6008

ATS-08-01

OCD-ARTESIA

Form 3160-3
(September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

29

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

# APPLICATION FOR PERMIT TO DRILL OR REENTER

NOV 19 2007

OCD-ARTESIA

| | |
|---|---|
| 5 Lease Serial No | NM-025777 |
| 6 If Indian, Allottee or Tribe Name | |
| 7 If Unit or CA Agreement, Name and No | |
| 8 Lease Name and Well No. | Geronimo 24 Federal #5 |
| 9 API Well No | 30-015-35935 |
| 10 Field and Pool, or Exploratory | Tamano Bone Spring |
| 11 Sec , T , R , M , or Blk and Survey or Area | Sec 24-T18S-R31E |
| 12 County or Parish | Eddy |
| 13 State | NM |

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 660' FSL & 330' FEL Unit P
At proposed prod. zone

14 Distance in miles and direction from nearest town or post office*
10 5 miles SE 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 160 | 17 Spacing Unit dedicated to this well 40 acres |
| 18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 330' | 19 Proposed Depth 9300' | 20 BLM/BIA Bond No on file NM1693, Nationwide |
| 21 Elevations (Show whether DF, KDB, RT, GL, etc ) 3703' GL | 22. Approximate date work will start* ASAP | 23 Estimated duration 30 |

## 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 Kristi Green | Name *(Printed/Typed)* Kristi Green | Date 09/29/07 |
| Title Hobbs Regulatory | | |
| Approved by *(Signature)* /s/ James Stovall | Name *(Printed/Typed)* /s/ James Stovall /s/ James Stovall | Date NOV 15 2007 |
| Title FIELD MANAGER | Office CARLSBAD FIELD OFFICE | |

Application approval does not warrant ... rights in the subject lease which would entitle the applicant to conduct operations thereon

Conditions of approval, if any, are atta...

APPROVAL FOR TWO YEARS

Title 18 U S C Section 1001 and Titl... ingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulen... tion

*(Instructions on reverse)*

**If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.**

Capitan Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

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

# OIL CONSERVATION DIVISION

*1220 South St. Francis Dr.*
*Santa Fe, New Mexico 87505*

Form C-102
Revised October 12, 2005

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 |
|---|---|---|
| | 58040 | Tamano; Bone Spring |

| Property Code | Property Name | Well Number |
|---|---|---|
| 36775 | GERONIMO 24 FEDERAL | 5 |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 14744 | MEWBOURNE OIL COMPANY | 3703' |

### Surface Location

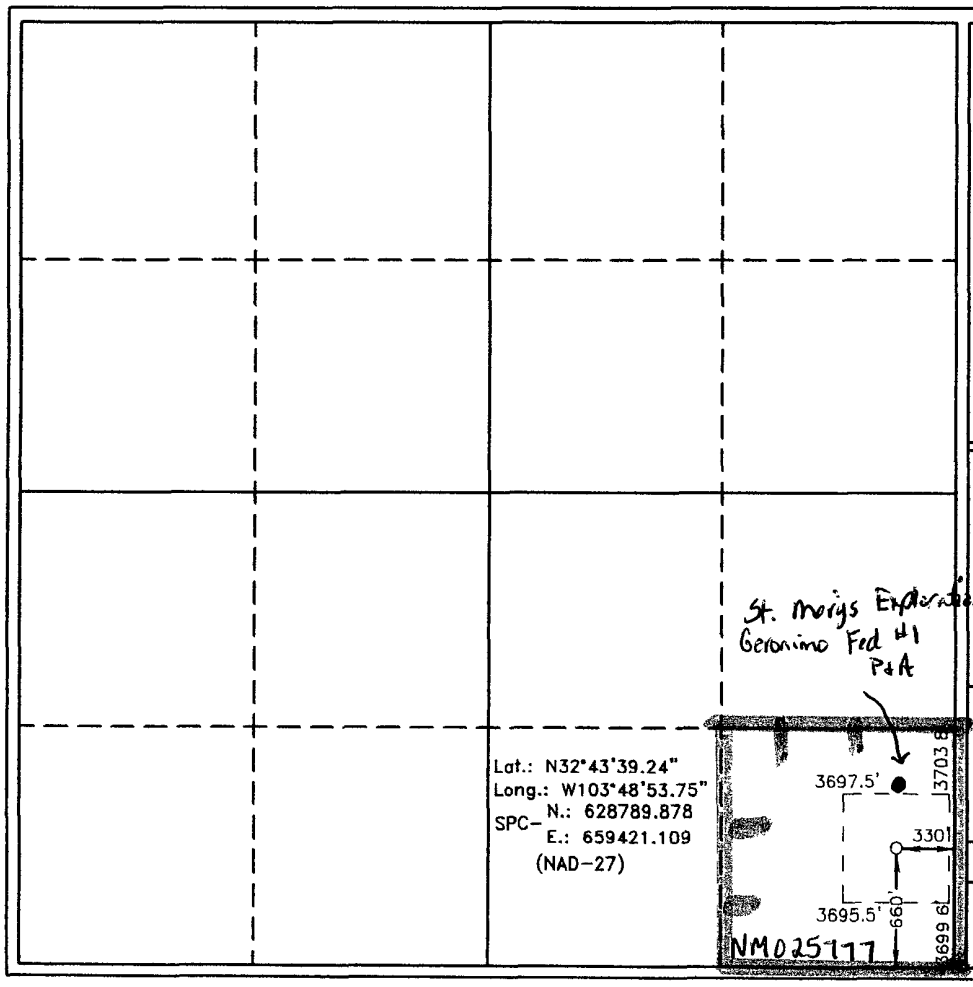
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| P | 24 | 18 S | 31 E | | 660 | SOUTH | 330 | EAST | EDDY |

