



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

July 11, 2000

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

JUL 20

RE: Expansion of Pressure Maintenance Project
North Hobbs (Grayburg/San Andres) Unit
Hobbs; Grayburg – San Andres Pool
Well No. 131
Letter L, Section 28, T-18-S, R-38-E
Lea County, NM

Gentlemen:

Occidental Permian Limited Partnership respectfully requests administrative approval for expansion of the subject pressure maintenance project by converting North Hobbs (G/SA) Unit Well No. 131 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. 131). 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



Occidental Permian Ltd.

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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: 7/11/00
- * 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

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. 131
Letter L, Section 28, 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	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



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 33111 & 28131
SAMPLED BY
DATE TAKEN 5/9/00
REMARKS T18S-R38E-Sec 29, Qtr Sec. 4,2,1

Barium as Ba	0	
Carbonate alkalinity PPM	40	
Bicarbonate alkalinity PPM	216	
pH at Lab	7.63	
Specific Gravity @ 60°F	1	
Magnesium as Mg	174	
Total Hardness as CaCO ₃	300	
Chlorides as Cl	155	
Sulfate as SO ₄	115	
Iron as Fe	0.1	
Potassium	0.09	
Hydrogen Sulfide	0	
Rw	9.4	@ 25° C
Total Dissolved Solids	850	
Calcium as Ca	126	
Nitrate	7.5	

Results reported as Parts per Million unless stated

Langelier Saturation Index 0.05

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



Laboratory Services, Inc.

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

Water Analysis

COMPANY Altura Energy Ltd,

SAMPLE Fresh Water Well For Well 28131

SAMPLED BY _____

DATE TAKEN 6/1/00

REMARKS T18S-R38E-Sec 28, Qtr Sec. 1,1,1

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	204	
pH at Lab	7.1	
Specific Gravity @ 60°F	1	
Magnesium as Mg	158	
Total Hardness as CaCO3	272	
Chlorides as Cl	127	
Sulfate as SO4	110	
Iron as Fe	0	
Potassium	0.07	
Hydrogen Sulfide	0	
Rw	9.5	@ 25° C
Total Dissolved Solids	730	
Calcium as Ca	114	
Nitrate	7.9	

Results reported as Parts per Million unless stated

Langelier Saturation Index + 0.55

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

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

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

DISTRICT III
1000 Rio Brazos Rd., Artec, 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 30-025-12497	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 131
OGRID No. 157984	Operator Name Occidental Permian Limited Partnership	Elevation 3647

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	28	18 S	38 E		2310	SOUTH	330	WEST	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

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Mark Stephens</u> Signature</p> <p>Mark Stephens Printed Name</p> <p>Business Analyst (SG) Title</p> <p>July 11, 2000 Date</p>	
	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>JANUARY 6, 2000 Date Surveyed DC</p> <p>Signature & Seal of Professional Surveyor <u>Gary Edson</u> 1/28/2000 00-13-0019</p> <p>Certificate No. RONALD L. EIDSON 3239 GARY EIDSON 12841 MACON McDONALD 12185</p>	

