



U.S. Department of the Interior

Bureau of Land Management

## Application for Permit to Drill

### APD Package Report

Date Printed:

APD ID:

Well Status:

APD Received Date:

Well Name:

Operator:

Well Number:

#### APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
  - Well Plat: 1 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
  - Blowout Prevention Choke Diagram Attachment: 4 file(s)
  - Blowout Prevention BOP Diagram Attachment: 3 file(s)
  - Casing Design Assumptions and Worksheet(s): 8 file(s)
  - Hydrogen sulfide drilling operations plan: 2 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  - Other Facets: 4 file(s)
  - Other Variances: 4 file(s)
- SUPO Report
- SUPO Attachments
  - Existing Road Map: 1 file(s)
  - Attach Well map: 1 file(s)
  - Production Facilities map: 2 file(s)
  - Water source and transportation map: 2 file(s)
  - Construction Materials source location attachment: 2 file(s)
  - Well Site Layout Diagram: 1 file(s)
  - Recontouring attachment: 2 file(s)
- PWD Report
- PWD Attachments
  - None
- Bond Report

- Bond Attachments
  - None

Form 3160-3  
(October 2024)FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2027

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

1a. Type of work:  DRILL  REENTER  
 1b. Type of Well:  Oil Well  Gas Well  Other  
 1c. Type of Completion:  Hydraulic Fracturing  Single Zone  Multiple Zone

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

9. API Well No.

**30-025-55665**

2. Name of Operator

10. Field and Pool, or Exploratory

3a. Address

3b. Phone No. (include area code)

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

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

At surface

At proposed prod. zone

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

12. County or Parish

13. State

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

16. No of acres in lease

17. Spacing Unit dedicated to this well

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

19. Proposed Depth

20. BLM/BIA Bond No. in file

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

22. Approximate date work will start\*

23. Estimated duration

24. Attachments

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

1. Well plat certified by a registered surveyor.

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 requested by the BLM.

25. Signature

Name (Printed/Typed)

Date

Title

Approved by (Signature)

Name (Printed/Typed)

Date

Title

Office

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

Conditions of approval, if any, are attached.

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

**APPROVED WITH CONDITIONS**

(Continued on page 2)

\*(Instructions on page 2)

## INSTRUCTIONS

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

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

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

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the 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.

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

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

0. SHL: SWSE / 360 FSL / 2271 FEL / TWSP: 21S / RANGE: 32E / SECTION: 17 / LAT: 32.4724276 / LONG: -103.6956357 ( TVD: 0 feet, MD: 0 feet )  
PPP: SESE / 0 FNL / 328 FEL / TWSP: 21S / RANGE: 32E / SECTION: 8 / LAT: 32.5004997 / LONG: -103.6893223 ( TVD: 8747 feet, MD: 20140 feet )  
PPP: SESE / 100 FSL / 330 FEL / TWSP: 21S / RANGE: 32E / SECTION: 17 / LAT: 32.4717356 / LONG: -103.5893436 ( TVD: 8947 feet, MD: 9675 feet )  
PPP: SESE / 0 FNL / 329 FEL / TWSP: 21S / RANGE: 32E / SECTION: 17 / LAT: 32.485994 / LONG: -103.689333 ( TVD: 8947 feet, MD: 14862 feet )  
BHL: LOT 16 / 3859 FSL / 330 FEL / TWSP: 21S / RANGE: 32E / SECTION: 5 / LAT: 32.5111052 / LONG: -103.6893144 ( TVD: 8947 feet, MD: 23998 feet )

### BLM Point of Contact

Name: PAMELLA HERNANDEZ  
Title: LIE  
Phone: (575) 234-5954  
Email: PHERNANDEZ@BLM.GOV

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

**OPERATOR'S NAME: MEWBOURNE OIL COMPANY  
Lease Number: NMNM94095  
Lea County, New Mexico**

**COUSIN EDDY FED UNIT COM 33H**

Surface Hole Location: 360 feet FSL and 2307 feet FEL, Section 17, T. 21 S., R. 32 E.  
Bottom Hole Location: 3860 feet FSL and 660 feet FEL, Section 5, T. 21 S, R 32 E.

**COUSIN EDDY FED UNIT COM 34H**

Surface Hole Location: 360 feet FSL and 2343 feet FEL, Section 17, T. 21 S., R. 32 E.  
Bottom Hole Location: 3861 feet FSL and 1510 feet FEL, Section 5, T. 21 S, R 32 E.

**COUSIN EDDY FED UNIT COM 35H**

Surface Hole Location: 360 feet FSL and 2415 feet FEL, Section 17, T. 21 S., R. 32 E.  
Bottom Hole Location: 3862 feet FSL and 2360 feet FEL, Section 5, T. 21 S, R 32 E.

**COUSIN EDDY FED UNIT COM 36H**

Surface Hole Location: 360 feet FSL and 2271 feet FEL, Section 17, T. 21 S., R. 32 E.  
Bottom Hole Location: 3859 feet FSL and 330 feet FEL, Section 5, T. 21 S, R 32 E.

**COUSIN EDDY FED UNIT COM 37H**

Surface Hole Location: 360 feet FSL and 2379 feet FEL, Section 17, T. 21 S., R. 32 E.  
Bottom Hole Location: 3861 feet FSL and 1650 feet FEL, Section 5, T. 21 S, R 32 E.

**CAPER 20/29 FED COM 316H**

Surface Hole Location: 360 feet FSL and 2361 feet FEL, Section 17, T. 21 S., R. 32 E.  
Bottom Hole Location: 100 feet FSL and 1650 feet FEL, Section 29, T. 21 S, R 32 E.

**CAPER 20/29 FED COM 318H**

Surface Hole Location: 360 feet FSL and 2289 feet FEL, Section 17, T. 21 S., R. 32 E.  
Bottom Hole Location: 100 feet FSL and 330 feet FEL, Section 29, T. 21 S, R 32 E.

**CAPER 20/29 FED COM 417H**

**Surface Hole Location: 360 feet FSL and 2325 feet FEL, Section 17, T. 21 S., R. 32 E.**

**Bottom Hole Location: 100 feet FSL and 800 feet FEL, Section 29, T. 21 S, R 32 E.**

**CAPER 20/29 FED COM 455H**

**Surface Hole Location: 360 feet FSL and 2397 feet FEL, Section 17, T. 21 S., R. 32 E.**

**Bottom Hole Location: 100 feet FSL and 2120 feet FEL, Section 29, T. 21 S, R 32 E.**

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## 1. GENERAL PROVISIONS

The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

### 1.1. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the operator, or any person working on the operator's behalf, on the public or federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area (within 100ft) of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer, in conjunction with a BLM Cultural Resource Specialist, to determine appropriate actions to prevent the loss of significant scientific values. The operator shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

Traditional Cultural Properties (TCPs) are protected by NHPA as codified in 36 CFR 800 for possessing traditional, religious, and cultural significance tied to a certain group of individuals. Though there are currently no designated TCPs within the project area or within a mile of the project area, but it is possible for a TCP to be designated after the approval of this project. **If a TCP is designated in the project area after the project's approval, the BLM Authorized Officer will notify the operator of the following conditions and the duration for which these conditions are required.**

1. Temporary halting of all construction, drilling, and production activities to lower noise.
2. Temporary shut-off of all artificial lights at night.

The operator is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA), specifically NAGPRA Subpart B regarding discoveries, to protect human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered during project work. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and a BLM-CFO Authorized Officer will be notified immediately. The BLM will then be required to be notified, in writing, within 24 hours of the discovery. The written notification should include the geographic location by county and state, the contents of the discovery, and the steps taken to protect said discovery. You must also include any potential threats to the discovery and a conformation that all activity within 100ft of the discovery has ceased and work will not resume until written certification is issued. All work on the entire project must halt for a minimum of 3 days and work cannot resume until an Authorized Officer grants permission to do so.

Any paleontological resource discovered by the operator, or any person working on the operator's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. The operator will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

### 1.2. 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, New Mexico Department of Agriculture, and BLM requirements and policies.

### **1.3.1 African Rue (Peganum harmala)**

**Spraying:** The spraying of African Rue must be completed by a licensed or certified applicator. In order to attempt to kill or remove African Rue the proper mix of chemical is needed. The mix consists of 2% Arsenal (Imazapyr) and 2% Roundup (Glyphosate) along with a nonionic surfactant. Any other chemicals or combinations shall be approved by the BLM Noxious Weeds Coordinator prior to treatment. African Rue shall be sprayed in connection to any dirt working activities or disturbances to the site being sprayed. Spraying of African Rue shall be done on immature plants at initial growth through flowering and mature plants between budding and flowering stages. Spraying shall not be conducted after flowering when plant is fruiting. This will ensure optimal intake of chemical and decrease chances of developing herbicide resistance. After spraying, the operator or necessary parties must contact the Carlsbad Field Office to inspect the effectiveness of the application treatment to the plant species. No ground disturbing activities can take place until the inspection by the authorized officer is complete. The operator may contact the Environmental Protection Department or the BLM Noxious Weed Coordinator at (575) 234-5972 or BLM\_NM\_CFO\_NoxiousWeeds@blm.gov.

**Management Practices:** In addition to spraying for African Rue, good management practices should be followed. All equipment should be washed off using a power washer in a designated containment area. The containment area shall be bermed to allow for containment of the seed to prevent it from entering any open areas of the nearby landscape. The containment area shall be excavated near or adjacent to the well pad at a depth of three feet and just large enough to get equipment inside it to be washed off. This will allow all seeds to be in a centrally located area that can be treated at a later date if the need arises.

## **1.3. LIGHT POLLUTION**

### **1.3.1. Downfacing**

All permanent lighting will be pointed straight down at the ground in order to prevent light spill beyond the edge of approved surface disturbance.

### **1.3.2. Shielding**

All permanent lighting will use full cutoff luminaires, which are fully shielded (i.e., not emitting direct or indirect light above an imaginary horizontal plane passing through the lowest part of the light source).

### **1.3.3. Lighting Color**

Lighting shall be 3,500 Kelvin or less (Warm White) except during drilling, completion, and workover operations. No bluish-white lighting shall be used in permanent outdoor lighting.

## **2. SPECIAL REQUIREMENTS**

### **2.1. WATERSHED**

The entire well pad(s) 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 with impermeable mineral material (e.g. caliche). 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 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 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. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berthing or erosion control. 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.

### 2.1.1. Buried/Surface Line(s)

When crossing ephemeral drainages, the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons must be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences must be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars must be placed within the corridor to divert and dissipate surface runoff. A pipeline access road is not permitted to cross ephemeral drainages. Traffic must be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

### 2.1.2. Electric Line(s)

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole must not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that does not promote further erosion.

## 2.2. WILDLIFE

### 2.2.1 Lesser Prairie Chicken

#### 2.2.1.1 Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

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

#### 2.2.1.2 Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

#### 2.2.1.3 Ground-level Abandoned Well Marker to avoid raptor perching:

Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at BLM\_NM\_CFO\_Construction\_Reclamation@blm.gov.

## POTASH RESOURCES

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Capers Drill Island.

## 3. CONSTRUCTION REQUIREMENTS

### 3.1 CONSTRUCTION NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at BLM\_NM\_CFO\_Construction\_Reclamation@blm.gov 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 COAs on the well site and they shall be made available upon request by the Authorized Officer.

### 3.2 TOPSOIL

The operator shall strip the topsoil (the A horizon) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. No more than the top 6 inches of topsoil shall be removed. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berthing the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (the B horizon and below) 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.

### 3.3 CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No reserve pits will be used for drill cuttings. The operator shall properly dispose of drilling contents at an authorized disposal site.

### 3.4 FEDERAL MINERAL 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.

### 3.5 WELL PAD & SURFACING

Any surfacing material used to surface the well pad will be removed at the time of interim and final reclamation.

### 3.6 EXCLOSURE FENCING (CELLARS & PITS)

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 well cellar 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.)

The operator will also install and maintain mesh netting for all open well cellars to prevent access to smaller wildlife before and after drilling operations until the well cellar is free of fluids and the operator. Use a maximum netting mesh size of 1 1/2 inches. The netting must not have holes or gaps.

### 3.7 ON LEASE ACESST ROAD

#### 3.7.1 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.

#### 3.7.2 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 will 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.

#### 3.7.3 Crownning

Crownning 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.

#### 3.7.4 Ditching

Ditching shall be required on both sides of the road.

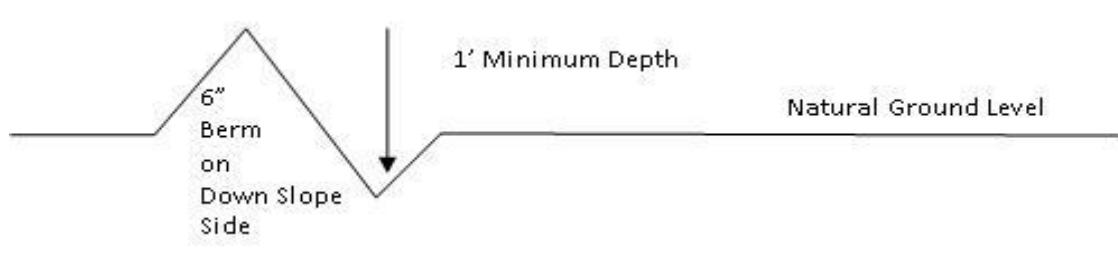
#### 3.7.5 Turnouts

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.

#### 3.7.6 Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, leadoff 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:

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

**3.7.7 Public Access**

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

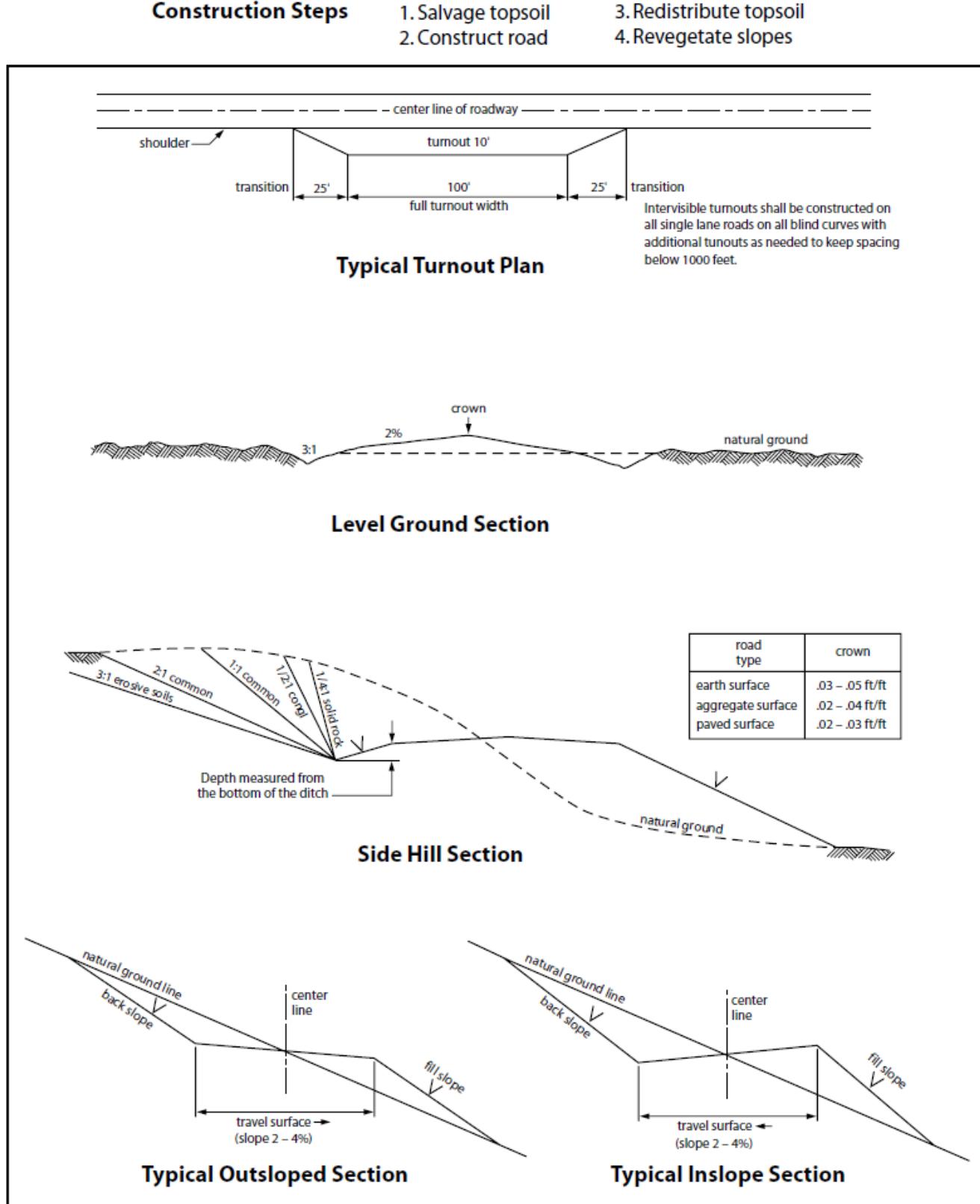


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## 4. PIPELINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

### 4.1 BURIED PIPELINES

A copy of the application (APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request a copy of your permit during construction to ensure compliance with all stipulations.

Operator agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Operator shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this APD.
2. The Operator shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the operator shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this APD. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The operator agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Pipeline corridor (unless the release or threatened release is wholly unrelated to the operator's activity on the pipeline corridor), or resulting from the activity of the Operator on the pipeline corridor. This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.
4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant is discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant,

wherever found, shall be the responsibility of operator, regardless of fault. Upon failure of operator to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the operator. Such action by the Authorized Officer shall not relieve operator of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized pipeline corridor.
6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.
7. The maximum allowable disturbance for construction in this pipeline corridor will be 30 feet:
  - Blading of vegetation within the pipeline corridor will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
  - Clearing of brush species within the pipeline corridor will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
  - The remaining area of the pipeline corridor (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)
8. The operator shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.
9. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this pipeline corridor and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire pipeline corridor shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted, and a 6-inch berm will be left over the ditch line to allow for settling back to grade.
10. The pipeline will be identified by signs at the point of origin and completion of the pipeline corridor and at all road crossings. At a minimum, signs will state the operator's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.
11. The operator shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the operator before maintenance begins. The operator will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the operator to construct temporary deterrence structures.
12. 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 associated roads, 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.

13. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:
  - a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them alive at least 100 yards from the trench.
  - b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30-degree slope and spaced no more than 500 feet apart) shall be placed in the trench. Before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them alive at least 100 yards from the trench.

## 5. OVERHEAD ELECTRIC LINES

**A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Operator agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The operator shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this APD.
2. The operator shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the operator shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the powerline corridor or on facilities authorized under this powerline corridor. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The operator agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Powerline corridor(unless the release or threatened release is wholly unrelated to the operator's activity on the powerline corridor), or resulting from the activity of the Operator on the powerline corridor. This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.
4. There will be no clearing or blading of the powerline corridor unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The operator shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this powerline corridor, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the operator without liability or expense to the United States.
6. Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.
7. The operator shall minimize disturbance to existing fences and other improvements on public lands. The operator is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The operator will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
8. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.
9. Upon cancellation, relinquishment, or expiration of this APD, the operator shall comply with those abandonment procedures as prescribed by the Authorized Officer.
10. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this APD, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.
11. Special Stipulations:
  - For reclamation remove poles, lines, transformer, etc. and dispose of properly. Fill in any holes from the poles removed.
12. Karst stipulations for overhead electric lines
  - Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features.
  - The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.
  - No further construction will be done until clearance has been issued by the Authorized Officer.
  - Special restoration stipulations or realignment may be required.

## 6. PRODUCTION (POST DRILLING)

### 5.1 WELL STRUCTURES & FACILITIES

#### 5.1.1 Placement of Production Facilities

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

#### 5.1.2 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.

#### 5.1.3. 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.

#### 5.1.4. 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.

#### 5.1.5. 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.

## 7. RECLAMATION

Stipulations required by the Authorized Officer on specific actions may differ from the following general guidelines

## 6.1 ROAD AND SITE RECLAMATION

Any roads constructed during the life of the well will have the caliche removed or linear burial. If contaminants are indicated then testing will be required for chlorides and applicable contaminant anomalies for final disposal determination (disposed of in a manner approved by the Authorized Officer within Federal, State and Local statutes, regulations, and ordinances) and seeded to the specifications in sections 6.5 and 6.6.

## 6.2 EROSION CONTROL

Install erosion control berms, windrows, and hummocks. Windrows must be level and constructed perpendicular to down-slope drainage; steeper slopes will require greater windrow density. Topsoil between windrows must be ripped to a depth of at least 12", unless bedrock is encountered. Any large boulders pulled up during ripping must be deep-buried on location. Ripping must be perpendicular to down-slope. The surface must be left rough in order to catch and contain rainfall on-site. Any trenches resulting from erosion cause by run-off shall be addressed immediately.

## 6.3 INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations must 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 must work with BLM surface protection specialists (BLM\_NM\_CFO\_Construction\_Reclamation@blm.gov) to devise the best strategies to reduce the size of the location. Interim reclamation must allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche and any other surface material is required. 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 in section 6.6.

Upon completion of interim reclamation, the operator shall submit a Sundry Notice, Subsequent Report of Reclamation (Form 3160-5).

## 6.4 FINAL ABANDONMENT & RECLAMATION

Prior to surface abandonment, the operator shall submit a Notice of Intent Sundry Notice and reclamation plan.

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 will 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. After earthwork and seeding is completed, the operator is required to submit a Sundry Notice, Subsequent Report of Reclamation.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (BLM\_NM\_CFO\_Construction\_Reclamation@blm.gov).

## 6.5 SEEDING TECHNIQUES

Seeds shall be hydro-seeded, mechanically drilled, or broadcast, with the broadcast-seeded area raked, ripped or dragged to aid in covering the seed. The seed mixture shall be evenly and uniformly planted over the disturbed area.

## 6.6 SOIL SPECIFIC SEED MIXTURE

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

Seed land application will be accomplished by mechanical planting using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds tend to drop the bottom of the drill and are planted first; the operator shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory BLM or Soil Conservation

District stand is established as determined by the Authorized Officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding or until several months of precipitation have occurred, enabling a full four months of growth, with one or more seed generations being established.

**Seed Mixture #5 for LPC Sand/Shinnery Sites**

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

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

\*Pounds of pure live seed:

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

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	MEWBOURNE OIL COMPANY		
<b>WELL NAME &amp; NO.:</b>	COUSIN EDDY FED UNIT COM 36H		
<b>APD ID:</b>	10400106440		
<b>LOCATION:</b>	Section 17, T.21 S., R.32 E. NMP.		
<b>COUNTY:</b>	Lea County, New Mexico <input style="width: 20px; height: 15px; vertical-align: middle;" type="button" value="▼"/>		

COA

<b>H<sub>2</sub>S</b>	<input type="radio"/> No <input checked="" type="radio"/> Yes			
<b>Potash / WIPP</b>	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" type="radio"/> R-111-Q	<input checked="" type="checkbox"/> Open Annulus
<b>3-String Design: Open Production Casing Annulus</b>				
<b>Cave / Karst</b>	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High	<input type="radio"/> Critical
<b>Wellhead</b>	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both	<input type="radio"/> Diverter
<b>Cementing</b>	<input checked="" type="checkbox"/> Primary Squeeze	<input type="checkbox"/> Cont. Squeeze	<input type="checkbox"/> EchoMeter	<input type="checkbox"/> DV Tool
<b>Special Req</b>	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
<b>Waste Prev.</b>	<input type="radio"/> Self-Certification	<input checked="" type="radio"/> Waste Min. Plan	<input type="radio"/> APD Submitted prior to 06/10/2024	
<b>Additional Language</b>	<input checked="" type="checkbox"/> Flex Hose	<input type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole	<input checked="" type="checkbox"/> Break Testing
	<input type="checkbox"/> Four-String	<input checked="" type="checkbox"/> Offline Cementing	<input checked="" type="checkbox"/> Fluid-Filled	

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated **AT SPUD**. As a result, the Hydrogen Sulfide area must meet **43 CFR 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

*APD is within the R-111-Q defined boundary. Operator must follow all applicable procedures and requirements listed within the order R-111-Q.*

### B. CASING DESIGN

#### Primary Casing Program (Design A)

**Note:** The surface casing set depth was adjusted based on the BLM geologist's recommendation. *"The operator proposes to set surface casing at 1061 ft. which will be in or above the Magenta Dolomite Aquifer and will not adequately protect all usable water zones. Instead, set surface casing at a depth of approximately 1200 ft. If salt is encountered, set casing at least 25 ft. above the salt."*

1. The **13-3/8** inch surface casing shall be set at approximately **1,200 ft.** (a minimum of 70 feet into the Rustler Anhydrite, above the salt and below usable water) and cemented to the surface. **If salt is encountered, set casing at least 25 ft. above the salt.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 psi compressive strength**, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The **9-5/8 in.** intermediate casing shall be set at approximately **4,450 ft.** 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 Potash.

**Note:** Excess cement is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

**Note:** The intermediate casing must be kept fluid-filled to meet the BLM's minimum requirements for the collapse design safety factor.

3. Operator has proposed to set **7-5/8 inch** production casing at approximately **8,775 ft.** (8,374 ft. TVD). The minimum required fill of cement behind the **7-5/8 inch** production casing is:
  - Operator has proposed to cement the production casing in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the R-111-Q guidelines.

- a. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation.

**Note:** For the first stage, no excess cement should be pumped to avoid cement tie-back into the intermediate casing shoe.

- b. Second stage: Operator will perform bradenhead squeeze within 180 days after completion per R-111-Q requirements. Cement shall be tie-back **at least 500 ft. into the intermediate casing and below the Marker Bed 126**. If cement does not circulate, the appropriate BLM office shall be notified.
- ❖ Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM.**
- ❖ Operator must verify top of cement per R-111-Q requirements. Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. If cement does not tie-back at least 500 ft. into the previous casing shoe, the appropriate BLM office shall be notified.
- ❖ A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing x Production Casing annulus un-cemented and monitored. Operator must follow all monitoring requirements listed within R-111-Q. Tieback shall be met within **180 days**.
- ❖ **In the event of a casing failure during completion,** the operator must contact the BLM engineer at (575-706-2779) and inspection staff (575-393-3612 Lea County).
- ❖ Pressure monitoring device and Pressure Safety Valves must be installed at surface on the open annulus for the life of the well.

4. The minimum required fill of cement behind the **5-1/2 in.** production liner is:

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

#### Alternate Casing Program (Design B)

**Note:** The surface casing set depth was adjusted based on the BLM geologist's recommendation. *"The operator proposes to set surface casing at 1061 ft. which will be in or above the Magenta Dolomite Aquifer and will not adequately protect all usable water zones. Instead, set surface casing at a depth of approximately 1200 ft. If salt is encountered, set casing at least 25 ft. above the salt."*

1. The **13-3/8** inch surface casing shall be set at approximately **1,200 ft.** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 ft. above the salt.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 psi compressive strength**, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8 in.** intermediate casing shall be set at approximately **4,450 ft**. 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 Potash.

**Note:** Excess cement is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

**Note:** The intermediate casing must be kept fluid-filled to meet the BLM's minimum requirements for the collapse design safety factor.

3. Operator has proposed to set **7-5/8 inch** production casing at approximately **9,675 ft**. (8,947 ft. TVD). The minimum required fill of cement behind the **7-5/8 inch** production casing is:

- Operator has proposed to cement the production casing in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the R-111-Q guidelines.
  - a. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation.

**Note:** For the first stage, no excess cement should be pumped to avoid cement tie-back into the intermediate casing shoe.

- b. Second stage: Operator will perform bradenhead squeeze within 180 days after completion per R-111-Q requirements. Cement shall be tie-back **at least 500 ft. into the intermediate casing and below the Marker Bed 126**. If cement does not circulate, the appropriate BLM office shall be notified.

❖ Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM.**

- ❖ Operator must verify top of cement per R-111-Q requirements. Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. If cement does not tie-back at least 500 ft. into the previous casing shoe, the appropriate BLM office shall be notified.
- ❖ A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing x Production Casing annulus un-cemented and monitored. Operator must follow all monitoring requirements listed within R-111-Q. Tieback shall be met within 180 days.
- ❖ **In the event of a casing failure during completion**, the operator must contact the BLM engineer at (575-706-2779) and inspection staff (575-393-3612 Lea County).
- ❖ Pressure monitoring device and Pressure Safety Valves must be installed at surface on the open annulus for the life of the well.

4. The minimum required fill of cement behind the **5-1/2 in.** production liner is:

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

### Offline Cementing

Operator has been **(Approved)** to pump the proposed cement program offline in the **Surface and intermediate(s) intervals**. Offline cementing should commence within 24 hours of landing the casing for the interval. Notify the BLM 4hrs prior to the commencement of any offline cementing procedure at **Lea County: 575-689-5981**.

### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. Before drilling out surface casing shoe, BOP/BOPE and annular preventer must be pressure tested in accordance with **title 43 CFR 3172**.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.

- d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

### **BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

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

#### **Communityization Agreement**

- The operator will submit a Communityization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, 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 Communityization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communityization 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 Communityization Agreement number is known, it shall also be on the sign.

### **Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

### **Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months. (**This is not necessary for secondary recovery unit wells**)

## **GENERAL REQUIREMENTS**

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

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

### **Contact Lea County Petroleum Engineering Inspection Staff:**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981.

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the doghouse or stairway area.

3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

## A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

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

## B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - i. 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 cement), 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).

- ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (Only applies to single stage cement jobs, prior to the cement setting up.)
- iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- iv. 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.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. 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.
- vii. 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.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

### **C. DRILLING MUD**

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

### **D. WASTE MATERIAL AND FLUIDS**

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

**SA 12/19/2025**



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

# Operator Certification Data Report

12/19/2025

## Operator

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:** MELONY LEAL**Signed on:** 09/02/2025**Title:** Analyst**Street Address:** 4801 BUSINESS PARK BLVD**City:** HOBBS**State:** NM**Zip:** 88240**Phone:** (575)393-5905**Email address:** MLEAL@MEWBOURNE.COM

## Field

**Representative Name:****Street Address:****City:****State:****Zip:****Phone:****Email address:**



APD ID: 10400106440

Submission Date: 09/02/2025

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400106440

Tie to previous NOS? N

Submission Date: 09/02/2025

BLM Office: Carlsbad

User: MELONY LEAL

Title: Analyst

Federal/Indian APD: FED

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

Lease number: NMNM94095

Lease Acres:

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

## Operator Info

Operator Organization Name: MEWBOURNE OIL COMPANY

Operator Address: P O BOX 5270

Zip: 88241

Operator PO Box:

Operator City: HOBBS State: NM

Operator Phone: (575)393-5905

Operator Internet Address:

## Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

Field/Pool or Exploratory? Field and Pool

Field Name: BILBREY BASIN Pool Name: BONE SPRING

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

Is the proposed well in an area containing other mineral resources? USEABLE WATER,POTASH

Is the proposed well in a Helium production area? N Use Existing Well Pad? N New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: Cousin Number: 9  
Eddy Fed Unit 33 34 35 36 37  
CAPER 316 318 417 455

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 20 Miles

Distance to nearest well: 18 FT

Distance to lease line: 330 FT

Reservoir well spacing assigned acres Measurement: 440 Acres

Well plat: COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_C102\_20251031140833.pdf

Well work start Date: 10/07/2025

Duration: 60 DAYS

### Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: None

Reference Datum: KELLY BUSHING

Wellbore	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	TD	Will this well produce from this
SHL Leg #1	360	FSL	227 1	FEL	21S	32E	17	Aliquot SWSE	32.47242 76	-103.6956 357	LEA	NEW MEXI CO	NEW MEXI CO	F	NMM 94095	364 1			Y
KOP Leg #1	473	FNL	330	FEL	21S	32E	20	Aliquot NENE	32.47016 09	-103.6893 444	LEA	NEW MEXI CO	NEW MEXI CO	F	NMM 31375	-473 3	877 5	837 4	Y

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVd	Will this well produce from this
PPP Leg #1-1	100	FSL	330	FEL	21S	32E	17	Aliquot SESE	32.47173 56 436	-103.5893	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 94095	-530 6	967 5	894 7	Y
PPP Leg #1-2	0	FNL	329	FEL	21S	32E	17	Aliquot SESE	32.48599 4	-103.6893 33	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 121957	-530 6	148 62	894 7	Y
PPP Leg #1-3	0	FNL	328	FEL	21S	32E	8	Aliquot SESE	32.50049 97 223	-103.6893	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 14791	-510 6	201 40	874 7	Y
EXIT Leg #1	385 9	FSL	330	FEL	21S	32E	5	Lot 16	32.51110 52 144	-103.6893	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 14791	-530 6	239 98	894 7	Y
BHL Leg #1	385 9	FSL	330	FEL	21S	32E	5	Lot 16	32.51110 52 144	-103.6893	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 14791	-530 6	239 98	894 7	Y

C-102	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION		Revised July 9, 2024
Submit Electronically Via OCD Permitting			Submittal Type:
	<input checked="" type="checkbox"/> Initial Submittal		
	<input type="checkbox"/> Amended Report		
	<input type="checkbox"/> As Drilled		

## WELL LOCATION INFORMATION

API Number <b>30-025-55665</b>	Pool Code <b>5695- 97961</b>	Pool Name <b>WC-025 G-06 S213217K; Bone Spring BILBREY BASIN, BONE SPRING</b>
Property Code <b>338330</b>	Property Name <b>COUSIN EDDY FED UNIT COM</b>	Well Number <b>36H</b>
OGRID No. <b>14744</b>	Operator Name <b>MEWBORNE OIL COMPANY</b>	Ground Level Elevation <b>3641'</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

## Surface Location

UL <b>0</b>	Section <b>17</b>	Township <b>21S</b>	Range <b>32E</b>	Lot	Ft. from N/S <b>360 FSL</b>	Ft. from E/W <b>2271 FEL</b>	Latitude <b>32.4724276°N</b>	Longitude <b>103.6956357°W</b>	County <b>LEA</b>
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## Bottom Hole Location

UL <b>H</b>	Section <b>5</b>	Township <b>21S</b>	Range <b>32E</b>	Lot <b>16</b>	Ft. from N/S <b>3859 FSL</b>	Ft. from E/W <b>330 FEL</b>	Latitude <b>32.5111052°N</b>	Longitude <b>103.6893144°W</b>	County <b>LEA</b>
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Dedicated Acres <b>440</b>	Infill or Defining Well <b>DEFINING</b>	Defining Well API	Overlapping Spacing Unit (Y/N) <b>N</b>	Consolidation Code <b>C</b>
Order Numbers. N/A			Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

## Kick Off Point (KOP)

UL <b>A</b>	Section <b>20</b>	Township <b>21S</b>	Range <b>32E</b>	Lot	Ft. from N/S <b>473 FNL</b>	Ft. from E/W <b>330 FEL</b>	Latitude <b>32.4701609°N</b>	Longitude <b>103.6893444°W</b>	County <b>LEA</b>
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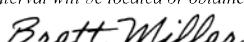
## First Take Point (FTP)

UL <b>P</b>	Section <b>17</b>	Township <b>21S</b>	Range <b>32E</b>	Lot	Ft. from N/S <b>100 FSL</b>	Ft. from E/W <b>330 FEL</b>	Latitude <b>32.4717356°N</b>	Longitude <b>103.6893436°W</b>	County <b>LEA</b>
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## Last Take Point (LTP)

UL <b>H</b>	Section <b>5</b>	Township <b>21S</b>	Range <b>32E</b>	Lot <b>16</b>	Ft. from N/S <b>3859 FSL</b>	Ft. from E/W <b>330 FEL</b>	Latitude <b>32.5111052°N</b>	Longitude <b>103.6893144°W</b>	County <b>LEA</b>
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Unitized Area or Area of Uniform Interest <b>N/A</b>	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation: <b>3641'</b>
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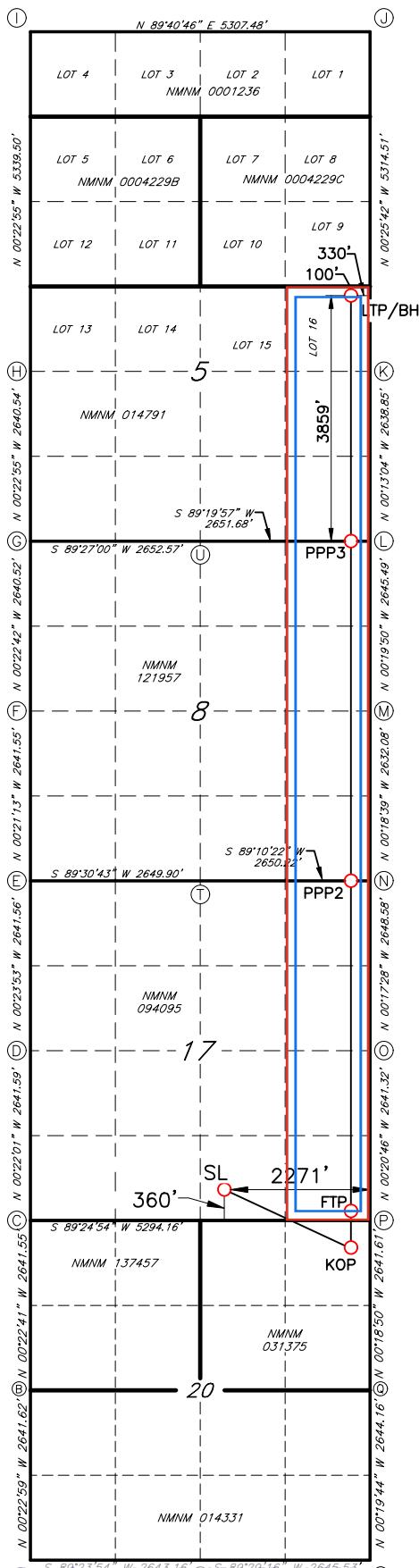
OPERATOR CERTIFICATIONS					SURVEYOR CERTIFICATIONS				
<p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</p>					<p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me under my supervision and that the same is true and correct to the best of my belief.</p>				
 <b>10/31/2025</b>									
Signature <b>BRETT MILLER</b>					Signature and Seal of Professional Surveyor <b>Robert M. Howett</b>				
Printed Name <b>BRETT.MILLER@MEWBORNE.COM</b>					Certificate Number <b>19680</b>		Date of Survey <b>09/16/2025</b>		
Email Address <b></b>									

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

## ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is a directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



## COUSIN EDDY FED UNIT COM #36H

GEODETIC DATA  
NAD 83 GRID - NM EASTSURFACE LOCATION (SL)  
360' FSL & 2271' FEL (SEC.17)

N: 536187.6 - E: 737997.6

LAT: 32.4724276° N  
LONG: 103.6956357° WKICK OFF POINT (KOP)  
473' FNL & 330' FEL (SEC.20)

N: 535374.7 - E: 739942.8

LAT: 32.4701609° N  
LONG: 103.6893444° WFIRST TAKE POINT (FTP)  
100' FSL & 330' FEL (SEC.17)

N: 535947.5 - E: 739942.6

LAT: 32.4717356° N  
LONG: 103.6893436° W

## PROPOSED PENETRATION POINT 2 (PPP2)

0' FNL &amp; 329' FEL (SEC.17)

N: 541134.8 - E: 739911.5

LAT: 32.4859940° N  
LONG: 103.6893330° W

## PROPOSED PENETRATION POINT 3 (PPP3)

0' FNL &amp; 328' FEL (SEC.8)

N: 546412.1 - E: 739883.0

LAT: 32.5004997° N  
LONG: 103.6893223° W

## LAST TAKE POINT/BOTTOM HOLE (LTP/BH)

3859' FSL &amp; 330' FEL (SEC.5)

N: 550270.5 - E: 739862.1

LAT: 32.5111052° N  
LONG: 103.6893144° WCORNER DATA  
NAD 83 GRID - NM EASTA: FOUND BRASS CAP "1916"  
N: 530515.0 - E: 735012.4K: FOUND BRASS CAP "1916"  
N: 549054.2 - E: 740201.1B: FOUND BRASS CAP "1916"  
N: 533156.0 - E: 734994.8L: FOUND BRASS CAP "1916"  
N: 546415.9 - E: 740211.2C: FOUND BRASS CAP "1916"  
N: 535796.9 - E: 734977.4M: FOUND BRASS CAP "1916"  
N: 543771.0 - E: 740226.4D: FOUND BRASS CAP "1916"  
N: 538437.8 - E: 734960.4N: FOUND BRASS CAP "1916"  
N: 541139.6 - E: 740240.7E: CALCULATED CORNER  
N: 541078.8 - E: 734942.1O: FOUND BRASS CAP "1916"  
N: 538491.6 - E: 740254.1F: FOUND BRASS CAP "1916"  
N: 543719.7 - E: 734925.8P: FOUND BRASS CAP "1916"  
N: 535850.9 - E: 740270.1G: FOUND BRASS CAP "1916"  
N: 546359.6 - E: 734908.4Q: FOUND BRASS CAP "1916"  
N: 533209.9 - E: 740284.5H: FOUND BRASS CAP "1916"  
N: 548999.5 - E: 734890.8R: FOUND BRASS CAP "1916"  
N: 530566.4 - E: 740299.7I: FOUND BRASS CAP "1916"  
N: 554337.7 - E: 734855.2S: FOUND BRASS CAP "1916"  
N: 530542.7 - E: 737654.9J: FOUND BRASS CAP "1916"  
N: 554367.4 - E: 740161.4T: FOUND BRASS CAP "1916"  
N: 541101.3 - E: 737591.3U: FOUND BRASS CAP "1916"  
N: 546385.0 - E: 737560.2



APD ID: 10400106440

Submission Date: 09/02/2025

Highlighted data  
reflects the most  
recent changes

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formation
17043533	UNKNOWN	3585	27	27	OTHER : Topsoil	NONE	N
17043547	RUSTLER	2599	986	986	ANHYDRITE, DOLOMITE	USEABLE WATER	N
17043534	TOP SALT	2465	1120	1120	SALT	NONE	N
17043536	BASE OF SALT	-575	4160	4160	SALT	NONE	N
17043537	LAMAR	-945	4530	4530	LIMESTONE	NATURAL GAS, OIL	N
17043538	BELL CANYON	-990	4575	4575	SANDSTONE	NATURAL GAS, OIL	N
17043540	CHERRY CANYON	-1815	5400	5400	SANDSTONE	NATURAL GAS, OIL	N
17043548	BRUSHY CANYON	-3115	6700	6700	SANDSTONE	NATURAL GAS, OIL	N
17043542	BONE SPRING	-4855	8440	8440	LIMESTONE	NATURAL GAS, OIL	N
17043543	BONE SPRING 1ST	-5905	9490	9490	SANDSTONE	NATURAL GAS, OIL	Y
17043544	BONE SPRING 2ND	-6555	10140	10140	SANDSTONE	NATURAL GAS, OIL	Y
17043545	BONE SPRING 3RD	-7525	11110	11110	SANDSTONE	NATURAL GAS, OIL	Y
17043549	WOLFCAMP	-7930	11515	11515	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N

## Section 2 - Blowout Prevention

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

Pressure Rating (PSI): 5M

Rating Depth: 23998

**Equipment:** Annular, Pipe Rams, Blind Rams, 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.

Requesting Variance? YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for hydrostatic test chart. Anchors are not required by manufacturer. Variance is requested to use a multi bowl wellhead. Variance is requested to perform break testing according to attached procedure. If a breaktesting variance is approved & incorporated, API Standard 53 will be incorporated and testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater, will be performed.

