

Well Name: THOMPSON 8 B3AD FED	Well Location: T20S / R29E / SEC 8 / NENE / 32.5921623 / -104.08929	County or Parish/State: EDDY / NM
Well Number: 1H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM0103878	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: MEWBOURNE OIL COMPANY	

Notice of Intent

Sundry ID: 2820856

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/05/2024

Time Sundry Submitted: 10:43

Date proposed operation will begin: 01/01/2025

Procedure Description: Mewbourne requests the following changes be made to the Thompson 8 B3AD Fed #1H well (APD ID 10400080857): 1. Change name f/ Thompson 8 B3AD Fed #1H (APD ID 10400080857) to Jericho 8/12 Fed Com #621H 2. Change SHL f/ 1120 FNL & 210 FEL (Sec 8) to 1260 FNL & 210 FEL (Sec 8) 3. Change BHL f/ 440 FNL & 100 FWL (8-20S-29E) to 440 FNL & 2566 FEL (12-20S-28E) 4. Request permission to perform break testing and offline cementing 5. Attached C102, Drlg Program, Dir Plan/Plot, Csg Assumptions, & Offline Cementing/Break Testing procedures corresponding to requested changes

NOI Attachments

Procedure Description

- Jericho_8_12_Fed_Com__621H_CsgAssumptions_C_20241216151736.pdf
- Mewbourne_Offline_Cementing_Variance_20241105104318.pdf
- Mewbourne_Break_Testing_Variance_20241105104318.pdf
- Jericho_8_12_Fed_Com__621H_CsgAssumptions_20241105104259.pdf
- Jericho_8_12_Fed_Com_621H_MOC_Dir_Plan_20241105104259.pdf
- Jericho_8_12_Fed_Com_621H_MOC_Dir_Plot_20241105104259.pdf
- JERICO_8_12_FED_COM_621H_C102_20241105104259.pdf
- Jericho_8_12_Fed_Com__621H_Drlg_Program_20241105104259.pdf

Well Name: THOMPSON 8 B3AD FED

Well Location: T20S / R29E / SEC 8 / NENE / 32.5921623 / -104.08929

County or Parish/State: EDDY / NM

Well Number: 1H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM0103878

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: MEWBOURNE OIL COMPANY

Conditions of Approval

Additional

JERICO_8_12_FED_COM_621H_ENG_COA_20241220115052.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: RYAN MCDANIEL

Signed on: DEC 16, 2024 03:17 PM

Name: MEWBOURNE OIL COMPANY

Title: Engineer

Street Address: 4801 BUSINESS PARK BLVD

City: HOBBS

State: NM

Phone: (575) 393-5905

Email address: RYANMCDANIEL@MEWBOURNE.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 12/23/2024

Signature: Chris Walls

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

1. Type of Well

Oil Well Gas Well Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. (include area code)

10. Field and Pool or Exploratory Area

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)

11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

Additional Information

Location of Well

0. SHL: NENE / 1120 FNL / 210 FEL / TWSP: 20S / RANGE: 29E / SECTION: 8 / LAT: 32.5921623 / LONG: -104.08929 (TVD: 27 feet, MD: 27 feet)

PPP: NENE / 440 FNL / 100 FEL / TWSP: 20S / RANGE: 29E / SECTION: 8 / LAT: 32.5940318 / LONG: -104.089642 (TVD: 9071 feet, MD: 9219 feet)

BHL: NWNW / 440 FNL / 100 FWL / TWSP: 20S / RANGE: 29E / SECTION: 8 / LAT: 32.5940807 / LONG: -104.105467 (TVD: 9113 feet, MD: 14103 feet)

CONFIDENTIAL

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: MEWBOURNE OIL COMPANY
WELL NAME & NO.: JERICOHO 8/12 FED COM 621H
APD ID: 10400080857
LOCATION: Section 8, T.20 S., R.29 E. NMP.
COUNTY: Eddy County, New Mexico ▼

*Previously known as **THOMPSON 8 B3AD FED 1H**. Changes approved through engineering via **Sundry 2820856** on 12/20/2024. Any previous COAs not addressed within the updated COAs still apply.*

COA

H ₂ S	○ No		● Yes	
Potash / WIPP	● None	○ Secretary	○ R-111-Q	□ Open Annulus □ WIPP
Cave / Karst	○ Low	○ Medium	● High	○ Critical
Wellhead	○ Conventional	● Multibowl	○ Both	○ Diverter
Cementing	□ Primary Squeeze	□ Cont. Squeeze	□ EchoMeter	☑ DV Tool
Special Req	☑ Capitan Reef	□ Water Disposal	☑ COM	□ Unit
Waste Prev.	○ Self-Certification	○ Waste Min. Plan	● APD Submitted prior to 06/10/2024	
Additional Language	☑ Flex Hose	□ Casing Clearance	□ Pilot Hole	☑ Break Testing
	☑ Four-String	☑ Offline Cementing	□ Fluid-Filled	

SEE ORIGINAL COA FOR ALL OTHER REQUIREMENTS.

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H₂S) 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.

B. CASING PROGRAM

Casing Design A

1. The **18-5/8-inch** surface casing shall be set at approximately **330 ft.** (a minimum of 70 feet (Eddy 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 **13-3/8** inch 1st intermediate casing shall be set in a competent bed at approximately **1,200 ft**. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:
- **Cement to surface.** If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.
 - ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
 - ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Note: The 2nd intermediate set depth has been adjusted based on BLM geologist recommendation. *The operator proposes to set the second intermediate casing at 3100'. BLM accepts 3,000' the base of the Capitan Reef.*

3. The **9-5/8** inch 2nd intermediate casing shall be set in a competent bed at approximately **3,000 ft**. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage): Cement should tie-back at least **50 feet** above Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.

Option 2 (Two-stage): Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. **First stage to DV tool:** Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. **Second stage above DV tool:** Cement should tie-back at least **50 feet** above Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.
- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)

- Switch to freshwater mud to protect the Capitan Reef and use freshwater mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
4. Operator has proposed to set **7 in.** production casing at approximately **8,515 ft.** (8,438 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:
 - Cement should tie-back **at least 200 feet** into the previous casing. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan reef**.
 5. The minimum required fill of cement behind the **4-1/2 in.** production liner is:
 - Cement should tie-back **at least 100 feet** into previous casing string. Operator shall provide method of verification.

Casing Design B

1. The **18-5/8-inch** surface casing shall be set at approximately **330 ft.** (a minimum of 70 feet (Eddy 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 **13-3/8** inch 1st intermediate casing shall be set in a competent bed at approximately **1,200 ft**. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:
- **Cement to surface.** If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.
 - ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
 - ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Note: The 2nd intermediate set depth has been adjusted based on BLM geologist recommendation. *The operator proposes to set the second intermediate casing at 3100'. BLM accepts 3,000' the base of the Capitan Reef.*

3. The **9-5/8** inch 2nd intermediate casing shall be set in a competent bed at approximately **3,000 ft**. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage): Cement should tie-back at least **50 feet** above Capitan Reef top or **200 feet** into the previous casing, whichever is greater. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.

Option 2 (Two-stage): Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

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

- b. **Second stage above DV tool:** Cement should tie-back at least **50 feet** above Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.
- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
- (Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)**
- Switch to freshwater mud to protect the Capitan Reef and use freshwater mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
4. Operator has proposed to set **7 in.** production casing at approximately **9,415 ft.** (9,011 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:
- Cement should tie-back **at least 200 feet** into the previous casing. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan reef**.
5. The minimum required fill of cement behind the **4-1/2 in.** production liner is:
- Cement should tie-back **at least 100 feet** into previous casing string. Operator shall provide method of verification.

Casing Design C

1. The **18-5/8-inch** surface casing shall be set at approximately **330 ft.** (a minimum of 70 feet (Eddy 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 **13-3/8** inch 1st intermediate casing shall be set in a competent bed at approximately **1,200 ft**. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:
- **Cement to surface.** If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.
 - ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
 - ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Note: The 2nd intermediate set depth has been adjusted based on BLM geologist recommendation. *The operator proposes to set the second intermediate casing at 3100'. BLM accepts 3,000' the base of the Capitan Reef.*

3. The **9-5/8** inch 2nd intermediate casing shall be set in a competent bed at approximately **3,000 ft**. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage): Cement should tie-back at least **50 feet** above Capitan Reef top or **200 feet** into the previous casing, whichever is greater. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.

Option 2 (Two-stage): Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. **First stage to DV tool:** Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. **Second stage above DV tool:** Cement should tie-back at least **50 feet** above Capitan Reef top or **200 feet** into the previous casing, whichever is greater. Operator shall provide method of verification. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst and Capitan Reef**.

- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)

- Switch to freshwater mud to protect the Capitan Reef and use freshwater mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
4. Operator has proposed to set **7 x 4-1/2** inch tapered production casing at approximately **21,646 ft.** (8,855 ft. TVD). (Casing and hole size change at the KOP, approximately at 8,515 ft.) The minimum required fill of cement behind the **7 x 4-1/2** inch tapered production casing is:
- Cement should tie-back at least **200 feet** into the previous casing. 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 **Eddy County: 575-361-2822**.

C. PRESSURE CONTROL

1. Variance approved to use **flex line** from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. Before drilling the surface casing shoe out, the BOP/BOPE shall 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 the **title 43 CFR 3172.6(b)(9)** 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 (**575-361-2822 Eddy 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.

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 Eddy County Petroleum Engineering Inspection Staff:

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; BLM_NM_CFO_DrillingNotifications@BLM.GOV; (575) 361-2822.

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 2nd 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 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the 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 12/20/2024

Mewbourne Oil Company, Jericho 8/12 Fed Com 621H

Sec 8, T20S, R29E

SHL: 1260' FNL 210' FEL (Sec 8)

BHL: 440' FNL 2566' FEL (Sec 12)

Casing Program Design C						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry	1.6 Dry
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	26"	0'	0'	330'	330'	18 5/8" 87.5# J55 BTC	4.27	15.25	46.03	47.34
Intermediate 1	17.5"	0'	0'	1200'	1200'	13.375" 48# H40 STC	1.21	2.72	5.59	9.39
Intermediate 2	12.25"	0'	0'	3100'	3100'	9.625" 36# J55 LTC	1.46	2.54	4.06	5.05
Production	8.75"	0'	0'	8515'	8438'	7" 26# P110 LTC	1.37	2.19	3.13	3.75
Production	8.5"	8515'	8438'	21646'	8855'	4.5" 13.5# P110 LTC	2.07	2.41	1.91	2.38

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	TOC/BOC	Volume ft ³	% Excess	Slurry Description
18.625 in	LEAD	440	12.5	2.12	0' - 255'	940	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	255' - 330'	268		Class C: Retarder
13.375 in	LEAD	420	12.5	2.12	0' - 925'	900	50%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	925' - 1200'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	200	12.5	2.12	1375' - 2438'	430	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	2438' - 3100'	268		Class C: Retarder
2nd Stg 9.625 in	LEAD	190	12.5	2.12	0' - 1036'	410	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1036' - 1375'	134		Class C: Retarder
7 in - 4.5 in	LEAD	1000	12.5	2.12	1359' - 8566'	2120	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	2080	13.5	1.85	8566' - 21646'	3848		Class H: Retarder, Fluid Loss, Defoamer

Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 330'	8.4 - 8.6	Fresh Water
330' - 1200'	10.0 - 10.2	Brine
1200' - 3100'	8.4 - 8.6	Fresh Water
3100' - 8515'	8.6 - 9.7	Cut-Brine
8515' - 21646'	10.0 - 11.	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	292'	Usable Water	Yeso		
Castile			Delaware (Lamar)	3178'	Oil/Natural Gas
Salt Top	544'	None	Bell Canyon		
Marker Bed 126			Cherry Canyon		
Salt Base	911'	None	Manzanita Marker		
Yates	1086'	Oil/Natural Gas	Basal Brushy Canyon		
Seven Rivers			Bone Spring	5746'	Oil/Natural Gas
Queen			1st Bone Spring	6926'	Oil/Natural Gas
Capitan	1409'	Usable Water	2nd Bone Spring	7646'	Oil/Natural Gas
Grayburg			3rd Bone Spring	8810'	Oil/Natural Gas
San Andres			Wolfcamp	9185'	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.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-Q?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	
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?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Jericho 8/12 Fed Com 621H

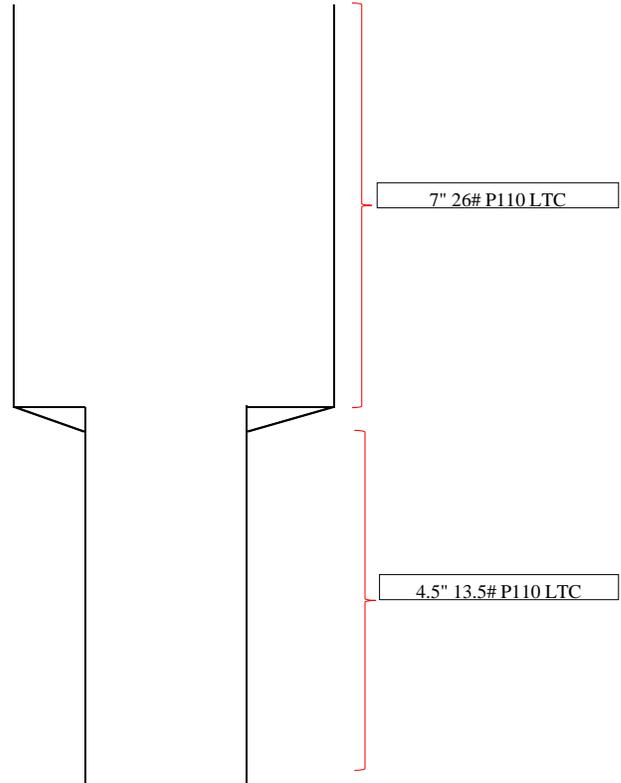
Sec 8, T20S, R29E

SHL: 1260' FNL & 210' FEL (Sec 8)

BHL: 440' FNL & 2566' FEL (Sec 12)

Casing Design C

Hole Size	From	To	Csg. Size	#/ft	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension	
8.75	0'	8515'	7" 26# P110 LTC					1.37	2.19	3.13	3.75
8.5	8515'	21646'	4.5" 13.5# P110 LTC					2.07	2.41	1.91	2.38





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 3rd 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.

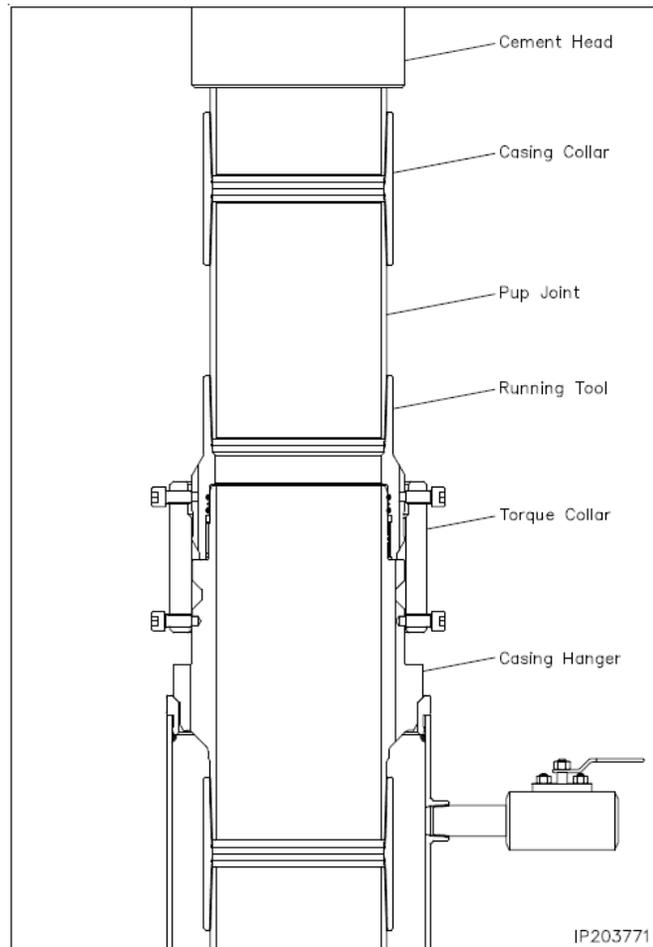


Figure 1. Cactus 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

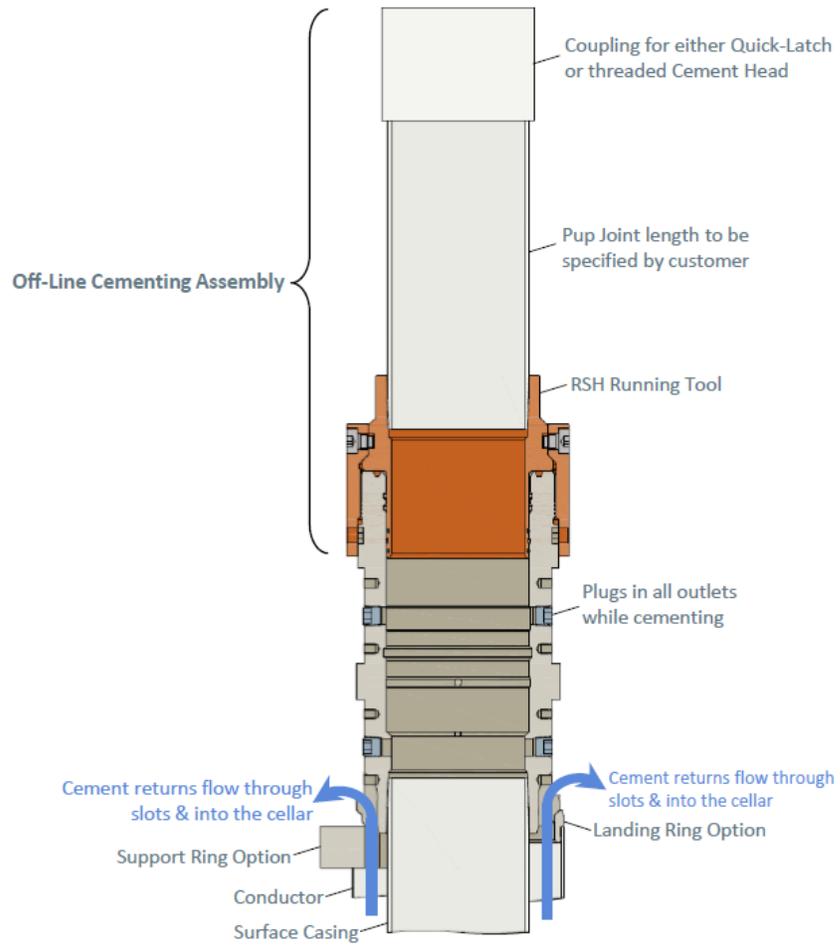


Figure 2. Vault 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

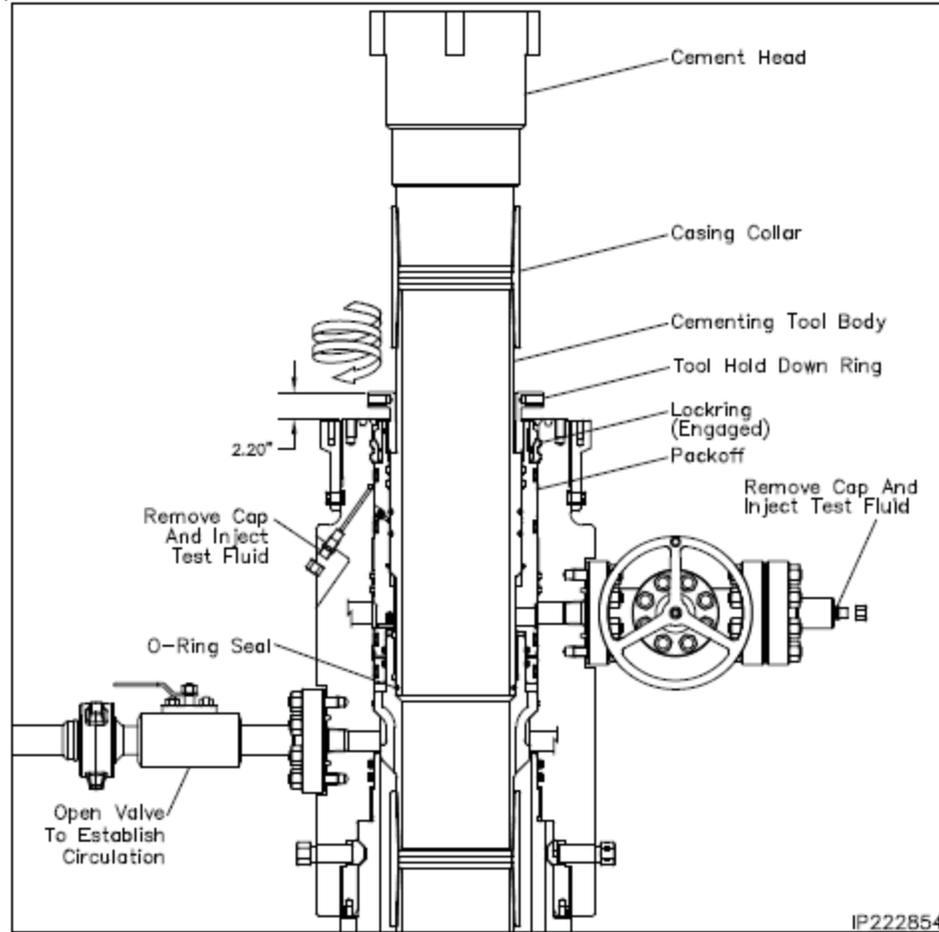


Figure 3. Cactus 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

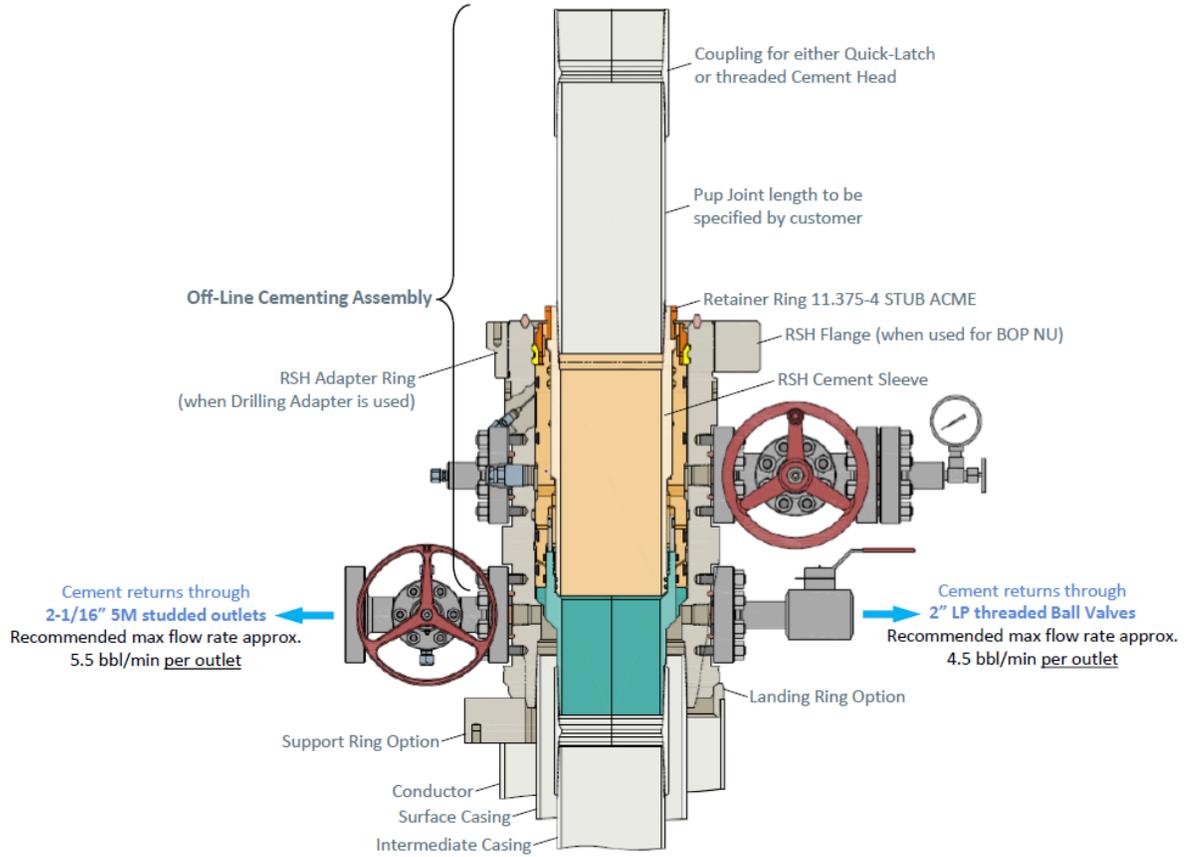


Figure 4. Vault 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

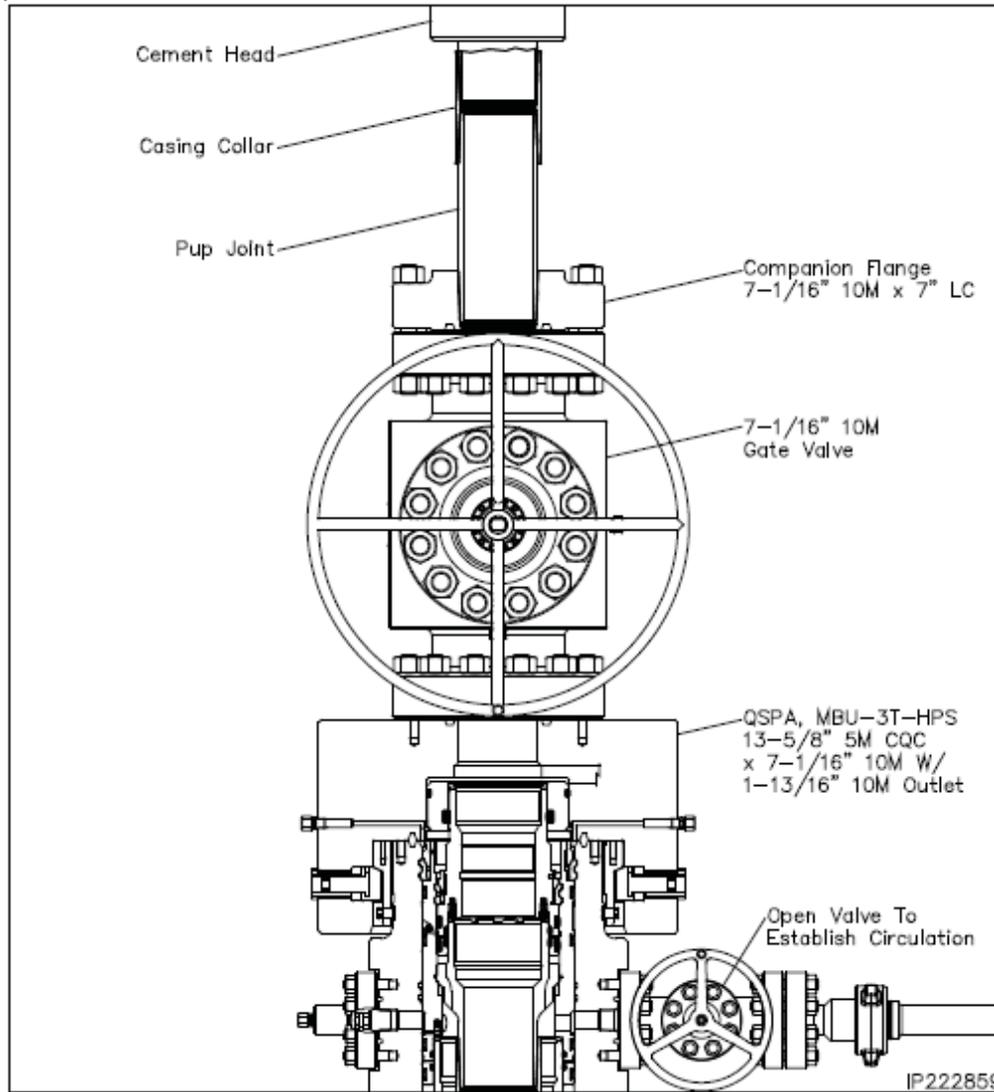


Figure 5. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

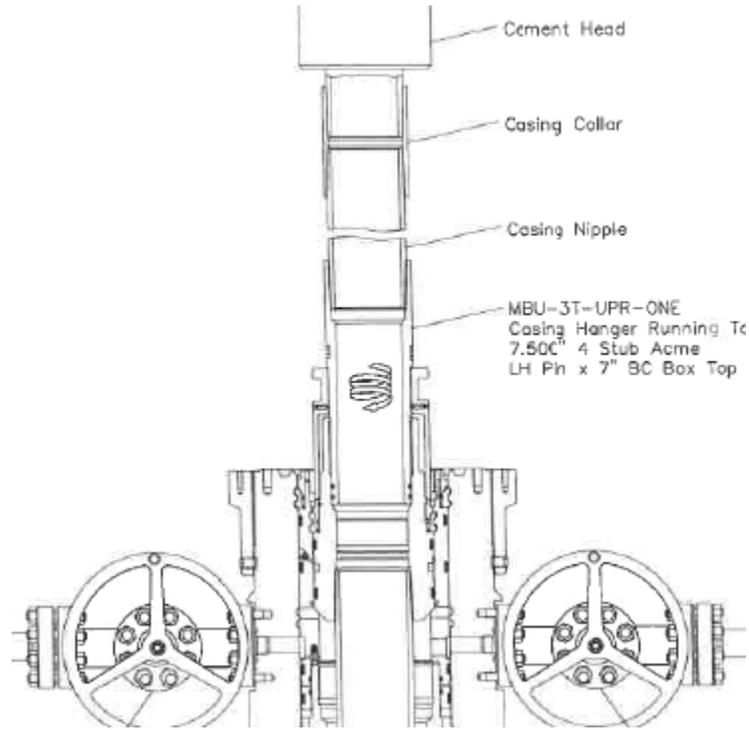


Figure 6. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

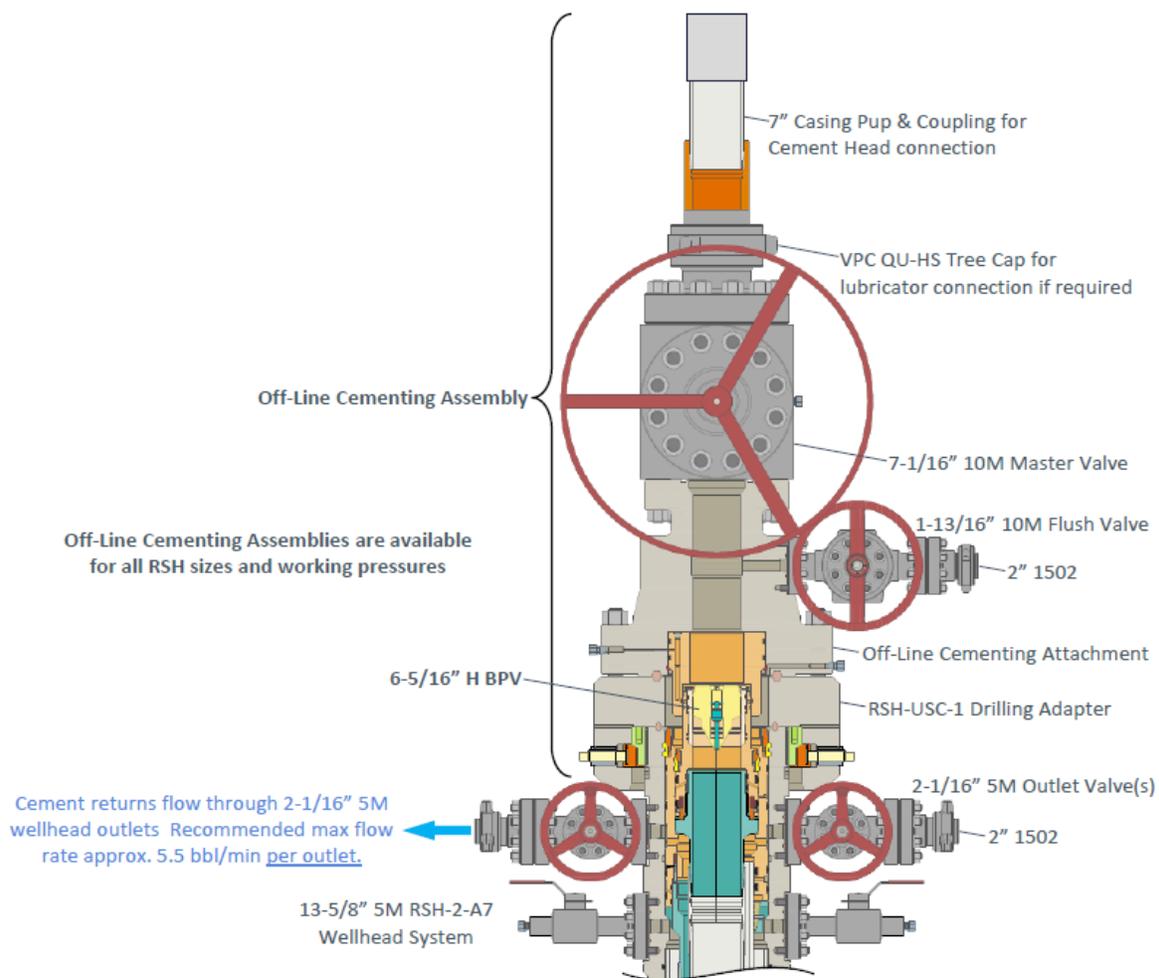


Figure 7. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

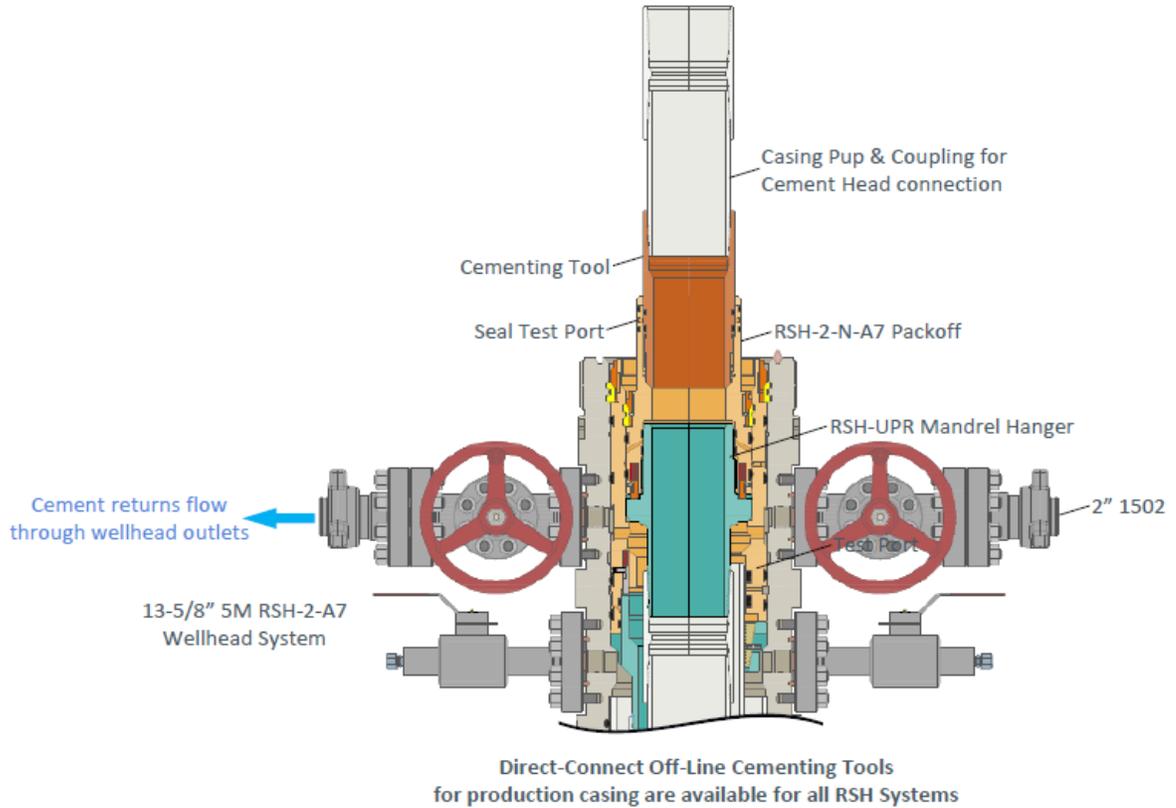


Figure 8. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

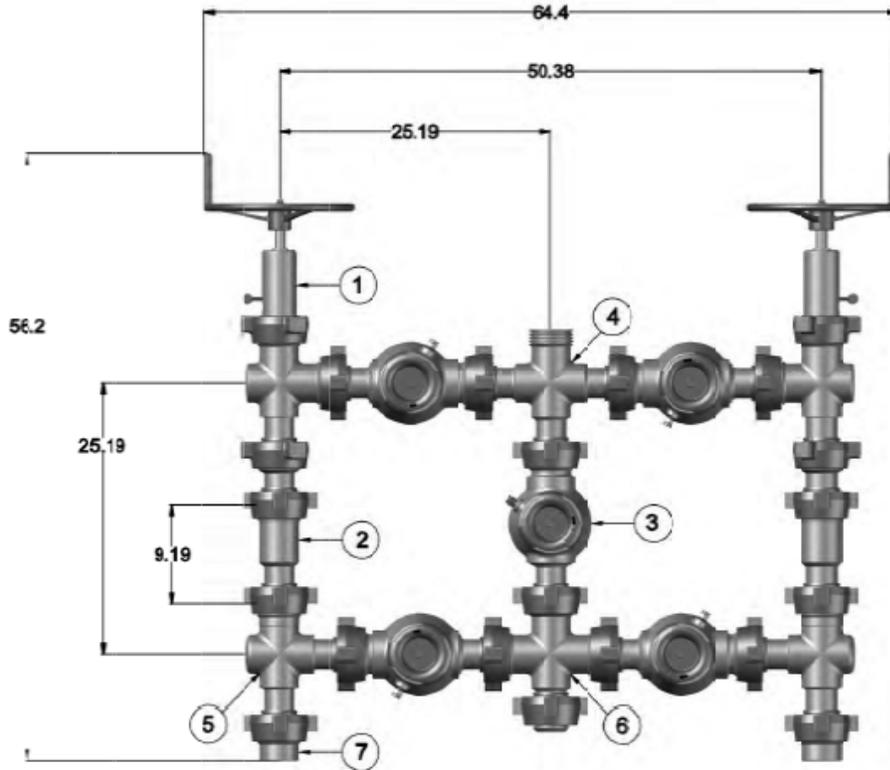


Figure 9. Five valve 15k choke manifold.

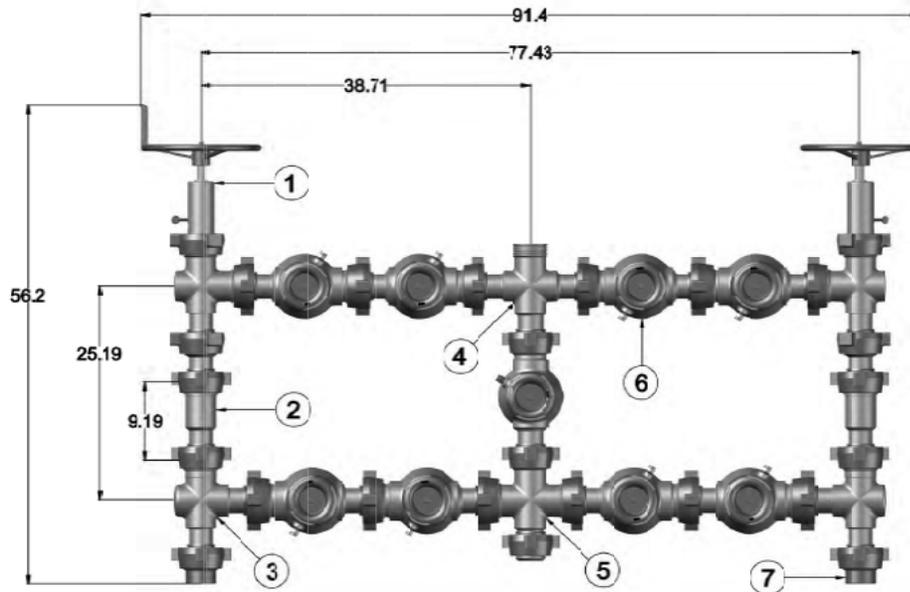


Figure 10. Nine valve 15k choke manifold.



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* (5th 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.

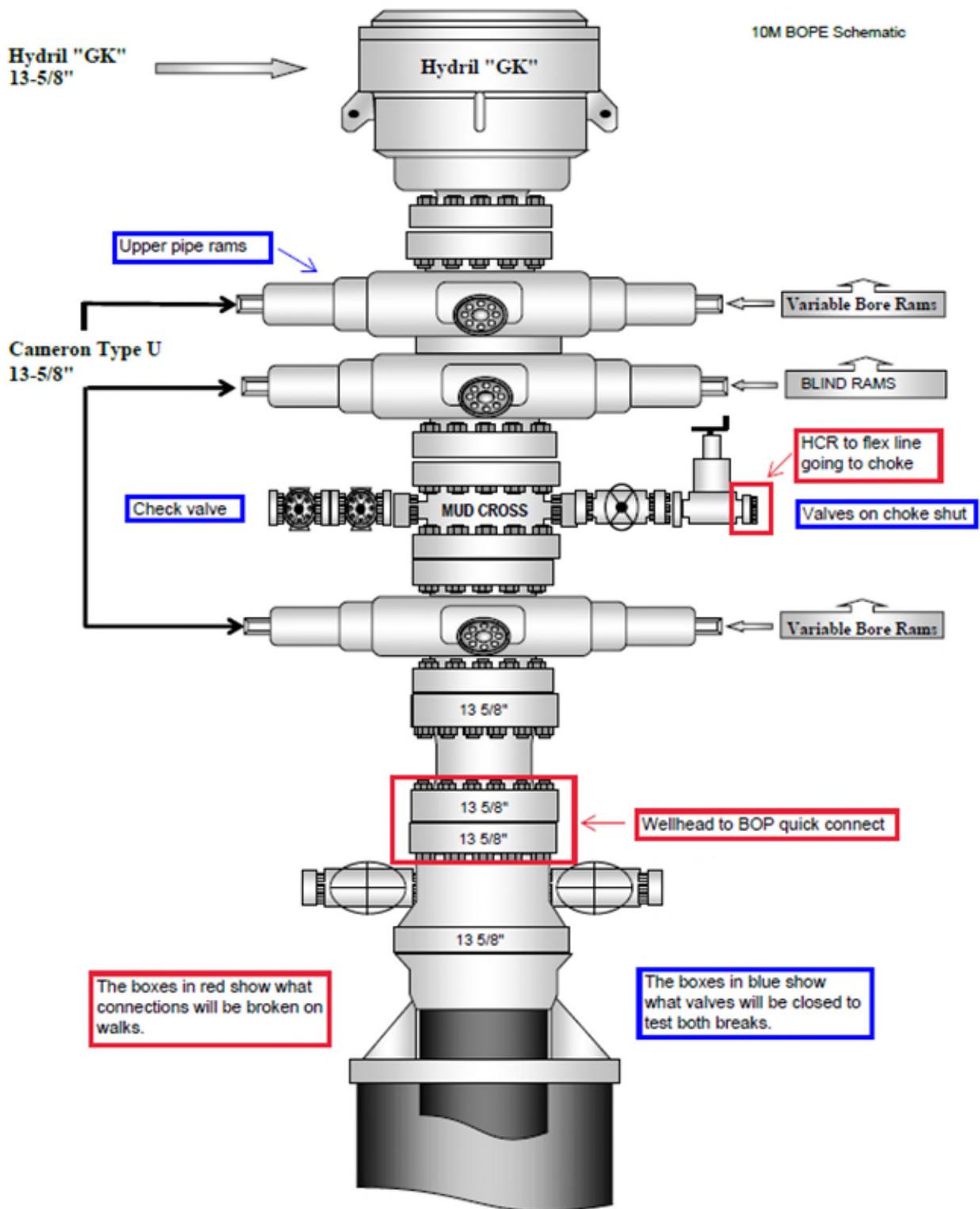


Figure 1. BOP diagram



5M BOPE & Closed Loop Equipment Schematic

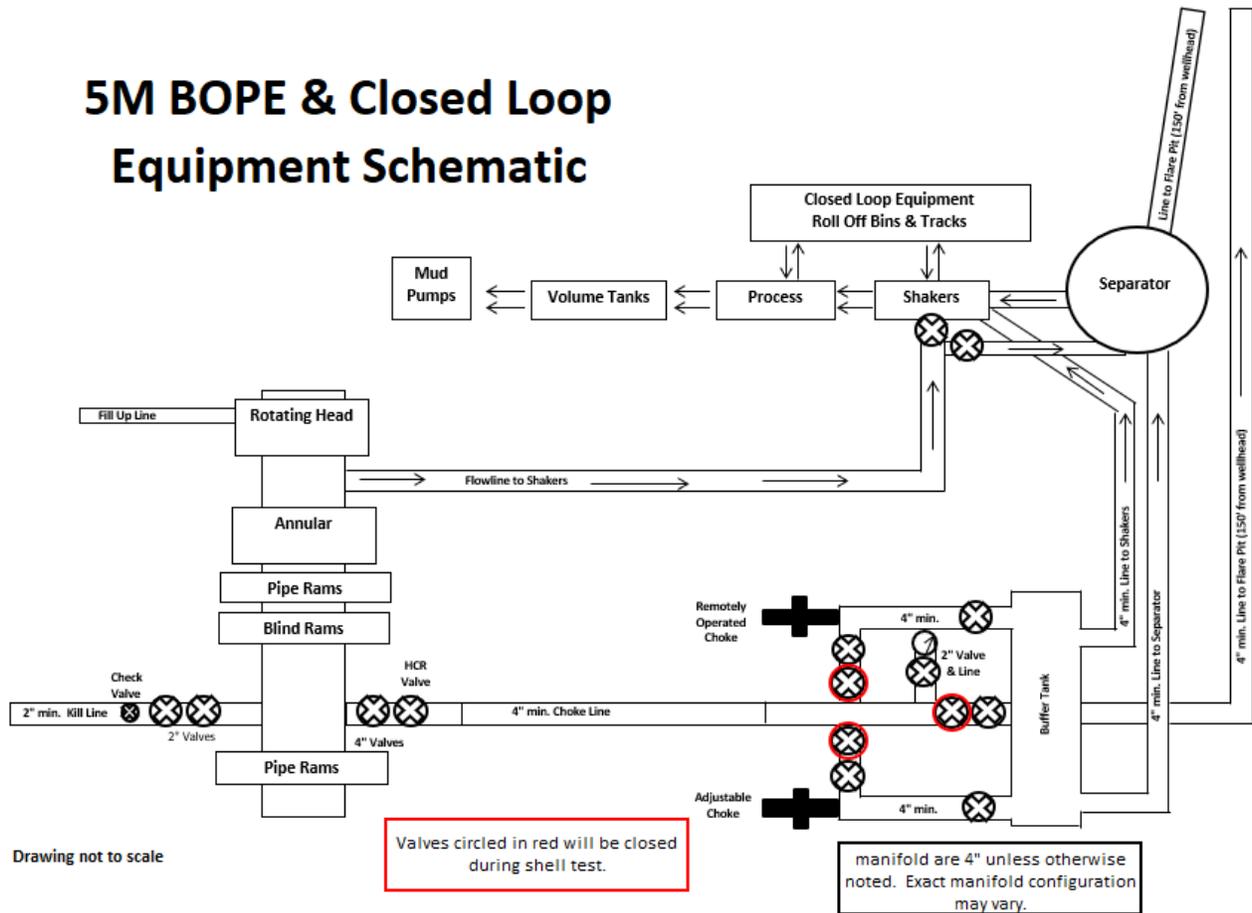


Figure 2. BOPE diagram



Figure 3. BOP handling system



Figure 4. BOP handling system

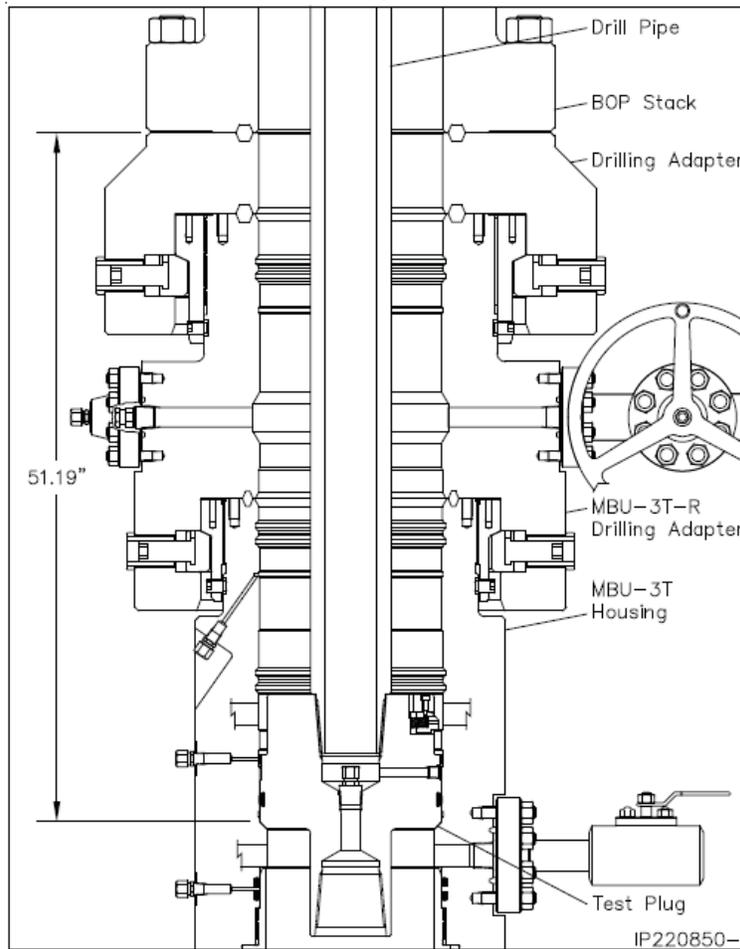


Figure 5. Cactus 5M wellhead with BOP quick connect

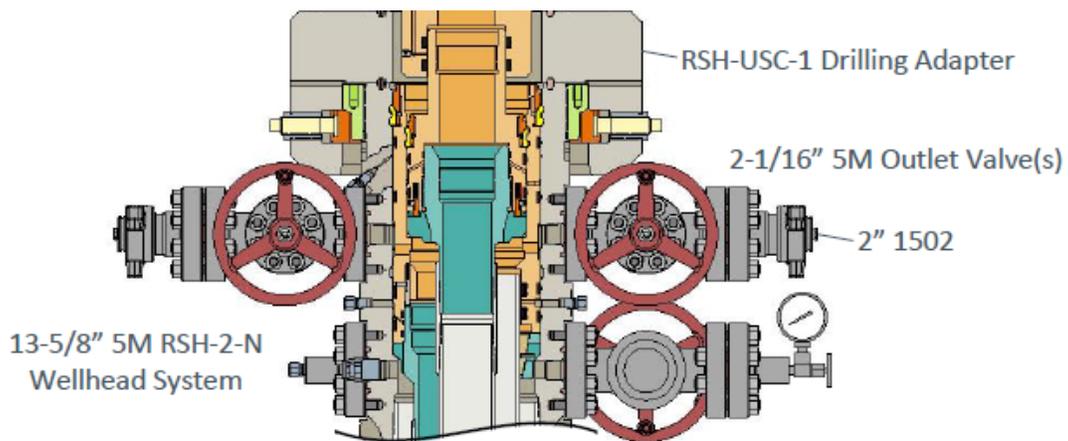


Figure 6. Vault 5M wellhead with BOP quick connect

Mewbourne Oil Company, Jericho 8/12 Fed Com 621H
 Sec 8, T20S, R29E
 SHL: 1260' FNL 210' FEL (Sec 8)
 BHL: 440' FNL 2566' FEL (Sec 12)

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	26"	0'	0'	330'	330'	18 5/8" 87.5# J55 BTC	4.27	15.25	46.03	47.34
Intermediate 1	17.5"	0'	0'	1200'	1200'	13.375" 48# H40 STC	1.21	2.72	5.59	9.39
Intermediate 2	12.25"	0'	0'	3100'	3100'	9.625" 36# J55 LTC	1.46	2.54	4.06	5.05
Production	8.75"	0'	0'	8515'	8438'	7" 26# P110 LTC	1.46	2.34	3.13	3.75
Liner	6.125"	8315'	8255'	21646'	8855'	4.5" 13.5# P110 LTC	2.07	2.41	1.88	2.34

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft ³ /sack	TOC/BOC	Volume ft ³	% Excess	Slurry Description
18.625 in	LEAD	440	12.5	2.12	0' - 255'	940	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	255' - 330'	268		Class C: Retarder
13.375 in	LEAD	420	12.5	2.12	0' - 925'	900	50%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	925' - 1200'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	200	12.5	2.12	1375' - 2438'	430	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	2438' - 3100'	268		Class C: Retarder
9 5/8" DV Tool @ 1375'								
2nd Stg 9.625 in	LEAD	190	12.5	2.12	0' - 1036'	410	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1036' - 1375'	134		Class C: Retarder
7 in	LEAD	670	12.5	2.12	1359' - 6739'	1430	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6739' - 8515'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	850	13.5	1.85	8315' - 21646'	1580	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 330'	8.4 - 8.6	Fresh Water
330' - 1200'	10.0 - 10.2	Brine
1200' - 3100'	8.4 - 8.6	Fresh Water
3100' - 8515'	8.6 - 9.7	Cut-Brine
8515' - 21646'	10.0 - 11.	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	292'	Usable Water	Yeso		
Castile			Delaware (Lamar)	3178'	Oil/Natural Gas
Salt Top	544'	None	Bell Canyon		
Marker Bed 126			Cherry Canyon		
Salt Base	911'	None	Manzanita Marker		
Yates	1086'	Oil/Natural Gas	Basal Brushy Canyon		
Seven Rivers			Bone Spring	5746'	Oil/Natural Gas
Queen			1st Bone Spring	6926'	Oil/Natural Gas
Capitan	1409'	Usable Water	2nd Bone Spring	7646'	Oil/Natural Gas
Grayburg			3rd Bone Spring	8810'	Oil/Natural Gas
San Andres			Wolfcamp	9185'	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.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-Q?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	
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?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Jericho 8/12 Fed Com 621H

Sec 8, T20S, R29E

SHL: 1260' FNL 210' FEL (Sec 8)

BHL: 440' FNL 2566' FEL (Sec 12)

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	26"	0'	0'	330'	330'	18 5/8" 87.5# J55 BTC	4.27	15.25	46.03	47.34
Int 1	17.5"	0'	0'	1200'	1200'	13.375" 48# H40 STC	1.21	2.72	5.59	9.39
Int 2	12.25"	0'	0'	3100'	3100'	9.625" 36# J55 LTC	1.46	2.54	4.06	5.05
Production	8.75"	0'	0'	9415'	9011'	7" 26# P110 LTC	1.37	2.19	2.83	3.39
Liner	6.125"	8515'	8438'	21646'	8855'	4.5" 13.5# P110 LTC	2.07	2.41	1.91	2.38

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft³/sack	TOC/BOC	Volume ft³	% Excess	Slurry Description
18.625 in	LEAD	440	12.5	2.12	0' - 255'	940	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	255' - 330'	268		Class C: Retarder
13.375 in	LEAD	420	12.5	2.12	0' - 925'	900	50%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	925' - 1200'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	200	12.5	2.12	1375' - 2438'	430	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	2438' - 3100'	268		Class C: Retarder
9 5/8" DV Tool @ 1375'								
2nd Stg 9.625 in	LEAD	190	12.5	2.12	0' - 1036'	410	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1036' - 1375'	134		Class C: Retarder
1st Stg 7 in	LEAD	580	12.5	2.12	1359' - 6178'	1230	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	700	15.6	1.18	6178' - 9415'	826		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	830	13.5	1.85	8515' - 21646'	1540	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 330'	8.4 - 8.6	Fresh Water
330' - 1200'	10.0 - 10.2	Brine
1200' - 3100'	8.4 - 8.6	Fresh Water
3100' - 9415'	8.6 - 9.7	Cut-Brine
9415' - 21646'	10.0 - 11.	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	292'	Usable Water	Yeso		
Castile			Delaware (Lamar)	3178'	Oil/Natural Gas
Salt Top	544'	None	Bell Canyon		
Marker Bed 126			Cherry Canyon		
Salt Base	911'	None	Manzanita Marker		
Yates	1086'	Oil/Natural Gas	Basal Brushy Canyon		
Seven Rivers			Bone Spring	5746'	Oil/Natural Gas
Queen			1st Bone Spring	6926'	Oil/Natural Gas
Capitan	1409'	Usable Water	2nd Bone Spring	7646'	Oil/Natural Gas
Grayburg			3rd Bone Spring	8810'	Oil/Natural Gas
San Andres			Wolfcamp	9185'	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.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-Q?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	
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?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company

Eddy County, New Mexico NAD 83

Jericho 8/12 Fed Com #621H

Sec 08, T20S, R29E

SHL: 1260' FNL & 210' FEL (Sec 8)

BHL: 440' FNL & 2566' FEL (Sec 12)

Plan: Design #1

Standard Planning Report

05 November, 2024

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Jericho 8/12 Fed Com #621H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3311.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3311.0usft (Original Well Elev)
Site:	Jericho 8/12 Fed Com #621H	North Reference:	Grid
Well:	Sec 08, T20S, R29E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 440' FNL & 2566' FEL (Sec 12)		
Design:	Design #1		

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

Site	Jericho 8/12 Fed Com #621H				
Site Position:		Northing:	579,105.60 usft	Latitude:	32.5917775
From:	Map	Easting:	616,498.10 usft	Longitude:	-104.0892903
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	Sec 08, T20S, R29E					
Well Position	+N/-S	0.0 usft	Northing:	579,105.60 usft	Latitude:	32.5917775
	+E/-W	0.0 usft	Easting:	616,498.10 usft	Longitude:	-104.0892903
Position Uncertainty		0.0 usft	Wellhead Elevation:	3,311.0 usft	Ground Level:	3,283.0 usft
Grid Convergence:	0.13 °					

Wellbore	BHL: 440' FNL & 2566' FEL (Sec 12)				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/31/2014	7.42	60.35	48,402.58472731

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	274.16

Plan Survey Tool Program	Date	11/5/2024		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,646.0	Design #1 (BHL: 440' FNL & 2566	

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	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,043.3	10.87	13.62	4,040.0	49.9	12.1	2.00	2.00	0.00	13.62	
7,971.7	10.87	13.62	7,898.0	769.6	186.5	0.00	0.00	0.00	0.00	
8,514.9	0.00	0.00	8,438.0	819.5	198.6	2.00	-2.00	0.00	180.00	KOP: 440' FNL & 10' I
9,422.4	90.73	270.44	9,011.0	823.9	-381.7	10.00	10.00	0.00	-89.56	
21,646.0	90.73	270.44	8,855.0	916.8	-12,604.0	0.00	0.00	0.00	0.00	BHL: 440' FNL & 2566'

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Jericho 8/12 Fed Com #621H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3311.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3311.0usft (Original Well Elev)
Site:	Jericho 8/12 Fed Com #621H	North Reference:	Grid
Well:	Sec 08, T20S, R29E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 440' FNL & 2566' FEL (Sec 12)		
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	
SHL: 1260' FNL & 210' FEL (Sec 8)										
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,600.0	2.00	13.62	3,600.0	1.7	0.4	-0.3	2.00	2.00	0.00	
3,700.0	4.00	13.62	3,699.8	6.8	1.6	-1.1	2.00	2.00	0.00	
3,800.0	6.00	13.62	3,799.5	15.3	3.7	-2.6	2.00	2.00	0.00	
3,900.0	8.00	13.62	3,898.7	27.1	6.6	-4.6	2.00	2.00	0.00	
4,000.0	10.00	13.62	3,997.5	42.3	10.3	-7.2	2.00	2.00	0.00	
4,043.3	10.87	13.62	4,040.0	49.9	12.1	-8.4	2.00	2.00	0.00	
4,100.0	10.87	13.62	4,095.7	60.3	14.6	-10.2	0.00	0.00	0.00	
4,200.0	10.87	13.62	4,193.9	78.6	19.1	-13.3	0.00	0.00	0.00	
4,300.0	10.87	13.62	4,292.1	96.9	23.5	-16.4	0.00	0.00	0.00	
4,400.0	10.87	13.62	4,390.4	115.3	27.9	-19.5	0.00	0.00	0.00	
4,500.0	10.87	13.62	4,488.6	133.6	32.4	-22.6	0.00	0.00	0.00	
4,600.0	10.87	13.62	4,586.8	151.9	36.8	-25.7	0.00	0.00	0.00	
4,700.0	10.87	13.62	4,685.0	170.2	41.3	-28.8	0.00	0.00	0.00	
4,800.0	10.87	13.62	4,783.2	188.5	45.7	-31.9	0.00	0.00	0.00	
4,900.0	10.87	13.62	4,881.4	206.9	50.1	-35.0	0.00	0.00	0.00	
5,000.0	10.87	13.62	4,979.6	225.2	54.6	-38.1	0.00	0.00	0.00	
5,100.0	10.87	13.62	5,077.8	243.5	59.0	-41.2	0.00	0.00	0.00	

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Jericho 8/12 Fed Com #621H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3311.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3311.0usft (Original Well Elev)
Site:	Jericho 8/12 Fed Com #621H	North Reference:	Grid
Well:	Sec 08, T20S, R29E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 440' FNL & 2566' FEL (Sec 12)		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,200.0	10.87	13.62	5,176.0	261.8	63.5	-44.3	0.00	0.00	0.00	
5,300.0	10.87	13.62	5,274.2	280.1	67.9	-47.4	0.00	0.00	0.00	
5,400.0	10.87	13.62	5,372.4	298.5	72.3	-50.5	0.00	0.00	0.00	
5,500.0	10.87	13.62	5,470.6	316.8	76.8	-53.6	0.00	0.00	0.00	
5,600.0	10.87	13.62	5,568.8	335.1	81.2	-56.7	0.00	0.00	0.00	
5,700.0	10.87	13.62	5,667.0	353.4	85.6	-59.8	0.00	0.00	0.00	
5,800.0	10.87	13.62	5,765.3	371.7	90.1	-62.9	0.00	0.00	0.00	
5,900.0	10.87	13.62	5,863.5	390.1	94.5	-66.0	0.00	0.00	0.00	
6,000.0	10.87	13.62	5,961.7	408.4	99.0	-69.1	0.00	0.00	0.00	
6,100.0	10.87	13.62	6,059.9	426.7	103.4	-72.2	0.00	0.00	0.00	
6,200.0	10.87	13.62	6,158.1	445.0	107.8	-75.3	0.00	0.00	0.00	
6,300.0	10.87	13.62	6,256.3	463.3	112.3	-78.4	0.00	0.00	0.00	
6,400.0	10.87	13.62	6,354.5	481.7	116.7	-81.5	0.00	0.00	0.00	
6,500.0	10.87	13.62	6,452.7	500.0	121.2	-84.6	0.00	0.00	0.00	
6,600.0	10.87	13.62	6,550.9	518.3	125.6	-87.7	0.00	0.00	0.00	
6,700.0	10.87	13.62	6,649.1	536.6	130.0	-90.8	0.00	0.00	0.00	
6,800.0	10.87	13.62	6,747.3	554.9	134.5	-93.9	0.00	0.00	0.00	
6,900.0	10.87	13.62	6,845.5	573.3	138.9	-97.0	0.00	0.00	0.00	
7,000.0	10.87	13.62	6,943.7	591.6	143.4	-100.1	0.00	0.00	0.00	
7,100.0	10.87	13.62	7,042.0	609.9	147.8	-103.2	0.00	0.00	0.00	
7,200.0	10.87	13.62	7,140.2	628.2	152.2	-106.3	0.00	0.00	0.00	
7,300.0	10.87	13.62	7,238.4	646.5	156.7	-109.4	0.00	0.00	0.00	
7,400.0	10.87	13.62	7,336.6	664.9	161.1	-112.5	0.00	0.00	0.00	
7,500.0	10.87	13.62	7,434.8	683.2	165.6	-115.6	0.00	0.00	0.00	
7,600.0	10.87	13.62	7,533.0	701.5	170.0	-118.7	0.00	0.00	0.00	
7,700.0	10.87	13.62	7,631.2	719.8	174.4	-121.8	0.00	0.00	0.00	
7,800.0	10.87	13.62	7,729.4	738.1	178.9	-124.9	0.00	0.00	0.00	
7,900.0	10.87	13.62	7,827.6	756.5	183.3	-128.0	0.00	0.00	0.00	
7,971.7	10.87	13.62	7,898.0	769.6	186.5	-130.2	0.00	0.00	0.00	
8,000.0	10.30	13.62	7,925.8	774.6	187.7	-131.0	2.00	-2.00	0.00	
8,100.0	8.30	13.62	8,024.5	790.3	191.5	-133.7	2.00	-2.00	0.00	
8,200.0	6.30	13.62	8,123.7	802.7	194.5	-135.8	2.00	-2.00	0.00	
8,300.0	4.30	13.62	8,223.3	811.7	196.7	-137.3	2.00	-2.00	0.00	
8,400.0	2.30	13.62	8,323.1	817.3	198.1	-138.2	2.00	-2.00	0.00	
8,500.0	0.30	13.62	8,423.1	819.5	198.6	-138.6	2.00	-2.00	0.00	
8,514.9	0.00	0.00	8,438.0	819.5	198.6	-138.6	2.00	-2.00	0.00	
KOP: 440' FNL & 10' FEL (Sec 8)										
8,550.0	3.51	270.44	8,473.1	819.5	197.5	-137.6	10.00	10.00	0.00	
8,600.0	8.51	270.44	8,522.8	819.5	192.3	-132.3	10.00	10.00	0.00	
8,650.0	13.51	270.44	8,571.8	819.6	182.8	-122.8	10.00	10.00	0.00	
8,700.0	18.50	270.44	8,619.9	819.7	169.0	-109.1	10.00	10.00	0.00	
8,750.0	23.50	270.44	8,666.5	819.9	151.1	-91.2	10.00	10.00	0.00	
8,800.0	28.50	270.44	8,711.5	820.0	129.1	-69.3	10.00	10.00	0.00	
8,840.5	32.55	270.44	8,746.3	820.2	108.6	-48.8	10.00	10.00	0.00	
FTP: 440' FNL & 100' FEL (Sec 8)										
8,850.0	33.50	270.44	8,754.3	820.2	103.4	-43.6	10.00	10.00	0.00	
8,900.0	38.50	270.44	8,794.7	820.4	74.0	-14.3	10.00	10.00	0.00	
8,950.0	43.50	270.44	8,832.5	820.7	41.2	18.4	10.00	10.00	0.00	
9,000.0	48.50	270.44	8,867.2	821.0	5.3	54.3	10.00	10.00	0.00	
9,050.0	53.50	270.44	8,898.6	821.3	-33.6	93.1	10.00	10.00	0.00	
9,100.0	58.50	270.44	8,926.6	821.6	-75.0	134.4	10.00	10.00	0.00	
9,150.0	63.50	270.44	8,950.8	821.9	-118.7	178.0	10.00	10.00	0.00	
9,200.0	68.50	270.44	8,971.2	822.3	-164.4	223.6	10.00	10.00	0.00	
9,250.0	73.50	270.44	8,987.4	822.6	-211.6	270.8	10.00	10.00	0.00	

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Jericho 8/12 Fed Com #621H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3311.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3311.0usft (Original Well Elev)
Site:	Jericho 8/12 Fed Com #621H	North Reference:	Grid
Well:	Sec 08, T20S, R29E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 440' FNL & 2566' FEL (Sec 12)		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,300.0	78.50	270.44	8,999.5	823.0	-260.1	319.2	10.00	10.00	0.00
9,350.0	83.49	270.44	9,007.4	823.4	-309.5	368.4	10.00	10.00	0.00
9,400.0	88.49	270.44	9,010.8	823.7	-359.4	418.2	10.00	10.00	0.00
9,415.0	90.00	270.44	9,011.0	823.9	-374.4	433.2	10.00	10.00	0.00
LP: 440' FNL & 583' FEL (Sec 8)									
9,422.4	90.73	270.44	9,011.0	823.9	-381.7	440.5	10.00	10.00	0.00
9,500.0	90.73	270.44	9,010.0	824.5	-459.4	518.0	0.00	0.00	0.00
9,600.0	90.73	270.44	9,008.7	825.3	-559.3	617.7	0.00	0.00	0.00
9,700.0	90.73	270.44	9,007.5	826.0	-659.3	717.5	0.00	0.00	0.00
9,800.0	90.73	270.44	9,006.2	826.8	-759.3	817.3	0.00	0.00	0.00
9,900.0	90.73	270.44	9,004.9	827.5	-859.3	917.1	0.00	0.00	0.00
10,000.0	90.73	270.44	9,003.6	828.3	-959.3	1,016.9	0.00	0.00	0.00
10,100.0	90.73	270.44	9,002.4	829.1	-1,059.3	1,116.6	0.00	0.00	0.00
10,200.0	90.73	270.44	9,001.1	829.8	-1,159.3	1,216.4	0.00	0.00	0.00
10,300.0	90.73	270.44	8,999.8	830.6	-1,259.3	1,316.2	0.00	0.00	0.00
10,400.0	90.73	270.44	8,998.5	831.3	-1,359.3	1,416.0	0.00	0.00	0.00
10,500.0	90.73	270.44	8,997.2	832.1	-1,459.2	1,515.8	0.00	0.00	0.00
10,600.0	90.73	270.44	8,996.0	832.9	-1,559.2	1,615.5	0.00	0.00	0.00
10,700.0	90.73	270.44	8,994.7	833.6	-1,659.2	1,715.3	0.00	0.00	0.00
10,800.0	90.73	270.44	8,993.4	834.4	-1,759.2	1,815.1	0.00	0.00	0.00
10,900.0	90.73	270.44	8,992.1	835.1	-1,859.2	1,914.9	0.00	0.00	0.00
11,000.0	90.73	270.44	8,990.9	835.9	-1,959.2	2,014.7	0.00	0.00	0.00
11,100.0	90.73	270.44	8,989.6	836.7	-2,059.2	2,114.5	0.00	0.00	0.00
11,200.0	90.73	270.44	8,988.3	837.4	-2,159.2	2,214.2	0.00	0.00	0.00
11,300.0	90.73	270.44	8,987.0	838.2	-2,259.2	2,314.0	0.00	0.00	0.00
11,400.0	90.73	270.44	8,985.8	838.9	-2,359.1	2,413.8	0.00	0.00	0.00
11,500.0	90.73	270.44	8,984.5	839.7	-2,459.1	2,513.6	0.00	0.00	0.00
11,600.0	90.73	270.44	8,983.2	840.5	-2,559.1	2,613.4	0.00	0.00	0.00
11,700.0	90.73	270.44	8,981.9	841.2	-2,659.1	2,713.1	0.00	0.00	0.00
11,800.0	90.73	270.44	8,980.7	842.0	-2,759.1	2,812.9	0.00	0.00	0.00
11,900.0	90.73	270.44	8,979.4	842.7	-2,859.1	2,912.7	0.00	0.00	0.00
12,000.0	90.73	270.44	8,978.1	843.5	-2,959.1	3,012.5	0.00	0.00	0.00
12,100.0	90.73	270.44	8,976.8	844.3	-3,059.1	3,112.3	0.00	0.00	0.00
12,200.0	90.73	270.44	8,975.6	845.0	-3,159.1	3,212.0	0.00	0.00	0.00
12,300.0	90.73	270.44	8,974.3	845.8	-3,259.0	3,311.8	0.00	0.00	0.00
12,400.0	90.73	270.44	8,973.0	846.5	-3,359.0	3,411.6	0.00	0.00	0.00
12,500.0	90.73	270.44	8,971.7	847.3	-3,459.0	3,511.4	0.00	0.00	0.00
12,600.0	90.73	270.44	8,970.4	848.1	-3,559.0	3,611.2	0.00	0.00	0.00
12,700.0	90.73	270.44	8,969.2	848.8	-3,659.0	3,710.9	0.00	0.00	0.00
12,800.0	90.73	270.44	8,967.9	849.6	-3,759.0	3,810.7	0.00	0.00	0.00
12,900.0	90.73	270.44	8,966.6	850.3	-3,859.0	3,910.5	0.00	0.00	0.00
13,000.0	90.73	270.44	8,965.3	851.1	-3,959.0	4,010.3	0.00	0.00	0.00
13,100.0	90.73	270.44	8,964.1	851.9	-4,059.0	4,110.1	0.00	0.00	0.00
13,200.0	90.73	270.44	8,962.8	852.6	-4,158.9	4,209.8	0.00	0.00	0.00
13,300.0	90.73	270.44	8,961.5	853.4	-4,258.9	4,309.6	0.00	0.00	0.00
13,400.0	90.73	270.44	8,960.2	854.1	-4,358.9	4,409.4	0.00	0.00	0.00
13,500.0	90.73	270.44	8,959.0	854.9	-4,458.9	4,509.2	0.00	0.00	0.00
13,600.0	90.73	270.44	8,957.7	855.7	-4,558.9	4,609.0	0.00	0.00	0.00
13,700.0	90.73	270.44	8,956.4	856.4	-4,658.9	4,708.7	0.00	0.00	0.00
13,800.0	90.73	270.44	8,955.1	857.2	-4,758.9	4,808.5	0.00	0.00	0.00
13,900.0	90.73	270.44	8,953.9	857.9	-4,858.9	4,908.3	0.00	0.00	0.00
14,000.0	90.73	270.44	8,952.6	858.7	-4,958.9	5,008.1	0.00	0.00	0.00
14,100.0	90.73	270.44	8,951.3	859.5	-5,058.8	5,107.9	0.00	0.00	0.00

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Jericho 8/12 Fed Com #621H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3311.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3311.0usft (Original Well Elev)
Site:	Jericho 8/12 Fed Com #621H	North Reference:	Grid
Well:	Sec 08, T20S, R29E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 440' FNL & 2566' FEL (Sec 12)		
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)	
14,125.2	90.73	270.44	8,951.0	859.6	-5,084.0	5,133.0	0.00	0.00	0.00	
PPP2: 408' FNL & 0' FEL (Sec 7)										
14,200.0	90.73	270.44	8,950.0	860.2	-5,158.8	5,207.7	0.00	0.00	0.00	
14,300.0	90.73	270.44	8,948.8	861.0	-5,258.8	5,307.4	0.00	0.00	0.00	
14,400.0	90.73	270.44	8,947.5	861.7	-5,358.8	5,407.2	0.00	0.00	0.00	
14,500.0	90.73	270.44	8,946.2	862.5	-5,458.8	5,507.0	0.00	0.00	0.00	
14,600.0	90.73	270.44	8,944.9	863.3	-5,558.8	5,606.8	0.00	0.00	0.00	
14,700.0	90.73	270.44	8,943.6	864.0	-5,658.8	5,706.6	0.00	0.00	0.00	
14,800.0	90.73	270.44	8,942.4	864.8	-5,758.8	5,806.3	0.00	0.00	0.00	
14,900.0	90.73	270.44	8,941.1	865.5	-5,858.8	5,906.1	0.00	0.00	0.00	
15,000.0	90.73	270.44	8,939.8	866.3	-5,958.7	6,005.9	0.00	0.00	0.00	
15,100.0	90.73	270.44	8,938.5	867.1	-6,058.7	6,105.7	0.00	0.00	0.00	
15,200.0	90.73	270.44	8,937.3	867.8	-6,158.7	6,205.5	0.00	0.00	0.00	
15,300.0	90.73	270.44	8,936.0	868.6	-6,258.7	6,305.2	0.00	0.00	0.00	
15,400.0	90.73	270.44	8,934.7	869.3	-6,358.7	6,405.0	0.00	0.00	0.00	
15,500.0	90.73	270.44	8,933.4	870.1	-6,458.7	6,504.8	0.00	0.00	0.00	
15,600.0	90.73	270.44	8,932.2	870.9	-6,558.7	6,604.6	0.00	0.00	0.00	
15,700.0	90.73	270.44	8,930.9	871.6	-6,658.7	6,704.4	0.00	0.00	0.00	
15,800.0	90.73	270.44	8,929.6	872.4	-6,758.7	6,804.1	0.00	0.00	0.00	
15,900.0	90.73	270.44	8,928.3	873.1	-6,858.7	6,903.9	0.00	0.00	0.00	
16,000.0	90.73	270.44	8,927.1	873.9	-6,958.6	7,003.7	0.00	0.00	0.00	
16,100.0	90.73	270.44	8,925.8	874.7	-7,058.6	7,103.5	0.00	0.00	0.00	
16,200.0	90.73	270.44	8,924.5	875.4	-7,158.6	7,203.3	0.00	0.00	0.00	
16,300.0	90.73	270.44	8,923.2	876.2	-7,258.6	7,303.0	0.00	0.00	0.00	
16,400.0	90.73	270.44	8,922.0	876.9	-7,358.6	7,402.8	0.00	0.00	0.00	
16,500.0	90.73	270.44	8,920.7	877.7	-7,458.6	7,502.6	0.00	0.00	0.00	
16,600.0	90.73	270.44	8,919.4	878.5	-7,558.6	7,602.4	0.00	0.00	0.00	
16,700.0	90.73	270.44	8,918.1	879.2	-7,658.6	7,702.2	0.00	0.00	0.00	
16,766.5	90.73	270.44	8,917.3	879.7	-7,725.1	7,768.6	0.00	0.00	0.00	
PPP3: 383' FNL & 2314' FEL (Sec 7)										
16,800.0	90.73	270.44	8,916.8	880.0	-7,758.6	7,801.9	0.00	0.00	0.00	
16,900.0	90.73	270.44	8,915.6	880.7	-7,858.5	7,901.7	0.00	0.00	0.00	
17,000.0	90.73	270.44	8,914.3	881.5	-7,958.5	8,001.5	0.00	0.00	0.00	
17,100.0	90.73	270.44	8,913.0	882.3	-8,058.5	8,101.3	0.00	0.00	0.00	
17,200.0	90.73	270.44	8,911.7	883.0	-8,158.5	8,201.1	0.00	0.00	0.00	
17,300.0	90.73	270.44	8,910.5	883.8	-8,258.5	8,300.8	0.00	0.00	0.00	
17,400.0	90.73	270.44	8,909.2	884.5	-8,358.5	8,400.6	0.00	0.00	0.00	
17,500.0	90.73	270.44	8,907.9	885.3	-8,458.5	8,500.4	0.00	0.00	0.00	
17,600.0	90.73	270.44	8,906.6	886.1	-8,558.5	8,600.2	0.00	0.00	0.00	
17,700.0	90.73	270.44	8,905.4	886.8	-8,658.5	8,700.0	0.00	0.00	0.00	
17,800.0	90.73	270.44	8,904.1	887.6	-8,758.4	8,799.8	0.00	0.00	0.00	
17,900.0	90.73	270.44	8,902.8	888.3	-8,858.4	8,899.5	0.00	0.00	0.00	
18,000.0	90.73	270.44	8,901.5	889.1	-8,958.4	8,999.3	0.00	0.00	0.00	
18,100.0	90.73	270.44	8,900.3	889.9	-9,058.4	9,099.1	0.00	0.00	0.00	
18,200.0	90.73	270.44	8,899.0	890.6	-9,158.4	9,198.9	0.00	0.00	0.00	
18,300.0	90.73	270.44	8,897.7	891.4	-9,258.4	9,298.7	0.00	0.00	0.00	
18,400.0	90.73	270.44	8,896.4	892.1	-9,358.4	9,398.4	0.00	0.00	0.00	
18,500.0	90.73	270.44	8,895.1	892.9	-9,458.4	9,498.2	0.00	0.00	0.00	
18,600.0	90.73	270.44	8,893.9	893.7	-9,558.4	9,598.0	0.00	0.00	0.00	
18,700.0	90.73	270.44	8,892.6	894.4	-9,658.3	9,697.8	0.00	0.00	0.00	
18,800.0	90.73	270.44	8,891.3	895.2	-9,758.3	9,797.6	0.00	0.00	0.00	
18,900.0	90.73	270.44	8,890.0	895.9	-9,858.3	9,897.3	0.00	0.00	0.00	
19,000.0	90.73	270.44	8,888.8	896.7	-9,958.3	9,997.1	0.00	0.00	0.00	
19,080.3	90.73	270.44	8,887.7	897.3	-10,038.6	10,077.2	0.00	0.00	0.00	

Planning Report

Database:	Hobbs	Local Co-ordinate Reference:	Site Jericho 8/12 Fed Com #621H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3311.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3311.0usft (Original Well Elev)
Site:	Jericho 8/12 Fed Com #621H	North Reference:	Grid
Well:	Sec 08, T20S, R29E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 440' FNL & 2566' FEL (Sec 12)		
Design:	Design #1		

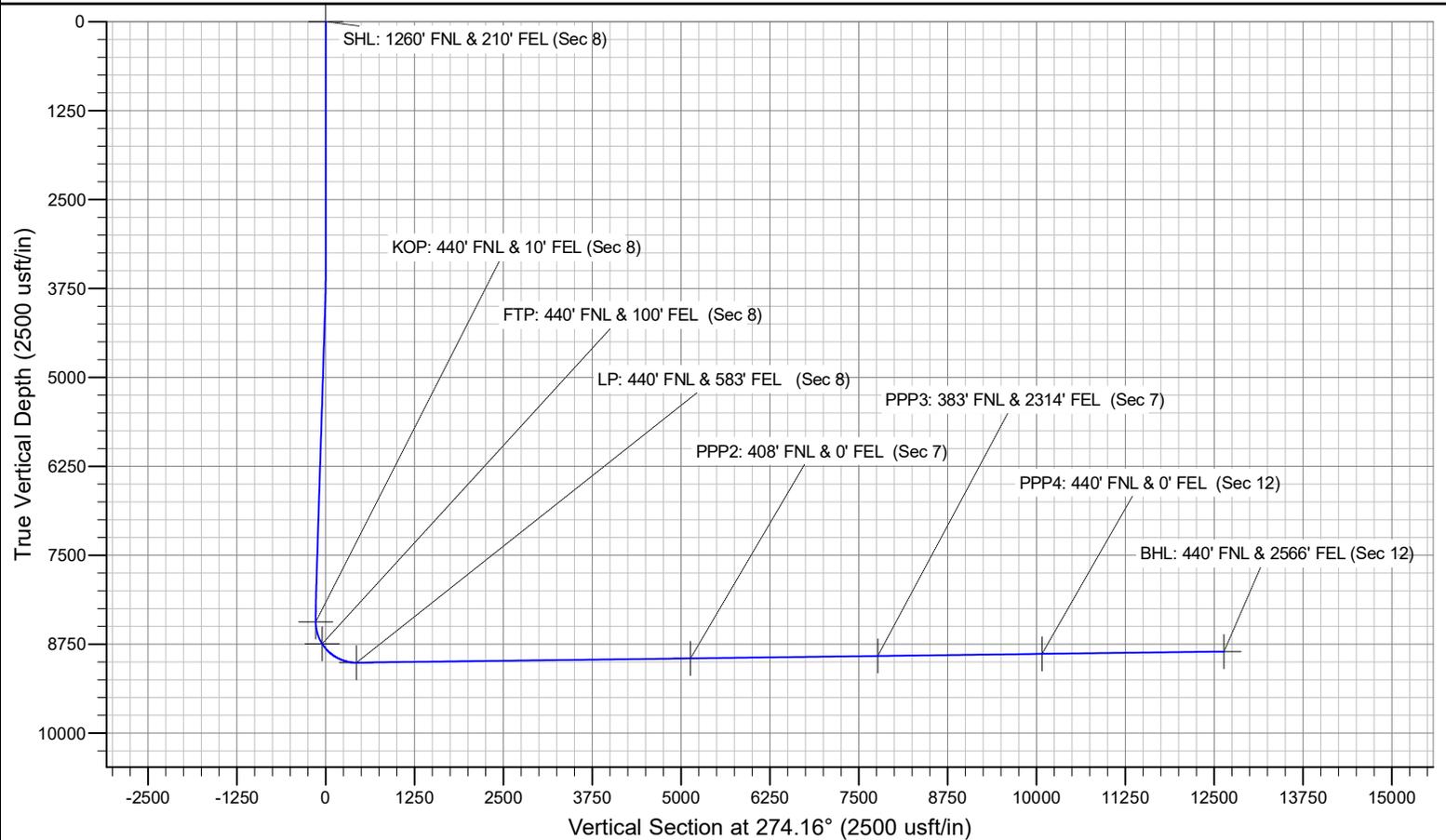
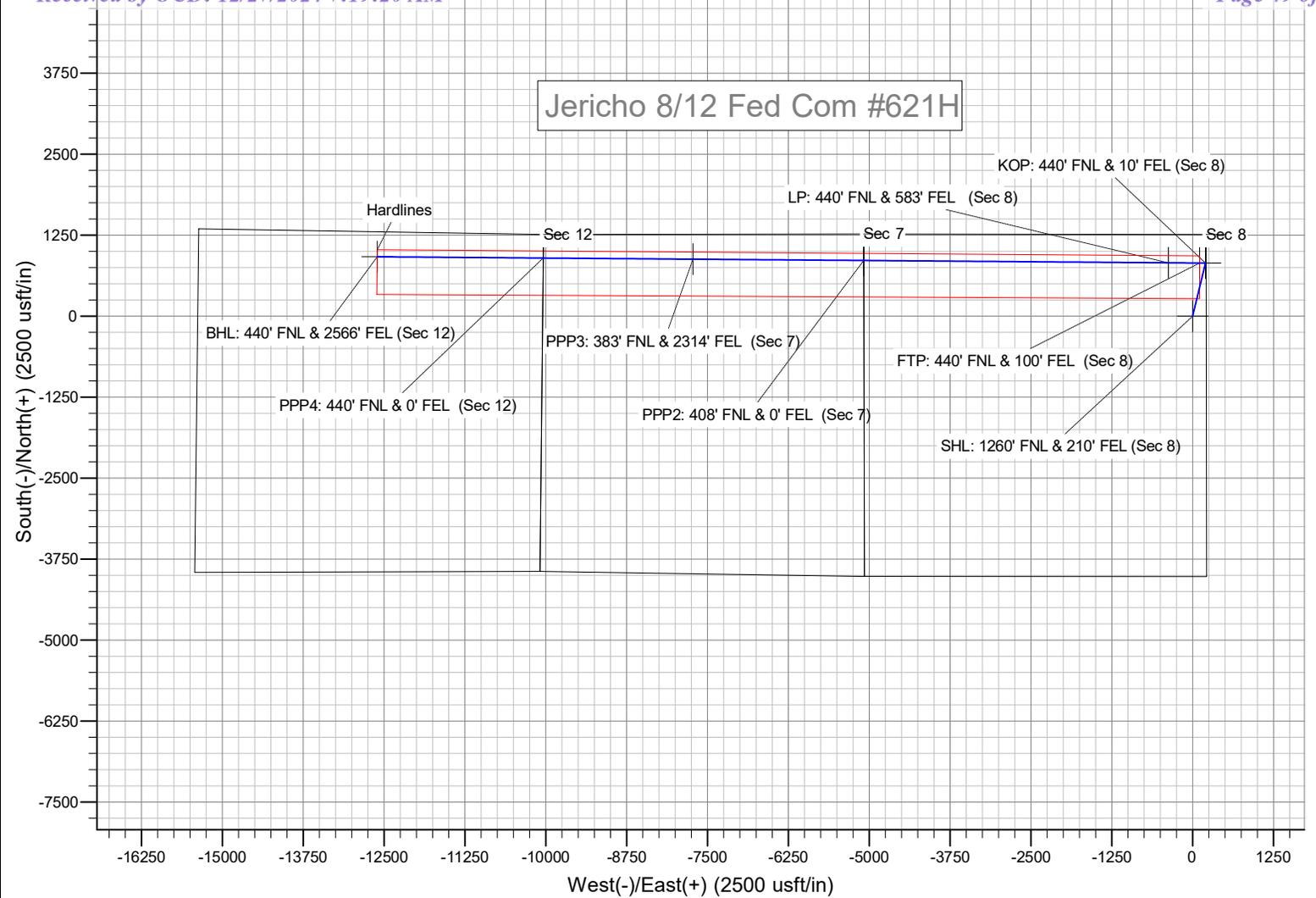
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
PPP4: 440' FNL & 0' FEL (Sec 12)									
19,100.0	90.73	270.44	8,887.5	897.5	-10,058.3	10,096.9	0.00	0.00	0.00
19,200.0	90.73	270.44	8,886.2	898.2	-10,158.3	10,196.7	0.00	0.00	0.00
19,300.0	90.73	270.44	8,884.9	899.0	-10,258.3	10,296.5	0.00	0.00	0.00
19,400.0	90.73	270.44	8,883.7	899.7	-10,358.3	10,396.2	0.00	0.00	0.00
19,500.0	90.73	270.44	8,882.4	900.5	-10,458.3	10,496.0	0.00	0.00	0.00
19,600.0	90.73	270.44	8,881.1	901.3	-10,558.2	10,595.8	0.00	0.00	0.00
19,700.0	90.73	270.44	8,879.8	902.0	-10,658.2	10,695.6	0.00	0.00	0.00
19,800.0	90.73	270.44	8,878.6	902.8	-10,758.2	10,795.4	0.00	0.00	0.00
19,900.0	90.73	270.44	8,877.3	903.5	-10,858.2	10,895.1	0.00	0.00	0.00
20,000.0	90.73	270.44	8,876.0	904.3	-10,958.2	10,994.9	0.00	0.00	0.00
20,100.0	90.73	270.44	8,874.7	905.1	-11,058.2	11,094.7	0.00	0.00	0.00
20,200.0	90.73	270.44	8,873.5	905.8	-11,158.2	11,194.5	0.00	0.00	0.00
20,300.0	90.73	270.44	8,872.2	906.6	-11,258.2	11,294.3	0.00	0.00	0.00
20,400.0	90.73	270.44	8,870.9	907.3	-11,358.2	11,394.0	0.00	0.00	0.00
20,500.0	90.73	270.44	8,869.6	908.1	-11,458.1	11,493.8	0.00	0.00	0.00
20,600.0	90.73	270.44	8,868.3	908.9	-11,558.1	11,593.6	0.00	0.00	0.00
20,700.0	90.73	270.44	8,867.1	909.6	-11,658.1	11,693.4	0.00	0.00	0.00
20,800.0	90.73	270.44	8,865.8	910.4	-11,758.1	11,793.2	0.00	0.00	0.00
20,900.0	90.73	270.44	8,864.5	911.1	-11,858.1	11,893.0	0.00	0.00	0.00
21,000.0	90.73	270.44	8,863.2	911.9	-11,958.1	11,992.7	0.00	0.00	0.00
21,100.0	90.73	270.44	8,862.0	912.7	-12,058.1	12,092.5	0.00	0.00	0.00
21,200.0	90.73	270.44	8,860.7	913.4	-12,158.1	12,192.3	0.00	0.00	0.00
21,300.0	90.73	270.44	8,859.4	914.2	-12,258.1	12,292.1	0.00	0.00	0.00
21,400.0	90.73	270.44	8,858.1	914.9	-12,358.0	12,391.9	0.00	0.00	0.00
21,500.0	90.73	270.44	8,856.9	915.7	-12,458.0	12,491.6	0.00	0.00	0.00
21,600.0	90.73	270.44	8,855.6	916.5	-12,558.0	12,591.4	0.00	0.00	0.00
21,646.0	90.73	270.44	8,855.0	916.8	-12,604.0	12,637.3	0.00	0.00	0.00
BHL: 440' FNL & 2566' FEL (Sec 12)									

Planning Report

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Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3311.0usft (Original Well Elev)
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Site:	Jericho 8/12 Fed Com #621H	North Reference:	Grid
Well:	Sec 08, T20S, R29E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 440' FNL & 2566' FEL (Sec 12)		
Design:	Design #1		

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
SHL: 1260' FNL & 210' F - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	579,105.60	616,498.10	32.5917775	-104.0892903	
KOP: 440' FNL & 10' FE - plan hits target center - Point	0.00	0.00	8,438.0	819.5	198.6	579,925.10	616,696.70	32.5940289	-104.0886393	
FTP: 440' FNL & 100' FE - plan hits target center - Point	0.00	0.00	8,746.3	820.2	108.6	579,925.79	616,606.70	32.5940313	-104.0889316	
BHL: 440' FNL & 2566' F - plan hits target center - Point	0.00	0.00	8,855.0	916.8	-12,604.0	580,022.40	603,894.10	32.5943704	-104.1302090	
PPP4: 440' FNL & 0' FEI - plan hits target center - Point	0.00	0.00	8,887.7	897.3	-10,038.6	580,002.91	606,459.50	32.5943031	-104.1218792	
PPP3: 383' FNL & 2314' - plan hits target center - Point	0.00	0.00	8,917.3	879.7	-7,725.1	579,985.32	608,773.00	32.5942419	-104.1143673	
PPP2: 408' FNL & 0' FEI - plan hits target center - Point	0.00	0.00	8,951.0	859.6	-5,084.0	579,965.25	611,414.10	32.5941714	-104.1057917	
LP: 440' FNL & 583' FEL - plan hits target center - Point	0.00	0.00	9,011.0	823.9	-374.4	579,929.46	616,123.70	32.5940444	-104.0904998	

Jericho 8/12 Fed Com #621H

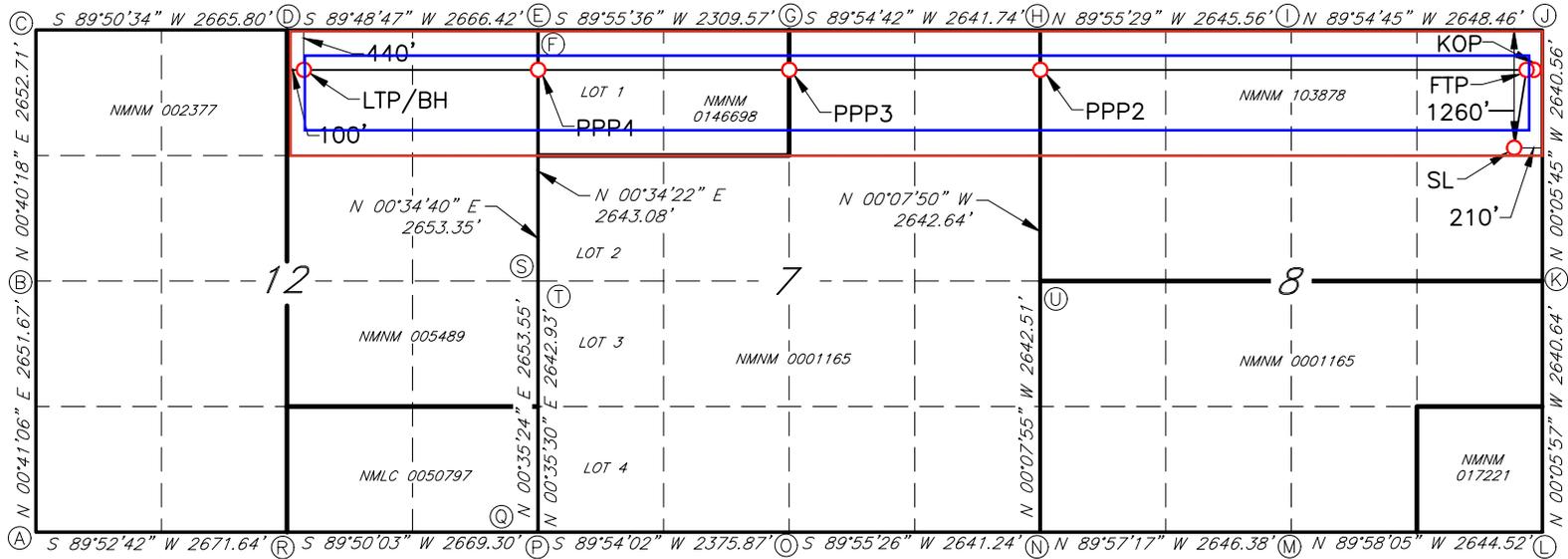


ACREAGE DEDICATION PLATS

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.

JERICHO 8/12 FED COM #621H



GEODETIC DATA

NAD 83 GRID - NM EAST

SURFACE LOCATION (SL)
 N: 579105.6 - E: 616498.1
 LAT: 32.5917776° N
 LONG: 104.0892903° W

KICK OF POINT (KOP)
 440' FNL & 10' FEL SEC.8
 N: 579925.1 - E: 616696.7
 LAT: 32.5940288° N
 LONG: 104.0886393° W

FIRST TAKE POINT (FTP)
 440' FNL & 100' FEL SEC.8
 N: 579925.2 - E: 616606.7
 LAT: 32.5940298° N
 LONG: 104.0889315° W

PROPOSED PENETRATION POINT 2 (PPP2)
 408' FNL - 0' FEL SEC.7
 N: 579964.9 - E: 611414.1
 LAT: 32.5941705° N
 LONG: 104.1057916° W

PROPOSED PENETRATION POINT 3 (PPP3)
 383' FNL - 2314' FWL SEC.7
 N: 579985.1 - E: 608773.0
 LAT: 32.5942413° N
 LONG: 104.1143673° W

PROPOSED PENETRATION POINT 4 (PPP4)
 440' FNL - 0' FEL SEC.12
 N: 580002.8 - E: 606459.5
 LAT: 32.5943027° N
 LONG: 104.1218792° W

LAST TAKE POINT (LTP)/
 BOTTOM HOLE (BH)
 N: 580022.4 - E: 603894.1
 LAT: 32.5943704° N
 LONG: 104.1302089° W

CORNER DATA

NAD 83 GRID - NM EAST

A: FOUND BRASS CAP "1942"
 N: 575151.9 - E: 601070.9

B: FOUND BRASS CAP "1942"
 N: 577802.7 - E: 601102.6

C: FOUND BRASS CAP "1942"
 N: 580454.6 - E: 601133.7

D: FOUND BRASS CAP "1942"
 N: 580461.9 - E: 603798.9

E: FOUND BRASS CAP "1916"
 N: 580365.5 - E: 606463.1

F: FOUND BRASS CAP "1916"
 N: 580470.7 - E: 606464.6

G: FOUND BRASS CAP "1916"
 N: 580368.4 - E: 608772.1

H: FOUND BRASS CAP "1916"
 N: 580372.5 - E: 611413.2

I: FOUND BRASS CAP "1916"
 N: 580369.0 - E: 614058.1

J: FOUND BRASS CAP "1916"
 N: 580365.0 - E: 616706.0

K: FOUND BRASS CAP "1916"
 N: 577725.0 - E: 616710.4

L: FOUND BRASS CAP "1916"
 N: 575085.0 - E: 616714.9

M: FOUND BRASS CAP "1916"
 N: 575086.5 - E: 614071.1

N: FOUND BRASS CAP "1916"
 N: 575088.6 - E: 611425.3

O: FOUND BRASS CAP "1916"
 N: 575085.1 - E: 608784.7

P: FOUND BRASS CAP "1916"
 N: 575165.3 - E: 606410.6

Q: FOUND BRASS CAP "1916"
 N: 575081.0 - E: 606409.4

R: FOUND BRASS CAP "1942"
 N: 575157.6 - E: 603741.9

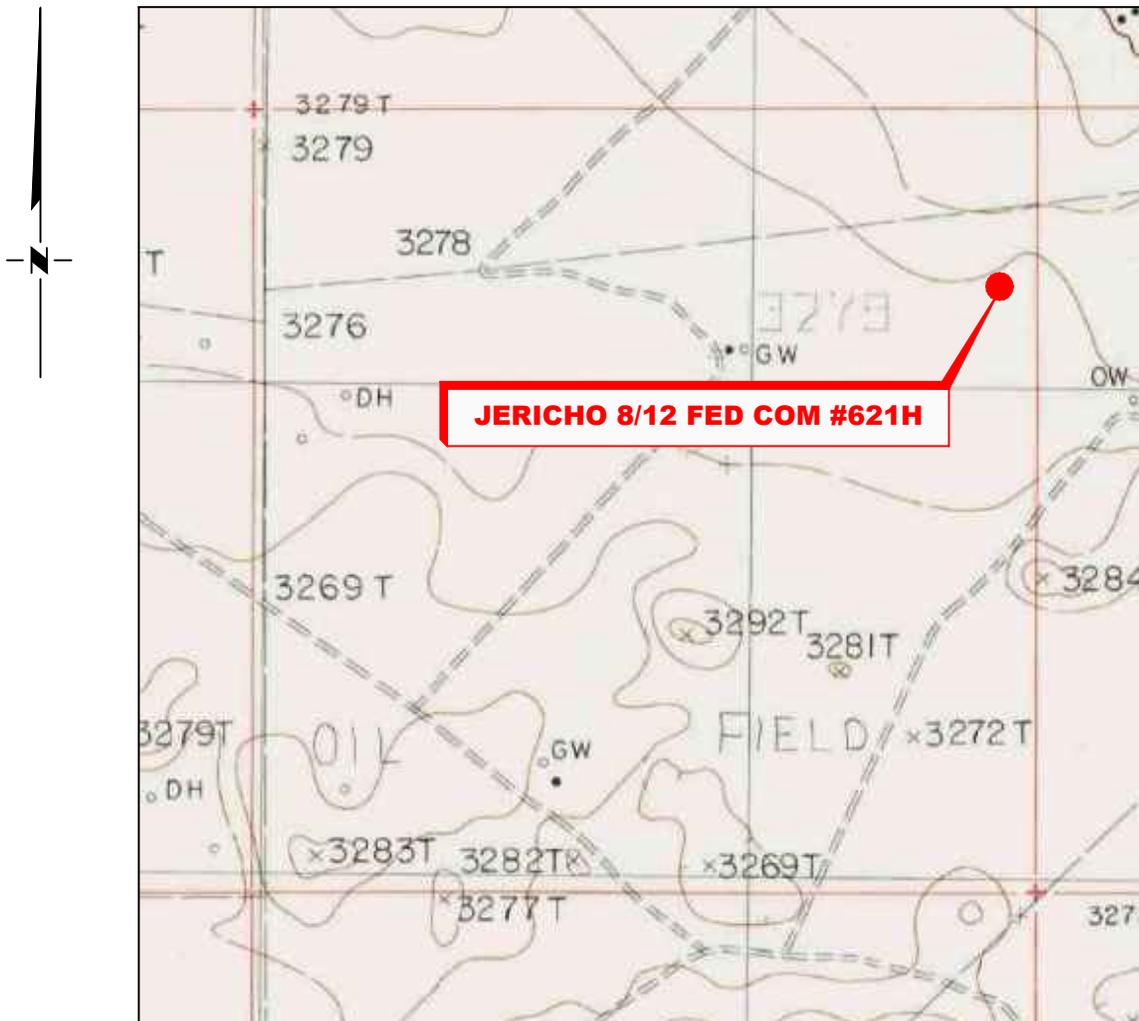
S: FOUND BRASS CAP "1916"
 N: 577818.1 - E: 606437.9

T: FOUND BRASS CAP "1942"
 N: 577723.1 - E: 606436.7

U: FOUND BRASS CAP "1916"
 N: 577730.5 - E: 611419.2

LOCATION VERIFICATION MAP

NOT TO SCALE



*SECTION 8, TWP. 20 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY CO., NEW MEXICO*

OPERATOR: Mewbourne Oil Company
 LEASE: Jericho 8/12 Fed Com
 WELL NO.: 621H
 ELEVATION: 3283'

LOCATION: 1260' FNL & 210' FEL
 CONTOUR INTERVAL: 10'
 USGS TOPO. SOURCE MAP:
Illinois Camp SE, NM (1985)

NO.	REVISION	DATE
1	NAME CHANGE	9/17/24
1	WELL MOVE	6/14/24
JOB NO.: LS24060509D1		
DWG. NO.: 24060509D1-2		

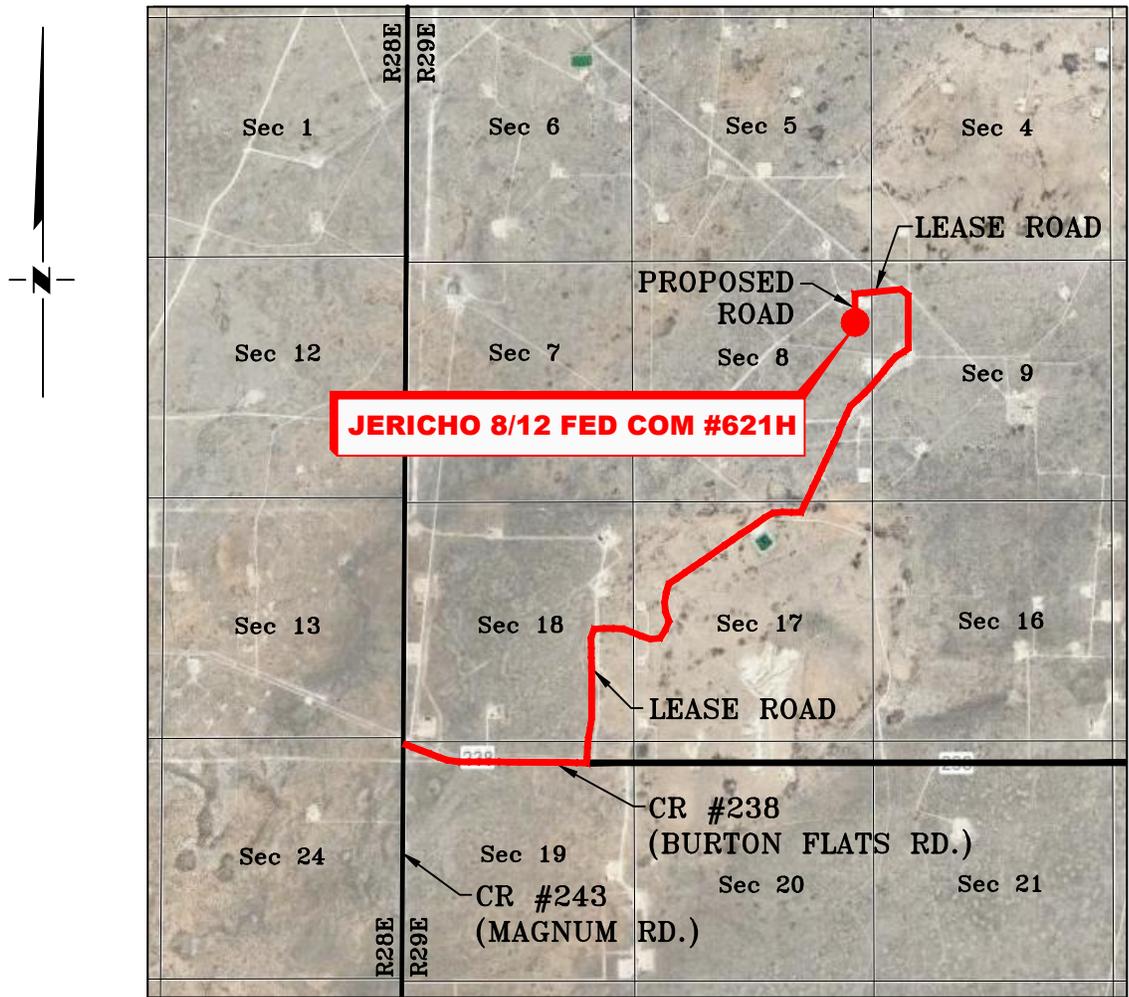


701 S. CECIL ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 08-19-2021
SURVEYED BY: ML/AG
DRAWN BY: LM
APPROVED BY: RMH
SHEET: 1 OF 1

VICINITY MAP

NOT TO SCALE



*SECTION 8, TWP. 20 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY CO., NEW MEXICO*

OPERATOR: Mewbourne Oil Company
 LEASE: Jericho 8/12 Fed Com
 WELL NO.: 621H

LOCATION: 1260' FNL & 210' FEL
 ELEVATION: 3283'

NO.	REVISION	DATE
1	NAME CHANGE	9/17/24
1	WELL MOVE	6/14/24

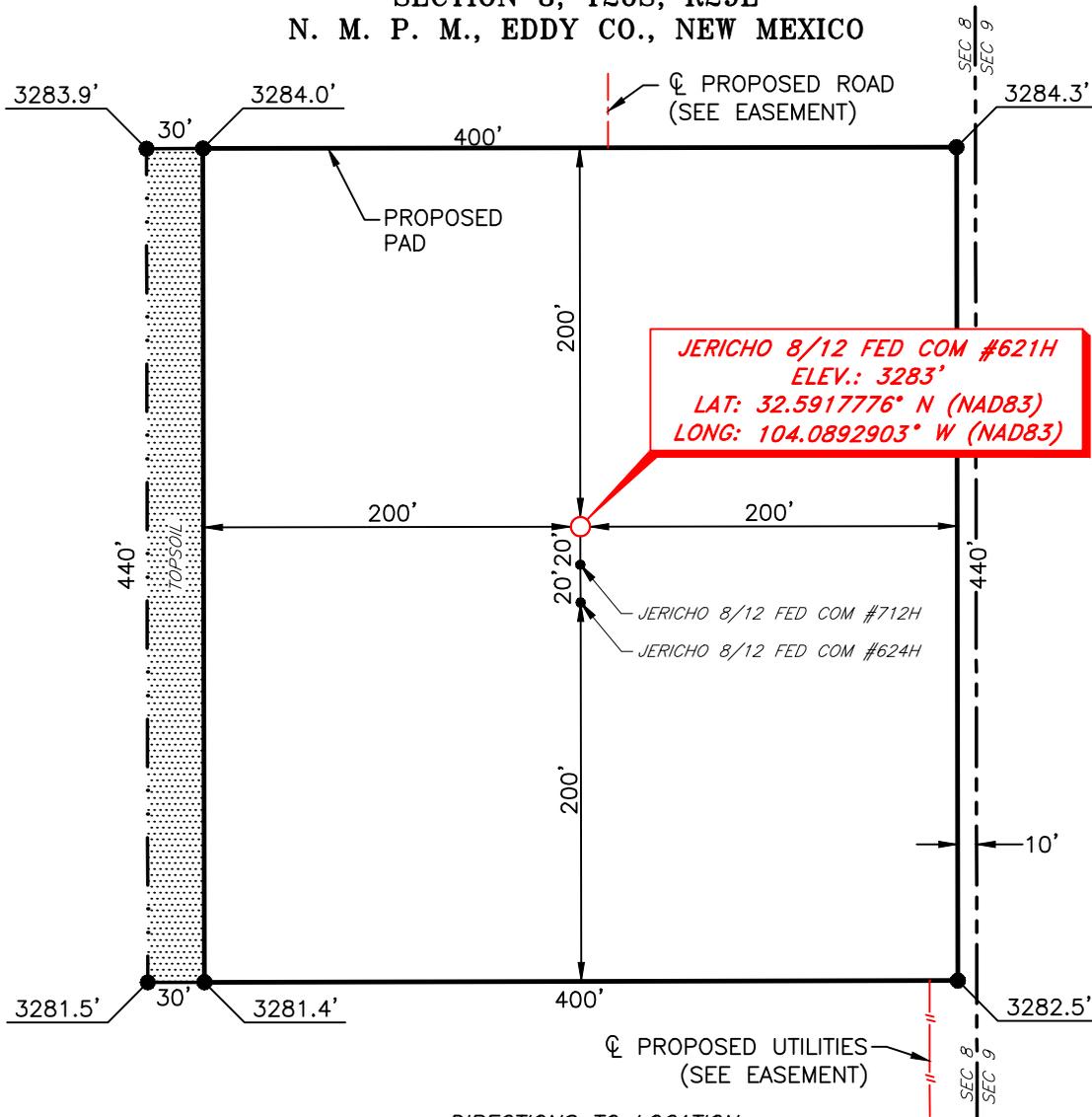
JOB NO.: LS24060509D1
 DWG. NO.: 24060509D1-3



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

SCALE: N. T. S.
DATE: 08-19-2021
SURVEYED BY: ML/AG
DRAWN BY: LM
APPROVED BY: RMH
SHEET: 1 OF 1

**MEWBOURNE OIL COMPANY
 JERICHO 8/12 FED COM #621H
 (1260' FNL & 210' FEL)
 SECTION 8, T20S, R29E
 N. M. P. M., EDDY CO., NEW MEXICO**



DIRECTIONS TO LOCATION

From the intersection of CR #238 (Burton Flats Rd.) & CR #243 (Magnum Rd.):
 Go East on CR #238 approx. 0.8 miles to a lease road on the left;
 Turn left and go North approx. 0.5 miles to a lease road on the right;
 Turn right and go East approx. 0.2 miles road curves left;
 Continue North approx. 0.3 miles road curves right;
 Continue Northeast approx. 0.6 miles to a lease road on the left;
 Turn left and go North approx. 0.8 miles to a lease road on the left;
 Turn left and go North approx. 0.3 miles to a lease road on the left;
 Turn left and go West approx. 0.2 miles to a lease road on the left;
 Turn left and go South approx. 250 feet to a proposed road;
 Continue South approx. 250 feet to location on the right.

THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY.

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



SCALE: 1" = 100'
 50 100

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

1	NAME CHANGE	9/17/24
1	WELL/PAD MOVE	6/14/24
NO.	REVISION	DATE
JOB NO.: LS24060509D1		
DWG. NO.: 24060509D1-4		



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

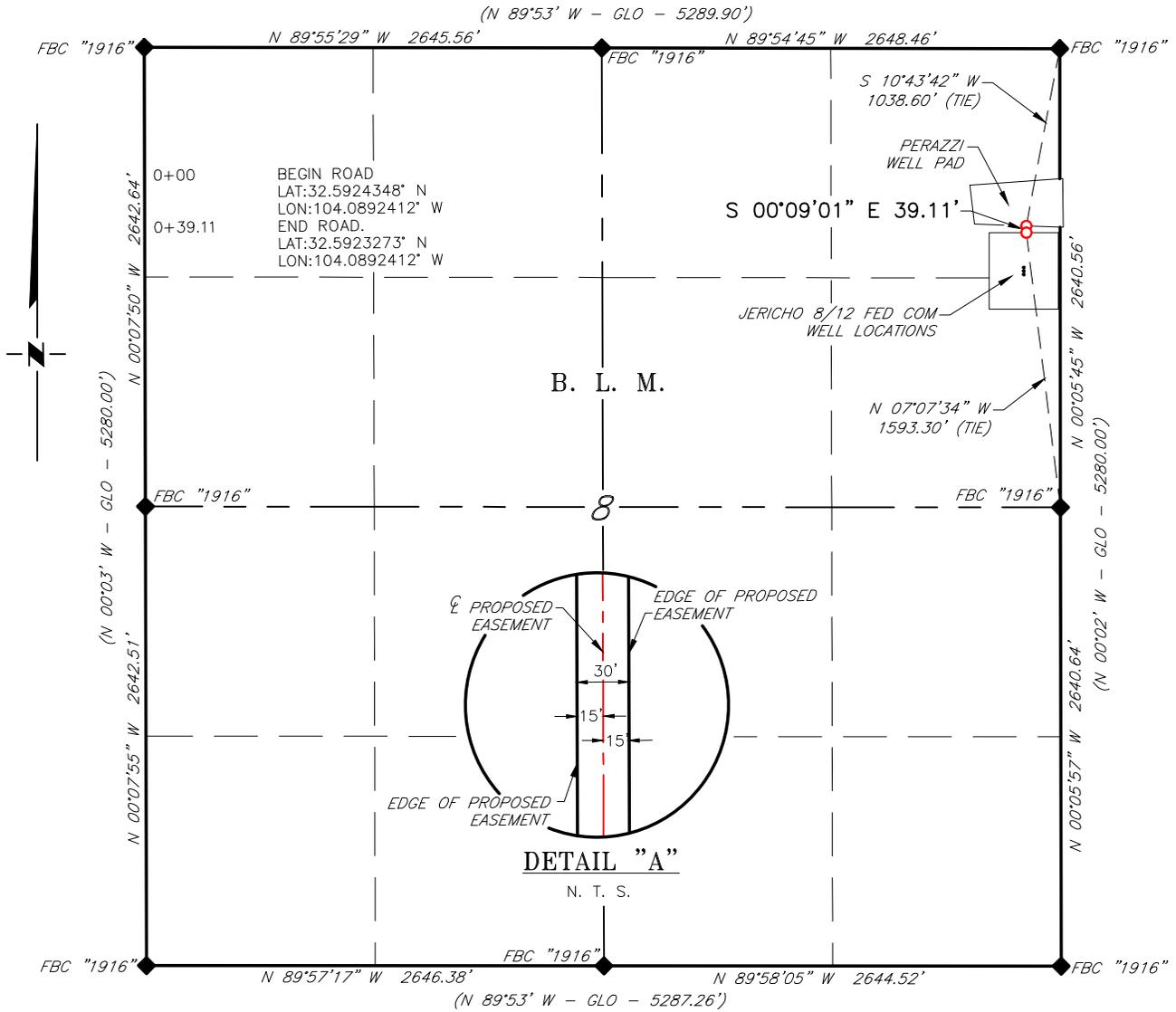
SCALE: 1" = 100'
DATE: 08-19-2021
SURVEYED BY: ML/AG
DRAWN BY: LM
APPROVED BY: RMH
SHEET: 1 OF 1

MEWBOURNE OIL COMPANY

ACCESS ROAD FOR THE JERICHO 8/12 FED COM WELL LOCATIONS

SECTION 8, T20S, R29E

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



DESCRIPTION

A strip of land 30 feet wide, being 39.11 feet or 2.370 rods in length, lying in Section 8, Township 20 South, Range 29 East, N. M. P. M., Eddy County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across B. L. M. land:

BEGINNING at Engr. Sta. 0+00, a point in the Northeast quarter of Section 8, which bears, S 10°43'42" W, 1,038.60 feet from a brass cap, stamped "1916", found for the Northeast corner of Section 8;

Thence S 00°09'01" E, 39.11 feet, to Engr. Sta. 0+39.11, the End of Survey, a point in the Northeast quarter of Section 8, which bears, N 07°07'34" W, 1,593.30 feet from a brass cap, stamped "1916", found for the East quarter corner of Section 8.

Said strip of land contains 0.027 acres, more or less, and is allocated by forties as follows:

NE 1/4 NE 1/4	39.11 Feet	2.370 Rods	0.027 Acres
---------------	------------	------------	-------------

SCALE: 1" = 1000'

0 500' 1000'

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

LEGEND

() RECORD DATA - GLO

◆ FOUND MONUMENT AS NOTED

— PROPOSED ACCESS ROAD

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
1	NAME CHANGE	9/17/24
JOB NO.: LS24060509D1		
DWG. NO.: 24060509D1-5		



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

SCALE: 1" = 1000'
DATE: 06/14/2024
SURVEYED BY: ML/JH
DRAWN BY: LM
APPROVED BY: RMH
SHEET: 1 OF 1

Mewbourne Oil Company, Jericho 8/12 Fed Com 621H

Sec 8, T20S, R29E

SHL: 1260' FNL 210' FEL (Sec 8)

BHL: 440' FNL 2566' FEL (Sec 12)

Well Location GL: 3283'

Point	Calls	Leases	Aliquot	Section	Township	Range	County	Lat	Long	TVD	MD
SHL	SHL: 1260' FNL & 210' FEL (Sec 8)	NMNM103878	NENE	8	20S	29E	Eddy	32.5917776	- 104.0892903	0'	0'
KOP	KOP: 440' FNL & 10' FEL (Sec 8)	NMNM103878	NENE	8	20S	29E	Eddy	32.5940288	- 104.0886393	8,438'	8,515'
FTP	FTP: 440' FNL & 100' FEL (Sec 8)	NMNM103878	NENE	8	20S	29E	Eddy	32.5940298	- 104.0889315	8,746'	8,841'
PPP2	PPP2: 408' FNL & 0' FEL (Sec 7)	NMNM0001165	NENE	7	20S	29E	Eddy	32.5941705	- 104.1057916	8,951'	14,125'
PPP3	PPP3: 383' FNL & 2314' FEL (Sec 7)	NMNM0144698	NENW	7	20S	29E	Eddy	32.5942413	- 104.1143673	8,917'	16,767'
PPP4	PPP4: 440' FNL & 0' FEL (Sec 12)	NMNM005489	NENE	12	20S	28E	Eddy	32.5943027	- 104.1218792	8,888'	19,080'
BHL	BHL: 440' FNL & 2566' FEL (Sec 12)	NMNM005489	NWNE	12	20S	28E	Eddy	32.5943704	- 104.1302089	8,855'	21,646'

GEOLOGY

Formation	Est. Top (TVD)	Lithology	Mineral Resources	Formation	Est. Top (TVD)	Lithology	Mineral Resources
Rustler	292'	Dolomite/Anhydrite	Usable Water	Yeso			
Castile				Delaware (Lamar)	3178'	Limestone/Dolomite	Oil/Natural Gas
Salt Top	544'	Salt	None	Bell Canyon			
Marker Bed 126				Cherry Canyon			
Salt Base	911'	Salt	None	Manzanita Marker			
Yates	1086'	Sandstone	Oil/Natural Gas	Basal Brushy Canyon			
Seven Rivers				Bone Spring	5746'	Limestone	Oil/Natural Gas
Queen				1st Bone Spring	6926'	Sandstone	Oil/Natural Gas
Capitan	1409'	Limestone/Dolomite	Usable Water	2nd Bone Spring	7646'	Sandstone	Oil/Natural Gas
Grayburg				3rd Bone Spring	8810'	Sandstone	Oil/Natural Gas
San Andres				Wolfcamp	9185'	Shale/Sandstone/Limestone	Oil/Natural Gas

Casing Program Design A						BLM Minimum Safety Factors		1.125	1.0	1.6 Dry	1.6 Dry
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension	
Surface	26"	0'	0'	330'	330'	18 5/8" 87.5# J55 BTC	4.27	15.25	46.03	47.34	
Intermediate 1	17.5"	0'	0'	1200'	1200'	13.375" 48# H40 STC	1.21	2.72	5.59	9.39	
Intermediate 2	12.25"	0'	0'	3100'	3100'	9.625" 36# J55 LTC	1.46	2.54	4.06	5.05	
Production	8.75"	0'	0'	8515'	8438'	7" 26# P110 LTC	1.46	2.34	3.13	3.75	
Liner	6.125"	8315'	8255'	21646'	8855'	4.5" 13.5# P110 LTC	2.07	2.41	1.88	2.34	

All casing strings will be tested in accordance with 43 CFR Part 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.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
Is well located in SOPA but not in R-111-Q?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	
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?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Jericho 8/12 Fed Com 621H

Sec 8, T20S, R29E

SHL: 1260' FNL 210' FEL (Sec 8)

BHL: 440' FNL 2566' FEL (Sec 12)

Design A - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft ³ /sack	TOC/BOC	Volume, ft ³	% Excess	Slurry Description
18.625 in	LEAD	440	12.5	2.12	0' - 255'	940	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	255' - 330'	268		Class C: Retarder
13.375 in	LEAD	420	12.5	2.12	0' - 925'	900	50%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	925' - 1200'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	200	12.5	2.12	1375' - 2438'	430	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	2438' - 3100'	268		Class C: Retarder
9 5/8" DV Tool @ 1375'								
2nd Stg 9.625 in	LEAD	190	12.5	2.12	0' - 1036'	410	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1036' - 1375'	134		Class C: Retarder
7 in	LEAD	670	12.5	2.12	1359' - 6739'	1430	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6739' - 8515'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	850	13.5	1.85	8315' - 21646'	1580	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Pressure Control Equipment

BOP installed and tested before drilling hole, in:	Size, in	System Rated WP	Type	Tested to:	Rating Depth	
17.5	20	5M	Annular	X	2500#/3500#	21,646'
			Blind Ram	X		
		5M	Pipe Ram	X	5000#	
			Double Ram			
			Other*			

*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., lb/gal	Mud Type
0' - 330'	8.4 - 8.6	Fresh Water
330' - 1200'	10.0 - 10.2	Brine
1200' - 3100'	8.4 - 8.6	Fresh Water
3100' - 8515'	8.6 - 9.7	Cut-Brine
8515' - 21646'	10.0 - 11.	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, Jericho 8/12 Fed Com 621H

Sec 8, T20S, R29E

SHL: 1260' FNL 210' FEL (Sec 8)

BHL: 440' FNL 2566' FEL (Sec 12)

Logging and Testing Procedures

Logging, Coring and Testing.	
N	Will run GR/CNL from KOP (8515') 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: Jericho 8/12 Fed Com #712H
N	Coring? If yes, explain:

Open & 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	5154 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.

	H2S is present
X	H2S Plan attached

Mewbourne Oil Company, Jericho 8/12 Fed Com 621H

Sec 8, T20S, R29E

SHL: 1260' FNL 210' FEL (Sec 8)

BHL: 440' FNL 2566' FEL (Sec 12)

Other facets of operation

Mewbourne Oil Company also requests approval to implement Design B as described below. 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
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt	1.8 Wet	1.8 Wet
Surface	26"	0'	0'	330'	330'	18 5/8" 87.5# J55 BTC	4.27	15.25	46.03	47.34	
Int 1	17.5"	0'	0'	1200'	1200'	13.375" 48# H40 STC	1.21	2.72	5.59	9.39	
Int 2	12.25"	0'	0'	3100'	3100'	9.625" 36# J55 LTC	1.46	2.54	4.06	5.05	
Production	8.75"	0'	0'	9415'	9011'	7" 26# P110 LTC	1.37	2.19	2.83	3.39	
Liner	6.125"	8515'	8438'	21646'	8855'	4.5" 13.5# P110 LTC	2.07	2.41	1.91	2.38	

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

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

Design B - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft ³ /sack	TOC/BOC	Volume, ft ³	% Excess	Slurry Description
18.625 in	LEAD	440	12.5	2.12	0' - 255'	940	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	255' - 330'	268		Class C: Retarder
13.375 in	LEAD	420	12.5	2.12	0' - 925'	900	50%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	925' - 1200'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	200	12.5	2.12	1375' - 2438'	430	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	2438' - 3100'	268		Class C: Retarder
9 5/8" DV Tool @ 1375'								
2nd Stg 9.625 in	LEAD	190	12.5	2.12	0' - 1036'	410	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	1036' - 1375'	134		Class C: Retarder
1st Stg 7 in	LEAD	580	12.5	2.12	1359' - 6178'	1230	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	700	15.6	1.18	6178' - 9415'	826		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	830	13.5	1.85	8515' - 21646'	1540	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

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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 415392

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 415392
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Accepted for the record. Operator performed work without OCD approval.	6/9/2025