name of field or Pool Hobbs

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

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) San Andres: 4066-67, 4075-78, 4094-96, 4098-4105, 4115-19, 4125-30, 4145-50, 4154-55, 4169-72, 4174-76, 4190-4220

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 North Hobbs G/SA Unit		County Lea	
Well No. 32-431	Footage Location 2310' FSL & 330' FEL	Section 32	Township 18-S	Range 38-E	Unit Letter I

Schematic

12-1/2"
@205'

9-5/8"
@2750'

7"
@3968'

5-1/2"
@4244'

<u>Surface Casing</u>		<u>Tubular Data</u>	
Size	<u>12-1/2"</u>	Cemented with	<u>225</u> sxs.
TOC	<u>SURF</u>	Determined by	<u>CIRC.</u>
Hole size _____			
<u>Intermediate Casing</u>			
Size	<u>9-5/8"</u>	Cemented with	<u>475</u> sxs.
TOC	_____	Determined by	_____
Hole size _____			
<u>Long string Casing</u>			
Size	<u>7"</u>	Cemented with	<u>350</u> sxs.
TOC	_____	Determined by	_____
Hole size _____			
<u>Liner</u>			
Size	<u>5-1/2"</u>	Cemented with	<u>65</u> sxs.
TOC	<u>2850'</u>	Determined by	<u>NA</u>
Hole size _____			
<u>Total depth</u>		<u>4245'</u>	
<u>Injection interval</u>			
<u>4100</u>		feet to	<u>4300</u> feet
<u>Completion type</u>		<u>Perforated Casing</u>	
<u>Tubing size</u>	<u>2-7/8"</u>	lined with	<u>Duoline (Fiberglass liner)</u> set in a
<u>Guiberson – Uni VI</u>		packer at	<u>4000'</u> feet
(brand and model)			

Other Data

- Name of the injection formation San Andres
- Name of field or Pool Hobbs
- Is this a new well drilled for injection? Yes ☐ No ☒

If no, for what purpose was the well originally drilled? Producer
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) San Andres: 4066-67, 4075-78, 4094-96, 4098-4105, 4115-19, 4125-30, 4145-50, 4154-55, 4169-72, 4174-76, 4190-4220
- 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 INJECTORS

FOR WELLS 28332,29231,29321,30223,32312,32431

FOR WELLS 28332,29231,29321,30223,32312,32431																
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
19241 Oxy	30-025- 07364	19 -18S	-38E	N	9/30	SI	4244	4144	4232	NONE	12.5	18	246	200	CIRC	CIRC
							PBTD				9.625	12	2750	600	CIRC	CIRC
											7	8.75	3975	225	3230	
											5.5	7.875	3936-4246	100	3936	
19242 Oxy	30-025- 23481	19 -18S	-38E	N	5/70	P	4186	4276	4179	4020-4058	13.375	17.5	360	360	CIRC**	CIRC**
										4192-4196	9.625	12.25	3794	500	CIRC**	CIRC**
											5.5	8.75	3537-7103	950	CIRC**	CIRC**
19341 Oxy	30-025- 12491	19 -18S	-38E	O	9/30	TA	4005	4140	4272	NONE	9.625	12.25	2750	600	330**	
							CIBP				7	8.75	3975	225	3299 CBL	
											5.5 Lnr	6.125	3937-4245	100	3937	
27121 Oxy	30-025- 12494	27 -18S	-38E	E	6/36	P	4244	4108	4250	1730	12.5	17.5	270	150	CIRC	CIRC
							PBTD			2475	9.625	12.25	1705	575	CIRC	CIRC
											7	8.75	4108	275	CIRC**	CIRC**
27131 Oxy	30-025- 07410	27 -18S	-38E	L	6/35	P	4252	4034	4252	NONE	12.5	16.5	259	150	CIRC**	CIRC**
											9.625	12.25	1645	200	1202**	
											7	8.75	4075	250	2818**	
27221 Oxy	30-025- 30910	27 -18S	-38E	E/L	12/91	I	4509	4430	4495	NONE	14	17.5	53	NA	NA	
							PBTD				8.625	12.25	1658	850	CIRC	CIRC
											5.5	8.875	4546	1035	CIRC	CIRC
27231 Oxy	30-025- 12495	27 -18S	-38E	K	7/37	P	4375	4086	4375	NONE	13	17.5	274	150	CIRC	CIRC
								OPEN HOLE			9.625	12.25	1718	450	CIRC	CIRC
											7	8.75	4086	250	3225-CBL	
28111 Oxy	30-025- 07422	28 -18S	-38E	D	7/34	I	4288	4214	4273	4041-4053	15.5	18	296	200	CIRC	CIRC
										4073-4097	10	12.75	2704	150	2304	
										4106-4120	7	8.75	3956	250	2244	
										4147-4160	4.5	6.25	3913-4234	50	CIRC**	CIRC**
										4172-4182						

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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
28121 Oxy	30-025- 07420	28 -18S	-38E	E	9/30	P	4247	PBTD	4139	4233	NONE	12.5	16	228	245	CIRC**
												9.625	11.75	2750	700	CIRC**
												7	8.75	3942	300	3065-CBL
												4.5	6.25	3893-4250	65	3893-CBL
28122 Oxy	30-025- 28964	28 -18S	-38E	E	12/84	P	4326	Cmt	4034	4264	NONE	13.375	17.5	40	NA	NA
												8.625	12.25	1525	675	CIRC
												5.5	7.875	4384	740	300-CBL
28131 Oxy	30-025- 12497	28 -18S	-38E	L	9/30	P	4263		4048	4263	3190-3202	12.5	16	238	200	CIRC
											4124-4151	9.625	12	2751	600	CIRC
												7	8.75	3973	225	3086-CBL
												5.5	7.875	3932-4233	100	3932-CBL
28132 Oxy	30-025- 23277	28 -18S	-38E	L	11/69	P	4257	PBTD	4019	4255	4144-4146	13.375	17.5	352	200	CIRC
											4158-4172	9.625	12	3816	1400	1922
												7	8.75	3611-7143	335	3611
28141 Oxy	30-025- 12496	28 -18S	-38E	M	9/30	P	4228	CIBP	4066	4220	4033	12.5	16	236	225	CIRC
											4035	9.625	12	2750	475	CIRC
											4038	7	8.75	3960	350	2450
											4040	5	6.5	4228	65	2990
28142 Oxy	30-025- 23246	28 -18S	-38E	M	10/69	P	4030	PBTD	3890	3968	NONE	13.375	17.5	372	350	CIRC
												9.625	12.25	3787	1400	CIRC**
												7	8.75	3589-7102	720	CIRC
28211 Oxy	30-025- 07425	28 -18S	-38E	C	9/35	I	4171		4036	4262	NONE	15.5	18	243	300	CIRC
												10.75	15	2733	200	2400**
												7	8.75	4036	680	2715-TS
28311 Oxy	30-025- 07417	28 -18S	-38E	B	7/35	I	4264		4090	4264	NONE	12.5	16	235	150	CIRC**
												7	8.75	4103	500	2820-CBL
28321	30-025- 07416	28 -18S	-38E	G	2/35	P	4234		4000	4260	NONE	12.5	16	264	150	CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBD	Top Perf	Bot. Perf	Sqz. Perts	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Oxy								PBTD				7	8.75	4000	500	976**
28331 Oxy	30-025- 07412	28 -18S	-38E	J	5/35	P		4280	4015	4268	4081-4093	10.75 7.625	13.5 9.625	245 1635	150 300	CIRC 186
												5.5	6.25	4015	300	2662-CBL
												4.5	6.5	3987-4280	100	3987
28411 Oxy	30-025- 07419	28 -18S	-38E	A	4/36	P		4223	4133	4225	15 17 475	12.5 7	16 8.75	227 4133	160 750	CIRC** 2550-CBL
28421 Oxy	30-025- 07418	28 -18S	-38E	H	5/35	TA		4262	4020	4262	NONE	12.5 7	16 8.75	235 4020	150 200	CIRC 2677-CBL
28422 Oxy	30-025- 27243	28 -18S	-38E	H	5/48	I		4470	4239	4268	4222-4228 4242-4244 4252-4256 4269-4271	16 8.625 5.5	20 12.25 7.875	40 1600 4503	40 850 1050	CIRC CIRC CIRC
28431 Oxy	30-025- 07413	28 -18S	-38E	I	8/35	P		4225	3993	4218	2660	10.75 7.625 5.5	13.5 9.625 7.875	225 1640 3993	150 400 400	CIRC** CIRC** 2698-CBL
28441 Oxy	30-025- 07411	28 -18S	-38E	P	1/35	I		4272	4102	4257	NONE	10.75 7.625 5.5	13.5 9.625 6.25	243 1634 4015	150 300 300	CIRC 185 CIRC
29111 Oxy	30-025- 23919	29 -18S	-38E	D	12/71	P		4287	4183	4287	3905-4250	8.625 5.5	11 7.875	310 3905	150 300	CIRC 2427**
29121 Oxy	30-025- 07449	29 -18S	-38E	E	3/47	P		4275	3924	4275	4070-85 4110-20 4130-50	9.625 7 4.5 Lnr	12.25 8.75 6.25	2739 3104 2900-4201	650 100 100	890 2640 CBL 2900
29122 Oxy	30-025- 28953	29 -18S	-38E	E	2/85	I		4215	4154	4211	NONE	13.375 8.625 5.5	17.5 11 7.875	40 1510 4370	NA 785 435	CIRC CIRC CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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
29131 Oxy	30-025- 07447	29	-18S	-38E	L	10/30	P	4168 PBD	4050	4210	NONE	12.5 9.625	18 12	225 2750	250 650	CIRC 660**
												7	8.75	3976	300	1504-CBL
												5	6.125	3870-4220	50	3930-CBL
29132 Oxy	30-025- 26917	29	-18S	-38E	L	12/80	I	4470 PBD	4025	4245	NONE	16 8.625	20 12.25	40 1595	40 785	CIRC CIRC
												5.5	7.875	4510	900	CIRC**
29141 Oxy	30-025- 07448	29	-18S	-38E	M	8/30	I	4238 PBD	3690	4228	3960-4108 4033-4053	12.5 9.625	18 12	203 2736	200 650	CIRC 1000**
												7	8.75	3960	300	1850**
												5.5	7.875	3941	250	3460-CBL
												4.5	6.25	3417-4238	50	3774-CBL
29211 Oxy	30-025- 07433	29	-18S	-38E	C	11/30	TA	4003 CIBP	4217	4270	4053-4150 4180-4200	12.5 9.625	18 12	243 2796	250 400	CIRC CIRC
												7	8.75	4007	500	3014**
												5.5	6.25	3957-4238	50	3957
29221 Oxy	30-025- 07430	29	-18S	-38E	F	9/30	P	4210 PBD	4118	4176	4154-4162 4175-4185	12.5 9.625	18 12	210 2704	200 400	CIRC 1236
												7	8.75	3979	500	2753
												4.5	6.125	3910-4213	50	3910
29222 Oxy	30-025- 26934	29	-18S	-38E	F	4/81	I	4465	4175	4265	NONE	16 8.625	20 12.25	40 1605	40 950	CIRC CIRC
												5.5	7.875	4510	1050	CIRC
29231 Oxy	30-025- 07438	29	-18S	-38E	K	10/30	P	4255	4106	4255	NONE	15.5 9.625	18 12.25	252 2729	1000 600	CIRC** CIRC
												7	8.75	3953	300	2718
												5	6.25	3906-4220	50	3906
29241 Oxy	30-025- 07437	29	-18S	-38E	N	10/30	I	4255	4076	4239	NONE	12.5 9.625	18 12	217 2730	160 500	CIRC 895
												7	8.75	3929	350	1850

