

PMX

8/14/00



Occidental Permian Ltd.

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

July 25, 2000

JUL 28

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

RE: Expansion of Pressure Maintenance Project
North Hobbs (Grayburg/San Andres) Unit
Hobbs; Grayburg – San Andres Pool
Well No. 631
Letter B, Section 33, T-18-S, R-38-E
Lea County, NM

Gentlemen:

Occidental Permian Limited Partnership respectfully requests administrative approval for expansion of the subject pressure maintenance project by the drilling and completion of North Hobbs (G/SA) Unit Well No. 631 as a new water injection well. 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 (along with a copy of NMOCD-approved Form C-101)
- A map reflecting the location of the proposed injection well (No. 631). 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: _____ 7/25/00

- * 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. 631
Letter B, Section 33, T-18-S, R-38-E
Lea County, New Mexico

III. Well Data

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

VII. Proposed Operation

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

IX. Stimulation Program

Acid treatment of unitized perforations will be performed during conversion work

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

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

MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Water Analysis

Company.... Nalco/Exxon Energy Chemicals
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 Wells 33211, 33534 & 33631
SAMPLED BY

DATE TAKEN 5/31/00

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

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

Results reported as Parts per Million unless stated

Langelier Saturation Index + 0.11

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

**Laboratory Services, Inc.**

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

Water Analysis

COMPANY Altura Energy Ltd,

SAMPLE Fresh Water Well For Wells 33211, 33534 & 33631
SAMPLED BY

DATE TAKEN 5/31/00

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

Barium as Ba	0	
Carbonate alkalinity PPM	64	
Bicarbonate alkalinity PPM	212	
pH at Lab	7.43	
Specific Gravity @ 60°F	1	
Magnesium as Mg	202	
Total Hardness as CaCO ₃	348	
Chlorides as Cl	127	
Sulfate as SO ₄	155	
Iron as Fe	0	
Potassium	0.1	
Hydrogen Sulfide	0	
Rw	9.5	@ 25° C
Total Dissolved Solids	930	
Calcium as Ca	146	
Nitrate	8.8	

