Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5. Lease Serial No. NMNM129728 **BUREAU OF LAND MANAGEMENT** APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: FOREIGNER 33/4 W2JO FEE COM 1H / 1b. Type of Well: Oil Well ✓ Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing ✓ Single Zone Multiple Zone FOREIGNER 33/4 WOIP FED COM 2H 9. API Well No. 30 015 48923 2. Name of Operator MEWBOURNE OIL COMPANY 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory PURPLE SAGE/ WOLFCAMP PO Box 5270, Hobbs, NM 88240 (575) 393-5905 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 33/T23S/R28E/NMP At surface NWSE / 2400 FSL / 2180 FEL / LAT 32.2608388 / LONG -104.0908178 At proposed prod. zone SESE / 330 FSL / 1300 FEL / LAT 32.2407688 / LONG -104.0883363 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13. State **EDDY** NM 7 miles 15. Distance from proposed\* 16. No of acres in lease 17. Spacing Unit dedicated to this well 330 feet location to nearest property or lease line, ft. 480.0 (Also to nearest drig. unit line, if any) 18. Distance from proposed location\* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 60 feet 9558 feet / 17258 feet FED: NM1693 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 3080 feet 03/13/2021 60 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the Name (Printed/Typed) Date 25. Signature BRADLEY BISHOP / Ph: (575) 393-5905 02/04/2021 (Electronic Submission) Title Regulatory Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) Cody Layton / Ph: (575) 234-5959 08/13/2021 Title Office Assistant Field Manager Lands & Minerals Carlsbad Field Office Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency

of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



#### 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.

### **Additional Operator Remarks**

#### **Location of Well**

0. SHL: NWSE / 2400 FSL / 2180 FEL / TWSP: 23S / RANGE: 28E / SECTION: 33 / LAT: 32.2608388 / LONG: -104.0908178 ( TVD: 27 feet, MD: 27 feet )
PPP: SENE / 1308 FNL / 1300 FEL / TWSP: 24S / RANGE: 28E / SECTION: 4 / LAT: 32.2506518 / LONG: -104.0881564 ( TVD: 9580 feet, MD: 13663 feet )
PPP: NENE / 0 FNL / 1300 FEL / TWSP: 24S / RANGE: 28E / SECTION: 4 / LAT: 32.2542472 / LONG: -104.0880914 ( TVD: 9588 feet, MD: 12355 feet )
PPP: NESE / 2319 FSL / 1300 FEL / TWSP: 23S / RANGE: 28E / SECTION: 33 / LAT: 32.2606217 / LONG: -104.0879761 ( TVD: 9602 feet, MD: 10035 feet )
BHL: SESE / 330 FSL / 1300 FEL / TWSP: 24S / RANGE: 28E / SECTION: 4 / LAT: 32.2407688 / LONG: -104.0883363 ( TVD: 9558 feet, MD: 17258 feet )

#### **BLM Point of Contact**

Name: PAMELLA HERNANDEZ

Title: LIE

Phone: (575) 234-5954

Email: PHERANDEZ@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.



# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** | Mewbourne Oil Company

**LEASE NO.: | NMNM129728** 

**WELL NAME & NO.:** FOREIGNER 33-4 W0IP FED COM 2H

**SURFACE HOLE FOOTAGE:** 2400'/S & 2180'/E **BOTTOM HOLE FOOTAGE** 330'/S & 1300'/E

**LOCATION:** | Section 33, T.23 S., R.28 E., NMP

**COUNTY:** Eddy County, New Mexico

COA

H2S	○ Yes	No	
Potash	None	© Secretary	○ R-111-P
Cave/Karst Potential	○ Low	• Medium	○ High
Cave/Karst Potential	© Critical		
Variance	© None	Flex Hose	Other Other
Wellhead	Conventional	• Multibowl	○ Both
Other	4 String Area	Capitan Reef	□WIPP
Other	Fluid Filled	Cement Squeeze	Pilot Hole
Special Requirements	Water Disposal	☑ COM	Unit

#### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

#### **B. CASING**

#### **Casing Design:**

- 1. The 13-3/8 inch surface casing shall be set at approximately 350 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - 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 pounds 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 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing which shall be set at approximately 2525 feet is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.
     Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
     Excess cement calculates to 22%, additional cement might be required.
  - ❖ In Medium 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. The minimum required fill of cement behind the 7 inch production casing is:

Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Excess cement calculates to 24%**, additional cement might be

Excess cement calculates to 24%, additional cement might be required.

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

#### 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.

- 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 OOGO2.III.A.2.i must be followed.

# D. SPECIAL REQUIREMENT (S)

#### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, 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)
  - Eddy County
     Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
  - Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

- 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
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 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 dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### 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. <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24</u>

- <u>hours</u>. WOC time will be recorded in the driller's log. The casing intergrity 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 intergrity 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-P 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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 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:
  - 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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. 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.
  - a. 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 when specified), 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).
  - b. 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
  - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- d. 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.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. 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 Onshore Order No. 2.

#### 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.

#### OTA07282021

District I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

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

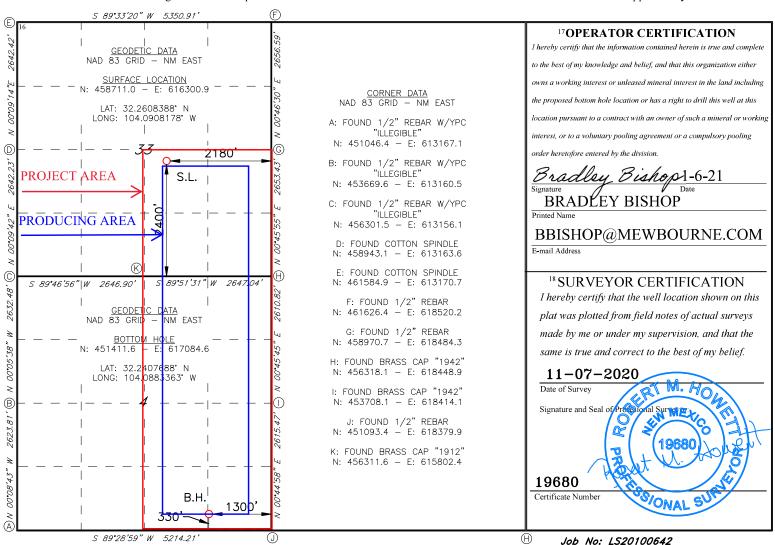
Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

	API Number	r		<sup>2</sup> Pool Code	e		<sup>3</sup> Pool Na	me						
30 015 48	3923			9822	.0	PURPLE :	SAGE; WOL	FCAM	P GAS	POOL				
<sup>4</sup> Property Cod <b>331383</b>	de		FOREIGNER 33/4 WOIP FED COM  6 Well Number 2H											
70GRID 1 14744				8 Operator Name 9 Elevation MEWBOURNE OIL COMPANY 3080'										
		<sup>10</sup> Surface Location												
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/We	st line	County				
J	33	23S	28E		2400	SOUTH	2180	EAS	T	EDDY				
•			11 ]	Bottom H	Hole Location	If Different Fr	om Surface							
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/We	st line	County				
P	4	24S	28E		330 SOUTH 1300 EAST									
12 Dedicated Acres	13 Joint	or Infill 14	Consolidation	Code 15	Order No.				•					
480														

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



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# 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

	N.	ATURAL G	AS MANA	GEMENT P	LAN	
This Natural Gas Manag	ement Plan m	ust be submitted w	ith each Applica	tion for Permit to I	Orill (APD) for a	new or recompleted well,
			1 – Plan D ffective May 25.			
I. Operator:Mev	vbourne (	Oil Co.	OGRID:	14744	Date:	8/13/21
II. Type: 💢 Original 🗆	Amendment	due to □ 19.15.27	.9.D(6)(a) NMA	C 🗆 19.15.27.9.D(	(6)(b) NMAC 🗆 (	Other.
If Other, please describe	£					
III. Well(s): Provide the be recompleted from a s	e following inf ingle well pad	formation for each or connected to a	new or recomple central delivery p	ooint.		be drilled or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Foreigner 33/4 W0IP Fed Com #2H		J 33 23S 28E	2400' FSL x 2180'	FEL 1500	2500	3500
IV. Central Delivery Po V. Anticipated Schedul proposed to be recomple	le: Provide the	Foreigner 33/4 Wo	tion for each nev	v or recompleted w		9.15.27.9(D)(1) NMAC] s proposed to be drilled or
Well Name	API	Spud Date	TD Reached Date	Completion Commencement	II	
Foreigner 33/4 W0IP Fed Com #2H		10/13/21	11/13/21	12/13/21	12/28/	21 12/28/21
VII. Operational Prac Subsection A through F	tices:  Attaction of 19.15.27.8  At Practices: §	h a complete desc NMAC. ☑ Attach a comple	ription of the ac	tions Operator wil	l take to comply	at to optimize gas capture.  with the requirements of tices to minimize venting

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			Enhanced Plan E APRIL 1, 2022								
	2022, an operator th complete this section		with its statewide natural g	as cap	oture requirement for the applicable						
	es that it is not requir t for the applicable re		ction because Operator is in	compl	liance with its statewide natural gas						
IX. Anticipated Na	itural Gas Productio	on:									
W	Vell ell	API	Anticipated Average Natural Gas Rate MCF/E	)	Anticipated Volume of Natural Gas for the First Year MCF						
X. Natural Gas Ga	thering System (NG	GGS):									
Operator	Operator System ULSTR of Tie-in Anticipated Gathering Available Maximum Daily Capacity Start Date of System Segment Tie-in										
production operation the segment or portion the segment or portion.  XII. Line Capacity production volume.  XIII. Line Pressur natural gas gatherin.  Attach Operator.  XIV. Confidential. Section 2 as provide.	ns to the existing or prion of the natural gas  y. The natural gas gat from the well prior to e. Operator  does  g system(s) described s plan to manage pro ity:  Operator assort ed in Paragraph (2) of	planned interconnect of a gathering system(s) to the thering system will to the date of first production and anticipate the date of the da	the natural gas gathering systemhich the well(s) will be conwich which the well(s) will be conwition.  at its existing well(s) connect meet anticipated increases in the increased line pressure.  Suant to Section 71-2-8 NMS 27.9 NMAC, and attaches a second which we will be converted to the control of the c	em(s), nected gather ted to a line	ted pipeline route(s) connecting the and the maximum daily capacity of d.  100% of the anticipated natural gas the same segment, or portion, of the pressure caused by the new well(s).  278 for the information provided in escription of the specific information						

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# Section 3 - Certifications Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal: X 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: power generation on lease; (a) power generation for grid; (b) compression on lease; (c) liquids removal on lease; (d) reinjection for underground storage; (e) reinjection for temporary storage; **(f)** reinjection for enhanced oil recovery; (g)

# Section 4 - Notices

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

other alternative beneficial uses approved by the division.

fuel cell production; and

(h)

(i)

- (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.

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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:	8/13/21
Phone:	575-393-5905
	OIL CONSERVATION DIVISION  (Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of Ap	pproval:

#### 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 pressure venting and flaring, MOC will estimate the volume of vented or flared natural gas. Measuring equipment will conform to industry standards and will not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

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



**APD ID**: 10400067802

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

# Drilling Plan Data Report 08/16/2021

Submission Date: 02/04/2021

Highlighted data reflects the most recent changes

recent changes

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: FOREIGNER 33/4 W0IP FED COM

Well Number: 2H

**Show Final Text** 

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

## **Section 1 - Geologic Formations**

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
1377374	UNKNOWN	3080	28	28	OTHER : Topsoil	NONE	N
1377386	TOP SALT	2140	940	940	SALT	NONE	N
1377375	BOTTOM SALT	690	2390	2390	SALT	NONE	N
1377379	LAMAR	480	2600	2600	LIMESTONE	NATURAL GAS, OIL	N
1377380	BELL CANYON	445	2635	2635	SANDSTONE	NATURAL GAS, OIL	N
1377381	CHERRY CANYON	-390	3470	3470	SANDSTONE	NATURAL GAS, OIL	N
1377382	MANZANITA	-520	3600	3600	LIMESTONE	NATURAL GAS, OIL	N
1377373	BONE SPRING	-3120	6200	6200	LIMESTONE, SHALE	NATURAL GAS, OIL	N
1377376	BONE SPRING 1ST	-4040	7120	7120	SANDSTONE	NATURAL GAS, OIL	N
1377377	BONE SPRING 2ND	-4775	7855	7855	SANDSTONE	NATURAL GAS, OIL	N
1377384	BONE SPRING 3RD	-5930	9010	9010	SANDSTONE	NATURAL GAS, OIL	N
1377385	WOLFCAMP	-6354	9434	9434	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

#### **Section 2 - Blowout Prevention**

Pressure Rating (PSI): 5M Rating Depth: 17258

Equipment: Annular, Pipe Ram, Blind Ram

Requesting Variance? YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. A multi-bowl wellhead is being used. See attached schematic.

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 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

Well Name: FOREIGNER 33/4 WOIP FED COM Well Number: 2H

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. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

#### **Choke Diagram Attachment:**

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_5M\_BOPE\_Choke\_Diagram\_20210204103906.pdf

Foreigner 33 4 WOIP Fed Com 2H Flex Line Specs 20210204103906.pdf

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Flex\_Line\_Specs\_API\_16C\_20210204103907.pdf

#### **BOP Diagram Attachment:**

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Multi\_Bowl\_WH\_20210204103920.pdf

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_5M\_BOPE\_Schematic\_20210204103920.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	525	0	525	3080	2555	525	H-40	48	ST&C	3.21	7.2	DRY	12.7 8	DRY	21.4 7
2	INTERMED IATE	12 <u>.</u> 2 5	9.625	NEW	API	N	0	2525	0	2525	2996	555	2525	J-55	36	LT&C	1.54	2.68	DRY	4.98	DRY	6.2
3	PRODUCTI ON	8.75	7.0	NEW	API	N	0	9700	0	9545	2996	-6465	9700	HCP -110		LT&C	1.32	2.11	DRY	2.75	DRY	3.29
4	LINER	6.12 5	4.5	NEW	API	N	9188	17258	9126	9603	-6046	-6523	8070	P- 110	13.5	LT&C	1.78	2.07	DRY	3.1	DRY	3.87

#### **Casing Attachments**

Well Name: FOREIGNER 33/4 W0IP FED COM Well Number: 2H

Casing	Attac	hment	S
--------	-------	-------	---

Casing ID: 1

String Type: SURFACE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Csg\_assumptions\_20210204103956.pdf

Casing ID: 2

String Type: INTERMEDIATE

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Csg\_assumptions\_20210204104010.pdf

Casing ID: 3

String Type: PRODUCTION

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Csg\_assumptions\_20210204104041.pdf

Well Name: FOREIGNER 33/4 W0IP FED COM Well Number: 2H

#### **Casing Attachments**

Casing ID: 4

String Type:LINER

**Inspection Document:** 

**Spec Document:** 

**Tapered String Spec:** 

Casing Design Assumptions and Worksheet(s):

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Csg\_assumptions\_20210204104110.pdf

### **Section 4 - Cement**

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	333	220	2.12	12.5	466	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail	0	333	525	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	1841	340	2.12	12.5	721	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1841	2525	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	1	2325	7188	430	2.12	12.5	912	25	Class C	Gel, Extender, Salt, LCM
PRODUCTION	Tail		7188	9698	400	1.18	15.6	472	25	Class C	Retarder, Fluid Loss, Defoamer
LINER	Lead		9188	1725 8	320	2.97	11.2	950	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Well Name: FOREIGNER 33/4 W0IP FED COM Well Number: 2H

## **Section 5 - Circulating Medium**

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: Lost circulation material Sweeps Mud scavengers in surface hole

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

### **Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	525	SPUD MUD	8.4	8.8		)					
525	2525	SALT SATURATED	10	10	1						
2525	9545	WATER-BASED MUD	8.6	9.5							
9545	9603	OIL-BASED MUD	10	12							

# Section 6 - Test, Logging, Coring

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

Will run GR/CNL in offset Foreigner 33/4 W0IP Fed Com #1H.

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

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

Coring operation description for the well:

None

Well Name: FOREIGNER 33/4 W0IP FED COM Well Number: 2H

#### **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 5992 Anticipated Surface Pressure: 3879

**Anticipated Bottom Hole Temperature(F): 165** 

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_H2S\_Plan\_20210204104310.pdf

#### **Section 8 - Other Information**

Proposed horizontal/directional/multi-lateral plan submission:

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Dir\_plot\_20210204104336.pdf Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Dir\_plan\_20210204104336.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Foreigner\_33\_4\_W0IP\_Fed\_Com\_2H\_Add\_Info\_20210204104345.pdf

**Other Variance attachment:** 

SL: 2400' FSL & 2180' FEL (Sec 33, T23S, R28E) BHL: 330' FSL & 1300' FEL (Sec 4, T24S, R28E)

Hole	Casing	Interval	Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	525'	13.375"	48	H40	STC	3.21	7.20	12.78	21.47
12.25"	0'	2525'	9.625"	36	J55	LTC	1.54	2.68	4.98	6.20
8.75"	0'	9700'	7"	26	P110	LTC	1.32	2.11	2.75	3.29
6.125"	9188'	17258'	4.5"	13.5	P110	LTC	1.78	2.07	3.10	3.87
				BLM Min	imum Safet	y Factor	1.125	1	1.6 Dry	1.6 Dry
									1.8 Wet	1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	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.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
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?	

SL: 2400' FSL & 2180' FEL (Sec 33, T23S, R28E) BHL: 330' FSL & 1300' FEL (Sec 4, T24S, R28E)

Hole	Casing Interval		Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	525'	13.375"	48	H40	STC	3.21	7.20	12.78	21.47
12.25"	0'	2525'	9.625"	36	J55	LTC	1.54	2.68	4.98	6.20
8.75"	0'	9700'	7"	26	P110	LTC	1.32	2.11	2.75	3.29
6.125"	9188'	17258'	4.5"	13.5	P110	LTC	1.78	2.07	3.10	3.87
				BLM Min	imum Safet	y Factor	1.125	1	1.6 Dry	1.6 Dry
								1.8 Wet	1.8 Wet	

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	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.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
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?	

SL: 2400' FSL & 2180' FEL (Sec 33, T23S, R28E) BHL: 330' FSL & 1300' FEL (Sec 4, T24S, R28E)

Hole	Casing Interval		Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	525'	13.375"	48	H40	STC	3.21	7.20	12.78	21.47
12.25"	0'	2525'	9.625"	36	J55	LTC	1.54	2.68	4.98	6.20
8.75"	0'	9700'	7"	26	P110	LTC	1.32	2.11	2.75	3.29
6.125"	9188'	17258'	4.5"	13.5	P110	LTC	1.78	2.07	3.10	3.87
				BLM Min	imum Safet	y Factor	1.125	1	1.6 Dry	1.6 Dry
									1.8 Wet	1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

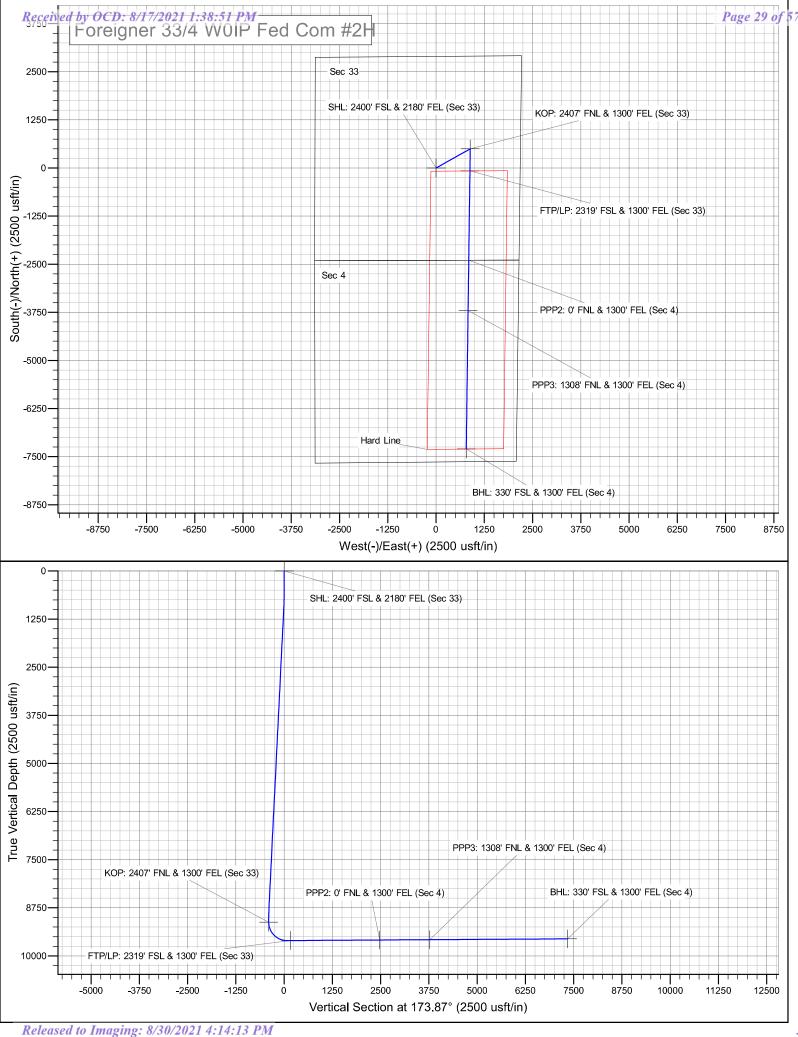
	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Is casing API approved? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards?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

SL: 2400' FSL & 2180' FEL (Sec 33, T23S, R28E) BHL: 330' FSL & 1300' FEL (Sec 4, T24S, R28E)

Hole	Casing Interval		Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	To	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	525'	13.375"	48	H40	STC	3.21	7.20	12.78	21.47
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8.75"	0'	9700'	7"	26	P110	LTC	1.32	2.11	2.75	3.29
6.125"	9188'	17258'	4.5"	13.5	P110	LTC	1.78	2.07	3.10	3.87
				BLM Min	imum Safet	y Factor	1.125	1	1.6 Dry	1.6 Dry
									1.8 Wet	1.8 Wet

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	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	Y
justification (loading assumptions, casing design criteria).	
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the	Y
collapse pressure rating of the casing?	
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	11
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back	
500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
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**

Eddy County, New Mexico NAD 83 Foreigner 33/4 W0IP Fed Com #2H

Sec 33, T23S, R28E

SHL: 2400' FSL & 2180' FEL, Sec 33 BHL: 330' FSL & 1300' FEL, Sec 4

Plan: Design #1

# **Standard Planning Report**

12 January, 2021

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Foreigner 33/4 WOIP Fed Com #2H

Well: Sec 33, T23S, R28E

**Wellbore:** BHL: 330' FSL & 1300' FEL, Sec 4

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Foreigner 33/4 W0IP Fed Com #2H WELL @ 3108.0usft (Original Well Elev) WELL @ 3108.0usft (Original Well Elev)

Grid

Minimum Curvature

Project Eddy County, New Mexico NAD 83

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

System Datum:

Ground Level

Site Foreigner 33/4 W0IP Fed Com #2H

Northing: 458,711.00 usft Site Position: 32.2608388 Latitude: From: Мар Easting: 616,301.00 usft Longitude: -104.0908175 Slot Radius: 13-3/16 " Grid Convergence: 0.13° **Position Uncertainty:** 0.0 usft

Well Sec 33, T23S, R28E

**Well Position** +N/-S 0.0 usft 458,711.00 usft Latitude: 32.2608388 Northing: +E/-W 0.0 usft Easting: 616,301.00 usft Longitude: -104.0908175 0.0 usft Wellhead Elevation: 3,108.0 usft Ground Level: 3,080.0 usft **Position Uncertainty** 

BHL: 330' FSL & 1300' FEL, Sec 4 Wellbore Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 12/31/2014 7.39 60.05 48,205

Design Design #1 Audit Notes: Version: **PROTOTYPE** Tie On Depth: 0.0 Phase: **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°) 0.0 0.0 0.0 173.87

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	
525.0	0.00	0.00	525.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.3	7.13	60.66	999.1	14.5	25.7	1.50	1.50	0.00	60.66	
8,712.8	7.13	60.66	8,651.9	483.5	860.3	0.00	0.00	0.00	0.00	
9,188.1	0.00	0.00	9,126.0	498.0	886.0	1.50	-1.50	0.00	180.00	KOP: 2407' FNL & 13
9,940.3	90.35	180.75	9,603.0	18.1	879.7	12.01	12.01	0.00	-179.25	
17,258.2	90.35	180.75	9,558.0	-7,299.0	784.0	0.00	0.00	0.00	0.00	BHL: 330' FSL & 1300

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83

Site: Foreigner 33/4 W0IP Fed Com #2H

Well: Sec 33, T23S, R28E

Wellbore: BHL: 330' FSL & 1300' FEL, Sec 4

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Site Foreigner 33/4 WOIP Fed Com #2H WELL @ 3108.0usft (Original Well Elev) WELL @ 3108.0usft (Original Well Elev)

Grid

Minimum Curvature

ned Survey									
·			Montic - I			Mantical	Dawie	D	T
Measured Depth (usft)	Inclination	Azimuth	Vertical Depth (usft)	+N/-S	+E/-W	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
`	(°)	(°)	` '	(usft)	(usft)	, ,	,	,	, ,
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	FSL & 2180' FEL	•	100.0	0.0	0.0	2.0	0.00	0.00	2.22
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
300.0 400.0	0.00 0.00	0.00 0.00	300.0 400.0	0.0 0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00 0.00	0.00 0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
525.0	0.00	0.00	525.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	1.13	60.66	600.0	0.4	0.6	-0.3	1.50	1.50	0.00
700.0	2.63	60.66	699.9	2.0	3.5	-1.6 3.0	1.50	1.50	0.00
800.0	4.13	60.66	799.8	4.8	8.6	-3.9	1.50	1.50	0.00
900.0	5.63	60.66	899.4	9.0	16.0	-7.2	1.50	1.50	0.00
1,000.0	7.13	60.66	998.8	14.5	25.7	-11.6	1.50	1.50	0.00
1,000.3	7.13	60.66	999.1	14.5	25.7	-11.6	1.50	1.50	0.00
1,100.0	7.13	60.66	1,098.0	20.5	36.5	-16.5	0.00	0.00	0.00
1,200.0	7.13	60.66	1,197.2	26.6	47.4	-21.4	0.00	0.00	0.00
1,300.0	7.13	60.66	1,296.5	32.7	58.2	-26.3	0.00	0.00	0.00
1,400.0	7.13	60.66	1,395.7	38.8	69.0	-31.2	0.00	0.00	0.00
1,500.0	7.13	60.66	1,494.9	44.9	79.8	-36.1	0.00	0.00	0.00
1,600.0	7.13	60.66	1,594.1	50.9	90.6	-41.0	0.00	0.00	0.00
1,700.0	7.13	60.66	1,693.4	57.0	101.5	-45.9	0.00	0.00	0.00
1,800.0	7.13	60.66	1,792.6	63.1	112.3	-50.8	0.00	0.00	0.00
1,900.0	7.13	60.66	1,891.8	69.2	123.1	-55.6	0.00	0.00	0.00
2,000.0	7.13	60.66	1,991.0	75.3	133.9	-60.5	0.00	0.00	0.00
2,100.0	7.13	60.66	2,090.3	81.4	144.7	-65.4	0.00	0.00	0.00
2,200.0	7.13	60.66	2,189.5	87.4	155.6	-70.3	0.00	0.00	0.00
	7.40							0.00	
2,300.0 2,400.0	7.13 7.13	60.66 60.66	2,288.7 2,388.0	93.5 99.6	166.4 177.2	-75.2 -80.1	0.00 0.00	0.00 0.00	0.00 0.00
2,500.0	7.13	60.66	2,386.0	105.7	188.0	-85.0	0.00	0.00	0.00
2,600.0	7.13	60.66	2,586.4	111.8	198.8	-89.9	0.00	0.00	0.00
2,700.0	7.13	60.66	2,685.6	117.8	209.7	-94.8	0.00	0.00	0.00
2,800.0	7.13	60.66	2,784.9	123.9	220.5	-99.7	0.00	0.00	0.00
2,900.0	7.13	60.66	2,884.1	130.0	231.3	-104.6	0.00	0.00	0.00
3,000.0	7.13	60.66	2,983.3	136.1	242.1	-109.5	0.00	0.00	0.00
3,100.0	7.13	60.66	3,082.5	142.2	252.9	-114.3	0.00	0.00	0.00
3,200.0	7.13	60.66	3,181.8	148.3	263.8	-119.2	0.00	0.00	0.00
3,300.0	7.13	60.66	3,281.0	154.3	274.6	-124.1	0.00	0.00	0.00
3,400.0	7.13	60.66	3,380.2	160.4	285.4	-129.0	0.00	0.00	0.00
3,500.0	7.13	60.66	3,479.4	166.5	296.2	-133.9	0.00	0.00	0.00
3,600.0	7.13	60.66	3,578.7	172.6	307.0	-138.8	0.00	0.00	0.00
3,700.0	7.13	60.66	3,677.9	178.7	317.9	-143.7	0.00	0.00	0.00
3,800.0	7.13	60.66	3,777.1	184.7	328.7	-148.6	0.00	0.00	0.00
3,900.0	7.13	60.66	3,876.4	190.8	339.5	-153.5	0.00	0.00	0.00
4,000.0	7.13	60.66	3,975.6	196.9	350.3	-158.4	0.00	0.00	0.00
4,100.0	7.13	60.66	4,074.8	203.0	361.1	-163.3	0.00	0.00	0.00
4,200.0	7.13	60.66	4,174.0	209.1	372.0	-168.1	0.00	0.00	0.00
4,300.0	7.13	60.66	4,273,3	215.2	382.8	-173.0	0.00	0.00	0.00
4,400.0	7.13	60.66	4,372.5	221.2	393.6	-173.0 -177.9	0.00	0.00	0.00
4,500.0	7.13	60.66	4,471.7	227.3	404.4	-182.8	0.00	0.00	0.00
4,600.0	7.13	60.66	4,570.9	233.4	415.2	-187.7	0.00	0.00	0.00
4,700.0	7.13	60.66	4,670.2	239.5	426.1	-192.6	0.00	0.00	0.00
4,800.0 4,900.0	7.13 7.13	60.66	4,769.4 4,868.6	245.6 251.6	436.9	-197.5 -202.4	0.00	0.00	0.00
	/ 1.3	60.66	4.808.0	201.0	447.7	-202.4	0.00	0.00	0.00

Database: Hobbs

Wellbore:

Company: Mewbourne Oil Company

**Project:** Eddy County, New Mexico NAD 83

BHL: 330' FSL & 1300' FEL, Sec 4

Site: Foreigner 33/4 W0IP Fed Com #2H

Well: Sec 33, T23S, R28E

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Foreigner 33/4 W0IP Fed Com #2H WELL @ 3108.0usft (Original Well Elev) WELL @ 3108.0usft (Original Well Elev)

Grid

Minimum Curvature

nned 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)
5,100.0	7.13	60.66	5,067.1	263.8	469.3	-212.2	0.00	0.00	0.00
5,200.0	7.13	60.66	5,166.3	269.9	480.2	-217.1	0.00	0.00	0.00
5,300.0	7.13	60.66	5,265.5	276.0	491.0	-222.0	0.00	0.00	0.00
5,400.0	7.13	60.66	5,364.8	282.1	501.8	-226.8	0.00	0.00	0.00
5,500.0	7.13	60.66	5,464.0	288.1	512.6	-231 7	0.00	0.00	0.00
5,600.0	7.13	60.66	5,563.2	294.2	523.4	-236.6	0.00	0.00	0.00
5,700.0	7.13	60.66	5,662.4	300.3	534.3	-241.5	0.00	0.00	0.00
5,800.0	7.13	60.66	5,761.7	306.4	545.1	-246.4	0.00	0.00	0.00
5,900.0	7.13	60.66	5,860.9	312.5	555.9	-251.3	0.00	0.00	0.00
6,000.0	7.13	60.66	5,960.1	318.5	566.7	-256.2	0.00	0.00	0.00
6,100.0	7.13	60.66	6,059.3	324.6	577.5	-261.1	0.00	0.00	0.00
6,200.0	7.13	60.66	6,158.6	330.7	588.4	-266.0	0.00	0.00	0.00
6,300.0	7.13	60.66	6,257.8	336.8	599.2	-270.9	0.00	0.00	0.00
6,400.0	7.13	60.66	6,357.0	342.9	610.0	-275.8	0.00	0.00	0.00
6,500.0	7.13	60.66	6,456.2	349.0	620.8	-280.7	0.00	0.00	0.00
6,600.0	7.13	60.66	6,555.5	355.0	631.6	-285.5	0.00	0.00	0.00
6,700.0	7.13	60.66	6,654.7	361.1	642.5	-290.4	0.00	0.00	0.00
6,800.0	7.13	60.66	6,753.9	367.2	653.3	-295.3	0.00	0.00	0.00
6,900.0	7.13	60.66	6,853.2	373.3	664.1	-300.2	0.00	0.00	0.00
7,000.0	7.13	60.66	6,952.4	379.4	674.9	-305.1	0.00	0.00	0.00
7.100.0	7.13	60.66	7,051.6	385.4	685.7	-310.0	0.00	0.00	0.00
7,200.0	7.13	60.66	7,150.8	391.5	696.6	-314.9	0.00	0.00	0.00
•			•						
7,300.0	7.13	60.66	7,250.1	397.6	707.4	-319.8	0.00	0.00	0.00
7,400.0	7.13	60.66	7,349.3	403.7	718.2	-324.7	0.00	0.00	0.00
7,500.0	7.13	60.66	7,448.5	409.8	729.0	-329.6	0.00	0.00	0.00
7,600.0	7.13	60.66	7,547.7	415.9	739.8	-334.5	0.00	0.00	0.00
7,700.0	7.13	60.66	7,647.0	421.9	750.7	-339.4	0.00	0.00	0.00
7,800.0	7.13	60.66	7,746.2	428.0	761.5	-344.2	0.00	0.00	0.00
7,900.0	7.13	60.66	7,845.4	434.1	772.3	-349.1	0.00	0.00	0.00
8,000.0	7.13	60.66	7,944.6	440.2	783.1	-354.0	0.00	0.00	0.00
8,100.0	7.13	60.66	8,043.9	446.3	793.9	-358.9	0.00	0.00	0.00
8,200.0	7.13	60.66	8,143.1	452.3	804.8	-363.8	0.00	0.00	0.00
8,300.0	7.13	60.66	8,242.3	458.4	815.6	-368.7	0.00	0.00	0.00
8,400.0	7.13	60.66	8,242.3 8,341.6	458.4 464.5	815.6 826.4	-368.7 -373.6	0.00	0.00	0.00
8,500.0	7.13	60.66	8,440.8	464.5 470.6	837.2	-373.6 -378.5	0.00	0.00	0.00
8,600.0	7.13	60.66	8,540.0	470.6 476.7	848.1	-376.5 -383.4	0.00	0.00	0.00
8,700.0	7.13	60.66	8,639.2	476.7 482.8	858.9	-388.3	0.00	0.00	0.00
8,712.8	7.13	60.66	8,651.9	483.5	860.3	-388.9	0.00	0.00	0.00
8,800.0	5.82	60.66	8,738.6	488.3	868.8	-392.8	1.50	-1.50	0.00
8,900.0	4.32	60.66	8,838.2	492.7	876.5	-396.2	1.50	-1.50	0.00
9,000.0	2.82	60.66	8,938.0	495.7	882.0	-398.7	1.50	-1.50	0.00
9,100.0	1.32	60.66	9,037.9	497.5	885.1	-400.1	1.50	-1.50	0.00
9,188.1	0.00	0.00	9,126.0	498.0	886.0	-400.5	1.50	-1.50	0.00
	FNL & 1300' FEL		2,120.0	700.0	555.5	.00.0			0.00
9,200.0	1.43	180.75	9,137.9	497.9	886.0	-400.4	12.01	12.01	0.00
9,300.0	13.44	180.75	9,137.9	484.9	885.8	-387.6	12.01	12.01	0.00
9,400.0	25.45	180.75	9,331.0	451.7	885.4	-354.6	12.01	12.01	0.00
9,500.0	37.46	180.75	9,416.2	399.6	884.7	-302.8	12.01	12.01	0.00
9,600.0	49.48	180.75	9,488.6	330.9	883.8	-234.7	12.01	12.01	0.00
9,700.0	61.49	180.75	9,545.2	248.7	882.7	-153.0	12.01	12.01	0.00
9,800.0	73.50	180.75	9,583.4	156.5	881.5	-61.5	12.01	12.01	0.00
9,900.0	85.51	180.75	9,601.5	58.4	880.2	36.0	12.01	12.01	0.00
9,940.3	90.35	180.75	9,603.0	18.1	879.7	76.0	12.01	12.01	0.00

Database: Hobbs

Company: Mewbourne Oil Company

Project: Eddy County, New Mexico NAD 83
Site: Foreigner 33/4 WOIP Fed Com #2H

Well: Sec 33, T23S, R28E

Wellbore: BHL: 330' FSL & 1300' FEL, Sec 4

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Site Foreigner 33/4 WOIP Fed Com #2H WELL @ 3108.0usft (Original Well Elev) WELL @ 3108.0usft (Original Well Elev)

Grid Minimum Curvature

esign:	Design #1								
lanned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	90.35	180.75	9,602.6	-41.6	878.9	135.2	0.00	0.00	0.00
10,035.4	90.35	180.75	9,602.4	-77.0	878.5	170.4	0.00	0.00	0.00
FTP/LP: 231	9' FSL & 1300' F	EL (Sec 33)							
10,100.0	90.35	180.75	9,602.0	-141.6	877.6	234.5	0.00	0.00	0.00
10,200.0	90.35	180.75	9,601.4	-241.6	876.3	333.8	0.00	0.00	0.00
10,300.0	90.35	180.75	9,600.8	-341.6	875.0	433.0	0.00	0.00	0.00
10,400.0	90.35	180.75	9,600.2	-441.5	873.7	532.3	0.00	0.00	0.00
10,500.0	90.35	180.75	9,599.6	-541.5	872.4	631.6	0.00	0.00	0.00
10,600.0	90.35	180.75	9,598.9	-641.5	871.1	730.9	0.00	0.00	0.00
10,700.0	90.35	180.75	9,598.3	-741.5	869.8	830.2	0.00	0.00	0.00
10,800.0	90.35	180.75	9,597.7	-841.5	868.5	929.4	0.00	0.00	0.00
10,900.0	90.35	180.75	9,597.1	-941.5	867.2	1,028.7	0.00	0.00	0.00
11,000.0	90.35	180.75	9,596.5	-1,041.5	865.9	1,128.0	0.00	0.00	0.00
11,100.0	90.35	180.75	9,595.9	<b>-</b> 1,141.5	864.6	1,227.3	0.00	0.00	0.00
11,200.0	90.35	180.75	9,595.3	-1,241.5	863.2	1,326.6	0.00	0.00	0.00
11,300.0	90.35	180.75	9,594.6	-1,341.4	861.9	1,425.8	0.00	0.00	0.00
11,400.0	90.35	180.75	9,594.0	-1,441.4	860.6	1,525.1	0.00	0.00	0.00
11,500.0	90.35	180.75	9,593.4	-1,541.4	859.3	1,624.4	0.00	0.00	0.00
11,600.0	90.35	180.75	9,592.8	-1,641.4	858.0	1,723.7	0.00	0.00	0.00
11,700.0	90.35	180.75	9,592.2	-1,741.4	856.7	1,822.9	0.00	0.00	0.00
11,800.0	90.35	180.75	9,591.6	-1,841.4	855.4	1,922.2	0.00	0.00	0.00
11,900.0	90.35	180.75	9,590.9	-1,941.4	854.1	2,021.5	0.00	0.00	0.00
12,000.0	90.35	180.75	9,590.3	-2,041.4	852.8	2,120.8	0.00	0.00	0.00
12,100.0	90.35	180.75	9,589.7	-2,141.4	851.5	2,220.1	0.00	0.00	0.00
12,200.0	90.35	180.75	9,589.1	-2,241.4	850.2	2,319.3	0.00	0.00	0.00
12,300.0	90.35	180.75	9,588.5	-2,341.3	848.9	2,418.6	0.00	0.00	0.00
12,354.7	90.35	180.75	9,588.2	-2,396.0	848.1	2,472.9	0.00	0.00	0.00
PPP2: 0' FN	L & 1300' FEL (S	ec 4)							
12,400.0	90.35	180.75	9,587.9	-2,441.3	847.5	2,517.9	0.00	0.00	0.00
12,500.0	90.35	180.75	9,587.3	-2,541.3	846.2	2,617.2	0.00	0.00	0.00
12,600.0	90.35	180.75	9,586.6	-2,641.3	844.9	2,716.4	0.00	0.00	0.00
12,700.0	90.35	180.75	9,586.0	-2,741.3	843.6	2,815.7	0.00	0.00	0.00
12,800.0	90.35	180.75	9,585.4	-2,841.3	842.3	2,915.0	0.00	0.00	0.00
12,900.0	90.35	180.75	9,584.8	-2,941.3	841.0	3,014.3	0.00	0.00	0.00
13,000.0	90.35	180.75	9,584.2	-3,041.3	839.7	3,113.6	0.00	0.00	0.00
13,100.0	90.35	180.75	9,583.6	-3,141.3	838.4	3,212.8	0.00	0.00	0.00
13,200.0	90.35	180.75	9,583.0	-3,241.2	837.1	3,312.1	0.00	0.00	0.00
13,300.0	90.35	180.75	9,582.3	-3,341.2	835.8	3,411.4	0.00	0.00	0.00
13,400.0	90.35	180.75	9,581.7	-3,441.2	834.5	3,510.7	0.00	0.00	0.00
13,500.0	90.35	180.75	9,581.1	-3,541.2	833.2	3,609.9	0.00	0.00	0.00
13,600.0	90.35	180.75	9,580.5	-3,641.2	831.9	3,709.2	0.00	0.00	0.00
13,662.8	90.35	180.75	9,580.1	-3,704.0	831.0	3,771.6	0.00	0.00	0.00
PPP3: 1308'	FNL & 1300' FEI	L (Sec 4)							
13,700.0	90.35	180.75	9,579.9	-3,741.2	830.5	3,808.5	0.00	0.00	0.00
13,800.0	90.35	180.75	9,579.3	-3,841.2	829.2	3,907.8	0.00	0.00	0.00
13,900.0	90.35	180.75	9,578.7	-3,941.2	827.9	4,007.1	0.00	0.00	0.00
14,000.0	90.35	180.75	9,578.0	-4,041.2	826.6	4,106.3	0.00	0.00	0.00
14,100.0	90.35	180.75	9,577.4	-4,141.2	825.3	4,205.6	0.00	0.00	0.00
14,200.0	90.35	180.75	9,576.8	-4,241.1	824.0	4,304.9	0.00	0.00	0.00
14,300.0	90.35	180.75	9,576.2	-4,341.1	822.7	4,404.2	0.00	0.00	0.00
		180.75	9,575.6	-4,441.1	821.4	4,503.4	0.00	0.00	0.00
14,400.0	90.35	160.73	9,373.0	-4,441.1	021.4	7,000.7	0.00	0.00	0.00
14,400.0 14,500.0 14,600.0	90.35 90.35 90.35	180.75 180.75 180.75	9,575.0 9,575.0 9,574.3	-4,541.1 -4,641.1	820.1 818.8	4,602.7 4,702.0	0.00 0.00	0.00 0.00	0.00 0.00

Database: Ecompany:

Project:

Site:

Hobbs

Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Foreigner 33/4 W0IP Fed Com #2H

Well: Sec 33, T23S, R28E

 Wellbore:
 BHL: 330' FSL & 1300' FEL, Sec 4

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Site Foreigner 33/4 W0IP Fed Com #2H WELL @ 3108.0usft (Original Well Elev) WELL @ 3108.0usft (Original Well Elev)

Grid

Minimum Curvature

anned 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)
14,700.0	90.35	180.75	9,573.7	-4,741.1	817.5	4,801.3	0.00	0.00	0.00
14,800.0	90.35	180.75	9,573.1	-4,841.1	816.2	4,900.6	0.00	0.00	0.00
14,900.0	90.35	180.75	9,572.5	-4,941.1	814.8	4,999.8	0.00	0.00	0.00
15,000.0	90.35	180.75	9,571.9	-5,041.1	813.5	5,099.1	0.00	0.00	0.00
15,100.0	90.35	180.75	9,571.3	-5,141.1	812.2	5,198.4	0.00	0.00	0.00
15,200.0	90.35	180.75	9,570.7	-5,241.0	810.9	5,297.7	0.00	0.00	0.00
15,300.0	90.35	180.75	9,570.0	-5,341.0	809.6	5,396.9	0.00	0.00	0.00
15,400.0	90.35	180.75	9,569.4	-5,441.0	808.3	5,496.2	0.00	0.00	0.00
15,500.0	90.35	180.75	9,568.8	-5,541.0	807.0	5,595.5	0.00	0.00	0.00
15,600.0	90.35	180.75	9,568.2	-5,641.0	805.7	5,694.8	0.00	0.00	0.00
15,700.0	90.35	180.75	9,567.6	-5,741.0	804.4	5,794.1	0.00	0.00	0.00
15,800.0	90.35	180.75	9,567.0	-5,841.0	803.1	5,893.3	0.00	0.00	0.00
15,900.0	90.35	180.75	9,566.4	-5,941.0	801.8	5,992.6	0.00	0.00	0.00
16,000.0	90.35	180.75	9,565.7	-6,041.0	800.5	6,091.9	0.00	0.00	0.00
16,100.0	90.35	180.75	9,565.1	-6,140.9	799.1	6,191.2	0.00	0.00	0.00
16,200.0	90.35	180.75	9,564.5	-6,240.9	797.8	6,290.5	0.00	0.00	0.00
16,300.0	90.35	180.75	9,563.9	-6,340.9	796.5	6,389.7	0.00	0.00	0.00
16,400.0	90.35	180.75	9,563.3	-6,440.9	795.2	6,489.0	0.00	0.00	0.00
16,500.0	90.35	180.75	9,562.7	-6,540.9	793.9	6,588.3	0.00	0.00	0.00
16,600.0	90.35	180.75	9,562.0	-6,640.9	792.6	6,687.6	0.00	0.00	0.00
16,700.0	90.35	180.75	9,561.4	-6,740.9	791.3	6,786.8	0.00	0.00	0.00
16,800.0	90.35	180.75	9,560.8	-6,840.9	790.0	6,886.1	0.00	0.00	0.00
16,900.0	90.35	180.75	9,560.2	-6,940.9	788.7	6,985.4	0.00	0.00	0.00
17,000.0	90.35	180.75	9,559.6	-7,040.9	787.4	7,084.7	0.00	0.00	0.00
17,100.0	90.35	180.75	9,559.0	-7,140.8	786.1	7,184.0	0.00	0.00	0.00
17,200.0 17,258.2 BHL: 330' FS	90.35 90.35 <b>SL &amp; 1300' FEL (</b> \$	180.75 180.75 <b>Sec 4)</b>	9,558.4 9,558.0	-7,240.8 -7,299.0	784.8 784.0	7,283.2 7,341.0	0.00 0.00	0.00 0.00	0.00 0.00

Hobbs Database:

Site:

Company: Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Project: Foreigner 33/4 W0IP Fed Com #2H

Well: Sec 33, T23S, R28E

Wellbore: BHL: 330' FSL & 1300' FEL, Sec 4

Design: Design #1 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Site Foreigner 33/4 W0IP Fed Com #2H WELL @ 3108.0usft (Original Well Elev) WELL @ 3108.0usft (Original Well Elev)

Minimum Curvature

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL: 2400' FSL & 2180' - plan hits target cent - Point	0.00 er	0.00	0.0	0.0	0.0	458,711.00	616,301.00	32.2608388	-104.0908175
KOP: 2407' FNL & 1300' - plan hits target cent - Point	0.00 er	0.00	9,126.0	498.0	886.0	459,209.00	617,187.00	32.2622022	-104.0879475
BHL: 330' FSL & 1300' F - plan hits target cent - Point	0.00 er	0.00	9,558.0	-7,299.0	784.0	451,412.00	617,085.00	32.2407699	-104.0883351
PPP3: 1308' FNL & 1300 - plan hits target cent - Point	0.00 er	0.00	9,580.1	-3,704.0	831.0	455,007.00	617,132.03	32.2506518	-104.0881564
PPP2: 0' FNL & 1300' FE - plan hits target cent - Point	0.00 er	0.01	9,588.2	<b>-</b> 2,396.0	848.1	456,315.00	617,149.14	32.2542472	-104.0880914
FTP/LP: 2319' FSL & 13 - plan hits target cent - Point	0.00 er	0.00	9,602.4	-77.0	878.5	458,634.00	617,179.48	32.2606217	-104.0879761

Inten	t X	As Dril	led											
API#	<b>†</b>													
	rator Na wbourne	me: e Oil Co.					perty N eigner			0IP F	ed C	Com		Well Number 2H
Vick (	Off Boint	(KOB)												
UL	Off Point Section	Township	Range	Lot	Feet		From N	I/S	Feet		Fron	n E/W	County	
Н	33	23S	28E	200	2407		N		130		E		Eddy	
132.2	<sup>ude</sup> 262202	22			Longitu -104.		9475						NAD 83	
First <sup>-</sup>	Take Poir	nt (FTP)												
UL I	Section 33	Township 23S	Range 28E	Lot	Feet 2319		From N	I/S	Feet 130		Fron	n E/W	County Eddy	
Latitu <b>32.</b> 2	 ude 260621	† 17	l		Longitu		' '9761		l		l		NAD 83	
UL P Latitu	Section 4	Township 24S	Range 28E	Lot	Feet 330 Longitu	S	m N/S 33363	Feet 130		From E	E/W	Count Eddy NAD		
		e defining v infill well?	vell for th	e Horiz	zontal Sp	oacin	g Unit?		1	]				
	ng Unit.	lease prov	ide API if a	availab	ole, Oper	ator	Name :	and v	vell n	umbei	r for I	Definii	ng well fo	r Horizontal
Ope	rator Na	me:				Pro	perty N	ame:						Well Number

KZ 06/29/2018

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** | Mewbourne Oil Company

**LEASE NO.: NMNM129728** 

**WELL NAME & NO.:** FOREIGNER 33-4 W0IP FED COM 2H

**SURFACE HOLE FOOTAGE:** 2400'/S & 2180'/E **BOTTOM HOLE FOOTAGE** 330'/S & 1300'/E

**LOCATION:** | Section 33, T.23 S., R.28 E., NMP

**COUNTY:** Eddy County, New Mexico

COA

H2S	© Yes	© No	
Potash	None	© Secretary	○ R-111-P
Cave/Karst Potential	C Low	Medium	○ High
Cave/Karst Potential	© Critical		
Variance	© None	Flex Hose	Other Other
Wellhead	Conventional	• Multibowl	○ Both
Other	4 String Area	Capitan Reef	□WIPP
Other	Fluid Filled	Cement Squeeze	Pilot Hole
Special Requirements	Water Disposal	☑ COM	Unit

#### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

#### **B. CASING**

#### **Casing Design:**

- 1. The 13-3/8 inch surface casing shall be set at approximately 350 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - 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 pounds 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 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing which shall be set at approximately 2525 feet is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.
     Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
     Excess cement calculates to 22%, additional cement might be required.
  - ❖ In Medium 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. The minimum required fill of cement behind the 7 inch production casing is:

Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

Excess cement calculates to 24%, additional cement might be required.

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

#### 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.

- 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 OOGO2.III.A.2.i must be followed.

## D. SPECIAL REQUIREMENT (S)

### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, 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)
  - Eddy County
     Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
  - Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

- 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
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 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 dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### 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, 2) until cement has been in place at least 24

- <u>hours</u>. WOC time will be recorded in the driller's log. The casing intergrity 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 intergrity 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-P 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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 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:
  - 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
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. 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.
  - a. 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 when specified), 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).
  - b. 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
  - The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- d. 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.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. 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 Onshore Order No. 2.

## 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.

#### OTA07282021

## 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:

- 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.
- 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. <u>Protective Equipment for Essential Personnel</u>

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

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

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

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

#### 4. Visual Warning Systems

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

## 4. Mud Program

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

## 5. Metallurgy

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

#### 6. Communications

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

## 7. Well Testing

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

#### 8. Emergency Phone Numbers

<b>Eddy County Sheriff's Office</b>	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
<b>Closest Medical Facility - Columbia Medical Center</b>	of Carlsbad 575-492-5000

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

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: FOREIGNER 33/4 W0IP FED COM Well Number: 2H

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

**FACILITY** 

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.

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 containment attachment:

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

**FACILITY** 

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 Disposal location ownership: PRIVATE

**FACILITY** 

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

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: FOREIGNER 33/4 W0IP FED COM Well Number: 2H

## **Cuttings Area**

Cuttings Area being used? NO

Are you storing cuttings on location? N

**Description of cuttings location** 

Cuttings area length (ft.)

Cuttings area width (ft.)

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

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

**WCuttings** area liner

Cuttings area liner specifications and installation description

## **Section 8 - Ancillary Facilities**

Are you requesting any Ancillary Facilities?: N

**Ancillary Facilities attachment:** 

#### Comments:

## **Section 9 - Well Site Layout**

#### **Well Site Layout Diagram:**

Foreigner33 4W0IPFedCom2H wellsitelayout 20210113111237.pdf

#### Comments:

## **Section 10 - Plans for Surface Reclamation**

Type of disturbance: New Surface Disturbance Multiple Well Pad Name: Foreigner 33/4 IP/JO wells

Multiple Well Pad Number: 3

Recontouring attachment:

Drainage/Erosion control construction: None
Drainage/Erosion control reclamation: None



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

# **Drilling Plan Data Report**

08/16/2021

**APD ID**: 10400067802

Submission Date: 02/04/2021

Highlighted data reflects the most recent changes

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Number: 2H

**Show Final Text** 

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

## **Section 1 - Geologic Formations**

Well Name: FOREIGNER 33/4 W0IP FED COM

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1377374	UNKNOWN	3080	28	28	OTHER : Topsoil	NONE	N
1377386	TOP SALT	2140	940	940	SALT	NONE	N
1377375	BOTTOM SALT	690	2390	2390	SALT	NONE	N
1377379	LAMAR	480	2600	2600	LIMESTONE	NATURAL GAS, OIL	N
1377380	BELL CANYON	445	2635	2635	SANDSTONE	NATURAL GAS, OIL	N
1377381	CHERRY CANYON	-390	3470	3470	SANDSTONE	NATURAL GAS, OIL	N
1377382	MANZANITA	-520	3600	3600	LIMESTONE	NATURAL GAS, OIL	N
1377373	BONE SPRING	-3120	6200	6200	LIMESTONE, SHALE	NATURAL GAS, OIL	N
1377376	BONE SPRING 1ST	-4040	7120	7120	SANDSTONE	NATURAL GAS, OIL	N
1377377	BONE SPRING 2ND	-4775	7855	7855	SANDSTONE	NATURAL GAS, OIL	N
1377384	BONE SPRING 3RD	-5930	9010	9010	SANDSTONE	NATURAL GAS, OIL	N
1377385	WOLFCAMP	-6354	9434	9434	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

## **Section 2 - Blowout Prevention**

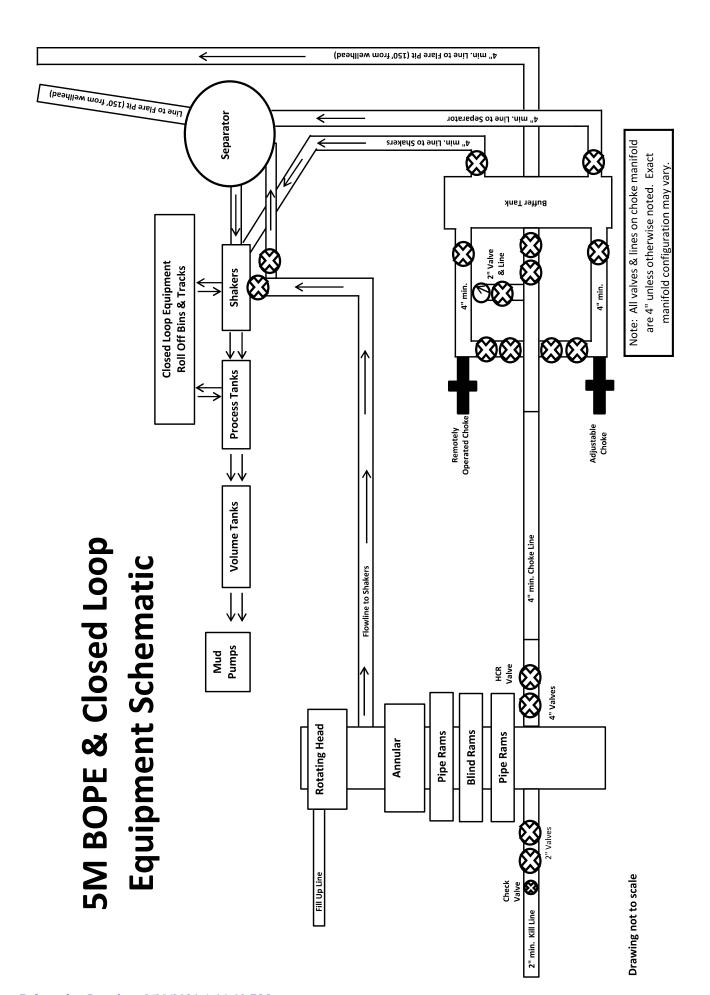
Pressure Rating (PSI): 5M Rating Depth: 17258

Equipment: Annular, Pipe Ram, Blind Ram

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. A multi-bowl wellhead is being used. See attached schematic.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 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





GATES E & S NORTH AMERICA, INC. 134 44TH STREET **CORPUS CHRISTI, TEXAS 78405** 

PHONE: 361-887-9807 FAX: 361-887-0812

EMAIL: Tim.Cantu@gates.com

www.gates.com

## **10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE**

Customer: Customer Ref. :

Invoice No.:

AUSTIN DISTRIBUTING

4060578 500506

10,000 PSI

Test Date: Hose Serial No.:

Created By:

4/30/2015 D-043015-7

JUSTIN CROPPER

Product Description:

10K3.548.0CK4.1/1610KFLGE/E LE

End Fitting 1:

Working Pressure:

4 1/16 10K FLG 4773-6290 Gates Part No.:

End Fitting 2:

Assembly Code: Test Pressure:

4 1/16 10K FLG

L36554102914D-043015-7

15,000 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 15,000 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality Manager:

Date:

Signature:

QUALITY

4/30/2015

Produciton:

Date:

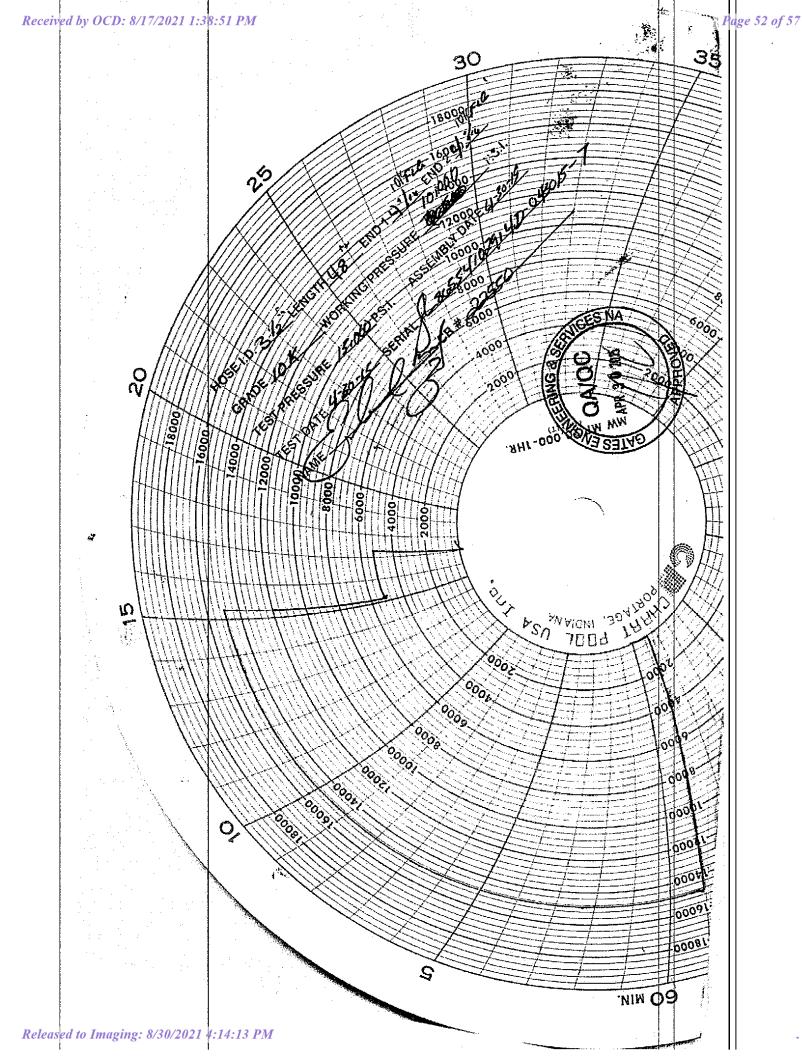
Signature :

**PRODUCTION** 

4/30/20**1**5

Forn PTC - 01 Rev.0 2







GATES ENGINEERING & SERVICES NORTH AMERICA 7603 Prairie Oak Dr. Houston, TX 77086 PHONE: (281) 602 - 4119

FAX:

EMAIL: Troy.Schmidt@gates.com

WEB: www.gates.com

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

Test Date: 8/20/2018 A-7 AUSTIN INC DBA AUSTIN HOSE Customer: Hose Serial No.: H-082018-10 Customer Ref .: 4101901 Created By: Moosa Nagvi Invoice No.: 511956 10KF3.035.0CK41/1610KFLGFXDxFLT\_L/E Product Description: End Fitting 2: 4 1/16 in. Float Flange End Fitting 1: 4 1/16 in. Fixed Flange Assembly Code: L40695052218H-082018-10 Gates Part No.: 68503010-9721632 Test Pressure: 15,000 psi. Working Pressure: 10,000 psi.

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

Quality:

Date : Signature : QUALITY

8/20/2018

Production: Date :

Signature:

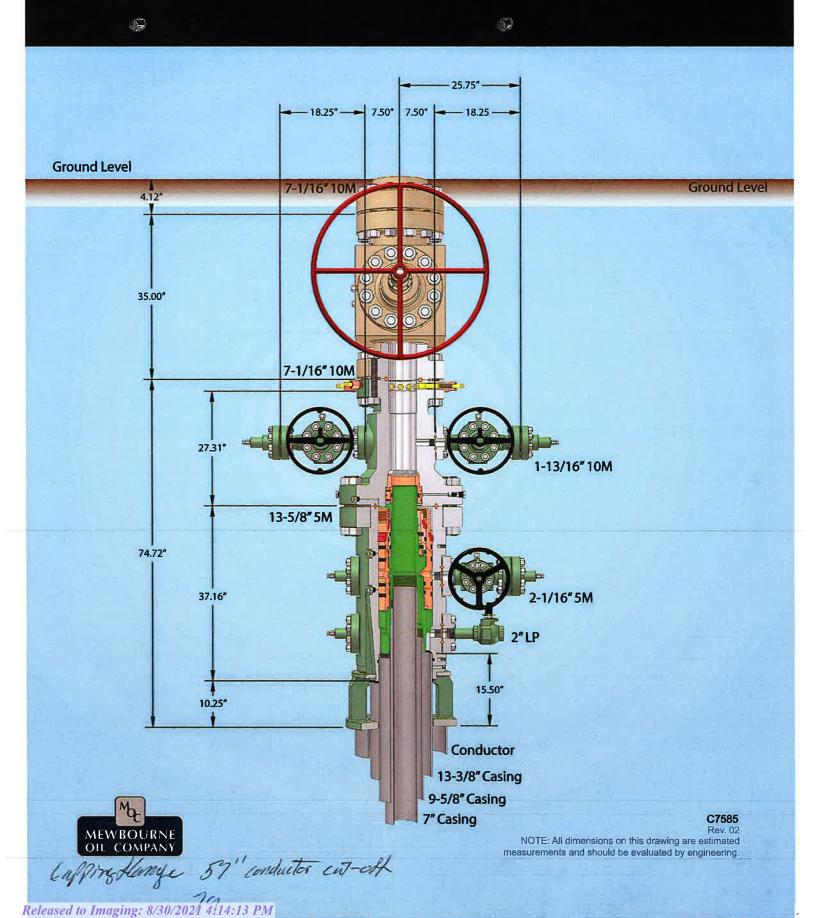
Form PTC - 01 Rev.0 2

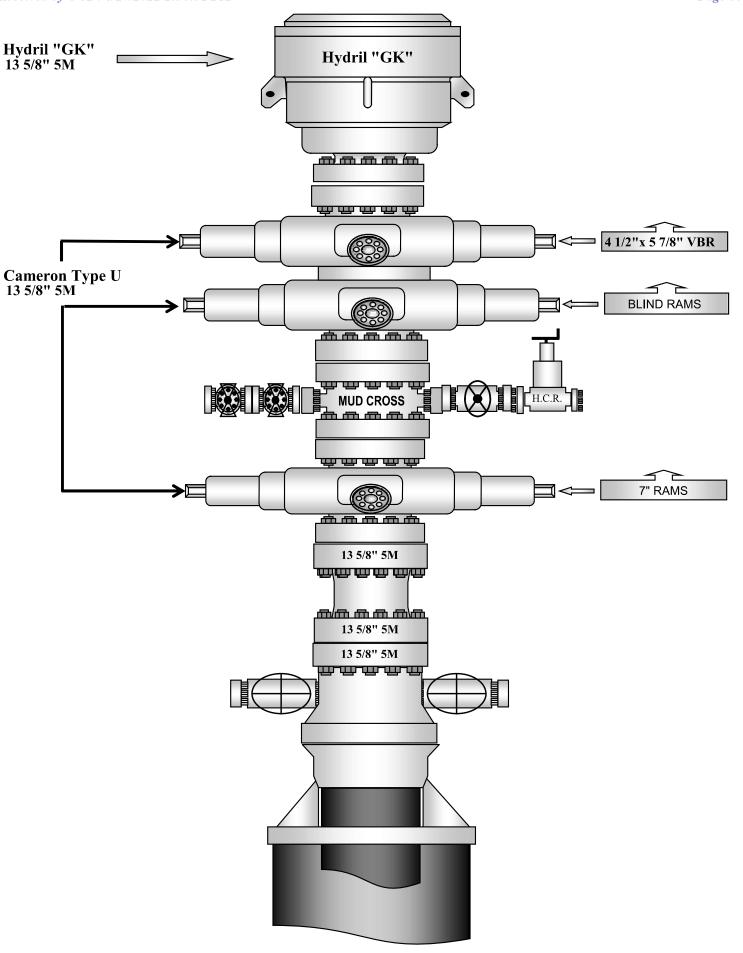
PRODUCTION

8/20/2018



# 13-5/8" MN-DS Wellhead System





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

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**

COMMENTS

Action 42614

#### **COMMENTS**

Operator:	OGRID:
MEWBOURNE OIL CO	14744
P.O. Box 5270	Action Number:
Hobbs, NM 88241	42614
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

#### COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 8/20/2021	8/20/2021

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Phone: (575) 393-6161 Fax: (575) 393-0720

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CONDITIONS

Action 42614

#### **CONDITIONS**

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

#### CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify OCD 24 hours prior to casing & cement	8/20/2021
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/20/2021
	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	8/20/2021
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	8/20/2021
	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	8/20/2021