U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		Sundry Print Report 08/01/2024
Well Name: LOBO 33/28 W0PA FED COM	Well Location: T21S / R32E / SEC 33 / SWSE / 32.4283581 / -103.6768523	County or Parish/State: LEA / NM
Well Number: 1H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM86710	Unit or CA Name:	Unit or CA Number:
US Well Number:	<b>Operator:</b> MEWBOURNE OIL COMPANY	

### **Notice of Intent**

Sundry ID: 2797679

Type of Submission: Notice of Intent

Date Sundry Submitted: 06/27/2024

Date proposed operation will begin: 07/01/2024

Type of Action: APD Change Time Sundry Submitted: 01:53

**Procedure Description:** Mewbourne Oil Company request that the following change be made to the Lobo 33/28 W0PA Fed Com #1H (APD ID #10400062779): 1. Change name from Lobo 33/28 W0PA Fed Com 1H (APD ID #10400062779) to Lobo 33/28 Fed Com 628H. 2. Change SHL f/ 150 FSL & 1750 FEL (33) to 150 FSL & 1700 FEL (33) 3. Change Target f/ Wolfcamp to Bone Spring 4. Request a variance to perform break testing and offline cementing per attachments. 5. Attached Break Testing and Offline Cementing variance, new plat, new directional plan and plot, add info, & csg assumptions.

### **NOI Attachments**

### **Procedure Description**

Lobo\_33\_28\_Fed\_Com\_628H\_Drlg\_Program\_20240723155749.pdf

Lobo\_33\_28\_Fed\_Com\_628H\_CsgAssumptions\_20240723155749.pdf

Lobo\_33\_28\_Fed\_Com\_628H\_R\_111Q\_Variance\_20240723155749.pdf

Vault\_5K\_WH\_1002000AD1\_20240717145529.pdf

5M\_BOPE\_Schematic\_20240717145529.pdf

5M\_BOPE\_Choke\_Diagram\_20240717145529.pdf

Mewbourne\_Offline\_Cementing\_Variance\_20240627135211.pdf

Mewbourne\_Break\_Testing\_Variance\_20240627135211.pdf

LOBO\_33\_28\_FED\_COM\_628H\_C102\_20240627135204.pdf

Lobo\_33\_28\_Fed\_Com\_628H\_MOC\_Dir\_Plot\_20240627135203.pdf

Lobo\_33\_28\_Fed\_Com\_628H\_AddInfo\_20240627135204.pdf

Lobo\_33\_28\_Fed\_Com\_628H\_MOC\_Dir\_Plan\_20240627135202.pdf

Lobo\_33\_28\_W0PA\_Fed\_Com\_1H\_Sundry\_20240627135203.pdf

H2S\_Plan\_20240627135202.pdf

Flex\_Line\_Specs\_API\_16C\_20240627135156.pdf

### **Conditions of Approval**

### Additional

LOBO\_33\_28\_FED\_COM\_628H\_Sundry\_2797679\_COA\_20240801113655.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** 

Name: MEWBOURNE OIL COMPANY

Title: Engineer

Street Address: 4801 BUSINESS PARK BLVD

**City: HOBBS** 

State: NM

State:

Phone: (575) 393-5905

Email address: RYANMCDANIEL@MEWBOURNE.COM

Field

Representative Name: Street Address: City: Phone:

Email address:

**BLM Point of Contact** 

BLM POC Name: CHRISTOPHER WALLS BLM POC Phone: 5752342234 Disposition: Approved Signature: Chris Walls

BLM POC Title: Petroleum Engineer BLM POC Email Address: cwalls@blm.gov Disposition Date: 08/01/2024

Zip:

Released to Imaging: 8/23/2024 11:36:44 AM

Signed on: JUL 23, 2024 03:48 PM

Received by OCD: 8/1/2024 2:09:18 PM Well Name: LOBO 33/28 WOPA FED COM	Well Location: T21S / R32E / SEC 33 / SWSE / 32.4283581 / -103.6768523	County or Parish/State: LER 3 of 60 NM
Well Number: 1H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM86710	Unit or CA Name:	Unit or CA Number:
US Well Number:	<b>Operator:</b> MEWBOURNE OIL COMPANY	

### Received by OCD: 8/1/2024 2:09:18 PM

cccircu by 0CD. 0/1/20		<b></b>				1 <i>use</i> + <i>oj</i>		
Form 3160-5 (June 2019)		UNITED STATI PARTMENT OF THE I EAU OF LAND MAN	INTERIOR		FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No.			
Do not use	e this f	NOTICES AND REP( form for proposals Use Form 3160-3 (A	6. If Indian, Allottee or	Tribe Name				
SUE	BMIT IN	TRIPLICATE - Other instr	uctions on page 2		7. If Unit of CA/Agreen	nent, Name and/or No.		
1. Type of Well					-			
Oil Well	Gas V	Vell Other			8. Well Name and No.			
2. Name of Operator					9. API Well No.			
3a. Address			3b. Phone No. (include area code	ea code) 10. Field and Pool or Exploratory Area				
4. Location of Well (Footage,	Sec., T.,F	R.,M., or Survey Description	)		11. Country or Parish, S	State		
	12. CHE	CK THE APPROPRIATE B	OX(ES) TO INDICATE NATURE	OF NOT	TICE, REPORT OR OTH	ER DATA		
TYPE OF SUBMISSIC	DN		TYI	PE OF AC	CTION			
Notice of Intent		Acidize	Deepen Hydraulic Fracturing		duction (Start/Resume) lamation	Water Shut-Off Well Integrity		
Subsequent Report Casing Repair Change Plans			New Construction Plug and Abandon		complete Other nporarily Abandon			
Final Abandonment No	otice	Convert to Injection	Plug Back	Wat	er Disposal			
the proposal is to deepen of the Bond under which the completion of the involved	directiona work wil d operatio	ally or recomplete horizontal ll be perfonned or provide th ons. If the operation results i	ly, give subsurface locations and n e Bond No. on file with BLM/BIA n a multiple completion or recomp	neasured a Required letion in a	nd true vertical depths of d subsequent reports mus new interval, a Form 31	k and approximate duration thereof. If all pertinent markers and zones. Attach t be filed within 30 days following 60-4 must be filed once testing has been e operator has detennined that the site		

14. I hereby certify that the foregoing is true and correct. Name ( <i>Printed/Typed</i> )		
	Title	
Signature	Date	
Signature		
THE SPACE FOR FEDE	RAL OR STATE OF	FICE USE
Approved by		
	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant certify that the applicant holds legal or equitable title to those rights in the subject lea which would entitle the applicant to conduct operations thereon.		
Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any any false, fictitious or fraudulent statements or representations as to any matter within		Ifully to make to any department or agency of the United Stat

(Instructions on page 2)

is ready for final inspection.)

#### **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: SWSE / 150 FSL / 1750 FEL / TWSP: 21S / RANGE: 32E / SECTION: 33 / LAT: 32.4283581 / LONG: -103.6768523 (TVD: 0 feet, MD: 0 feet ) PPP: SESE / 100 FSL / 440 FEL / TWSP: 21S / RANGE: 32E / SECTION: 33 / LAT: 32.4282367 / LONG: -103.6726056 (TVD: 11856 feet, MD: 11957 feet ) PPP: SESE / 0 FSL / 440 FEL / TWSP: 21S / RANGE: 32E / SECTION: 28 / LAT: 32.4425274 / LONG: -103.6726029 (TVD: 11999 feet, MD: 17221 feet ) BHL: NENE / 100 FNL / 440 FEL / TWSP: 21S / RANGE: 32E / SECTION: 28 / LAT: 32.4567418 / LONG: -103.6725993 (TVD: 11939 feet, MD: 22393 feet )

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	MEWBOURNE OIL COMPANY
WELL NAME & NO.:	LOBO 33/28 FED COM 628H
APD ID:	10400062779
LOCATION:	Section 33, T.21 S., R.32 E. NMP.
COUNTY:	Lea County, New Mexico 🔻

Previously known as LOBO 33 WOPA FED COM 1H. Changes approved through engineering via Sundry 2797679 on 8/1/2024. Any previous COAs not addressed within the updated COAs still apply.

# COA

H <sub>2</sub> S	0	No	• Yes				
Potash / WIPP	O None	• Secretary	© R-111-Q	Open Annulus WIPP			
Cave / Karst	• Low	O Medium	O High	• Critical			
Wellhead	Conventional	Multibowl	O Both	O Diverter			
Cementing	Primary Squeeze	🗆 Cont. Squeeze	EchoMeter	DV Tool			
Special Req	🗆 Capitan Reef	🗆 Water Disposal	COM	🗆 Unit			
Waste Prev.	© Self-Certification	O Waste Min. Plan	• APD Submitted	prior to 06/10/2024			
Additional	Flex Hose	Casing Clearance	Pilot Hole	Break Testing			
Language	□ Four-String	Offline Cementing	Fluid-Filled				

### A. HYDROGEN SULFIDE

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

### **B. CASING**

### **Primary Casing Program**

- 1. The 13-3/8 inch surface casing shall be set at approximately 790 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. If salt is encountered set casing at least 25 ft. above the salt.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface

log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8 hours</u> or <u>500 psi compressive strength</u>, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.
- 2. The 9-5/8 inch intermediate casing shall be set in a competent bed at approximately 4,650 ft. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

**Option 1 (Single Stage):** Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

**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 to surface.** If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Note: Excess cement is below BLM's recommendation of 25%. More cement might e needed.

- In <u>Secretary Potash Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3<sup>rd</sup> casing string must come to surface.
- Operator has proposed to set 7 in. (26# HCP-110) production casing at approximately 11,399 ft. (11,284 ft. TVD). The minimum required fill of cement behind the 7 inch production casing is:
  - Cement should tie-back at least **500 feet** into previous casing string. 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 Potash.

**Note:** Cement volume is insufficient to bring cement to the prescribed depth. More cement is needed. TOC: 4,150 ft. or higher.

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

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

### **Alternate Casing Program**

- 1. The 13-3/8 inch surface casing shall be set at approximately 790 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. If salt is encountered set casing at least 25 ft. above the salt.
  - e. 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.
  - f. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8 hours</u> or <u>500 psi compressive strength</u>, whichever is greater. (This is to include the lead cement)
  - g. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - h. If cement falls back, remedial cementing will be done prior to drilling out that string.
  - Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.
- 2. The 9-5/8 inch intermediate casing shall be set in a competent bed at approximately 4,650 ft. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

**Option 1 (Single Stage):** Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

**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 to surface.** If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.

Note: Excess cement is below BLM's recommendation of 25%. More cement might e needed.

In <u>Secretary Potash Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3<sup>rd</sup> casing string must come to surface.

- Operator has proposed to set 7 in. (26# HCP-110) production casing at approximately 12,229 ft. (11,857 ft. TVD). The minimum required fill of cement behind the 7 inch production casing is:
  - Cement should tie-back at least **500 feet** into previous casing string. 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 Potash.

**Note:** Cement volume is insufficient to bring cement to the prescribed depth. More cement might be needed. TOC: 4,150 ft. or higher.

- 4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
  - Cement should tie-back **100 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 **Lea County: 575-689-5981**.

### C. PRESSURE CONTROL

- 1. Variance approved to use **flex line** from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2. Operator has proposed a multi-bowl wellhead assembly. 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 10,000 (10M) psi. Variance is granted to use a 10,000 psi BOP/BOPE along with a 5,000-psi annular preventer. Before drilling out surface casing shoe, BOP/BOPE and annular preventer must be pressure tested in accordance with title 43 CFR 3172.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

### **BOPE Break Testing Variance**

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

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

### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the</u> <u>Communitization Agreement number is known, it shall also be on the sign.</u>

# **GENERAL REQUIREMENTS**

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

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

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

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

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

### A. CASING

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

- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least <u>8 hours</u>. 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. <u>Wait on cement (WOC) for Water Basin:</u> 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 <u>8 hours</u>. 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 8/1/2024

#### Mewbourne Oil Company, Lobo 33/28 Fed Com 628H Sec 33, T21S, R32E SHL: 150' FSL 1700' FEL (Sec 33) BHL: 100' FNL 440' FEL (Sec 28)

Well Location	GL: 3799'										
Point	Calls	Leases	Aliquot	Section	Township	Range	County	Lat	Long	TVD	MD
SHL	SHL: 150' FSL & 1700' FEL (Sec 33)	NMNM086710	SWSE	33	218	32E	Lea	32.4283587	103.6766903	0'	0'
KOP	KOP: 10' FSL & 440' FEL (Sec 33)	NMNM086710	SESE	33	218	32E	Lea	32.4279898	103.6726065	11,284'	11,399'
FTP	FTP: 100' FSL & 440' FEL (Sec 33)	NMNM086710	SESE	33	21S	32E	Lea	32.4282371	103.6726064	11,592'	11,724'
PPP2	PPP2: 0' FSL & 440' FEL (Sec 28)	NMNM058938	SESE	28	21S	32E	Lea	32.4424782	103.6726029	11,843'	16,997'
BHL	BHL: 100' FNL & 440' FEL (Sec 28)	NMNM058938	NENE	28	21S	32E	Lea	32.4567418	103.6725993	11,827'	22,186'

#### GEOLOGY

Formation	Est. Top (TVD)	Lithology	Mineral Resources	Formation	Est. Top (TVD)	Lithology	Mineral Resources
Rustler	770'	Dolomite/Anhydrite	Usable Water	Yeso			
Castile				Delaware (Lamar)	4835'	Limestone/Dolomite	Oil/Natural Gas
Salt Top	1095'	Salt	None	Bell Canyon	4950'	Sandstone	Oil/Natural Gas
Salt Base	4370'	Salt	None	Cherry Canyon			
Yates				Manzanita Marker	5995'	Limestone	Oil/Natural Gas
Seven Rivers				Basal Brushy Canyon	8510'	Sandstone	Oil/Natural Gas
Queen				Bone Spring	8795'	Limestone	Oil/Natural Gas
Capitan				1st Bone Spring	9815'	Sandstone	Oil/Natural Gas
Grayburg				2nd Bone Spring	10475'	Sandstone	Oil/Natural Gas
San Andres				3rd Bone Spring	10975'	Sandstone	Oil/Natural Gas
Glorietta				Wolfcamp	11900'	Shale/Sandstone/Limestone	Oil/Natural Gas

	Casing Program Design A						1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4184'	4184'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4184'	4184'	4650'	4650'	9.625" 40# L80 LTC	1.22	2.26	39.54	49.14
Production	8.75"	0'	0'	11399'	11284'	7" 26# HCP110 LTC	1.40	1.78	2.34	2.80
Liner	6.125"	11199'	11069'	22186'	11857'	4.5" 13.5# P110 LTC	1.50	1.75	2.28	2.85

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?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-Q?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>std</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
	N
If yes, are three strings cemented to surface?	

.

#### Mewbourne Oil Company, Lobo 33/28 Fed Com 628H Sec 33, T21S, R32E SHL: 150' FSL 1700' FEL (Sec 33) BHL: 100' FNL 440' FEL (Sec 28)

Design A - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft <sup>3</sup> /sack	TOC/BOC	Volume, ft <sup>3</sup>	% Excess	Slurry Description					
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM					
15.575 III	TAIL	200	14.8	1.34	601' - 790'	268	100%	Class C: Retarder					
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM					
1st 5tg 9.025 m	TAIL	200	14.8	1.34	3979' - 4650'	268	23%	Class C: Retarder					
	9 5/8" DV Tool @ 2000'												
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM					
2nu 5tg 9.025 m	TAIL	100	14.8	1.34	1662' - 2000'	134	2370	Class C: Retarder					
7 in	LEAD	220	12.5	2.12	5200' - 8293'	470	0%	Class C: Salt, Gel, Extender, LCM, Defoamer					
7 m	TAIL	400	15.6	1.18	8293' - 11399'	472	0%	Class H: Retarder, Fluid Loss, Defoamer					
4.5 in	LEAD	700	13.5	1.85	11199' - 22186'	1300	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	Туре		Tested to:	Rating Depth							
		5M	Annular	Х	2500#								
	13.375	13.375		Blind Ram	Х								
12.25			13.375	514				-			Pipe Ram	Х	5000 //
		5M	Double Ram		5000#								
			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.
Y	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' - 790'	8.4 - 8.6	Fresh Water
790' - 4650'	9.5 - 10.5	Brine
4650' - 11399'	8.6 - 9.5	Cut-Brine
11399' - 22186'	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

#### Logging and Testing Procedures

Logging	z, Coring and Testing.
	Will run GR/CNL from KOP (11399') 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: Lobo 33/28 Fed Com #706H
Ν	Coring? If yes, explain:

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

Caliper		Cement Bond Log	CNL/FDC
Compensated Densilog		Compensated Neutron Log	Computer Generated Log
Dip Meter Log		Directional Survey	Dual Induction/Microresistivity
Dual Lateral Log/Microspherically Focused		Electric Log	Formation Density Compensated Log
Gamma Ray Log	2	Measurement While Drilling	Mud Log/Geological Lithology Log
Other		Porosity-Resistivity Log	Sidewall Neutron Log
Sonic Log		Spontaneous Potential Log	Temperature Log

#### **Drilling Conditions**

Condition	Specify what type and where?						
BH Pressure at deepest TVD	6782 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 poss	sible 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
Х	H2S Plan attached

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#### 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 is requested to perform Open Hole Cementing per R
111Q Guidelines if well is in Potash.

		Casing Progr	am 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	1.8 Wet SF Jt	1.8 Wet SF Body
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4184'	4184'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4184'	4184'	4650'	4650'	9.625" 40# L80 LTC	1.22	2.26	39.54	49.14
Production	8.75"	0'	0'	12299'	11857'	7" 26# HCP110 LTC	1.33	1.70	2.17	2.60
Liner	6.125"	11399'	11284'	22186'	11857'	4.5" 13.5# P110 LTC	1.50	1.75	2.32	2.90

#### 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.	Ν
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?	Ν
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-Q?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 <sup>rd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If ves, are there three strings cemented to surface?	**

#### Design B - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft <sup>3</sup> /sack	TOC/BOC	Volume, ft <sup>3</sup>	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
13.375 m	TAIL	200	14.8	1.34	601' - 790'	268	100%	Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
1st stg 9.025 m	TAIL	200	14.8	1.34	3979' - 4650'	268	2.370	Class C: Retarder
					9 5	/8'' DV Tool @ 2000'		
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM
2nd Stg 9.625 m	TAIL	100	14.8	1.34	1662' - 2000'	134	23%	Class C: Retarder
7 in	LEAD	290	12.5	2.12	5200' - 9231'	620	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
/ III	TAIL	400	15.6	1.18	9231' - 12299'	472	0%	Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	LEAD 680 13.5		1.85	11399' - 22186'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent

#### Mewbourne Oil Company, Lobo 33/28 Fed Com 628H Sec 33, T21S, R32E SHL: 150' FSL 1700' FEL (Sec 33) BHL: 100' FNL 440' FEL (Sec 28)

		Casing Prog	ram Design A			BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4184'	4184'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4184'	4184'	4650'	4650'	9.625" 40# L80 LTC	1.22	2.26	39.54	49.14
Production	8.75"	0'	0'	11399'	11284'	7" 26# HCP110 LTC	1.40	1.78	2.34	2.80
Liner	6.125"	11199'	11069'	22186'	11857'	4.5" 13.5# P110 LTC	1.50	1.75	2.28	2.85

#### Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft <sup>3</sup> /sack	TOC/BOC	Volume ft <sup>3</sup>	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
15.575 III	TAIL	200	14.8	1.34	601' - 790'	268	10070	Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
1st stg 5.025 m	TAIL	200	14.8	1.34	3979' - 4650'	268	2.3 70	Class C: Retarder
					9 5/8" D	V Tool @ 2000'		
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM
2110 Stg 9.025 III	TAIL	100	14.8	1.34	1662' - 2000'	134	2.3 70	Class C: Retarder
7 in	LEAD	220	12.5	2.12	5200' - 8293'	470	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
7 Ш	TAIL	400	15.6	1.18	8293' - 11399'	472	0%	Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	11199' - 22186'	1300	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent

#### Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 790'	8.4 - 8.6	Fresh Water
790' - 4650'	9.5 - 10.5	Brine
4650' - 11399'	8.6 - 9.5	Cut-Brine
11399' - 22186'	10.0 - 11.	OBM

Geology					
Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler	770'	Usable Water	Yeso		
Castile			Delaware (Lamar)	4835'	Oil/Natural Gas
Salt Top	1095'	None	Bell Canyon	4950'	Oil/Natural Gas
Salt Base	4370'	None	Cherry Canyon		
Yates			Manzanita Marker	5995'	Oil/Natural Gas
Seven Rivers			Basal Brushy Canyon	8510'	Oil/Natural Gas
Queen			Bone Spring	8795'	Oil/Natural Gas
Capitan			1st Bone Spring	9815'	Oil/Natural Gas
Grayburg			2nd Bone Spring	10475'	Oil/Natural Gas
San Andres			3rd Bone Spring	10975'	Oil/Natural Gas
Glorieta			Wolfcamp	11900'	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.	Ν
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?	Ν
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-Q?	Ν
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	Ν
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	Ν
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

	Casing Program Design B						1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4184'	4184'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4184'	4184'	4650'	4650'	9.625" 40# L80 LTC	1.22	2.26	39.54	49.14
Production	8.75"	0'	0'	12299'	11857'	7" 26# HCP110 LTC	1.33	1.70	2.17	2.60
Liner	6.125"	11399'	11284'	22186'	11857'	4.5" 13.5# P110 LTC	1.50	1.75	2.32	2.90

#### Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft <sup>3</sup> /sack	TOC/BOC	Volume ft <sup>3</sup>	% Excess	Slurry Description		
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM		
15.575 III	TAIL	200	14.8	1.34	601' - 790'	268	10070	Class C: Retarder		
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM		
1st Stg 9.025 III	TAIL	200	14.8	1.34	3979' - 4650'	268	2.370	Class C: Retarder		
	9 5/8" DV Tool @ 2000'									
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM		
2nu 3tg 9.025 m	TAIL	100	14.8	1.34	1662' - 2000'	134	2.370	Class C: Retarder		
7 in	LEAD	290	12.5	2.12	5200' - 9231'	620	0%	Class C: Salt, Gel, Extender, LCM, Defoamer		
7 III	TAIL	400	15.6	1.18	9231' - 12299'	472	0%	Class H: Retarder, Fluid Loss, Defoamer		
4.5 in	LEAD	680	13.5	1.85	11399' - 22186'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent		

Design B - Mud Pro	gram		Geology					
Depth	Mud Wt	Mud Type	Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
			Rustler	770'	Usable Water	Yeso		
0' - 790'	8.4 - 8.6	Fresh Water	Castile			Delaware (Lamar)	4835'	Oil/Natural Gas
790' - 4650'	9.5 - 10.5	Brine	Salt Top	1095'	None	Bell Canyon	4950'	Oil/Natural Gas
4650' - 12299'	8.6 - 9.5	Cut-Brine	Salt Base	4370'	None	Cherry Canyon		
12299' - 22186'	10.0 - 11.	OBM	Yates			Manzanita Marker	5995'	Oil/Natural Gas
			Seven Rivers			Basal Brushy Canyon	8510'	Oil/Natural Gas
			Queen			Bone Spring	8795'	Oil/Natural Gas
			Capitan			1st Bone Spring	9815'	Oil/Natural Gas
			Grayburg			2nd Bone Spring	10475'	Oil/Natural Gas
			San Andres			3rd Bone Spring	10975'	Oil/Natural Gas
			<b>~</b> .	1		*** **	110001	

Glorieta

#### All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172. Must have table for contingency casing.

11900'

Wolfcamp

Oil/Natural Gas

	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.	Ν
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?	Ν
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	Ν
Is well located in SOPA but not in R-111-Q?	Ν
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 <sup>rd</sup> string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	Ν
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

#### Mewbourne Oil Company, Lobo 33/28 Fed Com 628H Sec 33, T21S, R32E SHL: 150' FSL 1700' FEL (Sec 33) BHL: 100' FNL 440' FEL (Sec 28)

Casing Program Design A						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4184'	4184'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4184'	4184'	4650'	4650'	9.625" 40# L80 LTC	1.22	2.26	39.54	49.14
Production	8.75"	0'	0'	11399'	11284'	7" 26# HCP110 LTC	1.40	1.78	2.34	2.80
Liner	6.125"	11199'	11069'	22186'	11857'	4.5" 13.5# P110 LTC	1.50	1.75	2.28	2.85

Cement Program									
Casing		# Sacks	Wt. lb/gal	Yield ft <sup>3</sup> /sack	TOC/BOC	Volume ft <sup>3</sup>	% Excess	Slurry Description	
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM	
15.575 II	TAIL	200	14.8	1.34	601' - 790'	268	100%	Class C: Retarder	
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM	
1st Stg 9.025 III	TAIL	200	14.8	1.34	3979' - 4650'	268	23%	Class C: Retarder	
9 5/8" DV Tool @ 2000'									
2nd Stg 9.625 in	LEAD	310	12.5	2.12	0' - 1662'	660	25%	Class C: Salt, Gel, Extender, LCM	
2nu stg 9.025 m	TAIL	100	14.8	1.34	1662' - 2000'	134	2.3%	Class C: Retarder	
7 in	LEAD	220	12.5	2.12	5200' - 8293'	470	0%	Class C: Salt, Gel, Extender, LCM, Defoamer	
7 111	TAIL	400	15.6	1.18	8293' - 11399'	472	070	Class H: Retarder, Fluid Loss, Defoamer	
					7'' TOC @ 520	0', BHS TOC @ 4150'			
Braden Head Sqz	LEAD	140	14.8	1.34	4150' - 5200'	190	25%	Class C	
4.5 in	LEAD	700	13.5	1.85	11199' - 22186'	1300	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent	

	Casing Program Design B						1.125	1.0	1.6 Dry	1.6 Dry
	······································					Factors		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
buing	String Hole Size	TOP MD	100 110	Dot MD	201112	esgronie		or build	or et renoion	Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4184'	4184'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4184'	4184'	4650'	4650'	9.625" 40# L80 LTC	1.22	2.26	39.54	49.14
Production	8.75"	0'	0'	12299'	11857'	7" 26# HCP110 LTC	1.33	1.70	2.17	2.60
Liner	6.125"	11399'	11284'	22186'	11857'	4.5" 13.5# P110 LTC	1.50	1.75	2.32	2.90

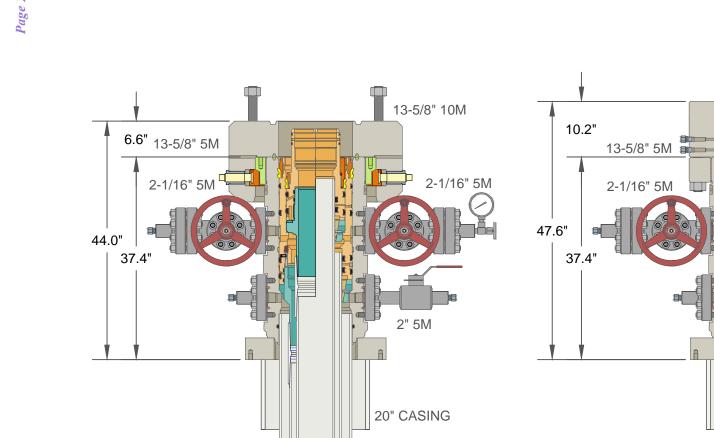
#### Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft <sup>3</sup> /sack	TOC/BOC	Volume ft <sup>3</sup>	% Excess	Slurry Description	
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM	
15.575 III	TAIL	200	14.8	1.34	601' - 790'	268	100%	Class C: Retarder	
1st Stg 9.625 in	LEAD	280	12.5	2.12	2500' - 3986'	600	25%	Class C: Salt, Gel, Extender, LCM	
1st 3tg 9.025 m	TAIL	200	14.8	1.34	3986' - 4650'	268	2370	Class C: Retarder	
9 5/8" DV Tool @ 2500'									
2nd Stg 9.625 in	LEAD	400	12.5	2.12	0' - 2160'	850	25%	Class C: Salt, Gel, Extender, LCM	
2nd Stg 9.625 m	TAIL	100	14.8	1.34	2160' - 2500'	134	23%	Class C: Retarder	
7 in	LEAD	290	12.5	2.12	5200' - 9231'	620	0%	Class C: Salt, Gel, Extender, LCM, Defoamer	
/ III	TAIL	400	15.6	1.18	9231' - 12299'	472	0%	Class H: Retarder, Fluid Loss, Defoamer	
					7" TOC @ 520	0', BHS TOC @ 4150'			
Braden Head Sqz	LEAD	140	14.8	1.34	4150' - 5200'	190	25%	Class C	
4.5 in	LEAD	680	13.5	1.85	11399' - 22186'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti- settling Agent	

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VAULT PRESSURE CONTROL	VAULI									
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	benefit of Vault Pressure Control and may not be distributed, transmitted, reproduced, altered or used for any purpose without	REVIEWED BY:	Rev. A Sht.	1 <sup>of</sup>						
	ALL DIMENSIONS ARE APPROXIMATE. NOT FOR MANUFACTURING USE.	APPROVED BY:	DATE: 8/17/2022							

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



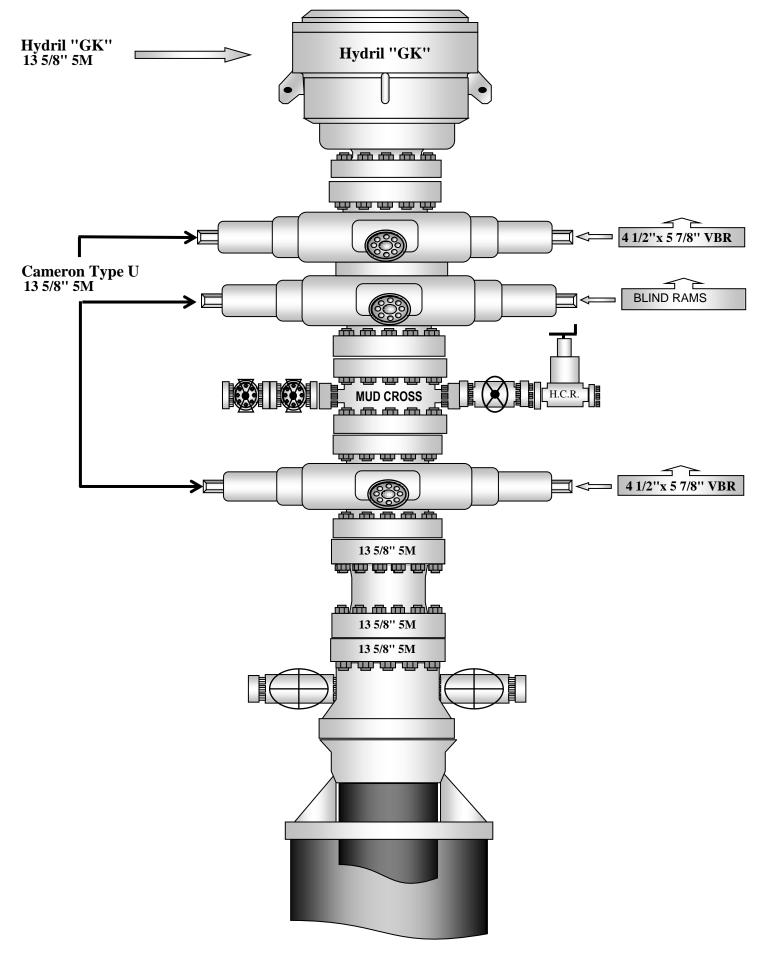
13-3/8" CASING

9-5/8" CASING

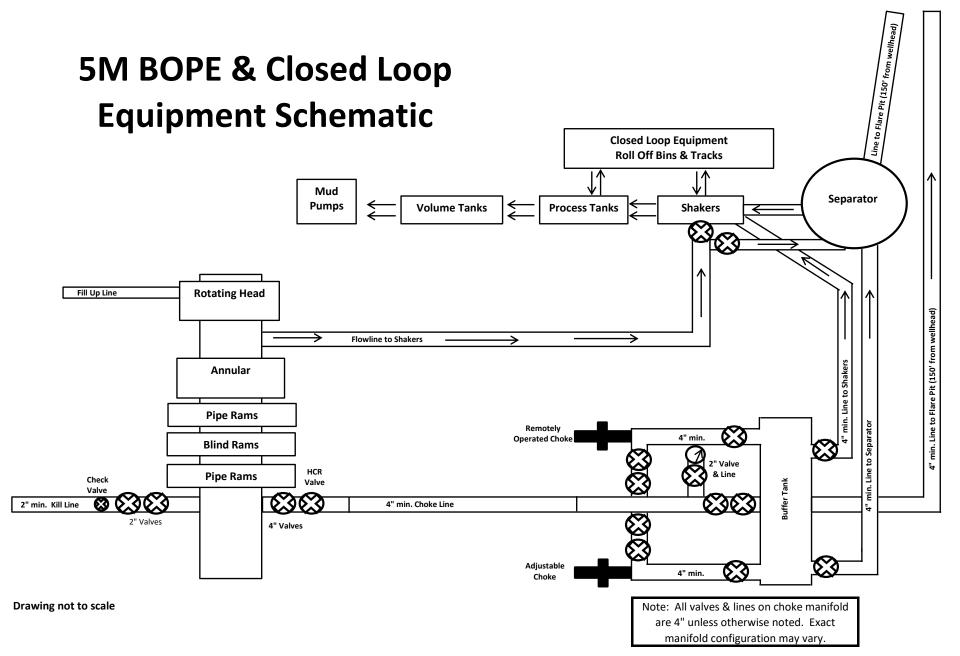
7" CASING

7" CASING

2" 5M



### Page 25 of 60





# 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 <sup>5</sup>/<sub>4</sub>" 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
  - o Contact BLM if a well control event occurs.
  - Rig up 3<sup>rd</sup> party pump or rig pumps to pump down casing and kill well.
  - Returns will be taken through the wellhead valves to a choke manifold (Fig 9 & 10).
  - Well could also be killed through the wellhead valves down the annulus.

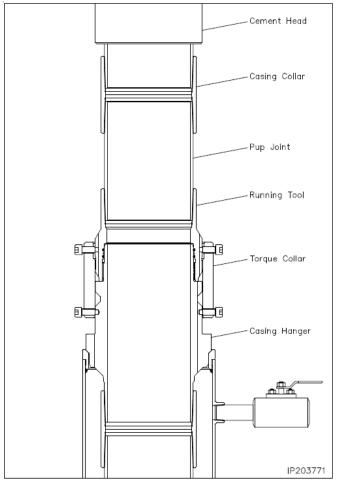


Figure 1. Cactus 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.



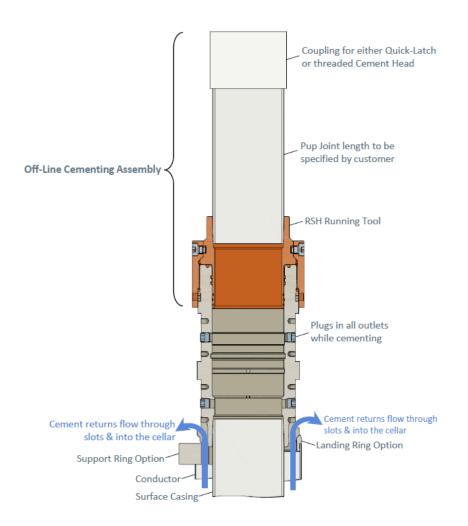


Figure 2. Vault 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.



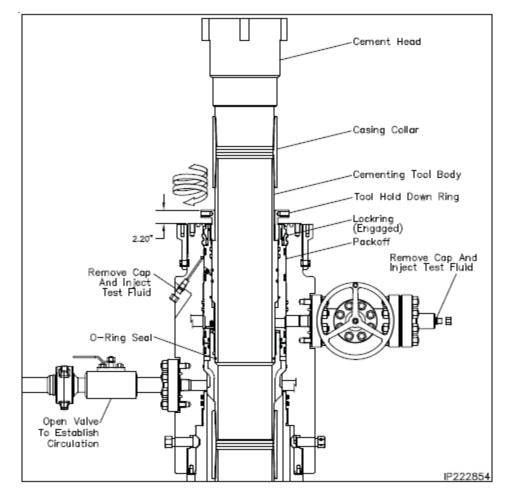


Figure 3. Cactus 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

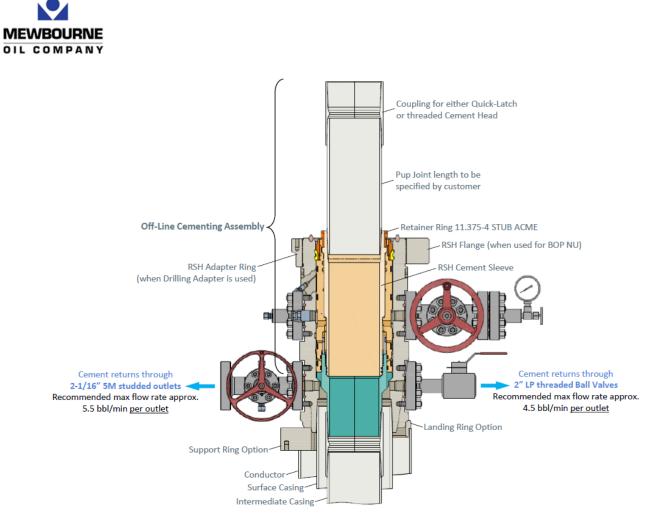


Figure 4. Vault 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.



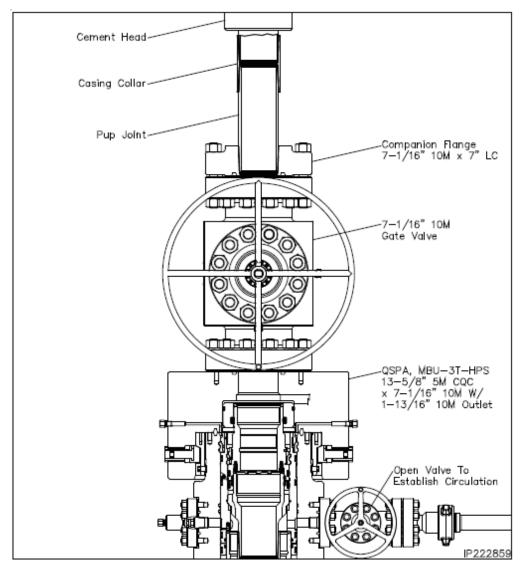


Figure 5. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.



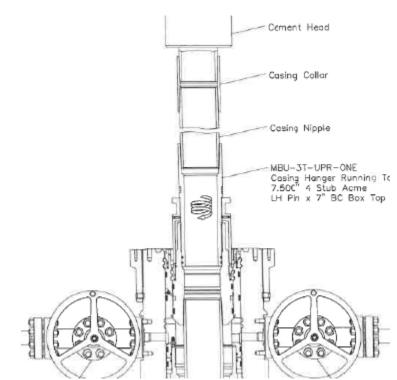


Figure 6. Cactus 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

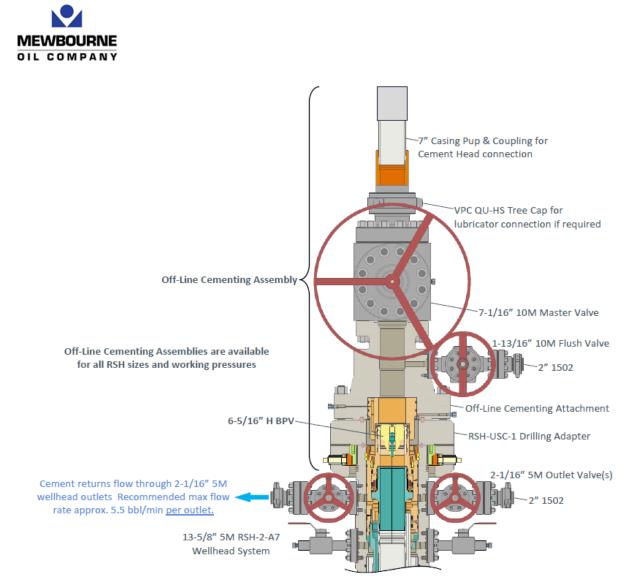
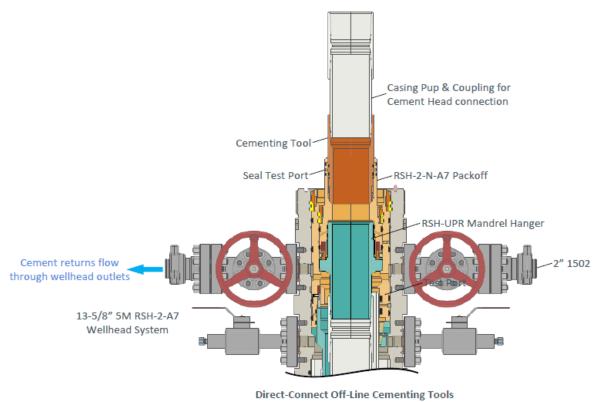


Figure 7. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.





for production casing are available for all RSH Systems

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



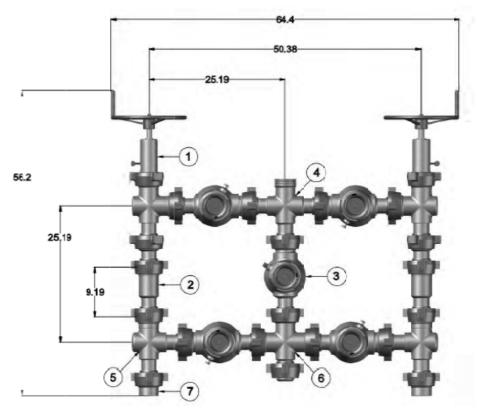


Figure 9. Five valve 15k choke manifold.

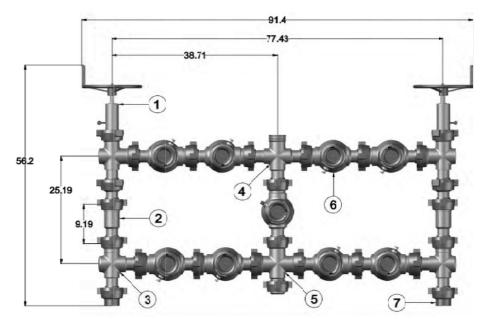


Figure 10. Nine valve 15k choke manifold.



## Mewbourne Oil Co.

**BOP Break Testing Variance** 

Mewbourne Oil Company requests a variance from the minimum standards for well control equipment testing of 43 CFR 3172 to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) along with batch drilling & offline cementing operations. Modern rig upgrades which facilitate pad drilling allow the BOP stack to be moved between wells on a multi-well pad without breaking any BOP stack components apart. Widespread use of these technologies has led to break testing BOPE being endorsed as safe and reliable. American Petroleum Institute (API) best practices are frequently used by regulators to develop their regulations. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (5<sup>th</sup> Ed., Dec. 2018) Section 5.3.7.1 states "A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component."

## **Procedures**

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



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

## **Barriers**

### **Before Nipple Down:**

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

### After Nipple Down:

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

## **Summary**

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

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

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

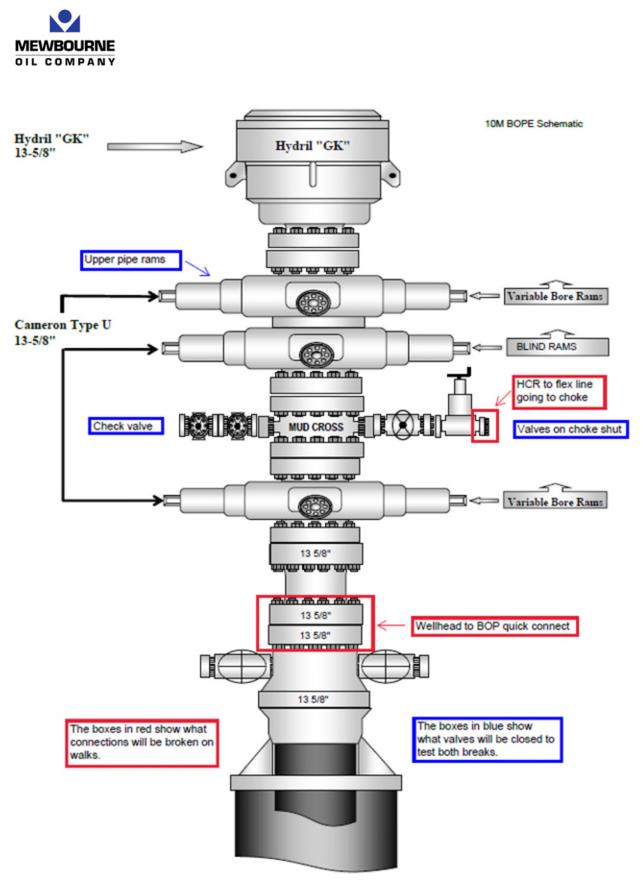


Figure 1. BOP diagram



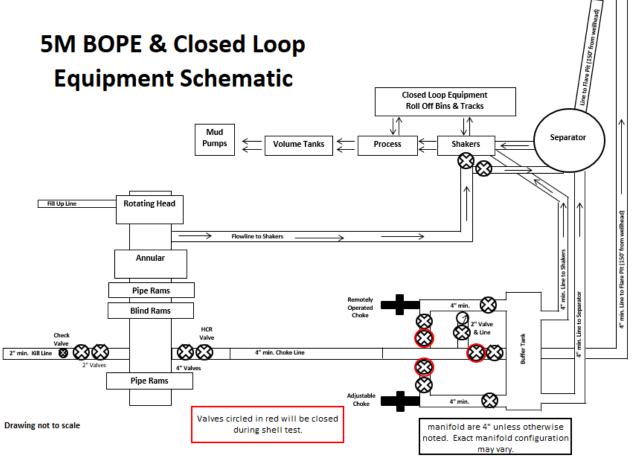


Figure 2. BOPE diagram





Figure 3. BOP handling system





Figure 4. BOP handling system



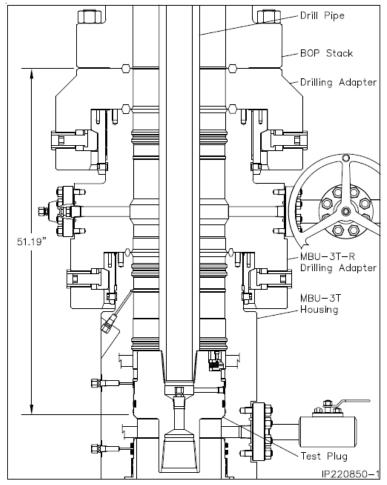


Figure 5. Cactus 5M wellhead with BOP quick connect

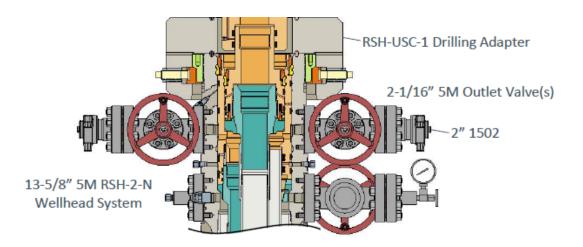


Figure 6. Vault 5M wellhead with BOP quick connect

1625 N. French Dr., Hobbs, NM 88240

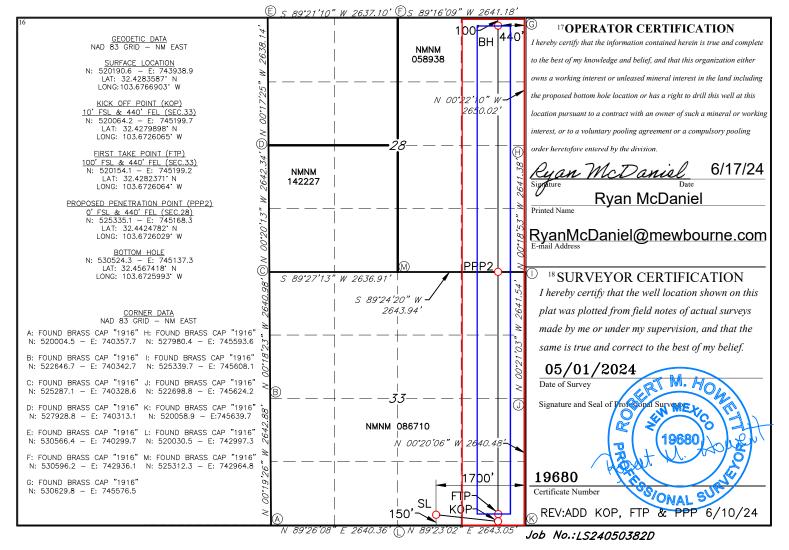
District 1

Form C-102

Revised August 1, 2011 Energy, Minerals & Natural Resources Department Phone: (575) 393-6161 Fax: (575) 393-0720 District II Submit one copy to appropriate OIL CONSERVATION DIVISION 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District Office 1220 South St. Francis Dr. District III 1000 Rio Brazos Road, Aztec, NM 87410 Santa Fe, NM 87505 Phone: (505) 334-6178 Fax: (505) 334-6170 AMENDED REPORT District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 WELL LOCATION AND ACREAGE DEDICATION PLAT 1 API Number 2 Pool Code <sup>3</sup> Pool Name BILBREY BASIN; BONE SPRING 5695 5 Property Name 6 Well Number 4Property Code LOBO 33/28 FED COM 628H 7 OGRID NO. 8 Operator Name 9Elevation MEWBOURNE OIL COMPANY 3799' 14744 <sup>10</sup> Surface Location UL or lot no. Township Lot Idn Feet from the North/South line Feet From the East/West line Section Range County 0 33 21S 32E 150 SOUTH 1700 EAST LEA <sup>11</sup> Bottom Hole Location If Different From Surface UL or lot no Section Township Range Lot Idn Feet from the North/South line Feet from the Fast/West line County 28 21S32E 100 NORTH 440 EAST LEA A 12 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 15 Order No 640

State of New Mexico

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



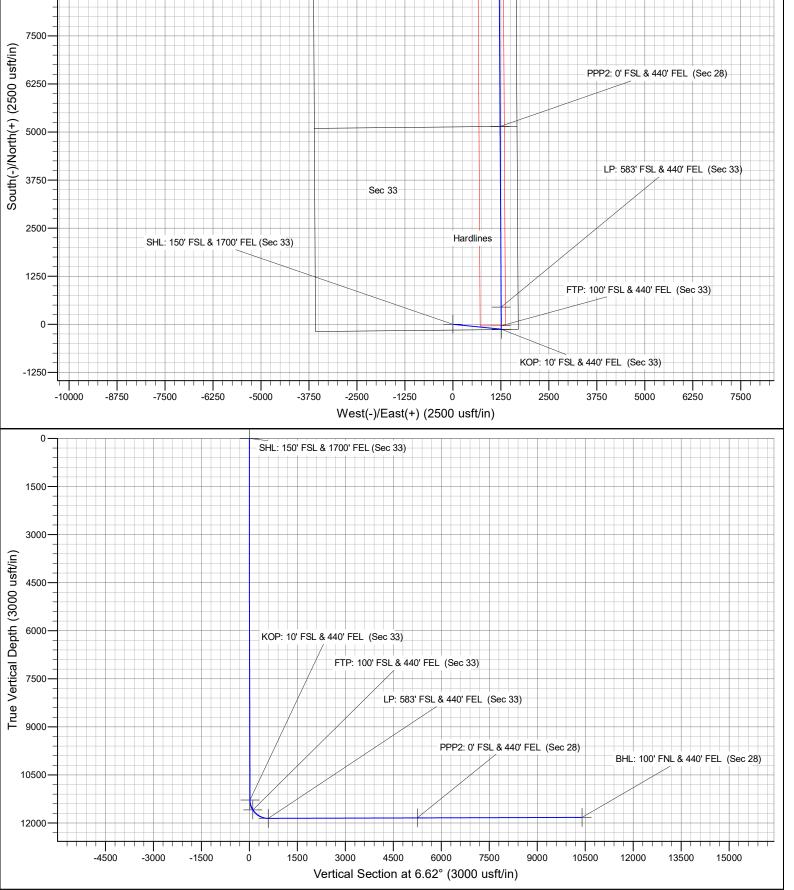
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BHL: 100' FNL & 440' FEL (Sec 28)

Sec28

#### Mewbourne Oil Company, Lobo 33/28 Fed Com 628H Sec 33, T21S, R32E SHL: 150' FSL 1700' FEL (Sec 33) BHL: 100' FNL 440' FEL (Sec 28)

Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Lobo 33/28 Fed Com	628H

Kick Off Point (KOP)

	,	/							
UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Р	33	21	32	1	10'	FSL	440'	FEL	Lea
		Latitude				Long	itude		NAD
32.4279898	3				-103.67260	)65			83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Р	33	21	32	-	100'	FSL	440'	FEL	Lea
		Latitude				Long	itude		NAD
32.4282371	l				-103.67260	)64			83

Last Take Point (LTP)

East rane i	onne (BII	)							
UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Α	28	21	32	-	100'	FNL	440'	FEL	Lea
		Latitude				Long	itude		NAD
32.4567418	3				-103.67259	993			83

Y

Well Number

Is this well the defining well for the Horizontal Spacing Unit? Is this well an infill well? N

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #	]
	]
Operator Name:	Property Name:

## **Mewbourne Oil Company**

Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H Sec 33, T21S, R32E SHL: 150' FSL & 1700' FEL (Sec 33) BHL: 100' FNL & 440' FEL (Sec 28)

Plan: Design #1

# **Standard Planning Report**

17 June, 2024

	uth Dep	oth +N/		+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target		
0.0	Design #1 (Bł	IL: 100' FNL &	440'								
Depth To (usft)	Survey (Wellt	oore)	То	ol Name		Remarks					
	Date 6/17/	2024									
		0.0		0.0	(	).0		6.62			
	(	usft)		(usft)	(u	isft)		(°)			
	Donéh	Phase:	PRO			•		0.0			
Design #1											
IGF	RF2010	12/31/2	2014	(°)	7.21		(°) 60.27	<b>(nT)</b> 48,370.8	4277059		
Model Na	me	Sample Date		Declina	ition	Dip	Angle	Field Stren	gth		
BHL: 100' FN	IL & 440' FEL (	Sec 28)									
	0.0 usit	vveiinead	a Elevation:		3,027.0	usit G	round Level:		3,799.0 us		
+E/-W	0.0 usft	Easting:			743,938.90	usft L	ongitude:		-103.676690		
		Northing			520 190 60	usft I	atitude:		32.428358		
Мар	0.0 usft	Easting:		743,9	938.90 usft				-103.676690		
LODO 33/28 F6	ed Com #628H			520	190.60.usft	Latituda			32.428358		
New Mexico Ea	astern Zone										
			:	System Dat	tum:		Mean Sea Level				
-	lew Mexico NA	\D 83									
	NL & 440' FEL (	(Sec 28)									
		4				hod:	Grid Minimum Curvature				
	Oil Company New Mexico N	AD 83		TVD Reference			WELL @ 3827.0usft (Original Well Elev) WELL @ 3827.0usft (Original Well Elev)				
	Lea County, Lobo 33/28 F Sec 33, T215 BHL: 100' FN US State Plane North American New Mexico Ea Lobo 33/28 Fd Map Sec 33, T215, +N/-S +E/-W BHL: 100' FN Model Na IGI Design #1 IGI Design #1 0.0	Lea County, New Mexico N Lobo 33/28 Fed Com #628l Sec 33, T21S, R32E BHL: 100' FNL & 440' FEL ( Design #1 Lea County, New Mexico NA US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Map 0.0 usft Sec 33, T21S, R32E +N/-S 0.0 usft +E/-W 0.0 usft 0.35 ° BHL: 100' FNL & 440' FEL ( Model Name IGRF2010 Design #1 Depth F (( gram Date 6/17/ Depth To (usft) Survey (Wellt 0.0 Design #1 (BF	Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H Sec 33, T21S, R32E BHL: 100' FNL & 440' FEL (Sec 28) Design #1 Lea County, New Mexico NAD 83 US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Map Easting: 0.0 usft Slot Radius: Sec 33, T21S, R32E +N/-S 0.0 usft Northing: +E/-W 0.0 usft Easting: 0.0 usft Wellhear 0.35 ° BHL: 100' FNL & 440' FEL (Sec 28) Model Name Sample Date IGRF2010 12/31/2 Design #1 Phase: Depth From (TVD) (usft) 0.0 gram Date 6/17/2024 Depth To (usft) Survey (Wellbore) 0.0 Design #1 (BHL: 100' FNL & Northing: Easting: 0.0 Design #1 (BHL: 100' FNL &	Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H Sec 33, T21S, R32E BHL: 100' FNL & 440' FEL (Sec 28) Design #1 Lea County, New Mexico NAD 83 US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Map 0.0 usft Slot Radius: Sec 33, T21S, R32E +N/-S 0.0 usft Northing: +E/-W 0.0 usft Northing: +E/-W 0.0 usft Wellhead Elevation: 0.35 ° BHL: 100' FNL & 440' FEL (Sec 28) Model Name Sample Date IGRF2010 12/31/2014 Design #1 Phase: PRC Depth From (TVD) (usft) 0.0 Gram Date 6/17/2024 Depth To (usft) 0.0 CO 0.0 Design #1 (BHL: 100' FNL & 440' Northing: To 0.0 Design #1 (BHL: 100' FNL & 440'	Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H Sec 33, T215, R32E BHL: 100' FNL & 440' FEL (Sec 28) Design #1 Lea County, New Mexico NAD 83 US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Map 0.0 usft Slot Radius: 1 Sec 33, T21S, R32E *N/-S 0.0 usft Northing: 520, Map 0.0 usft Slot Radius: 1 Sec 33, T21S, R32E *N/-S 0.0 usft Northing: 440' FEL (Sec 28) BHL: 100' FNL & 440' FEL (Sec 28) Model Name Sample Date Design #1 Design #1 Phase: PROTOTYPE Depth From (TVD) (usft) 0.0 0.0 gram Date 6/17/2024 Depth To (usft) Survey (Wellbore) 0.0 Design #1 (BHL: 100' FNL & 440' Phase: PROTOTYPE Perform (Usft) 0.0 0.0 Sample Date 0.0 Sample Date 0.0 Sample Date 0.0 Sample Date Sample Date Phase: PROTOTYPE Phase: PROTOTYPE Perform (TVD) (usft) 0.0 Sample Date 0.0 Sample Date 0.0 Sample Date Sample Date Sam	Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H Sec 33, T21S, R32E BHL: 100' FNL & 440' FEL (Sec 28) Design #1 Lea County, New Mexico NAD 83 US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Map 0.0 usft Slot Radius: 13-3/16 " Sec 33, T21S, R32E +N/-S 0.0 usft Northing: 520,190.60 usft 743,938.90 usft 0.0 usft Slot Radius: 13-3/16 " Sec 33, T21S, R32E +N/-S 0.0 usft Northing: 520,190.60 usft 13-3/16 " Sec 33, T21S, R32E +N/-S 0.0 usft Northing: 520,190.60 vellead Elevation: 3,827.0 0.35 ° BHL: 100' FNL & 440' FEL (Sec 28) Model Name Sample Date Declination (*) IGRF2010 12/31/2014 7.21 Design #1 Phase: PROTOTYPE Tick Usft) (usft) Usft) Cool 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H BHL: 100' FNL & 440' FEL (Sec 28) Design #1 Lea County, New Mexico NAD 83 US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Map Easting: 743,938.90 usft Latitude: Map 0.0 usft Slot Radius: 13-3/16 * Sec 33, T21S, R32E +N/-S 0.0 usft Northing: 520,190.60 usft Latitude: Map 0.0 usft Slot Radius: 13-3/16 * Sec 33, T21S, R32E +N/-S 0.0 usft Northing: 520,190.60 usft Latitude: 0.0 usft Wellhead Elevation: 3,827.0 usft 0.0 usft Easting: 743,938.90 usft 10,00 usft Wellhead Elevation: 3,827.0 usft 0.0 usft 20,00 usf	Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H Ses 33, T215, R32E BH:: 100 'FNL & 440' FEL (Sec 28) Design #1 Lea County, New Mexico NAD 83 US State Plane 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Map <u>Easting</u> : 743,938.90 usft Latitude: Easting: 743,938.90 usft Longitude: 0.0 usft Stot Radius: 13-3/16 " Sec 33, T215, R32E +N/-S 0.0 usft Northing: 520,190.60 usft Latitude: Map <u>Easting</u> : 743,938.90 usft Longitude: 0.0 usft Wellbead Elevation: 3,827.0 usft Ground Level 0.0 usft Wellbead Elevation: 3,827.0 usft Ground Level 0.35 " BHL: 100' FNL & 440' FEL (Sec 28) Model Name Sample Date Declination Dip Angle () () () IGRF2010 12/31/2014 7.21 60.27 Design #1 Phase: PROTOTYPE Tie On Depth: Phase: PROTOTYPE Tie On Depth: 0.0 0.0 0.0 gram Date 6/17/2024 Depth From (TVD) +N/-S +E/-W D (usft) Survey (Wellbore) Tool Name Remarks 0.0 Design #1 (BHL: 100' FNL & 440' Vertical Depth +N/-S +E/-W Rate Rate Rate	Lea County, New Mexico NAD 83 Labo 33/28 Fed Com #628H BHL: 100 FNL & 440 FEL (Sec 28) Design #1 Lea County, New Mexico NAD 83 US State Plane 1983 North American Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Lobo 33/28 Fed Com #628H Magnetic Datum 1983 New Mexico Eastern Zone Northing: 520,190.60 usft Latitude: Longitude: 0.0 usft Easting: 743,938.90 usft Longitude: 0.0 usft Weilhead Elevation: 3,827.0 usft Ground Level: 0.35 ° BHL: 100' FNL & 440' FEL (Sec 28) Model Name Sample Date Declination Dip Angle Field Strem (*) (*) 0.0 Eastern City (usft) (*) 0.0 Eastern City		

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Database:	Hobbs	Local Co-ordinate Reference:	Site Lobo 33/28 Fed Com #628H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3827.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3827.0usft (Original Well Elev)
Site:	Lobo 33/28 Fed Com #628H	North Reference:	Grid
Well:	Sec 33, T21S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 440' FEL (Sec 28)		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	SL & 1700' FEL (		0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
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
1,200.0	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
0.500.0	0.00	0.00	0,500,0	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	0.00	2,700.0	0.0 0.0	0.0	0.0	0.00 0.00	0.00 0.00	0.00 0.00
2,800.0		0.00	2,800.0	0.0	0.0	0.0			
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	2.00	95.72	4,100.0	-0.2	1.7	0.0	2.00	2.00	0.00
4,200.0	4.00	95.72	4,199.8	-0.7	6.9	0.1	2.00	2.00	0.00
4,300.0	6.00	95.72	4,299.5	-1.6	15.6	0.2	2.00	2.00	0.00
4,400.0	8.00	95.72	4,398.7	-2.8	27.7	0.4	2.00	2.00	0.00
4,500.0	10.00	95.72	4,497.5	-4.3	43.3	0.7	2.00	2.00	0.00
4,531.5	10.63	95.72	4,528.5	-4.9	48.9	0.8	2.00	2.00	0.00
4,600.0	10.63	95.72	4,595.8	-6.2	61.5	1.0	0.00	0.00	0.00
4,700.0	10.63	95.72	4,694.1	-8.0	79.8	1.2	0.00	0.00	0.00
4,800.0	10.63	95.72	4,792.3	-9.8	98.2	1.5	0.00	0.00	0.00
4,900.0	10.63	95.72	4,890.6	-11.7	116.6	1.8	0.00	0.00	0.00
5,000.0	10.63	95.72	4,988.9	-13.5	134.9	2.1	0.00	0.00	0.00
5,100.0	10.63	95.72	5,087.2	-15.4	153.3	2.4	0.00	0.00	0.00

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l Elev)
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	10.63	95.72	5,185.5	-17.2	171.6	2.7	0.00	0.00	0.00
5,300.0	10.63	95.72	5,283.8	-19.0	190.0	3.0	0.00	0.00	0.00
			,						
5,400.0	10.63	95.72	5,382.1	-20.9	208.3	3.3	0.00	0.00	0.00
5,500.0	10.63	95.72	5,480.3	-22.7	226.7	3.5	0.00	0.00	0.00
5,600.0	10.63	95.72	5,578.6	-24.6	245.0	3.8	0.00	0.00	0.00
5,700.0	10.63	95.72	5,676.9	-26.4	263.4	4.1	0.00	0.00	0.00
5,800.0	10.63	95.72	5,775.2	-28.2	281.8	4.4	0.00	0.00	0.00
5,900.0	10.63	95.72	5,873.5	-30.1	300.1	4.7	0.00	0.00	0.00
6,000.0	10.63	95.72	5,971.8	-31.9	318.5	5.0	0.00	0.00	0.00
6,100.0	10.63	95.72	6,070.0	-33.8	336.8	5.3	0.00	0.00	0.00
6,200.0	10.63	95.72	6,168.3	-35.6	355.2	5.5	0.00	0.00	0.00
6,300.0	10.63	95.72	6,266.6	-37.4	373.5	5.8	0.00	0.00	0.00
6,400.0	10.63	95.72	6,364.9	-39.3	391.9	6.1	0.00	0.00	0.00
6,500.0	10.63	95.72	6,463.2	-41.1	410.2	6.4	0.00	0.00	0.00
6,600.0	10.63	95.72	6,561.5	-43.0	428.6	6.7	0.00	0.00	0.00
6,700.0	10.63	95.72	6,659.7	-43.0	428.0	7.0	0.00	0.00	0.00
6,700.0	10.63	95.72 95.72	6,659.7 6,758.0	-44.8 -46.6	447.0 465.3	7.0	0.00	0.00	0.00
			,						
6,900.0	10.63	95.72	6,856.3	-48.5	483.7	7.6	0.00	0.00	0.00
7,000.0	10.63	95.72	6,954.6	-50.3	502.0	7.8	0.00	0.00	0.00
7,100.0	10.63	95.72	7,052.9	-52.2	520.4	8.1	0.00	0.00	0.00
7,200.0	10.63	95.72	7,151.2	-54.0	538.7	8.4	0.00	0.00	0.00
7,300.0	10.63	95.72	7,249.4	-55.9	557.1	8.7	0.00	0.00	0.00
7,400.0	10.63	95.72	7,347.7	-57.7	575.4	9.0	0.00	0.00	0.00
7,500.0	10.63	95.72	7,446.0	-59.5	593.8	9.3	0.00	0.00	0.00
7,600.0	10.63	95.72	7,544.3	-61.4	612.2	9.6	0.00	0.00	0.00
7,700.0	10.63	95.72	7,642.6	-63.2	630.5	9.8	0.00	0.00	0.00
7,800.0	10.63	95.72	7,740.9	-65.1	648.9	10.1	0.00	0.00	0.00
7,900.0	10.63	95.72	7,839.1	-66.9	667.2	10.4	0.00	0.00	0.00
8,000.0	10.63	95.72	7,937.4	-68.7	685.6	10.7	0.00	0.00	0.00
8,100.0	10.63	95.72	8,035.7	-70.6	703.9	11.0	0.00	0.00	0.00
8,200.0	10.63	95.72	8,134.0	-72.4	722.3	11.3	0.00	0.00	0.00
8,300.0	10.63	95.72	8,232.3	-74.3	740.6	11.6	0.00	0.00	0.00
8,400.0	10.63	95.72	8,330.6	-76.1	759.0	11.8	0.00	0.00	0.00
8,500.0	10.63	95.72	8,428.8	-77.9	777.4	12.1	0.00	0.00	0.00
8,600.0	10.63	95.72	8,527.1	-79.8	795.7	12.1	0.00	0.00	0.00
8,700.0	10.63	95.72	8,625.4	-81.6	814.1	12.7	0.00	0.00	0.00
8,800.0	10.63	95.72	8,723.7	-83.5	832.4	13.0	0.00	0.00	0.00
8,900.0	10.63	95.72	8,822.0	-85.3	850.8	13.3	0.00	0.00	0.00
9,000.0	10.63	95.72	8,920.3	-87.1	869.1	13.6	0.00	0.00	0.00
9,100.0	10.63	95.72	9,018.5	-89.0	887.5	13.9	0.00	0.00	0.00
9,200.0	10.63	95.72	9,116.8	-90.8	905.8	14.1	0.00	0.00	0.00
9,300.0	10.63	95.72	9,215.1	-92.7	924.2	14.4	0.00	0.00	0.00
9,400.0	10.63	95.72	9,313.4	-94.5	942.5	14.7	0.00	0.00	0.00
9,500.0	10.63	95.72	9,411.7	-96.3	960.9	15.0	0.00	0.00	0.00
9,600.0	10.63	95.72	9,510.0	-98.2	979.3	15.3	0.00	0.00	0.00
9,700.0	10.63	95.72	9,608.3	-100.0	997.6	15.6	0.00	0.00	0.00
9,800.0	10.63	95.72	9,706.5	-101.9	1,016.0	15.9	0.00	0.00	0.00
9,900.0	10.63	95.72	9,804.8	-103.7	1,034.3	16.1	0.00	0.00	0.00
10,000.0	10.63	95.72	9,903.1	-105.5	1,052.7	16.4	0.00	0.00	0.00
10,100.0	10.63	95.72	10,001.4	-107.4	1,071.0	16.7	0.00	0.00	0.00
10,200.0	10.63	95.72	10,099.7	-109.2	1,089.4	17.0	0.00	0.00	0.00
10,300.0	10.63	95.72	10,198.0	-111.1	1,107.7	17.3	0.00	0.00	0.00
10,400.0	10.63	95.72	10,296.2	-112.9	1,126.1	17.6	0.00	0.00	0.00
10,400.0	10.63	95.72	10,290.2	-112.9	1,120.1	17.0	0.00	0.00	0.00

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Hobbs	Local Co-ordinate Reference:	Site Lobo 33/28 Fed Com #628H
Mewbourne Oil Company	TVD Reference:	WELL @ 3827.0usft (Original Well Elev)
Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3827.0usft (Original Well Elev)
Lobo 33/28 Fed Com #628H	North Reference:	Grid
Sec 33, T21S, R32E	Survey Calculation Method:	Minimum Curvature
BHL: 100' FNL & 440' FEL (Sec 28)		
Design #1		
	Mewbourne Oil Company .ea County, New Mexico NAD 83 .obo 33/28 Fed Com #628H Sec 33, T21S, R32E 3HL: 100' FNL & 440' FEL (Sec 28)	Mewbourne Oil Company     TVD Reference:       Lea County, New Mexico NAD 83     MD Reference:       Lobo 33/28 Fed Com #628H     North Reference:       Sec 33, T21S, R32E     Survey Calculation Method:       BHL: 100' FNL & 440' FEL (Sec 28)     Survey Calculation Method:

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,600.0	10.63	95.72	10,492.8	-116.6	1,162.8	18.2	0.00	0.00	0.00
10,700.0	10.63	95.72	10,591.1	-118.4	1,181.2	18.4	0.00	0.00	0.00
10,800.0	10.63	95.72	10,689.4	-120.3	1,199.5	18.7	0.00	0.00	0.00
10,867.3	10.63	95.72	10,755.5	-121.5	1,211.9	18.9	0.00	0.00	0.00
10,900.0	9.98	95.72	10,787.7	-122.1	1,217.7	19.0	2.00	-2.00	0.00
11,000.0	7.98	95.72	10,886.5	-123.6	1,233.2	19.3	2.00	-2.00	0.00
11,100.0	5.98	95.72	10,985.7	-124.8	1,245.3	19.4	2.00	-2.00	0.00
11,200.0	3.98	95.72	11,085.3	-125.7	1,253.9	19.6	2.00	-2.00	0.00
11,300.0	1.98	95.72	11,185.2	-126.2	1,259.1	19.7	2.00	-2.00	0.00
11,398.8	0.00	0.01	11,284.0	-126.4	1,260.8	19.7	2.00	-2.00	0.00
	SL & 440' FEL (S								
11,400.0	0.12	359.66	11,285.2	-126.4	1,260.8	19.7	10.00	10.00	0.00
11,450.0	5.12	359.66	11,335.1	-124.1	1,260.8	21.9	10.00	10.00	0.00
11,500.0	10.12	359.66	11,384.6	-117.5	1,260.7	28.5	10.00	10.00	0.00
11,550.0	15.12	359.66	11,433.4	-106.6	1,260.7	39.4	10.00	10.00	0.00
11,600.0	20.12	359.66	11,481.1	-91.4	1,260.6	54.4	10.00	10.00	0.00
11,650.0	25.12	359.66	11,527.2	-72.2	1,260.5	73.5	10.00	10.00	0.00
11,700.0	30.11	359.66	11,571.5	-49.1	1,260.3	96.5	10.00	10.00	0.00
11,724.2	32.53 SL & 440' FEL (S	359.66	11,592.1	-36.5	1,260.3	108.9	10.00	10.00	0.00
	•	•							
11,750.0	35.11	359.66	11,613.6	-22.1	1,260.2	123.2	10.00	10.00	0.00
11,800.0	40.11	359.66	11,653.2	8.4	1,260.0	153.5	10.00	10.00	0.00
11,850.0	45.11	359.66	11,690.0	42.2	1,259.8	187.1	10.00	10.00	0.00
11,900.0 11,950.0	50.11 55.11	359.66 359.66	11,723.7 11,754.0	79.1 118.9	1,259.6 1,259.3	223.7 263.1	10.00 10.00	10.00 10.00	0.00 0.00
12,000.0	60.11	359.66	11,780.8	161.1	1,259.1	305.0	10.00	10.00	0.00
12,050.0 12,100.0	65.11 70.11	359.66 359.66	11,803.8 11,822.8	205.5 251.7	1,258.8 1,258.5	349.1 395.0	10.00 10.00	10.00 10.00	0.00 0.00
12,100.0	75.11	359.66	11,837.8	299.4	1,258.3	442.3	10.00	10.00	0.00
12,200.0	80.11	359.66	11,848.5	348.2	1,258.0	490.8	10.00	10.00	0.00
12,250.0	85.11	359.66	11,854.9	397.8	1,257.7	540.0	10.00	10.00	0.00
12,298.9	90.00	359.66	11,857.0	446.6	1,257.4	588.4	10.00	10.00	0.00
	L & 440' FEL (Se		,		.,20111	00011	10100	10100	0.00
12,300.6	90.17	359.66	11,857.0	448.3	1,257.4	590.2	10.00	10.00	0.00
12,400.0	90.17	359.66	11,856.7	547.7	1,256.8	688.8	0.00	0.00	0.00
12,500.0	90.17	359.66	11,856.4	647.7	1,256.2	788.1	0.00	0.00	0.00
12,600.0	90.17	359.66	11,856.1	747.7	1,255.6	887.4	0.00	0.00	0.00
12,700.0	90.17	359.66	11,855.8	847.7	1,255.0	986.6	0.00	0.00	0.00
12,800.0	90.17	359.66	11,855.5	947.7	1,254.4	1,085.9	0.00	0.00	0.00
12,900.0	90.17	359.66	11,855.2	1,047.7	1,253.8	1,185.1	0.00	0.00	0.00
13,000.0	90.17	359.66	11,854.9	1,147.7	1,253.2	1,284.4	0.00	0.00	0.00
13,100.0	90.17	359.66	11,854.6	1,247.7	1,252.6	1,383.7	0.00	0.00	0.00
13,200.0	90.17	359.66	11,854.3	1,347.7	1,252.0	1,482.9	0.00	0.00	0.00
13,300.0	90.17	359.66	11,854.0	1,447.7	1,251.4	1,582.2	0.00	0.00	0.00
13,400.0	90.17	359.66 359.66	11,853.7	1,547.7 1.647.7	1,250.8	1,681.5	0.00	0.00	0.00
13,500.0	90.17	359.66	11,853.4	1,647.7	1,250.2	1,780.7	0.00	0.00	0.00
13,600.0	90.17	359.66	11,853.1	1,747.7	1,249.6	1,880.0	0.00	0.00	0.00
13,700.0	90.17	359.66	11,852.8	1,847.7	1,249.0	1,979.2	0.00	0.00	0.00
13,800.0	90.17	359.66	11,852.4 11,852.1	1,947.7	1,248.4	2,078.5	0.00	0.00	0.00
13,900.0 14,000.0	90.17 90.17	359.66 359.66	11,852.1	2,047.7 2,147.7	1,247.8 1,247.2	2,177.8 2,277.0	0.00 0.00	0.00 0.00	0.00 0.00
14,100.0 14,200.0	90.17	359.66 359.66	11,851.5	2,247.7	1,246.6	2,376.3	0.00	0.00	0.00
14.200.0	90.17	339.00	11,851.2	2,347.7	1,246.0	2,475.6	0.00	0.00	0.00

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Database:	Hobbs	Local Co-ordinate Reference:	Site Lobo 33/28 Fed Com #628H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3827.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3827.0usft (Original Well Elev)
Site:	Lobo 33/28 Fed Com #628H	North Reference:	Grid
Well:	Sec 33, T21S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 440' FEL (Sec 28)		
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)
14,300.0	90.17	359.66	11,850.9	2,447.7	1,245.4	2,574.8	0.00	0.00	0.00
14,400.0	90.17	359.66	11,850.6	2,547.6	1,244.8	2,674.1	0.00	0.00	0.00
14,500.0	90.17	359.66	11,850.3	2,647.6	1,244.3	2,773.4	0.00	0.00	0.00
14,600.0	90.17	359.66	11,850.0	2,747.6	1,243.7	2,872.6	0.00	0.00	0.00
14,700.0	90.17	359.66	11,849.7	2,847.6	1,243.1	2,971.9	0.00	0.00	0.00
14,800.0	90.17	359.66	11,849.4	2,947.6	1,242.5	3,071.1	0.00	0.00	0.00
14,900.0	90.17	359.66	11,849.1	3,047.6	1,241.9	3,170.4	0.00	0.00	0.00
15,000.0	90.17	359.66	11,848.8	3,147.6	1,241.3	3,269.7	0.00	0.00	0.00
15,100.0	90.17	359.66	11,848.5	3,247.6	1,240.7	3,368.9	0.00	0.00	0.00
15,200.0	90.17	359.66	11,848.2	3,347.6	1,240.1	3,468.2	0.00	0.00	0.00
15,300.0	90.17	359.66	11,847.9	3,447.6	1,239.5	3,567.5	0.00	0.00	0.00
15,400.0	90.17	359.66	11,847.6	3,547.6	1,238.9	3,666.7	0.00	0.00	0.00
15,500.0	90.17	359.66	11,847.3	3,647.6	1,238.3	3,766.0	0.00	0.00	0.00
15,600.0	90.17	359.66	11,847.0	3,747.6	1,237.7	3,865.3	0.00	0.00	0.00
15,700.0	90.17	359.66	11,846.7	3,847.6	1,237.1	3,964.5	0.00	0.00	0.00
15,800.0	90.17	359.66	11,846.4	3,947.6	1,236.5	4,063.8	0.00	0.00	0.00
15,900.0	90.17	359.66	11,846.1	4,047.6	1,235.9	4,163.0	0.00	0.00	0.00
16,000.0	90.17	359.66	11,845.8	4,147.6	1,235.3	4,262.3	0.00	0.00	0.00
16,100.0	90.17	359.66	11,845.5	4,247.6	1,234.7	4,361.6	0.00	0.00	0.00
16,200.0	90.17	359.66	11,845.2	4,347.6	1,234.1	4,460.8	0.00	0.00	0.00
16,300.0	90.17	359.66	11,844.9	4,447.6	1,233.5	4,560.1	0.00	0.00	0.00
16,400.0	90.17	359.66	11,844.6	4,547.6	1,232.9	4,659.4	0.00	0.00	0.00
16,500.0	90.17	359.66	11,844.3	4,647.6	1,232.3	4,758.6	0.00	0.00	0.00
16,600.0	90.17	359.66	11,844.0	4,747.6	1,231.7	4,857.9	0.00	0.00	0.00
16,700.0	90.17	359.66	11,843.6	4,847.6	1,231.1	4,957.1	0.00	0.00	0.00
16,800.0	90.17	359.66	11,843.3	4,947.6	1,230.5	5,056.4	0.00	0.00	0.00
16,900.0	90.17	359.66	11,843.0	5,047.6	1,229.9	5,155.7	0.00	0.00	0.00
16,996.9	90.17	359.66	11,842.7	5,144.5	1,229.4	5,251.9	0.00	0.00	0.00
PPP2: 0' FSL	L & 440' FEL (Se	ec 28)							
17,000.0	90.17	359.66	11,842.7	5,147.6	1,229.3	5,254.9	0.00	0.00	0.00
17,100.0	90.17	359.66	11,842.4	5,247.6	1,228.7	5,354.2	0.00	0.00	0.00
17,200.0	90.17	359.66	11,842.1	5,347.6	1,228.1	5,453.5	0.00	0.00	0.00
17,300.0	90.17	359.66	11,841.8	5,447.6	1,227.5	5,552.7	0.00	0.00	0.00
17,400.0	90.17	359.66	11,841.5	5,547.6	1,227.0	5,652.0	0.00	0.00	0.00
17,500.0	90.17	359.66	11,841.2	5,647.6	1,226.4	5,751.3	0.00	0.00	0.00
17,600.0	90.17	359.66	11,840.9	5,747.6	1,225.8	5,850.5	0.00	0.00	0.00
17,700.0	90.17	359.66	11,840.6	5,847.6	1,225.2	5,949.8	0.00	0.00	0.00
17,800.0	90.17	359.66	11,840.3	5,947.6	1,224.6	6,049.0	0.00	0.00	0.00
17,900.0	90.17	359.66	11,840.0	6,047.6	1,224.0	6,148.3	0.00	0.00	0.00
18,000.0	90.17	359.66	11,839.7	6,147.6	1,223.4	6,247.6	0.00	0.00	0.00
18,100.0	90.17	359.66	11,839.4	6,247.6	1,222.8	6,346.8	0.00	0.00	0.00
18,200.0	90.17	359.66	11,839.1	6,347.6	1,222.2	6,446.1	0.00	0.00	0.00
18,300.0	90.17	359.66	11,838.8	6,447.6	1,221.6	6,545.4	0.00	0.00	0.00
18,400.0	90.17	359.66	11,838.5	6,547.6	1,221.0	6,644.6	0.00	0.00	0.00
18,500.0	90.17	359.66	11,838.2	6,647.6	1,220.4	6,743.9	0.00	0.00	0.00
18,600.0	90.17	359.66	11,837.9	6,747.6	1,219.8	6,843.2	0.00	0.00	0.00
18,700.0	90.17	359.66	11,837.6	6,847.6	1,219.2	6,942.4	0.00	0.00	0.00
18,800.0	90.17	359.66	11,837.3	6,947.5	1,218.6	7,041.7	0.00	0.00	0.00
18,900.0	90.17	359.66	11,837.0	7,047.5	1,218.0	7,140.9	0.00	0.00	0.00
19,000.0	90.17	359.66	11,836.7	7,147.5	1,217.4	7,240.2	0.00	0.00	0.00
19,100.0	90.17	359.66	11,836.4	7,247.5	1,216.8	7,339.5	0.00	0.00	0.00
19,200.0	90.17	359.66	11,836.1	7,347.5	1,216.2	7,438.7	0.00	0.00	0.00
19,300.0	90.17	359.66	11,835.8	7,447.5	1,215.6	7,538.0	0.00	0.00	0.00
19,400.0	90.17	359.66	11,835.5	7,547.5	1,215.0	7,637.3	0.00	0.00	0.00

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Database:	Hobbs	Local Co-ordinate Reference:	Site Lobo 33/28 Fed Com #628H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3827.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	MD Reference:	WELL @ 3827.0usft (Original Well Elev)
Site:	Lobo 33/28 Fed Com #628H	North Reference:	Grid
Well:	Sec 33, T21S, R32E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 100' FNL & 440' FEL (Sec 28)		
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)
19,500.0	90.17	359.66	11,835.2	7,647.5	1,214.4	7,736.5	0.00	0.00	0.00
19,600.0	90.17	359.66	11,834.8	7,747.5	1,213.8	7,835.8	0.00	0.00	0.00
19,700.0	90.17	359.66	11,834.5	7,847.5	1,213.2	7,935.0	0.00	0.00	0.00
19,800.0	90.17	359.66	11,834.2	7,947.5	1,212.6	8,034.3	0.00	0.00	0.00
19,900.0	90.17	359.66	11,833.9	8,047.5	1,212.0	8,133.6	0.00	0.00	0.00
20,000.0	90.17	359.66	11,833.6	8,147.5	1,211.4	8,232.8	0.00	0.00	0.00
20,100.0	90.17	359.66	11,833.3	8,247.5	1,210.8	8,332.1	0.00	0.00	0.00
20,200.0	90.17	359.66	11,833.0	8,347.5	1,210.2	8,431.4	0.00	0.00	0.00
20,300.0	90.17	359.66	11,832.7	8,447.5	1,209.7	8,530.6	0.00	0.00	0.00
20,400.0	90.17	359.66	11,832.4	8,547.5	1,209.1	8,629.9	0.00	0.00	0.00
20,500.0	90.17	359.66	11,832.1	8,647.5	1,208.5	8,729.2	0.00	0.00	0.00
20,600.0	90.17	359.66	11,831.8	8,747.5	1,207.9	8,828.4	0.00	0.00	0.00
20,700.0	90.17	359.66	11,831.5	8,847.5	1,207.3	8,927.7	0.00	0.00	0.00
20,800.0	90.17	359.66	11,831.2	8,947.5	1,206.7	9,026.9	0.00	0.00	0.00
20,900.0	90.17	359.66	11,830.9	9,047.5	1,206.1	9,126.2	0.00	0.00	0.00
21,000.0	90.17	359.66	11,830.6	9,147.5	1,205.5	9,225.5	0.00	0.00	0.00
21,100.0	90.17	359.66	11,830.3	9,247.5	1,204.9	9,324.7	0.00	0.00	0.00
21,200.0	90.17	359.66	11,830.0	9,347.5	1,204.3	9,424.0	0.00	0.00	0.00
21,300.0	90.17	359.66	11,829.7	9,447.5	1,203.7	9,523.3	0.00	0.00	0.00
21,400.0	90.17	359.66	11,829.4	9,547.5	1,203.1	9,622.5	0.00	0.00	0.00
21,500.0	90.17	359.66	11,829.1	9,647.5	1,202.5	9,721.8	0.00	0.00	0.00
21,600.0	90.17	359.66	11,828.8	9,747.5	1,201.9	9,821.0	0.00	0.00	0.00
21,700.0	90.17	359.66	11,828.5	9,847.5	1,201.3	9,920.3	0.00	0.00	0.00
21,800.0	90.17	359.66	11,828.2	9,947.5	1,200.7	10,019.6	0.00	0.00	0.00
21,900.0	90.17	359.66	11,827.9	10,047.5	1,200.1	10,118.8	0.00	0.00	0.00
22,000.0	90.17	359.66	11,827.6	10,147.5	1,199.5	10,218.1	0.00	0.00	0.00
22,100.0	90.17	359.66	11,827.3	10,247.5	1,198.9	10,317.4	0.00	0.00	0.00
22,186.2	90.17	359.66	11,827.0	10,333.7	1,198.4	10,403.0	0.00	0.00	0.00

Database: Company: Project: Site: Well: Wellbore: Design:	Hobbs Mewbourne Oil Company Lea County, New Mexico NAD 83 Lobo 33/28 Fed Com #628H Sec 33, T21S, R32E BHL: 100' FNL & 440' FEL (Sec 28) Design #1				TVD Refere MD Referen North Refer	ice:	WELL @ 3 WELL @ 3 Grid	Site Lobo 33/28 Fed Com #628H WELL @ 3827.0usft (Original Well Elev) WELL @ 3827.0usft (Original Well Elev) Grid Minimum Curvature		
Design Targets Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL: 150' FSL & 1700' - plan hits target ce - Point		0.00	0.0	0.0	0.0	520,190.60	743,938.90	32.4283587	-103.6766902	
KOP: 10' FSL & 440' FB - plan hits target ce - Point		0.01	11,284.0	-126.4	1,260.8	520,064.20	745,199.70	32.4279899	-103.6726066	
FTP: 100' FSL & 440' F - plan hits target ce - Point		0.00	11,592.1	-36.5	1,260.3	520,154.10	745,199.16	32.4282370	-103.6726066	
BHL: 100' FNL & 440' F - plan hits target ce - Point		0.00	11,827.0	10,333.7	1,198.4	530,524.30	745,137.30	32.4567419	-103.6725992	
PPP2: 0' FSL & 440' FE - plan hits target ce - Point		0.00	11,842.7	5,144.5	1,229.4	525,335.10	745,168.25	32.4424782	-103.6726029	
LP: 583' FSL & 440' FE - plan hits target ce - Point		0.00	11,857.0	446.6	1,257.4	520,637.17	745,196.28	32.4295649	-103.6726062	



## **Sundry Request:**

Mewbourne Oil Company request that the following change be made to the Lobo 33/28 W0PA Fed Com #1H (APD ID #10400062779):

- 1. Change name f/ Lobo 33/28 W0PA Fed Com #1H (APD ID #10400062779) to Lobo 33/28 Fed Com #628H.
- 2. Change SHL f/ 150 FSL & 1750 FEL (33) to 150 FSL & 1700 FEL (33)
- 3. Change Target f/ Wolfcamp to Bone Spring
- 4. Request a variance to perform break testing and offline cementing per attachments.
- 5. Attached Break Testing and Offline Cementing variance, new plat, new directional plan and plot, add info, & csg assumptions.

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

#### 1. General Requirements

Rule 118 does not apply to this well because MOC has researched this area and no high concentrations of H2S were found. MOC will have on location and working all H2S safety equipment before the Delaware formation for purposes of safety and insurance requirements.

#### 2. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

- 1. The hazards and characteristics of hydrogen sulfide gas.
- 2. The proper use of personal protective equipment and life support systems.
- 3. The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
- 4. The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- 1 The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- 3 The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

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

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the 9 5/8" intermediate casing.

- 1. <u>Well Control Equipment</u>
  - A. Choke manifold with minimum of one adjustable choke/remote choke.
  - B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
  - C. Auxiliary equipment including annular type blowout preventer.
- 2. <u>Protective Equipment for Essential Personnel</u>

Thirty minute self contained work unit located in the dog house and at briefing areas.

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

3. <u>Hydrogen Sulfide Protection and Monitoring Equipment</u>

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 PPM.

#### 4. <u>Visual Warning Systems</u>

A. Wind direction indicators as indicated on the wellsite diagram.B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

#### 4. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

#### 5. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

#### 6. Communications

State & County Officials phone numbers are posted on rig floor and supervisors trailer. Communications in company vehicles and toolpushers are either two way radios or cellular phones.

#### 7. Well Testing

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

#### 8. Emergency Phone Numbers

Eddy County Sheriff's Office911 or 575-887-7551Ambulance Service911 or 575-885-2111Carlsbad Fire Dept911 or 575-885-2111Loco Hills Volunteer Fire Dept.911 or 575-677-3266Closest Medical Facility - Columbia Medical Center of Carlsbad575-492-5000

Mewbourne Oil Company	Hobbs District Office Fax 2 <sup>nd</sup> Fax	575-393-5905 575-397-6252 575-393-7259
District Manager	<b>Robin Terrell</b>	575-390-4816
Drilling Superintendent	Frosty Lathan	575-390-4103
	Bradley Bishop	575-390-6838
Drilling Foreman	Wesley Noseff	575-441-0729



GATES ENGINEERING & SERVICES NORTH AMERICA 7603 Prairie Oak Dr. Houston, TX 77086 PHONE: (281) 602 - 4119 FAX: EMAIL: Troy.Schmidt@gates.com WEB: www.gates.com

## **10K CHOKE & KILL ASSEMBLY PRESSURE TEST CERTIFICATE**

Customer:	A-7 AUSTIN INC DBA AUSTIN HOSE	Test Date:	8/20/2018
Customer Ref.:	4101901	Hose Serial No.:	H-082018-10
Invoice No.:	511956	Created By:	Moosa Naqvi
Dead and Descriptions	10KE	3.035.0CK41/1610KFLGFXDxFLT	L/E
Product Description:	and the second s		
End Fitting 1:	4 1/16 in. Fixed Flange	End Fitting 2:	4 1/16 in. Float Flange
		_	

Gates Engineering & Services North America certifies that the following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements.

Quality:	QUALITY	Production:	PRODUCTION
Date :	8/20/2018	Date :	8/20/2018
Signature :	1000	Signature :	THE T
	Mossa Nym	/	· //
	-l		Form PTC - 01 Rev.0 2
			- Mile



District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

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

CONDITIONS

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	369454
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

#### CONDITIONS

Created By		Condition Date
pkautz	None	8/23/2024

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Action 369454