Results reported as Parts per Million unless stated

Langelier Saturation Index -0.5

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

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

FOR WELL 33631																
Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBT	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Operator					Ltr											
28142	30-025-23246	28	-18S	-38E	M	10/69	P	4030 PBT	3890	3968	NONE	13.375	17.5	372	350	CIRC
Altura								PBT				9.625	12.25	3787	1400	CIRC**
												7	8.75	3589-7102	720	CIRC
28241	30-025-12498	28	-18S	-38E	N	9/34	P	4260	4061	4260	4004-4010	12.5	16	256	150	CIRC
Altura											4023-4026	9.625	12	2770	150	3094**
												7	8.75	1800	250	CIRC**
												5.5	7.875	4229	100	3334
28242	30-025-29276	28	-18S	-38E	N	7/85	I	4423	4213	4347	NONE	13.375	17.5	40	NA	NA
Altura								PBT				9.625	12	1509	650	CIRC
												7	8.75	4470	1005	CIRC
28243	30-025-23304	28	-18S	-38E	N	10/69	P	6300	5890	5967	4898	13.375	17.5	348	250	CIRC
Altura								PBT			4904	9.625	12.25	3805	1400	CIRC**
											4910	7	8.75	3602-6350	500	CIRC
											4918					
											4922					
28341	30-025-12489	28	-18S	-38E	O	7/34	P	4262	4084	4258	382	13.375	17.5	222	180	CIRC
Altura								PBT			4268-4276	9.625	12.25	1637	300	766
											4128-4171	7	8.75	3975	400	2912-CBL
												5	6.25	3928-4276	100	4009-CBL
28441	30-025-07411	28	-18S	-38E	P	1/35	I	4272	4102	4257	NONE	10.75	13.5	243	150	CIRC
Altura								PBT				7.625	9.625	1634	300	185
												5.5	6.25	4015	300	CIRC
33211	30-025-07564	33	-18S	-38E	C	6/34	P	4223	4076	4222	3993-4008	12.5	16	296	150	CIRC**
Altura								PBT				9.625	12.25	2760	150	3191**
												7	8.75	3930	250	2601**
												5.5	7.875	3884	250	3800-CBL
												5.5	7.875	3887-4226	82	3887**
33212	30-025-29026	33	-18S	-38E	C	12/84	I	4327	4029	4231	NONE	13.375	17.5	40	40	CIRC
Altura								PBT				8.625	12.25	1600	875	CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Operator					Ltr											
33213	30-025- 29065	33 -18S	-38E	C	2/85	P	4328	4027	4255		NONE	13.375	17.5	40	NA	NA
Altura							PBTD					8.625	12.25	1551	675	CIRC
												5.5	7.875	4370	775	CIRC
33221	30-025- 07560	33 -18S	-38E	F	9/30	I	4185	4047	4230		606	12.5	16	237	125	CIRC
Altura							CIBP				3145-3146	9.625	11.75	2770	400	CIRC
											4043-4052	7	8.75	4012	275	CIRC
												5	6.25	4242	100	2850-CBL
33222	30-025- 26975	33 -18S	-38E	F	10/80	I	4322	4054	4276		4206-4210	16	20	40	40	CIRC
Altura							CIBP				4214-4218	8.625	12.25	1600	800	CIRC
												5.5	7.875	4400	1100	CIRC
33233	30-025- 28410	33 -18S	-38E	K	12/83	P	4290	4047	4246		NONE	16	20	40	NA	NA
Altura							PBTD					8.625	12.25	1582	750	CIRC
												5.5	7.875	4350	875	65
33312	30-025- 29199	33 -18S	-38E	B	6/85	P	4362	3945	4270		NONE	13.375	17.5	40	NA	CIRC
Altura							PBTD					9.625	12.25	1510	650	CIRC
												7	8.75	4421	975	CIRC
33322	30-025- 27169	33 -18S	-38E	G	1/81	I	4392	4058	4230		NONE	16	20	40	40	CIRC
Altura							PBTD					8.625	12.25	1600	850	CIRC
												5.5	7.875	4510	915	CIRC
33323	30-025- 28951	33 -18S	-38E	G	7/85	P	4370	4003	4182		NONE	13.375	17.5	40	NA	NA
Altura							PBTD					9.625	12.25	1157	650	CIRC
												7	8.75	4370	925	CIRC
33411	30-025- 07556	33 -18S	-38E	A	11/34	P	4256	4095	4256		4020-4058	13.375	17	285	200	CIRC**
Altura												9.625	12.25	2739	SQZD	CIRC
												7	8.75	3970	150	CIRC
												5.5	6.25	3919-4175	40	3919**
33412	30-025- 29932	33 -18S	-38E	H	7/87	P	4436	4171	4341		NONE	9.625	12.25	1542	650	CIRC

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Altura												7	8.75	4436	1250	CIRC
33422	30-025- 28268	33 -18S	-38E	H	11/83	I	4476	4144	4313		NONE	16	20	30	40	CIRC
Altura												8.625	12.25	1664	650	CIRC
												5.5	7.875	4476	750	CIRC
33521	30-025- 34643	33 -18S	-38E	C	9/99	P	4360	4104	4260		NONE	14	18	40	50	CIRC
Altura							PBTD					8.625	12.25	1565	795	CIRC**
												5.5	7.875	4400	1655	4050-CBL
33523	30-025- 34372	33 -18S	-38E	F	7/98	P	4376	4095	4268		NONE	14	18	40	50	CIRC**
Altura							PBTD					8.625	12.25	1560	800	CIRC**
												5.5	7.875	4406	1000	CIRC**
33534	30-025- 34373	33 -18S	-38E	J	7/98	P	4370	4107	4244		4072-4106	14	18	40	50	CIRC**
Altura							PBTD					8.625	12.25	1564	800	CIRC**
												5.5	7.875	4402	740	CIRC**
33545	30-025- 34416	33 -18S	-38E	G	8/98	P	4511	4275	4354		NONE	14	18	40	50	CIRC**
Altura							PBTD					8.625	12.25	1550	800	CIRC**
												5.5	7.875	4558	1000	CIRC**
STATE G #6	30-025- 23334	33 -18S	-38E	F	11/69	P	6441	6204	6148		450-452	11.75	17.5	420	540	CIRC
Altura							PBTD				3410-3412	8.625	11	1831	370	1831-TS
											5930-5962	5.5	7.875	6009	400	3500-TS
												4	4.75	5815-7041	75	5815**
TURNER TR. 2 #30	30-025- 26375	33 -18S	-38E	E	2/80	P	7012	6665	6986		2060-2062	13.375	17.5	420	450	CIRC
Altura							PBTD					9.625	12.25	4401	1250	CIRC
												7	8.75	7050	400	4045-TS
WD Grimes NCT-B #7	30-025- 23438	33 -18S	-38E	B	3/70	P	7059	5836	7008		5848-5988	13.375	17.5	368	400	CIRC
Texland							PBTD					9.625	12.25	3859	2000	CIRC
												7	8.75	7099	485	3635