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

1 ATLANTIC RICHFIELD GRIMES
 ES-3653
 TD-4242
 30 025 07371

3 HUMBLE O&R BOWERS B.
 ES-3646
 TD-4225
 30 025 07373

3 SWEET C H OIL BOWERS-FED.
 DF-3647
 TD-4230
 3/1/1954
 30 025 07385

1 GULF OIL GRIMES C
 TD-4219
 30 025 07390

2 RUNNELS HAROLD L GULF-GRIMES
 TD-420
 30 025 22670

2 GULF OIL GRIMES C
 TD-4225
 30 025 07391

30 025 22690
 1 RUNNELS HAROLD L GULF-GRIMES
 TD-320
 7/1/1968
 30 025 22602

341 SHELL OIL
 GR-3649
 TD-4238
 2/1/1983
 30 025 07396

29

3 SONNYS OIL FLD SERV HOBBS-STATE
 DF-3652
 TD-6083
 9/7/1971
 30 025 23621

311 SHELL OIL
 GR-3648
 TD-4219
 1/8/1983
 30 025 07432

2 HUMBLE O&R WD GRIMES
 ES-3651
 TD-4045
 30 025 07455

1 HUMBLE O&R GRIMES
 ES-3644
 TD-4223
 30 025 07454

5 TIDAL OIL CO GRIMES
 ES-3650
 TD-4200
 30 025 07460

2 PONTOTOC OIL HOBBS STATE
 DF-3654
 TD-7075
 30 025 23620

5 AM. HESS CORP STATE B
 ES-3655
 TD-3225
 30 025 07434

2 AM. HESS CORP STATE B
 ES-3652
 TD-4207
 30 025 07431

2 TIDAL OIL CO WD GRIMES
 ES-3652
 TD-4176
 30 025 07457

4 GETTY OIL GRIMES WD
 DF-3657
 TD-4194
 30 025 07459

3 TIDEWTR OIL GRIMES
 ES-3653
 TD-4190
 30 025 07458

6 GETTY OIL GRIMES WD
 GR-3647
 TD-7050
 2/1/1970
 30 025 23400

1 CONT. OIL STATE A
 ES-3655
 TD-3215
 30 025 07439

1 CONT. OIL STATE A
 TD-4178
 1/1/1901
 30 025 07436

1 TIDEWTR OIL WD GRIMES
 ES-3655
 TD-4160
 30 025 07456

1 STAND OIL OF TX STATE
 ES-3647
 TD-4191
 30 025 07442

442 SHELL W. E&P
 KB-3655
 TD-4370
 30 025 28885

2 STAND OIL OF TX STATE
 ES-3655
 TD-4171
 30 025 07443

544 ALTURA ENERGY NORTH HOBBS
 GR-3646
 TD-
 30 025 34644

441 SHELL OIL
 ES-3652
 TD-4175
 30 025 07444

4 STAND OIL OF TX STATE
 ES-3649
 TD-4170
 30 025 07445

5 CHEVRON USA STATE "A"
 GR-3644
 TD-7025
 30 025 23173

6 STAND OIL OF TX STATE I
 DF-3657
 TD-7015
 30 025 23252

III SHELL OIL
 ES-3646
 TD-4210
 30 025 07422

122 SHELL W. E&P
 DF-3659
 TD-4370
 30 025 28964

5 SINCLAIR O&G WD GRIMES
 ES-3653
 TD-3231
 30 025 07426

2X ATLANTIC RICHFIELD GRIMES WD
 DF-3657
 TD-4240
 7/1/1971
 30 025 07429

6 REPOLLO OIL CO WD GRIMES
 ES-3654
 TD-3325
 30 025 07428

2 REPOLLO OIL CO GRIMES
 ES-3654
 TD-4223
 30 025 07427

1 ATLANTIC RICHFIELD GRIMES WD
 ES-3653
 TD-4191
 30 025 07420

2 REPOLLO OIL CO GRIMES
 ES-3654
 TD-4223
 30 025 07427

31 SHELL OIL
 GR-3647
 TD-4200
 30 025 07416

321 SHELL OIL
 GR-3647
 TD-4200
 30 025 07416

6 SAMEDAN OIL MOON A
 ES-3648
 TD-4217
 7/7/1935
 30 025 07417

2 SHELL OIL
 GR-3649
 TD-4220
 30 025 07425

21 SHELL OIL
 GR-3649
 TD-4220
 30 025 07425

243 SHELL W. E&P NORTH HOBBS
 GR-3646
 TD-6350
 30 025 23304

241 SHELL OIL
 GR-3648
 TD-4230
 30 025 12498

242 SHELL W. E&P
 KB-3657
 TD-4475
 9/2/1985
 30 025 29276

142 SHELL W. E&P NORTH HOBBS
 GR-3648
 TD-7102
 30 025 23246

141 SHELL OIL
 GR-3652
 TD-4175
 2/5/1983
 30 025 12496

132 SHELL OIL
 GR-3658
 TD-7150
 30 025 23277

5 SHELL OIL WD GRIMES
 ES-3658
 TD-3200
 30 025 07424

131 SHELL OIL
 GR-3653
 TD-4190
 30 025 12497

WI-232 SHELL W. E&P
 GR-3650
 TD-4370
 30 025 28882

8 SHELL OIL GRIMES
 ES-3658
 TD-3230
 9/2/1942
 30 025 07423

6 CONT. OIL GRIMES
 ES-3656
 TD-3255
 30 025 07415

3 CONT. OIL GRIMES
 GR-3638
 TD-4225
 30 025 07412

5 CONT. OIL WD GRIMES
 ES-3652
 TD-3218
 30 025 07414

341 SHELL OIL
 GR-3642
 TD-4217
 30 025 12489

ONE-HALF MILE RADIUS FROM WELL 28-131

32

313 SHELL W. E&P
 KB-3652
 TD-4350
 5/1/1988
 30 025 30263

312 SHELL W. E&P
 GR-3651
 TD-4370
 30 025 29017

4 AM. HESS CORP STATE "A"
 GR-3640
 TD-6000
 2/7/1947
 30 025 23076

3 AM. HESS CORP STATE A
 ES-3650
 TD-3164
 30 025 07517

1 AM. HESS CORP STATE A
 ES-3639
 TD-4160
 30 025 07515

5 AM. HESS CORP STATE A
 GR-3648
 TD-8044
 7/1/1969
 30 025 23116

WI-323 SHELL OIL
 GR-3639
 TD-4400
 30 025 26973

422 SHELL W. E&P
 DF-3651
 TD-4370
 30 025 29074

1 SHELL OIL STATE B
 ES-3656
 TD-4175
 30 025 12505

142 SHELL W. E&P N HOBBS
 GR-3636
 TD-4370
 30 025 28411

141 SHELL OIL
 GR-3652
 TD-4175
 2/5/1983
 30 025 12496

142 SHELL W. E&P N HOBBS
 GR-3636
 TD-4370
 30 025 28411

521 ALTURA ENERGY NORTH HOBBS
 GR-3646
 TD-
 30 025 34643

WI-222 SHELL OIL N HOBBS
 GR-3646
 TD-4400
 30 025 26975

211 SHELL OIL
 GR-3641
 TD-4220
 30 025 07555

213 SHELL W. E&P
 DF-3646
 TD-4370
 30 025 29065

313 SHELL W. E&P
 KB-3652
 TD-4350
 5/1/1988
 30 025 30263

4 AM. HESS CORP STATE "A"
 GR-3640
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 ES-3639
 TD-4160
 30 025 07515

5 AM. HESS CORP STATE A
 GR-3648
 TD-8044
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 30 025 23116

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 30 025 26973

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 30 025 29074

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 ES-3656
 TD-4175
 30 025 12505