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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
29242 Oxy	30-025- 28413	29	-18S	-38E	N	3/184	P	4370	4005	4257	4019 4037 4040	16 8.625 5.5	20 12.25 7.875	30 1511 4368	NA 750 750	CIIRC CIIRC 2330
29311 Oxy	30-025- 07432	29	-18S	-38E	B	10/130	P	4269	4044	4269	4090-4110 4171	12.5 9.625 7 5.5	16 11.75 8.75 6.25	241 2776 4008 3921-4234	250 400 500 350	113 2750 2949 3786
29321 Oxy	30-025- 07431	29	-18S	-38E	G	9/130	P	4301 PBD	4137	4271	3895 4100	12.5 9.625 7 5	16 11.75 8.75 6.25	211 2756 3995 3812-4308	250 250 300 100	CIIRC 921 2930-CBL 3894-CBL
29322 Oxy	30-025- 28883	29	-18S	-38E	G	11/184	I	4342 PBD	4160	4256	NONE	13.375 8.625 5.5	17.5 12.25 7.875	40 1520 4384	NA 620 850	CIIRC CIIRC CIIRC
29323 Oxy	30-025- 28941	29	-18S	-38E	G	1/185	P	4180 PBD	3089	4272	NONE	13.375 8.625 5.5	17.5 12.25 7.875	40 1542 4370	NA 375 450	CIIRC CIIRC 575-CBL
29331 Oxy	30-025- 07436	29	-18S	-38E	J	9/130	I	4261	4100	4258	4044-4065	9.625 7 4.5	11.75 8.75 6.25	2742 3929 4270	500 300 750	907 2115 3788 CBL
29341 Oxy	30-025- 07445	29	-18S	-38E	O	10/130	P	4090 PBD	4050	4146	4010-4035	13.375 9.625 7 5	15 12 8.75 6.25	210 2750 3934 4162	150 700 300 350	CIIRC** CIIRC** 3430-CBL CIIRC
29342 Oxy	30-025- 28884	29	-18S	-38E	O	11/184	I	4375	4083	4250	NONE	13.375 8.625 5.5	17.5 12.25 7.875	40 1520 4375	NA 620 875	NA CIIRC CIIRC
29411	30-025- 07454	29	-18S	-38E	A	10/130	I	4335	4200	4335	4102-4137	12.5	16	245	250	CIIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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
Oxy											4057-4091 4154-4158	9.625 7	11.75 8.75	2750 4045	650 300	365** 2231**
												5.5	6.25	3941-4223	30	3941**
29431 Oxy	30-025- 07458	29	-18S	-38E	I	10/30	P	4227 PBD	4155	4225	4010 4075	15.5 9.625	18 12.25	228 2720	200 600	CIRC** 978**
												7	8.75	3900	400	2086**
												5.5	6.25	3209-4229	120	3209**
29441 Oxy	30-025- 07444	29	-18S	-38E	P	10/30	P	4211 PBD	4058	4266	4020-4028	13.375 9.625	18 12	232 2743	150 1400	CIRC** CIRC**
												7	8.75	3950	300	3240-CBL
												5	6.5	4172	22	4020
29442 Oxy	30-025- 28885	29	-18S	-38E	P	2/85	I	4237 CIBP	4065	4210	4031 4036	13.375 9.625	17.5 12.25	40 1536	NA 575	CIRC CIRC
												7	7.875	4370	1100	CIRC
29544 Oxy	30-025- 34644	29	-18S	-38E	P	7/99	P	4359 PBD	4124	4256	NONE	14 8.625	18 12.25	40 1565	50 725	CIRC CIRC
												5.5	7.875	4400	775	CIRC
30112 Oxy	30-025- 29063	30	-18S	-38E	D	3/85	TA	4000 CIBP	4034	4264	NONE	13.375 9.625	17.5 12.25	40 1520	NA 250	NA CIRC
												7	8.75	4369	675	CIRC
30113 Oxy	30-025- 29064	30	-18S	-38E	D	1/85	P	4310 CIBP	4042	4285	NONE	13.375 8.625	17.5 7.875	55 1495	NA 620	CIRC CIRC
												5.5	7.875	4370	990	CIRC
30121 Oxy	30-025- 07464	30	-18S	-38E	E	9/30	I	4115 PBD	4160	4271	4042-4096	12.5 9.625	16 11.75	212 2749	200 400	CIRC** 1281**
												7	8.75	3994	425	2738-CBL
												5	6.125	3841-4312	40	CIRC-CBL
30131 Oxy	30-025- 07481	30	-18S	-38E	L	10/30	P	4256 CIBP	4082	4270	4006-70 4116-40	9.625 7	11.75 8.75	2751 3900	550 350	733 1783