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 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.

#### Choke Diagram Attachment:

5M\_BOPE\_Choke\_Diagram\_20250807102937.pdf

Flex\_Line\_Specs\_API\_16C\_20250807102942.pdf

Flex\_Line\_Specs\_API\_16C\_20250827092032.pdf

5M\_BOPE\_Choke\_Diagram\_20250827092032.pdf

#### BOP Diagram Attachment:

5M\_BOPE\_Schematic\_20250807102951.pdf

5M\_BOPE\_Schematic\_20250827092110.pdf

Vault\_5K\_with\_7.625\_csg\_WH\_20250924145601.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	1061	0	1061	3641	2580	1061	H-40	48	ST&C	1.62	3.62	DRY	6.32	DRY	10.62
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3385	0	3385	3585	256	3385	J-55	36	LT&C	1.13	1.96	DRY	2.75	DRY	3.43
3	INTERMEDIATE	12.25	9.625	NEW	API	N	3385	4307	3385	4307	252	-666	922	J-55	40	LT&C	1.13	1.73	DRY	12.21	DRY	14.79
4	INTERMEDIATE	12.25	9.625	NEW	API	N	4307	4450	4307	4450	-670	-809	143	L-80	40	LT&C	1.31	2.44	DRY	99.99	DRY	99.99
5	PRODUCTION	8.75	7.625	NEW	API	N	0	8775	0	8374	-8529	-4733	8775	HCP-110	29.7	OTHER - GBCD	1.69	2.24	DRY	2.95	DRY	3.61

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

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
6	LINER	6.75	5.5	NEW	API	N	8575	23998	8215	8947	-4574	-5306	15423	HCP -110	20	OTHER - talon	2.07	2.36	DRY	1.78	DRY	2.08

**Casing Attachments**

Casing ID: 1      String      SURFACE

**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

13.375in\_48\_\_H40\_STC\_Csg\_20250827092437.pdf

Casing ID: 2      String      INTERMEDIATE

**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

9.625in\_36\_J55\_LTC\_Csg\_20250827092419.pdf

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

### Casing Attachments

---

**Casing ID:** 3      **String**      INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

9.625in\_40\_\_J55\_LTC\_Csg\_20250827092402.pdf

---

**Casing ID:** 4      **String**      INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

9.625in\_40\_\_J55\_LTC\_Csg\_20250402102400.pdf

9.625in\_40\_\_L80\_LTC\_Csg\_20250827092300.pdf

---

**Casing ID:** 5      **String**      PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

7.625in\_29.7\_\_HCP110\_GBCD\_Slim\_Csg\_20250827092627.pdf

---

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

**Casing Attachments**

Casing ID: 6 String LINER

**Inspection Document:****Spec Document:****Tapered String Spec:****Casing Design Assumptions and Worksheet(s):**

5.5in\_20\_\_HPP110\_Talon\_Csg\_20250807103121.pdf

5.5in\_20\_\_HPP110\_Talon\_Csg\_20250827092551.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
INTERMEDIATE	Lead		0	0	0	0	0	0	0		0

SURFACE	Lead		0	869	570	2.12	12.5	1210	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		869	1061	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	3764	690	2.12	12.5	1470	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		3764	4450	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead		5450	6078	50	2.12	12.5	110	0	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		6078	8775	400	1.18	15.6	472	0	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		8575	2399 8	870	1.85	13.5	1610	25	CLASS H	SALT GEL FLUID LOSS RETARDER DISPERSANT DEFOAMER ANIT-SETTLING AGENT

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

## 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 43 CFR 3172:**

**Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:**

**Describe what will be on location to control well or mitigate other conditions:** Formation integrity test will be performed per 43 CFR Part 3172. 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 43 CFR Part 3172.

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

## Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	pH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1061	SPUD MUD	8.4	8.6							
1061	4450	SALT SATURATED	10	10.2							
8775	2399 8	OIL-BASED MUD	10	11.5							
4450	8775	OIL-BASED MUD	8.6	9.7							

**Operator Name:** MEWBOURNE OIL COMPANY**Well Name:** COUSIN EDDY FED UNIT COM**Well Number:** 36H

## Section 6 - Test, Logging, Coring

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

No logs are planned based on well control or offset log information. Offset Well: Cousin Eddy Fed Unit Com #37H

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

DIRECTIONAL SURVEY,MEASUREMENT WHILE DRILLING,MUD LOG/GEOLOGIC LITHOLOGY LOG,

**Coring operation description for the well:**

None

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 5350**Anticipated Surface Pressure:** 3381**Anticipated Bottom Hole Temperature(F):** 140**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO**Describe:****Contingency Plans geohazards description:****Contingency Plans geohazards****Hydrogen Sulfide drilling operations plan required?** YES**Hydrogen sulfide drilling operations**[H2S\\_Plan\\_20250402090051.pdf](#)[H2S\\_Plan\\_20250827092853.pdf](#)

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**[COUSIN\\_EDDY\\_FED\\_UNIT\\_36H\\_Dir\\_Plot\\_20251031141655.pdf](#)[COUSIN\\_EDDY\\_FED\\_UNIT\\_36H\\_Dir\\_Plan\\_20251031141656.pdf](#)**Other proposed operations facets description:**

Variance is requested to perform offline cementing according to the attached procedure. R-111Q Varaince:

Variance is requested to perform Open Hole

Cementing Variance per R-111Q Guidelines if well is in Potash.

**Other proposed operations facets attachment:**[Cousin\\_Eddy\\_Fed\\_Unit\\_Com\\_36H\\_CsgAssumptions\\_20251031141717.pdf](#)[Cousin\\_Eddy\\_Fed\\_Unit\\_Com\\_36H\\_R\\_111Q\\_Csg\\_Cmt\\_Assumptions\\_20251031141717.pdf](#)[Cousin\\_Eddy\\_Fed\\_Unit\\_Com\\_36H\\_Drlg\\_Program\\_20251031141717.pdf](#)[COUSIN\\_EDDY\\_FED\\_UNIT\\_COM\\_36H\\_NGMP\\_20251031153547.pdf](#)**Other Variance request(s)?:** Y

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

**Other Variance attachment:**

MOC\_Break\_Testing\_Variance\_20250509090719.pdf

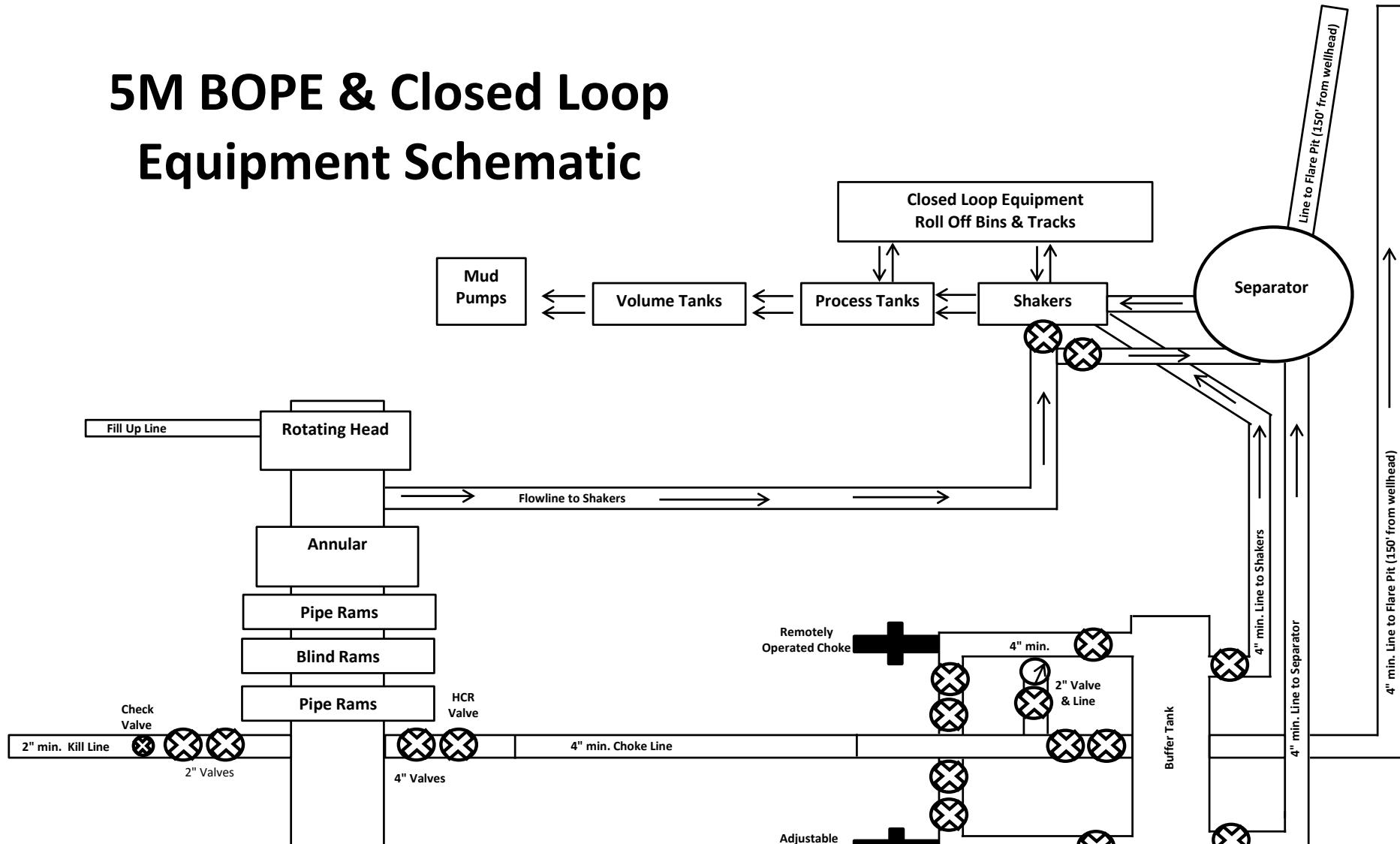
MOC\_Offline\_Cementing\_Variance\_20250509090719.pdf

MOC\_Break\_Testing\_Variance\_20250827093013.pdf

MOC\_Offline\_Cementing\_Variance\_20250827093013.pdf

CONFIDENTIAL

# 5M BOPE & Closed Loop Equipment Schematic



Drawing not to scale

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

## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## HYDROSTATIC TESTING REPORT

LTYY/QR-5.7.1-28

No: 230826015

Product Name	Choke And Kill Hose	Standard	API Spec 16C 3 <sup>rd</sup> edition
Product Specification	3"×10000psi×60ft (18.29m)	Serial Number	7660144
Inspection Equipment	MTU-BS-1600-3200-E	Test medium	Water
Inspection Department	Q.C. Department	Inspection Date	2023.08.26

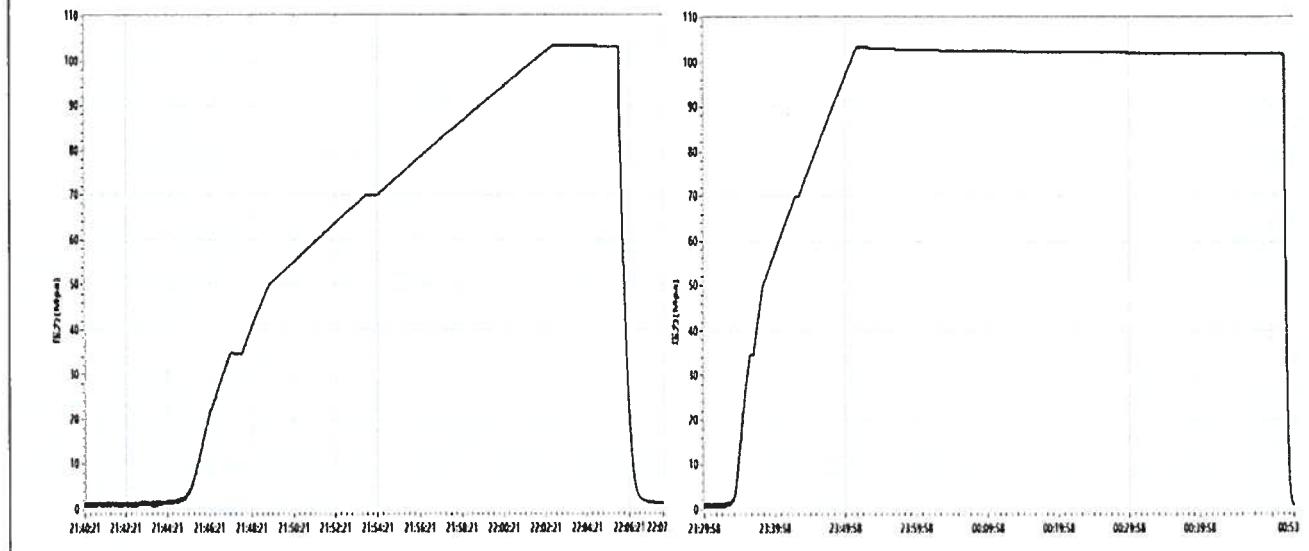
## Rate of length change

Standard requirements	At working pressure ,the rate of length change should not more than $\pm 2\%$
Testing result	10000psi (69.0MPa) ,Rate of length change 0.7%

## Hydrostatic testing

Standard requirements	At 1.5 times working pressure, the initial pressure-holding period of not less than three minutes, the second pressure-holding period of not less than one hour, no leaks.
Testing result	15000psi (103.5MPa), 3 min for the first time, 60 min for the second time, no leakage

## Graph of pressure testing:



Conclusion	The inspected items meet standard requirements of API Spec 16C 3 <sup>rd</sup> edition				
Approver	Jiaolong Chen	Auditor	Huijing Dong	Inspector	Zhansheng Wang

## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## CERTIFICATE OF QUALITY

LTYY/QR-5.7.1-19B

No: LT2023-126-002

Customer Name	Austin Hose		
Product Name	Choke And Kill Hose		
Product Specification	3"×10000psi×60ft (18.29m)	Quantity	2PCS
Serial Number	7660143~7660144	FSL	FSL3
Temperature Range	-29°C ~ +121°C	Standard	API Spec 16C 3 <sup>rd</sup> edition
Inspection Department	Q.C. Department	Inspection date	2023.08.26

Inspection Items	Inspection results
Appearance Checking	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Size and Lengths	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Dimensions and Tolerances	In accordance with API Spec 16C 3 <sup>rd</sup> edition
End Connections: 4-1/16"×10000psi Integral flange for sour gas service	In accordance with API Spec 6A 21 <sup>st</sup> edition
End Connections: 4-1/16"×10000psi Integral flange for sour gas service	In accordance with API Spec 17D 3 <sup>rd</sup> edition
Hydrostatic Testing	In accordance with API Spec 16C 3 <sup>rd</sup> edition
product Marking	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Inspection conclusion	The inspected items meet standard requirements of API Spec 16C 3 <sup>rd</sup> edition
Remarks	
Approver	Jiaolong Chen
Auditor	Huijing Dong
Inspector	Zhanheng Wang



## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

### CERTIFICATE OF CONFORMANCE

No:LT230826016

Product Name: Choke And Kill Hose

Product Specification: 3"×10000psi×60ft (18.29m)

Serial Number: 7660143~7660144

End Connections: 4-1/16"×10000psi Integral flange for sour gas service

The Choke And Kill Hose assembly was produced by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD . in Aug 2023, and inspected by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD. according to API Spec 16C 3<sup>rd</sup> edition on Aug 26, 2023. The overall condition is good. This is to certify that the Choke And Kill Hose complies with all current standards and specifications for API Spec 16C 3<sup>rd</sup> edition .

Jiaolong Chen  
QC Manager:

Date:Aug 26, 2023

## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## HYDROSTATIC TESTING REPORT

LTYY/QR-5.7.1-28

No: 230826015

Product Name	Choke And Kill Hose	Standard	API Spec 16C 3 <sup>rd</sup> edition
Product Specification	3"×10000psi×60ft (18.29m)	Serial Number	7660144
Inspection Equipment	MTU-BS-1600-3200-E	Test medium	Water
Inspection Department	Q.C. Department	Inspection Date	2023.08.26

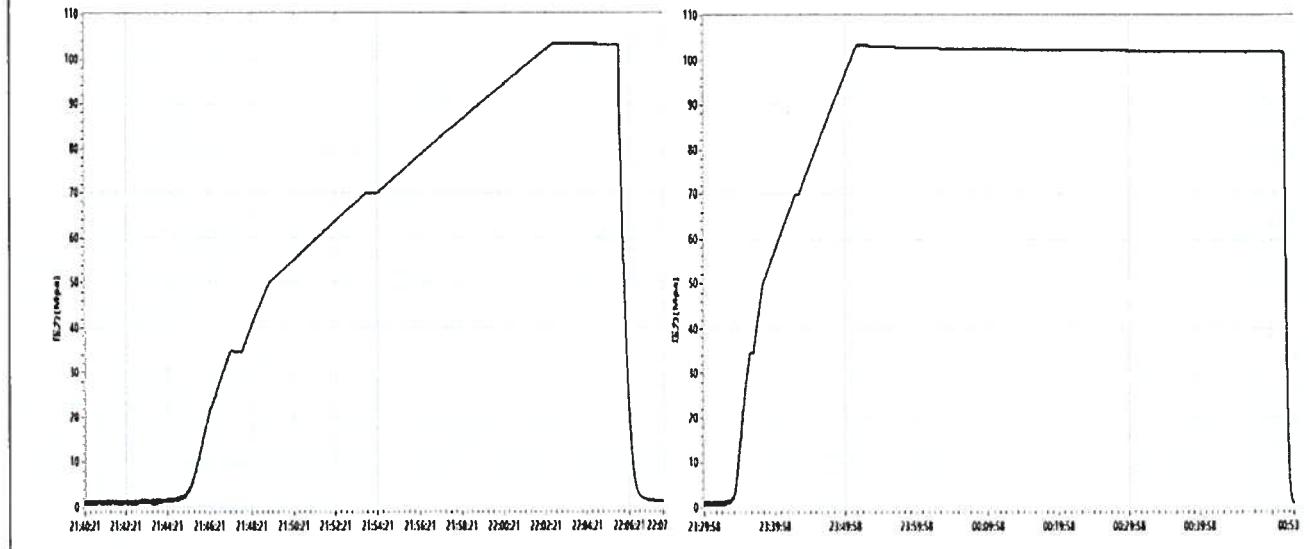
## Rate of length change

Standard requirements	At working pressure ,the rate of length change should not more than $\pm 2\%$
Testing result	10000psi (69.0MPa) ,Rate of length change 0.7%

## Hydrostatic testing

Standard requirements	At 1.5 times working pressure, the initial pressure-holding period of not less than three minutes, the second pressure-holding period of not less than one hour, no leaks.
Testing result	15000psi (103.5MPa), 3 min for the first time, 60 min for the second time, no leakage

## Graph of pressure testing:



Conclusion	The inspected items meet standard requirements of API Spec 16C 3 <sup>rd</sup> edition				
Approver	Jiaolong Chen	Auditor	Huijing Dong	Inspector	Zhansheng Wang

## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

## CERTIFICATE OF QUALITY

LTYY/QR-5.7.1-19B

No: LT2023-126-002

Customer Name	Austin Hose		
Product Name	Choke And Kill Hose		
Product Specification	3"×10000psi×60ft (18.29m)	Quantity	2PCS
Serial Number	7660143~7660144	FSL	FSL3
Temperature Range	-29°C ~ +121°C	Standard	API Spec 16C 3 <sup>rd</sup> edition
Inspection Department	Q.C. Department	Inspection date	2023.08.26

Inspection Items	Inspection results
Appearance Checking	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Size and Lengths	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Dimensions and Tolerances	In accordance with API Spec 16C 3 <sup>rd</sup> edition
End Connections: 4-1/16"×10000psi Integral flange for sour gas service	In accordance with API Spec 6A 21 <sup>st</sup> edition
End Connections: 4-1/16"×10000psi Integral flange for sour gas service	In accordance with API Spec 17D 3 <sup>rd</sup> edition
Hydrostatic Testing	In accordance with API Spec 16C 3 <sup>rd</sup> edition
product Marking	In accordance with API Spec 16C 3 <sup>rd</sup> edition
Inspection conclusion	The inspected items meet standard requirements of API Spec 16C 3 <sup>rd</sup> edition
Remarks	
Approver	Jiaolong Chen
Auditor	Huijing Dong
Inspector	Zhansheng Wang



## LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

### CERTIFICATE OF CONFORMANCE

No:LT230826016

Product Name: Choke And Kill Hose

Product Specification: 3"×10000psi×60ft (18.29m)

Serial Number: 7660143~7660144

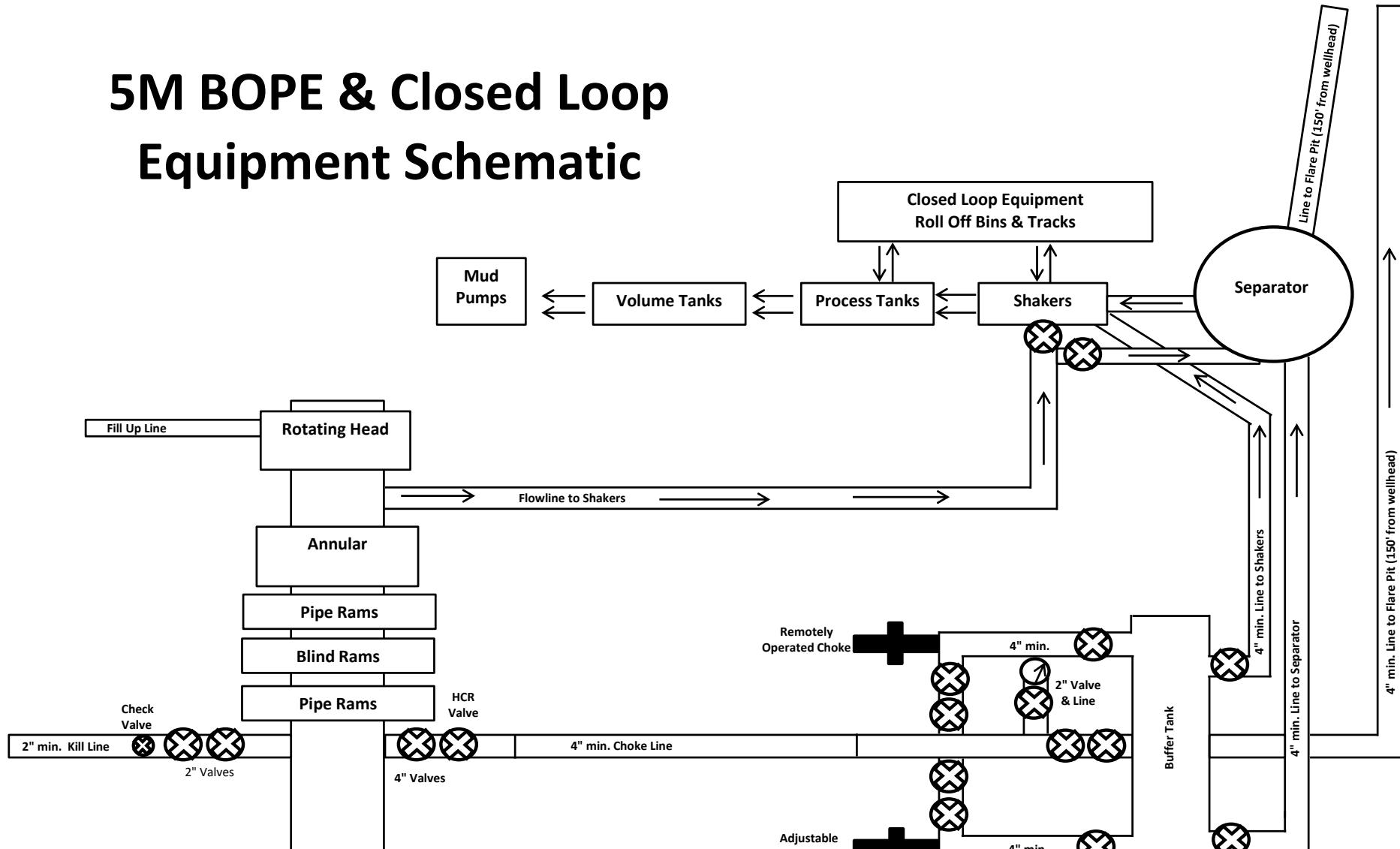
End Connections: 4-1/16"×10000psi Integral flange for sour gas service

The Choke And Kill Hose assembly was produced by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD . in Aug 2023, and inspected by LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD. according to API Spec 16C 3<sup>rd</sup> edition on Aug 26, 2023. The overall condition is good. This is to certify that the Choke And Kill Hose complies with all current standards and specifications for API Spec 16C 3<sup>rd</sup> edition .

Jiaolong Chen  
QC Manager:

Date:Aug 26, 2023

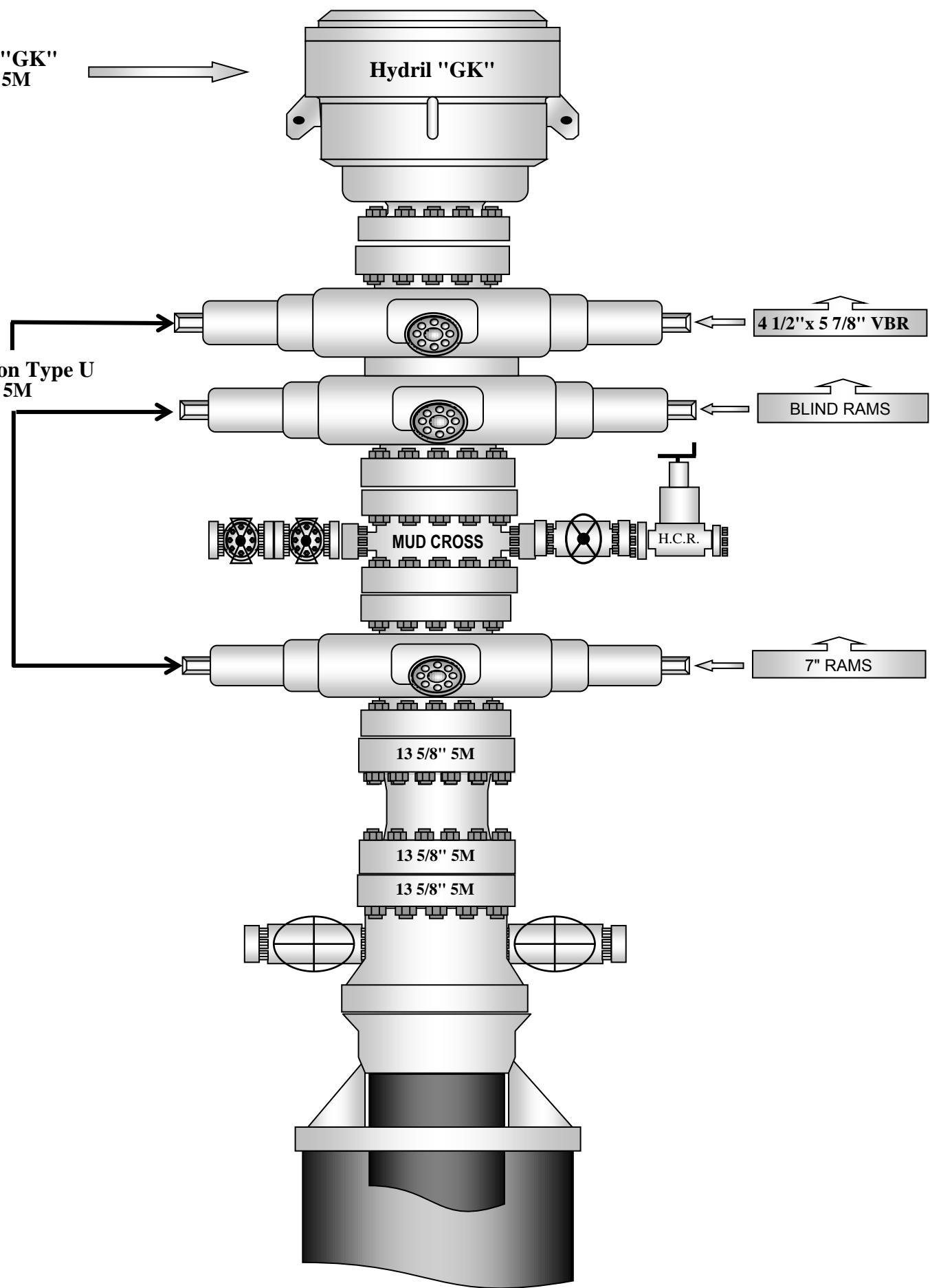
# 5M BOPE & Closed Loop Equipment Schematic



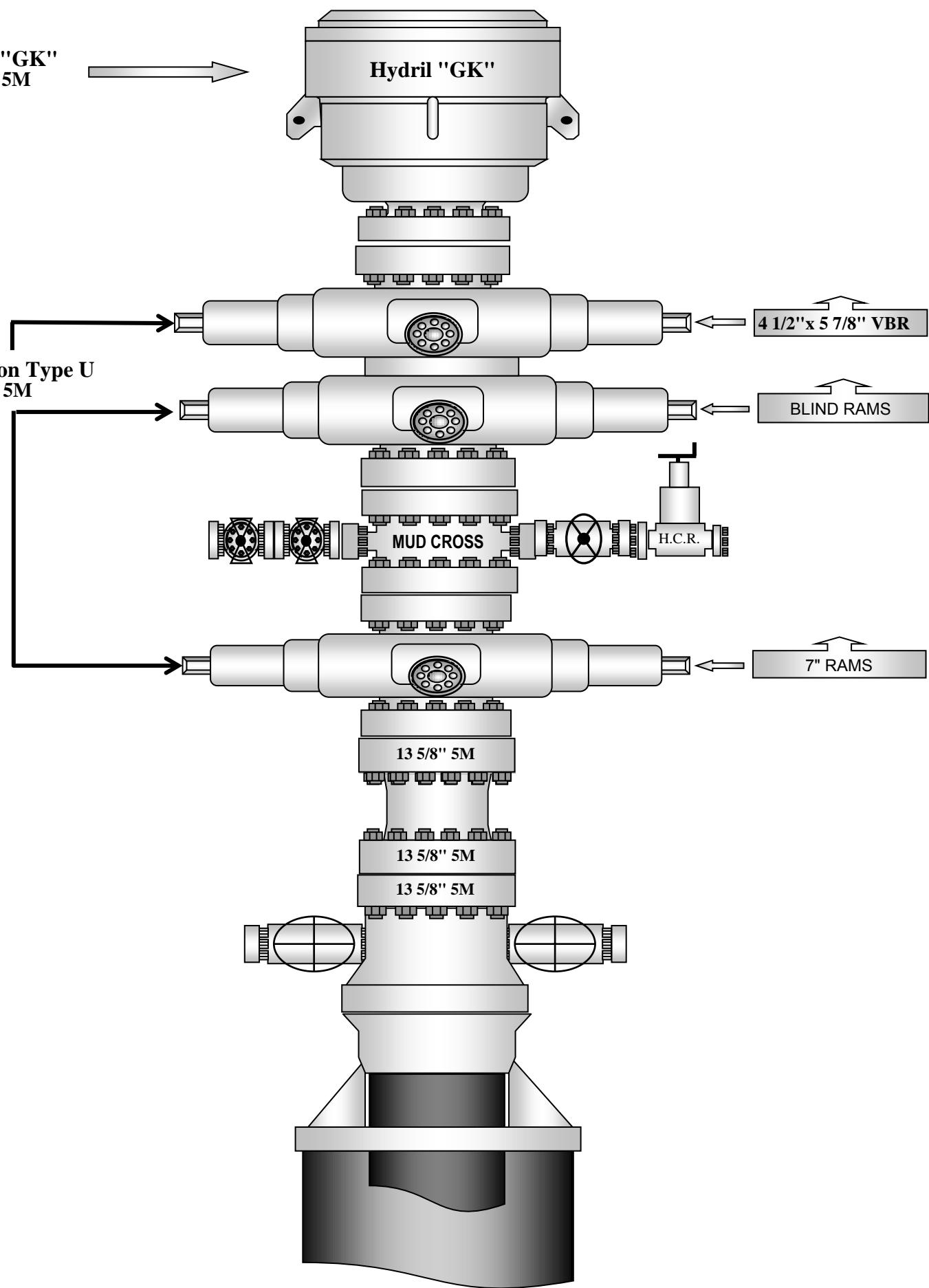
Drawing not to scale

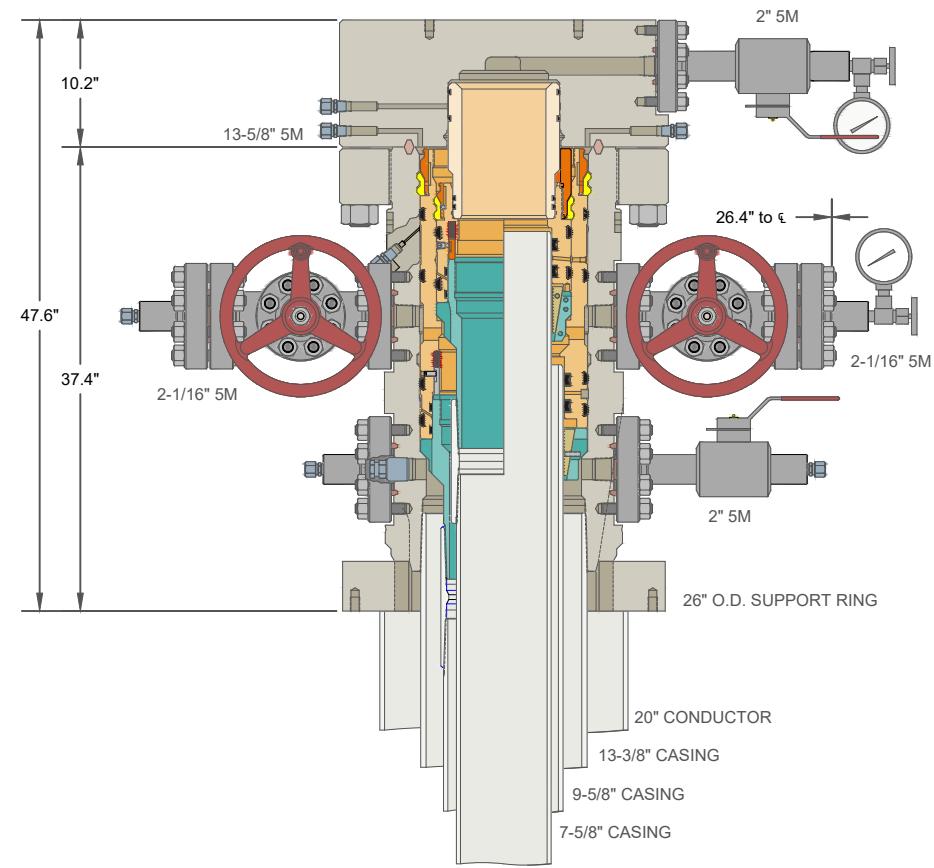
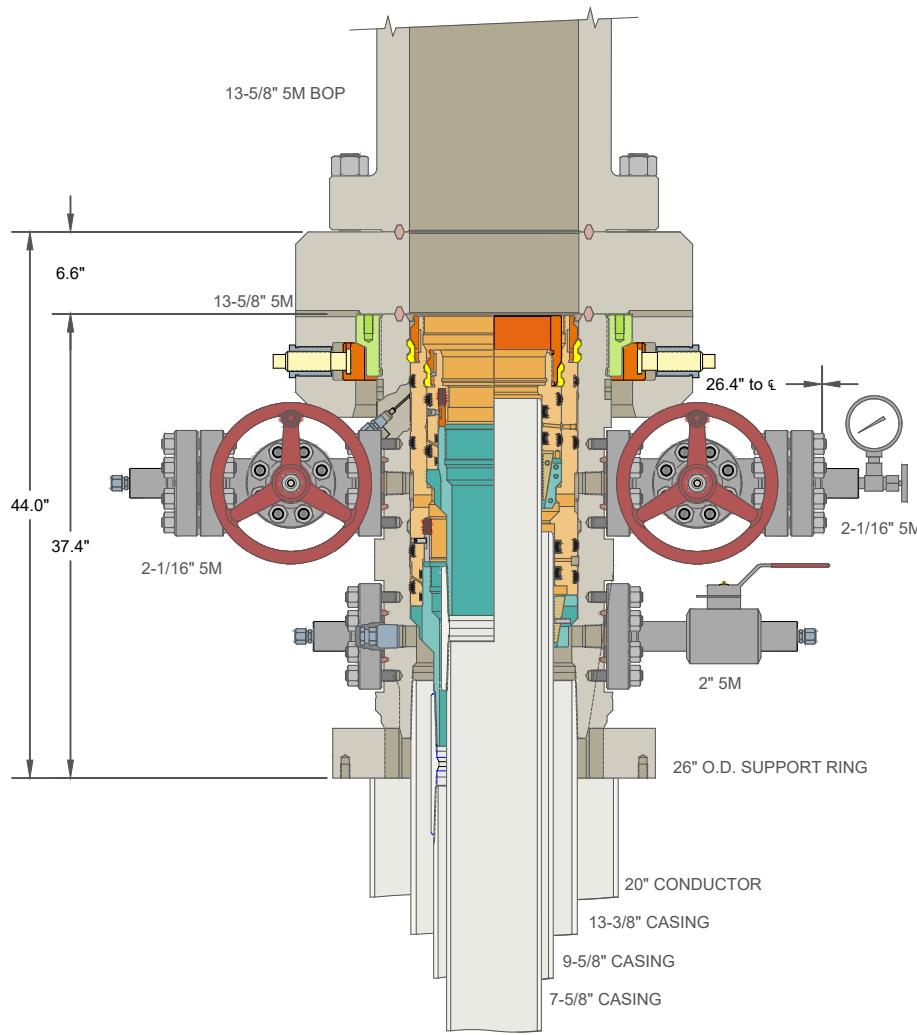
Note: All valves & lines on choke manifold are 4" unless otherwise noted. Exact manifold configuration may vary.

Hydril "GK"  
13 5/8" 5M



Hydril "GK"  
13 5/8" 5M





20" X 13-3/8" X 9-5/8" X 7-5/8" 5/10M RSH-2N WELLHEAD ASSEMBLY,  
WITH TA CAP

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DRAWN BY:	KN	DRAWING NO.	11003848
REVIEWED BY:	Rev. NC	Sht. 1	of 1
APPROVED BY:		DATE:	3/3/2025



# API LTC

Coupling	Pipe Body
Grade: J55 (Casing)	Grade: J55 (Casing)
Body: Bright Green	1st Band: Bright Green
1st Band: White	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -

Outside Diameter	9.625 in.	Wall Thickness	0.395 in.	Grade	J55 (Casing)
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Regular				

## Pipe Body Data

Geometry		Performance	
Nominal OD	9.625 in.	Drift	8.679 in.
Wall Thickness	0.395 in.	Plain End Weight	38.97 lb/ft
Nominal Weight	40 lb/ft	OD Tolerance	API
Nominal ID	8.835 in.		

## Connection Data

Geometry	Performance	Make-Up Torques
Thread per In	Joint Strength	Minimum Torque
8	520 x1000 lb	3900 ft-lb
Connection OD	Coupling Face Load	Optimum Torque
10.625 in.	433 x1000 lb	5200 ft-lb
Hand Tight Stand Off	Internal Pressure Capacity	Maximum Torque
3.500 in.	3950 psi	6500 ft-lb

## Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations.

For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.

Couplings OD are shown according to current API 5CT 10th Edition.

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# API LTC

Coupling	Pipe Body
Grade: L80 Type 1	Grade: L80 Type 1
Body: Red	1st Band: Red
1st Band: Brown	2nd Band: Brown
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -

Outside Diameter	9.625 in.	Wall Thickness	0.395 in.	Grade	L80 Type 1
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Regular				

## Pipe Body Data

Geometry		Performance	
Nominal OD	9.625 in.	Drift	8.679 in.
Wall Thickness	0.395 in.	Plain End Weight	38.97 lb/ft
Nominal Weight	40 lb/ft	OD Tolerance	API
Nominal ID	8.835 in.		

## Connection Data

Geometry	Performance	Make-Up Torques	
Thread per In	8	Joint Strength	727 x1000 lb
Connection OD	10.625 in.	Coupling Face Load	630 x1000 lb
Hand Tight Stand Off	3.500 in.	Internal Pressure Capacity	5750 psi

## Notes

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# API LTC

Coupling	Pipe Body
Grade: J55 (Casing)	Grade: J55 (Casing)
Body: Bright Green	1st Band: Bright Green
1st Band: White	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -

Outside Diameter	9.625 in.	Wall Thickness	0.395 in.	Grade	J55 (Casing)
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Regular				

## Pipe Body Data

Geometry		Performance	
Nominal OD	9.625 in.	Drift	8.679 in.
Wall Thickness	0.395 in.	Plain End Weight	38.97 lb/ft
Nominal Weight	40 lb/ft	OD Tolerance	API
Nominal ID	8.835 in.		

## Connection Data

Geometry	Performance	Make-Up Torques
Thread per In	Joint Strength	Minimum Torque
8	520 x1000 lb	3900 ft-lb
Connection OD	Coupling Face Load	Optimum Torque
10.625 in.	433 x1000 lb	5200 ft-lb
Hand Tight Stand Off	Internal Pressure Capacity	Maximum Torque
3.500 in.	3950 psi	6500 ft-lb

## Notes

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# API LTC

Coupling	Pipe Body
Grade: J55 (Casing)	Grade: J55 (Casing)
Body: Bright Green	1st Band: Bright Green
1st Band: White	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -

Outside Diameter	9.625 in.	Wall Thickness	0.352 in.	Grade	J55 (Casing)
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Regular				

## Pipe Body Data

Geometry		Performance	
Nominal OD	9.625 in.	Drift	8.765 in.
Wall Thickness	0.352 in.	Plain End Weight	34.89 lb/ft
Nominal Weight	36 lb/ft	OD Tolerance	API
Nominal ID	8.921 in.		

## Connection Data

Geometry	Performance	Make-Up Torques
Thread per In	Joint Strength	Minimum Torque
8	453 x1000 lb	3400 ft-lb
Connection OD	Coupling Face Load	Optimum Torque
10.625 in.	433 x1000 lb	4530 ft-lb
Hand Tight Stand Off	Internal Pressure Capacity	Maximum Torque
3.500 in.	3520 psi	5660 ft-lb

## Notes

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# API STC

Coupling	Pipe Body
Grade: H40	Grade: H40
Body: -	1st Band: Black
1st Band: Black	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -

Outside Diameter	13.375 in.	Wall Thickness	0.330 in.	Grade	H40
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Regular				

## Pipe Body Data

Geometry		Performance	
Nominal OD	13.375 in.	Drift	12.559 in.
Wall Thickness	0.330 in.	Plain End Weight	46.02 lb/ft
Nominal Weight	48 lb/ft	OD Tolerance	API
Nominal ID	12.715 in.		

## Connection Data

Geometry	Performance	Make-Up Torques	
Thread per In	8	Joint Strength	322 x1000 lb
Connection OD	14.375 in.	Coupling Face Load	377 x1000 lb
Hand Tight Stand Off	3.500 in.	Internal Pressure Capacity	1730 psi

## Notes

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**Casing Performance Data Sheet**  
**Manufactured to API 5CT**  
**With GB CD Slim Connection**

<b>Grade</b>	<b>P110 HC</b>
<b>OD</b>	<b>7.625"</b>
<b>Nominal Wall Thickness</b>	<b>0.375"</b>
<b>Nominal Weight, T&amp;C</b>	<b>29.700 lb/ft</b>
<b>Nominal Weight, PE</b>	<b>29.060 lb/ft</b>
<b>Nominal ID</b>	<b>6.875"</b>
<b>Standard Drift</b>	<b>6.750"</b>

**Performance Properties**

<b>Collapse Rating</b>	<b>6,700 psi</b>
<b>Internal Pressure Yield</b>	<b>9,460 psi</b>
<b>Pipe body Tension Yield</b>	<b>940,000 lbs</b>

**Connection Performance per GB**

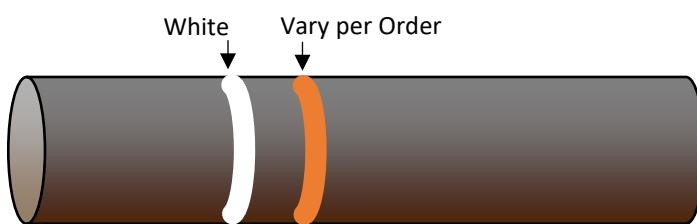
GB CD Slim Hole 7.900 COUPLING GEOMETRY			
Coupling OD (in.)	7.900	Makeup Loss (in.)	4.8125
Coupling Length (in.)	9.625	Critical Cross-Sect. (in. <sup>2</sup> )	6.721

GB CD Slim Hole 7.900 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES					
Material Specification	API P-110	Min. Yield Str. (psi)	Efficiency		Bending
			Gas	Liquid***	
Tension OD Turn (kips)	776	Internal Pressure (%)	83%	100%	Build Rate to Yield (°/100 ft)
Thread Str. (kips)	794	External Pressure (%)	100%		Yield Torque
Min. Tension Yield (kips)	702	Tension (%)	85%		Yield Torque (ft-lbs)
Min. Tension Ult. (kips)	798	Compression (%)	85%		48,860
Joint Str. (kips)	794	Ratio of Areas (Cplg/Pipe)	0.79		
		Ratio of Areas (Cplg/OD Turn)	0.95		

MAKEUP TORQUE					
Min. MU Tq. (ft-lbs)	10,000	Max. MU Tq. (ft-lbs)	20,000	Running Tq. (ft-lbs)	See GBC RP

Max. Operating Tq. (ft-lbs)\* 46,410

**Color Code**





## U. S. Steel Tubular Products

5.500" 20.00lb/ft (0.361" Wall) P110 HP USS-TALON HTQ™ RD

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MECHANICAL PROPERTIES	Pipe	USS-TALON HTQ™ RD	[6]
Minimum Yield Strength	125,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	130,000	--	psi
DIMENSIONS	Pipe	USS-TALON HTQ™ RD	--
Outside Diameter	5.500	5.900	in.
Wall Thickness	0.361	--	in.
Inside Diameter	4.778	4.778	in.
Standard Drift	4.653	4.653	in.
Alternate Drift	--	--	in.
Nominal Linear Weight, T&C	20.00	--	lb/ft
Plain End Weight	19.83	--	lb/ft
SECTION AREA	Pipe	USS-TALON HTQ™ RD	--
Critical Area	5.828	5.828	sq. in.
Joint Efficiency	--	100.0	%
PERFORMANCE	Pipe	USS-TALON HTQ™ RD	--
Minimum Collapse Pressure	13,150	13,150	psi
Minimum Internal Yield Pressure	14,360	14,360	psi
Minimum Pipe Body Yield Strength	729,000	--	lb
Joint Strength	--	729,000	lb
Compression Rating	--	729,000	lb
Reference Length	--	24,300	ft
Maximum Uniaxial Bend Rating	--	104.2	deg/100 ft
MAKE-UP DATA	Pipe	USS-TALON HTQ™ RD	--
Make-Up Loss	--	5.58	in.
Minimum Make-Up Torque	--	18,400	ft-lb
Maximum Make-Up Torque	--	21,400	ft-lb
Maximum Operating Torque	--	44,400	ft-lb

## Notes

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
2. Joint efficiencies are calculated by dividing the connection critical area by the pipe body area.
3. Uniaxial bend rating shown is structural only.
4. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
5. Reference length is calculated by Joint Strength divided by Nominal Linear Weight, T&C with a 1.5 Safety factor.
6. Coupling must meet minimum mechanical properties of the pipe.

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UNCONTROLLED



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**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>

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

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**1. Well Control Equipment**

- A. Choke manifold with minimum of one adjustable choke/remote choke.
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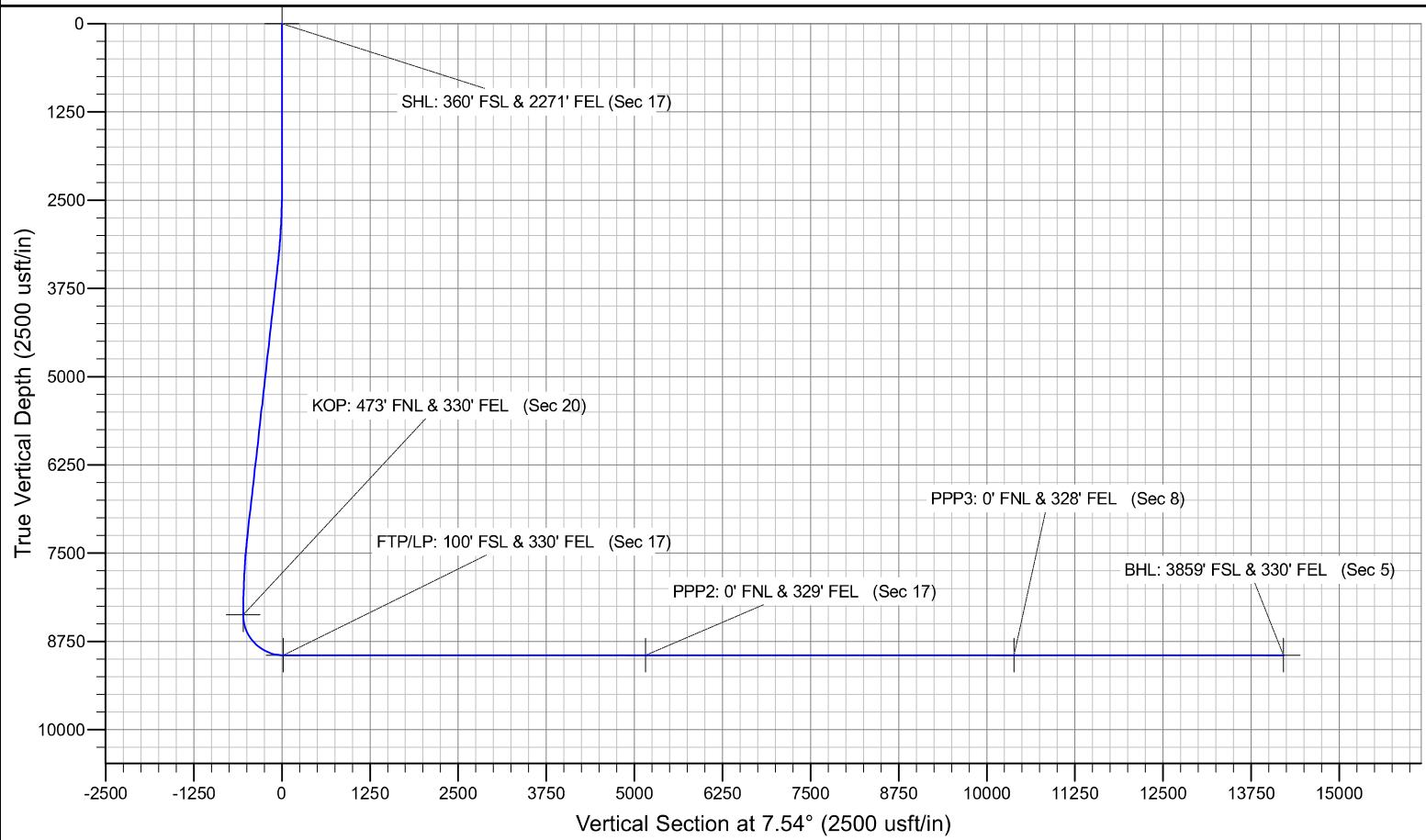
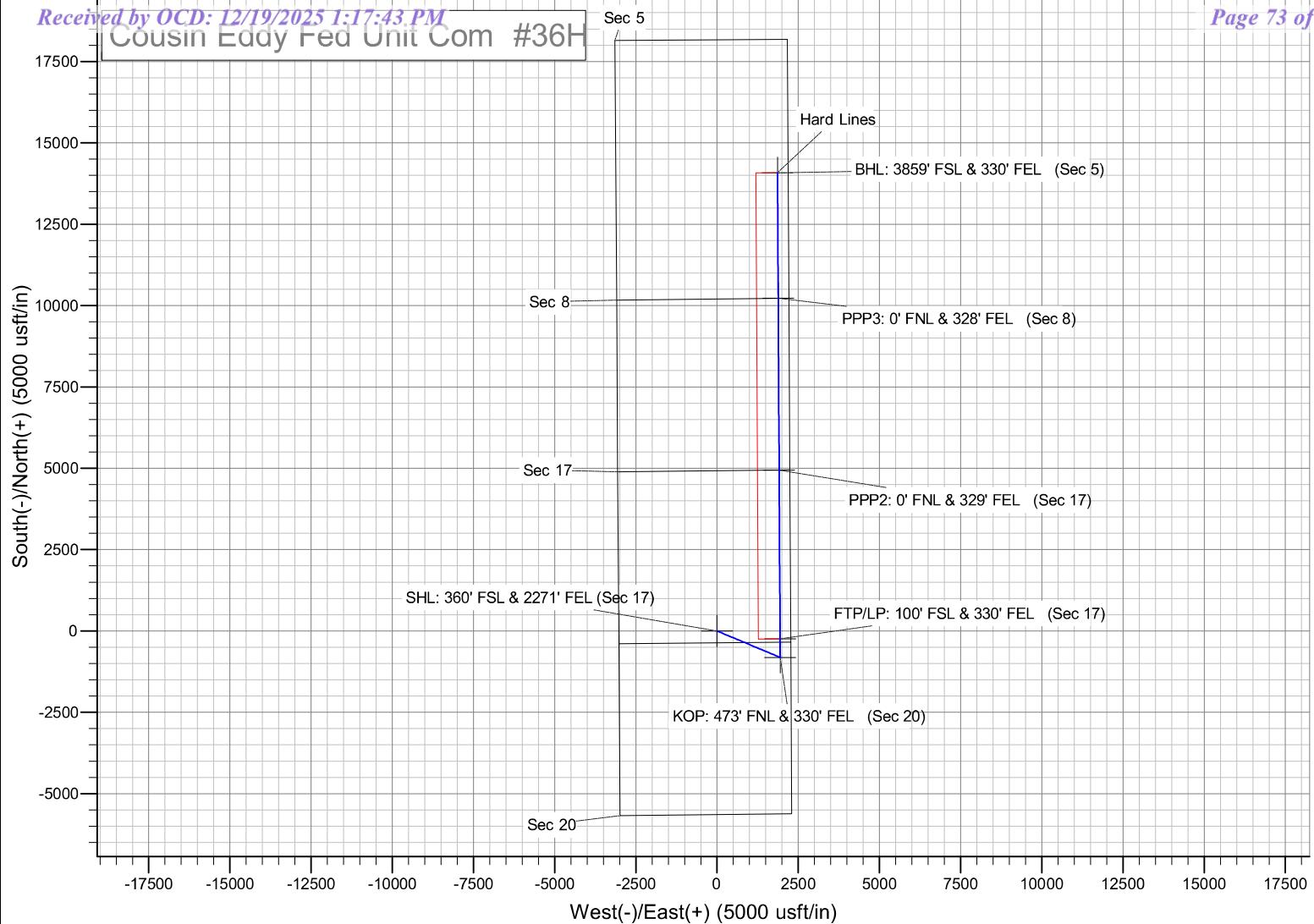
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	<b>Bradley Bishop</b>	<b>575-390-6838</b>
<b>Drilling Foreman</b>	<b>Wesley Noseff</b>	<b>575-441-0729</b>

Cousin Eddy Fed Unit Com #36H



## **Mewbourne Oil Company**

**Lea County, New Mexico NAD 83**  
**Cousin Eddy Fed Unit Com #36H**  
**Sec 17, T21S, R32E**  
**SHL: 360' FSL & 2271' FEL (Sec 17)**  
**BHL: 3859' FSL & 330' FEL (Sec 5)**

**Plan: Design #1**

## **Standard Planning Report**

**31 October, 2025**

## Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Cousin Eddy Fed Unit Com #36H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3669.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3669.0usft (Original Well Elev)
Site:	Cousin Eddy Fed Unit Com #36H	North Reference:	Grid
Well:	Sec 17, T21S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 3859' FSL & 330' FEL (Sec 5)		
Design:	Design #1		

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

Site	Cousin Eddy Fed Unit Com #36H			
Site Position:		Northing:	536,187.60 usft	Latitude: 32.4724276
From:	Map	Easting:	737,997.60 usft	Longitude: -103.6956356
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	

Well	Sec 17, T21S, R32E				
Well Position	+N-S +E-W	0.0 usft 0.0 usft	Northing: Easting:	536,187.60 usft 737,997.60 usft	Latitude: Longitude:
Position Uncertainty		0.0 usft	Wellhead Elevation:	3,669.0 usft	Ground Level: 3,641.0 usft
Grid Convergence:		0.34 °			

Wellbore	BHL: 3859' FSL & 330' FEL (Sec 5)				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/31/2014	7.22	60.31	48,396.43014961

Design	Design #1				
<b>Audit Notes:</b>					
Version:		Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
		0.0	0.0	0.0	7.54

Plan Survey Tool Program	Date	10/31/2025		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	0.0	Design #1 (BHL: 3859' FSL & 330	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	

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Database:	Hobbs	Local Co-ordinate Reference:	Site Cousin Eddy Fed Unit Com #36H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3669.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3669.0usft (Original Well Elev)
Site:	Cousin Eddy Fed Unit Com #36H	North Reference:	Grid
Well:	Sec 17, T21S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 3859' FSL & 330' FEL (Sec 5)		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
<b>SHL: 360' FSL &amp; 2271' FEL (Sec 17)</b>										
50.0	0.00	0.00	50.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	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	0.00
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	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	0.00
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	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	0.00
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	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	0.00
550.0	0.00	0.00	550.0	0.0	0.0	0.0	0.00	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	0.00
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	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	0.00
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	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	0.00
850.0	0.00	0.00	850.0	0.0	0.0	0.0	0.00	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	0.00
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	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	0.00
1,050.0	0.00	0.00	1,050.0	0.0	0.0	0.0	0.00	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	0.00
1,150.0	0.00	0.00	1,150.0	0.0	0.0	0.0	0.00	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	0.00
1,250.0	0.00	0.00	1,250.0	0.0	0.0	0.0	0.00	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	0.00
1,350.0	0.00	0.00	1,350.0	0.0	0.0	0.0	0.00	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	0.00
1,450.0	0.00	0.00	1,450.0	0.0	0.0	0.0	0.00	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	0.00
1,550.0	0.00	0.00	1,550.0	0.0	0.0	0.0	0.00	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	0.00
1,650.0	0.00	0.00	1,650.0	0.0	0.0	0.0	0.00	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	0.00
1,750.0	0.00	0.00	1,750.0	0.0	0.0	0.0	0.00	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	0.00
1,850.0	0.00	0.00	1,850.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
1,950.0	0.00	0.00	1,950.0	0.0	0.0	0.0	0.00	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	0.00
2,050.0	0.00	0.00	2,050.0	0.0	0.0	0.0	0.00	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	0.00
2,150.0	0.00	0.00	2,150.0	0.0	0.0	0.0	0.00	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	0.00
2,250.0	0.00	0.00	2,250.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,290.0	0.00	0.00	2,290.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,300.0	0.20	112.68	2,300.0	0.0	0.0	0.0	2.00	2.00	2.00	0.00
2,350.0	1.20	112.68	2,350.0	-0.2	0.6	-0.2	2.00	2.00	2.00	0.00
2,400.0	2.20	112.68	2,400.0	-0.8	1.9	-0.6	2.00	2.00	2.00	0.00
2,450.0	3.20	112.68	2,449.9	-1.7	4.1	-1.2	2.00	2.00	2.00	0.00
2,500.0	4.20	112.68	2,499.8	-3.0	7.1	-2.0	2.00	2.00	2.00	0.00
2,550.0	5.20	112.68	2,549.6	-4.5	10.9	-3.1	2.00	2.00	2.00	0.00

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)	
2,600.0	6.20	112.68	2,599.4	-6.5	15.5	-4.4	2.00	2.00	0.00	
2,650.0	7.20	112.68	2,649.1	-8.7	20.8	-5.9	2.00	2.00	0.00	
2,700.0	8.20	112.68	2,698.6	-11.3	27.0	-7.6	2.00	2.00	0.00	
2,750.0	9.20	112.68	2,748.0	-14.2	34.0	-9.6	2.00	2.00	0.00	
2,800.0	10.20	112.68	2,797.3	-17.5	41.8	-11.8	2.00	2.00	0.00	
2,850.0	11.20	112.68	2,846.4	-21.0	50.3	-14.2	2.00	2.00	0.00	
2,900.0	12.20	112.68	2,895.4	-24.9	59.7	-16.9	2.00	2.00	0.00	
2,950.0	13.20	112.68	2,944.2	-29.2	69.8	-19.8	2.00	2.00	0.00	
3,000.0	14.20	112.68	2,992.8	-33.8	80.8	-22.9	2.00	2.00	0.00	
3,050.0	15.20	112.68	3,041.1	-38.6	92.5	-26.2	2.00	2.00	0.00	
3,100.0	16.20	112.68	3,089.3	-43.9	105.0	-29.7	2.00	2.00	0.00	
3,150.0	17.20	112.68	3,137.1	-49.4	118.2	-33.5	2.00	2.00	0.00	
3,200.0	18.20	112.68	3,184.8	-55.3	132.2	-37.4	2.00	2.00	0.00	
3,250.0	19.20	112.68	3,232.1	-61.4	147.0	-41.6	2.00	2.00	0.00	
3,300.0	20.20	112.68	3,279.2	-67.9	162.6	-46.0	2.00	2.00	0.00	
3,350.0	21.20	112.68	3,326.0	-74.8	178.9	-50.6	2.00	2.00	0.00	
3,400.0	22.20	112.68	3,372.4	-81.9	195.9	-55.5	2.00	2.00	0.00	
3,450.0	23.20	112.68	3,418.6	-89.3	213.7	-60.5	2.00	2.00	0.00	
3,453.0	23.26	112.68	3,421.3	-89.8	214.8	-60.8	2.00	2.00	0.00	
3,500.0	23.26	112.68	3,464.5	-96.9	232.0	-65.7	0.00	0.00	0.00	
3,550.0	23.26	112.68	3,510.4	-104.6	250.2	-70.8	0.00	0.00	0.00	
3,600.0	23.26	112.68	3,556.4	-112.2	268.4	-76.0	0.00	0.00	0.00	
3,650.0	23.26	112.68	3,602.3	-119.8	286.6	-81.1	0.00	0.00	0.00	
3,700.0	23.26	112.68	3,648.2	-127.4	304.8	-86.3	0.00	0.00	0.00	
3,750.0	23.26	112.68	3,694.2	-135.0	323.1	-91.4	0.00	0.00	0.00	
3,800.0	23.26	112.68	3,740.1	-142.6	341.3	-96.6	0.00	0.00	0.00	
3,850.0	23.26	112.68	3,786.1	-150.2	359.5	-101.7	0.00	0.00	0.00	
3,900.0	23.26	112.68	3,832.0	-157.8	377.7	-106.9	0.00	0.00	0.00	
3,950.0	23.26	112.68	3,877.9	-165.5	395.9	-112.1	0.00	0.00	0.00	
4,000.0	23.26	112.68	3,923.9	-173.1	414.1	-117.2	0.00	0.00	0.00	
4,050.0	23.26	112.68	3,969.8	-180.7	432.4	-122.4	0.00	0.00	0.00	
4,100.0	23.26	112.68	4,015.7	-188.3	450.6	-127.5	0.00	0.00	0.00	
4,150.0	23.26	112.68	4,061.7	-195.9	468.8	-132.7	0.00	0.00	0.00	
4,200.0	23.26	112.68	4,107.6	-203.5	487.0	-137.8	0.00	0.00	0.00	
4,250.0	23.26	112.68	4,153.5	-211.1	505.2	-143.0	0.00	0.00	0.00	
4,300.0	23.26	112.68	4,199.5	-218.8	523.5	-148.2	0.00	0.00	0.00	
4,350.0	23.26	112.68	4,245.4	-226.4	541.7	-153.3	0.00	0.00	0.00	
4,400.0	23.26	112.68	4,291.4	-234.0	559.9	-158.5	0.00	0.00	0.00	
4,450.0	23.26	112.68	4,337.3	-241.6	578.1	-163.6	0.00	0.00	0.00	
4,500.0	23.26	112.68	4,383.2	-249.2	596.3	-168.8	0.00	0.00	0.00	
4,550.0	23.26	112.68	4,429.2	-256.8	614.5	-173.9	0.00	0.00	0.00	
4,600.0	23.26	112.68	4,475.1	-264.4	632.8	-179.1	0.00	0.00	0.00	
4,650.0	23.26	112.68	4,521.0	-272.0	651.0	-184.2	0.00	0.00	0.00	
4,700.0	23.26	112.68	4,567.0	-279.7	669.2	-189.4	0.00	0.00	0.00	
4,750.0	23.26	112.68	4,612.9	-287.3	687.4	-194.6	0.00	0.00	0.00	
4,800.0	23.26	112.68	4,658.8	-294.9	705.6	-199.7	0.00	0.00	0.00	
4,850.0	23.26	112.68	4,704.8	-302.5	723.8	-204.9	0.00	0.00	0.00	
4,900.0	23.26	112.68	4,750.7	-310.1	742.1	-210.0	0.00	0.00	0.00	
4,950.0	23.26	112.68	4,796.6	-317.7	760.3	-215.2	0.00	0.00	0.00	
5,000.0	23.26	112.68	4,842.6	-325.3	778.5	-220.3	0.00	0.00	0.00	
5,050.0	23.26	112.68	4,888.5	-332.9	796.7	-225.5	0.00	0.00	0.00	
5,100.0	23.26	112.68	4,934.5	-340.6	814.9	-230.7	0.00	0.00	0.00	
5,150.0	23.26	112.68	4,980.4	-348.2	833.2	-235.8	0.00	0.00	0.00	
5,200.0	23.26	112.68	5,026.3	-355.8	851.4	-241.0	0.00	0.00	0.00	

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)
5,250.0	23.26	112.68	5,072.3	-363.4	869.6	-246.1	0.00	0.00	0.00
5,300.0	23.26	112.68	5,118.2	-371.0	887.8	-251.3	0.00	0.00	0.00
5,350.0	23.26	112.68	5,164.1	-378.6	906.0	-256.4	0.00	0.00	0.00
5,400.0	23.26	112.68	5,210.1	-386.2	924.2	-261.6	0.00	0.00	0.00
5,450.0	23.26	112.68	5,256.0	-393.9	942.5	-266.8	0.00	0.00	0.00
5,500.0	23.26	112.68	5,301.9	-401.5	960.7	-271.9	0.00	0.00	0.00
5,550.0	23.26	112.68	5,347.9	-409.1	978.9	-277.1	0.00	0.00	0.00
5,600.0	23.26	112.68	5,393.8	-416.7	997.1	-282.2	0.00	0.00	0.00
5,650.0	23.26	112.68	5,439.8	-424.3	1,015.3	-287.4	0.00	0.00	0.00
5,700.0	23.26	112.68	5,485.7	-431.9	1,033.6	-292.5	0.00	0.00	0.00
5,750.0	23.26	112.68	5,531.6	-439.5	1,051.8	-297.7	0.00	0.00	0.00
5,800.0	23.26	112.68	5,577.6	-447.1	1,070.0	-302.8	0.00	0.00	0.00
5,850.0	23.26	112.68	5,623.5	-454.8	1,088.2	-308.0	0.00	0.00	0.00
5,900.0	23.26	112.68	5,669.4	-462.4	1,106.4	-313.2	0.00	0.00	0.00
5,950.0	23.26	112.68	5,715.4	-470.0	1,124.6	-318.3	0.00	0.00	0.00
6,000.0	23.26	112.68	5,761.3	-477.6	1,142.9	-323.5	0.00	0.00	0.00
6,050.0	23.26	112.68	5,807.2	-485.2	1,161.1	-328.6	0.00	0.00	0.00
6,100.0	23.26	112.68	5,853.2	-492.8	1,179.3	-333.8	0.00	0.00	0.00
6,150.0	23.26	112.68	5,899.1	-500.4	1,197.5	-338.9	0.00	0.00	0.00
6,200.0	23.26	112.68	5,945.1	-508.1	1,215.7	-344.1	0.00	0.00	0.00
6,250.0	23.26	112.68	5,991.0	-515.7	1,234.0	-349.3	0.00	0.00	0.00
6,300.0	23.26	112.68	6,036.9	-523.3	1,252.2	-354.4	0.00	0.00	0.00
6,350.0	23.26	112.68	6,082.9	-530.9	1,270.4	-359.6	0.00	0.00	0.00
6,400.0	23.26	112.68	6,128.8	-538.5	1,288.6	-364.7	0.00	0.00	0.00
6,450.0	23.26	112.68	6,174.7	-546.1	1,306.8	-369.9	0.00	0.00	0.00
6,500.0	23.26	112.68	6,220.7	-553.7	1,325.0	-375.0	0.00	0.00	0.00
6,550.0	23.26	112.68	6,266.6	-561.3	1,343.3	-380.2	0.00	0.00	0.00
6,600.0	23.26	112.68	6,312.5	-569.0	1,361.5	-385.3	0.00	0.00	0.00
6,650.0	23.26	112.68	6,358.5	-576.6	1,379.7	-390.5	0.00	0.00	0.00
6,700.0	23.26	112.68	6,404.4	-584.2	1,397.9	-395.7	0.00	0.00	0.00
6,750.0	23.26	112.68	6,450.4	-591.8	1,416.1	-400.8	0.00	0.00	0.00
6,800.0	23.26	112.68	6,496.3	-599.4	1,434.3	-406.0	0.00	0.00	0.00
6,850.0	23.26	112.68	6,542.2	-607.0	1,452.6	-411.1	0.00	0.00	0.00
6,900.0	23.26	112.68	6,588.2	-614.6	1,470.8	-416.3	0.00	0.00	0.00
6,950.0	23.26	112.68	6,634.1	-622.3	1,489.0	-421.4	0.00	0.00	0.00
7,000.0	23.26	112.68	6,680.0	-629.9	1,507.2	-426.6	0.00	0.00	0.00
7,050.0	23.26	112.68	6,726.0	-637.5	1,525.4	-431.8	0.00	0.00	0.00
7,100.0	23.26	112.68	6,771.9	-645.1	1,543.7	-436.9	0.00	0.00	0.00
7,150.0	23.26	112.68	6,817.8	-652.7	1,561.9	-442.1	0.00	0.00	0.00
7,200.0	23.26	112.68	6,863.8	-660.3	1,580.1	-447.2	0.00	0.00	0.00
7,250.0	23.26	112.68	6,909.7	-667.9	1,598.3	-452.4	0.00	0.00	0.00
7,300.0	23.26	112.68	6,955.7	-675.5	1,616.5	-457.5	0.00	0.00	0.00
7,350.0	23.26	112.68	7,001.6	-683.2	1,634.7	-462.7	0.00	0.00	0.00
7,400.0	23.26	112.68	7,047.5	-690.8	1,653.0	-467.8	0.00	0.00	0.00
7,450.0	23.26	112.68	7,093.5	-698.4	1,671.2	-473.0	0.00	0.00	0.00
7,500.0	23.26	112.68	7,139.4	-706.0	1,689.4	-478.2	0.00	0.00	0.00
7,550.0	23.26	112.68	7,185.3	-713.6	1,707.6	-483.3	0.00	0.00	0.00
7,600.0	23.26	112.68	7,231.3	-721.2	1,725.8	-488.5	0.00	0.00	0.00
7,612.4	23.26	112.68	7,242.7	-723.1	1,730.4	-489.8	0.00	0.00	0.00
7,650.0	22.51	112.68	7,277.3	-728.8	1,743.8	-493.6	2.00	-2.00	0.00
7,700.0	21.51	112.68	7,323.7	-736.0	1,761.1	-498.5	2.00	-2.00	0.00
7,750.0	20.51	112.68	7,370.3	-742.9	1,777.7	-503.1	2.00	-2.00	0.00
7,800.0	19.51	112.68	7,417.3	-749.5	1,793.5	-507.6	2.00	-2.00	0.00
7,850.0	18.51	112.68	7,464.6	-755.8	1,808.5	-511.9	2.00	-2.00	0.00

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)
7,900.0	17.51	112.68	7,512.1	-761.7	1,822.7	-515.9	2.00	-2.00	0.00
7,950.0	16.51	112.68	7,560.0	-767.4	1,836.2	-519.7	2.00	-2.00	0.00
8,000.0	15.51	112.68	7,608.0	-772.7	1,849.0	-523.3	2.00	-2.00	0.00
8,050.0	14.51	112.68	7,656.3	-777.7	1,860.9	-526.7	2.00	-2.00	0.00
8,100.0	13.51	112.68	7,704.8	-782.3	1,872.1	-529.9	2.00	-2.00	0.00
8,150.0	12.51	112.68	7,753.5	-786.7	1,882.5	-532.8	2.00	-2.00	0.00
8,200.0	11.51	112.68	7,802.4	-790.7	1,892.1	-535.5	2.00	-2.00	0.00
8,250.0	10.51	112.68	7,851.5	-794.4	1,900.9	-538.0	2.00	-2.00	0.00
8,300.0	9.51	112.68	7,900.8	-797.7	1,908.9	-540.3	2.00	-2.00	0.00
8,350.0	8.51	112.68	7,950.1	-800.7	1,916.1	-542.3	2.00	-2.00	0.00
8,400.0	7.51	112.68	7,999.7	-803.4	1,922.5	-544.1	2.00	-2.00	0.00
8,450.0	6.51	112.68	8,049.3	-805.8	1,928.2	-545.7	2.00	-2.00	0.00
8,500.0	5.51	112.68	8,099.0	-807.8	1,933.0	-547.1	2.00	-2.00	0.00
8,550.0	4.51	112.68	8,148.8	-809.5	1,937.0	-548.2	2.00	-2.00	0.00
8,600.0	3.51	112.68	8,198.7	-810.8	1,940.2	-549.2	2.00	-2.00	0.00
8,650.0	2.51	112.68	8,248.6	-811.8	1,942.7	-549.8	2.00	-2.00	0.00
8,700.0	1.51	112.68	8,298.6	-812.5	1,944.3	-550.3	2.00	-2.00	0.00
8,750.0	0.51	112.68	8,348.6	-812.9	1,945.1	-550.5	2.00	-2.00	0.00
8,775.4	0.00	0.00	8,374.0	-812.9	1,945.2	-550.6	2.00	-2.00	0.00
<b>KOP: 473' FNL &amp; 330' FEL (Sec 20)</b>									
8,800.0	2.46	359.69	8,398.6	-812.4	1,945.2	-550.0	10.00	10.00	0.00
8,850.0	7.46	359.69	8,448.4	-808.1	1,945.2	-545.8	10.00	10.00	0.00
8,900.0	12.46	359.69	8,497.6	-799.4	1,945.1	-537.2	10.00	10.00	0.00
8,950.0	17.46	359.69	8,545.9	-786.5	1,945.1	-524.4	10.00	10.00	0.00
9,000.0	22.46	359.69	8,592.9	-769.5	1,945.0	-507.5	10.00	10.00	0.00
9,050.0	27.46	359.69	8,638.2	-748.4	1,944.9	-486.6	10.00	10.00	0.00
9,100.0	32.46	359.69	8,681.5	-723.4	1,944.7	-461.9	10.00	10.00	0.00
9,150.0	37.46	359.69	8,722.5	-694.8	1,944.6	-433.5	10.00	10.00	0.00
9,200.0	42.46	359.69	8,760.8	-662.7	1,944.4	-401.7	10.00	10.00	0.00
9,250.0	47.45	359.69	8,796.2	-627.4	1,944.2	-366.7	10.00	10.00	0.00
9,300.0	52.45	359.69	8,828.3	-589.1	1,944.0	-328.8	10.00	10.00	0.00
9,350.0	57.45	359.69	8,857.0	-548.2	1,943.8	-288.3	10.00	10.00	0.00
9,400.0	62.45	359.69	8,882.0	-504.9	1,943.5	-245.4	10.00	10.00	0.00
9,450.0	67.45	359.69	8,903.2	-459.6	1,943.3	-200.6	10.00	10.00	0.00
9,500.0	72.45	359.69	8,920.3	-412.7	1,943.0	-154.1	10.00	10.00	0.00
9,550.0	77.45	359.69	8,933.3	-364.4	1,942.8	-106.3	10.00	10.00	0.00
9,600.0	82.45	359.69	8,942.0	-315.2	1,942.5	-57.5	10.00	10.00	0.00
9,650.0	87.45	359.69	8,946.4	-265.4	1,942.2	-8.2	10.00	10.00	0.00
9,675.3	89.98	359.69	8,947.0	-240.1	1,942.1	16.9	10.00	10.00	0.00
<b>FTP/LP: 100' FSL &amp; 330' FEL (Sec 17)</b>									
9,675.5	90.00	359.69	8,947.0	-239.9	1,942.1	17.1	10.00	10.00	0.00
9,700.0	90.00	359.69	8,947.0	-215.4	1,942.0	41.4	0.00	0.00	0.00
9,750.0	90.00	359.69	8,947.0	-165.4	1,941.7	90.9	0.00	0.00	0.00
9,800.0	90.00	359.69	8,947.0	-115.4	1,941.4	140.4	0.00	0.00	0.00
9,850.0	90.00	359.69	8,947.0	-65.4	1,941.2	189.9	0.00	0.00	0.00
9,900.0	90.00	359.69	8,947.0	-15.4	1,940.9	239.5	0.00	0.00	0.00
9,950.0	90.00	359.69	8,947.0	34.6	1,940.6	289.0	0.00	0.00	0.00
10,000.0	90.00	359.69	8,947.0	84.6	1,940.3	338.5	0.00	0.00	0.00
10,050.0	90.00	359.69	8,947.0	134.6	1,940.1	388.1	0.00	0.00	0.00
10,100.0	90.00	359.69	8,947.0	184.6	1,939.8	437.6	0.00	0.00	0.00
10,150.0	90.00	359.69	8,947.0	234.6	1,939.5	487.1	0.00	0.00	0.00
10,200.0	90.00	359.69	8,947.0	284.6	1,939.3	536.7	0.00	0.00	0.00
10,250.0	90.00	359.69	8,947.0	334.6	1,939.0	586.2	0.00	0.00	0.00
10,300.0	90.00	359.69	8,947.0	384.6	1,938.7	635.7	0.00	0.00	0.00

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)
10,350.0	90.00	359.69	8,947.0	434.6	1,938.4	685.3	0.00	0.00	0.00
10,400.0	90.00	359.69	8,947.0	484.6	1,938.2	734.8	0.00	0.00	0.00
10,450.0	90.00	359.69	8,947.0	534.6	1,937.9	784.3	0.00	0.00	0.00
10,500.0	90.00	359.69	8,947.0	584.6	1,937.6	833.8	0.00	0.00	0.00
10,550.0	90.00	359.69	8,947.0	634.6	1,937.4	883.4	0.00	0.00	0.00
10,600.0	90.00	359.69	8,947.0	684.6	1,937.1	932.9	0.00	0.00	0.00
10,650.0	90.00	359.69	8,947.0	734.6	1,936.8	982.4	0.00	0.00	0.00
10,700.0	90.00	359.69	8,947.0	784.6	1,936.5	1,032.0	0.00	0.00	0.00
10,750.0	90.00	359.69	8,947.0	834.6	1,936.3	1,081.5	0.00	0.00	0.00
10,800.0	90.00	359.69	8,947.0	884.6	1,936.0	1,131.0	0.00	0.00	0.00
10,850.0	90.00	359.69	8,947.0	934.6	1,935.7	1,180.6	0.00	0.00	0.00
10,900.0	90.00	359.69	8,947.0	984.6	1,935.5	1,230.1	0.00	0.00	0.00
10,950.0	90.00	359.69	8,947.0	1,034.6	1,935.2	1,279.6	0.00	0.00	0.00
11,000.0	90.00	359.69	8,947.0	1,084.6	1,934.9	1,329.2	0.00	0.00	0.00
11,050.0	90.00	359.69	8,947.0	1,134.6	1,934.6	1,378.7	0.00	0.00	0.00
11,100.0	90.00	359.69	8,947.0	1,184.6	1,934.4	1,428.2	0.00	0.00	0.00
11,150.0	90.00	359.69	8,947.0	1,234.6	1,934.1	1,477.8	0.00	0.00	0.00
11,200.0	90.00	359.69	8,947.0	1,284.6	1,933.8	1,527.3	0.00	0.00	0.00
11,250.0	90.00	359.69	8,947.0	1,334.6	1,933.6	1,576.8	0.00	0.00	0.00
11,300.0	90.00	359.69	8,947.0	1,384.6	1,933.3	1,626.3	0.00	0.00	0.00
11,350.0	90.00	359.69	8,947.0	1,434.6	1,933.0	1,675.9	0.00	0.00	0.00
11,400.0	90.00	359.69	8,947.0	1,484.6	1,932.8	1,725.4	0.00	0.00	0.00
11,450.0	90.00	359.69	8,947.0	1,534.6	1,932.5	1,774.9	0.00	0.00	0.00
11,500.0	90.00	359.69	8,947.0	1,584.6	1,932.2	1,824.5	0.00	0.00	0.00
11,550.0	90.00	359.69	8,947.0	1,634.6	1,931.9	1,874.0	0.00	0.00	0.00
11,600.0	90.00	359.69	8,947.0	1,684.6	1,931.7	1,923.5	0.00	0.00	0.00
11,650.0	90.00	359.69	8,947.0	1,734.6	1,931.4	1,973.1	0.00	0.00	0.00
11,700.0	90.00	359.69	8,947.0	1,784.6	1,931.1	2,022.6	0.00	0.00	0.00
11,750.0	90.00	359.69	8,947.0	1,834.6	1,930.9	2,072.1	0.00	0.00	0.00
11,800.0	90.00	359.69	8,947.0	1,884.6	1,930.6	2,121.7	0.00	0.00	0.00
11,850.0	90.00	359.69	8,947.0	1,934.6	1,930.3	2,171.2	0.00	0.00	0.00
11,900.0	90.00	359.69	8,947.0	1,984.6	1,930.0	2,220.7	0.00	0.00	0.00
11,950.0	90.00	359.69	8,947.0	2,034.6	1,929.8	2,270.3	0.00	0.00	0.00
12,000.0	90.00	359.69	8,947.0	2,084.6	1,929.5	2,319.8	0.00	0.00	0.00
12,050.0	90.00	359.69	8,947.0	2,134.6	1,929.2	2,369.3	0.00	0.00	0.00
12,100.0	90.00	359.69	8,947.0	2,184.6	1,929.0	2,418.8	0.00	0.00	0.00
12,150.0	90.00	359.69	8,947.0	2,234.6	1,928.7	2,468.4	0.00	0.00	0.00
12,200.0	90.00	359.69	8,947.0	2,284.6	1,928.4	2,517.9	0.00	0.00	0.00
12,250.0	90.00	359.69	8,947.0	2,334.6	1,928.1	2,567.4	0.00	0.00	0.00
12,300.0	90.00	359.69	8,947.0	2,384.6	1,927.9	2,617.0	0.00	0.00	0.00
12,350.0	90.00	359.69	8,947.0	2,434.6	1,927.6	2,666.5	0.00	0.00	0.00
12,400.0	90.00	359.69	8,947.0	2,484.6	1,927.3	2,716.0	0.00	0.00	0.00
12,450.0	90.00	359.69	8,947.0	2,534.6	1,927.1	2,765.6	0.00	0.00	0.00
12,500.0	90.00	359.69	8,947.0	2,584.6	1,926.8	2,815.1	0.00	0.00	0.00
12,550.0	90.00	359.69	8,947.0	2,634.6	1,926.5	2,864.6	0.00	0.00	0.00
12,600.0	90.00	359.69	8,947.0	2,684.6	1,926.3	2,914.2	0.00	0.00	0.00
12,650.0	90.00	359.69	8,947.0	2,734.6	1,926.0	2,963.7	0.00	0.00	0.00
12,700.0	90.00	359.69	8,947.0	2,784.6	1,925.7	3,013.2	0.00	0.00	0.00
12,750.0	90.00	359.69	8,947.0	2,834.6	1,925.4	3,062.8	0.00	0.00	0.00
12,800.0	90.00	359.69	8,947.0	2,884.6	1,925.2	3,112.3	0.00	0.00	0.00
12,850.0	90.00	359.69	8,947.0	2,934.6	1,924.9	3,161.8	0.00	0.00	0.00
12,900.0	90.00	359.69	8,947.0	2,984.6	1,924.6	3,211.3	0.00	0.00	0.00
12,950.0	90.00	359.69	8,947.0	3,034.6	1,924.4	3,260.9	0.00	0.00	0.00
13,000.0	90.00	359.69	8,947.0	3,084.6	1,924.1	3,310.4	0.00	0.00	0.00

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)
13,050.0	90.00	359.69	8,947.0	3,134.6	1,923.8	3,359.9	0.00	0.00	0.00
13,100.0	90.00	359.69	8,947.0	3,184.6	1,923.5	3,409.5	0.00	0.00	0.00
13,150.0	90.00	359.69	8,947.0	3,234.6	1,923.3	3,459.0	0.00	0.00	0.00
13,200.0	90.00	359.69	8,947.0	3,284.6	1,923.0	3,508.5	0.00	0.00	0.00
13,250.0	90.00	359.69	8,947.0	3,334.6	1,922.7	3,558.1	0.00	0.00	0.00
13,300.0	90.00	359.69	8,947.0	3,384.6	1,922.5	3,607.6	0.00	0.00	0.00
13,350.0	90.00	359.69	8,947.0	3,434.6	1,922.2	3,657.1	0.00	0.00	0.00
13,400.0	90.00	359.69	8,947.0	3,484.6	1,921.9	3,706.7	0.00	0.00	0.00
13,450.0	90.00	359.69	8,947.0	3,534.6	1,921.6	3,756.2	0.00	0.00	0.00
13,500.0	90.00	359.69	8,947.0	3,584.6	1,921.4	3,805.7	0.00	0.00	0.00
13,550.0	90.00	359.69	8,947.0	3,634.5	1,921.1	3,855.3	0.00	0.00	0.00
13,600.0	90.00	359.69	8,947.0	3,684.5	1,920.8	3,904.8	0.00	0.00	0.00
13,650.0	90.00	359.69	8,947.0	3,734.5	1,920.6	3,954.3	0.00	0.00	0.00
13,700.0	90.00	359.69	8,947.0	3,784.5	1,920.3	4,003.8	0.00	0.00	0.00
13,750.0	90.00	359.69	8,947.0	3,834.5	1,920.0	4,053.4	0.00	0.00	0.00
13,800.0	90.00	359.69	8,947.0	3,884.5	1,919.8	4,102.9	0.00	0.00	0.00
13,850.0	90.00	359.69	8,947.0	3,934.5	1,919.5	4,152.4	0.00	0.00	0.00
13,900.0	90.00	359.69	8,947.0	3,984.5	1,919.2	4,202.0	0.00	0.00	0.00
13,950.0	90.00	359.69	8,947.0	4,034.5	1,918.9	4,251.5	0.00	0.00	0.00
14,000.0	90.00	359.69	8,947.0	4,084.5	1,918.7	4,301.0	0.00	0.00	0.00
14,050.0	90.00	359.69	8,947.0	4,134.5	1,918.4	4,350.6	0.00	0.00	0.00
14,100.0	90.00	359.69	8,947.0	4,184.5	1,918.1	4,400.1	0.00	0.00	0.00
14,150.0	90.00	359.69	8,947.0	4,234.5	1,917.9	4,449.6	0.00	0.00	0.00
14,200.0	90.00	359.69	8,947.0	4,284.5	1,917.6	4,499.2	0.00	0.00	0.00
14,250.0	90.00	359.69	8,947.0	4,334.5	1,917.3	4,548.7	0.00	0.00	0.00
14,300.0	90.00	359.69	8,947.0	4,384.5	1,917.0	4,598.2	0.00	0.00	0.00
14,350.0	90.00	359.69	8,947.0	4,434.5	1,916.8	4,647.8	0.00	0.00	0.00
14,400.0	90.00	359.69	8,947.0	4,484.5	1,916.5	4,697.3	0.00	0.00	0.00
14,450.0	90.00	359.69	8,947.0	4,534.5	1,916.2	4,746.8	0.00	0.00	0.00
14,500.0	90.00	359.69	8,947.0	4,584.5	1,916.0	4,796.3	0.00	0.00	0.00
14,550.0	90.00	359.69	8,947.0	4,634.5	1,915.7	4,845.9	0.00	0.00	0.00
14,600.0	90.00	359.69	8,947.0	4,684.5	1,915.4	4,895.4	0.00	0.00	0.00
14,650.0	90.00	359.69	8,947.0	4,734.5	1,915.1	4,944.9	0.00	0.00	0.00
14,700.0	90.00	359.69	8,947.0	4,784.5	1,914.9	4,994.5	0.00	0.00	0.00
14,750.0	90.00	359.69	8,947.0	4,834.5	1,914.6	5,044.0	0.00	0.00	0.00
14,800.0	90.00	359.69	8,947.0	4,884.5	1,914.3	5,093.5	0.00	0.00	0.00
14,850.0	90.00	359.69	8,947.0	4,934.5	1,914.1	5,143.1	0.00	0.00	0.00
14,862.7	90.00	359.69	8,947.0	4,947.2	1,914.0	5,155.6	0.00	0.00	0.00
PPP2: 0' FNL & 329' FEL (Sec 17)									
14,900.0	90.00	359.69	8,947.0	4,984.5	1,913.8	5,192.6	0.00	0.00	0.00
14,950.0	90.00	359.69	8,947.0	5,034.5	1,913.5	5,242.1	0.00	0.00	0.00
15,000.0	90.00	359.69	8,947.0	5,084.5	1,913.2	5,291.7	0.00	0.00	0.00
15,050.0	90.00	359.69	8,947.0	5,134.5	1,913.0	5,341.2	0.00	0.00	0.00
15,100.0	90.00	359.69	8,947.0	5,184.5	1,912.7	5,390.7	0.00	0.00	0.00
15,150.0	90.00	359.69	8,947.0	5,234.5	1,912.4	5,440.3	0.00	0.00	0.00
15,200.0	90.00	359.69	8,947.0	5,284.5	1,912.2	5,489.8	0.00	0.00	0.00
15,250.0	90.00	359.69	8,947.0	5,334.5	1,911.9	5,539.3	0.00	0.00	0.00
15,300.0	90.00	359.69	8,947.0	5,384.5	1,911.6	5,588.8	0.00	0.00	0.00
15,350.0	90.00	359.69	8,947.0	5,434.5	1,911.4	5,638.4	0.00	0.00	0.00
15,400.0	90.00	359.69	8,947.0	5,484.5	1,911.1	5,687.9	0.00	0.00	0.00
15,450.0	90.00	359.69	8,947.0	5,534.5	1,910.8	5,737.4	0.00	0.00	0.00
15,500.0	90.00	359.69	8,947.0	5,584.5	1,910.5	5,787.0	0.00	0.00	0.00
15,550.0	90.00	359.69	8,947.0	5,634.5	1,910.3	5,836.5	0.00	0.00	0.00
15,600.0	90.00	359.69	8,947.0	5,684.5	1,910.0	5,886.0	0.00	0.00	0.00

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)	
15,650.0	90.00	359.69	8,947.0	5,734.5	1,909.7	5,935.6	0.00	0.00	0.00	
15,700.0	90.00	359.69	8,947.0	5,784.5	1,909.5	5,985.1	0.00	0.00	0.00	
15,750.0	90.00	359.69	8,947.0	5,834.5	1,909.2	6,034.6	0.00	0.00	0.00	
15,800.0	90.00	359.69	8,947.0	5,884.5	1,908.9	6,084.2	0.00	0.00	0.00	
15,850.0	90.00	359.69	8,947.0	5,934.5	1,908.6	6,133.7	0.00	0.00	0.00	
15,900.0	90.00	359.69	8,947.0	5,984.5	1,908.4	6,183.2	0.00	0.00	0.00	
15,950.0	90.00	359.69	8,947.0	6,034.5	1,908.1	6,232.7	0.00	0.00	0.00	
16,000.0	90.00	359.69	8,947.0	6,084.5	1,907.8	6,282.3	0.00	0.00	0.00	
16,050.0	90.00	359.69	8,947.0	6,134.5	1,907.6	6,331.8	0.00	0.00	0.00	
16,100.0	90.00	359.69	8,947.0	6,184.5	1,907.3	6,381.3	0.00	0.00	0.00	
16,150.0	90.00	359.69	8,947.0	6,234.5	1,907.0	6,430.9	0.00	0.00	0.00	
16,200.0	90.00	359.69	8,947.0	6,284.5	1,906.7	6,480.4	0.00	0.00	0.00	
16,250.0	90.00	359.69	8,947.0	6,334.5	1,906.5	6,529.9	0.00	0.00	0.00	
16,300.0	90.00	359.69	8,947.0	6,384.5	1,906.2	6,579.5	0.00	0.00	0.00	
16,350.0	90.00	359.69	8,947.0	6,434.5	1,905.9	6,629.0	0.00	0.00	0.00	
16,400.0	90.00	359.69	8,947.0	6,484.5	1,905.7	6,678.5	0.00	0.00	0.00	
16,450.0	90.00	359.69	8,947.0	6,534.5	1,905.4	6,728.1	0.00	0.00	0.00	
16,500.0	90.00	359.69	8,947.0	6,584.5	1,905.1	6,777.6	0.00	0.00	0.00	
16,550.0	90.00	359.69	8,947.0	6,634.5	1,904.9	6,827.1	0.00	0.00	0.00	
16,600.0	90.00	359.69	8,947.0	6,684.5	1,904.6	6,876.7	0.00	0.00	0.00	
16,650.0	90.00	359.69	8,947.0	6,734.5	1,904.3	6,926.2	0.00	0.00	0.00	
16,700.0	90.00	359.69	8,947.0	6,784.5	1,904.0	6,975.7	0.00	0.00	0.00	
16,750.0	90.00	359.69	8,947.0	6,834.5	1,903.8	7,025.2	0.00	0.00	0.00	
16,800.0	90.00	359.69	8,947.0	6,884.5	1,903.5	7,074.8	0.00	0.00	0.00	
16,850.0	90.00	359.69	8,947.0	6,934.5	1,903.2	7,124.3	0.00	0.00	0.00	
16,900.0	90.00	359.69	8,947.0	6,984.5	1,903.0	7,173.8	0.00	0.00	0.00	
16,950.0	90.00	359.69	8,947.0	7,034.5	1,902.7	7,223.4	0.00	0.00	0.00	
17,000.0	90.00	359.69	8,947.0	7,084.5	1,902.4	7,272.9	0.00	0.00	0.00	
17,050.0	90.00	359.69	8,947.0	7,134.5	1,902.1	7,322.4	0.00	0.00	0.00	
17,100.0	90.00	359.69	8,947.0	7,184.5	1,901.9	7,372.0	0.00	0.00	0.00	
17,150.0	90.00	359.69	8,947.0	7,234.5	1,901.6	7,421.5	0.00	0.00	0.00	
17,200.0	90.00	359.69	8,947.0	7,284.5	1,901.3	7,471.0	0.00	0.00	0.00	
17,250.0	90.00	359.69	8,947.0	7,334.5	1,901.1	7,520.6	0.00	0.00	0.00	
17,300.0	90.00	359.69	8,947.0	7,384.5	1,900.8	7,570.1	0.00	0.00	0.00	
17,350.0	90.00	359.69	8,947.0	7,434.5	1,900.5	7,619.6	0.00	0.00	0.00	
17,400.0	90.00	359.69	8,947.0	7,484.5	1,900.2	7,669.2	0.00	0.00	0.00	
17,450.0	90.00	359.69	8,947.0	7,534.5	1,900.0	7,718.7	0.00	0.00	0.00	
17,500.0	90.00	359.69	8,947.0	7,584.5	1,899.7	7,768.2	0.00	0.00	0.00	
17,550.0	90.00	359.69	8,947.0	7,634.5	1,899.4	7,817.7	0.00	0.00	0.00	
17,600.0	90.00	359.69	8,947.0	7,684.5	1,899.2	7,867.3	0.00	0.00	0.00	
17,650.0	90.00	359.69	8,947.0	7,734.5	1,898.9	7,916.8	0.00	0.00	0.00	
17,700.0	90.00	359.69	8,947.0	7,784.5	1,898.6	7,966.3	0.00	0.00	0.00	
17,750.0	90.00	359.69	8,947.0	7,834.5	1,898.4	8,015.9	0.00	0.00	0.00	
17,800.0	90.00	359.69	8,947.0	7,884.5	1,898.1	8,065.4	0.00	0.00	0.00	
17,850.0	90.00	359.69	8,947.0	7,934.5	1,897.8	8,114.9	0.00	0.00	0.00	
17,900.0	90.00	359.69	8,947.0	7,984.5	1,897.5	8,164.5	0.00	0.00	0.00	
17,950.0	90.00	359.69	8,947.0	8,034.5	1,897.3	8,214.0	0.00	0.00	0.00	
18,000.0	90.00	359.69	8,947.0	8,084.5	1,897.0	8,263.5	0.00	0.00	0.00	
18,050.0	90.00	359.69	8,947.0	8,134.5	1,896.7	8,313.1	0.00	0.00	0.00	
18,100.0	90.00	359.69	8,947.0	8,184.5	1,896.5	8,362.6	0.00	0.00	0.00	
18,150.0	90.00	359.69	8,947.0	8,234.5	1,896.2	8,412.1	0.00	0.00	0.00	
18,200.0	90.00	359.69	8,947.0	8,284.5	1,895.9	8,461.7	0.00	0.00	0.00	
18,250.0	90.00	359.69	8,947.0	8,334.5	1,895.6	8,511.2	0.00	0.00	0.00	
18,300.0	90.00	359.69	8,947.0	8,384.5	1,895.4	8,560.7	0.00	0.00	0.00	

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)
18,350.0	90.00	359.69	8,947.0	8,434.5	1,895.1	8,610.2	0.00	0.00	0.00
18,400.0	90.00	359.69	8,947.0	8,484.5	1,894.8	8,659.8	0.00	0.00	0.00
18,450.0	90.00	359.69	8,947.0	8,534.5	1,894.6	8,709.3	0.00	0.00	0.00
18,500.0	90.00	359.69	8,947.0	8,584.5	1,894.3	8,758.8	0.00	0.00	0.00
18,550.0	90.00	359.69	8,947.0	8,634.5	1,894.0	8,808.4	0.00	0.00	0.00
18,600.0	90.00	359.69	8,947.0	8,684.5	1,893.7	8,857.9	0.00	0.00	0.00
18,650.0	90.00	359.69	8,947.0	8,734.5	1,893.5	8,907.4	0.00	0.00	0.00
18,700.0	90.00	359.69	8,947.0	8,784.5	1,893.2	8,957.0	0.00	0.00	0.00
18,750.0	90.00	359.69	8,947.0	8,834.5	1,892.9	9,006.5	0.00	0.00	0.00
18,800.0	90.00	359.69	8,947.0	8,884.5	1,892.7	9,056.0	0.00	0.00	0.00
18,850.0	90.00	359.69	8,947.0	8,934.5	1,892.4	9,105.6	0.00	0.00	0.00
18,900.0	90.00	359.69	8,947.0	8,984.5	1,892.1	9,155.1	0.00	0.00	0.00
18,950.0	90.00	359.69	8,947.0	9,034.5	1,891.9	9,204.6	0.00	0.00	0.00
19,000.0	90.00	359.69	8,947.0	9,084.5	1,891.6	9,254.2	0.00	0.00	0.00
19,050.0	90.00	359.69	8,947.0	9,134.5	1,891.3	9,303.7	0.00	0.00	0.00
19,100.0	90.00	359.69	8,947.0	9,184.5	1,891.0	9,353.2	0.00	0.00	0.00
19,150.0	90.00	359.69	8,947.0	9,234.5	1,890.8	9,402.7	0.00	0.00	0.00
19,200.0	90.00	359.69	8,947.0	9,284.5	1,890.5	9,452.3	0.00	0.00	0.00
19,250.0	90.00	359.69	8,947.0	9,334.5	1,890.2	9,501.8	0.00	0.00	0.00
19,300.0	90.00	359.69	8,947.0	9,384.5	1,890.0	9,551.3	0.00	0.00	0.00
19,350.0	90.00	359.69	8,947.0	9,434.5	1,889.7	9,600.9	0.00	0.00	0.00
19,400.0	90.00	359.69	8,947.0	9,484.5	1,889.4	9,650.4	0.00	0.00	0.00
19,450.0	90.00	359.69	8,947.0	9,534.5	1,889.1	9,699.9	0.00	0.00	0.00
19,500.0	90.00	359.69	8,947.0	9,584.5	1,888.9	9,749.5	0.00	0.00	0.00
19,550.0	90.00	359.69	8,947.0	9,634.5	1,888.6	9,799.0	0.00	0.00	0.00
19,600.0	90.00	359.69	8,947.0	9,684.5	1,888.3	9,848.5	0.00	0.00	0.00
19,650.0	90.00	359.69	8,947.0	9,734.5	1,888.1	9,898.1	0.00	0.00	0.00
19,700.0	90.00	359.69	8,947.0	9,784.5	1,887.8	9,947.6	0.00	0.00	0.00
19,750.0	90.00	359.69	8,947.0	9,834.5	1,887.5	9,997.1	0.00	0.00	0.00
19,800.0	90.00	359.69	8,947.0	9,884.5	1,887.2	10,046.7	0.00	0.00	0.00
19,850.0	90.00	359.69	8,947.0	9,934.5	1,887.0	10,096.2	0.00	0.00	0.00
19,900.0	90.00	359.69	8,947.0	9,984.5	1,886.7	10,145.7	0.00	0.00	0.00
19,950.0	90.00	359.69	8,947.0	10,034.5	1,886.4	10,195.2	0.00	0.00	0.00
20,000.0	90.00	359.69	8,947.0	10,084.5	1,886.2	10,244.8	0.00	0.00	0.00
20,050.0	90.00	359.69	8,947.0	10,134.5	1,885.9	10,294.3	0.00	0.00	0.00
20,100.0	90.00	359.69	8,947.0	10,184.5	1,885.6	10,343.8	0.00	0.00	0.00
20,140.0	90.00	359.69	8,947.0	10,224.5	1,885.4	10,383.5	0.00	0.00	0.00
<b>PPP3: 0' FNL &amp; 328' FEL (Sec 8)</b>									
20,150.0	90.00	359.69	8,947.0	10,234.5	1,885.3	10,393.4	0.00	0.00	0.00
20,200.0	90.00	359.69	8,947.0	10,284.5	1,885.1	10,442.9	0.00	0.00	0.00
20,250.0	90.00	359.69	8,947.0	10,334.5	1,884.8	10,492.4	0.00	0.00	0.00
20,300.0	90.00	359.69	8,947.0	10,384.5	1,884.5	10,542.0	0.00	0.00	0.00
20,350.0	90.00	359.69	8,947.0	10,434.4	1,884.3	10,591.5	0.00	0.00	0.00
20,400.0	90.00	359.69	8,947.0	10,484.4	1,884.0	10,641.0	0.00	0.00	0.00
20,450.0	90.00	359.69	8,947.0	10,534.4	1,883.7	10,690.6	0.00	0.00	0.00
20,500.0	90.00	359.69	8,947.0	10,584.4	1,883.5	10,740.1	0.00	0.00	0.00
20,550.0	90.00	359.69	8,947.0	10,634.4	1,883.2	10,789.6	0.00	0.00	0.00
20,600.0	90.00	359.69	8,947.0	10,684.4	1,882.9	10,839.2	0.00	0.00	0.00
20,650.0	90.00	359.69	8,947.0	10,734.4	1,882.6	10,888.7	0.00	0.00	0.00
20,700.0	90.00	359.69	8,947.0	10,784.4	1,882.4	10,938.2	0.00	0.00	0.00
20,750.0	90.00	359.69	8,947.0	10,834.4	1,882.1	10,987.7	0.00	0.00	0.00
20,800.0	90.00	359.69	8,947.0	10,884.4	1,881.8	11,037.3	0.00	0.00	0.00
20,850.0	90.00	359.69	8,947.0	10,934.4	1,881.6	11,086.8	0.00	0.00	0.00

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)
20,900.0	90.00	359.69	8,947.0	10,984.4	1,881.3	11,136.3	0.00	0.00	0.00
20,950.0	90.00	359.69	8,947.0	11,034.4	1,881.0	11,185.9	0.00	0.00	0.00
21,000.0	90.00	359.69	8,947.0	11,084.4	1,880.7	11,235.4	0.00	0.00	0.00
21,050.0	90.00	359.69	8,947.0	11,134.4	1,880.5	11,284.9	0.00	0.00	0.00
21,100.0	90.00	359.69	8,947.0	11,184.4	1,880.2	11,334.5	0.00	0.00	0.00
21,150.0	90.00	359.69	8,947.0	11,234.4	1,879.9	11,384.0	0.00	0.00	0.00
21,200.0	90.00	359.69	8,947.0	11,284.4	1,879.7	11,433.5	0.00	0.00	0.00
21,250.0	90.00	359.69	8,947.0	11,334.4	1,879.4	11,483.1	0.00	0.00	0.00
21,300.0	90.00	359.69	8,947.0	11,384.4	1,879.1	11,532.6	0.00	0.00	0.00
21,350.0	90.00	359.69	8,947.0	11,434.4	1,878.8	11,582.1	0.00	0.00	0.00
21,400.0	90.00	359.69	8,947.0	11,484.4	1,878.6	11,631.6	0.00	0.00	0.00
21,450.0	90.00	359.69	8,947.0	11,534.4	1,878.3	11,681.2	0.00	0.00	0.00
21,500.0	90.00	359.69	8,947.0	11,584.4	1,878.0	11,730.7	0.00	0.00	0.00
21,550.0	90.00	359.69	8,947.0	11,634.4	1,877.8	11,780.2	0.00	0.00	0.00
21,600.0	90.00	359.69	8,947.0	11,684.4	1,877.5	11,829.8	0.00	0.00	0.00
21,650.0	90.00	359.69	8,947.0	11,734.4	1,877.2	11,879.3	0.00	0.00	0.00
21,700.0	90.00	359.69	8,947.0	11,784.4	1,877.0	11,928.8	0.00	0.00	0.00
21,750.0	90.00	359.69	8,947.0	11,834.4	1,876.7	11,978.4	0.00	0.00	0.00
21,800.0	90.00	359.69	8,947.0	11,884.4	1,876.4	12,027.9	0.00	0.00	0.00
21,850.0	90.00	359.69	8,947.0	11,934.4	1,876.1	12,077.4	0.00	0.00	0.00
21,900.0	90.00	359.69	8,947.0	11,984.4	1,875.9	12,127.0	0.00	0.00	0.00
21,950.0	90.00	359.69	8,947.0	12,034.4	1,875.6	12,176.5	0.00	0.00	0.00
22,000.0	90.00	359.69	8,947.0	12,084.4	1,875.3	12,226.0	0.00	0.00	0.00
22,050.0	90.00	359.69	8,947.0	12,134.4	1,875.1	12,275.6	0.00	0.00	0.00
22,100.0	90.00	359.69	8,947.0	12,184.4	1,874.8	12,325.1	0.00	0.00	0.00
22,150.0	90.00	359.69	8,947.0	12,234.4	1,874.5	12,374.6	0.00	0.00	0.00
22,200.0	90.00	359.69	8,947.0	12,284.4	1,874.2	12,424.1	0.00	0.00	0.00
22,250.0	90.00	359.69	8,947.0	12,334.4	1,874.0	12,473.7	0.00	0.00	0.00
22,300.0	90.00	359.69	8,947.0	12,384.4	1,873.7	12,523.2	0.00	0.00	0.00
22,350.0	90.00	359.69	8,947.0	12,434.4	1,873.4	12,572.7	0.00	0.00	0.00
22,400.0	90.00	359.69	8,947.0	12,484.4	1,873.2	12,622.3	0.00	0.00	0.00
22,450.0	90.00	359.69	8,947.0	12,534.4	1,872.9	12,671.8	0.00	0.00	0.00
22,500.0	90.00	359.69	8,947.0	12,584.4	1,872.6	12,721.3	0.00	0.00	0.00
22,550.0	90.00	359.69	8,947.0	12,634.4	1,872.3	12,770.9	0.00	0.00	0.00
22,600.0	90.00	359.69	8,947.0	12,684.4	1,872.1	12,820.4	0.00	0.00	0.00
22,650.0	90.00	359.69	8,947.0	12,734.4	1,871.8	12,869.9	0.00	0.00	0.00
22,700.0	90.00	359.69	8,947.0	12,784.4	1,871.5	12,919.5	0.00	0.00	0.00
22,750.0	90.00	359.69	8,947.0	12,834.4	1,871.3	12,969.0	0.00	0.00	0.00
22,800.0	90.00	359.69	8,947.0	12,884.4	1,871.0	13,018.5	0.00	0.00	0.00
22,850.0	90.00	359.69	8,947.0	12,934.4	1,870.7	13,068.1	0.00	0.00	0.00
22,900.0	90.00	359.69	8,947.0	12,984.4	1,870.5	13,117.6	0.00	0.00	0.00
22,950.0	90.00	359.69	8,947.0	13,034.4	1,870.2	13,167.1	0.00	0.00	0.00
23,000.0	90.00	359.69	8,947.0	13,084.4	1,869.9	13,216.6	0.00	0.00	0.00
23,050.0	90.00	359.69	8,947.0	13,134.4	1,869.6	13,266.2	0.00	0.00	0.00
23,100.0	90.00	359.69	8,947.0	13,184.4	1,869.4	13,315.7	0.00	0.00	0.00
23,150.0	90.00	359.69	8,947.0	13,234.4	1,869.1	13,365.2	0.00	0.00	0.00
23,200.0	90.00	359.69	8,947.0	13,284.4	1,868.8	13,414.8	0.00	0.00	0.00
23,250.0	90.00	359.69	8,947.0	13,334.4	1,868.6	13,464.3	0.00	0.00	0.00
23,300.0	90.00	359.69	8,947.0	13,384.4	1,868.3	13,513.8	0.00	0.00	0.00
23,350.0	90.00	359.69	8,947.0	13,434.4	1,868.0	13,563.4	0.00	0.00	0.00
23,400.0	90.00	359.69	8,947.0	13,484.4	1,867.7	13,612.9	0.00	0.00	0.00
23,450.0	90.00	359.69	8,947.0	13,534.4	1,867.5	13,662.4	0.00	0.00	0.00
23,500.0	90.00	359.69	8,947.0	13,584.4	1,867.2	13,712.0	0.00	0.00	0.00
23,550.0	90.00	359.69	8,947.0	13,634.4	1,866.9	13,761.5	0.00	0.00	0.00

## Planning Report

<b>Database:</b> <b>Company:</b> <b>Project:</b> <b>Site:</b> <b>Well:</b> <b>Wellbore:</b> <b>Design:</b>	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Cousin Eddy Fed Unit Com #36H Sec 17, T21S, R32E BHL: 3859' FSL & 330' FEL (Sec 5) Design #1	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b>	Site Cousin Eddy Fed Unit Com #36H WELL @ 3669.0usft (Original Well Elev) WELL @ 3669.0usft (Original Well Elev) Grid Minimum Curvature
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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)	
23,600.0	90.00	359.69	8,947.0	13,684.4	1,866.7	13,811.0	0.00	0.00	0.00	
23,650.0	90.00	359.69	8,947.0	13,734.4	1,866.4	13,860.6	0.00	0.00	0.00	
23,700.0	90.00	359.69	8,947.0	13,784.4	1,866.1	13,910.1	0.00	0.00	0.00	
23,750.0	90.00	359.69	8,947.0	13,834.4	1,865.8	13,959.6	0.00	0.00	0.00	
23,800.0	90.00	359.69	8,947.0	13,884.4	1,865.6	14,009.1	0.00	0.00	0.00	
23,850.0	90.00	359.69	8,947.0	13,934.4	1,865.3	14,058.7	0.00	0.00	0.00	
23,900.0	90.00	359.69	8,947.0	13,984.4	1,865.0	14,108.2	0.00	0.00	0.00	
23,950.0	90.00	359.69	8,947.0	14,034.4	1,864.8	14,157.7	0.00	0.00	0.00	
23,998.5	90.00	359.69	8,947.0	14,082.9	1,864.5	14,205.8	0.00	0.00	0.00	
BHL: 3859' FSL & 330' FEL (Sec 5)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL: 360' FSL & 2271' F - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	536,187.60	737,997.60	32.4724276	-103.6956356	
KOP: 473' FNL & 330' FI - plan hits target center - Point	0.00	0.00	8,374.0	-812.9	1,945.2	535,374.70	739,942.80	32.4701611	-103.6893443	
PPP2: 0' FNL & 329' FEI - plan hits target center - Point	0.00	0.00	8,947.0	4,947.2	1,914.0	541,134.80	739,911.59	32.4859939	-103.6893328	
BHL: 3859' FSL & 330' F - plan hits target center - Point	0.00	0.00	8,947.0	14,082.9	1,864.5	550,270.50	739,862.10	32.5111053	-103.6893143	
PPP3: 0' FNL & 328' FEI - plan hits target center - Point	0.00	0.00	8,947.0	10,224.5	1,885.4	546,412.10	739,883.00	32.5004997	-103.6893221	
FTP/LP: 100' FSL & 330 - plan hits target center - Point	0.00	0.00	8,947.0	-240.1	1,942.1	535,947.50	739,939.69	32.4717356	-103.6893432	

**Mewbourne Oil Company, Cousin Eddy Fed Unit Com 36H**  
**Sec 17, T21S, R32E**  
**SHL: 360' FSL 2271' FEL (Sec 17)**  
**BHL: 3859' FSL 330' FEL (Sec 5)**

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry	1.6 Dry
									1.8 Wet	1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	1061'	1061'	13.375" 48# H40 STC	1.62	3.65	6.32	10.62
Intermediate	12.25"	0'	0'	3385'	3385'	9.625" 36# J55 LTC	1.13	1.96	2.75	3.43
Intermediate	12.25"	3385'	3385'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	12.21	14.79
Intermediate	12.25"	4307'	4307'	4450'	4450'	9.625" 40# L80 LTC	1.31	2.44	128.85	160.14
Production	8.75"	0'	0'	8775'	8374'	7 5/8" 29.7# HCP110 GBCD	1.69	2.24	2.95	3.61
Liner	6.75"	8575'	8215'	23998'	8947'	5.5" 20# HPP110 Talon	2.07	2.36	1.78	2.08

## Cement Program

Casing		# Sacks	Wt. (PPG)	Yield (ft <sup>3</sup> /sack)	TOC/BOC	Volume (ft <sup>3</sup> )	% Excess	Slurry Description
13.375 in	LEAD	570	12.5	2.12	0' - 869'	1210	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	869' - 1061'	268		Class C: Retarder
9.625 in	LEAD	690	12.5	2.12	0' - 3764'	1470	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3764' - 4450'	268		Class C: Retarder
7.625 in	LEAD	50	12.5	2.12	5450' - 6078'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6078' - 8775'	472		Class H: Retarder, Fluid Loss, Defoamer
5.5 in	LEAD	870	13.5	1.85	8575' - 23998'	1610	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant,

## Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 1061'	8.4 - 8.6	Fresh Water
1061' - 4450'	10.0 - 10.2	Brine
4450' - 8775'	8.6 - 9.7	Cut-Brine
8775' - 23998'	10.0 - 11.5	OBM

## Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	986'	Usable Water	Delaware (Lamar)	4530'	Oil/Natural Gas
Castile			Bell Canyon	4575'	Oil/Natural Gas
Salt Top	1120'	None	Cherry Canyon	5400'	Oil/Natural Gas
Marker Bed 126	2290'	None	Manzanita Marker		
Salt Base	4160'	None	Basal Brushy Canyon	6700'	Oil/Natural Gas
Yates			Bone Spring	8440'	Oil/Natural Gas
Seven Rivers			1st Bone Spring Carbonate	8570'	Oil/Natural Gas
Queen			1st Bone Spring Sand	9490'	Oil/Natural Gas
Capitan			2nd Bone Spring Carbonate	9950'	Oil/Natural Gas
Grayburg			2nd Bone Spring Sand	10140'	Oil/Natural Gas
San Andres			3rd Bone Spring Carbonate	10725'	Oil/Natural Gas
Glorietta			3rd Bone Spring Sand	11110'	Oil/Natural Gas
Yoso			Wolfcamp	11515'	Oil/Natural Gas

All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172. 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.	Y
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.	N
Is well located in SOPA but not in R-111-Q?	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-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

**Mewbourne Oil Company, Cousin Eddy Fed Unit Com 36H**  
**Sec 17, T21S, R32E**  
**SHL: 360' FSL 2271' FEL (Sec 17)**  
**BHL: 3859' FSL 330' FEL (Sec 5)**

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	1061'	1061'	13.375" 48# H40 STC	1.62	3.65	6.32	10.62
Intermediate	12.25"	0'	0'	3385'	3385'	9.625" 36# J55 LTC	1.13	1.96	2.75	3.43
Intermediate	12.25"	3385'	3385'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	12.21	14.79
Intermediate	12.25"	4307'	4307'	4450'	4450'	9.625" 40# L80 LTC	1.31	2.44	128.85	160.14
Production	8.75"	0'	0'	9675'	8947'	7 5/8" 29.7# HCP110 GBCD	1.58	2.10	2.68	3.27
Liner	6.75"	8775'	8374'	23998'	8947'	5.5" 20# HPP110 Talon	2.07	2.36	1.80	2.11

## Design B - Cement Program

Casing	Cement Stage	# sx	Density (ppg)	Yield (ft³/sack)	Depth (MD)	Volume (ft³)	% Excess	Slurry Description
13.375 in	LEAD	570	12.5	2.12	0' - 869'	1210	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	869' - 1061'	268		Class C: Retarder
9.625 in	LEAD	690	12.5	2.12	0' - 3764'	1470	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3764' - 4450'	268		Class C: Retarder
7.625 in	LEAD	50	12.5	2.12	5450' - 6249'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6249' - 9675'	472		Class H: Retarder, Fluid Loss, Defoamer
5.5 in	LEAD	860	13.5	1.85	8775' - 23998'	1600	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant,

## Design B - Mud Program

Depth	Mud Wt (ppg)	Mud Type
0' - 1061'	8.4 - 8.6	Fresh Water
1061' - 4450'	10.0 - 10.2	Brine
4450' - 9675'	8.6 - 9.7	Cut-Brine
9675' - 23998'	10.0 - 11.5	OBM

## Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	986'	Usable Water	Delaware (Lamar)	4530'	Oil/Natural Gas
Castile			Bell Canyon	4575'	Oil/Natural Gas
Salt Top	1120'	None	Cherry Canyon	5400'	Oil/Natural Gas
Marker Bed 126	2290'	None	Manzanita Marker		
Salt Base	4160'	None	Basal Brushy Canyon	6700'	Oil/Natural Gas
Yates			Bone Spring	8440'	Oil/Natural Gas
Seven Rivers			1st Bone Spring Carbonate	8570'	Oil/Natural Gas
Queen			1st Bone Spring Sand	9490'	Oil/Natural Gas
Capitan			2nd Bone Spring Carbonate	9950'	Oil/Natural Gas
Grayburg			2nd Bone Spring Sand	10140'	Oil/Natural Gas
San Andres			3rd Bone Spring Carbonate	10725'	Oil/Natural Gas
Glorietta			3rd Bone Spring Sand	11110'	Oil/Natural Gas
Yoso			Wolfcamp	11515'	Oil/Natural Gas

All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172. 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.	Y
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 tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-Q?	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-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

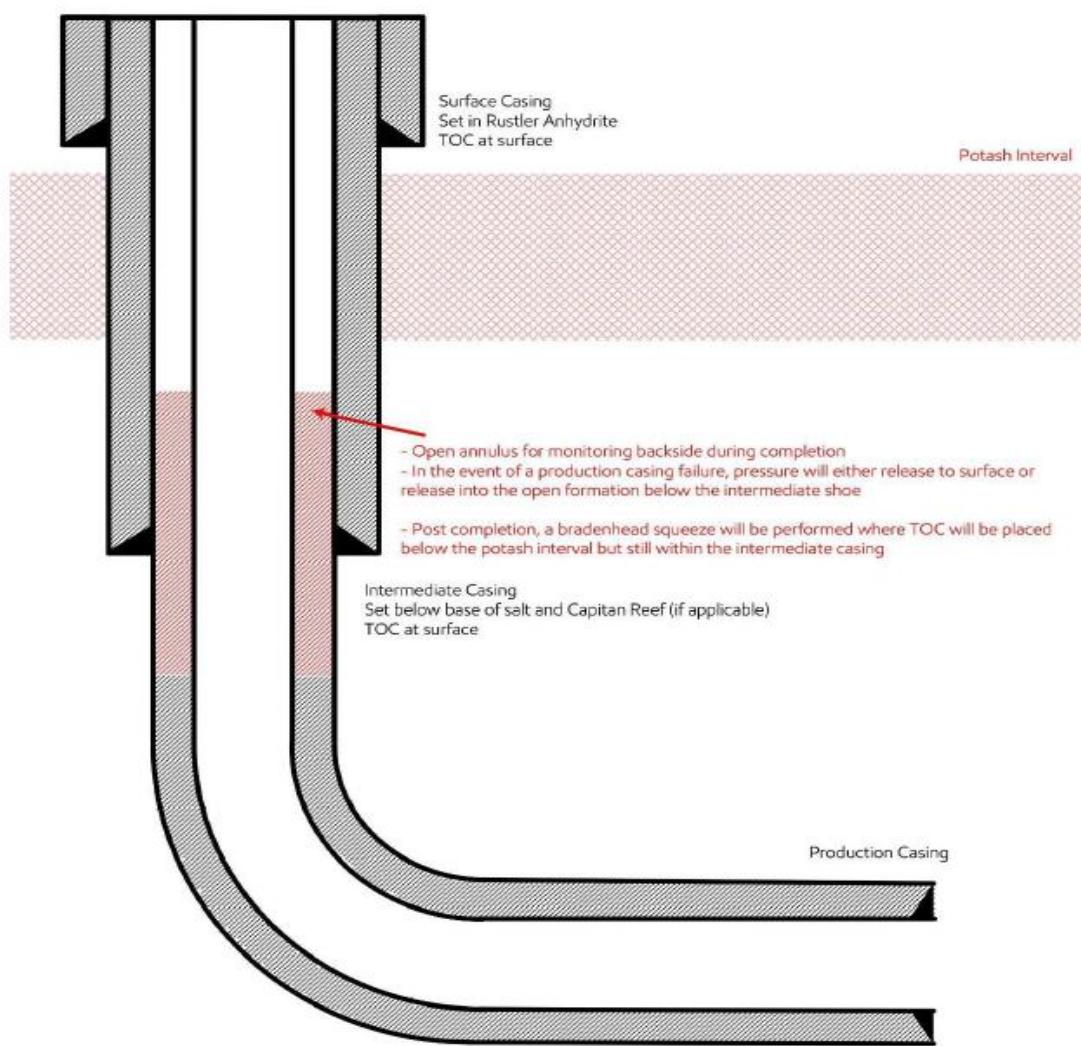
## **Mewbourne Oil Company R-111Q Procedure**

Mewbourne Oil Company request permission to perform Open Hole Annulus procedure per R-111Q guidelines to be implemented as follows:

### **Production String**

- a) The Production string shall consist new oil field casing in good condition that meets API specifications, rated for the loads expected over the lifecycle of the well.
- b) For wells within the KPLA where a 2nd intermediate string will not be utilized resulting in a 3 String Design (Surface, Salt or Salt/Capitan Reef, Production), the following safeguard shall apply to safely divert flow of wellbore fluids away from the Salt Interval in the event of a catastrophic production casing failure. The Surface Equipment utilized during stimulation operations should be designed to relieve pressure from the production x intermediate casing annulus below the burst threshold of the casing string components.
  - i. A monitored open annulus will be incorporated during completion by leaving the 1st Intermediate Casing x Production Casing annulus un-cemented and monitored inside the 1st Intermediate String. Reference wellbore diagram.
    - i. The top of cement in the Production Casing x 1st Intermediate Casing Annulus shall stand uncemented at least 500' below the 1st Intermediate Casing Shoe. Zero percent excess shall be pumped on the Production Cementing Slurry to ensure no tie-back into the 1st Intermediate Casing Shoe.
    - ii. After Stimulation Operations have been concluded and no longer than 180 days after the well is brought online, the operator will be responsible for Bradenheading cement to ensure at least a 500' tie back has been established inside the 1st Intermediate (Salt String / Capitan String) but not higher than Marker Bed No. 126 (base of the Potash mining interval).
    - iii. The top of cement may be estimated through pumped displacement volumes or with the use of a fluid shot tool prior to filling backside with fluid.

### 3-String Design – Open Production Casing Annulus







**Mewbourne Oil Company, Cousin Eddy Fed Unit Com 36H**  
**Sec 17, T21S, R32E**  
**SHL: 360' FSL 2271' FEL (Sec 17)**  
**BHL: 3859' FSL 330' FEL (Sec 5)**

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry	1.6 Dry
									1.8 Wet	1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	1061'	1061'	13.375" 48# H40 STC	1.62	3.65	6.32	10.62
Intermediate	12.25"	0'	0'	3385'	3385'	9.625" 36# J55 LTC	1.13	1.96	2.75	3.43
Intermediate	12.25"	3385'	3385'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	12.21	14.79
Intermediate	12.25"	4307'	4307'	4450'	4450'	9.625" 40# L80 LTC	1.31	2.44	128.85	160.14
Production	8.75"	0'	0'	8775'	8374'	7 5/8" 29.7# HCP110 GBCD	1.69	2.24	2.95	3.61
Liner	6.75"	8575'	8215'	23998'	8947'	5.5" 20# HPP110 Talon	2.07	2.36	1.78	2.08

**Cement Program**

Casing		# Sacks	Wt. lb/gal	Yield ft <sup>3</sup> /sack	TOC/BOC	Volume ft <sup>3</sup>	% Excess	Slurry Description		
13.375 in	LEAD	570	12.5	2.12	0' - 869'	1210	100%	Class C: Salt, Gel, Extender, LCM		
	TAIL	200	14.8	1.34	869' - 1061'	268		Class C: Retarder		
9.625 in	LEAD	690	12.5	2.12	0' - 3764'	1470	25%	Class C: Salt, Gel, Extender, LCM		
	TAIL	200	14.8	1.34	3764' - 4450'	268		Class C: Retarder		
7.625 in	LEAD	50	12.5	2.12	5450' - 6078'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer		
	TAIL	400	15.6	1.18	6078' - 8775'	472		Class H: Retarder, Fluid Loss, Defoamer		
<b>7.625" TOC @ 5450', BHS TOC @ 3950'</b>										
Braden Head Sqz	LEAD	140	14.8	1.34	3950' - 5450'	190	25%	Class C		
5.5 in	LEAD	870	13.5	1.85	8575' - 23998'	1610	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent		

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry	1.6 Dry
									1.8 Wet	1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	1061'	1061'	13.375" 48# H40 STC	1.62	3.65	6.32	10.62
Intermediate	12.25"	0'	0'	3385'	3385'	9.625" 36# J55 LTC	1.13	1.96	2.75	3.43
Intermediate	12.25"	3385'	3385'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	12.21	14.79
Intermediate	12.25"	4307'	4307'	4450'	4450'	9.625" 40# L80 LTC	1.31	2.44	128.85	160.14
Production	8.75"	0'	0'	9675'	8947'	7 5/8" 29.7# HCP110 GBCD	1.58	2.10	2.68	3.27
Liner	6.75"	8775'	8374'	23998'	8947'	5.5" 20# HPP110 Talon	2.07	2.36	1.80	2.11

**Design B - Cement Program**

Casing		# Sacks	Wt. lb/gal	Yield ft <sup>3</sup> /sack	TOC/BOC	Volume ft <sup>3</sup>	% Excess	Slurry Description		
13.375 in	LEAD	570	12.5	2.12	0' - 869'	1210	100%	Class C: Salt, Gel, Extender, LCM		
	TAIL	200	14.8	1.34	869' - 1061'	268		Class C: Retarder		
1st Stg 9.625 in	LEAD	690	12.5	2.12	0' - 3764'	1470	25%	Class C: Salt, Gel, Extender, LCM		
	TAIL	200	14.8	1.34	3764' - 4450'	268		Class C: Retarder		
7.625 in	LEAD	50	12.5	2.12	5450' - 6249'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer		
	TAIL	400	15.6	1.18	6249' - 9675'	472		Class H: Retarder, Fluid Loss, Defoamer		
<b>7.625" TOC @ 5450', BHS TOC @ 3950'</b>										
Braden Head Sqz	LEAD	140	14.8	1.34	3950' - 5450'	190	25%	Class C		
5.5 in	LEAD	860	13.5	1.85	8775' - 23998'	1600	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent		

## Mewbourne Oil Company, Cousin Eddy Fed Unit Com 36H

Sec 17, T21S, R32E

SHL: 360' FSL 2271' FEL (Sec 17)

BHL: 3859' FSL 330' FEL (Sec 5)

## Well Location GL: 3641'

Point	Calls	Leases	Aliquot	Section	Township	Range	County	Lat	Long	TVD	MD
SHL	SHL: 360' FSL & 2271' FEL (Sec 17)	NMNM094095	SESW	17	21S	32E	Lea	32.4724276	-103.6956357	0'	0'
KOP	KOP: 473' FNL & 330' FEL (Sec 20)	NMNM031375	NENE	20	21S	32E	Lea	32.4701609	-103.6893444	8,374'	8,775'
FTP	FTP/LP: 100' FSL & 330' FEL (Sec 17)	NMNM094095	SESE	17	21S	32E	Lea	32.4717356	-103.6893436	8,947'	9,675'
PPP2	PPP2: 0' FNL & 329' FEL (Sec 17)	NMNM121957	SESE	17	21S	32E	Lea	32.4859940	-103.6893330	8,947'	14,862'
PPP3	PPP3: 0' FNL & 328' FEL (Sec 8)	NMNM014791	SESE	8	21S	32E	Lea	32.5004997	-103.6893223	8,947'	20,140'
BHL	BHL: 3859' FSL & 330' FEL (Sec 5)	NMNM014791	Lot 16	5	21S	32E	Lea	32.5111052	-103.6893144	8,947'	23,998'

## GEOLOGY

Formation	Est. Top (TVD)	Lithology	Mineral Resources	Formation	Est. Top (TVD)	Lithology	Mineral Resources
Rustler	986'	Dolomite/Anhydrite	Usable Water	Delaware (Lamar)	4530'	Limestone	Oil/Natural Gas
Castile				Bell Canyon	4575'	Sandstone	Oil/Natural Gas
Salt Top	1120'	Salt	None	Cherry Canyon	5400'	Sandstone	Oil/Natural Gas
Marker Bed 126	2290'	Salt	None	Manzanita Marker			
Salt Base	4160'	Salt	None	Basal Brushy Canyon	6700'	Sandstone	Oil/Natural Gas
Yates				Bone Spring	8440'	Limestone/Shale	Oil/Natural Gas
Seven Rivers				1st Bone Spring Carbonate	8570'	Limestone	Oil/Natural Gas
Queen				1st Bone Spring Sand	9490'	Sandstone	Oil/Natural Gas
Capitan				2nd Bone Spring Carbonate	9950'	Limestone	Oil/Natural Gas
Grayburg				2nd Bone Spring Sand	10140'	Sandstone	Oil/Natural Gas
San Andres				3rd Bone Spring Carbonate	10725'	Limestone	Oil/Natural Gas
Glorietta				3rd Bone Spring Sand	11110'	Sandstone	Oil/Natural Gas
Yoso				Wolfcamp	11515'	Shale/Sandstone/Limestone	Oil/Natural Gas

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
Casing String	Hole Diameter (in)	Top MD	Top TVD	Bottom MD	Bottom TVD	Casing Description	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	1061'	1061'	13.375" 48# H40 STC	1.62	3.65	6.32	10.62
Intermediate	12.25"	0'	0'	3385'	3385'	9.625" 36# J55 LTC	1.13	1.96	2.75	3.43
Intermediate	12.25"	3385'	3385'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	12.21	14.79
Intermediate	12.25"	4307'	4307'	4450'	4450'	9.625" 40# L80 LTC	1.31	2.44	128.85	160.14
Production	8.75"	0'	0'	8775'	8374'	7 5/8" 29.7# HCP110 GBCD	1.69	2.24	2.95	3.61
Liner	6.75"	8575'	8215'	23998'	8947'	5.5" 20# HPP110 Talon	2.07	2.36	1.78	2.08

All casing strings will be tested in accordance with 43 CFR Part 3172. Must have table for contingency casing.

Is casing new? If used, attach certification as required in Onshore Order #1	Y or N
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
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.	N
Is well located in SOPA but not in R-111-Q?	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-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

## Mewbourne Oil Company, Cousin Eddy Fed Unit Com 36H

Sec 17, T21S, R32E

SHL: 360' FSL 2271' FEL (Sec 17)

BHL: 3859' FSL 330' FEL (Sec 5)

## Design A - Cement Program

Casing	Cement Stage	# sx	Density (ppg)	Yield (ft <sup>3</sup> /sack)	Depth (MD)	Volume (ft <sup>3</sup> )	% Excess	Slurry Description
13.375 in	LEAD	570	12.5	2.12	0' - 869'	1210	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	869' - 1061'	268		Class C: Retarder
9.625 in	LEAD	690	12.5	2.12	0' - 3764'	1470	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3764' - 4450'	268		Class C: Retarder
7.625 in	LEAD	50	12.5	2.12	5450' - 6078'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6078' - 8775'	472		Class H: Retarder, Fluid Loss, Defoamer
5.5 in	LEAD	870	13.5	1.85	8575' - 23998'	1610	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

## Pressure Control Equipment

BOP installed and tested before drilling hole (in):	Size (in)	System Rated WP	Type	Tested to:	Rating Depth
12.25	13.375	5M	Annular	X	2500#/3500#
			Blind Ram	X	5000#
			Pipe Ram	X	
			Double Ram		
			Other*		23,998'

\*Specify if additional ram is utilized.

**Equipment:** Annular, Pipe Rams, Blind Rams, 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.

**Variance Request:** A variance is requested for the use of a flexible choke line from the BOP to the choke manifold. See attached for hydrostatic test chart. Anchors are not required by manufacturer. Variance is requested to use a multi bowl wellhead. Variance is requested to perform break testing according to attached procedure. If a breaktesting variance is approved & incorporated, API Standard 53 will be incorporated and testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater, will be performed.

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 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.

Y	Formation integrity test will be performed per 43 CFR Part 3172. 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 43 CFR Part 3172.
N	Mewbourne Oil Company request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack.

## Mud Program

Depth (MD)	Mud Wt (ppg)	Mud Type
0' - 1061'	8.4 - 8.6	Fresh Water
1061' - 4450'	10.0 - 10.2	Brine
4450' - 8775'	8.6 - 9.7	Cut-Brine
8775' - 23998'	10.0 - 11.5	OBM

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?	Pason/PVT/Visual Monitoring
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## Mewbourne Oil Company, Cousin Eddy Fed Unit Com 36H

Sec 17, T21S, R32E

SHL: 360' FSL 2271' FEL (Sec 17)

BHL: 3859' FSL 330' FEL (Sec 5)

## Logging and Testing Procedures

Logging, Coring and Testing.	
N	Will run GR/CNL from KOP (8775') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Y	No logs are planned based on well control or offset log information. Offset Well: Cousin Eddy Fed Unit Com #37H
N	Coring? If yes, explain:

## Open &amp; Cased Hole Logs Run In the Well

<input type="checkbox"/>	Caliper	<input type="checkbox"/>	Cement Bond Log	<input type="checkbox"/>	CNL/FDC
<input type="checkbox"/>	Compensated Densilog	<input type="checkbox"/>	Compensated Neutron Log	<input type="checkbox"/>	Computer Generated Log
<input type="checkbox"/>	Dip Meter Log	<input checked="" type="checkbox"/>	Directional Survey	<input type="checkbox"/>	Dual Induction/Microresistivity
<input type="checkbox"/>	Dual Lateral Log/Microspherically Focused	<input type="checkbox"/>	Electric Log	<input type="checkbox"/>	Formation Density Compensated Log
<input type="checkbox"/>	Gamma Ray Log	<input checked="" type="checkbox"/>	Measurement While Drilling	<input type="checkbox"/>	Mud Log/Geological Lithology Log
<input type="checkbox"/>	Other	<input type="checkbox"/>	Porosity-Resistivity Log	<input type="checkbox"/>	Sidewall Neutron Log
<input type="checkbox"/>	Sonic Log	<input type="checkbox"/>	Spontaneous Potential Log	<input type="checkbox"/>	Temperature Log

## Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5350 psi
BH Temperature	140
Abnormal Temp, Pressure, or Geologic Hazards	No

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

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

<input type="checkbox"/>	H2S is present
X	H2S Plan attached

## Mewbourne Oil Company, Cousin Eddy Fed Unit Com 36H

Sec 17, T21S, R32E

SHL: 360' FSL 2271' FEL (Sec 17)

BHL: 3859' FSL 330' FEL (Sec 5)

## Other facets of operation

Mewbourne Oil Company also requests approval to implement additional designs as described below &/or in other attachments. BLM will be notified of elected design.

**Offline Cementing Variance:** Variance is requested to perform offline cementing according to the attached procedure. **R-111Q:** Mewbourne proposes performing Open Hole Cementing per R-111Q Guidelines if well is in Potash.

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry	1.6 Dry
Casing String	Hole Diameter (in)	Top MD	Top TVD	Bottom MD	Bottom TVD				1.8 Wet	1.8 Wet
Surface	17.5"	0'	0'	1061'	1061'	13.375" 48# H40 STC	1.62	3.65	6.32	10.62
Intermediate	12.25"	0'	0'	3385'	3385'	9.625" 36# J55 LTC	1.13	1.96	2.75	3.43
Intermediate	12.25"	3385'	3385'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	12.21	14.79
Intermediate	12.25"	4307'	4307'	4450'	4450'	9.625" 40# L80 LTC	1.31	2.44	128.85	160.14
Production	8.75"	0'	0'	9675'	8947'	7 5/8" 29.7# HCP110 GBCD	1.58	2.10	2.68	3.27
Liner	6.75"	8775'	8374'	23998'	8947'	5.5" 20# HPP110 Talon	2.07	2.36	1.80	2.11

All casing strings will be tested in accordance with 43 CFR Part 3172. Must have table for contingency casing.

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.	Y
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.	N
Is well located in SOPA but not in R-111-Q?	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-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

## Design B - Cement Program

Casing	Cement Stage	# sx	Density (ppg)	Yield (ft <sup>3</sup> /sack)	Depth (MD)	Volume (ft <sup>3</sup> )	% Excess	Slurry Description	
								Class C: Salt, Gel, Extender, LCM	Class C: Retarder
13.375 in	LEAD	570	12.5	2.12	0' - 869'	1210	100%	Class C: Salt, Gel, Extender, LCM	Class C: Retarder
	TAIL	200	14.8	1.34	869' - 1061'	268			
9.625 in	LEAD	690	12.5	2.12	0' - 3764'	1470	25%	Class C: Salt, Gel, Extender, LCM	Class C: Retarder
	TAIL	200	14.8	1.34	3764' - 4450'	268			
7.625 in	LEAD	50	12.5	2.12	5450' - 6249'	110	0%	Class C: Salt, Gel, Extender, LCM, Defoamer	Class H: Retarder, Fluid Loss, Defoamer
	TAIL	400	15.6	1.18	6249' - 9675'	472			
5.5 in	LEAD	860	13.5	1.85	8775' - 23998'	1600	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent	

State of New Mexico  
Energy, Minerals and Natural Resources Department

Submit Electronically  
Via E-permitting

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description Effective May 25, 2021

**I. Operator:** Mewbourne Oil Co. **OGRID:** 14744 **Date:** 8/7/25

**II. Type:**  Original  Amendment due to  19.15.27.9.D(6)(a) NMAC  19.15.27.9.D(6)(b) NMAC  Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
COUSIN EDDY FED UNIT COM 36H	O 17 21S 32E	360' FSL x 2271' FEL	2000	3000	6000	
			Y1-800 Y2-600 Y3-400	Y1-800 Y2-600 Y3-400	Y1-1600 Y2-1200 Y3-800	

**IV. Central Delivery Point Name:** COUSIN EDDY FED UNIT COM 36H [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
COUSIN EDDY FED UNIT COM 36H		9/7/25	10/7/25	11/7/25	11/22/25	11/27/25

**VI. Separation Equipment:**  Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:**  Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:**  Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

**Section 2 – Enhanced Plan**  
**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

**IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

**X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.**  Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system  will  will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator  does  does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:**  Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

## Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.**  Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.**  Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

## Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

Page 8

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	<i>Bradley Bishop</i>
Printed Name:	BRADLEY BISHOP
Title:	REGULATORY MANAGER
E-mail Address:	BBISHOP@MEWBOURNE.COM
Date:	8/7/25
Phone:	575-393-5905
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

## Mewbourne Oil Company

## Natural Gas Management Plan – Attachment

VI. Separation equipment will be sized by construction engineering staff based on stated manufacturer daily throughput capacities and anticipated daily production rates to ensure adequate capacity. Closed vent system piping, compression needs, and VRUs will be sized utilizing ProMax modelling software to ensure adequate capacity for anticipated production volumes and conditions.

VII. Mewbourne Oil Company (MOC) will take following actions to comply with the regulations listed in 19.15.27.8 :

- A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.
- B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.
- C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will be analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.
- D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.
- E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.
- F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

the volume of natural gas flared from existing process piping or a flowline piped from equipment such as high pressure separators, heater treaters, or vapor recovery units associated with a well or facility associated with a well authorized by an APD issued after May 25, 2021 that has an average daily production greater than 60 Mcf/day. If metering is not practicable due to circumstances such as low flow rate or low pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

- VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.



## Mewbourne Oil Co.

### BOP Break Testing Variance

Mewbourne Oil Company requests a variance from the minimum standards for well control equipment testing of 43 CFR 3172 to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with batch drilling & offline cementing operations. Modern rig upgrades which facilitate pad drilling allow the BOP stack to be moved between wells on a multi-well pad without breaking any BOP stack components apart.

Widespread use of these technologies has led to break testing BOPE being endorsed as safe and reliable. American Petroleum Institute (API) best practices are frequently used by regulators to develop their regulations. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (5<sup>th</sup> Ed., Dec. 2018) Section 5.3.7.1 states "A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component."

### **Procedures**

1. Full BOPE test at first installation on the pad.
  - Full BOPE test at least every 21 days.
  - Function test BOP elements per 43 CFR 3172.
  - Contact the BLM if a well control event occurs.
2. After the well section is secured and the well is confirmed to be static, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.  
Two breaks on the BOPE will be made (Fig. 1).
  - Connection between the flex line and the HCR valve
  - Connection between the wellhead and the BOP quick connect (Fig. 5 & 6).
3. A capping flange will be installed after cementing per wellhead vendor procedure & casing pressure will be monitored via wellhead valve.
4. The BOP will be removed and carried by a hydraulic carrier (Fig. 3 & 4).
5. The rig will then walk to the next well.
6. Confirm that the well is static and remove the capping flange.
7. The connection between the flex line and HCR valve and the connection between the wellhead and the BOP quick connect will be reconnected.
8. Install a test plug into the wellhead.
9. A test will then be conducted against the upper pipe rams and choke, testing both breaks (Fig. 1 & 2).
10. The test will be held at 250 psi low and to the high value submitted in the APD, not to exceed 5000 psi.
11. The annular, blind rams and lower pipe rams will then be function tested.
12. If a pad consists of three or more wells, steps 4 through 11 will be repeated.



13. A break test will only be conducted if the intermediate section can be drilled and cased within 21 days of the last full BOPE test.

## **Barriers**

### **Before Nipple Down:**

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff

### **After Nipple Down:**

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff
- Offline cementing tool and/or cement head
- Capping flange after cementing

## **Summary**

A variance is requested to only test broken pressure seals on the BOPE when moving between wells on a multi-well pad if the following conditions are met:

- A full BOPE test is conducted on the first well on the pad. API Standard 53 requires testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater.
- If the first well on the pad is not the well with the deepest intermediate section, a full BOPE test will also be performed when moving to a deeper well.
- The hole section being drilled has a MASP under 5000 psi.
- If a well control event occurs, Mewbourne will contact BLM for permission to continue break testing.
- If significant (>50%) losses occur, full BOPE testing will be required going forward.
- Full BOPE test will be required prior to drilling the production hole.

While walking the rig, the BOP stack will be secured via hydraulic winch or hydraulic carrier. A full BOPE test will be performed at least every 21 days.

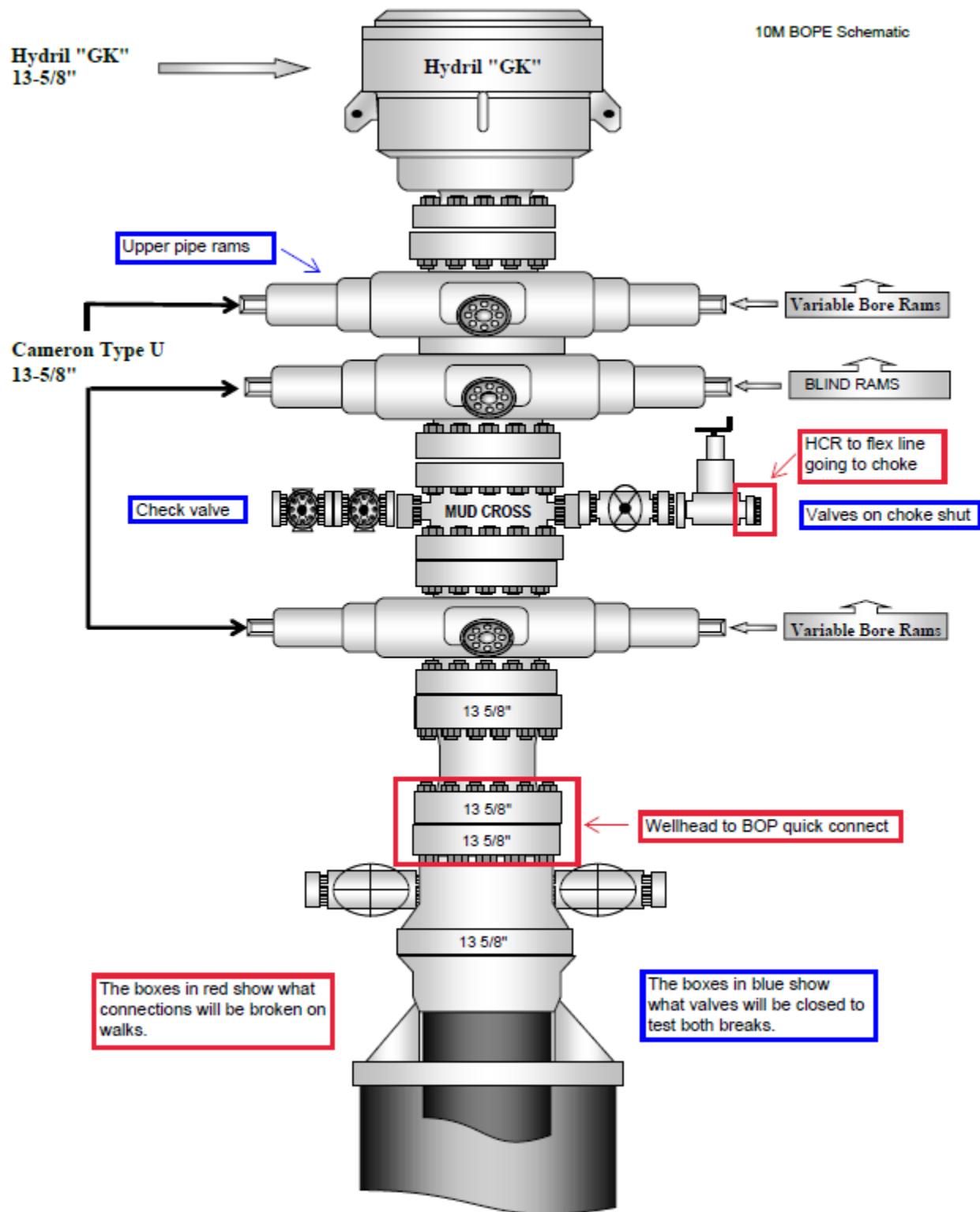


Figure 1. BOP diagram



## 5M BOPE & Closed Loop Equipment Schematic

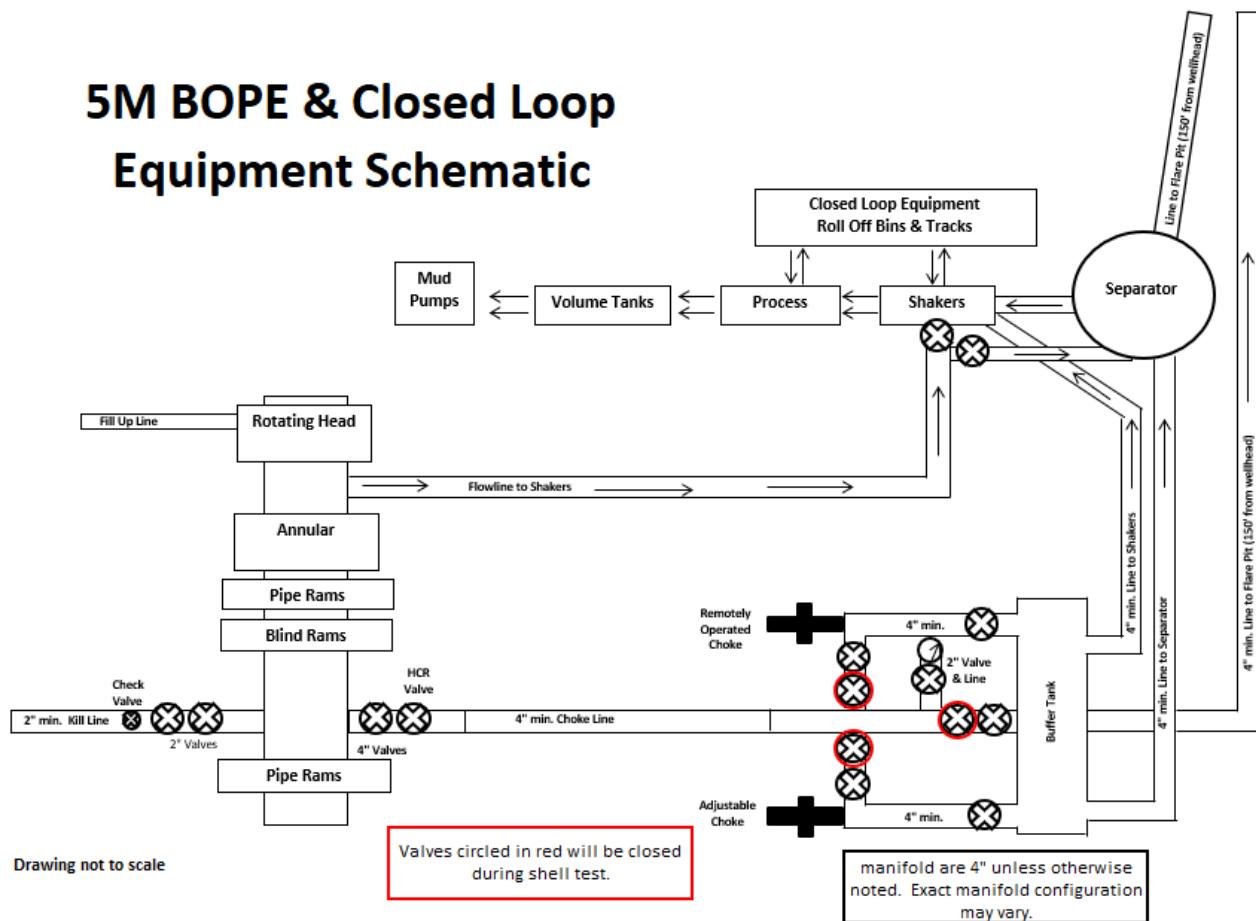


Figure 2. BOPE diagram



Figure 3. BOP handling system



Figure 4. BOP handling system

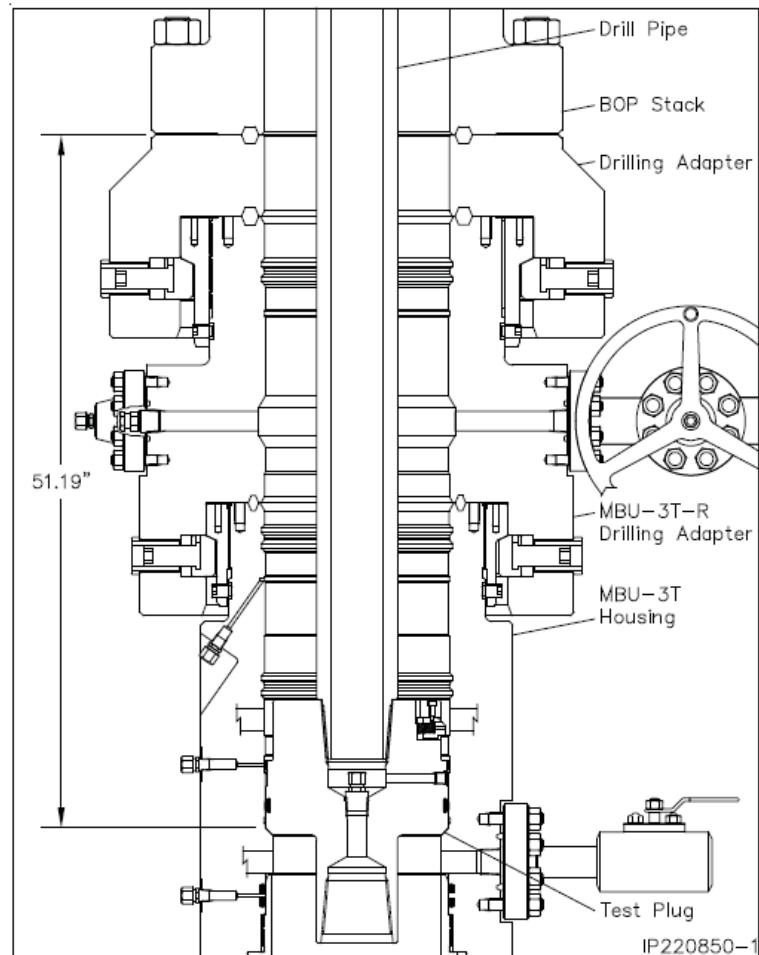


Figure 5. Cactus 5M wellhead with BOP quick connect

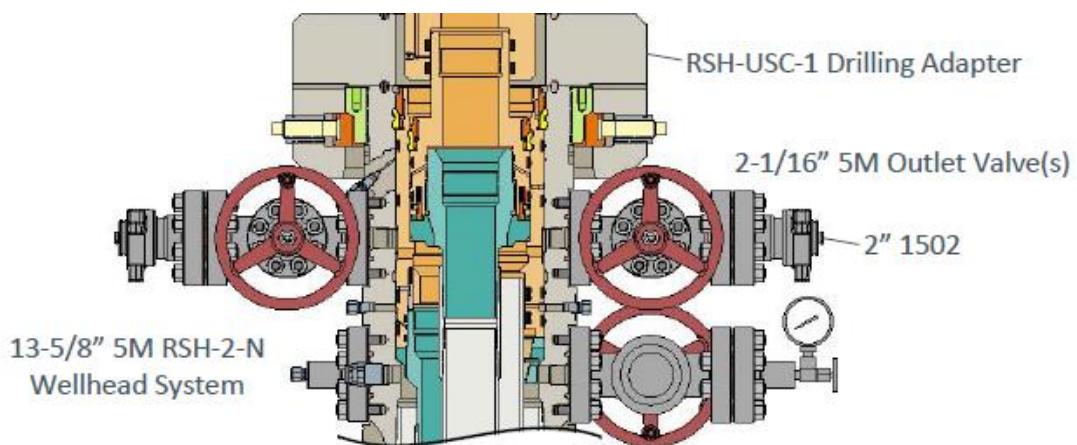


Figure 6. Vault 5M wellhead with BOP quick connect



## Mewbourne Oil Co.

### Surface & Intermediate Offline Cementing Variance

Mewbourne Oil Company requests a variance to perform offline cementing for surface and intermediate casing strings with the following conditions:

- Offline cementing will not be performed on production casing.
- Offline cementing will not be performed on a hole section with MASP > 5000 psi.
- Offline cementing will not be performed concurrently with offset drilling.

#### Surface Casing Order of Operations:

1. Run 13 3/8" surface casing as per normal operations (TPGS and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Confirm well is static.
4. Make up 13 5/8" wellhead or wellhead landing ring assembly and land on 20" conductor.
5. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
6. Confirm well is static.
7. Back out landing joint and pull to rig floor. Lay down landing joint.
8. Walk rig to next well on pad with cement crew standing by to rig up.
9. Make up offline cement tool with forklift per wellhead manufacturer (Fig. 1 & 2).
10. Make up cement head on top of offline cement tool with forklift.
11. Commence cement operations.
12. If cement circulates, confirm well is static and proceed to step 16.
13. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
14. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
15. Confirm well is static.
16. Once cement job is complete, the cement head and offline cementing tool are removed.  
The wellhead technician returns to cellar to install wellhead/valves.
17. Install wellhead capping flange.

#### Barriers

##### Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus



#### After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing

#### 20" Surface Casing Order of Operations (4 string area):

1. Run 20" surface casing as per normal operations (TPGS and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
4. Confirm well is static.
5. Back out landing joint and pull to rig floor. Lay down landing joint.
6. Make up cement head.
7. Walk rig to next well on pad with cement crew standing by to rig up.
8. Commence cement operations.
9. If cement circulates, confirm well is static and proceed to step 13.
10. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
11. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
12. Confirm well is static.
13. Once cement job is complete, remove cement head and install cap.

#### Barriers

#### Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement Head

#### After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement head
- Capping flange after cementing



## Intermediate Casing Order of Operations:

1. Run casing as per normal operations (float shoe and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Confirm well is static (if running SBM).
4. Land casing.
5. Fill pipe, circulate casing capacity and confirm floats are still holding.
6. Confirm well is static.
7. Back out landing joint and pull to rig floor. Lay down landing joint. Install packoff & test.
8. Nipple down BOP.
9. Walk rig to next well on pad with cement crew standing by to rig up.
10. Make up offline cement tool using forklift per wellhead manufacturer (Fig. 3 - 8).
11. Make up cement head on top of offline cement tool.
12. Commence cement operations.
13. If cement circulates, confirm well is static and proceed to step 16.
14. If cement does not circulate (when required), notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
15. Pump remedial cement job if required.
16. Confirm well is static.
17. Remove cement head and offline cementing tool.
18. Install wellhead capping flange and test.

## Barriers

### Before Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff

### After Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing



## Risks:

- Pressure build up in annulus before cementing
  - Contact BLM if a well control event occurs.
  - Rig up 3<sup>rd</sup> party pump or rig pumps to pump down casing and kill well.
  - Returns will be taken through the wellhead valves to a choke manifold (Fig 9 & 10).
  - Well could also be killed through the wellhead valves down the annulus.

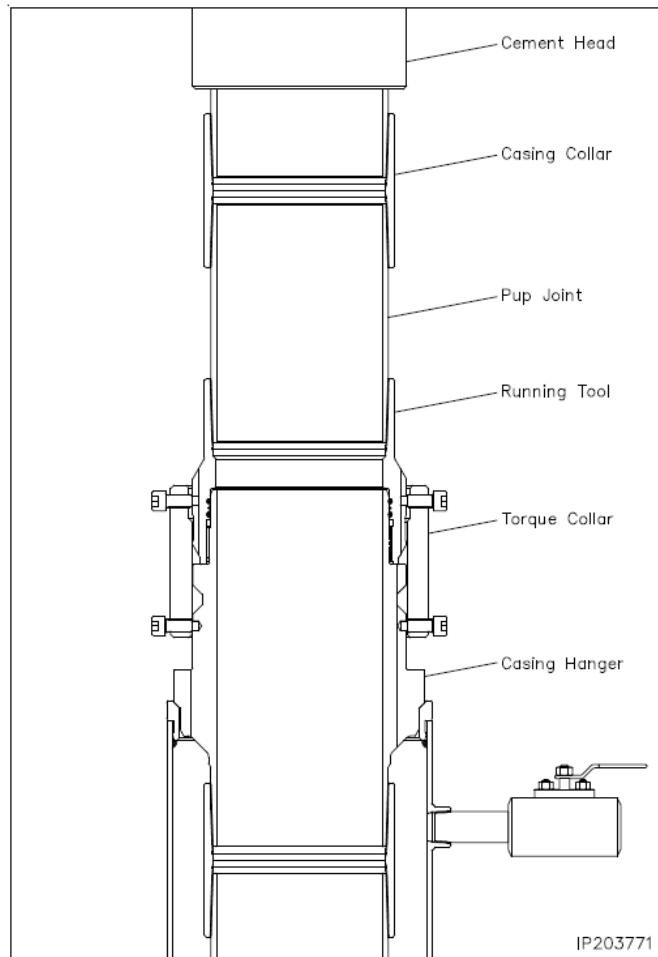


Figure 1. Cactus 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

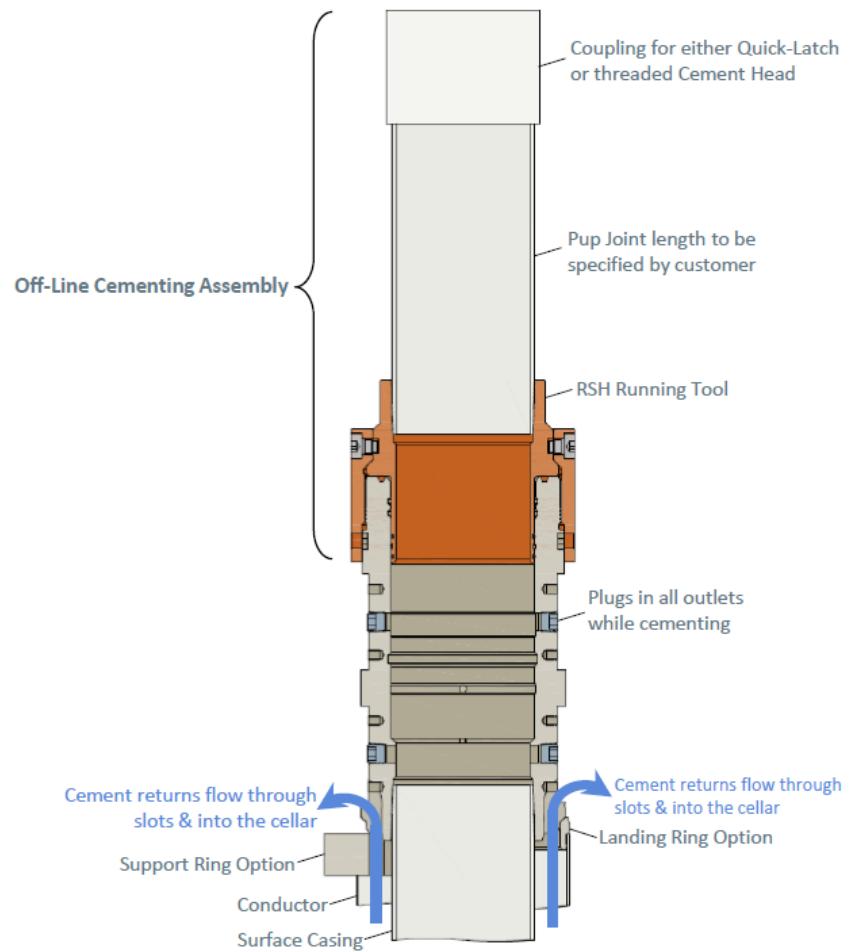


Figure 2. Vault 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

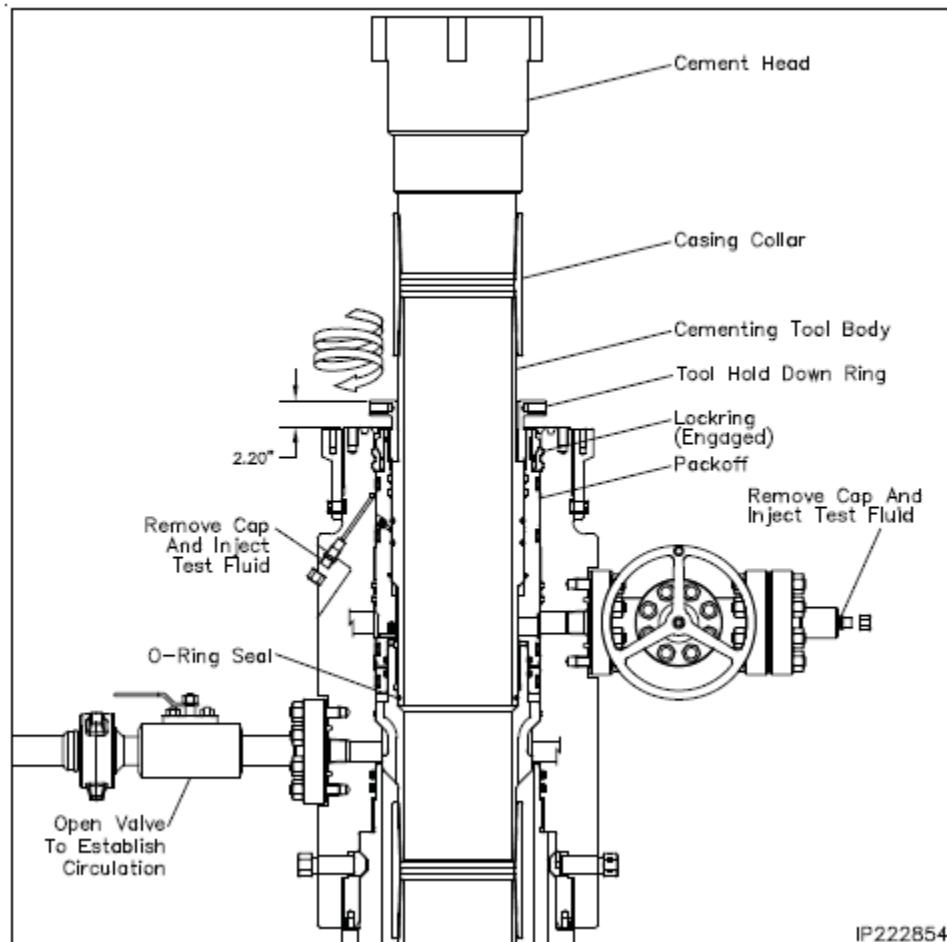


Figure 3. Cactus 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

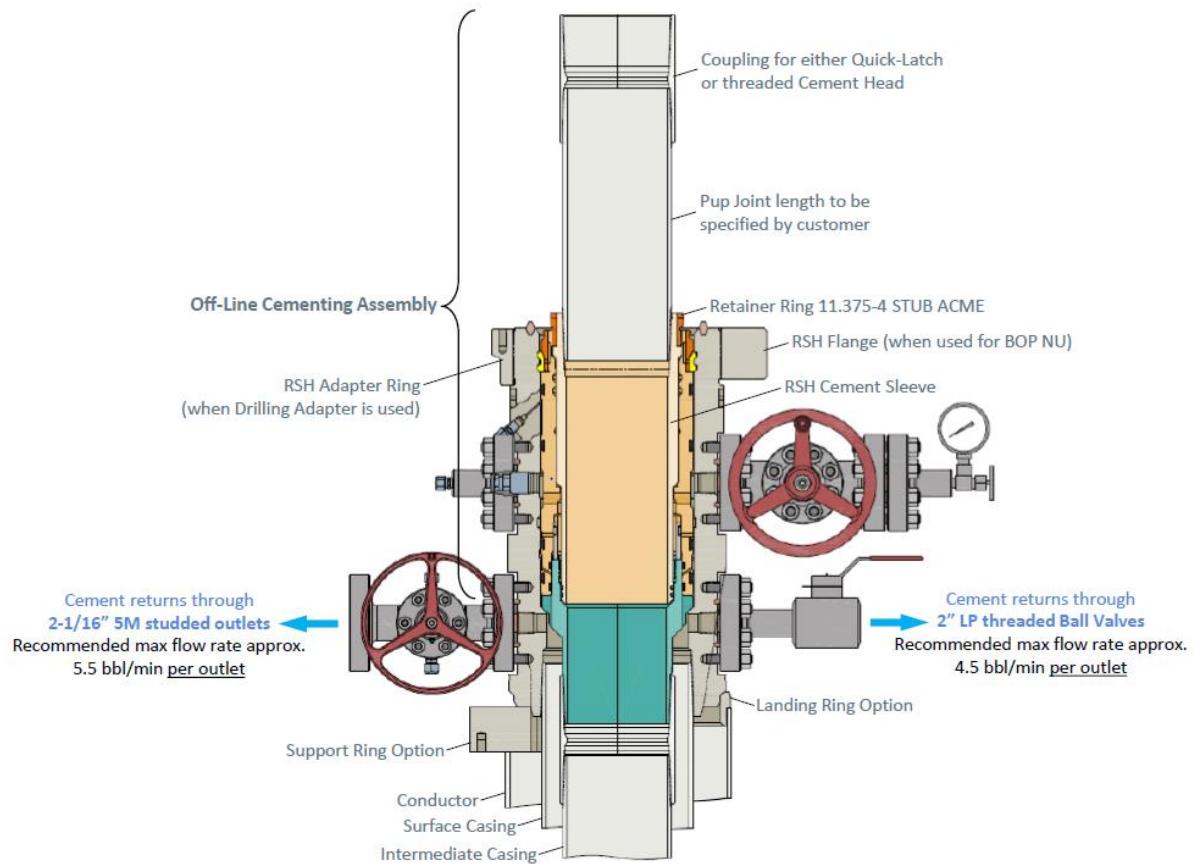


Figure 4. Vault 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

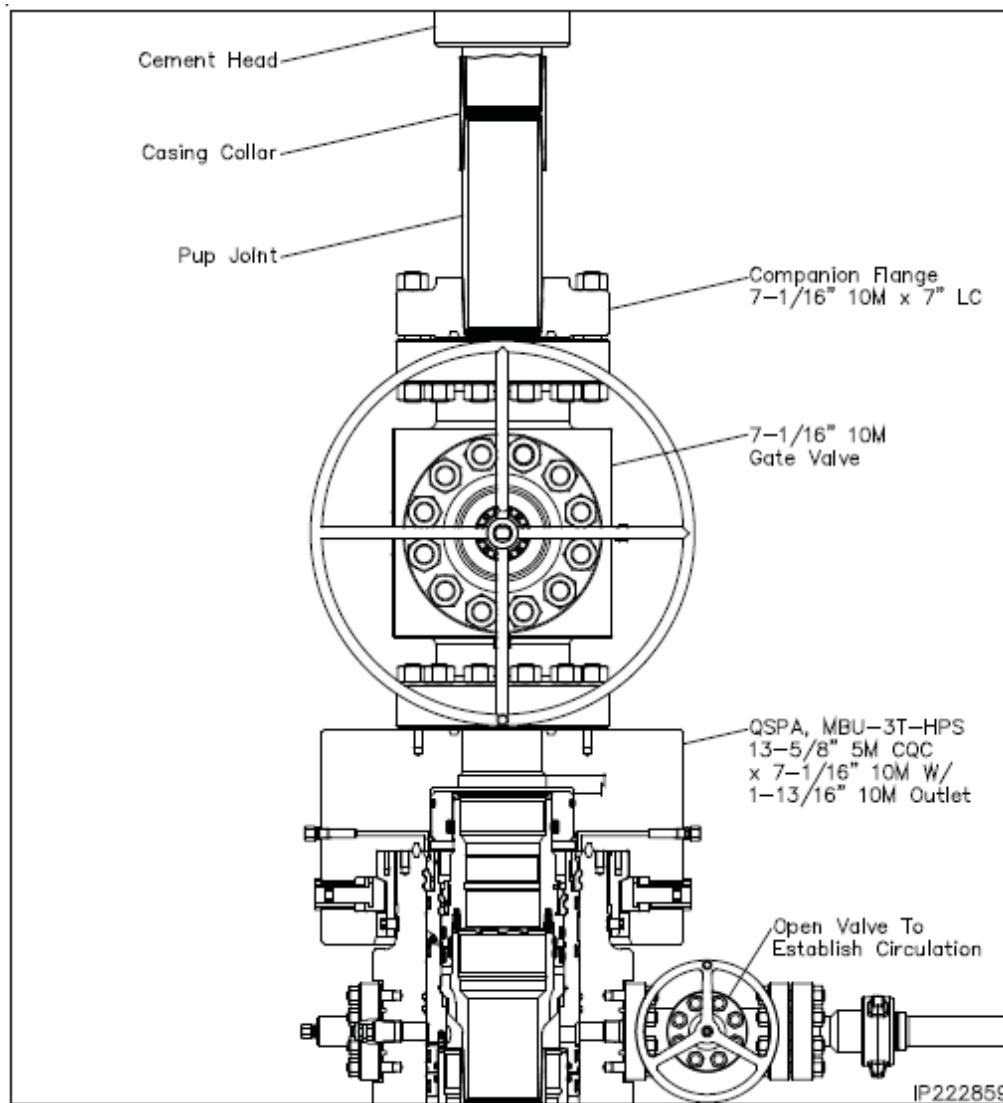


Figure 5. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

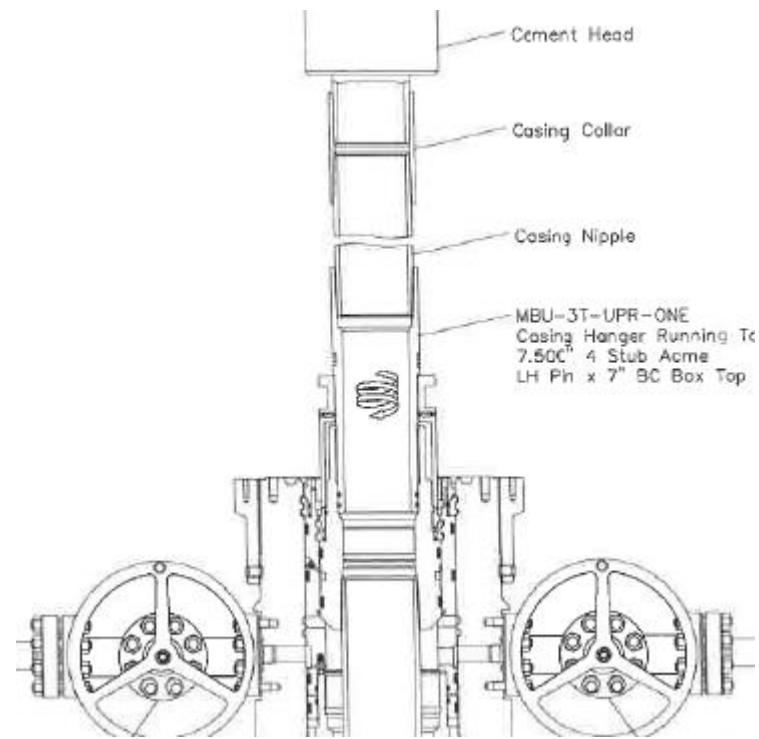


Figure 6. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

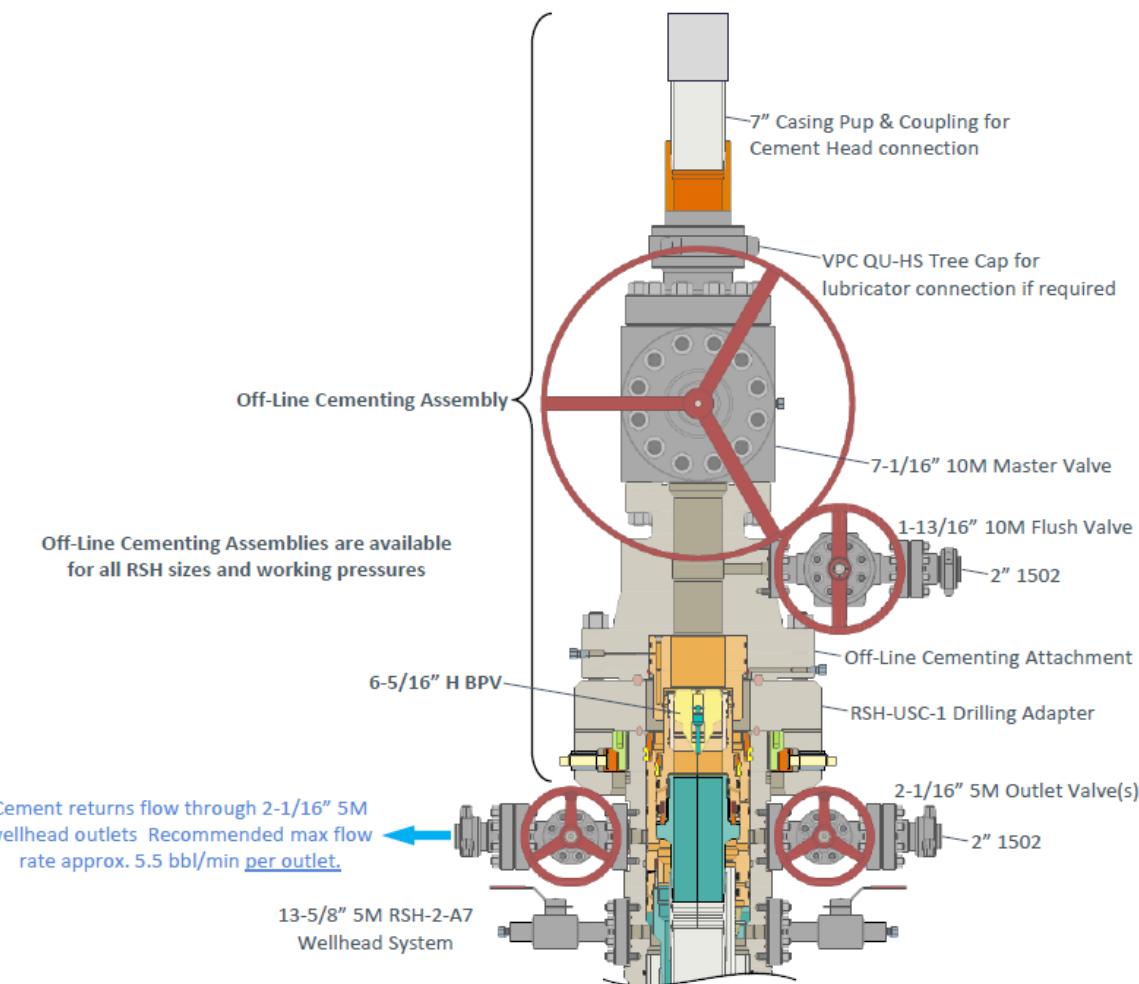


Figure 7. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

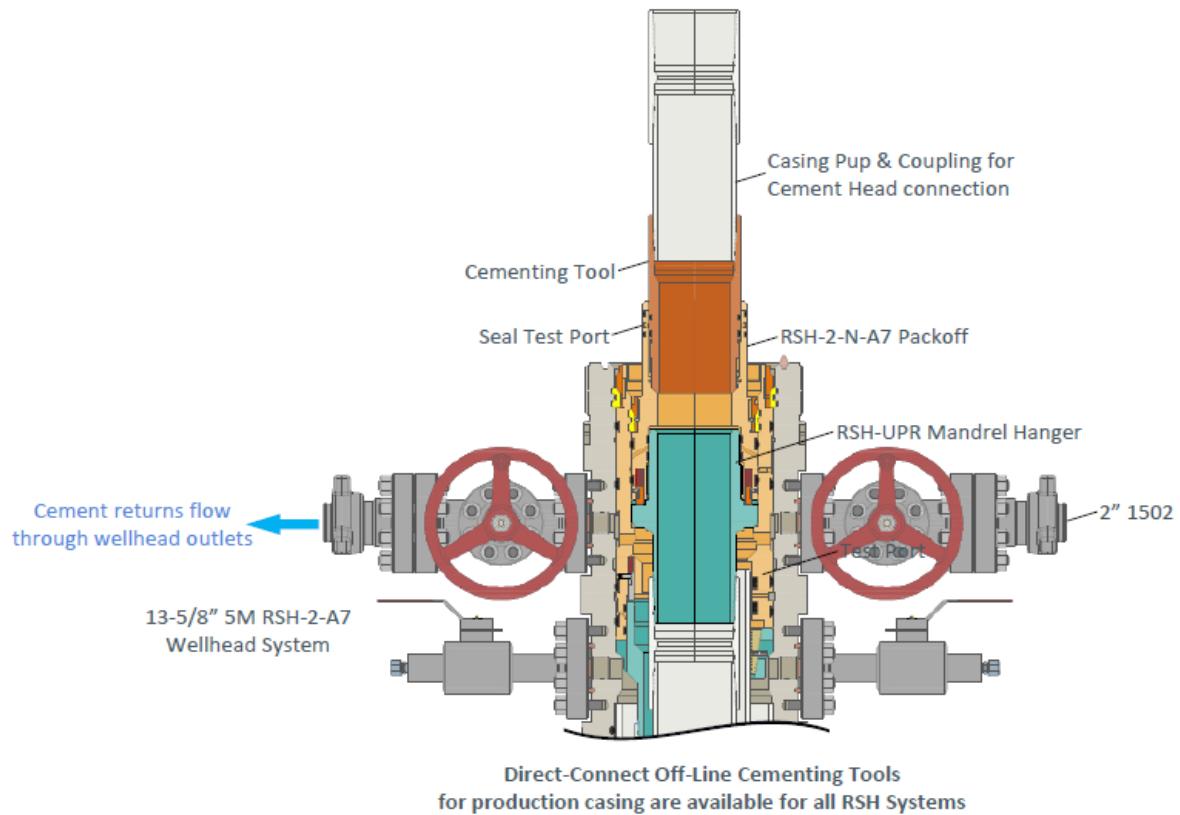


Figure 8. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

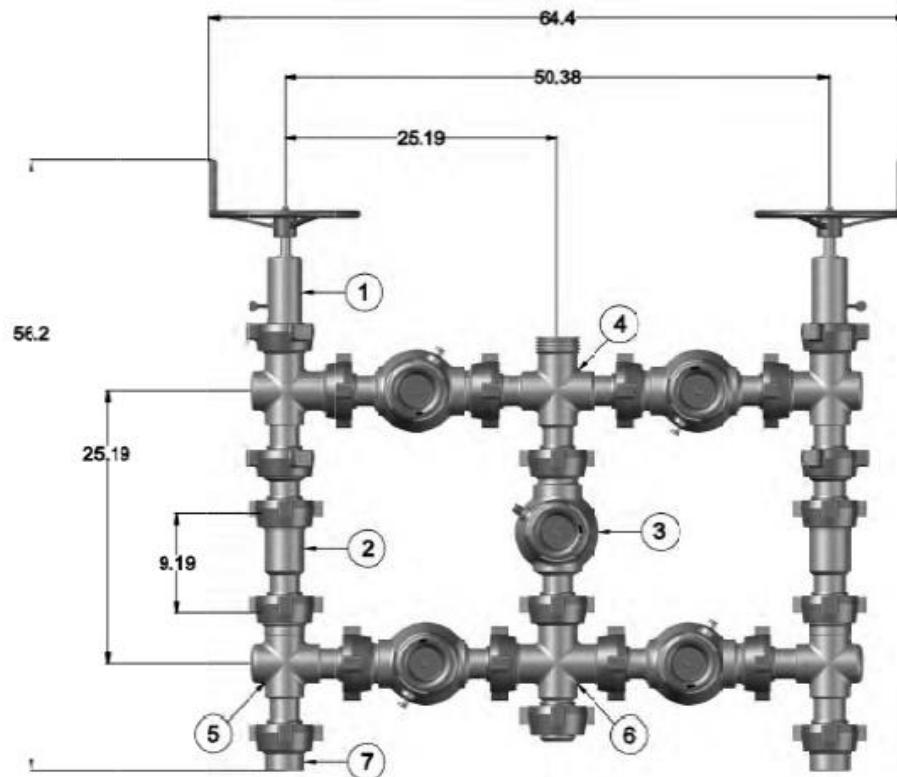


Figure 9. Five valve 15k choke manifold.

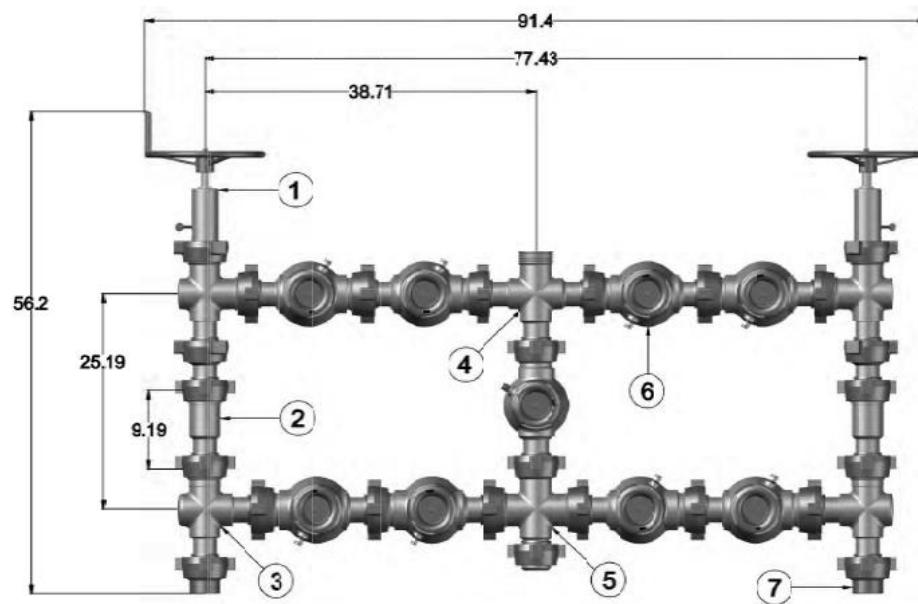


Figure 10. Nine valve 15k choke manifold.



## Mewbourne Oil Co.

### BOP Break Testing Variance

Mewbourne Oil Company requests a variance from the minimum standards for well control equipment testing of 43 CFR 3172 to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with batch drilling & offline cementing operations. Modern rig upgrades which facilitate pad drilling allow the BOP stack to be moved between wells on a multi-well pad without breaking any BOP stack components apart.

Widespread use of these technologies has led to break testing BOPE being endorsed as safe and reliable. American Petroleum Institute (API) best practices are frequently used by regulators to develop their regulations. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (5<sup>th</sup> Ed., Dec. 2018) Section 5.3.7.1 states "A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component."

### Procedures

1. Full BOPE test at first installation on the pad.
  - Full BOPE test at least every 21 days.
  - Function test BOP elements per 43 CFR 3172.
  - Contact the BLM if a well control event occurs.
2. After the well section is secured and the well is confirmed to be static, the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad.  
Two breaks on the BOPE will be made (Fig. 1).
  - Connection between the flex line and the HCR valve
  - Connection between the wellhead and the BOP quick connect (Fig. 5 & 6).
3. A capping flange will be installed after cementing per wellhead vendor procedure & casing pressure will be monitored via wellhead valve.
4. The BOP will be removed and carried by a hydraulic carrier (Fig. 3 & 4).
5. The rig will then walk to the next well.
6. Confirm that the well is static and remove the capping flange.
7. The connection between the flex line and HCR valve and the connection between the wellhead and the BOP quick connect will be reconnected.
8. Install a test plug into the wellhead.
9. A test will then be conducted against the upper pipe rams and choke, testing both breaks (Fig. 1 & 2).
10. The test will be held at 250 psi low and to the high value submitted in the APD, not to exceed 5000 psi.
11. The annular, blind rams and lower pipe rams will then be function tested.
12. If a pad consists of three or more wells, steps 4 through 11 will be repeated.



13. A break test will only be conducted if the intermediate section can be drilled and cased within 21 days of the last full BOPE test.

## **Barriers**

### **Before Nipple Down:**

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff

### **After Nipple Down:**

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff
- Offline cementing tool and/or cement head
- Capping flange after cementing

## **Summary**

A variance is requested to only test broken pressure seals on the BOPE when moving between wells on a multi-well pad if the following conditions are met:

- A full BOPE test is conducted on the first well on the pad. API Standard 53 requires testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater.
- If the first well on the pad is not the well with the deepest intermediate section, a full BOPE test will also be performed when moving to a deeper well.
- The hole section being drilled has a MASP under 5000 psi.
- If a well control event occurs, Mewbourne will contact BLM for permission to continue break testing.
- If significant (>50%) losses occur, full BOPE testing will be required going forward.
- Full BOPE test will be required prior to drilling the production hole.

While walking the rig, the BOP stack will be secured via hydraulic winch or hydraulic carrier. A full BOPE test will be performed at least every 21 days.

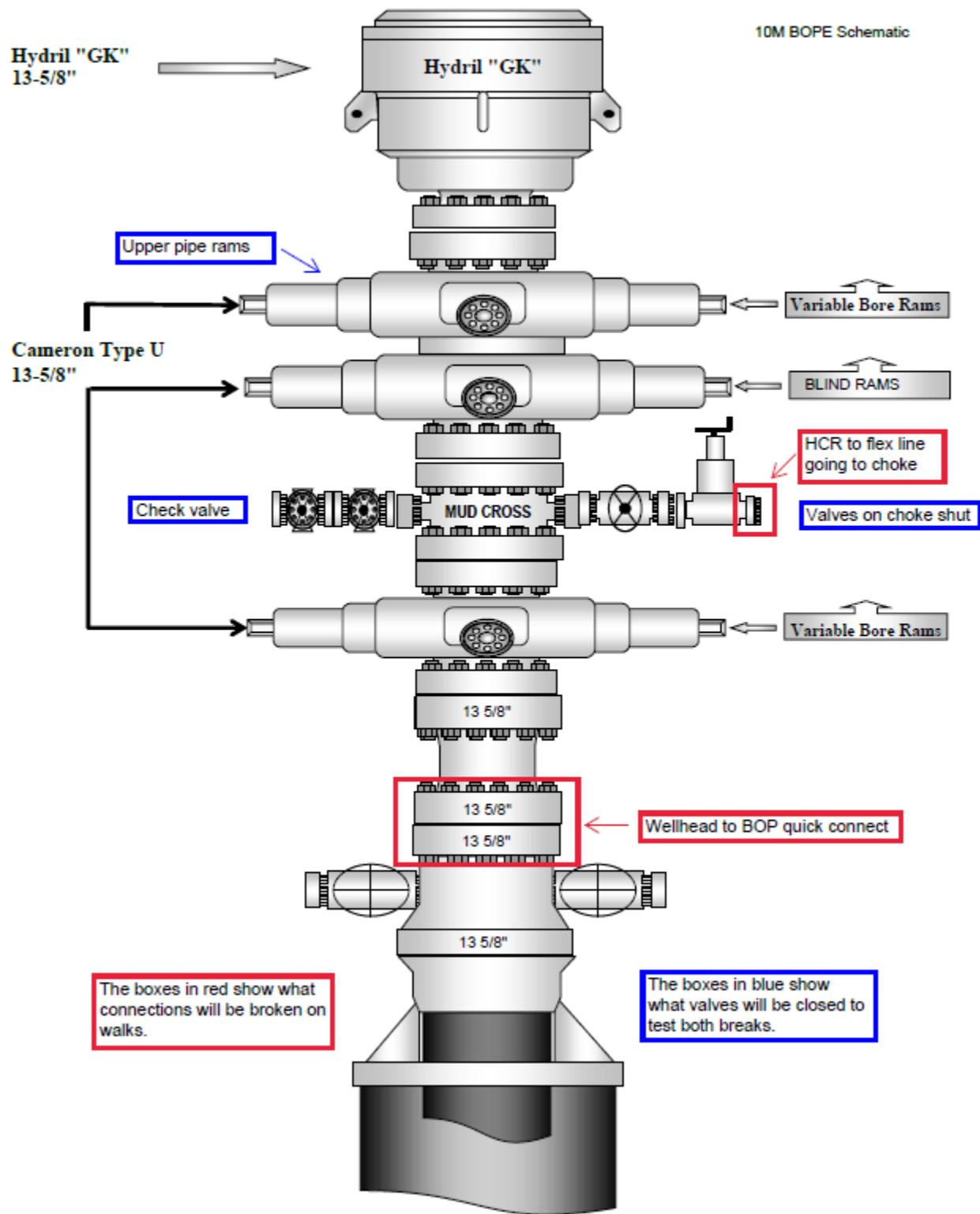


Figure 1. BOP diagram



## 5M BOPE & Closed Loop Equipment Schematic

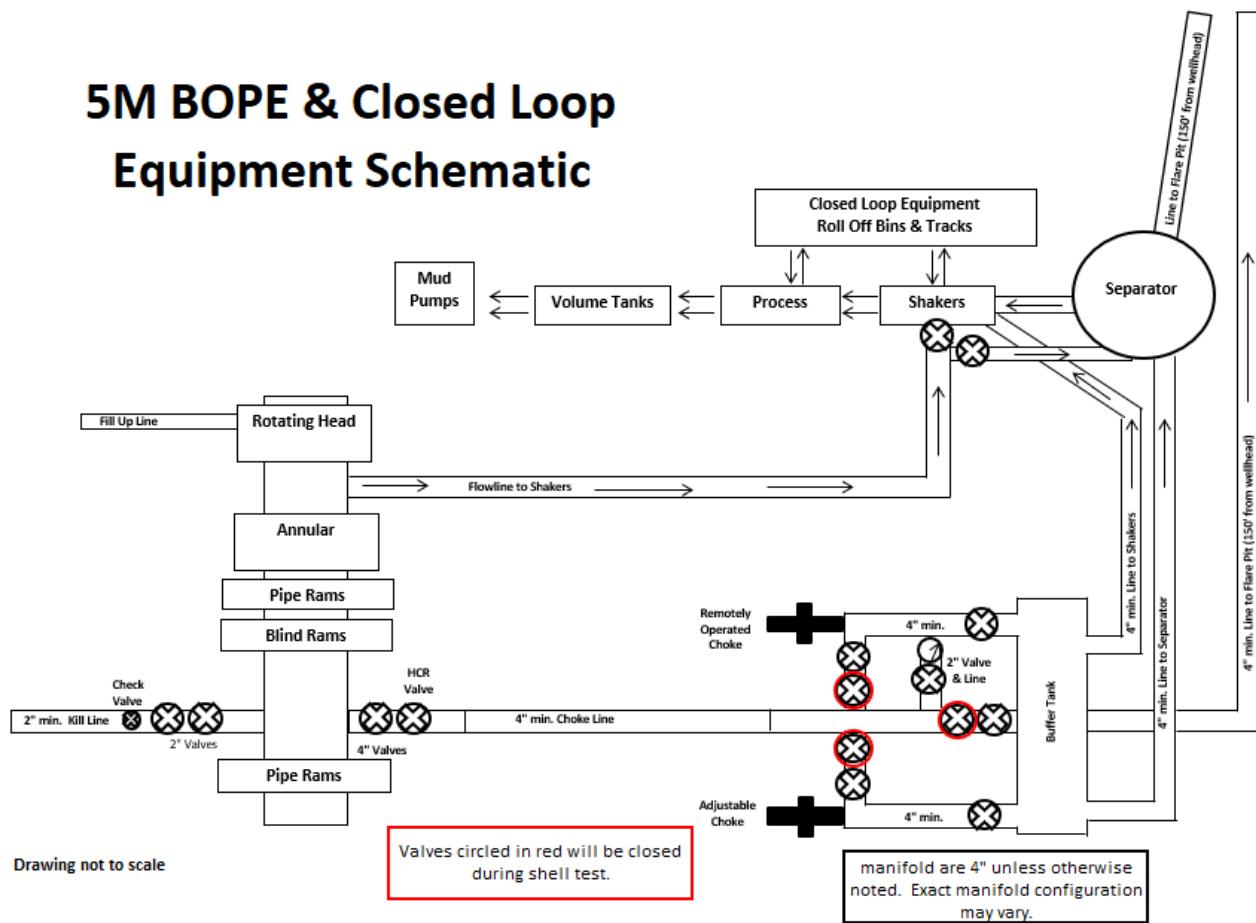


Figure 2. BOPE diagram



Figure 3. BOP handling system



Figure 4. BOP handling system

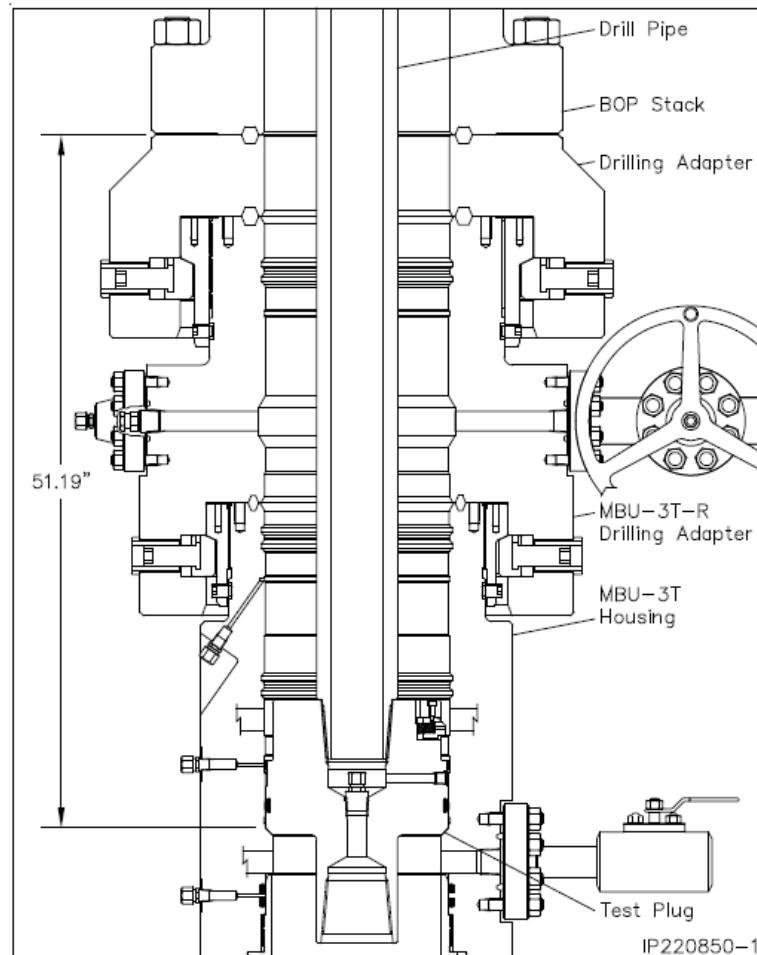


Figure 5. Cactus 5M wellhead with BOP quick connect

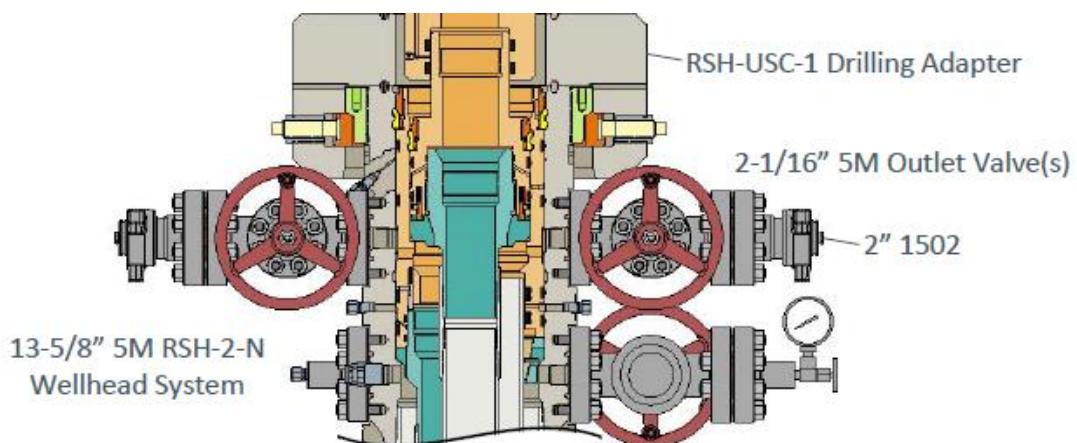


Figure 6. Vault 5M wellhead with BOP quick connect



## Mewbourne Oil Co.

### Surface & Intermediate Offline Cementing Variance

Mewbourne Oil Company requests a variance to perform offline cementing for surface and intermediate casing strings with the following conditions:

- Offline cementing will not be performed on production casing.
- Offline cementing will not be performed on a hole section with MASP > 5000 psi.
- Offline cementing will not be performed concurrently with offset drilling.

#### Surface Casing Order of Operations:

1. Run 13 3/8" surface casing as per normal operations (TPGS and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Confirm well is static.
4. Make up 13 5/8" wellhead or wellhead landing ring assembly and land on 20" conductor.
5. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
6. Confirm well is static.
7. Back out landing joint and pull to rig floor. Lay down landing joint.
8. Walk rig to next well on pad with cement crew standing by to rig up.
9. Make up offline cement tool with forklift per wellhead manufacturer (Fig. 1 & 2).
10. Make up cement head on top of offline cement tool with forklift.
11. Commence cement operations.
12. If cement circulates, confirm well is static and proceed to step 16.
13. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
14. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
15. Confirm well is static.
16. Once cement job is complete, the cement head and offline cementing tool are removed.  
The wellhead technician returns to cellar to install wellhead/valves.
17. Install wellhead capping flange.

#### Barriers

##### Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus



#### After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing

#### 20" Surface Casing Order of Operations (4 string area):

1. Run 20" surface casing as per normal operations (TPGS and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
4. Confirm well is static.
5. Back out landing joint and pull to rig floor. Lay down landing joint.
6. Make up cement head.
7. Walk rig to next well on pad with cement crew standing by to rig up.
8. Commence cement operations.
9. If cement circulates, confirm well is static and proceed to step 13.
10. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
11. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
12. Confirm well is static.
13. Once cement job is complete, remove cement head and install cap.

#### Barriers

#### Before Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement Head

#### After Walk:

- Float(s) in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Cement head
- Capping flange after cementing



## Intermediate Casing Order of Operations:

1. Run casing as per normal operations (float shoe and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Confirm well is static (if running SBM).
4. Land casing.
5. Fill pipe, circulate casing capacity and confirm floats are still holding.
6. Confirm well is static.
7. Back out landing joint and pull to rig floor. Lay down landing joint. Install packoff & test.
8. Nipple down BOP.
9. Walk rig to next well on pad with cement crew standing by to rig up.
10. Make up offline cement tool using forklift per wellhead manufacturer (Fig. 3 - 8).
11. Make up cement head on top of offline cement tool.
12. Commence cement operations.
13. If cement circulates, confirm well is static and proceed to step 16.
14. If cement does not circulate (when required), notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
15. Pump remedial cement job if required.
16. Confirm well is static.
17. Remove cement head and offline cementing tool.
18. Install wellhead capping flange and test.

## Barriers

### Before Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff

### After Nipple Down:

- Floats in casing
- Kill weight fluid in casing
- Kill weight fluid in annulus
- Solid body mandrel and/or packoff
- Offline cementing tool tested to 5000 psi and cement head
- Capping flange after cementing



## Risks:

- Pressure build up in annulus before cementing
  - Contact BLM if a well control event occurs.
  - Rig up 3<sup>rd</sup> party pump or rig pumps to pump down casing and kill well.
  - Returns will be taken through the wellhead valves to a choke manifold (Fig 9 & 10).
  - Well could also be killed through the wellhead valves down the annulus.

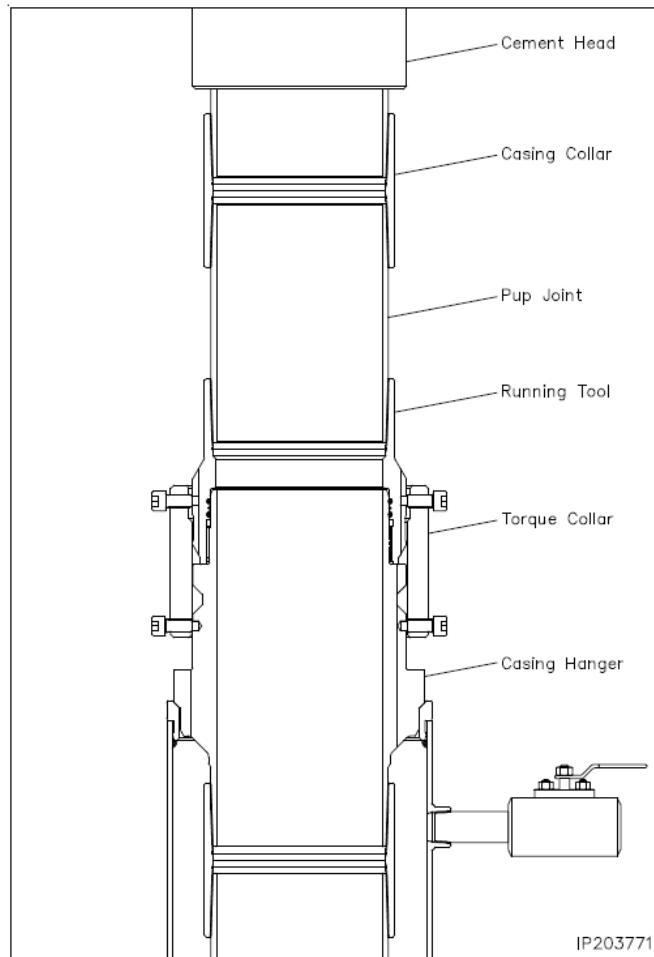


Figure 1. Cactus 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

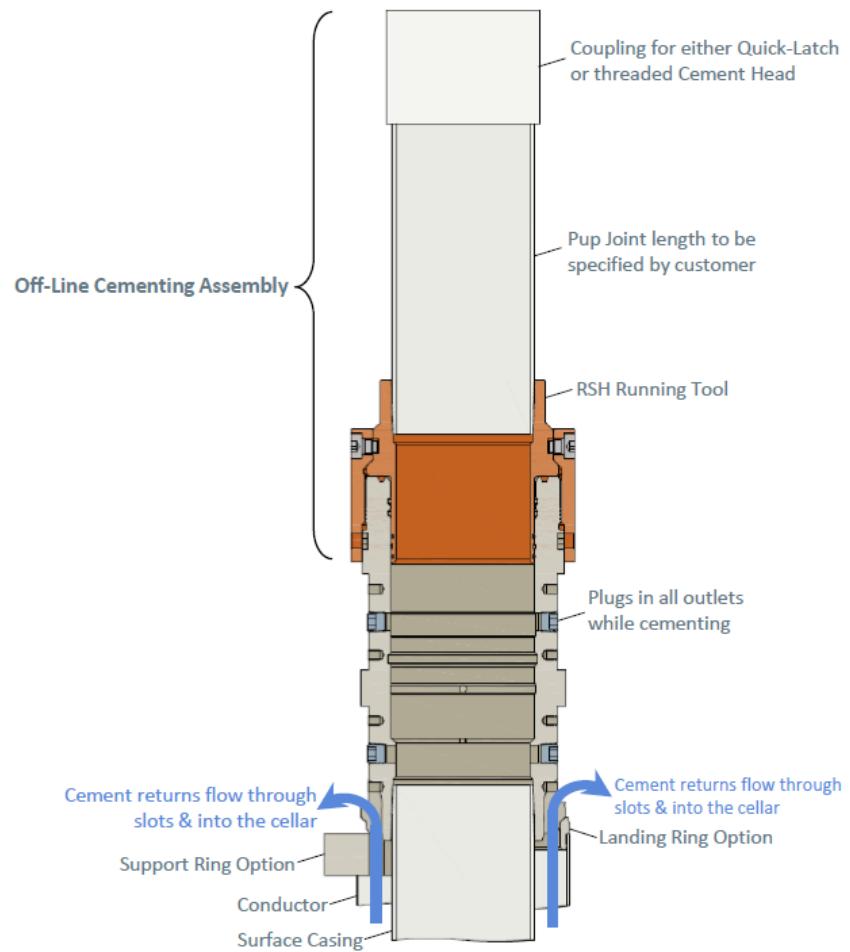


Figure 2. Vault 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

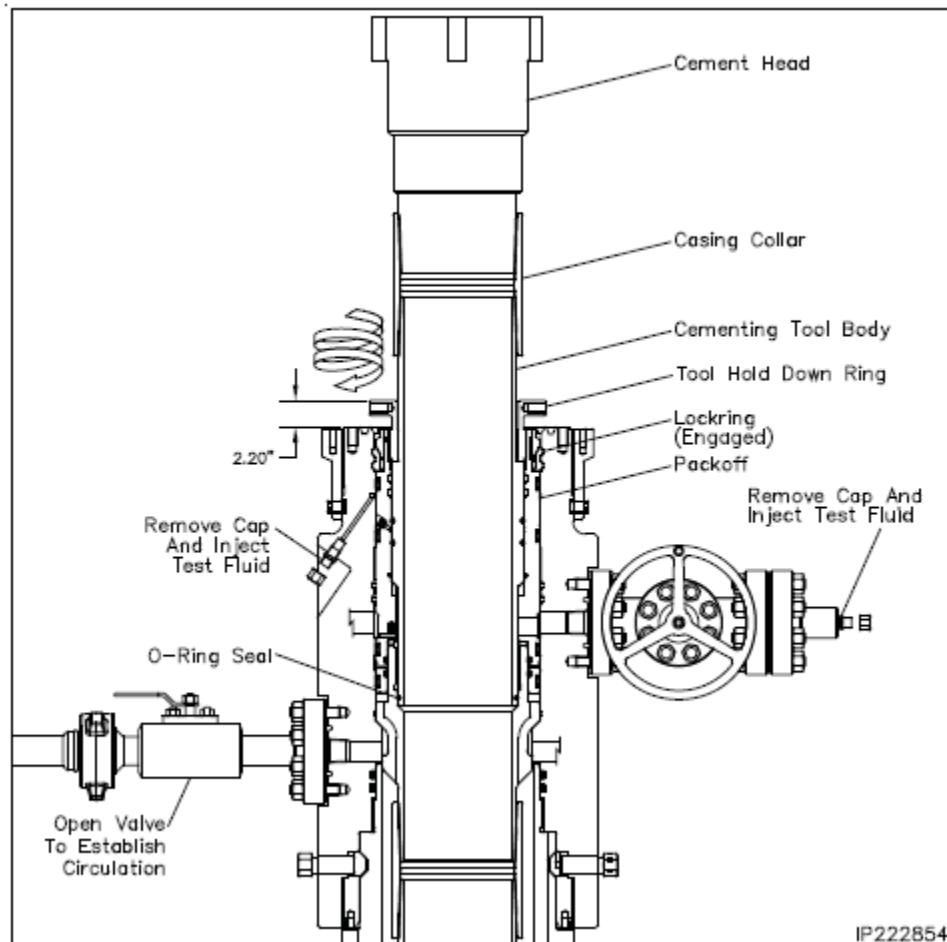


Figure 3. Cactus 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

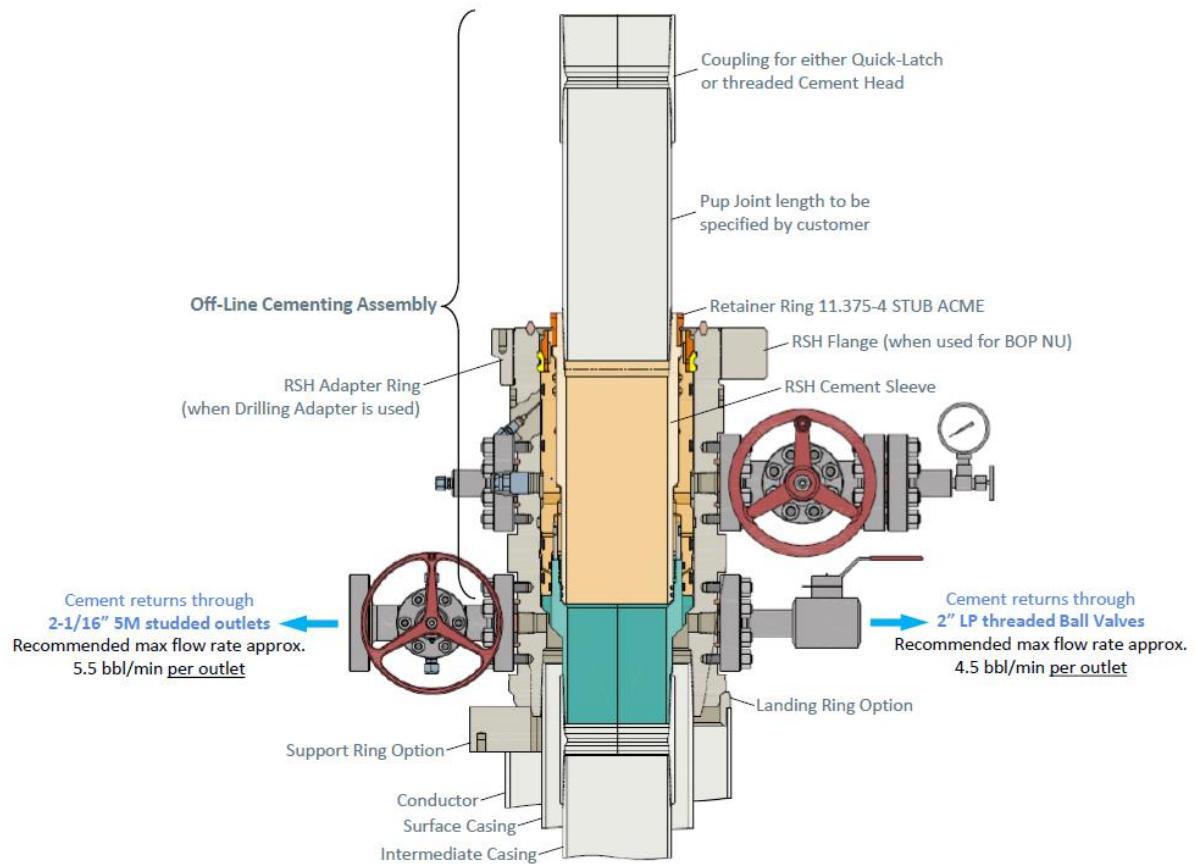


Figure 4. Vault 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

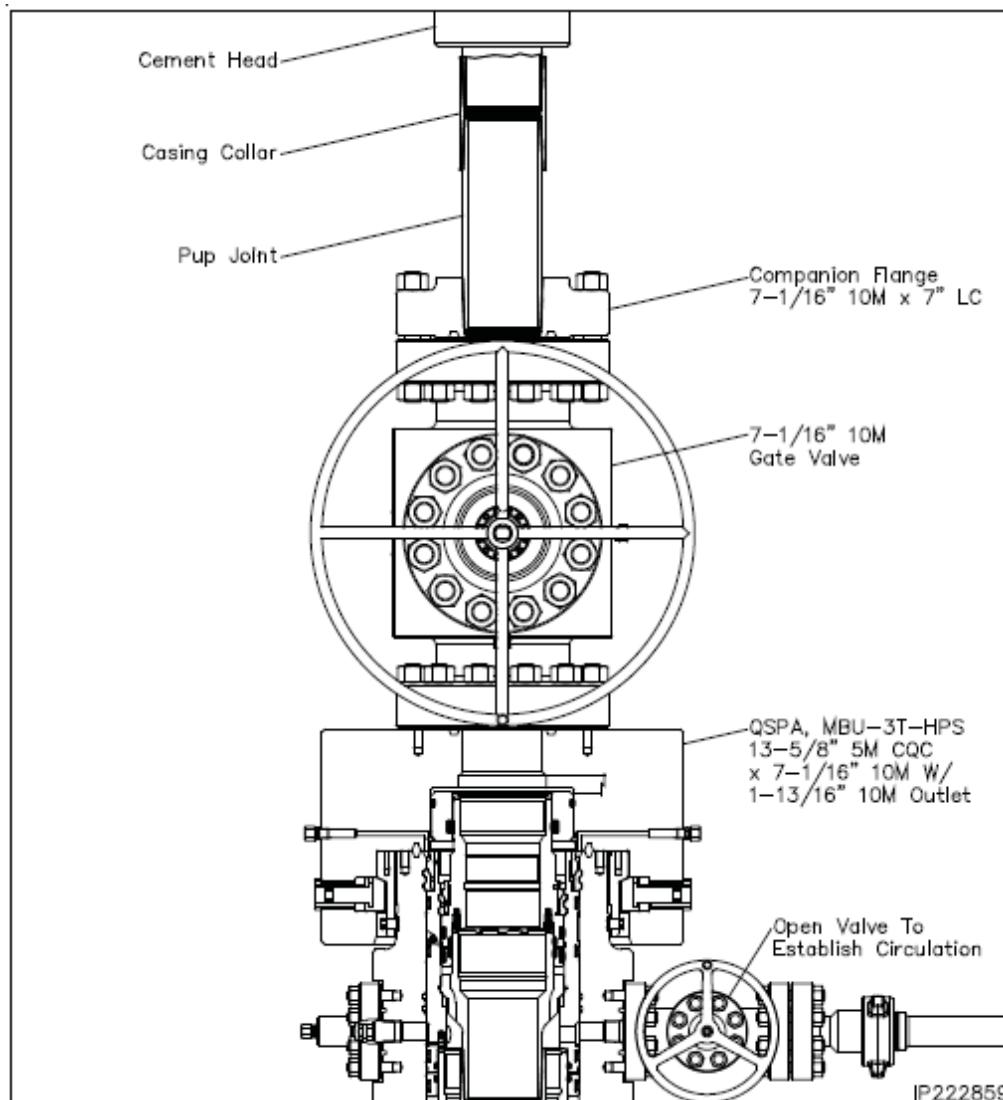


Figure 5. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

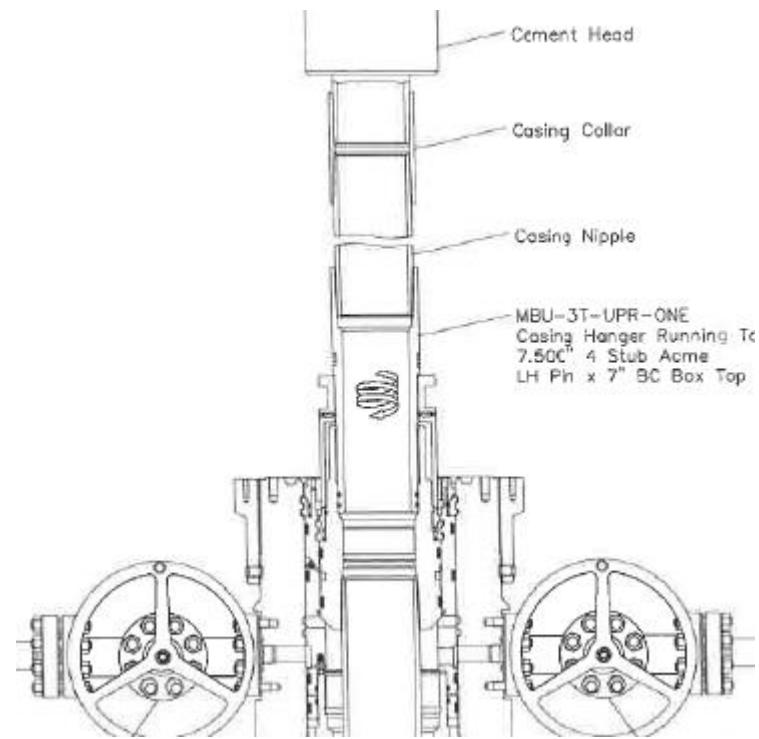


Figure 6. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

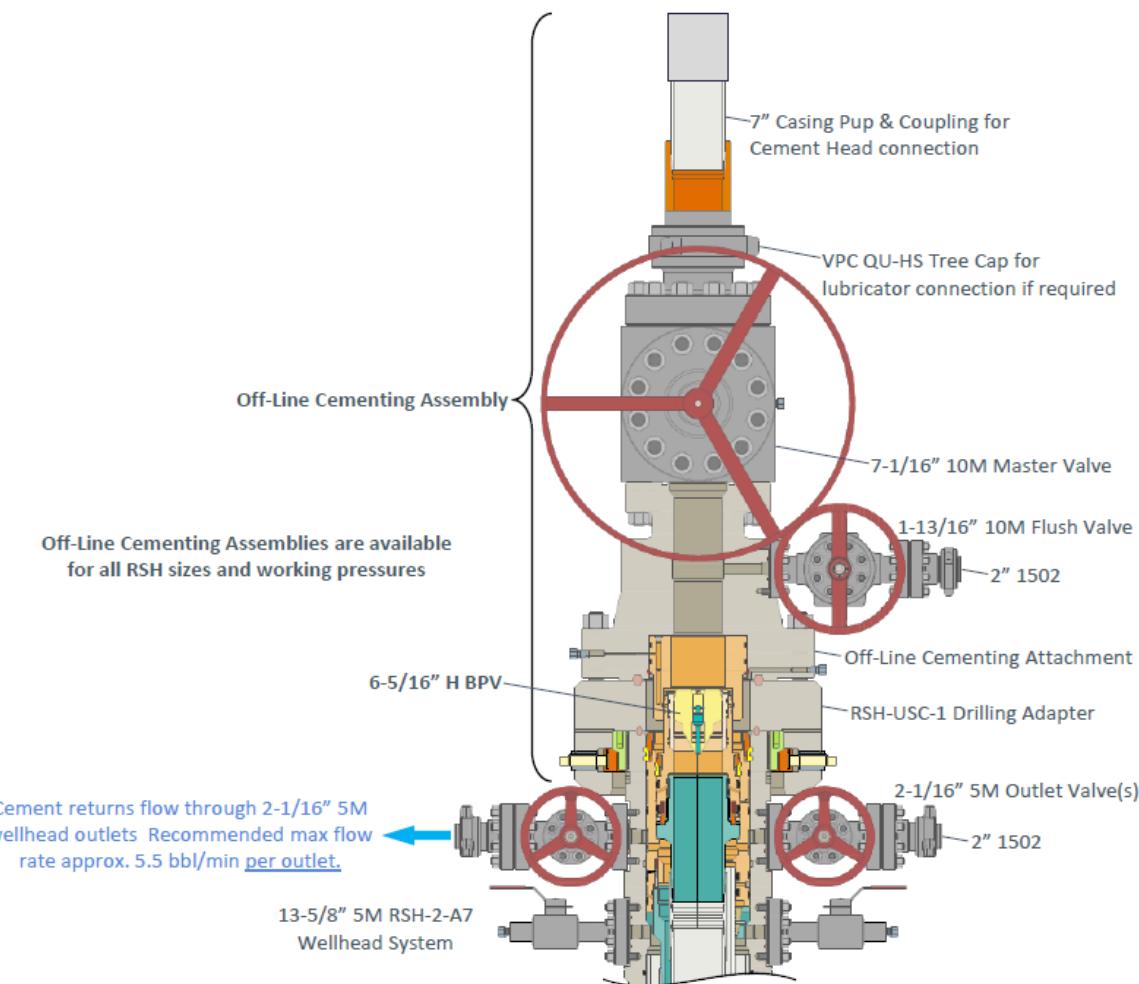


Figure 7. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

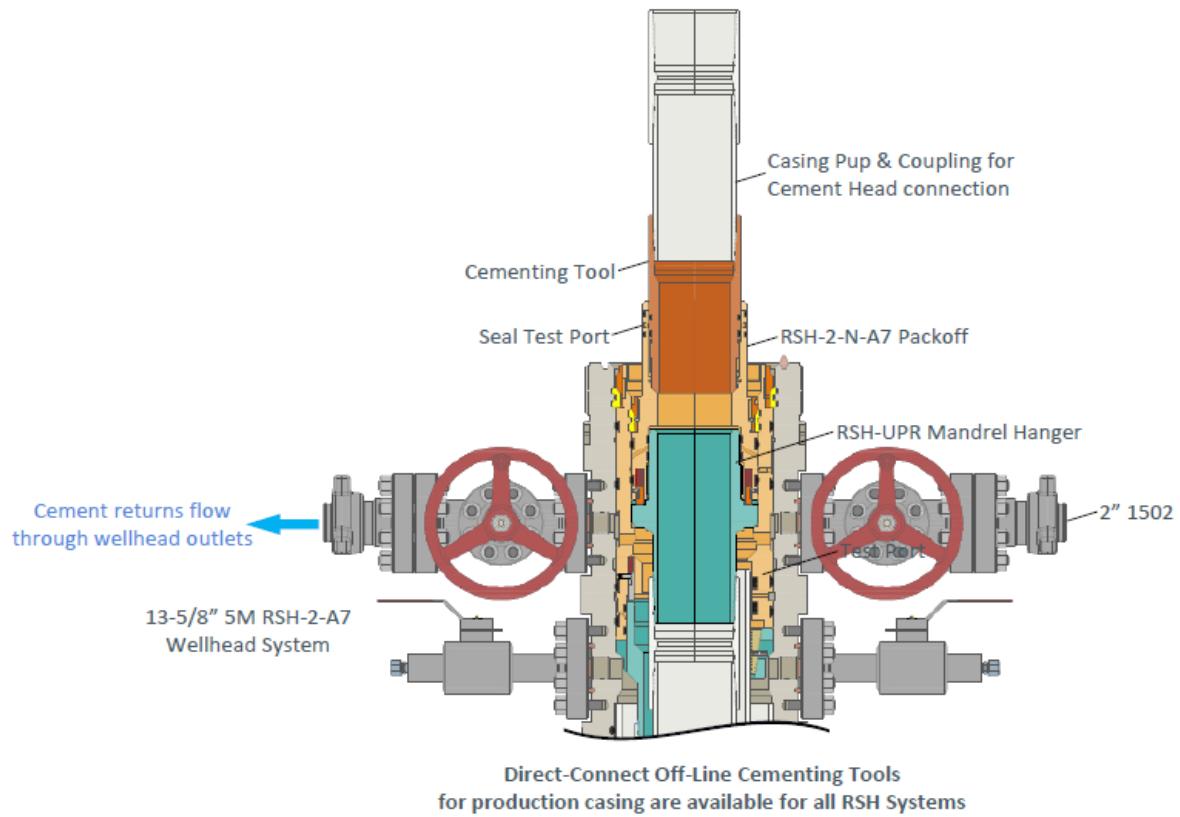


Figure 8. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

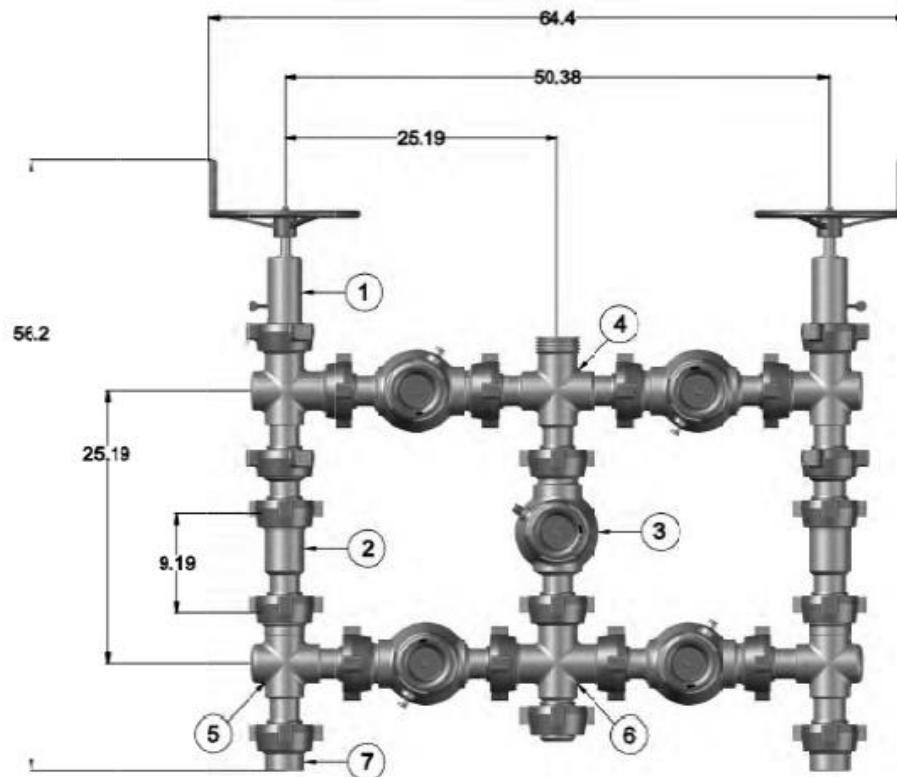


Figure 9. Five valve 15k choke manifold.

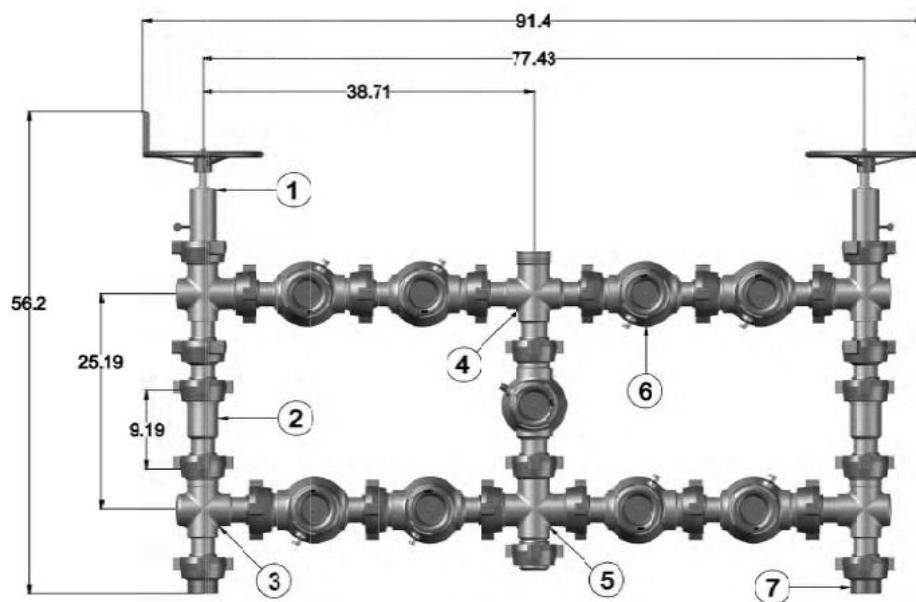


Figure 10. Nine valve 15k choke manifold.



APD ID: 10400106440

Submission Date: 09/02/2025

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

Operator Name: MEWBOURNE OIL COMPANY

Well Name: COUSIN EDDY FED UNIT COM

Well Number: 36H

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_Ex\_Rds\_20251215175911.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

### ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

## Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Other Description:

**Operator Name:** MEWBOURNE OIL COMPANY**Well Name:** COUSIN EDDY FED UNIT COM**Well Number:** 36H

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES**Existing Well map Attachment:**

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_ExistingWellMap\_20250827093100.pdf

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

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

**Production Facilities description:** 1 3.5 buried steel flowline with a working pressure of 250#. 1 3.5 buried steel gas line for gas lift purposes with a working pressure of 250#. 1 1 buried gas supply line with a working pressure of 150#. These lines will be installed in one ditch following the attached route approximately 1637.71' in length. An overhead electric line will be installed within 15' of the flowline route. OHEL will be up to 22900 volts.

**Production Facilities map:**

COUSIN\_EDDY\_O\_17\_PAD\_1\_TO\_COUSIN\_EDDY\_J\_17\_CTB\_2\_UTILITIES\_LINE\_20251111154821.pdf

COUSIN\_EDDY\_FED\_UNIT\_COM\_ProdFacMap\_20251215180001.pdf

### Section 5 - Location and Types of Water Supply

#### Water Source Table

**Water source type:** IRRIGATION**Water source use type:** DUST CONTROL

CAMP USE

SURFACE CASING

INTERMEDIATE/PRODUCTION  
CASING

STIMULATION

**Source latitude:** 32.423752**Source longitude:** -103.655604**Source datum:** NAD83**City:****Water source permit type:** WATER WELL**Water source transport method:** TRUCKING**Source land ownership:** FEDERAL**Source transportation land ownership:** FEDERAL**Water source volume (barrels):** 3240**Source volume (acre-feet):** 0.41761363

**Operator Name:** MEWBOURNE OIL COMPANY**Well Name:** COUSIN EDDY FED UNIT COM**Well Number:** 36H**Source volume (gal):** 136080**Water source type:** IRRIGATION**Water source use type:** DUST CONTROL

CAMP USE

SURFACE CASING

INTERMEDIATE/PRODUCTION  
CASING  
STIMULATION**Source latitude:** 32.30893**Source longitude:** -103.89153**Source datum:** NAD83**City:****Water source permit type:** WATER WELL**Water source transport method:** TRUCKING**Source land ownership:** PRIVATE**Source transportation land ownership:** FEDERAL**Water source volume (barrels):** 3240**Source volume (acre-feet):** 0.41761363**Source volume (gal):** 136080**Water source and transportation**

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_WaterSourceTransMap\_20250807103543.pdf

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_WaterSourceTransMap\_20250827093138.pdf

**Water source comments:** LAT: 32.423332 LONG: -103.718519**New water well? N****New Water Well Info****Well latitude:****Well Longitude:****Well datum:****Well target aquifer:****Est. depth to top of aquifer(ft):****Est thickness of aquifer:****Aquifer comments:****Aquifer documentation:****Well depth (ft):****Well casing type:****Well casing outside diameter (in.):****Well casing inside diameter (in.):****New water well casing?****Used casing source:**

**Operator Name:** MEWBOURNE OIL COMPANY**Well Name:** COUSIN EDDY FED UNIT COM**Well Number:** 36H**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

**Using any construction materials:** YES**Construction Materials description:** SESE 21S 32E LAT: 32.487933 LONG: -103.689486**Construction Materials source location**

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_CalicheSourceTransMap\_20250807103555.pdf

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_CalicheSourceTransMap\_20250827093150.pdf

## Section 7 - Methods for Handling

**Waste type:** DRILLING**Waste content description:** Drill Cuttings**Amount of waste:** 3240 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    **Disposal location ownership:** PRIVATE FACILITY**Disposal type description:****Disposal location description:** NMOCD approved disposal locations are CRI or Lea Land, both facilities are located on HWY 62/180, Sec 27 T20S R32E.**Waste type:** SEWAGE**Waste content description:** Human waste & Grey water**Amount of waste:** 1500 gallons**Waste disposal frequency :** Weekly**Safe containment description:** 2000 gallon plastic container**Safe containmant attachment:****Waste disposal type:** HAUL TO COMMERCIAL    **Disposal location ownership:** PRIVATE FACILITY**Disposal type description:****Disposal location description:** City of Carlsbad Water Treatment Facility



**Operator Name:** MEWBOURNE OIL COMPANY**Well Name:** COUSIN EDDY FED UNIT COM**Well Number:** 36H

## Section 8 - Ancillary

**Are you requesting any Ancillary Facilities?:** N**Ancillary Facilities****Comments:**

## Section 9 - Well Site

**Well Site Layout Diagram:**

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_Pad\_Layout\_20251215180015.pdf

**Comments:** None

## Section 10 - Plans for Surface

**Type of disturbance:** New Surface Disturbance**Multiple Well Pad Name:** Cousin Eddy Fed Unit 33 34 35 36 37**CAPER 316 318 417 455****Multiple Well Pad Number:** 9**Recontouring**

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_InterimReclamationMap\_20250807103619.pdf

COUSIN\_EDDY\_FED\_UNIT\_COM\_36H\_InterimReclamationMap\_20250827093218.pdf

**Drainage/Erosion control construction:** None**Drainage/Erosion control reclamation:** None**Well pad proposed disturbance (acres):** 4.59**Well pad interim reclamation (acres):** 1.16      **Well pad long term disturbance (acres):** 3.43**Road proposed disturbance (acres):** 0.06**Road interim reclamation (acres):** 0      **Road long term disturbance (acres):** 0**Powerline proposed disturbance (acres):** 0**Powerline interim reclamation (acres):** 0      **Powerline long term disturbance (acres):** 0**Pipeline proposed disturbance (acres):** 1.3**Pipeline interim reclamation (acres):** 0      **Pipeline long term disturbance (acres):** 0**Other proposed disturbance (acres):** 0**Other interim reclamation (acres):** 0      **Other long term disturbance (acres):** 0**Total proposed disturbance:****Total interim reclamation:** 1.16**Total long term disturbance:** 3.43

5.949999999999999

**Disturbance Comments:****Reconstruction method:** The area planned for interim reclamation will be recontoured to the original contour if feasible. 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 ration.**Topsoil redistribution:** Topsoil will be evenly re-spread and aggressively revegetated over the entire disturbed area not needed for all weather operations including cuts & fills. To seed the area, proper BLM seed mixture, free of noxious weeds will be used.**Soil treatment:** NA

**Operator Name:** MEWBOURNE OIL COMPANY**Well Name:** COUSIN EDDY FED UNIT COM**Well Number:** 36H**Existing Vegetation at the well pad:** Various brush & grasses**Existing Vegetation at the well pad****Existing Vegetation Community at the road:** Various brush & grasses**Existing Vegetation Community at the road****Existing Vegetation Community at the pipeline:** Various brush & grasses**Existing Vegetation Community at the pipeline****Existing Vegetation Community at other disturbances:** Various brush & grasses**Existing Vegetation Community at other disturbances****Non native seed used?** N**Non native seed description:****Seedling transplant description:****Will seedlings be transplanted for this project?** N**Seedling transplant description attachment:****Will seed be harvested for use in site reclamation?** N**Seed harvest description:****Seed harvest description attachment:****Seed****Seed Table****Seed Summary****Total pounds/Acre:**

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

**Seed reclamation****Operator Contact/Responsible Official****First Name:****Last Name:****Phone:****Email:****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

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

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 of broadcasting over entire reclaimed area.

**Existing invasive species?** N

**Existing invasive species treatment description:**

**Existing invasive species treatment**

**Weed treatment plan description:** NA

**Weed treatment plan**

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

**Monitoring plan**

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

**Pit closure description:** NA

**Pit closure attachment:**

## Section 11 - Surface

**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:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

**Disturbance type:** OTHER

**Describe:** Production Facility

**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:**

## Section 12 - Other

**Right of Way needed?** N

**Use APD as ROW?**

**ROW Type(s):**

**ROW**

**SUPO Additional Information:** None

**Use a previously conducted onsite?** Y

**Previous Onsite information:** Met w/RRC Surveying & staked location @ 360' FSL & 2328' FWL, Sec 17, T21S, R32E, Lea Co., NM. (Elevation @ 3637'). Pad is 624' x 400'. Topsoil staked 30 to the N. Road out of the SW corner to lease road. Flow lines will go W to existing Caper battery. Reclaim E & N 60'. Arc survey required. Lat.: 32.47244195 N, Long.: -103.6978898 W NAD83. (BPS)

**Other SUPO**

**Operator Name:** MEWBOURNE OIL COMPANY

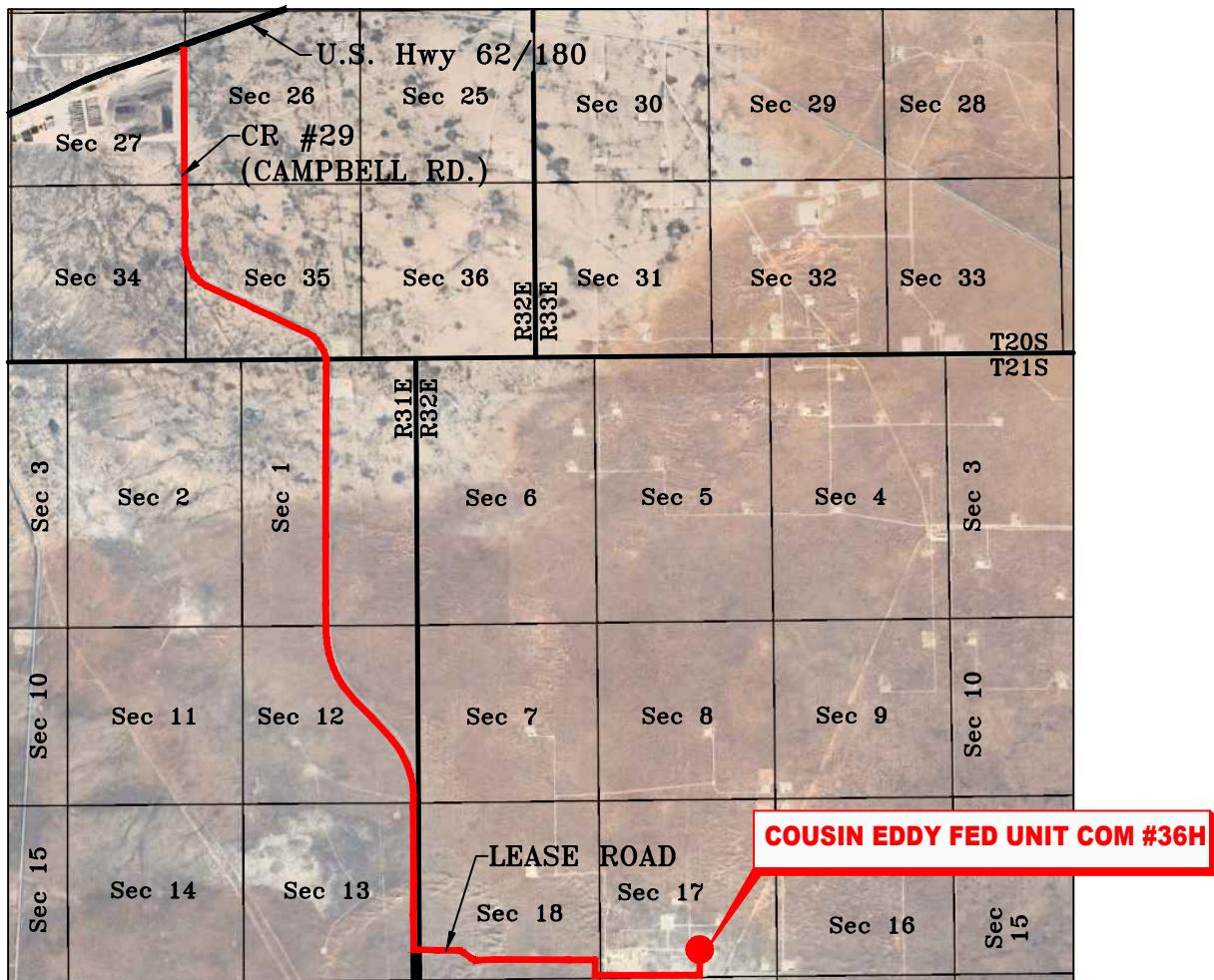
**Well Name:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

CONFIDENTIAL

## VICINITY MAP

NOT TO SCALE



*SECTION 17, TWP. 21 SOUTH, RGE. 32 EAST,  
N. M. P. M., LEA CO., NEW MEXICO*

OPERATOR: Mewbourne Oil CompanyLOCATION: 360' FSL & 2271' FELLEASE: Cousin Eddy Fed Unit ComELEVATION: 3641'WELL NO.: 36H

NO.	REVISION	DATE
JOB NO.: LS25060546R1		
DWG. NO.: 25060546R1-3		

**RRC**

ENERGY SERVICES, LLC.

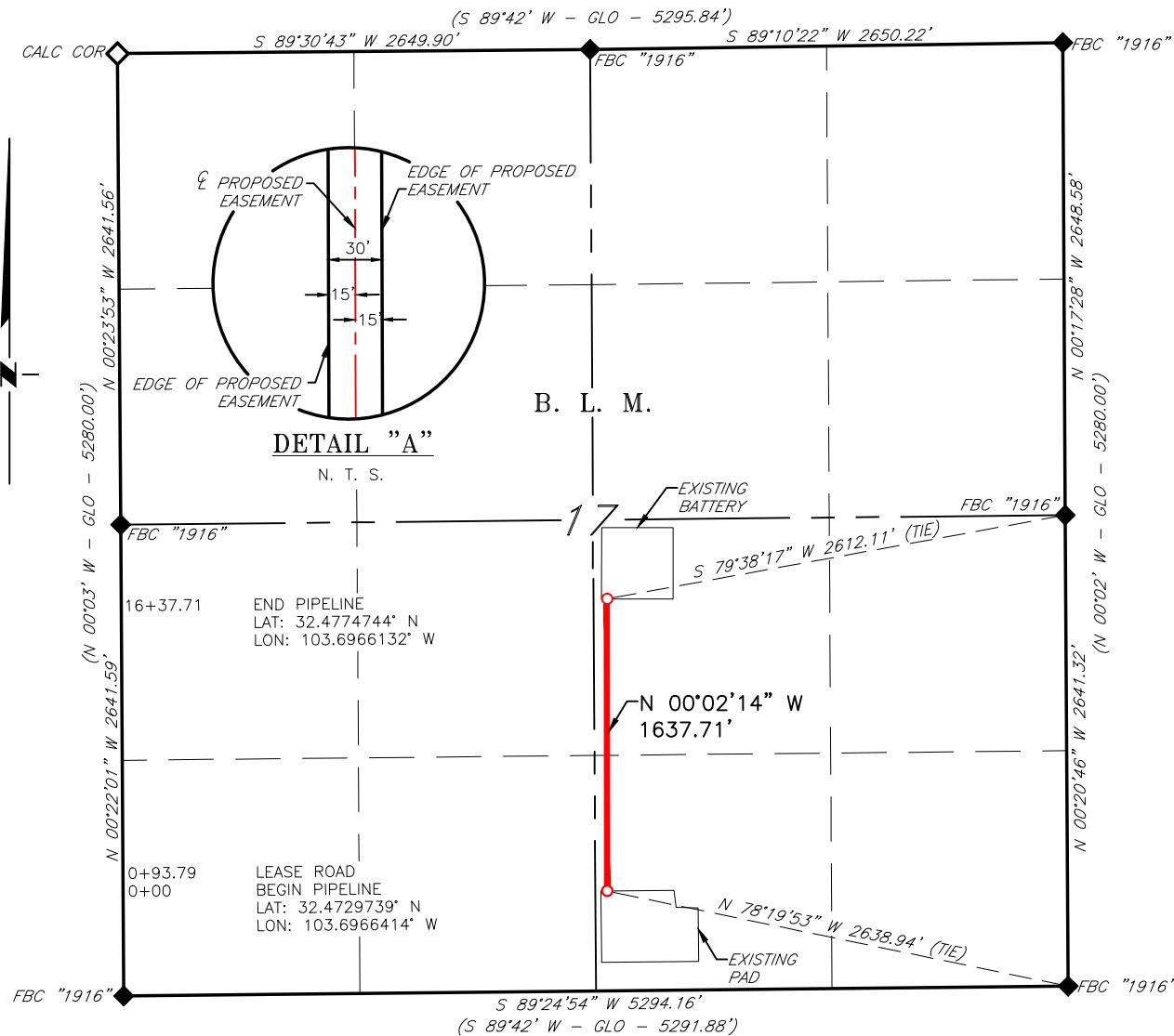
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 09/16/2025
SURVEYED BY: ML/JG
DRAWN BY: NC
APPROVED BY: RMH
SHEET: 1 OF 1





**MEWBOURNE OIL COMPANY**  
**COUSIN EDDY 0-17 PAD 1 TO COUSIN EDDY J-17**  
**CTB 2 UTILITIES LINE**  
**SECTION 17, T21S, R32E**  
**N. M. P. M., LEA COUNTY, NEW MEXICO**



**DESCRIPTION**

A strip of land 30 feet wide, being 1,637.71 feet or 99.255 rods in length, lying in Section 17, Township 21, South, Range 32 East, N. M. P. M., Lea 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 Southeast quarter of Section 17, which bears, N 78°19'53" W, 2,638.94 feet, from a brass cap, stamped "1916", found for the Southeast corner of Section 17;

Thence N 00°02'14" W, 1,637.71 feet, to Engr. Sta. 16+37.71, the End of Survey, a point in the Southeast quarter of Section 17, which bears, S 79°38'17" W, 2,612.11 feet, from a brass cap, stamped "1916", found for the East quarter corner of Section 17.

Said strip of land contains 1.128 acres, more or less, and is allocated by forties as follows:

SW 1/4 SE 1/4	46.101 Rods	0.524 Acres
NW 1/4 SE 1/4	53.154 Rods	0.604 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
- ◆ CALCULATED CORNER
- ◆ PROPOSED PIPELINE

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



NO.	REVISION	DATE
JOB NO.: LS25100909		
DWG. NO.: 25100909-1		

RRC

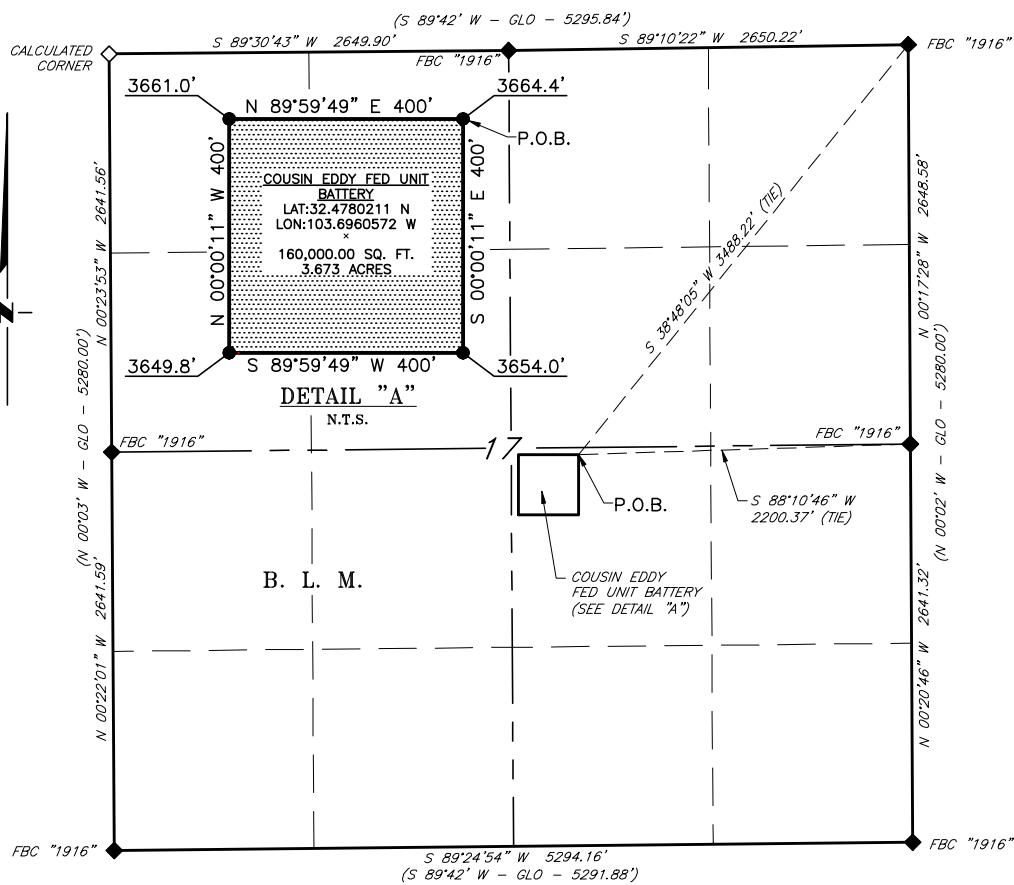
ENERGY SERVICES, LLC.

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

SCALE: 1" = 1000'
DATE: 11/3/2025
SURVEYED BY: ML/JG
DRAWN BY: JJN
APPROVED BY: RMH
SHEET: 1 OF 1

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MEWBOURNE OIL COMPANY  
COUSIN EDDY FED UNIT BATTERY  
SECTION 17, T21S, R32E  
N. M. P. M., LEA CO., NEW MEXICO



## DESCRIPTION

A tract of land situated within the Southeast quarter of Section 17, Township 21 South, Range 32 East, N. M. P. M. Lea County, New Mexico, across B. L. M. land and being more particularly described by metes and bounds as follows:

BEGINNING at a point which bears, S 38°48'05" W, 3,488.22 feet from a brass cap, stamped "1916", found for the Northeast corner of Section 17 and being S 88°10'46" W, 2,200.37 feet from a brass cap, stamped "1916", found for the East quarter corner of Section 17;

Thence S 00°00'11" E, 400 feet, to a point;

Thence S 89°59'49" W, 400 feet, to a point;

Thence N 00°00'11" W, 400 feet, to a point;

Thence N 89°59'49" E, 400 feet, to the Point of Beginning.

Said tract of land contains 160,000 square feet or 3.673 acres, more or less and is allocated by forties as follows:

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

NW 1/4 SE 1/4

160,000.00 Sq. Ft.

3.673 Acres

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

LEGEND  
 RECORD DATA - GLO  
 FOUND MONUMENT  
AS NOTED  
 CALCULATED CORNER  
 P.O.B. POINT OF BEGINNING

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

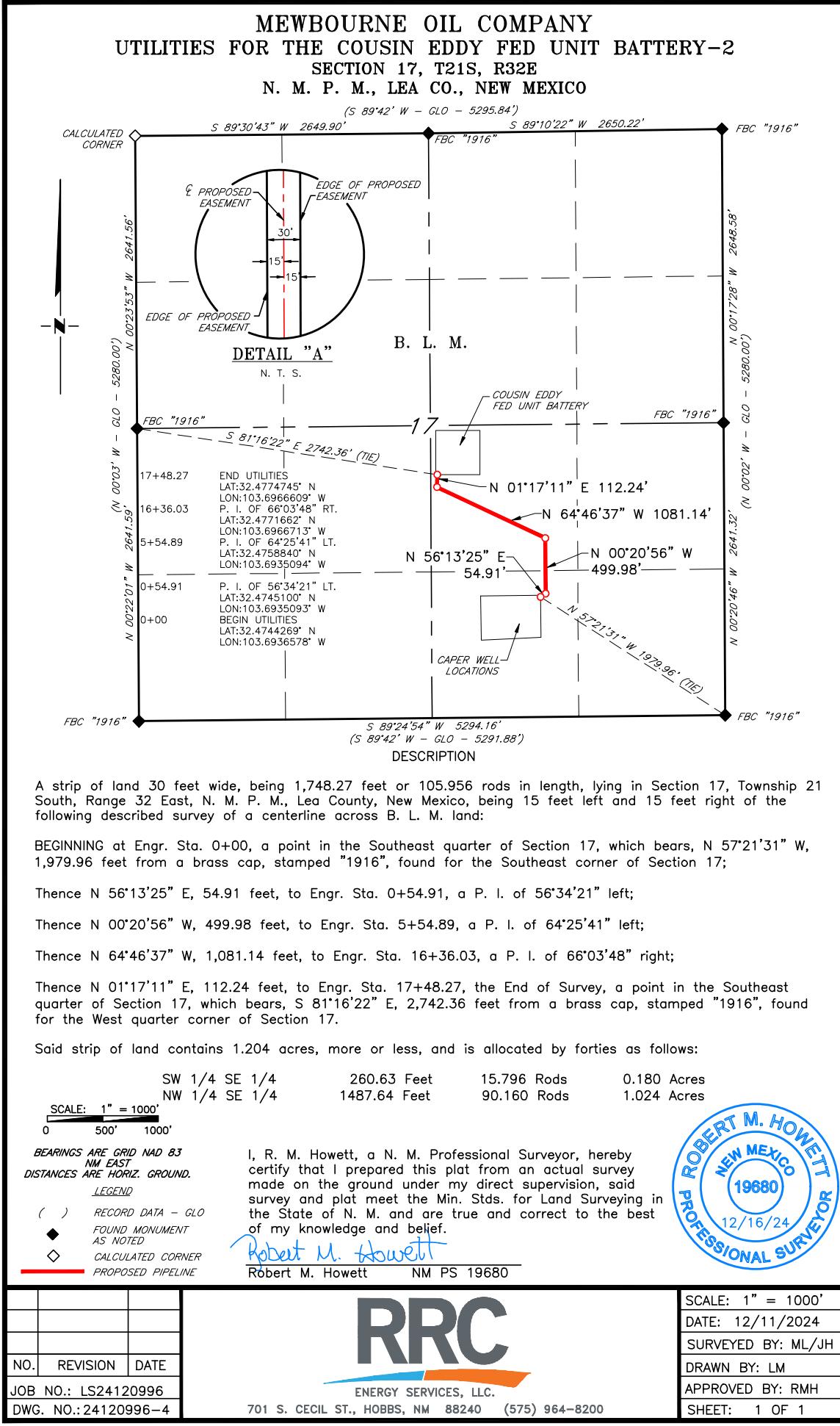


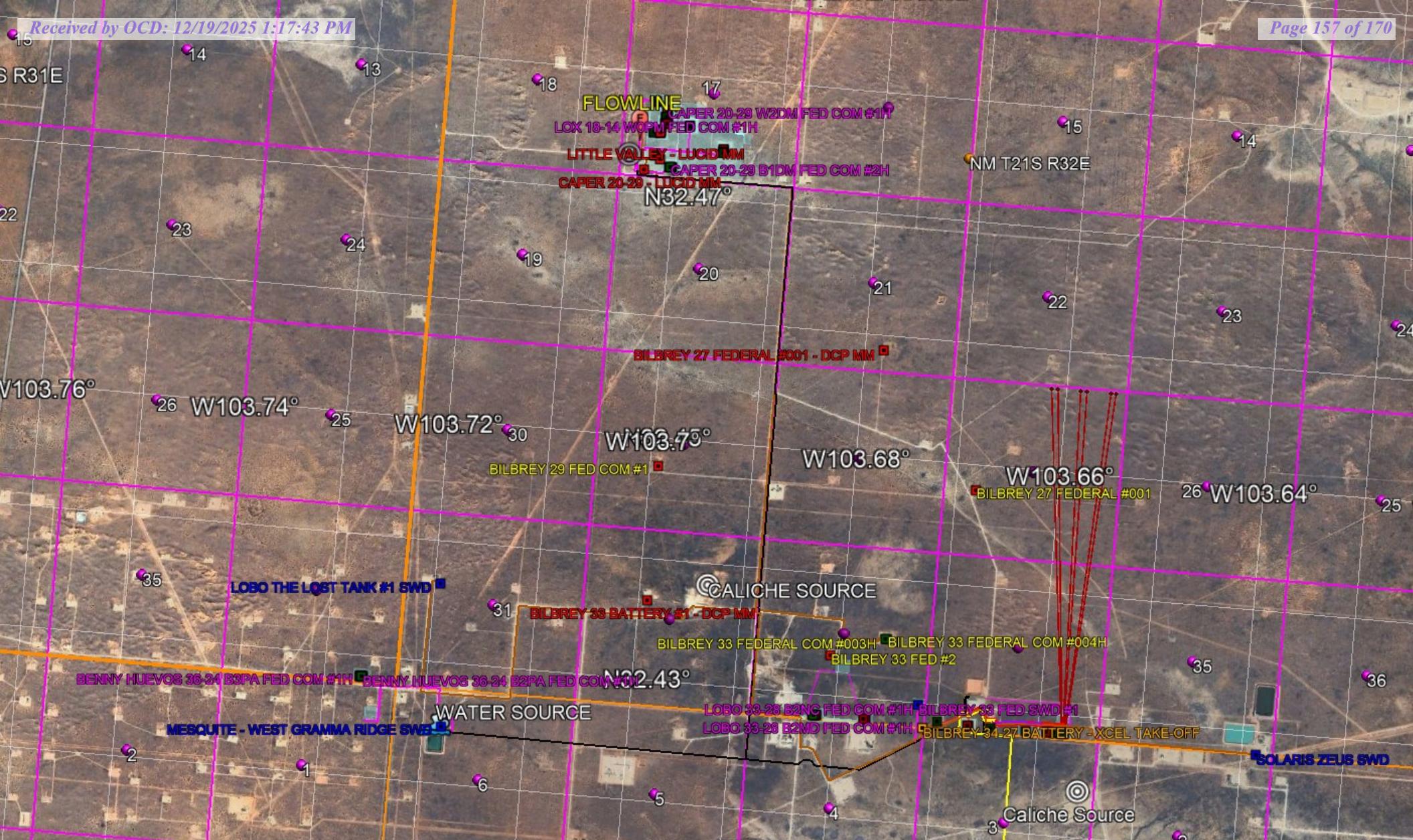
NO.	REVISION	DATE
JOB NO.:	LS24120996	
DWG. NO.:	24120996-1	

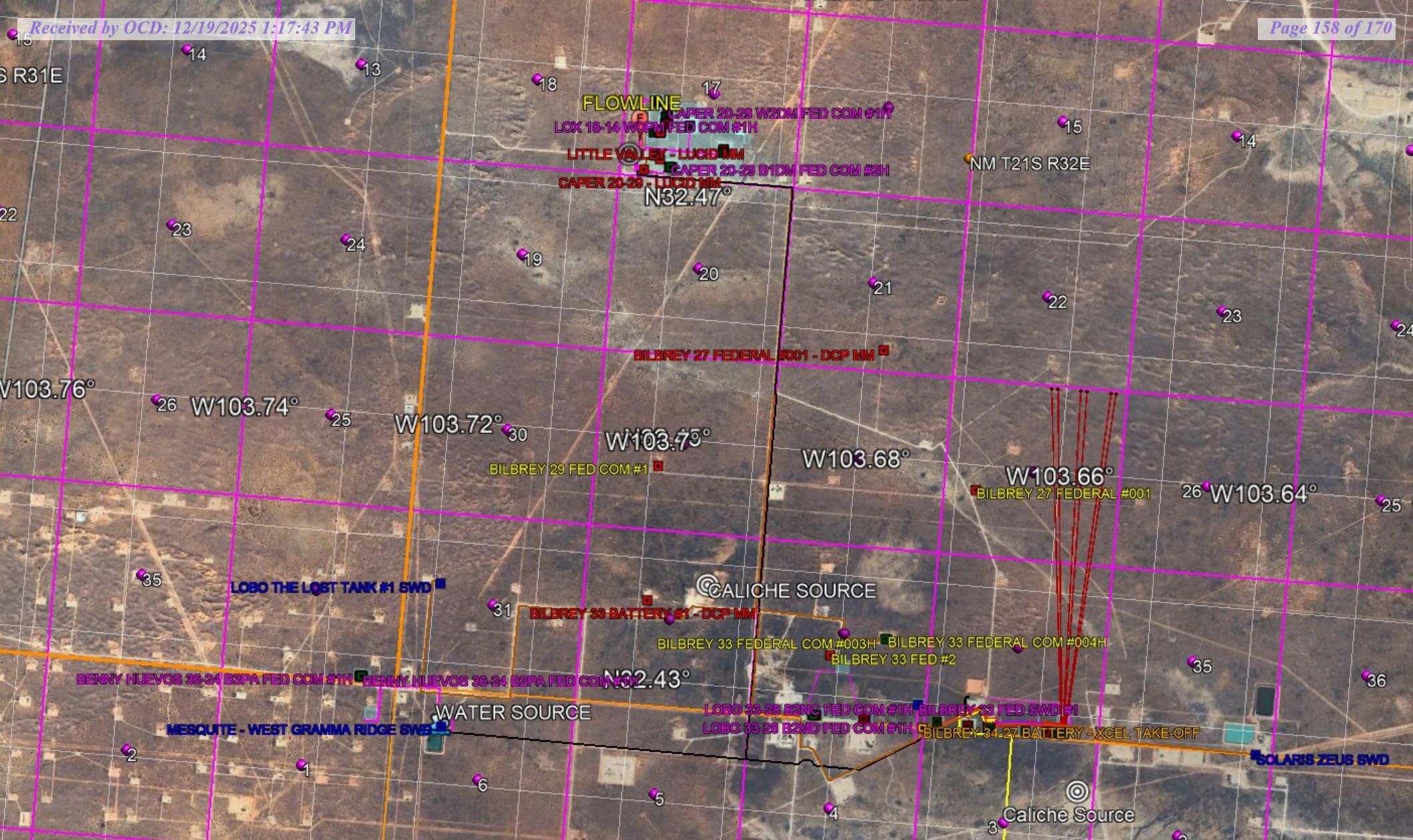
**RRC**  
ENERGY SERVICES, LLC.  
701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

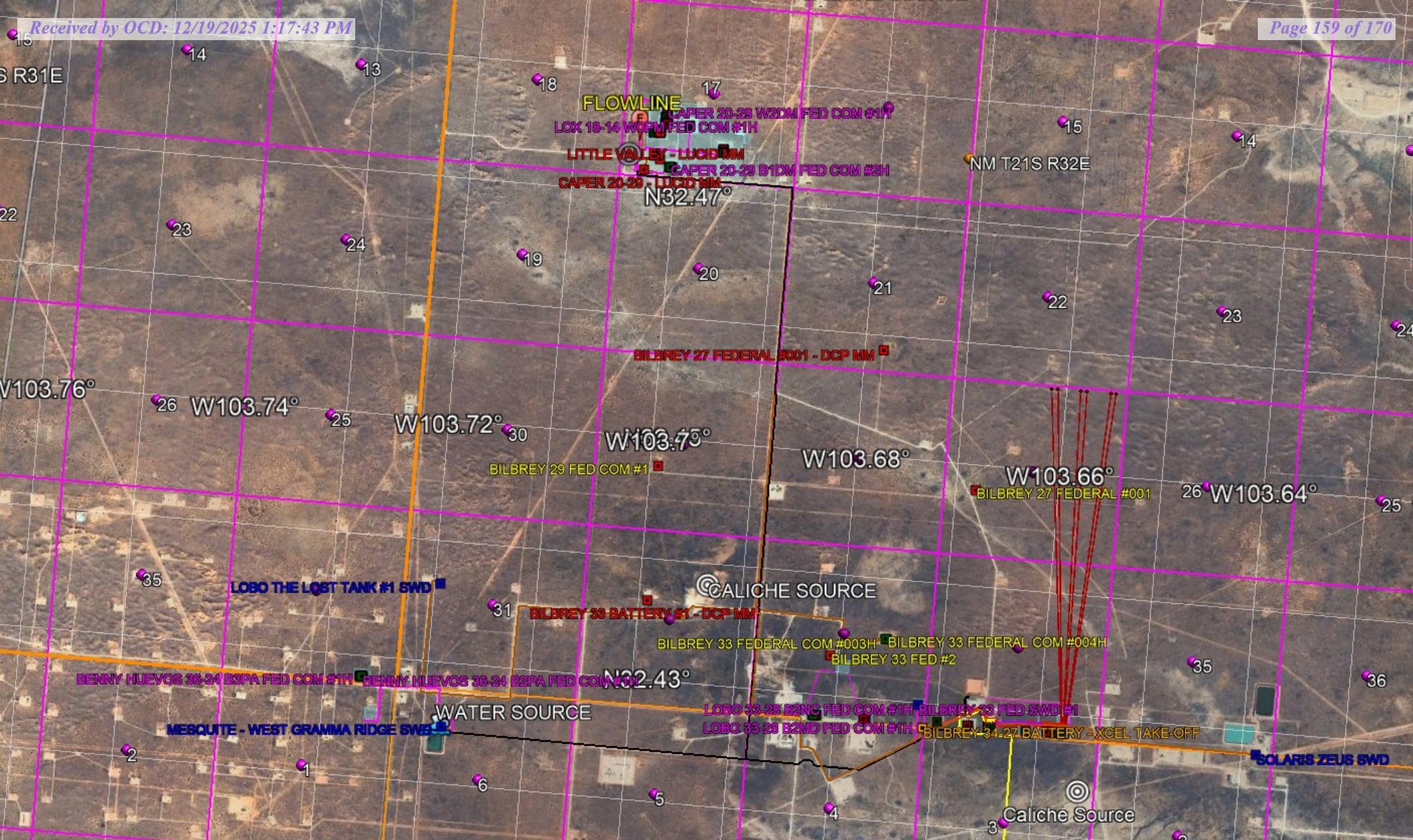
SCALE: 1" = 1000'  
DATE: 12/11/2024  
SURVEYED BY: ML/JH  
DRAWN BY: LM  
APPROVED BY: RMH  
SHEET: 1 OF 1

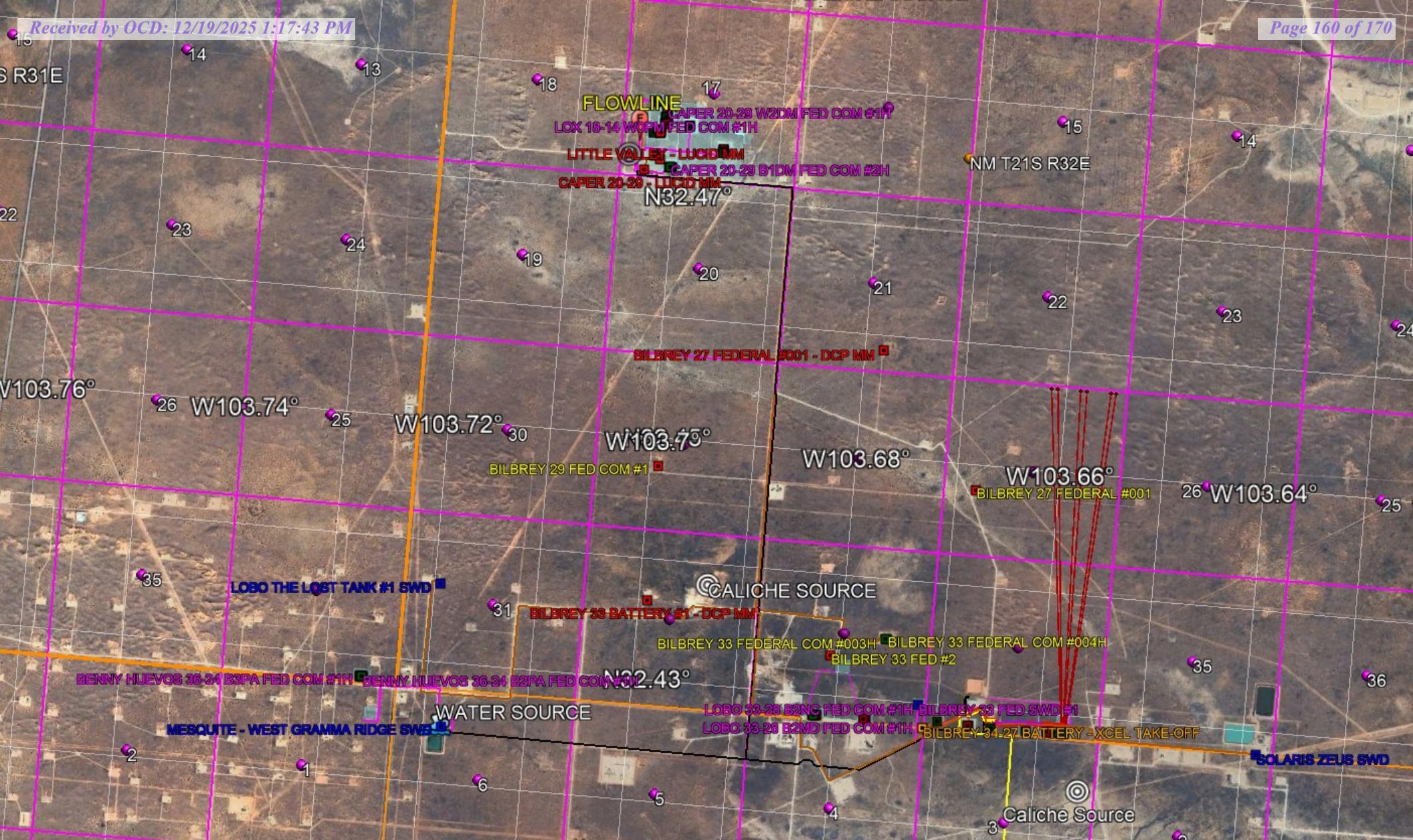
**MEWBOURNE OIL COMPANY**  
**UTILITIES FOR THE COUSIN EDDY FED UNIT BATTERY-2**  
**SECTION 17, T21S, R32E**  
**N. M. P. M., LEA CO., NEW MEXICO**



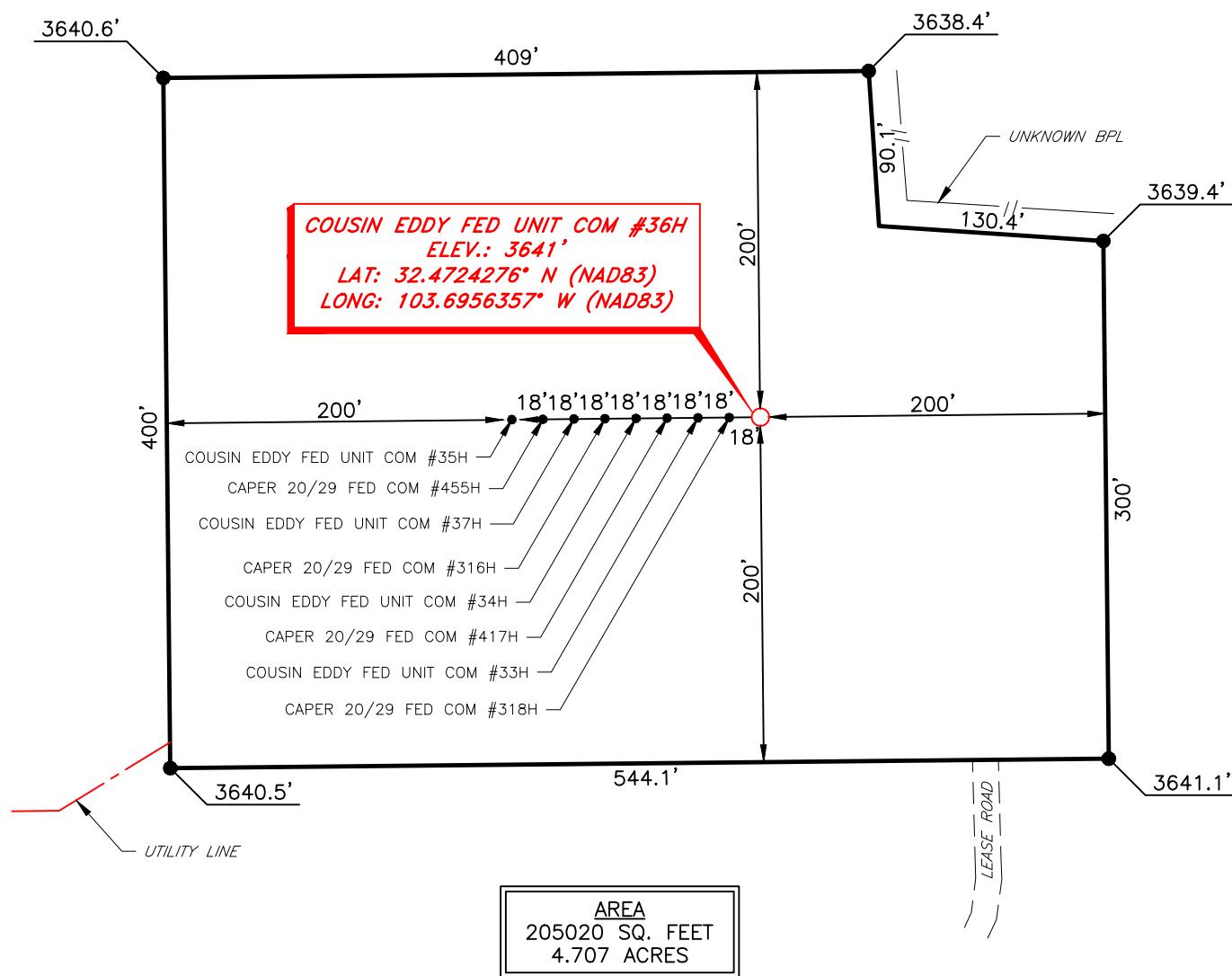








MEWBOURNE OIL COMPANY  
COUSIN EDDY FED UNIT COM #36H  
(360' FSL & 2271' FEL)  
SECTION 17, T21S, R32E  
N. M. P. M., LEA CO., NEW MEXICO



*DIRECTIONS TO LOCATION*

From the intersection of CR #29 (Campbell Rd.) and Hwy #62/180,

On CR #29 go South for approx. 5.8 miles to a lease road on the left;

Turn left and go East approx. 1.0 miles, road turns right,

Turn right and go South approx. 0.1 miles road curves left.

Turn left and Go East approx. 0.6 miles to a lease road on the left;

Turn left and go North approx. 300 feet to location on the left.

- 7 -

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

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. 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



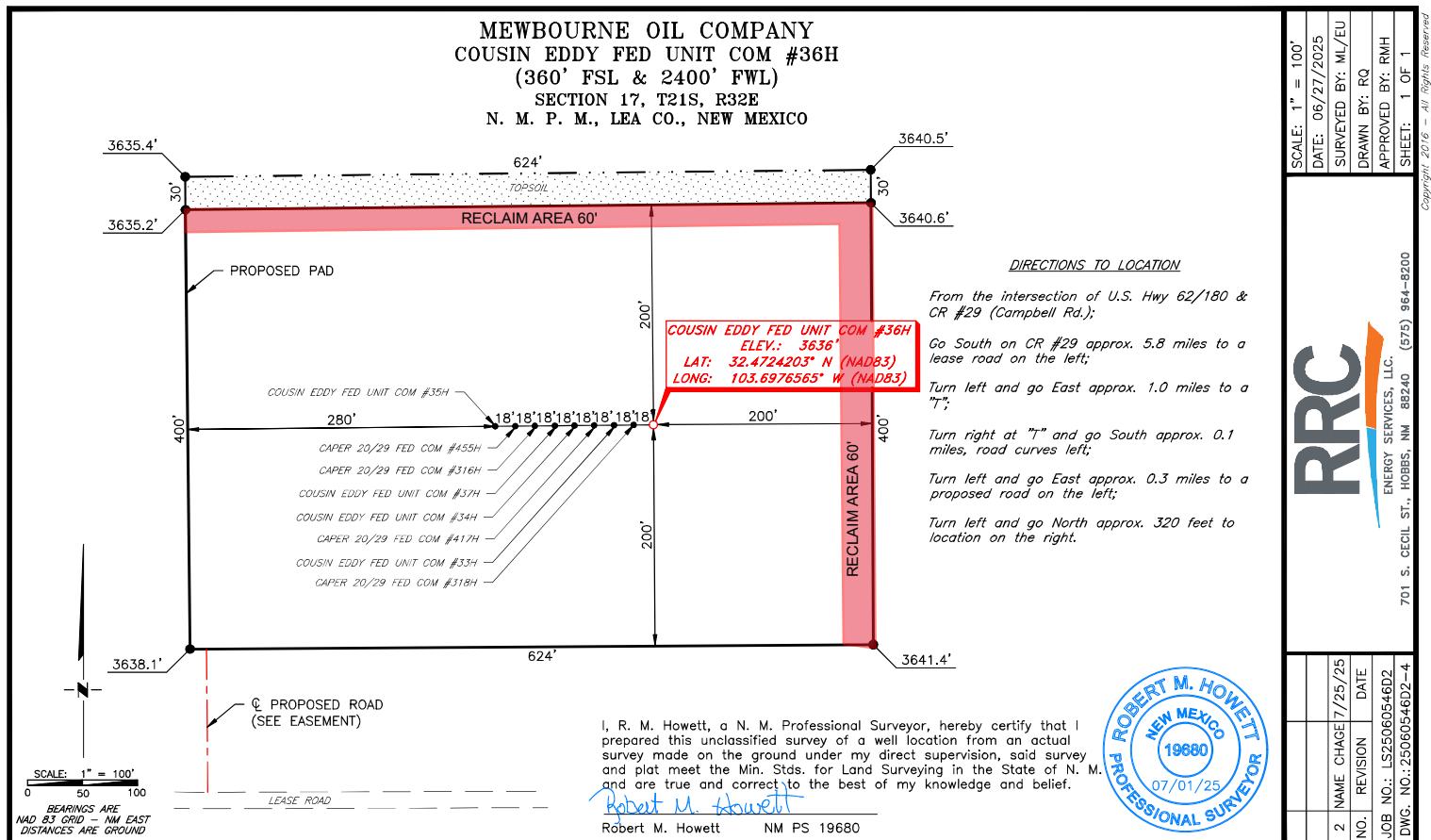
NO.	REVISION	DATE
JOB NO.: LS25060546R1		
DWG. NO.: 25060546R1-4		

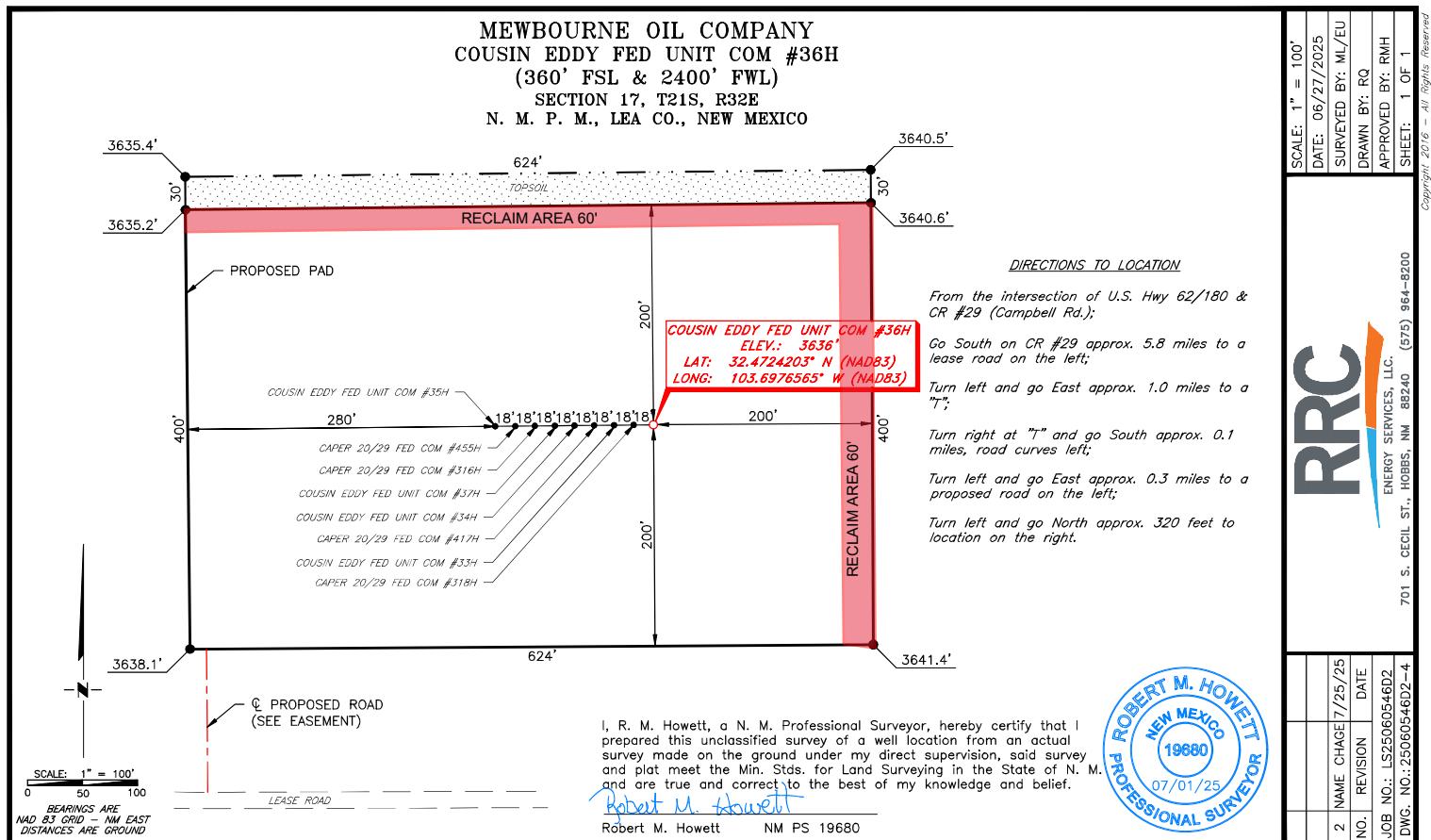


ENERGY SERVICES, LLC

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

SCALE: 1" = 100'
DATE: 09/16/2025
SURVEYED BY: ML/IW
DRAWN BY: NC
APPROVED BY: RMH
SHEET: 1 OF 1







**APD ID:** 10400106440

**Submission Date:** 09/02/2025

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

**Well Type:** OIL WELL

**Well Work Type:** Drill

## Section 1 - General

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

## Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD Surface Owner Description:

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system



**Operator Name:** MEWBURNE OIL COMPANY

**Well Name:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

## State

### Unlined Produced Water Pit Estimated

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

## Section 4 -

Would you like to utilize Injection PWD options? N

### Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD Surface Owner Description:

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

Underground Injection Control (UIC) Permit?

UIC Permit

## Section 5 - Surface

Would you like to utilize Surface Discharge PWD options? N

### Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD Surface Owner Description :

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:

**Operator Name:** MEWBOURNE OIL COMPANY

**Well Name:** COUSIN EDDY FED UNIT COM

**Well Number:** 36H

## Section 6 -

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

PWD Surface Owner Description:

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements



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

**Bond Info Data**

12/19/2025

**APD ID:** 10400106440

**Submission Date:** 09/02/2025

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

**Operator Name:** MEWBURNE OIL COMPANY

**Well Number:** 36H

**Well Name:** COUSIN EDDY FED UNIT COM

**Well Work Type:** Drill

**Well Type:** OIL WELL

## Bond

**Federal/Indian APD:** FED

**BLM Bond number:** NMB106714152

**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 amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

ACKNOWLEDGMENTS

Action 536474

**ACKNOWLEDGMENTS**

Operator:	OGRID:
MEWBURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	14744
	Action Number:
	536474
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
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Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 536474

**CONDITIONS**

Operator:  MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:  14744
	Action Number:  536474
	Action Type:  [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

**CONDITIONS**

Created By	Condition	Condition Date
mleal	Cement is required to circulate on both surface and intermediate1 strings of casing.	12/19/2025
mleal	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	12/19/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	12/19/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	12/19/2025
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	12/19/2025
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	12/19/2025
ward.rikala	Operator must comply with all of the R-111-Q requirements.	12/19/2025