

OCD-ARTESIA

Secretary's Petition

A/S-16-227

RECEIVED  
MAY 17 2010  
NMCD-ARTESIAUNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

5. Lease Serial No.

LC-046256-B / NM 27279 BHL

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

Aries 20 Federal Com #1H

9. API Well No.

30-015-37819

10. Field and Well Name  
SAND TANK Bone Spring

96832

11. Sec., T, R, M., or Blk. and Survey or Area

Sec 20 - T18S - R30E

12. County or Parish

Eddy

13. State

NM

1a. Type of Work ☒ DRILL☐ REENTER1b. Type of Well. ☒ Oil Well ☐ Gas Well ☐ Other☐ Single Zone☐ Multiple Zone

2. Name of Operator

Mewbourne Oil Company (14744)

3a. Address

PO Box 5270 Hobbs, NM 88241

3b. Phone No. (include area code)

575-393-5905

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)

At surface 600' FNL &amp; 330' FWL (SL) Unit D

At proposed prod. zone 600' FNL &amp; 330' FEL (BHL) Unit A

14. Distance in miles and direction from nearest town or post office\*

8 miles S of Loco Hills, NM

15. Distance from proposed\*

location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)

330'

16. No. of Acres in lease

80

17. Spacing Unit dedicated to this well

160

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.

NA

19. Proposed Depth

12505 MD  
8197' TVD

20. BLM/BIA Bond No. on file

NM1693, Nationwide

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3493' GL

22. Approximate date work will start\*

ASAP

23. Estimated duration

45

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan

3. A Surface Use Plan (if the location is on National Forest System Lands, the  
SUPO shall be filed with the appropriate Forest Service Office).4. Bond to cover the operations unless covered by an existing bond on file (see  
Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be required by the  
authorized officer.

25. Signature

Name (Printed/Typed)

Date

Jackie Lathan

01/29/10

Title

Hobbs Regulatory

Approved by (Signature)

/s/ Linda S. C. Rundell

Name (Printed/Typed)

/s/ Linda S. C. Rundell

Date

5-11-10

Title

STATE DIRECTOR

Office

NM STATE OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct  
operations thereon

Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United  
States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

CAPTAN CONTROLLED WATER BASIN

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHEDSEE ATTACHED FOR  
CONDITIONS OF APPROVAL

United States Department of the Interior  
Bureau of Land Management  
Carlsbad Field Office  
620 E Greene Street  
Carlsbad, New Mexico 88201-1287

**Statement Accepting Responsibility for Operations**

Operator Name: Mewbourne Oil Company  
Street or Box: P.O. Box 5270  
City, State: Hobbs, New Mexico  
Zip Code: 88241

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted of the leased land or portion thereof, as described below.

Lease Number: Lease Number #LC-046256-B *SHL NM 27279 BHL*

Legal Description of Land: Section 20, T-18S, R-30E Eddy County, New Mexico.  
Location @ 600' FNL & 330' FWL.

Formation (if applicable):

Bond Coverage: \$150,000

BLM Bond File: NM1693, Nationwide

Authorized Signature: \_\_\_\_\_

*N.M. Young*  
Name: NM (Micky) Young  
Title: District Manager  
Date: January 19, 2010

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1901 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 15, 2009

Submit one copy to appropriate  
District Office

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                                   |   |   |
|-----------------------------------|---|---|
| API Number<br><b>30-015-37819</b> | Pool Code<br><b>96832</b>                       | Well Name<br><b>Sand Tank Box Springs</b> |
| Property Code<br><b>38153</b>     | Property Name<br><b>ARIES "20" FEDERAL COM</b>  | Well Number<br><b>1H</b>                  |
| OGRID No.<br><b>14744</b> ✓       | Operator Name<br><b>MEWBOURNE OIL COMPANY</b> ✓ | Elevation<br><b>3493'</b>                 |

Surface Location

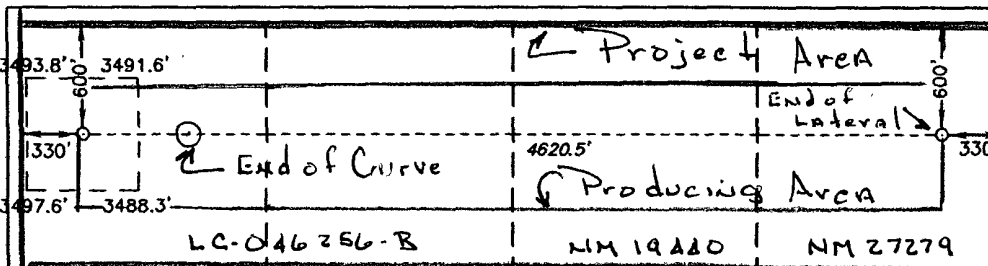
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 20      | 18 S     | 30 E  |         | 600           | NORTH            | 330           | WEST           | EDDY   |

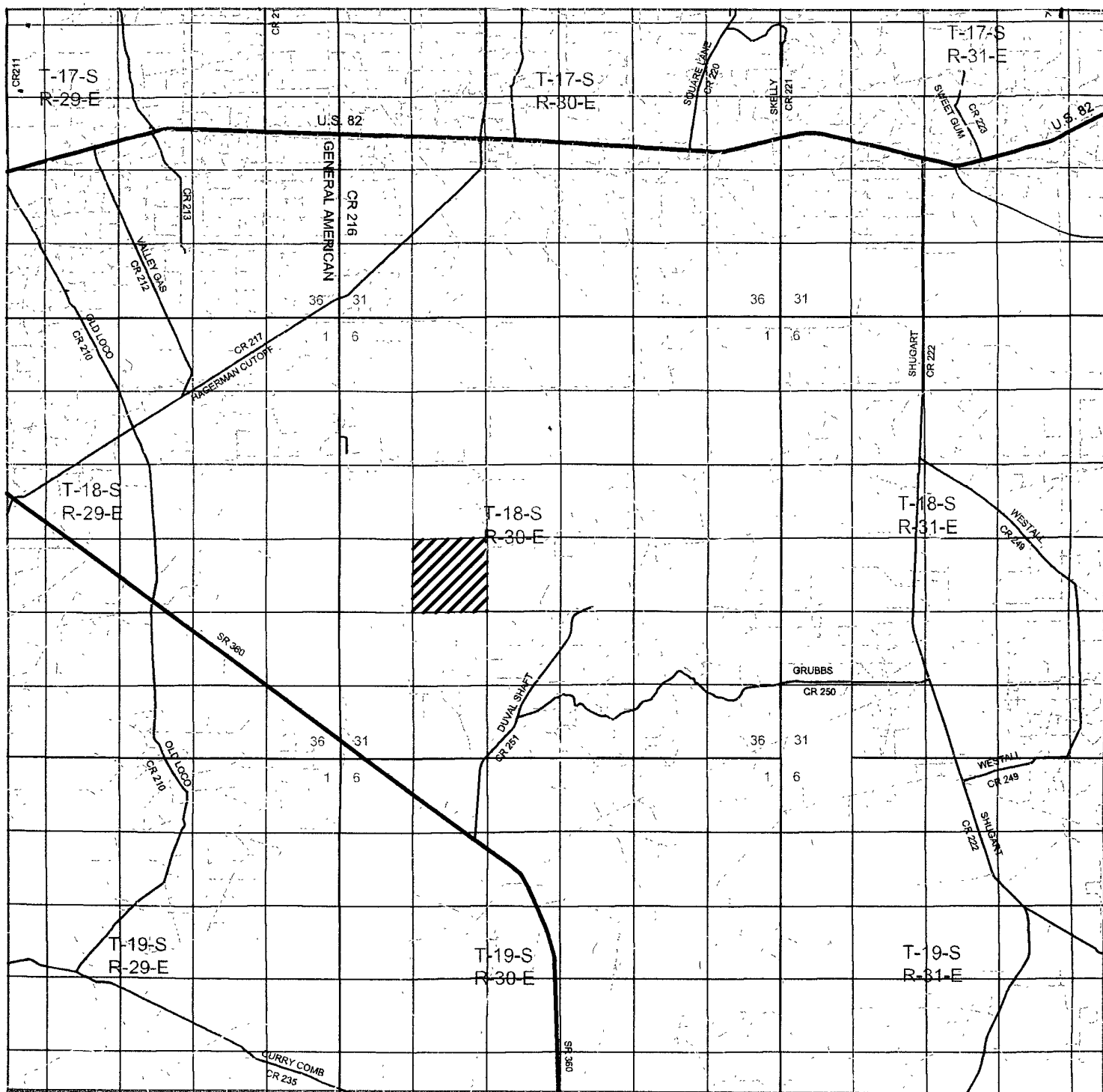
Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A             | 20      | 18 S     | 30 E  |         | 600           | NORTH            | 330           | EAST           | EDDY   |

|                               |                 |                    |           |
|-------------------------------|-----------------|--------------------|-----------|
| Dedicated Acres<br><b>160</b> | 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

|  |   |
|--|---|
|    | <b>OPERATOR CERTIFICATION</b><br><p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><u>Jackie Lathan</u> 1/19/10<br/>Signature Date</p> <p><u>Jackie Lathan</u><br/>Printed Name</p> |
| <b>SURFACE LOCATION</b><br>Lat - N 32°44'18.58"<br>Long - W 104°00'04.18"<br>NMSPC- E 602138.377<br>(NAD-27)   | <b>PROPOSED BOTTOM HOLE LOCATION</b><br>Lat - N 32°44'18.45"<br>Long - W 103°59'10.09"<br>NMSPC- E 606757.741<br>(NAD-27)   |
| <b>SURVEYOR CERTIFICATION</b><br><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><b>JANUARY 11, 2010</b><br/>Date Surveyed</p> <p><b>NEW MEXICO</b><br/>Signature &amp; Seal of Professional Surveyor</p> <p><b>W.D. Jones</b><br/>Certificate No. Gary L. Jones 7977</p> <p><b>BASIN SURVEYS</b></p> |   |



ARIES "20" FEDERAL COM #1H

Exhibit 3

Located 600' FNL and 330' FWL

Section 20, Township 18 South, Range 30 East,  
N.M.P.M., Eddy County, New Mexico.