### 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 | Joint or Infill | Consolidation Code | Order No. |
|---|---|---|---|
| 40 | | | |

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




### OPERATOR CERTIFICATION

*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.*

Kristi Green 9/29/07
Signature Date

Kristi Green
Printed Name

### SURVEYOR CERTIFICATION

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief*

SEPTEMBER 25, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

W.O. No. 18634

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

**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 #NM-025777

Legal Description of Land: Unit P of Section 24, T-18S, R-31E Eddy County, New Mexico. Location @ 660' FSL & 330' FEL.

Formation (if applicable):

Bond Coverage: $150,000

BLM Bond File: NM1693, Nationwide

Authorized Signature: NM Young by Kristi Green

Name: NM (Micky) Young
Title: District Manager
Date: September 28, 2007

# Drilling Program
## Mewbourne Oil Company
## Geronimo 24 Federal #5
## 660' FSL & 330' FEL
## Sec 24-T18S-R31E
## Eddy County, New Mexico

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

| | |
|---|---|
| Yates | 2300' |
| Queen | 3500' |
| San Andres | 4300' |
| Delaware | 4800' |
| Bone Springs | 6400' |

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

| | |
|---|---|
| Water | Fresh water will be protected by setting surface casing at 800' and cement to surface. |
| Hydrocarbons | All hydrocarbon bearing zones below the **top of the Yates** will be protected by setting production casing thru zones and cement as necessary. |

**3. Pressure control equipment:**

A 3000 psi WP Double Ram BOP and a 3000 psi WP Annular will be installed after running 8 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 as recommended in Onshore Order #2 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:**

| Hole Size | Casing | Wt/Ft. | Grade | Depth | Jt Type |
|---|---|---|---|---|---|
| 12 ¼" | 8 5/8" (new) | 32# | J55 | 0-~~800'~~ See COA | LT&C |
| 7 7/8" ~~8¾"~~ | 4 ½" (new) | 11.6 per operator 11-6-07 ~~17#~~ | N80 | 0-9300' | LT&C |

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8 (API standard)

**B. Cementing Program**

i. Surface Casing: 100 sacks Class C light cement containing ½#/sk cellophane flakes, 2% CaCl, 5#/sk gilsonite. Yield at 1.98 cuft/sk. 400 sks Class C cement containing 2% CaCl. Yield at 1.34 cuft/sk. Cmt circulated to surface.

ii. Production Casing: 400 sacks Class H cement containing fluid loss additive, friction reducer additive, compressive strength enhancer, and NaCl. Yield at 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 inside surface casing.

See COA

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

## 5. Mud Program:

| Interval see | Type System | Weight | Viscosity | Fluid Loss |
|---|---|---|---|---|
| 0'~~-800'~~ cem | FW spud mud | 8.6-9.4 | 32-34 | NA |
| 800'-9300' | Brine water | 10.0-10.2 | 28-30 | NA |

## 6. Evaluation Program:

| | |
|---|---|
| Samples: | 10' samples from top of Bonesprings surface |
| 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:

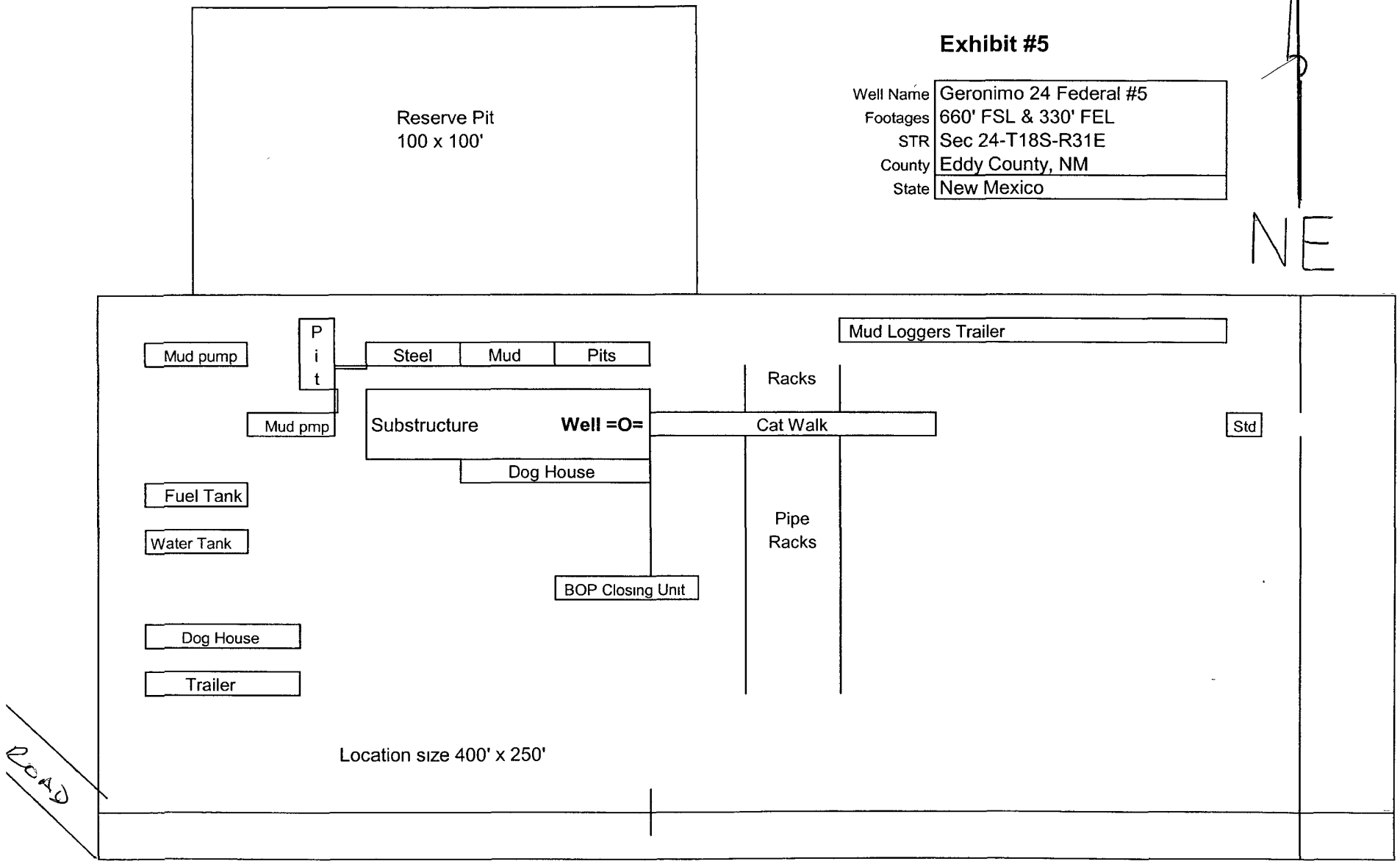
Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 30 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

Mewbourne Oil Company

See COA's
Pit Northeast

**Exhibit #5**

| | |
|---|---|
| Well Name | Geronimo 24 Federal #5 |
| Footages | 660' FSL & 330' FEL |
| STR | Sec 24-T18S-R31E |
| County | Eddy County, NM |
| State | New Mexico |




Rig Location Schematic

**Notes Regarding Blowout Preventer**
**Mewbourne Oil Company**
**Geronimo 24 Federal #5**
**660' FSL & 330' FEL**
**Sec 24-T18S-R31E**
**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 3000 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 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 and 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
8 3/4" or 7 7/8" Hole

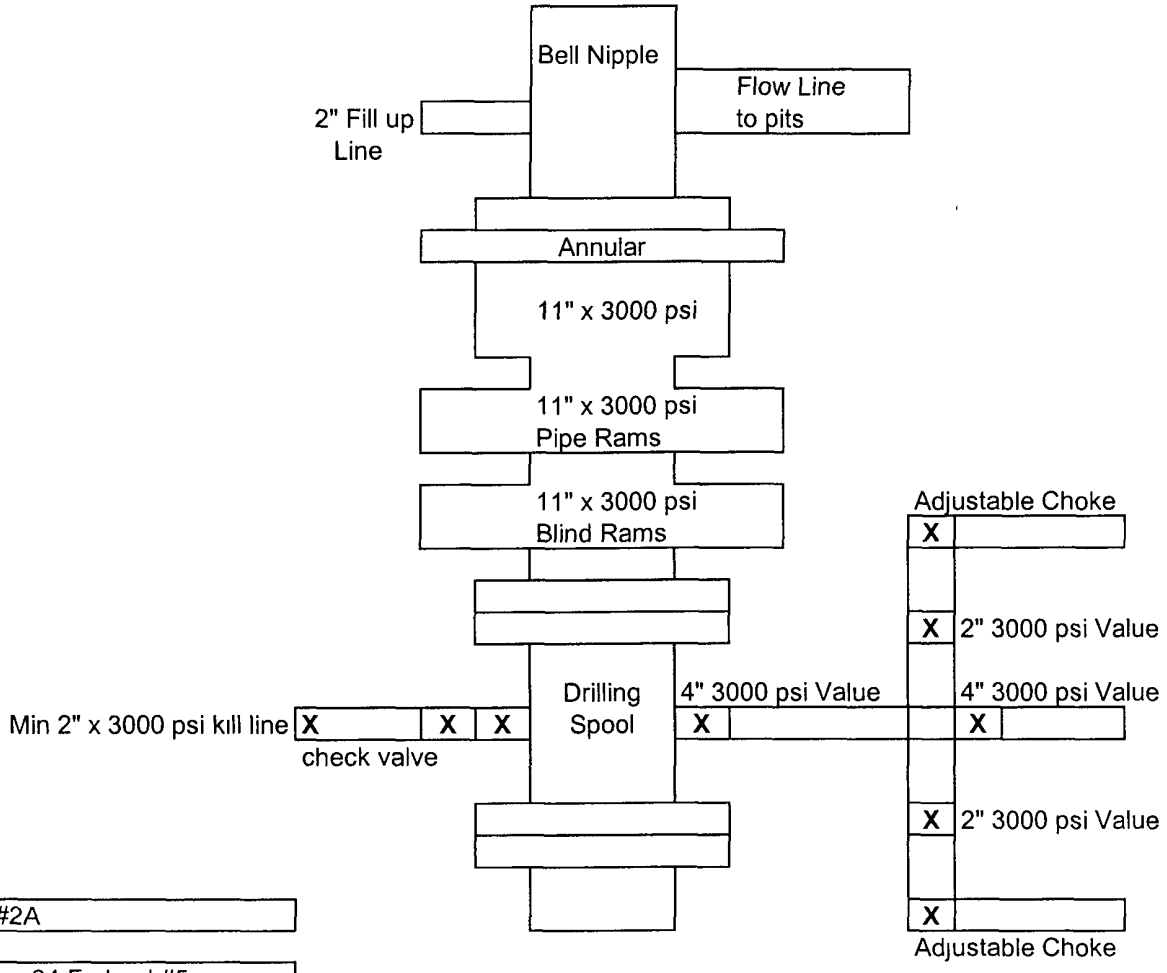



Exhibit #2A

Geronimo 24 Federal #5
660' FSL & 330' FEL
Sec 24-T18S-R31E
Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan

**Mewbourne Oil Company**

**Geronimo 24 Federal #5**

**660' FSL & 330' FEL**

**Sec 24-T18S-R31E**

**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 Yates formation @ 2300' 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 know 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
## Geronimo 24 Federal #5
## 660' FSL & 330' FEL
## Sec 24-T18S-R31E
## 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). Exhibit #3A is a topographic map showing the location of the proposed well and access road (existing road is highlighted in black).