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

Well Name	API No.	Sec.	T	R	Un	Drill	Well	TD or	Top	Bot.	Sqz.	Csg.	Hole	Depth	No. of	
Operator					Ltr	Date	Type	PBTD	Perf	Perf	Perfs	Size	Size		Sxs.	TOC
WD Grimes NCT-B #8	30-025- 24928	33	-18S	-38E	H	2/1/75	P	6935	6654	6850	5728-5993	13.375	17.5	398	450	CIRC
Texland								PBTD				9.625	12.25	3960	1750	CIRC
												7	8.75	7100	470	2510
WD Grimes NCT-B #9	30-025- 28299	33	-18S	-38E	A	9/1/83	P	7110	6638	6952	NONE	13.75	17.5	415	500	CIRC
Texland												8.625	12.25	4289	1740	CIRC
												5.5	7.875	7109	1220	CIRC
Conoco-State #1	30-025- 23759	33	-18S	-38E	G	8/1/71	P	7075	5871	6975	NONE	13.375	17.5	418	410	CIRC
Saga Petroleum												9.625	12.25	3799	350	1089
												7	8.75	7075	900	3658
STATE G #3	30-025- 07562	33	-18S	-38E	F	11/1/48	PA	3208	3175	3178	NONE	9.625	12.25	462	250	CIRC
Altura								PBTD				5.5	7.875	3100	1000	CIRC
Grimes #5	30-025- 07414	28	-18S	-38E	O	12/1/47	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	12/1/47	PA	3255	3236	3249	NONE	10.75	12.25	424	350	CIRC**
Conoco												7	8.75	3255	550	CIRC**
State A-33 #11	30-025- 07552	33	-18S	-38E	G	5/1/49	PA	3194	3090	3161	NONE	10.75	15	402	375	CIRC**
Conoco								PBTD				5.5	7.875	3190	1200	CIRC**
Grimes B #5	30-025- 07557	33	-18S	-38E	B	5/1/48	PA	3055	3130	3226	NONE	9.625	13.375	300	250	CIRC
Gulf								CMT				5.5	7.875	3120	700	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 #7	30-025- 12499	28	-18S	-38E	N	8/1/47	PA	3000	3173	7176	NONE	8.625	11	397	200	CIRC**

** Denotes calculated TOC with 50% efficiency

OFFSET WELLS WITHIN ONE HALF MILE OF PROPOSED INJECTOR

Well Name	API No.	Sec.	T	R	Un	Drill	Well	TD or	Top	Bot.	Sqz.	Csg.	Hole	No. of	
Operator					Ltr	Date	Type	PBTD	Perf	Perf	Perfs	Size	Size	Sxs.	TOC
Shell								CMT				4.5	7.875	850	CIRC**
														1976	

** Denotes calculated TOC with 50% efficiency

State G #3
Amoco
Unit F, 2285 FNL & 2310 FWL
Sec 33, T-18S, R-38E

WELL PLUGGED:
3/11/71

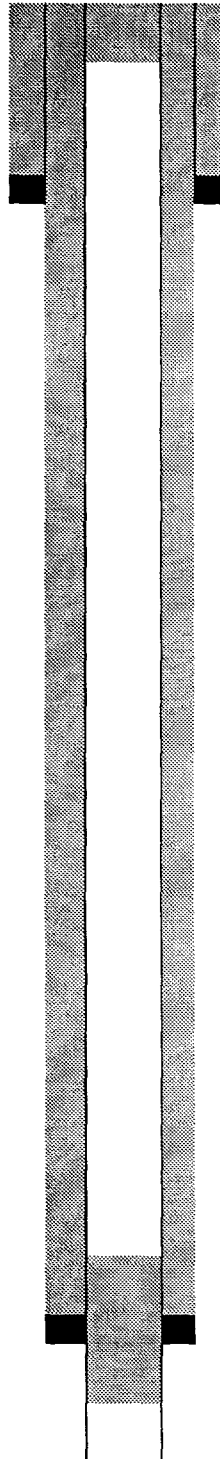
Size: 9.625"
Depth: 462'
Hole size: 12.25"
Cmt: 250 sxs
TOC: Circ.

Spotted 10 sxs plug at surface

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

TD: 3208'

Spotted 25 sxs plug from 3208-3100



W. D. Grimes #3
Conoco
Unit O, 1980 FEL & 660 FSL
Sec 28, T-18S, R-38E

WELL PLUGGED:
1/20/71

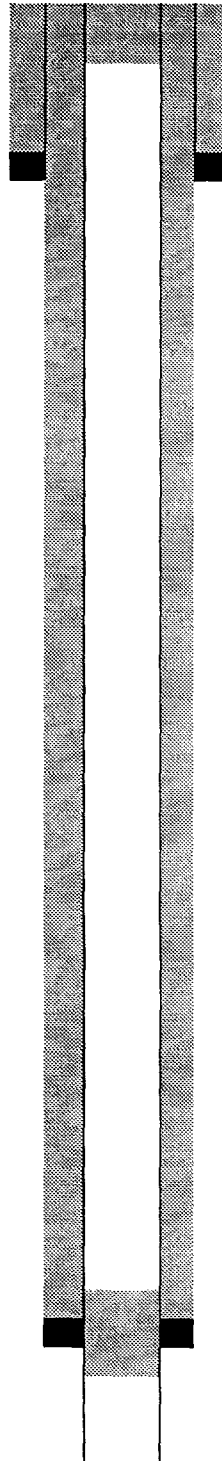
Spotted 10 sxs plug at surface.

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

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

TD: 3218'

Spotted 40 sxs plug 3209-3199'

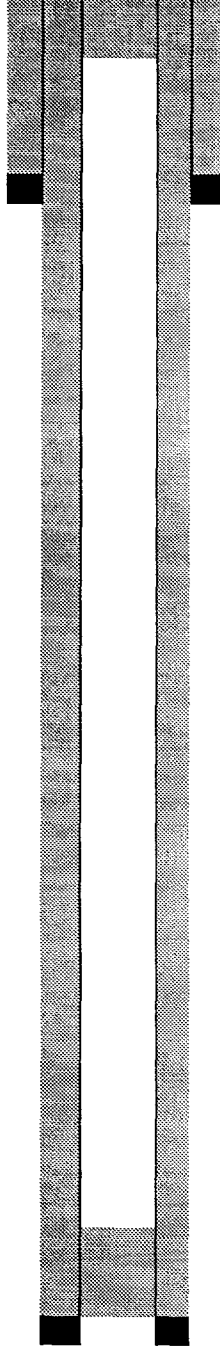


**W. D. Grimes #6
Conoco
Unit J, 1980 FEL & 1980 FSL
Sec 28, T-18S, R-38E**

WELL PLUGGED:
1/20/71

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

Spotted 10 sxs plug at surface.



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

TD: 3255'

Spotted 40 sxs plug from 3249-3236'

State A-33 #11
Conoco
Unit G, 2310 FNL & 2310 FEL
Sec 33, T-18S, R-38E

WELL PLUGGED:
3/18/87

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

Spotted 20 sxs plug from 100' to surface

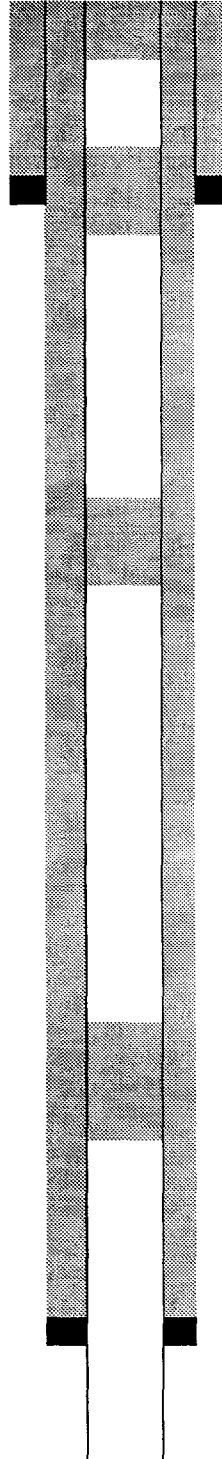
Spotted 20 sxs plug from 470-290'

Spotted 20 sxs plug from 1620-1370'

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

Spotted 35 sxs plug from 2850-2600'

TD: 3194'



**W. D. Grimes B #3
Gulf
Unit B,
Sec 33, T-18S, R-38E**

WELL PLUGGED:
4/18/60

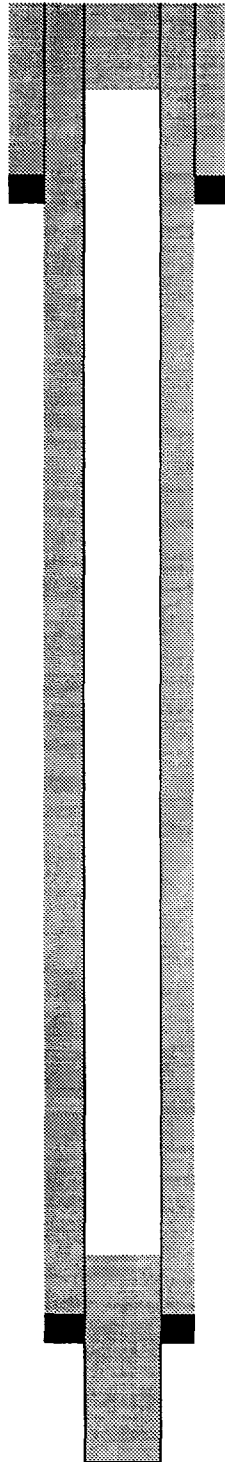
Size: 9.625"
Depth: 300'
Hole size: 13.375"
Cmt: 250 sxs
TOC: Circ.

Spotted 10 sxs plug from 80' to surface

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

Spotted 35 sxs plug from 3226 to 2946'

TD: 3226



**W.D. Grimes #6
Shell Oil Co.
Unit M, SW/4 of SW/4
Sec 28, T-18S, R-38E**

WELL PLUGGED:
10/24/53

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

Spotted 5 sxs plug from 16' to surface

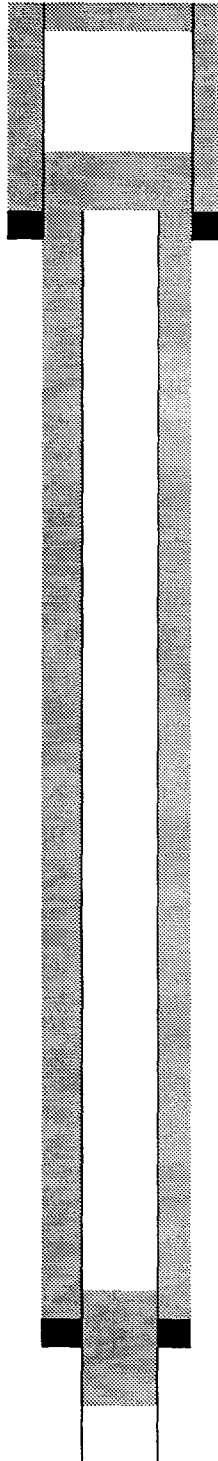
Spotted 5 sxs plug from 370-329'

Pulled 360' of 5.5" csg.

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

TD: 3200'

Spotted 6 sxs plug 3140-3090'



Grimes #1
Shell Oil Co.
Unit N
Sec 28, T-18S, R-38E

WELL PLUGGED:
3/27/51

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

Spotted 10 sxs plug 60' to surface.

Hole full of heavy mud.

Shot 4.5 csg off at 1150'

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

Spotted 10 sxs plug 3120-3000'

TD: 3187

