

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 11038
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator MEWBOURNE OIL COMPANY		7. If Unit or CA Agreement, Name and No.
3a. Address PO Box 5270 Hobbs NM 88240		8. Lease Name and Well No. FULLER 14/11 B2HA FED 1H 319623
3b. Phone No. (include area code) (575)393-5905		9. API Well No. 30-015-44449
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NESE / 2500 FSL / 425 FEL / LAT 32.0413618 / LONG -103.9469228 At proposed prod. zone NENE / 330 FNL / 660 FEL / LAT 32.063204 / LONG -103.947652		10. Field and Pool, or Exploratory CORRAL CANYON SOUTH BONE SPRI
14. Distance in miles and direction from nearest town or post office* 25 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 14 / T26S / R29E / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 feet	16. No. of acres in lease 1240	17. Spacing Unit dedicated to this well 240
18. Distance from proposed location* to nearest well, drilling, completed, 50 feet applied for, on this lease, ft.	19. Proposed Depth 8895 feet / 16592 feet	20. BLM/BIA Bond No. on file FED: NM1693
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2953 feet	22. Approximate date work will start* 10/17/2017	23. Estimated duration 60 days
24. Attachments		

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

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM.             |

25. Signature (Electronic Submission)	Name (Printed/Typed) Bradley Bishop / Ph: (575)393-5905	Date 07/21/2017
Title Regulatory		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 09/20/2017
Title Supervisor Multiple Resources		

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.

(Continued on page 2)

\*(Instructions on page 2)

**APPROVED WITH CONDITIONS**

RUP 9-22-17

## 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 1:** 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 well, 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 directionally 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.

## 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 well 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 will 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 collects this information to allow 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 Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## **Additional Operator Remarks**

### **Location of Well**

1. SHL: NESE / 2500 FSL / 425 FEL / TWSP: 26S / RANGE: 29E / SECTION: 14 / LAT: 32.0413618 / LONG: -103.9469228 ( TVD: 0 feet, MD: 0 feet )  
PPP: SENE / 2700 FNL / 593 FEL / TWSP: 26S / RANGE: 29E / SECTION: 11 / LAT: 32.056662 / LONG: -103.947013 ( TVD: 8878 feet, MD: 14200 feet )  
PPP: SESE / 0 FSL / 505 FEL / TWSP: 26S / RANGE: 29E / SECTION: 11 / LAT: 32.049361 / LONG: -103.946771 ( TVD: 8860 feet, MD: 11500 feet )  
PPP: SENE / 2412 FNL / 439 FEL / TWSP: 26S / RANGE: 29E / SECTION: 14 / LAT: 32.042215 / LONG: -103.946646 ( TVD: 8844 feet, MD: 9160 feet )  
BHL: NENE / 330 FNL / 660 FEL / TWSP: 26S / RANGE: 29E / SECTION: 11 / LAT: 32.063204 / LONG: -103.947652 ( TVD: 8895 feet, MD: 16592 feet )

### **BLM Point of Contact**

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: 5752345934

Email: pperez@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 OPERATIONS  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Mewbourne Oil Co
LEASE NO.:	NM011038
WELL NAME & NO.:	Fuller 14-11 B2HA Federal – 1H
SURFACE HOLE FOOTAGE:	2500'S & 425'E
BOTTOM HOLE FOOTAGE	330'/N & 660'/E, sec. 11
LOCATION:	Sec. 14, T. 26 S, R. 29 E
COUNTY:	Eddy County

**I. 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.

**Waste Minimization Plan (WMP)**

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

**II. DRILLING OPERATIONS 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

1. **Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the 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.**

### III. CASING

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.

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

#### 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.**

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

**Medium Cave/Karst**

**Possibility of water flows in the Salado and Castile.**

**Possibility of lost circulation in the Red Beds, Rustler, and Delaware.**

A. The **13-3/8** inch surface casing shall be set at approximately **615** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

1. 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.
2. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
3. 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.
4. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Medium Cave/Karst: If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface.**

B. 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. Excess calculates to 17% - Additional cement may be required.**

**Centralizers required through the curve and a minimum of one every other joint.**

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

**Operator has proposed DV tool at depth of 4185', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.**

a. First stage to DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve approved top of cement on the next stage.

b. Second stage above DV tool:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 0% - Additional cement may be required.**

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

- ☒ Cement as proposed by operator. Operator shall provide method of verification.

E. 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.

#### **IV. PRESSURE CONTROL**

- A. 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.
- B. Variance approved to use flex line from BOP to choke manifold. 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.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).



- C. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
- D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
1. 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).
  2. 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 (18 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).
  3. 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.
  4. The results of the test shall be reported to the appropriate BLM office.
  5. 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.**
  6. 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.

## V. DRILL STEM TEST

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

## **VI. 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.

**CLN 09/07/2017**

# PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Mewbourne Oil Co
LEASE NO.:	NM011038
WELL NAME & NO.:	Fuller 14-11 B2HA Federal – 1H
SURFACE HOLE FOOTAGE:	2500'/S & 425'/E
BOTTOM HOLE FOOTAGE	330'/N & 660'/E, sec. 11
LOCATION:	Section 14, T. 26 S., R. 29 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

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

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Cave/Karst
  - Watershed
  - Phantom Bank Heronries
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

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

## **II. PERMIT EXPIRATION**

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

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

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

## **IV. NOXIOUS WEEDS**

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

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

### **Cave and Karst**

\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

### **Cave/Karst Surface Mitigation**

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

#### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

#### **No Blasting:**

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

#### **Pad Berming:**

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

#### **Tank Battery Liners and Berms:**

Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

#### **Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

**Automatic Shut-off Systems:**

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

**Cave/Karst Subsurface Mitigation**

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

**Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

**Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

**Lost Circulation:**

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

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

**Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

**Watershed**

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the

well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.

- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

### **Phantom Bank Heronries**

Surface disturbance will not be allowed within up to 200 meters of active heronries or by delaying activity for up to 120 days, or a combination of both.

Exhaust noise from engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

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

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

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

Tanks are required for drilling operations: No Pits.

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

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

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

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. EXCLOSURE FENCING (CELLARS & PITS)**



**Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

**G. ON LEASE ACCESS ROADS****Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

**Surfacing**

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

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

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

**Crowning**

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

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

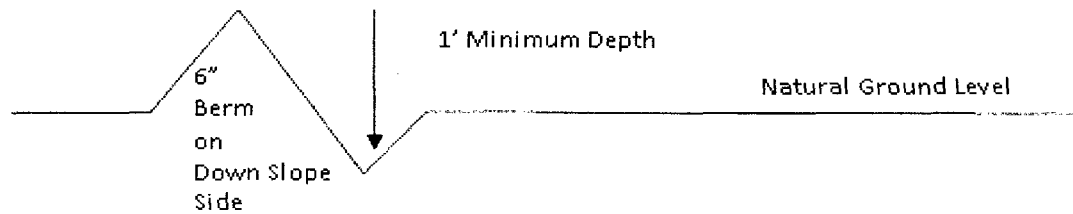
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

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

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

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



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

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

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

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

#### **Cattle guards**

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

#### **Fence Requirement**

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

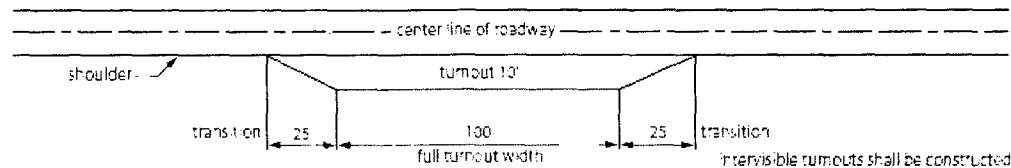
#### **Public Access**

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

### Construction Steps

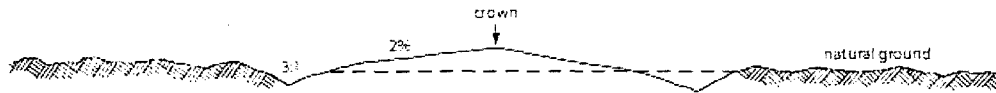
1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

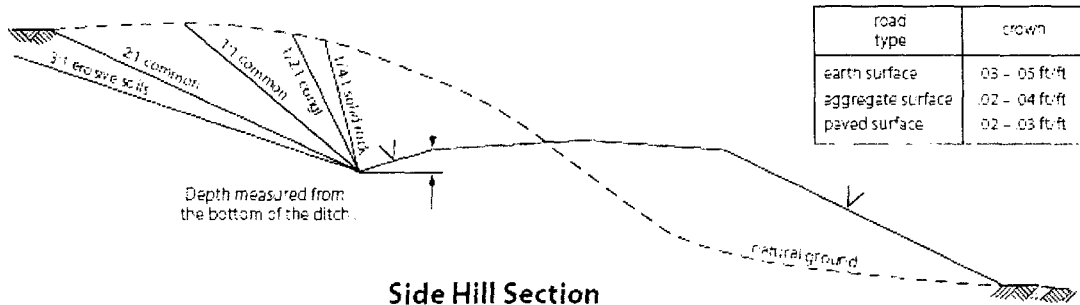


**Typical Turnout Plan**

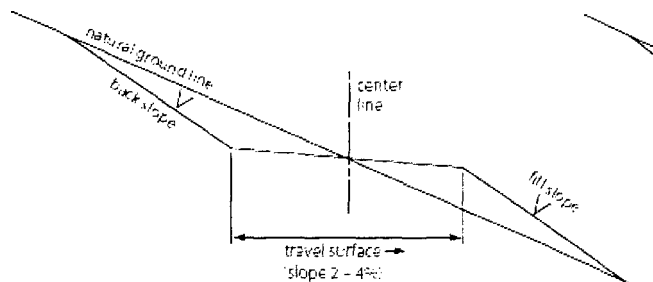
intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional turnouts as needed to keep spacing below 1000 feet.



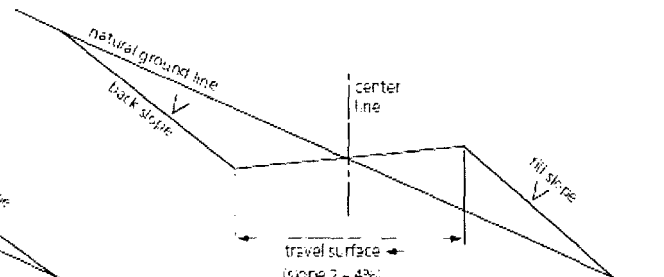
**Level Ground Section**



**Side Hill Section**



**Typical Outsloped Section**



**Typical Insloped Section**

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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

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

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

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

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

### **VIII. INTERIM RECLAMATION**

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

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

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

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

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

### **IX. FINAL ABANDONMENT & RECLAMATION**

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

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

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

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

### **Seed Mixture 1 for Loamy Sites**

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

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

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

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass ( <i>Eragrostis intermedia</i> )	0.5
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sideoats grama ( <i>Bouteloua curtipendula</i> )	5.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

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



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

## Operator Certification Data Report

09/21/2017

### 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:** 07/21/2017

**Title:** Regulatory

**Street Address:** PO Box 5270

**City:** Hobbs

**State:** NM

**Zip:** 88240

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

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

### Field Representative

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**



**APD ID:** 10400013831**Submission Date:** 07/21/2017Highlighted data  
reflects the most  
recent changes**Operator Name:** MEWBOURNE OIL COMPANY**Well Name:** FULLER 14/11 B2HA FED**Well Number:** 1H[Show Final Text](#)**Well Type:** OIL WELL**Well Work Type:** Drill

### Section 1 - General

**APD ID:** 10400013831**Tie to previous NOS?****Submission Date:** 07/21/2017**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:** NMNM 11038**Lease Acres:** 1240**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**Mater Development Plan name:****Well in Master SUPO?** NO**Master SUPO name:****Well in Master Drilling Plan?** NO**Master Drilling Plan name:****Well Name:** FULLER 14/11 B2HA FED**Well Number:** 1H**Well API Number:****Field/Pool or Exploratory?** Field and Pool**Field Name:** CORRAL CANYON **Pool Name:** BONE SPRING  
SOUTH BONE SPRING**Is the proposed well in an area containing other mineral resources?** USEABLE WATER,NATURAL GAS,OIL

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**Describe other minerals:**

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

**Type of Well Pad:** SINGLE WELL

**Multiple Well Pad Name:**

**Number:**

**Well Class:** HORIZONTAL

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** APPRAISAL

**Describe sub-type:**

**Distance to town:** 25 Miles

**Distance to nearest well:** 50 FT

**Distance to lease line:** 330 FT

**Reservoir well spacing assigned acres Measurement:** 240 Acres

**Well plat:** Fuller14\_11B2HAFed1H\_wellplat\_08-07-2017.pdf

**Well work start Date:** 10/17/2017

**Duration:** 60 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:**

	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	250 0	FSL	425	FEL	26S	29E	14	Aliquot NESE	32.04136 18	- 103.9469 228	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 11038	295 3	0	0
KOP Leg #1	250 0	FSL	425	FEL	26S	29E	14	Aliquot NESE	32.04136 18	- 103.9469 228	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 11038	- 541 4	836 7	836 7
PPP Leg #1	241 2	FNL	439	FEL	26S	29E	14	Aliquot SENE	32.04221 5	- 103.9466 46	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 11038	- 589 1	916 0	884 4

Operator Name: MEWBOURNE OIL COMPANY

Well Name: FULLER 14/11 B2HA FED

Well Number: 1H

	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	0	FSL	505	FEL	26S	29E	11	Aliquot SESE 1	32.04936 1	- 103.9467 71	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 121953	- 590 7	115 00	886 0
PPP Leg #1	270 0	FNL	593	FEL	26S	29E	11	Aliquot SENE 2	32.05666 2	- 103.9470 13	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 11039	- 592 5	142 00	887 8
EXIT Leg #1	330	FNL	660	FEL	26S	29E	11	Aliquot NENE 4	32.06320 4	- 103.9476 52	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 11039	- 594 2	165 92	889 5
BHL Leg #1	330	FNL	660	FEL	26S	29E	11	Aliquot NENE 4	32.06320 4	- 103.9476 52	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 11039	- 594 2	165 92	889 5

APD ID: 10400013831

Submission Date: 07/21/2017

Highlighted data  
reflects the most  
recent changes

Operator Name: MEWBOURNE OIL COMPANY

Well Name: FULLER 14/11 B2HA FED

Well Number: 1H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
17691	UNKNOWN	2955	27	27		NONE	No
17746	RUSTLER	2340	615	615	DOLOMITE, ANHYDRITE	USEABLE WATER	No
17718	TOP SALT	1595	1360	1360	SALT	NONE	No
17762	CASTILE	1370	1585	1585	SALT	NONE	No
17722	BASE OF SALT	40	2915	2915	SALT	NONE	No
17719	LAMAR	-150	3105	3105	LIMESTONE	NATURAL GAS, OIL	No
15332	BELL CANYON	-180	3135	3135	SANDSTONE	NATURAL GAS, OIL	No
15316	CHERRY CANYON	-1050	4005	4005	SANDSTONE	NATURAL GAS, OIL	No
17766	MANZANITA	-1230	4185	4185		NONE	No
17713	BRUSHY CANYON	-2330	5285	5285	SANDSTONE	NATURAL GAS, OIL	No
17688	BONE SPRING	-3910	6865	6865	LIMESTONE, SHALE	NATURAL GAS, OIL	No
15338	BONE SPRING 1ST	-4860	7815	7815	SANDSTONE	NATURAL GAS, OIL	No
17737	BONE SPRING 2ND	-5465	8420	8420	SANDSTONE	NATURAL GAS, OIL	Yes

## Section 2 - Blowout Prevention

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**Pressure Rating (PSI):** 3M

**Rating Depth:** 16600

**Equipment:** Annular, Pipe Ram, Blind Ram

**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. Anchors not required by manufacturer. A multibowl wellhead is being used. See attached schematic

**Testing Procedure:** Test Annular to 1500# Test BOPE to 3000#

**Choke Diagram Attachment:**

Fuller\_14\_11\_B2HA\_Fed\_1H\_3M\_BOPE\_Choke\_Diagram\_07-06-2017.pdf

**BOP Diagram Attachment:**

Fuller\_14\_11\_B2HA\_Fed\_1H\_3M\_BOPE\_Schematic\_07-06-2017.pdf

Fuller\_14\_11\_B2HA\_Fed\_1H\_Multi\_Bowl\_WH\_07-06-2017.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	685	0	685	-5891	-6506	685	H-40	48	STC	2.4	5.4	DRY	9.79	DRY	16.45
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3030	0	3030	-5891	-8921	3030	J-55	36	LTC	1.28	2.23	DRY	4.15	DRY	5.17
3	PRODUCTION	8.75	7.0	NEW	API	N	0	9113	0	8844	-5891	-14735	9113	P-110	26	LTC	1.79	2.29	DRY	2.7	DRY	3.5
4	LINER	6.125	4.5	NEW	API	N	8366	16600	8366	8895	-14257	-14786	8234	P-110	13.5	LTC	2.31	2.68	DRY	3.04	DRY	3.8

**Casing Attachments**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

#### Casing Attachments

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Fuller\_14\_11\_B2HA\_Fed\_1H\_Csg\_Assumptions\_20170830145537.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Fuller\_14\_11\_B2HA\_Fed\_1H\_Csg\_Assumptions\_07-06-2017.pdf

---

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Fuller\_14\_11\_B2HA\_Fed\_1H\_Csg\_Assumptions\_07-06-2017.pdf

---

Operator Name: MEWBOURNE OIL COMPANY

Well Name: FULLER 14/11 B2HA FED

Well Number: 1H

#### Casing Attachments

Casing ID: 4 String Type: LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Fuller\_14\_11\_B2HA\_Fed\_1H\_Csg\_Assumptions\_07-06-2017.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	450	330	2.12	12.5	700	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		450	615	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	2382	465	2.12	12.5	986	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		2382	3030	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	4185	2830	3517	65	2.12	12.5	138	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		3517	4185	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	4185	4185	6634	220	2.12	12.5	466	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		6634	9113	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		8366	16600	335	2.97	11.2	995	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

## Section 5 - Circulating Medium

**Mud System Type:** Closed

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

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

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

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

**Describe the mud monitoring system utilized:** 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	615	SPUD MUD	8.6	8.8							
615	3030	SALT SATURATED	10	10							
3030	8366	WATER-BASED MUD	8.6	9.7							
8366	8895	OIL-BASED MUD	8.6	10							

## Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (8,366') to surface

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

CBL,CNL,DS,GR,MWD,MUDLOG

**Coring operation description for the well:**

None



**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

## **Section 7 - Pressure**

**Anticipated Bottom Hole Pressure:** 4626

**Anticipated Surface Pressure:** 2662.72

**Anticipated Bottom Hole Temperature(F):** 140

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

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

**Hydrogen sulfide drilling operations plan:**

Fuller\_14\_11\_B2HA\_Fed\_1H\_H2S\_Plan\_07-06-2017.pdf

## **Section 8 - Other Information**

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

Fuller\_14\_11\_B2HA\_Fed\_1H\_Dir\_Plot\_07-06-2017.pdf

Fuller\_14\_11\_B2HA\_Fed\_1H\_Dir\_Plan\_07-06-2017.pdf

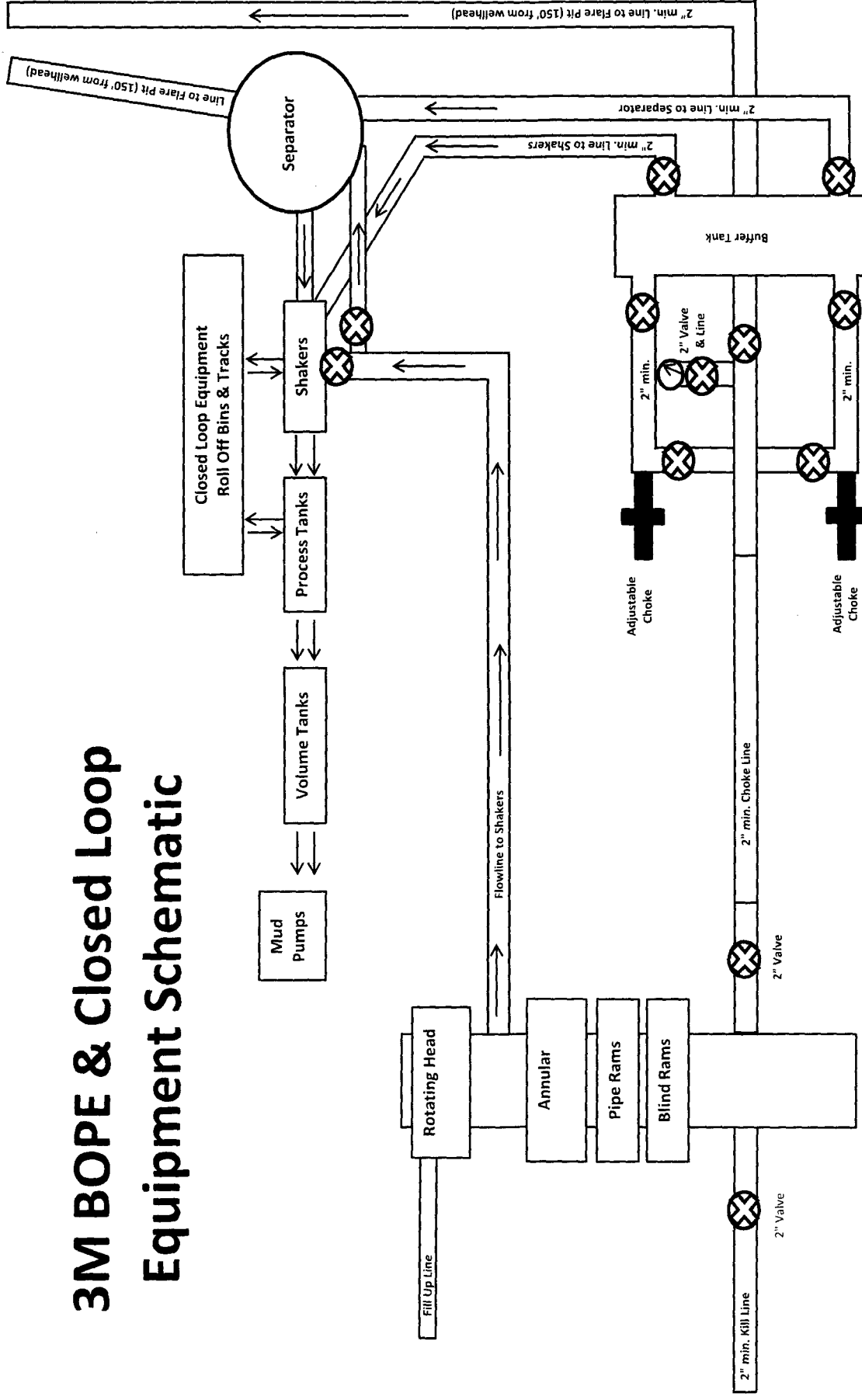
**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

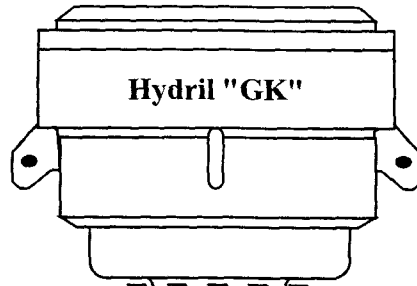
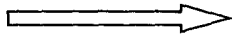
Fuller\_14\_11\_B2HA\_Fed\_1H\_Drlg\_Program\_20170830145709.doc

**Other Variance attachment:**

# 3M BOPE & Closed Loop Equipment Schematic

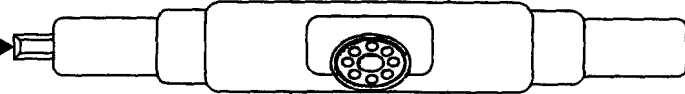
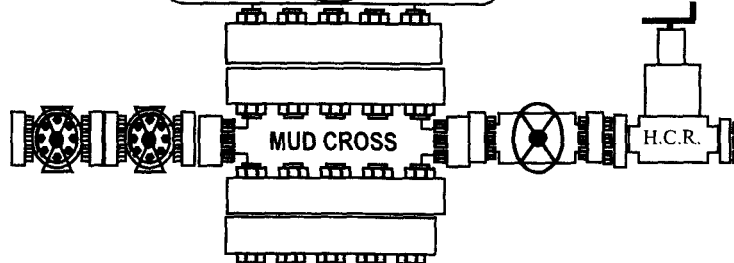
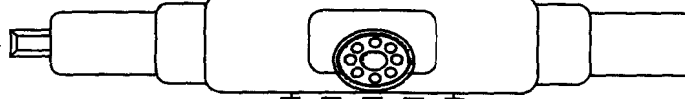
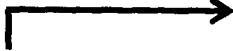


Hydril "GK"  
13 5/8" 3M



Hydril "GK"

Cameron Type U  
13 5/8" 3M



4 1/2" x 5 7/8" VBR

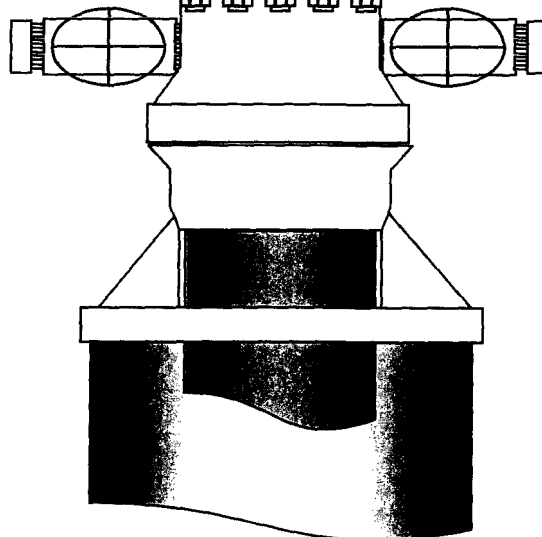
BLIND RAMS

7" RAMS

13 5/8" 3M

13 5/8" 3M

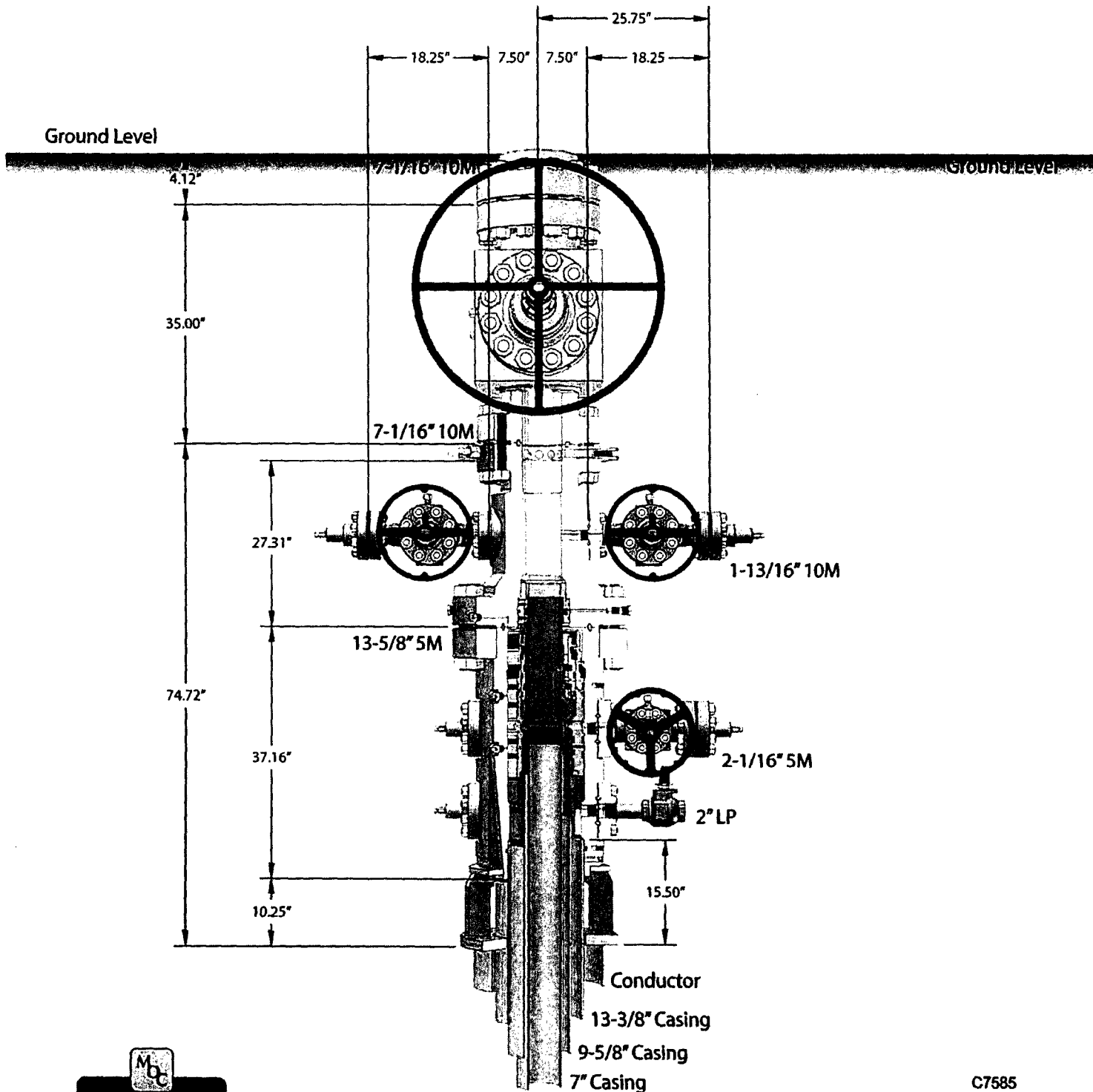
13 5/8" 3M



# CAMERON

A Schlumberger Company

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



C7585  
Rev. 02

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

*Coupling flange 57" conductor cut-off*  
*709*

**Mewbourne Oil Company, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	685'	13.375"	48	H40	STC	2.40	5.40	9.79	16.45
12.25"	0'	3030'	9.625"	36	J55	LTC	1.28	2.23	4.15	5.17
8.75"	0'	9113'	7"	26	HCP110	LTC	1.79	2.29	2.70	3.50
6.125"	8366'	16600'	4.5"	13.5	P110	LTC	2.31	2.68	3.04	3.80
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 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 3 <sup>rd</sup> 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 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(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, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	615'	13.375"	48	H40	STC	2.68	6.01	10.91	18.33
12.25"	0'	3030'	9.625"	36	J55	LTC	1.28	2.23	4.15	5.17
8.75"	0'	9113'	7"	26	HCP110	LTC	1.79	2.29	2.70	3.50
6.125"	8366'	16600'	4.5"	13.5	P110	LTC	2.31	2.68	3.04	3.80
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 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 3 <sup>rd</sup> 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 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(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, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	615'	13.375"	48	H40	STC	2.68	6.01	10.91	18.33
12.25"	0'	3030'	9.625"	36	J55	LTC	1.28	2.23	4.15	5.17
8.75"	0'	9113'	7"	26	HCP110	LTC	1.79	2.29	2.70	3.50
6.125"	8366'	16600'	4.5"	13.5	P110	LTC	2.31	2.68	3.04	3.80
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 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 3 <sup>rd</sup> 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 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(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, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

**Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	615'	13.375"	48	H40	STC	2.68	6.01	10.91	18.33
12.25"	0'	3030'	9.625"	36	J55	LTC	1.28	2.23	4.15	5.17
8.75"	0'	9113'	7"	26	HCP110	LTC	1.79	2.29	2.70	3.50
6.125"	8366'	16600'	4.5"	13.5	P110	LTC	2.31	2.68	3.04	3.80
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 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 3 <sup>rd</sup> 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 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(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 H<sub>2</sub>S were found. MOC will have on location and working all H<sub>2</sub>S 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 known hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

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

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 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 H<sub>2</sub>S 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 H<sub>2</sub>S 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.

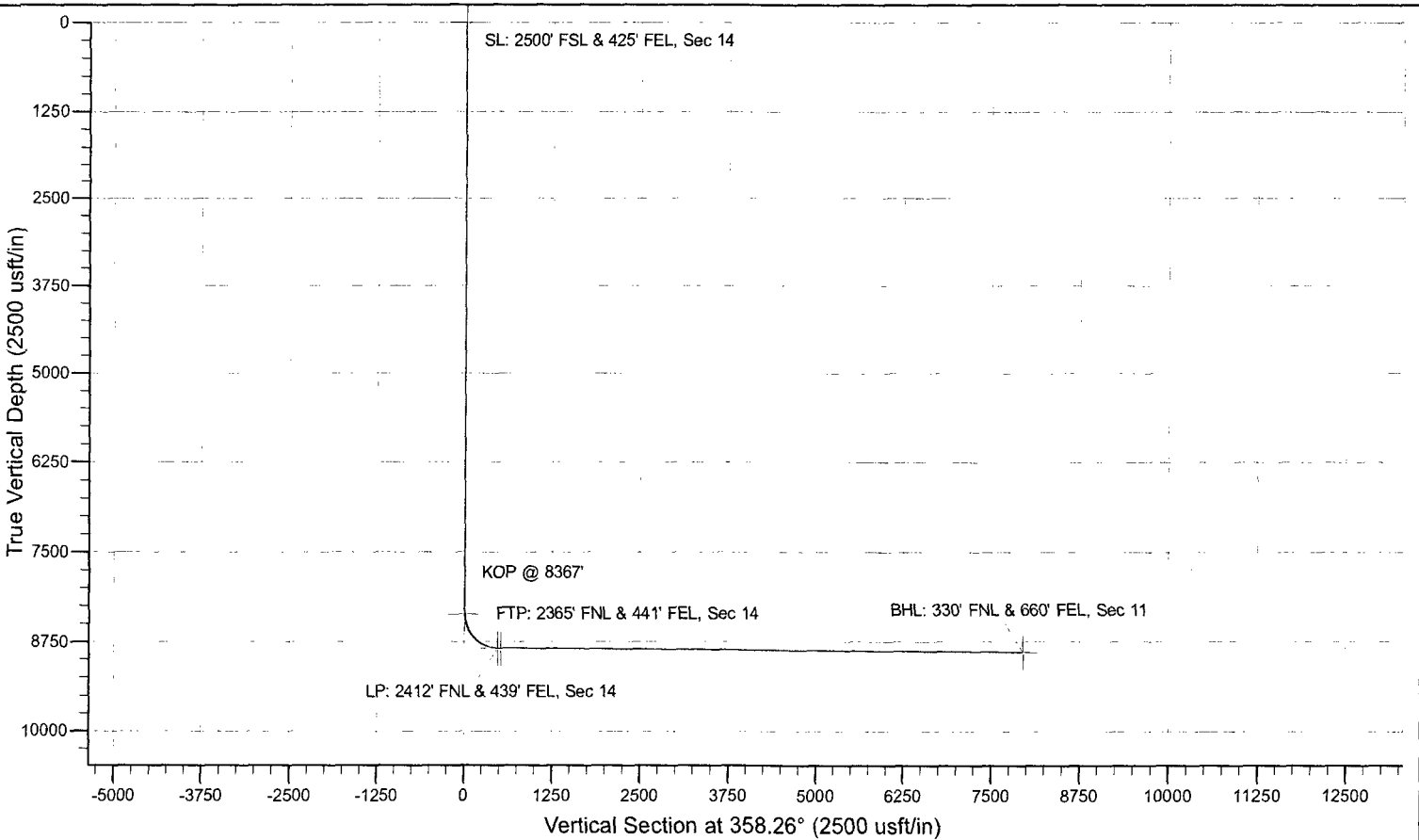
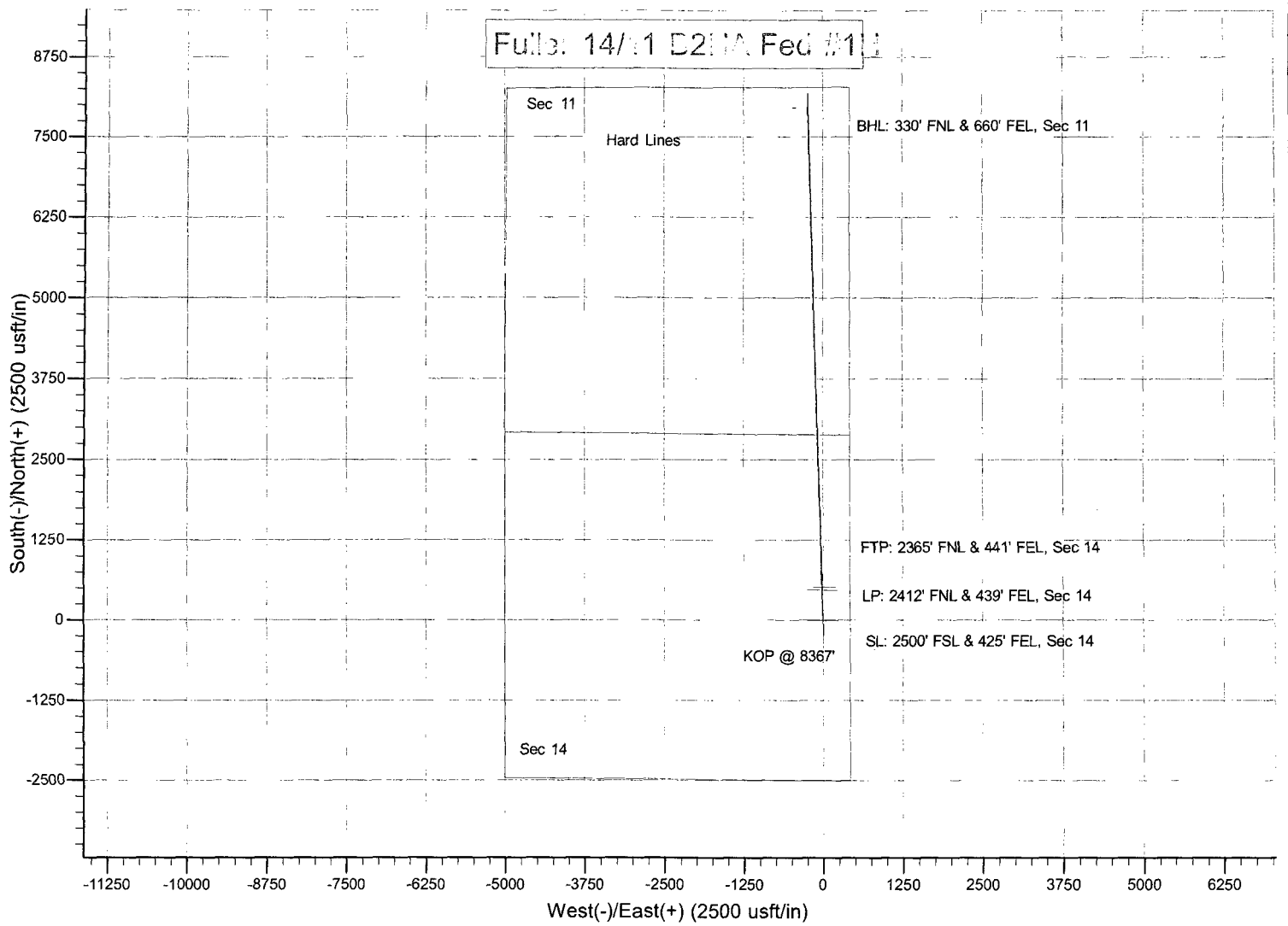
8. **Emergency Phone Numbers**

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

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

<b>District Manager</b>	<b>Robin Terrell</b>	<b>575-390-4816</b>
<b>Drilling Superintendent</b>	<b>Frosty Lathan</b>	<b>575-390-4103</b>
	<b>Bradley Bishop</b>	<b>575-390-6838</b>
<b>Drilling Foreman</b>	<b>Wesley Noseff</b>	<b>575-441-0729</b>

# Full: 14/11 D211A Fed #11



# **Mewbourne Oil Company**

**Eddy County, New Mexico NAD 83**

**Fuller 14/11 B2HA Fed #1H**

**Sec 14, T26S, R29E**

**SL: 2500' FSL & 425' FEL, Sec 14**

**BHL: 330' FNL & 660' FEL, Sec 11**

**Plan: Design #1**

## **Standard Planning Report**

**05 July, 2017**

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico NAD 83  
**Site:** Fuller 14/11 B2HA Fed #1H  
**Well:** Sec 14, T26S, R29E  
**Wellbore:** BHL: 330' FNL & 660' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Fuller 14/11 B2HA Fed #1H  
**TVD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**MD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	Eddy County, New Mexico NAD 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

**Site** Fuller 14/11 B2HA Fed #1H

<b>Site Position:</b>	<b>Northing:</b>	379,000.00 usft	<b>Latitude:</b>	32° 2' 28.904 N
<b>From:</b> Map	<b>Easting:</b>	661,067.00 usft	<b>Longitude:</b>	103° 56' 48.919 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.21 °

**Well** Sec 14, T26S, R29E

<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	379,000.00 usft	<b>Latitude:</b>	32° 2' 28.904 N
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	661,067.00 usft	<b>Longitude:</b>	103° 56' 48.919 W
<b>Position Uncertainty</b>	0.0 usft		<b>Wellhead Elevation:</b>	2,982.0 usft	<b>Ground Level:</b>	2,955.0 usft

**Wellbore** BHL: 330' FNL & 660' FEL, Sec 11

<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/5/2017	7.00	59.80	47,866

**Design** Design #1

**Audit Notes:**

<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	358.26

## Plan Sections

<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,366.5	0.00	0.00	8,366.5	0.0	0.0	0.00	0.00	0.00	0.00	KOP @ 8367'
9,113.3	89.61	358.26	8,844.0	474.0	-14.4	12.00	12.00	0.00	-1.74	
16,592.9	89.61	358.26	8,895.0	7,950.0	-241.0	0.00	0.00	0.00	0.00	BHL: 330' FNL & 660'

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico NAD 83  
**Site:** Fuller 14/11 B2HA Fed #1H  
**Well:** Sec 14, T26S, R29E  
**Wellbore:** BHL: 330' FNL & 660' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Fuller 14/11 B2HA Fed #1H  
**TVD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**MD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## 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: 2500' FSL & 425' FEL, Sec 14									
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	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico NAD 83  
**Site:** Fuller 14/11 B2HA Fed #1H  
**Well:** Sec 14, T26S, R29E  
**Wellbore:** BHL: 330' FNL & 660' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Fuller 14/11 B2HA Fed #1H  
**TVD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**MD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## 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)
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,366.5	0.00	0.00	8,366.5	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP @ 8367'</b>									
8,400.0	4.02	358.26	8,400.0	1.2	0.0	1.2	12.00	12.00	0.00
8,500.0	16.01	358.26	8,498.3	18.5	-0.6	18.5	12.00	12.00	0.00
8,600.0	28.01	358.26	8,590.8	55.9	-1.7	55.9	12.00	12.00	0.00
8,700.0	40.01	358.26	8,673.5	111.7	-3.4	111.8	12.00	12.00	0.00
8,800.0	52.01	358.26	8,742.9	183.5	-5.6	183.6	12.00	12.00	0.00
8,900.0	64.01	358.26	8,795.7	268.1	-8.1	268.3	12.00	12.00	0.00
9,000.0	76.01	358.26	8,829.9	361.9	-11.0	362.1	12.00	12.00	0.00
9,100.0	88.01	358.26	8,843.7	460.7	-14.0	460.9	12.00	12.00	0.00
9,113.3	89.61	358.26	8,844.0	474.0	-14.4	474.2	12.00	12.00	0.00
<b>LP: 2412' FNL &amp; 439' FEL, Sec 14</b>									
9,160.3	89.61	358.26	8,844.3	521.0	-15.8	521.2	0.00	0.00	0.00
<b>FTP: 2365' FNL &amp; 441' FEL, Sec 14</b>									
9,200.0	89.61	358.26	8,844.6	560.7	-17.0	560.9	0.00	0.00	0.00
9,300.0	89.61	358.26	8,845.3	660.6	-20.0	660.9	0.00	0.00	0.00
9,400.0	89.61	358.26	8,846.0	760.6	-23.1	760.9	0.00	0.00	0.00
9,500.0	89.61	358.26	8,846.6	860.5	-26.1	860.9	0.00	0.00	0.00
9,600.0	89.61	358.26	8,847.3	960.5	-29.1	960.9	0.00	0.00	0.00
9,700.0	89.61	358.26	8,848.0	1,060.4	-32.1	1,060.9	0.00	0.00	0.00
9,800.0	89.61	358.26	8,848.7	1,160.4	-35.2	1,160.9	0.00	0.00	0.00
9,900.0	89.61	358.26	8,849.4	1,260.3	-38.2	1,260.9	0.00	0.00	0.00

# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico NAD 83  
**Site:** Fuller 14/11 B2HA Fed #1H  
**Well:** Sec 14, T26S, R29E  
**Wellbore:** BHL: 330' FNL & 660' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**

Site Fuller 14/11 B2HA Fed #1H  
 WELL @ 2982.0usft (Original Well Elev)  
 WELL @ 2982.0usft (Original Well Elev)  
 Grid  
 Minimum Curvature

## 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)
10,000.0	89.61	358.26	8,850.0	1,360.3	-41.2	1,360.9	0.00	0.00	0.00
10,100.0	89.61	358.26	8,850.7	1,460.2	-44.3	1,460.9	0.00	0.00	0.00
10,200.0	89.61	358.26	8,851.4	1,560.2	-47.3	1,560.9	0.00	0.00	0.00
10,300.0	89.61	358.26	8,852.1	1,660.1	-50.3	1,660.9	0.00	0.00	0.00
10,400.0	89.61	358.26	8,852.8	1,760.1	-53.4	1,760.9	0.00	0.00	0.00
10,500.0	89.61	358.26	8,853.5	1,860.0	-56.4	1,860.9	0.00	0.00	0.00
10,600.0	89.61	358.26	8,854.1	1,960.0	-59.4	1,960.9	0.00	0.00	0.00
10,700.0	89.61	358.26	8,854.8	2,059.9	-62.4	2,060.9	0.00	0.00	0.00
10,800.0	89.61	358.26	8,855.5	2,159.9	-65.5	2,160.9	0.00	0.00	0.00
10,900.0	89.61	358.26	8,856.2	2,259.8	-68.5	2,260.9	0.00	0.00	0.00
11,000.0	89.61	358.26	8,856.9	2,359.8	-71.5	2,360.9	0.00	0.00	0.00
11,100.0	89.61	358.26	8,857.5	2,459.7	-74.6	2,460.9	0.00	0.00	0.00
11,200.0	89.61	358.26	8,858.2	2,559.7	-77.6	2,560.9	0.00	0.00	0.00
11,300.0	89.61	358.26	8,858.9	2,659.6	-80.6	2,660.9	0.00	0.00	0.00
11,400.0	89.61	358.26	8,859.6	2,759.6	-83.7	2,760.9	0.00	0.00	0.00
11,500.0	89.61	358.26	8,860.3	2,859.6	-86.7	2,860.9	0.00	0.00	0.00
11,600.0	89.61	358.26	8,861.0	2,959.5	-89.7	2,960.9	0.00	0.00	0.00
11,700.0	89.61	358.26	8,861.6	3,059.5	-92.7	3,060.9	0.00	0.00	0.00
11,800.0	89.61	358.26	8,862.3	3,159.4	-95.8	3,160.9	0.00	0.00	0.00
11,900.0	89.61	358.26	8,863.0	3,259.4	-98.8	3,260.9	0.00	0.00	0.00
12,000.0	89.61	358.26	8,863.7	3,359.3	-101.8	3,360.9	0.00	0.00	0.00
12,100.0	89.61	358.26	8,864.4	3,459.3	-104.9	3,460.9	0.00	0.00	0.00
12,200.0	89.61	358.26	8,865.0	3,559.2	-107.9	3,560.8	0.00	0.00	0.00
12,300.0	89.61	358.26	8,865.7	3,659.2	-110.9	3,660.8	0.00	0.00	0.00
12,400.0	89.61	358.26	8,866.4	3,759.1	-114.0	3,760.8	0.00	0.00	0.00
12,500.0	89.61	358.26	8,867.1	3,859.1	-117.0	3,860.8	0.00	0.00	0.00
12,600.0	89.61	358.26	8,867.8	3,959.0	-120.0	3,960.8	0.00	0.00	0.00
12,700.0	89.61	358.26	8,868.5	4,059.0	-123.0	4,060.8	0.00	0.00	0.00
12,800.0	89.61	358.26	8,869.1	4,158.9	-126.1	4,160.8	0.00	0.00	0.00
12,900.0	89.61	358.26	8,869.8	4,258.9	-129.1	4,260.8	0.00	0.00	0.00
13,000.0	89.61	358.26	8,870.5	4,358.8	-132.1	4,360.8	0.00	0.00	0.00
13,100.0	89.61	358.26	8,871.2	4,458.8	-135.2	4,460.8	0.00	0.00	0.00
13,200.0	89.61	358.26	8,871.9	4,558.7	-138.2	4,560.8	0.00	0.00	0.00
13,300.0	89.61	358.26	8,872.5	4,658.7	-141.2	4,660.8	0.00	0.00	0.00
13,400.0	89.61	358.26	8,873.2	4,758.6	-144.3	4,760.8	0.00	0.00	0.00
13,500.0	89.61	358.26	8,873.9	4,858.6	-147.3	4,860.8	0.00	0.00	0.00
13,600.0	89.61	358.26	8,874.6	4,958.5	-150.3	4,960.8	0.00	0.00	0.00
13,700.0	89.61	358.26	8,875.3	5,058.5	-153.3	5,060.8	0.00	0.00	0.00
13,800.0	89.61	358.26	8,876.0	5,158.4	-156.4	5,160.8	0.00	0.00	0.00
13,900.0	89.61	358.26	8,876.6	5,258.4	-159.4	5,260.8	0.00	0.00	0.00
14,000.0	89.61	358.26	8,877.3	5,358.3	-162.4	5,360.8	0.00	0.00	0.00
14,100.0	89.61	358.26	8,878.0	5,458.3	-165.5	5,460.8	0.00	0.00	0.00
14,200.0	89.61	358.26	8,878.7	5,558.2	-168.5	5,560.8	0.00	0.00	0.00
14,300.0	89.61	358.26	8,879.4	5,658.2	-171.5	5,660.8	0.00	0.00	0.00
14,400.0	89.61	358.26	8,880.0	5,758.2	-174.6	5,760.8	0.00	0.00	0.00
14,500.0	89.61	358.26	8,880.7	5,858.1	-177.6	5,860.8	0.00	0.00	0.00
14,600.0	89.61	358.26	8,881.4	5,958.1	-180.6	5,960.8	0.00	0.00	0.00
14,700.0	89.61	358.26	8,882.1	6,058.0	-183.6	6,060.8	0.00	0.00	0.00
14,800.0	89.61	358.26	8,882.8	6,158.0	-186.7	6,160.8	0.00	0.00	0.00
14,900.0	89.61	358.26	8,883.5	6,257.9	-189.7	6,260.8	0.00	0.00	0.00
15,000.0	89.61	358.26	8,884.1	6,357.9	-192.7	6,360.8	0.00	0.00	0.00
15,100.0	89.61	358.26	8,884.8	6,457.8	-195.8	6,460.8	0.00	0.00	0.00
15,200.0	89.61	358.26	8,885.5	6,557.8	-198.8	6,560.8	0.00	0.00	0.00
15,300.0	89.61	358.26	8,886.2	6,657.7	-201.8	6,660.8	0.00	0.00	0.00



# Planning Report

**Database:** Hobbs  
**Company:** Mewbourne Oil Company  
**Project:** Eddy County, New Mexico NAD 83  
**Site:** Fuller 14/11 B2HA Fed #1H  
**Well:** Sec 14, T26S, R29E  
**Wellbore:** BHL: 330' FNL & 660' FEL, Sec 11  
**Design:** Design #1

**Local Co-ordinate Reference:** Site Fuller 14/11 B2HA Fed #1H  
**TVD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**MD Reference:** WELL @ 2982.0usft (Original Well Elev)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## 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)
15,400.0	89.61	358.26	8,886.9	6,757.7	-204.9	6,760.8	0.00	0.00	0.00
15,500.0	89.61	358.26	8,887.5	6,857.6	-207.9	6,860.8	0.00	0.00	0.00
15,600.0	89.61	358.26	8,888.2	6,957.6	-210.9	6,960.8	0.00	0.00	0.00
15,700.0	89.61	358.26	8,888.9	7,057.5	-213.9	7,060.8	0.00	0.00	0.00
15,800.0	89.61	358.26	8,889.6	7,157.5	-217.0	7,160.8	0.00	0.00	0.00
15,900.0	89.61	358.26	8,890.3	7,257.4	-220.0	7,260.8	0.00	0.00	0.00
16,000.0	89.61	358.26	8,891.0	7,357.4	-223.0	7,360.8	0.00	0.00	0.00
16,100.0	89.61	358.26	8,891.6	7,457.3	-226.1	7,460.8	0.00	0.00	0.00
16,200.0	89.61	358.26	8,892.3	7,557.3	-229.1	7,560.8	0.00	0.00	0.00
16,300.0	89.61	358.26	8,893.0	7,657.2	-232.1	7,660.8	0.00	0.00	0.00
16,400.0	89.61	358.26	8,893.7	7,757.2	-235.2	7,760.8	0.00	0.00	0.00
16,500.0	89.61	358.26	8,894.4	7,857.1	-238.2	7,860.7	0.00	0.00	0.00
16,592.9	89.61	358.26	8,895.0	7,950.0	-241.0	7,953.7	0.00	0.00	0.00
BHL: 330' FNL & 660' FEL, Sec 11									

## 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: 2500' FSL & 425' FE - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	379,000.00	661,067.00	32° 2' 28.904 N	103° 56' 48.919 W
KOP @ 8367' - plan hits target center - Point	0.00	0.00	8,366.5	0.0	0.0	379,000.00	661,067.00	32° 2' 28.904 N	103° 56' 48.919 W
LP: 2412' FNL & 439' FE - plan hits target center - Point	0.00	0.00	8,844.0	474.0	-14.4	379,474.00	661,052.60	32° 2' 33.595 N	103° 56' 49.067 W
FTP: 2365' FNL & 441' F - plan hits target center - Point	0.00	0.00	8,844.3	521.0	-15.8	379,521.00	661,051.21	32° 2' 34.060 N	103° 56' 49.081 W
BHL: 330' FNL & 660' FE - plan hits target center - Point	0.00	0.00	8,895.0	7,950.0	-241.0	386,950.00	660,826.00	32° 3' 47.586 N	103° 56' 51.389 W

**Mewbourne Oil Company, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

**1. Geologic Formations**

TVD of target	8895'	Pilot hole depth	NA
MD at TD:	16600'	Deepest expected fresh water:	125'

**Basin**

<b>Formation</b>	<b>Depth (TVD) from KB</b>	<b>Water/Mineral Bearing/ Target Zone?</b>	<b>Hazards*</b>
Quaternary Fill	Surface		
Rustler	590	Water	
Top Salt	1360		
Castile	1585		
Base Salt	2915		
Lamar	3105	Oil/Gas	
Bell Canyon	3135	Oil/Gas	
Cherry Canyon	4005	Oil/Gas	
Manzanita Marker	4185		
Brushy Canyon	5285	Oil/Gas	
Bone Spring	6865	Oil/Gas	
1 <sup>st</sup> Bone Spring Sand	7815		
2 <sup>nd</sup> Bone Spring Sand	8420	Target Zone	
3 <sup>rd</sup> Bone Spring Sand			
Abo			
Wolfcamp			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company, Fuller 14/11 B2HA Federal #1H  
 Sec 14, T26S, R29E  
 SL: 2500' FSL & 425' FEL, Sec 14  
 BHL: 330' FNL & 660' FEL, Sec 11

## 2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	685'	13.375"	48	H40	STC	2.40	5.40	9.79	16.45
12.25"	0'	3030'	9.625"	36	J55	LTC	1.28	2.23	4.15	5.17
8.75"	0'	9113'	7"	26	HCP110	LTC	1.79	2.29	2.70	3.50
6.125"	8366'	16600'	4.5"	13.5	P110	LTC	2.31	2.68	3.04	3.80
BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 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 3 <sup>rd</sup> 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 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(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, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

**3. Cementing Program**

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H <sub>2</sub> O gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	330	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.	465	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	220	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	13	Tail: Class H + Retarder + Fluid Loss + Defoamer
ECP/DV Tool @ 4185'						
Prod. Stg 2	65	12.5	2.12	11	16	Lead: Class C + Gel + Retarder + Defoamer + Extender
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder
Liner	335	11.2	2.97	17	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, etc.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	2445'	25%
Liner	8366'	25%

Mewbourne Oil Company, Fuller 14/11 B2HA Federal #1H  
 Sec 14, T26S, R29E  
 SL: 2500' FSL & 425' FEL, Sec 14  
 BHL: 330' FNL & 660' FEL, Sec 11

**4. Pressure Control Equipment**

	Variance: None
--	----------------

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	X	1500#
			Blind Ram	X	3000#
			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. 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. <ul style="list-style-type: none"> <li>Provide description here: See attached schematic.</li> </ul>

**Mewbourne Oil Company, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0'	615'	Spud Mud	8.6-8.8	28-34	N/C
615'	3030'	BW	10.0	28-34	N/C
3030'	8366'	FW w/ Polymer	8.6-9.7	28-34	N/C
8366'	16600'	OBM	8.6-10.0	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.

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

**6. Logging and Testing Procedures**

<b>Logging, Coring and Testing.</b>	
X	Will run GR/CNL from KOP (8366') 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

<b>Additional logs planned</b>		<b>Interval</b>
X	Gamma Ray	8366' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

**7. Drilling Conditions**

<b>Condition</b>	<b>Specify what type and where?</b>
BH Pressure at deepest TVD	4626 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole.

**Mewbourne Oil Company, Fuller 14/11 B2HA Federal #1H**  
**Sec 14, T26S, R29E**  
**SL: 2500' FSL & 425' FEL, Sec 14**  
**BHL: 330' FNL & 660' FEL, Sec 11**

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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.

	H <sub>2</sub> S is present
X	H <sub>2</sub> S Plan attached

### **8. Water & Waste Volume Estimates**

Fresh Water Required: 2910 bbl

Waste Water: 2910 bbl

Waste Solids: 1910 bbl

### **9. 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

**APD ID:** 10400013831

**Submission Date:** 07/21/2017

Highlighted data  
reflects the most  
recent changes

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

[Show Final Text](#)
**Well Type:** OIL WELL

**Well Work Type:** Drill

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

Fuller14\_11B2HAFed1H\_existingroadmap\_20170830144858.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?** YES

**New Road Map:**

Fuller14\_11B2HAFed1H\_newroadmap\_20170830144929.pdf

Fuller14\_11B2HAFed1H\_newroadmap2\_20170830144941.pdf

**New road type:** RESOURCE

**Length:** 321.45 Feet

**Width (ft.):** 20

**Max slope (%):** 3

**Max grade (%):** 3

**Army Corp of Engineers (ACOE) permit required?** NO

**ACOE Permit Number(s):**
**New road travel width:** 14

**New road access erosion control:** None

**New road access plan or profile prepared?** NO

**New road access plan attachment:**



**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**Access road engineering design?** NO

**Access road engineering design attachment:**

**Access surfacing type:** OTHER

**Access topsoil source:** OFFSITE

**Access surfacing type description:** Caliche

**Access onsite topsoil source depth:**

**Offsite topsoil source description:** Topsoil will be on edge of lease road.

**Onsite topsoil removal process:**

**Access other construction information:** None

**Access miscellaneous information:** None

**Number of access turnouts:** 3

**Access turnout map:**

### **Drainage Control**

**New road drainage crossing:** OTHER

**Drainage Control comments:** None

**Road Drainage Control Structures (DCS) description:** None

**Road Drainage Control Structures (DCS) attachment:**

### **Access Additional Attachments**

**Additional Attachment(s):**

### **Section 3 - Location of Existing Wells**

**Existing Wells Map?** YES

**Attach Well map:**

Fuller14\_11B2HAFed1H\_existingwellmap\_20170830145046.pdf

**Existing Wells description:**

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

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

**Estimated Production Facilities description:**

**Production Facilities description:**

**Production Facilities map:**

Fuller14\_11B2HAFed1H\_productionfacilitymap\_20170830145108.pdf

**Operator Name:** MEWBORNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source use type:** DUST CONTROL,  
INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE  
CASING

**Describe type:**

**Water source type:** IRRIGATION

**Source longitude:** -104.05763

**Source latitude:** 32.04928

**Source datum:** NAD83

**Water source permit type:** WATER WELL

**Source land ownership:** FEDERAL

**Water source transport method:** TRUCKING

**Source transportation land ownership:** COMMERCIAL

**Water source volume (barrels):** 2014

**Source volume (acre-feet):** 0.2595907

**Source volume (gal):** 84588

**Water source use type:** DUST CONTROL,  
INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE  
CASING

**Describe type:**

**Water source type:** IRRIGATION

**Source longitude:** -103.94242

**Source latitude:** 31.998123

**Source datum:** NAD83

**Water source permit type:** WATER WELL

**Source land ownership:** PRIVATE

**Water source transport method:** TRUCKING

**Source transportation land ownership:** COMMERCIAL

**Water source volume (barrels):** 2014

**Source volume (acre-feet):** 0.2595907

**Source volume (gal):** 84588

**Water source and transportation map:**

Fuller14\_11B2HAFed1H\_watersourceandtransmap\_20170830145131.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:**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**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.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Construction Materials description:** Caliche - both sources shown on one map.

**Construction Materials source location attachment:**

Fuller14\_11B2HAFed1H\_calichesourceandtransmap\_20170830145153.pdf

## Section 7 - Methods for Handling Waste

**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

**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:**

**Operator Name:** MEWBORNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

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

**Disposal type description:**

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

**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.

### 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:** FULLER 14/11 B2HA FED

**Well Number:** 1H

## Section 8 - Ancillary Facilities

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

**Ancillary Facilities attachment:**

**Comments:**

## Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Fuller14\_11B2HAFed1H\_wellsitelayout\_20170830145214.pdf

**Comments:**

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** NEW

**Recontouring attachment:**

**Drainage/Erosion control construction:** None

**Drainage/Erosion control reclamation:** None

**Wellpad long term disturbance (acres):** 1.414

**Wellpad short term disturbance (acres):** 2.65

**Access road long term disturbance (acres):** 0

**Access road short term disturbance (acres):** 0

**Pipeline long term disturbance (acres):** 0

**Pipeline short term disturbance (acres):** 0

**Other long term disturbance (acres):** 0

**Other short term disturbance (acres):** 0

**Total long term disturbance:** 1.414

**Total short term disturbance:** 2.65

**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 needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

**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:**

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**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:**

### **Seed Summary**

**Total pounds/Acre:**

<b>Seed Type</b>	<b>Pounds/Acre</b>
------------------	--------------------

**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.

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**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:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**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:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**Fee Owner:** Pecos Valley Artesian Conservation District

**Phone:** (575)622-7000

**Fee Owner Address:** PO Box 1346 Roswell NM 88202

**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:** BUREAU OF LAND MANAGEMENT

**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:** FULLER 14/11 B2HA FED

**Well Number:** 1H

**Fee Owner:** Pecos Valley Artesian Conservation  
District

**Phone:** (575)622-7000

**Fee Owner Address:** PO Box 1346 Roswell NM 88202

**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:** APR 18 2017 Met with Brooke Wilson (BLM ) & RRC Surveying and staked location @ 2500' FSL & 425' FEL, Sec 14, T26S, R29E, Eddy Co., NM. (Elevation @ 2953'). This appears to be a drillable location with pit area to the N. Topsoil W. Reclaim all sides. Shares pad with the six other wells.

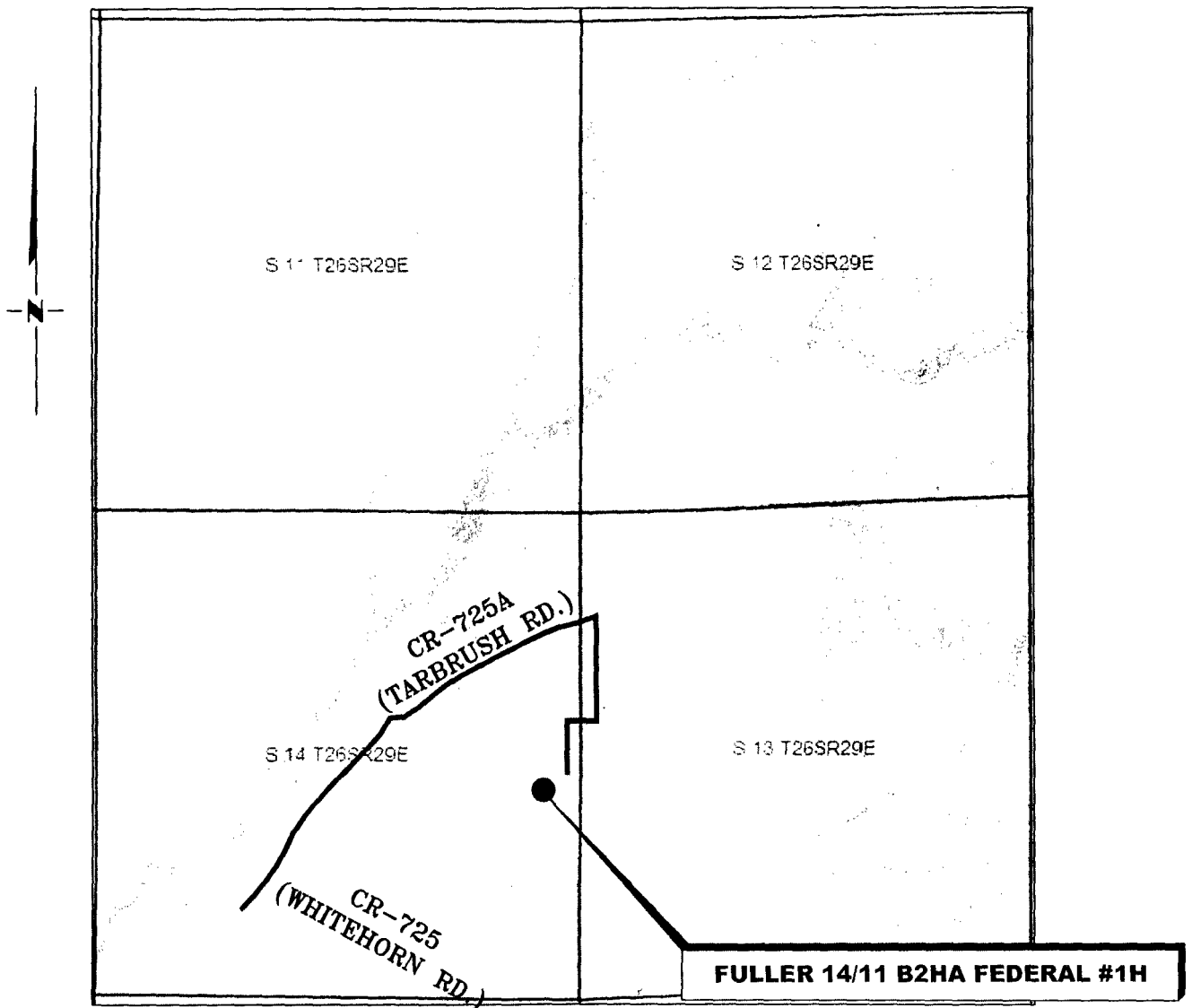
### Other SUPO Attachment

Fuller14\_11B2HAFed1H\_interimreclamationmap\_20170830145236.pdf

Fuller14\_11B2HAFed1H\_GASCAPTUREPLAN\_20170830145246.pdf

# VICINITY MAP

NOT TO SCALE



*SECTION 14, TWP. 26 SOUTH, RGE. 29 EAST,  
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: Mewbourne Oil Company  
LEASE: Fuller 14/11 B2HA Federal  
WELL NO.: 1H

LOCATION: 2500' FSL & 425' FEL  
ELEVATION: 2953'

Copyright 2016 - All Rights Reserved

NO.	REVISION	DATE
JOB NO.:	LS1703146	
DWG. NO.:	1703146VM	

# RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE:	N. T. S.
DATE:	4-13-2017
SURVEYED BY:	ML/JL
DRAWN BY:	LA
APPROVED BY:	RMH
SHEET:	1 OF 1

**MEWBOURNE OIL COMPANY**  
**FULLER 14/11 W2HA FEDERAL #3H**  
**(2500' FNL & 435' FEL)**  
**SECTION 14, T26S, R29E**  
**N. M. P. M., EDDY CO., NEW MEXICO**

720'

2947.3'

2950.9'

2952.1'

30'

520'

2952.2'

2954.3'

EXISTING PAD

PROPOSED ROAD  
S 89°57'26" W 321.45'  
(SEE EASEMENT)

FULLER 14/11 W1HA  
FEDERAL #2H

200'

35'

35'

50'

FULLER 14/23 W1IP  
FEDERAL #1H

FULLER 14/23 W2IP  
FEDERAL #4H

200'

400'

600'

TOPSOIL

PROPOSED PAD

2949.0'

2949.0'

520'

2952.2'

2948.9'

2953.1'

720'

**DIRECTIONS TO LOCATION**

*From the intersection of CR-725 (Whitehorn Rd.) and CR-725A (Tarbrush Rd.);*  
*Go Northeast on CR-725A approx. 1.0 miles to a lease road on the right;*  
*Turn right and go South approx. 0.2 miles to a proposed road on the right;*  
*Turn right and go West approx. 321 feet to location.*

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Standards for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett NM PS 19680

SCALE: 1" = 100'

BEARINGS ARE  
NAD 83 GRID - NM EAST  
DISTANCES ARE  
GROUND.

Copyright 2016 - All Rights Reserved

**RRC**

NO. REVISION DATE

JOB NO.: LS1708498

DWG. NO.: 4-1708498

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'

DATE: 8-14-2017

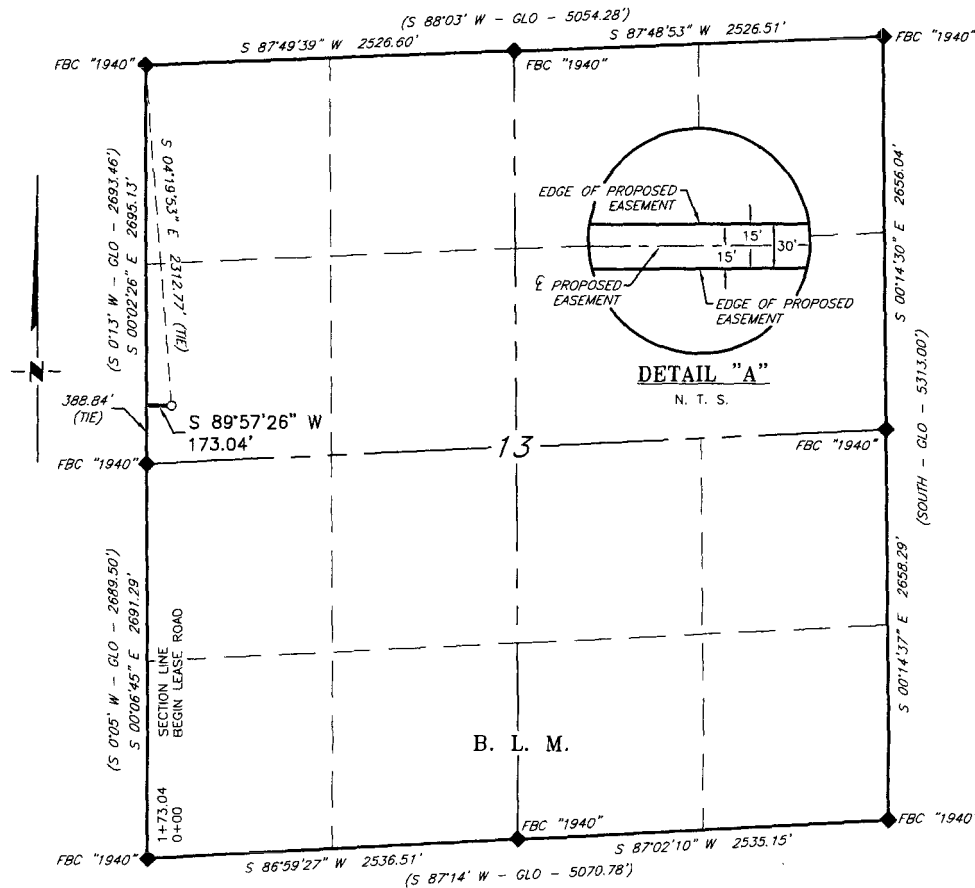
SURVEYED BY: ML/JL

DRAWN BY: LPS

APPROVED BY: RMH

SHEET: 1 OF 1

**MEWBOURNE OIL COMPANY  
SURVEY OF A PROPOSED ACCESS ROAD  
FOR THE FULLER WELL LOCATIONS  
SECTION 13, T26S, R29E  
N. M. P. M., EDDY CO., NEW MEXICO**



**DESCRIPTION**

A strip of land 30 feet wide, being 173.04 feet or 10.487 rods in length, lying in Section 13, Township 26 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northwest quarter of Section 13, which bears, S 04°19'53" E, 2,312.77 feet from a brass cap, stamped "1940", found for the Northwest corner of Section 13;

Thence S 89°57'26" W, 173.04 feet, to Engr. Sta. 1+73.04, a point on the West section line of Section 13, which bears, N 00°02'26" W, 388.84 feet from a brass cap, stamped "1940", found for the West quarter corner of Section 13.

Said strip of land contains 0.119 acres, more or less, and is allocated by forties as follows:

SW 1/4 NW 1/4      10.487 Rods      0.119 Acres

SCALE: 1" = 1000'  
0      500'      1000'

BEARINGS ARE GRID NAD 83  
NM EAST  
DISTANCES ARE HORIZ. GROUND.

LEGEND  
( ) RECORD DATA - GLO  
◆ FOUND MONUMENT  
AS NOTED

PROPOSED ACCESS ROAD  
Firm No.: NM 4655451

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
Robert M. Howett      NM PS 19680



Copyright 2016 - All Rights Reserved

NO.	REVISION	DATE
JOB NO.:	LS1703147	
DWG. NO.:	5-1703147	

**RRC**

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

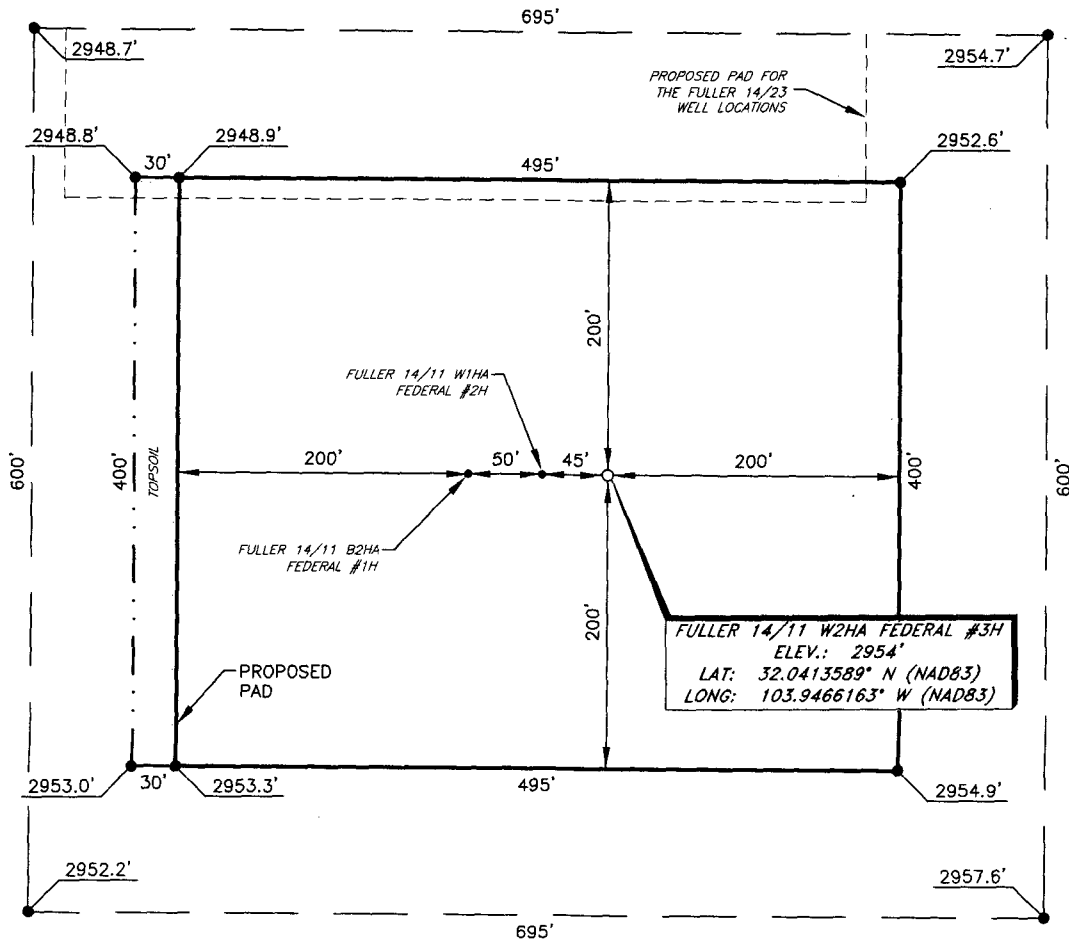
SCALE: 1" = 1000'
DATE: 4-13-17
SURVEYED BY: ML/JL
DRAWN BY: KAKN
APPROVED BY: RMH
SHEET: 1 OF 2

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



SCALE: 1" = 1000'
DATE: 4-13-17
SURVEYED BY: ML/JL
DRAWN BY: KAKN
APPROVED BY: RMH
SHEET: 2 OF 2

**MEWBOURNE OIL COMPANY**  
**FULLER 14/11 W2HA FEDERAL #3H**  
**(2500' FSL & 330' FEL)**  
**SECTION 14, T26S, R29E**  
**N. M. P. M., EDDY CO., NEW MEXICO**



DIRECTIONS TO LOCATION

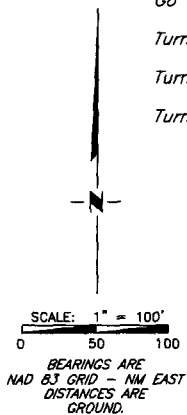
From the intersection of CR-725 (Whitehorn Rd.) and CR-725A (Tarbrush Rd.);

Go Northeast on CR-725A approx. 1.0 miles to a lease road on the right;

Turn right and go South approx. 0.2 miles to a proposed road on the right;

Turn right and go West approx. 321 feet to the Northeast corner of a proposed pad;

Turn left and go South through proposed pad approx. 0.1 miles, to location on the right.



I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that the proposed well location is an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stats. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



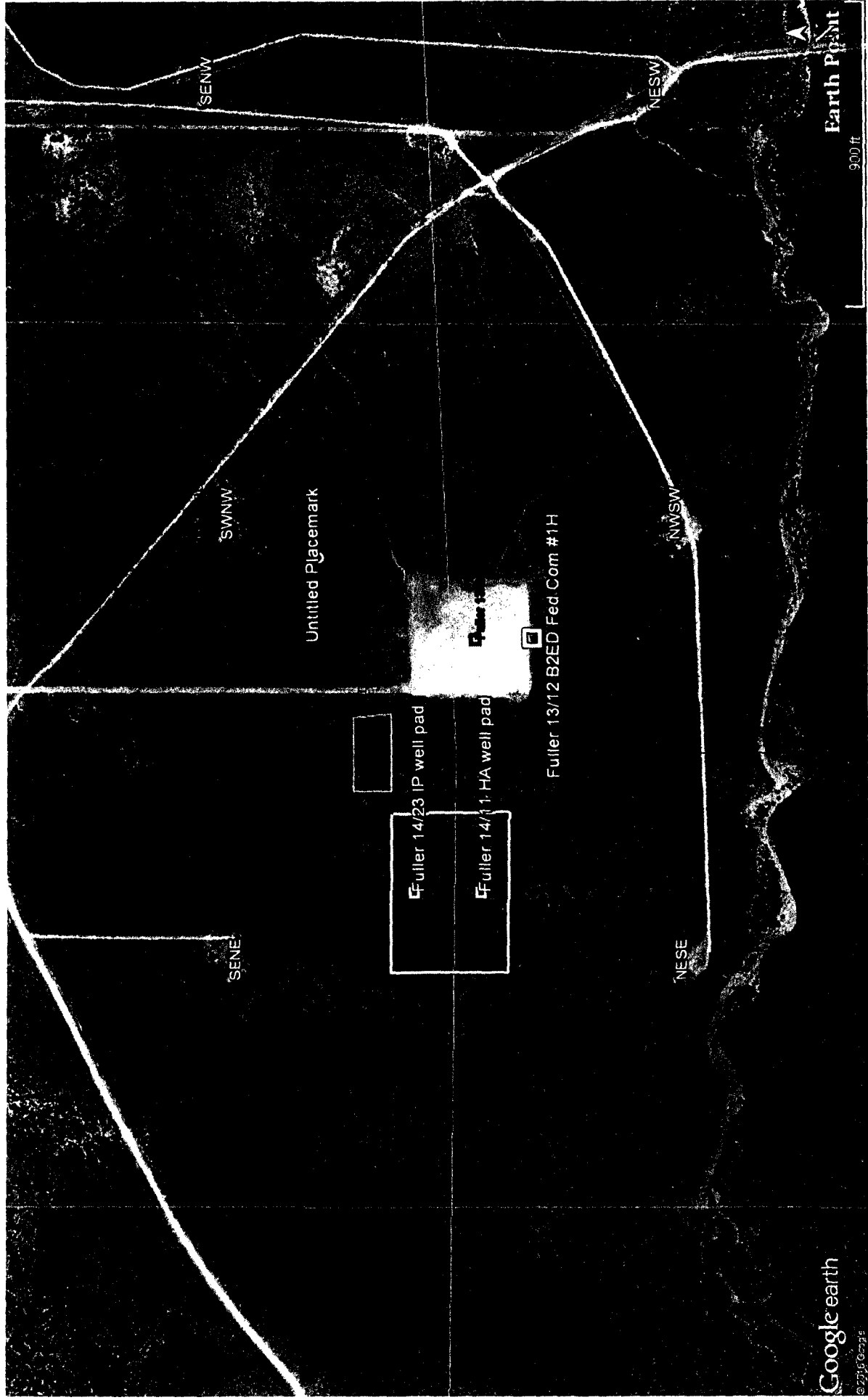
Copyright 2016 - All Rights Reserved

NO.	REVISION	DATE
JOB NO.:	LS1703145	
DWG. NO.:	1703145PAD	

**RRC**

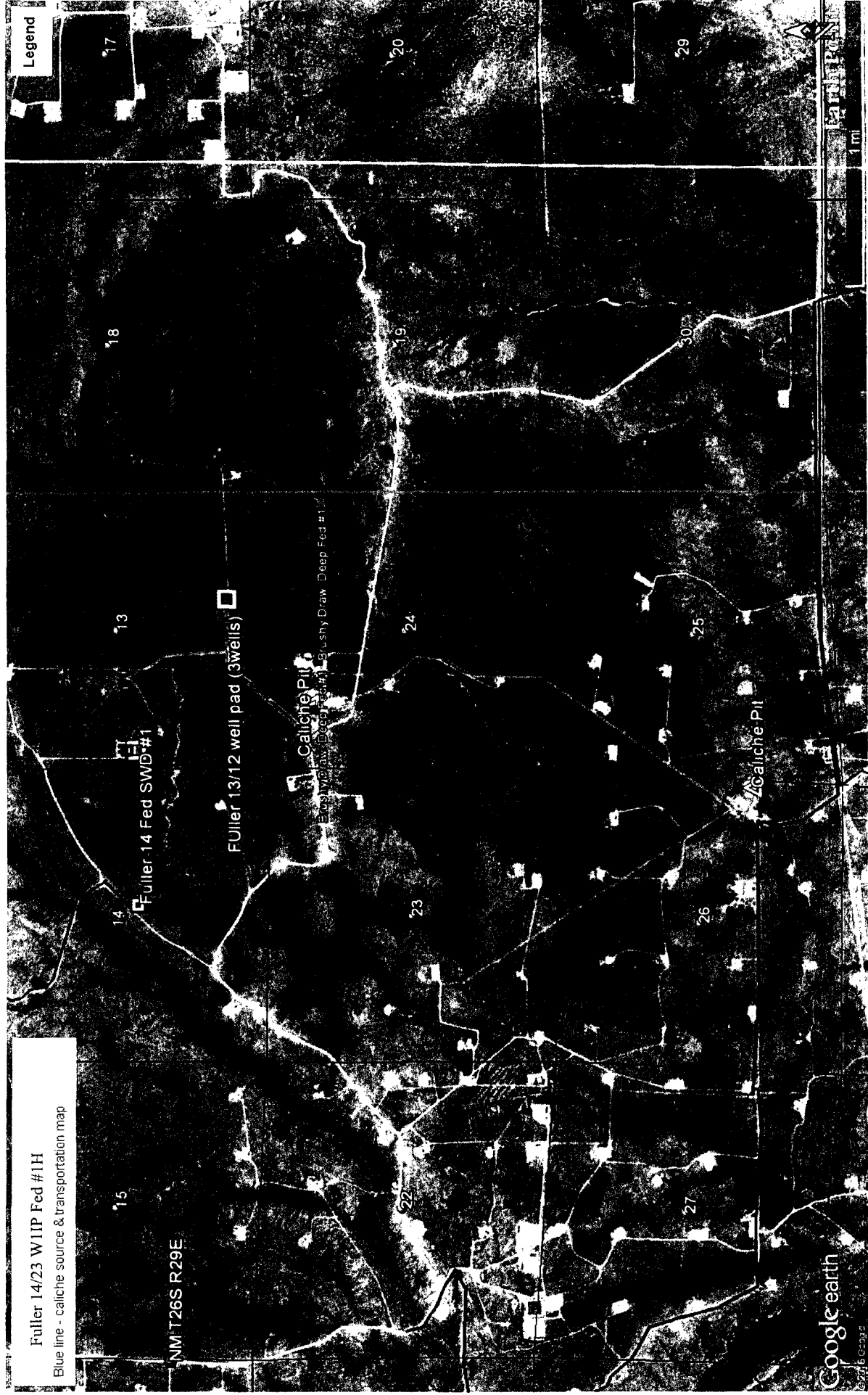
308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE:	1" = 100'
DATE:	4-13-2017
SURVEYED BY:	ML/JL
DRAWN BY:	CMJ
APPROVED BY:	RMH
SHEET:	1 OF 1

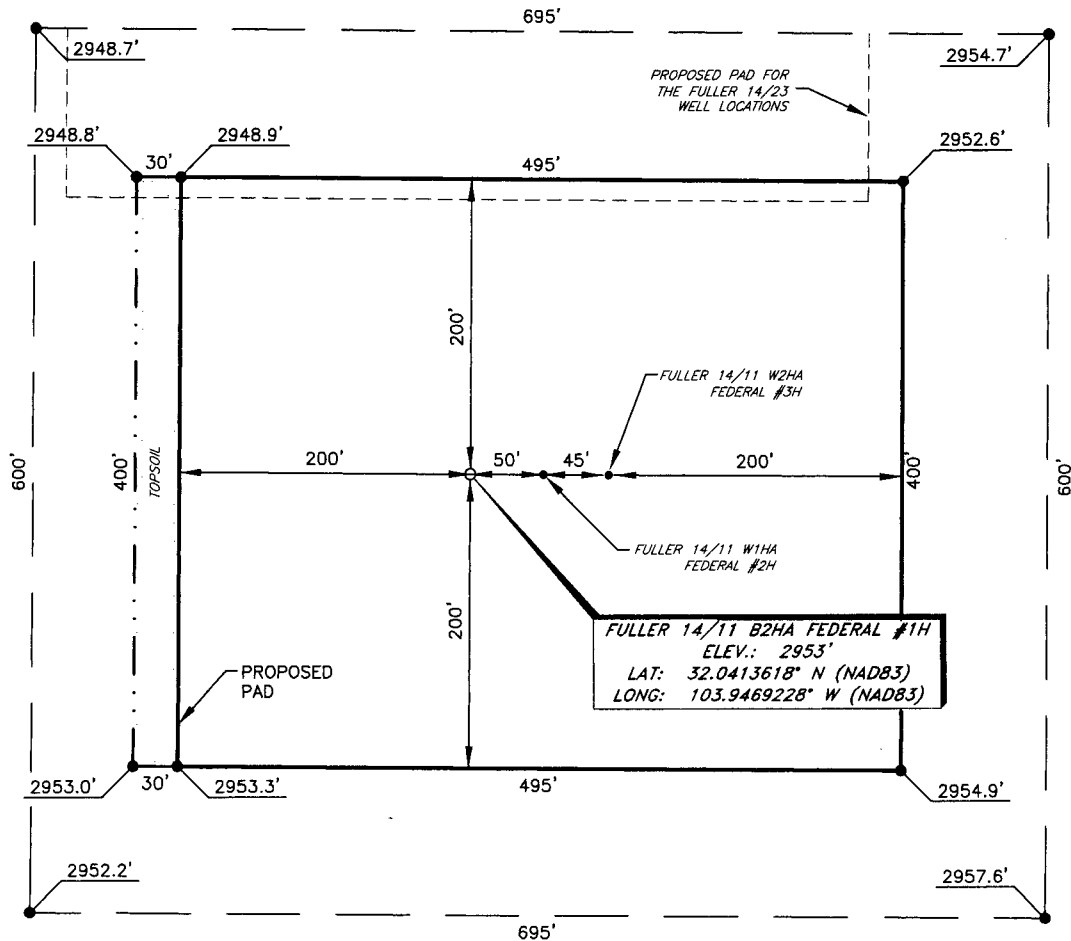








**MEWBOURNE OIL COMPANY**  
**FULLER 14/11 B2HA FEDERAL #1H**  
**(2500' FSL & 425' FEL)**  
**SECTION 14, T26S, R29E**  
**N. M. P. M., EDDY CO., NEW MEXICO**



DIRECTIONS TO LOCATION

From the intersection of CR-725 (Whitehorn Rd.) and CR-725A (Tarbrush Rd.);

Go Northeast on CR-725A approx. 1.0 miles to a lease road on the right;

Turn right and go South approx. 0.2 miles to a proposed road on the right;

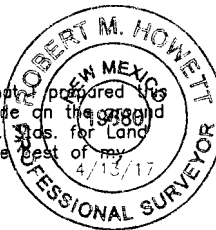
Turn right and go West approx. 321 feet to the Northeast corner of a proposed pad;

Turn left and go South through proposed pad approx. 0.1 miles, to location on the right.

SCALE: 1" = 100'  
 0 50 100  
 BEARINGS ARE  
 NAD 83 GRID - NM EAST  
 DISTANCES ARE  
 GROUND.

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared the unclassified survey of a well location from an actual survey made on the 4/13/17 and under my direct supervision, said survey and plat meet the Min. Stats. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

*Robert M. Howett*  
 Robert M. Howett NM PS 19680



Copyright 2016 - All Rights Reserved

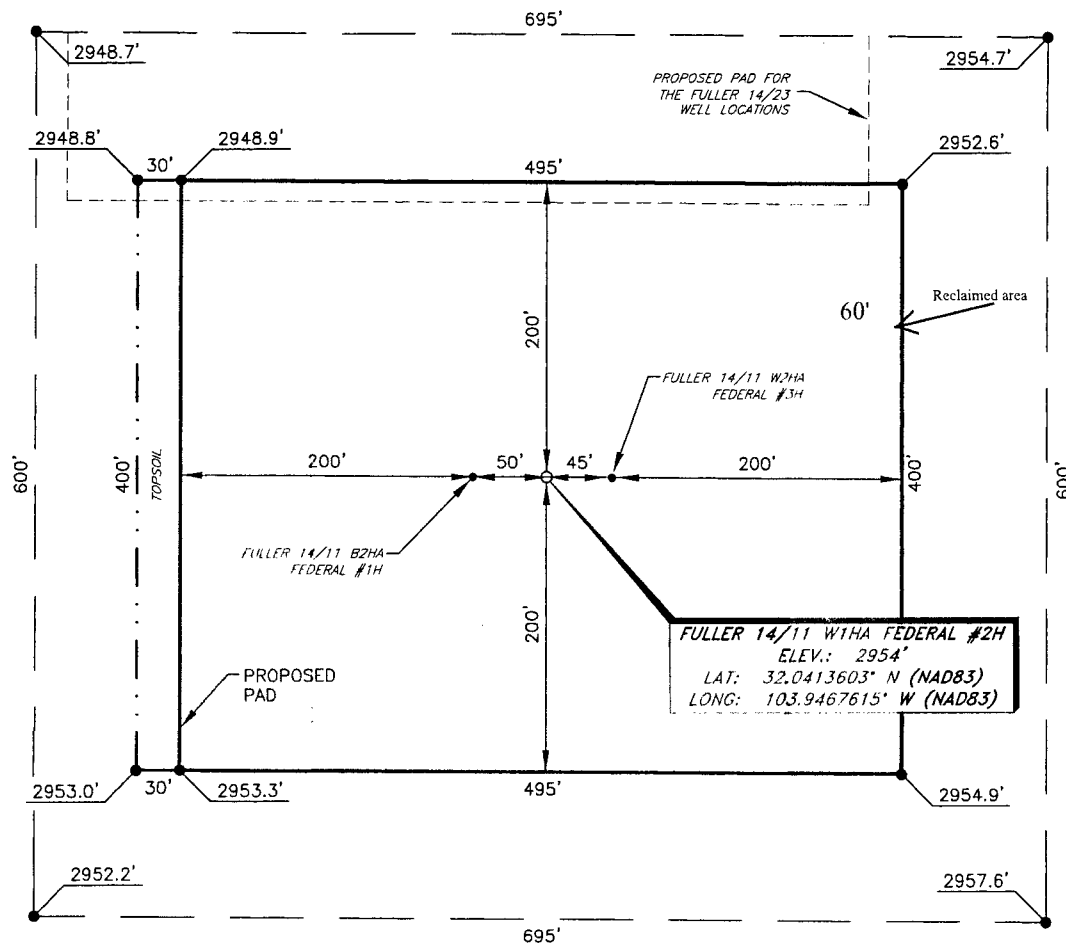
NO.	REVISION	DATE
JOB NO.:	LS1703146	
DWG. NO.:	1703146PAD	

**RRC**

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 4-13-2017
SURVEYED BY: ML/JL
DRAWN BY: LA
APPROVED BY: RMH
SHEET: 1 OF 1

**MEWBOURNE OIL COMPANY**  
**FULLER 14/11 W1HA FEDERAL #2H**  
**(2500' FSL & 375' FEL)**  
**SECTION 14, T26S, R29E**  
**N. M. P. M., EDDY CO., NEW MEXICO**



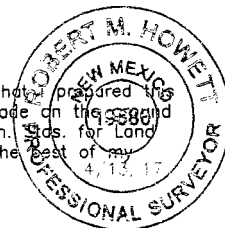
DIRECTIONS TO LOCATION

From the intersection of CR-725 (Whitehorn Rd.) and CR-725A (Tarbrush Rd.);  
 Go Northeast on CR-725A approx. 1.0 miles to a lease road on the right;  
 Turn right and go South approx. 0.2 miles to a proposed road on the right;  
 Turn right and go West approx. 321 feet to the Northeast corner of a proposed pad;  
 Turn left and go South through proposed pad approx. 0.1 miles, to location on the right.

SCALE: 1" = 100'  
 0 50 100  
 BEARINGS ARE  
 NAD 83 GRID - NM EAST  
 DISTANCES ARE  
 GROUND.

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stats. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett NM PS 19680



Copyright 2016 - All Rights Reserved

NO.	REVISION	DATE
JOB NO.:	LS1703150	
DWG. NO.:	1703150PAD	

**RRC**

308 W. BROADWAY ST. HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 4-13-2017
SURVEYED BY: ML/JL
DRAWN BY: LA
APPROVED BY: RMH
SHEET: 1 OF 1

## 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:

Describe 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:

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 surface owner:**

**PWD disturbance (acres):**

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

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

**Unlined pit specifications:**

**Precipitated solids disposal:**

**Describe 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?**

**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):**

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

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**

**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:**