**basin  
surveys**  
focused on excellence  
in the oilfield

P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(575) 393-7316 - Office  
(575) 392-2206 - Fax  
basinsurveys.com

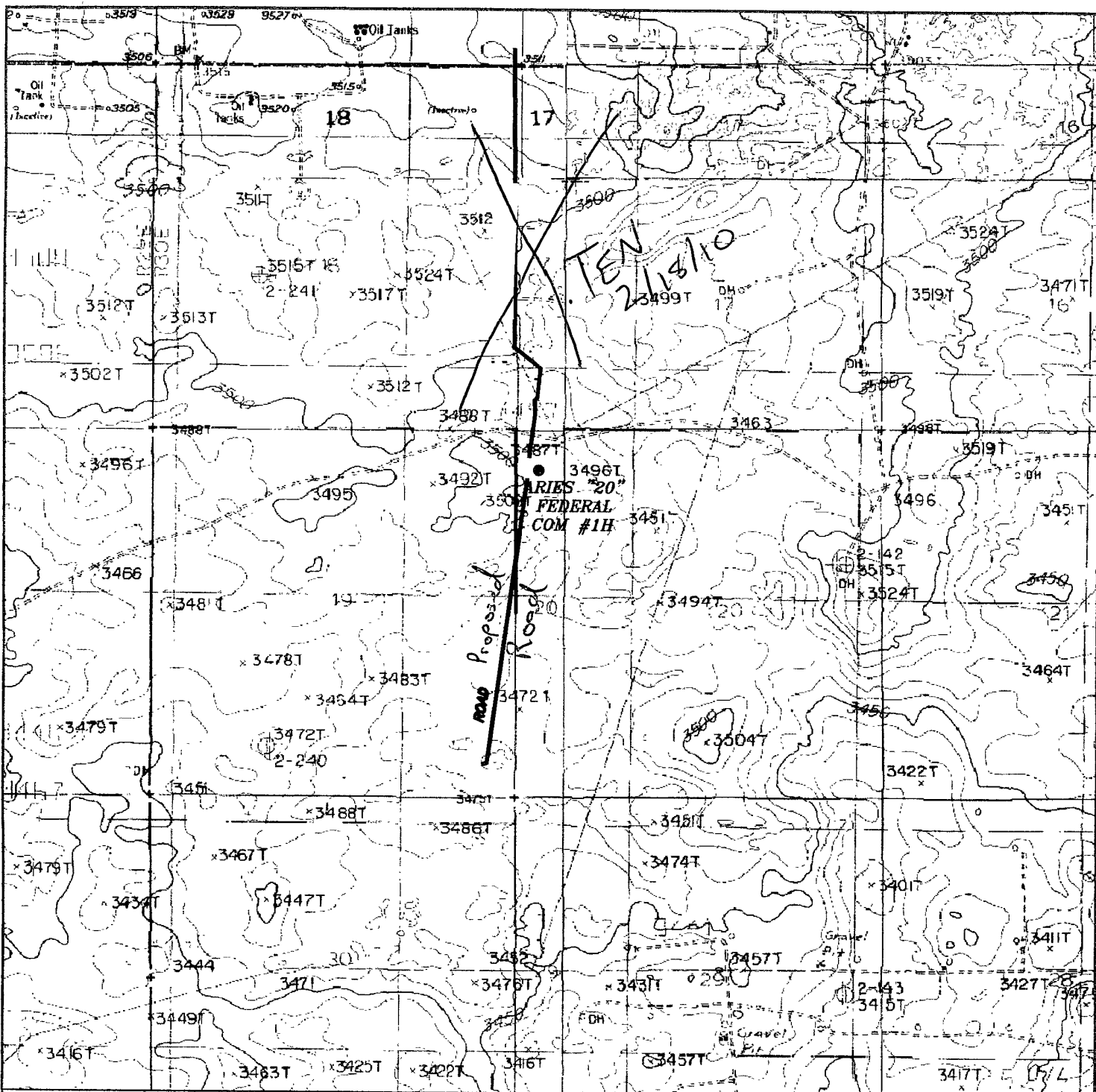
W.O. Number. JMS 22185

Survey Date: 01-11-2010

Scale: 1" = 2 Miles

Date: 01-14-2010

**MEWBOURNE  
OIL COMPANY**



ARIES "20" FEDERAL COM #1H  
 Located 600' FNL and 330' FWL  
 Section 20, Township 18 South, Range 30 East,  
 N.M.P.M., Eddy County, New Mexico.

Exhibit 3A

**basin**  
**surveys**  
 focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

W.O. Number: JMS 22185

Survey Date: 01-11-2010

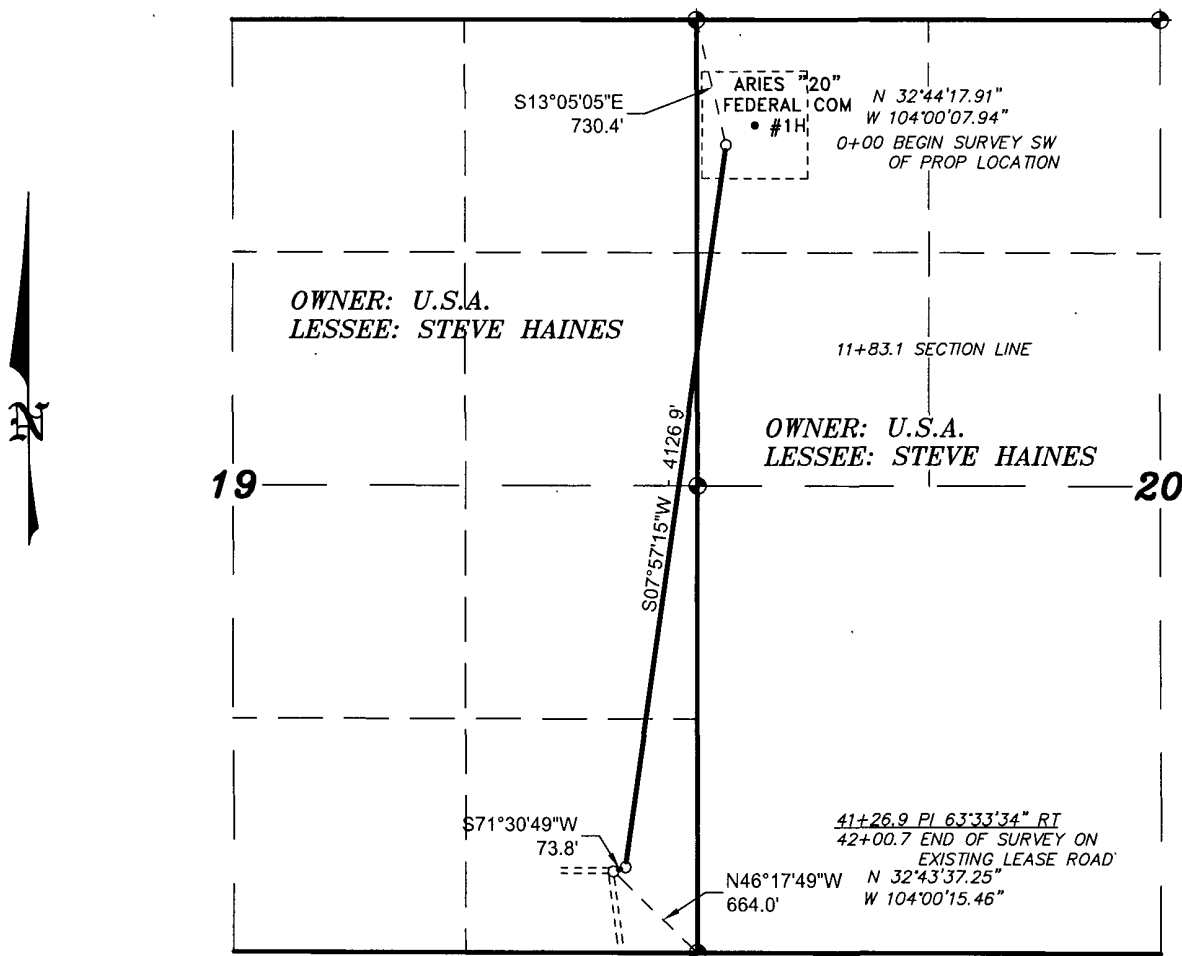
Scale: 1" = 2000'

Date: 01-14-2010



**MEWBOURNE**  
**OIL COMPANY**

SECTIONS 19&20, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



LEGAL DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTIONS 19&20, TOWNSHIP 18 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

NW/4NW/4 SEC. 20 = 614.5 FEET = 37.24 RODS = 0.12 MILES = 0.42 ACRES  
SW/4NW/4 SEC. 20 = 568.6 FEET = 34.46 RODS = 0.11 MILES = 0.39 ACRES  
SE/4NE/4 SEC. 19 = 763.7 FEET = 46.28 RODS = 0.14 MILES = 0.53 ACRES  
NE/4SE/4 SEC. 19 = 1332.4 FEET = 80.75 RODS = 0.25 MILES = 0.92 ACRES  
SE/4SE/4 SEC. 19 = 921.5 FEET = 55.86 RODS = 0.18 MILES = 0.63 ACRES

TOTAL = 4200.7 FEET = 254.59 RODS = 0.80 MILES = 2.89 ACRES

I HEREBY CERTIFY THAT THIS MAP WAS PREPARED FROM FIELD NOTES OF AN ADEQUATE SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, N.M.P.S. No. 7977  
No. 5074

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 22185

Drawn By: J. M. SMALL

Date: 01-14-2010

Disk: JMS 22185

Survey Date: 01-11-2010

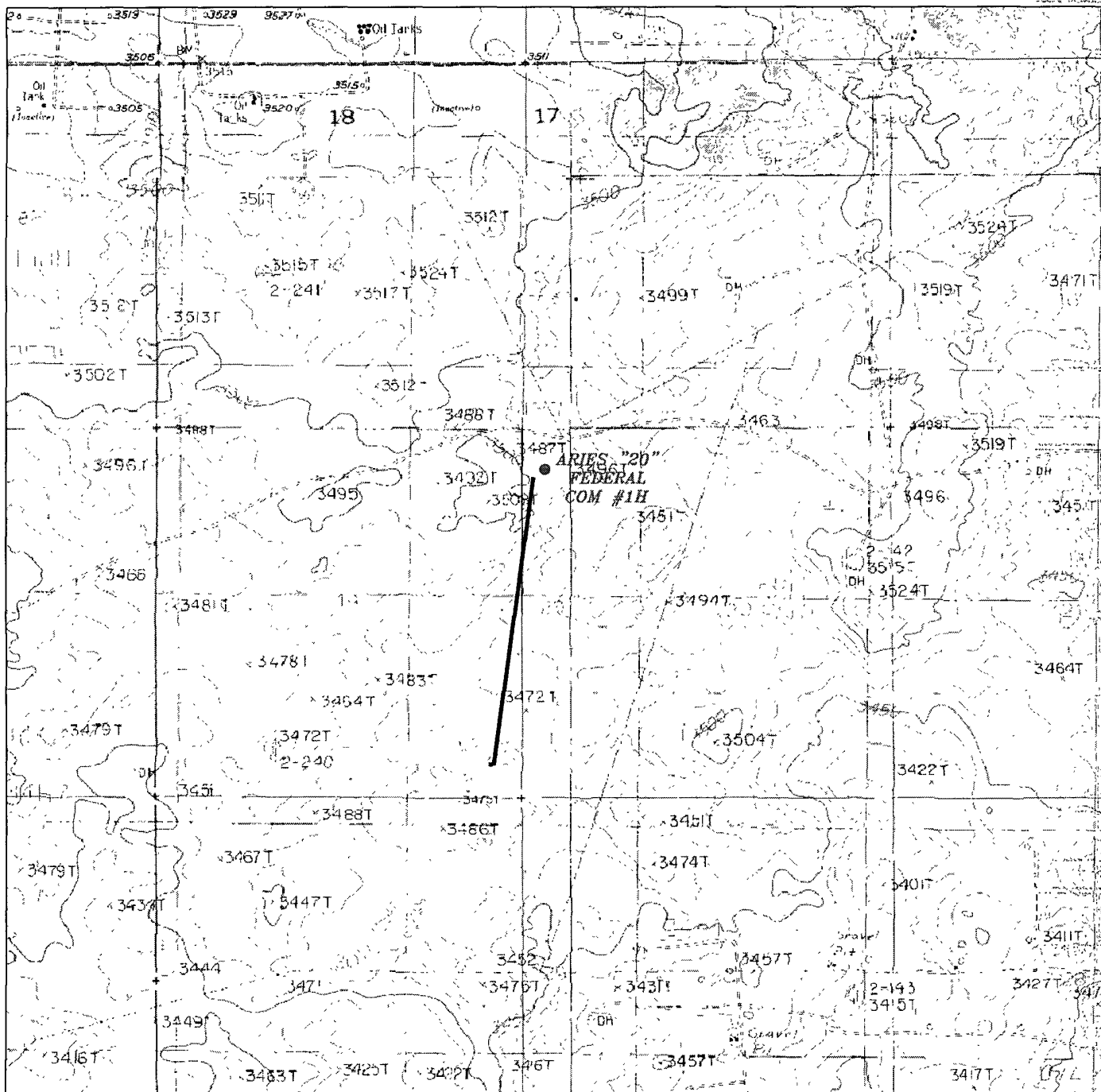
Sheet 1 of 1 Sheets

1000 0 1000 2000 FEET

**MEWBORNE OIL COMPANY**

REF: PROPOSED LEASE ROAD

A LEASE ROAD CROSSING USA LAND IN  
SECTIONS 19&20, TOWNSHIP 18 SOUTH, RANGE 30 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.



