

PMX 12/21/99



December 3, 1999

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

RE: Expansion of Pressure Maintenance Project  
North Hobbs (Grayburg/San Andres) Unit  
Hobbs; Grayburg - San Andres Pool  
Well No. 332  
Leiter J. Section 30, T-18-S, R-38-E  
Lea County, NM

Gentlemen:

Altura Energy LTD respectfully requests administrative approval for expansion of the subject pressure maintenance project by converting North Hobbs (G/SA) Unit Well No. 332 from production to water injection. Administrative Order No. R-6199 granted November 30, 1979, authorized Shell Western E&P Inc. (Altura'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. 332). 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
- Schematics of plugged wells that are 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  
P.O. Box 1980  
Hobbs, NM 88241

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, NM 87504-1148

Bureau of Land Management  
Roswell District Office  
2909 West Second Street  
Roswell, NM 88201

Offset Operators (see attached list)

Surface Owners (see attached list)

**APPLICATION FOR AUTHORIZATION TO INJECT**

- ☒ I. PURPOSE:            Secondary Recovery   X   Pressure Maintenance            Disposal            Storage  
Application qualifies for administrative approval?   X   Yes            No
- ☒ II. OPERATOR:            Altura Energy LTD  
ADDRESS:            P.O. Box 4294, Houston, TX 77210-4294  
CONTACT PARTY:            Mark Stephens, Rm. 338-B, WL2            PHONE:            (281) 552-1158
- ☒ III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- ☒ IV. Is this an expansion of an existing project?   X   Yes            No  
If yes, give the Division order number authorizing the project:            R-6199 (11/30/79)
- ☒ V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- ☒ VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- ☒ VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- ☒ VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- ☐ IX. Describe the proposed stimulation program, if any.
- ☒ X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- ☒ XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- ☒ XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- ☐ XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- ☐ XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME:            Mark Stephens            TITLE:            Business Analyst (SG)  
SIGNATURE:            *Mark Stephen*            DATE:            12/3/99
- \* 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.

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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. 332  
Letter J, Section 30, T-18-S, R-38-E  
Lea County, New Mexico

III. Well Data

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

VII. Proposed Operation

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

IX. Stimulation Program

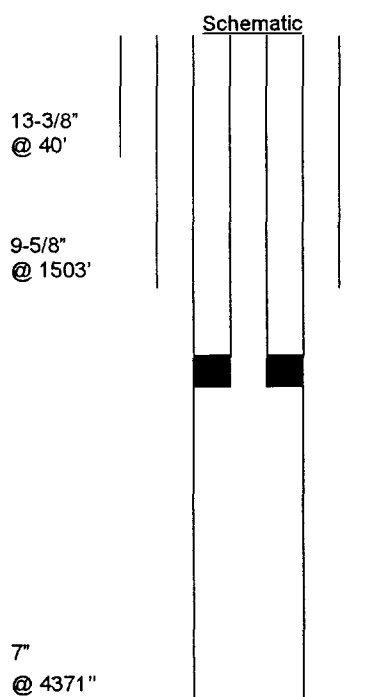
Acid treatment of unitized perforations will be performed during conversion work

- XI. Fresh Water Sample Analysis  
(Laboratory Services, Inc. analysis attached – 4 ea.)

- XII. Altura Energy LTD 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.

# INJECTION WELL DATA SHEET

Operator <b>Altura Energy LTD.</b>		Lease <b>North Hobbs G/SA Unit</b>		County <b>Lea</b>	
Well No. <b>30-332</b>	Footage Location <b>2470 FSL &amp; 1600 FEL</b>	Section <b>30</b>	Township <b>18-S</b>	Range <b>38-E</b>	Unit Letter <b>J</b>



<u>Surface Casing</u>		<u>Tubular Data</u>	
Size	<u>13-3/8</u>	Cemented with	<u>                    </u> sxs.
TOC	<u>                    </u>	Determined by	<u>                    </u>
Hole size	<u>                    </u>		
<u>Intermediate Casing</u>			
Size	<u>9-5/8</u>	Cemented with	<u>650</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size	<u>                    </u>		
<u>Long string Casing</u>			
Size	<u>7"</u>	Cemented with	<u>800</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size	<u>                    </u>		
Total depth	<u>4371'</u>		
<u>Injection interval</u>			
<u>4000</u>	feet to	<u>4350</u>	feet
<u>Completion type</u>		<u>Perforations</u>	

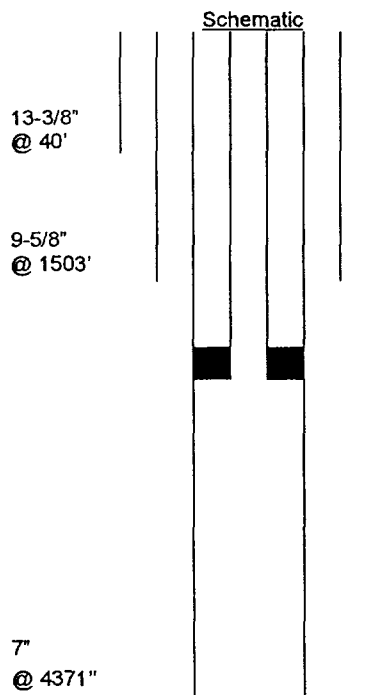
Tubing size 2-7/8" lined with Fiberglass Epoxy set in a  
Giberson Uni VI packer at ±3950 feet  
 (brand and model)

## Other Data

- Name of the injection formation San Andres
- Name of field or Pool Hobbs (Grayburg/San Andres) Pool
- Is this a new well drilled for injection? Yes ☐ No ☒  
 If no, for what purpose was the well originally drilled? San Andres 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)  
None
- Give the depth to and name of any overlying and/or underlying oil and gas zones (pools) in this area.  
Grayburg - 3700, Glorieta - 5300

# INJECTION WELL DATA SHEET

Operator Altura Energy LTD.		Lease North Hobbs G/SA Unit			County Lea
Well No. 30-332	Footage Location 2470 FSL & 1600 FEL	Section 30	Township 18-S	Range 38-E	Unit Letter J



Tubular Data

Surface Casing  
 Size 13-3/8 Cemented with \_\_\_\_\_ sxs.  
 TOC \_\_\_\_\_ Determined by \_\_\_\_\_  
 Hole size \_\_\_\_\_

Intermediate Casing  
 Size 9-5/8 Cemented with 650 sxs.  
 TOC Surf Determined by Circ.  
 Hole size \_\_\_\_\_

Long string Casing  
 Size 7" Cemented with 800 sxs.  
 TOC Surf Determined by Circ.  
 Hole size \_\_\_\_\_

Total depth 4371'

Injection interval  
4000 feet to 4350 feet

Completion type Perforations

Tubing size 2-7/8" lined with Fiberglass Epoxy set in a  
Giberson Uni VI packer at ±3950 feet  
 (brand and model)

## Other Data

- Name of the injection formation San Andres
- Name of field or Pool Hobbs (Grayburg/San Andres) Pool
- Is this a new well drilled for injection? Yes ☐ No ☒  
 If no, for what purpose was the well originally drilled? San Andres 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)  
None
- Give the depth to and name of any overlying and/or underlying oil and gas zones (pools) in this area.  
Grayburg - 3700, Glorieta - 5300

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

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

OIL CONSERVATION DIVISION

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-28954	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 332
OGRID No. 157984	Operator Name ALTURA ENERGY LTD.	Elevation 3651

Surface Location

UL or lot No. J	Section 30	Township 18 S	Range 38 E	Lot Idn	Feet from the 2457	North/South line SOUTH	Feet from the 1598	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

LOT 1 37.81 ACRES LOT 2 37.85 ACRES		SPC NME NAD 27 Y=626538 X=853506		
LOT 3 37.87 ACRES LOT 4 37.91 ACRES		WELL #332 1598' 2457'		

OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Mark Stephens  
Signature

Mark Stephens  
Printed Name

Business Analyst (SG)  
Title

December 3, 1999  
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.

JULY 20, 1999

Date Surveyed

Signature of Surveyor

Professional Surveyor

NEW MEXICO

3239

7-27-99

3239

12641

12185



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., Aztec, NM 87410

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-28954	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 332
OGRID No. 157984	Operator Name ALTURA ENERGY LTD.	Elevation 3651

Surface Location

UL or lot No. J	Section 30	Township 18 S	Range 38 E	Lot Idn	Feet from the 2457	North/South line SOUTH	Feet from the 1598	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

LOT 1 37.81 ACRES LOT 2	SPC NME NAD 27 Y=626538 X=853506	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  December 3, 1999 Date
37.85 ACRES LOT 3	WELL #332 1598'	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.  JULY 20, 1999 Date Surveyed DMCC
37.87 ACRES LOT 4	2457'	 7-27-99
37.91 ACRES		Certification No. 3239 EIDSON 12641 McDONALD 12185

**WELL SCHEMATIC:  
ALTURA NHU 30-342**

WELL PLUGGED:  
4/27/99

12 1/2"  
220'  
210 SX  
TOC: SURF

Spotted 10 sx cmt plug from  
60' to 3'.

Spotted 36 sx cmt plug from  
306' to 97'.

Circulated plugging mud.

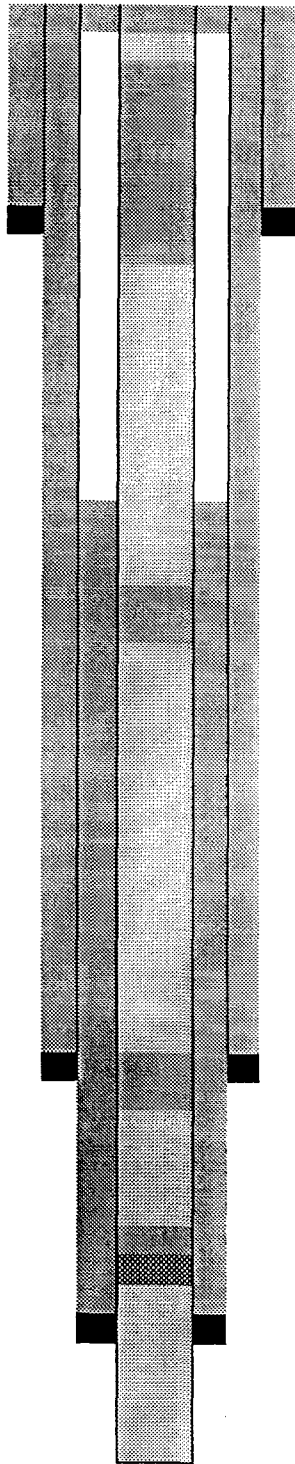
Spotted 25 sx cmt plug from  
1713' to 1564'.

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

Spotted 25 sx cmt plug from  
2825' to 2696'.