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBTB	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
30211 Oxy	30-025- 07463	30	-18S	-38E	C	8//30	P	4254	4149	4250	4078 4086 4100	9.625 6.625 5 Lnr	12.25 7.875 6.5	2647 3972 3867-4310	400 250 100	2940** 3130 CBL CIRC**
30221 Oxy	30-025- 07462	30	-18S	-38E	F	4//30	P	4279	4072	4208-79 OH	4023-4025 4081-4104 4120-4128	9.625 7 4.5 Lnr	11.75 8.25 6.25	2750 3852 3799-4207	535 250 125	787 1500 CBL 3799
30222 Oxy	30-025- 26833	30	-18S	-38E	F	10//80	I	4290	4123	4302	3718 4322-29	16 8.625 5.5	20 12.25 7.875	40 1570 4349	40 950 800	CIRC CIRC 2608 CBL
30231	30-025- 07479	30	-18S	-38E	K	7//30	TA	4015	4119	4256	943-955 4166-4190	20 9.625 7 5	22 12.25 8.75 6.25	215 2750 3930 4200	75 400 550 60	67 1589 604 3193-CBL
30232 Oxy	30-025- 26935	30	-18S	-38E	K	12//80	I	4519	4138	4310	4170-78 4186-94	16 8.625 5.5	18 11 7.875	40 1600 4555	40 875 1155	CIRC CIRC 2614 CBL
30233 Oxy	30-025- 28942	30	-18S	-38E	K	2//85	P	4210	4148	4240	NONE	13.375 8.625 5.5 2.375	17.5 11 7.875 5	55 1507 4383 4060	NA 620 1070 NA	NA CIRC CIRC NA
30311	30-025- 07469	30	-18S	-38E	B	8//30	TA	3950	3998	4121	2601	13.5 9.625 7	16 11.75 8.75	245 2753 3998	200 600 250	CIRC 551 3154
30312 Oxy	30-025- 29197	30	-18S	-38E	B	5//85	P	4380	4215	4333	NONE	13.375 9.625 7	17.5 12.25 8.75	40 1500 4431	NA 650 700	NA CIRC CIRC
30313	30-025- 23270	30	-18S	-38E	B	11//69	TA	4065	5871	5951	5805-53	13.375	17.5	382	400	CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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
Oxy								CIBP				8.625	12.25	3849	1256	600
												5.5	7.875	6047	570	1500
30321 Oxy	30-025- 07467	30	-18S	-38E	G	7//30	P	4257	4130	4196	4030-60	9.625	11.75	2755	600	553
												7	8.75	3854	250	2342
												5	7	4200	405	CIRC/CBL
30331 Oxy	30-025- 07472	30	-18S	-38E	J	8//30	P	4238	4014	4225	4068-4072 4074-4092	12.5 9.625	15 12	242 2750	225 650	CIRC CIRC
												7	8.75	3960	300	CIRC
												5.5	6.125	4238	30	3650
30332 Oxy	30-025- 28954	30	-18S	-38E	J	5//85	I	4323	4127	4236	NONE	13.375	17.5	40	NA	NA
								PBTD				9.625	12.25	1503	650	CIRC
												7	8.75	4371	800	CIRC
30333 Oxy	30-025- 28955	30	-18S	-38E	J	2//85	I	4328	4137	4290	NONE	13.375	17.5	40	NA	NA
												8.625	12.25	1579	425	CIRC
												5.5	7.875	4370	500	CIRC
30412 Oxy	30-025- 23384	30	-18S	-38E	A	1//70	P	4440	4009	4261	4142-4200	13.375	17.5	379	400	CIRC
								PBTD				9.625	12.25	3848	1200	75
												7	8.75	7106	865	3400
30421 Oxy	30-025- 07468	30	-18S	-38E	H	7//30	P	4258	4114	4258	NONE	12.5	16	251	200	CIRC
												9.625	11.75	2756	600	554
												7	8.75	3858	250	CIRC
												5	6.25	4202	450	CIRC
30422 Oxy	30-025- 27059	30	-18S	-38E	H	5//81	I	4477	4110	4265	4108-23	16	20	40	40	CIRC
												8.625	12.25	1524	850	CIRC
												5.5	7.875	4510	1000	2500 CBL
30431 Oxy	30-025- 07474	30	-18S	-38E	I	8//30	P	4213	4085	4201	4034-4035	12.5	16	214	200	CIRC**
								PBTD				9.625	11.75	2750	650	CIRC**
												7	8.75	3975	300	2009**

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBTB	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
30432 Oxy	30-025-28957	30	-18S	-38E	I	12//84	I	4325	4110	4266	NONE	13.375	17.5	55	REDIMIX	CIRC
								PBTB				8.625	12.25	1490	370	CIRC
												5.5	7.875	4370	350	CIRC
30443 Oxy	30-025-28958	30	-18S	-38E	P	12//84	I	4290	4094	4247	NONE	13.375	17.5	40	54	CIRC
								PBTB				8.625	12.25	1470	425	440-TS
												5.5	5.5	4370	340	858-CBL
32211 Oxy	30-025-07525	32	-18S	-38E	C	4//31	P	4252	4083	4206	NONE	13.375	17	189	200	CIRC**
												9.625	12.25	2736	600	977**
												6.625	8.75	3860	300	2210-CBL
32212 Oxy	30-025-30258	32	-18S	-38E	C	4//88	P	4303	4135	4256	NONE	14	17	53	NA	NA
								PBTB				9.625	12.25	1504	650	CIRC
												7	8.75	4348	1150	CIRC
32221 Oxy	30-025-07520	32	-18S	-38E	F	8//30	P	4215	4084	4252	3940-4065	12.5	16	207	200	CIRC**
								CMT				9.625	12.25	2752	600	333**
												6.625	8.75	3940	200	2892-CBL
												4.5	6.25	3748-4289	65	CIRC
32231 Oxy	30-025-07521	32	-18S	-38E	K	8//30	P	4030	3876	4222	4068-4083	15.5	17.5	207	200	CIRC
								PBTB				9.625	12.25	2738	600	996
												7	8.75	3946	300	2246
												4	6.25	3701-4194	90	3701
32313 Oxy	30-025-30263	32	-18S	-38E	B	4//88	P	4300	4120	4229	NONE	14	17	53	NA	NA
								PBTB				9.625	12.25	1510	650	CIRC
												7	8.75	4346	1250	CIRC
32321	30-025-12506	32	-18S	-38E	G	8//30	I	4220	4114	4200	3145-3150	12.5	16	230	225	CIRC**
								PBTB				9	12.25	2759	600	983**
												6.625	8.75	3950	225	2472-CBL
												3971-4247				
32322 Oxy	30-025-07518	32	-18S	-38E	G	9//30	P	4250	4148	4210	4035-4037	12.5	16	240	200	CIRC**
								PBTB				9.625	12.25	2750	600	330**
												7	8.75	3960	225	2900-CBL

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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
32323 Oxy	30-025- 26973	32 -18S	-38E	G	12//80		I	4292 PBD	4062	4276	4293-4332	16 8.625 5.5	20 12.25 7.875	40 1600 4400	40 1000 920	CIRC CIRC 3624-CBL
32331 Oxy	30-025- 07538	32 -18S	-38E	J	9//30		I	4220 PBD	3940	4200	1414 2670 3964-3997 4050-4261	15.5 9.625 7 5	18 11.75 8.75 6.25	300 2750 3940 4247	250 300 700 750	CIRC 915** CIRC 2430-CBL
32332 Oxy	30-025- 29173	32 -18S	-38E	J	4//85		P	4310 PBD	4055	4208	4019-4021	13.375 9.625 7	17.5 12.25 8.75	40 1534 4356	NA 680 875	NA CIRC CIRC
32342 Oxy	30-025- 28266	32 -18S	-38E	O/A	10//83		I	4380	4091	4283	NONE	16 8.625 5.5	20 12.25 7.875	30 1522 4380	40 700 650	CIRC CIRC CIRC**
32343 Oxy	30-025- 29906	32 -18S	-38E	O	6//87		P	4220 PBD	4141	4208	4000-4002 4224-4035	14 9.625 7	18 12.25 8.75	40 1498 4370	NA 1400 1350	NA CIRC CIRC
32411 Oxy	30-025- 07516	32 -18S	-38E	A	9//30		P	4272	3939	4160	NONE	12.5 9.625 7	16 11.75 8.75	224 2740 3939	200 400 500	CIRC** 1272** 2690-CBL
32421 Oxy	30-025- 07517	32 -18S	-38E	H	8//30		P	4210 PBD	4092	4202	4046-4056 4158-4192 4203-4218	12.5 9.625 7 5.5	16 12 8.75 7.875	245 2755 3950 3916-4219	200 600 225 125	CIRC** CIRC** 2385-CBL CIRC**
32422 Oxy	30-025- 29074	32 -18S	-38E	H	3//85		P	4257 PBD	3874	4222	4047-4057 4090	13.375 9.625 7	17.5 12.25 8.75	40 1538 4369	NA 425 570	NA CIRC CIRC
32423	30-025- 29198	32 -18S	-38E	H	5//85		I	4328	4051	4235	NONE	13.375	17.5	40	NA	NA

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBD	Top Perf	Bot. Perf	Sqz. Perts	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Oxy					Ltr							9.625	12.25	1508	580	CIRC
												7	8.75	4379	925	CIRC
32424 Oxy	30-025- 23130	32	-18S	-38E	H		P	5210 PBD	4128	4244	NONE	13.375 8.625 5.5	17.5 12.25 7.875	350 3790 3580-7015	350 1300 650	CIRC** CIRC** 3580**
32432 Oxy	30-025- 26974	32	-18S	-38E	I	10//80	I	4216 CMT	4062	4214	4227-4252	16 8.625 5.5	20 12.25 7.875	40 1600 4400	40 850 950	CIRC CIRC CIRC
32441 Oxy	30-025- 07536	32	-18S	-38E	P	8//30	P	4244	4112	4244	4060-4087	12.5 9.625 7 5	16 12.25 8.75 6.25	188 2750 3971 4234	125 400 250 60	CIRC 1595** 2662** 3500-CBL
32531 Oxy	30-025- 34374	32	-18S	-38E	J	6//98	P	4354 PBD	4098	4233	4052-4075	14 8.625 5.5	18 12.25 7.875	40 1553 4400	50 800 1000	CIRC** CIRC CIRC**
32542 Oxy	30-025- 34375	32	-18S	-38E	I	7//98	P	4444 PBD	4105	4250	NONE	14 8.625 5.5	18 12.25 7.875	40 1581 4600	50 800 1000	CIRC** CIRC CIRC
33111 Oxy	30-025- 12505	33	-18S	-38E	D	9//30	P	4160 PBD	4050	4176	4011-4021 4041-4048 4061-4070 4130-4136 4142-4149 4150-4166 4171-4172	12.5 9.625 7 5.5	16 11.75 8.75 7.875	240 2750 3968 3923-4236	200 600 225 95	CIRC CIRC 2520-CBL CIRC**
33114 Oxy	30-025- 23207	33	-18S	-38E	D	8//69	P	5275 PBD	4110	4276	3749-4072 5306-5442	13.375 9.625 7	17.5 12.25 8.75	346 3786 7000	350 1850 688	CIRC** CIRC** 956**
33121 Oxy	30-025- 07559	33	-18S	-38E	E	8//30	P	4279	4053	4223	NONE	12.5 9.625	16 11.75	184 2755	NA NA	NA NA

****** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBD	Top Perf	Bot. Perf	Sqz. Perts	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
33123 Oxy	30-025- 23263	33	-18S	-38E	E	9/69	P	6215 PBD	4051	6933	NONE	13.375 9.625	17.5 12.25	425 3958 7040	400 550 700	CIRC 1640** 3500-TS
33131 Oxy	30-025- 07544	33	-18S	-38E	L	9/30	P	4243	4050	4238	NONE	15.5 9.625	18 12.25	208 2740 3953	373 500 300	CIRC 1289 2870-CBL
33141 Oxy	30-025- 07543	33	-18S	-38E	M	9/30	P	4254 PBD	4062	4249	NONE	12.5 9.625	16 11.75	209 2738 3976	165 500 275	CIRC 903** 2313**
33142 Oxy	30-025- 28411	33	-18S	-38E	M	12/83	I	4296 PBD	4067	4236	4027 4040 4068-4116	16 8.625 5.5	20 12.25 7.875	40 1540 4370	NA 750 910	CIRC CIRC 320-CBL
33221 Oxy	30-025- 07560	33	-18S	-38E	F	9/30	I	4185 CIBP	4047	4230	606 3145-3146 4043-4052	12.5 9.625 7	16 11.75 8.75	237 2770 4012	125 400 275	CIRC CIRC CIRC
33222 Oxy	30-025- 26975	33	-18S	-38E	F	10/80	I	4322 CIBP	4054	4276	4206-4210 4214-4218	16 8.625 5.5	20 12.25 7.875	40 1600 4400	40 800 1100	CIRC CIRC CIRC
33231 Oxy	30-025- 07545	33	-18S	-38E	K	10/30	I	4259	4042	4228	4043-4050	15.5 9.625 7	18 12.25 8.75	183 2732 3946	250 600 310	CIRC 990** 2860-CBL
33232 Oxy	30-025- 26834	33	-18S	-38E	K	9/80	I	4395 PBD	4130	4148	4050-4054 4096-4101	16 8.625 5.5	20 12.25 7.875	40 1590 4439	40 700 750	CIRC CIRC CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBTB	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
State A #1 Oxy	30-025- 12504	32	-18S	-38E	G	6//30	P	3750 PBTB	3585	3685	NONE	12.5 9	16.5 12.25	222 2755	135 600	CIRC** 977**
												7	8.75	3850	200	3139**
State A #6 Oxy	30-025- 22944	32	-18S	-38E	G	4//69	P	5861	5805	5929	NONE	13.375 8.625	17.5 11.75	357 3820	350 800	CIRC CIRC
												5.5	7.875	3566	500	CIRC
State B #1 Now 33111 Oxy	30-025- 12505	33	-18S	-38E												
State G #6 Oxy	30-025- 23334	33	-18S	-38E	F	11//69	P	6441 PBTB	6204	6148	450-452 3410-3412	11.75 8.625	17.5 11	420 1831	540 370	CIRC 1831-TS
											5930-5962	5.5	7.875	6009	400	3500-TS
												4	4.75	5815-7041	75	5815**
27111 Oxy	30-025- 23375	27	-18S	-38E	D	2//77	PA	4077 PBTB	4161	4360	NONE	8.625 5.5	12.25 7.875	347 4222	275 450	CIRC** 2676-CBL
29421 Oxy	30-025- 07459	29	-18S	-38E	H	11//30	PA	308 CICR	3880	4232	NONE	12.5 9.625	16 11.75	220 2720	200 600	CIRC** 518**
												7	8.75	3880	300	2914-CBL
												5.5	6.25	3796-4236	50	3866
32311	30-025- 07515	32	-18S	-38E	B	8//30	PA	2700 PBTB	3938	4160	NONE	12.5 9.625	16 11.75	207 2739	200 425	CIRC** 1179**
												6.625	8.75	3938	350	2740-CBL
State A #5 Oxy	30-025- 08409	32	-18S	-38E	H	10//48	PA	2200 CMT	NA	NA	NONE	8.625 5.5	11 7.75	391 3120	200 800	CIRC** CIRC**
State B #4	30-025- 12508	33	-18S	-38E	D	12//47	PA	3192	3145	3186	NONE	8.625	11	413	200	CIRC**

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator Oxy	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 CIRC**
State G #4 Oxy	30-025-07563	33	-18S	-38E	E	12//49	PA	3210	3187	3190	NONE	10.75	15	448	400	CIRC
												5.5	7.375	3108	800	CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

FOR WELLS 28332,29231,29321,30223,32312,32431																	
Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBDT	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC	
St A #4 Collins & Ware	30-025-23076		32	-18S	-38E	B	4/69	TA	5325	5375	5966	NA	11.75	15	380	350	CIRC
								CIBP				8.625	11	3810	590	2400	
												5.5	7.875	5998	325	5281**	
St A #5 Collins & Ware	30-025-23116		32	-18S	-38E	A	6/69	P	6954	6674	6936	NA	11.75	15	385	400	CIRC**
												8.625	11	3798	590	1099**	
												5.5	7.875	7000	501	4772**	
State B #5 Collins & Ware	30-025-07434		29	-18S	-38E	G	12/48	P	3224	3136	3224	1680-1682	10.75	13.75	220	200	CIRC**
												7.625	9.875	1665	300	CIRC**	
												5.5	6.75	3136	300	CIRC**	
State B #6 Collins & Ware	30-025-07435		29	-18S	-38E	F	1/47	P	3219	3137	3219	NONE	7.625	9.875	414	200	390
												5.5	6.75	3137	394	CIRC**	
St #5 Texland Pet.	30-025-23173		29	-18S	-38E	O	7/69	P	6970	6648	6930	NONE	8.625	12.25	3808	300	3418**
												6.625	8.75	3575	530	CIRC**	
												5.5	7.875	7022	NA	NA	
State A #7 Conoco	30-025-22934		29	-18S	-38E	N	2/69	P	6050	5823	5941	NONE	11.75	15	360	250	CIRC**
												8.625	11	3800	240	2515-TS	
												5.5	7.875	6050	405	3300-TS	
State A #8 Conoco	30-025-23048		29	-18S	-38E	K	4/69	TA	3567	3652	5787	5824-5924	11.75	15	360	250	CIRC**
								CIBP				8.625	11	3800	240	3064**	
												5.5	7.875	5960	405	4309**	
State A-33 #12 Brothers Prod. Co.	30-025-23195		33	-18S	-38E	L	9/69	P	6985	6686	6946	NONE	13.375	17.5	422	375	CIRC
								PBDT				9.625	12.5	3750	325	2850	
												7	8.75	7018	525	3700	