LEASE ROAD TO THE ARIES "20" FEDERAL COM #1H  
 Section 23, Township 20 South, Range 34 East,  
 N.M.P.M., Lea County, New Mexico.



focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

W.O. Number JMS 22185

Survey Date: 01-14-2010

Scale 1" = 2000'

Date: 01-14-2010

MEWBOURNE  
 OIL COMPANY

**Drilling Program**  
**Mewbourne Oil Company**  
Aries 20 Federal Com #1H  
600' FNL & 330' FWL  
Sec 20-T18S-R30E  
Eddy County, New Mexico

**1. The estimated tops of geological markers are as follows:**

|               |       |
|---------------|-------|
| Rustler       | 250'  |
| Salt          | 400'  |
| *Yates        | 1300' |
| *Queen        | 2400' |
| *Grayburg     | 2800' |
| *San Andres   | 3350' |
| *Bone Springs | 4200' |

**2. Estimated depths of anticipated fresh water, oil, or gas:**

|              |  |
|--------------|--|
| Water        | Fresh water will be protected by setting surface casing at 300' and cementing to surface.                      |
| Hydrocarbons | Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as necessary. |

**3. Pressure control equipment:**

A 2000# working pressure annular BOP will be installed on the 13 3/8" surface casing. A 3000# WP Double Ram BOP and a 3000# WP Annular will be installed after running 9 5/8" casing. A 3000# WP Double Ram BOP and a 3000# WP Annular will be installed after running 7" casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated daily to insure mechanical integrity and the inspection will be recorded on the daily drilling report.

Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the kelly is not in use.

**\*4. Proposed casing and cementing program:**

**A. Casing Program:**

|                      | <u>Hole Size</u> | <u>Casing</u> | <u>Wt/Ft.</u> | <u>Grade</u> | <u>Depth</u>        | <u>Jt Type</u> |
|----------------------|------------------|---------------|---------------|--------------|---------------------|----------------|
| <i>See<br/>COA</i> — | 17 1/2"          | 13 3/8" (new) | 48#           | H40          | 0-300' <i>1200'</i> | ST&C           |
|                      | 12 1/4"          | 9 5/8" (new)  | 36#           | J55          | 0- <del>1500'</del> | LT&C           |
|                      | 8 3/4"           | 7" (new)      | 26#           | P110         | 0-8450'             | LT&C           |
|                      | 6 1/8"           | 4 1/2" (new)  | 11.6#         | P110         | 8200' 12505'        | LT&C           |

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

\*Subject to availability of casing.



## B. Cementing Program

- i. Surface Casing: 300 sks Class C cement containing 2% CaCl. Yield at 1.34 cuft/sk. Cmt circulated to surface.
- ii. Intermediate Casing: 500 sacks Class C light cement with additives. Yield at 1.98 cuft/sk 200 sacks Class C cement containing 2% CaCl. Yield at 1.34 cuft/sk Cmt circulated to surface.
- ii. Deep Intermediate Casing: 600 sacks Class H Light with additives. Yield at 2.05 cuft/sk. 400 sacks Class H cement with additives. Yield at 1.18 cuft/sk. Cmt circulated to surface.
- iii. Production Casing: Plans are to use a Packer-Plus system with 4 ½" casing. Will run Packer type liner @ 8200'.

## 5. Mud Program:

| <u>Interval</u> | <u>Type System</u> | <u>Weight</u> | <u>Viscosity</u> | <u>Fluid Loss</u> |
|-----------------|--------------------|---------------|------------------|-------------------|
| 0'-300'         | FW spud mud        | 8.6-9.4       | 32-34            | NA                |
| 300'-1500'      | Brine water        | 10.0-10.2     | 28-30            | NA                |
| 1500' 8450'     | Cut brine water    | 8.8-9.2       | 28-30            | NA                |
| 8450' 12505'    | Cut brine mud      | 8.6-8.8       | 32-36            | 15                |

## 6. Evaluation Program:

*See COTA* — Samples: 10' samples from surface casing to TD  
Logging: Gyro from KOP (7558') to surface. GR from 7000' to TD.

## 7. Downhole Conditions

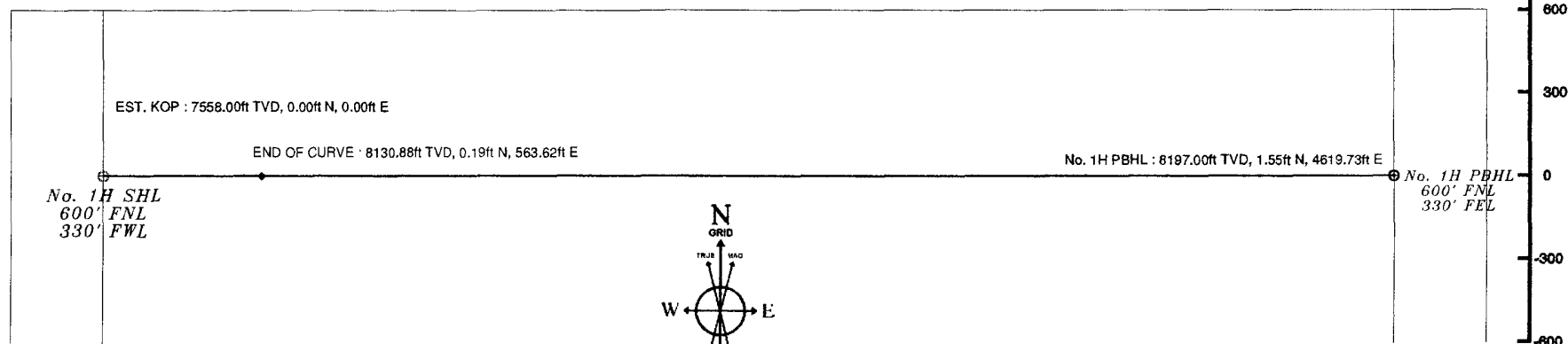
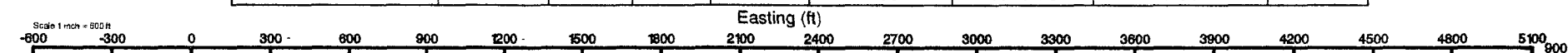
|                                  |   |
|----------------------------------|---|
| Zones of abnormal pressure:      | None anticipated                              |
| Zones of lost circulation:       | Anticipated in surface and intermediate holes |
| Maximum bottom hole temperature: | 130 degree F                                  |
| Maximum bottom hole pressure:    | 8.3 lbs/gal gradient or less                  |

## 8. Anticipated Starting Date:

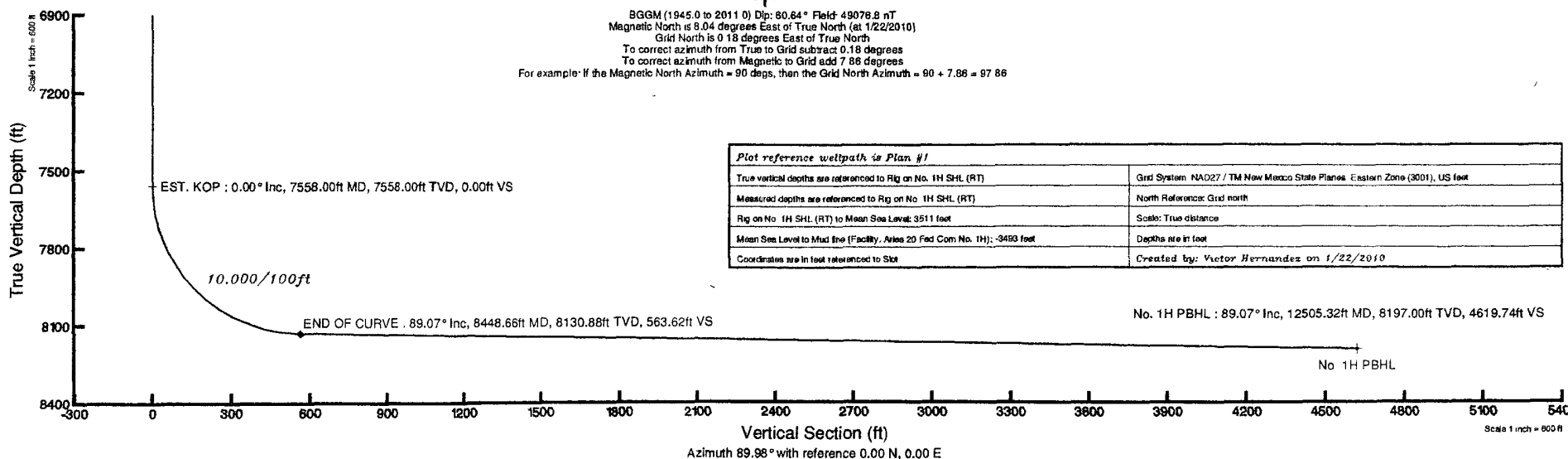
Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 45 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

## Well Profile Data

| Design Comment | MD (ft)  | Inc (°) | Az (°) | TVD (ft) | Local N (ft) | Local E (ft) | DLS (°/100ft) | VS (ft) |
|----------------|----------|---------|--------|----------|--------------|--------------|---------------|---------|
| Tie On         | 0.00     | 0.000   | 89.981 | 0.00     | 0.00         | 0.00         | 0.00          | 0.00    |
| EST. KOP       | 7558.00  | 0.000   | 89.981 | 7558.00  | 0.00         | 0.00         | 0.00          | 0.00    |
| END OF CURVE   | 8448.66  | 89.066  | 89.981 | 8130.88  | 0.19         | 563.62       | 10.00         | 563.62  |
| No. 1H PBHL    | 12505.32 | 89.066  | 89.981 | 8197.00  | 1.55         | 4619.73      | 0.00          | 4619.74 |



BGGM (1945.0 to 2011.0) Dip: 80.64° Field: 49078.8 nT  
Magnetic North is 8.04 degrees East of True North (at 1/22/2010)  
Grid North is 0.18 degrees East of True North  
To correct azimuth from True to Grid subtract 0.18 degrees  
To correct azimuth from Magnetic to Grid add 7.88 degrees  
For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.88 = 97.88



|  |  |
|--|--|
| Plot reference wellpath is Plan #1   |  |
| True vertical depths are referenced to Rig on No. 1H SHL (RT)              | Grid System: NAD83 / TM New Mexico State Planes Eastern Zone (2001), US feet |
| Measured depths are referenced to Rig on No. 1H SHL (RT)                   | North Reference: Grid north  |
| Rig on No. 1H SHL (RT) to Mean Sea Level: 3511 feet                        | Scale: True distance   |
| Mean Sea Level to Mud line (Facility: Aries 20 Fed Com No. 1H): -3493 feet | Depths are in feet   |
| Coordinates are in feet referenced to Slot                                 | Created by: Victor Hernandez on 1/22/2010                                    |