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 GR-3636
 TD-4370
 30 025 28411

141 SHELL OIL
 GR-3652
 TD-4175
 2/5/1983
 30 025 12496

521 ALTURA ENERGY NORTH HOBBS
 GR-3646
 TD-
 30 025 34643

WI-222 SHELL OIL N HOBBS
 GR-3646
 TD-4400
 30 025 26975

211 SHELL OIL
 GR-3641
 TD-4220
 30 025 07555

213 SHELL W. E&P
 DF-3646
 TD-4370
 30 025 29065

313 SHELL W. E&P
 KB-3652
 TD-4350
 5/1/1988
 30 025 30263

4 AM. HESS CORP STATE "A"
 GR-3640
 TD-6000
 2/7/1947
 30 025 23076

3 AM. HESS CORP STATE A
 ES-3650
 TD-3164
 30 025 07517

1 AM. HESS CORP STATE A
 ES-3639
 TD-4160
 30 025 07515

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 TD-8044
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 TD-4175
 2/5/1983
 30 025 12496

521 ALTURA ENERGY NORTH HOBBS
 GR-3646
 TD-
 30 025 34643

WI-222 SHELL OIL N HOBBS
 GR-3646
 TD-4400
 30 025 26975

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 TD-4220
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 DF-3646
 TD-4370
 30 025 29065

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 KB-3652
 TD-4350
 5/1/1988
 30 025 30263

4 AM. HESS CORP STATE "A"
 GR-3640
 TD-6000
 2/7/1947
 30 025 23076

3 AM. HESS CORP STATE A
 ES-3650
 TD-3164
 30 025 07517

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 ES-3639
 TD-4160
 30 025 07515

5 AM. HESS CORP STATE A
 GR-3648
 TD-8044
 7/1/1969
 30 025 23116

WI-323 SHELL OIL
 GR-3639
 TD-4400
 30 025 26973

422 SHELL W. E&P
 DF-3651
 TD-4370
 30 025 29074

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

Altura Altura Energy Ltd.
 ENERGY, LTD.

Area of Review Plat
NORTH HOBBS (GRAYBURG SAN ANDRES) UNIT
 WELL NO. 28-131
 T-18-S, R-38-E
 Lea County, New Mexico

Scale: 1" = 600' 12-29-99 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

Repollo/Sinclair
Unit F
Sec 28, T-18S, R-38E

WELL PLUGGED:
4/18/59

Size: 15.5"
Depth: 238'
Hole size: 18"
Cmt: 200 sxs
TOC: Circ.- Calc.
50% efficiency

Spotted 25 sxs plug at surface.

Size: 10-3/4"
Depth: 2710'
Hole size: 12.25"
Cmt: 700 sxs
TOC: Circ.- Calc.
50% efficiency

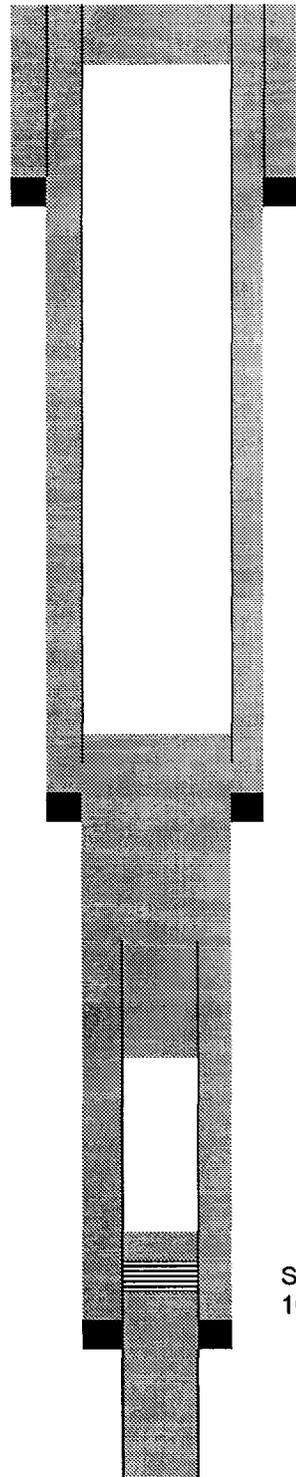
Spotted 300 sxs plug from 3100 to 2350'

Shot off 6-5/8 csg at 2958'

Size: 6-5/8"
Depth: 3974'
Hole size:
Cmt: 250 sxs
TOC:

Set Cmt Ret. At 3825' and squeezed OH with
100 sxs. Dumped 5 sxs on top of retainer.