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBDT	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Operator					Ltr											
Bowers A Fed. #28	30-025-23022	29	-18S	-38E	M	4/1/69	P	5345	5856	5928	NONE	11.75	15	374	300	CIRC**
Exxon								CIBP				8.625	11	3850	500	1879**
												5.5	7.875	5989	450	3838**
Bowers A Fed. #29	30-025-23131	29	-18S	-38E	L	5/1/69	P	6000	5808	5889	NONE	11.75	15	370	300	CIRC**
Exxon												8.625	11	3849	500	1877**
												4.5	7.875	6000	450	5087**
Bowers A Fed. #38	30-025-28580	30	-18S	-38E	I	4/1/84	P	7006	6764	6962	NONE	13.375	17.5	1476	1220	CIRC
Exxon												10.75	12.25	4491	1650	CIRC
												5.5	7.875	7000	660	4985
WD Grimes #6	30-025-23400	29	-18S	-38E	I	2/1/70	P	7018	6631	6984	NONE	13.375	17.5	377	400	CIRC**
Lewis B. Burleson								PBTD				9.625	12.25	3847	2300	CIRC**
												7	8.75	7049	540	3458**
HD McKinley #8	30-025-23151	30	-18S	-38E	H	6/1/69	P	5615	3676	3754	NONE	13.375	17.5	360	340	CIRC
Getty												8.625	11	3842	1400	CIRC
												5.5	7.875	6057	650	3300
HD McKinley #9	30-025-23221	30	-18S	-38E	G	8/1/69	TA	6961	5761	6965	NONE	13.375	17.5	378	400	CIRC**
Getty								CIBP				9.625	12.25	3851	1748	CIRC**
												7	8.75	6999	650	1933**
Grimes A #4	30-025-07522	32	-18S	-38E	C	9/1/30	P	3884	3604	3700	270	15.5	20	220	200	CIRC**
Techsys Res.								PBTD				9.625	12.25	2742	600	318**
												6.625	7.875	3931	400	CIRC**
Grimes NCT-A #17	30-025-22792	32	-18S	-38E	C	11/1/68	P	6051	5780	5996	NONE	13.375	17.5	366	370	CIRC
Texland Pet.								PBTD				9.625	12.25	3399	1450	CIRC**
												7	8.75	6149	545	2510
Grimes NCT-A #18	30-025-22915	32	-18S	-38E	F	2/1/69	P	6000	5772	5928	NONE	13.375	17.5	351	335	CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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.	
Texland Pet.								PBTD				8.625	11	3799	500	1802**
												5.5	7.875	6019	505	2470
Bowers A Fed. # 1	30-025-07471	30	-18S	-38E	I	1//30	PA	6000	5878	5922	3669-3726	12.25	17	205	180	CIRC**
Exxon								PBTD			5812-5849	9.625	11.5	2750	630	CIRC**
												7	8.75	3962	528	CIRC**
												4.5	6.25	6000	275	2200-TS
Bowers A Fed. #CT21	30-025-21968	30	-18S	-38E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Humble																
Bowers A Fed. #CT22	30-025-21961	29	-18S	-38E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Humble																
Bowers A Fed. #CT23	30-025-21962	29	-18S	-38E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Humble																
Bowers Fed. #2	30-025-07472	30	-18S	-38E												
Humble																
Now NHU 30331																
St #5	30-025-07483	30	-18S	-38E	K	2//48	P	3246	3194	3244	NA	8.625	11	300	125	CIRC**
Marathon												5.5	7	3160	1350	CIRC**
State A #6	30-025-07540	32	-18S	-38E	O	6//48	TA	3240	3156	3198	NONE	8.625	11	301	125	CIRC**
Saga Petroleum												5.5	7	3116	750	CIRC**
State #7	30-025-07541	32	-18S	-38E	P	6//48	SI	3213	3116	3213	NONE	8.625	11	301	125	CIRC**

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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											
Saga Petroleum												5.5	7	3116	1000	CIRC
State #8	30-025-07542	32	-18S	-38E	I	7/1/48	P	3192	3124	3192	NONE	8.625	11	300	125	CIRC
Saga Petroleum												5.5	7	3124	1000	CIRC
St #8	30-025-07486	30	-18S	-38E	L	4/1/48	P	3180	3223	3271	NA	8.625	11	295	125	CIRC
Marathon									OH			5.5	7	3173	900	CIRC
Hobbs State #1	30-025-23585	29	-18S	-38E	F	10/1/70	P	7032	6680	6992	NONE	12.75	17.5	356	400	CIRC
Marcum Drilling								PBTD				8.625	11	3795	300	2600
												5.5	7.875	7050	150	3839-CBL
Conoco-State #2	30-025-23856	33	-18S	-38E	K	11/1/71	P	7075	5830	6533	NONE	13.375	17	402	410	CIRC
Saga Petroleum												9.625	12.25	3797	350	998
												7	8.75	7075	600	3503
Hobbs State #2	30-025-23620	29	-18S	-38E	G	11/1/71	P	6397	6705	7031	6318-6350	9.625	12.75	358	200	CIRC
Marcum Drilling								PBTD				7	8.75	3850	250	2481**
												4.5	6.125	7075	425	1672**
Hobbs SWD F #WD29	30-025-12802	29	-18S	-38E	F	2/1/60	I	5050	4469	5050	NA	9.625	12.25	400	300	CIRC**
Rice										OH		7	8.75	4700	700	CIRC**
State Land S32 #9	30-025-23309	32	-18S	-38E	J	11/1/70	P	6710	5954	6560	NONE	13.375	17.5	364	160	90**
Saga								CIBP				9.625	12.25	3799	1140	CIRC**
												7	8.75	573-6998	490	CIRC**
Seed St 30 #1	30-025-22994	30	-18S	-38E	K	2/1/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																

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OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name	API No.	Sec.	T	R	Un	Drill	Well	TD or	Top	Bot.	Sqz.	Csg.	Hole		No of	
Operator					Ltr	Date	Type	PBTD	Perf	Perf	Perfs	Size	Size	Depth	Sxs.	TOC
Seed St 30 #2	30-025-22995	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Seed St 30 #3	30-025-22996	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Seed St 30 #4	30-025-22997	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Seed St 30 #5	30-025-22998	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Seed St 30 #6	30-025-22319	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Seed St 30 #7	30-025-22320	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Seed St 30 #8	30-025-22321	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Seed St 30 #9	30-025-22322	30	-18S	-38E	K	2/69	P	45	10	45	NONE	7	8.5	10	2	CIRC**
C.E. Seed																
Hobbs State #3	30-025-23621	29	-18S	-38E	B	12/70	SWD	6060	5144	6029	NONE	9.625	12.25	350	200	CIRC

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OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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 HRC, Inc.					Ltr							7	8.75	3850	200	2300
												4.5	6.25	6083	200	3112
St I #6 Texland Pet.	30-025-23252	29	-18S	-38E	P	8/69	P	6986	6652	6929	NA	9.625 7	12.25 8.75	3800 3549	600 700	1905** CIRC**
												5.5	7.875	7013	NA	NA
HD McKinley #5 Amerada	30-025-07465	30	-18S	-38E	F	3/47	PA	3230	3197	3206	NONE	7.625 5.5	9.875 6.75	432 3130	200 600	CIRC** CIRC**
HD McKinley #6 Amerada	30-025-07466	30	-18S	-38E	C	3/47	PA	3229	3145	3229	NONE	7.625 5.5	9.875 6.75	416 3145	200 625	CIRC CIRC
HD McKinley #9 Amerada	30-025-22172	30	-18S	-38E	F	6/67	PA	37	10	37	NONE	5.5	6.75	10	21	CIRC**
State A #3 Amerada	30-025-07517	32	-18S	-38E	B	1/47	PA	3164	3149	3150	NA	10.75 7.625	13.75 9.875	221 1570	200 300	CIRC** CIRC**
												5.5	6.75	3164	600	CIRC**
Bowers Fed. A #1 ARC Ind.	30-025-22124	30	-18S	-38E	J	6/67	PA	42	10	38	NONE	6.625	6.75	10	3	CIRC**
Bowers A Fed. #2 ARC	30-025-22125	30	-18S	-38E	J	5/67	PA	38	32	38	NONE	6.625	6.75	10	3	CIRC**

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OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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	Perts	Size	Size		Sxs.	TOC
Bowers Fed. A #3	30-025- 22126		30 -18S	-38E	J	6/67	PA	38	10	38	NONE	7	7.875	10	3	CIRC**
ARC Ind.																
Bowers Fed. A #4	30-025- 22127		30 -18S	-38E	J	7/67	PA	38	10	38	NONE	6.625	6.75	10	3	CIRC
ARC Ind.																
Bowers Fed. A #5	30-025- 22189		30 -18S	-38E	J	7/67	PA	38	10	38	NONE	6.625	6.75	10	3	CIRC
ARC Ind.																
Bowers Fed. A #6	30-025- 22276		30 -18S	-38E	J	10/67	PA	45	10	45	NONE	5.5	6.75	10	3	CIRC**
ARC Ind.																
Bowers Fed. A #10	30-025- 22147		30 -18S	-38E	J	6/67	PA	38	10	38	NONE	7	7.875	10	3	CIRC**
ARC Ind.																
Bowers Fed. A #11	30-025- 22148		30 -18S	-38E	J	6/67	PA	38	10	38	NONE	6.625	6.75	10	3	CIRC**
ARC Ind.																
Bowers Fed. A #12	30-025- 22190		30 -18S	-38E	J	10/67	PA	45	10	45	NONE	6.625	6.75	10	3	CIRC**
ARC Ind.																
F.A Bowers #13	30-025- 22277		30 -18S	-38E	J	10/67	PA	45	10	45	NONE	5.5	6.75	10	3	CIRC**
ARC Ind.																
Grimes #5	30-025- 07414		28 -18S	-38E	O	12/47	PA	3218	3199	3209	3199-3209	10.75	13.75	422	300	CIRC**
Conoco												5.5	7.375	3204	650	CIRC**
Grimes #6	30-025- 07415		28 -18S	-38E	J	12/47	PA	3255	3236	3249	NONE	10.75	12.25	424	350	CIRC**

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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.	
Conoco												7	8.75	3255	550	CIRC**
St A #4	30-025- 07439	29	-18S	-38E	J	2/1/47	PA	3215	3167	3194	NA	10.75	15	200	250	CIRC**
Conoco												5.5	7.875	3200	600	CIRC**
State A #5	30-025- 07440	29	-18S	-38E	K	3/1/47	PA	3200	3168	3188	NONE	10.75	15	280	200	CIRC**
Conoco												7.625	9.875	1573	425	CIRC**
												5.5	7.875	3197	450	CIRC**
State A #6	30-025- 07441	29	-18S	-38E	N	7/1/47	PA	3172	3158	3166	NONE	12.75	15	260	200	CIRC
Conoco												8.625	10.75	1562	475	CIRC**
												7	8.25	2721	350	CIRC**
												5	6.25	3172	500	CIRC**
State A-33 #8	30-025- 07549	33	-18S	-38E	L	9/1/48	PA	3200	3148	3197	3148-3197	13.375	17.5	362	300	CIRC**
Conoco												5.5	7.875	3199	1200	CIRC**
State A-33 #9	30-025- 07550	33	-18S	-38E	M	10/1/48	PA	3235	3100	3235	NONE	10.75	13.375	371	300	CIRC**
Conoco												5.5	7.875	3210	1000	CIRC**
Grimes A #11	30-025- 07529	32	-18S	-38E	F	12/1/47	PA	3169	3140	3169	NA	9.625	12.25	294	200	CIRC**
Chevron									OH			7	8.75	3130	600	CIRC**
Bowers #2	30-025- 08045	30	-18S	-38E	J	5/1/30	PA	106	NA	NA	NONE	12.5	16	106	25	CIRC**
Humble																
B.A. Bowers #6	30-025- 07475	30	-18S	-38E	I	11/1/30	PA	3190	NA	NA	NA	12.5	18	217	200	CIRC
Exxon												9.625	12	2750	650	CIRC**
												7	8.75	3147	120	3139**
Bowers A #12	30-025- 07450	29	-18S	-38E	L	4/1/47	PA	3088	NA	NA	NA	8.625	11	236	100	CIRC**
Exxon								PBTD				5.5	7.625	3144	675	880-TS

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

Well Name Operator	API No.	Sec.	T	R	Un Ltr	Drill Date	Well Type	TD or PBDT	Top Perf	Bot. Perf	Sqz. Perts	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Bowers A #14 Exxon	30-025-07451	29	-18S	-38E	O	8/147	PA	3207	3162	3207	NONE	8.625 5.5	11 7.625	496 3120	400 1350	CIRC** CIRC**
Bowers A-B #1 Exxon	30-025-07453	29	-18S	-38E	D	9/148	PA	3238	3179	3238	NA OH	8.625 5.5	11 7.625	260 3179	150 1050	CIRC** CIRC**
Bowers A Fed. #9 Exxon	30-025-07446	29	-18S	-38E	E	8/130	PA	4259	NA	NA	NA	9.625 7 5	12 8.75 6.25	2750 3976 4259	650 300 NA	CIRC** 2011** NA
Bowers A Fed. #13 Exxon	30-025-07476	30	-18S	-38E	J	7/147	PA	3189	3148	3189	NA OH	8.625 5.5	11 7.625	225 3150	200 1350	CIRC** CIRC**
Bowers A Fed. #17 Exxon	30-025-21900	30	-18S	-38E	J	10/166	PA	50	10	50	NONE	7	8	12	6	CIRC**
Bowers A Fed. #31 Exxon	30-025-23176	29	-18S	-38E	E	6/169	PA	7050	6075	6991	NONE	8.625 5.5 2	11 7.875 7.875	3836 7038 7005	500 650 NA	1858** 3125** NA
Bowers A Fed. #33 Exxon	30-025-23222	29	-18S	-38E	D	7/169	PA	3970	4144	5953	4256-66	13.375	17	416	400	CIRC**
Bowers A Fed. #34 Exxon	30-025-23260	30	-18S	-38E	J	8/169	PA	7010	5822	6979	5848-98	9.625 3.5 B 3.5 D	12.25 7.875 7.875	3850 6088 6098	550 895 895	2296** 2600** 2615**
Bowers A Fed. #CT24 Humble	30-025-21963	29	-18S	-38E	E	1/167	PA	35	NA	NA	NA	NA	NA	NA	NA	NA
Bowers A Fed. #CT25	30-025-21964	29	-18S	-38E	E	1/167	PA	35	NA	NA	NA	NA	NA	NA	NA	NA

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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
Exxon																
Bowers A Fed. #CT26	30-025- 21969	30	-18S	-38E	J	11/67	PA	35	NA	NA	NA	NA	NA	NA	NA	NA
Exxon																
Bowers A Fed. #CT27	30-025- 21970	30	-18S	-38E	H	11/67	PA	35	NA	NA	NA	NA	NA	NA	NA	NA
Exxon																
WD Grimes #2	30-025- 07455	29	-18S	-38E	A	21/48	PA	4045	NA	NA	NA	8.625	11	242	150	CIRC**
Humble												5.5	7.375	3205	450	CIRC**
G. O. McKinley #3	30-025- 07461	30	-18S	-38E	H	71/30	PA	3199	NA	NA	NA	9.625	12.25	2755	600	337**
Marathon/Getty												7	8.25	3166	100	2995**
G. O. McKinley #6	30-025- 07488	30	-18S	-38E	G	61/47	PA	3200	1453	NA	NA	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	71/47	PA	3224	NA	NA	NA	8.625	11	1504	400	CIRC**
Marathon/Getty												5.5	6.5	3192	200	CIRC**
Hobbs State #5	30-025- 23662	29	-18S	-38E	F	11/71	PA	5959	5813	5879	NA	9.625	12.25	364	200	CIRC
Ne-O-Tex												7	8.75	3826	200	2250
												4.5	6.25	5986	120	3800 (C)
State-Northrup #1	30-025- 07535	32	-18S	-38E	J	61/30	PA	3227	3140	3203	NONE	12.5	16	1482	175	1046**
Ohio Oil								PBTD				10.75	12.25	2776	200	2050**
												7	8.75	3850	275	CIRC
												5	7	3244	500	CIRC
WD Grimes #6	30-025- 07428	28	-18S	-38E	F	11/47	PA	3325	NONE	NONE	NONE	9.625	13	441	300	CIRC**
Repollo/Sinclair												7	9	3185	800	CIRC**

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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	Date	Type	PBTD	Perf	Perf	Perfs	Size	Size	Depth	Sxs.	TOC
WD Grimes #5	30-025-07424	28	-18S	-38E	L	7/1/47	PA	3150	3191	3197	NONE	8.625	11	409	195	CIRC**
Shell								CMT				4.5	7.875	1958	600	CIRC**
WD Grimes #6	30-025-12500	28	-18S	-38E	M	7/1/47	PA	3090	3155	3161	NONE	8.625	11	411	200	CIRC**
Shell								CMT				5.5	7.875	2778	1400	CIRC**
Grimes #8	30-025-07423	28	-18S	-38E	L	9/1/47	PA	3120	3215	3221	NONE	8.625	11	402	200	CIRC**
Shell								CMT				4.5	7.875	2108	850	CIRC**
McKinley A #9	30-025-12492	19	-18S	-38E	N	8/1/47	PA	3247	3205	3247	NA	8.625	11	407	200	CIRC**
Shell												4.5	7.875	3168	850	CIRC**
WD Grimes #5	30-025-07426	28	-18S	-38E	E	10/1/47	PA	3222	3212	3222	NONE	9.625	13	441	300	CIRC**
Sinclair												7	9	3185	600	CIRC**
St #1	30-025-07442	29	-18S	-38E	P	8/1/30	PA	4191	3150	4191	NA	13.375	17.5	217	200	CIRC**
Std of Tx										OH		9	12.25	2735	500	1473**
												6.625	7.875	3907	174	2374**
St #2	30-025-07443	29	-18S	-38E	O	9/1/30	PA	4171	3155	4156	NA	13	17.5	225	150	CIRC**
Std of Tx												9.625	12.25	2810	725	CIRC**
												7	8.75	3951	300	1973**
WD Grimes #1	30-025-07456	29	-18S	-38E	I	8/1/30	PA	4160	3168	3189	3259-61	12.5	17.5	236	200	CIRC**
Tidewater											3049-50	9.625	12.25	2712	600	273**
												6.625	8.75	3826	300	2404**
Grimes #2	30-025-07457	29	-18S	-38E	H	10/1/30	PA	4176	3148	3255	3086-3088	15.5	18	230	200	CIRC**
Tidewater											3270-3272	9.625	12.25	2718	600	282**
												7	8.75	3880	300	1867**
												5.5	7.875	3350	100	3088**
Grimes #5	30-025-07460	29	-18S	-38E	H	12/1/30	PA	4196	NA	NA	NA	12.5	16	214	250	CIRC

** Denotes calculated TOC with 50% efficiency

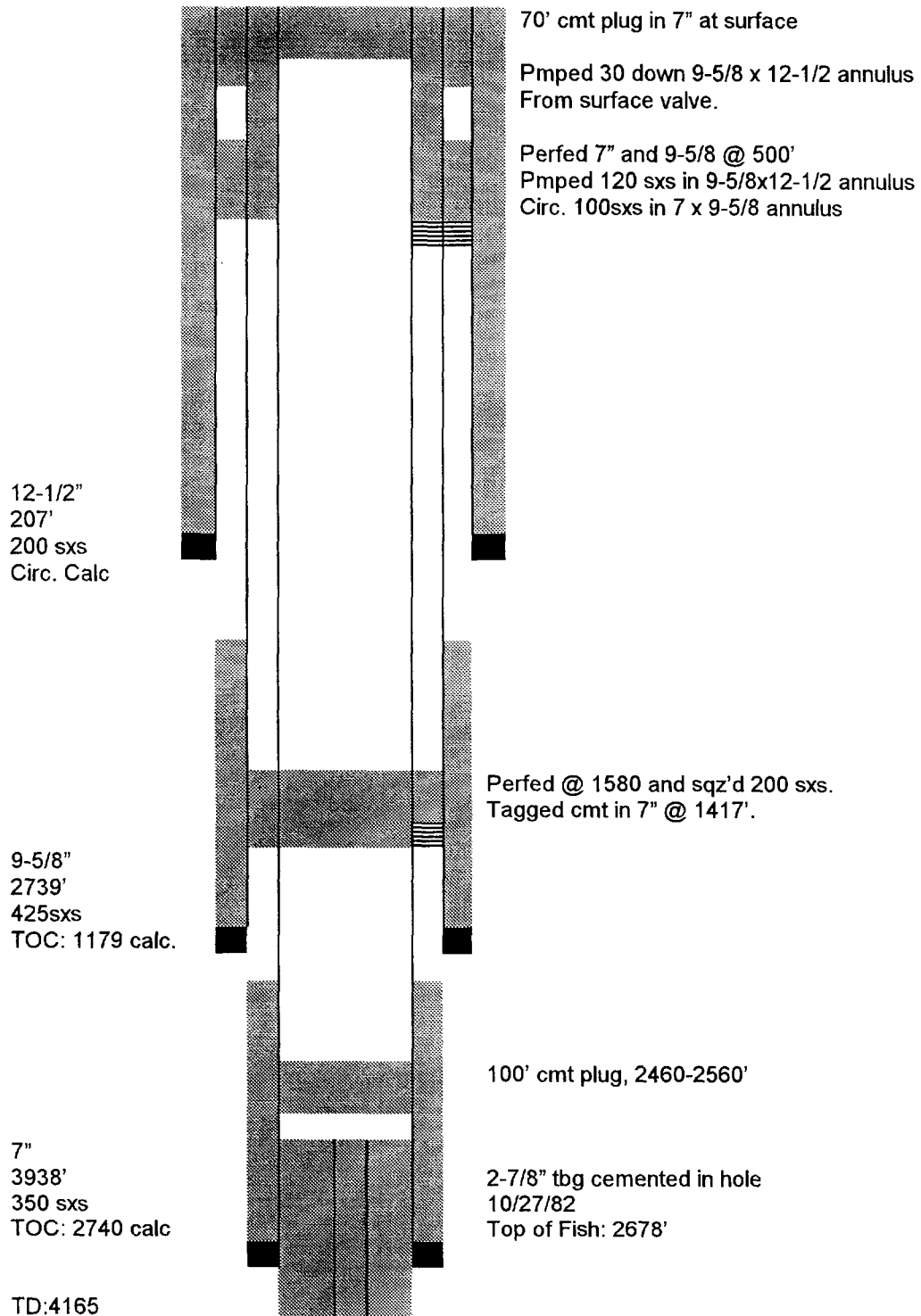
OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTORS

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	Depth	Sxs.	TOC
Tidewater												9.625	12.25	2715	600	277**
												7	8.75	3911	400	595**

** Denotes calculated TOC with 50% efficiency

WELL SCHEMATIC - NHU 32-311

Well plugged 4/19/84



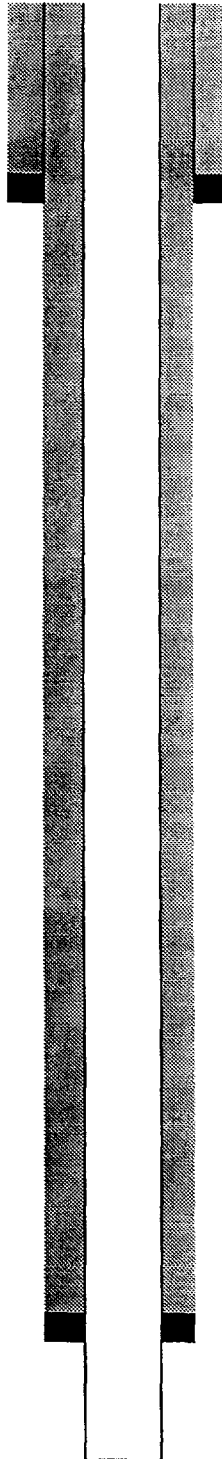
Altura Energy
Unit H, SE/4 of NE/4
Sec 32, T-18S, R-38E

WELL PLUGGED:
10/19/53

Size: 8.625"
Depth: 391'
Hole size: 11"
Cmt: 200 sxs
TOC: Circ.- Calc.
50% efficiency

Size: 5.5"
Depth: 3120'
Hole size: 7.75"
Cmt: 800 sxs
TOC: Circ. - Calc.
50% efficiency

PBTD: 2200'- Cmt.



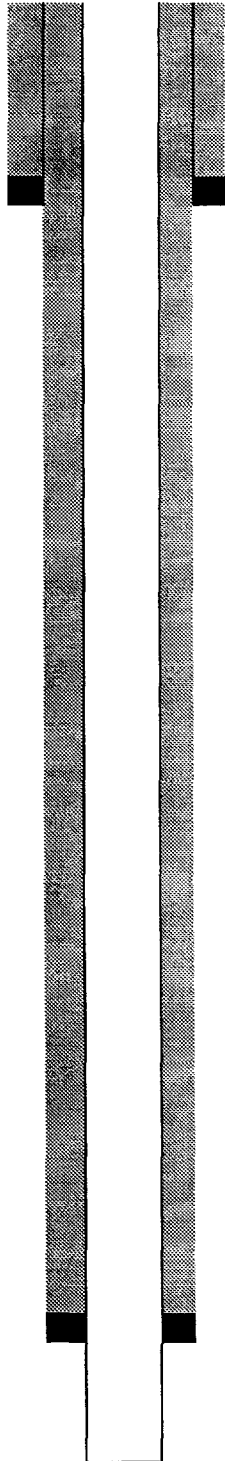
Amoco
Unit E, 2310 FNL & 990 FWL
Sec 33, T-18S, R-38E

WELL PLUGGED:
3/9/71

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

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

PBTD: 3210'



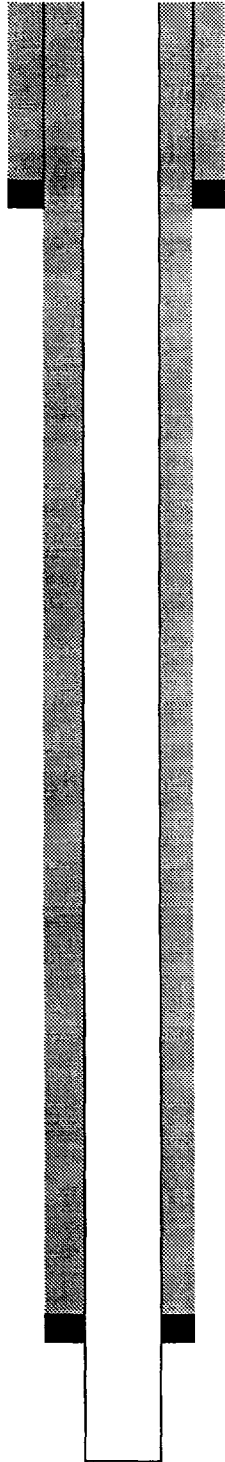
Conoco
Unit L, 2060 FSL & 660 FWL
Sec 33, T-18S, R-38E

WELL PLUGGED:
1/13/71

Size: 13.375"
Depth: 362'
Hole size: 17.5"
Cmt: 300 sxs
TOC: Circ.- Calc.
50% efficiency

Size: 5.5"
Depth: 3199'
Hole size: 7.875"
Cmt: 1200 sxs
TOC: Circ.- Calc.
50% efficiency

TD: 3200'



Conoco
Unit M, 585 FWL & 585 FSL
Sec 33, T-18S, R-38E

Size: 10.75"
Depth: 371'
Hole size: 13.375"
Cmt: 300 sxs
TOC: CIRC- Calc.
With 50% effic.