# Planned Wellpath Report

Plan #1  
Page 1 of 4

## REFERENCE WELLPATH IDENTIFICATION

|          |                            |          |            |
|----------|----------------------------|----------|------------|
| Operator | Mewbourne Oil Company      | Slot     | No. 1H SHL |
| Area     | Eddy County, NM            | Well     | No. 1H     |
| Field    | (Aries) Sec 20, T18S, R30E | Wellbore | No. 1H PWB |
| Facility | Aries 20 Fed Com No. 1H    |          |            |

## REPORT SETUP INFORMATION

|                     |  |                      |                           |
|---------------------|--|----------------------|---------------------------|
| Projection System   | NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet | Software System      | WellArchitect® 2.0        |
| North Reference     | Grid   | User                 | Victor Hernandez          |
| Scale               | 0.999921   | Report Generated     | 1/22/2010 at 2:44:06 PM   |
| Convergence at slot | 0.18° East   | Database/Source file | WA_Midland/No. 1H_PWB.xml |

## WELLPATH LOCATION

|                       | Local coordinates |          | Grid coordinates |                | Geographic coordinates |                 |
|-----------------------|-------------------|----------|------------------|----------------|------------------------|-----------------|
|                       | North[ft]         | East[ft] | Easting[USft]    | Northing[USft] | Latitude               | Longitude       |
| Slot Location         | 0.00              | 0.00     | 602138.38        | 632535.63      | 32°44'18.583"N         | 104°00'04.176"W |
| Facility Reference Pt |                   |          | 602138.38        | 632535.63      | 32°44'18.583"N         | 104°00'04.176"W |
| Field Reference Pt    |                   |          | 602138.38        | 632535.63      | 32°44'18.583"N         | 104°00'04.176"W |

## WELLPATH DATUM

|                          |                        |  |                   |
|--------------------------|------------------------|--|-------------------|
| Calculation method       | Minimum curvature      | Rig on No. 1H SHL (RT) to GL             | 18.00ft           |
| Horizontal Reference Pt  | Slot                   | Rig on No. 1H SHL (RT) to Mean Sea Level | 3511.00ft         |
| Vertical Reference Pt    | Rig on No. 1H SHL (RT) | GL to Mud Line (Facility)                | 0.00ft            |
| MD Reference Pt          | Rig on No. 1H SHL (RT) | Section Origin                           | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level         | Section Azimuth                          | 89.98°            |

## Planned Wellpath Report

Plan #1  
Page 2 of 4

## REFERENCE WELLPATH IDENTIFICATION

|          |                            |          |            |
|----------|----------------------------|----------|------------|
| Operator | Mewbourne Oil Company      | Slot     | No. 1H SHL |
| Area     | Eddy County, NM            | Well     | No. 1H     |
| Field    | (Aries) Sec 20, T18S, R30E | Wellbore | No. 1H PWB |
| Facility | Aries 20 Fed Com No. 1H    |          |            |

## WELLPATH DATA (53 stations) † = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[srv ft] | Grid North<br>[srv ft] | DLS<br>[°/100ft] | Comments     |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|-----------------------|------------------------|------------------|--------------|
| 0.00       | 0.000              | 89.981         | 0.00        | 0.00              | 0.00          | 0.00         | 602138.38             | 632535.63              | 0.00             | Tie On       |
| 7558.00    | 0.000              | 89.981         | 7558.00     | 0.00              | 0.00          | 0.00         | 602138.38             | 632535.63              | 0.00             | EST. KOP     |
| 7658.00†   | 10.000             | 89.981         | 7657.49     | 8.70              | 0.00          | 8.70         | 602147.08             | 632535.63              | 10.00            |              |
| 7758.00†   | 20.000             | 89.981         | 7753.96     | 34.55             | 0.01          | 34.55        | 602172.93             | 632535.64              | 10.00            |              |
| 7858.00†   | 30.000             | 89.981         | 7844.48     | 76.76             | 0.03          | 76.76        | 602215.14             | 632535.66              | 10.00            |              |
| 7958.00†   | 40.000             | 89.981         | 7926.29     | 134.05            | 0.04          | 134.05       | 602272.42             | 632535.67              | 10.00            |              |
| 8058.00†   | 50.000             | 89.981         | 7996.91     | 204.67            | 0.07          | 204.67       | 602343.03             | 632535.70              | 10.00            |              |
| 8158.00†   | 60.000             | 89.981         | 8054.20     | 286.48            | 0.10          | 286.48       | 602424.84             | 632535.73              | 10.00            |              |
| 8258.00†   | 70.000             | 89.981         | 8096.40     | 376.99            | 0.13          | 376.99       | 602515.34             | 632535.76              | 10.00            |              |
| 8358.00†   | 80.000             | 89.981         | 8122.25     | 473.46            | 0.16          | 473.46       | 602611.81             | 632535.79              | 10.00            |              |
| 8448.66    | 89.066             | 89.981         | 8130.88     | 563.62            | 0.19          | 563.62       | 602701.95             | 632535.82              | 10.00            | END OF CURVE |
| 8458.00†   | 89.066             | 89.981         | 8131.03     | 572.96            | 0.19          | 572.96       | 602711.29             | 632535.82              | 0.00             |              |
| 8558.00†   | 89.066             | 89.981         | 8132.66     | 672.94            | 0.23          | 672.94       | 602811.27             | 632535.86              | 0.00             |              |
| 8658.00†   | 89.066             | 89.981         | 8134.29     | 772.93            | 0.26          | 772.93       | 602911.25             | 632535.89              | 0.00             |              |
| 8758.00†   | 89.066             | 89.981         | 8135.92     | 872.92            | 0.29          | 872.92       | 603011.23             | 632535.92              | 0.00             |              |
| 8858.00†   | 89.066             | 89.981         | 8137.55     | 972.90            | 0.33          | 972.90       | 603111.21             | 632535.96              | 0.00             |              |
| 8958.00†   | 89.066             | 89.981         | 8139.18     | 1072.89           | 0.36          | 1072.89      | 603211.18             | 632535.99              | 0.00             |              |
| 9058.00†   | 89.066             | 89.981         | 8140.81     | 1172.88           | 0.39          | 1172.88      | 603311.16             | 632536.02              | 0.00             |              |
| 9158.00†   | 89.066             | 89.981         | 8142.44     | 1272.86           | 0.43          | 1272.86      | 603411.14             | 632536.06              | 0.00             |              |
| 9258.00†   | 89.066             | 89.981         | 8144.07     | 1372.85           | 0.46          | 1372.85      | 603511.12             | 632536.09              | 0.00             |              |
| 9358.00†   | 89.066             | 89.981         | 8145.70     | 1472.84           | 0.49          | 1472.84      | 603611.10             | 632536.12              | 0.00             |              |
| 9458.00†   | 89.066             | 89.981         | 8147.33     | 1572.82           | 0.53          | 1572.82      | 603711.08             | 632536.16              | 0.00             |              |
| 9558.00†   | 89.066             | 89.981         | 8148.96     | 1672.81           | 0.56          | 1672.81      | 603811.06             | 632536.19              | 0.00             |              |
| 9658.00†   | 89.066             | 89.981         | 8150.59     | 1772.80           | 0.59          | 1772.80      | 603911.03             | 632536.22              | 0.00             |              |
| 9758.00†   | 89.066             | 89.981         | 8152.22     | 1872.78           | 0.63          | 1872.78      | 604011.01             | 632536.26              | 0.00             |              |
| 9858.00†   | 89.066             | 89.981         | 8153.85     | 1972.77           | 0.66          | 1972.77      | 604110.99             | 632536.29              | 0.00             |              |
| 9958.00†   | 89.066             | 89.981         | 8155.48     | 2072.76           | 0.70          | 2072.76      | 604210.97             | 632536.33              | 0.00             |              |
| 10058.00†  | 89.066             | 89.981         | 8157.11     | 2172.74           | 0.73          | 2172.74      | 604310.95             | 632536.36              | 0.00             |              |
| 10158.00†  | 89.066             | 89.981         | 8158.74     | 2272.73           | 0.76          | 2272.73      | 604410.93             | 632536.39              | 0.00             |              |
| 10258.00†  | 89.066             | 89.981         | 8160.37     | 2372.72           | 0.80          | 2372.72      | 604510.91             | 632536.43              | 0.00             |              |

## Planned Wellpath Report

Plan #1  
Page 3 of 4

## REFERENCE WELLPATH IDENTIFICATION

|          |                            |          |            |
|----------|----------------------------|----------|------------|
| Operator | Mewbourne Oil Company      | Slot     | No. 1H SHL |
| Area     | Eddy County, NM            | Well     | No. 1H     |
| Field    | (Aries) Sec 20, T18S, R30E | Wellbore | No. 1H PWB |
| Facility | Aries 20 Fed Com No. 1H    |          |            |

## WELLPATH DATA (53 stations) † = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[srv ft] | Grid North<br>[srv ft] | DLS<br>[°/100ft] | Comments    |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|-----------------------|------------------------|------------------|-------------|
| 10358.00†  | 89.066             | 89.981         | 8162.00     | 2472.70           | 0.83          | 2472.70      | 604610.88             | 632536.46              | 0.00             |             |
| 10458.00†  | 89.066             | 89.981         | 8163.63     | 2572.69           | 0.86          | 2572.69      | 604710.86             | 632536.49              | 0.00             |             |
| 10558.00†  | 89.066             | 89.981         | 8165.26     | 2672.68           | 0.90          | 2672.68      | 604810.84             | 632536.53              | 0.00             |             |
| 10658.00†  | 89.066             | 89.981         | 8166.89     | 2772.66           | 0.93          | 2772.66      | 604910.82             | 632536.56              | 0.00             |             |
| 10758.00†  | 89.066             | 89.981         | 8168.52     | 2872.65           | 0.96          | 2872.65      | 605010.80             | 632536.59              | 0.00             |             |
| 10858.00†  | 89.066             | 89.981         | 8170.15     | 2972.64           | 1.00          | 2972.64      | 605110.78             | 632536.63              | 0.00             |             |
| 10958.00†  | 89.066             | 89.981         | 8171.78     | 3072.62           | 1.03          | 3072.62      | 605210.76             | 632536.66              | 0.00             |             |
| 11058.00†  | 89.066             | 89.981         | 8173.41     | 3172.61           | 1.06          | 3172.61      | 605310.73             | 632536.69              | 0.00             |             |
| 11158.00†  | 89.066             | 89.981         | 8175.04     | 3272.60           | 1.10          | 3272.60      | 605410.71             | 632536.73              | 0.00             |             |
| 11258.00†  | 89.066             | 89.981         | 8176.67     | 3372.59           | 1.13          | 3372.58      | 605510.69             | 632536.76              | 0.00             |             |
| 11358.00†  | 89.066             | 89.981         | 8178.30     | 3472.57           | 1.17          | 3472.57      | 605610.67             | 632536.80              | 0.00             |             |
| 11458.00†  | 89.066             | 89.981         | 8179.93     | 3572.56           | 1.20          | 3572.56      | 605710.65             | 632536.83              | 0.00             |             |
| 11558.00†  | 89.066             | 89.981         | 8181.56     | 3672.55           | 1.23          | 3672.54      | 605810.63             | 632536.86              | 0.00             |             |
| 11658.00†  | 89.066             | 89.981         | 8183.19     | 3772.53           | 1.27          | 3772.53      | 605910.61             | 632536.90              | 0.00             |             |
| 11758.00†  | 89.066             | 89.981         | 8184.82     | 3872.52           | 1.30          | 3872.52      | 606010.58             | 632536.93              | 0.00             |             |
| 11858.00†  | 89.066             | 89.981         | 8186.45     | 3972.51           | 1.33          | 3972.51      | 606110.56             | 632536.96              | 0.00             |             |
| 11958.00†  | 89.066             | 89.981         | 8188.08     | 4072.49           | 1.37          | 4072.49      | 606210.54             | 632537.00              | 0.00             |             |
| 12058.00†  | 89.066             | 89.981         | 8189.71     | 4172.48           | 1.40          | 4172.48      | 606310.52             | 632537.03              | 0.00             |             |
| 12158.00†  | 89.066             | 89.981         | 8191.34     | 4272.47           | 1.43          | 4272.47      | 606410.50             | 632537.06              | 0.00             |             |
| 12258.00†  | 89.066             | 89.981         | 8192.97     | 4372.45           | 1.47          | 4372.45      | 606510.48             | 632537.10              | 0.00             |             |
| 12358.00†  | 89.066             | 89.981         | 8194.60     | 4472.44           | 1.50          | 4472.44      | 606610.46             | 632537.13              | 0.00             |             |
| 12458.00†  | 89.066             | 89.981         | 8196.23     | 4572.43           | 1.53          | 4572.43      | 606710.44             | 632537.16              | 0.00             |             |
| 12505.32   | 89.066             | 89.981         | 8197.00†    | 4619.74           | 1.55          | 4619.73      | 606757.74             | 632537.18              | 0.00             | No. 1H PBHL |

## Planned Wellpath Report

Plan #1  
Page 4 of 4

## REFERENCE WELLPATH IDENTIFICATION

|          |                            |          |            |
|----------|----------------------------|----------|------------|
| Operator | Mewbourne Oil Company      | Slot     | No. 1H SHL |
| Area     | Eddy County, NM            | Well     | No. 1H     |
| Field    | (Aries) Sec 20, T18S, R30E | Wellbore | No. 1H PWB |
| Facility | Aries 20 Fed Com No. 1H    |          |            |

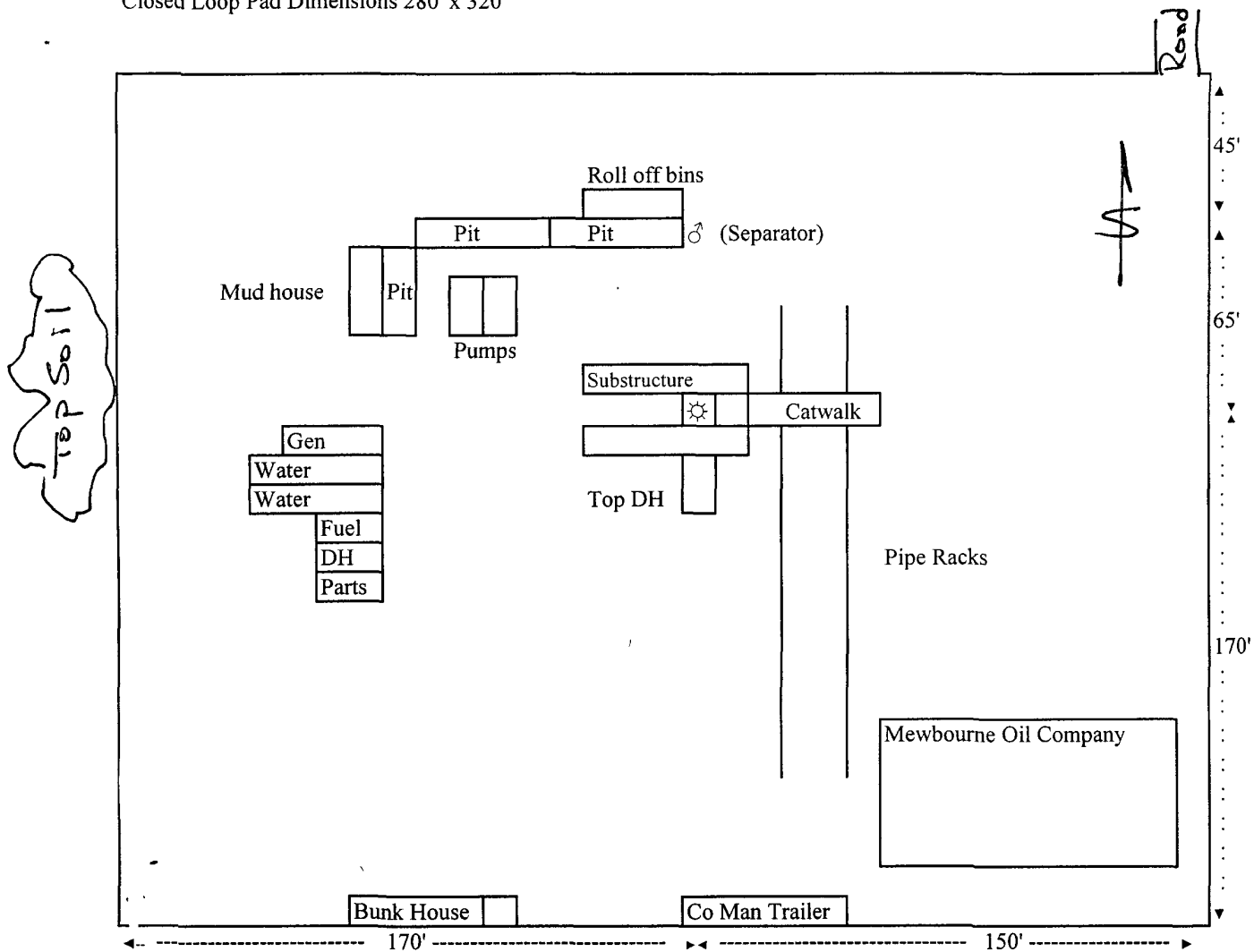
## TARGETS

| Name           | MD<br>[ft] | TVD<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[srv ft] | Grid North<br>[srv ft] | Latitude       | Longitude       | Sh |
|----------------|------------|-------------|---------------|--------------|-----------------------|------------------------|----------------|-----------------|----|
| 1) No. 1H PBHL | 12505.32   | 8197.00     | 1.55          | 4619.73      | 606757.74             | 632537.18              | 32°44'18.452"N | 103°59'10.094"W | pc |

## SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Plan #1

| Start MD<br>[ft] | End MD<br>[ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore   |
|------------------|----------------|------------------------------|------------------|------------|
| 18.00            | 12505.32       | NaviTrak (Standard)          |                  | No. 1H PWB |

Closed Loop Pad Dimensions 280' x 320'

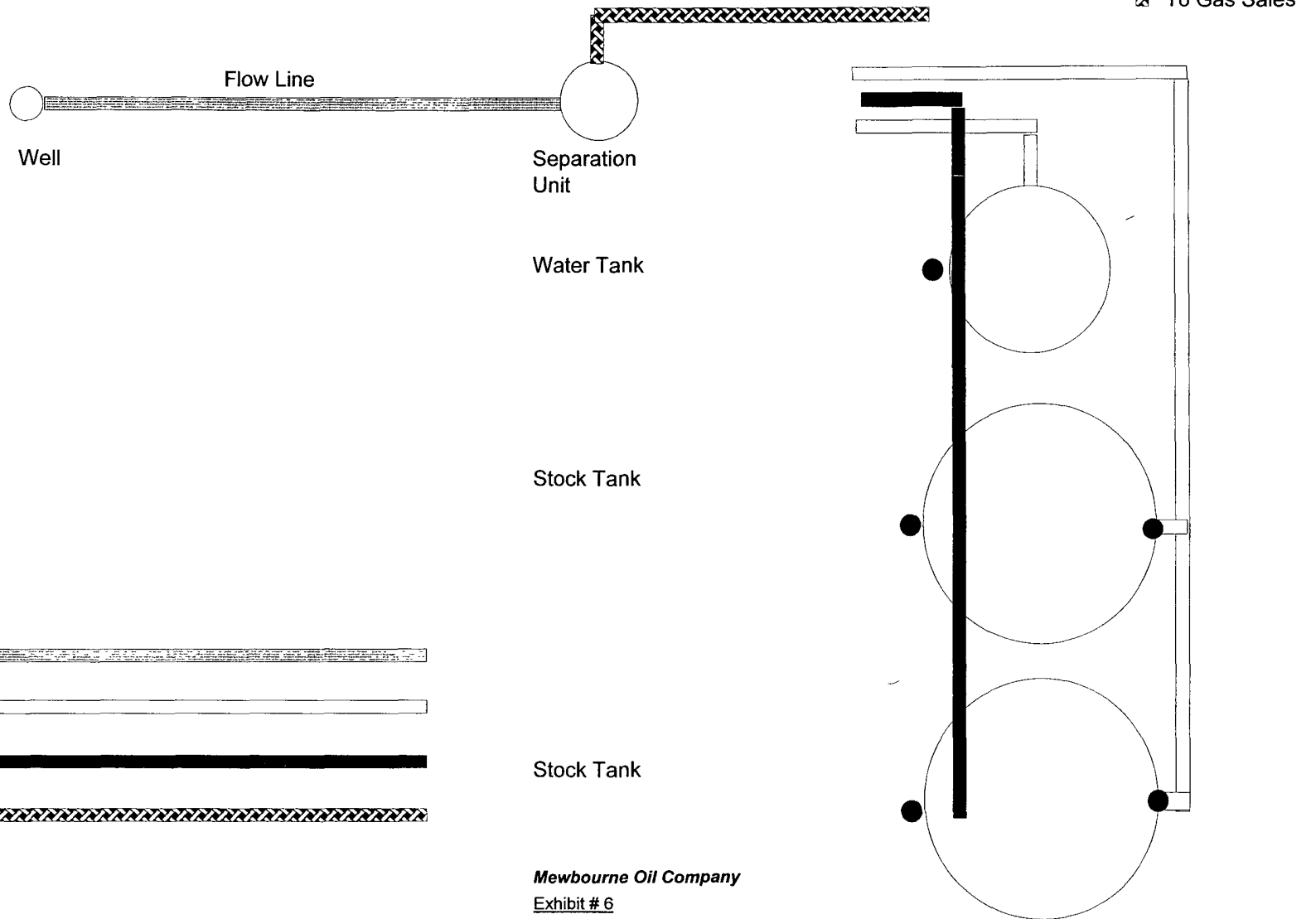


Aries 20 Fed Com #1H  
600' FNL & 330' FWL  
Sec 20, T18S, R30E  
Eddy Co., NM

EXHIBIT 5

# Proposed Production Facilities Schematic

Road



**Mewbourne Oil Company**

Exhibit # 6

Proposed Production Facilities Schematic

Aries 20 Federal Com #1H  
600' FNL & 330' FWL  
Sec 20-T18S-R30E  
Eddy, County  
New Mexico

*Handwritten mark resembling a stylized 'Z' or '7' with an arrow pointing right.*



**Notes Regarding Blowout Preventer**

**Mewbourne Oil Company**

Aries 20 Federal Com #1H

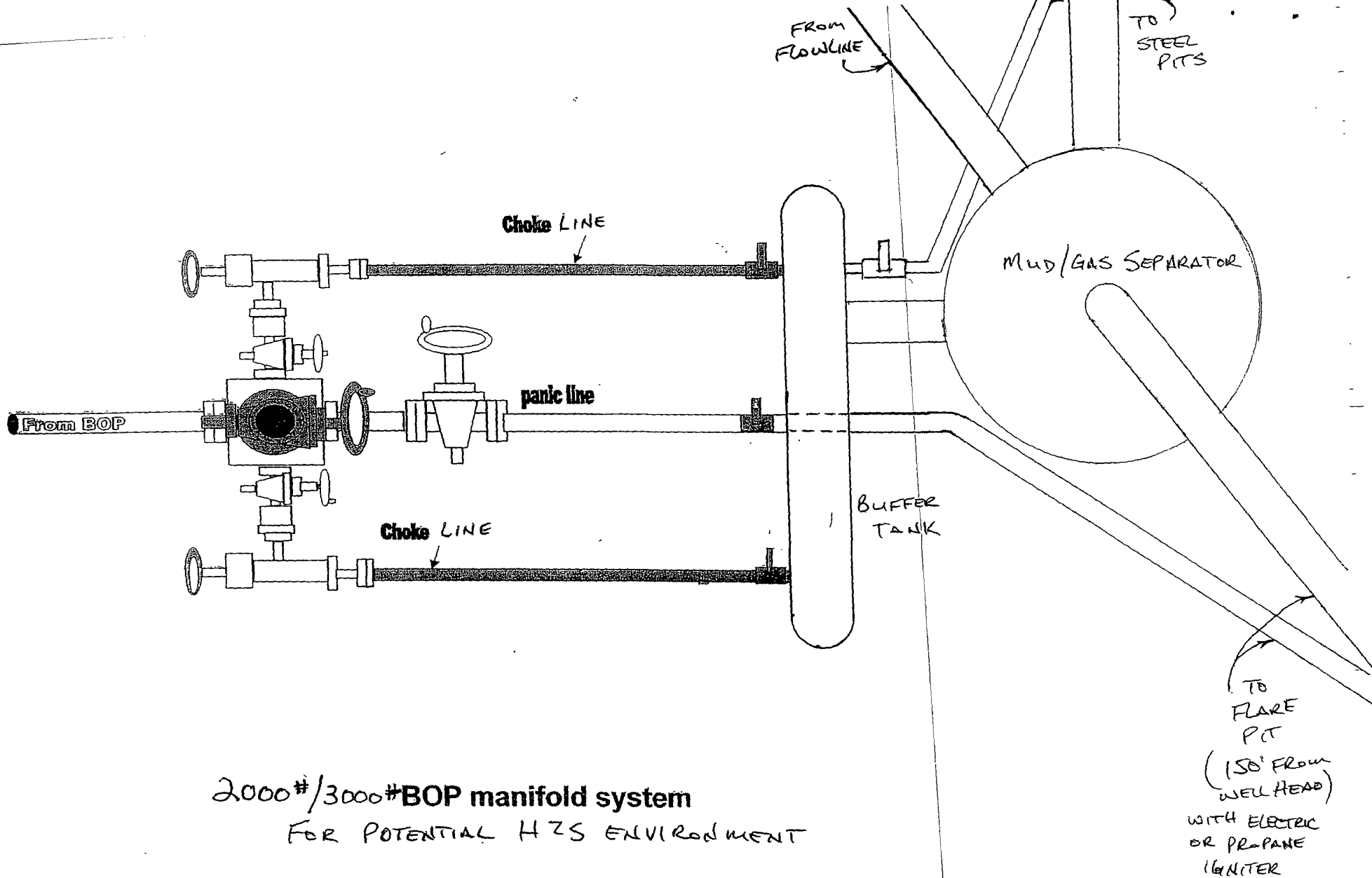
600' FNL & 330' FWL

Sec 20-T18S-R30E

Eddy County, New Mexico

- I. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.
- II. Blowout preventer and all fittings must be in good condition with a minimum 2000 psi working pressure on 13 3/8" casing and 3000 psi working pressure on 9 5/8" & 7" casing.
- III. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 3000 psi working pressure.
- IV. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.
- V. A kelly cock shall be installed on the kelly at all times.

Blowout preventer closing equipment to include an accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.



Mewbourne Oil Company  
BOP Schematic for  
12 1/4" Hole

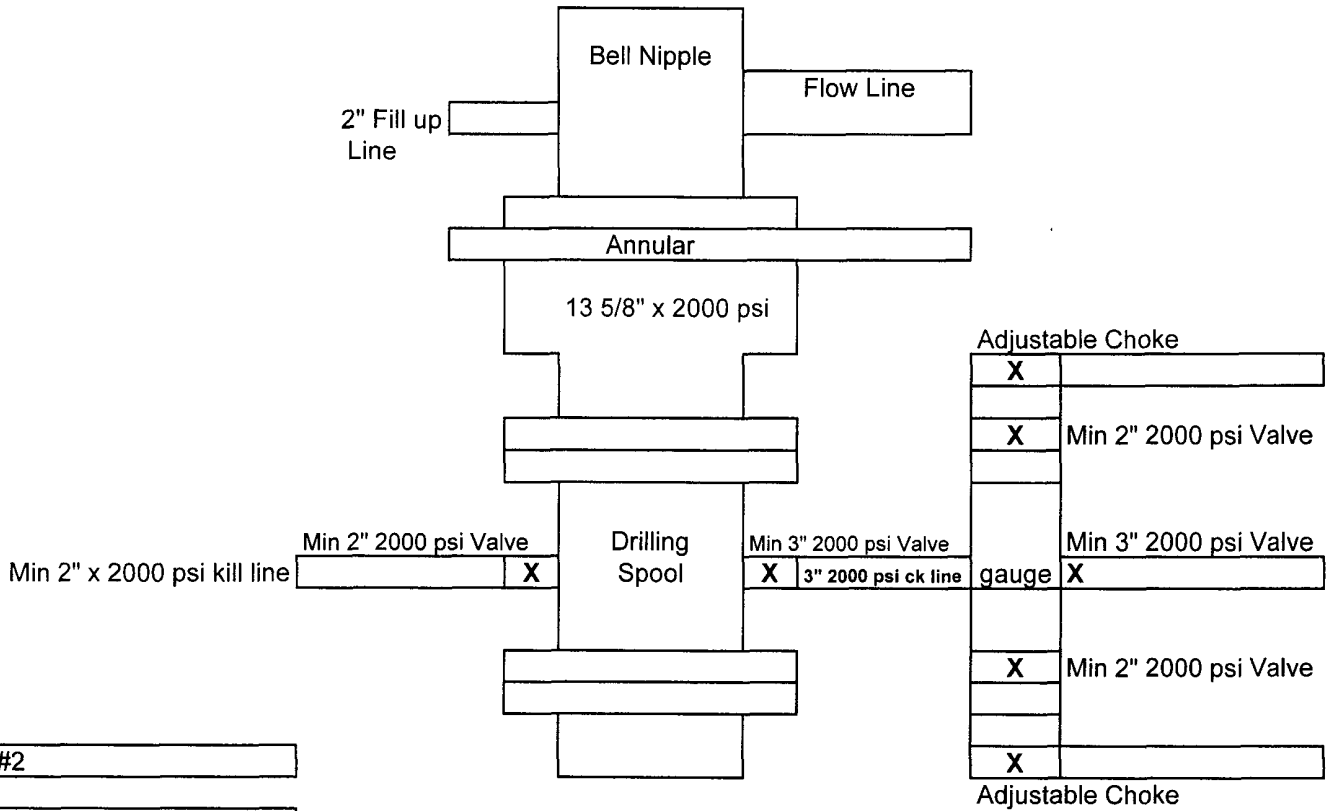


Exhibit #2

Aries 20 Federal Com #1H  
600' FNL & 330' FWL  
Sec 20-T18S-R30E  
Eddy, County  
New Mexico

Mewbourne Oil Company  
BOP Schematic for  
8 3/4" Hole

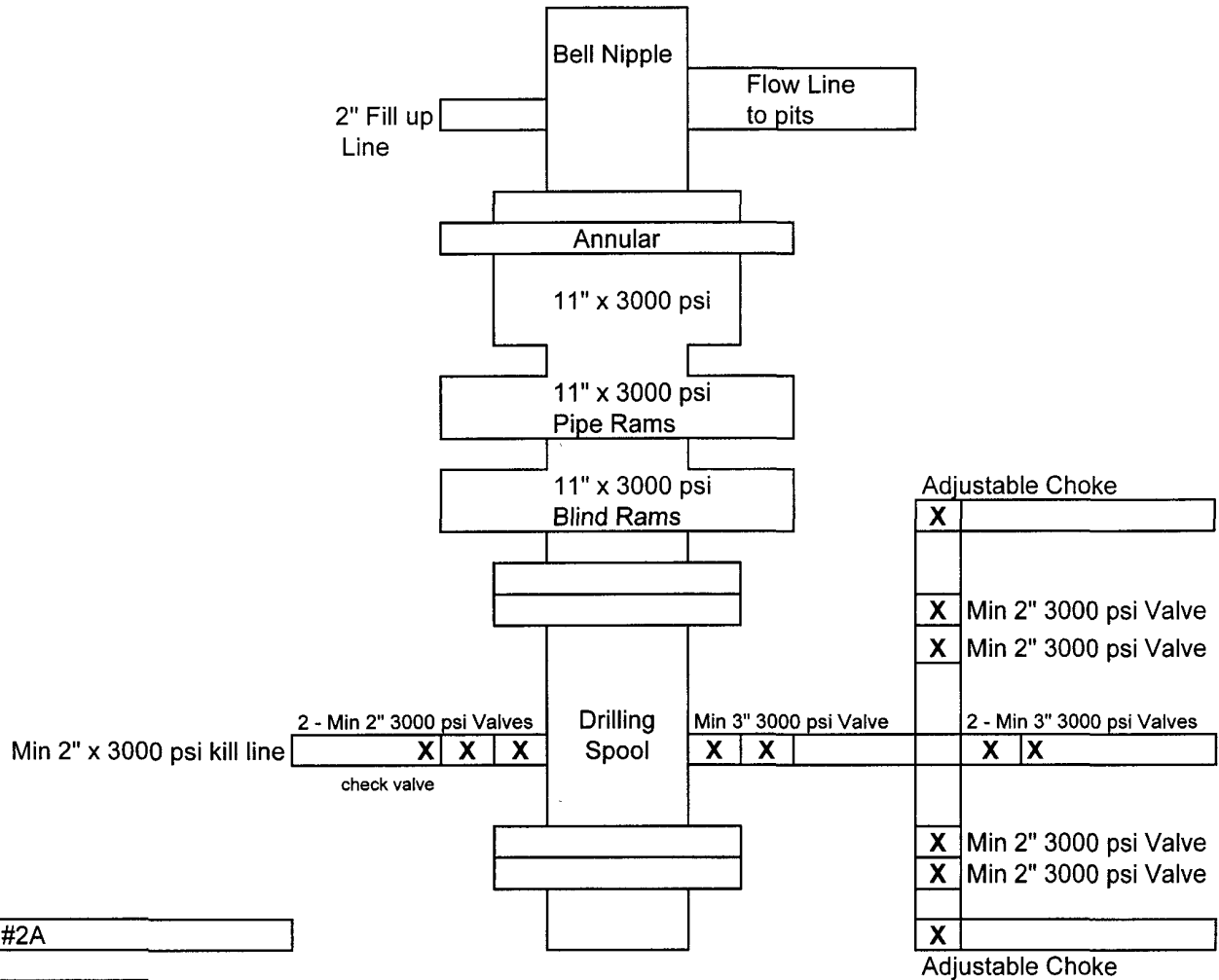


Exhibit #2A

Aries 20 Federal Com #1H  
600' FNL & 330' FWL  
Sec 20-T18S-R30E  
Eddy, County  
New Mexico

Mewbourne Oil Company  
BOP Schematic for  
6 1/8" Hole

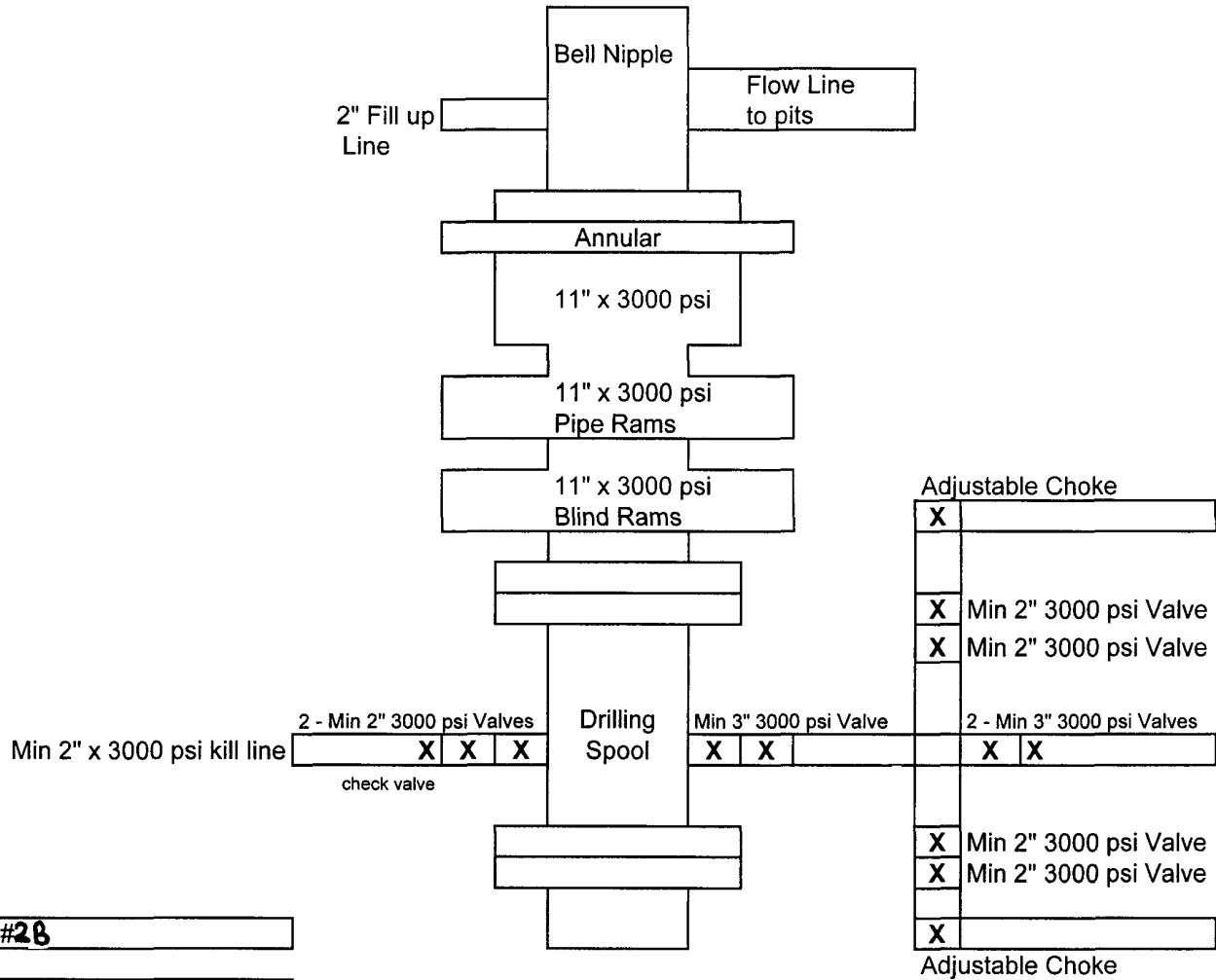


Exhibit #28

Aries 20 Federal Com #1H  
600' FNL & 330' FWL  
Sec 20-T18S-R30E  
Eddy, County  
New Mexico

## Hydrogen Sulfide Drilling Operations Plan

**Mewbourne Oil Company**  
Aries 20 Federal Com #1H  
600' FNL & 330' FWL  
Sec 20-T18S-R30E  
Eddy County, New Mexico

### **1. General Requirements**

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H<sub>2</sub>S were found. MOC will have on location and working all H<sub>2</sub>S safety equipment before the Yates formation for purposes of safety and insurance requirements.

### **2. Hydrogen Sulfide Training**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

1. The hazards and characteristics of hydrogen sulfide gas.
2. The proper use of personal protective equipment and life support systems.
3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- 1 The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- 3 The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a known hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

### **3. Hydrogen Sulfide Safety Equipment and Systems**

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the intermediate casing.

1. Well Control Equipment
  - A. Flare line with automatic igniter or continuous ignition source.
  - B. Choke manifold with minimum of one adjustable choke.
  - C. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
  - D. Auxiliary equipment including rotating head and annular type blowout preventer.
2. Protective Equipment for Essential Personnel

Thirty minute self contained work unit located at briefing area as indicated on wellsite diagram.

3. Hydrogen Sulfide Protection and Monitoring Equipment

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

4. Visual Warning Systems

A. Wind direction indicators as indicated on the wellsite diagram.

B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. **Mud Program**

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

5. **Metallurgy**

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

6. **Communications**

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

7. **Well Testing**

Drill stem testing is not an anticipated requirement for evaluation of this well. A drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

8. **Emergency Phone Numbers**

|  |                     |
|--|---------------------|
| Eddy County Sheriff's Office                                   | 911 or 575-887-7551 |
| Ambulance Service  | 911 or 575-885-2111 |
| Carlsbad Fire Dept   | 911 or 575-885-2111 |
| Loco Hills Volunteer Fire Dept.                                | 911 or 575-677-3266 |
| Closest Medical Facility - Columbia Medical Center of Carlsbad | 575-492-5000        |

|                       |                       |              |
|-----------------------|-----------------------|--------------|
| Mewbourne Oil Company | Hobbs District Office | 575-393-5905 |
|                       | Fax                   | 575-397-6252 |
|                       | 2 <sup>nd</sup> Fax   | 575-393-7259 |

|                         |               |              |
|-------------------------|---------------|--------------|
| District Manager        | Micky Young   | 575-390-0999 |
| Drilling Superintendent | Frosty Lathan | 575-390-4103 |
| Drilling Foreman        | Wesley Noseff | 575-441-0729 |

# **MULTI-POINT SURFACE USE AND OPERATIONS PLAN**

## **MEWBOURNE OIL COMPANY**

Aries 20 Federal Com #1H

600' FNL & 330' FWL

Sec 20-T18S-R30E

Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, Covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved, and the procedures to be followed in restoring the surface so that a complete appraisal can be made of the environmental impact associated with the proposed operations.

### **1. Existing Roads:**

- A. Exhibit #3 is a road map showing the location of the proposed well. Existing roads are highlighted in black and proposed road is highlighted in blue. Exhibit #3A is a topographic map showing the location of the proposed well and access road. Existing and proposed roads are highlighted in black.
- B. **Directions to location from Carlsbad, NM: Go NE on Hwy 62/180 for 16 miles to Hwy 360. Turn North on Hwy 360 and go 13 miles. Turn NE on Grubbs Road (CR 250). Continue North 2.0 Miles. Turn Left (North) on lease Road 3 miles, then North 1.0 miles to location.**

### **2. Proposed Access Road:**

- A. Approx 1 mile of new road will be needed.
- B. The access to the location will be limited to 14' in width and will adequately drain runoff and control erosion as presently constructed.

### **3. Location of Existing Wells:**

There are producing wells within the immediate vicinity of the well site. Exhibit #4 shows the proposed well and existing wells within a one mile radius.

### **4. Location of Existing and/or Proposed Facilities:**

- A. There are no production facilities on this lease at the present time.
- B. In the event that the well is productive, production facilities will be located on the NW side of well pad.
- C. All production vessels left on location will be painted to conform with BLM painting stipulations within 180 days of installation.

### **5. Location and Type of Water Supply**

The well will be drilled with a combination of fresh water and brine water based mud systems. The water will be obtained from commercial suppliers in the area and/or hauled to the location by transport trucks over existing and proposed roads as indicated in Exhibit #3.



## **6. Source of Construction Materials**

All material required for construction of the drill pad and access roads will be obtained from private, state, or federal pits. The construction contractor will be solely responsible for securing construction materials required for this operation and paying any royalties that may be required on those materials.

## **7. Methods of Handling Waste Disposal:**

- A. Drill cuttings not retained for evaluation purposed will be hauled to approved land fill.
- B. Water produced during operations will be hauled to an approved SWD.
- C. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
- D. Current regulations regarding the proper disposal of human waste will be followed.
- E. All trash, junk, and other waste materials will be stored in proper containers to prevent dispersal and will be removed to an appropriate facility within one week of cessation of drilling and completion activities.

## **8. Ancillary Facilities**

There are no ancillary facilities within the immediate vicinity of the proposed well site.

## **9. Well Site Layout**

- A. A diagram of the drill pad is shown in Exhibit #5. Dimensions of the pad and location of major rig components are shown.
- B. The pad dimension of 280' x 320' has been staked and flagged.
- C. An archaeological survey is in the process of being conducted on the proposed location pad.

## **10. Plans for Restoration of Surface**

- A. Upon cessation of the proposed operations, if the well is abandoned, the location and road will be ripped and re-seeded. The entire location will be restored to the original contour as much as reasonable possible. All trash and garbage will be hauled to appropriate disposal to assure the location is aesthetically pleasing as reasonable possible. All restoration work will be completed within 180 days of cessation of activities.
- B. The disturbed area will be restored by re-seeding during the proper growing season.
- C. Any additional caliche required for production facilities will be obtained from a source as described in Section 6.
- D. Within 90 days of cessation of drilling and completion operations, all equipment not necessary for production operations will be removed. The location will be cleaned of all trash and junk to assure the well site is left as aesthetically pleasing as reasonably possible.

**11. Surface Ownership:**

The surface is owned by: BLM

**12. Other Information:**

- A. Topography: Refer to the archaeological report for a detailed description of flora, fauna, soil characteristics, dwellings, and historical or cultural sites.
- B. The primary use of the surface at the location is for grazing of livestock.

**13. Operator's Representative:**

- A. Through APD approval, drilling, completion and production operations:

**N.M. Young, District Manager**  
Mewbourne Oil Company  
PO Box 5270  
Hobbs, NM 88241  
575-393-5905

## Mewbourne Oil Company

PO Box 5270  
Hobbs, NM 88241  
(575) 393-5905

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route for the Aries 20 Federal Com #1H, 600' FNL & 330' FWL of Sec 20-T18S- R30E, Eddy County, New Mexico; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mewbourne Oil Company, its contractors and subcontractors, in accordance with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Signature: \_\_\_\_\_



Date: \_\_\_\_\_

1/28/10

Print: \_\_\_\_\_

**Hobbs District Manager**

**Exhibit #4**  
**Status of Wells in Immediate Vicinity**  
**Mewbourne Oil Company**  
**Aries 20 Federal Com #1H**  
**600' FSL & 330' FWL**  
**Sec 20-T18S-R30E**  
**Eddy County, New Mexico**

**Section 29-T18S-R30E**

Operator: Mewbourne Oil Company  
Well Name: Santo Nino 29 Fed #1  
Unit letter: E  
Status: SWD  
Field: Santo Nino Bone Springs

Operator: Mewbourne Oil Company  
Well Name: Santo Nino 29 Federal #2  
Unit letter: D  
Status: Producing  
Field: Santo Nino Bone Springs

Operator: Mewbourne Oil Company  
Well Name: Santo Nino 29 Federal #3  
Unit letter: L  
Status: Producing  
Field: Santo Nino Bone Springs

# PECOS DISTRICT CONDITIONS OF APPROVAL

|                       |                                     |
|-----------------------|-------------------------------------|
| OPERATOR'S NAME:      | MEWBOURNE OIL COMPANY               |
| LEASE NO.:            | NM27279                             |
| WELL NAME & NO.:      | 1H-ARIES 20 FEDERAL COM             |
| SURFACE HOLE FOOTAGE: | 0600' FNL & 0330' FWL               |
| BOTTOM HOLE FOOTAGE:  | 0600' FNL & 0330' FEL               |
| LOCATION:             | Section 20, T. 18 S., R 30 E., NMPM |
| COUNTY:               | Eddy County, New Mexico             |

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Livestock Watering Requirement
  - Lesser Prairie-Chicken Timing Stipulations
  - HEA Restriction
  - Ground-level Abandoned Well Marker
  - Access Road Restriction
  - Communitization Agreement
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - Secretary's Potash
  - H2S – Onshore Order 6 requirements
  - Logging requirements
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Future Electric Line
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

### **Livestock Watering Requirement**

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by the operator. The operator will take the proper measures to not damage or impede the normal functions of the existing water pipeline. The operator shall notify the grazing allotment holder prior to crossing the water pipeline.

### **Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

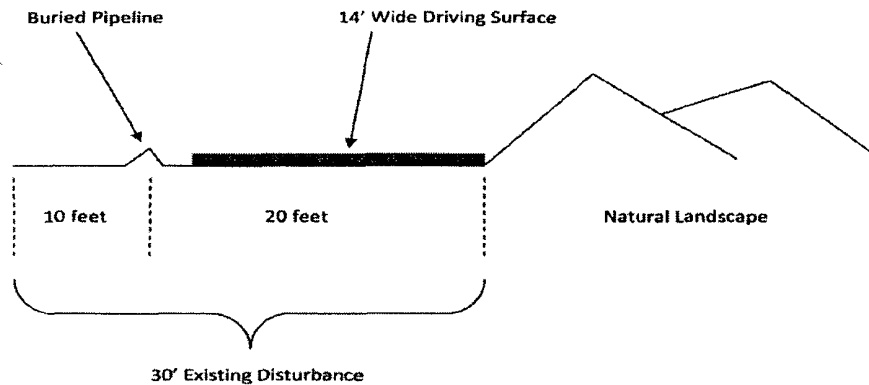
Due to the location occurring in a Lesser Prairie-Chicken Habitat Evaluation Area (HEA), as described in the 2008 Special Status Species Resource Management Plan Amendment, **non-emergency exceptions to this condition-of-approval will not be granted.**

**Ground-level Abandoned Well Marker to avoid raptor perching:** Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

### **Access Road Restriction:**

The access road will be constructed in a manner to minimize new surface disturbance. The access road will be constructed within the existing surface disturbance created by the buried pipeline. The operator shall utilize a thirty feet wide area to construct the access road, which will consist of 20 feet east of the buried pipeline and 10 feet west of the buried pipeline. The driving surface shall be constructed on the east side of the buried pipeline; at least 5 feet from the pipeline. It is understood by the BLM that 1 to 2 feet of new disturbance will be created east of the existing buried pipeline right-of-way. See the following figure for a reference.

**Communitization Agreement:** A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.



## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall stockpile the topsoil in a low profile manner (less than 8 feet) in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.



## **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## **F. ON LEASE ACCESS ROADS**

### **Road Width**

The access road will be constructed in a manner to minimize new surface disturbance. The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet. The width of disturbance (30 feet) shall include the existing surface disturbance of the buried pipeline.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

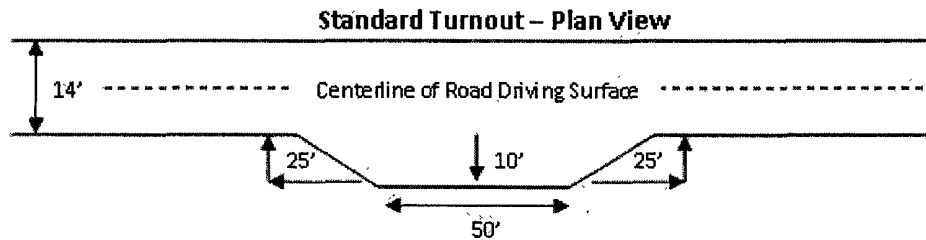
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

## Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

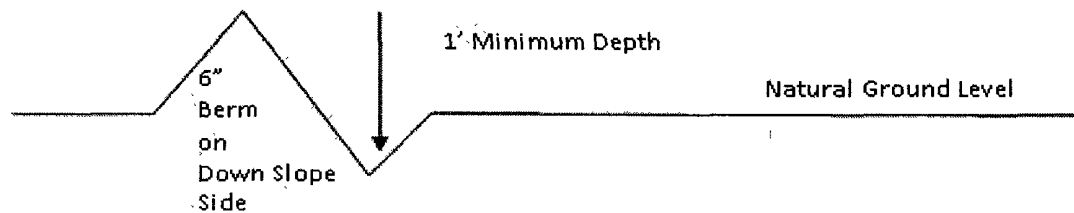


## Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

**Culvert Installations**

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

**Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

**Fence Requirement**

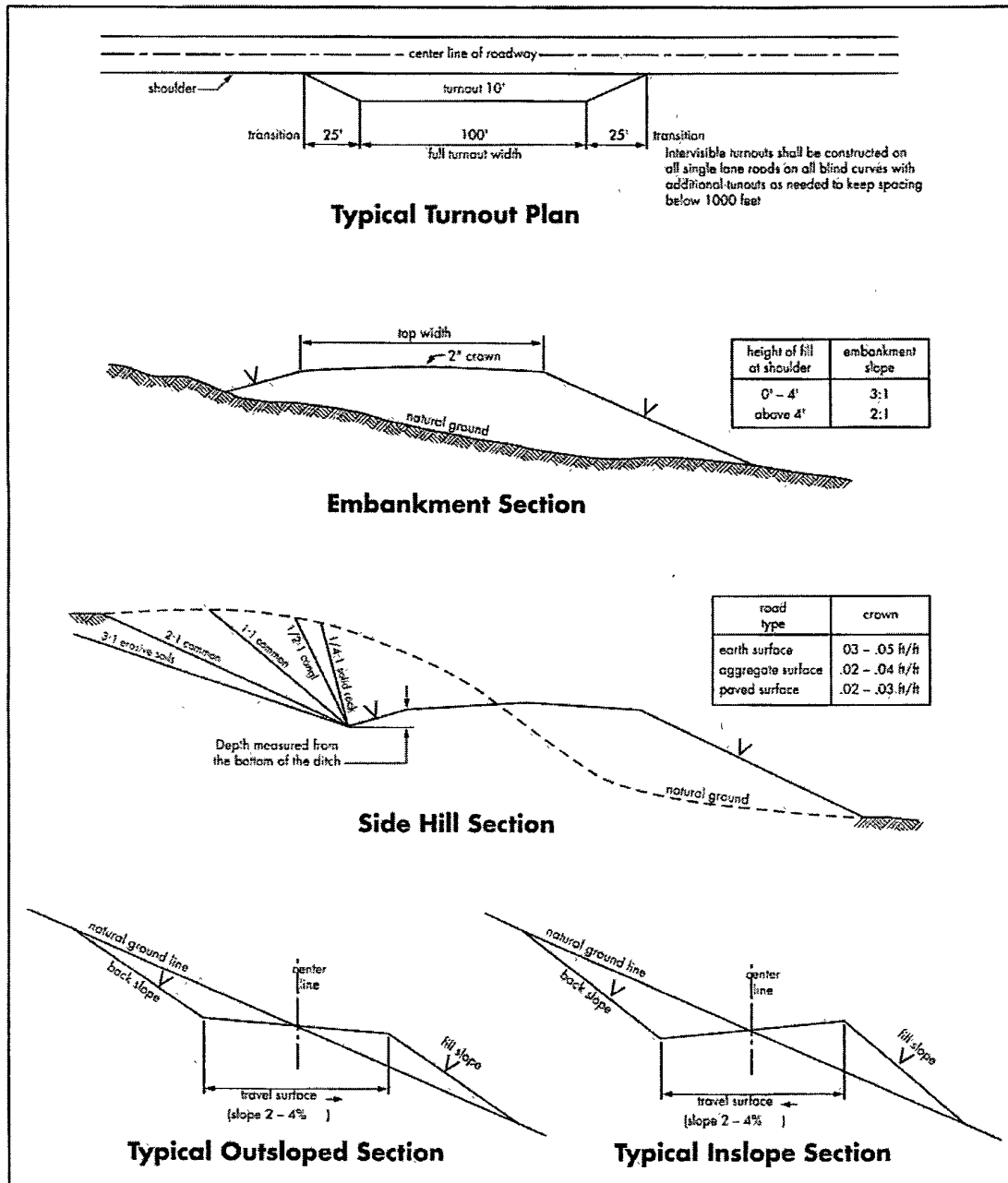
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Figure 1 – Cross Sections and Plans For Typical Road Sections**



## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Secretary's Potash**

**Possible water & brine flows in the Salado Group and Premier member of the Grayburg formation.**

1. The 13-3/8 inch surface casing shall be set at approximately **300 feet** (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:  
**Casing should be set in the Tansill formation at approximately 1200 feet.**
  - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**Centralizers required on 7 inch casing horizontal leg, must be type for horizontal service and minimum of one every other joint.**

3. The minimum required fill of cement behind the 7 inch production casing is:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. The minimum required fill of cement behind the 4-1/2 inch liner is:

- ☒ Cement not required; operator is using the Packer-Plus completion system.  
Liner to tie-back a minimum of 200 feet into the production casing.

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 2000 (2M) psi.

- a. For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 intermediate casing shoe shall be **3000 (3M) psi**.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. Casing cut-off and BOP installation will not be initiated until the cement has had a minimum of 8 hours setup time for a water basin. The casing shall remain stationary and under pressure for at least eight hours after the operator places the cement. **In the potash area, the minimum time is 12 hours and the casing shall remain stationary and under pressure during this time period.** Casing shall be under pressure if the operator uses some acceptable means of holding pressure or if the operator employs one or more float valves to hold the cement in place. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
  - b. The tests shall be done by an independent service company using a test plug.
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

**RGH 030910**

### **VIII. PRODUCTION (POST DRILLING)**

#### **A. WELL STRUCTURES & FACILITIES**

##### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.



**Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

**Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

**B. FUTURE ELECTRIC LINES**

As agreed on the onsite with Mr. Young (Mewbourne Oil Company): In the event that electricity is needed to service the Aries 20 Federal Com 1H well location, the electric lines will be buried along the east edge of the access road (approximately 4,300 feet of electric line).

**IX. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

## Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

| <u>Species</u>      | <u>lb/acre</u> |
|---------------------|----------------|
| Plains Bristlegrass | 5lbs/A         |
| Sand Bluestem       | 5lbs/A         |
| Little Bluestem     | 3lbs/A         |
| Big Bluestem        | 6lbs/A         |
| Plains Coreopsis    | 2lbs/A         |
| Sand Dropseed       | 1lbs/A         |

\*\*Four-winged Saltbush 5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed