Form 3160-3
(June 2015)

OCD – HOBBS
10/13/2020
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM0555567

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.
WINTERFELL 5_6 B2PO FED COM [329750]
1H

2. Name of Operator
MEWBOURNE OIL COMPANY [14744]

9. API Well No.
30-025-47866

3a. Address
PO Box 5270, Hobbs, NM 88240

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

10. Field and Pool, or Exploratory [65350]
PALMILLO BONE SPRING EAST/BONE S

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface TR P / 1240 FSL / 455 FEL / LAT 32.772739 / LONG -103.7814103
At proposed prod. zone TR O / 500 FSL / 2539 FEL / LAT 32.7707398 / LONG -103.8054189

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 5/T18S/R32E/NMP

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

12. County or Parish
LEA

13. State
NM

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

16. No of acres in lease
40

17. Spacing Unit dedicated to this well
240.0

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

19. Proposed Depth
8759 feet / 16429 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3832 feet

22. Approximate date work will start*
10/31/2019

23. Estimated duration
60 days

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	BRADLEY BISHOP / Ph: (575) 393-5905	08/30/2019

Title
Regulatory

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575) 234-5959	09/25/2020

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.

GCP Rec 10/13/2020

KZ
10/21/2020

SL

APPROVED WITH CONDITIONS

Approval Date: 09/25/2020

(Continued on page 2)

*(Instructions on page 2)

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.

(Continued on page 3)

Additional Operator Remarks

Location of Well

0. SHL: TR P / 1240 FSL / 455 FEL / TWSP: 18S / RANGE: 32E / SECTION: 5 / LAT: 32.772739 / LONG: -103.7814103 (TVD: 0 feet, MD: 0 feet)

PPP: TR P / 500 FSL / 0 FEL / TWSP: 18S / RANGE: 32E / SECTION: 6 / LAT: 32.770729 / LONG: -103.7971886 (TVD: 8756 feet, MD: 13899 feet)

PPP: TR M / 500 FSL / 3976 FEL / TWSP: 18S / RANGE: 32E / SECTION: 5 / LAT: 32.7707231 / LONG: -103.7928779 (TVD: 8754 feet, MD: 12574 feet)

PPP: TR O / 500 FSL / 1325 FEL / TWSP: 18S / RANGE: 32E / SECTION: 5 / LAT: 32.7707109 / LONG: -103.7842533 (TVD: 8751 feet, MD: 9923 feet)

PPP: TR P / 500 FSL / 100 FEL / TWSP: 18S / RANGE: 32E / SECTION: 5 / LAT: 32.7707051 / LONG: -103.7802679 (TVD: 8560 feet, MD: 8638 feet)

BHL: TR O / 500 FSL / 2539 FEL / TWSP: 18S / RANGE: 32E / SECTION: 6 / LAT: 32.7707398 / LONG: -103.8054189 (TVD: 8759 feet, MD: 16429 feet)

BLM Point of Contact

Name: Tenille Ortiz
Title: Legal Instruments Examiner
Phone: (575) 234-2224
Email: tortiz@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
SURFACE USE
CONDITIONS OF APPROVAL

WINTERFELL 5_6 B2IJ FED COM 1H
Surface Hole Location: 1270' FSL & 455' FEL, Section 5, T. 18 S., R. 32 E.
Bottom Hole Location: 1980' FSL & 2540' FEL, Section 6, T. 18 S, R 32 E.

WINTERFELL 5_6 B2PO FED COM 1H
Surface Hole Location: 1240' FSL & 455' FEL, Section 5, T. 18 S., R. 32 E.
Bottom Hole Location: 500' FSL & 2539' FEL, Section 6, T. 18 S, R 32 E.

Lea County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for

acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:
Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Below Ground-level Abandoned Well Marker to avoid raptor perching:
Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Timing Limitation Exceptions:
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Hydrology
The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Range:

Livestock Watering Requirement

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

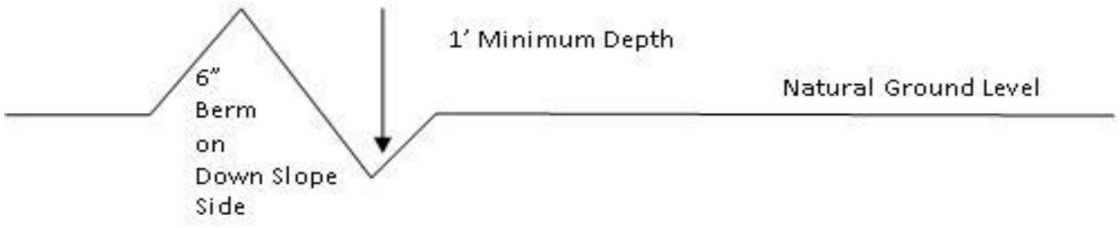
Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of

lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

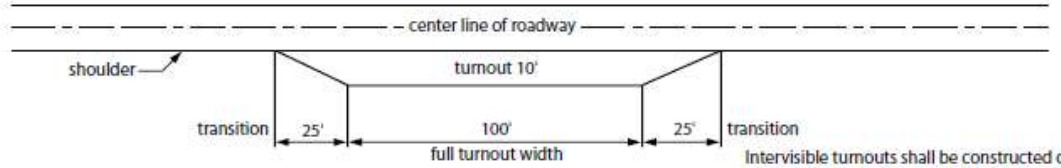
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

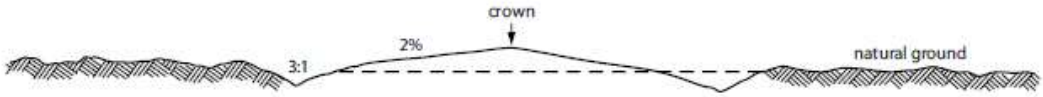
Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

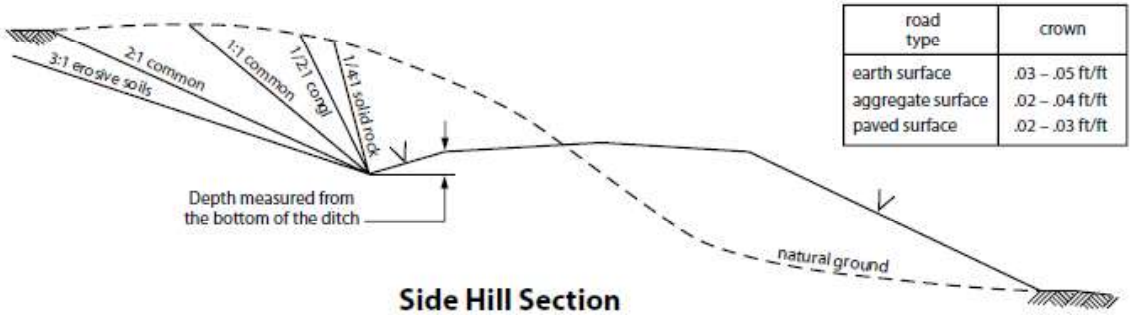


Intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional tunouts as needed to keep spacing below 1000 feet.

Typical Turnout Plan

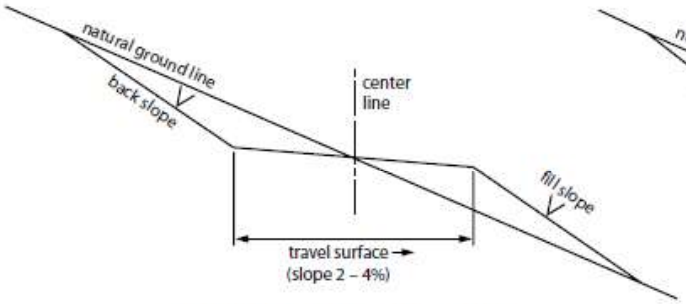


Level Ground Section

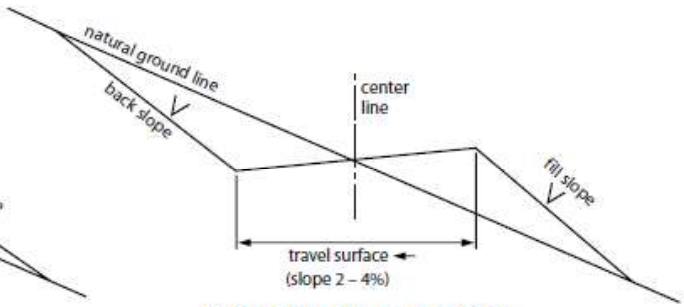


road type	crown
earth surface	.03 – .05 ft/ft
aggregate surface	.02 – .04 ft/ft
paved surface	.02 – .03 ft/ft

Side Hill Section



Typical Outsloped Section



Typical Inslope Section

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production

equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

VRM Facility Requirement
Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Below Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mewbourne Oil Company**
LEASE NO.:	**NMNM0555567**
WELL NAME & NO.:	WINTERFELL 5-6 B2PO FED COM 1H
SURFACE HOLE FOOTAGE:	1240'/S & 455'/E
BOTTOM HOLE FOOTAGE	500'/S & 2539'/E
LOCATION:	Section 05, T.18 S., R.32 E., NMPM
COUNTY:	Lea 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
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Other	[ ] 4 String Area	[ ] Capitan Reef	[ ] WIPP
Other	[ ] Fluid Filled	[ ] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Queen and Bone Spring formations. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1160** feet (a minimum of **25 feet (Lea 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 **9-5/8** inch intermediate casing shall be set at approximately **4805** feet.The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess cement calculates to 18%, additional cement might be required.**

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.

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 2nd 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 hours. 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.

OTA09012020

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

Is the proposed well in an area containing other mineral resources? POTASH

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: SINGLE WELL **Multiple Well Pad Name:** **Number:**

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: APPRAISAL

Describe sub-type:

Distance to town: 10 Miles **Distance to nearest well:** 330 FT **Distance to lease line:** 210 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Winterfell5_6B2POFedCom1H_wellplat_20190829161048.pdf

Well work start Date: 10/31/2019 **Duration:** 60 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	1240	FSL	455	FEL	18S	32E	5	Tract P	32.772739	-103.7814103	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0555567	3832	0	0	N
KOP Leg #1	500	FSL	10	FEL	18S	32E	5	Tract P	32.7707046	-103.7799546	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0555567	-4441	8330	8273	N
PPP Leg #1-1	500	FSL	100	FEL	18S	32E	5	Tract P	32.7707051	-103.7802679	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0555567	-4728	8638	8560	Y

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-2	500	FSL	1325	FEL	18S	32E	5	Tract O	32.7707109	-103.7842533	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0064098	-4919	9923	8751	Y
PPP Leg #1-3	500	FSL	3976	FEL	18S	32E	5	Tract M	32.7707231	-103.7928779	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 040450	-4922	12574	8754	Y
PPP Leg #1-4	500	FSL	0	FEL	18S	32E	6	Tract P	32.770729	-103.7971886	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 111242	-4924	13899	8756	Y
EXIT Leg #1	500	FSL	2539	FEL	18S	32E	6	Tract O	32.7707398	-103.8054189	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 111242	-4927	16429	8759	Y
BHL Leg #1	500	FSL	2539	FEL	18S	32E	6	Tract O	32.7707398	-103.8054189	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 111242	-4927	16429	8759	Y

APD ID: 10400046774 **Submission Date:** 08/30/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
526718	UNKNOWN	3859	27	27	OTHER : Top soil	NONE	N
526719	RUSTLER	2749	1110	1110	ANHYDRITE, DOLOMITE	USEABLE WATER	N
526729	TOP SALT	2414	1445	1445	SALT	NONE	N
526730	BASE OF SALT	1459	2400	2400	SALT	NONE	N
526722	YATES	1274	2585	2585	SANDSTONE	NATURAL GAS, OIL	N
526731	SEVEN RIVERS	819	3040	3040	DOLOMITE	NATURAL GAS, OIL	N
526723	QUEEN	114	3745	3745	DOLOMITE	NATURAL GAS, OIL	N
526724	GRAYBURG	-136	3995	3995	DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
526767	LAMAR	-1021	4880	4880	LIMESTONE	NATURAL GAS	N
526726	BONE SPRING	-2061	5920	5920	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
526727	BONE SPRING 1ST	-3816	7675	7675	SANDSTONE	NATURAL GAS, OIL	N
526728	BONE SPRING 2ND	-4516	8375	8375	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 16429

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

Variance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. Anchors are not required by manufacturer. A variance is requested to use a multi-bowl wellhead.
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 tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

Choke Diagram Attachment:

Winterfell_5_6_B2PO_Fed_Com_1H_Flex_Line_Specs_20190829161149.pdf

Winterfell_5_6_B2PO_Fed_Com_1H_BOPE_Choke_Diagram_rev_1_15_19_20190829161150.xlsx

Winterfell_5_6_B2PO_Fed_Com_1H_Flex_Line_Specs_API_16C_20190829161150.pdf

BOP Diagram Attachment:

Winterfell_5_6_B2PO_Fed_Com_1H_5M_BOPE_Schematic_4_18_17_20190829161157.pdf

Winterfell_5_6_B2PO_Fed_Com_1H_Multi_Bowl_Surface_Running_Procedure_20190829161158.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	1385	0	1385	3832	2447	1385	H-40	48	ST&C	1.21	2.73	DRY	4.84	DRY	8.14
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4805	0	4805		-973	4805	L-80	40	LT&C	1.24	2.3	DRY	3.78	DRY	4.77
3	PRODUCTION	8.75	7.0	NEW	API	N	0	9078	0	8750		-4918	9078	P-110	26	LT&C	1.8	2.3	DRY	2.94	DRY	3.52
4	LINER	6.125	4.5	NEW	API	N	8330	16429	8272	8759	-4440	-4927	8099	P-110	13.5	LT&C	1.95	2.27	DRY	3.09	DRY	3.86

Casing Attachments

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Winterfell_5_6_B2PO_Fed_Com_1H_CA_20190829162212.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Winterfell_5_6_B2PO_Fed_Com_1H_CA_20190829162407.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Winterfell_5_6_B2PO_Fed_Com_1H_CA_20190829162322.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

Casing Attachments

Casing ID: 4 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Winterfell_5_6_B2PO_Fed_Com_1H_CA_20190829162451.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	1194	790	2.12	12.5	1675	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		1194	1385	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	4112	750	2.12	12.5	1590	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		4112	4805	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead		4605	6664	180	2.12	12.5	382	25	Class C	Salt, Gel, Extender, LCM, Defoamer
PRODUCTION	Tail		6664	9078	400	1.18	15.6	472	25	Class C	Retarder
LINER	Lead		8330	16429	320	2.97	11.2	950	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-settling Agent

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

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

Describe the mud monitoring system utilized: Pason/PVT/visual monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1385	SPUD MUD	8.6	8.8							
1385	4805	SALT SATURATED	10	10							
4805	8750	WATER-BASED MUD	8.6	9.5							
8750	8759	OIL-BASED MUD	9.5	11							

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (8330') to surface (horizontal well vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.

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,

Coring operation description for the well:

None

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5465 **Anticipated Surface Pressure:** 3538

Anticipated Bottom Hole Temperature(F): 150

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:

Winterfell_5_6_B2PO_Fed_Com_1H_H2S_Plan_20190829163115.doc

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Winterfell_5_6_B2PO_Fed_Com_1H_Dir_plot_20190829163133.pdf

Winterfell_5_6_B2PO_Fed_Com_1H_Dir_plan_20190829163133.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Winterfell_5_6_B2PO_Fed_Com_1H_Drlg_Program_20190829163224.docx

Winterfell_5_6_B2PO_Fed_Com_1H_Add_info_20190829163227.pdf

Other Variance attachment:

ENGINEERING & SERVICES

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*
WEB: www.gates.com

10K CEMENTING ASSEMBLY PRESSURE TEST CERTIFICATE

Customer :	AUSTIN DISTRIBUTING	Test Date:	4/30/2015
Customer Ref. :	4060578	Hose Serial No.:	D-043015-7
Invoice No. :	500506	Created By:	JUSTIN CROPPER

Product Description:	10K3.548.0CK4.1/1610KFLGE/E LE

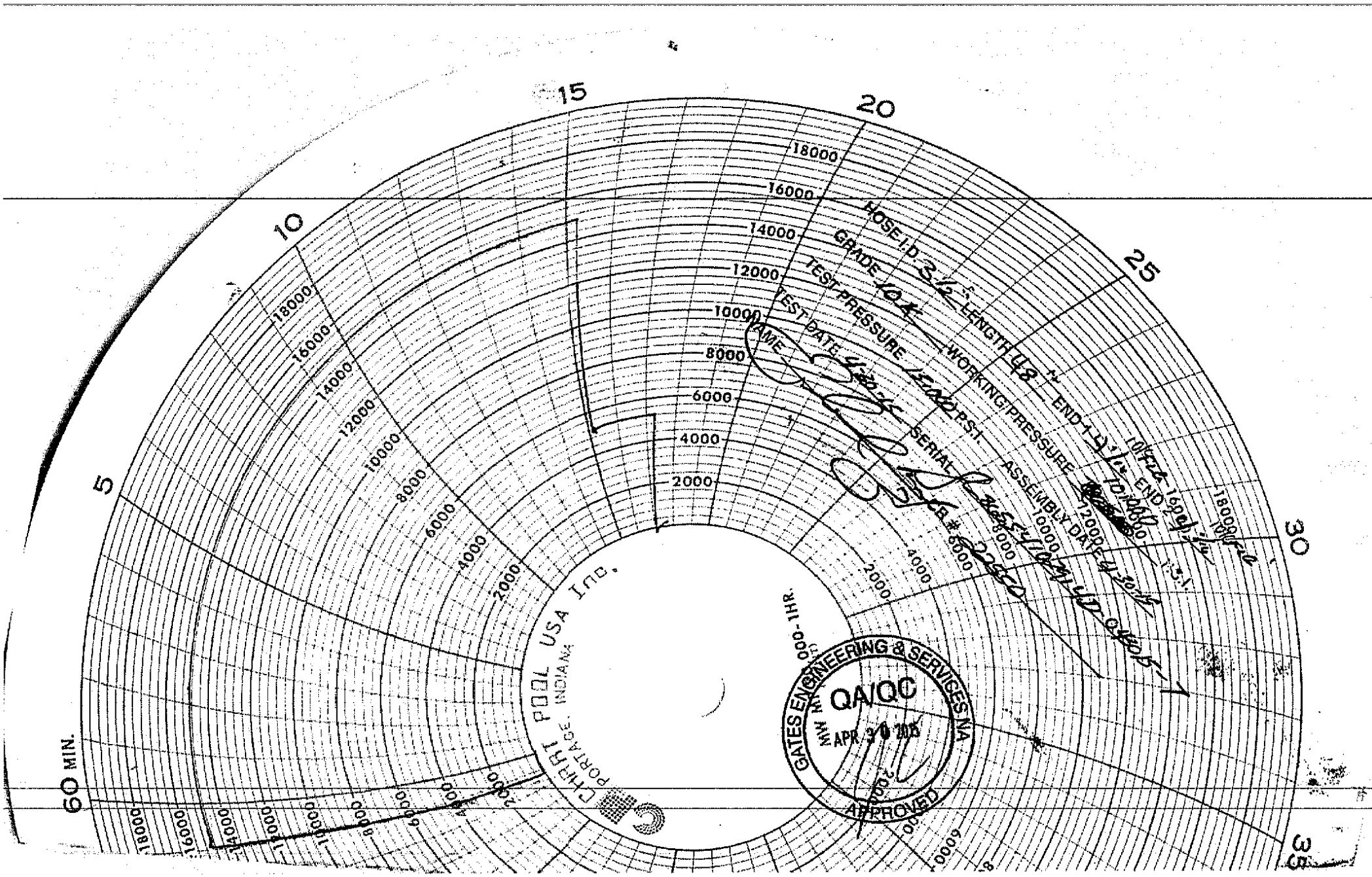
End Fitting 1 :	4 1/16 10K FLG	End Fitting 2 :	4 1/16 10K FLG
Gates Part No. :	4773-6290	Assembly Code :	L36554102914D-043015-7
Working Pressure :	10,000 PSI	Test Pressure :	15,000 PSI

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 :	QUALITY	Produciton:	PRODUCTION
Date :	4/30/2015	Date :	4/30/2015
Signature :	Justin Cropper	Signature :	

Form-PTC - 01 Rev.0 2

Gates BLACK GOLD


5
10
15
20
25
30
35
60 MIN.
18000
16000
14000
12000
10000
8000
6000
4000
2000
HOSE I.D.
GRADE
TEST PRESSURE
TEST DATE
WORKING PRESSURE
LENGTH
END 1
END 2
ASSEMBLY DATE
SERIAL #
P.S.I.
CHARLIE POOL USA Inc.
PORTAGE, INDIANA
GATES ENGINEERING & SERVICES NA
QA/QC
APR 30 2015
APPROVED
MW MAX 1,000-1HR.

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	1385'	13.375"	48	H40	STC	1.21	2.73	4.84	8.14
12.25"	0'	4805'	9.625"	40	L80	LTC	1.24	2.3	3.78	4.77
8.75"	0'	9078'	7"	26	HCP110	LTC	1.8	2.3	2.94	3.52
6.125"	8330'	16429'	4.5"	13.5	P110	LTC	1.95	2.27	3.09	3.86
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

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

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	1385'	13.375"	48	H40	STC	1.21	2.73	4.84	8.14
12.25"	0'	4805'	9.625"	40	L80	LTC	1.24	2.3	3.78	4.77
8.75"	0'	9078'	7"	26	HCP110	LTC	1.8	2.3	2.94	3.52
6.125"	8330'	16429'	4.5"	13.5	P110	LTC	1.95	2.27	3.09	3.86
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

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

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	1385'	13.375"	48	H40	STC	1.21	2.73	4.84	8.14
12.25"	0'	4805'	9.625"	40	L80	LTC	1.24	2.3	3.78	4.77
8.75"	0'	9078'	7"	26	HCP110	LTC	1.8	2.3	2.94	3.52
6.125"	8330'	16429'	4.5"	13.5	P110	LTC	1.95	2.27	3.09	3.86
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

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

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	1385'	13.375"	48	H40	STC	1.21	2.73	4.84	8.14
12.25"	0'	4805'	9.625"	40	L80	LTC	1.24	2.3	3.78	4.77
8.75"	0'	9078'	7"	26	HCP110	LTC	1.8	2.3	2.94	3.52
6.125"	8330'	16429'	4.5"	13.5	P110	LTC	1.95	2.27	3.09	3.86
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

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

Hydrogen Sulfide Drilling Operations Plan
Mewbourne Oil Company

1. General Requirements

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

2. Hydrogen Sulfide Training

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

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

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

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

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

3. Hydrogen Sulfide Safety Equipment and Systems

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

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

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

3. Hydrogen Sulfide Protection and Monitoring Equipment

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

4. Visual Warning Systems

A. Wind direction indicators as indicated on the wellsite diagram.

B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

4. Mud Program

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

5. Metallurgy

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

6. Communications

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

7. Well Testing

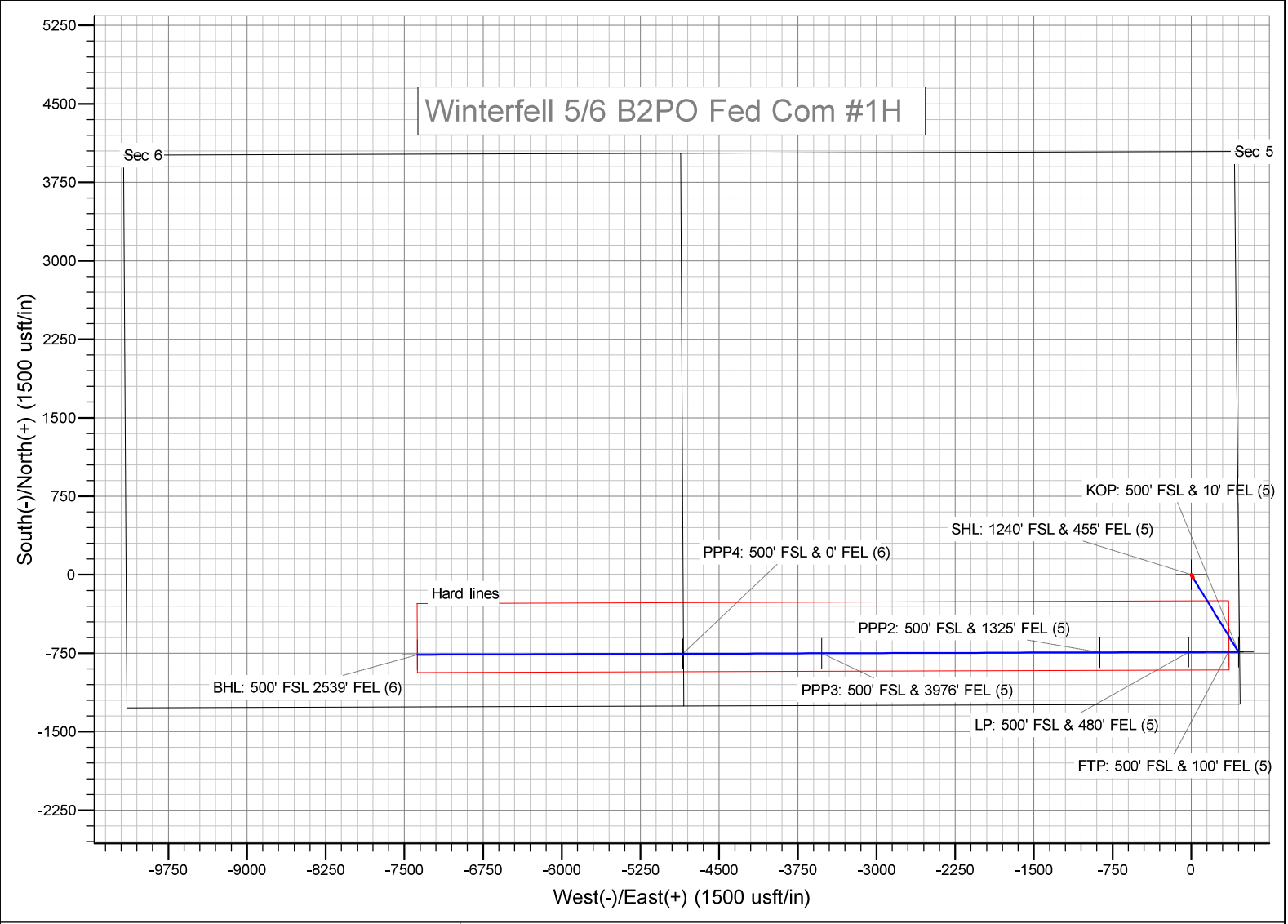
Drill stem testing is not an anticipated requirement for evaluation of this well. If a drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

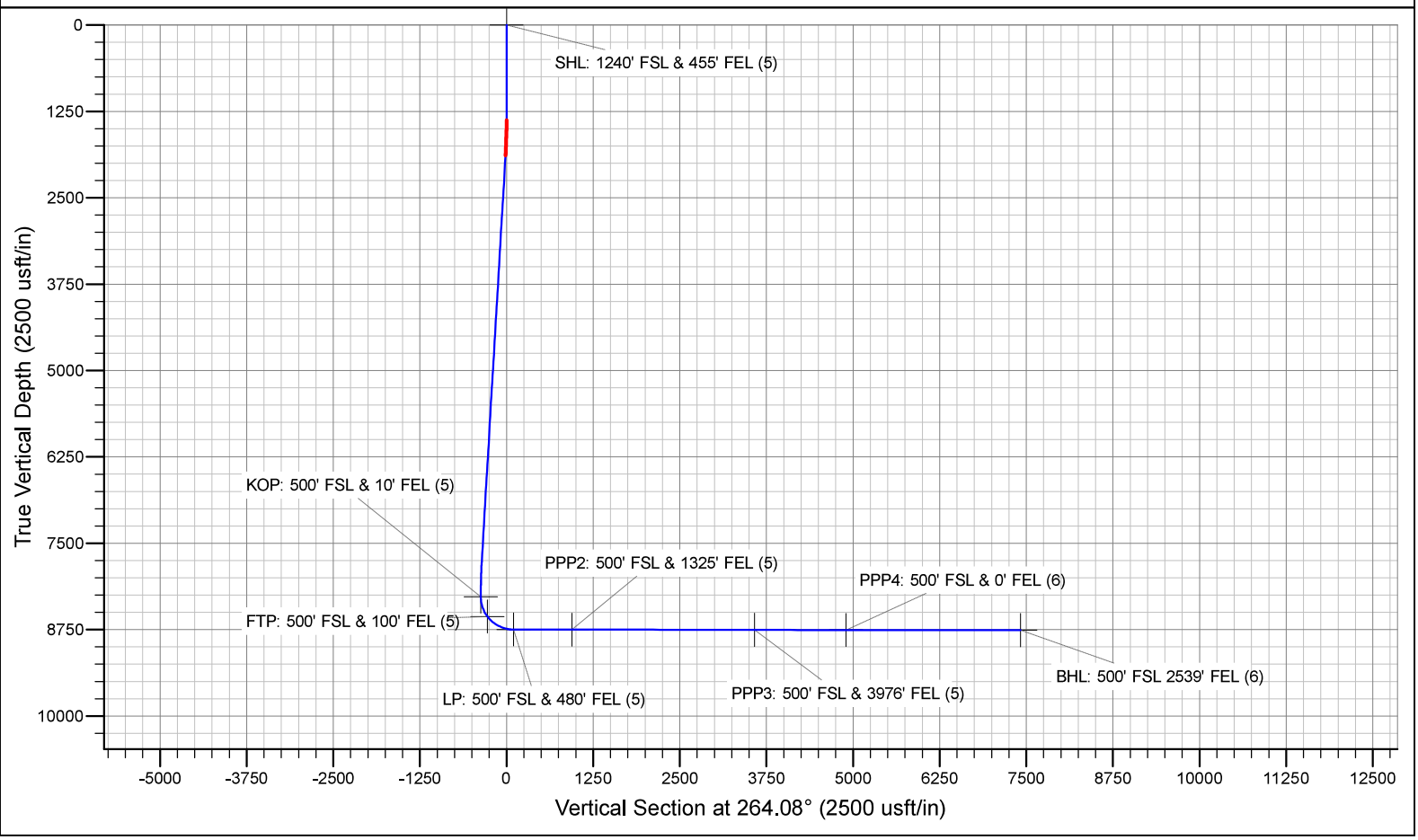
8. Emergency Phone Numbers

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

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

Drilling Foreman	**Wesley Noseff**	**575-441-0729**


Winterfell 5/6 B2PO Fed Com #1H
Sec 6
Sec 5
Hard lines
KOP: 500' FSL & 10' FEL (5)
SHL: 1240' FSL & 455' FEL (5)
PPP4: 500' FSL & 0' FEL (6)
PPP2: 500' FSL & 1325' FEL (5)
BHL: 500' FSL 2539' FEL (6)
PPP3: 500' FSL & 3976' FEL (5)
LP: 500' FSL & 480' FEL (5)
FTP: 500' FSL & 100' FEL (5)
South(-)/North(+) (1500 usft/in)
West(-)/East(+) (1500 usft/in)
5250
4500
3750
3000
2250
1500
750
0
-750
-1500
-2250
-9750
-9000
-8250
-7500
-6750
-6000
-5250
-4500
-3750
-3000
-2250
-1500
-750
0


SHL: 1240' FSL & 455' FEL (5)
KOP: 500' FSL & 10' FEL (5)
PPP2: 500' FSL & 1325' FEL (5)
PPP4: 500' FSL & 0' FEL (6)
FTP: 500' FSL & 100' FEL (5)
BHL: 500' FSL 2539' FEL (6)
LP: 500' FSL & 480' FEL (5)
PPP3: 500' FSL & 3976' FEL (5)
True Vertical Depth (2500 usft/in)
Vertical Section at 264.08° (2500 usft/in)
0
1250
2500
3750
5000
6250
7500
8750
10000
-5000
-3750
-2500
-1250
0
1250
2500
3750
5000
6250
7500
8750
10000
11250
12500

Mewbourne Oil Company

Lea County, New Mexico NAD 83
Winterfell 5/6 B2PO FEd Com #1H
Sec 5, T18S, R32E
SHL: 1240' FSL & 455' FEL, Sec 5
BHL: 500' FSL & 2539' FEL, Sec 6

Plan: Design #1

Standard Planning Report

26 July, 2019

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Winterfell 5/6 B2PO FEd Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Site:	Winterfell 5/6 B2PO FEd Com #1H	**North Reference:**	Grid
Well:	Sec 5, T18S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 500' FSL & 2539' FEL, Sec 6		
Design:	Design #1		

Project Lea County, New Mexico NAD 83

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

Site Winterfell 5/6 B2PO FEd Com #1H

Site Position:		**Northing:**	645,296.80 usft	**Latitude:**	32.7727390
From:	Map	**Easting:**	710,977.70 usft	**Longitude:**	-103.7814103
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.30 °

Well Sec 5, T18S, R32E

Well Position	**+N/-S**	0.0 usft	**Northing:**	645,296.80 usft	**Latitude:**	32.7727390
	+E/-W	0.0 usft	**Easting:**	710,977.70 usft	**Longitude:**	-103.7814103
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	3,859.0 usft	**Ground Level:**	3,832.0 usft

Wellbore BHL: 500' FSL & 2539' FEL, Sec 6

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	7/26/2019	0.00	0.00	0

Design Design #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	264.08

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	

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Winterfell 5/6 B2PO FEd Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Site:	Winterfell 5/6 B2PO FEd Com #1H	**North Reference:**	Grid
Well:	Sec 5, T18S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 500' FSL & 2539' FEL, Sec 6		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL: 1240' FSL & 455' FEL (5)									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,375.0	0.00	0.00	1,375.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.38	148.55	1,400.0	-0.1	0.0	0.0	1.50	1.50	0.00
1,500.0	1.88	148.55	1,500.0	-1.7	1.1	-0.9	1.50	1.50	0.00
1,600.0	3.38	148.55	1,599.9	-5.7	3.5	-2.9	1.50	1.50	0.00
1,700.0	4.88	148.55	1,699.6	-11.8	7.2	-6.0	1.50	1.50	0.00
1,800.0	6.38	148.55	1,799.1	-20.1	12.3	-10.2	1.50	1.50	0.00
1,889.4	7.72	148.55	1,887.9	-29.5	18.0	-14.9	1.50	1.50	0.00
1,900.0	7.72	148.55	1,898.4	-30.7	18.8	-15.5	0.00	0.00	0.00
2,000.0	7.72	148.55	1,997.4	-42.2	25.8	-21.3	0.00	0.00	0.00
2,100.0	7.72	148.55	2,096.5	-53.6	32.8	-27.1	0.00	0.00	0.00
2,200.0	7.72	148.55	2,195.6	-65.1	39.8	-32.9	0.00	0.00	0.00
2,300.0	7.72	148.55	2,294.7	-76.5	46.8	-38.7	0.00	0.00	0.00
2,400.0	7.72	148.55	2,393.8	-88.0	53.8	-44.5	0.00	0.00	0.00
2,500.0	7.72	148.55	2,492.9	-99.4	60.8	-50.2	0.00	0.00	0.00
2,600.0	7.72	148.55	2,592.0	-110.9	67.8	-56.0	0.00	0.00	0.00
2,700.0	7.72	148.55	2,691.1	-122.4	74.8	-61.8	0.00	0.00	0.00
2,800.0	7.72	148.55	2,790.2	-133.8	81.8	-67.6	0.00	0.00	0.00
2,900.0	7.72	148.55	2,889.3	-145.3	88.9	-73.4	0.00	0.00	0.00
3,000.0	7.72	148.55	2,988.4	-156.7	95.9	-79.2	0.00	0.00	0.00
3,100.0	7.72	148.55	3,087.5	-168.2	102.9	-85.0	0.00	0.00	0.00
3,200.0	7.72	148.55	3,186.6	-179.6	109.9	-90.8	0.00	0.00	0.00
3,300.0	7.72	148.55	3,285.7	-191.1	116.9	-96.5	0.00	0.00	0.00
3,400.0	7.72	148.55	3,384.8	-202.5	123.9	-102.3	0.00	0.00	0.00
3,500.0	7.72	148.55	3,483.9	-214.0	130.9	-108.1	0.00	0.00	0.00
3,600.0	7.72	148.55	3,583.0	-225.4	137.9	-113.9	0.00	0.00	0.00
3,700.0	7.72	148.55	3,682.0	-236.9	144.9	-119.7	0.00	0.00	0.00
3,800.0	7.72	148.55	3,781.1	-248.4	151.9	-125.5	0.00	0.00	0.00
3,900.0	7.72	148.55	3,880.2	-259.8	158.9	-131.3	0.00	0.00	0.00
4,000.0	7.72	148.55	3,979.3	-271.3	165.9	-137.1	0.00	0.00	0.00
4,100.0	7.72	148.55	4,078.4	-282.7	172.9	-142.8	0.00	0.00	0.00
4,200.0	7.72	148.55	4,177.5	-294.2	179.9	-148.6	0.00	0.00	0.00
4,300.0	7.72	148.55	4,276.6	-305.6	186.9	-154.4	0.00	0.00	0.00
4,400.0	7.72	148.55	4,375.7	-317.1	194.0	-160.2	0.00	0.00	0.00
4,500.0	7.72	148.55	4,474.8	-328.5	201.0	-166.0	0.00	0.00	0.00
4,600.0	7.72	148.55	4,573.9	-340.0	208.0	-171.8	0.00	0.00	0.00
4,700.0	7.72	148.55	4,673.0	-351.4	215.0	-177.6	0.00	0.00	0.00
4,800.0	7.72	148.55	4,772.1	-362.9	222.0	-183.4	0.00	0.00	0.00
4,900.0	7.72	148.55	4,871.2	-374.4	229.0	-189.1	0.00	0.00	0.00
5,000.0	7.72	148.55	4,970.3	-385.8	236.0	-194.9	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Winterfell 5/6 B2PO FEd Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Site:	Winterfell 5/6 B2PO FEd Com #1H	**North Reference:**	Grid
Well:	Sec 5, T18S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 500' FSL & 2539' FEL, Sec 6		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.0	7.72	148.55	5,069.4	-397.3	243.0	-200.7	0.00	0.00	0.00
5,200.0	7.72	148.55	5,168.5	-408.7	250.0	-206.5	0.00	0.00	0.00
5,300.0	7.72	148.55	5,267.6	-420.2	257.0	-212.3	0.00	0.00	0.00
5,400.0	7.72	148.55	5,366.7	-431.6	264.0	-218.1	0.00	0.00	0.00
5,500.0	7.72	148.55	5,465.7	-443.1	271.0	-223.9	0.00	0.00	0.00
5,600.0	7.72	148.55	5,564.8	-454.5	278.0	-229.7	0.00	0.00	0.00
5,700.0	7.72	148.55	5,663.9	-466.0	285.0	-235.4	0.00	0.00	0.00
5,800.0	7.72	148.55	5,763.0	-477.4	292.0	-241.2	0.00	0.00	0.00
5,900.0	7.72	148.55	5,862.1	-488.9	299.1	-247.0	0.00	0.00	0.00
6,000.0	7.72	148.55	5,961.2	-500.4	306.1	-252.8	0.00	0.00	0.00
6,100.0	7.72	148.55	6,060.3	-511.8	313.1	-258.6	0.00	0.00	0.00
6,200.0	7.72	148.55	6,159.4	-523.3	320.1	-264.4	0.00	0.00	0.00
6,300.0	7.72	148.55	6,258.5	-534.7	327.1	-270.2	0.00	0.00	0.00
6,400.0	7.72	148.55	6,357.6	-546.2	334.1	-276.0	0.00	0.00	0.00
6,500.0	7.72	148.55	6,456.7	-557.6	341.1	-281.7	0.00	0.00	0.00
6,600.0	7.72	148.55	6,555.8	-569.1	348.1	-287.5	0.00	0.00	0.00
6,700.0	7.72	148.55	6,654.9	-580.5	355.1	-293.3	0.00	0.00	0.00
6,800.0	7.72	148.55	6,754.0	-592.0	362.1	-299.1	0.00	0.00	0.00
6,900.0	7.72	148.55	6,853.1	-603.4	369.1	-304.9	0.00	0.00	0.00
7,000.0	7.72	148.55	6,952.2	-614.9	376.1	-310.7	0.00	0.00	0.00
7,100.0	7.72	148.55	7,051.3	-626.4	383.1	-316.5	0.00	0.00	0.00
7,200.0	7.72	148.55	7,150.4	-637.8	390.1	-322.3	0.00	0.00	0.00
7,300.0	7.72	148.55	7,249.4	-649.3	397.1	-328.0	0.00	0.00	0.00
7,400.0	7.72	148.55	7,348.5	-660.7	404.2	-333.8	0.00	0.00	0.00
7,500.0	7.72	148.55	7,447.6	-672.2	411.2	-339.6	0.00	0.00	0.00
7,600.0	7.72	148.55	7,546.7	-683.6	418.2	-345.4	0.00	0.00	0.00
7,700.0	7.72	148.55	7,645.8	-695.1	425.2	-351.2	0.00	0.00	0.00
7,800.0	7.72	148.55	7,744.9	-706.5	432.2	-357.0	0.00	0.00	0.00
7,815.3	7.72	148.55	7,760.1	-708.3	433.3	-357.9	0.00	0.00	0.00
7,900.0	6.45	148.55	7,844.1	-717.2	438.7	-362.4	1.50	-1.50	0.00
8,000.0	4.95	148.55	7,943.6	-725.7	443.9	-366.6	1.50	-1.50	0.00
8,100.0	3.45	148.55	8,043.4	-731.9	447.7	-369.8	1.50	-1.50	0.00
8,200.0	1.95	148.55	8,143.3	-735.9	450.1	-371.8	1.50	-1.50	0.00
8,300.0	0.45	148.55	8,243.2	-737.7	451.2	-372.7	1.50	-1.50	0.00
8,329.8	0.00	0.00	8,273.0	-737.8	451.3	-372.8	1.50	-1.50	0.00
KOP: 500' FSL & 10' FEL (5)									
8,350.0	2.43	269.80	8,293.2	-737.8	450.9	-372.4	12.01	12.01	0.00
8,375.0	5.43	269.80	8,318.2	-737.8	449.2	-370.6	12.01	12.01	0.00
8,400.0	8.44	269.80	8,343.0	-737.8	446.1	-367.6	12.01	12.01	0.00
8,425.0	11.44	269.80	8,367.6	-737.8	441.8	-363.4	12.01	12.01	0.00
8,450.0	14.44	269.80	8,392.0	-737.9	436.2	-357.8	12.01	12.01	0.00
8,475.0	17.44	269.80	8,416.0	-737.9	429.4	-350.9	12.01	12.01	0.00
8,500.0	20.45	269.80	8,439.6	-737.9	421.2	-342.9	12.01	12.01	0.00
8,525.0	23.45	269.80	8,462.8	-737.9	411.9	-333.6	12.01	12.01	0.00
8,550.0	26.45	269.80	8,485.5	-738.0	401.4	-323.1	12.01	12.01	0.00
8,575.0	29.46	269.80	8,507.6	-738.0	389.6	-311.4	12.01	12.01	0.00
8,600.0	32.46	269.80	8,529.0	-738.1	376.8	-298.6	12.01	12.01	0.00
8,625.0	35.46	269.80	8,549.7	-738.1	362.8	-284.7	12.01	12.01	0.00
8,638.2	37.05	269.80	8,560.4	-738.1	355.0	-277.0	12.01	12.01	0.00
FTP: 500' FSL & 100' FEL (5)									
8,650.0	38.46	269.80	8,569.7	-738.2	347.8	-269.8	12.01	12.01	0.00
8,675.0	41.47	269.80	8,588.9	-738.2	331.7	-253.8	12.01	12.01	0.00
8,700.0	44.47	269.80	8,607.2	-738.3	314.7	-236.9	12.01	12.01	0.00
8,725.0	47.47	269.80	8,624.5	-738.3	296.7	-219.0	12.01	12.01	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Winterfell 5/6 B2PO FEd Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Site:	Winterfell 5/6 B2PO FEd Com #1H	**North Reference:**	Grid
Well:	Sec 5, T18S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 500' FSL & 2539' FEL, Sec 6		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,750.0	50.48	269.80	8,640.9	-738.4	277.9	-200.2	12.01	12.01	0.00
8,775.0	53.48	269.80	8,656.3	-738.5	258.2	-180.6	12.01	12.01	0.00
8,800.0	56.48	269.80	8,670.7	-738.5	237.7	-160.2	12.01	12.01	0.00
8,825.0	59.49	269.80	8,683.9	-738.6	216.5	-139.1	12.01	12.01	0.00
8,850.0	62.49	269.80	8,696.1	-738.7	194.6	-117.4	12.01	12.01	0.00
8,875.0	65.49	269.80	8,707.0	-738.8	172.2	-95.0	12.01	12.01	0.00
8,900.0	68.49	269.80	8,716.8	-738.8	149.2	-72.2	12.01	12.01	0.00
8,925.0	71.50	269.80	8,725.3	-738.9	125.7	-48.8	12.01	12.01	0.00
8,950.0	74.50	269.80	8,732.7	-739.0	101.8	-25.0	12.01	12.01	0.00
8,975.0	77.50	269.80	8,738.7	-739.1	77.5	-0.9	12.01	12.01	0.00
9,000.0	80.51	269.80	8,743.5	-739.2	53.0	23.6	12.01	12.01	0.00
9,025.0	83.51	269.80	8,746.9	-739.3	28.2	48.2	12.01	12.01	0.00
9,050.0	86.51	269.80	8,749.1	-739.4	3.3	73.0	12.01	12.01	0.00
9,075.0	89.51	269.80	8,750.0	-739.4	-21.7	97.8	12.01	12.01	0.00
9,078.3	89.92	269.80	8,750.0	-739.5	-25.0	101.2	12.01	12.01	0.00
LP: 500' FSL & 480' FEL (5)									
9,078.5	89.93	269.80	8,750.0	-739.5	-25.1	101.3	12.01	12.01	0.00
9,100.0	89.93	269.80	8,750.0	-739.5	-46.7	122.7	0.00	0.00	0.00
9,200.0	89.93	269.80	8,750.1	-739.9	-146.7	222.2	0.00	0.00	0.00
9,300.0	89.93	269.80	8,750.3	-740.2	-246.7	321.7	0.00	0.00	0.00
9,400.0	89.93	269.80	8,750.4	-740.6	-346.7	421.2	0.00	0.00	0.00
9,500.0	89.93	269.80	8,750.5	-740.9	-446.7	520.7	0.00	0.00	0.00
9,600.0	89.93	269.80	8,750.6	-741.3	-546.7	620.2	0.00	0.00	0.00
9,700.0	89.93	269.80	8,750.8	-741.6	-646.7	719.7	0.00	0.00	0.00
9,800.0	89.93	269.80	8,750.9	-742.0	-746.6	819.2	0.00	0.00	0.00
9,900.0	89.93	269.80	8,751.0	-742.3	-846.6	918.7	0.00	0.00	0.00
9,923.4	89.93	269.80	8,751.0	-742.4	-870.0	941.9	0.00	0.00	0.00
PPP2: 500' FSL & 1325' FEL (5)									
10,000.0	89.93	269.80	8,751.1	-742.7	-946.6	1,018.2	0.00	0.00	0.00
10,100.0	89.93	269.80	8,751.3	-743.0	-1,046.6	1,117.7	0.00	0.00	0.00
10,200.0	89.93	269.80	8,751.4	-743.4	-1,146.6	1,217.2	0.00	0.00	0.00
10,300.0	89.93	269.80	8,751.5	-743.7	-1,246.6	1,316.7	0.00	0.00	0.00
10,400.0	89.93	269.80	8,751.6	-744.0	-1,346.6	1,416.2	0.00	0.00	0.00
10,500.0	89.93	269.80	8,751.7	-744.4	-1,446.6	1,515.7	0.00	0.00	0.00
10,600.0	89.93	269.80	8,751.9	-744.7	-1,546.6	1,615.2	0.00	0.00	0.00
10,700.0	89.93	269.80	8,752.0	-745.1	-1,646.6	1,714.7	0.00	0.00	0.00
10,800.0	89.93	269.80	8,752.1	-745.4	-1,746.6	1,814.2	0.00	0.00	0.00
10,900.0	89.93	269.80	8,752.2	-745.8	-1,846.6	1,913.7	0.00	0.00	0.00
11,000.0	89.93	269.80	8,752.4	-746.1	-1,946.6	2,013.2	0.00	0.00	0.00
11,100.0	89.93	269.80	8,752.5	-746.5	-2,046.6	2,112.7	0.00	0.00	0.00
11,200.0	89.93	269.80	8,752.6	-746.8	-2,146.6	2,212.2	0.00	0.00	0.00
11,300.0	89.93	269.80	8,752.7	-747.2	-2,246.6	2,311.7	0.00	0.00	0.00
11,400.0	89.93	269.80	8,752.8	-747.5	-2,346.6	2,411.2	0.00	0.00	0.00
11,500.0	89.93	269.80	8,753.0	-747.9	-2,446.6	2,510.7	0.00	0.00	0.00
11,600.0	89.93	269.80	8,753.1	-748.2	-2,546.6	2,610.2	0.00	0.00	0.00
11,700.0	89.93	269.80	8,753.2	-748.6	-2,646.6	2,709.7	0.00	0.00	0.00
11,800.0	89.93	269.80	8,753.3	-748.9	-2,746.6	2,809.2	0.00	0.00	0.00
11,900.0	89.93	269.80	8,753.5	-749.3	-2,846.6	2,908.7	0.00	0.00	0.00
12,000.0	89.93	269.80	8,753.6	-749.6	-2,946.6	3,008.2	0.00	0.00	0.00
12,100.0	89.93	269.80	8,753.7	-750.0	-3,046.6	3,107.7	0.00	0.00	0.00
12,200.0	89.93	269.80	8,753.8	-750.3	-3,146.6	3,207.2	0.00	0.00	0.00
12,300.0	89.93	269.80	8,753.9	-750.7	-3,246.6	3,306.8	0.00	0.00	0.00
12,400.0	89.93	269.80	8,754.1	-751.0	-3,346.6	3,406.3	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Winterfell 5/6 B2PO FEd Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Site:	Winterfell 5/6 B2PO FEd Com #1H	**North Reference:**	Grid
Well:	Sec 5, T18S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 500' FSL & 2539' FEL, Sec 6		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,500.0	89.93	269.80	8,754.2	-751.3	-3,446.6	3,505.8	0.00	0.00	0.00
12,574.4	89.93	269.80	8,754.3	-751.6	-3,521.0	3,579.8	0.00	0.00	0.00
PPP3: 500' FSL & 3976' FEL (5)									
12,600.0	89.93	269.80	8,754.3	-751.7	-3,546.6	3,605.3	0.00	0.00	0.00
12,700.0	89.93	269.80	8,754.4	-752.0	-3,646.6	3,704.8	0.00	0.00	0.00
12,800.0	89.93	269.80	8,754.6	-752.4	-3,746.6	3,804.3	0.00	0.00	0.00
12,900.0	89.93	269.80	8,754.7	-752.7	-3,846.6	3,903.8	0.00	0.00	0.00
13,000.0	89.93	269.80	8,754.8	-753.1	-3,946.6	4,003.3	0.00	0.00	0.00
13,100.0	89.93	269.80	8,754.9	-753.4	-4,046.6	4,102.8	0.00	0.00	0.00
13,200.0	89.93	269.80	8,755.0	-753.8	-4,146.6	4,202.3	0.00	0.00	0.00
13,300.0	89.93	269.80	8,755.2	-754.1	-4,246.6	4,301.8	0.00	0.00	0.00
13,400.0	89.93	269.80	8,755.3	-754.5	-4,346.6	4,401.3	0.00	0.00	0.00
13,500.0	89.93	269.80	8,755.4	-754.8	-4,446.6	4,500.8	0.00	0.00	0.00
13,600.0	89.93	269.80	8,755.5	-755.2	-4,546.6	4,600.3	0.00	0.00	0.00
13,700.0	89.93	269.80	8,755.7	-755.5	-4,646.6	4,699.8	0.00	0.00	0.00
13,800.0	89.93	269.80	8,755.8	-755.9	-4,746.6	4,799.3	0.00	0.00	0.00
13,899.4	89.93	269.80	8,755.9	-756.2	-4,846.0	4,898.2	0.00	0.00	0.00
PPP4: 500' FSL & 0' FEL (6)									
13,900.0	89.93	269.80	8,755.9	-756.2	-4,846.6	4,898.8	0.00	0.00	0.00
14,000.0	89.93	269.80	8,756.0	-756.6	-4,946.6	4,998.3	0.00	0.00	0.00
14,100.0	89.93	269.80	8,756.1	-756.9	-5,046.6	5,097.8	0.00	0.00	0.00
14,200.0	89.93	269.80	8,756.3	-757.3	-5,146.6	5,197.3	0.00	0.00	0.00
14,300.0	89.93	269.80	8,756.4	-757.6	-5,246.6	5,296.8	0.00	0.00	0.00
14,400.0	89.93	269.80	8,756.5	-757.9	-5,346.6	5,396.3	0.00	0.00	0.00
14,500.0	89.93	269.80	8,756.6	-758.3	-5,446.6	5,495.8	0.00	0.00	0.00
14,600.0	89.93	269.80	8,756.8	-758.6	-5,546.6	5,595.3	0.00	0.00	0.00
14,700.0	89.93	269.80	8,756.9	-759.0	-5,646.6	5,694.8	0.00	0.00	0.00
14,800.0	89.93	269.80	8,757.0	-759.3	-5,746.6	5,794.3	0.00	0.00	0.00
14,900.0	89.93	269.80	8,757.1	-759.7	-5,846.6	5,893.8	0.00	0.00	0.00
15,000.0	89.93	269.80	8,757.3	-760.0	-5,946.6	5,993.3	0.00	0.00	0.00
15,100.0	89.93	269.80	8,757.4	-760.4	-6,046.6	6,092.8	0.00	0.00	0.00
15,200.0	89.93	269.80	8,757.5	-760.7	-6,146.6	6,192.3	0.00	0.00	0.00
15,300.0	89.93	269.80	8,757.6	-761.1	-6,246.6	6,291.8	0.00	0.00	0.00
15,400.0	89.93	269.80	8,757.7	-761.4	-6,346.6	6,391.3	0.00	0.00	0.00
15,500.0	89.93	269.80	8,757.9	-761.8	-6,446.6	6,490.8	0.00	0.00	0.00
15,600.0	89.93	269.80	8,758.0	-762.1	-6,546.6	6,590.3	0.00	0.00	0.00
15,700.0	89.93	269.80	8,758.1	-762.5	-6,646.6	6,689.8	0.00	0.00	0.00
15,800.0	89.93	269.80	8,758.2	-762.8	-6,746.6	6,789.3	0.00	0.00	0.00
15,900.0	89.93	269.80	8,758.4	-763.2	-6,846.6	6,888.8	0.00	0.00	0.00
16,000.0	89.93	269.80	8,758.5	-763.5	-6,946.6	6,988.3	0.00	0.00	0.00
16,100.0	89.93	269.80	8,758.6	-763.9	-7,046.6	7,087.8	0.00	0.00	0.00
16,200.0	89.93	269.80	8,758.7	-764.2	-7,146.6	7,187.3	0.00	0.00	0.00
16,300.0	89.93	269.80	8,758.8	-764.6	-7,246.6	7,286.8	0.00	0.00	0.00
16,400.0	89.93	269.80	8,759.0	-764.9	-7,346.6	7,386.3	0.00	0.00	0.00
16,429.2	89.93	269.80	8,759.0	-765.0	-7,375.8	7,415.4	0.00	0.00	0.00
BHL: 500' FSL 2539' FEL (6)									

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Winterfell 5/6 B2PO FEd Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3832.0usft (Original Well Elev)
Site:	Winterfell 5/6 B2PO FEd Com #1H	**North Reference:**	Grid
Well:	Sec 5, T18S, R32E	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 500' FSL & 2539' FEL, Sec 6		
Design:	Design #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL: 1240' FSL & 455' F - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	645,296.80	710,977.70	32.7727390	-103.7814103
KOP: 500' FSL & 10' FEI - plan hits target center - Point	0.00	0.00	8,273.0	-737.8	451.3	644,559.00	711,429.00	32.7707046	-103.7799546
FTP: 500' FSL & 100' FE - plan hits target center - Point	0.00	0.00	8,560.4	-738.1	355.0	644,558.67	711,332.70	32.7707051	-103.7802679
LP: 500' FSL & 480' FEL - plan hits target center - Point	0.00	0.00	8,750.0	-739.5	-25.0	644,557.35	710,952.70	32.7707069	-103.7815042
PPP2: 500' FSL & 1325' - plan hits target center - Point	0.00	0.00	8,751.0	-742.4	-870.0	644,554.41	710,107.70	32.7707109	-103.7842533
PPP3: 500' FSL & 3976' - plan hits target center - Point	0.00	0.00	8,754.3	-751.6	-3,521.0	644,545.20	707,456.70	32.7707231	-103.7928779
PPP4: 500' FSL & 0' FEI - plan hits target center - Point	0.00	0.00	8,755.9	-756.2	-4,846.0	644,540.60	706,131.70	32.7707290	-103.7971886
BHL: 500' FSL 2539' FEI - plan hits target center - Point	0.00	0.00	8,759.0	-765.0	-7,375.8	644,531.80	703,601.90	32.7707398	-103.8054189

Mewbourne Oil Company, Winterfell 5/6 B2PO Fed Com #1H
Sec 5, T18S, R32E
SL: 1240' FSL & 455' FEL (5)
BHL: 500' FSL & 2539' FEL (6)

1. **Geologic Formations**

TVD of target	8759'	Pilot hole depth	NA
MD at TD:	16429'	Deepest expected fresh water:	150'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	1110		
Top of Salt	1445		
Base of Salt	2400		
Yates	2585	Oil/Gas	
Seven Rivers	3040	Oil/Gas	
Queen	3745	Oil/Gas	
Grayburg	3995	Oil/Gas	
San Andres	4650	Oil/Gas	
Lamar	4880	Oil/Gas	
Bone Spring	5920	Oil/Gas	
1st Bone Spring Sand	7675	Oil/Gas	
2nd Bone Spring Sand	8375	Target Zone	
3rd Bone Spring Sand			
Abo			
Wolfcamp			
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

*H2S, water flows, loss of circulation, abnormal pressures, etc.

Mewbourne Oil Company, Winterfell 5/6 B2PO Fed Com #1H
Sec 5, T18S, R32E
SL: 1240' FSL & 455' FEL (5)
BHL: 500' FSL & 2539' FEL (6)

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
	From	To								
17.5"	0'	1385'	13.375"	48	H40	STC	1.21	2.73	4.84	8.14
12.25"	0'	4805'	9.625"	40	L80	LTC	1.24	2.3	3.78	4.77
8.75"	0'	9078'	7"	26	HCP110	LTC	1.8	2.3	2.94	3.52
6.125"	8330'	16429'	4.5"	13.5	P110	LTC	1.95	2.27	3.09	3.86
BLM Minimum Safety Factor	1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet						

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

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

Mewbourne Oil Company, Winterfell 5/6 B2PO Fed Com #1H
Sec 5, T18S, R32E
SL: 1240' FSL & 455' FEL (5)
BHL: 500' FSL & 2539' FEL (6)

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?	

3. **Cementing Program**

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	790	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Inter.	750	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	200	14.8	1.34	6.3	8	Tail: Class C + Retarder
Prod.	160	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
Liner	320	11.2	2.97	18	16	Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent

A copy of cement test will be available on location at time of cement job providing pump times & compressive strengths.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	4805'	25%
Liner	8330'	25%

Mewbourne Oil Company, Winterfell 5/6 B2PO Fed Com #1H
Sec 5, T18S, R32E
SL: 1240' FSL & 455' FEL (5)
BHL: 500' FSL & 2539' FEL (6)

4. **Pressure Control Equipment**

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type		Tested to:
12-1/4"	13-5/8"	5M	Annular	X	2500#
			Blind Ram	X	5000#
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

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 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. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke

	Manifold. See attached for specs and hydrostatic test chart.
	N Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. • Provide description here: See attached schematic.

5. **Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0'	1385'	FW Gel	8.6-8.8	28-34	N/C
1385'	4805'	Saturated Brine	10.0	28-34	N/C
4805'	8750'	Cut Brine	8.6-9.5	28-34	N/C
8750'	8759'	OBM	10.0-12.0	30-40	<10cc

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

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

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (8330') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Gamma Ray	8330' (KOP) to TD
	Density	

	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5465 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers in surface hole.

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

8. Other facets of operation

Is this a walking operation? If yes, describe.
Will be pre-setting casing? If yes, describe.

Attachments
___ Directional Plan
___ Other, describe

Mewbourne Oil Company, Winterfell 5/6 B2PO Fed Com #1H
Sec 5, T18S, R32E
SL: 1240' FSL & 455' FEL (5)
BHL: 500' FSL & 2539' FEL (6)

APD ID: 10400046774 **Submission Date:** 08/30/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Winterfell5_6B2POFedCom1H_existingroadmap_20190829161206.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Winterfell5_6B2POFedCom1H_existingwellmap_20190830063050.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: WINTERFELL 5_6 B2PO FED COM **Well Number:** 1H

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: BATTERY WILL BE TO THE WEST OF THE WELL PAD. Production facility will be 100' x 400'.

Production Facilities map:

Winterfell5_6B2POFedCom1H_productionfacility_20190829161229.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: IRRIGATION

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

Source latitude: 32.44582 **Source longitude:** -103.45101

Source datum: NAD83

Water source permit type: WATER WELL

Water source transport method: TRUCKING

Source land ownership: PRIVATE

Source transportation land ownership: STATE

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

Source volume (gal): 81480

Water source and transportation map:

Winterfell5_6B2POFedCom1H_watersource_20190829161250.pdf

Water source comments: BOTH SOURCES SHOWN ON ONE MAP

New water well? N

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

OCD – HOBBS
10/13/2020
RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-47866	65350	Young Bone Spring North

4 Property Code	5 Property Name	6 Well Number
329753	WINTERFELL 5/6 B2PO FED COM	1H

7 OGRID NO.	8 Operator Name	9 Elevation
14744	MEWBOURNE OIL COMPANY	3832'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
P	5	18S	32E		1240	SOUTH	455	EAST	LEA

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	6	18S	32E		500	SOUTH	2539	EAST	LEA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
240			

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.

16

GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION
N: 645296.8 – E: 710977.7

LAT: 32.7727390° N
LONG: 103.7814103° W

BOTTOM HOLE
N: 644531.8 – E: 703601.9

LAT: 32.7707396° N
LONG: 103.8054191° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1913
N: 644024.0 – E: 700832.1

B: FOUND BRASS CAP "1913"
N: 646666.0 – E: 700816.4

C: FOUND BRASS CAP "1913"
N: 649306.3 – E: 700801.5

D: FOUND BRASS CAP "1913"
N: 649315.1 – E: 703470.5

E: FOUND BRASS CAP "1913"
N: 649324.0 – E: 706111.0

F: FOUND BRASS CAP "1913"
N: 649334.9 – E: 708748.0

G: FOUND BRASS CAP "1913"
N: 649342.9 – E: 711390.3

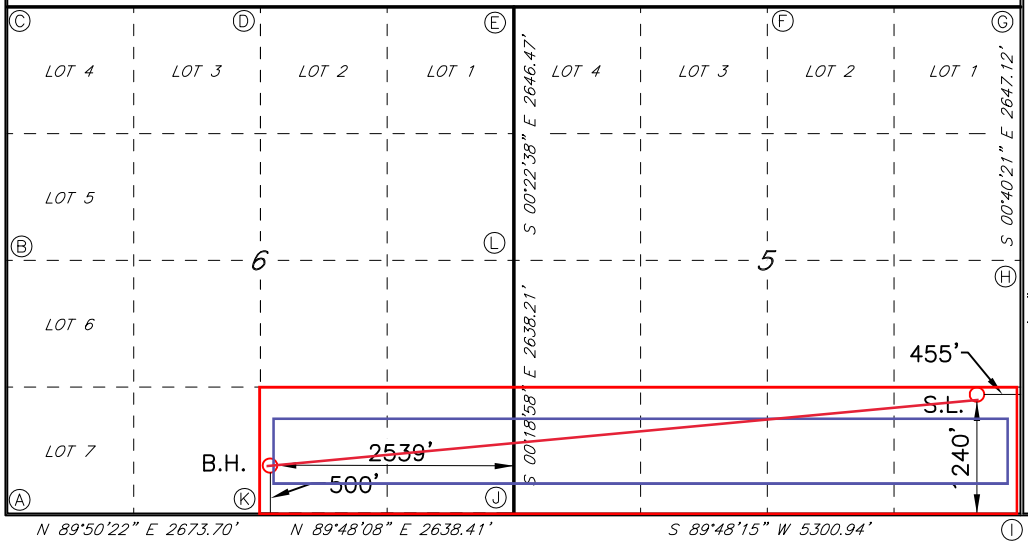
H: FOUND BRASS CAP "1913"
N: 646696.6 – E: 711421.4

I: FOUND BRASS CAP "1913"
N: 644058.8 – E: 711442.6

J: FOUND BRASS CAP "1913"
N: 644040.6 – E: 706142.9

K: FOUND BRASS CAP "1913"
N: 644031.5 – E: 703505.2

L: FOUND 1" IRON PIPE
N: 646678.2 – E: 706128.4



17 OPERATOR CERTIFICATION

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

Bradley A. Bishop
Signature

8-29-19
Date

BRADLEY BISHOP
Printed Name

BBISHOP@MEWBOURNE.COM
E-mail Address

18 SURVEYOR CERTIFICATION

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

05-29-2019
Date of Survey

Signature and Seal of Professional Surveyor

ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

RRC–Job No: LS19050637

Intent [X] As Drilled [ ]

API #
30-025-47866

Operator Name:	Property Name:	Well Number
Mewbourne Oil Co.	Winterfell 5/6 B2PO Fed Com	1H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	5	18S	32E		500	S	10	E	Lea

Latitude	Longitude	NAD
32.7707046	-103.7799546	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	5	18S	32E		500	S	100	E	Lea

Latitude	Longitude	NAD
32.7707051	-103.7802679	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	6	18S	32E		500	S	2539	E	Lea

Latitude	Longitude	NAD
32.7707398	-103.8054189	83

Is this well the defining well for the Horizontal Spacing Unit? [N]

Is this well an infill well? [Y]

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

API #

Operator Name:	Property Name:	Well Number
Mewbourne Oil Company	Winterfell 5/6 B2IJ Fed Com	1H

KZ 06/29/2018

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original
to Appropriate
District Office

OCD – HOBBS
10/13/2020
RECEIVED

GAS CAPTURE PLAN

Date: 8-29-19

☒ Original
☐ Amended - Reason for Amendment:

Operator & OGRID No.: Mewbourne Oil Company - 14744

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Winterfell 5_6 B2PO Fed Com #1H	P - 5 -T18S-R32E 30-025-47866	1240 FSL & 455 FEL		0	NA	ONLINE AFTER FRAC

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Western and will be connected to Western low/high pressure gathering system located in EDDY County, New Mexico. It will require 1400 ' of pipeline to connect the facility to low/high pressure gathering system. Mewbourne Oil Company provides (periodically) to Western a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Mewbourne Oil Company and Western have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Western Processing Plant located in Sec. 36, Blk. 58 T1S, Culberson County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Western system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines