NM Oil CONSERVATION
ARTESIA DISTRICT
OCT 1 2019
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(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

5. Lease Serial No.
NMNM0040547

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
WOLFMAN 5/4 W0PM FED COM
2H
326140

2. Name of Operator
MEWBOURNE OIL COMPANY

9. API Well No.
30-015-46310

3a. Address
PO Box 5270 Hobbs NM 88240

3b. Phone No. *(include area code)*
(575)393-5905

10. Field and Pool, or Exploratory
WILDCAT WOLFCAMP / LOWER 3RD B(

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWSW / 1305 FSL / 240 FWL / LAT 32.3302692 / LONG -104.2201272
At proposed prod. zone SESE / 500 FSL / 330 FEL / LAT 32.3283562 / LONG -104.1877998

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 5 / T23S / R27E / NMP

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

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)
210 feet

16. No of acres in lease
317.68

17. Spacing Unit dedicated to this well
640

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

19. Proposed Depth
9119 feet / 19035 feet

20. BLM/BIA Bond No. in file
FED: NM1693

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3181 feet

22. Approximate date work will start*
05/20/2019

23. Estimated duration
60 days

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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 must 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 requested by the BLM.

| 25. Signature | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Bradley Bishop / Ph: (575)393-5905 | 04/11/2019 |

Title
Regulatory

| Approved by *(Signature)* | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Cody Layton / Ph: (575)234-5959 | 09/27/2019 |

| Title | Office |
|---|---|
| Assistant Field Manager Lands & Minerals | CARLSBAD |

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.

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

**Approval Date: 09/27/2019**

RWP 10-01-19

## INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48( d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.



(Continued on page 3)

## Additional Operator Remarks

### Location of Well

1. SHL: SWSW / 1305 FSL / 240 FWL / TWSP: 23S / RANGE: 27E / SECTION: 5 / LAT: 32.3302692 / LONG: -104.2201272 ( TVD: 0 feet, MD: 0 feet )
   PPP: SESW / 500 FSL / 1305 FWL / TWSP: 23S / RANGE: 27E / SECTION: 4 / LAT: 32.3282511 / LONG: -104.19943 12 ( TVD: 9064 feet, MD: 15442 feet )
   PPP: SWSW / 500 FSL / 330 FWL / TWSP: 23S / RANGE: 27E / SECTION: 5 / LAT: 32.3280624 / LONG: -104.2198375 ( TVD: 8942 feet, MD: 9134 feet )
   BHL: SESE / 500 FSL / 330 FEL / TWSP: 23S / RANGE: 27E / SECTION: 4 / LAT: 32.3283562 / LONG: -104.1877998 ( TVD: 9119 feet, MD: 19035 feet )

## BLM Point of Contact

Name: Candy Vigil
Title: Admin Support Assistant
Phone: 5752345982
Email: cvigil@blm.gov

## Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | **MEWBOURNE OIL COMPANY** |
| **LEASE NO.:** | **NMNM0040547** |
| **WELL NAME & NO.:** | **WOLFMAN 5/4 W0PM FED COM 2H** |
| **SURFACE HOLE FOOTAGE:** | **1305' FSL & 240' FWL** |
| **BOTTOM HOLE FOOTAGE** | **500' FSL & 330' FEL** |
| **LOCATION:** | **Section 05, T. 23 S., R 27 E., NMPM** |
| **COUNTY:** | **Eddy County, New Mexico** |

COA

| | | | |
|---|---|---|---|
| H2S | ○ Yes | ◉ No | |
| Potash | ◉ None | ○ Secretary | ○ R-111-P |
| Cave/Karst Potential | ○ Low | ◉ Medium | ○ High |
| Variance | ○ None | ◉ Flex Hose | ○ Other |
| Wellhead | ○ Conventional | ◉ Multibowl | ○ Both |
| Other | ☐ 4 String Area | ☐ Capitan Reef | ☐ WIPP |
| Other | ☐ Fluid Filled | ☐ Cement Squeeze | ☐ Pilot Hole |
| Special Requirements | ☐ Water Disposal | ☑ COM | ☐ Unit |

## A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

## B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **450** feet (a minimum of **70 feet (Eddy County)** 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 will be a minimum of **8 hours** 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 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:

   - 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 cave/karst or potash.**

❖ **In <u>Medium Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.**

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

   Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

   a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

   b. Second stage above DV tool:

      - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

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

   - Cement should tie-back at least **100 feet** into the previous casing. Operator shall provide method of verification.

## C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout

preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

## D. SPECIAL REQUIREMENT (S)

**Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

**JJP08292019**

# GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. 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.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. 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.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall 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.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. 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.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. 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. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. 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.

g. 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. This test shall be performed prior to the test at full stack pressure.

h. 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.

C. 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.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Operator Certification Data Report

10/01/2019

## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Bradley Bishop **Signed on:** 04/11/2019

**Title:** Regulatory

**Street Address:**

**City:** **State:** **Zip:**

**Phone:** (575)393-5905

**Email address:** bbishop@mewbourne.com

## Field Representative

**Representative Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Application Data Report

10/01/2019

**APD ID:** 10400033648

**Submission Date:** 04/11/2019

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM

**Well Number:** 2H

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - General

**APD ID:** 10400033648

**Tie to previous NOS?**

**Submission Date:** 04/11/2019

**BLM Office:** CARLSBAD

**User:** Bradley Bishop

**Title:** Regulatory

**Federal/Indian APD:** FED

**Is the first lease penetrated for production Federal or Indian?** FED

**Lease number:** NMNM0040547

**Lease Acres:** 317.68

**Surface access agreement in place?**

**Allotted?**

**Reservation:**

**Agreement in place?** NO

**Federal or Indian agreement:**

**Agreement number:**

**Agreement name:**

**Keep application confidential?** YES

**Permitting Agent?** NO

**APD Operator:** MEWBOURNE OIL COMPANY

**Operator letter of designation:**

## Operator Info

**Operator Organization Name:** MEWBOURNE OIL COMPANY

**Operator Address:** PO Box 5270

**Zip:** 88240

**Operator PO Box:**

**Operator City:** Hobbs

**State:** NM

**Operator Phone:** (575)393-5905

**Operator Internet Address:**

## Section 2 - Well Information

**Well in Master Development Plan?** NO

**Master Development Plan name:**

**Well in Master SUPO?** NO

**Master SUPO name:**

**Well in Master Drilling Plan?** NO

**Master Drilling Plan name:**

**Well Name:** WOLFMAN 5/4 W0PM FED COM

**Well Number:** 2H

**Well API Number:**

**Field/Pool or Exploratory?** Field and Pool

**Field Name:** WILDCAT WOLFCAMP

**Pool Name:** LOWER 3RD BONE SPRING (HARKY) SHALE

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Is the proposed well in an area containing other mineral resources?** USEABLE WATER,NATURAL GAS,OIL

**Is the proposed well in a Helium production area?** N **Use Existing Well Pad?** NO **New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL **Multiple Well Pad Name:** STINGER 6 FED COM WELLS **Number:** 2

**Well Class:** HORIZONTAL **Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** CONVENTIONAL GAS WELL

**Describe Well Type:**

**Well sub-Type:** APPRAISAL

**Describe sub-type:**

**Distance to town:** 10 Miles **Distance to nearest well:** 330 FT **Distance to lease line:** 210 FT

**Reservoir well spacing assigned acres Measurement:** 640 Acres

**Well plat:** Wolfman5_4W0MPFedCom2H_wellplat_20190320133037.pdf

**Well work start Date:** 05/20/2019 **Duration:** 60 DAYS

## Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83 **Vertical Datum:** NAVD88

**Survey number:** 1 **Reference Datum:**

| | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHL Leg #1 | 1305 | FSL | 240 | FWL | 23S | 27E | 5 | Aliquot SWSW | 32.3302692 | -104.2201272 | EDDY | NEW MEXICO | NEW MEXICO | F | FEE | 3181 | 0 | 0 |
| KOP Leg #1 | 500 | FSL | 10 | FWL | 23S | 27E | 5 | Aliquot SWSW | 32.3280528 | -104.2208671 | EDDY | NEW MEXICO | NEW MEXICO | F | FEE | -5311 | 8547 | 8492 |
| PPP Leg #1 | 500 | FSL | 330 | FWL | 23S | 27E | 5 | Aliquot SWSW | 32.3280624 | -104.2198375 | EDDY | NEW MEXICO | NEW MEXICO | F | FEE | -5761 | 9134 | 8942 |

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

| | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PPP Leg #1 | 500 | FSL | 1305 | FWL | 23S | 27E | 4 | Aliquot SESW | 32.3282511 | -104.1994312 | EDDY | NEW MEXICO | NEW MEXICO | F | NMNM 118704 | -5883 | 15442 | 9064 |
| EXIT Leg #1 | 500 | FSL | 330 | FEL | 23S | 27E | 4 | Aliquot SESE | 32.3283562 | -104.1877998 | EDDY | NEW MEXICO | NEW MEXICO | F | NMNM 118704 | -5938 | 19035 | 9119 |
| BHL Leg #1 | 500 | FSL | 330 | FEL | 23S | 27E | 4 | Aliquot SESE | 32.3283562 | -104.1877998 | EDDY | NEW MEXICO | NEW MEXICO | F | NMNM 118704 | -5938 | 19035 | 9119 |

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Drilling Plan Data Report

10/01/2019

**APD ID:** 10400033648

**Submission Date:** 04/11/2019

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM

**Well Number:** 2H

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|---|---|---|---|---|---|---|---|
| 1 | UNKNOWN | 3181 | 27 | 27 | | NONE | N |
| 2 | TOP SALT | 2661 | 520 | 520 | SALT | NONE | N |
| 3 | BOTTOM SALT | 1529 | 1660 | 1660 | SALT | NONE | N |
| 4 | LAMAR | 1281 | 1900 | 1900 | LIMESTONE | NATURAL GAS,OIL | N |
| 5 | BELL CANYON | 1129 | 2060 | 2060 | SANDSTONE | NATURAL GAS,OIL | N |
| 6 | CHERRY CANYON | 381 | 2800 | 2800 | SANDSTONE | NATURAL GAS,OIL | N |
| 7 | MANZANITA | 281 | 2900 | 2900 | LIMESTONE | NATURAL GAS,OIL | N |
| 8 | BRUSHY CANYON | -949 | 4130 | 4130 | SANDSTONE | NATURAL GAS,OIL | N |
| 9 | BONE SPRING LIME | -2189 | 5370 | 5370 | LIMESTONE,SHALE | NATURAL GAS,OIL | N |
| 10 | BONE SPRING 1ST | -3249 | 6430 | 6430 | SANDSTONE | NATURAL GAS,OIL | N |
| 11 | BONE SPRING 2ND | -3719 | 6900 | 6900 | SANDSTONE | NATURAL GAS,OIL | N |
| 12 | BONE SPRING 3RD | -5319 | 8500 | 8500 | SANDSTONE | NATURAL GAS,OIL | N |
| 13 | WOLFCAMP | -5669 | 8850 | 8850 | LIMESTONE,SHALE,SANDSTONE | NATURAL GAS,OIL | Y |

## Section 2 - Blowout Prevention

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**ressure Rating (PSI):** 5M **Rating Depth:** 19035

**quipment:** Annular, Pipe Ram, Blind Ram

**equesting Variance?** YES

**ariance request:** A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. Anchors ren't required by manufacturer. A multi-bowl wellhead is being used. See attached schematic

**esting Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure ıdicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the orking pressure listed in the table above. If the system is upgraded all the components installed will be functional and ested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out f the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly ock and floor safety valve (inside BOP) and choke lines and choke manifold.

**hoke Diagram Attachment:**

Wolfman_5_4_W0MP_Fed_Com_2H_5M_BOPE_Choke_Diagram_20190405163529.pdf

Wolfman_5_4_W0MP_Fed_Com_2H_Flex_Line_Specs_20190405163530.pdf

**OP Diagram Attachment:**

Wolfman_5_4_W0MP_Fed_Com_2H_5M_BOPE_Schematic_20190405163616.pdf

Wolfman_5_4_W0MP_Fed_Com_2H_Multi_Bowl_WH_20190405163616.pdf

## Section 3 - Casing

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SURFACE | 17.5 | 13.375 | NEW | API | N | 0 | 450 | 0 | 450 | 3208 | | 450 | H-40 | 48 | ST&C | 3.66 | 8.21 | DRY | 14.91 | DRY | 25.05 |
| 2 | INTERMEDIATE | 12.25 | 9.625 | NEW | API | N | 0 | 1825 | 0 | 1825 | 3208 | | 1825 | J-55 | 36 | LT&C | 2.13 | 3.71 | DRY | 6.89 | DRY | 8.58 |
| 3 | PRODUCTION | 8.75 | 7.0 | NEW | API | N | 0 | 9134 | 0 | 8942 | 3208 | | 9134 | P-110 | 26 | LT&C | 1.68 | 2.24 | DRY | 2.74 | DRY | 3.49 |
| 4 | LINER | 6.125 | 4.5 | NEW | API | N | 8547 | 19035 | 8492 | 9119 | | | 10488 | P-110 | 13.5 | LT&C | 1.73 | 2.01 | DRY | 2.39 | DRY | 2.98 |

**Casing Attachments**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Casing Attachments**

---

**Casing ID:** 1 **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Wolfman_5_4_W0MP_Fed_Com_2H_Csg_Assumptions_20190405164422.pdf

---

**Casing ID:** 2 **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Wolfman_5_4_W0MP_Fed_Com_2H_Csg_Assumptions_20190405164431.pdf

---

**Casing ID:** 3 **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Wolfman_5_4_W0MP_Fed_Com_2H_Csg_Assumptions_20190405164438.pdf

---

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Casing Attachments**

**Casing ID:** 4 **String Type:**LINER

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Wolfman_5_4_W0MP_Fed_Com_2H_Csg_Assumptions_20190405164446.pdf

## Section 4 - Cement

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SURFACE | Lead | | 0 | 261 | 175 | 2.12 | 12.5 | 371 | 100 | Class C | Salt, Gel, Extender, LCM |
| SURFACE | Tail | | 261 | 450 | 200 | 1.34 | 14.8 | 268 | 100 | Class C | Retarder |
| NTERMEDIATE | Lead | | 0 | 1192 | 235 | 2.12 | 12.5 | 498 | 25 | Class C | Salt, Gel, Extender, LCM |
| NTERMEDIATE | Tail | | 1192 | 1825 | 200 | 1.34 | 14.8 | 268 | 25 | Class C | Retarder |
| PRODUCTION | Lead | 2900 | 1625 | 2267 | 60 | 2.12 | 12.5 | 127 | 25 | Class C | Gel, Retarder, Defoamer, Extender |
| PRODUCTION | Tail | | 2267 | 2900 | 100 | 1.34 | 14.8 | 134 | 25 | Class C | Retarder |
| PRODUCTION | Lead | 2900 | 2900 | 6645 | 335 | 2.12 | 12.5 | 710 | 25 | Class C | Gel, Retarder, Defoamer, Extender |
| PRODUCTION | Tail | | 6645 | 9134 | 400 | 1.18 | 15.6 | 472 | 25 | Class H | Retarder, Fluid Loss, Defoamer |
| LINER | Lead | | 8547 | 19035 | 420 | 2.97 | 11.2 | 1247 | 25 | Class C | Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent |

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

## Section 5 - Circulating Medium

**lud System Type:** Closed

**Vill an air or gas system be Used?** NO

**escription of the equipment for the circulating system in accordance with Onshore Order #2:**

**iagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**escribe what will be on location to control well or mitigate other conditions:** Lost circulation material Sweeps Mud cavengers in surface hole

**escribe the mud monitoring system utilized:** Pason/PVT/Visual Monitoring

## Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 450 | SPUD MUD | 8.6 | 8.8 | | | | | | | |
| 450 | 1825 | SALT SATURATED | 10 | 10 | | | | | | | |
| 1825 | 8942 | WATER-BASED MUD | 8.6 | 9.5 | | | | | | | |
| 8942 | 9119 | OIL-BASED MUD | 10 | 12 | | | | | | | |

## Section 6 - Test, Logging, Coring

**ist of production tests including testing procedures, equipment and safety measures:**

Vill run GR/CNL from KOP (8547') to surface

**ist of open and cased hole logs run in the well:**

:NL,DS,GR,MWD,MUDLOG

**:oring operation description for the well:**

lone

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

## Section 7 - Pressure

**nticipated Bottom Hole Pressure:** 5691 **Anticipated Surface Pressure:** 3684.82

**nticipated Bottom Hole Temperature(F):** 165

**nticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**escribe:**

**ontingency Plans geoharzards description:**

**ontingency Plans geohazards attachment:**

**ydrogen Sulfide drilling operations plan required?** YES

**ydrogen sulfide drilling operations plan:**

Wolfman_5_4_W0MP_Fed_Com_2H_H2S_Plan_20190405164824.pdf

## Section 8 - Other Information

**roposed horizontal/directional/multi-lateral plan submission:**

Wolfman_5_4_W0MP_Fed_Com_2H_Dir_Plot_20190405164846.pdf

Wolfman_5_4_W0MP_Fed_Com_2H_Dir_Plan_20190405164847.pdf

**ther proposed operations facets description:**

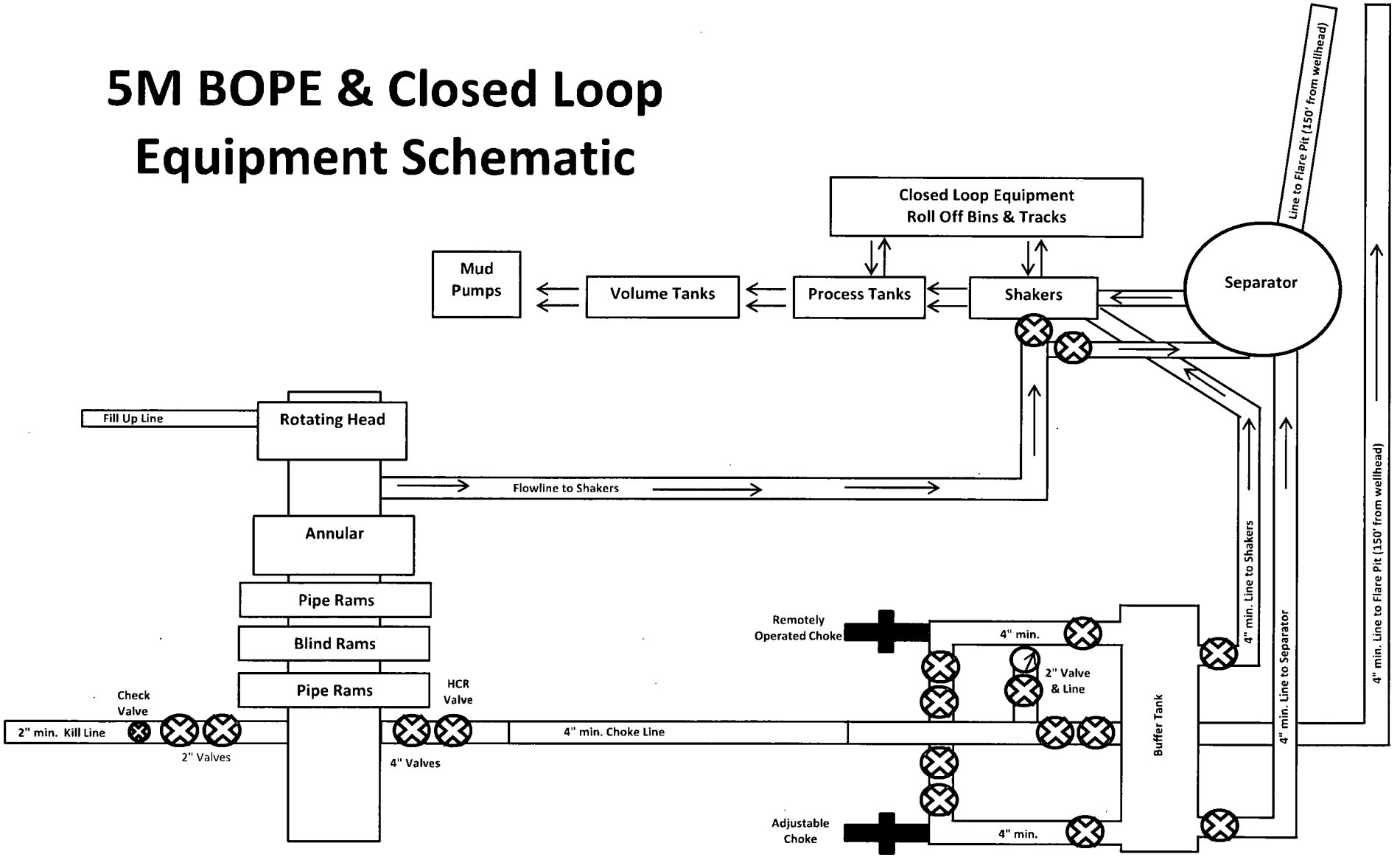
**ther proposed operations facets attachment:**

Wolfman_5_4_W0MP_Fed_Com_2H_Drlg_Program_20190405164902.doc

Wolfman_5_4_W0MP_Fed_Com_2H_Csg_Assumptions_20190405165336.pdf

**ther Variance attachment:**

# 5M BOPE & Closed Loop Equipment Schematic




Drawing not to scale

Note: All valves & lines on choke manifold are 4" unless otherwise noted. Exact manifold configuration may vary.

ENGINEERING & SERVICES

**GATES E & S NORTH AMERICA, INC.**
**134 44TH STREET**
**CORPUS CHRISTI, TEXAS 78405**

**PHONE: 361-887-9807**
**FAX: 361-887-0812**
**EMAIL: *Tim.Cantu@gates.com***
**WEB: www.gates.com**

# 10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

| | | | |
|---|---|---|---|
| Customer : | AUSTIN DISTRIBUTING | Test Date: | 4/30/2015 |
| Customer Ref. : | 4060578 | Hose Serial No.: | D-043015-7 |
| Invoice No. : | 500506 | Created By: | JUSTIN CROPPER |

| | |
|---|---|
| Product Description: | 10K3.548.0CK4.1/1610KFLGE/E LE |

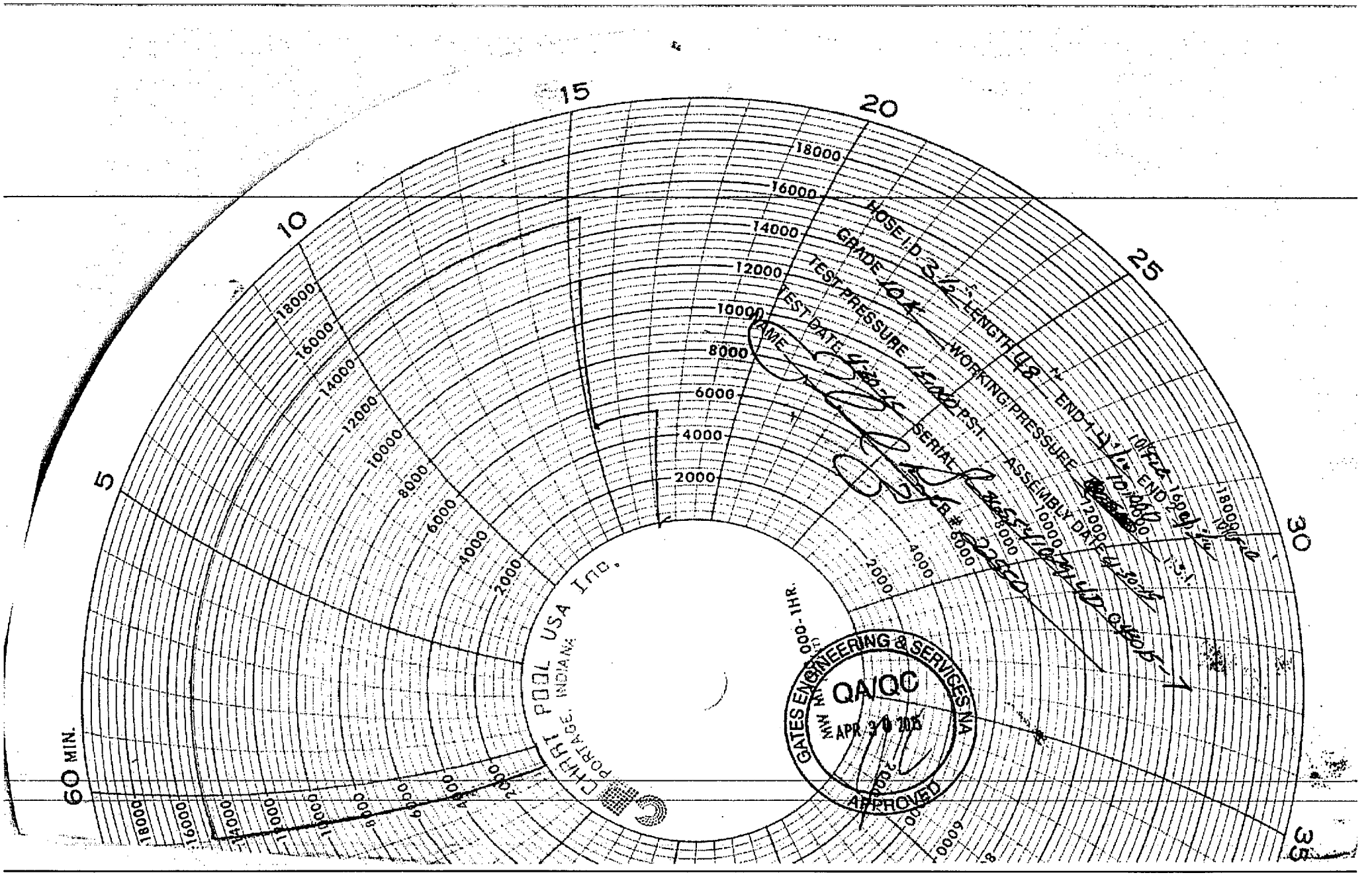
| | | | |
|---|---|---|---|
| End Fitting 1 : | 4 1/16 10K FLG | End Fitting 2 : | 4 1/16 10K FLG |
| Gates Part No. : | 4773-6290 | Assembly Code : | L36554102914D-043015-7 |
| Working Pressure : | 10,000 PSI | Test Pressure : | 15,000 PSI |

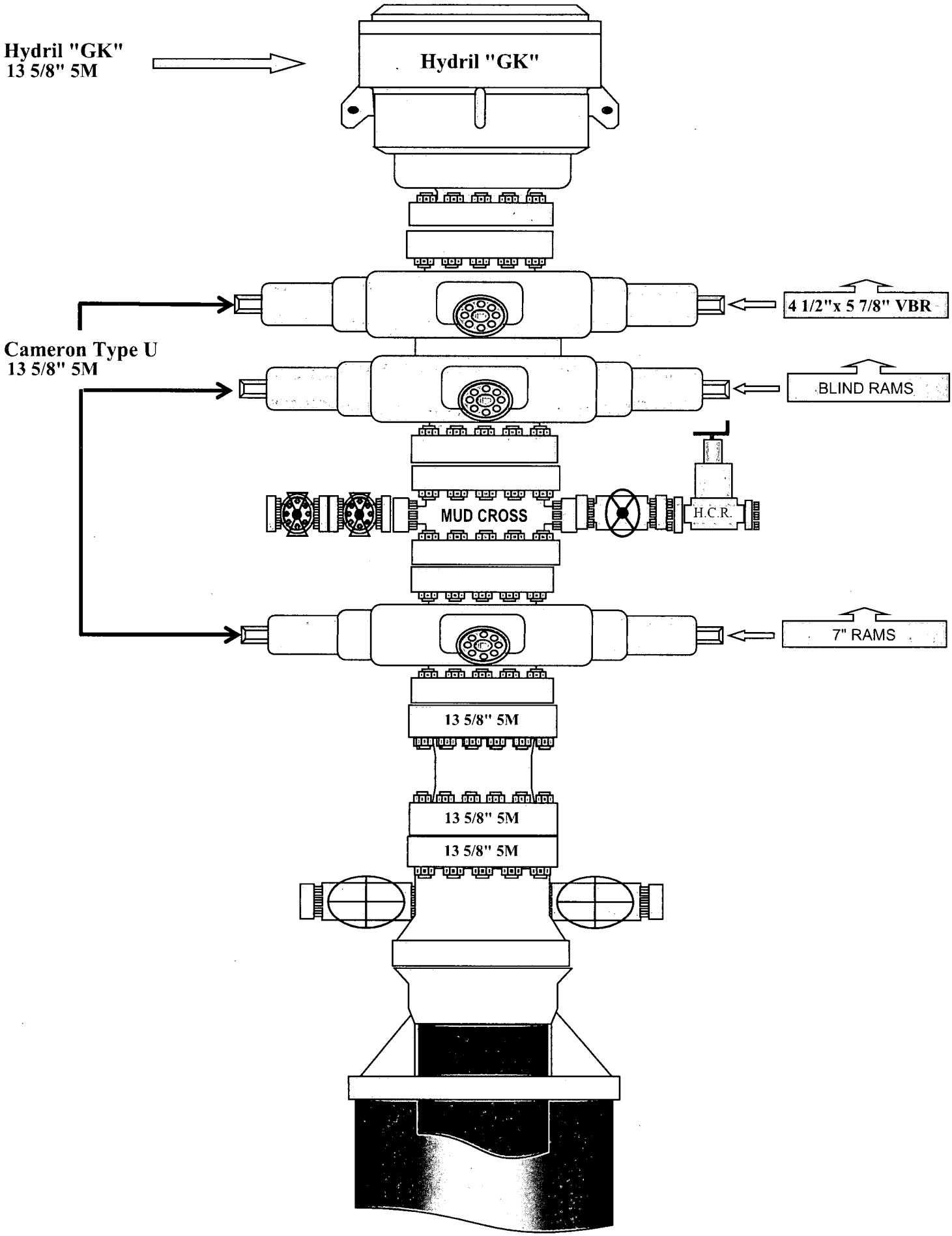
**Gates E & S North America, Inc.** certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

| | | | |
|---|---|---|---|
| Quality Manager : | QUALITY | Produciton: | PRODUCTION |
| Date : | 4/30/2015 | Date : | 4/30/2015 |
| Signature : | | Signature : | |

Form-PTC - 01 Rev.0 2

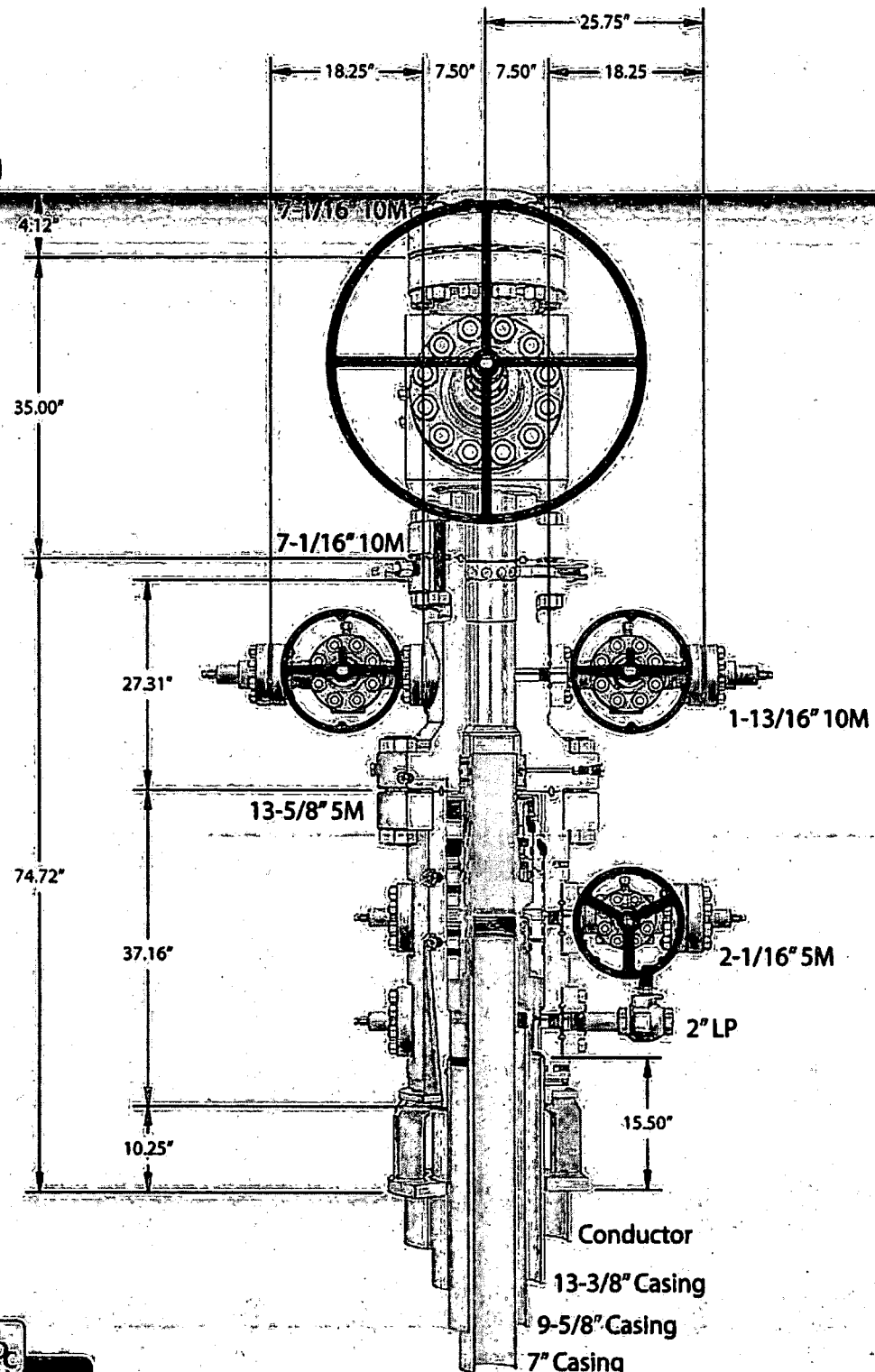
Gates BLACK GOLD


5
10
15
20
25
30
60 MIN.
18000
16000
14000
12000
10000
8000
6000
4000
2000
HOSE I.D. 3 1/2"
LENGTH 40'
GRADE 10K
WORKING PRESSURE
TEST PRESSURE 15000 PSI
TEST DATE 4-30-15
SERIAL
ASSEMBLY DATE 4-30-15
CHART POOL USA Inc.
PORTAGE, INDIANA
GATES ENGINEERING & SERVICES NA
QA/QC
APR 30 2015
APPROVED


Hydril "GK"
13 5/8" 5M
Hydril "GK"
4 1/2"x 5 7/8" VBR
Cameron Type U
13 5/8" 5M
BLIND RAMS
MUD CROSS
H.C.R.
7" RAMS
13 5/8" 5M
13 5/8" 5M
13 5/8" 5M

CAMERON
A Schlumberger Company

# 13-5/8" MN-DS Wellhead System




MEWBOURNE OIL COMPANY

C7585
Rev. 02

NOTE: All dimensions on this drawing are estimated measurements and should be evaluated by engineering.

Casing Hanger 57" conductor cut-off

79

**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

**Casing Program**

| Hole Size | Casing Interval From | Casing Interval To | Csg. Size | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | SF Jt Tension | SF Body Tension |
|---|---|---|---|---|---|---|---|---|---|---|
| 17.5" | 0' | 450' | 13.375" | 48 | H40 | STC | 3.66 | 8.21 | 14.91 | 25.05 |
| 12.25" | 0' | 1825' | 9.625" | 36 | J55 | LTC | 2.13 | 3.71 | 6.89 | 8.58 |
| 8.75" | 0' | 9134' | 7" | 26 | P110 | LTC | 1.68 | 2.24 | 2.74 | 3.49 |
| 6.125" | 8547' | 19,035' | 4.5" | 13.5 | P110 | LTC | 1.73 | 2.01 | 2.39 | 2.98 |
| | | | BLM Minimum Safety Factor | | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet | 1.6 Dry<br>1.8 Wet |

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

| | Y or N |
|---|---|
| Is casing new? If used, attach certification as required in Onshore Order #1 | Y |
| Is casing API approved? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary. | |
| | |
| Is well located in SOPA but not in R-111-P? | N |
| If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing? | |
| | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2nd string set 100' to 600' below the base of salt? | |
| | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |
| | |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

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| 6.125" | 8547' | 19,035' | 4.5" | 13.5 | P110 | LTC | 1.73 | 2.01 | 2.39 | 2.98 |
| | | | BLM Minimum Safety Factor | | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet | 1.6 Dry<br>1.8 Wet |

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| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary. | |
| | |
| Is well located in SOPA but not in R-111-P? | N |
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**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

**Casing Program**

| Hole Size | Casing Interval From | To | Csg. Size | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | SF Jt Tension | SF Body Tension |
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All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

| | Y or N |
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| Is casing API approved? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| | |
| Is well located within Capitan Reef? | N |
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| | |
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| | |
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**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
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| 8.75" | 0' | 9134' | 7" | 26 | P110 | LTC | 1.68 | 2.24 | 2.74 | 3.49 |
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All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

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|---|---|
| Is casing new? If used, attach certification as required in Onshore Order #1 | Y |
| Is casing API approved? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
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| | |
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| If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing? | |
| | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2nd string set 100' to 600' below the base of salt? | |
| | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |
| | |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

# Hydrogen Sulfide Drilling Operations Plan
**Mewbourne Oil Company**

## 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 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 9 5/8" intermediate casing.

1. Well Control Equipment
   - A. Choke manifold with minimum of one adjustable choke/remote choke.
   - B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
   - C. Auxiliary equipment including annular type blowout preventer.
2. Protective Equipment for Essential Personnel
   Thirty minute self contained work unit located in the dog house and at briefing areas.

Additionally: If H2S is encountered in concentrations less than 10 ppm, fans will be placed in work areas to prevent the accumulation of hazardous amounts of poisonous gas. If higher concentrations of H2S are detected the well will be shut in and a rotating head, mud/gas separator, remote choke and flare line with igniter will be installed.

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.

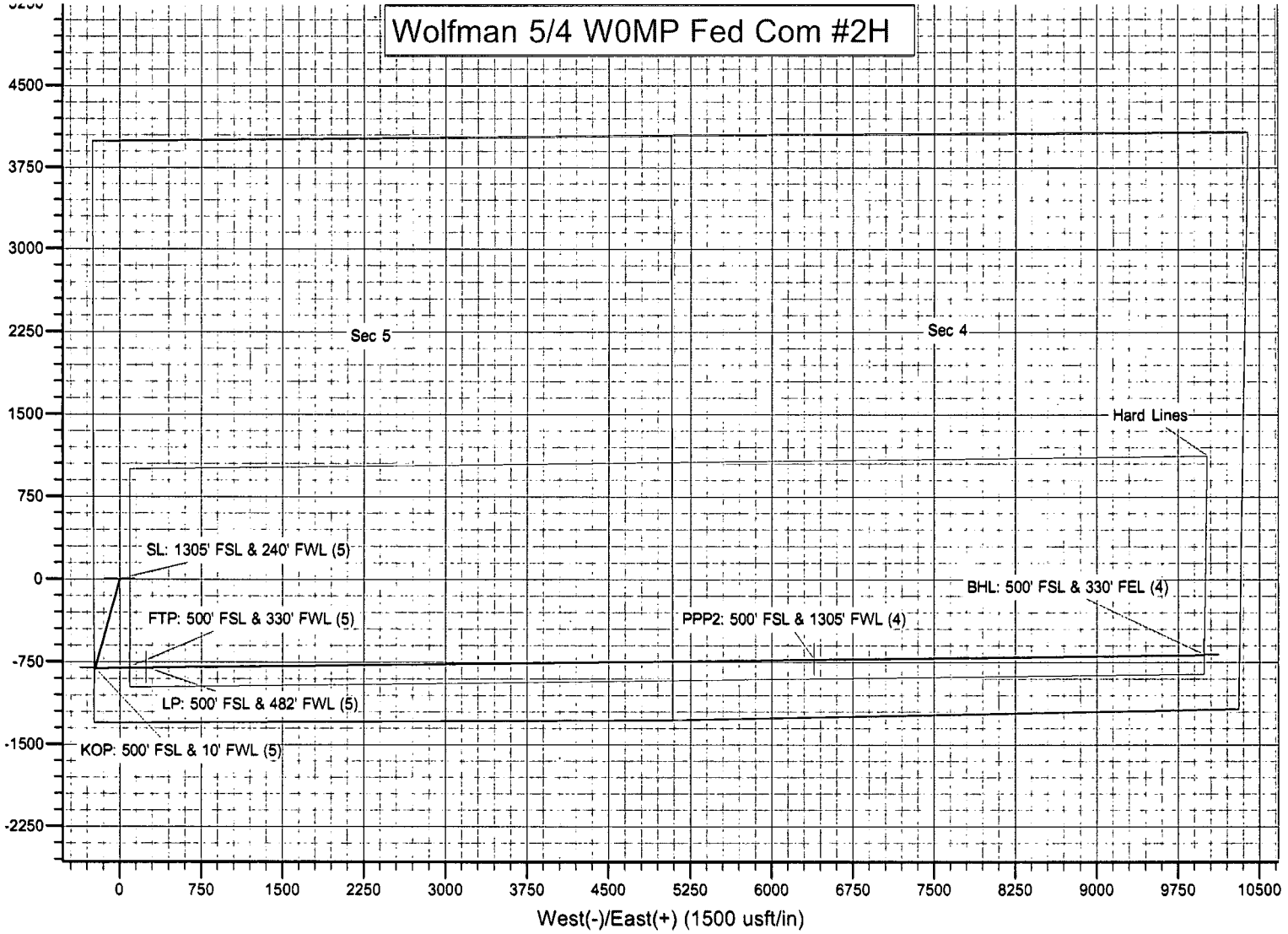
## 7. Well Testing

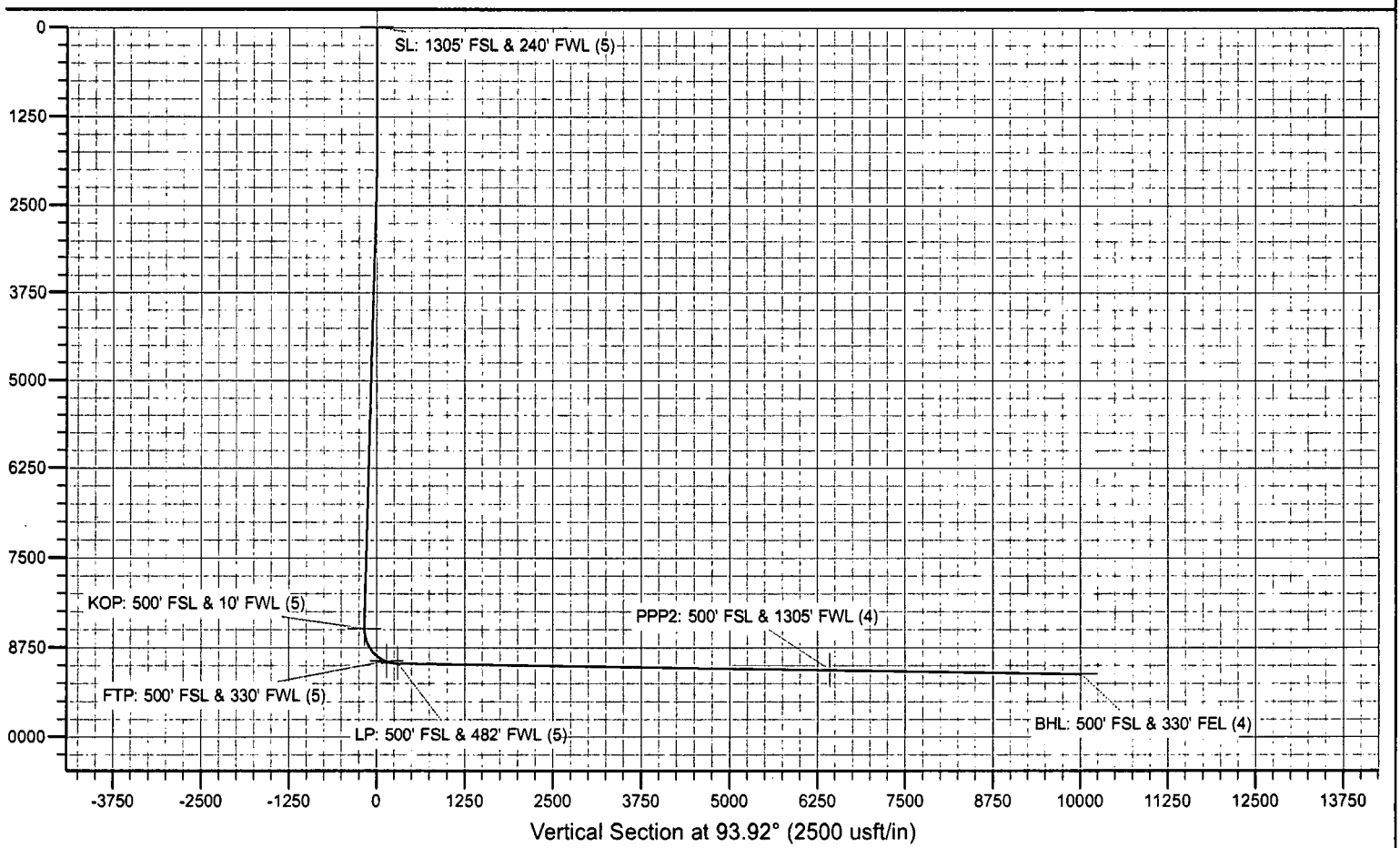
Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

## 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** |
| | **2nd Fax** | **575-393-7259** |
| **District Manager** | **Robin Terrell** | **575-390-4816** |
| **Drilling Superintendent** | **Frosty Lathan** | **575-390-4103** |
| | **Bradley Bishop** | **575-390-6838** |
| **Drilling Foreman** | **Wesley Noseff** | **575-441-0729** |


Wolfman 5/4 W0MP Fed Com #2H
Sec 5
Sec 4
Hard Lines
SL: 1305' FSL & 240' FWL (5)
FTP: 500' FSL & 330' FWL (5)
LP: 500' FSL & 482' FWL (5)
KOP: 500' FSL & 10' FWL (5)
PPP2: 500' FSL & 1305' FWL (4)
BHL: 500' FSL & 330' FEL (4)
4500
3750
3000
2250
1500
750
0
-750
-1500
-2250
0
750
1500
2250
3000
3750
4500
5250
6000
6750
7500
8250
9000
9750
10500
West(-)/East(+) (1500 usft/in)


SL: 1305' FSL & 240' FWL (5)
KOP: 500' FSL & 10' FWL (5)
PPP2: 500' FSL & 1305' FWL (4)
FTP: 500' FSL & 330' FWL (5)
LP: 500' FSL & 482' FWL (5)
BHL: 500' FSL & 330' FEL (4)
0
1250
2500
3750
5000
6250
7500
8750
0000
-3750
-2500
-1250
0
1250
2500
3750
5000
6250
7500
8750
10000
11250
12500
13750
Vertical Section at 93.92° (2500 usft/in)

# Mewbourne Oil Company

**Eddy County, New Mexico NAD 83**
**Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

**Plan: Design #1**

# Standard Planning Report

**05 April, 2019**

| | | | |
|---|---|---|---|
| **Database:** | Hobbs | **Local Co-ordinate Reference:** | Site Wolfman 5/4 W0MP Fed Com #2H |
| **Company:** | Mewbourne Oil Company | **TVD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Site:** | Wolfman 5/4 W0MP Fed Com #2H | **North Reference:** | Grid |
| **Well:** | Sec 5, T23S, R27E | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | BHL: 500' FSL & 330' FEL, Sec 4 | | |
| **Design:** | Design #1 | | |

| | | | |
|---|---|---|---|
| **Project** | Eddy County, New Mexico NAD 83 | | |
| **Map System:** | US State Plane 1983 | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | North American Datum 1983 | | |
| **Map Zone:** | New Mexico Eastern Zone | | |

| | | | | | |
|---|---|---|---|---|---|
| **Site** | Wolfman 5/4 W0MP Fed Com #2H | | | | |
| **Site Position:** | | **Northing:** | 483,903.00 usft | **Latitude:** | 32.3302705 |
| **From:** | Map | **Easting:** | 576,304.00 usft | **Longitude:** | -104.2201262 |
| **Position Uncertainty:** | 0.0 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.06 ° |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well** | Sec 5, T23S, R27E | | | | | |
| **Well Position** | **+N/-S** | 0.0 usft | **Northing:** | 483,903.00 usft | **Latitude:** | 32.3302705 |
| | **+E/-W** | 0.0 usft | **Easting:** | 576,304.00 usft | **Longitude:** | -104.2201262 |
| **Position Uncertainty** | | 0.0 usft | **Wellhead Elevation:** | 3,208.0 usft | **Ground Level:** | 3,181.0 usft |

| | | | | | |
|---|---|---|---|---|---|
| **Wellbore** | BHL: 500' FSL & 330' FEL, Sec 4 | | | | |
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | IGRF2010 | 4/5/2019 | 6.93 | 59.98 | 47,835 |

| | | | | | |
|---|---|---|---|---|---|
| **Design** | Design #1 | | | | |
| **Audit Notes:** | | | | | |
| **Version:** | | **Phase:** | PROTOTYPE | **Tie On Depth:** | 0.0 |
| **Vertical Section:** | **Depth From (TVD) (usft)** | **+N/-S (usft)** | **+E/-W (usft)** | **Direction (°)** | |
| | 0.0 | 0.0 | 0.0 | 93.92 | |

**Plan Sections**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,900.0 | 0.00 | 0.00 | 1,900.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,284.8 | 7.70 | 195.78 | 2,283.6 | -24.8 | -7.0 | 2.00 | 2.00 | 0.00 | 195.78 | |
| 8,162.0 | 7.70 | 195.78 | 8,107.9 | -782.2 | -221.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,546.8 | 0.00 | 0.00 | 8,491.5 | -807.0 | -228.0 | 2.00 | -2.00 | 0.00 | 180.00 | KOP: 500' FSL & 10' I |
| 9,289.5 | 89.12 | 89.31 | 8,969.0 | -801.3 | 242.1 | 12.00 | 12.00 | 0.00 | 89.31 | |
| 19,035.2 | 89.12 | 89.31 | 9,119.0 | -684.0 | 9,986.0 | 0.00 | 0.00 | 0.00 | 0.00 | BHL: 500' FSL & 330' |

| | | | |
|---|---|---|---|
| **Database:** | Hobbs | **Local Co-ordinate Reference:** | Site Wolfman 5/4 W0MP Fed Com #2H |
| **Company:** | Mewbourne Oil Company | **TVD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Site:** | Wolfman 5/4 W0MP Fed Com #2H | **North Reference:** | Grid |
| **Well:** | Sec 5, T23S, R27E | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | BHL: 500' FSL & 330' FEL, Sec 4 | | |
| **Design:** | Design #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| **SL: 1305' FSL & 240' FWL (5)** | | | | | | | | | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 0.00 | 0.00 | 1,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 0.00 | 0.00 | 1,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 2.00 | 195.78 | 2,000.0 | -1.7 | -0.5 | -0.4 | 2.00 | 2.00 | 0.00 |
| 2,100.0 | 4.00 | 195.78 | 2,099.8 | -6.7 | -1.9 | -1.4 | 2.00 | 2.00 | 0.00 |
| 2,200.0 | 6.00 | 195.78 | 2,199.5 | -15.1 | -4.3 | -3.2 | 2.00 | 2.00 | 0.00 |
| 2,284.8 | 7.70 | 195.78 | 2,283.6 | -24.8 | -7.0 | -5.3 | 2.00 | 2.00 | 0.00 |
| 2,300.0 | 7.70 | 195.78 | 2,298.7 | -26.8 | -7.6 | -5.7 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 7.70 | 195.78 | 2,397.8 | -39.7 | -11.2 | -8.5 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 7.70 | 195.78 | 2,496.9 | -52.6 | -14.9 | -11.2 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 7.70 | 195.78 | 2,596.0 | -65.4 | -18.5 | -14.0 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 7.70 | 195.78 | 2,695.1 | -78.3 | -22.1 | -16.7 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 7.70 | 195.78 | 2,794.2 | -91.2 | -25.8 | -19.5 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 7.70 | 195.78 | 2,893.3 | -104.1 | -29.4 | -22.2 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 7.70 | 195.78 | 2,992.4 | -117.0 | -33.1 | -25.0 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 7.70 | 195.78 | 3,091.5 | -129.9 | -36.7 | -27.7 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 7.70 | 195.78 | 3,190.6 | -142.8 | -40.3 | -30.5 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 7.70 | 195.78 | 3,289.7 | -155.7 | -44.0 | -33.2 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 7.70 | 195.78 | 3,388.8 | -168.5 | -47.6 | -36.0 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 7.70 | 195.78 | 3,487.9 | -181.4 | -51.3 | -38.7 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 7.70 | 195.78 | 3,587.0 | -194.3 | -54.9 | -41.5 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 7.70 | 195.78 | 3,686.1 | -207.2 | -58.5 | -44.2 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 7.70 | 195.78 | 3,785.2 | -220.1 | -62.2 | -47.0 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 7.70 | 195.78 | 3,884.3 | -233.0 | -65.8 | -49.7 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 7.70 | 195.78 | 3,983.4 | -245.9 | -69.5 | -52.5 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 7.70 | 195.78 | 4,082.5 | -258.7 | -73.1 | -55.2 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 7.70 | 195.78 | 4,181.6 | -271.6 | -76.7 | -58.0 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 7.70 | 195.78 | 4,280.7 | -284.5 | -80.4 | -60.8 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 7.70 | 195.78 | 4,379.8 | -297.4 | -84.0 | -63.5 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 7.70 | 195.78 | 4,478.9 | -310.3 | -87.7 | -66.3 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 7.70 | 195.78 | 4,578.0 | -323.2 | -91.3 | -69.0 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 7.70 | 195.78 | 4,677.1 | -336.1 | -94.9 | -71.8 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 7.70 | 195.78 | 4,776.2 | -348.9 | -98.6 | -74.5 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 7.70 | 195.78 | 4,875.3 | -361.8 | -102.2 | -77.3 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 7.70 | 195.78 | 4,974.4 | -374.7 | -105.9 | -80.0 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 7.70 | 195.78 | 5,073.5 | -387.6 | -109.5 | -82.8 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | Hobbs | **Local Co-ordinate Reference:** | Site Wolfman 5/4 W0MP Fed Com #2H |
| **Company:** | Mewbourne Oil Company | **TVD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Site:** | Wolfman 5/4 W0MP Fed Com #2H | **North Reference:** | Grid |
| **Well:** | Sec 5, T23S, R27E | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | BHL: 500' FSL & 330' FEL, Sec 4 | | |
| **Design:** | Design #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 5,200.0 | 7.70 | 195.78 | 5,172.6 | -400.5 | -113.1 | -85.5 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 7.70 | 195.78 | 5,271.7 | -413.4 | -116.8 | -88.3 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 7.70 | 195.78 | 5,370.8 | -426.3 | -120.4 | -91.0 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 7.70 | 195.78 | 5,469.9 | -439.1 | -124.1 | -93.8 | 0.00 | 0.00 | 0.00 |
| 5,600.0 | 7.70 | 195.78 | 5,569.0 | -452.0 | -127.7 | -96.5 | 0.00 | 0.00 | 0.00 |
| 5,700.0 | 7.70 | 195.78 | 5,668.1 | -464.9 | -131.4 | -99.3 | 0.00 | 0.00 | 0.00 |
| 5,800.0 | 7.70 | 195.78 | 5,767.2 | -477.8 | -135.0 | -102.0 | 0.00 | 0.00 | 0.00 |
| 5,900.0 | 7.70 | 195.78 | 5,866.3 | -490.7 | -138.6 | -104.8 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 7.70 | 195.78 | 5,965.4 | -503.6 | -142.3 | -107.5 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 7.70 | 195.78 | 6,064.5 | -516.5 | -145.9 | -110.3 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 7.70 | 195.78 | 6,163.6 | -529.3 | -149.6 | -113.0 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 7.70 | 195.78 | 6,262.7 | -542.2 | -153.2 | -115.8 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 7.70 | 195.78 | 6,361.8 | -555.1 | -156.8 | -118.5 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 7.70 | 195.78 | 6,460.9 | -568.0 | -160.5 | -121.3 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 7.70 | 195.78 | 6,560.0 | -580.9 | -164.1 | -124.0 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 7.70 | 195.78 | 6,659.1 | -593.8 | -167.8 | -126.8 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 7.70 | 195.78 | 6,758.2 | -606.7 | -171.4 | -129.5 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 7.70 | 195.78 | 6,857.3 | -619.5 | -175.0 | -132.3 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 7.70 | 195.78 | 6,956.4 | -632.4 | -178.7 | -135.0 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 7.70 | 195.78 | 7,055.5 | -645.3 | -182.3 | -137.8 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 7.70 | 195.78 | 7,154.6 | -658.2 | -186.0 | -140.5 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 7.70 | 195.78 | 7,253.7 | -671.1 | -189.6 | -143.3 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 7.70 | 195.78 | 7,352.8 | -684.0 | -193.2 | -146.1 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 7.70 | 195.78 | 7,451.9 | -696.9 | -196.9 | -148.8 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 7.70 | 195.78 | 7,551.0 | -709.8 | -200.5 | -151.6 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 7.70 | 195.78 | 7,650.1 | -722.6 | -204.2 | -154.3 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 7.70 | 195.78 | 7,749.2 | -735.5 | -207.8 | -157.1 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 7.70 | 195.78 | 7,848.3 | -748.4 | -211.4 | -159.8 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 7.70 | 195.78 | 7,947.4 | -761.3 | -215.1 | -162.6 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 7.70 | 195.78 | 8,046.5 | -774.2 | -218.7 | -165.3 | 0.00 | 0.00 | 0.00 |
| 8,162.0 | 7.70 | 195.78 | 8,107.9 | -782.2 | -221.0 | -167.0 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 6.94 | 195.78 | 8,145.6 | -786.8 | -222.3 | -168.0 | 2.00 | -2.00 | 0.00 |
| 8,300.0 | 4.94 | 195.78 | 8,245.1 | -796.8 | -225.1 | -170.1 | 2.00 | -2.00 | 0.00 |
| 8,400.0 | 2.94 | 195.78 | 8,344.8 | -803.4 | -227.0 | -171.5 | 2.00 | -2.00 | 0.00 |
| 8,500.0 | 0.94 | 195.78 | 8,444.8 | -806.6 | -227.9 | -172.2 | 2.00 | -2.00 | 0.00 |
| 8,546.8 | 0.00 | 0.00 | 8,491.5 | -807.0 | -228.0 | -172.3 | 2.00 | -2.00 | 0.00 |
| **KOP: 500' FSL & 10' FWL (5)** | | | | | | | | | |
| 8,600.0 | 6.39 | 89.31 | 8,544.6 | -807.0 | -225.0 | -169.4 | 12.00 | 12.00 | 0.00 |
| 8,700.0 | 18.38 | 89.31 | 8,642.1 | -806.7 | -203.6 | -148.0 | 12.00 | 12.00 | 0.00 |
| 8,800.0 | 30.38 | 89.31 | 8,733.1 | -806.2 | -162.4 | -107.0 | 12.00 | 12.00 | 0.00 |
| 8,900.0 | 42.38 | 89.31 | 8,813.4 | -805.5 | -103.2 | -47.9 | 12.00 | 12.00 | 0.00 |
| 9,000.0 | 54.38 | 89.31 | 8,879.7 | -804.6 | -28.6 | 26.4 | 12.00 | 12.00 | 0.00 |
| 9,100.0 | 66.38 | 89.31 | 8,929.0 | -803.6 | 58.2 | 112.9 | 12.00 | 12.00 | 0.00 |
| 9,134.2 | 70.48 | 89.31 | 8,941.6 | -803.2 | 90.0 | 144.7 | 12.00 | 12.00 | 0.00 |
| **FTP: 500' FSL & 330' FWL (5)** | | | | | | | | | |
| 9,200.0 | 78.38 | 89.31 | 8,959.3 | -802.4 | 153.3 | 207.8 | 12.00 | 12.00 | 0.00 |
| 9,289.5 | 89.11 | 89.31 | 8,969.0 | -801.3 | 242.1 | 296.3 | 12.00 | 12.00 | 0.00 |
| **LP: 500' FSL & 482' FWL (5)** | | | | | | | | | |
| 9,300.0 | 89.12 | 89.31 | 8,969.2 | -801.2 | 252.6 | 306.8 | 0.04 | 0.04 | 0.00 |
| 9,400.0 | 89.12 | 89.31 | 8,970.7 | -800.0 | 352.6 | 406.4 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 89.12 | 89.31 | 8,972.2 | -798.8 | 452.6 | 506.1 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 89.12 | 89.31 | 8,973.8 | -797.6 | 552.6 | 605.8 | 0.00 | 0.00 | 0.00 |
| 9,700.0 | 89.12 | 89.31 | 8,975.3 | -796.4 | 652.5 | 705.4 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | Hobbs | **Local Co-ordinate Reference:** | Site Wolfman 5/4 W0MP Fed Com #2H |
| **Company:** | Mewbourne Oil Company | **TVD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Site:** | Wolfman 5/4 W0MP Fed Com #2H | **North Reference:** | Grid |
| **Well:** | Sec 5, T23S, R27E | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | BHL: 500' FSL & 330' FEL, Sec 4 | | |
| **Design:** | Design #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 9,800.0 | 89.12 | 89.31 | 8,976.9 | -795.2 | 752.5 | 805.1 | 0.00 | 0.00 | 0.00 |
| 9,900.0 | 89.12 | 89.31 | 8,978.4 | -794.0 | 852.5 | 904.8 | 0.00 | 0.00 | 0.00 |
| 10,000.0 | 89.12 | 89.31 | 8,979.9 | -792.8 | 952.5 | 1,004.4 | 0.00 | 0.00 | 0.00 |
| 10,100.0 | 89.12 | 89.31 | 8,981.5 | -791.6 | 1,052.5 | 1,104.1 | 0.00 | 0.00 | 0.00 |
| 10,200.0 | 89.12 | 89.31 | 8,983.0 | -790.4 | 1,152.4 | 1,203.8 | 0.00 | 0.00 | 0.00 |
| 10,300.0 | 89.12 | 89.31 | 8,984.6 | -789.2 | 1,252.4 | 1,303.4 | 0.00 | 0.00 | 0.00 |
| 10,400.0 | 89.12 | 89.31 | 8,986.1 | -788.0 | 1,352.4 | 1,403.1 | 0.00 | 0.00 | 0.00 |
| 10,500.0 | 89.12 | 89.31 | 8,987.6 | -786.8 | 1,452.4 | 1,502.8 | 0.00 | 0.00 | 0.00 |
| 10,600.0 | 89.12 | 89.31 | 8,989.2 | -785.6 | 1,552.4 | 1,602.4 | 0.00 | 0.00 | 0.00 |
| 10,700.0 | 89.12 | 89.31 | 8,990.7 | -784.4 | 1,652.4 | 1,702.1 | 0.00 | 0.00 | 0.00 |
| 10,800.0 | 89.12 | 89.31 | 8,992.2 | -783.2 | 1,752.3 | 1,801.8 | 0.00 | 0.00 | 0.00 |
| 10,900.0 | 89.12 | 89.31 | 8,993.8 | -781.9 | 1,852.3 | 1,901.4 | 0.00 | 0.00 | 0.00 |
| 11,000.0 | 89.12 | 89.31 | 8,995.3 | -780.7 | 1,952.3 | 2,001.1 | 0.00 | 0.00 | 0.00 |
| 11,100.0 | 89.12 | 89.31 | 8,996.9 | -779.5 | 2,052.3 | 2,100.7 | 0.00 | 0.00 | 0.00 |
| 11,200.0 | 89.12 | 89.31 | 8,998.4 | -778.3 | 2,152.3 | 2,200.4 | 0.00 | 0.00 | 0.00 |
| 11,300.0 | 89.12 | 89.31 | 8,999.9 | -777.1 | 2,252.2 | 2,300.1 | 0.00 | 0.00 | 0.00 |
| 11,400.0 | 89.12 | 89.31 | 9,001.5 | -775.9 | 2,352.2 | 2,399.7 | 0.00 | 0.00 | 0.00 |
| 11,500.0 | 89.12 | 89.31 | 9,003.0 | -774.7 | 2,452.2 | 2,499.4 | 0.00 | 0.00 | 0.00 |
| 11,600.0 | 89.12 | 89.31 | 9,004.6 | -773.5 | 2,552.2 | 2,599.1 | 0.00 | 0.00 | 0.00 |
| 11,700.0 | 89.12 | 89.31 | 9,006.1 | -772.3 | 2,652.2 | 2,698.7 | 0.00 | 0.00 | 0.00 |
| 11,800.0 | 89.12 | 89.31 | 9,007.6 | -771.1 | 2,752.1 | 2,798.4 | 0.00 | 0.00 | 0.00 |
| 11,900.0 | 89.12 | 89.31 | 9,009.2 | -769.9 | 2,852.1 | 2,898.1 | 0.00 | 0.00 | 0.00 |
| 12,000.0 | 89.12 | 89.31 | 9,010.7 | -768.7 | 2,952.1 | 2,997.7 | 0.00 | 0.00 | 0.00 |
| 12,100.0 | 89.12 | 89.31 | 9,012.3 | -767.5 | 3,052.1 | 3,097.4 | 0.00 | 0.00 | 0.00 |
| 12,200.0 | 89.12 | 89.31 | 9,013.8 | -766.3 | 3,152.1 | 3,197.1 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 89.12 | 89.31 | 9,015.3 | -765.1 | 3,252.0 | 3,296.7 | 0.00 | 0.00 | 0.00 |
| 12,400.0 | 89.12 | 89.31 | 9,016.9 | -763.9 | 3,352.0 | 3,396.4 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 89.12 | 89.31 | 9,018.4 | -762.7 | 3,452.0 | 3,496.1 | 0.00 | 0.00 | 0.00 |
| 12,600.0 | 89.12 | 89.31 | 9,020.0 | -761.5 | 3,552.0 | 3,595.7 | 0.00 | 0.00 | 0.00 |
| 12,700.0 | 89.12 | 89.31 | 9,021.5 | -760.3 | 3,652.0 | 3,695.4 | 0.00 | 0.00 | 0.00 |
| 12,800.0 | 89.12 | 89.31 | 9,023.0 | -759.1 | 3,752.0 | 3,795.1 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 89.12 | 89.31 | 9,024.6 | -757.9 | 3,851.9 | 3,894.7 | 0.00 | 0.00 | 0.00 |
| 13,000.0 | 89.12 | 89.31 | 9,026.1 | -756.7 | 3,951.9 | 3,994.4 | 0.00 | 0.00 | 0.00 |
| 13,100.0 | 89.12 | 89.31 | 9,027.6 | -755.5 | 4,051.9 | 4,094.0 | 0.00 | 0.00 | 0.00 |
| 13,200.0 | 89.12 | 89.31 | 9,029.2 | -754.3 | 4,151.9 | 4,193.7 | 0.00 | 0.00 | 0.00 |
| 13,300.0 | 89.12 | 89.31 | 9,030.7 | -753.1 | 4,251.9 | 4,293.4 | 0.00 | 0.00 | 0.00 |
| 13,400.0 | 89.12 | 89.31 | 9,032.3 | -751.8 | 4,351.8 | 4,393.0 | 0.00 | 0.00 | 0.00 |
| 13,500.0 | 89.12 | 89.31 | 9,033.8 | -750.6 | 4,451.8 | 4,492.7 | 0.00 | 0.00 | 0.00 |
| 13,600.0 | 89.12 | 89.31 | 9,035.3 | -749.4 | 4,551.8 | 4,592.4 | 0.00 | 0.00 | 0.00 |
| 13,700.0 | 89.12 | 89.31 | 9,036.9 | -748.2 | 4,651.8 | 4,692.0 | 0.00 | 0.00 | 0.00 |
| 13,800.0 | 89.12 | 89.31 | 9,038.4 | -747.0 | 4,751.8 | 4,791.7 | 0.00 | 0.00 | 0.00 |
| 13,900.0 | 89.12 | 89.31 | 9,040.0 | -745.8 | 4,851.7 | 4,891.4 | 0.00 | 0.00 | 0.00 |
| 14,000.0 | 89.12 | 89.31 | 9,041.5 | -744.6 | 4,951.7 | 4,991.0 | 0.00 | 0.00 | 0.00 |
| 14,100.0 | 89.12 | 89.31 | 9,043.0 | -743.4 | 5,051.7 | 5,090.7 | 0.00 | 0.00 | 0.00 |
| 14,200.0 | 89.12 | 89.31 | 9,044.6 | -742.2 | 5,151.7 | 5,190.4 | 0.00 | 0.00 | 0.00 |
| 14,300.0 | 89.12 | 89.31 | 9,046.1 | -741.0 | 5,251.7 | 5,290.0 | 0.00 | 0.00 | 0.00 |
| 14,400.0 | 89.12 | 89.31 | 9,047.7 | -739.8 | 5,351.6 | 5,389.7 | 0.00 | 0.00 | 0.00 |
| 14,500.0 | 89.12 | 89.31 | 9,049.2 | -738.6 | 5,451.6 | 5,489.4 | 0.00 | 0.00 | 0.00 |
| 14,600.0 | 89.12 | 89.31 | 9,050.7 | -737.4 | 5,551.6 | 5,589.0 | 0.00 | 0.00 | 0.00 |
| 14,700.0 | 89.12 | 89.31 | 9,052.3 | -736.2 | 5,651.6 | 5,688.7 | 0.00 | 0.00 | 0.00 |
| 14,800.0 | 89.12 | 89.31 | 9,053.8 | -735.0 | 5,751.6 | 5,788.3 | 0.00 | 0.00 | 0.00 |
| 14,900.0 | 89.12 | 89.31 | 9,055.4 | -733.8 | 5,851.5 | 5,888.0 | 0.00 | 0.00 | 0.00 |
| 15,000.0 | 89.12 | 89.31 | 9,056.9 | -732.6 | 5,951.5 | 5,987.7 | 0.00 | 0.00 | 0.00 |
| 15,100.0 | 89.12 | 89.31 | 9,058.4 | -731.4 | 6,051.5 | 6,087.3 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | Hobbs | **Local Co-ordinate Reference:** | Site Wolfman 5/4 W0MP Fed Com #2H |
| **Company:** | Mewbourne Oil Company | **TVD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Site:** | Wolfman 5/4 W0MP Fed Com #2H | **North Reference:** | Grid |
| **Well:** | Sec 5, T23S, R27E | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | BHL: 500' FSL & 330' FEL, Sec 4 | | |
| **Design:** | Design #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 15,200.0 | 89.12 | 89.31 | 9,060.0 | -730.2 | 6,151.5 | 6,187.0 | 0.00 | 0.00 | 0.00 |
| 15,300.0 | 89.12 | 89.31 | 9,061.5 | -729.0 | 6,251.5 | 6,286.7 | 0.00 | 0.00 | 0.00 |
| 15,400.0 | 89.12 | 89.31 | 9,063.0 | -727.8 | 6,351.5 | 6,386.3 | 0.00 | 0.00 | 0.00 |
| 15,441.6 | 89.12 | 89.31 | 9,063.7 | -727.3 | 6,393.0 | 6,427.8 | 0.00 | 0.00 | 0.00 |
| **PPP2: 500' FSL & 1305' FWL (4)** | | | | | | | | | |
| 15,500.0 | 89.12 | 89.31 | 9,064.6 | -726.6 | 6,451.4 | 6,486.0 | 0.00 | 0.00 | 0.00 |
| 15,600.0 | 89.12 | 89.31 | 9,066.1 | -725.4 | 6,551.4 | 6,585.7 | 0.00 | 0.00 | 0.00 |
| 15,700.0 | 89.12 | 89.31 | 9,067.7 | -724.2 | 6,651.4 | 6,685.3 | 0.00 | 0.00 | 0.00 |
| 15,800.0 | 89.12 | 89.31 | 9,069.2 | -723.0 | 6,751.4 | 6,785.0 | 0.00 | 0.00 | 0.00 |
| 15,900.0 | 89.12 | 89.31 | 9,070.7 | -721.7 | 6,851.4 | 6,884.7 | 0.00 | 0.00 | 0.00 |
| 16,000.0 | 89.12 | 89.31 | 9,072.3 | -720.5 | 6,951.3 | 6,984.3 | 0.00 | 0.00 | 0.00 |
| 16,100.0 | 89.12 | 89.31 | 9,073.8 | -719.3 | 7,051.3 | 7,084.0 | 0.00 | 0.00 | 0.00 |
| 16,200.0 | 89.12 | 89.31 | 9,075.4 | -718.1 | 7,151.3 | 7,183.7 | 0.00 | 0.00 | 0.00 |
| 16,300.0 | 89.12 | 89.31 | 9,076.9 | -716.9 | 7,251.3 | 7,283.3 | 0.00 | 0.00 | 0.00 |
| 16,400.0 | 89.12 | 89.31 | 9,078.4 | -715.7 | 7,351.3 | 7,383.0 | 0.00 | 0.00 | 0.00 |
| 16,500.0 | 89.12 | 89.31 | 9,080.0 | -714.5 | 7,451.2 | 7,482.7 | 0.00 | 0.00 | 0.00 |
| 16,600.0 | 89.12 | 89.31 | 9,081.5 | -713.3 | 7,551.2 | 7,582.3 | 0.00 | 0.00 | 0.00 |
| 16,700.0 | 89.12 | 89.31 | 9,083.1 | -712.1 | 7,651.2 | 7,682.0 | 0.00 | 0.00 | 0.00 |
| 16,800.0 | 89.12 | 89.31 | 9,084.6 | -710.9 | 7,751.2 | 7,781.6 | 0.00 | 0.00 | 0.00 |
| 16,900.0 | 89.12 | 89.31 | 9,086.1 | -709.7 | 7,851.2 | 7,881.3 | 0.00 | 0.00 | 0.00 |
| 17,000.0 | 89.12 | 89.31 | 9,087.7 | -708.5 | 7,951.1 | 7,981.0 | 0.00 | 0.00 | 0.00 |
| 17,100.0 | 89.12 | 89.31 | 9,089.2 | -707.3 | 8,051.1 | 8,080.6 | 0.00 | 0.00 | 0.00 |
| 17,200.0 | 89.12 | 89.31 | 9,090.8 | -706.1 | 8,151.1 | 8,180.3 | 0.00 | 0.00 | 0.00 |
| 17,300.0 | 89.12 | 89.31 | 9,092.3 | -704.9 | 8,251.1 | 8,280.0 | 0.00 | 0.00 | 0.00 |
| 17,400.0 | 89.12 | 89.31 | 9,093.8 | -703.7 | 8,351.1 | 8,379.6 | 0.00 | 0.00 | 0.00 |
| 17,500.0 | 89.12 | 89.31 | 9,095.4 | -702.5 | 8,451.1 | 8,479.3 | 0.00 | 0.00 | 0.00 |
| 17,600.0 | 89.12 | 89.31 | 9,096.9 | -701.3 | 8,551.0 | 8,579.0 | 0.00 | 0.00 | 0.00 |
| 17,700.0 | 89.12 | 89.31 | 9,098.4 | -700.1 | 8,651.0 | 8,678.6 | 0.00 | 0.00 | 0.00 |
| 17,800.0 | 89.12 | 89.31 | 9,100.0 | -698.9 | 8,751.0 | 8,778.3 | 0.00 | 0.00 | 0.00 |
| 17,900.0 | 89.12 | 89.31 | 9,101.5 | -697.7 | 8,851.0 | 8,878.0 | 0.00 | 0.00 | 0.00 |
| 18,000.0 | 89.12 | 89.31 | 9,103.1 | -696.5 | 8,951.0 | 8,977.6 | 0.00 | 0.00 | 0.00 |
| 18,100.0 | 89.12 | 89.31 | 9,104.6 | -695.3 | 9,050.9 | 9,077.3 | 0.00 | 0.00 | 0.00 |
| 18,200.0 | 89.12 | 89.31 | 9,106.1 | -694.1 | 9,150.9 | 9,177.0 | 0.00 | 0.00 | 0.00 |
| 18,300.0 | 89.12 | 89.31 | 9,107.7 | -692.9 | 9,250.9 | 9,276.6 | 0.00 | 0.00 | 0.00 |
| 18,400.0 | 89.12 | 89.31 | 9,109.2 | -691.6 | 9,350.9 | 9,376.3 | 0.00 | 0.00 | 0.00 |
| 18,500.0 | 89.12 | 89.31 | 9,110.8 | -690.4 | 9,450.9 | 9,476.0 | 0.00 | 0.00 | 0.00 |
| 18,600.0 | 89.12 | 89.31 | 9,112.3 | -689.2 | 9,550.8 | 9,575.6 | 0.00 | 0.00 | 0.00 |
| 18,700.0 | 89.12 | 89.31 | 9,113.8 | -688.0 | 9,650.8 | 9,675.3 | 0.00 | 0.00 | 0.00 |
| 18,800.0 | 89.12 | 89.31 | 9,115.4 | -686.8 | 9,750.8 | 9,774.9 | 0.00 | 0.00 | 0.00 |
| 18,900.0 | 89.12 | 89.31 | 9,116.9 | -685.6 | 9,850.8 | 9,874.6 | 0.00 | 0.00 | 0.00 |
| 19,000.0 | 89.12 | 89.31 | 9,118.5 | -684.4 | 9,950.8 | 9,974.3 | 0.00 | 0.00 | 0.00 |
| 19,035.2 | 89.12 | 89.31 | 9,119.0 | -684.0 | 9,986.0 | 10,009.4 | 0.00 | 0.00 | 0.00 |
| **BHL: 500' FSL & 330' FEL (4)** | | | | | | | | | |

| | | | |
|---|---|---|---|
| **Database:** | Hobbs | **Local Co-ordinate Reference:** | Site Wolfman 5/4 W0MP Fed Com #2H |
| **Company:** | Mewbourne Oil Company | **TVD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | WELL @ 3208.0usft (Original Well Elev) |
| **Site:** | Wolfman 5/4 W0MP Fed Com #2H | **North Reference:** | Grid |
| **Well:** | Sec 5, T23S, R27E | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | BHL: 500' FSL & 330' FEL, Sec 4 | | |
| **Design:** | Design #1 | | |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| SL: 1305' FSL & 240' FW - plan hits target center - Point | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 483,903.00 | 576,304.00 | 32.3302705 | -104.2201262 |
| KOP: 500' FSL & 10' FW - plan hits target center - Point | 0.00 | 0.00 | 8,491.5 | -807.0 | -228.0 | 483,096.00 | 576,076.00 | 32.3280528 | -104.2208671 |
| FTP: 500' FSL & 330' FW - plan hits target center - Point | 0.00 | 0.00 | 8,941.6 | -803.2 | 90.0 | 483,099.83 | 576,394.00 | 32.3280624 | -104.2198375 |
| LP: 500' FSL & 482' FWL - plan hits target center - Point | 0.00 | 0.00 | 8,969.0 | -801.3 | 242.1 | 483,101.70 | 576,546.10 | 32.3280671 | -104.2193451 |
| PPP2: 500' FSL & 1305' - plan hits target center - Point | 0.00 | 0.00 | 9,063.7 | -727.3 | 6,393.0 | 483,175.73 | 582,697.00 | 32.3282511 | -104.1994312 |
| BHL: 500' FSL & 330' FE - plan hits target center - Point | 0.00 | 0.00 | 9,119.0 | -684.0 | 9,986.0 | 483,219.00 | 586,290.00 | 32.3283571 | -104.1877987 |

**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

## 1. Geologic Formations

| | | | |
|---|---|---|---|
| TVD of target | 9119' | Pilot hole depth | NA |
| MD at TD: | 19,035' | Deepest expected fresh water: | 100' |

**Basin**

| Formation | Depth (TVD) from KB | Water/Mineral Bearing/ Target Zone? | Hazards* |
|---|---|---|---|
| Quaternary Fill | Surface | | |
| Rustler | | | |
| Top of Salt | 520 | | |
| Base of Salt | 1660 | | |
| Delaware (Lamar) | 1900 | Oil/Gas | |
| Bell Canyon | 2060 | | |
| Cherry Canyon | 2800 | | |
| Manzanita Marker | 2900 | | |
| Brushy Canyon | 4130 | | |
| Bone Spring | 5370 | Oil/Gas | |
| 1st Bone Spring Sand | 6430 | | |
| 2nd Bone Spring Sand | 6900 | | |
| 3rd Bone Spring Sand | 8500 | | |
| Abo | | | |
| Wolfcamp | 8850 | Target Zone | |
| Devonian | | | |
| Fusselman | | | |
| Ellenburger | | | |
| Granite Wash | | | |

*H2S, water flows, loss of circulation, abnormal pressures, etc.

**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

## 2. Casing Program

| Hole Size | Casing Interval From | Casing Interval To | Csg. Size | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | SF Jt Tension | SF Body Tension |
|---|---|---|---|---|---|---|---|---|---|---|
| 17.5" | 0' | 450' | 13.375" | 48 | H40 | STC | 3.66 | 8.21 | 14.91 | 25.05 |
| 12.25" | 0' | 1825' | 9.625" | 36 | J55 | LTC | 2.13 | 3.71 | 6.89 | 8.58 |
| 8.75" | 0' | 9134' | 7" | 26 | P110 | LTC | 1.68 | 2.24 | 2.74 | 3.49 |
| 6.125" | 8547' | 19,035' | 4.5" | 13.5 | P110 | LTC | 1.73 | 2.01 | 2.39 | 2.98 |
| BLM Minimum Safety Factor | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet | | 1.6 Dry<br>1.8 Wet | | | |

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

| | Y or N |
|---|---|
| Is casing new? If used, attach certification as required in Onshore Order #1 | Y |
| Is casing API approved? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary. | |
| | |
| Is well located in SOPA but not in R-111-P? | N |
| If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing? | |
| | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2nd string set 100' to 600' below the base of salt? | |
| | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |

**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

| | |
|---|---|
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

## 3. Cementing Program

| Casing | # Sks | Wt. lb/ gal | Yld ft3/ sack | $H_20$ gal/ sk | 500# Comp. Strength (hours) | Slurry Description |
|---|---|---|---|---|---|---|
| Surf. | 175 | 12.5 | 2.12 | 11 | 10 | Lead: Class C + Salt + Gel + Extender + LCM |
| | 200 | 14.8 | 1.34 | 6.3 | 8 | Tail: Class C + Retarder |
| Inter. | 235 | 12.5 | 2.12 | 11 | 10 | Lead: Class C + Salt + Gel + Extender + LCM |
| | 200 | 14.8 | 1.34 | 6.3 | 8 | Tail: Class C + Retarder |
| Prod. Stg 1 | 335 | 12.5 | 2.12 | 11 | 9 | Lead: Class C + Gel + Retarder + Defoamer + Extender |
| | 400 | 15.6 | 1.18 | 5.2 | 10 | Tail: Class H + Retarder + Fluid Loss + Defoamer |
| ECP/DV Tool @ 2900' | | | | | | |
| Prod. Stg 2 | 60 | 12.5 | 2.12 | 11 | 10 | Lead: Class C + Salt + Gel + Extender + LCM |
| | 100 | 14.8 | 1.34 | 6.3 | 8 | Tail: Class C + Retarder |
| Liner | 420 | 11.2 | 2.97 | 18 | 16 | Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent |

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

| Casing String | TOC | % Excess |
|---|---|---|
| Surface | 0' | 100% |
| Intermediate | 0' | 25% |
| Production | 1625' | 25% |
| Liner | 8547' | 25% |

## 4. Pressure Control Equipment

| | |
|---|---|
| N | Variance: A variance is requested for use of a 5000 psi annular BOP with the 10,000 psi BOP stack. Please see attached description and procedure. |

| BOP installed and tested before drilling which hole? | Size? | System Rated WP | Type | ✓ | Tested to: |
|---|---|---|---|---|---|
| 12-1/4" | 13-5/8" | 5M | Annular | X | 2,500# |
| | | | Blind Ram | X | 5,000# |
| | | | Pipe Ram | X | |
| | | | Double Ram | | |
| | | | Other* | | |

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

| | |
|---|---|
| X | Formation integrity test will be performed per Onshore Order #2.<br>On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. |

| | |
|---|---|
| Y | A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. |
| | N Are anchors required by manufacturer? |
| Y | A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.<br>• Provide description here: See attached schematic. |

## 5. Mud Program

| TVD | | Type | Weight (ppg) | Viscosity | Water Loss |
|---|---|---|---|---|---|
| From | To | | | | |
| 0 | 450 | FW Gel | 8.6-8.8 | 28-34 | N/C |
| 450 | 1825 | Saturated Brine | 10.0 | 28-34 | N/C |
| 1825 | 8942 | Cut Brine | 8.6-9.5 | 28-34 | N/C |
| 8942 | 9119 | OBM | 10.0-12.0 | 30-40 | <10cc |

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. MW up to 13.0 ppg may be required for shale control. The highest MW needed to balance formation pressure is expected to be 12.0 ppg.

| | |
|---|---|
| What will be used to monitor the loss or gain of fluid? | Pason/PVT/Visual Monitoring |

## 6. Logging and Testing Procedures

| Logging, Coring and Testing. | |
|---|---|
| X | Will run GR/CNL from KOP (8547') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. |
| | No Logs are planned based on well control or offset log information. |
| | Drill stem test? If yes, explain |
| | Coring? If yes, explain |

| Additional logs planned | | Interval |
|---|---|---|
| X | Gamma Ray | 8547' (KOP) to TD |
| | Density | |
| | CBL | |
| | Mud log | |
| | PEX | |

## 7. Drilling Conditions

| Condition | Specify what type and where? |
|---|---|
| BH Pressure at deepest TVD | 5691 psi |
| Abnormal Temperature | No |

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole. Weighted mud for possible over-pressure in Wolfcamp formation.

| Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM. | |
|---|---|
| | H2S is present |
| X | H2S Plan attached |

## 8. Other facets of operation

Is this a walking operation? If yes, describe.
Will be pre-setting casing? If yes, describe.

Attachments

___ Directional Plan
___ Other, describe

**Mewbourne Oil Company, Wolfman 5/4 W0MP Fed Com #2H**
**Sec 5, T23S, R27E**
**SL: 1305' FSL & 240' FWL, Sec 5**
**BHL: 500' FSL & 330' FEL, Sec 4**

**Casing Program**

| Hole Size | Casing Interval From | To | Csg. Size | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | SF Jt Tension | SF Body Tension |
|---|---|---|---|---|---|---|---|---|---|---|
| 17.5" | 0' | 450' | 13.375" | 48 | H40 | STC | 3.66 | 8.21 | 14.91 | 25.05 |
| 12.25" | 0' | 1825' | 9.625" | 36 | J55 | LTC | 2.13 | 3.71 | 6.89 | 8.58 |
| 8.75" | 0' | 9134' | 7" | 26 | P110 | LTC | 1.68 | 2.24 | 2.74 | 3.49 |
| 6.125" | 8547' | 19,035' | 4.5" | 13.5 | P110 | LTC | 1.73 | 2.01 | 2.39 | 2.98 |
| | | | BLM Minimum Safety Factor | | | | 1.125 | 1 | 1.6 Dry<br>1.8 Wet | 1.6 Dry<br>1.8 Wet |

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

| | Y or N |
|---|---|
| Is casing new? If used, attach certification as required in Onshore Order #1 | Y |
| Is casing API approved? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary. | |
| | |
| Is well located in SOPA but not in R-111-P? | N |
| If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing? | |
| | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2nd string set 100' to 600' below the base of salt? | |
| | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |
| | |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

**APD ID:** 10400033648

**Submission Date:** 04/11/2019

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM

**Well Number:** 2H

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

Wolfman5_4W0MPFedCom2H_existingroadmap_20190320133115.pdf

**Existing Road Purpose:** ACCESS,FLUID TRANSPORT

**Row(s) Exist?** NO

### ROW ID(s)

**ID:**

**Do the existing roads need to be improved?** NO

**Existing Road Improvement Description:**

**Existing Road Improvement Attachment:**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** NO

## Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

Wolfman5_4W0MPFedCom2H_existingwellmap_20190320133201.pdf

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

## Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** PRODUCTION FACILITY WILL BE ON THE EAST EDGE OF WELL PAD.

**Production Facilities map:**

Wolfman5_4W0MPFedCom2H_productionfacilitymap_20190320133221.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source type:** IRRIGATION

**Water source use type:** SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

STIMULATION

DUST CONTROL

CAMP USE

**Source latitude:** 32.294674 **Source longitude:** -104.23564

**Source datum:** NAD83

**Water source permit type:** WATER WELL

**Water source transport method:** TRUCKING

**Source land ownership:** PRIVATE

**Source transportation land ownership:** STATE

**Water source volume (barrels):** 1940 **Source volume (acre-feet):** 0.2500526

**Source volume (gal):** 81480

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Water source type:** IRRIGATION

**Water source use type:** SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

STIMULATION

DUST CONTROL

**Source latitude:** 32.32698 **Source longitude:** -104.21917

**Source datum:** NAD83

**Water source permit type:** WATER WELL

**Water source transport method:** TRUCKING

**Source land ownership:** PRIVATE

**Source transportation land ownership:** FEDERAL

**Water source volume (barrels):** 1940 **Source volume (acre-feet):** 0.2500526

**Source volume (gal):** 81480

---

**Water source and transportation map:**

Wolfman5_4W0MPFedCom2H_watersourceandtransmap_20190320133303.pdf

**Water source comments:** Both sources shown on one map.

**New water well?** NO

## New Water Well Info

**Well latitude:** **Well Longitude:** **Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):** **Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):** **Well casing type:**

**Well casing outside diameter (in.):** **Well casing inside diameter (in.):**

**New water well casing?** **Used casing source:**

**Drilling method:** **Drill material:**

**Grout material:** **Grout depth:**

**Casing length (ft.):** **Casing top depth (ft.):**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Well Production type:** **Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Using any construction materials:** YES

**Construction Materials description:** Caliche

**Construction Materials source location attachment:**

Wolfman5_4W0MPFedCom2H_calichesourceandtransmap_20190320133317.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Drill cuttings

**Amount of waste:** 940 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** Drill cuttings will be properly contained in steel tanks (20 yard roll off bins.)

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** NMOCD approved waste disposal locations are CRI or Lea Land, both facilities are located on HWY 62/180, Sec. 27 T20S R32E.

**Waste type:** SEWAGE

**Waste content description:** Human waste & grey water

**Amount of waste:** 1500 gallons

**Waste disposal frequency :** Weekly

**Safe containment description:** 2,000 gallon plastic container

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** City of Carlsbad Water Treatment facility

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Waste type:** GARBAGE

**Waste content description:** Garbage & trash

**Amount of waste:** 1500 pounds

**Waste disposal frequency :** One Time Only

**Safe containment description:** Enclosed trash trailer

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Waste Management facility in Carlsbad.

## Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)** **Reserve pit width (ft.)**

**Reserve pit depth (ft.)** **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

## Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)** **Cuttings area width (ft.)**

**Cuttings area depth (ft.)** **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

## Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

## Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Wolfman5_4W0MPFedCom2H_wellsitelayout_20190320133335.pdf

**Comments:**

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** STINGER 6 FED COM WELLS

**Multiple Well Pad Number:** 2

**Recontouring attachment:**

**Drainage/Erosion control construction:** None

**Drainage/Erosion control reclamation:** None

| | | |
|---|---|---|
| **Well pad proposed disturbance (acres):** 6.34 | **Well pad interim reclamation (acres):** 0.62 | **Well pad long term disturbance (acres):** 5.72 |
| **Road proposed disturbance (acres):** 0 | **Road interim reclamation (acres):** 0.062 | **Road long term disturbance (acres):** 0.062 |
| **Powerline proposed disturbance (acres):** 0 | **Powerline interim reclamation (acres):** 0 | **Powerline long term disturbance (acres):** 0 |
| **Pipeline proposed disturbance (acres):** 0 | **Pipeline interim reclamation (acres):** 0 | **Pipeline long term disturbance (acres):** 0 |
| **Other proposed disturbance (acres):** 0 | **Other interim reclamation (acres):** 0 | **Other long term disturbance (acres):** 0 |
| **Total proposed disturbance:** 6.34 | **Total interim reclamation:** 0.682 | **Total long term disturbance:** 5.782 |

**Disturbance Comments:** In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

**Reconstruction method:** The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

**Topsoil redistribution:** Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Soil treatment:** NA

**Existing Vegetation at the well pad:** Various brush & grasses

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** Various brush & grasses

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** NA

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** NA

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

| Seed Type | Pounds/Acre |
|---|---|

**Seed reclamation attachment:**

## Operator Contact/Responsible Official Contact Info

**First Name:** Bradley **Last Name:** Bishop

**Phone:** (575)393-5905 **Email:** bbishop@mewbourne.com

**Seedbed prep:** Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
**Seed BMP:** To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

**Seed method:** drilling or broadcasting seed over entire reclaimed area.

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** NA

**Weed treatment plan attachment:**

**Monitoring plan description:** vii. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion and invasive/noxious weeds are controlled.
**Monitoring plan attachment:**

**Success standards:** regrowth within 1 full growing season of reclamation.

**Pit closure description:** NA

**Pit closure attachment:**

## Section 11 - Surface Ownership

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Fee Owner:** Barnhart Family Trust **Fee Owner Address:**

**Phone:** (505)281-2626 **Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** SUA in place

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Fee Owner:** Barnhart Family Trust **Fee Owner Address:**

**Phone:** (505)281-2626 **Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** SUA in place

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

## Section 12 - Other Information

**Right of Way needed?** NO **Use APD as ROW?**

**ROW Type(s):**

## ROW Applications

**SUPO Additional Information:** NONE

**Use a previously conducted onsite?** YES

**Previous Onsite information:** JUL 10 2018 Met w/RRC Surveying & staked location @ 1305' FSL & 205' FWL, Sec 5, T23S, R27E, Eddy Co., NM. This location was unacceptable due to Xcel electric line. Moved location to 1305' FSL & 240' FWL, Sec 5, T23S, R27E, Eddy, Co., NM. (Elevation @ 3181'). Pad is 460 x 600 w/longer side to E & will extend onto existing Wolfman pad. Topsoil S. Reclaim S 60. Will need to relocate MOC electric line going to Wolfman 5/4 W0LI Fed Com #1H. SUA needed with Barnhart Family Trust. Will require BLM onsite & Arch survey. Lat: 32.33026922 N, Long: -104.22012723 W NAD 83.

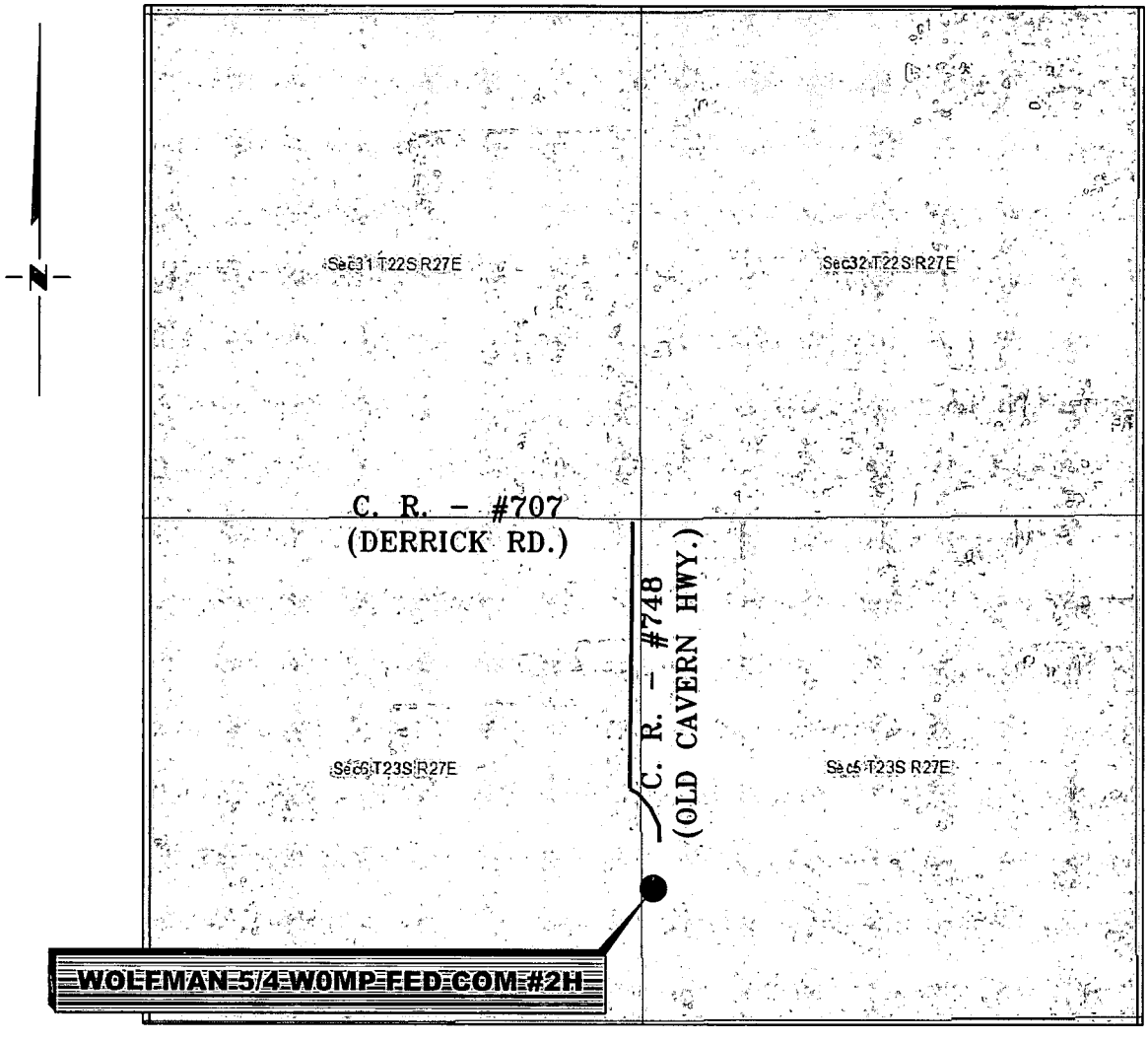
## Other SUPO Attachment

Wolfman5_4W0MPFedCom2H_interimreclamationdiagram_20190320134018.pdf

Wolfman5_4W0MPFedCom2H_gascaptureplan_20190320134026.pdf

# VICINITY MAP

NOT TO SCALE




## *SECTION 5, TWP. 23 SOUTH, RGE. 27 EAST, N. M. P. M., EDDY CO., NEW MEXICO*

OPERATOR: Mewbourne Oil Company
LOCATION: 1305' FSL & 240' FWL
LEASE: Wolfman 5/4 WOMP Fed Com
ELEVATION: 3181'
WELL NO.: 2H



| NO. | REVISION | DATE |
|---|---|---|
| | | |
| | | |
| | | |

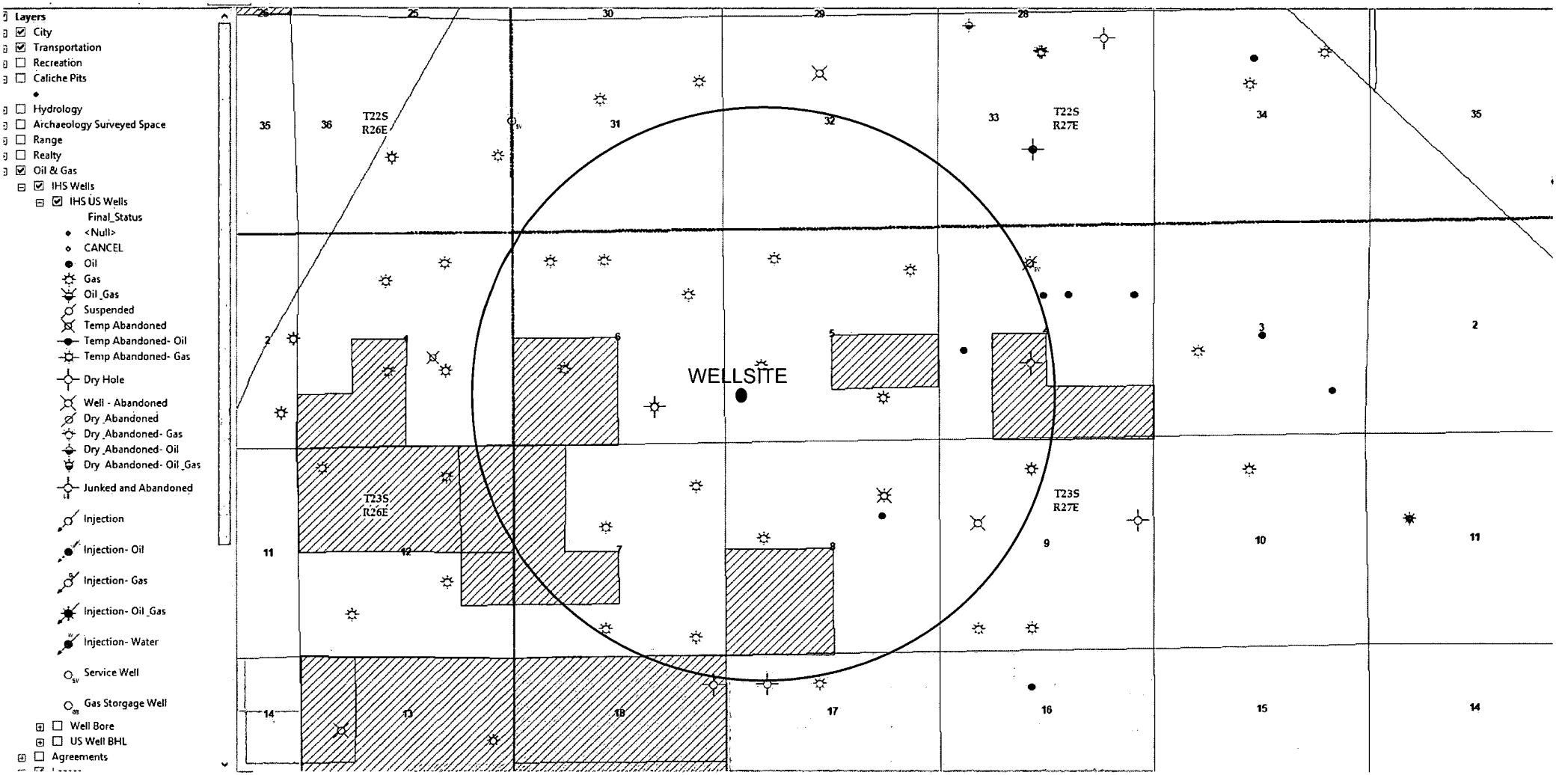
JOB NO.: LS1806837D
DWG. NO.: 1806837-3

RRC

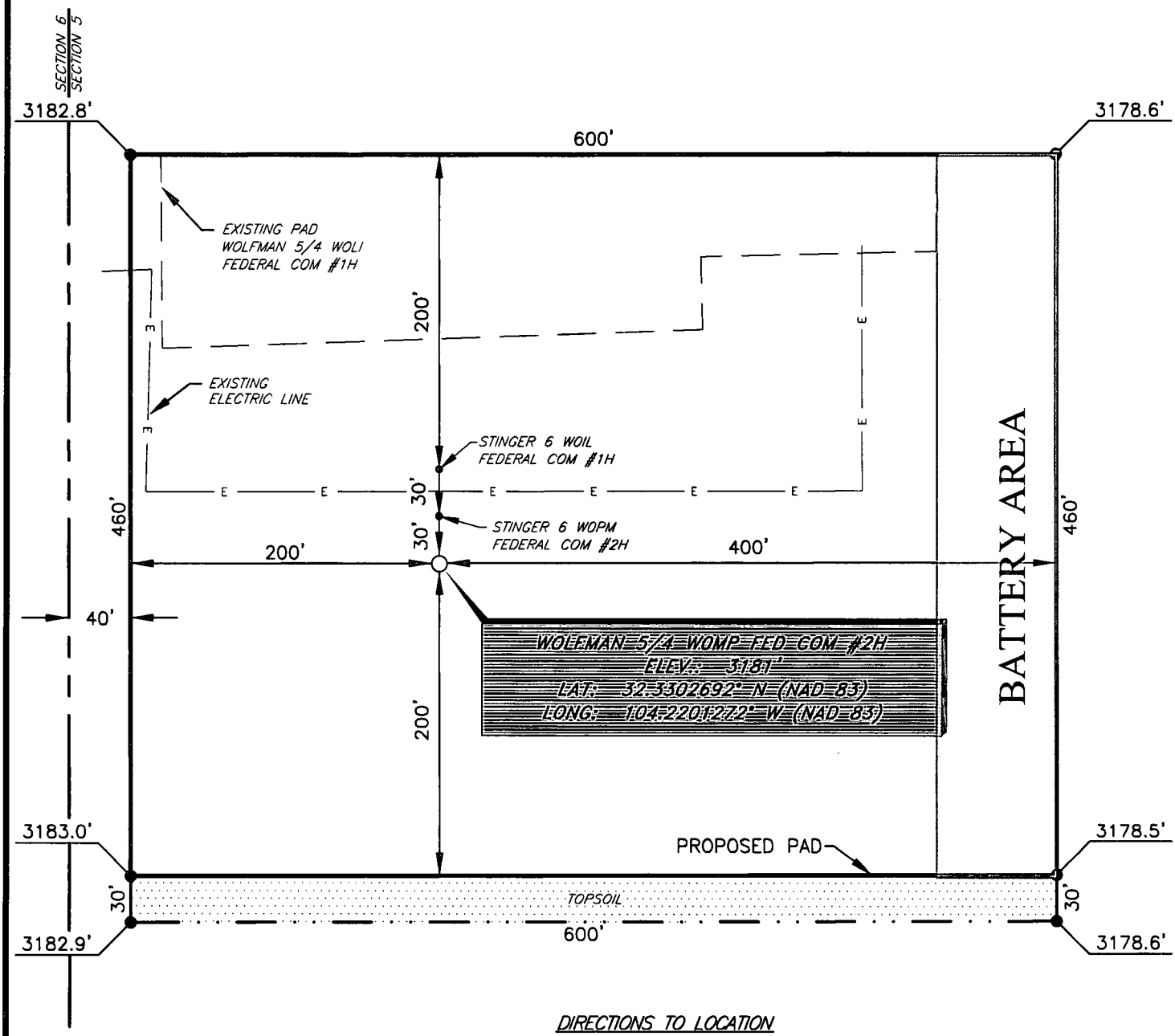
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 07-03-2018
SURVEYED BY: ML/TF
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

# EXISTING WELL MAP
# WOLFMAN 5/4 W0MP FED COM #2H



# MEWBOURNE OIL COMPANY
## WOLFMAN 5/4 WOMP FED COM #2H
## (1305' FSL & 240' FWL)
### SECTION 5, T23S, R27E
### N. M. P. M., EDDY COUNTY, NEW MEXICO




*DIRECTIONS TO LOCATION*

*From the intersection of CR-707 (Derrick Rd.) and CR-748 (Old Cavern Hwy.)*

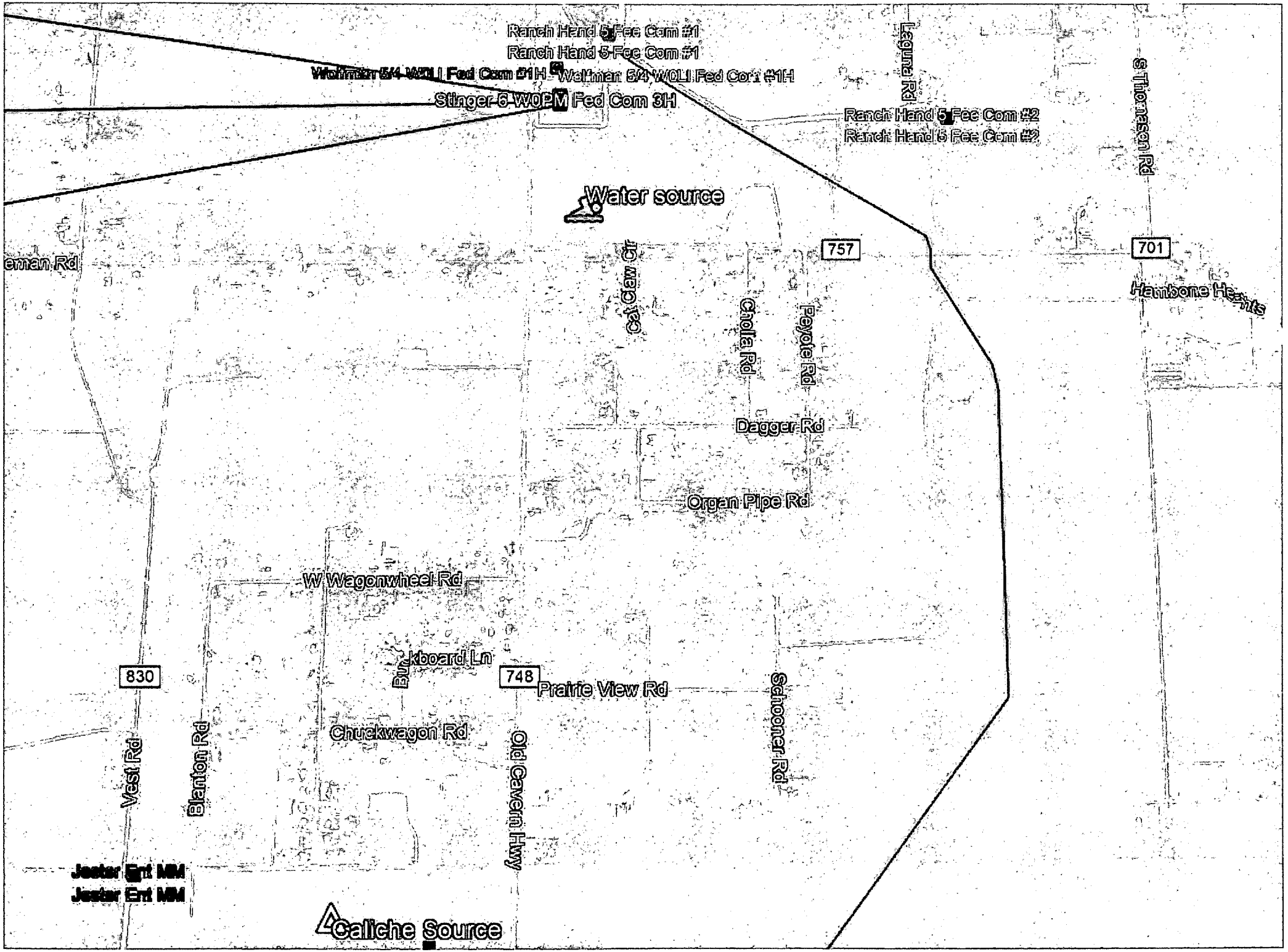
*Go South on CR-748 approx. 0.6 miles to a lease road on the left;*

*Turn left and and go Southeast on lease road approx. 0.2 miles to an existing pad;*

*Continue South across pad approx. 470 feet to proposed location on the right.*

THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY, BOUNDARY DATA IS SHOWN FROM A PREVIOUS SURVEY REFERENCED HEREON.

ERT M. HOL


Ranch Hand 5 Fee Com #1
Ranch Hand 5 Fee Com #1
Wellman 5/4 W0LI Fed Com #1H
Stinger 6 W0PM Fed Com 3H
Laguna Rd
Ranch Hand 5 Fee Com #2
Ranch Hand 5 Fee Com #2
S Thomason Rd
Water source
757
701
eman Rd
Cat Claw Cir
Chola Rd
Peyote Rd
Hambone Heights
Dagger Rd
Organ Pipe Rd
W Wagonwheel Rd
Buckboard Ln
830
748
Prairie View Rd
Schooner Rd
Vest Rd
Blanton Rd
Chuckwagon Rd
Old Cavern Hwy
Jester Ent MM
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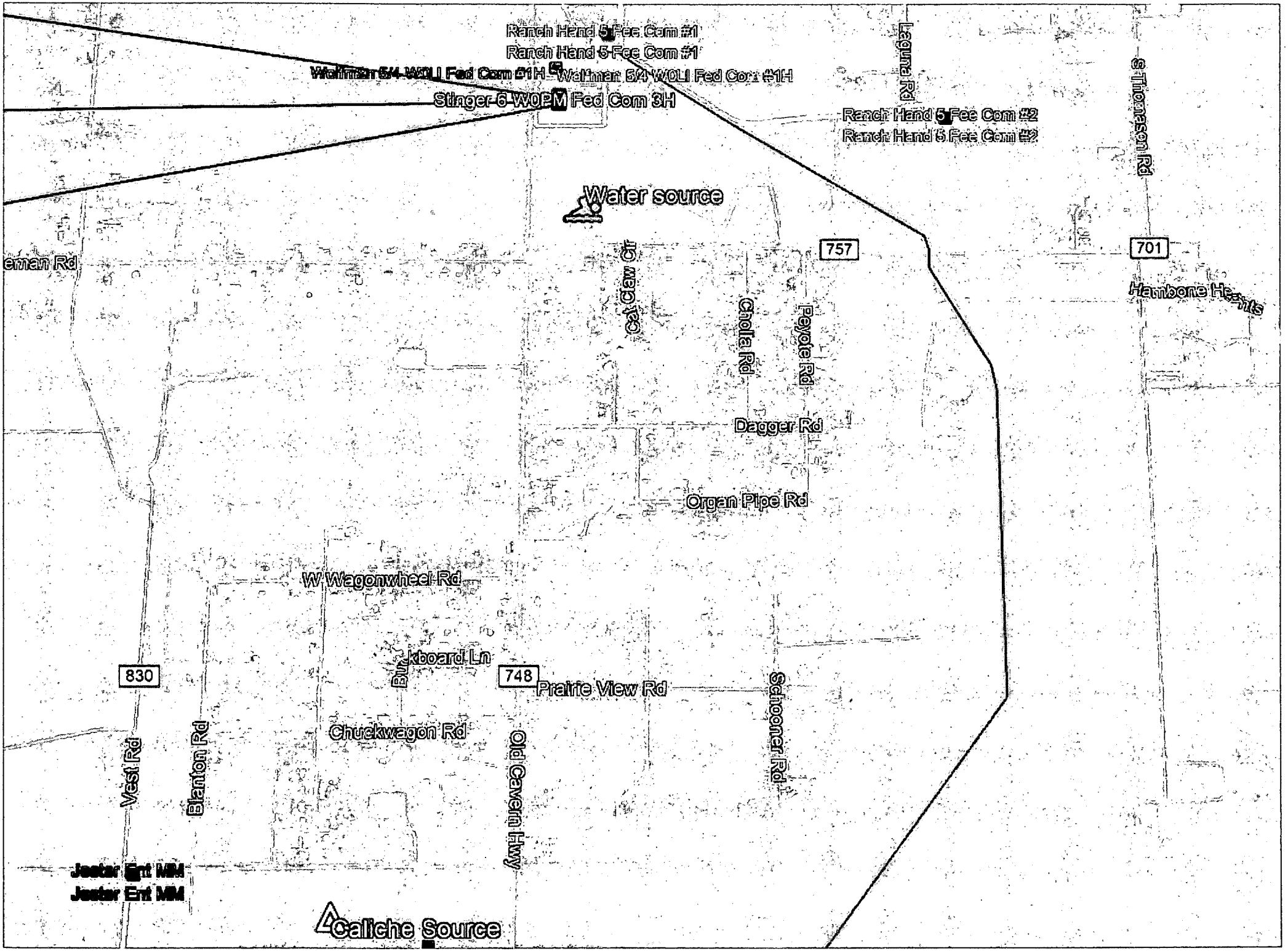
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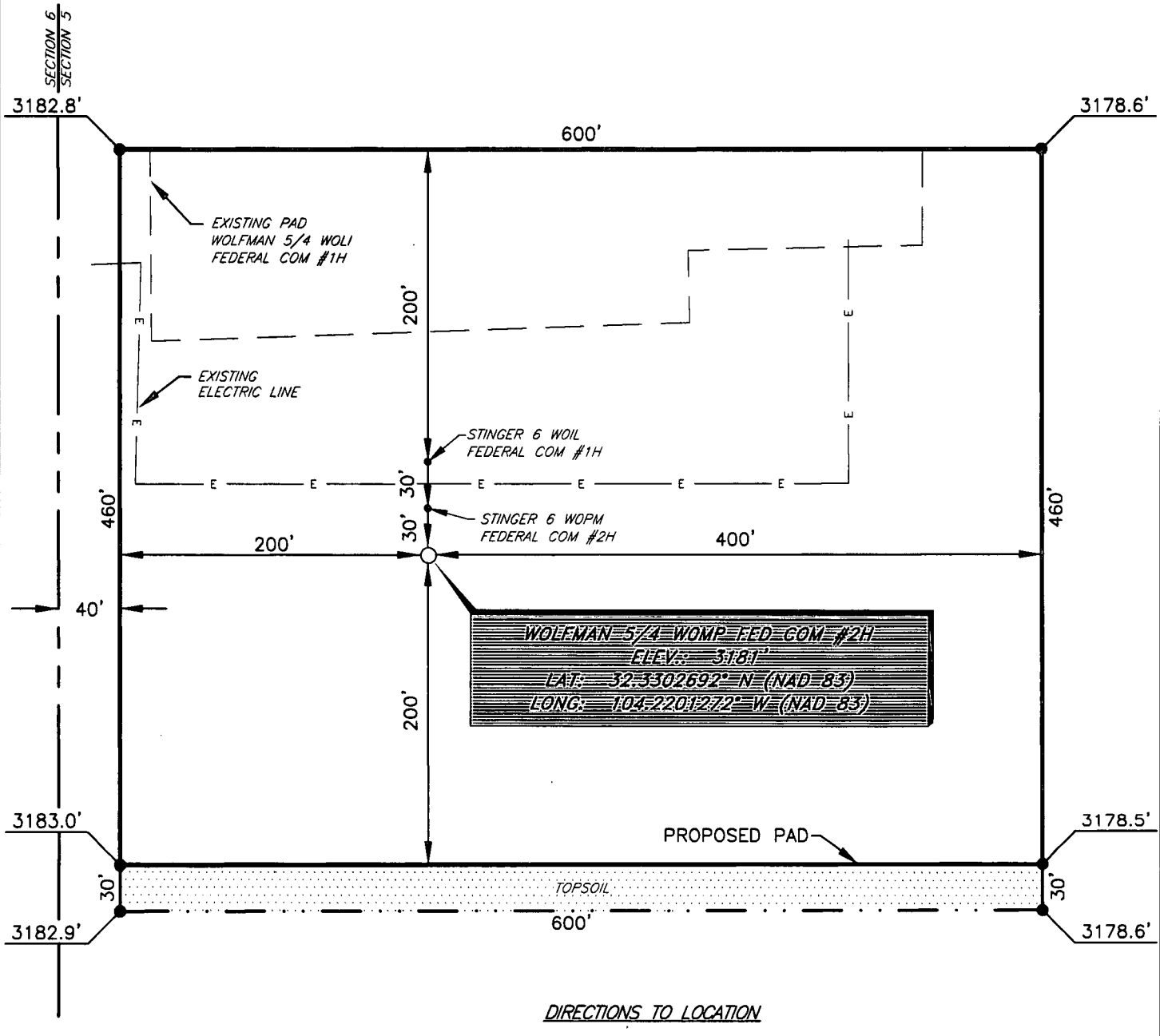


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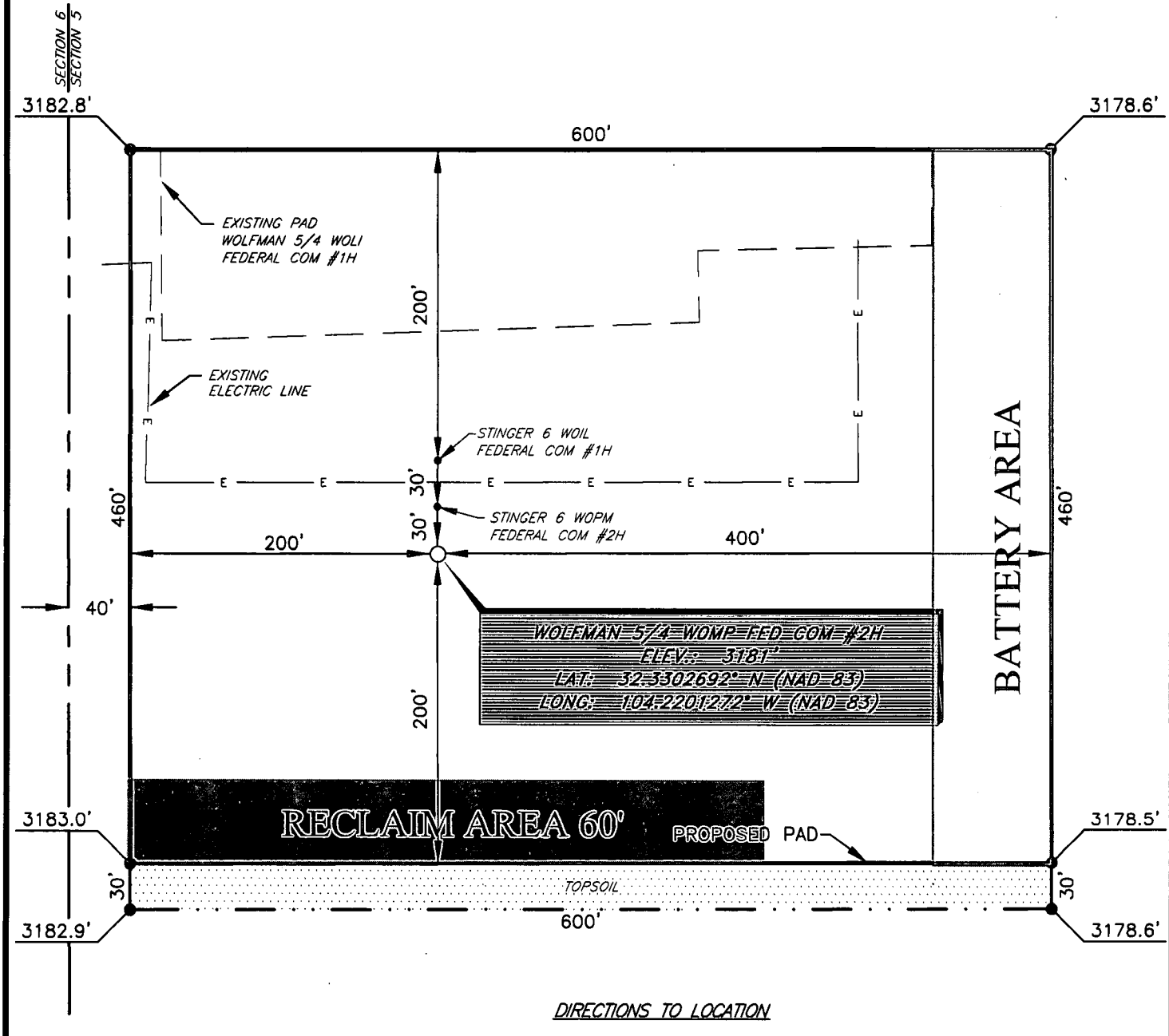


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ERT M. HOL

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U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# PWD Data Report

10/01/2019

**APD ID:** 10400033648 **Submission Date:** 04/11/2019

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Well Type:** CONVENTIONAL GAS WELL **Well Work Type:** Drill

## Section 1 - General

**Would you like to address long-term produced water disposal?** NO

## Section 2 - Lined Pits

**Would you like to utilize Lined Pit PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit specifications:**

**Pit liner description:**

**Pit liner manufacturers information:**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule attachment:**

**Lined pit reclamation description:**

**Lined pit reclamation attachment:**

**Leak detection system description:**

**Leak detection system attachment:**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

**Lined pit: do you have a reclamation bond for the pit?**

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information attachment:**

## Section 3 - Unlined Pits

**Would you like to utilize Unlined Pit PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD disturbance (acres):** **PWD surface owner:**

**Unlined pit PWD on or off channel:**

**Unlined pit PWD discharge volume (bbl/day):**

**Unlined pit specifications:**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Unlined pit precipitated solids disposal schedule:**

**Unlined pit precipitated solids disposal schedule attachment:**

**Unlined pit reclamation description:**

**Unlined pit reclamation attachment:**

**Unlined pit Monitor description:**

**Unlined pit Monitor attachment:**

**Do you propose to put the produced water to beneficial use?**

**Beneficial use user confirmation:**

**Estimated depth of the shallowest aquifer (feet):**

**Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?**

**TDS lab results:**

**Geologic and hydrologic evidence:**

**State authorization:**

**Unlined Produced Water Pit Estimated percolation:**

**Unlined pit: do you have a reclamation bond for the pit?**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Is the reclamation bond a rider under the BLM bond?**

**Unlined pit bond number:**

**Unlined pit bond amount:**

**Additional bond information attachment:**

## Section 4 - Injection

**Would you like to utilize Injection PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Injection PWD discharge volume (bbl/day):**

**Injection well mineral owner:**

**Injection well type:**

**Injection well number:** **Injection well name:**

**Assigned injection well API number?** **Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

## Section 5 - Surface Discharge

**Would you like to utilize Surface Discharge PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

## Section 6 - Other

**Would you like to utilize Other PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:** **PWD disturbance (acres):**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM **Well Number:** 2H

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**

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BUREAU OF LAND MANAGEMENT

# Bond Info Data Report

10/01/2019

**APD ID:** 10400033648

**Submission Date:** 04/11/2019

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** WOLFMAN 5/4 W0PM FED COM

**Well Number:** 2H

**Well Type:** CONVENTIONAL GAS WELL

**Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

## Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** NM1693

**BIA Bond number:**

**Do you have a reclamation bond?** NO

**Is the reclamation bond a rider under the BLM bond?**

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**