7"  
3974'  
300 SX  
TOC: 1144' CBL  
TD: 4268'

Dumped 25 sx cmt on top of  
CIBP at 3825'.



**WELL SCHEMATIC:  
EXXON BOWERS #2**

WELL PLUGGED:  
5/12/30

Hole cemented with 40 sxs  
From 66' to surface.

Hole mudded from 106'  
To 66'.

PBTD: 106'

Plugged back at 106' with ?

12.5"  
25 sxs  
TOC: SURF(C)

TD: 242'

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

WELL PLUGGED:  
5/10/71

12 ½"  
217'  
200 SX  
TOC: NA

Spotted 10 sx cmt plug from  
35' to top.

Circulated well bore with 9#  
Mud.

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

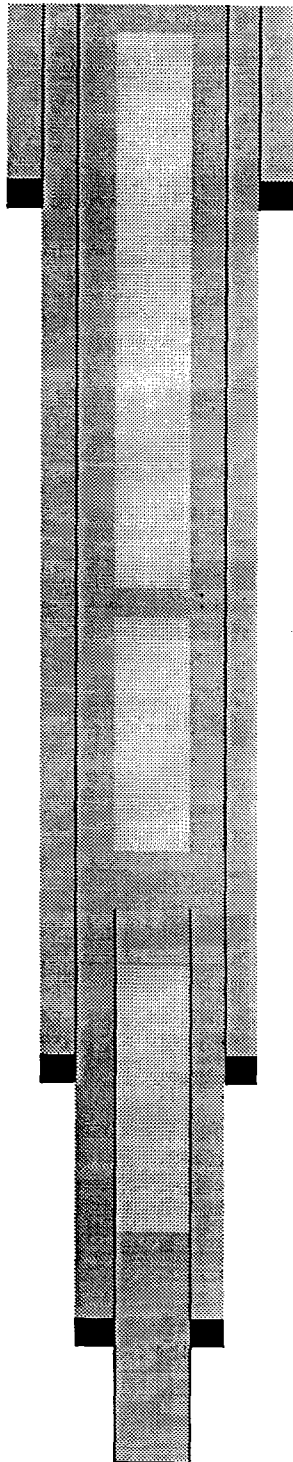
Spotted 20 sx cmt plug from  
1500' to 1400'.

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

7"  
3147'  
120 SX  
TOC: 2470 TS

TD: 3190'

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



**WELL SCHEMATIC:  
EXXON BOWERS A #12**

WELL PLUGGED  
11/21/80

8 5/8"  
222'  
100 sxs.  
TOC:N.A.

8 5/8 and 5 5 1/2 csg cut off  
7' below GL.. 1/2 " plate  
welded on top.  
10' cmt plug at surface.

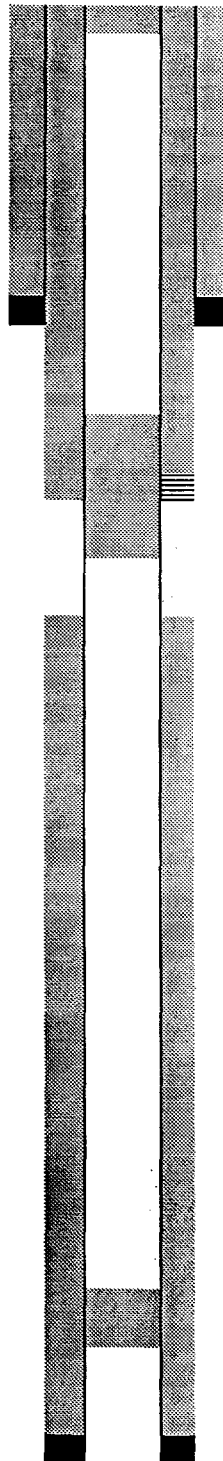
Cmt. Ret. set at 350'

Sqzd. Perfs at 390' with 100  
sxs. cmt from 500' to 350'.  
Circ. to surface.

5 5/8"  
3132'  
575 sxs.  
TOC: 880' TS

PBTD: 3088'

10 sxs. Cmt plug 3088-2988



**WELL SCHEMATIC: EXXON  
BOWERS A FED. #13**

WELL PLUGGED:  
5/10/71

8 5/8"  
283'  
125 sxs  
TOC: SURF (C)

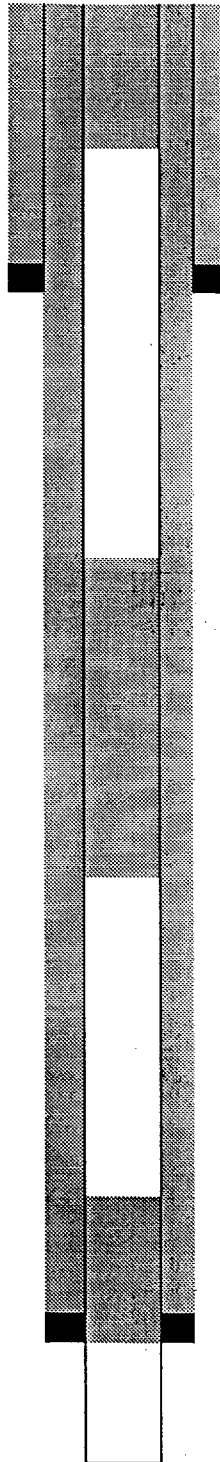
10 sxs cmt plug set from  
50' to surf

20 sxs cmt plug set from  
1500' to 1400'

5 1/2"  
3150'  
1350 sxs  
TOC: SURF (C)

50 sxs cmt plug set from  
3189' to 2800'

TD: 3189'



**WELL SCHEMATIC:  
EXXON BOWERS A FED #16**

WELL PLUGGED:  
11/27/70

Spotted a 10 sxs cmt plug at  
surface with marker.

8 5/8 "  
262'  
150 SXS  
TOC: CIRC

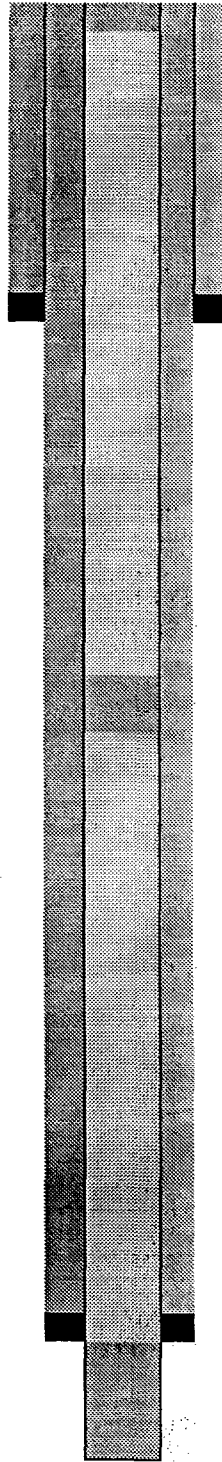
Hole loaded with mud laden  
fluids.

5 1/2"  
3151'  
1000 SXS  
TOC: CIRC

Spotted a 20 sxs cmt plug  
from 1400' to 1550'

TD: 3225'

Spotted a 30 sxs cmt plug from  
3050' to 3225'



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

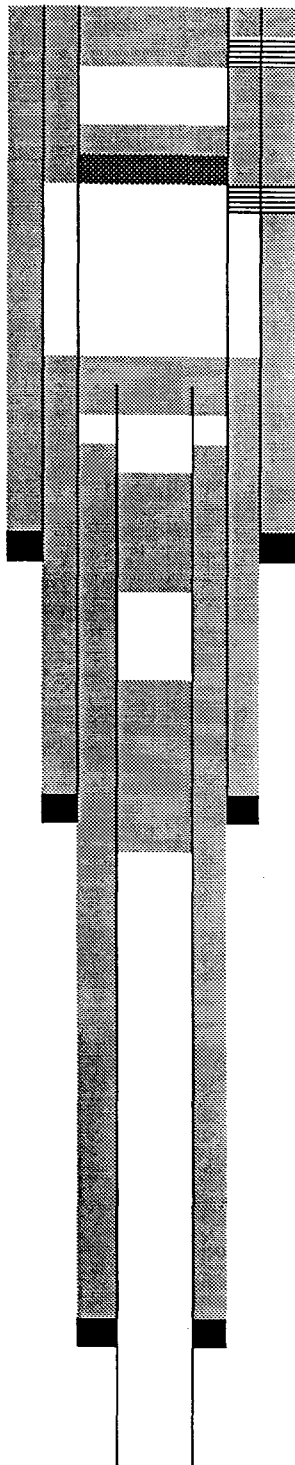
WELL PLUGGED:  
11/15/89

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

7"  
3962'  
528 SX  
TOC: NA

4 1/2"  
6000'  
275 SX  
TOC: 2200 TS

TD: 6000'



Perf'd 7" & 9 5/8" csg at 280'  
& sqzd w/100 sx.

Dropped 54' cmt on top of ret

Perf'd 7" and 9 5/8" csg at  
1350'. Set cmt ret at 1304'.  
Sqz'd w/100 sx thru perfs.

Spotted 25 sx cmt plug from  
1911' to 2058'.  
Cut 4 1/2" csg at 2000' and  
Pull out of hole.  
Spotted 20 sx cmt plug from  
2470' to 2800'.

Spotted 40 sx cmt plug from  
3430' to 4100'.



**WELL SCHEMATIC:  
EXXON BOWERS A FED #15**

WELL PLUGGED:  
11/27/70

8 5/8"  
249'  
150 SX  
TOC: CIRC

Spotted 10 sx cmt plug at  
Surface.

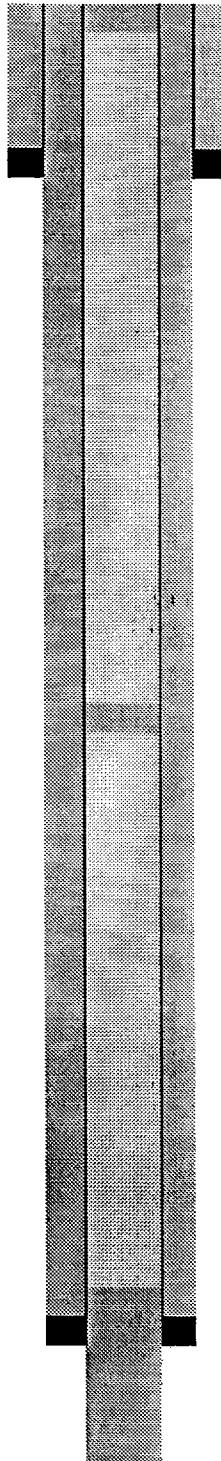
Hole was loaded with mud  
Laden fluid.

5 1/2"  
3158'  
1250 SX  
TOC: CIRC

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

TD: 3218'

Spotted 25 sx cmt plug at  
3218'.



**WELL SCHEMATIC:  
EXXON BOWERS A FED #17**

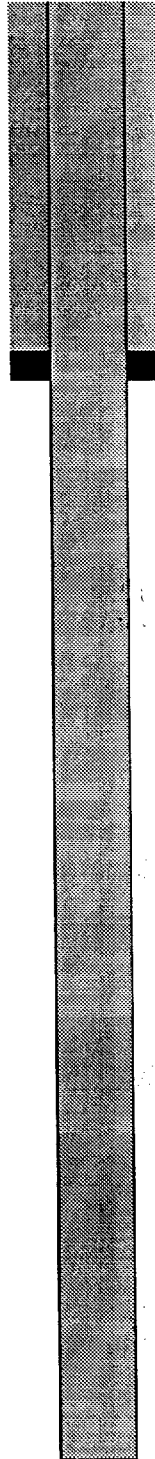
WELL PLUGGED:  
11/30/66

7"  
12'  
6 SX  
TOC: CIRC

12' of 7" csg left in hole.

Filled hole with approximately  
.75 yards of 5 sx Redi-Mix.

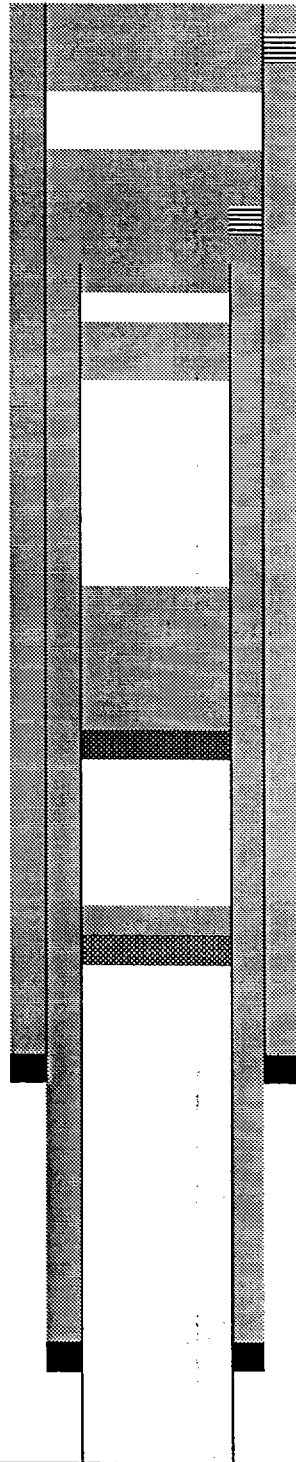
TD: 50'



**WELL SCHEMATIC:  
EXXON BOWERS A FED #30**

WELL PLUGGED:  
8/4/90

8 5/8"  
3836'  
500 SX  
TOC: 2300' TS



Perf'd 8 5/8" at 450'. Pumped  
211 sx down 8 5/8" thru perfs  
At 450' and circulate.

Perf'd 8 5/8" csg at 1485'.  
Cut off 4 1/2 csg at 1500'.  
Spotted 77 sx cmt plug from  
1500' to 1385'.

Spotted 15 sx cmt plug from  
2711' to 2528'.

Spotted 70 sx cmt plug from  
4632' to 3364'.

Cmt. ret. at 4632' – sqz with  
25 sx.

CIBP at 5300' w/ 35' cmt cap.

4 1/2"  
5988'  
550 SX  
TOC: 2800' TS

TD: 6000'

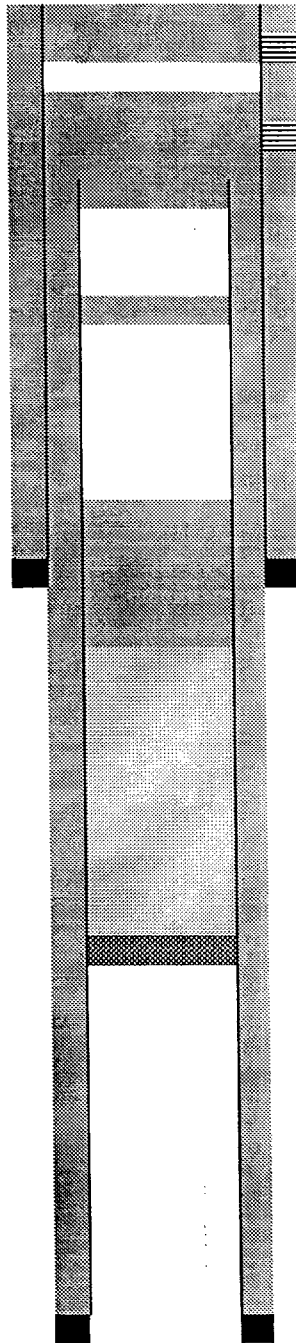
**WELL SCHEMATIC:  
EXXON BOWERS A FED #31**

WELL PLUGGED:  
8/30/90

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

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

TD: 7050'



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

Spotted 25 sx cmt plug at  
2716'.

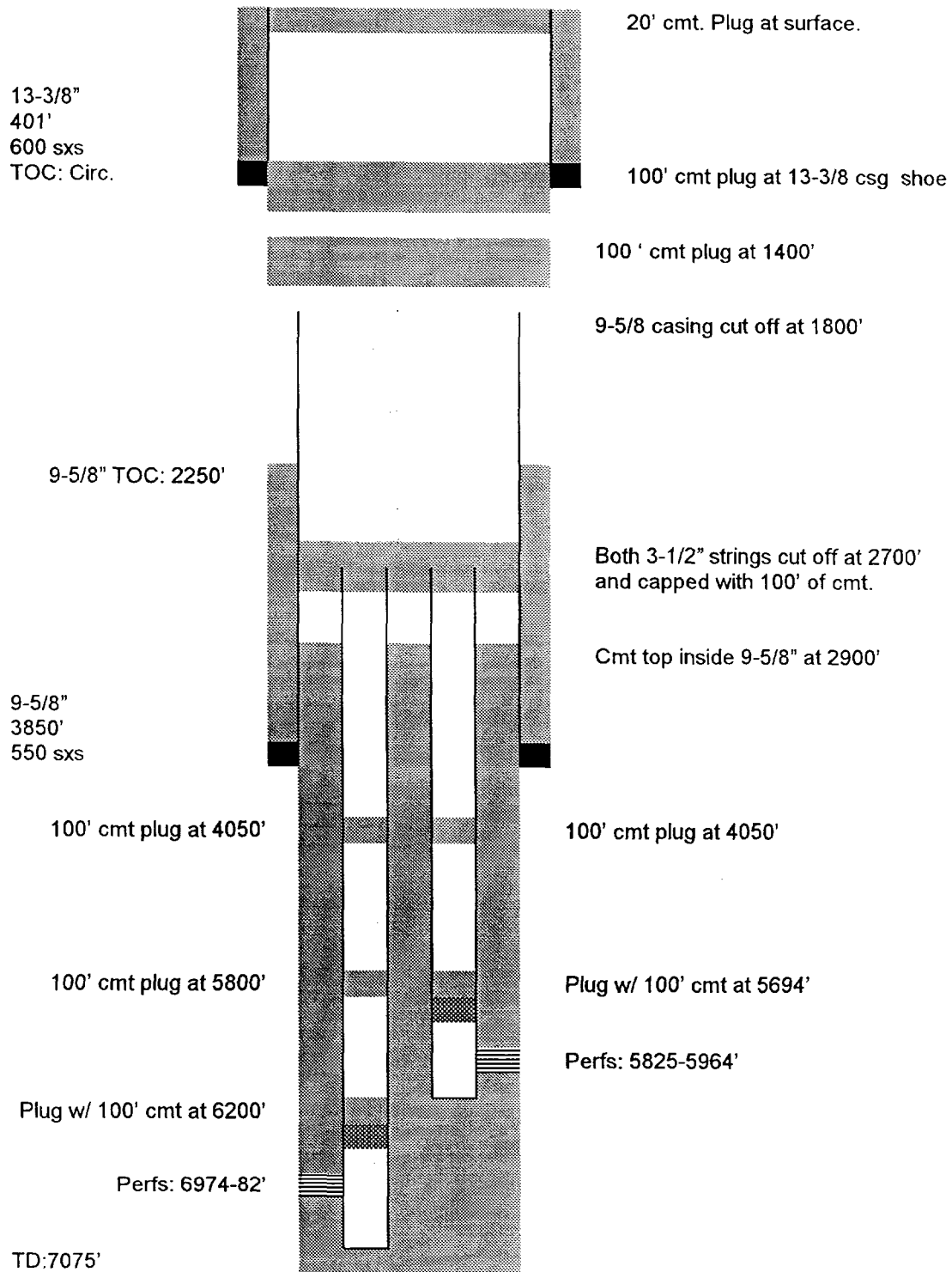
Spot 50 sx cmt from 4100' to  
3600'.

Displaced hole with salt gel  
Mud.

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

# WELL SCHEMATIC - Exxon Bowers A Federal #32

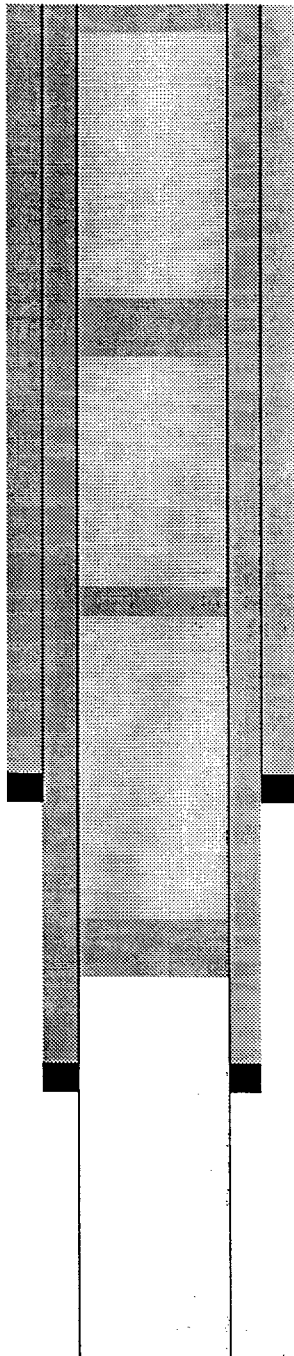
Well plugged 9/14/72



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

WELL PLUGGED:  
12/3/70

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



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

Hole was loaded with mud  
Laden fluids.

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

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

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

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

TD: 4259'

**WELL SCHEMATIC:  
EXXON BOWERS A FED #10**

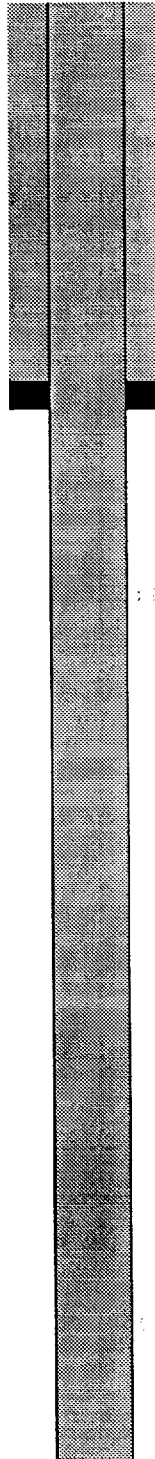
WELL PLUGGED:  
8/19/98

7"  
10'  
3 SX  
TOC: NA

Csg was pulled out of hole.  
Well was filled to the surface  
With approximately .75 cu.  
Yds. of 5 sx Redi-Mix.

10' to 38' – open hole.

TD: 38'



**WELL SCHEMATIC:  
EXXON BOWERS A FED #11**

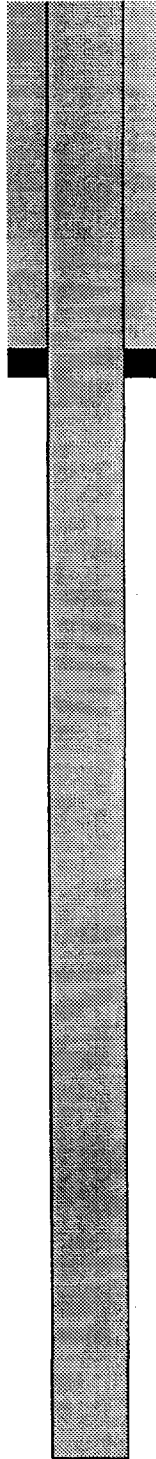
WELL PLUGGED:  
8/19/98

6 5/8"  
10'  
3 SX  
TOC: NA

Csg was pulled out of hole.  
Well was filled to the surface  
With approximately .75 yards  
Of 5 sx Redi-Mix.

10' to 38' – open hole.

TD: 38'





**WELL SCHEMATIC:  
EXXON BOWERS A #12**

WELL PLUGGED  
11/21/80

8 5/8"  
222'  
100 sxs.  
TOC:N.A.

8 5/8 and 5 5 1/2 csg cut off  
7' below GL... 1/2 " plate  
welded on top.  
10' cmt plug at surface.

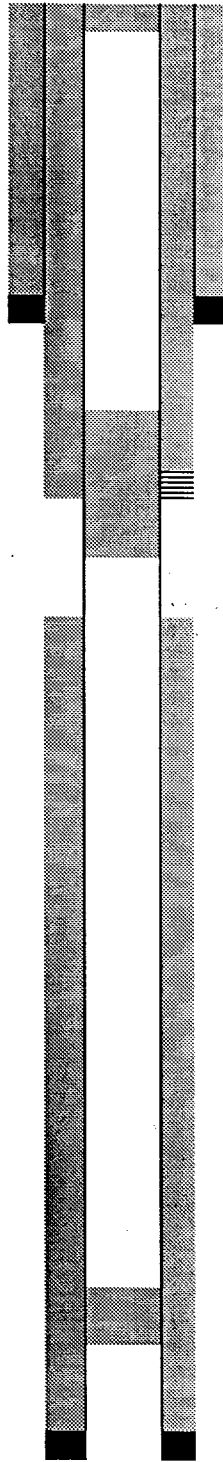
Cmt. Ret. set at 350'

Sqzd. Perfs at 390' with 100  
sxs. cmt from 500' to 350'.  
Circ. to surface.

5 5/8"  
3132'  
575 sxs.  
TOC: 880' TS

PBTD: 3088'

10 sxs. Cmt plug 3088-2988



**WELL SCHEMATIC:  
ARC IND BOWERS A FED #2**

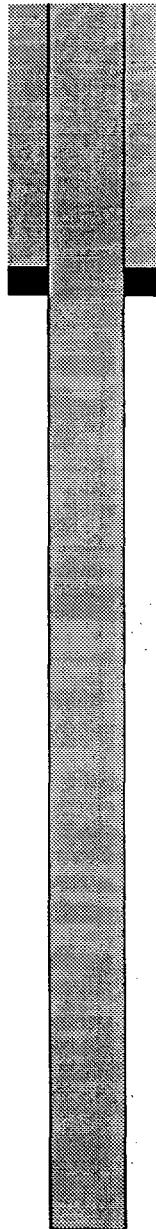
WELL PLUGGED:  
8/19/98

6 5/8"  
10'  
3 SX  
TOC: NA

Csg was pulled out of hole.  
Well was filled to the surface  
With approximately .75 yards  
Of 5 sx Redi-Mix.

10' to 38' – open hole.

TD: 38'

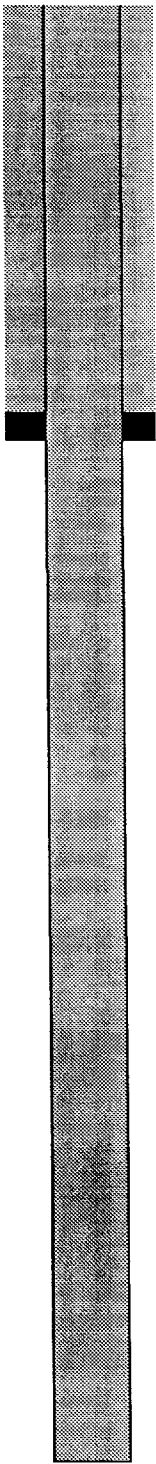


WELL SCHEMATIC:  
ARC IND BOWERS A FED #3

WELL PLUGGED:  
8/19/98

7"  
10'  
3 SX  
TOC: NA

Csg was pulled out of hole.  
Well bore was filled with  
Approximately .75 yards of  
5 sx Redi-Mix.



TD: 38'

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

WELL PLUGGED:  
12/21/71

15 ½"  
235'  
225 SX  
TOC: NA

Set 120 sx cmt plug at 250'  
And circulate.

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

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

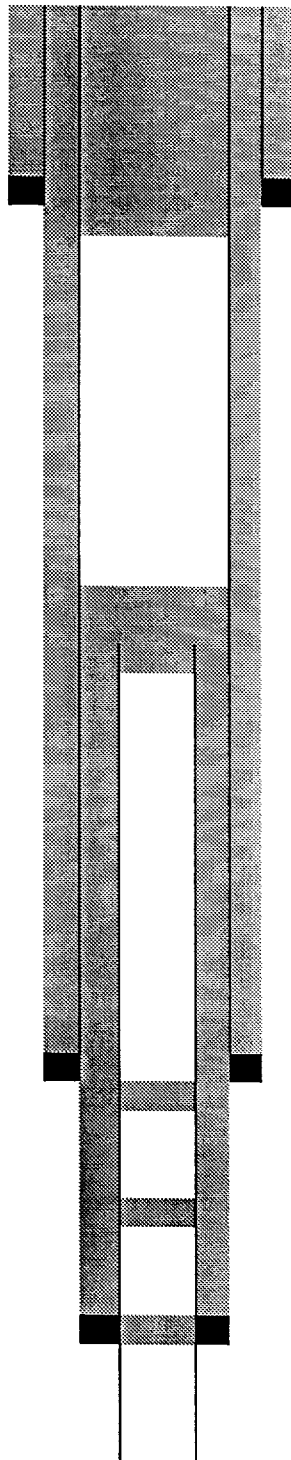
7"  
3987'  
300 SX  
TOC: 2027 (C)

Set plug at 2800'.

Spotted 25 sx cmt plug at  
3355'.

TD: 4239

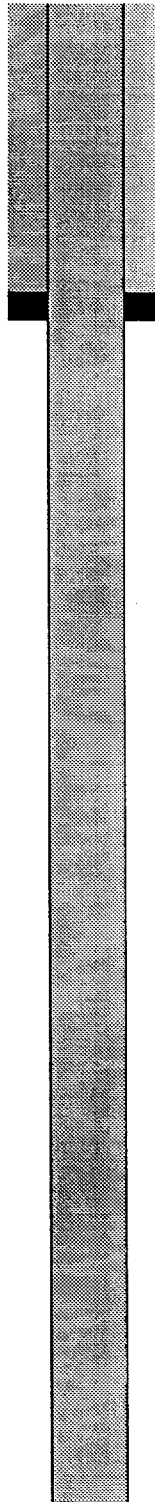
Spotted 28 sx cmt plug at  
3970'.



**WELL SCHEMATIC:  
ARC IND. BOWERS A FED #13**

WELL PLUGGED:  
8/19/98

5 ½"  
10'  
3 SX  
TOC: NA



Csg was pulled out of hole.  
Well was filled to the surface  
With approximately .75 yards  
Of 5 sx Redi-Mix.

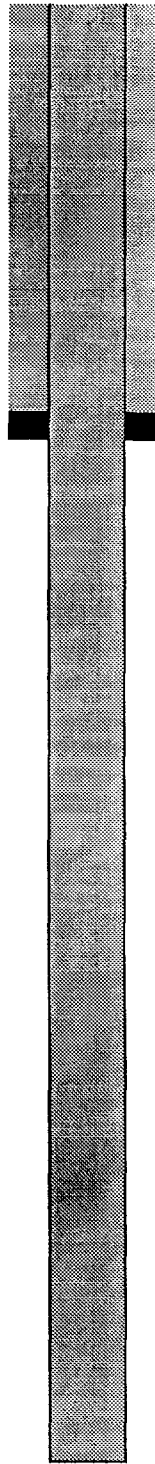
TD: 45'

**WELL SCHEMATIC:  
EXXON BOWERS A FED #4**

WELL PLUGGED:  
8/19/98

6 5/8"  
10'  
3 SX  
TOC: NA

Csg was pulled out of hole.  
Well was filled to the surface  
With approximately .75 yards  
Of 5 sx Redi-Mix.



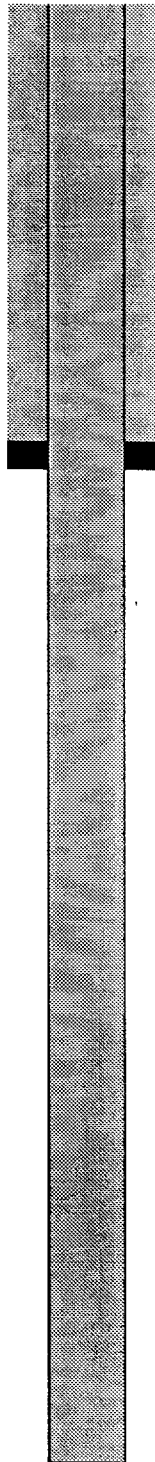
TD: 38'

**WELL SCHEMATIC:  
EXXON BOWERS A FED #5**

WELL PLUGGED:  
8/19/98

6 5/8"  
10'  
3 SX  
TOC: NA

Csg was pulled out of hole.  
Well was filled to the surface  
With approximately .75 yards  
Of 5 sx Redi-Mix.