Loaded hole wth 10# mud

Spotted 40 sxs cmt plug across perfs

Perfs 3100-70

Perfs 3100-70

State-Northern #1
Ohio Oil Co.
Unit J
Sec. 32, T-18S, 38E

WELL PLUGGED:
7/21/58

Size: 12.5"
Depth: 1482'
Hole size: 16"
Cmt: 175 sxs
TOC: 1046' - Calc.

Spotted 5 sxs at surface

Perfed at 400', pumped 110 sxs, circ.
10-3/4x12.5 annulus.
Perfed at 1000' sqz'd 200 sxs

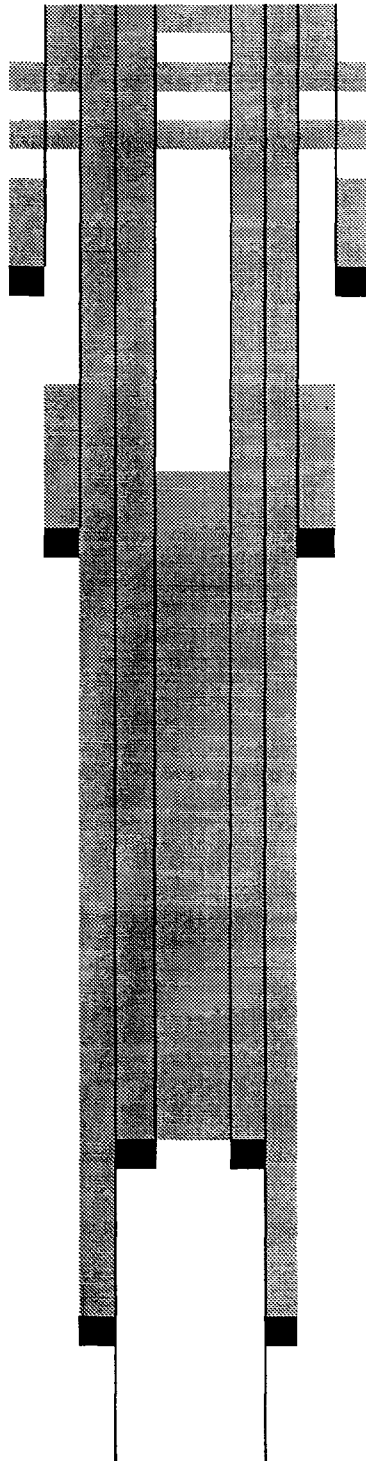
Size: 10-3/4"
Depth: 2776'
Hole size: 12.25"
Cmt: 200 sxs
TOC: 2058' - Calc.
With 50% effic.

Spotted 55 sxs, 3227-2603'

Size: 5"
Depth: 3244'
Cmt: 500 sxs
TOC: Circ.

Size: 7"
Depth: 3850'
Hole size: 8.75"
Cmt: 275 sxs
TOC: Circ.

PBTD: 3227'
TD: 4176'



LIST OF OFFSET OPERATORS & SURFACE OWNERS

North Hobbs (Grayburg/San Andres) Unit
Well No. 431
Letter B, Section 32, T-18-S, R-38-E
Lea County, New Mexico

Offset Operators

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

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

Collins & Ware, Inc.
508 W. Wall, Suite 1200
Midland, TX 79701

Brothers Production Company, Inc.
P.O. Box 7515
Midland, TX 79708

Surface Owners

Grimes Land Company
P.O. Box 5102
Hobbs, NM 88240

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

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

2. Article Number (Copy from service label)
7000 0520 0017 5308 9258

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery

C. Signature

X☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Brothers Production Company, Inc.
P.O. Box 7515
Midland, TX 79708

2. Article Number (Copy from service label)
7000 0520 0017 5308 9265

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery

C. Signature

X☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Collins & Ware, Inc.
508 W. Wall, Suite 1200
Midland, TX 79701

2. Article Number (Copy from service label)
7000 0520 0017 5308 9203

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Grimes Land Company
P.O. Box 5102
Hobbs, NM 88240

2. Article Number (Copy from service label)
7000 0520 0017 5308 9241

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

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

of 1

weeks.

Beginning with the issue dated

December 31 1999

and ending with the issue dated

December 31 1999

Kathi Bearden

Publisher

Sworn and subscribed to before

me this 3rd day of

January 2000

Godi' Henson
Notary Public.

My Commission expires
October 18, 2000
(Seal)

This newspaper is duly qualified
to publish legal notices or 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

Hobbs FMT

Occidental Permian Ltd. 1017 W. Stanolind Road Hobbs, NM 88240

**Occidental Permian Ltd.**Date: 11/21/2000Number of pages including cover sheet: 3

To:

Mark Ashby

Phone:

Fax phone: 505-827-2177

CC:

From

Steve W. Jones
Oxy. PermianPhone: 505-397-8228Fax phone: (505) 397-8204 or 8-748-2204

REMARKS:

☐

Urgent

☐

For your review

☐

Reply ASAP

☐

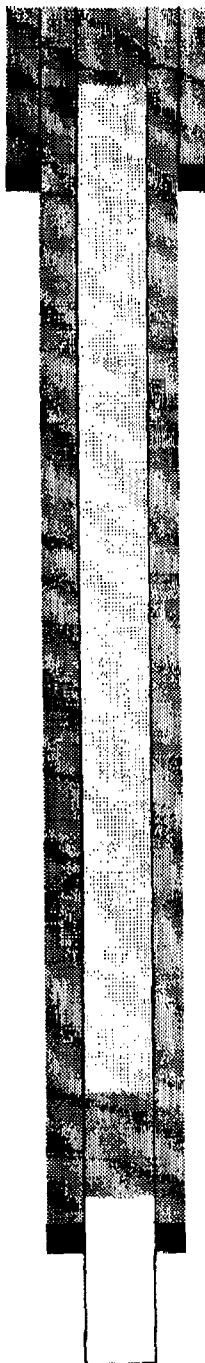
Please comment

Conoco
Unit L, 2060 FSL & 660 FWL
Sec 33, T-18S, R-38E

WELL PLUGGED:
1/13/71

Size: 13.375"
Depth: 362'
Hole size: 17.5"
Cmt: 300 sxs
TOC: Circ. - Calc.
50% efficiency

10 sxs plug at surface



Loaded hole with 10# mud

Size: 5.5"
Depth: 3199'
Hole size: 7.875"
Cmt: 1200 sxs
TOC: Circ. - Calc.
50% efficiency

40 sxs plug 3148-97'

TD: 3200'

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

WELL PLUGGED:
3/9/71

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

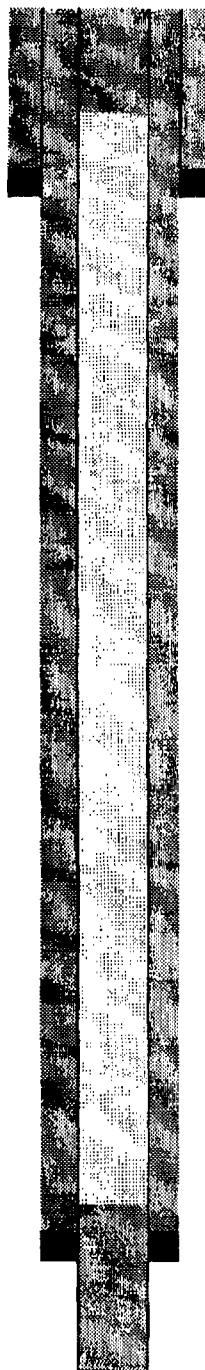
10 sxs plug at surface

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

Loaded hole with mud

PBTD: 3210'

25 sxs plug 3108-3210



Hobbs FMT

Occidental Permian Ltd. 1017 W. Stanolind Road Hobbs, NM 88240

**Occidental Permian Ltd.**Date: 11/1/2000Number of pages including cover sheet: 3

To:

Mark Ashby

Phone:

Fax phone: 505-827-8177

CC:

From

Steve W Jones
Oxy PermianPhone: 505-397-8228Fax phone: (505) 397-8204 or 8-748-2204

REMARKS:

☐ Urgent☐ For your review☐ Reply ASAP☐ Please comment

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

WELL PLUGGED:
1/20/71

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

10 sxs plug at Surface

10# mud in hole

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

40 sxs plug 3236-49

TD: 3255'

Unit H, SE/4 of NE/4
Altura Energy
Unit H, SE/4 of NE/4
Sec 32, T-18S, R-38E

WELL PLUGGED:
10/19/53

Size: 8.825"
Depth: 391'
Hole size: 11"
Cmt: 200 sxs
TOC: Circ.- Calc.
50% efficiency

2 sxs plug at Surface

5 sxs plug 384-400

Pulled 920 ft of 5-1/2" csg.

5 sxs plug 900-930

Size: 5.5"
Depth: 3120'
Hole size: 7.75"
Cmt: 800 sxs
TOC:

Loaded hole with drilling mud
prior to spotting cmt plugs.

PBTD: 2200'- Cmt.

6 sxs plug 3060-3100'