**B. Directions to location from Hobbs, NM: Go west on US 62/180 13 miles to Hwy NM529. Turn right and continue West/NW approx 24 miles to Lusk plant Rd (CR126). Turn left and continue south approx 4.3 miles. Turn right and continue West/SW on main road approx 1 ½ miles to large tank battery on right. Turn left and continue to SE 0.5 miles to location.**

**2. Proposed Access Road:**

A Will need to improve 400' of existing reclaimed road.

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 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 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 disposed of in the reserve pit.
B. Drilling fluids will be allowed to evaporate in the reserve pit prior to closure.
C. Water produced during operations will be disposed of in the reserve pit.
D. 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, pits, and location of major rig components are shown.
B. The reserve pit will be lined with a high quality plastic sheeting to prevent migration of fluids.
C. The pad dimension of 400' X 250' has been staked and flagged.
D. An archaeological survey is in the process of being conducted.

**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 reserve pit area, after allowing to dry will be leveled. 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. Three sides of the reserve pit will be fenced prior to and during drilling operations. The reserve pit will be fenced on the fourth side after the drilling rig is removed to prevent the endangerment of livestock. The fence will remain in place until the pit area has been leveled and restored.

D Upon cessation of the proposed operations, if the well is not abandoned, the reserve pit area will be restored as per OCD guidelines. Any additional caliche required for production facilities will be obtained from a source as described in Section 6.

E. 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: Located entirely on federal surface.

**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

**United States Department of the Interior**
**Bureau of Land Management**
**Carlsbad Field Office**
**620 E Green St**
**Carlsbad, New Mexico 88220**

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

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; 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.