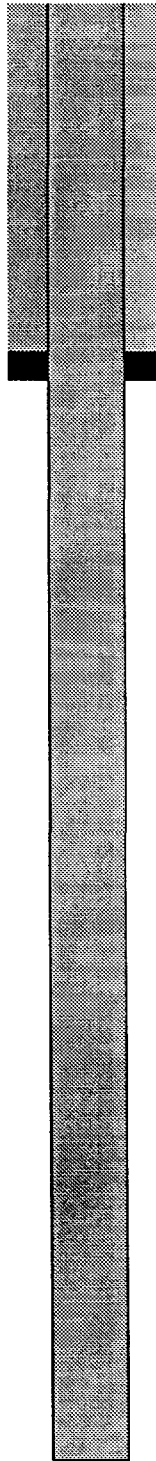


TD: 38'

**WELL SCHEMATIC:  
ARC IND BOWERS A FED #6**

WELL PLUGGED:  
8/19/98

6 3/4"  
10'  
3 SX  
TOC: NA



Csg was pulled and well was  
Filled with approximately  
.75 yards of 5 sx Redi-Mix.

TD: 45'

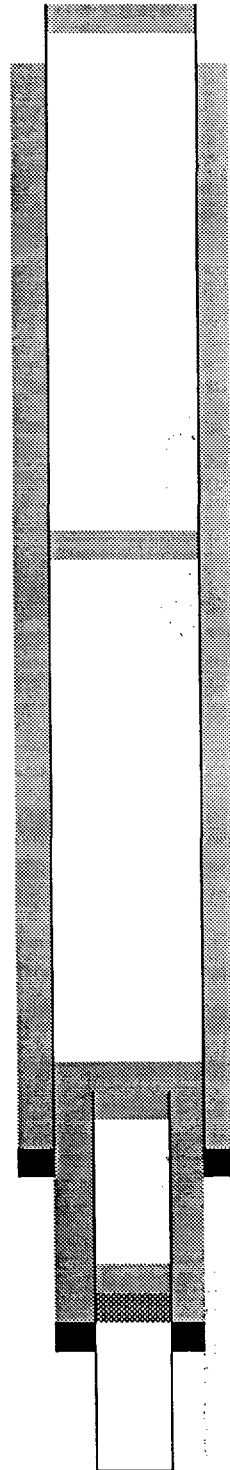


**WELL SCHEMATIC:  
GETTY HD MCKINLEY #3**

WELL PLUGGED:  
8/26/75

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

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



Laid 10 sx cmt plug in top.

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

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

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

**WELL SCHEMATIC:  
GETTY HD MCKINLEY #6**

WELL PLUGGED:  
8/26/75

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

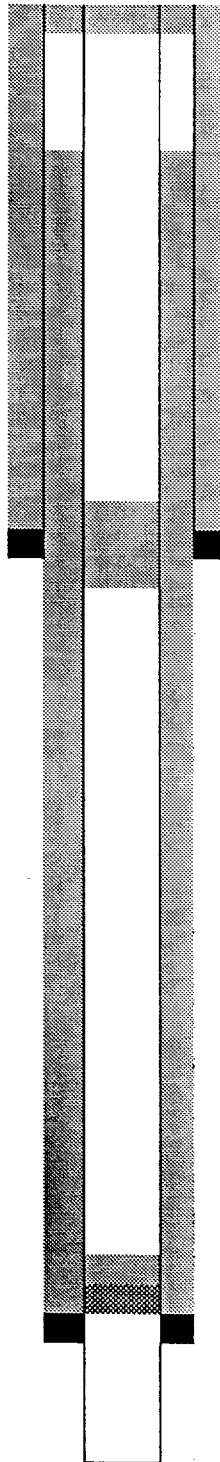
Laid 10 sx cmt plug in top.

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

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

TD:3200'

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



**WELL SCHEMATIC:  
AMERADA H.D. MCKINLEY #5**

WELL PLUGGED:  
5/19/93

7 5/8"  
432'  
200 SX  
TOC: CIRC

Spotted 25 sx cmt plug from  
250' to surface.

Displaced hole with 75 bbls  
Of 9 1/2 # mud.

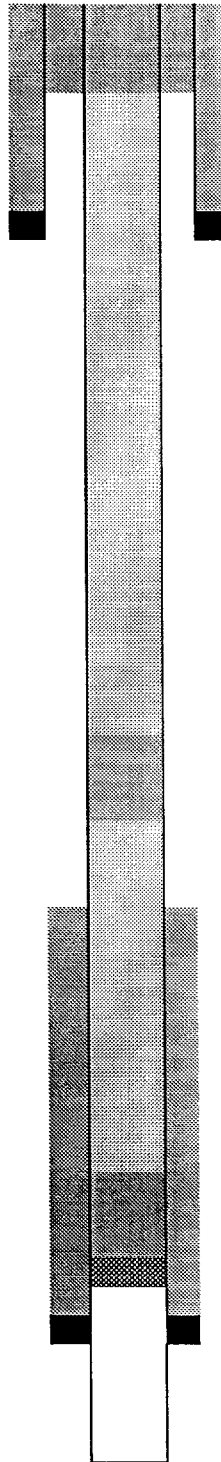
5 1/2"  
3130'  
600 SX  
TOC: 2992'

Spotted 25 sx cmt plug from  
1850' to 1600'.

TD: 3230'

Spotted 25 sx cmt plug from  
3050' to 2800'.

Set CIBP at 3050'.

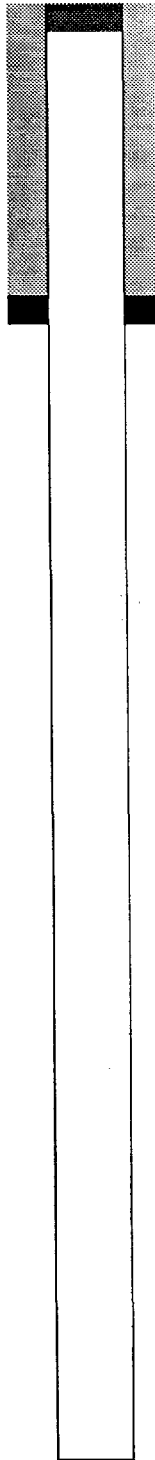


**WELL SCHEMATIC:  
AMERADA MCKINLEY #10**

WELL PLUGGED:  
8/14/82

5 ½"  
10'  
1 yd. Redi-Mix

The pump was pulled from  
The well and steel plates  
Were welded on top of the  
Well.



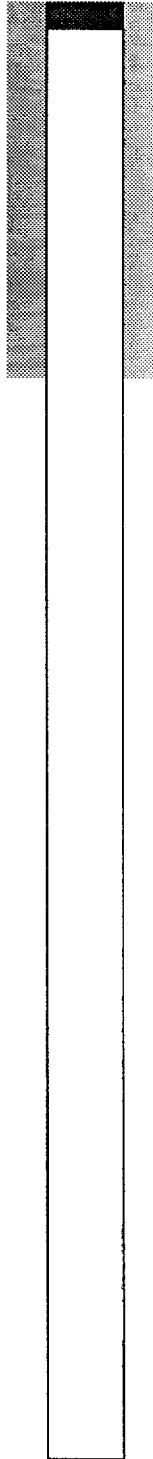
TD: 37'

**WELL SCHEMATIC:  
AMERADA MCKINLEY #9**

WELL PLUGGED:  
8/14/82

5 ½"  
10'  
1 YD REDI-MIX  
TOC: NA

The pump was pulled from  
Well and steel plates were  
Welded on top of well.



TD: 37'



P.O. BOX 2187  
HOBBS, NEW MEXICO 88240

## Saturation Index Calculations

Champion Technologies, Inc.  
(Based on the Tomson-Oddo Model)

Telephone (505) 393-7726

### Site Information

Company	Altura
Field	North Hobbs Unit
Point	IPD
Date	4/15/98

### Water Analysis (mg/L)

Calcium	1,122
Magnesium	194
Barium	0
Strontium	0
Sodium*	3730
Bicarbonate Alkalinity	1,769
Sulfate	1,726
Chloride	6,000

\* - Calculated Value

### Appended Data

Dissolved CO2	228 mg/L
Dissolved O2	N/A PPB
H2S	596 mg/L
Iron	0.0 mg/L
Specific Gravity	1.010 value
TDS	14551 mg/L
Total Hardness	3600 mg/L
Well head pH	N/A value

### Physical Properties

Ionic Strength*	0.29
pH†	6.52
Temperature	86°F
Pressure	100 psia

\* - Calculated Value † - Known/Specified Value

### Calcite Calculation Information

Calculation Method	Value
pH	6.52
<hr/>	
Bicarbonate Alkalinity Correction(s)	Value
None Used	---

### SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	0.48	310.4
Gypsum (Calcium Sulfate)	-0.45	N/A
Hemihydrate (Calcium Sulfate)	-0.32	N/A
Anhydrite (Calcium Sulfate)	-0.72	N/A
Barite (Barium Sulfate)	N/A	N/A
Celestite (Strontium Sulfate)	N/A	N/A

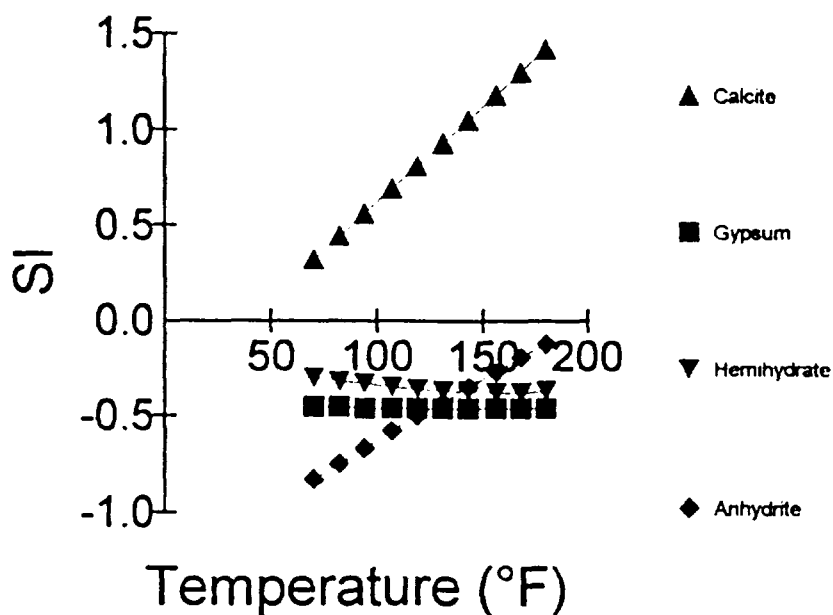
**Site Information**

Company	Altura
Field	North Hobbs Unit
Point	IPD
Date	4/15/98

**SI Results**

Temperature (°F)	Calcite	Gypsum	Hemihydrate	Anhydrite
70	0.32	-0.45	-0.30	-0.83
82	0.44	-0.45	-0.32	-0.75
94	0.56	-0.46	-0.33	-0.67
107	0.69	-0.46	-0.35	-0.58
119	0.81	-0.46	-0.36	-0.50
131	0.93	-0.46	-0.37	-0.43
143	1.05	-0.46	-0.37	-0.35
156	1.18	-0.46	-0.38	-0.27
168	1.30	-0.46	-0.38	-0.19
180	1.42	-0.46	-0.37	-0.12

# SI



**Laboratory Services, Inc.**

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

**Water Analysis**

**COMPANY** Altura Energy Ltd,  
**SAMPLE** North Hobbs Un. CTB 18S-38E-SEC29  
**SAMPLED BY** David Nelson SW 1/4, NW 1/4, NW 2/4, NW 3/4

**DATE TAKEN** 10/12/99

**REMARKS**

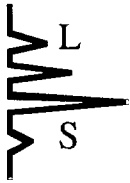
Barium as Ba	0	
Carbonate alkalinity PPM	12	
Bicarbonate alkalinity PPM	212	
pH at Lab	7.48	
Specific Gravity @ 60°F	1.001	
Magnesium as Mg	200	
Total Hardness as CaCO <sub>3</sub>	344	
Chlorides as Cl	155	
Sulfate as SO <sub>4</sub>	145	
Iron as Fe	0.1	
Potassium	0.08	
Hydrogen Sulfide	0	
Rw	7	24 C
Total Dissolved Solids	1,045	
Calcium as Ca	144	
Nitrate	14	

Results reported as Parts per Million unless stated

Langelier Saturation Index + 0.03

Analysis by: Rolland Perry  
Date: 10/19/99



**Laboratory Services, Inc.**

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

**Water Analysis**

**COMPANY** Altura Energy Ltd,

**SAMPLE** 18S-38E-Sec 30 NW1/4, NE1/4, SW1/4, SE1/4, SW1/4

**SAMPLED BY** David Nelson

**DATE TAKEN** 10/12/99

**REMARKS**

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	212	
pH at Lab	7.46	
Specific Gravity @ 60°F	1.001	
Magnesium as Mg	172	
Total Hardness as CaCO <sub>3</sub>	296	
Chlorides as Cl	85	
Sulfate as SO <sub>4</sub>	135	
Iron as Fe	0.01	
Potassium	0.1	
Hydrogen Sulfide	0	
Rw	7	23 C
Total Dissolved Solids	922	
Calcium as Ca	124	
Nitrate	7.9	

Results reported as Parts per Million unless stated

Langelier Saturation Index - 0.04

Analysis by: Rolland Perry  
Date: 10/19/99

**Laboratory Services, Inc.**

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

**Water Analysis**

**COMPANY** Altura Energy Ltd,

**SAMPLE** 18S-38E-Sec30 NE1/4, SW1/4, SW1/4

**SAMPLED BY** David Nelson

**DATE TAKEN** 10/12/99

**REMARKS**

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	204	
pH at Lab	7.52	
Specific Gravity @ 60°F	1.001	
Magnesium as Mg	125	
Total Hardness as CaCO <sub>3</sub>	216	
Chlorides as Cl	64	
Sulfate as SO <sub>4</sub>	55	
Iron as Fe	0.01	
Potassium	0.1	
Hydrogen Sulfide	0	
Rw	9	23 C
Total Dissolved Solids	595	
Calcium as Ca	91	
Nitrate	1.2	

Results reported as Parts per Million unless stated

**Langelier Saturation Index** - 0.18

Analysis by: Rolland Perry  
Date: 10/19/99

**Laboratory Services, Inc.**

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

**Water Analysis**

**COMPANY** Altura Energy Ltd,

**SAMPLE** 18S-38E-Sec.30 SW1/4, NE1/4, NE1/4, SW1/4, NE1/4

**SAMPLED BY** David Nelson

**DATE TAKEN** 10/12/99

**REMARKS**

Barium as Ba	0	
Carbonate alkalinity PPM	0	
Bicarbonate alkalinity PPM	248	
pH at Lab	7.15	
Specific Gravity @ 60°F	1.001	
Magnesium as Mg	174	
Total Hardness as CaCO <sub>3</sub>	300	
Chlorides as Cl	71	
Sulfate as SO <sub>4</sub>	110	
Iron as Fe	0.22	
Potassium	0.1	
Hydrogen Sulfide	0	
Rw	7.5	23 C
Total Dissolved Solids	820	
Calcium as Ca	126	
Nitrate	2.2	

Results reported as Parts per Million unless stated

Langelier Saturation Index - 0.35

Analysis by: Rolland Perry  
Date: 10/19/99

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

## LIST OF OFFSET OPERATORS & SURFACE OWNERS

---

North Hobbs (Grayburg/San Andres) Unit  
Well No. 332  
Letter J, Section 30, T-18-S, R-38-E  
Lea County, New Mexico

### Offset Operators

---

Altura Energy LTD  
P.O. Box 4294  
Houston, TX 77210-4294

Exxon Company, U.S.A.  
Attn: Joint Interest Operations  
P.O. Box 4707  
Houston, TX 77210-4707

Getty Oil Company  
P.O. Box 797035  
Dallas, TX 75379-7035

Charles E. Seed  
Houston Ranch  
Lovington Hwy.  
Hobbs, NM 88240

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

### Surface Owners

---

Grimes Land Co.  
P.O. Box 5102  
Hobbs, NM 88241

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:

Getty Oil Company  
P.O. Box 797035  
Dallas, TX 75379-7035

4a. Article Number

P 447 842 751

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:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
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- 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:

Charles E. Seed  
Houston Ranch  
Lovington Hwy.  
Hobbs, NM 88240

4a. Article Number

P 447 842 752

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:

Exxon Company, U.S.A.  
Attn: Joint Interest  
Operations  
P.O. Box 4707  
Houston, TX 77210-4707

4a. Article Number

P 447 842 833

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:**

- 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:

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

4a. Article Number

P 447 842 753

4b. Service Type

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

7. Date of Delivery

5. Received By: (Print Name)

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

6. Signature: (Addressee or Agent)

X

PS Form 3811, December 1994

102595-97-B-0179

Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

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

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

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

Consult postmaster for fee.

3. Article Addressed to:

Grimes Land Company  
P.O. Box 5102  
Hobbs, NM 88241

4a. Article Number

P 447 842 750

4b. Service Type

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

7. Date of Delivery

5. Received By: (Print Name)

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

6. Signature: (Addressee or Agent)

X

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

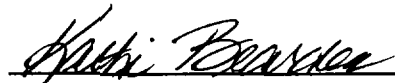
of the Hobbs News-Sun, a  
newspaper published at  
Hobbs, New Mexico, do solemnly  
swear that the clipping attached  
hereto was published once a  
week in the regular and entire  
issue of said paper, and not a  
supplement thereof for a period.

of 2  
\_\_\_\_\_ weeks.

Beginning with the issue dated

September 11 1999  
and ending with the issue dated

September 12 1999



Publisher

Sworn and subscribed to before  
me this 22nd day of

October 1999



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

SEPTEMBER 12, 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 Depart-  
ment, for approval of the fol-  
lowing injection wells for the  
purpose of secondary recov-  
ery:

Pool Name: Hobbs; Grayburg  
-San Andres

Lease/Unit Name: North  
Hobbs G/SA Unit

Well No. 221

Loc.: 2310' FNL & 2310' FWL,  
Unit Letter F, Sec. 24, T-18-S,  
R-37-E, Lea Co., NM

Well No. 342

Loc.: 145' FSL & 1435' FEL,  
Unit Letter O, Sec. 24, T-18-  
S, R-37-E, Lea Co., NM

Well No. 432

Loc.: 2480' FSL & 1280' FEL,  
Unit Letter I, Sec. 24, T-18-S,  
R-37-E, Lea Co., NM

Well No. 141

Loc.: 330' FSL & 330' FWL,  
Unit Letter M, Sec. 29, T-18-  
S, R-38-E, Lea Co., NM

Well No. 241

Loc.: 330' FSL & 2310' FWL,  
Unit Letter N, Sec. 29, T-18-  
S, R-38-E, Lea Co., NM

Well No. 112

Loc.: 200' FNL & 1310' FWL,  
Unit Letter D, Sec. 30, T-18-  
S, R-38-E, Lea Co., NM

Well No. 233

Loc.: 2455' FSL & 1480' FWL,  
Unit Letter K, Sec. 30, T-18-S,  
R-38-E, Lea Co., NM

Well No. 313

Loc.: 405' FNL & 2272' FEL,  
Unit Letter B, Sec. 30, T-18-S,  
R-38-E, Lea Co., NM

Well No. 332

Loc.: 2470' FSL & 1600' FEL,  
Unit Letter J, Sec. 30, T-18-S,  
R-38-E, Lea Co., NM

Well No. 412

Loc.: 760' FNL & 550' FEL,  
Unit Letter A, Sec. 30, T-18-S,  
R-38-E, Lea Co., NM

Well No. 432

Loc.: 2260' FSL & 180' FEL,  
Unit Letter I, Sec. 30, 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. Ex-  
pected maximum infection  
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 Conser-  
vation Division, 2040, S. Pa-  
checo, Santa Fe, NM 87505  
within fifteen (15) days.  
#16873

02101173000 01535865

Altura Energy LTD  
P. O. Box 4294  
Houston, TX 77210-4294



Active wells within 1/2 mile radius of proposed 30-332 conversion

Well Name	Oper	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
29121	Altura	30-025-07449	29	-18S	-38E	E	3/4/7	Prod	4275	3924	4275	4070-85	9.625	12.25	2739	650	890
												4110-20	7	8.75	3104	100	2640 CBL
												4130-50	4.5 Lnr	6.25	2900-4201	100	2900
29122	Altura	30-025-28953	29	-18S	-38E	E	02/06/1985	Inj	4215 (CIBP)	4154	4211		13.375		40		Circ
													8.625		1510	785	Circ
													5.5		4370	435	Circ
29131	Altura	30-025-07447	29	-18S	-38E	L	10/30	Prod	4130 (CIBP)	4050	4210		9.625	12	2750	650	660
													7	8.75	3976	300	
													5 Lnr	6.125	3870-4220	50	3930
30221	Altura	30-025-07462	30	-18S	-38E	F	4/30	Prod	4279	4072	4208-79		9.625	11.75	2750	535	787
											OH	4023-25	7	8.25	3852	250	1500 CBL
												4081-4104	4.5 Lnr	6.25	3799-4207	125	3799
												4120-28					
30222	Altura	30-025-26833	30	-18S	-38E	F	10/80	Inj	4290	4123	4302	3718	16	20	40	40	Surf
												4322-29	8.625	12.25	1570	950	Surf
													5.5	7.875	4349	800	2608 CBL
30223	Altura	30-025-28555	30	-18S	-38E	F	7/84	Prod	4321	4139	4280		16		30		
													8.625		1455	650	Circ
													5.5		4394	250	2496 CBL
30231	Altura	30-025-07479	30	-18S	-38E	K	7/30	Prod	4015	4119	4200-56		9.625	12.25	2750	400	1589
											OH		7	8.75	3930	550	604
													5	6.25	4200	60	3193 CBL
30232	Altura	30-025-26935	30	-18S	-38E	K	12/80	Inj	4519	4138	4310	4170-78	16		40	40	Circ
												4186-94	8.625		1600	875	Circ
													5.5		4555	1155	2614 CBL
30233	Altura	30-025-28942	30	-18S	-38E	K	2/85	Prod	4210	4148	4240		13.375		55		
													8.625		1507	620	Circ
													5.5		4383	1070	Circ

Note: Calculated TOC's are estimated with 50% efficiency

Active wells within 1/2 mile radius of proposed 30-332 conversion

Well Name	Oper	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
30241	Altura	30-025-07480	30	-18S	-38E	N	9/30	Prod	3900	3946	4101	4118-38	9.625	12.25	2750	550	1154
												4158	7	8.75	3900	275	2237
													5	6.25	4167	60	3368 CBL
30311	Altura	30-025-07469	30	-18S	-38E	B	8/30	Prod	3950	3998-4121			12.5	16	245	200	Circ
									CIBP	(OH)			9.625	11.75	2753	600	551
													7	8.75	3998	250	3154 CBL
30312	Altura	30-025-29197	30	-18S	-38E	B	5/85	Prod	4380	4215	4333		13.375		40		
													9.625		1500	650	CIRC
													7		4431	700	CIRC
30313	Altura	30-025-23270	30	-18S	-38E	B	11/69	Prod	4065	5871	5951	5805-53	13.375		382	400	SURF/CIRC
									CIBP				8.625		3849	1256	600
													5.5		6047	570	1500
30321	Altura	30-025-07467	30	-18S	-38E	G	7/30	Prod	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	Altura	30-025-07472	30	-18S	-38E	J	9/30	Prod	4225	4014	4225	4068-72	9.625	12	2750	650	1000
												4074-92	7	8.75	3960	300	Circ
													5.5	6.125	4238	30	3650 CBL
30333	Altura	30-025-28955	30	-18S	-38E	J	2/85	Imj	4328	4137	4290		13.375		40		
													8.625		1579	425	Surf
													5.5		4370	500	Circ
30341	Altura	30-025-24665	30	-18S	-38E	O	3/74	Prod	4202	4042	4276	4104-26	9.625	12.25	1463	500	Circ
												4164-70	5.5	7.875	3956	625	1910 CBL
												4180-96	3.5 Lnr	4.75	3715-4350	125	3715
												4056-69					
30412	Altura	30-025-23384	30	-18S	-38E	A	1/70	Prod	4300	4009	4261	4142-4225	13.375	17.5	329	400	Circ
													9.625	12.25	3848	1200	75
													7	8.75	7106	865	Circ

Note: Calculated TOC's are estimated with 50% efficiency

Active wells within 1/2 mile radius of proposed 30-332 conversion

Well Name	Oper	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
30421	Altura	30-025-07468	30	-18S	-38E	H	7/30	Prod	4258	4114	4202-58		9.625	11.75	2756	600	554
											OH		7	8.75	3858	250	Circ
													5	6.25	4202	450	Surf/CBL
30422	Altura	30-025-27059	30	-18S	-38E	H	5/81	Inj	4477	4110	4265	4108-23	16	20	40	40	Surf
													8.625	12.25	1524	850	Circ
													5.5	7.875	4510	1000	2500 CBL
30431	Altura	30-025-07474	30	-18S	-38E	I	9/30	Prod	4213	4085	4229	3975-4103	9.625	12	2750	650	
													7	8.75	3975	300	2009 Calc.
													5.5	6.125	3917	600	CBL/Circ
30432	Altura	30-025-28957	30	-18S	-38E	I	2/85	Prod	4328	4110	4266		13.375		55		
													8.625		1490	370	CIRC
													5.5		4370	350	CIRC
30441	Altura	30-025-07473	30	-18S	-38E	P	8/30	Prod	4267	4094	4200		9.625	12	2750	650	365
													7	8.75	3970	300	2624 CBL
													5.5 Lnr		3847-4267	50	Circ.
30442	Altura	30-025-27001	30	-18S	-38E	P	5/81	Inj	4420	4162	4257	4110-16	16		40	40	Circ
												4128-34	8.625	12.25	1606	850	Circ
													5.5	7.875	4510	1075	Circ
30443	Altura	30-025-28958	30	-18S	-38E	P	1/85	Inj	4185	4094	4247		8.625		1470	425	440
									CIBP				5.5		4370	340	858
30444	Altura	30-025-28959	30	-18S	-38E	P	2/85	Prod	4145	4106	4270		13.375		40		
									CIBP				9.625		1519	500	Circ
													7		4369	1035	3900

OK

SEE PER # W-443  
30-025-28958  
32-18S-38E

Note: Calculated TOC's are estimated with 50% efficiency

Active Outside Operated wells within 1/2 mile radius of proposed 30-332 conversion

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz. Perts	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Oper					Ltr											
Bowers A Fed. #29	30-025-23131	29	-18S	-38E	L	5/69	Prod	6000	5831	5889		11.75	15	370	300	Surf 'c'
Exxon												8.625	11	3849	500	1877 'c'
												4.5	7.875	6000	450	5087 'c'
Bowers A Fed. #37	30-025-26485	30	-18S	-38E	P	10/79	Prod	3918	2637	3556		8.625	12.25	501	400	Circ.
Exxon												5.5	7.625	3910	850	Circ.
Bowers A Fed. #38	30-025-28580	30	-18S	-38E		2/84	Prod	6220	5760	7006		13.38	17.5	1476	1220	Circ.
Exxon								CIBP		OH		10.75	12.25	4491	1650	Circ.
												5.5	7.875	7000	660	4985
HD McKinley #8	30-025-23151	30	-18S	-38E	H	6/69	Prod	5615	3676	3754		13.375	17.5	360	340	SURF
Getty												8.625	11	3842	1400	SURF
												5.5	7.875	6057	650	3300
HD McKinley #9	30-025-23221	30	-18S	-38E	G	8/69	Prod	6661	5761	6965		13.375	17.5	378	400	Circ.
Getty								CIBP				9.625	12.25	3851	1748	Circ.
												7	8.75	6999	650	2700 TS
Seed St 30 #1	30-025-22994	30	-18S	-38E	K	2/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
Seed St 30 #2	30-025-22995	30	-18S	-38E	K	2/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
Seed St 30 #3	30-025-22996	30	-18S	-38E	K	2/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
Seed St 30 #4	30-025-22997	30	-18S	-38E	K	2/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
Seed St 30 #5	30-025-22998	30	-18S	-38E	K	2/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
Seed St 30 #6	30-025-22319	30	-18S	-38E	K	2/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							

Note: 'c' in TOC column denotes calculated cnt top w/ 50% efficiency.

SEE #114  
30-025-28151  
PMX-131-004

**Active Outside Operated wells within 1/2 mile radius of proposed 30-332 conversion**

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBD	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Oper					Ltr											
Seed St 30 #7	30-025- 22320	30	-18S	-38E	K	2/1/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
Seed St 30 #8	30-025- 22321	30	-18S	-38E	K	2/1/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
Seed St 30 #9	30-025- 22322	30	-18S	-38E	K	2/1/69	Prod	45	10	45		7	8.5	10	2	No data
C.E. Seed									OH							
St #5	30-025- 07483	30	-18S	-38E	K	2/1/48	Prod	3246	3155	3244		8.625	11	326	125	Surf 'c'
Saga Pet. LLC									OH			5.5	7	3155	1000	Surf 'c'
St #7	30-025- 07485	30	-18S	-38E	N	4/1/48	Prod	3252	3171	3252		8.625	11	296	125	Surf 'c'
Saga Pet. LLC									OH			5.5	7	3171	900	Surf 'c'

Note: 'c' in TOC column denotes calculated cmt top w/ 50% efficiency.

Plugged wells within 1/2 mile radius of proposed 30-332 conversion

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
Oper					Ltr											
30342	30-025-12501	30	-18S	-38E	O	9/1/30	PA	4268	3974	4268		12.5	18	210	210	Circ.
Altura										OH		9.625	12	2738	650	Circ.
												7	8.75	3974	300	1144 cbl
B.A. Bowers #2	30-025-08045	30	-18S	-38E	J	5/1/30	PA	242	No data	No data		12.5		242	225	Surf 'c'
Exxon																
B.A. Bowers #6	30-025-07475	30	-18S	-38E	I	11/1/30	PA	3190	3147	3190		12.5	17	217	200	Surf 'c'
Exxon									OH			9.625	11.5	2750	650	Surf 'c'
												7	8.75	3147	120	2470 TS
Bowers A #12	30-025-07450	29	-18S	-38E	L	4/1/47	PA	3088	No data	No data		8.625	11	222	100	Surf 'c'
Exxon												5.5	7.875	3132	575	880 TS
Bowers A #13	30-025-07476	30	-18S	-38E	J	7/1/47	PA	3189	3148	3189		8.625	11	283	125	Surf 'c'
Exxon									OH			5.5	7.625	3150	1350	Surf 'c'
Bowers A #16	30-025-07478	30	-18S	-38E	O	10/1/47	PA	3225	3151	3221		8.625	11	262	150	Circ.
Exxon									OH			5.5	7.625	3151	1000	Circ.
Bowers A Fed. #1	30-025-07471	30	-18S	-38E	I	11/1/30	PA	6000	5812	5922		9.625	11.5	2750	620	No data
Exxon												7	8.75	3962	528	
												4.5	6.25	6000	275	2200 TS
Bowers A Fed. #15	30-025-07477	30	-18S	-38E	P	8/1/47	PA	3218	3158	3218		8.625	11	249	150	Circ.
Exxon									OH			5.5	7.625	3158	1250	Circ.
Bowers A Fed. #17	30-025-21900	30	-18S	-38E	J	10/1/66	PA	50	12	50		7	8	12	6	Circ.
Exxon									OH							
Bowers A Fed. #30	30-025-23144	30	-18S	-38E	P	6/1/69	PA	6000	5356	5946		8.625	11	3836	500	2300 TS
Exxon												4.5	7.875	5988	550	2800 TS
Bowers A Fed. #31	30-025-23176	29	-18S	-38E	E	6/1/69	PA	7050	6075	6991		8.625	11	3836	500	1858 'c'
Exxon												5.5	7.875	7038	650	3125 'c'

Note: 'c' in TOC column denotes calculated cmt top w/ 50% efficiency.

Plugged wells within 1/2 mile radius of proposed 30-332 conversion

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
Oper					Ltr											
Bowers A Fed. #32	30-025-23235	30	-18S	-38E	O	8/69	PA		5825	5964	5887-01	13.375	17.5	385	400	2250
Exxon											6974-82	9.625	11	3850	550	2900
												7	8.75	7053	895	
Bowers A Fed. #9	30-025-07446	29	-18S	-38E	E	8/30	PA	4259	No data			12.5	17	226	250	Surf 'c'
Exxon												9.625	11	2750	650	Surf 'c'
												7	8.75	3976	300	2002 'c'
Bowers A Fed. #CT18	30-025-21965	30	-18S	-38E		1/67	PA	50								
Exxon																
Bowers A Fed. #CT19	30-025-21966	30	-18S	-38E		1/67	PA	30								
Exxon																
Bowers A Fed. #CT20	30-025-21967	30	-18S	-38E		1/67	PA	32								
Exxon																
Bowers A Fed. #CT21	30-025-21968	30	-18S	-38E		1/67	PA	37								
Exxon																
Bowers A Fed. #CT23	30-025-21962	29	-18S	-38E		1/67	PA	35								
Exxon																
Bowers A Fed. #CT24	30-025-21963	29	-18S	-38E		1/67	PA	35								
Exxon																
Bowers A Fed. #CT26	30-025-21969	30	-18S	-38E		1/67	PA	35								
Exxon																
Bowers A Fed. #CT27	30-025-21970	30	-18S	-38E		1/67	PA	35								
Exxon																
Bowers Fed. A #10	30-025-22147	30	-18S	-38E	J	6/67	PA	38	10	38		7	7.875	10	3	No data
ARC Ind.									OH							

NO DATA  
STATE RECORDS

Note: 'c' in TOC column denotes calculated cmt top w/ 50% efficiency.

Plugged wells within 1/2 mile radius of proposed 30-332 conversion

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBD	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Oper					Ltr											
Bowers Fed. A #11	30-025- 22148	30	-18S	-38E	J	6/1/67	PA	38	10	38		6.625	6.75	10	3	No data
ARC Ind.									OH							
Bowers Fed. A #12	30-025- 22190	30	-18S	-38E	J	10/1/67	PA	45	10	45		6.625	6.75	10	3	No data
ARC Ind.									OH							
Bowers Fed. A #2	30-025- 22125	30	-18S	-38E	J	6/1/67	PA	38	10	38		6.625	6.75	10	3	No data
ARC Ind.									OH							
Bowers Fed. A #3	30-025- 22126	30	-18S	-38E	J	6/1/67	PA	38	10	38		7	7.785	10	3	No data
ARC Ind.									OH							
Bowers Fed. B #1	30-025- 07452	29	-18S	-38E	D	9/1/32	PA	4239	4181	4239		15.5		235	225	No data
Exxon									OH			9.625	12.25	2716	650	Surf 'c'
												7	8.75	3987	300	2027 'c'
F. A Bowers #13	30-025- 22277	30	-18S	-38E	J	10/1/67	PA	45	10	45		5.5	6.75	10	3	No data
ARC Ind.									OH							
F. A Bowers #4	30-025- 22127	30	-18S	-38E	J	7/1/67	PA	38	10	38		6.625	6.75	10	3	No data
ARC Ind.									OH							
F. A Bowers #5	30-025- 22189	30	-18S	-38E	J	7/1/67	PA	38	10	38		6.625	6.75	10	3	No data
ARC Ind.									OH							
F. A Bowers #6	30-025- 22276	30	-18S	-38E	J	10/1/67	PA	45	10	45		5.5	6.75	10	3	No data
ARC Ind.									OH							
H.D. McKinley #3	30-025- 07461	30	-18S	-38E	H	7/1/30	PA	3199	3166	3199		9.625	12.25	2755	600	337 'c'
Getty									OH			7	8.25	3166	100	2595 'c'
H.D. McKinley #6	30-025- 07488	30	-18S	-38E	G	6/1/47	PA	3200	3178	3200		8.625	11	1474	400	Circ.
Getty									OH			5.5	6.875	3178	200	498 'c'
HD McKinley #5	30-025- 07465	30	-18S	-38E	F	3/1/47	PA	3230	3197	3206		7.625	9.875	432	200	Circ.
Amerada									OH			5.5	6.75	3130	600	2992

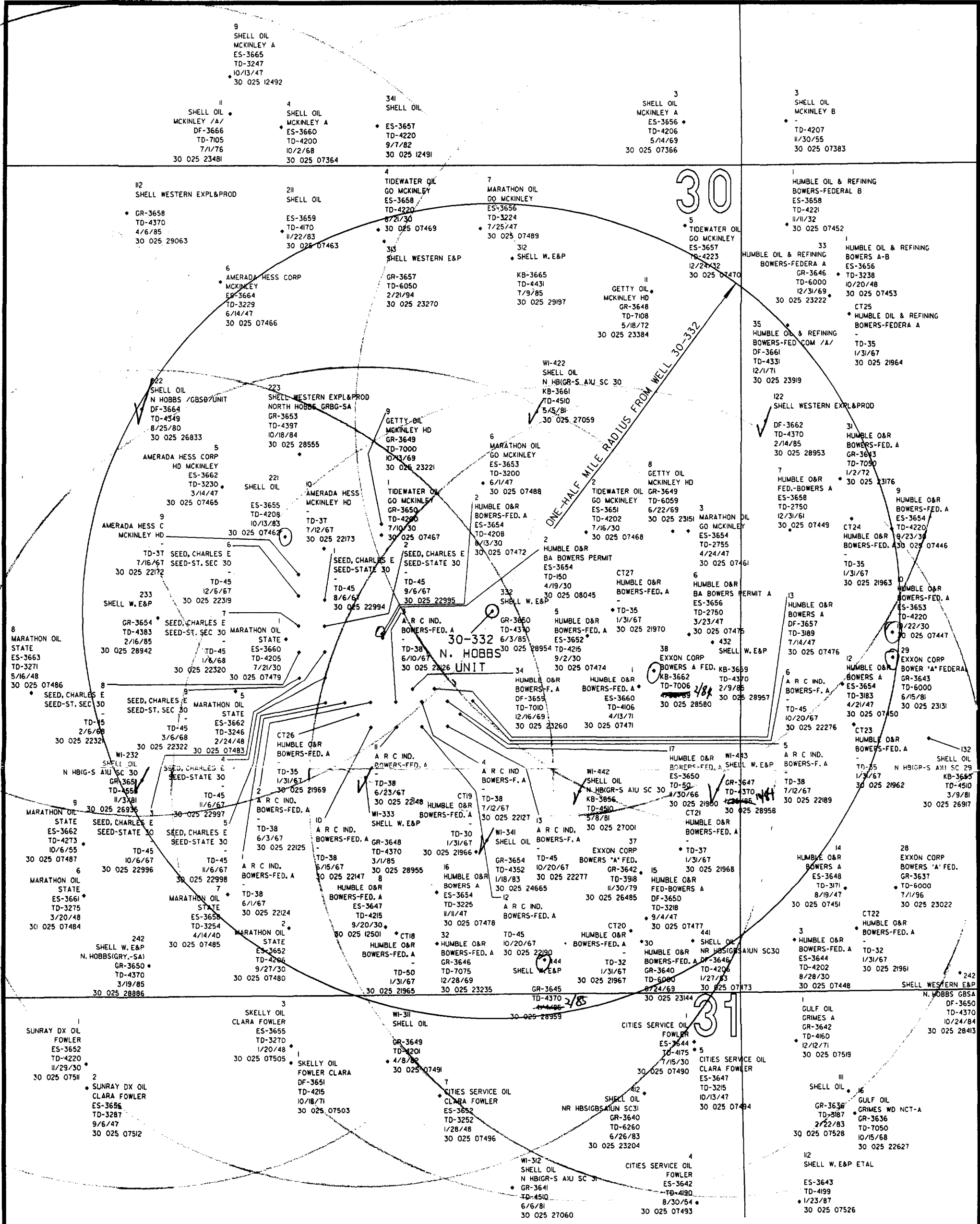
Note: 'c' in TOC column denotes calculated cmt top w/ 50% efficiency.



**Plugged wells within 1/2 mile radius of proposed 30-332 conversion**

Well Name	AP# No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBTD	Top Perf	Bot. Perf	Sqz. Perts	Csg. Size	Hole Size	Depth	No. of Sxs.	TOC
Oper					Ltr											
McKinley #10	30-025-	22173	30	-18S	-38E	F	6//67	PA	37	10-37 OH		5.5	6.75	10	1 YD	No data
Amerada																
McKinley #9	30-025-	22172	30	-18S	-38E	F	6//67	PA	37	10-37 OH		5.5	6.75	10	1 YD	No data
Amerada																

Note: 'c' in TOC column denotes calculated cmt top w/ 50% efficiency.



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. 30-332  
T-18-S, R-38-E  
Lea County, New Mexico

Scale: 1" = 600' 07-03-99 nm43800.dgn - 11  
Plat prepared by PJE Drafting, Inc.  
For Horizon Survey, Inc.

CMD : ONGARD 12/20/99 14:10:39  
OG6IWCM INQUIRE WELL COMPLETIONS OGOMWA -TPRC

API Well No : 30 25 28580 Eff Date : 11-01-1999 WC Status : A  
Pool Idn : 31680 HOBBS;UPPER BLINEBRY  
OGRID Idn : 113315 TEXLAND PETROLEUM INC  
Prop Idn : 25070 BOWERS A FEDERAL

Well No : 038  
GL Elevation: 3647

	U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
	---	---	-----	-----	-----	-----	-----
B.H. Locn : I	30	18S	38E	FTG 2080 F S	FTG 560 F E	A	
Lot Identifier:							
Dedicated Acre: 40.00							
Lease Type : F							
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :							

M0025: Enter PF keys to scroll

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07	PF08	PF09	PF10 NEXT-WC	PF11 HISTORY	PF12 NXTREC

PMX-202



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

12/10/99

GOVERNOR

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC \_\_\_\_\_  
DHC \_\_\_\_\_  
NSL \_\_\_\_\_  
NSP \_\_\_\_\_  
SWD \_\_\_\_\_  
WFX \_\_\_\_\_  
PMX ✓ \_\_\_\_\_

Gentlemen:

I have examined the application for the:

Altura Energy Ltd N Hobbs GB/SA Unit #332-J-3D-18-38  
Operator Lease & Well No. Unit S-T-R 3D-025-25954

and my recommendations are as follows:

OK

Yours very truly,

Chris Williams

Chris Williams  
Supervisor, District 1

/ed