TD: 4268'



W. D. GAMES
Repollo/Sinclair
Unit F, NW/4
Sec 28, T-18S, R-38E

WELL PLUGGED:
11/27/47

Size: 9.625"
Depth: 441'
Hole size: 13"
Cmt: 300 sxs
TOC: Circ.- Calc.
50% efficiency

Spotted 15 sxs plug at surface

Spotted 35 sxs at 500'

Hole full of heavy mud.

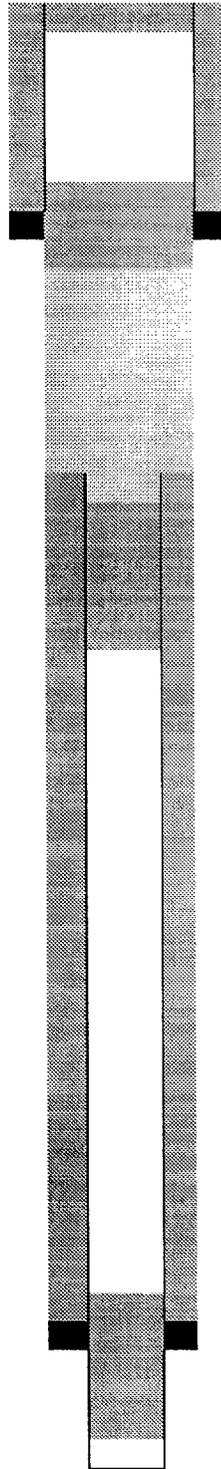
Cut off 7" at 1285 and pulled

Spotted 20 sxs plug at 1650'

Size: 7"
Depth: 3185'
Hole size: 9"
Cmt: 800 sxs
TOC:

TD: 3325'

Spotted 30 sxs plug from 3310'



W.D. GAMES #3
Sinclair Oil and Gas Co.
Unit E, NW/4
Sec 28, T-18S, R-38E

WELL PLUGGED:
8/24/50

Size: 9.625"
Depth: 441'
Hole size: 13"
Cmt: 300 sxs
TOC: Circ.

Spotted 10 sxs at surface

Filled hole with heavy mud.

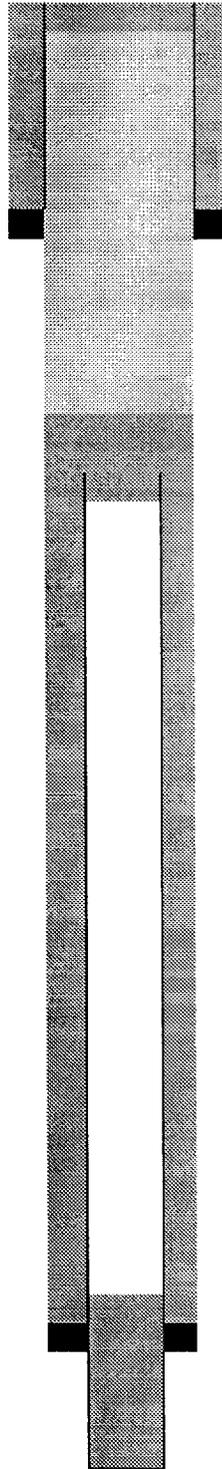
Spotted 20 sxs at 1342'

Shot 7" csg off at 1342'

Size: 7"
Depth: 3185'
Hole size:
Cmt:
TOC:

Spotted 25 sxs at 3222'

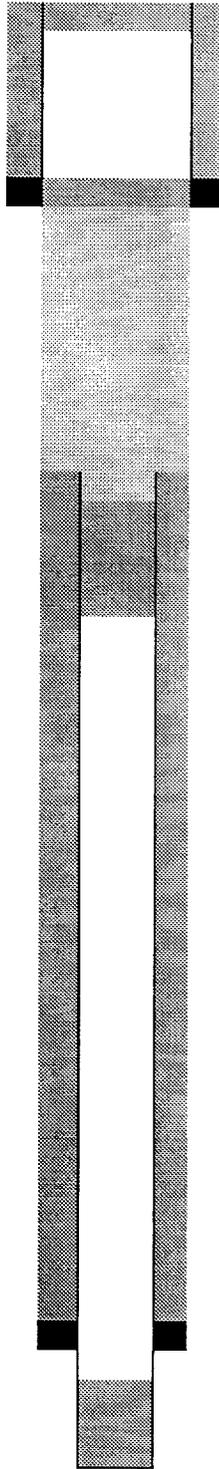
TD: 3222'



Grimes #10
Shell Oil Co.
Unit L, NW/4 of SW/4
Sec 28, T-18S, R-38E

WELL PLUGGED:
10/3/53

Size: 8.625"
Depth: 402'
Hole size: 11"
Cmt: 200 sxs
TOC: Circ.- Calc.
50% efficiency



Spotted 3 sxs plug at surface.

Spotted 6 sxs plug at 430'

Hole full of heavy mud.

Shot and pulled 1060' of 4.5" csg.