Date: 09/29/07

Signature: NM Young by Kristi Green

**N.M. Young, District Manager**
(505) 393-5905

# SECTION 24, TOWNSHIP 18 SOUTH, RANGE 31 EAST, N.M.P.M.,
**EDDY COUNTY,** **NEW MEXICO.**

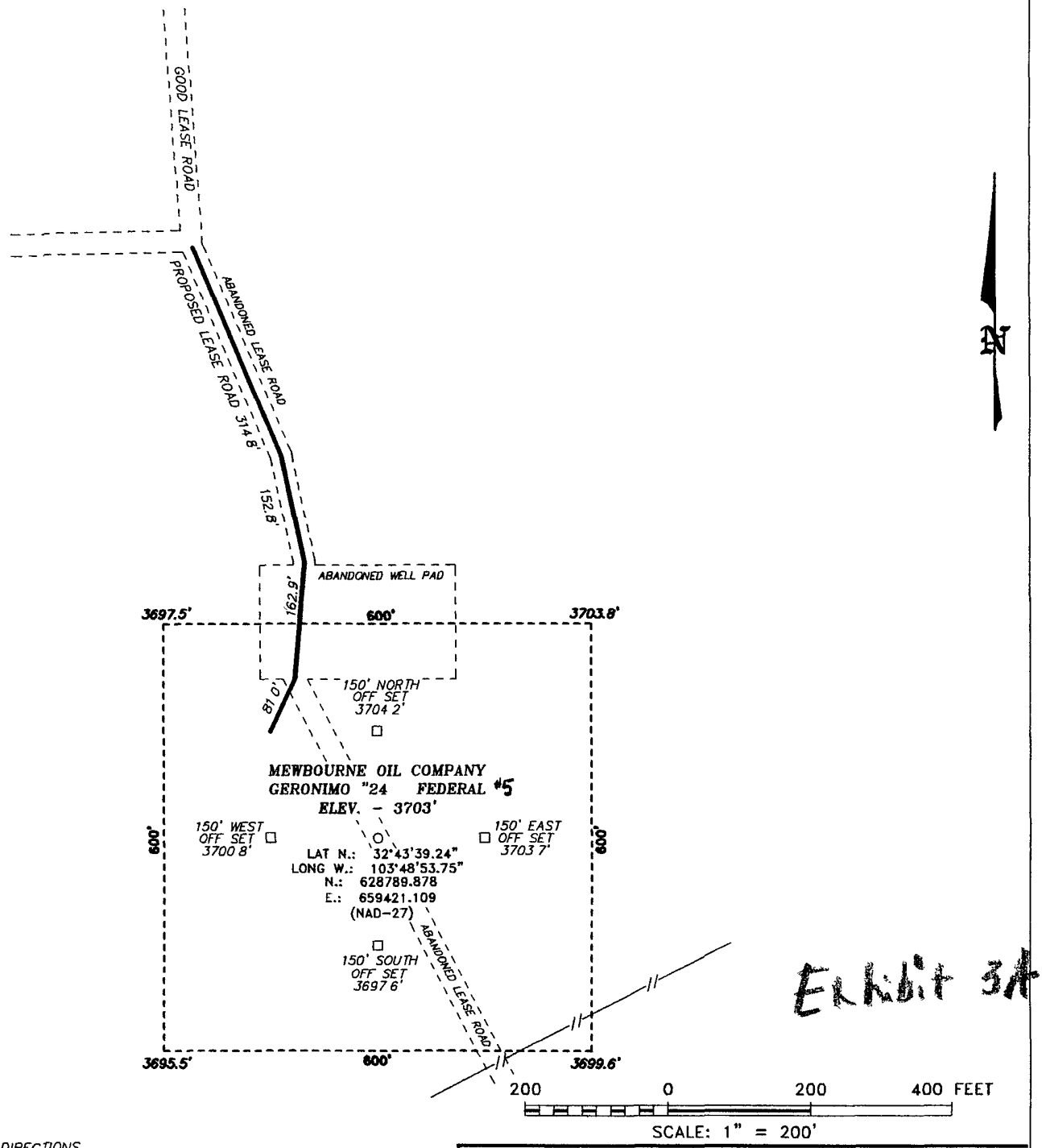



Exhibit 3A

*DRIVING DIRECTIONS*

*FROM THE JUNCTION OF STATE HWY 529 AND CO. RD 126, GO SOUTH ON CO. RD 126 FOR 4.3 MILES TO LEASE ROAD AND PROPOSED LEASE ROAD*

**MEWBOURNE OIL COMPANY**

REF: GERONIMO "24" FEDERAL #5 WELL PAD TOPO

THE GERONIMO "24" FEDERAL LOCATED 660' FROM THE SOUTH LINE AND 330' FROM THE EAST LINE OF SECTION 24, TOWNSHIP 18 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

| W.O Number: 18634 | Drawn By: J. SMALL |
|---|---|
| Date: 09-26-2007 | Disk: JMS 18634W |
| Survey Date: 09-25-2007 | Sheet 1 of 1 Sheets |

**Exhibit #4**
**Status of Wells in Immediate Vicinity**
**Mewbourne Oil Company**
**Geronimo 24 Federal #5**
**660' FSL & 330' FEL**
**Sec 24-T18S-R31E**
**Eddy County, New Mexico**

**Section 24-T18S-R31E**

| | |
|---|---|
| Operator: | Mewbourne Oil Company |
| Well Name: | Geronimo 24 Federal #1 |
| Unit letter: | K |
| Status: | Pumping |
| Field: | Tamano Bone Spring |

| | |
|---|---|
| Operator: | Mewbourne Oil Company |
| Well Name: | Geronimo 24 Federal #2 |
| Unit letter: | M |
| Status: | Pumping |
| Field: | Tamano Bone Spring |

| | |
|---|---|
| Operator: | St Mary Land & Exploration |
| Well Name: | Geronimo Federal #1 |
| Unit letter: | P |
| Status: | P&A |
| Field: | Shugart Delaware |

# 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

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

## C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 100' X 100' on the Northeast side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

## 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.

# VII. DRILLING

## A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 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, (505) 361-2822

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **Hydrogen Sulfide has been measured in nearby sections between 200-2000 ppm in gas streams and 20-2600 ppm in STVs.**

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

1. The **8-5/8** inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 830** feet and cemented to the surface. **Fresh water mud to be used to this setting depth.**

    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. If cement falls back, remedial action will be done prior to drilling out that string.

**Possible lost circulation in the Grayburg and San Andres formations.**
**Possible water flows in the Salado Group and the Premier member of the Grayburg formation.**

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

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement will be required. Proposed cement volume will cover approximately 2250' of gauge hole.**

3. 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 2 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.

**D. DRILL STEM TEST**

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

**Engineer on call phone (after hours): Carlsbad: (505) 706-2779**

**WWI 110607**