



PMX 11/29/99

NOV 10 1999

November 8, 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. 112
Lot 1, 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. 112 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. 112). 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,

A handwritten signature in cursive script that reads "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

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: 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? 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: 11/5/99

* 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.

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. 112
Lot 1, 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

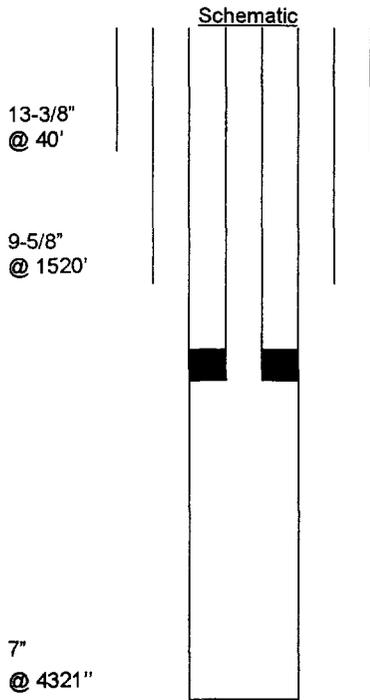
XI. Fresh Water Sample Analysis

(Laboratory Services, Inc. analysis attached – 3 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 Altura Energy LTD.		Lease North Hobbs G/SA Unit			County Lea
Well No. 30-112	Footage Location 200 FNL & 1310 FEL	Section 30	Township 18-S	Range 38-E	Unit Letter D



<u>Surface Casing</u>		<u>Tubular Data</u>	
Size	<u>13-3/8</u>	Cemented with	<u>400</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size _____			
<u>Intermediate Casing</u>			
Size	<u>9-5/8</u>	Cemented with	<u>250</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size _____			
<u>Long string Casing</u>			
Size	<u>7"</u>	Cemented with	<u>675</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size _____			
Total depth	<u>4321</u>		
<u>Injection interval</u>	<u>4000</u>	feet to	<u>4350</u> feet
<u>Completion type</u>	<u>Perforations</u>		

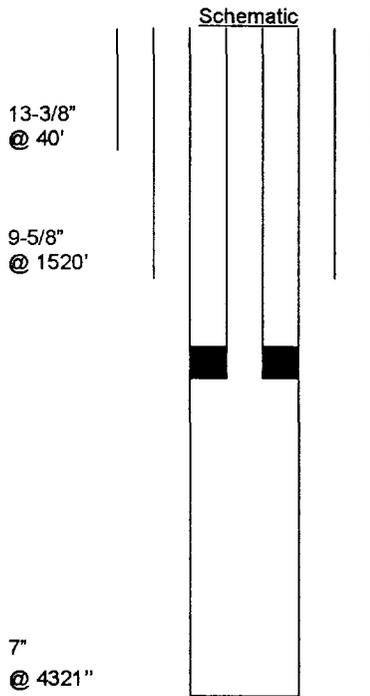
Tubing size 2-7/8" lined with Fiberglass Epoxy set in a
Giberson Uni VI packer at ±3950 feet
 (brand and model)

Other Data

1. Name of the injection formation San Andres
2. Name of field or Pool Hobbs (Grayburg/San Andres) Pool
3. Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? San Andres producer
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)
None
5. 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. 30-112	Footage Location 200 FNL & 1310 FEL	Section 30	Township 18-S	Range 38-E	Unit Letter D



<u>Surface Casing</u>		<u>Tubular Data</u>	
Size	<u>13-3/8</u>	Cemented with	<u>400</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size _____			
<u>Intermediate Casing</u>			
Size	<u>9-5/8</u>	Cemented with	<u>250</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size _____			
<u>Long string Casing</u>			
Size	<u>7"</u>	Cemented with	<u>675</u> sxs.
TOC	<u>Surf</u>	Determined by	<u>Circ.</u>
Hole size _____			
Total depth		<u>4321</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



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

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

* - Calculated 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
Bicarbonate Alkalinity Corrections	
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

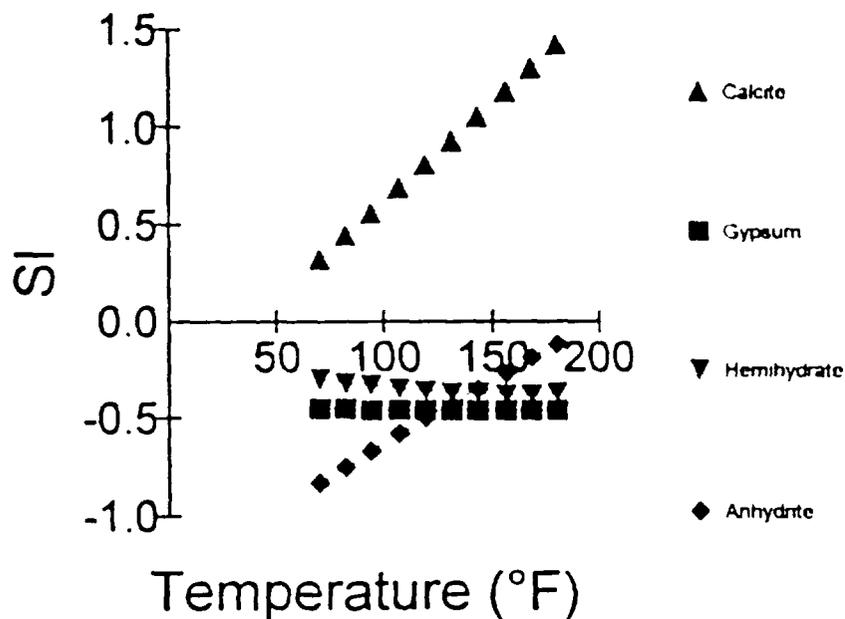
Site Information

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	1.12	-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 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 CaCO3	296	
Chlorides as Cl	85	
Sulfate as SO4	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 CaCO3	216	
Chlorides as Cl	64	
Sulfate as SO4	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-37E-Sec 24 SE1/4, SE1/4, SE1/4, SE1/4, 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	224	
pH at Lab	7.47	
Specific Gravity @ 60°F	1.001	
Magnesium as Mg	197	
Total Hardness as CaCO3	340	
Chlorides as Cl	141	
Sulfate as SO4	105	
Iron as Fe	0	
Potassium	0.1	
Hydrogen Sulfide	0	
Rw	7.5	23 C
Total Dissolved Solids	885	
Calcium as Ca	143	
Nitrate	2.4	

Results reported as Parts per Million unless stated

Langelier Saturation Index - 0.03

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

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

OIL CONSERVATION DIVISION
P.O. Box 2088

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

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 30-025-29063	Pool Code 31920	Pool Name HOBBS; GRAYBURG -- SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 112
OGRID No. 157984	Operator Name ALTURA ENERGY LTD.	Elevation 3658

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 1	30	18 S	38 E		206	NORTH	1310	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><i>Mark Stephens</i> Signature</p> <p>Mark Stephens Printed Name</p> <p>Business Analyst (SG) Title</p> <p>November 5, 1999 Date</p> <hr/> <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>JULY 20, 1999</p> <p>Date Surveyed _____ DMCC</p> <p>Signature and Seal Professional Surveyor <i>Ronald J. Edson</i> NEW MEXICO 3239 7-27-99 99-11-0599</p> <p>Certificate No. RONALD J. EDSON 3239 GARY EDSON 1264 RONALD J. EDSON 1278</p>
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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 86211-0719

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-29063	Pool Code 31920	Pool Name HOBBS; GRAYBURG - SAN ANDRES
Property Code 19520	Property Name NORTH HOBBS G/SA UNIT	Well Number 112
OGRID No. 157984	Operator Name ALTURA ENERGY LTD.	Elevation 3658

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 1	30	18 S	38 E		206	NORTH	1310	WEST	LEA

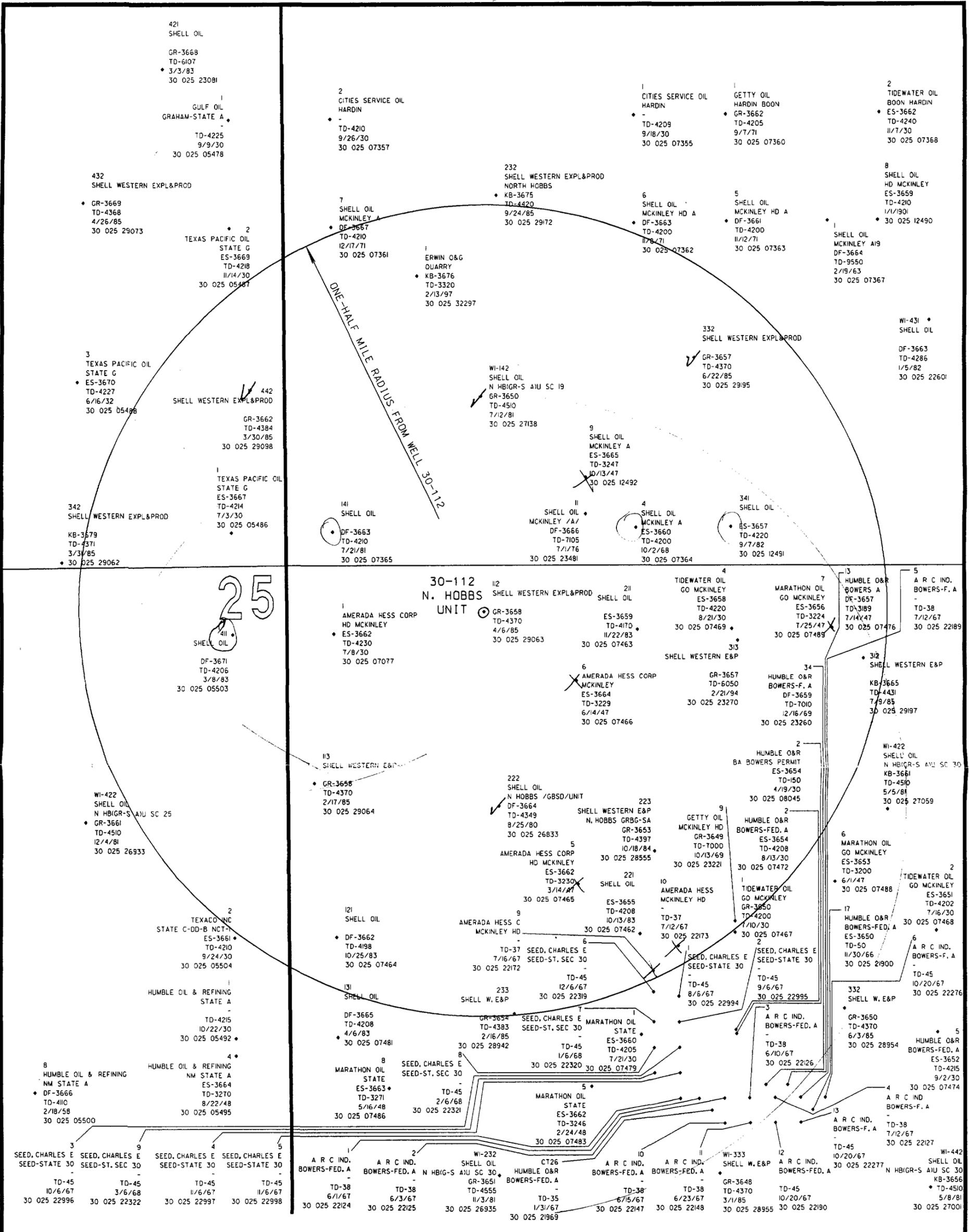
Bottom Hole Location If Different From Surface

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>LOT 1 1310'</p>	<p>WELL #112 SPC NME NAD 27 Y=629365 X=851165</p>			<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><i>Mark Stephens</i> Signature</p> <p>Mark Stephens Printed Name</p> <p>Business Analyst (SG) Title</p> <p>November 5, 1999 Date</p>
<p>37.81 ACRES LOT 2</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>JULY 20, 1999 Date Surveyed</p> <p>DMCC</p>
<p>37.85 ACRES LOT 3</p>				<p>Signature: <i>Ronald J. Edson</i> Professional Surveyor</p> <p>NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR 3239 99-11-0530</p>
<p>37.87 ACRES LOT 4</p>				<p>Certificate No. RONALD J. EDSON 3239 CAROL ANN EDSON 12641 DORIS MCDONALD 12125</p>
<p>37.91 ACRES</p>				



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. 30-112
T-18-S, R-38-E
Lea County, New Mexico

Scale: 1" = 600' 07-03-99 nm438a00.dgn - 11
Plat prepared by PJE Drafting, Inc.
For Horizon Survey, Inc.

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

WELL SCHEMATIC:
GETTY HD MCKINLEY #7

WELL PLUGGED:
10/14/75

Laid 10 sx cmt plug in top.

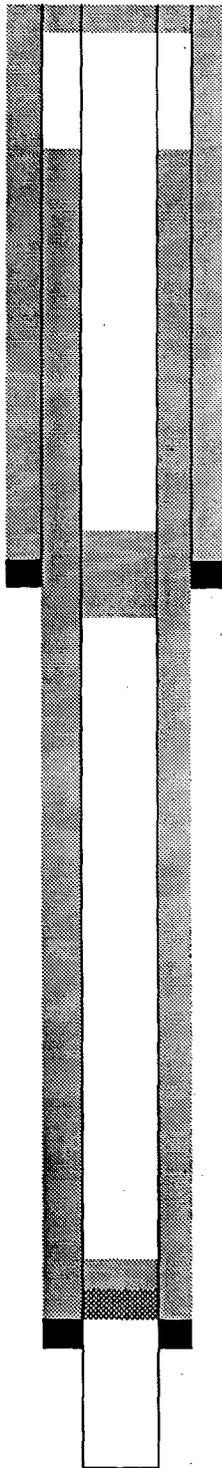
8 5/8"
1504'
400 SX
TOC: SURF (C)

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

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

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

TD:3224'



**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.

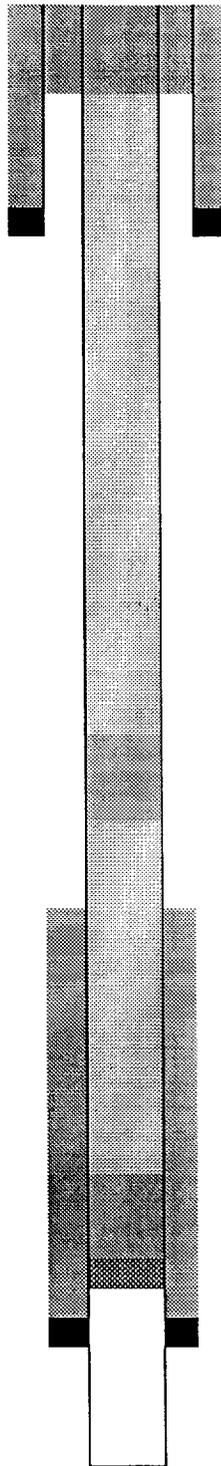
5 1/2"
3130'
600 SX
TOC: 2992'

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

TD: 3230'

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

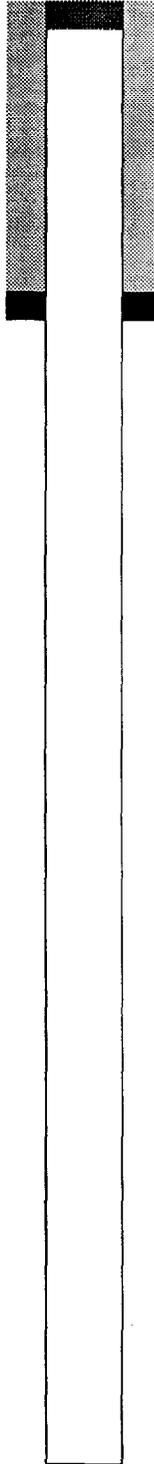
Set CIBP at 3050'.



WELL SCHEMATIC:
AMERADA MCKINLEY #10

WELL PLUGGED:
8/14/82

5 1/2"
10'
1 yd. Redi-Mix



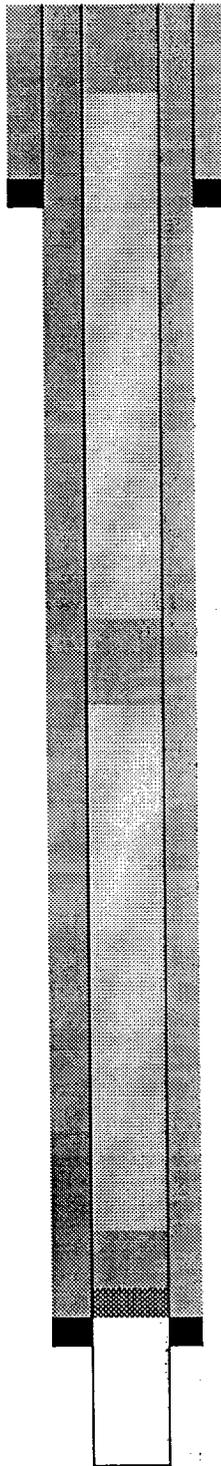
The pump was pulled from
The well and steel plates
Were welded on top of the
Well.

TD: 37'

WELL SCHEMATIC.
AMERADA H.D. MCKINLEY # 6

WELL PLUGGED:
5/17/93

7 5/8"
416'
200 SX
TOC: CIRC



Spotted 25 sx cmt plug from
250' to surface.

Displaced hole with 70 bbls
Of 9 1/2 # mud.

5 1/2"
3145'
625 SX
TOC: 20' TS

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

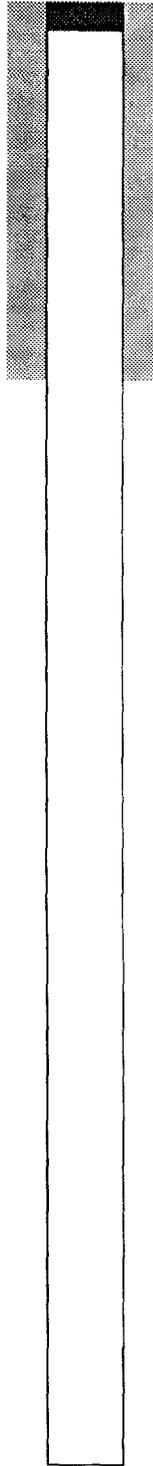
TD: 3229'

Spotted 25 sx cmt plug from
3100' to 2850'.
Set CIBP at 3100'.

WELL SCHEMATIC.
AMERADA MCKINLEY #9

WELL PLUGGED:
8/14/82

5 1/2"
10'
1 YD REDI-MIX
TOC: NA



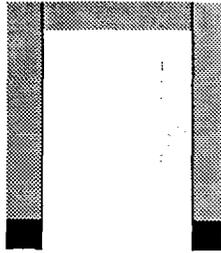
The pump was pulled from
Well and steel plates were
Welded on top of well.

TD: 37'

WELL SCHEMATIC:
SHELL MCKINLEY A #9

WELL PLUGGED:
5/12/50

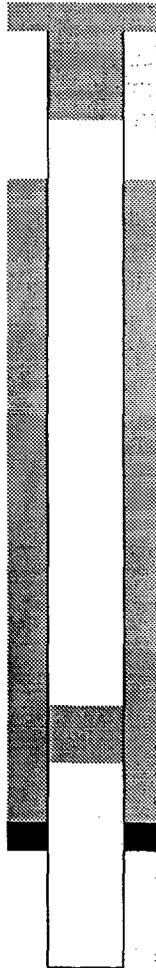
8 5/8"
407'
200 sx
TOC: CIRC



10 sx cmt at surface

Recovered 1147' of 4 1/2"
Csg.

4 1/2"
3179'
850 sx
TOC: 1530' TS



Shot csg at 1148'
Spotted 5 sx cmt from 1150'
To 1228'

Spotted 10 sx cmt plug from
3023' to 3179'

TD: 3247'

LIST OF OFFSET OPERATORS & SURFACE OWNERS

North Hobbs (Grayburg/San Andres) Unit
Well No. 112
Lot 1, 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

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

Erwin Oil & Gas Ltd Co.
P.O. Box 1506
Hobbs, NM 88241

Surface Owners

James K. Henson & Donna Fay Henson
2020 Matts Drive
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:

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

4a. Article Number

P 447 842 780

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.
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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:

Erwin Oil & Gas Ltd. Co.
P.O. Box 1506
Hobbs, NM 88241

4a. Article Number

P 447 842 781

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

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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:

James K. Henson &
Donna Fay Henson
2020 Matts Drive
Hobbs, NM 88240

4a. Article Number

P 447 842 782

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 2 weeks.

Beginning with the issue dated September 11 1999 and ending with the issue dated

September 12 1999

Kathi Bearden

Publisher

Sworn and subscribed to before

me this 22nd day of

October 1999

Jodi Stenson

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.

02101173000 01535865
Altura Energy LTD
P. O. Box 4294
Houston, TX 77210-4294

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 Department, for approval of the following injection wells for the purpose of secondary recovery:

- Pool Name: Hobbs; Grayburg -San Adres
- 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 Adres Pool between the intervals of +/-3700' and +/-5300' below the surface of the ground. Expected 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 Conservation Division, 2040, S. Pacheco, Santa Fe, NM 87505 within fifteen (15) days. #16873

CMP ~ 3500'

Active wells within 1/2 mile radius of proposed 30-112 conversion

Well Name	Oper	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBT	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	Depth	No. of	
																Sxs.	TOC
19141	Altura	30-025-07365	19	-18S	-38E	M	06/15/1930	Prod	4275	4033	4079		9	11.75	2783	500	1800 Calc.
													7	8.75	3880	500	2616 CBL
													5.5 Lnr	6.75	3810-4247	100	3810
19142	Altura	30-025-27138	19	-18S	-38E	N	07/12/1981	Inj	4437	4170	4270		16		40	40	SURF
													8.625	12.25	1600	875	CIRC
													5.5	7.875	4510	900	3450 CBL
19241	Altura	30-025-07364	19	-18S	-38E	N	9/30	Prod	4244	4128	4232		9.625	12.25	2750	600	
													7	8.75	3975	225	3230 CBL
													5.5 Lnr	6.75	3936-4246	100	3936
19242	Altura	30-025-23481	19	-18S	-38E	N	05/26/1970	Prod	4186	4114	4179	4192-97	13.375	17.5	360	360	CIRC
												4240-76	9.625	12.25	3794	500	2530
													5.5 Lnr	8.75	3557-7103	950	3630 CBL
19332	Altura	30-025-29195	19	-18S	-38E	J	06/18/1985	Inj	4316	4184	4232	4064-65	13.375	17.5	40	??	CIRC
												4101-05	9.625	12.25	1510	625	CIRC
													7	8.75	4368	955	CIRC
19341	Altura	30-025-12491	19	-18S	-38E	O	09/06/1930	Prod	4005 (CIBP)	4140	4272		9.625	12.25	2750	600	
													7	8.75	3975	225	3299 CBL
													5.5 Lnr	6.75	3937-4245	100	3937
24441	Altura	30-025-05486	24	-18S	-38E	P	7/30	Prod	4139	3880-4139 (OH)			12	15.5	1521	300	Circ
													9	11.75	2815	700	770
													7	8.25	3880	200	2131
24442	Altura	30-025-29098	24	-18S	-38E	P	3/85	Inj	4254 (CIBP)	4165	4271	4070-4156	13.375	17.5	40		
													9.625	12.5	1527	375	Circ
													7	8.25	4384	576	Circ
25411	Altura	30-025-05503	25	-18S	-38E	A	4/30	Prod	4106 (CIBP)	3959	4244		8.25	11.75	2750	600	1362
													6.25	7.625	3969	200	2926 CBL
													4.5 Lnr	5.75	3869-4257	50	4188

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

Active wells within 1/2 mile radius of proposed 30-112 conversion

30111	Altura	30-025-07077	30-18S-38E	D	7/30	Prod	4200	4042	4227	4081-92 4120-28 4138-68	9.625 7 4.5 Lnr	2755 3851 3784-4229	450 200 220	1700 2836 CBL 3784
30113	Altura	30-025-29064	30-18S-38E	D	1/85	Prod	4310 CIBP	4042	4285		13.375 8.625 5.5	55 1495 4370	?? 620 990	Circ Circ Circ
30121	Altura	30-025-07464	30-18S-38E	E	9/30	Prod	3800 CIBP	4042	4270	3994-4046 OH	9.625 7 5 Lnr	2749 3994 3841-4312	400 425 40	1281 2738 CBL Surf/CBL
30221	Altura	30-025-07462	30-18S-38E	F	4/30	Prod	4279	4072	4208-79 OH	9.625 7 4023-25 4081-4104 4120-28	11.75 8.25 6.25	2750 3852 3799-4207	535 250 125	787 1500 CBL 3799
30222	Altura	30-025-26833	30-18S-38E	F	10/80	Inj	4290 CIBP	4123	4302	3718 4322-29	16 8.625 5.5	40 1570 4349	40 950 800	Surf Surf 2608 CBL
30223	Altura	30-025-28555	30-18S-38E	F	7/84	Prod	4321	4139	4280		16 8.625 5.5	30 1455 4394		Circ Circ 2496 CBL
30233	Altura	30-025-28942	30-18S-38E	K	2/85	Prod	4210	4148	4240		13.375 8.625 5.5	55 1507 4383		Circ Circ
30311	Altura	30-025-07469	30-18S-38E	B	8/30	Prod	3950 CIBP	3998-4121 (OH)			12.5 9.625 7	245 2753 3998	200 600 250	Circ 551 3154 CBL
30312	Altura	30-025-29197	30-18S-38E	B	5/85	Prod	4380	4215	4333		13.375 9.625 7	40 1500 4431		CIRC CIRC

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

Active wells within 1/2 mile radius of proposed 30-112 conversion

30313	Altura	30-025-	23270	30-18S	-38E	B	11/1/69	Prod	4065	5871	5951	5805-53	13.375	382	400	SURF/CIRC
									CIBP				8.625	3849	1256	600
													5.5	6047	570	1500

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

Active Outside Operated wells within 1/2 mile radius of proposed 30-112 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	No. of		
														Depth	Sxs.	Depth
Oper																
HD McKinley #9	30-025-23221	30	-18S	-38E	G	8//69	Prod	6961	5761	6965		13.375	17.5	378	400	TOC
Getty							CIBP					9.625	12.25	3851	1748	Circ.
												7	8.75	6999	650	2700 TS
Quarry #1	30-025-32297	19	-18S	-38E	L	11//93	Prod	3200	2666	3260		8.625	12.25	318	200	Surf 'c'
Erwin O&G												5.5	7.875	3320	550	Surf 'c'

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

Plugged wells within 1/2 mile radius of proposed 30-112 conversion

Well Name	API No.	Sec.	T	R	Un	Drill Date	Well Type	TD or PBT	Top Perf	Bot. Perf	Sqz. Perfs	Csg. Size	Hole Size	No. of		
														Depth	Sxs.	
Oper																
H.D. McKinley #7	30-025-07489	30	-18S	-38E	B	7/47	PA	3224	3192	3224		8.625	11	1504	400	Surf 'c'
Getty									OH			5.5	7	3192	200	918 'c'
HD McKinley #5	30-025-07465	30	-18S	-38E	F	3/47	PA	3230	3197	3206		7.625	9.875	432	200	Circ.
Amerada									OH			5.5	6.75	3130	600	2992
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 #6	30-025-07466	30	-18S	-38E	C	3/47	PA	3229	3145	3229		7.625	9.875	416	200	Circ.
Amerada									OH			5.5	6.75	3145	625	20 TS
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																
McKinley A #9	30-025-12492	19	-18S	-38E	N	8/47	PA	3247	3179	3247		8.625	11	419	200	Circ.
Shell									OH			4.5	7.875	3179	850	1530 TS

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

PMX-199



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

GOVERNOR

11/12/99

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 _____ X

Gentlemen:

I have examined the application for the:

Altura Energy Ltd N Hobbs GB/SA Unit # 112-D-30-18-38
Operator Lease & Well No. Unit S-T-R 30-025-29063

and my recommendations are as follows:

OK

Yours very truly,

Chris Williams
Chris Williams
Supervisor, District 1

/ed