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.

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.

2. Name of Operator

9. API Well No.
30-015-55371

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

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

At surface

At proposed prod. zone

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

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

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

1. Well plat certified by a registered surveyor.
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	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

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

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 08/22/2024

INSTRUCTIONS

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

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

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

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

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

NOTICES

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

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

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

Approval Date: 08/22/2024

Additional Operator Remarks

Location of Well

0. SHL: SENE / 2175 FNL / 260 FEL / TWSP: 20S / RANGE: 27E / SECTION: 21 / LAT: 32.5603735 / LONG: -104.2784071 (TVD: 0 feet, MD: 0 feet)

PPP: SENE / 1980 FNL / 100 FEL / TWSP: 20S / RANGE: 27E / SECTION: 21 / LAT: 32.5609079 / LONG: -104.2778832 (TVD: 6586 feet, MD: 6613 feet)

PPP: SENW / 1980 FNL / 2640 FEL / TWSP: 20S / RANGE: 27E / SECTION: 20 / LAT: 32.5610392 / LONG: -104.3033511 (TVD: 6621 feet, MD: 14554 feet)

PPP: SWNE / 1980 FNL / 1320 FEL / TWSP: 20S / RANGE: 27E / SECTION: 21 / LAT: 32.5609287 / LONG: -104.2818592 (TVD: 6828 feet, MD: 7929 feet)

BHL: SWNW / 1980 FNL / 100 FEL / TWSP: 20S / RANGE: 27E / SECTION: 20 / LAT: 32.5610807 / LONG: -104.3116027 (TVD: 6542 feet, MD: 17098 feet)

BLM Point of Contact

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

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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
30-015-55371	96381	Avalon; Bone Spring
Property Code	**Property Name**	**Well Number**
336231	WINE MIXER 21/20 FED COM	524H
OGRID No.	**Operator Name**	**Ground Level Elevation**
14744	MEWBOURNE OIL COMPANY	3289'

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
H	21	20S	27E		2175 FNL	260 FEL	32.5603749	-104.2784069	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
E	20	20S	27E		1980 FNL	100 FWL	32.5610820	-104.3116029	EDDY

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

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
H	21	20S	27E		1980 FNL	10 FEL	32.5609077	-104.2778832	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	21	20S	27E		1980 FNL	100 FEL	32.5609088	-104.2778832	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
E	20	20S	27E		1980 FNL	100 FWL	32.5610820	-104.3116029	EDDY

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

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.

Conner Whitley 08/23/2024

Signature Date

Conner Whitley

Printed Name

cwhitley@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

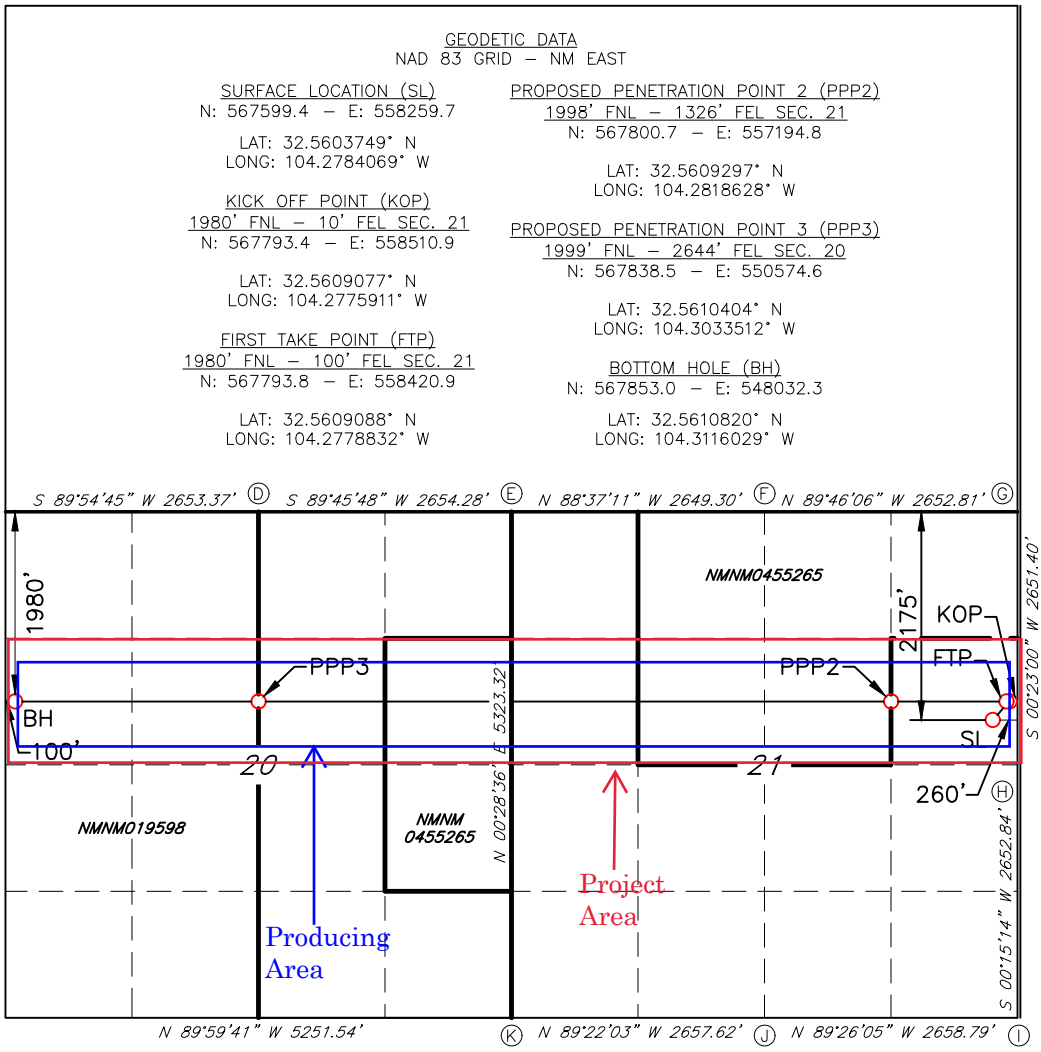
Certificate Number | Date of Survey

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.

ACREAGE DEDICATION PLATS

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

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



CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1942"
N: 564526.0 – E: 547939.6

B: FOUND BRASS CAP "1942"
N: 567179.5 – E: 547933.9

C: FOUND BRASS CAP "1942"
N: 569832.3 – E: 547927.8

D: FOUND BRASS CAP "1942"
N: 569836.4 – E: 550580.5

E: FOUND BRASS CAP "1942"
N: 569847.4 – E: 553234.1

F: FOUND BRASS CAP "1942"
N: 569783.6 – E: 555882.0

G: FOUND BRASS CAP "1942"
N: 569772.8 – E: 558534.1

H: FOUND BRASS CAP "1942"
N: 567122.1 – E: 558516.4

I: FOUND BRASS CAP "1942"
N: 564470.0 – E: 558504.7

J: FOUND BRASS CAP "1942"
N: 564496.2 – E: 555846.6

K: CALCULATED CORNER
N: 564525.5 – E: 553189.8

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:** 4/2/24

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
Wine Mixer 21/20 Fed Com	524H	H 21 20S 27E	2175' FNL x 260' FEL	1500	2500	3500

IV. Central Delivery Point Name: Wine Mixer 21/20 Fed Com 524H [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
Wine Mixer 21/20 Fed Com	524H	9/1/24	9/20/24	10/20/24	11/5/24	11/5/24

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:	8/23/24
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.

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

Drilling Plan Data Report
08/23/2024

APD ID: 10400098310
Submission Date: 05/03/2024
Operator Name: MEWBOURNE OIL COMPANY
Well Name: WINE MIXER 21/20 FED COM
Well Number: 524H
Well Type: OIL 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
13997878	UNKNOWN	3317	28	28	OTHER : Topsoil	NONE	N
13997891	YATES	2657	660	660	SANDSTONE	NATURAL GAS, OIL	N
13997897	CAPITAN REEF	1769	1548	1548	DOLOMITE, LIMESTONE	USEABLE WATER	N
13997884	LAMAR	975	2342	2342	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
13997877	BONE SPRING	-748	4065	4065	LIMESTONE	NATURAL GAS, OIL	N
13997880	BONE SPRING 1ST	-2517	5834	5834	LIMESTONE	NATURAL GAS, OIL	N
13997881	BONE SPRING 2ND	-3048	6365	6365	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 17098

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.

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_20240430074616.pdf

Flex_Line_Specs_API_16C_20240618152013.pdf

BOP Diagram Attachment:

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

5M_BOPE_Choke_Diagram_20240430074616.pdf

Flex_Line_Specs_API_16C_20240618152013.pdf

5M_BOPE_Schematic_20240430074642.pdf

MOC_Break_Testing_Variance_20240430074650.pdf

Multi_Bowl_WH_20240618101356.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	415	0	415	3270	2855	415	H-40	48	ST&C	4.25	9.54	DRY	16.16	DRY	27.16
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2260	0	2260	3713	1010	2260	J-55	36	LT&C	1.91	3.33	DRY	5.57	DRY	6.93
3	PRODUCTION	8.75	7.0	NEW	API	N	0	6287	0	6278	3713	-3008	6287	P-110	26	LT&C	1.91	3.03	DRY	4.24	DRY	5.08
4	LINER	6.125	4.5	NEW	API	N	6087	17098	6078	6851	-2808	-3581	11011	P-110	13.5	LT&C	2.6	3.03	DRY	2.27	DRY	2.84

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Wine_Mixer_21_20_Fed_Com___524H_CsgAssumptions_20240618141939.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Wine_Mixer_21_20_Fed_Com___524H_CsgAssumptions_20240618141926.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Wine_Mixer_21_20_Fed_Com___524H_CsgAssumptions_20240618142043.pdf

Casing ID: 4 **String** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Wine_Mixer_21_20_Fed_Com___524H_CsgAssumptions_20240618142144.pdf

Section 4 - Cement

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	226	150	2.12	12.5	320	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		226	415	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead	1000	0	660	120	2.12	12.5	260	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		660	1000	100	1.34	14.8	0	25	Class C	Retarder
INTERMEDIATE	Lead	1000	1000	1595	110	2.12	12.5	240	25	Class C	Salt, LCM, Extender, Gel
INTERMEDIATE	Tail		1595	2260	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	4000	2060	3305	110	2.12	12.5	240	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		3305	4000	100	1.34	14.8	134	25	Class C	Retarder, Fluid Loss, Defoamer
LINER	Lead		6087	17098	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: Formation integrity test will be performed per 43 CFR Part 3172. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR Part 3172.

Describe the mud monitoring system utilized: Visual monitoring

Circulating Medium Table

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

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	415	SPUD MUD	8.4	8.4							
415	2260	WATER-BASED MUD	9	9							
2260	6287	WATER-BASED MUD	10	10							
6287	17098	OIL-BASED MUD	11.5	11.5							

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: Wine Mixer 21/20 Fed Com #621H

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

COMPENSATED NEUTRON LOG,GAMMA RAY LOG,MEASUREMENT WHILE DRILLING,MUD LOG/GEOLOGIC LITHOLOGY LOG,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4097 **Anticipated Surface Pressure:** 2594

Anticipated Bottom Hole Temperature(F): 165

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_20240429150820.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Wine_Mixer_21_20_Fed_Com___524H_MOC_Dir_Plan_20240430075252.pdf

Wine_Mixer_21_20_Fed_Com___524H_MOC_Dir_Plot_20240430075256.pdf

Other proposed operations facets description:

Variance is request to perform offline cementing according to the attached procedure.

Other proposed operations facets attachment:

Wine_Mixer_21_20_Fed_Com___524H_AddInfo_20240430075305.pdf

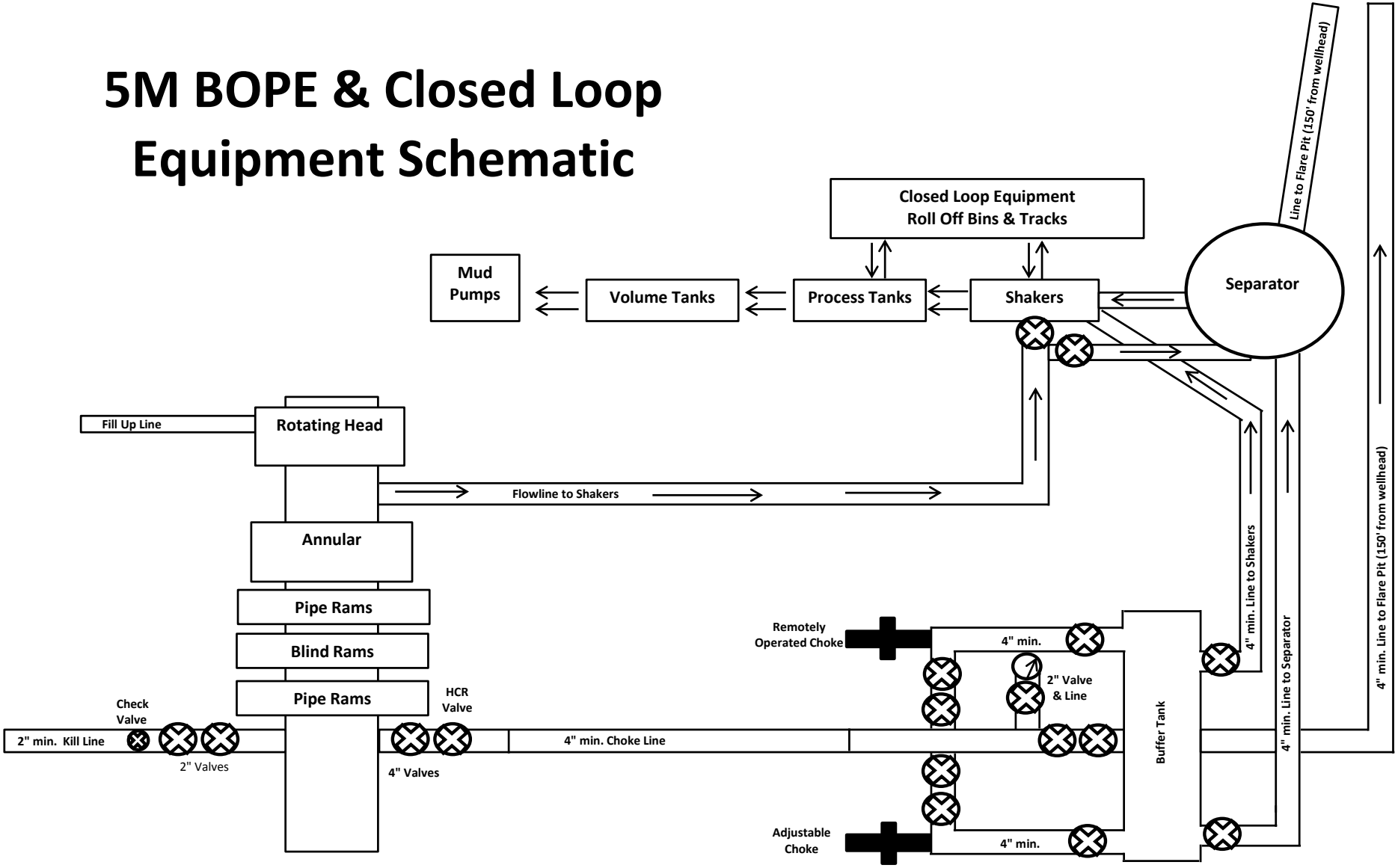
Wine_Mixer_21_20_Fed_Com___524H_Drlg_Program_20240618150058.pdf

Other Variance attachment:

Mewbourne_Break_Testing_Variance_20240618102147.pdf

Mewbourne_Offline_Cementing_Variance_20240618102147.pdf

5M BOPE & Closed Loop Equipment Schematic



Drawing not to scale

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

LETONE

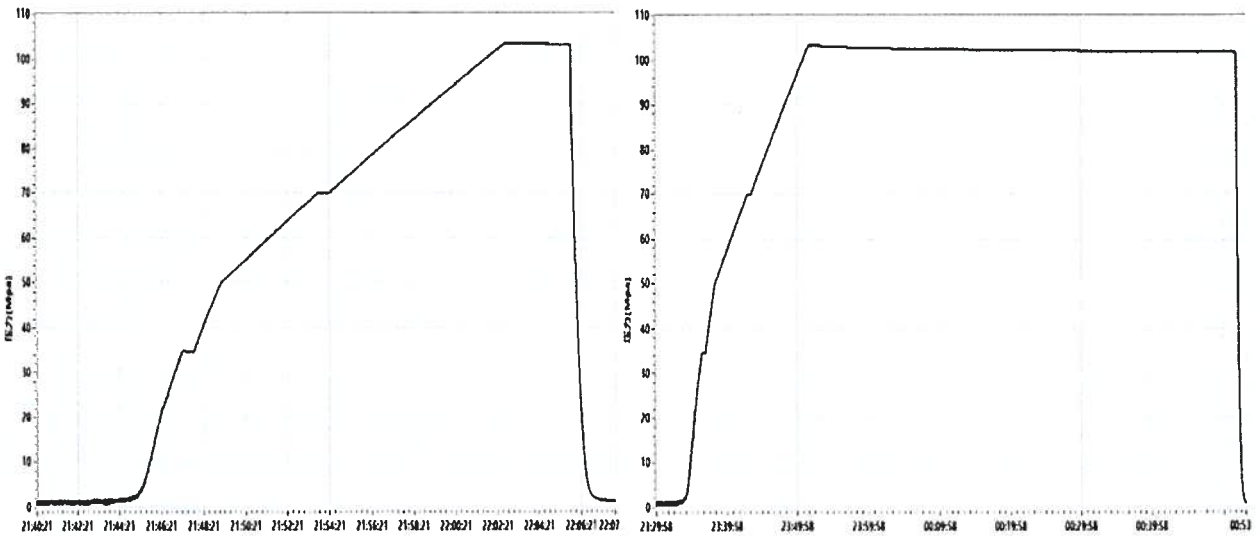
LUOHE LETONE HYDRAULICS TECHNOLOGY CO.,LTD

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	Hliqing 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	Hliqing 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）

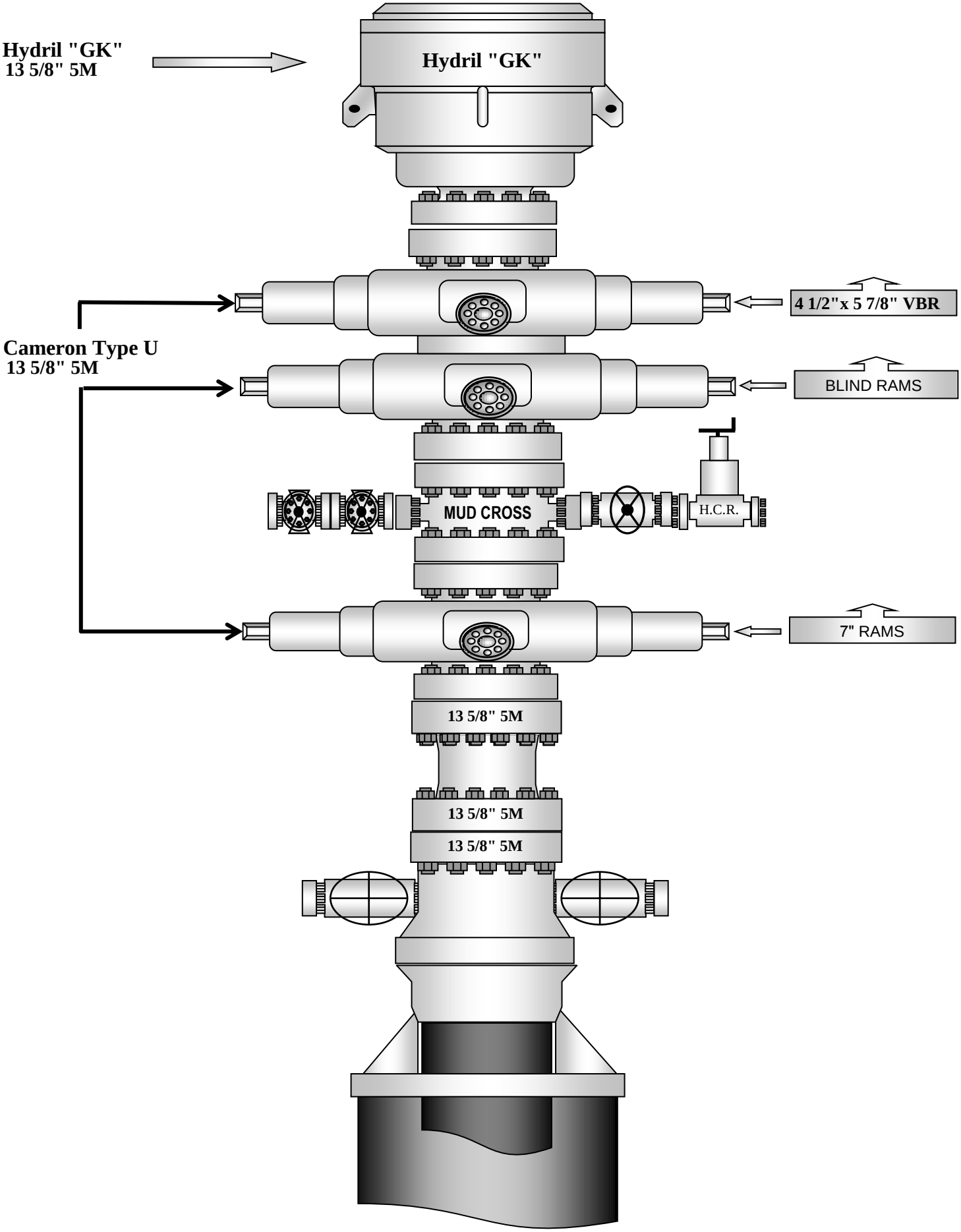
Serial Number：7660143~7660144

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

5M BOPE Schematic



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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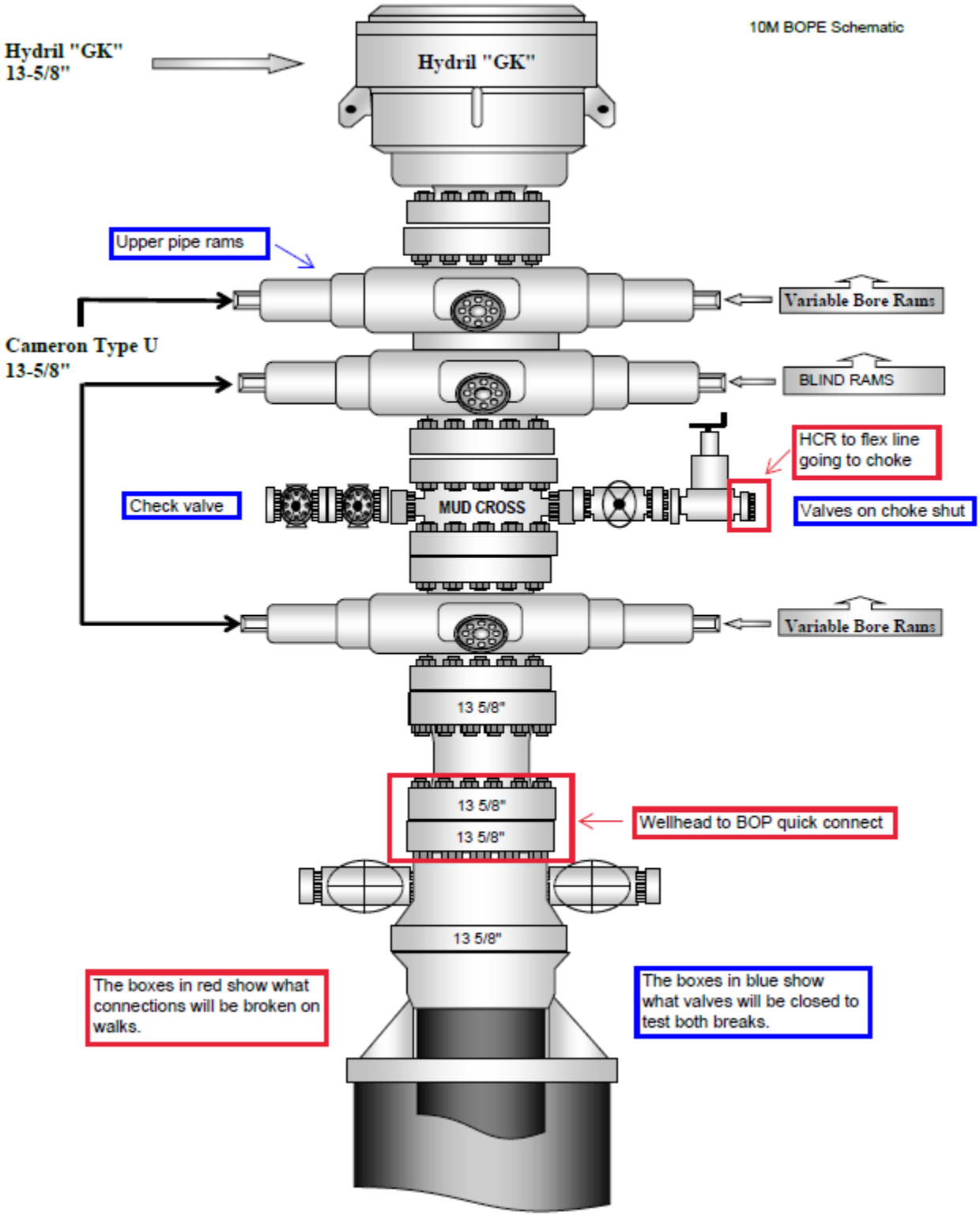

Figure 1. BOP diagram

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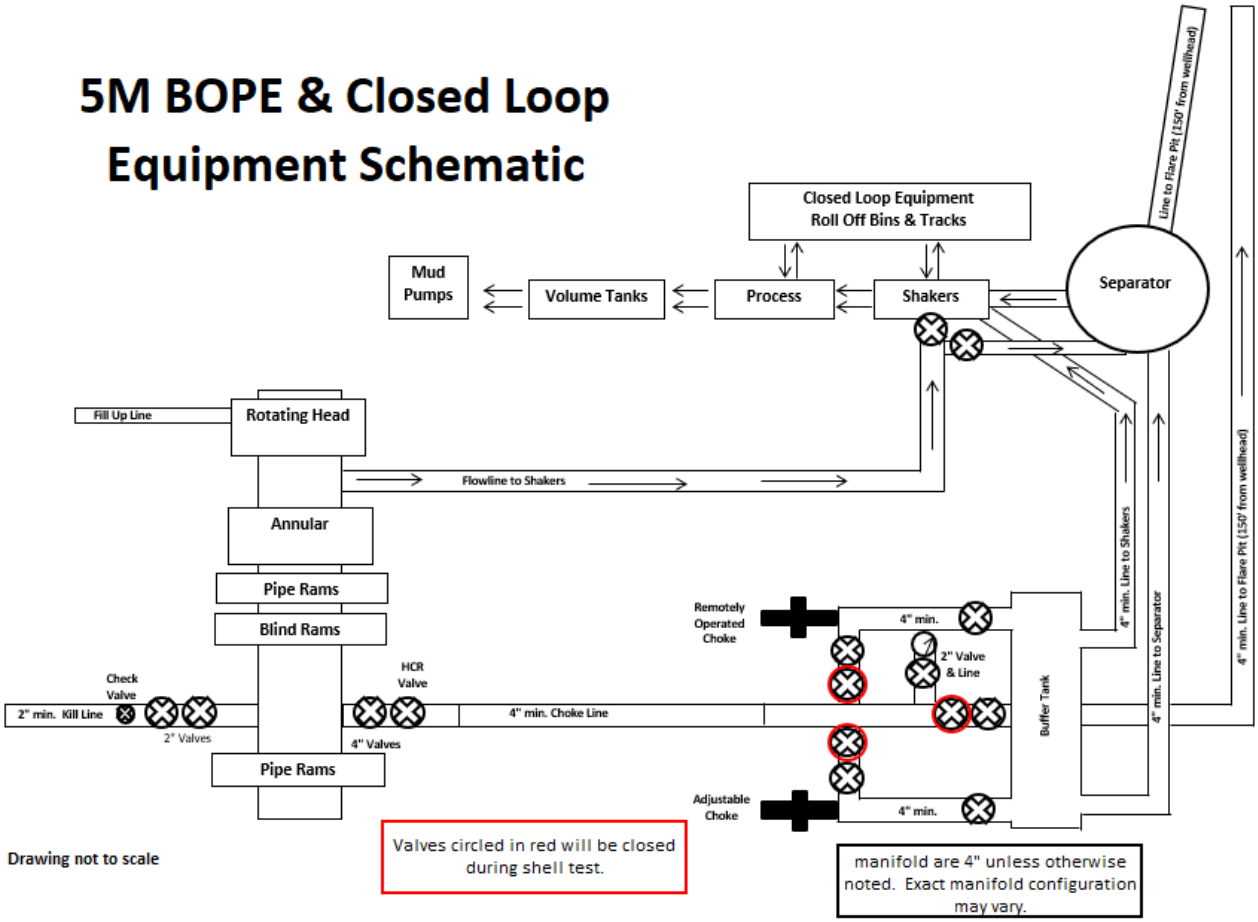

Figure 2. BOPE diagram

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Figure 3. BOP handling system

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Figure 4. BOP handling system

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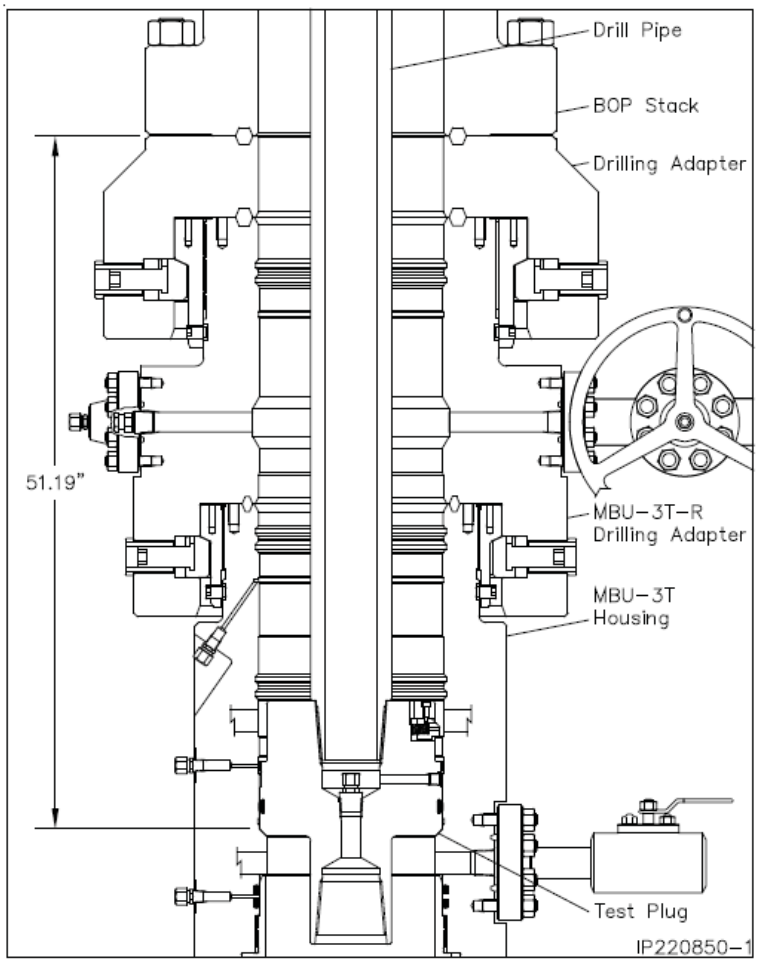


Figure 5. Cactus 5M wellhead with BOP quick connect

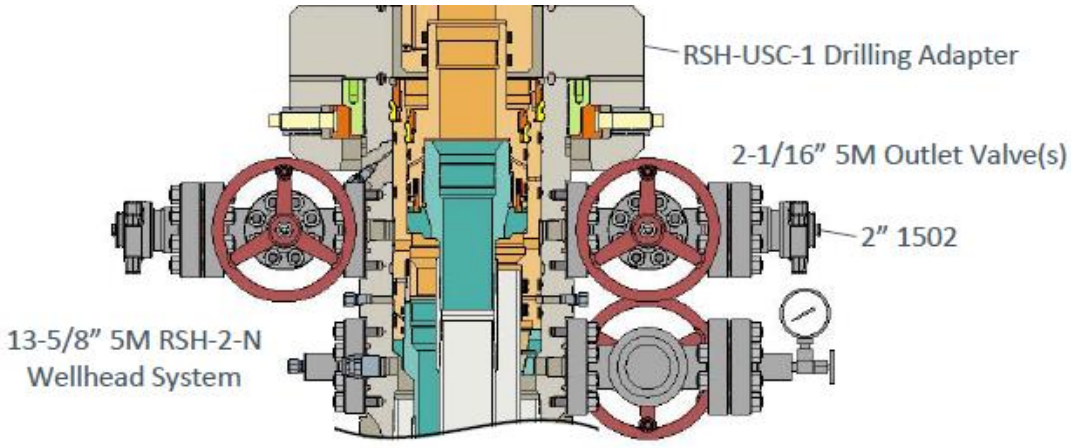
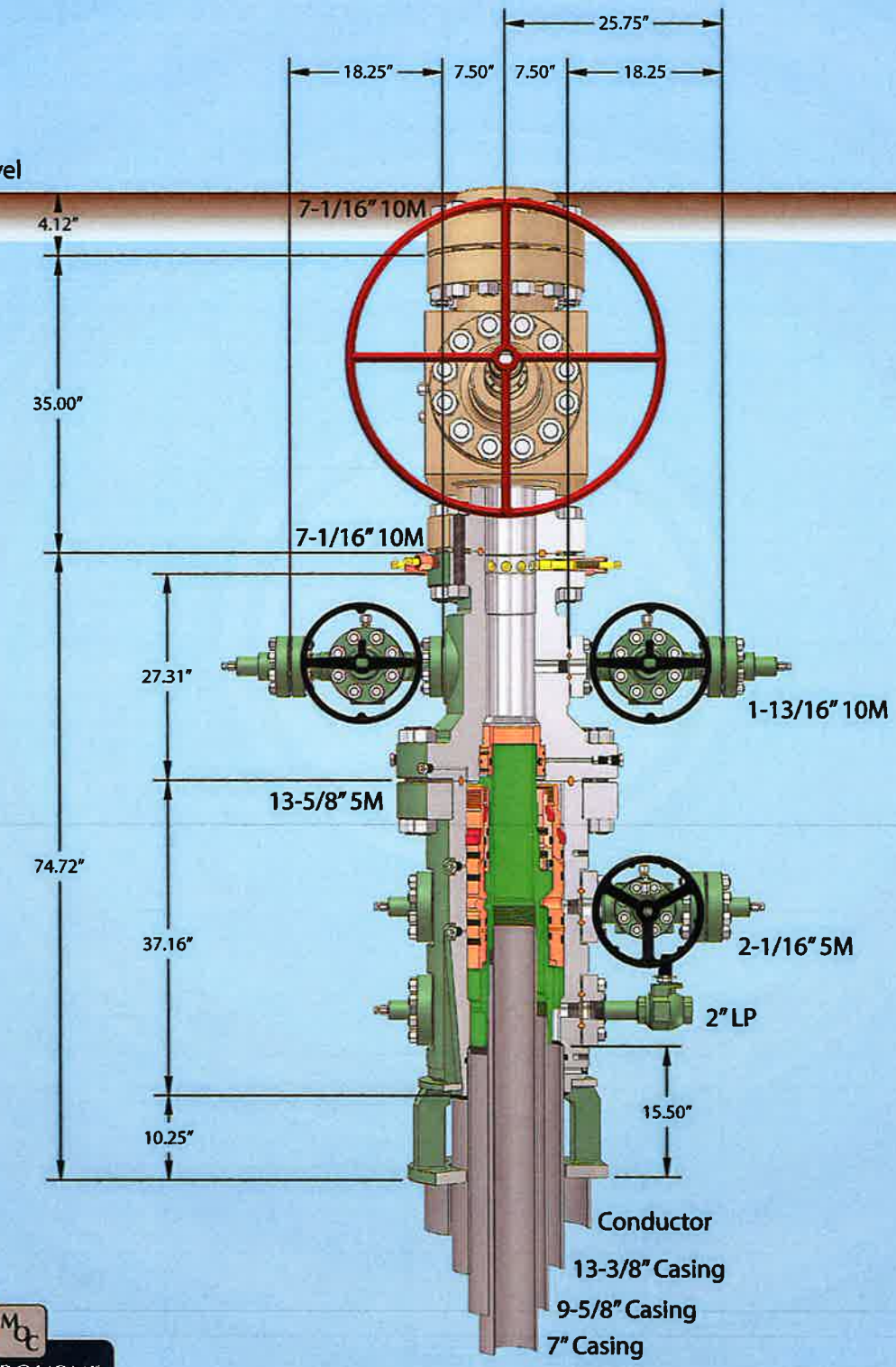


Figure 6. Vault 5M wellhead with BOP quick connect

CAMERON
A Schlumberger Company

13-5/8" MN-DS Wellhead System



MEWBOURNE OIL COMPANY

C7585
Rev. 02

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

Capping flange 57" conductor cut-off

79

Mewbourne Oil Company, Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL 260' FEL (Sec 21)
BHL: 1980' FNL 100' FEL (Sec 20)

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'	415'	415'	13.375" 48# H40 STC	4.25	9.54	16.16	27.16
Int	12.25'	0'	0'	2260'	2260'	9.625" 36# J55 LTC	1.91	3.33	5.57	6.93
Production	8.75'	0'	0'	6287'	6278'	7" 26# P110 LTC	1.91	3.05	4.24	5.08
Liner	6.125'	6087'	6078'	17098'	6851'	4.5" 13.5# P110 LTC	2.60	3.03	2.27	2.84

Cement Program

Casing		# Sacks	Wt. lb/gal	Yield ft^3/sack	TOC/BOC	Volume ft^3	% Excess	Slurry Description
13.375 in	LEAD	150	12.5	2.12	0' - 226'	320	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	226' - 415'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	110	12.5	2.12	1000' - 1595'	240	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	1595' - 2260'	268		Class C: Retarder
9 5/8'' DV Tool @ 1000'								
2nd Stg 9.625 in	LEAD	120	12.5	2.12	0' - 660'	260	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	660' - 1000'	0		Class C: Retarder
1st Stg 7 in	LEAD	50	12.5	2.12	4000' - 4432'	110	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	4432' - 6287'	472		Class H: Retarder, Fluid Loss, Defoamer
7'' DV Tool @ 4000'								
2nd Stg 7 in	LEAD	110	12.5	2.12	2060' - 3305'	240	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	100	14.8	1.34	3305' - 4000'	134		Class C: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	6087' - 17098'	1300	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Design A - Mud Program

Depth	Mud Wt	Mud Type
0' - 415'	8.4	Fresh Water
415' - 2260'	9	Brine
2260' - 6287'	10	Cut-Brine
6287' - 17098'	11.5	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler			Yeso		
Castile			Delaware (Lamar)	2342'	Oil/Natural Gas
Salt Top			Bell Canyon		
Salt Base			Cherry Canyon		
Yates	660'	Oil/Natural Gas	Manzanita Marker		
Seven Rivers			Basal Brushy Canyon		
Queen			Bone Spring	4065'	Oil/Natural Gas
Capitan	1548'	Usable Water	1st Bone Spring	5834'	Oil/Natural Gas
Grayburg			2nd Bone Spring	6365'	Oil/Natural Gas
San Andres			3rd Bone Spring		
Glorieta			Wolfcamp		

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-P?	**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-P and SOPA?	**N**
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	**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, Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL 260' FEL (Sec 21)
BHL: 1980' FNL 100' FEL (Sec 20)

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'	415'	415'	13.375" 48# H40 STC	4.25	9.54	16.16	27.16
Int	12.25'	0'	0'	2260'	2260'	9.625" 36# J55 LTC	1.91	3.33	5.57	6.93
Production	8.75'	0'	0'	7187'	6851'	7" 26# P110 LTC	1.75	2.79	3.71	4.44
Liner	6.125'	6287'	6278'	17098'	6851'	4.5" 13.5# P110 LTC	2.60	3.03	2.32	2.89

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	150	12.5	2.12	0' - 226'	320	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	226' - 415'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	110	12.5	2.12	1000' - 1595'	240	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	1595' - 2260'	268		Class C: Retarder
9 5/8'' DV Tool @ 1000'								
2nd Stg 9.625 in	LEAD	120	12.5	2.12	0' - 660'	260	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	660' - 1000'	0		Class C: Retarder
1st Stg 7 in	LEAD	60	12.5	2.12	4000' - 4688'	130	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	4688' - 7187'	472		Class H: Retarder, Fluid Loss, Defoamer
7'' DV Tool @ 4000'								
2nd Stg 7 in	LEAD	110	12.5	2.12	2060' - 3305'	240	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	100	14.8	1.34	3305' - 4000'	134		Class C: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	690	13.5	1.85	6287' - 17098'	1280	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Design B - Mud Program

Depth	Mud Wt	Mud Type
0' - 415'	8.4	Fresh Water
415' - 2260'	9	Brine
2260' - 7187'	10	Cut-Brine
7187' - 17098'	11.5	OBM

Geology

Formation	Est. Top (TVD)	Mineral Resources	Formation	Est. Top (TVD)	Mineral Resources
Rustler			Yeso		
Castile			Delaware (Lamar)	2342'	Oil/Natural Gas
Salt Top			Bell Canyon		
Salt Base			Cherry Canyon		
Yates	660'	Oil/Natural Gas	Manzanita Marker		
Seven Rivers			Basal Brushy Canyon		
Queen			Bone Spring	4065'	Oil/Natural Gas
Capitan	1548'	Usable Water	1st Bone Spring	5834'	Oil/Natural Gas
Grayburg			2nd Bone Spring	6365'	Oil/Natural Gas
San Andres			3rd Bone Spring		
Glorieta			Wolfcamp		

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-P?	**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-P and SOPA?	**N**
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	**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, Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL 260' FEL (Sec 21)
BHL: 1980' FNL 100' FEL (Sec 20)

Well Location **GL: 3270'**

Point	Calls	Leases	Aliquot	Section	Township	Range	County	Lat	Long	TVD	MD
SHL	SHL: 2175' FNL & 260' FEL (Sec 21)	VC10800000	SENE	21	20S	27E	Eddy	32.5603735	104.2784071	0'	0'
KOP	KOP: 1980' FNL & 10' FEL (Sec 21)	VC10800000	SENE	21	20S	27E	Eddy	32.5609064	104.2775911	6,278'	6,287'
FTP	FTP: 1980' FNL & 100' FEL (Sec 21)	VC10800000	SENE	21	20S	27E	Eddy	32.5609079	104.2778832	6,586'	6,613'
PPP2	PPP2: 1980' FNL & 1320' FEL (Sec 21)	NMNM0455265	SWNE	21	20S	27E	Eddy	32.5609287	104.2818592	6,828'	7,929'
PPP3	PPP3: 1980' FNL & 2640' FEL (Sec 20)	NMNM019598	SENW	20	20S	27E	Eddy	32.5610392	104.3033511	6,621'	14,554'
BHL	BHL: 1980' FNL & 100' FEL (Sec 20)	NMNM019598	SWNW	20	20S	27E	Eddy	32.5610807	104.3116027	6,542'	17,098'

GEOLOGY

Formation	Est. Top (TVD)	Lithology	Mineral Resources	Formation	Est. Top (TVD)	Lithology	Mineral Resources
Rustler				Yeso			
Castile				Delaware (Lamar)	2342'	Limestone/Dolomite	Oil/Natural Gas
Salt Top				Bell Canyon			
Salt Base				Cherry Canyon			
Yates	660'	Sandstone	Oil/Natural Gas	Manzanita Marker			
Seven Rivers				Basal Brushy Canyon			
Queen				Bone Spring	4065'	Limestone	Oil/Natural Gas
Capitan	1548'	Limestone/Dolomite	Usable Water	1st Bone Spring	5834'	Sandstone	Oil/Natural Gas
Grayburg				**2nd Bone Spring**	**6365'**	**Sandstone**	**Oil/Natural Gas**
San Andres				3rd Bone Spring			
Glorietta				Wolfcamp			

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'	415'	415'	13.375" 48# H40 STC	4.25	9.54	16.16	27.16
Int	12.25'	0'	0'	2260'	2260'	9.625" 36# J55 LTC	1.91	3.33	5.57	6.93
Production	8.75'	0'	0'	6287'	6278'	7" 26# P110 LTC	1.91	3.05	4.24	5.08
Liner	6.125'	6087'	6078'	17098'	6851'	4.5" 13.5# P110 LTC	2.60	3.03	2.27	2.84

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

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	**Y**
Is casing API approved? If no, attach casing specification sheet.	**Y**
Is premium or uncommon casing planned? If yes attach casing specification sheet.	**N**
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	**Y**
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	**Y**
Is well located within Capitan Reef?	**N**
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	**N**
Is well located in SOPA but not in R-111-P?	**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-P and SOPA?	**N**
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is an open annulus used to satisfy R-111-Q? If yes, see cement design.	
Is an engineered weak point used to satisfy R-111-Q?	
If yes, at what depth is the weak point planned?	
Is well located in high Cave/Karst?	**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, Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL 260' FEL (Sec 21)
BHL: 1980' FNL 100' FEL (Sec 20)

Design A - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft^3/sack	TOC/BOC	Volume, ft^3	% Excess	Slurry Description
13.375 in	LEAD	150	12.5	2.12	0' - 226'	320	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	226' - 415'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	110	12.5	2.12	1000' - 1595'	240	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	1595' - 2260'	268		Class C: Retarder
9 5/8'' DV Tool @ 1000'								
2nd Stg 9.625 in	LEAD	120	12.5	2.12	0' - 660'	260	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	660' - 1000'	0		Class C: Retarder
1st Stg 7 in	LEAD	50	12.5	2.12	4000' - 4432'	110	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	4432' - 6287'	472		Class H: Retarder, Fluid Loss, Defoamer
7'' DV Tool @ 4000'								
2nd Stg 7 in	LEAD	110	12.5	2.12	2060' - 3305'	240	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	100	14.8	1.34	3305' - 4000'	134		Class C: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	700	13.5	1.85	6087' - 17098'	1300	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Pressure Control Equipment

BOP installed and tested before drilling hole, in:	Size, in	System Rated WP	Type		Tested to:	Rating Depth
12.25	13.375	5M	Annular	X	2500#	17,098'
		5M	Blind Ram	X	5000#	
			Pipe Ram	X		
			Double Ram			
			Other*			

*Specify if additional ram is utilized.

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

Variance Request: A variance is requested for the use of a 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.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Y	Formation integrity test will be performed per 43 CFR Part 3172. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR Part 3172.
N	Mewbourne Oil Company request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack.

Mud Program

Depth (MD)	Mud Wt., lb/gal	Mud Type
0' - 415'	8.4	Fresh Water
415' - 2260'	9	Brine
2260' - 6287'	10	Cut-Brine
6287' - 17098'	11.5	OBM

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	Pason/PVT/Visual Monitoring

Mewbourne Oil Company, Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL 260' FEL (Sec 21)
BHL: 1980' FNL 100' FEL (Sec 20)

Logging and Testing Procedures

Logging, Coring and Testing.	
N	Will run GR/CNL from KOP (6287') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Y	No logs are planned based on well control or offset log information. Offset Well: Wine Mixer 21/20 Fed Com #621H
N	Coring? If yes, explain:

Open & Cased Hole Logs Run In the Well

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

Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4097 psi
BH Temperature	165
Abnormal Temp, Pressure, or Geologic Hazards	No

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

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

	H2S is present
X	H2S Plan attached

Mewbourne Oil Company, Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL 260' FEL (Sec 21)
BHL: 1980' FNL 100' FEL (Sec 20)

Other facets of operation

Mewbourne Oil Company also requests approval to implement Design B as described below. BLM will be notified of elected design.

Offline Cementing Variance: Variance is request to perform offline cementing according to the attached procedure.

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	SF Body
Surface	17.5'	0'	0'	415'	415'	13.375" 48# H40 STC	4.25	9.54	16.16	27.16
Int	12.25'	0'	0'	2260'	2260'	9.625" 36# J55 LTC	1.91	3.33	5.57	6.93
Production	8.75'	0'	0'	7187'	6851'	7" 26# P110 LTC	1.75	2.79	3.71	4.44
Liner	6.125'	6287'	6278'	17098'	6851'	4.5" 13.5# P110 LTC	2.60	3.03	2.32	2.89

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

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

Design B - Cement Program

Csg. Size		# Sacks	Wt., lb/gal	Yield, ft^3/sack	TOC/BOC	Volume, ft^3	% Excess	Slurry Description
13.375 in	LEAD	150	12.5	2.12	0' - 226'	320	100%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	226' - 415'	268		Class C: Retarder
1st Stg 9.625 in	LEAD	110	12.5	2.12	1000' - 1595'	240	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	200	14.8	1.34	1595' - 2260'	268		Class C: Retarder
9 5/8'' DV Tool @ 1000'								
2nd Stg 9.625 in	LEAD	120	12.5	2.12	0' - 660'	260	25%	Class C: Salt, Gel, Extender, LCM
	TAIL	100	14.8	1.34	660' - 1000'	0		Class C: Retarder
1st Stg 7 in	LEAD	60	12.5	2.12	4000' - 4688'	130	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	400	15.6	1.18	4688' - 7187'	472		Class H: Retarder, Fluid Loss, Defoamer
7'' DV Tool @ 4000'								
2nd Stg 7 in	LEAD	110	12.5	2.12	2060' - 3305'	240	25%	Class C: Salt, Gel, Extender, LCM, Defoamer
	TAIL	100	14.8	1.34	3305' - 4000'	134		Class C: Retarder, Fluid Loss, Defoamer
4.5 in	LEAD	690	13.5	1.85	6287' - 17098'	1280	25%	Class H: Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

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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.

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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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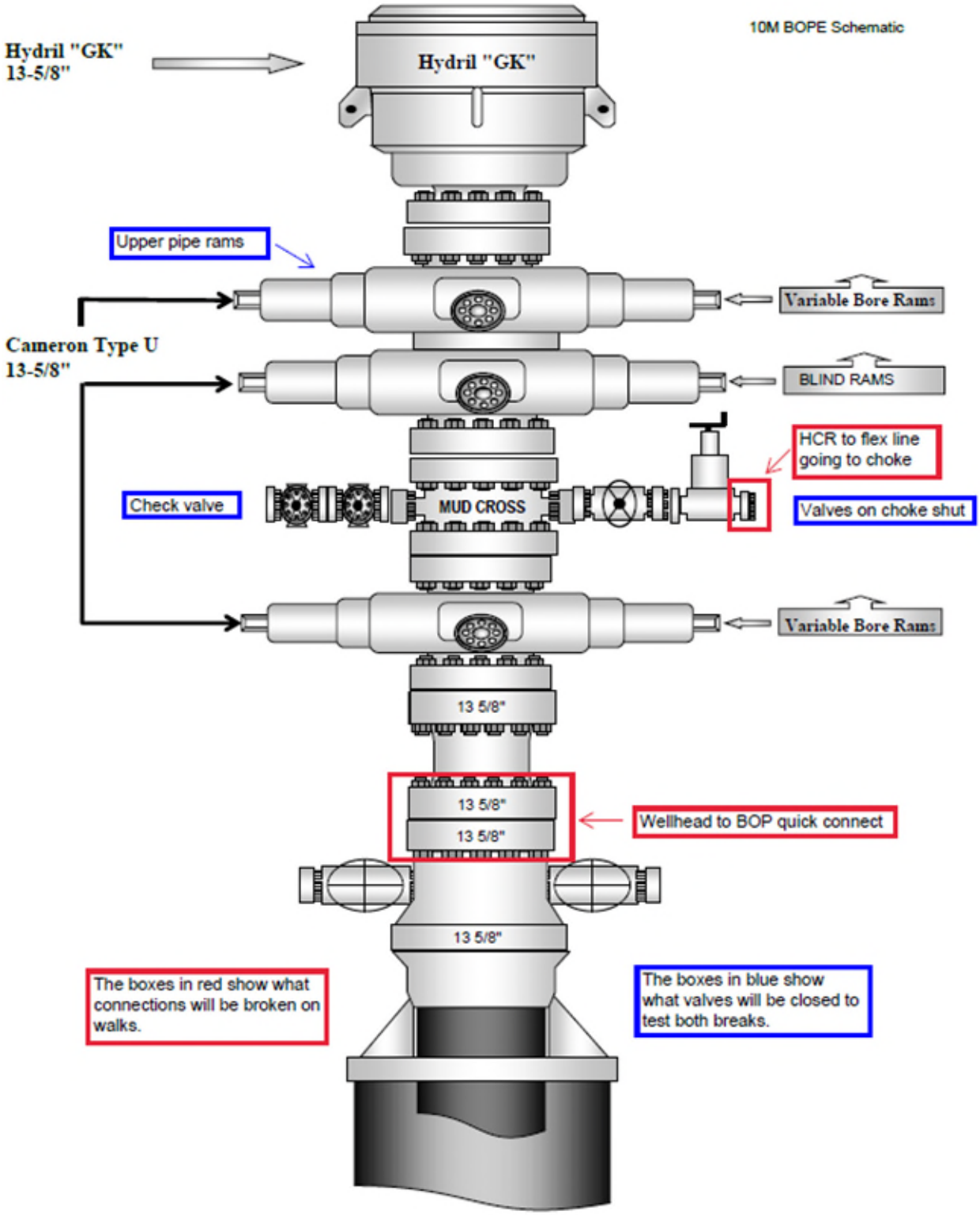

Figure 1. BOP diagram

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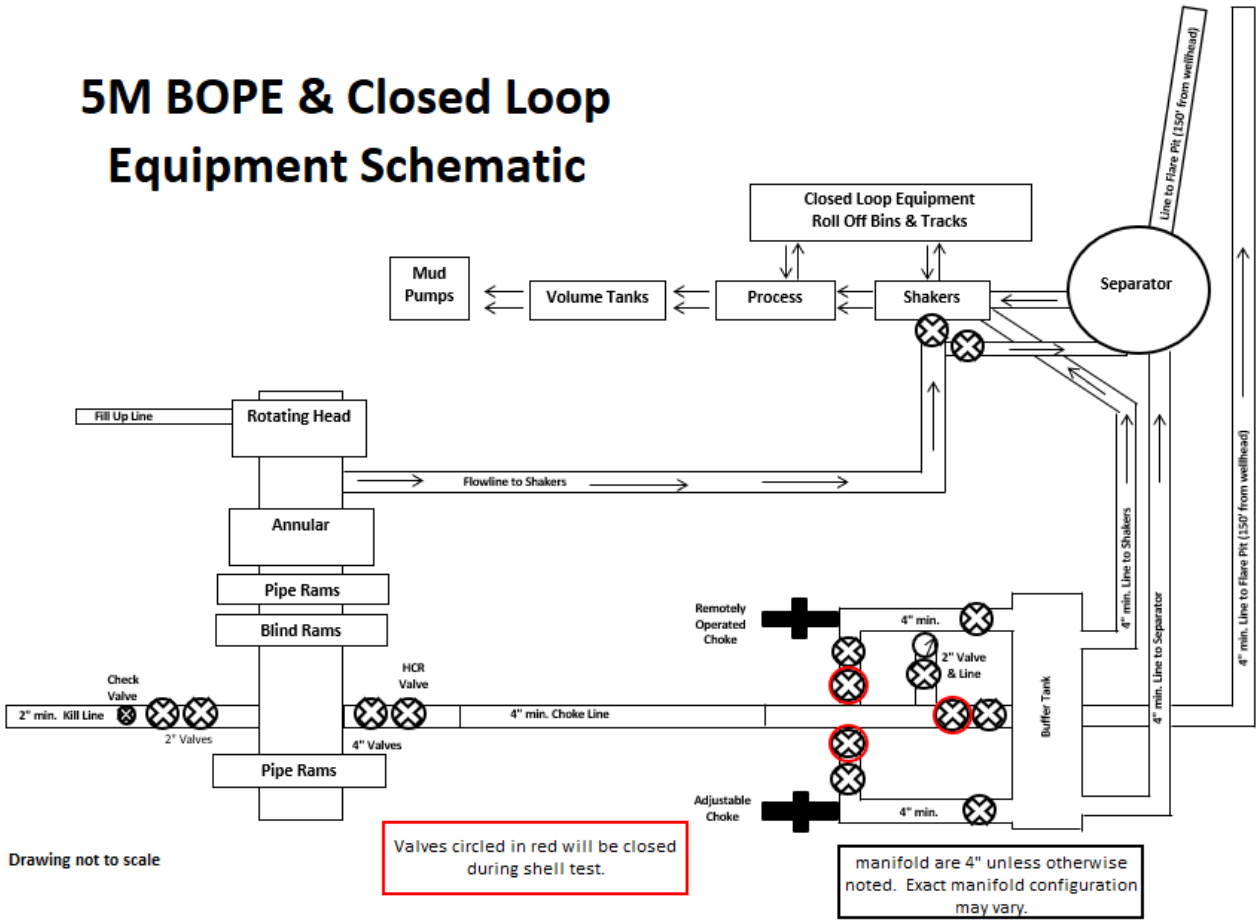

Figure 2. BOPE diagram

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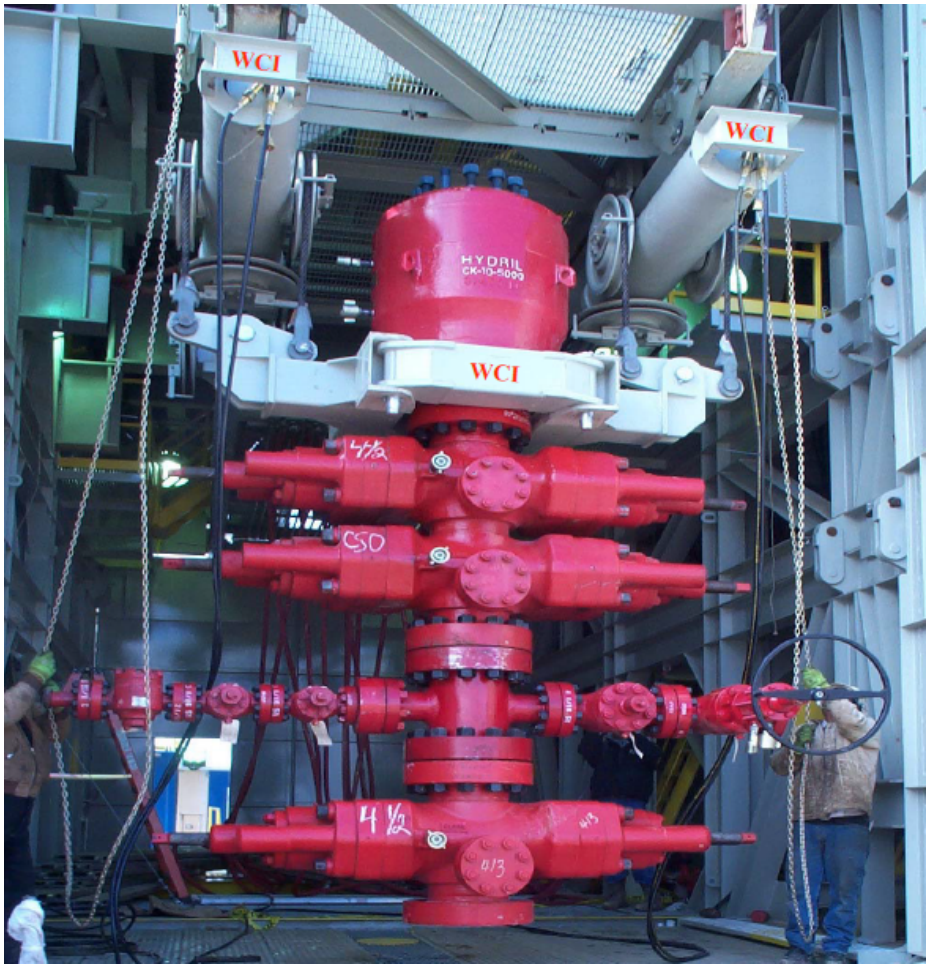

Figure 3. BOP handling system

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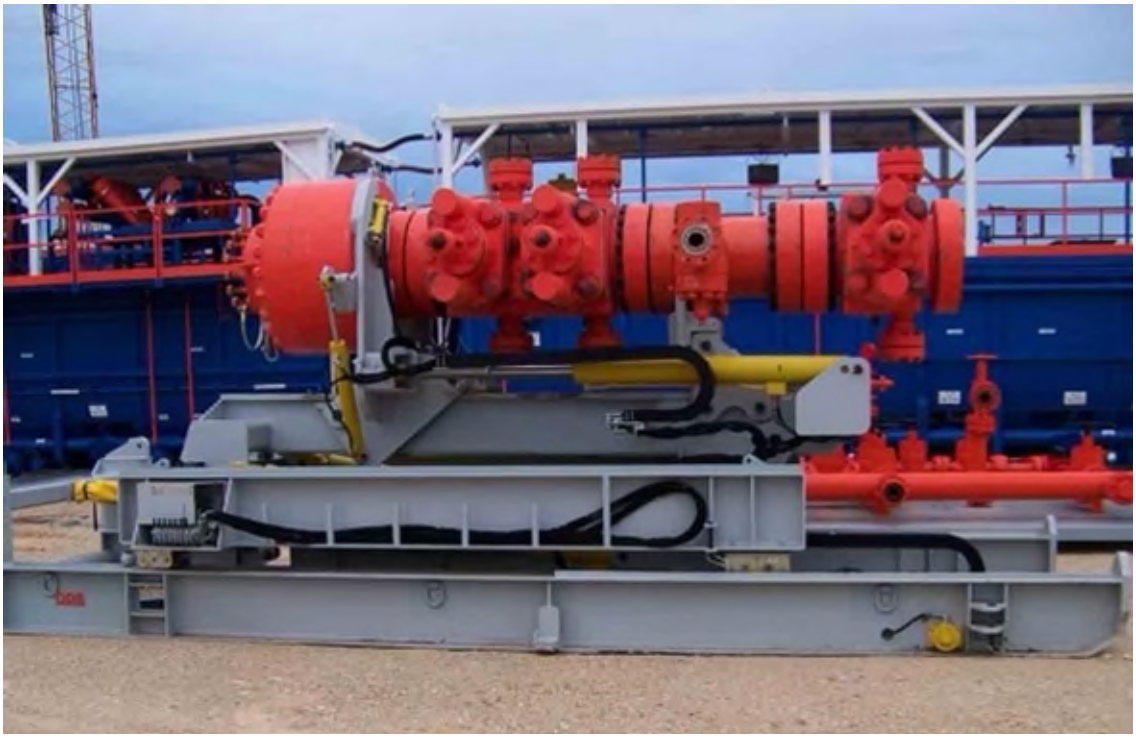

Figure 4. BOP handling system

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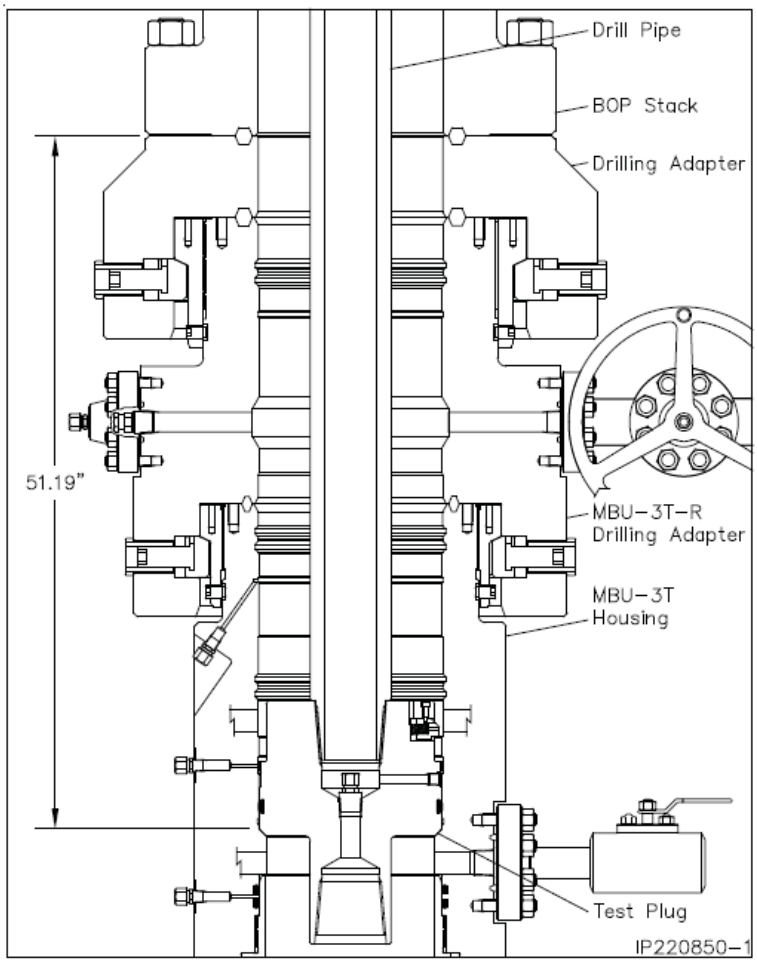

Figure 5. Cactus 5M wellhead with BOP quick connect

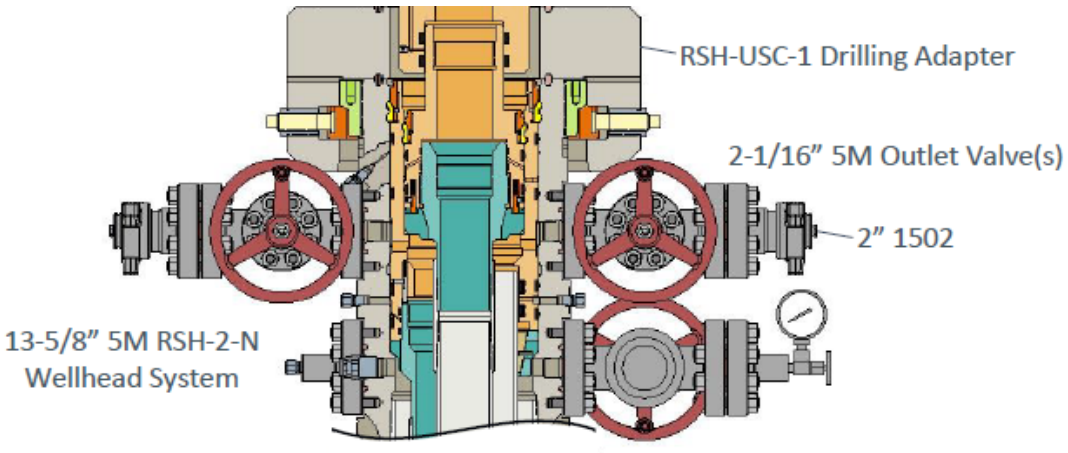

Figure 6. Vault 5M wellhead with BOP quick connect

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Surface & Intermediate Offline Cementing Variance

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

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

Surface Casing Order of Operations:

1. Run 13 3/8" surface casing as per normal operations (TPGS and float collar).
2. Perform negative pressure test to confirm integrity of float equipment while running casing.
3. Confirm well is static.
4. Make up 13 ⅝" wellhead or wellhead landing ring assembly and land on 20" conductor.
5. Fill pipe, circulate casing capacity and confirm float(s) are still holding.
6. Confirm well is static.
7. Back out landing joint and pull to rig floor. Lay down landing joint.
8. Walk rig to next well on pad with cement crew standing by to rig up.
9. Make up offline cement tool with forklift per wellhead manufacturer (Fig. 1 & 2).
10. Make up cement head on top of offline cement tool with forklift.
11. Commence cement operations.
12. If cement circulates, confirm well is static and proceed to step 16.
13. If cement does not circulate, notify the appropriate BLM office, wait a minimum of six hours, and run a temperature survey to determine the top of cement.
14. Use 1" pipe for remedial cement job until the surface casing is cemented to surface.
15. Confirm well is static.
16. Once cement job is complete, the cement head and offline cementing tool are removed. The wellhead technician returns to cellar to install wellhead/valves.
17. Install wellhead capping flange.

Barriers

Before Walk:

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

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After Walk:

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

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

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

Barriers

Before Walk:

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

After Walk:

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

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Intermediate Casing Order of Operations:

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

Barriers

Before Nipple Down:

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

After Nipple Down:

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

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Risks:

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

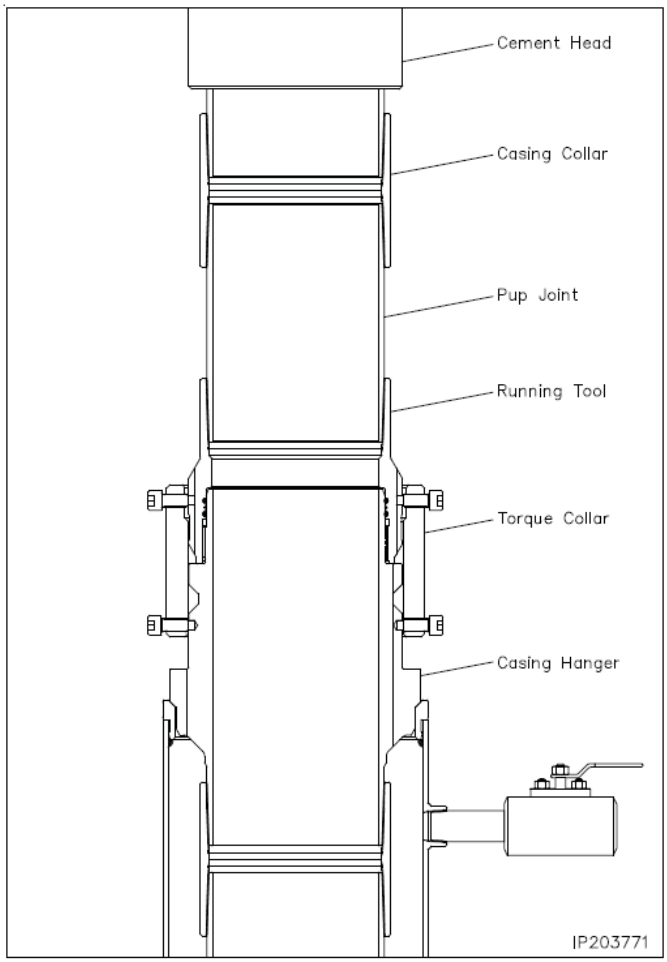

Figure 1. Cactus 13 3/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8" pup joint and casing.

MEWBOURNE
OIL COMPANY

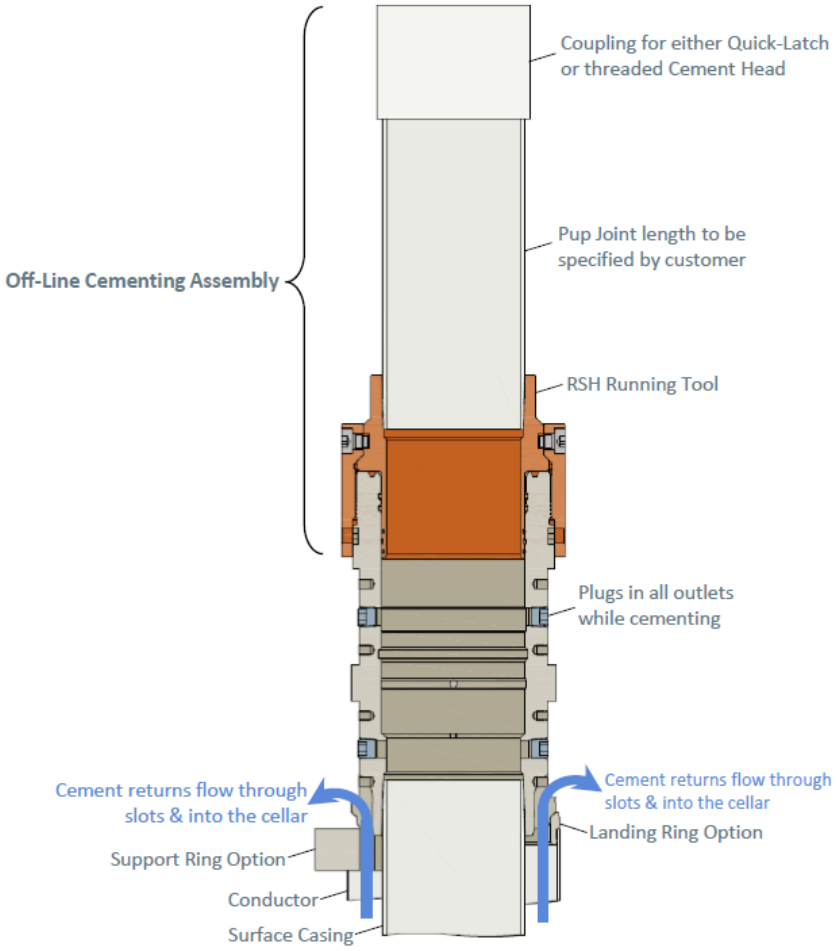

Figure 2. Vault 13 3/8” 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 13 3/8” pup joint and casing.

MEWBOURNE
OIL COMPANY

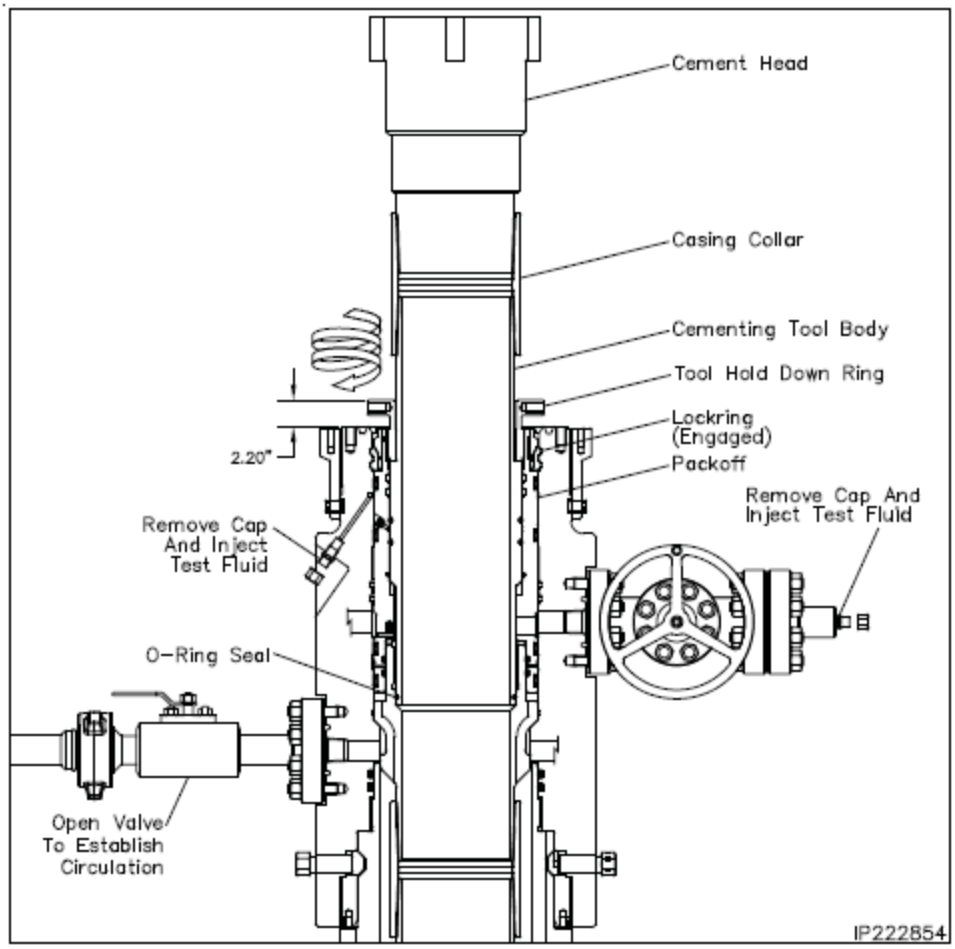

Figure 3. Cactus 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

MEWBOURNE
OIL COMPANY

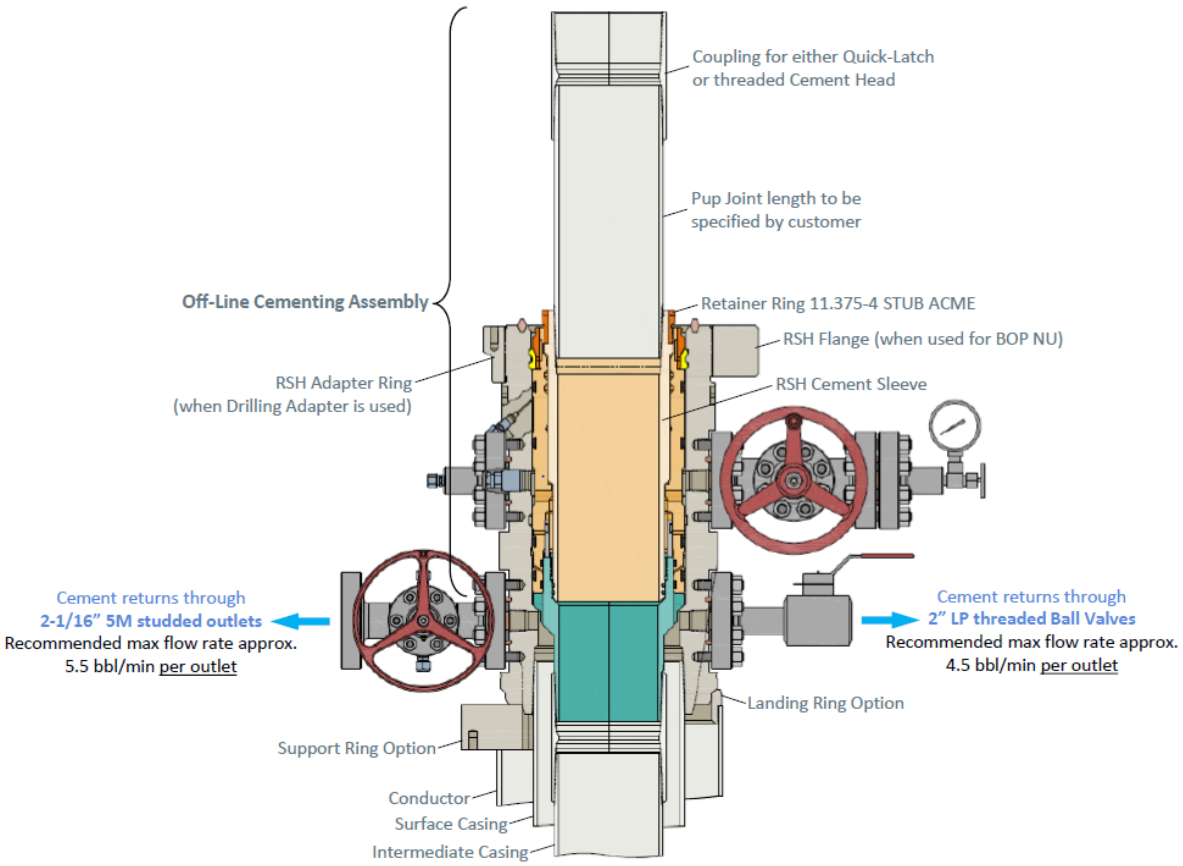

Figure 4. Vault 9 5/8" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 9 5/8" pup joint and casing.

MEWBOURNE
OIL COMPANY

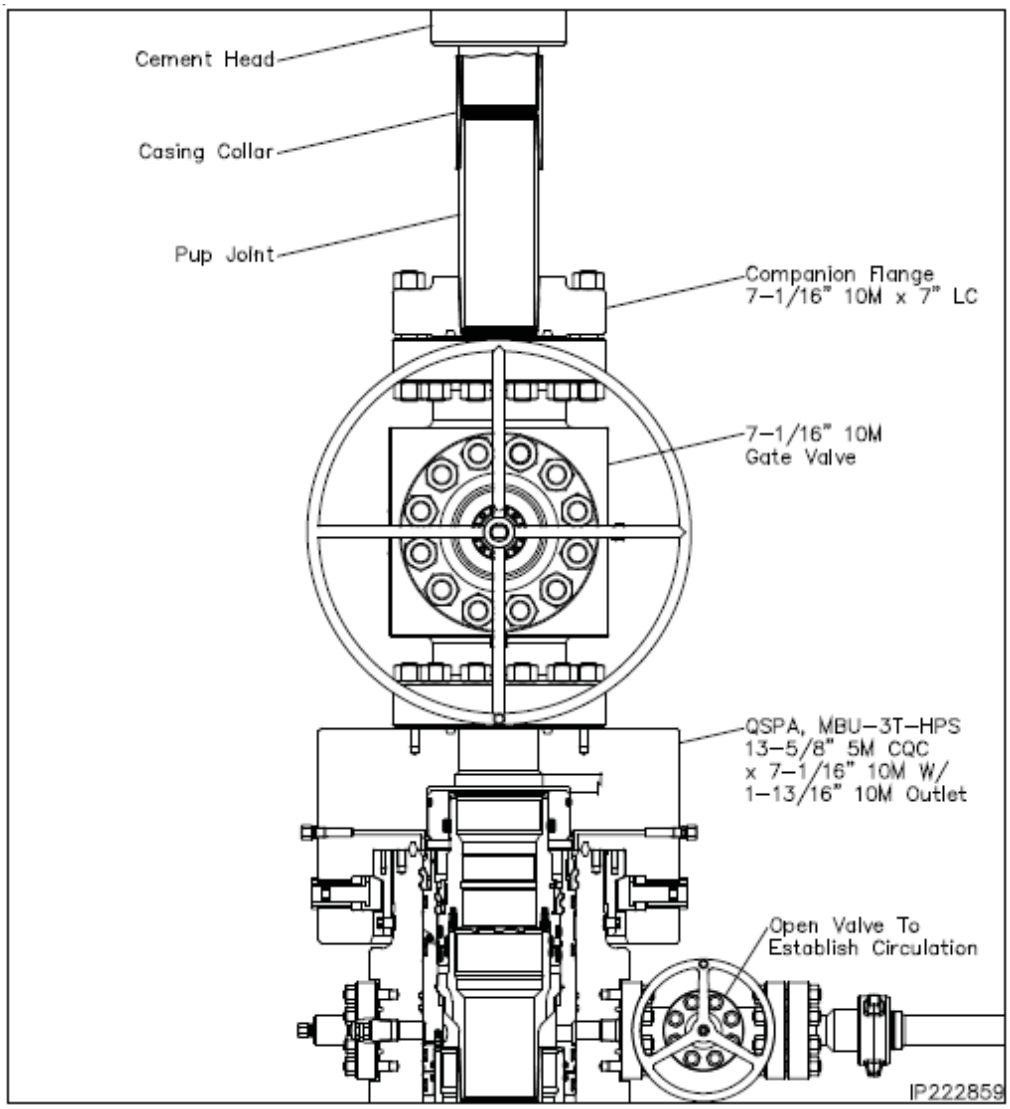

Figure 5. Cactus 7” 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7” pup joint and casing.

MEWBOURNE
OIL COMPANY

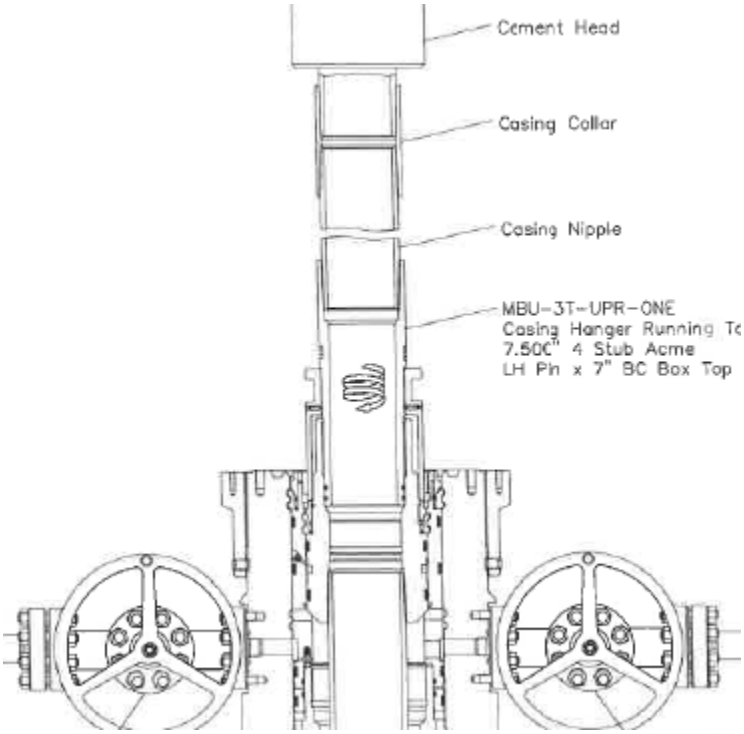

Figure 6. Cactus 7” 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7” pup joint and casing.

MEWBOURNE OIL COMPANY

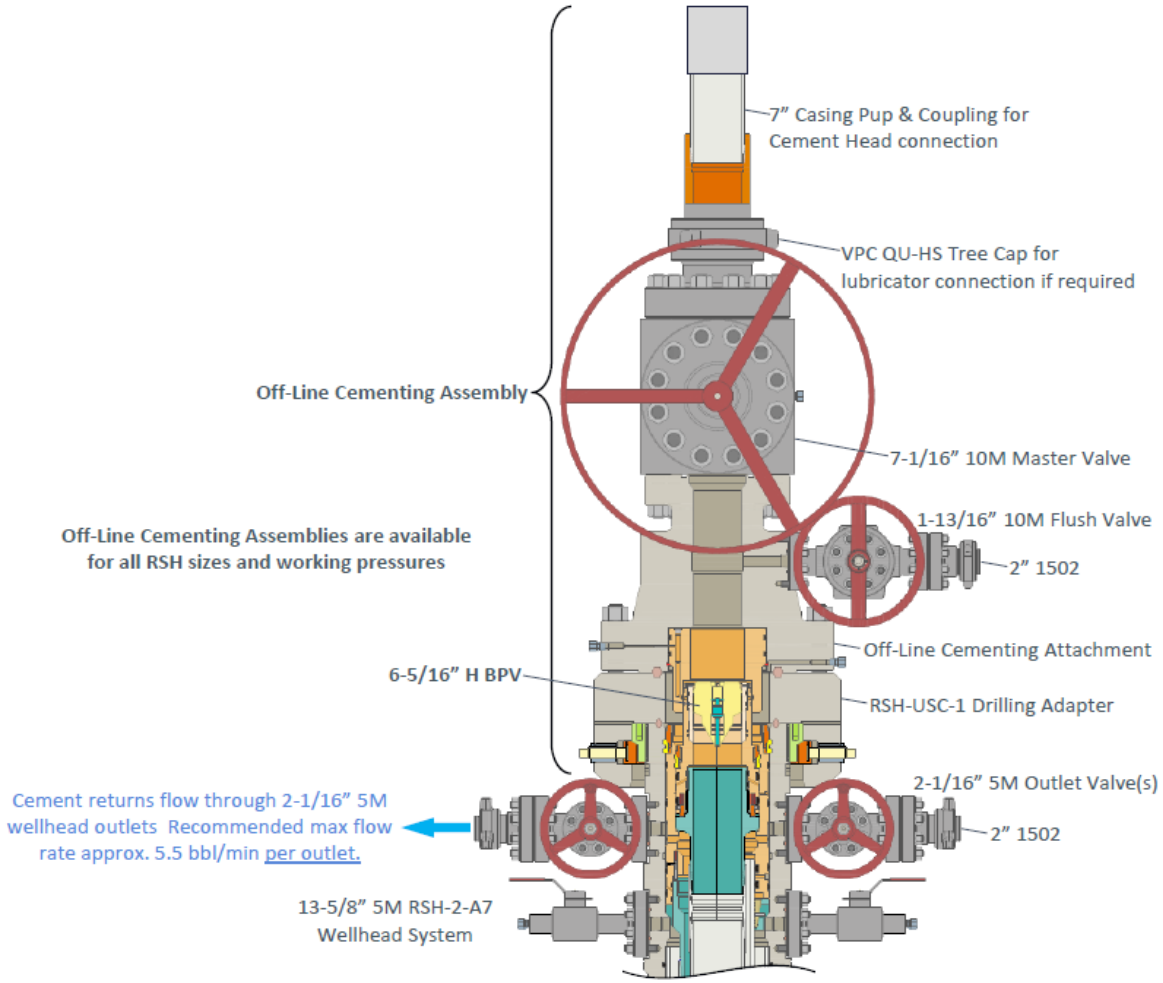

Figure 7. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

MEWBOURNE
OIL COMPANY

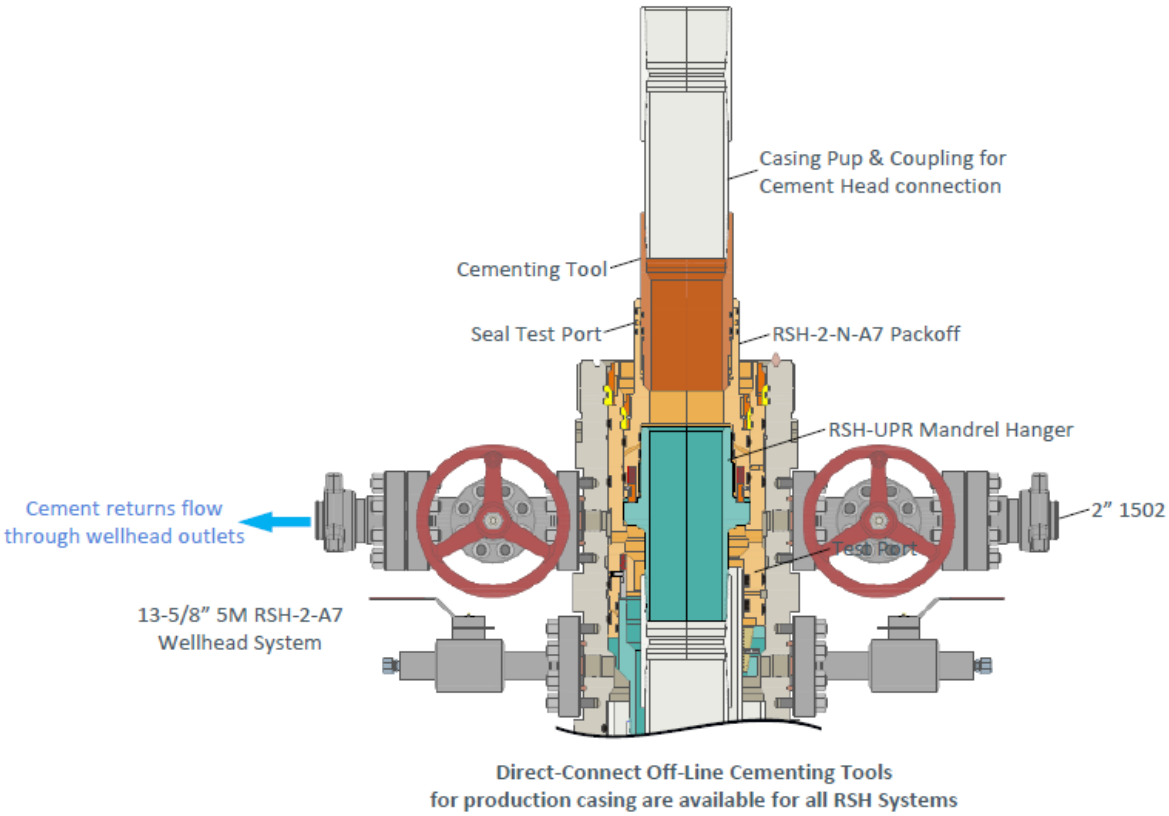

Figure 8. Vault 7" 5M offline cementing tool. Pressure rating limited by the lesser of 5M tool rating or the 7" pup joint and casing.

MEWBOURNE
OIL COMPANY

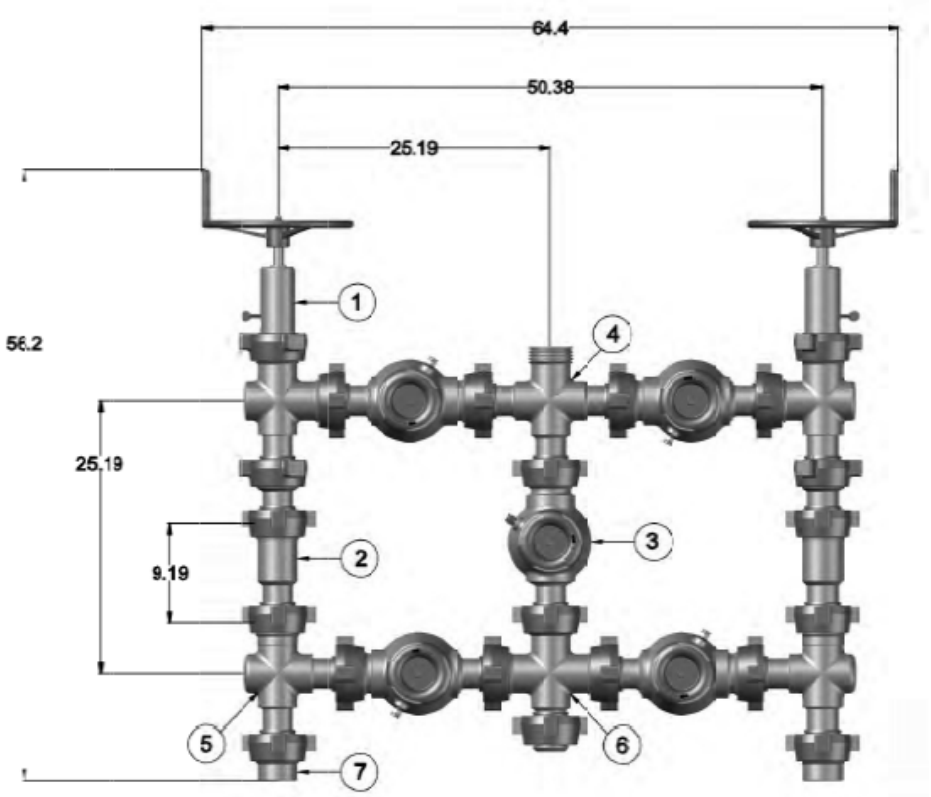

Figure 9. Five valve 15k choke manifold.

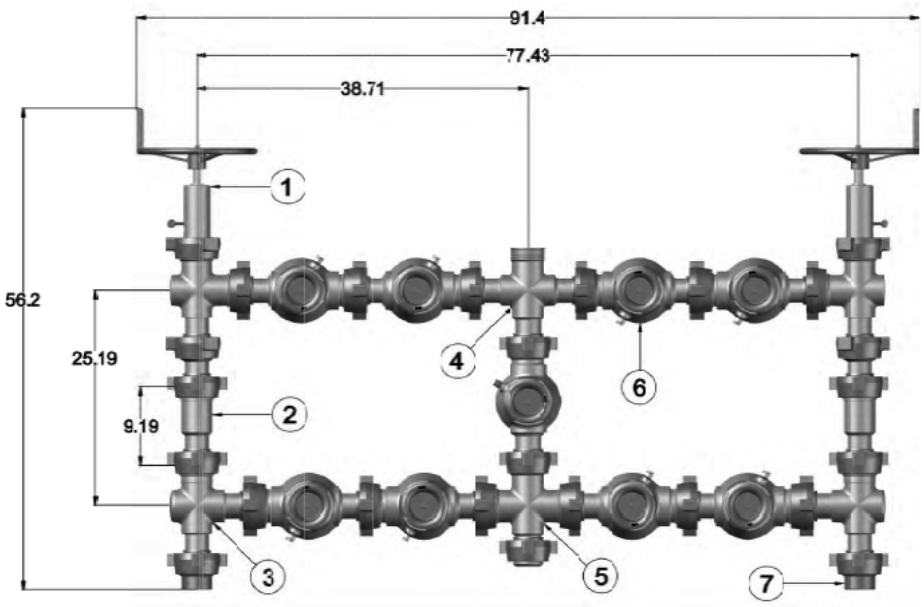

Figure 10. Nine valve 15k choke manifold.

Mewbourne Oil Company

Eddy County, New Mexico NAD 83
Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL & 260' FEL (Sec 21)
BHL: 1980' FNL & 100' FEL (Sec 20)

Plan: Design #1

Standard Planning Report

10 April, 2024

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Wine Mixer 21/20 Fed Com #524H
Company:	Mewbourne Oil Company	**TVD Reference:**	Well @ 3298.0usft (Original Well)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	Well @ 3298.0usft (Original Well)
Site:	Wine Mixer 21/20 Fed Com #524H	**North Reference:**	Grid
Well:	Sec 21, T20S, R27E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1980' FNL & 100' FEL (Sec 20)		
Design:	Design #1		

Project Eddy County, New Mexico NAD 83

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

Site Wine Mixer 21/20 Fed Com #524H

Site Position:		**Northing:**	567,598.90 usft	**Latitude:**	32.5603735
From:	Map	**Easting:**	558,259.60 usft	**Longitude:**	-104.2784071
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well Sec 21, T20S, R27E

Well Position	**+N/-S**	0.0 usft	**Northing:**	567,598.90 usft	**Latitude:**	32.5603735
	+E/-W	0.0 usft	**Easting:**	558,259.60 usft	**Longitude:**	-104.2784071
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	3,298.0 usft	**Ground Level:**	3,270.0 usft
Grid Convergence:		0.03 °				

Wellbore BHL: 1980' FNL & 100' FEL (Sec 20)

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/31/2014	7.50	60.29	48,363.08781512

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	271.42

Plan Survey Tool Program **Date** 4/10/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	17,097.6	Design #1 (BHL: 1980' FNL & 100		

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
661.8	3.24	52.33	661.7	2.8	3.6	2.00	2.00	0.00	52.33	
6,125.1	3.24	52.33	6,116.3	191.2	247.7	0.00	0.00	0.00	0.00	
6,286.9	0.00	0.00	6,278.0	194.0	251.3	2.00	-2.00	0.00	180.00	KOP: 1980' FNL & 10'
7,205.3	91.79	270.33	6,851.0	197.4	-339.9	9.99	9.99	0.00	-89.67	
17,097.6	91.79	270.33	6,542.0	253.6	-10,227.2	0.00	0.00	0.00	0.00	BHL: 1980' FNL & 10(

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Wine Mixer 21/20 Fed Com #524H
Company:	Mewbourne Oil Company	**TVD Reference:**	Well @ 3298.0usft (Original Well)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	Well @ 3298.0usft (Original Well)
Site:	Wine Mixer 21/20 Fed Com #524H	**North Reference:**	Grid
Well:	Sec 21, T20S, R27E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1980' FNL & 100' FEL (Sec 20)		
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: 2175' FNL & 260' FEL (Sec 21)									
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	2.00	52.33	600.0	1.1	1.4	-1.4	2.00	2.00	0.00
661.8	3.24	52.33	661.7	2.8	3.6	-3.5	2.00	2.00	0.00
700.0	3.24	52.33	699.9	4.1	5.3	-5.2	0.00	0.00	0.00
800.0	3.24	52.33	799.7	7.6	9.8	-9.6	0.00	0.00	0.00
900.0	3.24	52.33	899.5	11.0	14.3	-14.0	0.00	0.00	0.00
1,000.0	3.24	52.33	999.4	14.5	18.7	-18.4	0.00	0.00	0.00
1,100.0	3.24	52.33	1,099.2	17.9	23.2	-22.7	0.00	0.00	0.00
1,200.0	3.24	52.33	1,199.1	21.4	27.7	-27.1	0.00	0.00	0.00
1,300.0	3.24	52.33	1,298.9	24.8	32.1	-31.5	0.00	0.00	0.00
1,400.0	3.24	52.33	1,398.7	28.3	36.6	-35.9	0.00	0.00	0.00
1,500.0	3.24	52.33	1,498.6	31.7	41.1	-40.3	0.00	0.00	0.00
1,600.0	3.24	52.33	1,598.4	35.1	45.5	-44.6	0.00	0.00	0.00
1,700.0	3.24	52.33	1,698.3	38.6	50.0	-49.0	0.00	0.00	0.00
1,800.0	3.24	52.33	1,798.1	42.0	54.5	-53.4	0.00	0.00	0.00
1,900.0	3.24	52.33	1,897.9	45.5	58.9	-57.8	0.00	0.00	0.00
2,000.0	3.24	52.33	1,997.8	48.9	63.4	-62.2	0.00	0.00	0.00
2,100.0	3.24	52.33	2,097.6	52.4	67.9	-66.5	0.00	0.00	0.00
2,200.0	3.24	52.33	2,197.5	55.8	72.3	-70.9	0.00	0.00	0.00
2,300.0	3.24	52.33	2,297.3	59.3	76.8	-75.3	0.00	0.00	0.00
2,400.0	3.24	52.33	2,397.1	62.7	81.3	-79.7	0.00	0.00	0.00
2,500.0	3.24	52.33	2,497.0	66.2	85.7	-84.1	0.00	0.00	0.00
2,600.0	3.24	52.33	2,596.8	69.6	90.2	-88.4	0.00	0.00	0.00
2,700.0	3.24	52.33	2,696.7	73.1	94.7	-92.8	0.00	0.00	0.00
2,800.0	3.24	52.33	2,796.5	76.5	99.1	-97.2	0.00	0.00	0.00
2,900.0	3.24	52.33	2,896.3	80.0	103.6	-101.6	0.00	0.00	0.00
3,000.0	3.24	52.33	2,996.2	83.4	108.1	-106.0	0.00	0.00	0.00
3,100.0	3.24	52.33	3,096.0	86.9	112.5	-110.4	0.00	0.00	0.00
3,200.0	3.24	52.33	3,195.9	90.3	117.0	-114.7	0.00	0.00	0.00
3,300.0	3.24	52.33	3,295.7	93.8	121.5	-119.1	0.00	0.00	0.00
3,400.0	3.24	52.33	3,395.5	97.2	125.9	-123.5	0.00	0.00	0.00
3,500.0	3.24	52.33	3,495.4	100.7	130.4	-127.9	0.00	0.00	0.00
3,600.0	3.24	52.33	3,595.2	104.1	134.9	-132.3	0.00	0.00	0.00
3,700.0	3.24	52.33	3,695.1	107.6	139.3	-136.6	0.00	0.00	0.00
3,800.0	3.24	52.33	3,794.9	111.0	143.8	-141.0	0.00	0.00	0.00
3,900.0	3.24	52.33	3,894.8	114.5	148.3	-145.4	0.00	0.00	0.00
4,000.0	3.24	52.33	3,994.6	117.9	152.7	-149.8	0.00	0.00	0.00
4,100.0	3.24	52.33	4,094.4	121.4	157.2	-154.2	0.00	0.00	0.00
4,200.0	3.24	52.33	4,194.3	124.8	161.7	-158.5	0.00	0.00	0.00
4,300.0	3.24	52.33	4,294.1	128.3	166.1	-162.9	0.00	0.00	0.00
4,400.0	3.24	52.33	4,394.0	131.7	170.6	-167.3	0.00	0.00	0.00
4,500.0	3.24	52.33	4,493.8	135.2	175.1	-171.7	0.00	0.00	0.00
4,600.0	3.24	52.33	4,593.6	138.6	179.6	-176.1	0.00	0.00	0.00
4,700.0	3.24	52.33	4,693.5	142.1	184.0	-180.4	0.00	0.00	0.00
4,800.0	3.24	52.33	4,793.3	145.5	188.5	-184.8	0.00	0.00	0.00
4,900.0	3.24	52.33	4,893.2	149.0	193.0	-189.2	0.00	0.00	0.00
5,000.0	3.24	52.33	4,993.0	152.4	197.4	-193.6	0.00	0.00	0.00
5,100.0	3.24	52.33	5,092.8	155.9	201.9	-198.0	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Wine Mixer 21/20 Fed Com #524H
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Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	Well @ 3298.0usft (Original Well)
Site:	Wine Mixer 21/20 Fed Com #524H	**North Reference:**	Grid
Well:	Sec 21, T20S, R27E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1980' FNL & 100' FEL (Sec 20)		
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	3.24	52.33	5,192.7	159.3	206.4	-202.3	0.00	0.00	0.00
5,300.0	3.24	52.33	5,292.5	162.8	210.8	-206.7	0.00	0.00	0.00
5,400.0	3.24	52.33	5,392.4	166.2	215.3	-211.1	0.00	0.00	0.00
5,500.0	3.24	52.33	5,492.2	169.7	219.8	-215.5	0.00	0.00	0.00
5,600.0	3.24	52.33	5,592.0	173.1	224.2	-219.9	0.00	0.00	0.00
5,700.0	3.24	52.33	5,691.9	176.5	228.7	-224.2	0.00	0.00	0.00
5,800.0	3.24	52.33	5,791.7	180.0	233.2	-228.6	0.00	0.00	0.00
5,900.0	3.24	52.33	5,891.6	183.4	237.6	-233.0	0.00	0.00	0.00
6,000.0	3.24	52.33	5,991.4	186.9	242.1	-237.4	0.00	0.00	0.00
6,100.0	3.24	52.33	6,091.2	190.3	246.6	-241.8	0.00	0.00	0.00
6,125.1	3.24	52.33	6,116.3	191.2	247.7	-242.9	0.00	0.00	0.00
6,200.0	1.74	52.33	6,191.1	193.2	250.3	-245.4	2.00	-2.00	0.00
6,286.9	0.00	0.00	6,278.0	194.0	251.3	-246.4	2.00	-2.00	0.00
KOP: 1980' FNL & 10' FEL (Sec 21)									
6,300.0	1.31	270.33	6,291.1	194.0	251.1	-246.3	9.99	9.99	0.00
6,350.0	6.31	270.33	6,341.0	194.0	247.8	-242.9	9.99	9.99	0.00
6,400.0	11.31	270.33	6,390.4	194.1	240.2	-235.3	9.99	9.99	0.00
6,450.0	16.30	270.33	6,438.9	194.1	228.2	-223.4	9.99	9.99	0.00
6,500.0	21.30	270.33	6,486.2	194.2	212.1	-207.3	9.99	9.99	0.00
6,550.0	26.30	270.33	6,532.0	194.3	192.0	-187.1	9.99	9.99	0.00
6,600.0	31.29	270.33	6,575.8	194.5	167.9	-163.0	9.99	9.99	0.00
6,612.5	32.54	270.33	6,586.4	194.5	161.3	-156.4	9.99	9.99	0.00
FTP: 1980' FNL & 100' FEL (Sec 21)									
6,650.0	36.29	270.33	6,617.3	194.6	140.1	-135.2	9.99	9.99	0.00
6,700.0	41.29	270.33	6,656.3	194.8	108.8	-103.9	9.99	9.99	0.00
6,750.0	46.29	270.33	6,692.4	195.0	74.2	-69.3	9.99	9.99	0.00
6,800.0	51.28	270.33	6,725.3	195.2	36.6	-31.7	9.99	9.99	0.00
6,850.0	56.28	270.33	6,754.8	195.5	-3.7	8.6	9.99	9.99	0.00
6,900.0	61.28	270.33	6,780.7	195.7	-46.5	51.3	9.99	9.99	0.00
6,950.0	66.27	270.33	6,802.8	195.9	-91.3	96.1	9.99	9.99	0.00
7,000.0	71.27	270.33	6,820.9	196.2	-137.9	142.7	9.99	9.99	0.00
7,050.0	76.27	270.33	6,834.9	196.5	-185.9	190.7	9.99	9.99	0.00
7,100.0	81.27	270.33	6,844.6	196.8	-234.9	239.7	9.99	9.99	0.00
7,150.0	86.26	270.33	6,850.1	197.0	-284.6	289.4	9.99	9.99	0.00
7,187.1	89.97	270.33	6,851.3	197.3	-321.7	326.5	9.99	9.99	0.00
LP: 1980' FNL & 583' FEL (Sec 21)									
7,200.0	91.26	270.33	6,851.1	197.3	-334.6	339.4	9.99	9.99	0.00
7,205.3	91.79	270.33	6,851.0	197.4	-339.9	344.7	9.99	9.99	0.00
7,300.0	91.79	270.33	6,848.0	197.9	-434.5	439.3	0.00	0.00	0.00
7,400.0	91.79	270.33	6,844.9	198.5	-534.5	539.2	0.00	0.00	0.00
7,500.0	91.79	270.33	6,841.8	199.0	-634.4	639.2	0.00	0.00	0.00
7,600.0	91.79	270.33	6,838.7	199.6	-734.4	739.1	0.00	0.00	0.00
7,700.0	91.79	270.33	6,835.5	200.2	-834.3	839.0	0.00	0.00	0.00
7,800.0	91.79	270.33	6,832.4	200.7	-934.3	939.0	0.00	0.00	0.00
7,900.0	91.79	270.33	6,829.3	201.3	-1,034.2	1,038.9	0.00	0.00	0.00
7,929.4	91.79	270.33	6,828.4	201.5	-1,063.6	1,068.3	0.00	0.00	0.00
PPP2: 1980' FNL & 1320' FEL (Sec 21)									
8,000.0	91.79	270.33	6,826.2	201.9	-1,134.2	1,138.8	0.00	0.00	0.00
8,100.0	91.79	270.33	6,823.1	202.4	-1,234.1	1,238.8	0.00	0.00	0.00
8,200.0	91.79	270.33	6,819.9	203.0	-1,334.1	1,338.7	0.00	0.00	0.00
8,300.0	91.79	270.33	6,816.8	203.6	-1,434.0	1,438.6	0.00	0.00	0.00
8,400.0	91.79	270.33	6,813.7	204.2	-1,534.0	1,538.6	0.00	0.00	0.00
8,500.0	91.79	270.33	6,810.6	204.7	-1,633.9	1,638.5	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Wine Mixer 21/20 Fed Com #524H
Company:	Mewbourne Oil Company	**TVD Reference:**	Well @ 3298.0usft (Original Well)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	Well @ 3298.0usft (Original Well)
Site:	Wine Mixer 21/20 Fed Com #524H	**North Reference:**	Grid
Well:	Sec 21, T20S, R27E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1980' FNL & 100' FEL (Sec 20)		
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)
8,600.0	91.79	270.33	6,807.4	205.3	-1,733.9	1,738.4	0.00	0.00	0.00
8,700.0	91.79	270.33	6,804.3	205.9	-1,833.8	1,838.4	0.00	0.00	0.00
8,800.0	91.79	270.33	6,801.2	206.4	-1,933.8	1,938.3	0.00	0.00	0.00
8,900.0	91.79	270.33	6,798.1	207.0	-2,033.7	2,038.2	0.00	0.00	0.00
9,000.0	91.79	270.33	6,794.9	207.6	-2,133.7	2,138.2	0.00	0.00	0.00
9,100.0	91.79	270.33	6,791.8	208.1	-2,233.6	2,238.1	0.00	0.00	0.00
9,200.0	91.79	270.33	6,788.7	208.7	-2,333.6	2,338.0	0.00	0.00	0.00
9,300.0	91.79	270.33	6,785.6	209.3	-2,433.5	2,438.0	0.00	0.00	0.00
9,400.0	91.79	270.33	6,782.4	209.8	-2,533.5	2,537.9	0.00	0.00	0.00
9,500.0	91.79	270.33	6,779.3	210.4	-2,633.4	2,637.8	0.00	0.00	0.00
9,600.0	91.79	270.33	6,776.2	211.0	-2,733.4	2,737.8	0.00	0.00	0.00
9,700.0	91.79	270.33	6,773.1	211.5	-2,833.3	2,837.7	0.00	0.00	0.00
9,800.0	91.79	270.33	6,770.0	212.1	-2,933.3	2,937.6	0.00	0.00	0.00
9,900.0	91.79	270.33	6,766.8	212.7	-3,033.2	3,037.6	0.00	0.00	0.00
10,000.0	91.79	270.33	6,763.7	213.3	-3,133.2	3,137.5	0.00	0.00	0.00
10,100.0	91.79	270.33	6,760.6	213.8	-3,233.1	3,237.4	0.00	0.00	0.00
10,200.0	91.79	270.33	6,757.5	214.4	-3,333.1	3,337.4	0.00	0.00	0.00
10,300.0	91.79	270.33	6,754.3	215.0	-3,433.0	3,437.3	0.00	0.00	0.00
10,400.0	91.79	270.33	6,751.2	215.5	-3,533.0	3,537.2	0.00	0.00	0.00
10,500.0	91.79	270.33	6,748.1	216.1	-3,632.9	3,637.2	0.00	0.00	0.00
10,600.0	91.79	270.33	6,745.0	216.7	-3,732.9	3,737.1	0.00	0.00	0.00
10,700.0	91.79	270.33	6,741.8	217.2	-3,832.8	3,837.0	0.00	0.00	0.00
10,800.0	91.79	270.33	6,738.7	217.8	-3,932.8	3,937.0	0.00	0.00	0.00
10,900.0	91.79	270.33	6,735.6	218.4	-4,032.7	4,036.9	0.00	0.00	0.00
11,000.0	91.79	270.33	6,732.5	218.9	-4,132.7	4,136.8	0.00	0.00	0.00
11,100.0	91.79	270.33	6,729.3	219.5	-4,232.6	4,236.8	0.00	0.00	0.00
11,200.0	91.79	270.33	6,726.2	220.1	-4,332.6	4,336.7	0.00	0.00	0.00
11,300.0	91.79	270.33	6,723.1	220.6	-4,432.5	4,436.6	0.00	0.00	0.00
11,400.0	91.79	270.33	6,720.0	221.2	-4,532.5	4,536.6	0.00	0.00	0.00
11,500.0	91.79	270.33	6,716.8	221.8	-4,632.4	4,636.5	0.00	0.00	0.00
11,600.0	91.79	270.33	6,713.7	222.3	-4,732.4	4,736.4	0.00	0.00	0.00
11,700.0	91.79	270.33	6,710.6	222.9	-4,832.3	4,836.4	0.00	0.00	0.00
11,800.0	91.79	270.33	6,707.5	223.5	-4,932.3	4,936.3	0.00	0.00	0.00
11,900.0	91.79	270.33	6,704.4	224.1	-5,032.2	5,036.2	0.00	0.00	0.00
12,000.0	91.79	270.33	6,701.2	224.6	-5,132.2	5,136.2	0.00	0.00	0.00
12,100.0	91.79	270.33	6,698.1	225.2	-5,232.1	5,236.1	0.00	0.00	0.00
12,200.0	91.79	270.33	6,695.0	225.8	-5,332.1	5,336.0	0.00	0.00	0.00
12,300.0	91.79	270.33	6,691.9	226.3	-5,432.0	5,436.0	0.00	0.00	0.00
12,400.0	91.79	270.33	6,688.7	226.9	-5,532.0	5,535.9	0.00	0.00	0.00
12,500.0	91.79	270.33	6,685.6	227.5	-5,631.9	5,635.8	0.00	0.00	0.00
12,600.0	91.79	270.33	6,682.5	228.0	-5,731.9	5,735.8	0.00	0.00	0.00
12,700.0	91.79	270.33	6,679.4	228.6	-5,831.8	5,835.7	0.00	0.00	0.00
12,800.0	91.79	270.33	6,676.2	229.2	-5,931.8	5,935.6	0.00	0.00	0.00
12,900.0	91.79	270.33	6,673.1	229.7	-6,031.7	6,035.6	0.00	0.00	0.00
13,000.0	91.79	270.33	6,670.0	230.3	-6,131.7	6,135.5	0.00	0.00	0.00
13,100.0	91.79	270.33	6,666.9	230.9	-6,231.6	6,235.4	0.00	0.00	0.00
13,200.0	91.79	270.33	6,663.7	231.4	-6,331.6	6,335.4	0.00	0.00	0.00
13,300.0	91.79	270.33	6,660.6	232.0	-6,431.5	6,435.3	0.00	0.00	0.00
13,400.0	91.79	270.33	6,657.5	232.6	-6,531.5	6,535.2	0.00	0.00	0.00
13,500.0	91.79	270.33	6,654.4	233.1	-6,631.4	6,635.1	0.00	0.00	0.00
13,600.0	91.79	270.33	6,651.3	233.7	-6,731.4	6,735.1	0.00	0.00	0.00
13,700.0	91.79	270.33	6,648.1	234.3	-6,831.3	6,835.0	0.00	0.00	0.00
13,800.0	91.79	270.33	6,645.0	234.9	-6,931.3	6,934.9	0.00	0.00	0.00
13,900.0	91.79	270.33	6,641.9	235.4	-7,031.2	7,034.9	0.00	0.00	0.00

Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Wine Mixer 21/20 Fed Com #524H
Company:	Mewbourne Oil Company	**TVD Reference:**	Well @ 3298.0usft (Original Well)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	Well @ 3298.0usft (Original Well)
Site:	Wine Mixer 21/20 Fed Com #524H	**North Reference:**	Grid
Well:	Sec 21, T20S, R27E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1980' FNL & 100' FEL (Sec 20)		
Design:	Design #1		

Planned Survey

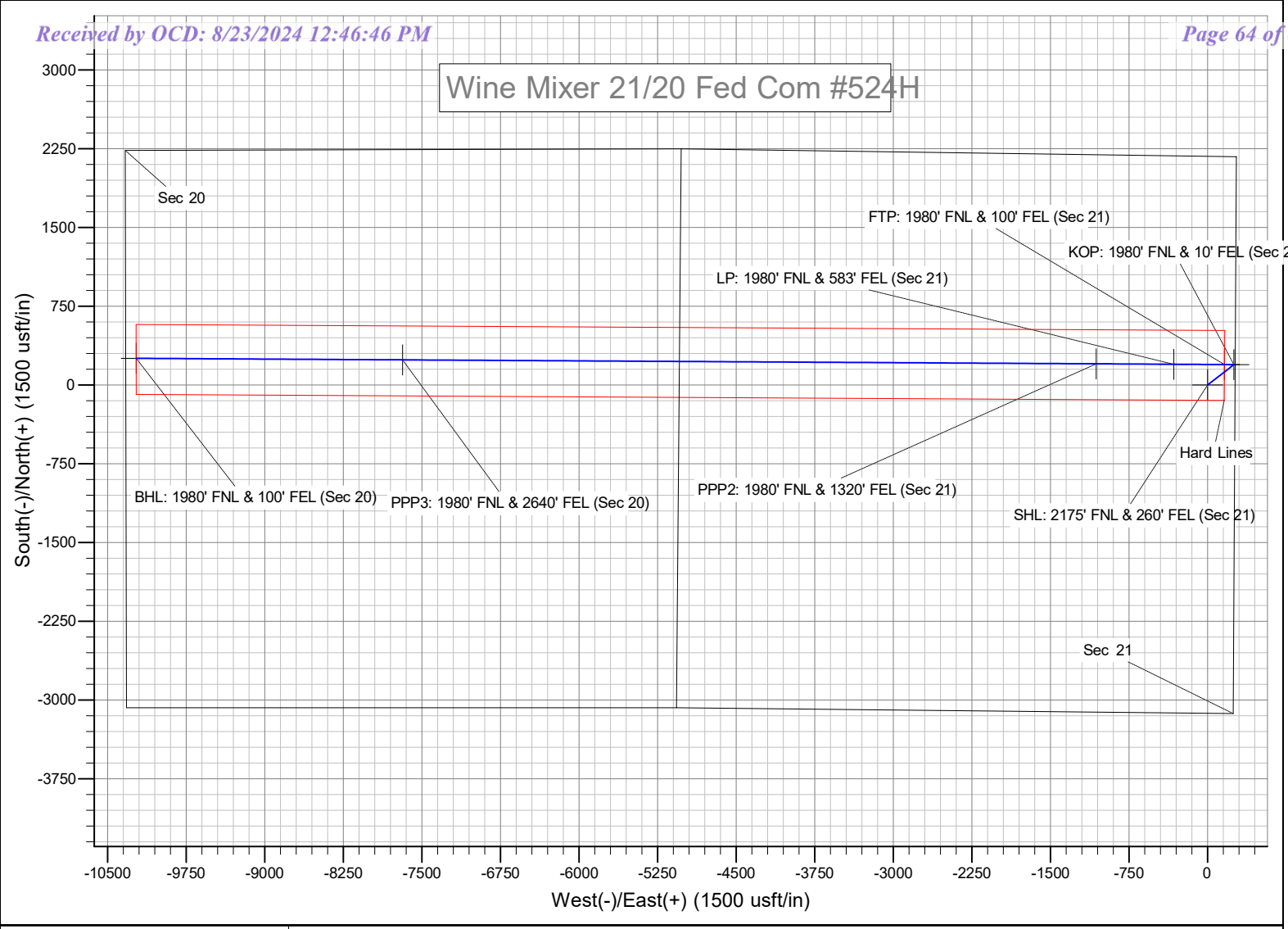
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.0	91.79	270.33	6,638.8	236.0	-7,131.2	7,134.8	0.00	0.00	0.00
14,100.0	91.79	270.33	6,635.6	236.6	-7,231.1	7,234.7	0.00	0.00	0.00
14,200.0	91.79	270.33	6,632.5	237.1	-7,331.1	7,334.7	0.00	0.00	0.00
14,300.0	91.79	270.33	6,629.4	237.7	-7,431.0	7,434.6	0.00	0.00	0.00
14,400.0	91.79	270.33	6,626.3	238.3	-7,531.0	7,534.5	0.00	0.00	0.00
14,500.0	91.79	270.33	6,623.1	238.8	-7,630.9	7,634.5	0.00	0.00	0.00
14,554.1	91.79	270.33	6,621.4	239.1	-7,685.0	7,688.6	0.00	0.00	0.00
PPP3: 1980' FNL & 2640' FEL (Sec 20)									
14,600.0	91.79	270.33	6,620.0	239.4	-7,730.9	7,734.4	0.00	0.00	0.00
14,700.0	91.79	270.33	6,616.9	240.0	-7,830.8	7,834.3	0.00	0.00	0.00
14,800.0	91.79	270.33	6,613.8	240.5	-7,930.8	7,934.3	0.00	0.00	0.00
14,900.0	91.79	270.33	6,610.6	241.1	-8,030.7	8,034.2	0.00	0.00	0.00
15,000.0	91.79	270.33	6,607.5	241.7	-8,130.7	8,134.1	0.00	0.00	0.00
15,100.0	91.79	270.33	6,604.4	242.2	-8,230.6	8,234.1	0.00	0.00	0.00
15,200.0	91.79	270.33	6,601.3	242.8	-8,330.6	8,334.0	0.00	0.00	0.00
15,300.0	91.79	270.33	6,598.2	243.4	-8,430.5	8,433.9	0.00	0.00	0.00
15,400.0	91.79	270.33	6,595.0	243.9	-8,530.5	8,533.9	0.00	0.00	0.00
15,500.0	91.79	270.33	6,591.9	244.5	-8,630.4	8,633.8	0.00	0.00	0.00
15,600.0	91.79	270.33	6,588.8	245.1	-8,730.3	8,733.7	0.00	0.00	0.00
15,700.0	91.79	270.33	6,585.7	245.7	-8,830.3	8,833.7	0.00	0.00	0.00
15,800.0	91.79	270.33	6,582.5	246.2	-8,930.2	8,933.6	0.00	0.00	0.00
15,900.0	91.79	270.33	6,579.4	246.8	-9,030.2	9,033.5	0.00	0.00	0.00
16,000.0	91.79	270.33	6,576.3	247.4	-9,130.1	9,133.5	0.00	0.00	0.00
16,100.0	91.79	270.33	6,573.2	247.9	-9,230.1	9,233.4	0.00	0.00	0.00
16,200.0	91.79	270.33	6,570.0	248.5	-9,330.0	9,333.3	0.00	0.00	0.00
16,300.0	91.79	270.33	6,566.9	249.1	-9,430.0	9,433.3	0.00	0.00	0.00
16,400.0	91.79	270.33	6,563.8	249.6	-9,529.9	9,533.2	0.00	0.00	0.00
16,500.0	91.79	270.33	6,560.7	250.2	-9,629.9	9,633.1	0.00	0.00	0.00
16,600.0	91.79	270.33	6,557.5	250.8	-9,729.8	9,733.1	0.00	0.00	0.00
16,700.0	91.79	270.33	6,554.4	251.3	-9,829.8	9,833.0	0.00	0.00	0.00
16,800.0	91.79	270.33	6,551.3	251.9	-9,929.7	9,932.9	0.00	0.00	0.00
16,900.0	91.79	270.33	6,548.2	252.5	-10,029.7	10,032.9	0.00	0.00	0.00
17,000.0	91.79	270.33	6,545.0	253.0	-10,129.6	10,132.8	0.00	0.00	0.00
17,097.6	91.79	270.33	6,542.0	253.6	-10,227.2	10,230.3	0.00	0.00	0.00
BHL: 1980' FNL & 100' FEL (Sec 20)									

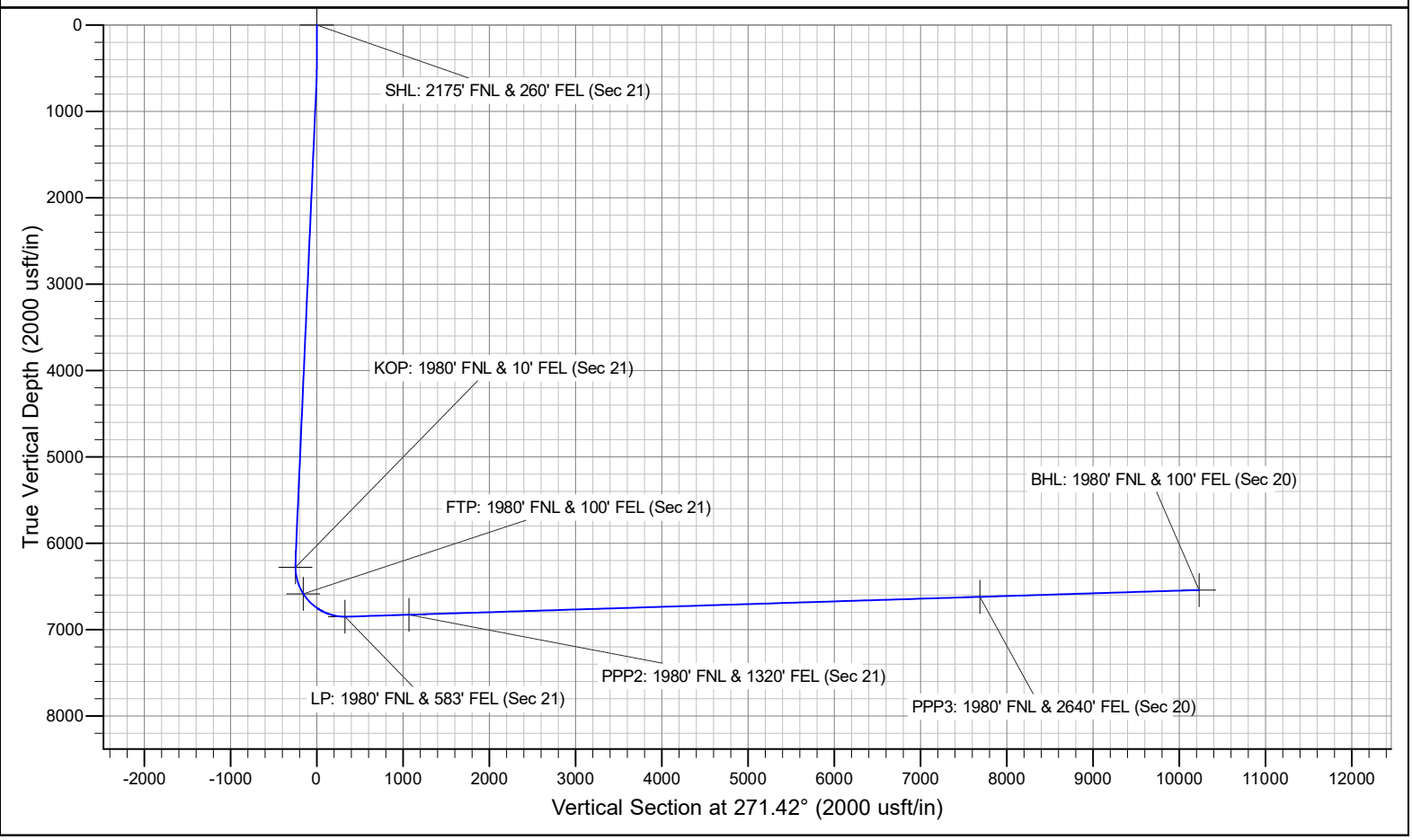
Planning Report

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Wine Mixer 21/20 Fed Com #524H
Company:	Mewbourne Oil Company	**TVD Reference:**	Well @ 3298.0usft (Original Well)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	Well @ 3298.0usft (Original Well)
Site:	Wine Mixer 21/20 Fed Com #524H	**North Reference:**	Grid
Well:	Sec 21, T20S, R27E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 1980' FNL & 100' FEL (Sec 20)		
Design:	Design #1		

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: 2175' FNL & 260' F - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	567,598.90	558,259.60	32.5603735	-104.2784071
KOP: 1980' FNL & 10' FI - plan hits target center - Point	0.00	0.00	6,278.0	194.0	251.3	567,792.90	558,510.90	32.5609064	-104.2775911
BHL: 1980' FNL & 100' F - plan hits target center - Point	0.00	0.00	6,542.0	253.6	-10,227.2	567,852.50	548,032.40	32.5610807	-104.3116027
FTP: 1980' FNL & 100' F - plan hits target center - Point	0.00	0.00	6,586.4	194.5	161.3	567,793.40	558,420.90	32.5609079	-104.2778832
PPP3: 1980' FNL & 264(- plan hits target center - Point	0.00	0.00	6,621.4	239.1	-7,685.0	567,838.04	550,574.58	32.5610392	-104.3033511
PPP2: 1980' FNL & 132(- plan hits target center - Point	0.00	0.00	6,828.4	201.5	-1,063.6	567,800.38	557,195.97	32.5609287	-104.2818592
LP: 1980' FNL & 583' FE - plan hits target center - Point	0.00	0.00	6,851.3	197.3	-321.7	567,796.16	557,937.91	32.5609161	-104.2794509


Wine Mixer 21/20 Fed Com #524H
Sec 20
FTP: 1980' FNL & 100' FEL (Sec 21)
KOP: 1980' FNL & 10' FEL (Sec 21)
LP: 1980' FNL & 583' FEL (Sec 21)
Hard Lines
BHL: 1980' FNL & 100' FEL (Sec 20)
PPP3: 1980' FNL & 2640' FEL (Sec 20)
PPP2: 1980' FNL & 1320' FEL (Sec 21)
SHL: 2175' FNL & 260' FEL (Sec 21)
Sec 21
South(-)/North(+) (1500 usft/in)
West(-)/East(+) (1500 usft/in)


SHL: 2175' FNL & 260' FEL (Sec 21)
KOP: 1980' FNL & 10' FEL (Sec 21)
FTP: 1980' FNL & 100' FEL (Sec 21)
BHL: 1980' FNL & 100' FEL (Sec 20)
PPP2: 1980' FNL & 1320' FEL (Sec 21)
LP: 1980' FNL & 583' FEL (Sec 21)
PPP3: 1980' FNL & 2640' FEL (Sec 20)
True Vertical Depth (2000 usft/in)
Vertical Section at 271.42° (2000 usft/in)

Mewbourne Oil Company, Wine Mixer 21/20 Fed Com #524H
Sec 21, T20S, R27E
SHL: 2175' FNL 260' FEL (Sec 21)
BHL: 1980' FNL 100' FEL (Sec 20)

Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Wine Mixer 21/20 Fed Com	#524H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
H	21	20	27	-	1980'	FNL	10'	FEL	Eddy
Latitude					Longitude				NAD
32.5609064					-104.2775911				83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
H	21	20	27	-	1980'	FNL	100'	FEL	Eddy
Latitude					Longitude				NAD
32.5609079					-104.2778832				83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
E	20	20	27	-	1980'	FNL	100'	FEL	Eddy
Latitude					Longitude				NAD
32.5610807					-104.3116027				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.:	WINE MIXER 21/20 FED COM 524H
APD ID:	10400098310
LOCATION:	Section 21, T.20 S., R.27 E. NMP.
COUNTY:	Eddy County, New Mexico

COA

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

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 Program

1. The **13-3/8** inch surface casing shall be set at approximately **415 ft.** and cemented to the surface. Rustler is at surface; BLM accepts Tansill/Yates as competent bed for surface casing set point for this well. Limited to no Salado salt formation is expected.
    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.

 Approval Date: 08/22/2024

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** inch intermediate casing shall be set in a competent bed at approximately **2,260 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 **Cave/Karst**.

Option 2 (Two-Stage): The operator has proposed utilize a DV tool. Operator may adjust depth of DV tool as long as cement volumes are adjusted accordingly. 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, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst**.

Note: Excess cement for the 2nd stage is below 25%. More cement might be needed.

❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. Operator has proposed to set **7 in.** production casing at approximately **6,287 ft.** (6,278 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:

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

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

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

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 Program

1. The **13-3/8** inch surface casing shall be set at approximately **415 ft.** and cemented to the surface. Rustler is at surface; BLM accepts Tansill/Yates as competent bed for surface casing set point for this well. Limited to no Salado salt formation is expected.
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** inch intermediate casing shall be set in a competent bed at approximately **2,260 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 **Cave/Karst**.

Option 2 (Two-Stage): The operator has proposed utilize a DV tool. Operator may adjust depth of DV tool as long as cement volumes are adjusted accordingly. 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, contact the appropriate BLM office. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to **Cave/Karst**.

Note: Excess cement for the 2nd stage is below 25%. More cement might be needed.

❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. Operator has proposed to set **7 in.** production casing at approximately **7,187 ft.** (6,851 ft. TVD). The minimum required fill of cement behind the **7 in.** production casing is:

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

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

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

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.

Offline Cementing

Operator has been **(Approved)** to pump the proposed cement program offline in the **Surface and intermediate(s) intervals**. Offline cementing should commence within 24 hours of landing the casing for the interval. Notify the BLM 4hrs prior to the commencement of any offline cementing procedure at **Eddy County: 575-361-2822**.

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. Before drilling the surface casing shoe out, the BOP/BOPE shall be pressure-tested in accordance with **title 43 CFR 3172 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 **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**.

- If in the event break testing is not utilized, then a full BOPE test would be conducted.

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 Eddy County Petroleum Engineering Inspection Staff:

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
    a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
    b. When the operator proposes to set surface casing with Spudder Rig

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

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the doghouse or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

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

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing

integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

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

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (Only applies to single stage cement jobs, prior to the cement setting up.)
iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
iv. The test shall be run on a 5000-psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one-hour chart. A circular chart shall have a maximum 2-hour clock. If a twelve hour or twenty-four-

hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

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

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

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

SA 08/13/2024

Hydrogen Sulfide Drilling Operations Plan
Mewbourne Oil Company

1. General Requirements

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

2. Hydrogen Sulfide Training

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

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

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

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

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

3. Hydrogen Sulfide Safety Equipment and Systems

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

1. Well Control Equipment
   - A. Choke manifold with minimum of one adjustable choke/remote choke.
   - B. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
   - C. Auxiliary equipment including annular type blowout preventer.
2. Protective Equipment for Essential Personnel
   Thirty minute self contained work unit located in the dog house and at briefing areas.

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

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

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

4. Mud Program

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

5. Metallurgy

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

6. Communications

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

7. Well Testing

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

8. Emergency Phone Numbers

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

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

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

Wine_Mixer_21_20_Fed_Com___524H_ExistingWellMap_20240430075346.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Battery will be on the existing Wine Mixer location. A buried flexsteel flowline will be installed to the south approximately 2,634'. Line pressure will be 500 PSI.
Production Facilities map:

Wine_Mixer_21_20_Fed_Com__522H_ProductionFacilityMap_20240430111743.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: IRRIGATION

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

Source latitude: 32.536579 **Source longitude:** -104.19403

Source datum: NAD83

Water source permit type: WATER WELL
PRIVATE CONTRACT

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: FEDERAL

Water source volume (barrels): 1940 **Source volume (acre-feet):** 0.2500526

Source volume (gal): 81480

Water source and transportation

Wine_Mixer_21_20_Fed_Com___524H_WaterSourceTransMap_20240430075410.pdf

Water source comments: NONE

New water well? N

New Water Well Info

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche

Construction Materials source location

Wine_Mixer_21_20_Fed_Com___524H_CalicheSourceTransMap_20240430075420.pdf

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drill cuttings

Amount of waste: 940 barrels

Waste disposal frequency : One Time Only

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

Safe containmant attachment:

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

Disposal type description:

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

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

Waste type: SEWAGE

Waste content description: Human waste & grey water

Amount of waste: 1500 gallons

Waste disposal frequency : Weekly

Safe containment description: 2,000 gallon plastic container

Safe containmant attachment:

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

Disposal type description:

Disposal location description: City of Carlsbad Water Treatment facility

Waste type: GARBAGE

Waste content description: Garbage & trash

Amount of waste: 1500 pounds

Waste disposal frequency : One Time Only

Safe containment description: Enclosed trash trailer

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Waste Management facility in Carlsbad.

Reserve Pit

Reserve Pit being used? NO

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

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINE MIXER 21/20 FED COM **Well Number:** 524H

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:

Wine_Mixer_21_20_Fed_Com___524H_WellSiteLayout_20240430075433.pdf

Comments: NONE

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** Wine Mixer 21/20 522H & 524H

Multiple Well Pad Number: 2

Recontouring

Drainage/Erosion control construction: None

Drainage/Erosion control reclamation: None

Well pad proposed disturbance (acres): 5.77	**Well pad interim reclamation (acres):** 1.12	**Well pad long term disturbance (acres):** 4.65
Road proposed disturbance (acres): 0.21	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 0
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 0	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 5.9799999999999995	**Total interim reclamation:** 1.12	**Total long term disturbance:** 4.65

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: 376965
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	8/30/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/30/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	8/30/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/30/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	8/30/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	8/30/2024