Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM86710

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.: LOBO 33/28 FED COM 408H

2. Name of Operator: MEWBOURNE OIL COMPANY

9. API Well No.:

3a. Address: P O BOX 5270, HOBBS, NM 88241

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

10. Field and Pool, or Exploratory: BILBERY BASIN/BONE SPRING

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

At surface: SWSE / 150 FSL / 1720 FEL / LAT 32.4283585 / LONG -103.6767522

At proposed prod. zone: NENE / 100 FNL / 500 FEL / LAT 32.4567378 / LONG -103.6727985

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 33/T21S/R32E/NMP

14. Distance in miles and direction from nearest town or post office*: 20 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 330 feet

16. No of acres in lease:

17. Spacing Unit dedicated to this well: 320.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 20 feet

19. Proposed Depth: 9851 feet / 20244 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3799 feet

22. Approximate date work will start*: 07/14/2024

23. Estimated duration: 60 days

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature: (Electronic Submission)

Name *(Printed/Typed)*: BRADLEY BISHOP / Ph: (575) 393-5905

Date: 05/16/2024

Title: Regulatory

Approved by *(Signature)*: (Electronic Submission)

Name *(Printed/Typed)*: CODY LAYTON / Ph: (575) 234-5959

Date: 10/18/2024

Title: Assistant Field Manager Lands & Minerals

Office: Carlsbad Field Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 10/18/2024

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
	5695	BILBREY BASIN; BONE SPRING

Property Code	Property Name	Well Number
38525	LOBO 33/28 FED COM	408H

OGRID No.	Operator Name	Ground Level Elevation
14744	MEWBOURNE OIL COMPANY	3799

Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal | Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
O	33	21S	32E		150 FSL	1720 FEL	32.4283585	-103.6767552	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	28	21S	32E		100 FNL	500 FEL	32.4567378	-103.6727985	EDDY

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
320	DEFINING			

Order Numbers. | Well setbacks are under Common Ownership: ☐Yes ☐No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	33	21	32		10 FSL	500 FEL	32.4279891	-103.6728010	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	33	21	32		100 FSL	500 FEL	32.4282364	-103.6728009	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	28	21	32		100 FNL	500 FEL	32.4494388	-103.6804465	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3799

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Ryan McDaniel — Signature — 10/21/24 — Date

RYAN MCDANIEL — Printed Name

RYANMCDANIEL@MEWBOURNE.COM — Email Address

SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Signature and Seal of Professional Surveyor

Certificate Number

Date of Survey

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

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
	5695	BILBREY BASIN; BONE SPRING

4 Property Code	5 Property Name	6 Well Number
	LOBO 33/28 FED COM	408H

7 OGRID NO.	8 Operator Name	9 Elevation
14744	MEWBOURNE OIL COMPANY	3799'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
0	33	21S	32E		150	SOUTH	1720	EAST	LEA

11 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	East/West line	County
A	28	21S	32E		100	NORTH	500	EAST	LEA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			

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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GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)
N: 520190.4 – E: 743918.9
LAT: 32.4283585° N
LONG: 103.6767552° W

KICK OFF POINT (KOP)
500' FEL & 10' FSL (SEC.33)
N: 520063.5 – E: 745139.8
LAT: 32.4279891° N
LONG: 103.6728010° W

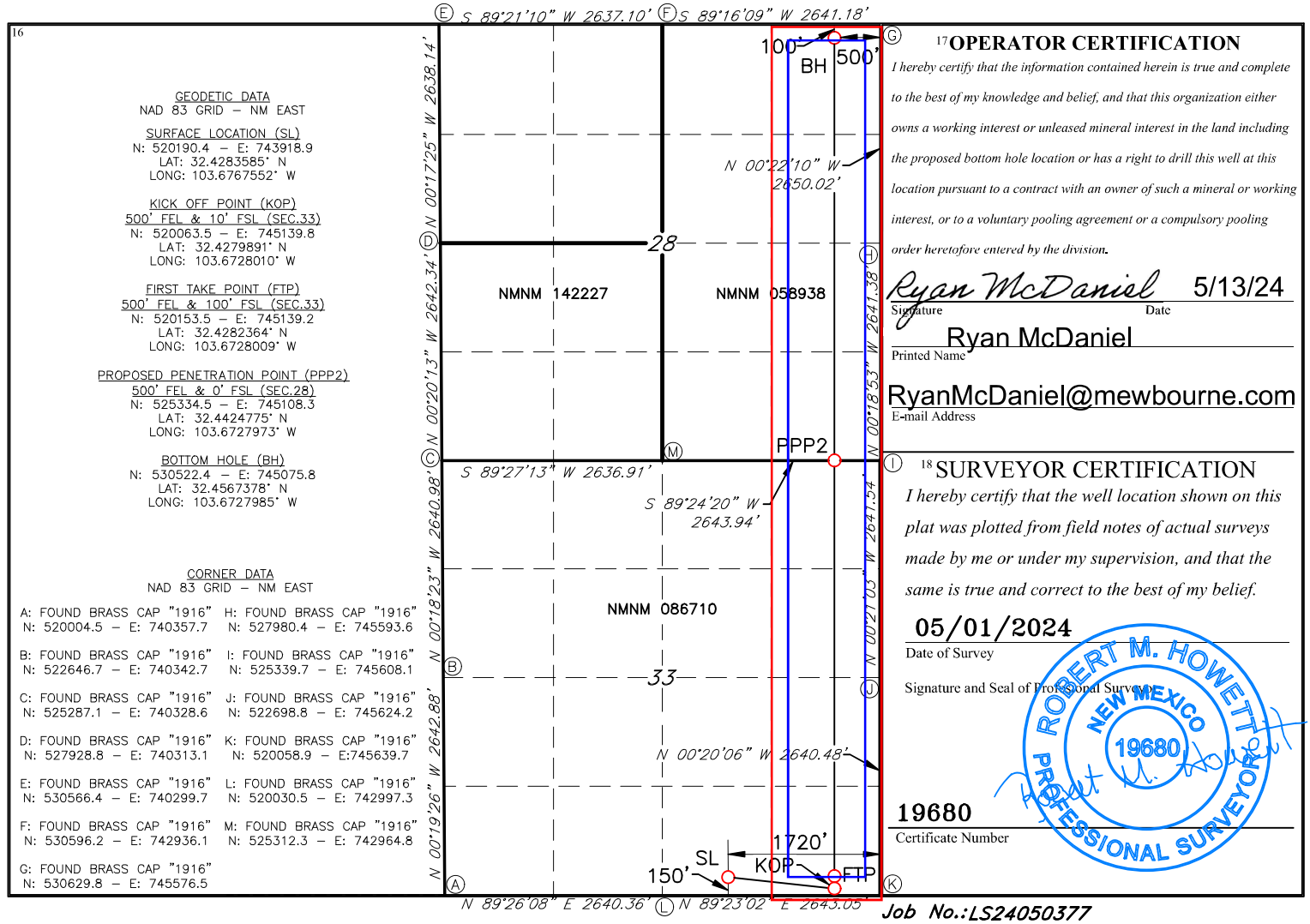
FIRST TAKE POINT (FTP)
500' FEL & 100' FSL (SEC.33)
N: 520153.5 – E: 745139.2
LAT: 32.4282364° N
LONG: 103.6728009° W

PROPOSED PENETRATION POINT (PPP2)
500' FEL & 0' FSL (SEC.28)
N: 525334.5 – E: 745108.3
LAT: 32.4424775° N
LONG: 103.6727973° W

BOTTOM HOLE (BH)
N: 530522.4 – E: 745075.8
LAT: 32.4567378° N
LONG: 103.6727985° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1916" N: 520004.5 – E: 740357.7
B: FOUND BRASS CAP "1916" N: 522646.7 – E: 740342.7
C: FOUND BRASS CAP "1916" N: 525287.1 – E: 740328.6
D: FOUND BRASS CAP "1916" N: 527928.8 – E: 740313.1
E: FOUND BRASS CAP "1916" N: 530566.4 – E: 740299.7
F: FOUND BRASS CAP "1916" N: 530596.2 – E: 742936.1
G: FOUND BRASS CAP "1916" N: 530629.8 – E: 745576.5
H: FOUND BRASS CAP "1916" N: 527980.4 – E: 745593.6
I: FOUND BRASS CAP "1916" N: 525339.7 – E: 745608.1
J: FOUND BRASS CAP "1916" N: 522698.8 – E: 745624.2
K: FOUND BRASS CAP "1916" N: 520058.9 – E:745639.7
L: FOUND BRASS CAP "1916" N: 520030.5 – E: 742997.3
M: FOUND BRASS CAP "1916" N: 525312.3 – E: 742964.8



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Ryan McDaniel 5/13/24
Signature Date

Ryan McDaniel
Printed Name

RyanMcDaniel@mewbourne.com
E-mail Address

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

05/01/2024
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT M. HOWETT NEW MEXICO 19680 PROFESSIONAL SURVEYOR

19680
Certificate Number

Job No.:LS24050377

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Mewbourne Oil Co. **OGRID:** 14744 **Date:** 5/2/24

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
LOBO 33/28 FED COM 408H		O 33 21S 32E	150' FSL x 1720' FEL	1500	3000	3000
				Y1: 400, Y2: 300, Y3: 200	Y1: 1200, Y2: 800, Y3: 500	Y1: 1500, Y2: 1000, Y3: 500

IV. Central Delivery Point Name: LOBO 33/28 FED COM 408H [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
LOBO 33/28 FED COM 408H		7/2/22	8/2/22	9/2/22	9/17/22	9/17/22

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

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

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

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

Page 8

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

Signature:	Bradley Bishop
Printed Name:	BRADLEY BISHOP
Title:	REGULATORY MANAGER
E-mail Address:	BBISHOP@MEWBOURNE.COM
Date:	5/2/24
Phone:	575-393-5905

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

Mewbourne Oil Company

Natural Gas Management Plan – Attachment

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

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

A. MOC will maximize the recovery of natural gas by minimizing the waste, as defined by 19.15.2 NMAC, of natural gas through venting and flaring. MOC will ensure that well(s) will be connected to a natural gas gathering system with sufficient capacity to transport natural gas. If there is no adequate takeaway for the gas, well(s) will be shut in until the natural gas gathering system is available.

B. All drilling operations will be equipped with a rig flare located at least 100 ft from the nearest surface hole. Rig flare will be utilized to combust any natural gas that is brought to surface during normal drilling operations. In the case of emergency venting or flaring the volumes will be estimated and reported appropriately.

C. During completion operations any natural gas brought to surface will be flared. Immediately following the finish of completion operations, all well flow will be directed to permanent separation equipment. Produced natural gas from separation equipment will be sent to sales. It is not anticipated that gas will not meet pipeline standards. However, if natural gas does not meet gathering pipeline quality specifications, MOC will flare the natural gas for 60 days or until the natural gas meets the pipeline quality specifications, whichever is sooner. MOC will ensure that the flare is sized properly and is equipped with automatic igniter or continuous pilot. The gas sample will analyzed twice per week and the gas will be routed into a gathering system as soon as pipeline specifications are met.

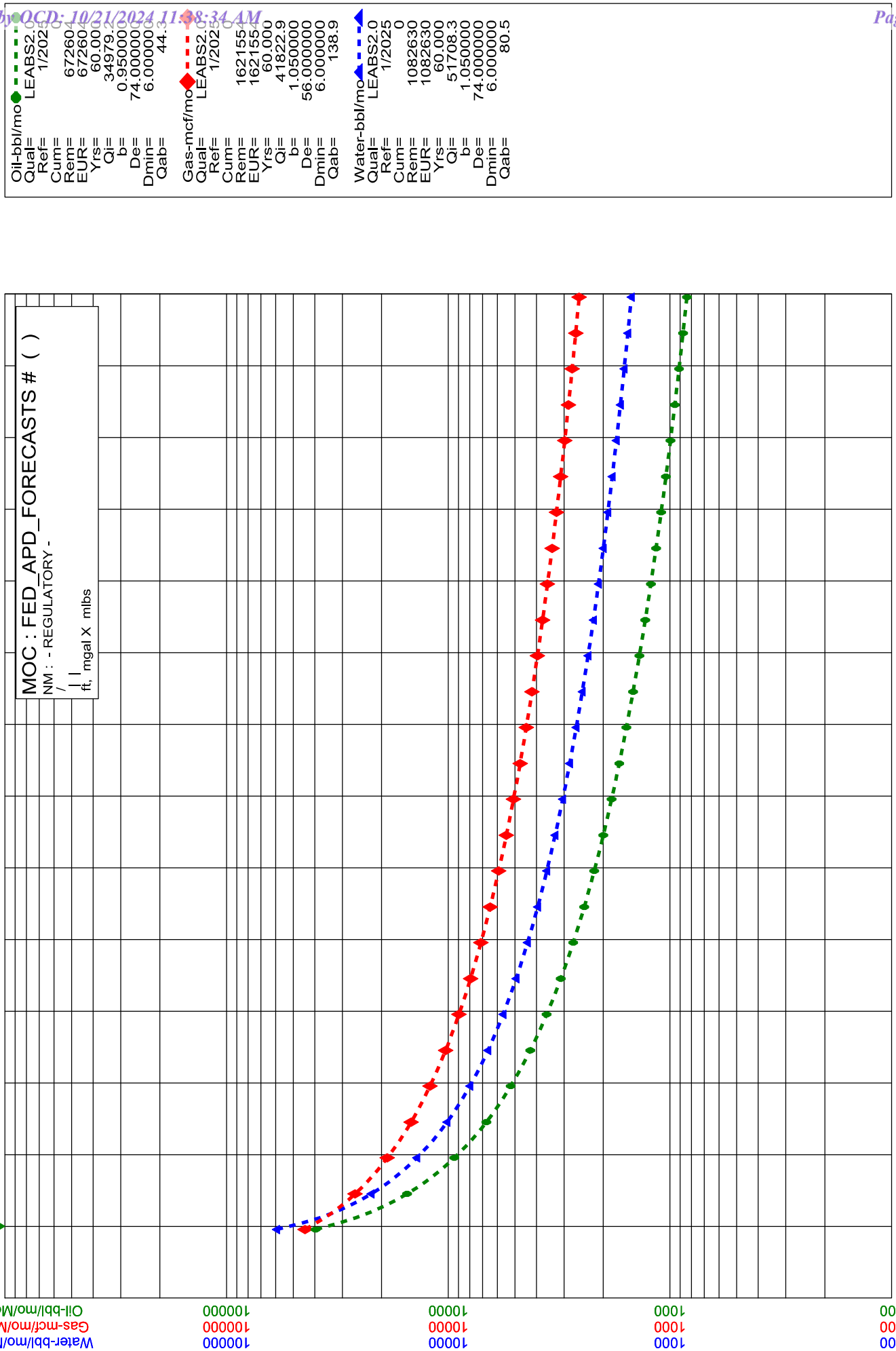
D. Natural gas will not be flared with the exceptions and provisions listed in the 19.15.27.8 D.(1) through (4). If there is no adequate takeaway for the separator gas, well(s) will be shut in until the natural gas gathering system is available with exception of emergency or malfunction situations. Venting and/or flaring volumes will be estimated and reported appropriately.

E. MOC will comply with the performance standards requirements and provisions listed in 19.15.27.8 E.(1) through (8). All equipment will be designed and sized to handle maximum anticipated pressures and throughputs in order to minimize the waste. Production storage tanks constructed after May 25, 2021 will be equipped with automatic gauging system. Flares constructed after May 25, 2021 will be equipped with automatic igniter or continuous pilot. Flares will be located at least 100' from the well and storage tanks unless otherwise approved by the division. MOC will conduct AVO inspections as described in 19.15.27.8 E (5) (a) with frequencies specified in 19.15.27.8 E (5) (b) and (c). All emergencies will be resolved as quickly and safely as feasible to minimize waste.

F. The volume of natural gas that is vented or flared as the result of malfunction or emergency during drilling and completions operations will be estimated. The volume of natural gas that is vented, flared or beneficially used during production operations, will be measured or estimated. MOC will install equipment to measure

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

VIII. For maintenance activities involving production equipment and compression, venting will be limited to the depressurization of the subject equipment to ensure safe working conditions. For maintenance of production and compression equipment the associated producing wells will be shut in to eliminate venting. For maintenance of VRUs all gas normally routed to the VRU will be routed to flare to eliminate venting.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Ref= 1/2025
Cum= 67260
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Yrs= 34979.
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De= 6.000000
Dmin= 44.
Qab=
Gas-mcf/mo
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De= 6.000000
Dmin= 138.9
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Water-bbl/mo
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De= 74.000000
Dmin= 6.000000
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MOC : FED_APD_FORECASTS # ( )
NM : - REGULATORY -
ft, mgal X mlbs
Oil-bbl/mo/Mo
Gas-mcf/mo/Mo
Water-bbl/mo/Mo
100000
10000
1000
100
25
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AFMSS

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

Drilling Plan Data Report
10/21/2024

APD ID: 10400098494
Submission Date: 05/16/2024

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM
Well Number: 408H

Well Type: CONVENTIONAL GAS WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
14338892	UNKNOWN	3799	28	28	OTHER : Topsoil	NONE	N
14338906	RUSTLER	3029	770	770	ANHYDRITE, DOLOMITE	USEABLE WATER	N
14338893	TOP SALT	2704	1095	1095	SALT	NONE	N
14338895	BASE OF SALT	-571	4370	4370	SALT	NONE	N
14338896	LAMAR	-1036	4835	4835	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
14338897	BELL CANYON	-1151	4950	4950	SANDSTONE	NATURAL GAS, OIL	N
14338899	MANZANITA	-2196	5995	5995	LIMESTONE	NATURAL GAS, OIL	N
14338901	BRUSHY CANYON	-4711	8510	8510	SANDSTONE	NATURAL GAS, OIL	N
14338902	BONE SPRING	-4996	8795	8795	LIMESTONE	NATURAL GAS, OIL	N
14338903	BONE SPRING 1ST	-6016	9815	9815	SANDSTONE	NATURAL GAS, OIL	Y
14338904	BONE SPRING 2ND	-6676	10475	10475	SANDSTONE	NATURAL GAS, OIL	N
14338905	BONE SPRING 3RD	-7176	10975	10975	SANDSTONE	NATURAL GAS, OIL	Y
14338891	WOLFCAMP	-8101	11900	11900	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N

Section 2 - Blowout Prevention

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

Pressure Rating (PSI): 5M **Rating Depth:** 20244

Equipment: Annular, Pipe Rams, Blind Rams, Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.
Requesting Variance? YES

Variance request: A variance is requested for the use of a variable choke line from the BOP to the choke manifold. See attached for hydrostatic test chart. Anchors are not required by manufacturer. Variance is requested to use a multi bowl wellhead. Variance is requested to perform break testing according to attached procedure. If a breaktesting variance is approved & incorporated, API Standard 53 will be incorporated and testing annular BOP to 70% of RWP or 100% of MASP, whichever is greater, will be performed.
Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Choke Diagram Attachment:

5M_BOPE_Choke_Diagram_20240514084530.pdf

Flex_Line_Specs_API_16C_20241007134111.pdf

BOP Diagram Attachment:

Mewbourne_Break_Testing_Variance_20240514084802.pdf

5M_BOPE_Schematic_20240514084824.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	790	0	790	3799	3009	790	H-40	48	ST&C	2.18	4.9	DRY	8.49	DRY	14.27
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4307	0	4307	-8529	-508	4307	J-55	40	LT&C	1.13	1.73	DRY	2.8	DRY	3.39
3	INTERMEDIATE	12.25	9.625	NEW	API	N	4307	4650	4307	4650	-508	-851	343	L-80	40	LT&C	1.25	2.33	DRY	53.72	DRY	66.76
4	PRODUCTION	8.75	7.0	NEW	API	N	0	9457	0	9294	-8529	-5495	9457	P-110	26	LT&C	1.36	2.17	DRY	2.82	DRY	2.85
5	LINER	6.125	4.5	NEW	API	N	9257	20244	9101	9876	-5302	-6077	10987	P-110	13.5	LT&C	2.08	2.42	BUOY	2.28	BUOY	2.85

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lobo_33_28_Fed_Com_408H_CsgAssumptions_20241007134223.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lobo_33_28_Fed_Com_408H_CsgAssumptions_20241007134214.pdf

Casing ID: 3 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lobo_33_28_Fed_Com_408H_CsgAssumptions_20241007134314.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

Casing Attachments

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lobo_33_28_Fed_Com_408H_CsgAssumptions_20241007134255.pdf

Casing ID: 5 **String** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lobo_33_28_Fed_Com_408H_CsgAssumptions_20241007134303.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		0	0	0	0	0	0	0	NA	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent
INTERMEDIATE	Tail		0	0	0	0	0	0	0		none
SURFACE	Lead		0	601	400	2.12	12.5	850	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		601	790	200	1.34	14.8	268	100	Class C	Retarder

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead	2000	0	1662	310	2.12	12.5	660	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1662	2000	100	1.34	14.8	134	25	Class C	Retarder
INTERMEDIATE	Lead	2000	2000	3979	370	2.12	12.5	790	25	Class C	SALT GEL EXTENDER LCM
INTERMEDIATE	Tail		3979	4650	200	1.34	14.8	268	25	CLASS C	REATARDER
PRODUCTION	Lead	2000	5200	6327	80	2.12	12.5	170	0	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		6327	9457	400	1.18	15.6	472	0	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		9257	20244	700	1.85	13.5	1300	25	Class H	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: Lost Circulation Material, Sweeps, Mud Scavengers in Surface Hole

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	790	SPUD MUD	8.4	8.6							
790	4650	SALT SATURATED	9.5	10.2							
4650	9457	WATER-BASED MUD	8.6	9.5							
9457	20244	OIL-BASED MUD	10	10							

Section 6 - Test, Logging, Coring

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

No logs are planned based on well control or offset log information. Offset Well: Lobo 33/28 Fed Com #706H

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

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

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5136 **Anticipated Surface Pressure:** 2965

Anticipated Bottom Hole Temperature(F): 140

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

H2S_Plan_20240514091303.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Lobo_33_28_Fed_Com_408H_MOC_Dir_Plan_20240514090703.pdf
Lobo_33_28_Fed_Com_408H_MOC_Dir_Plot_20240514090706.pdf

Other proposed operations facets description:

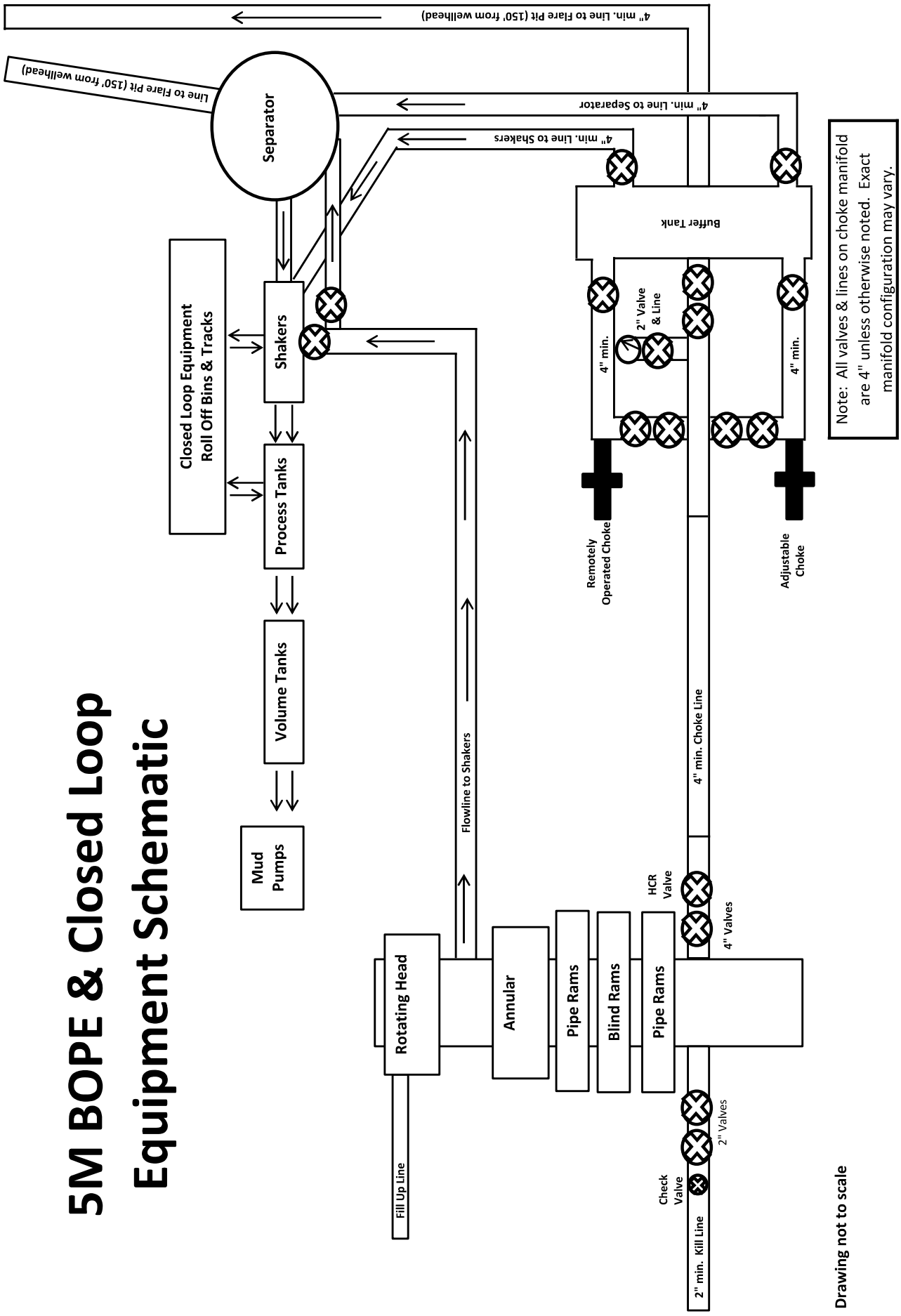
Other proposed operations facets attachment:

Lobo_33_28_Fed_Com_408H_AddInfo_20240514090859.pdf
Lobo_33_28_Fed_Com_408H_Drlg_Program_20241007134335.pdf

Other Variance attachment:

Lobo_33_28_Fed_Com_408H_R_111Q_Variance_20240514090907.pdf
Mewbourne_Offline_Cementing_Variance_20240514090941.pdf
Lobo_33_28_Fed_Com_408H_NGMP_20240904084611.pdf

5M BOPE & Closed Loop Equipment Schematic



LETONE

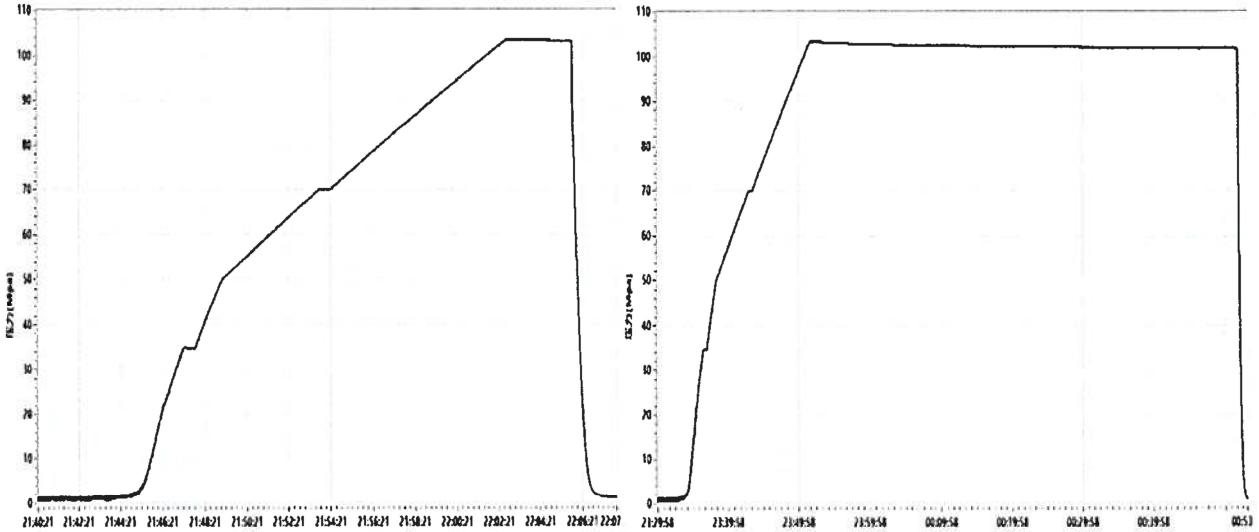
LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

HYDROSTATIC TESTING REPORT

LTYY/QR-5.7.1-28 №: 230826015

Product Name	Choke And Kill Hose	Standard	API Spec 16C 3rd edition
Product Specification	3″×10000psi×60ft（18.29m）	Serial Number	7660144
Inspection Equipment	MTU-BS-1600-3200-E	Test medium	Water
Inspection Department	Q.C. Department	Inspection Date	2023.08.26
Rate of length change			
Standard requirements	At working pressure ,the rate of length change should not more than ±2%		
Testing result	10000psi (69.0MPa) ,Rate of length change 0.7%		
Hydrostatic testing			
Standard requirements	At 1.5 times working pressure, the initial pressure-holding period of not less than three minutes, the second pressure-holding period of not less than one hour, no leaks.		
Testing result	15000psi (103.5MPa), 3 min for the first time, 60 min for the second time, no leakage		

Graph of pressure testing:



Conclusion	The inspected items meet standard requirements of API Spec 16C 3rd edition				
Approver	Jiaolong Chen	Auditor	Huiqing Dong	Inspector	Zhansheng Wang

LETONE

LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

CERTIFICATE OF QUALITY

LTYY/QR-5.7.1-19B №: LT2023-126-002

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

Inspection Items	Inspection results
Appearance Checking	In accordance with API Spec 16C 3rd edition
Size and Lengths	In accordance with API Spec 16C 3rd edition
Dimensions and Tolerances	In accordance with API Spec 16C 3rd edition
End Connections: 4-1/16″×10000psi Integral flange for sour gas service	In accordance with API Spec 6A 21st edition
End Connections: 4-1/16″×10000psi Integral flange for sour gas service	In accordance with API Spec 17D 3rd edition
Hydrostatic Testing	In accordance with API Spec 16C 3rd edition
product Marking	In accordance with API Spec 16C 3rd edition
Inspection conclusion	The inspected items meet standard requirements of API Spec 16C 3rd edition
Remarks	

Approver	Jiaolong Chen	Auditor	Hinging Dong	Inspector	Zhansheng Wang

LETONE

LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

CERTIFICATE OF CONFORMANCE

№:LT230826016

Product Name: Choke And Kill Hose

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

Serial Number: 7660143~7660144

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

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

QC Manager: Jiaolong Chen Date:Aug 26, 2023

MEWBOURNE OIL COMPANY

Mewbourne Oil Co.

BOP Break Testing Variance

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

Procedures

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

MEWBOURNE OIL COMPANY

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.

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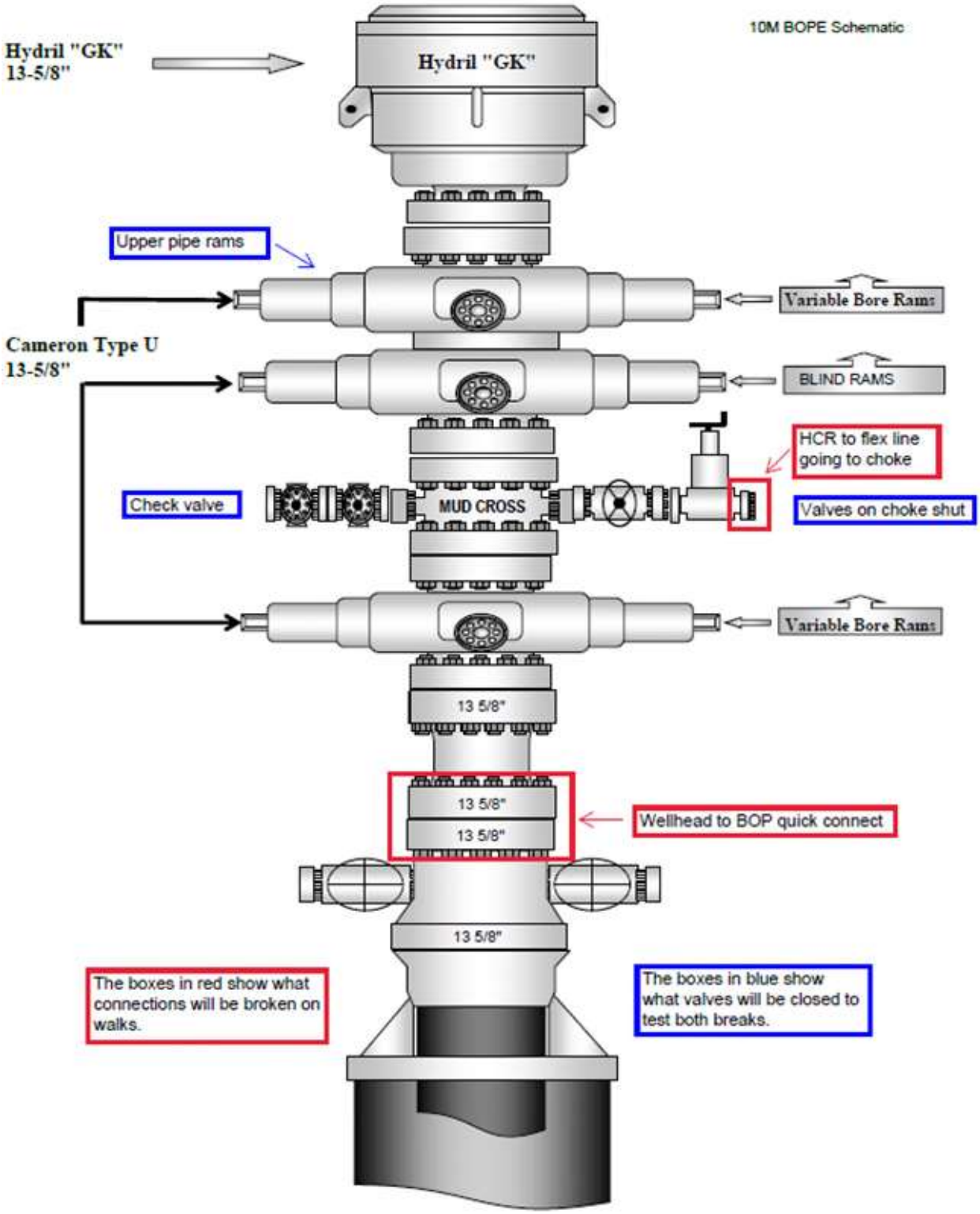

Figure 1. BOP diagram

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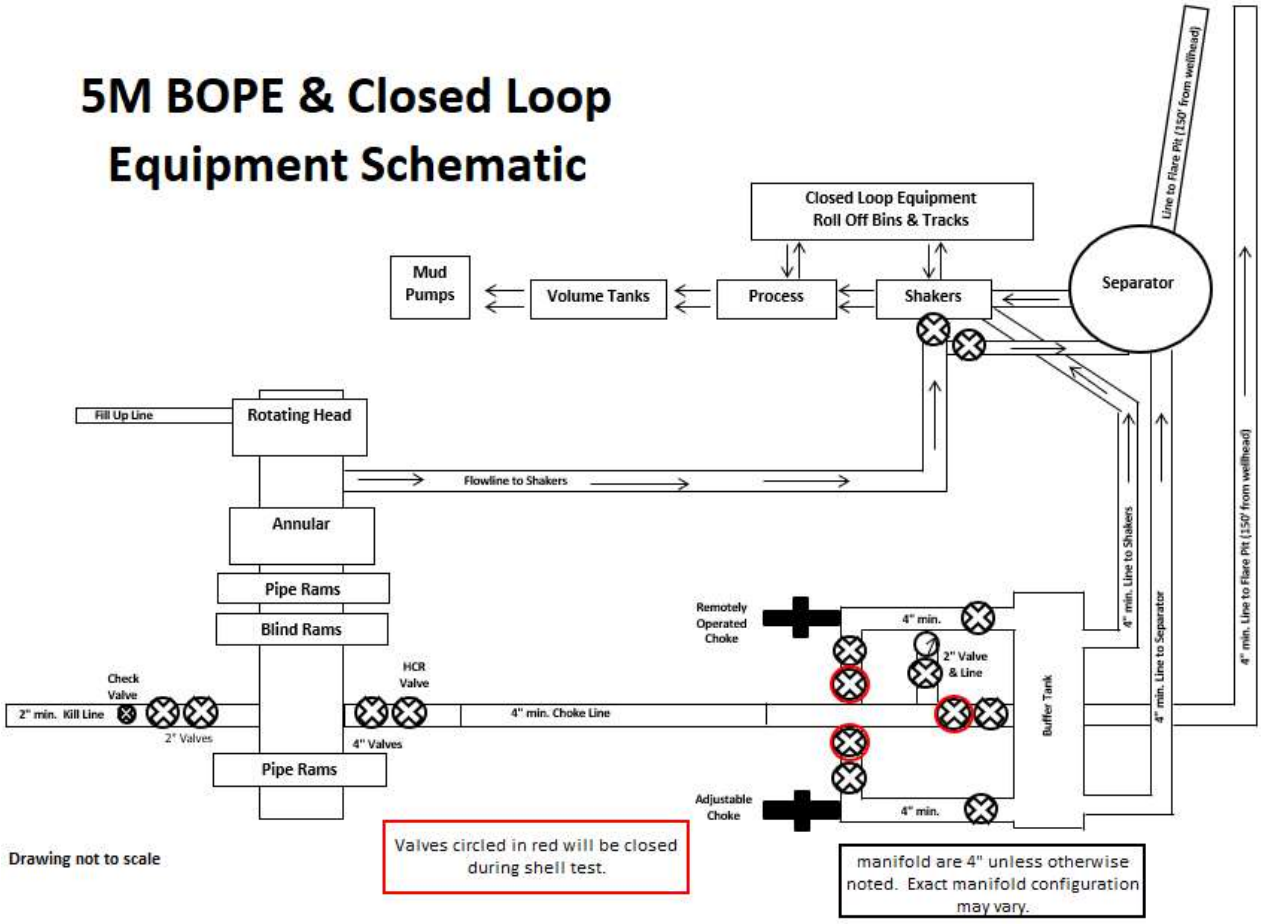

Figure 2. BOPE diagram

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Figure 3. BOP handling system

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Figure 4. BOP handling system

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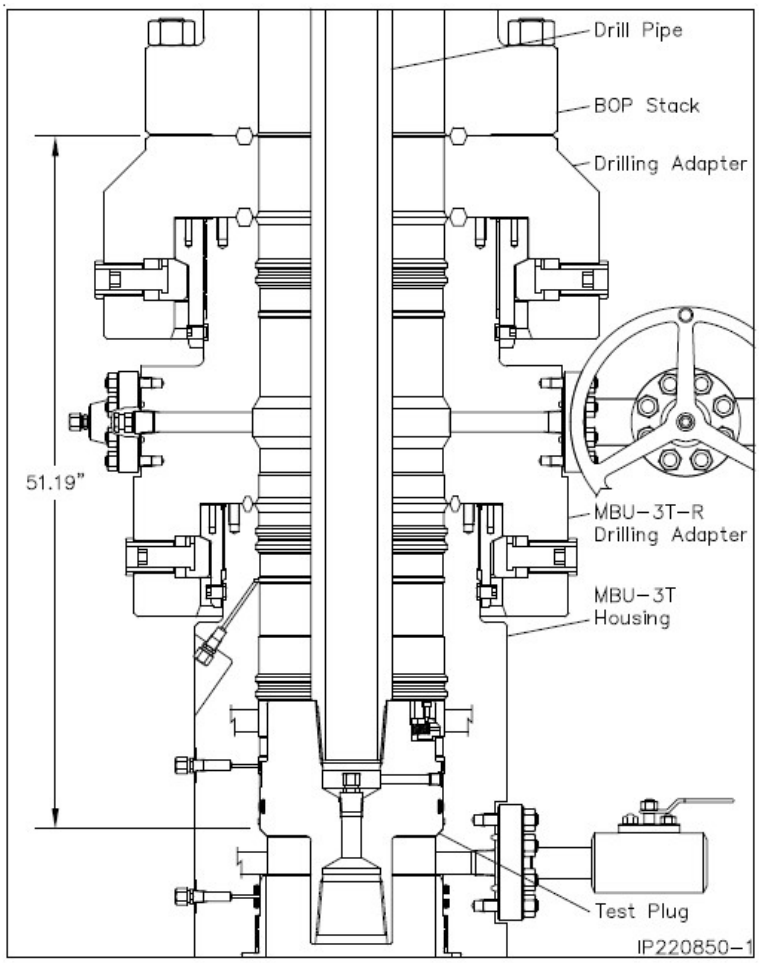


Figure 5. Cactus 5M wellhead with BOP quick connect

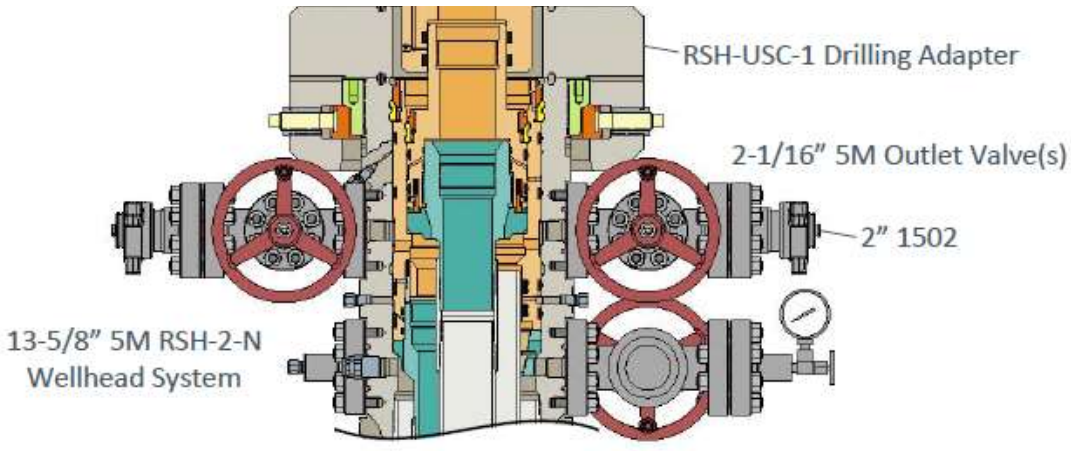
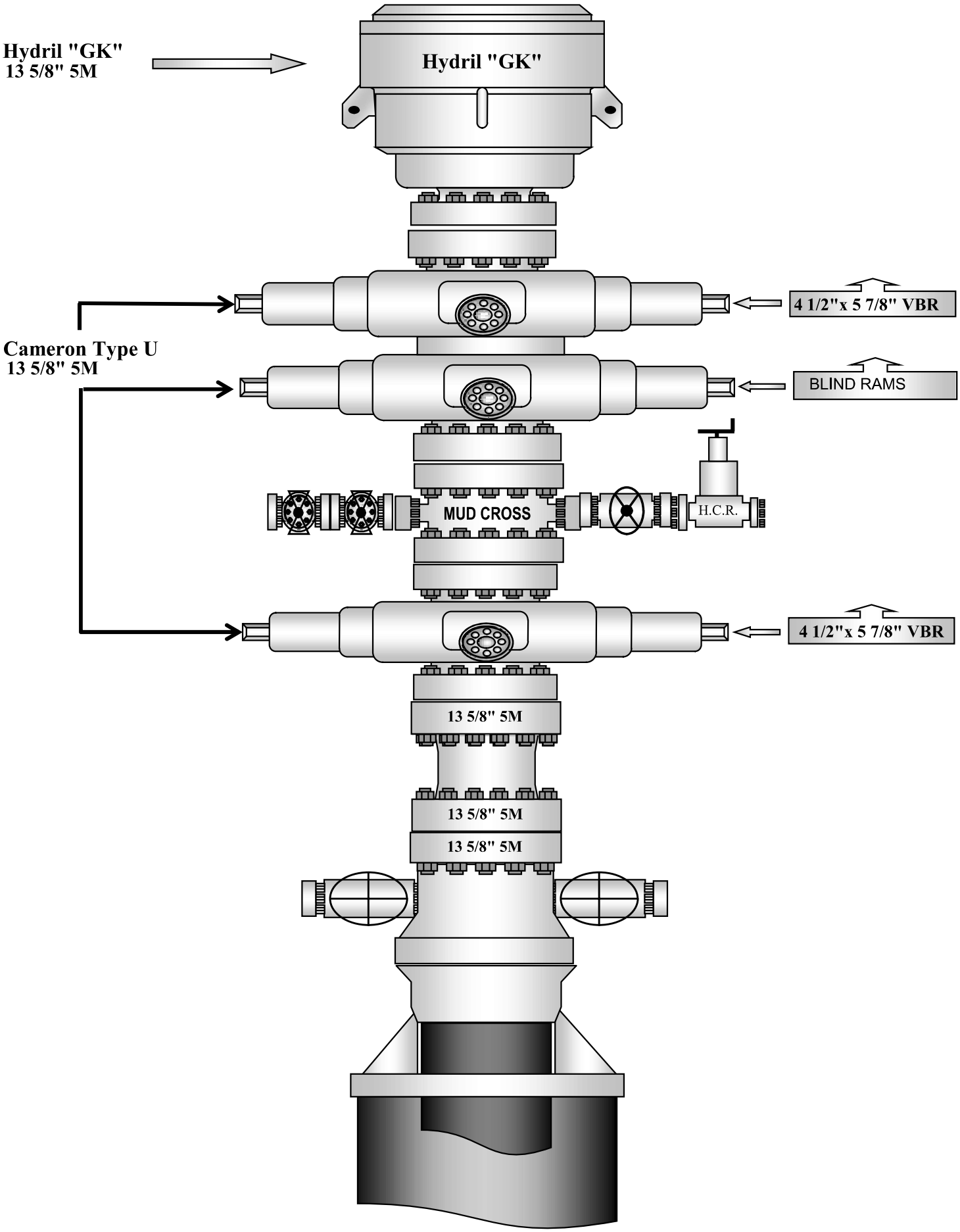


Figure 6. Vault 5M wellhead with BOP quick connect

5M BOPE Schematic



Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' 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'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	9457'	9294'	7" 26# P110 LTC	1.36	2.17	2.82	3.38
Liner	6.125"	9257'	9101'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.28	2.85

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	80	12.5	2.12	5200' - 6327'	170	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6327' - 9457'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	9257' - 20244'	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 - 10.2	Brine
4650' - 9457'	8.6 - 9.5	Cut-Brine
9457' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' FEL (Sec 28)

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	10357'	9876'	7" 26# P110 LTC	1.28	2.04	2.57	3.08
Liner	6.125"	9457'	9294'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.32	2.90

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	150	12.5	2.12	5200' - 7284'	320	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	7284' - 10357'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	680	13.5	1.85	9457' - 20244'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 790'	8.4 - 8.6	Fresh Water
790' - 4650'	9.5 - 10.2	Brine
4650' - 10357'	8.6 - 9.5	Cut-Brine
10357' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' 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'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	9457'	9294'	7" 26# P110 LTC	1.36	2.17	2.82	3.38
Liner	6.125"	9257'	9101'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.28	2.85

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	80	12.5	2.12	5200' - 6327'	170	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6327' - 9457'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	9257' - 20244'	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 - 10.2	Brine
4650' - 9457'	8.6 - 9.5	Cut-Brine
9457' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' FEL (Sec 28)

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	10357'	9876'	7" 26# P110 LTC	1.28	2.04	2.57	3.08
Liner	6.125"	9457'	9294'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.32	2.90

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	150	12.5	2.12	5200' - 7284'	320	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	7284' - 10357'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	680	13.5	1.85	9457' - 20244'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 790'	8.4 - 8.6	Fresh Water
790' - 4650'	9.5 - 10.2	Brine
4650' - 10357'	8.6 - 9.5	Cut-Brine
10357' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' 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'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	9457'	9294'	7" 26# P110 LTC	1.36	2.17	2.82	3.38
Liner	6.125"	9257'	9101'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.28	2.85

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	80	12.5	2.12	5200' - 6327'	170	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6327' - 9457'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	9257' - 20244'	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 - 10.2	Brine
4650' - 9457'	8.6 - 9.5	Cut-Brine
9457' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' FEL (Sec 28)

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	10357'	9876'	7" 26# P110 LTC	1.28	2.04	2.57	3.08
Liner	6.125"	9457'	9294'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.32	2.90

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	150	12.5	2.12	5200' - 7284'	320	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	7284' - 10357'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	680	13.5	1.85	9457' - 20244'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Design B - Mud Program

Depth	Mud Wt	Mud Type
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790' - 4650'	9.5 - 10.2	Brine
4650' - 10357'	8.6 - 9.5	Cut-Brine
10357' - 20244'	10.0 - 10.	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
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Seven Rivers			Basal Brushy Canyon	8510'	Oil/Natural Gas
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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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' 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
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Int	12.25"	0'	0'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	9457'	9294'	7" 26# P110 LTC	1.36	2.17	2.82	3.38
Liner	6.125"	9257'	9101'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.28	2.85

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	80	12.5	2.12	5200' - 6327'	170	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6327' - 9457'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	9257' - 20244'	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 - 10.2	Brine
4650' - 9457'	8.6 - 9.5	Cut-Brine
9457' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' FEL (Sec 28)

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	10357'	9876'	7" 26# P110 LTC	1.28	2.04	2.57	3.08
Liner	6.125"	9457'	9294'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.32	2.90

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	150	12.5	2.12	5200' - 7284'	320	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	7284' - 10357'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	680	13.5	1.85	9457' - 20244'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 790'	8.4 - 8.6	Fresh Water
790' - 4650'	9.5 - 10.2	Brine
4650' - 10357'	8.6 - 9.5	Cut-Brine
10357' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Lobo 33/28 Fed Com 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' 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'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	9457'	9294'	7" 26# P110 LTC	1.36	2.17	2.82	3.38
Liner	6.125"	9257'	9101'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.28	2.85

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	80	12.5	2.12	5200' - 6327'	170	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	6327' - 9457'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	9257' - 20244'	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 - 10.2	Brine
4650' - 9457'	8.6 - 9.5	Cut-Brine
9457' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd 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?	
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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 408H
Sec 33, T21S, R32E
SHL: 150' FSL 1720' FEL (Sec 33)
BHL: 100' FNL 500' FEL (Sec 28)

Casing Program Design B						BLM Minimum Safety Factors	1.125	1.0	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet
String	Hole Size	Top MD	Top TVD	Bot MD	Bot TVD	Csg. Size	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
Surface	17.5"	0'	0'	790'	790'	13.375" 48# H40 STC	2.18	4.90	8.49	14.27
Int	12.25"	0'	0'	4307'	4307'	9.625" 40# J55 LTC	1.13	1.73	2.80	3.39
Int	12.25"	4307'	4307'	4650'	4650'	9.625" 40# L80 LTC	1.25	2.33	53.72	66.76
Production	8.75"	0'	0'	10357'	9876'	7" 26# P110 LTC	1.28	2.04	2.57	3.08
Liner	6.125"	9457'	9294'	20244'	9876'	4.5" 13.5# P110 LTC	2.08	2.42	2.32	2.90

Design B - Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	400	12.5	2.12	0' - 601'	850	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	601' - 790'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	370	12.5	2.12	2000' - 3979'	790	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	3979' - 4650'	268		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
	TAIL	100	14.8	1.34	1662' - 2000'	134		Class C: Retarder
7 in	LEAD	150	12.5	2.12	5200' - 7284'	320	0%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	7284' - 10357'	472		Class H: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	680	13.5	1.85	9457' - 20244'	1260	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 790'	8.4 - 8.6	Fresh Water
790' - 4650'	9.5 - 10.2	Brine
4650' - 10357'	8.6 - 9.5	Cut-Brine
10357' - 20244'	10.0 - 10.	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.	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 3rd 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 2nd string set 100' to 600' below the base of salt?	Y
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	Y
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company

Lea County, New Mexico NAD 83
Lobo 33/28 Fed Com #408H
Sec 33, T21S, R32E
SHL: 150' FSL & 1720' FEL (Sec 33)
BHL: 100' FNL & 500' FEL (Sec 28)

Plan: Design #1

Standard Planning Report

10 May, 2024

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Lobo 33/28 Fed Com #408H
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 #408H	**North Reference:**	Grid
Well:	Sec 33, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FNL & 500' FEL (Sec 28)		
Design:	Design #1		

Project Lea County, New Mexico NAD 83

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Lobo 33/28 Fed Com #408H

Site Position:		**Northing:**	520,190.40 usft	**Latitude:**	32.4283585
From:	Map	**Easting:**	743,918.90 usft	**Longitude:**	-103.6767550
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well Sec 33, T21S, R32E

Well Position	**+N/-S**	0.0 usft	**Northing:**	520,190.40 usft	**Latitude:**	32.4283585
	+E/-W	0.0 usft	**Easting:**	743,918.90 usft	**Longitude:**	-103.6767550
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	3,827.0 usft	**Ground Level:**	3,799.0 usft
Grid Convergence:		0.35 °				

Wellbore BHL: 100' FNL & 500' FEL (Sec 28)

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/31/2014	7.21	60.27	48,370.83575189

Design Design #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	6.40

Plan Survey Tool Program **Date** 5/10/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,173.2	Design #1 (BHL: 100' FNL & 500'		

Plan Sections

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

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Lobo 33/28 Fed Com #408H
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 #408H	**North Reference:**	Grid
Well:	Sec 33, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FNL & 500' 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
SHL: 150' FSL & 1720' FEL (Sec 33)									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	2.00	95.93	4,100.0	-0.2	1.7	0.0	2.00	2.00	0.00
4,200.0	4.00	95.93	4,199.8	-0.7	6.9	0.1	2.00	2.00	0.00
4,300.0	6.00	95.93	4,299.5	-1.6	15.6	0.1	2.00	2.00	0.00
4,400.0	8.00	95.93	4,398.7	-2.9	27.7	0.2	2.00	2.00	0.00
4,500.0	10.00	95.93	4,497.5	-4.5	43.3	0.4	2.00	2.00	0.00
4,600.0	12.00	95.93	4,595.6	-6.5	62.3	0.5	2.00	2.00	0.00
4,700.0	14.00	95.93	4,693.1	-8.8	84.6	0.7	2.00	2.00	0.00
4,756.1	15.12	95.93	4,747.3	-10.3	98.7	0.8	2.00	2.00	0.00
4,800.0	15.12	95.93	4,789.7	-11.4	110.1	0.9	0.00	0.00	0.00
4,900.0	15.12	95.93	4,886.3	-14.1	136.0	1.1	0.00	0.00	0.00
5,000.0	15.12	95.93	4,982.8	-16.8	162.0	1.3	0.00	0.00	0.00
5,100.0	15.12	95.93	5,079.3	-19.5	187.9	1.5	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Lobo 33/28 Fed Com #408H
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 #408H	**North Reference:**	Grid
Well:	Sec 33, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FNL & 500' 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)
5,200.0	15.12	95.93	5,175.9	-22.2	213.8	1.7	0.00	0.00	0.00
5,300.0	15.12	95.93	5,272.4	-24.9	239.8	1.9	0.00	0.00	0.00
5,400.0	15.12	95.93	5,369.0	-27.6	265.7	2.2	0.00	0.00	0.00
5,500.0	15.12	95.93	5,465.5	-30.3	291.7	2.4	0.00	0.00	0.00
5,600.0	15.12	95.93	5,562.0	-33.0	317.6	2.6	0.00	0.00	0.00
5,700.0	15.12	95.93	5,658.6	-35.7	343.6	2.8	0.00	0.00	0.00
5,800.0	15.12	95.93	5,755.1	-38.4	369.5	3.0	0.00	0.00	0.00
5,900.0	15.12	95.93	5,851.6	-41.1	395.5	3.2	0.00	0.00	0.00
6,000.0	15.12	95.93	5,948.2	-43.8	421.4	3.4	0.00	0.00	0.00
6,100.0	15.12	95.93	6,044.7	-46.5	447.4	3.6	0.00	0.00	0.00
6,200.0	15.12	95.93	6,141.3	-49.2	473.3	3.8	0.00	0.00	0.00
6,300.0	15.12	95.93	6,237.8	-51.9	499.3	4.1	0.00	0.00	0.00
6,400.0	15.12	95.93	6,334.3	-54.6	525.2	4.3	0.00	0.00	0.00
6,500.0	15.12	95.93	6,430.9	-57.3	551.2	4.5	0.00	0.00	0.00
6,600.0	15.12	95.93	6,527.4	-60.0	577.1	4.7	0.00	0.00	0.00
6,700.0	15.12	95.93	6,623.9	-62.7	603.0	4.9	0.00	0.00	0.00
6,800.0	15.12	95.93	6,720.5	-65.4	629.0	5.1	0.00	0.00	0.00
6,900.0	15.12	95.93	6,817.0	-68.1	654.9	5.3	0.00	0.00	0.00
7,000.0	15.12	95.93	6,913.6	-70.8	680.9	5.5	0.00	0.00	0.00
7,100.0	15.12	95.93	7,010.1	-73.5	706.8	5.7	0.00	0.00	0.00
7,200.0	15.12	95.93	7,106.6	-76.2	732.8	5.9	0.00	0.00	0.00
7,300.0	15.12	95.93	7,203.2	-78.9	758.7	6.2	0.00	0.00	0.00
7,400.0	15.12	95.93	7,299.7	-81.6	784.7	6.4	0.00	0.00	0.00
7,500.0	15.12	95.93	7,396.2	-84.3	810.6	6.6	0.00	0.00	0.00
7,600.0	15.12	95.93	7,492.8	-87.0	836.6	6.8	0.00	0.00	0.00
7,700.0	15.12	95.93	7,589.3	-89.6	862.5	7.0	0.00	0.00	0.00
7,800.0	15.12	95.93	7,685.9	-92.3	888.5	7.2	0.00	0.00	0.00
7,900.0	15.12	95.93	7,782.4	-95.0	914.4	7.4	0.00	0.00	0.00
8,000.0	15.12	95.93	7,878.9	-97.7	940.3	7.6	0.00	0.00	0.00
8,100.0	15.12	95.93	7,975.5	-100.4	966.3	7.8	0.00	0.00	0.00
8,200.0	15.12	95.93	8,072.0	-103.1	992.2	8.1	0.00	0.00	0.00
8,300.0	15.12	95.93	8,168.5	-105.8	1,018.2	8.3	0.00	0.00	0.00
8,400.0	15.12	95.93	8,265.1	-108.5	1,044.1	8.5	0.00	0.00	0.00
8,500.0	15.12	95.93	8,361.6	-111.2	1,070.1	8.7	0.00	0.00	0.00
8,600.0	15.12	95.93	8,458.2	-113.9	1,096.0	8.9	0.00	0.00	0.00
8,701.0	15.12	95.93	8,555.7	-116.6	1,122.2	9.1	0.00	0.00	0.00
8,800.0	13.14	95.93	8,651.7	-119.1	1,146.3	9.3	2.00	-2.00	0.00
8,900.0	11.14	95.93	8,749.4	-121.3	1,167.2	9.5	2.00	-2.00	0.00
9,000.0	9.14	95.93	8,847.9	-123.1	1,184.7	9.6	2.00	-2.00	0.00
9,100.0	7.14	95.93	8,946.8	-124.6	1,198.8	9.7	2.00	-2.00	0.00
9,200.0	5.14	95.93	9,046.3	-125.7	1,209.4	9.8	2.00	-2.00	0.00
9,300.0	3.14	95.93	9,146.0	-126.5	1,216.6	9.9	2.00	-2.00	0.00
9,400.0	1.14	95.93	9,245.9	-126.8	1,220.3	9.9	2.00	-2.00	0.00
9,457.1	0.00	0.00	9,303.0	-126.9	1,220.9	9.9	2.00	-2.00	0.00
KOP: 10' FSL & 500' FEL (Sec 33)									
9,500.0	4.29	359.66	9,345.9	-125.3	1,220.9	11.5	10.00	10.00	0.00
9,550.0	9.29	359.66	9,395.5	-119.4	1,220.9	17.4	10.00	10.00	0.00
9,600.0	14.29	359.66	9,444.4	-109.2	1,220.8	27.5	10.00	10.00	0.00
9,650.0	19.29	359.66	9,492.3	-94.7	1,220.7	41.9	10.00	10.00	0.00
9,700.0	24.29	359.66	9,538.7	-76.2	1,220.6	60.3	10.00	10.00	0.00
9,750.0	29.29	359.66	9,583.3	-53.6	1,220.5	82.7	10.00	10.00	0.00
9,782.6	32.55	359.66	9,611.3	-36.9	1,220.4	99.3	10.00	10.00	0.00
FTP: 100' FSL & 500' FEL (Sec 33)									
9,800.0	34.29	359.66	9,625.8	-27.3	1,220.3	108.8	10.00	10.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Lobo 33/28 Fed Com #408H
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 #408H	**North Reference:**	Grid
Well:	Sec 33, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FNL & 500' 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)
9,850.0	39.29	359.66	9,665.8	2.6	1,220.1	138.5	10.00	10.00	0.00
9,900.0	44.29	359.66	9,703.1	35.9	1,219.9	171.6	10.00	10.00	0.00
9,950.0	49.29	359.66	9,737.3	72.4	1,219.7	207.8	10.00	10.00	0.00
10,000.0	54.29	359.66	9,768.3	111.6	1,219.5	246.8	10.00	10.00	0.00
10,050.0	59.29	359.66	9,795.6	153.4	1,219.2	288.3	10.00	10.00	0.00
10,100.0	64.29	359.66	9,819.3	197.5	1,219.0	332.1	10.00	10.00	0.00
10,150.0	69.29	359.66	9,839.0	243.4	1,218.7	377.7	10.00	10.00	0.00
10,200.0	74.29	359.66	9,854.6	290.9	1,218.4	424.8	10.00	10.00	0.00
10,250.0	79.29	359.66	9,866.0	339.6	1,218.1	473.2	10.00	10.00	0.00
10,300.0	84.29	359.66	9,873.2	389.0	1,217.8	522.3	10.00	10.00	0.00
10,350.0	89.28	359.66	9,876.0	438.9	1,217.5	571.8	10.00	10.00	0.00
10,357.2	90.00	359.66	9,876.0	446.1	1,217.5	579.0	10.00	10.00	0.00
LP: 583' FSL & 500' FEL (Sec 33)									
10,358.6	90.14	359.66	9,876.0	447.5	1,217.5	580.4	10.00	10.00	0.00
10,400.0	90.14	359.66	9,875.9	488.9	1,217.2	621.5	0.00	0.00	0.00
10,500.0	90.14	359.66	9,875.6	588.9	1,216.6	720.8	0.00	0.00	0.00
10,600.0	90.14	359.66	9,875.4	688.9	1,216.0	820.1	0.00	0.00	0.00
10,700.0	90.14	359.66	9,875.1	788.9	1,215.4	919.4	0.00	0.00	0.00
10,800.0	90.14	359.66	9,874.9	888.9	1,214.8	1,018.7	0.00	0.00	0.00
10,900.0	90.14	359.66	9,874.6	988.9	1,214.2	1,118.0	0.00	0.00	0.00
11,000.0	90.14	359.66	9,874.4	1,088.9	1,213.6	1,217.4	0.00	0.00	0.00
11,100.0	90.14	359.66	9,874.1	1,188.9	1,213.0	1,316.7	0.00	0.00	0.00
11,200.0	90.14	359.66	9,873.9	1,288.9	1,212.4	1,416.0	0.00	0.00	0.00
11,300.0	90.14	359.66	9,873.6	1,388.9	1,211.8	1,515.3	0.00	0.00	0.00
11,400.0	90.14	359.66	9,873.4	1,488.9	1,211.2	1,614.6	0.00	0.00	0.00
11,500.0	90.14	359.66	9,873.1	1,588.9	1,210.6	1,713.9	0.00	0.00	0.00
11,600.0	90.14	359.66	9,872.9	1,688.9	1,210.1	1,813.2	0.00	0.00	0.00
11,700.0	90.14	359.66	9,872.6	1,788.9	1,209.5	1,912.5	0.00	0.00	0.00
11,800.0	90.14	359.66	9,872.4	1,888.9	1,208.9	2,011.8	0.00	0.00	0.00
11,900.0	90.14	359.66	9,872.1	1,988.9	1,208.3	2,111.1	0.00	0.00	0.00
12,000.0	90.14	359.66	9,871.8	2,088.9	1,207.7	2,210.4	0.00	0.00	0.00
12,100.0	90.14	359.66	9,871.6	2,188.9	1,207.1	2,309.8	0.00	0.00	0.00
12,200.0	90.14	359.66	9,871.3	2,288.9	1,206.5	2,409.1	0.00	0.00	0.00
12,300.0	90.14	359.66	9,871.1	2,388.9	1,205.9	2,508.4	0.00	0.00	0.00
12,400.0	90.14	359.66	9,870.8	2,488.9	1,205.3	2,607.7	0.00	0.00	0.00
12,500.0	90.14	359.66	9,870.6	2,588.9	1,204.7	2,707.0	0.00	0.00	0.00
12,600.0	90.14	359.66	9,870.3	2,688.9	1,204.1	2,806.3	0.00	0.00	0.00
12,700.0	90.14	359.66	9,870.1	2,788.9	1,203.5	2,905.6	0.00	0.00	0.00
12,800.0	90.14	359.66	9,869.8	2,888.9	1,202.9	3,004.9	0.00	0.00	0.00
12,900.0	90.14	359.66	9,869.6	2,988.9	1,202.3	3,104.2	0.00	0.00	0.00
13,000.0	90.14	359.66	9,869.3	3,088.9	1,201.7	3,203.5	0.00	0.00	0.00
13,100.0	90.14	359.66	9,869.1	3,188.9	1,201.1	3,302.8	0.00	0.00	0.00
13,200.0	90.14	359.66	9,868.8	3,288.9	1,200.5	3,402.1	0.00	0.00	0.00
13,300.0	90.14	359.66	9,868.6	3,388.9	1,199.9	3,501.5	0.00	0.00	0.00
13,400.0	90.14	359.66	9,868.3	3,488.9	1,199.3	3,600.8	0.00	0.00	0.00
13,500.0	90.14	359.66	9,868.1	3,588.9	1,198.7	3,700.1	0.00	0.00	0.00
13,600.0	90.14	359.66	9,867.8	3,688.9	1,198.1	3,799.4	0.00	0.00	0.00
13,700.0	90.14	359.66	9,867.5	3,788.9	1,197.5	3,898.7	0.00	0.00	0.00
13,800.0	90.14	359.66	9,867.3	3,888.9	1,196.9	3,998.0	0.00	0.00	0.00
13,900.0	90.14	359.66	9,867.0	3,988.9	1,196.3	4,097.3	0.00	0.00	0.00
14,000.0	90.14	359.66	9,866.8	4,088.9	1,195.7	4,196.6	0.00	0.00	0.00
14,100.0	90.14	359.66	9,866.5	4,188.9	1,195.1	4,295.9	0.00	0.00	0.00
14,200.0	90.14	359.66	9,866.3	4,288.9	1,194.5	4,395.2	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Lobo 33/28 Fed Com #408H
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 #408H	**North Reference:**	Grid
Well:	Sec 33, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FNL & 500' 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	90.14	359.66	9,866.0	4,388.9	1,193.9	4,494.5	0.00	0.00	0.00
14,400.0	90.14	359.66	9,865.8	4,488.9	1,193.3	4,593.9	0.00	0.00	0.00
14,500.0	90.14	359.66	9,865.5	4,588.9	1,192.7	4,693.2	0.00	0.00	0.00
14,600.0	90.14	359.66	9,865.3	4,688.8	1,192.1	4,792.5	0.00	0.00	0.00
14,700.0	90.14	359.66	9,865.0	4,788.8	1,191.5	4,891.8	0.00	0.00	0.00
14,800.0	90.14	359.66	9,864.8	4,888.8	1,190.9	4,991.1	0.00	0.00	0.00
14,900.0	90.14	359.66	9,864.5	4,988.8	1,190.3	5,090.4	0.00	0.00	0.00
15,000.0	90.14	359.66	9,864.3	5,088.8	1,189.7	5,189.7	0.00	0.00	0.00
15,055.3	90.14	359.66	9,864.1	5,144.1	1,189.4	5,244.6	0.00	0.00	0.00
PPP2: 0' FSL & 500' FEL (Sec 28)									
15,100.0	90.14	359.66	9,864.0	5,188.8	1,189.1	5,289.0	0.00	0.00	0.00
15,200.0	90.14	359.66	9,863.8	5,288.8	1,188.5	5,388.3	0.00	0.00	0.00
15,300.0	90.14	359.66	9,863.5	5,388.8	1,187.9	5,487.6	0.00	0.00	0.00
15,400.0	90.14	359.66	9,863.3	5,488.8	1,187.3	5,586.9	0.00	0.00	0.00
15,500.0	90.14	359.66	9,863.0	5,588.8	1,186.7	5,686.3	0.00	0.00	0.00
15,600.0	90.14	359.66	9,862.7	5,688.8	1,186.2	5,785.6	0.00	0.00	0.00
15,700.0	90.14	359.66	9,862.5	5,788.8	1,185.6	5,884.9	0.00	0.00	0.00
15,800.0	90.14	359.66	9,862.2	5,888.8	1,185.0	5,984.2	0.00	0.00	0.00
15,900.0	90.14	359.66	9,862.0	5,988.8	1,184.4	6,083.5	0.00	0.00	0.00
16,000.0	90.14	359.66	9,861.7	6,088.8	1,183.8	6,182.8	0.00	0.00	0.00
16,100.0	90.14	359.66	9,861.5	6,188.8	1,183.2	6,282.1	0.00	0.00	0.00
16,200.0	90.14	359.66	9,861.2	6,288.8	1,182.6	6,381.4	0.00	0.00	0.00
16,300.0	90.14	359.66	9,861.0	6,388.8	1,182.0	6,480.7	0.00	0.00	0.00
16,400.0	90.14	359.66	9,860.7	6,488.8	1,181.4	6,580.0	0.00	0.00	0.00
16,500.0	90.14	359.66	9,860.5	6,588.8	1,180.8	6,679.3	0.00	0.00	0.00
16,600.0	90.14	359.66	9,860.2	6,688.8	1,180.2	6,778.6	0.00	0.00	0.00
16,700.0	90.14	359.66	9,860.0	6,788.8	1,179.6	6,878.0	0.00	0.00	0.00
16,800.0	90.14	359.66	9,859.7	6,888.8	1,179.0	6,977.3	0.00	0.00	0.00
16,900.0	90.14	359.66	9,859.5	6,988.8	1,178.4	7,076.6	0.00	0.00	0.00
17,000.0	90.14	359.66	9,859.2	7,088.8	1,177.8	7,175.9	0.00	0.00	0.00
17,100.0	90.14	359.66	9,859.0	7,188.8	1,177.2	7,275.2	0.00	0.00	0.00
17,200.0	90.14	359.66	9,858.7	7,288.8	1,176.6	7,374.5	0.00	0.00	0.00
17,300.0	90.14	359.66	9,858.4	7,388.8	1,176.0	7,473.8	0.00	0.00	0.00
17,400.0	90.14	359.66	9,858.2	7,488.8	1,175.4	7,573.1	0.00	0.00	0.00
17,500.0	90.14	359.66	9,857.9	7,588.8	1,174.8	7,672.4	0.00	0.00	0.00
17,600.0	90.14	359.66	9,857.7	7,688.8	1,174.2	7,771.7	0.00	0.00	0.00
17,700.0	90.14	359.66	9,857.4	7,788.8	1,173.6	7,871.0	0.00	0.00	0.00
17,800.0	90.14	359.66	9,857.2	7,888.8	1,173.0	7,970.4	0.00	0.00	0.00
17,900.0	90.14	359.66	9,856.9	7,988.8	1,172.4	8,069.7	0.00	0.00	0.00
18,000.0	90.14	359.66	9,856.7	8,088.8	1,171.8	8,169.0	0.00	0.00	0.00
18,100.0	90.14	359.66	9,856.4	8,188.8	1,171.2	8,268.3	0.00	0.00	0.00
18,200.0	90.14	359.66	9,856.2	8,288.8	1,170.6	8,367.6	0.00	0.00	0.00
18,300.0	90.14	359.66	9,855.9	8,388.8	1,170.0	8,466.9	0.00	0.00	0.00
18,400.0	90.14	359.66	9,855.7	8,488.8	1,169.4	8,566.2	0.00	0.00	0.00
18,500.0	90.14	359.66	9,855.4	8,588.8	1,168.8	8,665.5	0.00	0.00	0.00
18,600.0	90.14	359.66	9,855.2	8,688.8	1,168.2	8,764.8	0.00	0.00	0.00
18,700.0	90.14	359.66	9,854.9	8,788.8	1,167.6	8,864.1	0.00	0.00	0.00
18,800.0	90.14	359.66	9,854.7	8,888.8	1,167.0	8,963.4	0.00	0.00	0.00
18,900.0	90.14	359.66	9,854.4	8,988.8	1,166.4	9,062.8	0.00	0.00	0.00
19,000.0	90.14	359.66	9,854.1	9,088.8	1,165.8	9,162.1	0.00	0.00	0.00
19,100.0	90.14	359.66	9,853.9	9,188.8	1,165.2	9,261.4	0.00	0.00	0.00
19,200.0	90.14	359.66	9,853.6	9,288.8	1,164.6	9,360.7	0.00	0.00	0.00
19,300.0	90.14	359.66	9,853.4	9,388.7	1,164.0	9,460.0	0.00	0.00	0.00
19,400.0	90.14	359.66	9,853.1	9,488.7	1,163.4	9,559.3	0.00	0.00	0.00

Planning Report

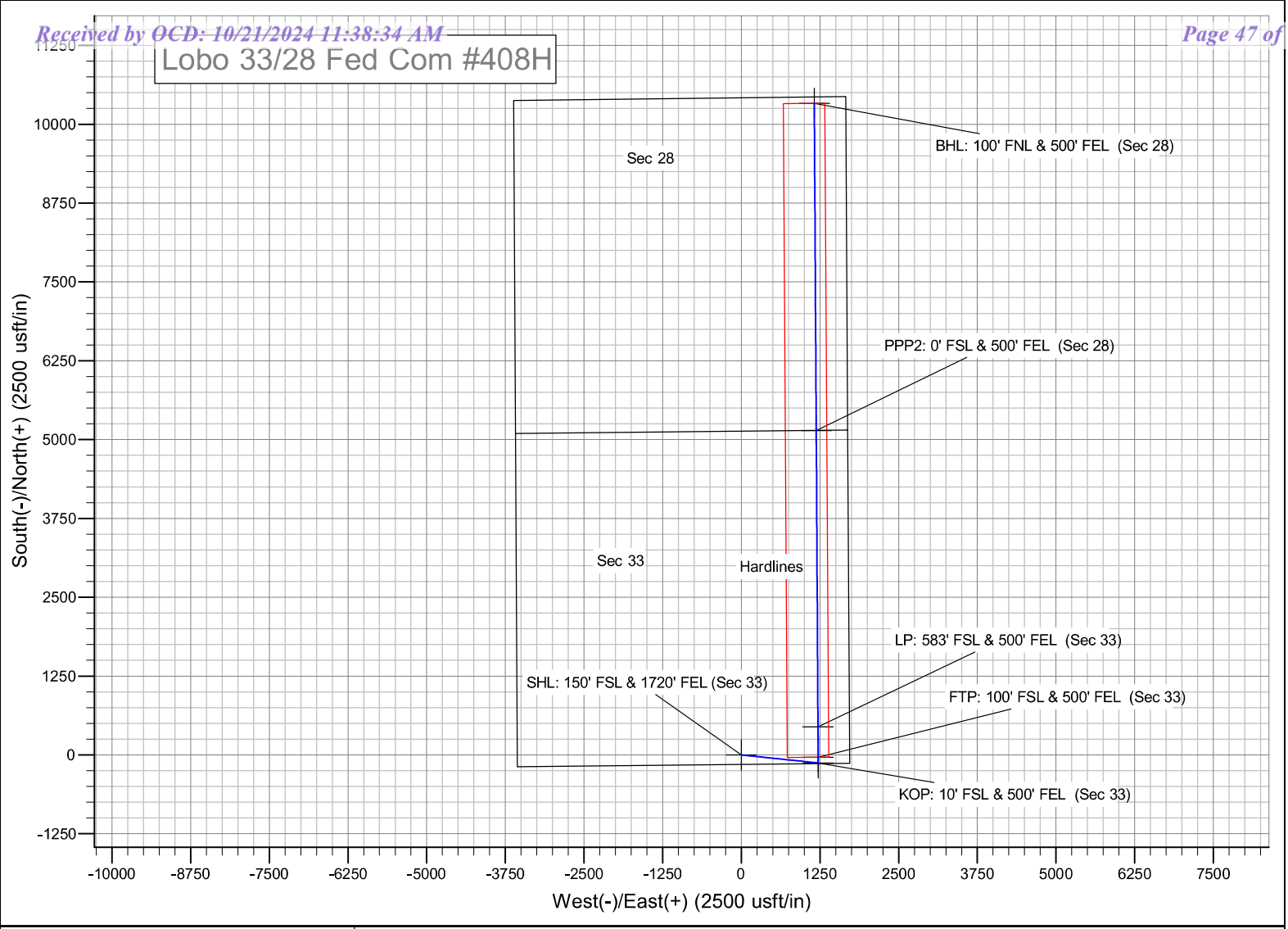
Database:	Hobbs	**Local Co-ordinate Reference:**	Site Lobo 33/28 Fed Com #408H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3827.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3827.0usft (Original Well Elev)
Site:	Lobo 33/28 Fed Com #408H	**North Reference:**	Grid
Well:	Sec 33, T21S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100' FNL & 500' FEL (Sec 28)		
Design:	Design #1		

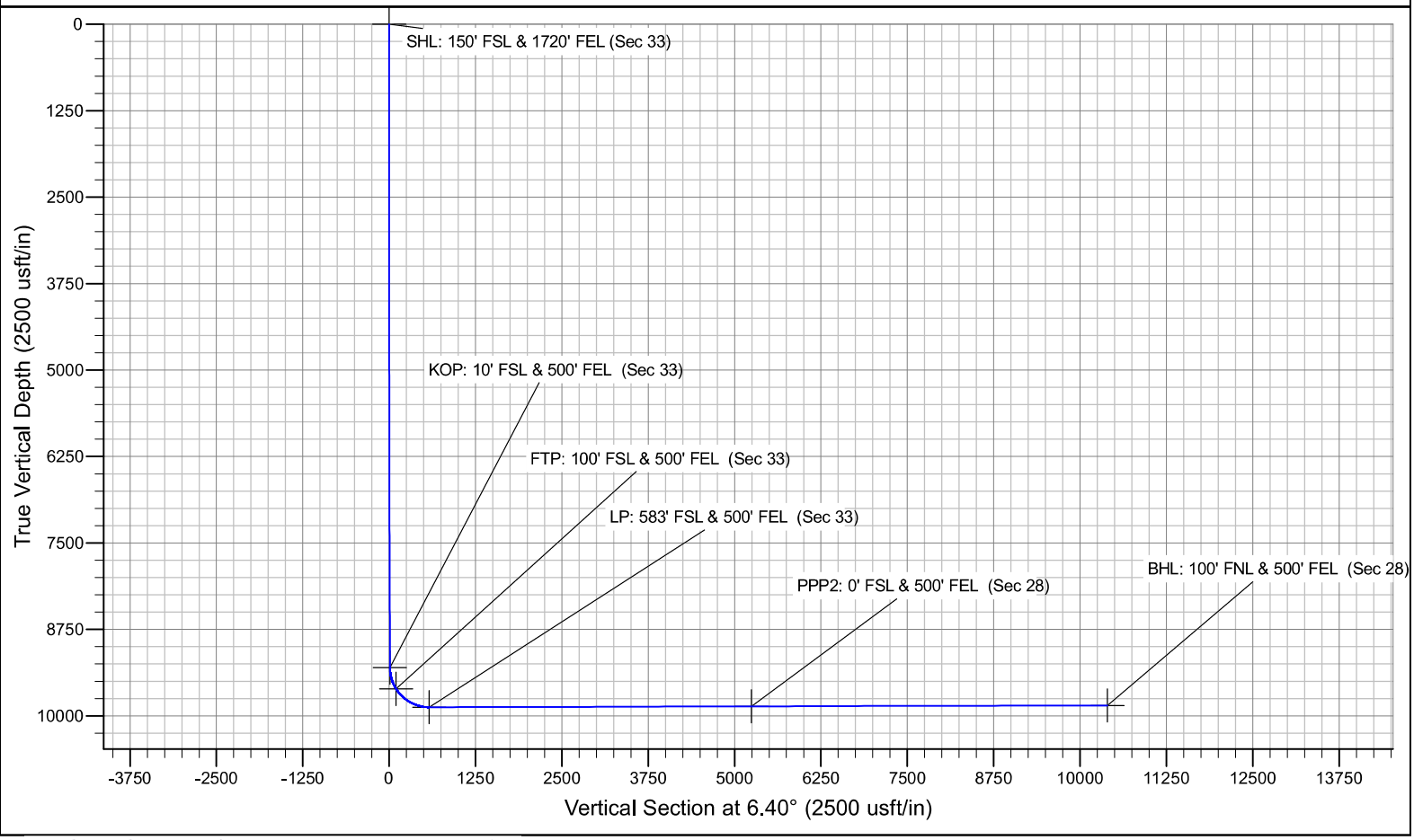
Planned Survey

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	90.14	359.66	9,852.9	9,588.7	1,162.8	9,658.6	0.00	0.00	0.00
19,600.0	90.14	359.66	9,852.6	9,688.7	1,162.3	9,757.9	0.00	0.00	0.00
19,700.0	90.14	359.66	9,852.4	9,788.7	1,161.7	9,857.2	0.00	0.00	0.00
19,800.0	90.14	359.66	9,852.1	9,888.7	1,161.1	9,956.5	0.00	0.00	0.00
19,900.0	90.14	359.66	9,851.9	9,988.7	1,160.5	10,055.8	0.00	0.00	0.00
20,000.0	90.14	359.66	9,851.6	10,088.7	1,159.9	10,155.1	0.00	0.00	0.00
20,100.0	90.14	359.66	9,851.4	10,188.7	1,159.3	10,254.5	0.00	0.00	0.00
20,200.0	90.14	359.66	9,851.1	10,288.7	1,158.7	10,353.8	0.00	0.00	0.00
20,244.4	90.14	359.66	9,851.0	10,333.1	1,158.4	10,397.8	0.00	0.00	0.00
BHL: 100' FNL & 500' FEL (Sec 28)									

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 & 1720' F - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	520,190.40	743,918.90	32.4283585	-103.6767550
KOP: 10' FSL & 500' FEI - plan hits target center - Point	0.00	0.00	9,303.0	-126.9	1,220.9	520,063.50	745,139.80	32.4279890	-103.6728008
FTP: 100' FSL & 500' FE - plan hits target center - Point	0.00	0.00	9,611.3	-36.9	1,220.4	520,153.50	745,139.26	32.4282364	-103.6728007
BHL: 100' FNL & 500' FE - plan hits target center - Point	0.00	0.00	9,851.0	10,333.1	1,158.4	530,523.50	745,077.30	32.4567407	-103.6727937
PPP2: 0' FSL & 500' FEI - plan hits target center - Point	0.00	0.00	9,864.1	5,144.1	1,189.4	525,334.50	745,108.30	32.4424776	-103.6727972
LP: 583' FSL & 500' FEL - plan hits target center - Point	0.00	0.00	9,876.0	446.1	1,217.5	520,636.50	745,136.37	32.4295640	-103.6728004


Lobo 33/28 Fed Com #408H
Sec 28
Sec 33
Hardlines
BHL: 100' FNL & 500' FEL (Sec 28)
PPP2: 0' FSL & 500' FEL (Sec 28)
LP: 583' FSL & 500' FEL (Sec 33)
FTP: 100' FSL & 500' FEL (Sec 33)
SHL: 150' FSL & 1720' FEL (Sec 33)
KOP: 10' FSL & 500' FEL (Sec 33)
South(-)/North(+) (2500 usft/in)
West(-)/East(+) (2500 usft/in)


SHL: 150' FSL & 1720' FEL (Sec 33)
KOP: 10' FSL & 500' FEL (Sec 33)
FTP: 100' FSL & 500' FEL (Sec 33)
LP: 583' FSL & 500' FEL (Sec 33)
PPP2: 0' FSL & 500' FEL (Sec 28)
BHL: 100' FNL & 500' FEL (Sec 28)
True Vertical Depth (2500 usft/in)
Vertical Section at 6.40° (2500 usft/in)

Mewbourne Oil Company, Example 700H
Sec 26, T23S, R34E
SHL: 205' FNL 1580' FEL (Sec 26)
BHL: 100' FSL 2310' FEL (Sec 35)

Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Lobo 33/28 Fed Com	408H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	33	21	32	-	10'	FSL	500'	FEL	Lea
Latitude					Longitude				NAD
32.4279891					-103.6728010				83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	33	21	32	-	100'	FSL	500'	FEL	Lea
Latitude					Longitude				NAD
32.4282364					-103.6728009				83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	28	21	32	-	100'	FNL	500'	FEL	Lea
Latitude					Longitude				NAD
32.4494388					-103.6804465				83

Is this well the defining well for the Horizontal Spacing Unit? Y
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:	Well Number

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MEWBOURNE OIL COMPANY
WELL NAME & NO.:	LOBO 33/28 FED COM 408H
APD ID:	10400098494
LOCATION:	Section 33, T.21 S., R.32 E. NMP.
COUNTY:	Lea County, New Mexico

COA

H_2S	○ No		◉ Yes	
Potash / WIPP	○ None	◉ Secretary	○ R-111-Q	☐ Open Annulus
	3-String Design: Open Production Casing Annulus			☐ WIPP
Cave / Karst	◉ Low	○ Medium	○ High	○ Critical
Wellhead	○ Conventional	◉ Multibowl	○ Both	○ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	☑ DV Tool
Special Req	☐ Capitan Reef	☐ Water Disposal	☑ COM	☐ Unit
Waste Prev.	○ Self-Certification	○ Waste Min. Plan	◉ APD Submitted prior to 06/10/2024	
Additional Language	☑ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☑ Break Testing
	☐ Four-String	☑ Offline Cementing	☑ Fluid-Filled	

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H_2S) Drilling Plan shall be activated **AT SPUD**. As a result, the Hydrogen Sulfide area must meet **43 CFR 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING DESIGN

Primary Casing Design

Note: Surface casing set depth was adjusted per BLM geologist's recommendation.

1. The **13-3/8** inch surface casing shall be set at approximately **1,072 ft.** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 ft. above the salt.**
    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

completing the cement job.

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

2. The **9-5/8 in.** intermediate casing shall be set at approximately **4,650 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 in 2nd stage is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Note: Intermediate casing must be kept fluid-filled to meet minimum collapse design requirements.

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

3. Operator has proposed to set **7 in.** production casing at approximately **9,457 ft.** (9,294 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:

- Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the R-111-Q guidelines.
  c. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and Potash.

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

❖ Operator must run a cement evaluation tool (fluid shot tool, Temperature log or CBL, etc.) to verify TOC after the second stage bradenhead. Submit the results to the BLM. If cement does not tie-back at least 500 ft. into the previous casing shoe, the appropriate BLM office shall be notified.

❖ A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing x Production Casing annulus un-cemented and monitored inside the Intermediate String. Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within 180 days.

4. The minimum required fill of cement behind the **4-1/2 in.** production liner is:
- Cement should tie-back **at least 100 feet** into previous casing string. Operator shall provide method of verification.

Alternate Casing Design

Note: Surface casing set depth was adjusted per BLM geologist's recommendation.

1. The **13-3/8** inch surface casing shall be set at approximately **1,072 ft.** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 ft. above the salt.**
a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 psi compressive strength**, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8 in.** intermediate casing shall be set at approximately **4,650 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 in 2nd stage is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Note: Intermediate casing must be kept fluid-filled to meet minimum collapse design requirements.

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

3. Operator has proposed to set **7 in.** production casing at approximately **10,357 ft.** (9,876 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:

- Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the R-111-Q guidelines.
  a. First stage: Operator will cement production casing with intent to bring cement to top of Brushy Canyon formation. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and Potash.

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

❖ Operator must run a cement evaluation tool (fluid shot tool, Temperature log or CBL, etc.) to verify TOC after the second stage bradenhead. Submit the results to the BLM. If cement does not tie-back at least 500 ft. into the previous casing shoe, the appropriate BLM office shall be notified.

❖ A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing x Production Casing annulus un-cemented and monitored inside the Intermediate String. Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within 180 days.

4. The minimum required fill of cement behind the **4-1/2 in.** production liner is:
    - Cement should tie-back **at least 100 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. The BOP/BOPE and annular preventer shall be pressure-tested in accordance with **title 43 CFR 3172 and API Standard 53.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in the **title 43 CFR 3172.6(b)(9)** must be followed.

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 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.

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**.

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.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.

- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.

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

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the

approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
    i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (Only applies to single stage cement jobs, prior to the cement setting up.)

iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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

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

vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

vii. The BOP/BOPE test shall include a low-pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

SA 10/09/2024

MEWBOURNE OIL COMPANY

Hydrogen Sulfide Plan Summary

A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

- Well control equipment
  a. Flare line 150' from wellhead to be ignited by flare gun.
  b. Choke manifold with a remotely operated choke.
  c. Mud/gas separator

- Protective equipment for essential personnel.

  Breathing apparatus:
  a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
  b. Work/Escape packs —4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
  c. Emergency Escape Packs —4 packs shall be stored in the doghouse for emergency evacuation.

  Auxiliary Rescue Equipment:
  a. Stretcher
  b. Two OSHA full body harness
  c. 100 ft 5/8 inch OSHA approved rope
  d. 1-20# class ABC fire extinguisher

- H2S detection and monitoring equipment:
  The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.
  (Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
  a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
  c. Two wind socks will be placed in strategic locations, visible from all angles.

MEWBOURNE OIL COMPANY

ALTHEA 18 FED #101H

- Mud program:
  The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

- Metallurgy:
  All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

- Communication:
  Communication will be via cell phones and land lines where available.

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drill Cuttings

Amount of waste: 3240 barrels

Waste disposal frequency : One Time Only

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

Safe containmant attachment:

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

Disposal type description:

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

Waste type: SEWAGE

Waste content description: Human waste & Grey water

Amount of waste: 1500 gallons

Waste disposal frequency : Weekly

Safe containment description: 2000 gallon plastic container

Safe containmant attachment:

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

Disposal type description:

Disposal location description: City of Carlsbad Water Treatment Facility

Waste type: GARBAGE

Waste content description: Garbage & Trash

Amount of waste: 1500 pounds

Waste disposal frequency : One Time Only

Safe containment description: Enclosed Trash Trailer

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Waste Management Facility in Carlsbad, NM

Reserve Pit

Reserve Pit being used? NO

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LOBO 33/28 FED COM **Well Number:** 408H

Temporary disposal of produced water into reserve pit? NO

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

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

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Description of cuttings location

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

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

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

Lobo_33_28_Fed_Com_408H_WellSiteLayout_20240514091520.pdf

Comments: None

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 P.O. Box 5270 Hobbs, NM 88241	14744
	Action Number: 394154
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	10/31/2024
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	10/31/2024
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	10/31/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	10/31/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	10/31/2024