

OCD-ARTESIA

510

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Split Estate

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. 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 88240

3b. Phone No. (include area code)

505-393-5905

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

At surface 1133' FNL & 1130' FWL Unit D

At proposed prod. zone Same

APR 08 2008

OCD-ARTESIA

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

6 miles SW of Carlsbad, NM

Lease Serial No.

NM-34247

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No

8. Lease Name and Well No

Shepherd Draw 33.Fed Com #1

9. API Well No

30-015-36268

10. Field and Pool, or Exploratory

Happy Valley Morrow

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

Sec 33-T22S-R26E

12. County or Parish

Eddy

13. State

NM

15. Distance from proposed*
location to nearest
property or lease line, ft
(Also to nearest drig. unit line, if any) 1130'

16. No. of Acres in lease

240

17. Spacing Unit dedicated to this well

320

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. 150'

19. Proposed Depth

11750'

20. BLM/BIA Bond No. on file

NM1693, Nationwide

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

3298' 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

Title

Hobbs Regulatory

Approved by (Signature)

/s/ Don Peterson

Name (Printed/Typed)

Jackie Lathan

Date

02/27/08

Title

FIELD MANAGER

Office

CARLSBAD FIELD 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)

Carlsbad Controlled Water Basin

Witness Surface &
Intermediate Casing

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

United States Department of the Interior
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, 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

Mewbourne Oil Company of Hobbs, NM is a field office of Mewbourne Oil Company, 3901 S Broadway, Tyler TX 75701. **Mail connected to this APD should be directed to the Hobbs address.** 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 #NM34247

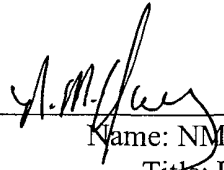
Legal Description of Land: Section 33, T-22S, R-26E Eddy County, New Mexico.
Location @ 1133' FNL & 1130' FWL.

Formation (if applicable): Morrow

Bond Coverage: \$150,000

BLM Bond File: NM1693, Nationwide

Authorized Signature: _____


Name: NMI (Micky) Young

Title: District Manager

Date: February 27, 2008

Mewbourne Oil Company
Shepherd 33 Federal Com #1
1133' FNL & 1130' FWL
Section 33-T22S-R26E
Eddy County, New Mexico

February 27, 2008

Mewbourne Oil Company has an agreement with William F. Gillock, Jr. and his wife, Beverly Gillock surface owners. For surface disturbance for location, road, pipeline and Right-of-Ways. If you have any questions, please call Mickey Young at 505-393-5905.

Thank You,
Jackie Lathan
Hobbs Regulatory

A handwritten signature in cursive script that reads "Jackie Lathan". The signature is written in black ink and is positioned below the typed name.

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

DISTRICT II
1301 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 12, 2005

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

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name <i>Happy Valley Morrow</i>
Property Code	Property Name SHEPHERD DRAW "33" FEDERAL COM	Well Number 1
GRID No. 14744	Operator Name MEWBOURNE OIL COMPANY	Elevation 3298'

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	33	22 S	26 E		1133	NORTH	1130	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
Dedicated Acres 320	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 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 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><i>Jackie Lathan</i> 2/27/08 Signature Date</p> <p><i>Jackie Lathan</i> Printed Name</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>FEBRUARY 12 2008</p> <p>Date Surveyed</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>[Signature]</i></p> <p>No. 10789</p>
	<p>Certificate No. Gary L. Jones 7977</p> <p>Basin Surveys</p>

Drilling Program
Mewbourne Oil Company
Shepherd Draw "33" Federal Com #1
1133' FNL & 1130' FWL
Sec 33-T22S-R26E
Eddy County, New Mexico

1. The estimated top of geological markers are as follows:

*Delaware	1700'	*Atoka	10570'
*Bonespring	4850'	*Morrow	10890'
*Wolfcamp	8460'	Barnett	11620'
*Strawn	10070'		

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

Water	Fresh water will be protected by setting surface casing at 1200' and cement to surface.
Oil and Gas Hydrocarbons	Oil and Gas are anticipated in the above (*) formations. These zones will be protected by setting casing and cementing as necessary.

3. Pressure control equipment:

A 2000# working pressure annular BOP will be installed on the 13 3/8" surface casing. A 5000# WP Double Ram BOP and a 5000# WP Annular will be installed after running 9 5/8" 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>
17 1/2"	13 3/8" (New)	48#	H40	0-350'	ST&C
12 1/4"	9 5/8" (New)	40#	N80	0-100'	LT&C
12 1/4"	9 5/8" (New)	40#	J55	100'-1600'	LT&C
8 3/4"	5 1/2" (New)	17#	P110	0-4000'	LT&C
8 3/4"	5 1/2" (New)	17#	N80	4000'-9000'	LT&C
8 3/4"	5 1/2" (New)	17#	P110	9000'-11750'	LT&C

Minimum casing design factors: Collapse 1.2, Burst 1.1, Tensile strength 2.0.

B. Cementing Program

- i. Surface Casing: 400 sacks Class C light cement with additives. Yield @ 1.98 cuft/sk. 200 sks Class C cement containing 2% CaCl. Yield @ 1.34 cuft/sk. Cmt circulated to surface.
- ii. Intermediate Casing: 700 Class C light cement with additives. Yield @ 1.98 cuft/sk. 400 sacks Class C cement containing 2% CaCl. Yield @ 1.34 cuft/sk. Cmt circulated to surface.
- iii. Production Casing: 400 sacks Class H cement with additives. Yield @ 1.28 cuft/sk. Shallower productive zones may be protected by utilizing a multiple stage cementing tool in the production casing below potentially productive zones and cementing with a light cement slurry. Cmt top to be ~~500'~~ above Wolfcamp. *see COA tie back*

*Mewbourne Oil Company reserves the right to change cement designs as hole conditions may warrant.

5. Mud Program:

<u>Interval</u>	<u>Type System</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0'-350'	FW spud mud	8.6-9.4	32-34	NA
350'-1600'	Fresh water	8.4-8.6	28-30	NA
1600'-11750'	Fresh water/Cut Brine	8.4-9.8	28-34	8-12

(Note: Any Weight Above 8.6#/gallon would be to hold back Wolfcamp shale, rather than abnormal BHP.)

6. Evaluation Program:

Samples:	10' samples from intermediate casing to TD
Logging:	Compensated density and dual laterlog from intermediate casing to TD
Coring:	As needed for evaluation
Drill Stem Tests:	As needed for evaluation

7. Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	180 degree F
Maximum bottom hole pressure:	9.0 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.

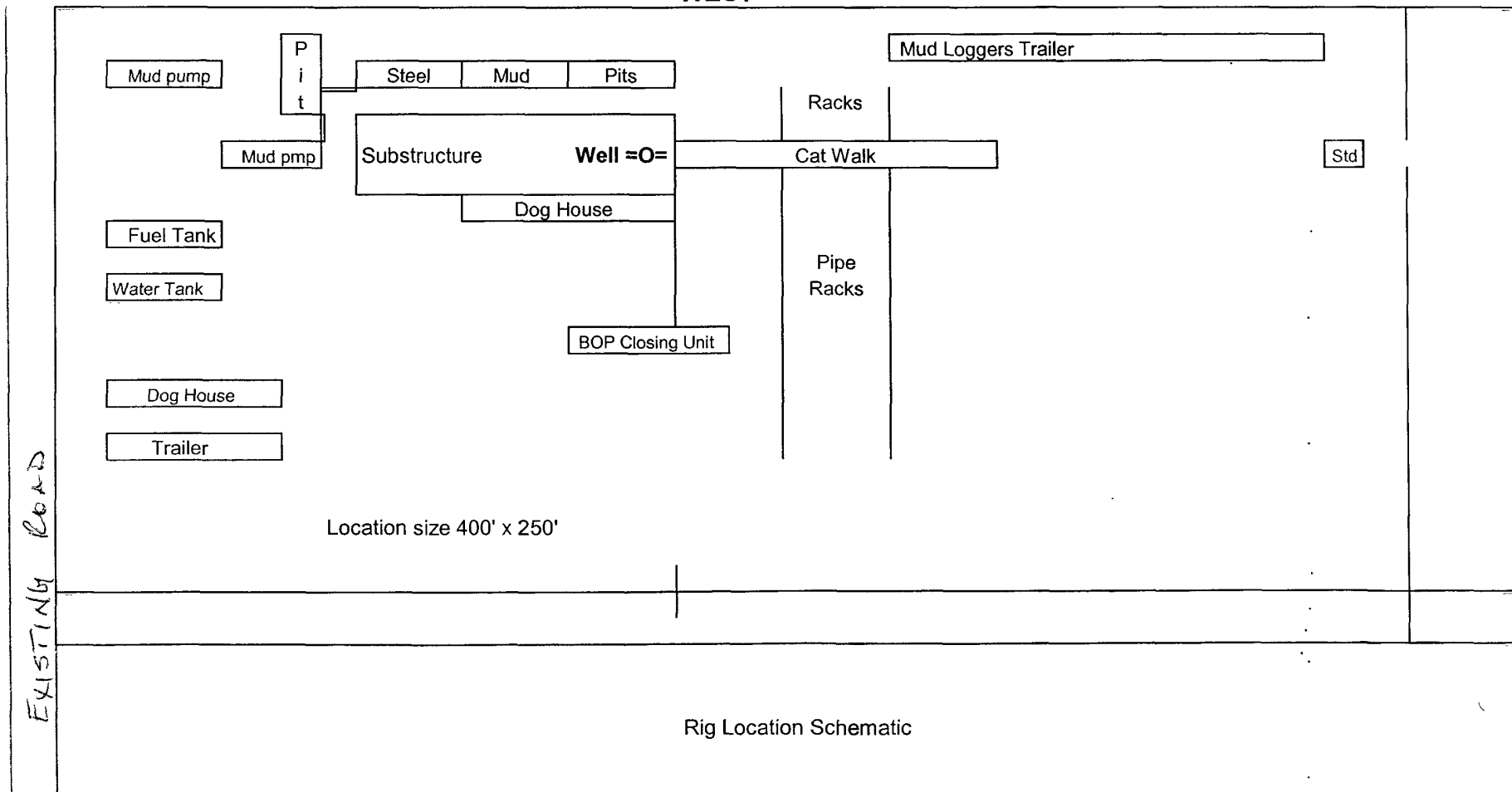
Mewbourne Oil Company

Exhibit #5

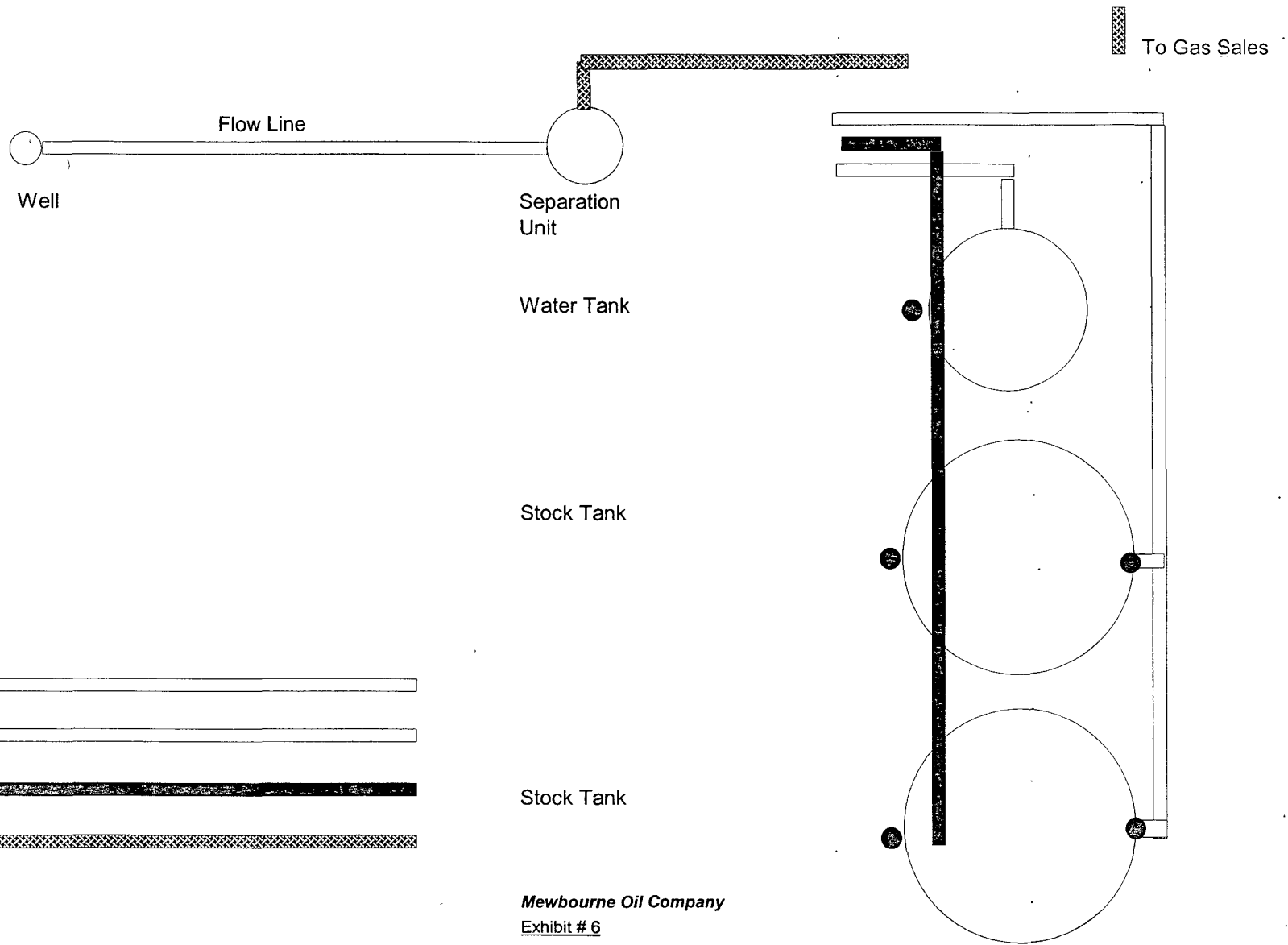
Well Name	Shepherd Draw 33 Fed Com #1
Footages	1133' FNL & 1130' FWL
STR	Sec 33-T22S-R26E
County	Eddy, County
State	New Mexico



WEST



Proposed Production Facilities Schematic



- Flow Line
- Water Line
- Oil Dump Line
- Gas Sales Line
- Sealing Valve
- Non Sealing Valve

Mewbourne Oil Company
 Exhibit # 6
 Proposed Production Facilities Schematic

Shepherd Draw 33 Fed Com #1
 1133' FNL & 1130' FWL
 Sec 33-T22S-R26E
 Eddy, County
 New Mexico

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

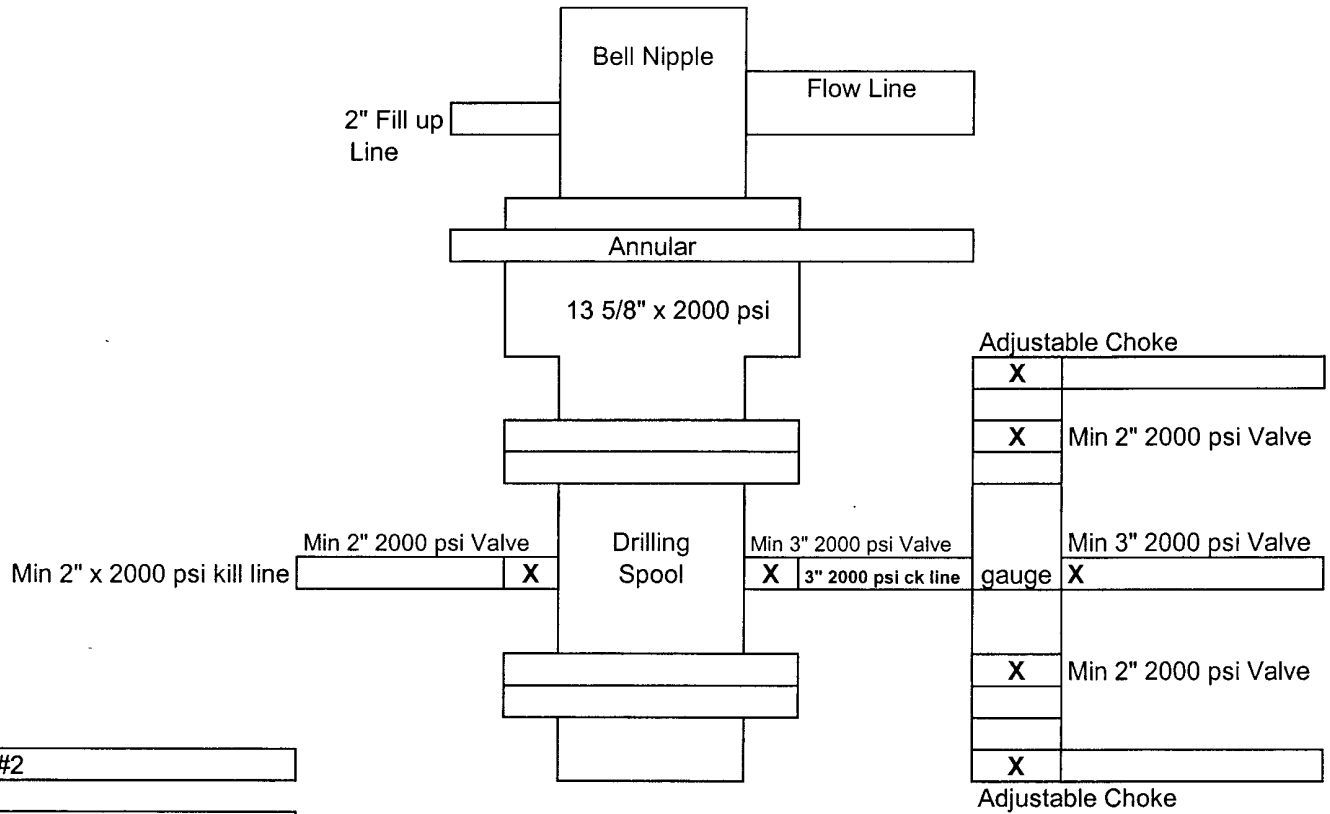


Exhibit #2

Shepherd Draw 33 Fed Com #1
1133' FNL & 1130' FWL
Sec 33-T22S-R26E
Eddy, County
New Mexico

Mewbourne Oil Company
BOP Schematic for
8 3/4" or 7 7/8" Hole

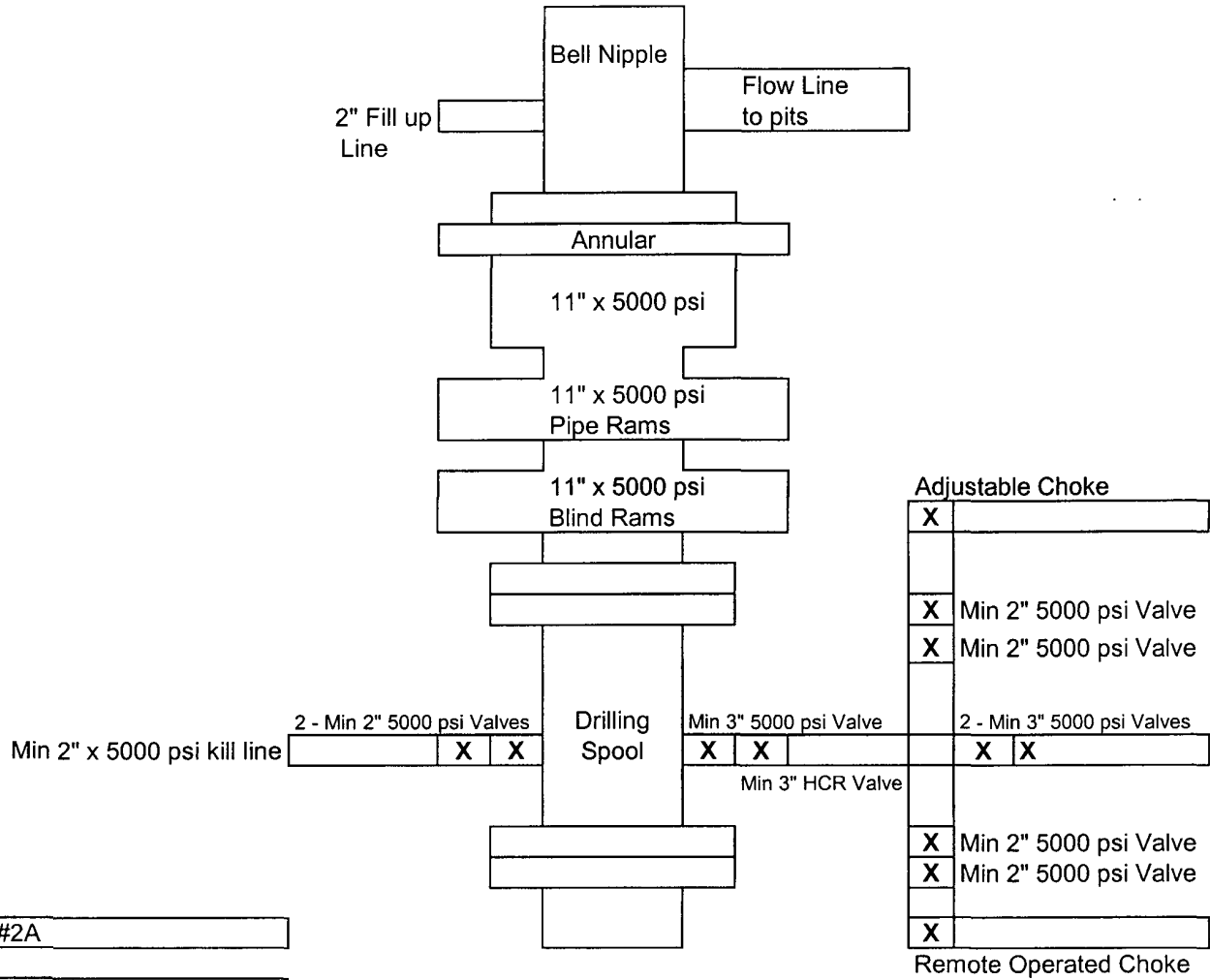


Exhibit #2A

Shepherd Draw 33 Fed Com #1
1133' FNL & 1130' FWL
Sec 33-T22S-R26E
Eddy, County
New Mexico

Notes Regarding Blowout Preventer

Mewbourne Oil Company

Shepherd Draw "33" Federal Com #1

1133' FNL & 1130' FWL

Sec 33-T22S-R26E

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 5000 psi working pressure.
- 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 5000 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.

Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company

Shepherd Draw "33" Federal Com #1

1133' FNL & 1130' FWL

Sec 33-T22S-R26E

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 H₂S were found. MOC will have on location and working all H₂S safety equipment before the Delaware formation @ 1650' 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.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

MEWBOURNE OIL COMPANY

Shepherd Draw "33" Federal Com #1

1133' FNL & 1130' FWL

Sec 33-T22S-R26E

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 blue. Exhibit #3A is a topographic map showing the location of the proposed well and access road. Existing roads are highlighted in blue.
- B. **Directions to location: From Carlsbad on US 62/180, 1.5 miles to Hildago Rd (CR672). Turn right (West) on Hidalgo and continue West/Southwest 3.8 miles. Turn right (West) 0.25 miles. Turn right (North) 0.5 miles, then left (West) 0.25 miles to location.**

2. Proposed Access Road:

- A. No new road will be needed.
- B. The access to the location will be limited to 16' 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 this well site shown on Exhibit 4.

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 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. This well will be drilled with a CLOSED LOOP System (there will be no drill cuttings).
- B. Water produced during operations will be disposed with the closed loop system.
- C. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
- E. Current regulations regarding the proper disposal of human waste will be followed.
- F. 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 400' X 250' 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, garbage, and pit lining 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. This well will be drilled with a CLOSED LOOP System. There will be no reserve pit. 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: William F. Gillock Jr & his wife, Beverly Gillock
159 Gillock Rd
Carlsbad, NM 88220

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
505-393-5905

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

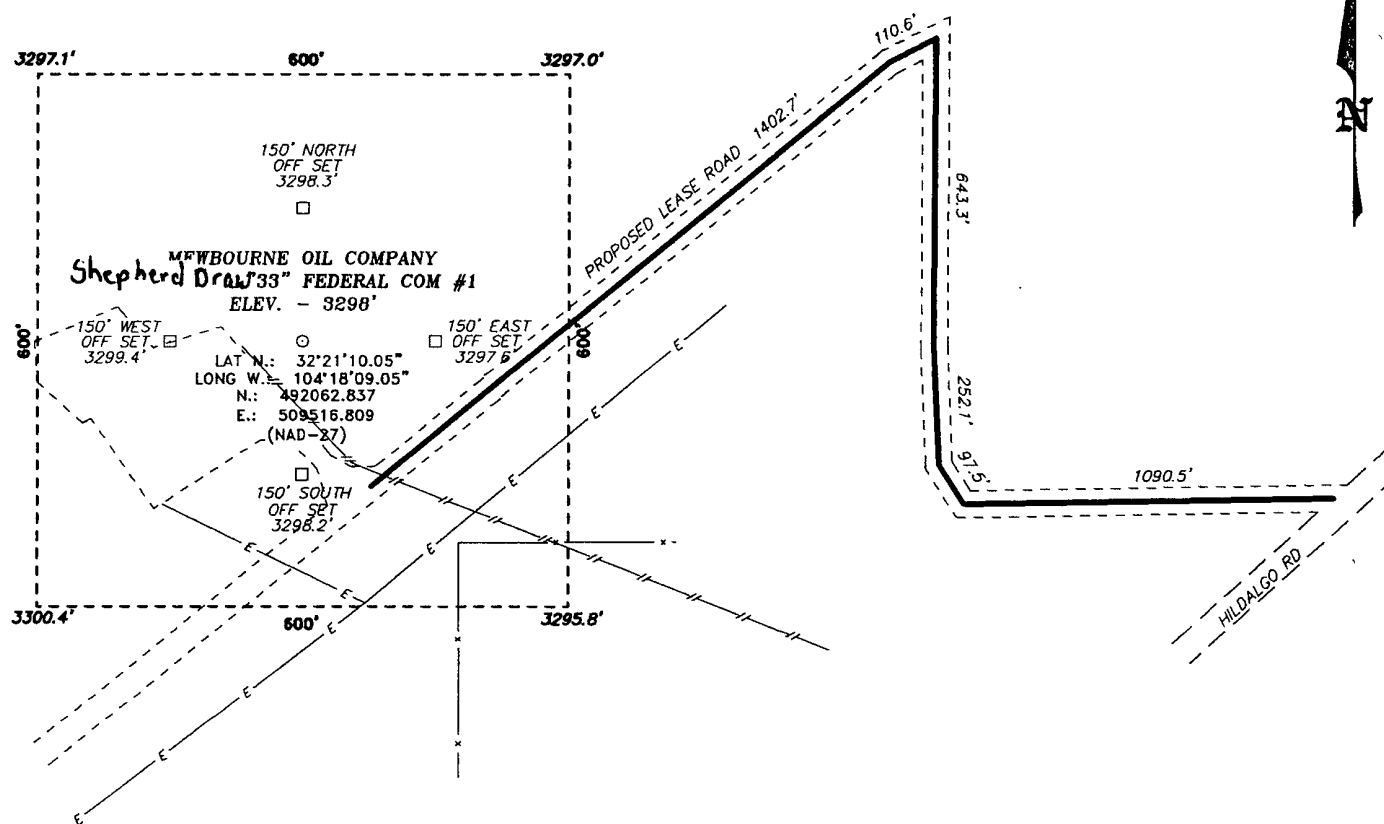
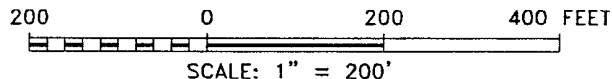


Exhibit 3



DRIVING DIRECTIONS:

FROM THE JUNCTION OF MCKITRICK AND HILDALGO, GO
SOUTHWEST ON HILDALGO FOR 0.6 MILES TO EXISTING LEASE
ROAD AND PROPOSED LEASE ROAD.

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

W.O. Number 19285

Drawn By: J. SMALL

Date: 02-26-2008

Disk: JMS 19285W

MEWBOURNE OIL COMPANY

REF: SHEPHERD "33" FEDERAL COM #1 / WELL PAD TOPO

Shepherd Draw "33" FEDERAL COM #1 LOCATED 1133'

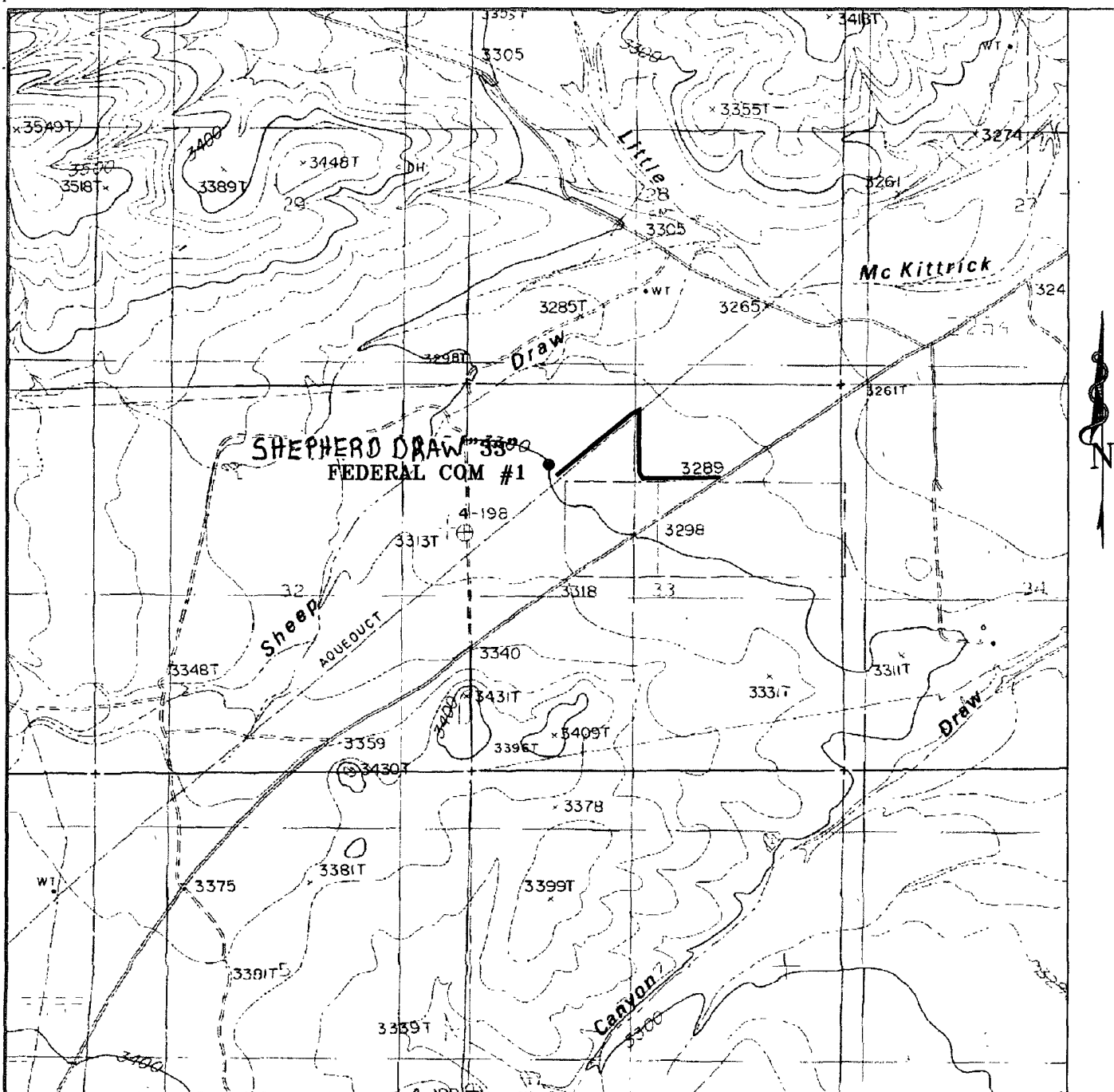
FROM THE NORTH LINE AND 1130' FROM THE WEST LINE OF

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 26 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 02-21-2008

Sheet 1 of 1 Sheets



SHEPHERD DRAW "33" FEDERAL COM #1
 Located 1133' FNL and 1130' FWL
 Section 33, Township 22 South, Range 26 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
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

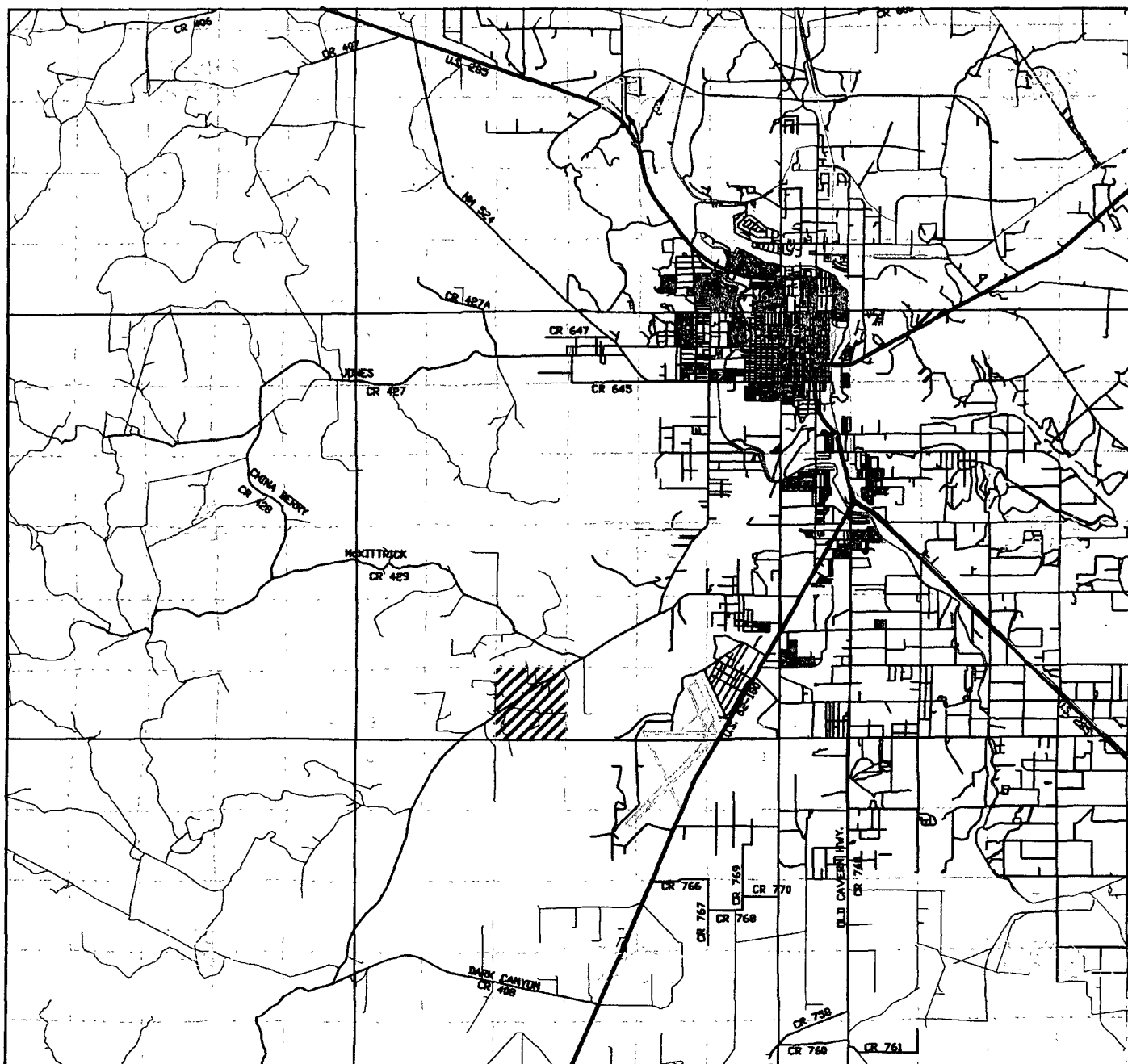
W.O. Number: 19285T JMS

Survey Date: 02-21-2008

Scale: 1" = 2000'

Date: 02-26-2008

MEWBOURNE
OIL CO.



SHEPHERD DRAW "33" FEDERAL COM #1

Located 1133' FNL and 1130' FWL

Section 33, Township 22 South, Range 26 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
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number: 19285TR JMS

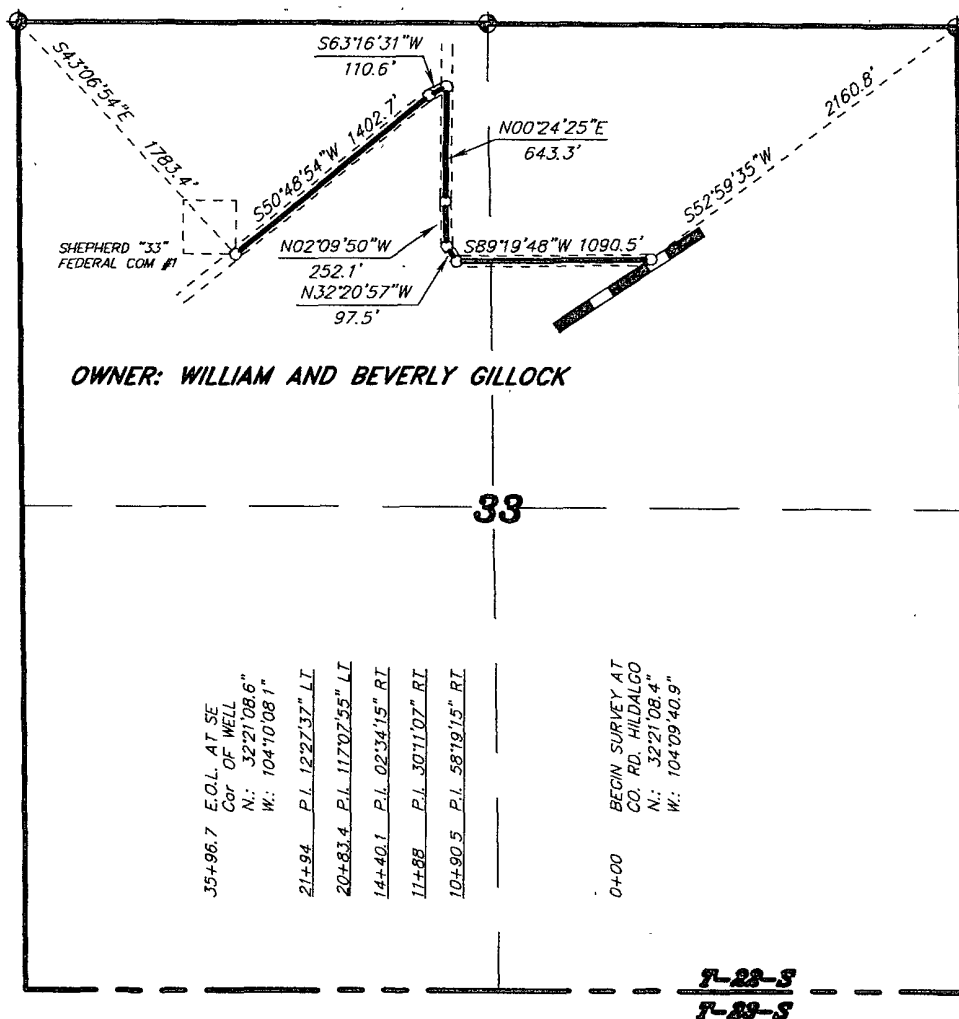
Survey Date: 02-21-2008

Scale: 1" = 2 MILES

Date: 02-26-2006

MEWBOURNE
OIL CO.

**SECTION 33, TOWNSHIP 22 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.**



NOTE: COORDINATES ARE NAD 27

LEGAL DESCRIPTION

A STRIP OF LAND 20.0 FEET WIDE, LOCATED IN SECTION 33, TOWNSHIP 22 SOUTH, RANGE 26 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 10.0 FEET LEFT AND RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY. BEGINNING AT A POINT WHICH LIES S.52°59'35"W., 2160.8 FEET FROM THE NORTHEAST CORNER OF SAID SECTION 33; THENCE S.89°19'48"W., 1090.5 FEET; THENCE N.32°20'57"W., 97.5 FEET; THENCE N.02°09'50"W., 252.1 FEET; THENCE N.00°24'25"E., 643.3 FEET; THENCE S.63°16'31"W., 110.6 FEET; THENCE S.50°48'54"W., 1402.7 FEET TO THE END OF THIS LINE WHICH LIES S.43°06'54"E., 1783.4 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 33. SAID STRIP OF LAND BEING 3596.7 FEET OR 217.98 RODS IN LENGTH.

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

GARY L. [Signature]
[Seal]
No. 7977
No. 5074

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

W.O. Number 19285R Drawn By. J. M. SMALL

Date: 02-26-2008 Disk: JMS 19285R

1000 0 1000 2000 FEET

MEWBOURNE OIL COMPANY

REF: PROP. LEASE ROAD TO THE SHEPHERD "33" FEDERAL COM #1

A ROAD CROSSING FEE LAND IN
SECTION 33, TOWNSHIP 22 SOUTH, RANGE 26 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 02-21-2008 Sheet 1 of 1 Sheets

Exhibit #4
Status of Wells in Immediate Vicinity
Mewbourne Oil Company
Shepherd Draw 33 Federal Com #1
1133' FNL & 1130' FWL
Sec 33-T22S-R26E
Eddy County, New Mexico

Section 33-T22S-R26E

Operator: RKI Exploration & Production, LLC
Well Name: Sheep Draw Fed Com #1
Unit letter: B
Status: Flowing
Field: Happy Valley Morrow

Section 33-T22S-R26E

Operator: RKI Exploration & Production, LLC
Well Name: Sheep Draw Fed Com #3
Unit letter: F
Status: Producing
Field: Happy Valley Delaware

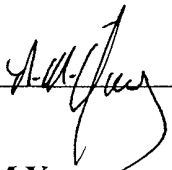
Section 33-T22S-R26E

Operator: RKI Exploration & Production, LLC
Well Name: Sheep Draw Fed #6
Unit letter: D
Status: Flowing
Field: Happy Valley Delaware

Mewbourne Oil Company

PO Box 5270
Hobbs, NM 88241
(505) 393-5905

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route for the Shepherd Draw 33 Federal Com #1, 1133' FNL & 1130' FWL of Sec 33-T22S- R26E, 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: 02/27/08

Print: NM Young_____

Hobbs District Manager

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Mewbourne Oil Company
LEASE NO.:	NM34247
WELL NAME & NO.:	Shepherd Draw 33 Fed Com No. 1
SURFACE HOLE FOOTAGE:	1133' FNL & 1130' FWL
BOTTOM HOLE FOOTAGE:	Same
LOCATION:	Section 33, T. 22 S., R 26 E., NMPM
COUNTY:	Eddy County, New Mexico

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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.

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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)

V-DOOR SOUTHEAST

Cave and Karst

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:

Tank batteries will be bermed to contain 1 ½ times the content of the largest tank.

Bermed areas will be lined with a permanent 20 mil plastic liner and then lined with a 4 oz. felt liner to prevent tears or punctures in liner.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 100 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the consequences of the situation and work with operator on corrective actions to resolve the problem.

Delayed Blasting:

Any blasting will be phased and time delayed.

Abandonment Cementing:

Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

Record Keeping:

The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

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 (505) 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 of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

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

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 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.

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 (H₂S) Drilling Plan should be activated 500 feet prior to drilling into the **Canyon** formation. **If Hydrogen Sulfide is encountered, please report measurements 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 are located, this does not include the dog house or stairway area.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work.

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

High cave/karst.

Possible lost circulation in the Capitan Reef.

Possible of high pressure gas bursts in the Wolfcamp and over pressure in the Pennsylvanian Section.

Water samples required every 100' in Capitan Reef, to be sent to NMOCD.

1. The **13-3/8** inch surface casing shall be set at **350 feet within the top of the Capitan Reef** 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 a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
- b. 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. (This is to include the lead cement).
- 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. **Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing.**
- e. If cement falls back, remedial cementing will be done prior to drilling out that string.
- f. **No pea gravel permitted for remedial or fall back remedial.**

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing (**set in base of Capitan Reef**) is:

- ☒ Cement to surface. If cement does not circulate see B.1.a-d above.
- a. **Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **If DV tool is used, approval is to be received prior to installation. Additional cement needed.**

4. 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. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. The tests shall be done by an independent service company.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. 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.
 - d. 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.
 - e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

WWI 040408

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

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions 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 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.

Seed Mixture 1, for Loamy 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/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 lovegrass (<i>Eragrostis intermedia</i>)	0.5
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sideoats grama (<i>Bouteloua curtipendula</i>)	5.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed
(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.