Spotted plug from 1320 to 1260

Size: 4.5"
Depth: 2108'
Hole size: 7.875"
Cmt: 850 sxs
TOC:

TD: 3230'

Spotted 6 sxs plug from 3180-3120'

Shell Oil Co.
Unit L, NW/4 of SW/4
Sec 28, T-18S, R-38E

WELL PLUGGED:
12/15/53

Size: 8.625"
Depth: 409'
Hole size: 11"
Cmt: 195 sxs
TOC: Circ.- Calc.
50% efficiency

Spotted 3 sxs plug at surface.

Hole filled with heavy mud.

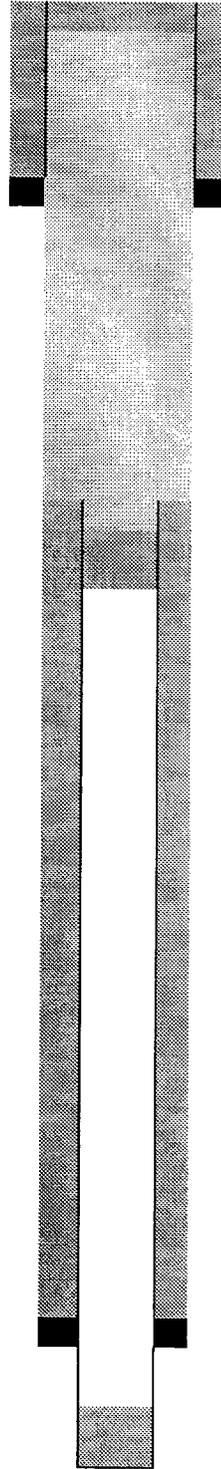
Shot and pulled 4.5" from 1200'

Spotted 10 sxs plug at 1230'

Size: 4.5"
Depth: 1958'
Hole size: 7.875"
Cmt: 600 sxs
TOC:

TD: 3200'

Spotted 10 sxs plug at 3150'



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

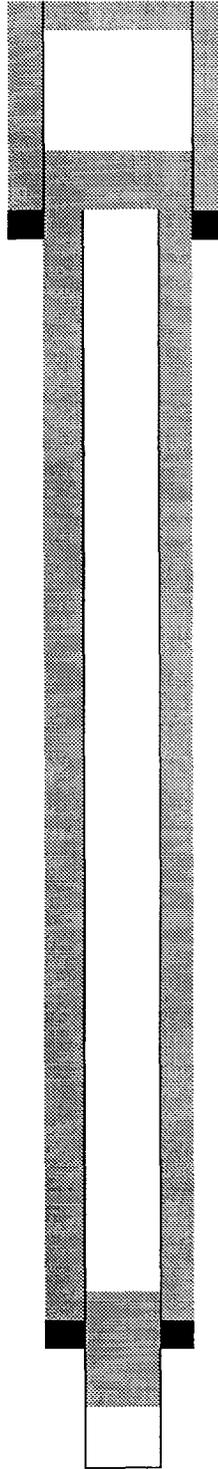
Spotted 5 sxs plug from 370-329'

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'



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.

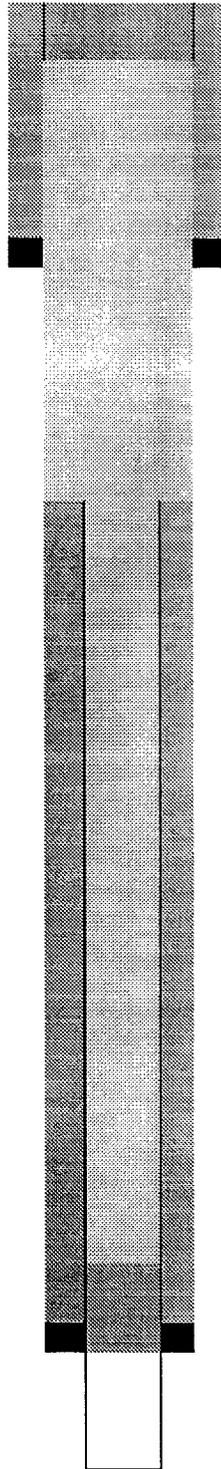
Hole full of heavy mud.

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'

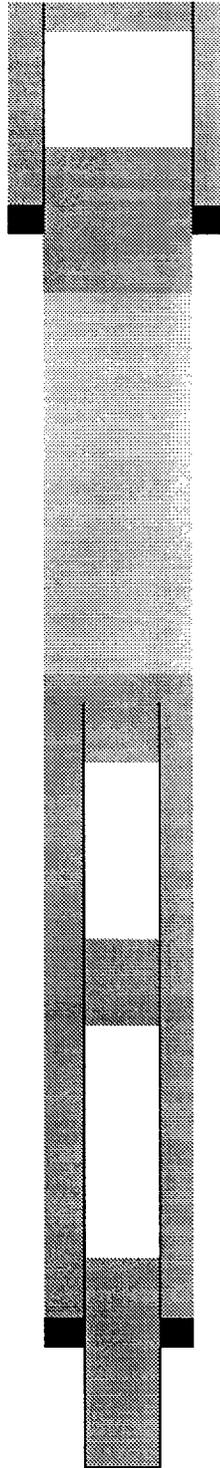
TD: 3187



Humble Oil & Refining Co.
Unit A, NE/4 of NE/4
Sec 29, T-18S, R-38E

WELL PLUGGED:
3/23/48

Size: 8.625"
Depth: 242'
Hole size: 11"
Cmt: 150 sxs
TOC: Circ.- Calc.
50% efficiency



Spotted 25 sxs plug from 70 to surface

Spotted 50 sxs from 300 to 111'

Hole filled with heavy mud.

Spotted 50 sxs plug from 1300 to 1120'

Cut and pulled 1263' of 5.5" csg.

Spotted 36 sxs plug from 3496 to 3160'

Size: 5.5"
Depth: 3205'
Hole size: 7.375"
Cmt.: 450 sxs
TOC:

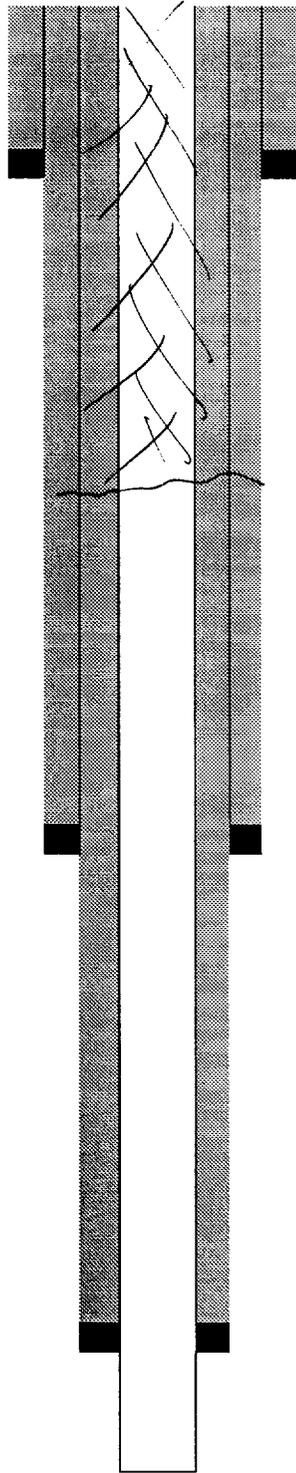
Spotted 32 sxs plug from 4045 to 3780'

TD: 4045'

W.D. STARBUCK
Tidewater Oil Co.
Unit H, 990 FEL & 2310 FNL
Sec 29, T-18S, R-38E

WELL PLUGGED:
2/18/82

Size: 15.5"
Depth: 218'
Hole size: 17.5"
Cmt: 200 sxs
TOC: Circ. - Calc.
50% efficiency



CMT OF 9 5/8" @ 1200' TO PBD 1361'
PUMPED 1535 SXS CMT, CIRC.

Size: 9.625"
Depth: 2754'
Hole size: 12.25"
Cmt: 600 sxs
TOC: 336' - Calc.
50% efficiency

Size: 7"
Depth: 3911'
Hole size: 8.75"
Cmt: 300 sxs
TOC: 1867' - Calc.
50% efficiency

TD:

Tidewater Oil Co.
Unit H, 1650 FNL & 990 FEL
Sec. 29, T-18S, R-38E

WELL PLUGGED:
3/17/81

Size: 12.5"
Depth: 214'
Hole Size: 17.5"
Cmt: 250 sxs
TOC: Circ. - Calc.
50% efficiency

Spotted 500 sxs at 400'

Spotted 100 sxs at 1249'

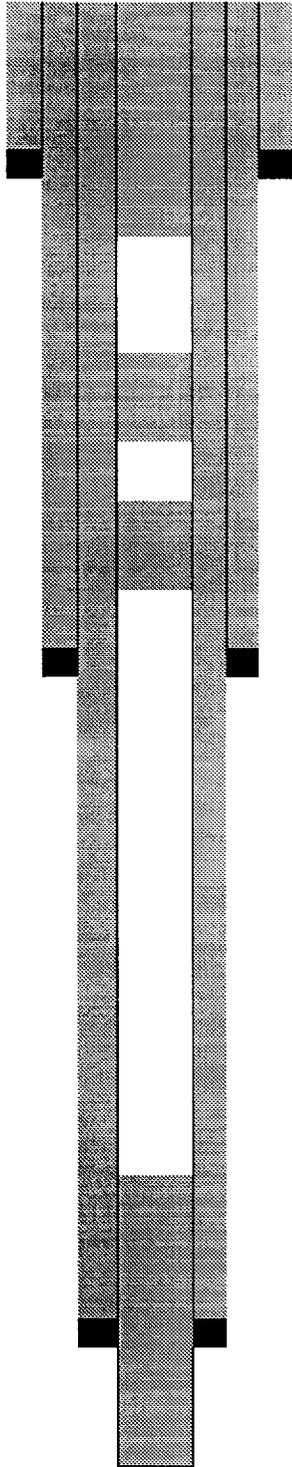
Size: 9.625"
Depth: 2715'
Hole Size: 12.25"
Cmt: 600 sxs
TOC: 277' - Calc.
50% efficiency

Spotted 100 sxs at 1800'

Size: 7"
Depth: 3911'
Hole size: 8.75"
Cmt: 400 sxs
TOC: 595' - Calc.
50% efficiency

Spotted 100 sxs at 4107'

TD: 4200'

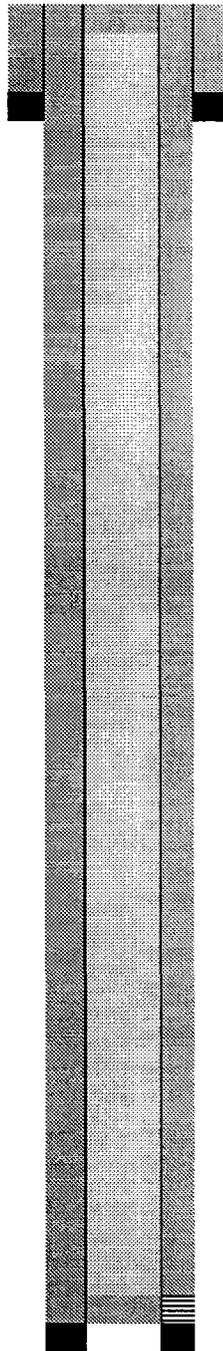


**WELL SCHEMATIC:
CONOCO STATE A #4**

WELL PLUGGED:
1/12/71

10 3/4"
200'
250 SX
TOC: SURF (C)

Spotted a 10 sx cmt plug at
Surface.



Filled well bore with 10# mud.

5 1/2"
3215'
600 SX
TOC: SURF (C)

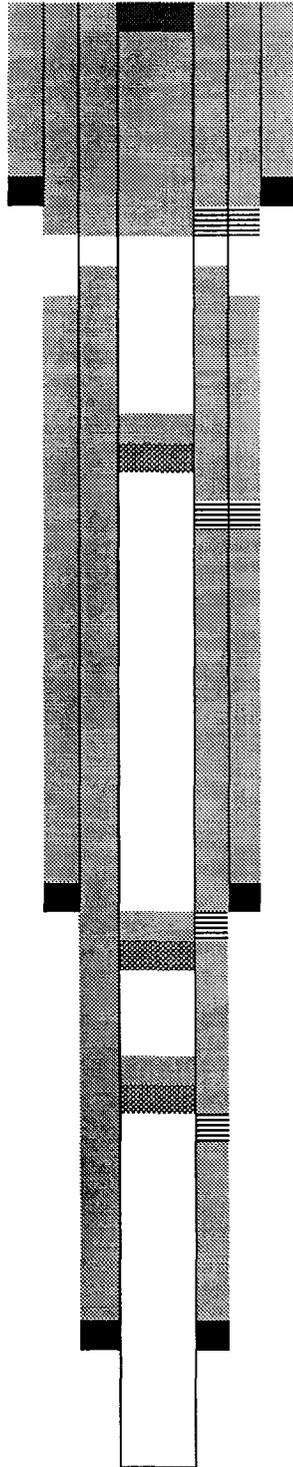
TD: 3215'

Set a 40 sx cmt plug over
Perfs from 3164' to 3197'.

**WELL SCHEMATIC:
STD OF TX- STATE #1**

WELL PLUGGED:
11/25/89

13 3/8"
217'
200 SX
TOC: SURF (C)



Weld 1/2" plate on top.

Perf 6 5/8" and 9" at 267'.
Pumped 170 sx cmt down
Prod csg, circ cmt out
Intermediate and surf csg
Annuli. Cut off 6 5/8" csg 3'
Below GL. Cap w/ 1/2" plate
And valve wellbore.

Set cicr at 1404'.

Perf 6 5/8" and 9" at 1500'.
Sqzd perms w/200 sx cmt.

9"
2735'
500 SX
TOC: 1220 (C)

Perfd 6 5/8" csg at 2785'.
Sqzd perms w/55 sx cmt.
Set cast iron cmt ret at 2681'.
Cap cmt ret w/35' cmt.

6 5/8"
3907'
357 SX
TOC: SURF

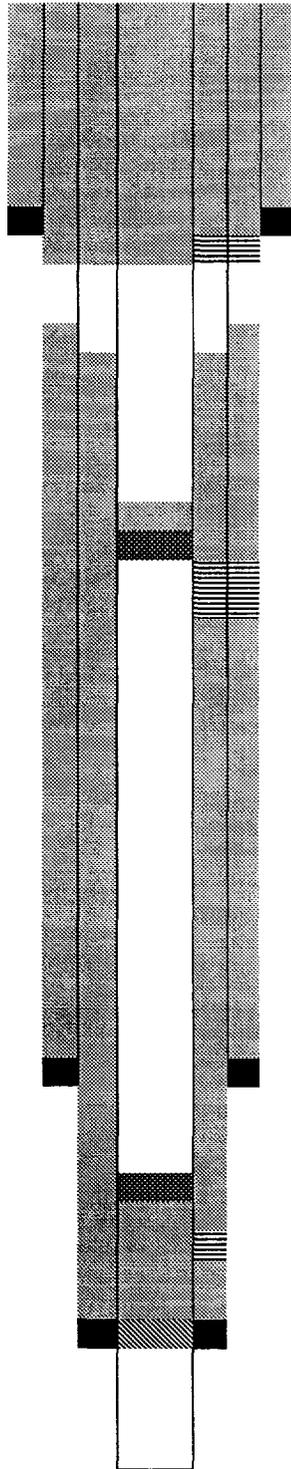
Capped CICR w/35' cmt to
3000'.
Set cast iron cmt ret at 3060'
Sqzd perms w/106 sx to 3000'
Perfs at 3138' to 3241'

TD: 4191'

**WELL SCHEMATIC:
CHEVRON STATE #2**

WELL PLUGGED:
12/5/89

13"
225'
150 sx
TOC: NA



Sqzd perms at 292' with 220
sx. Circ to surface

9 5/8"
2810'
725 sx
TOC:

Set cicr at 1404' and capped
With cmt.
Perf'd at 1500'.
Sqzd perms at 1500' with 300
sx

7"
3951'
300 sx
TOC: 1240 (C)

PBTD: 3072'

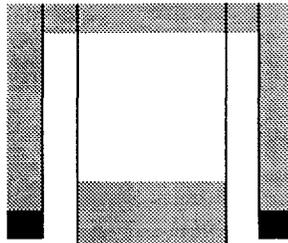
Set cicr at 2744'.

Perfs sqzd at 2852', sqzd
With 55 sx.
Dumped 35' cmt onto CIBP.
CIBP at 3072'

**WELL SCHEMATIC:
TIDEWATER WD GRIMES #1**

WELL PLUGGED:
7/25/68

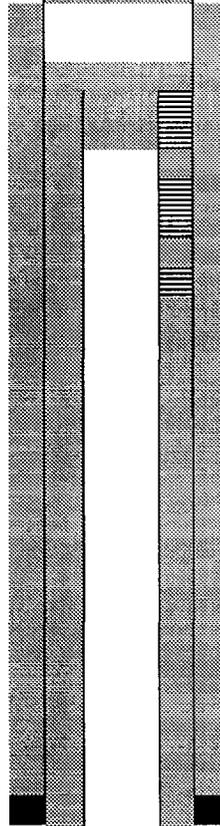
12 1/2"
236'
200 SX
TOC: SURF (C)



Laid 10 sx plug at surface.

Laid 25 sx cmt at bottom of
12 1/2" csg.

9 5/8"
2712'
600 SX
TOC: 273 (C)



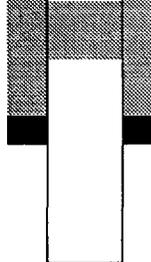
Laid 25 sx over 7" stub.
Shot at 787' and pulled.
Shot at 899'.

Shot at 1044'.
Shot at 1193'.

Shot at 1404'.

7"
3826'
300 SX
TOC: 800 FP

TD:4160'



Spotted 25 sx cmt plug from
3599' to 3467'.

LIST OF OFFSET OPERATORS & SURFACE OWNERS

North Hobbs (Grayburg/San Andres) Unit
Well No. 131
Letter L, Section 28, T-18-S, R-38-E
Lea County, New Mexico

Offset Operators

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

Marcum Drilling Company
P.O. Box 3699
Midland, TX 79707

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

Lewis B. Burleson, Inc.
P.O. Box 2479
Midland, TX 79702

Texland Petroleum-Hobbs, LLC
500 Throckmorton, Suite 3100
Ft. Worth, TX 76102-3818

Surface Owner

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

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Marcum Drilling Company
P.O. Box 3699
Midland, TX 79707

4a. Article Number
P 436 313 651

4b. Service Type

Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)
X

PS Form 3811, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

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I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

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

4a. Article Number
P 436 313 652

4b. Service Type

Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)
X

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I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Lewis B. Burleson, Inc.
P.O. Box 2479
Midland, TX 79702

4a. Article Number
P 436 313 653

4b. Service Type

Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)
X

PS Form 3811, December 1994 102595-97-B-0179 Domestic Return Receipt

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- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Texland Petroleum-Hobbs, LLC
500 Throckmorton, Suite 3100
Ft. Worth, TX 76102-3818

4a. Article Number

P 436 313 654

4b. Service Type

- Registered Certified
- Express Mail Insured
- Return Receipt for Merchandise COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

PS Form 3811, December 1994

102595-97-B-0179

Domestic Return Receipt

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I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

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

4a. Article Number

P 436 313 655

4b. Service Type

- Registered Certified
- Express Mail Insured
- Return Receipt for Merchandise COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

PS Form 3811, December 1994

102595-97-B-0179

Domestic Return Receipt

Thank you for using Return Receipt Service.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

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

of 1 weeks.

Beginning with the issue dated December 31 1999 and ending with the issue dated

December 31 1999

Kathi Bearden
Publisher

Sworn and subscribed to before me this 3rd day of January 2000

Jodi Henson
Notary Public.

My Commission expires
October 18, 2000
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

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