	RECEIVED		
Form 3160-3 (June 2015)	AUG 1 9 2019	OMB No. 1004- Expires: January 3	0137
DEPARTMENT OF THE I	NTERIOR	•5. Lease Serial No.	
APPLICATION FOR PERMIT TO D		6. If Indian, Allotee or Tribe	e Name
1a. Type of work: I DRILL	EENTER	7. If Unit or CA Agreement	Name and No.
DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGE STRICTION FOR PERMIT TO DRILL OR REENTER APPLICATION FOR PERMIT TO DRILL OR REENTER			
Ic. Type of Completion: Hydraulic Fracturing Si	ingle Zone Multiple Zone	11 2616	
•	14744 N		6233
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	· · ·		
At proposed prod. zone SWNE / 2333 FNL / 1650 FEL /	LAT 32.0142798 / LONG -103.831456		
	ice*		
location to nearest 185 feet property or lease line, ft. (Also to nearest drig, unit line, if any)	1000 ( 480	~	· · · · · · · · ·
to nearest well drilling, completed,			
	04/05/2019		
((	24. Attachments		
	f Onshore Oil and Gas Order No. 1, and the	Hydraulic Fracturing rule per	43 CFR 3162.3-3
2. A Drilling Plan.	Item 20 above).	ns unless covered by an existin	g bond on file (see
3. A Surface Use Plan (if the location is on National Forest Syste SUPO must be filed with the appropriate Forest Service Office	6. Such other site specific info	ormation and/or plans as may be	requested by the
		1	/2019
Title ( (			
Approved by (Signature)			/2019
Application approval does not warrant or certify that the applicat applicant to conduct operations thereon.	nt holds legal or equitable title to those right:	s in the subject lease which wo	ould entitle the
			artment or agency
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(Continued on page 2)

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\*(Instructions on page 2)



## JOS 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.



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(\$: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 congressionaLinquiries 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.

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## **Additional Operator Remarks**

### Location of Well

SHL: NWNE / 205 FNL / 1850 FEL / TWSP: 26S / RANGE: 30E / SECTION: 24 / LAT: 32.0347768 / LONG: -103.8321201 (TVD: 0 feet, MD: 0 feet)
 PPP: NWNE / 330 FNL / 1650 FEL / TWSP: 26S / RANGE: 30E / SECTION: 24 / LAT: 32.0344318 / LONG: -103.8314768 (TVD: 11385 feet)
 BHL: SWNE / 2333 FNL / 1650 FEL / TWSP: 26S / RANGE: 30E / SECTION: 25 / LAT: 32.0142798 / LONG: -103.831456 (TVD: 41447/feet, MD: 18855 feet)

## **BLM Point of Contact**

Name: Priscilla Perez Title: Legal Instruments Examiner Phone: 5752345934 Email: pperez@blm.gov

## **Review and Appeal Rights**

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

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	MEWBOURNE OIL COMPANY
LEASE NO.:	NMNM018626
WELL NAME & NO.:	LINDALE 24/25 W1BG FED 1H
<b>SURFACE HOLE FOOTAGE:</b>	205' FNL & 1850' FEL
<b>BOTTOM HOLE FOOTAGE</b>	2333' FNL & 1650' FEL
LOCATION:	Section 24, T. 26 S., R 30 E., NMPM
COUNTY:	Eddy County, New Mexico

COA

H2S	C Yes	🔅 No	
Potash	💽 None	C Secretary	© R-111-P
Cave/Karst Potential	C Low	C Medium	💽 High
Variance	C None	🖸 Flex Hose	C Other
Wellhead	C Conventional	• Multibowl	C Both
Other	☐4 String Area	Capitan Reef	₩IPP
Other	Fluid Filled	Cement Squeeze	🗖 Pilot Hole
Special Requirements	🖾 Water Disposal	I COM	🖵 Unit

## A. HYDROGEN SULFIDE

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

## **B. CASING**

- 1. The 13-3/8 inch surface casing shall be set at approximately 1,000 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of  $\underline{8}$ hours or 500 pounds compressive strength, whichever is greater. (This is to

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include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
  - In <u>High Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- 3. The minimum required fill of cement behind the 7 inch production casing is:

Operator has proposed DV tool at depth of **4,858 feet**, but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
- 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

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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.

#### JJP08052019

# **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)

#### Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201. During office hours call (575) 627-0272. After office hours call (575)

#### Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

Call the Hobbs Field Station 414 West 7

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

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure

rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

- b. When the operator proposes to set surface casing with Spudder Rig
  - Notify the BLM when moving in and removing the Spudder Rig.
  - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
  - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

## A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing 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: 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.

# PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

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OPERATOR'S NAME:	Mewbourne Oil Company
WELL NAME & NO.:	Lindale 24/25 W1BG Fed 1H
SURFACE HOLE FOOTAGE:	205'/N & 1850'/E
BOTTOM HOLE FOOTAGE	2333'/N & 1650'/E
LOCATION:	Section 24, T.26 S., R.30 E., NMPM
COUNTY:	Eddy 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.

General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Sites
Noxious Weeds
Special Requirements
Wildlife
Hydrology
Cave/Karst
Construction
Notification
Topsoil
Closed Loop System
Federal Mineral Material Pits
Well Pads
Roads
<b>Road Section Diagram</b>
Production (Post Drilling)
Well Structures & Facilities
Pipelines
Interim Reclamation
Final Abandonment & Reclamation

## **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)

#### Wildlife

Surface disturbance will not be allowed within up to 200 meters of active heronries or by delaying activity for up to 120 days, or a combination of both.

Exhaust noise from engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

## **Hydrology:**

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). 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 integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad 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. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

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.

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

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.

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Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

## **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production:

## **Construction:**

## **General Construction:**

- No blasting
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction, and no additional construction shall occur until clearance has been issued by the Authorized Officer.
- All linear surface disturbance activities will avoid sinkholes and other karst features to lessen the possibility of encountering near surface voids during construction, minimize changes to runoff, and prevent untimely leaks and spills from entering the karst drainage system.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

## **Pad Construction:**

- The pad will be constructed and leveled by adding the necessary fill and caliche no blasting.
- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

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- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised (i.e. an access road crossing the berm cannot be lower than the berm height).
- Following a rain event, all fluids will vacuumed off of the pad and hauled offsite and disposed at a proper disposal facility.

## Tank Battery Construction:

- The pad will be constructed and leveled by adding the necessary fill and caliche no blasting.
- All tank battery locations and facilities will be lined and bermed.
- The liner should be at least 20 mil in thickness and installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures.
- Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

## **Road Construction:**

- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to alter the natural flow of water into or out of cave or karst features.
- Special restoration stipulations or realignment may be required if subsurface features are discovered during construction.

## **Buried Pipeline/Cable Construction:**

• Rerouting of the buried line(s) may be required if a subsurface void is encountered during construction to minimize the potential subsidence/collapse of the feature(s) as well as the possibility of leaks/spills entering the karst drainage system.

## **Powerline Construction:**

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.
- Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- Special restoration stipulations or realignment may be required if subsurface voids are encountered.

## Surface Flowlines Installation:

• Flowlines will be routed around sinkholes and other karst features to minimize the possibility of leaks/spills from entering the karst drainage system.

## Leak Detection System:

- A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present.
- A leak detection plan will be submitted to BLM that incorporates an automatic shut off system (see below) to minimize the effects of an undesirable event that could negatively sensitive cave/karst resources.
- Well heads, pipelines (surface and buried), storage tanks, and all supporting equipment should be monitored regularly after installation to promptly identify and fix leaks.

## Automatic Shut-off Systems:

• Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

## **Cave/Karst Subsurface Mitigation**

The following stipulations will be applied to protect cave/karst and groundwater concerns:

#### **Closed Loop System:**

- A closed loop system using steel tanks will be utilized during drilling no pits
- All fluids and cuttings will be hauled off-site and disposed of properly at an authorized site

#### **Rotary Drilling with Fresh Water:**

• Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

#### **Directional Drilling:**

• The kick off point for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

#### **Lost Circulation:**

- ALL lost circulation zones between surface and the base of the cave occurrence zone will be logged and reported in the drilling report.
- If a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, regardless of the type of drilling machinery used, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

## Abandonment Cementing:

• Additional plugging conditions of approval may be required upon well abandonment in high and medium karst potential occurrence zones.

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• The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

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## **Pressure Testing:**

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- The operator will perform annual pressure monitoring on all casing annuli and reported in a sundry notice.
- If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

# **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)

Page 8 of 18

## **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.

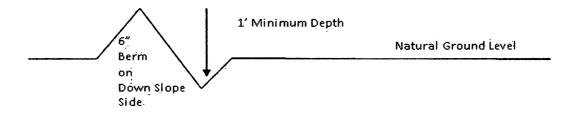
#### Drainage

Page 9 of 18

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:

400 foot road with 4% road slope: 400' + 100' = 200' lead-off ditch interval 4%

## **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.

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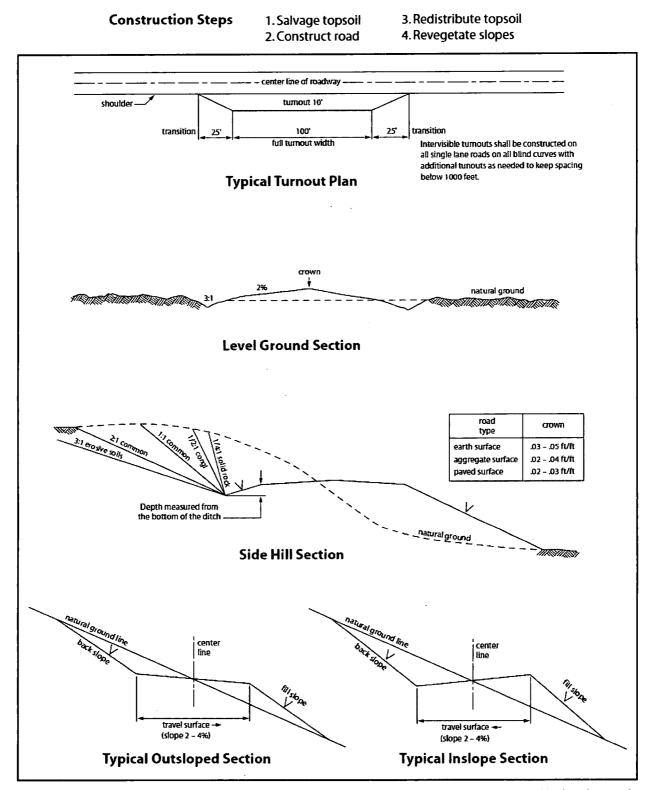


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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## 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 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  $1\frac{1}{2}$  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.

#### **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, <u>Shale Green</u> from the BLM Standard Environmental Color Chart (CC-001: June 2008).

## **B. PIPELINES**

#### STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 <u>et seq</u>. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies

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without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-ofway width of <u>20</u> feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of <u>24</u> inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. 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, powerline 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.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

## 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.

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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).

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#### Seed Mixture 2, for Sandy Sites

The 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 <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will 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). The 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. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will 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	l <u>b/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

\*Pounds of pure live seed:

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

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

## **Operator Certification**

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Operator Certification Data Report

08/16/2019

NAME: Bradley Bishop		Signed on: 02/12/2019
Title: Regulatory		
Street Address: PO Box 5270		
City: Hobbs	State: NM	<b>Zip:</b> 88240
Phone: (575)393-5905		
Email address: bbishop@mewb	oourne.com	
Field Representativ	/e	
Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

# **FAFMSS**

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

# Application Data Report 08/16/2019

APD ID: 10400038829

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LINDALE 24/25 W1BG FED

Well Type: CONVENTIONAL GAS WELL

Well Number: 1H Well Work Type: Drill

Submission Date: 02/12/2019

Highlighted data reflects the most recent changes

2.200

Show Final Text

Section 1 - General				
APD ID: 10400038829	Tie to previous NOS	i?	Submission D	Date: 02/12/2019
BLM Office: CARLSBAD	User: Bradley Bishop	) Title	e: Regulatory	, · · ·
Federal/Indian APD: FED	Is the first lease per	netrated for producti	on Federal or In	dian? FED
Lease number: NMNM018626	Lease Acres: 1000			
Surface access agreement in place?	Allotted?	Reservation:	$\mathbf{X} \geq [\mathbf{x}] + \mathbf{x}$	
Agreement in place? NO	Federal or Indian ag	reement:	X	
Agreement number:	$\langle \rangle$			
Agreement name:				
Keep application confidential? YES				
Permitting Agent? NO	APD Operator: MEV	VBOURNE OIL COMF	PANY	
Operator letter of designation:				
Operator Info Operator Organization Name: MEWBOUR Operator Address: PO Box 5270 Operator PO Box: Operator City: Hobbs State:		<b>Zip</b> : 88240		
<b>Operator Phone:</b> (575)393-5905				
Operator Internet Address:				
Section 2 - Well Informa	ation			
Well in Master Development Plan? NO	Master Dev	velopment Plan nam	e:	
Well in Master SUPO? NO	Master SU	PO name:		
Well in Master Drilling Plan? NO	Master Dri	lling Plan name:		
Well Name: LINDALE 24/25 W1BG FED	Well Numb	ber: 1H	Well API Num	ber:
Field/Pool or Exploratory? Field and Pool	WOLFCAN	e: PURPLE-SAGE 1P GAS	Pool Name: W	OLFCAMP

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

Operator	Name: MEWBOURNE OIL COMPANY

Well Name: LINDALE 24/25 W1BG FED

KOP 10

Leg

#1 PPP

Leg

#1

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FNL 165

FNL

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165

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Well Number: 1H

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Type of Well Pad: MULTIPLE WELL										ple Well P	Nu	ımt	<b>ber:</b> 2					
Well	Class	: HOF	RIZON	ITAL					-	ALE 24/25 Der of Leg		LLS			•	• • •	,	
Well	Work	Туре	: Drill															
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Rese	ervoir	well s	pacir	ng ass	igned	l acre	s Mea	asurem	ent: 480 A	cres								
Well	plat:	Lir	ndale2	4_25\	V1BG	Fed1	H_we	llplat_20	19020509	4604.pdf								
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Surv	ey nu	mber:							Refer	ence Datu	ım:							
	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	QW	DVT
SHL Leg #1	205	FNL	185 0	FEL	26S	30E	24	Aliquot NWNE	32.03477 68	- 103.8321 201	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 018626	321 9	0	0

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**FAFMSS** 

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

APD ID: 10400038829

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LINDALE 24/25 W1BG FED

Well Type: CONVENTIONAL GAS WELL

Submission Date: 02/12/2019

Well Number: 1H

Well Work Type: Drill

Highlighted data reflects the most recent changes

08/16/2019

Drilling Plan Data Report

- 4

12

Show Final Text

## Section 1 - Geologic Formations

						•	
Formation			True Vertical				Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	
1	UNKNOWN	3219	27	27		NONE	N
2	RUSTLER	2221	919	919	ANHYDRITE,DOLOMIT E	USEABLE WATER	N
3	CASTILE	839	2301	2301	SALT	NONE	N
4	BASE OF SALT	-499	3639	3639	SALT	NONE	N
5	LAMAR	-614	3754	3754	LIMESTONE	NATURAL GAS,OIL	N
6	BELL CANYON	-649	3789	3789	SANDSTONE	NATURAL GAS,OIL	N
7	CHERRY CANYON	-1542	4682	4682	SANDSTONE	NATURAL GAS, OIL	N
8	MANZANITA	-1718	4858	4858	LIMESTONE	NATURAL GAS,OIL	N
9	BRUSHY CANYON	-2736	5876	5876	SANDSTONE	NATURAL GAS,OIL	N
10	BONE SPRING	-4547	7687	7687	LIMESTONE, SHALE	NATURAL GAS,OIL	N
11	BONE SPRING 1ST	-5459	8678	8678	SANDSTONE	NATURAL GAS,OIL	N
12 BONE SPRING 2ND		-6133	9352	9352	SANDSTONE	NATURAL GAS,OIL	N
13	BONE SPRING 3RD	-7486	10705	10705	SANDSTONE	NATURAL GAS,OIL	N
14	WOLFCAMP	-7810	10950	10950	LIMESTONE,SHALE,SA NDSTONE	NATURAL GAS,OIL	Y

Section 2 - Blowout Prevention

Page 1 of 6

Operator Name: MEWBOURNE OIL COMPANY

Well Number: 1H

Pressure Rating (PSI): 5M Rating Depth: 18855

Equipment: Annular, Pipe Ram, Blind Ram

Well Name: LINDALE 24/25 W1BG FED

**Requesting Variance? YES** 

Variance request: A variance is requested for use of a flexible choke line from the BOP to Choke Manifold. Anchors not required by manufacturer A multi-bowl wellhead is being used. See attached schematic

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

#### Choke Diagram Attachment:

Lindale\_24\_25\_W1BG\_Fed\_1H\_5M\_BOPE\_Choke\_Diagram\_20190206110726.pdf

Lindale\_24\_25\_W1BG\_Fed\_1H\_Flex\_Line\_Specs\_20190206110726.pdf

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

Lindale\_24\_25\_W1BG\_Fed\_1H\_5M\_BOPE\_Schematic\_20190206110905.pdf

Lindale\_24\_25\_W1BG\_Fed\_1H\_Multi\_Bowl\_WH\_20190206110905.pdf

		Se	ctior	13-	Cas	ing					,	í.										
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
	SURFACE	17.5	13.375	NEW	API	N	Ő.	1000	0	1000	3246	-	1000	H-40	48	ST&C	1.65	3.7	DRY	6.71	DRY	11.2 7
2 '		12.2 5`	9.625	NEW	API	N	0	3700	0	3700	3246	-	3700	J-55	40	LT&C	1.34	2.05	DRY	3.47	DRY	5.76
3	PRODUCTI ON	8.75	7.0	NEW	API	N	0	11600	0	11417	3246		11600	Р- 110	26	LT&C	1.31	1.76	DRY	2.16	DRY	2.75
4	LINER	6.12 5	4.5	NEW	API	N	10877	18855	10871	11447			7978	Р- 110	13.5	LT&C	1.79	2.08	DRY	3.14	DRY	3.92

**Casing Attachments** 

Page 2 of 6

## Operator Name: MEWBOURNE OIL COMPANY Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

**Casing Attachments** 

Casing ID: 1 String Type:SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lindale\_24\_25\_W1BG\_Fed\_1H\_Csg\_Assumptions\_20190206112414.pdf

Casing ID: 2 String Type:INTERMEDIATE Inspection Document:

Spec Document:

Tapered String Spec:

Lindale\_24\_25\_W1DE\_Fed\_2H\_TaperedCsg\_20180917161637.pdf

Casing Design Assumptions and Worksheet(s):

Lindale\_24\_25\_W1BG\_Fed\_1H\_Csg\_Assumptions\_20190206112422.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lindale\_24\_25\_W1BG\_Fed\_1H\_Csg\_Assumptions\_20190206112430.pdf

Page 3 of 6

## Operator Name: MEWBOURNE OIL COMPANY Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

#### **Casing Attachments**

Casing ID: 4 String Type:LINER

Inspection Document:

Spec Document:

Tapered String Spec:

#### Casing Design Assumptions and Worksheet(s):

Lindale\_24\_25\_W1BG\_Fed\_1H\_Csg\_Assumptions\_20190206112437.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	809	535	2.12	12.5	1134	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		809	1000	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	3051	600	2.12	12.5	1272	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		3051	3700	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	4858	3500	4188	65	2.12	12.5	138	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		4188	4858	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	4858	4858	9109	380	2.12	12.5	806	25	Class H	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		9109	1160 0	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		1087 7	1885 5	325	2.97	11.2	965	25	Class H	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Page 4 of 6

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Operator Name: MEWBOURNE OIL COMPANY Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

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#### Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

	Circ	ulating Mediu	able					``````````````````````````````````````				
O Top Depth	Bottom Depth	edA WM SPUD MUD	& Min Weight (Ibs/gal)	∞ ∞ Max Weight (Ibs/gal)	Density (Ibs/cu ft)	Gel Strength (Ibs/100 sqft)	He	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics	
1000	3700	SALT	.10≺	10								
3700	1141	SATURATED	8.6	9.5								
1141	7 1144 7	MUD OIL-BASED MUD	10	12								

### Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (10877') to surface

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

CNL,DS,GR,MWD,MUDLOG

Coring operation description for the well:

None

### Operator Name: MEWBOURNE OIL COMPANY Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

### Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7143

Anticipated Surface Pressure: 4624.66

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Lindale\_24\_25\_W1BG\_Fed\_1H\_H2S\_Plan\_20190206113249.pdf

#### Section 8 - Other Information

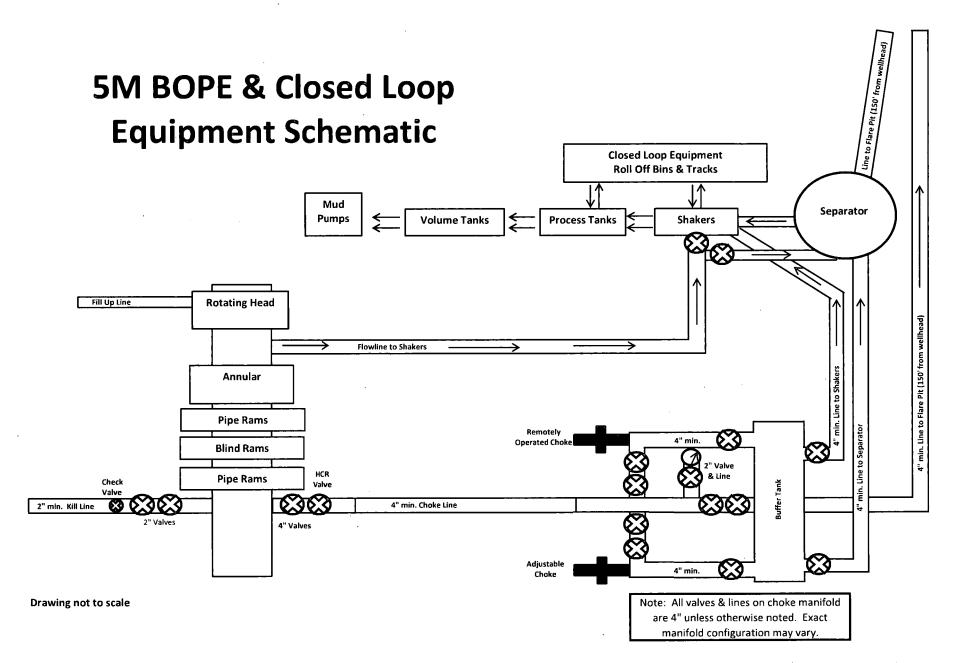
Proposed horizontal/directional/multi-lateral plan submission:

Lindale\_24\_25\_W1BG\_Fed\_1H\_Dir\_Plot\_20190206113502.pdf Lindale\_24\_25\_W1BG\_Fed\_1H\_Dir\_Plan\_20190206113503.pdf Other proposed operations facets description:

#### Other proposed operations facets attachment:

Lindale\_24\_25\_W1BG\_Fed\_1H\_Add\_Info\_20190206113531.pdf Lindale\_24\_25\_W1BG\_Fed\_1H\_Drlg\_Program\_20190206123248.doc Other Variance attachment:

Page 6 of 6





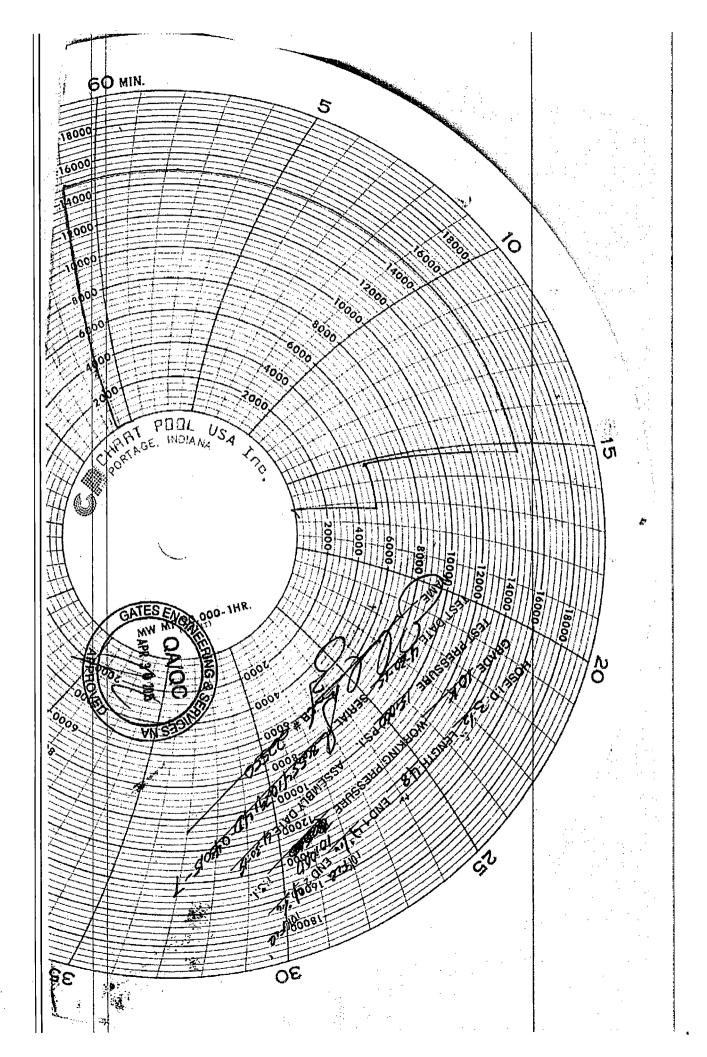
GATES E & S NORTH AMERICA, INC. 134 44TH STREET CORPUS CHRISTI, TEXAS 78405 
 PHONE:
 361-887-9807

 FAX:
 361-887-0812

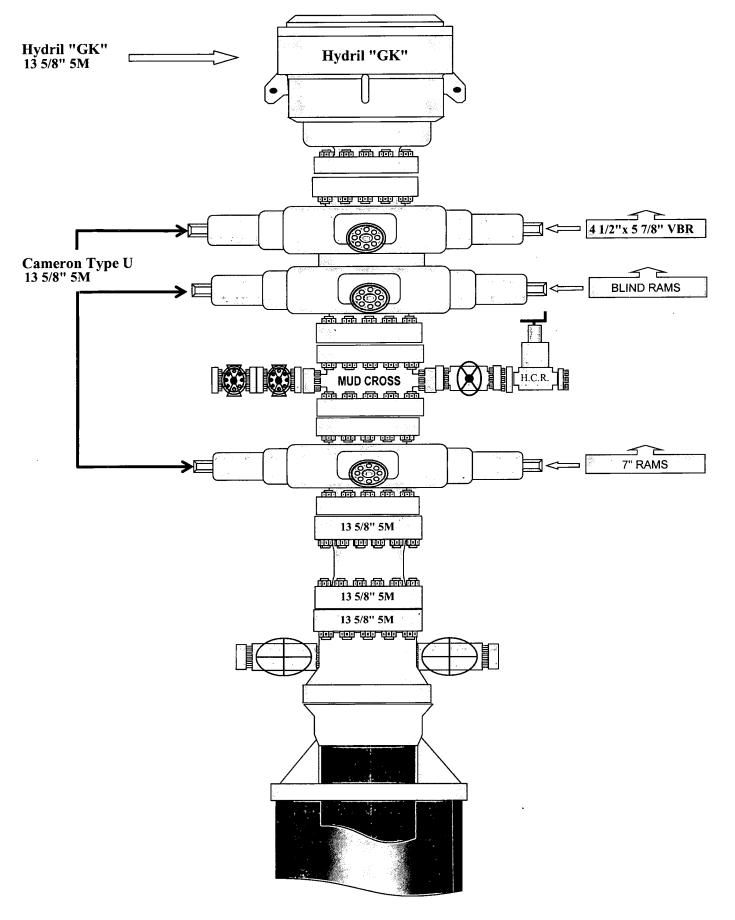
 EMAIL:
 Tim.Cantu@gates.com

 WEB:
 www.gates.com

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ustomer :	AUSTIN DISTRIBUTING	Test Date:	4/30/2015	
ustomer Ref. :	4060578	Hose Serial No.:	D-043015-7	.
voice No. :	500506	Created By:	JUSTIN CROPPER	-
		10K3.548.0CK4.1/1610KFLGE/	LE ]	
roduct Description:				
nd Fitting 1 :	4 1/16 10K FLG	End Fitting 2 :	4 1/16 10K FLG	
iates Part No. :	4773-6290	Assembly Code :	L36554102914D-043015-7	
Vorking Pressure :	10,000 PSI	Test Pressure :	15,000 PSI	
·			· · · · · · · · · · · · · · · · · · ·	
Gates E & S No	th America, Inc. certifies	that the following hos	e assembly has been tested to	
Gates E & S Nor the Gates Oilfiel	rth America, Inc. certifies d Roughneck Agreement/S	that the following hos pecification requirement	e assembly has been tested to ts and passed the 15 minute	
the Gates Oilfiel	d Roughneck Agreement/S	pecification requirement	nts and passed the 15 minute	
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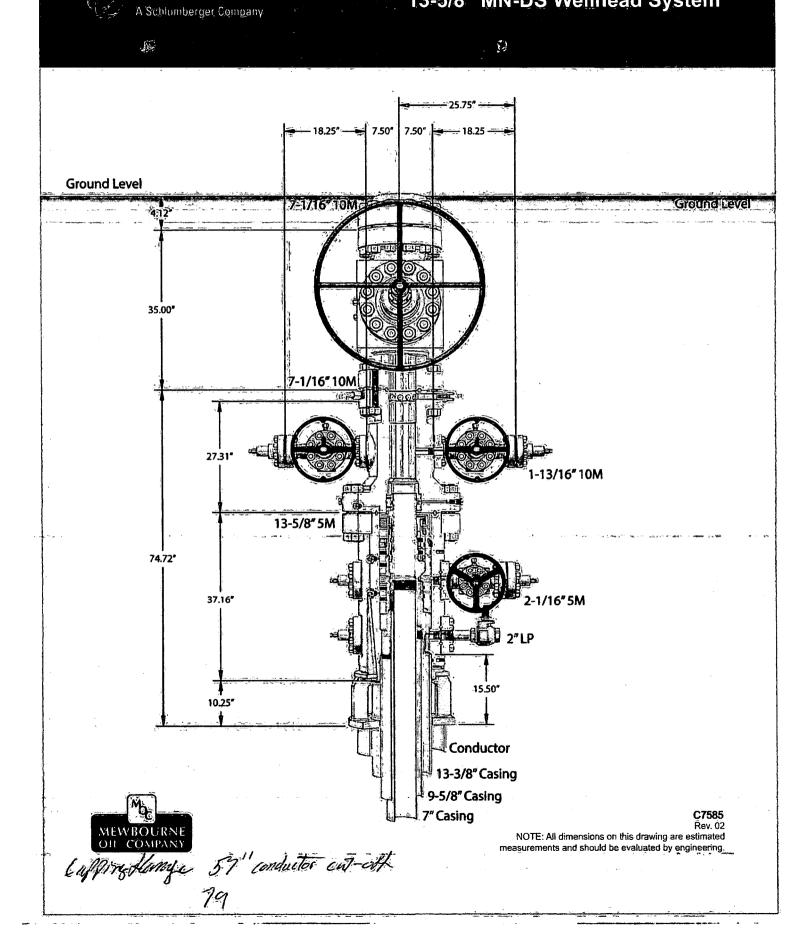


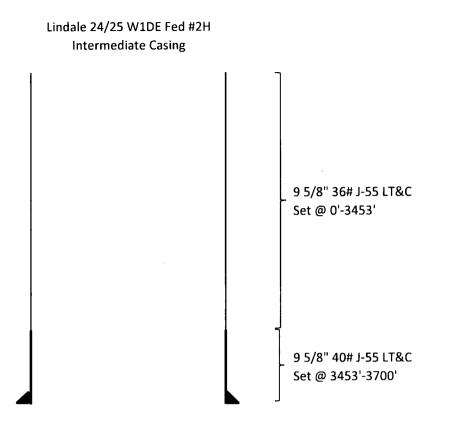
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CAMERON

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





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	SF	SF	SF Jt	SF Body
Casing	Collapse	Burst	Tension	Tension
36# J-55	1.13	1.96	3.38	4.20
40# J-55	1.34	2.05	52.63	63.76

# **Casing Program**

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Hole Size	Casing From	Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	1000'	13.375"	48	H40	STC	1.65	3.70	6.71	11.27
12.25"	0'	3700'	9.625"	40	J55	LTC	1.34	2.05	3.47	5.76
8.75"	0'	11,600'	7"	26	HCP110	LTC	1.31	1.76	2.16	2.75
6.125"	10,877'	18,418'	4.5"	13.5	P110	LTC	1.79	2.08	3.14	3.92
				BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

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

# **Casing Program**

Hole	Casing Interval		Csg.	Weight	Grade	Conn.	SF	SF	SF Jt	SF Body
Size	From	То	Size	(lbs)			Collapse	Burst	Tension	Tension
17.5"	0'	1000'	13.375"	48	H40	STC	1.65	3.70	6.71	11.27
12.25"	0'	3700'	9.625"	40	J55	LTC	1.34	2.05	3.47	5.76
8.75"	0'	11,600'	7"	26	HCP110	LTC	1.31	1.76	2.16	2.75
6.125"	10,877'	18,418'	4.5"	13.5	P110	LTC	1.79	2.08	3.14	3.92
	, <u>, , , , , , , , , , , , , , , , , , </u>	,	i	BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

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

# **Casing Program**

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Hole Size	Casing From	Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	1000'	13.375"	48	H40	STC	1.65	3.70	6.71	11.27
12.25"	0'	3700'	9.625"	40	J55	LTC	1.34	2.05	3.47	5.76
8.75"	0'	11,600'	7"	26	HCP110	LTC	1.31	1.76	2.16	2.75
6.125"	10,877'	18,418'	4.5"	13.5	P110	LTC	1.79	2.08	3.14	3.92
				BLM Minimum Safety			1.125	1	1.6 Dry	1.6 Dry
				Factor					1.8 Wet	1.8 Wet

Is casing new? If used, attach certification as required in Onshore Order #1       Is casing API approved? If no, attach casing specification sheet.         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).       N         Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?       N         Is well located within Capitan Reef?       N         Is well vithin the designated 4 string boundary.       N         Is well located in SOPA but not in R-111-P?       N         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?       N         Is well located in R-111-P and SOPA?       N         If yes, are the first three strings cemented to surface?       N         Is well located in high Cave/Karst?       N		
Is casing new? If used, attach certification as required in Onshore Order #1       I         Is casing API approved? If no, attach casing specification sheet.       N         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).       N         Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?       N         Is well located within Capitan Reef?       N         Is well within the designated 4 string boundary.       N         Is well located in SOPA but not in R-111-P?       N         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?       N         Is well located in R-111-P and SOPA?       N         If yes, are the first three strings cemented to surface?       N         Is well located in high Cave/Karst?       N         Is well located in high Cave/Karst?       N		Y or N
Is casing API approved? If no, attach casing specification sheet.       N         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).       N         Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?       N         Is well located within Capitan Reef?       N         If yes, does production casing cement tie back a minimum of 50' above the Reef?       N         Is well located in SOPA but not in R-111-P?       N         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?       N         Is well located in R-111-P and SOPA?       N         If yes, are the first three strings cemented to surface?       N         Is well located in high Cave/Karst?       N         Is well located in high Cave/Karst?       N	Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide       Image: Standard S		Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide       Image: Standard S	Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
collapse pressure rating of the casing?         Is well located within Capitan Reef?         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?         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back         500' into previous casing?         Is well located in R-111-P and SOPA?         If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?	Does the above casing design meet or exceed BLM's minimum standards? If not provide	Y
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?         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back         500' into previous casing?         Is well located in R-111-P and SOPA?         If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?		Y
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?         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back         500' into previous casing?         Is well located in R-111-P and SOPA?         If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?	Is well located within Canitan Reef?	N
Is well within the designated 4 string boundary.         Is well located in SOPA but not in R-111-P?         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back         500' into previous casing?         Is well located in R-111-P and SOPA?         If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?		11
Is well located in SOPA but not in R-111-P?       If         If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back       500' into previous casing?         Is well located in R-111-P and SOPA?       If         If yes, are the first three strings cemented to surface?       If         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?       If         Is well located in high Cave/Karst?       If         If yes, are there two strings cemented to surface?       If		
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back         500' into previous casing?         Is well located in R-111-P and SOPA?         If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?	Is well within the designated 4 string boundary.	
500' into previous casing?         Is well located in R-111-P and SOPA?         If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?	Is well located in SOPA but not in R-111-P?	N
If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?		
If yes, are the first three strings cemented to surface?         Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?	Is well located in R-111-P and SOPA?	N
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?         Is well located in high Cave/Karst?         If yes, are there two strings cemented to surface?		
If yes, are there two strings cemented to surface?		
If yes, are there two strings cemented to surface?	Is well leasted in high Cove/Variet?	Y
If yes, the there two strings combined to surface.		
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?		Y
	(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	and the second
Is well located in critical Cave/Karst?	Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?		

# **Casing Program**

Hole Size	Casing From	Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	1000'	13.375"	48	H40	STC	1.65	3.70	6.71	11.27
12.25"	0'	3700'	9.625"	40	J55	LTC	1.34	2.05	3.47	5.76
8.75"	0'	11,600'	7"	26	HCP110	LTC	1.31	1.76	2.16	2.75
6.125"	10,877'	18,418'	4.5"	13.5	P110	LTC	1.79	2.08	3.14	3.92
	· · ·	· · · · ·	1	BL	M Minimu	m Safety	1.125	1	1.6 Dry	1.6 Dry
						Factor			1.8 Wet	1.8 Wet

新闻家会委任者的法律法法的法律法法法律法法案的考虑的考虑并是	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?	<u>N</u>
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back	
500' into previous casing?	
	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	<u> </u>
Is well located in high Cave/Karst?	T Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
	IN
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. <u>Protective Equipment for Essential Personnel</u>

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

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

3. 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. <u>Visual Warning Systems</u>

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

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

### 4. Mud Program

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

### 5. Metallurgy

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

### 6. Communications

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

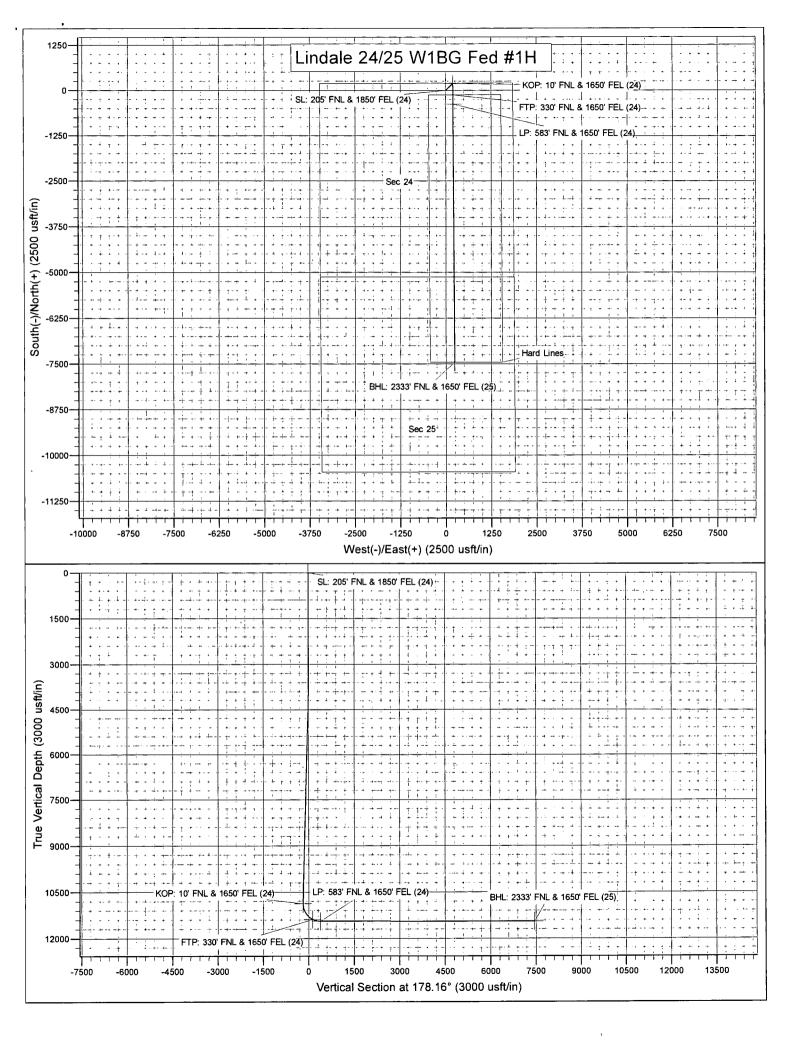
### 7. Well Testing

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

### 8. Emergency Phone Numbers

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

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



# **Mewbourne Oil Company**

Eddy County, New Mexico NAD 83 Lindale 24/25 W1BG Fed #1H Sec 24, T26S, R30E SL: 205' FNL & 1850' FEL, Sec 24 BHL: 2333' FNL & 1650' FEL, Sec 25

Plan: Design #1

# **Standard Planning Report**

28 January, 2019

Database:											
	Hobbs				Local Co-	Local Co-ordinate Reference: Site Lindale 24/25 W1BG Fed #1H			#1H		
Company:	Mewb	ourne Oil Comp	bany		TVD Refer	ence:	· · · · · · · · · · · · · · · · · · ·	VELL @ 3246.0u	usft (Original '	Well Elev)	
roject:	Eddy	County, New M	exico NAD 83		MD Refere	nce:	. I V	VELL @ 3246.0ı	usft (Original '	Well Elev)	
ite:	Lindal	e 24/25 W1BG	Fed #1H		North Refe	erence:	0	Ərid			
Veli:	Sec 24	4, T26S, R30E			Survey Ca	Iculation Meth	od: N	/inimum Curvatu	ire		
Veilbore:	BHL: 2	2333' FNL & 16	50' FEL, Sec 2	5							
Design:	Desig		<b>, -</b>								
		······									
Project	Eddy C	ounty, New Me	XICO NAD 83								
Map System:		Plane 1983			System Dat	um:	Me	an Sea Level			
Geo Datum:	North An	nerican Datum	1983								
Map Zone:	New Me:	kico Eastern Zo	ne								
Site	Lindale	24/25 W1BG F	ed #1H								
Site Position:			Northi	ng:	376,	751.00 usft	Latitude:			32,03477	
From:	Map	<b>)</b> .	Eastin	-	696		Longitude:			-103.832119	
Position Uncer			) usft Slot Ra	-			Grid Converge	ence:		0.27	
Well	Sec 24,	T26S, R30E									
Well Position	+N/-S	0	0 usft No	rthing:		376,751.00	usft Lati	tude:		32.03477	
	+E/-W	0	.0 usft Ea	sting:		696,650.00	usft Lon	gitude:		-103.83211	
Position Uncer	tainty	0	.0 usft We	Ilhead Elevatio	on:	3,246.0	usft <b>Gro</b>	und Level:		3,219.0 u	
Wellbore	BHL: 2	333' FNL & 16	50' FEL, Sec 2	5							
			<u> </u>	- Dott-					E al al		
Magnetics	MC	Model Name Sample Date				Declination Dip Ang (°) (°)					
							ľ	)	(	nT)	
		IGRF2010		1/28/2019	()	6.75	(°	59.78		nT) 47,717	
	Desim	- 19 2-1 August - 19-		1/28/2019		6.75	°)		()	-	
Design	Design	- 19 2-1 August - 19-		1/28/2019		6.75	(°		(1	-	
Audit Notes:	Design	- 19 2-1 August - 19-						59.78		-	
	Design	- 19 2-1 August - 19-	Phase		ROTOTYPE		(° On Depth:	59.78	0.0	-	
Audit Notes:		#1	Phase	e: Pf			On Depth:	59.78		-	
Audit Notes: Version:		#1		e: Pf	ROTOTYPE	Tie	On Depth:	59.78	0.0	-	
Audit Notes: Version:		#1	Phase epth From (TV	e: Pf	ROTOTYPE +N/-S	Tie +E/	On Depth: W sft)	59.78	0.0 ction	-	
Audit Notes: Version:		#1	Phase epth From (TV (usft)	e: Pf	ROTOTYPE +N/-S (usft)	Tie +E; (us	On Depth: W sft)	59.78	D.0 ction າ)	-	
Audit Notes: Version: Vertical Section Plan Sections		#1	Phase lepth From (TV (usft) 0.0	e: Pf	ROTOTYPE +N/-S (usft)	Tie +E/ (us 0.	On Depth: W sft) 0	59.78	D.0 ction າ)	-	
Audit Notes: Version: Vertical Section Plan Sections Measured	n:	#1E	Phase lepth From (TV (usft) 0.0 Vertical	:: Pf D)	ROTOTYPE +N/-S (usft) 0.0	Tie +E <sub>4</sub> (us 0. Dogleg	On Depth: W sft) 0 Build	59.78 ( Dire ( 17! Turn	0.0 ction °) 3.16	-	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth	n:	#1C	Phase lepth From (TV (usft) 0.0 Vertical Depth	:: PF 'D) +N/-S	ROTOTYPE +N/-S (usft) 0.0 +E/-W	Tie +E, (us 0. Dogleg Rate	On Depth: W sft) 0 Build Rate	59.78 ( Dire ( 178 Turn Rate	0.0 ction °) 3.16 TFO	47,717	
Audit Notes: Version: Vertical Section Plan Sections Measured	n:	#1E	Phase lepth From (TV (usft) 0.0 Vertical	:: Pf D)	ROTOTYPE +N/-S (usft) 0.0	Tie +E <sub>4</sub> (us 0. Dogleg	On Depth: W sft) 0 Build	59.78 ( Dire ( 17! Turn	0.0 ction °) 3.16	-	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth	n: Inclination (°)	#1C	Phase lepth From (TV (usft) 0.0 Vertical Depth	:: PF 'D) +N/-S	ROTOTYPE +N/-S (usft) 0.0 +E/-W	Tie +E, (us 0. Dogleg Rate	On Depth: W sft) 0 Build Rate	59.78 ( Dire ( 17( 17( 7) Turn Rate (*/100usft)	0.0 ction °) 3.16 TFO	47,717	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth (usft) 0.0	n: Inclination (°) 0.00	#1 E Azimuth (°) 0.00	Phase lepth From (TV (usft) 0.0 Vertical Depth (usft) 0.0	: Pf /D) +N/-S (usft) 0.0	ROTOTYPE +N/-S (usft) 0.0 +E/-W (usft) 0.0	Tie +E; (us 0. Dogleg Rate (°/100usft) 0.00	On Depth: W sft) 0 Build Rate (°/100usft) 0.00	59.78 ( Dire ( 17( 17( 7) Turn Rate (*/100usft) 0.00	0.0 ction °) 8.16 TFO (°) 0.00	47,717	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth (usft) 0,0 3,750.0	n: Inclination (°) 0.00 0.00	#1 E Azimuth (°) 0.00 0.00	Phase lepth From (TV (usft) 0.0 Vertical Depth (usft) 0.0 3,750.0	e: PF /D) +N/-S (usft) 0.0 0.0	ROTOTYPE +N/-S (usft) 0.0 +E/-W (usft) 0.0 0.0	Tie +E; (us 0. Dogleg Rate (°/100usft) 0.00 0.00	On Depth: W sft) 0 Build Rate (°/100usft) 0.00 0.00	59.78 ( Dire ( 17/ Turn Rate (*/100usft) 0.00 0.00	0.0 ction °) 8.16 TFO (°) 0.00 0.00	47,717	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth (usft) 0.0 3,750.0 3,902.2	n: Inclination (°) 0.00 0.00 2.28	#1 E Azimuth (°) 0.00 0.00 45.44	Phase lepth From (TV (usft) 0.0 Vertical Depth (usft) 0.0 3,750.0 3,902.2	e: PF /D) +N/-S (usft) 0.0 0.0 2.1	ROTOTYPE +N/-S (usft) 0.0 +E/-W (usft) 0.0 0.0 0.0 2.2	Tie +E; (us 0. Dogleg Rate (°/100usft) 0.00 0.00 1.50	On Depth: W sft) 0 Build Rate (°/100usft) 0.00 0.00 1.50	59.78 Dire ( 17/ Turn Rate (*/100usft) 0.00 0.00 0.00	0.0 ction °) 8.16 TFO (°) 0.00 0.00 45.44	47,717	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth (usft) 0,0 3,750.0 3,902.2 10,724.3	n: Inclination (°) 0.00 0.00 2.28 2.28	#1 <b>Azimuth</b> (°) 0.00 0.00 45.44 45.44	Phase lepth From (TV (usft) 0.0 Vertical Depth (usft) 0.0 3,750.0 3,902.2 10,718.8	e: PF /D) +N/-S (usft) 0.0 0.0 2.1 192.9	ROTOTYPE +N/-S (usft) 0.0 +E/-W (usft) 0.0 0.0 0.0 2.2 195.8	Tie +E; (us 0. Dogleg Rate (°/100usft) 0.00 0.00 1.50 0.00	On Depth: W sft) 0 Build Rate (°/100usft) 0.00 0.00 1.50 0.00	59.78 Dire ( 17/ Turn Rate (*/100usft) 0.00 0.00 0.00 0.00 0.00	0.0 ction °) 8.16 TFO (°) 0.00 0.00 45.44 0.00	47,717 Target	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth (usft) 0.0 3,750.0 3,902.2 10,724.3 10,876.5	n: Inclination (°) 0.00 0.00 2.28 2.28 2.28 0.00	#1 <b>Azimuth</b> (°) 0.00 0.00 45.44 45.44 0.00	Phase lepth From (TV (usft) 0.0 Vertical Depth (usft) 0.0 3,750.0 3,902.2 10,718.8 10,871.0	e: PF /D) +N/-S (usft) 0.0 0.0 2.1 192.9 195.0	ROTOTYPE +N/-S (usft) 0.0 +E/-W (usft) 0.0 0.0 2.2 195.8 198.0	Tie +Ei (us 0. Dogleg Rate (°/100usft) 0.00 0.00 1.50 0.00 1.50	On Depth: W sft) 0 Build Rate (*/100usft) 0.00 0.00 1.50 0.00 -1.50	59.78 Dire ( 17/ Turn Rate (*/100usft) 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.0 ction °) 8.16 TFO (°) 0.00 0.00 45.44 0.00 180.00	47,717	
Audit Notes: Version: Vertical Section Plan Sections Measured Depth (usft) 0,0 3,750.0 3,902.2 10,724.3	n: Inclination (°) 0.00 2.28 2.28 2.28 0.00 89.98	#1 <b>Azimuth</b> (°) 0.00 0.00 45.44 45.44	Phase lepth From (TV (usft) 0.0 Vertical Depth (usft) 0.0 3,750.0 3,902.2 10,718.8	e: PF /D) +N/-S (usft) 0.0 0.0 2.1 192.9	ROTOTYPE +N/-S (usft) 0.0 +E/-W (usft) 0.0 0.0 0.0 2.2 195.8	Tie +E; (us 0. Dogleg Rate (°/100usft) 0.00 0.00 1.50 0.00	On Depth: W sft) 0 Build Rate (°/100usft) 0.00 0.00 1.50 0.00	59.78 Dire ( 17/ Turn Rate (*/100usft) 0.00 0.00 0.00 0.00 0.00	0.0 ction °) 3.16 TFO (°) 0.00 0.00 45.44 0.00 180.00 179.69	47,717 Target	

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	(	)	Site Lindale 24/25 W1BG Fed #1H
Database:	Hobbs	Local Co-ordinate Reference:	Site Lindale 24/25 WIBG Fed #10
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3246.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3246.0usft (Original Well Elev)
Site:	Lindale 24/25 W1BG Fed #1H	North Reference:	Grid
Well:	Sec 24, T26S, R30E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 2333' FNL & 1650' FEL, Sec 25		
Design:	Design #1		A REAL OF A

Planned Survey

Measured Depth I	nclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SL: 205' FNL &	1850' FEL (24)								
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0,0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0,00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0,0	0.00	0.00	0.00
					0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0		0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0 0.0	0.0 0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0			0.0	0.00	0.00	0.00
1,800.0 1,900.0	0.00 0.00	0.00 0.00	1,800.0 1,900.0	0.0 0.0	0.0 0.0	0.0	0.00	0.00	0.00
									0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0,0	0.00 0.00	0.00 0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0			0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0,00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,750.0	0.00	0.00	3,750.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	· 0.75	45.44	3,800.0	0.2	0.2	-0.2	1.50	1.50	0.00
3,900.0	2.25	45.44	3,900.0	2.1	2.1	-2.0	1.50	1.50	0.00
3,902.2	2.28	45.44	3,902.2	2.1	2.2	-2.1	1.50	1,50	0.00
		45.44	3,999.9	4.9	4.9	-4.7	0.00	0.00	0.00
4,000.0 4,100.0	2.28 2.28	45.44	4,099.8	7.7	7.8	-7.4	0.00	0.00	0.00
4,100.0	2.28	45.44	4,099.8	10.5	10.6	-10.1	0.00	0.00	0.00
4,300.0	2.28	45.44	4,299.6	13.2	13.5	-12.8	0.00	0.00	0.00 0.00
4,400.0	2.28	45.44	4,399.6	16.0	16.3	-15.5	0.00	0.00	
4,500.0	2.28	45.44	4,499.5	18.8	19.1	-18.2	0.00	0.00	0.00
4,600.0	2,28	45.44	4,599.4	21.6	22.0	-20.9	0.00	0.00	0.00
4,700.0	2,28	45.44	4,699.3	24.4	24.8	-23.6	0.00	0.00	0.00
4,800.0	2.28	45.44	4,799.2	27.2	27.6	-26.3	0.00	0.00	0.00
4,900.0	2,28	45.44	4,899.2	30.0	30.5	-29.0	0.00	0.00	0.00
5,000.0	2.28	45.44	4,999,1	32.8	33,3	-31.7	0.00	0.00	0.00

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Database: Company: Project: Site: Well:	Hobbs Mewbourne Oil Company Eddy County, New Mexico NAD 83 Lindale 24/25 W1BG Fed #1H Sec 24, T26S, R30E	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Site Lindale 24/25 W1BG Fed #1H WELL @ 3246.0usft (Original Well Elev) WELL @ 3246.0usft (Original Well Elev) Grid Minimum Curvature					
Wellbore:	BHL: 2333' FNL & 1650' FEL, Sec 25							
Design:	Design #1	}						
Planned Survey								

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Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(*)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
5,100.0	2.28	45.44	5,099.0	35.6	36.2	-34.4	0.00	0.00	0.00
5,200.0	2.28	45.44	5,198.9	38.4	39.0	-37.1	0.00	0.00	0.00
5,300.0	2.28	45.44	5,298.8	41.2	41.8	-39.8	0.00	0.00	0,00
5,400.0	2.28	45.44	5,398.8	44.0	44.7	-42.5	0.00	0.00	0.00
5,500.0	2.28	45.44	5,498.7	46.8	47.5	-45.2	0.00	0.00	0.00
5,600.0	2.28	45.44	5,598.6	49.6	50.4	-48.0	0.00	0.00	0.00
5,700.0	2.28	45.44	5,698.5	52.4	53.2	-50,7	0.00	0.00	0.00
5,800.0	2.28	45.44	5,798.5	55.2	56.0	-53.4	0.00	0.00	0.00
5,900.0	2.28	45.44	5,898.4	58.0	58.9	-56.1	0.00	0.00	0.00
6,000.0	2.28	45.44	5,998.3	60.8	61.7	-58.8	0.00	0.00	0.00
6,100.0	2.28	45.44	6,098.2	63.6	64.6	-61.5	0.00	0.00	0.00
6,200.0	2.28	45.44	6,198.1	. 66.4	67.4	-64.2	0.00	0.00	0.00
6,300.0	2.28	45.44	6,298.1	69.2	70.2	-66.9	0.00	. 0.00	0.00
6,400.0	2.28	45.44	6,398.0	72.0	73.1	-69.6	· 0.00	0.00	0.00
		45.44 45.44		72.0	75.9		0.00	0.00	0.00
6,500.0	2.28 2.28		6,497.9	74.8 77,6	75.9 78,8	-72.3 -75.0	0.00	0.00	0.00
6,600.0		45.44	6,597.8 6,697.7					0.00	0.00
6,700.0	2.28	45.44	6,697.7	80.4	81.6	-77.7	0.00	0.00	0.00
6,800.0	2.28	45.44	6,797.7	83.1	84.4	-80.4	0.00	0.00	0.00
6,900.0	2.28	45.44	6,897.6	85.9	87.3	-83.1	0.00	0.00	0.00
7,000.0	2.28	45.44	6,997.5	88.7	90,1	-85.8	0.00	0.00	0.00
7,100.0	2.28	45.44	7,097.4	91.5	. 92.9	-88.5	0.00	0.00	0.00
7,200.0	2.28	45.44	7,197.3	94.3	95.8	-91.2	0.00	0.00	0.00
7,300.0	2.28	45.44	7,297.3	97.1	98.6	-93.9	0.00	0.00	0.00
7,400.0	2.28	45.44	7,397.2	99.9	101.5	-96.6	0.00	0.00	0.00
7,500.0	2.28	45.44	7,497.1	102.7	104.3	-99.3	0.00	0.00	0.00
7,600.0	2.28	45.44	7,597.0	105.5	107.1	-102.0	0.00	0.00	0.00
7,700.0	2.28	45.44	7,696.9	108.3	110.0	-104,7	0.00	0.00	0.00
· 7,800.0	2.28	45.44	7,796.9	111.1	112.8	-107.4	0.00	0.00	0.00
7,900.0	2.28	45.44	7,896.8	113.9	115.7	-110.1	0.00	0.00	0.00
8,000.0	2.28	45.44	7,996.7	116.7	118.5	-112.8	0.00	0.00	0.00
8,100.0	2.28	45.44	8,096,6	119.5	121.3	-115.5	0.00	0.00	0.00
8,200.0	2.28	45.44	8,196.5	122.3	124.2	-118.2	0.00	0.00	0.00
8,300.0	2.28	45.44	8,296.5	125.1	127.0	-120.9	0.00	0.00	0.00
8,400.0	2.28	45.44	8,396.4	127.9	129.9	-123.6	0.00	0.00	0.00
8,500.0	2.28	45.44	8,496.3	130.7	132.7	-126.3	0.00	0.00	0.00
8,600.0	2.28	45.44	8,596.2	133.5	135.5	-129.0	0.00	0.00	0.00
8,700.0	2.28	45.44	8,696.1	136.3	138.4	-131.8	0.00	0.00	0.00
8,800.0	2.28	45.44	8,796.1	139.1	141.2	-134.5	0.00	0.00	0.00
8,900.0	2.28	45.44	8,896.0	141.9	144.0	-137.2	0.00	0.00	0.00
9,000.0	2.28	45.44	8,995.9	144.7	146.9	-139.9	0.00	0.00	0.00
9,100.0	2.28	45.44	9,095.8	147.5	149.7	-142.6	0.00	0.00	0.00
9,200.0	2.28	45.44	9,195.8	150.3	152.6	-145.3	0.00	0.00	0.00
9,300.0	2.28	45.44	9,295.7	153.0	155.4	-148.0	0.00	0.00	0.00
9,400.0	2.28	45.44	9,395.6	155.8	158.2	-150.7	0.00	0.00	0.00
9,500.0	2.28	45.44	9,495.5	158.6	161.1	-153,4	0.00	0.00	0.00
9,600.0	2.28	45.44	9,595.4	161.4	163.9	-156.1	0.00	0.00	0.00
9,700.0	2.28	45.44	9,695.4	164.2	166.8	-158.8	0.00	0.00	0.00
0 000 0	2.20	45.44	9,795.3	167.0	169.6	-161.5	0.00	0.00	0.00
9,800.0	2.28							0.00	0.00
9,900.0	2.28	45.44	9,895.2	169.8	172.4	-164.2	0.00		
10,000.0	2.28	45.44	.9,995.1	172.6	175.3	-166.9	0.00	0.00	0.00
10,100.0	2.28	45.44	10,095.0	175.4	178.1	-169.6	0.00	0.00	0.00
10,200.0	2.28	45.44	10,195.0	178.2	181.0	-172.3	0.00	0.00	0.00
10,300.0	2.28	45.44	10,294.9	181.0	183.8	-175.0	0.00	0.00	0.00
10,400.0	2.28	45.44	10,394.8	183.8	186.6	-177.7	0.00	0.00	0.00

COMPASS 5000.1 Build 72

Database:	Hobbs	Local Co-ordinate Reference:	Site Lindale 24/25 W1BG Fed #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3246.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3246.0usft (Original Well Elev)
Site:	Lindale 24/25 W1BG Fed #1H	North Reference:	Grid
Well:	Sec 24, T26S, R30E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 2333' FNL & 1650' FEL, Sec 25		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Siection (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.0	2.28	45.44	10,494.7	186.6	189.5	-180.4	0.00	0.00	0.00
10,500.0	2.28	45.44	10,594.6	189.4	192.3	-183.1	0.00	0.00	0.00
		45.44	10,694.6	192.2	195.2	-185.8	0.00	0.00	0.00
10,700.0	2.28	43.44	10,094.0	192.2	155.2				
10,724.3	2.28	45.44	10,718.8	192.9	195.8	-186.5	0.00	0.00	0.00
10,800,0	1,15	45.44	10,794.5	194.5	197.5	-188.0	1.50	-1.50	0.00
10,876.5	0.00	0.00	10,871.0	195.0	198.0	-188.5	1.50	-1.50	0.00
	L & 1650' FEL (2	4)							
10,900.0	2.35	179.69	10,894.5	194.5	198.0	-188.0	10.00	10.00	0.00
11,000.0	12.35	179.69	10,993.5	181.7	198.1	-175.3	10.00	10.00	0.00
							40.00	40.00	0.00
11,100.0	22.35	179.69	11,088.9	152.0	198.2	-145.5	10.00	10.00	0.00
11,200.0	32.35	179.69	11,177.6	106.1	198.5	-99.6	10.00	10.00	0.00
11,300.0	42.35	179.69	11,257.0	45.5	198.8	-39.1	10.00	10.00	0.00
11,400.0	52.35	179.69	11,324.7	-28.0	199.2	34.4	10.00	10.00	0.00
11,500.0	62.35	179.69	11,378.5	-112.0	199.7	118.4	10.00	10.00	0.00
11,514.5	63.80	179.69	11,385.1	-125.0	199.8	131.3	10.00	10.00	0.00
				120.0	100.0		10.00		
	IL & 1650' FEL (	• ••	44 447 0	204.2	200.2	240 F	10.00	10.00	0.00
11,600.0	72.34	179.69	11,417.0	-204.2	200.2	210.5	10.00 10.00	10.00	0.00
11,700.0	82.34	179.69	11,438,9	-301.7	200.7	308.0			
11,776.3	89.97	179.69	11,444.0	-377.7	201.1	384.0	10.00	10.00	0.00
LP: 583' FNL	. & 1650' FEL (24	\$)							
11,800.0	89.98	179.69	11,444.0	-401.4	201.3	407.7	0.02	0.02	0.00
11,900.0	89.98	179.69	11,444.1	-501.4	201.8	507.7	0.00	0.00	0.00
12,000.0	89.98	179.69	11,444.1	-601.4	202.4	607.6	0.00	0.00	0.00
12,100.0	89.98	179,69	11,444.1	-701.4	202.9	707.6	0.00	0.00	0.00
12,200.0	89.98	179.69	11,444.2	-801.4	203.5	807.6	0.00	0.00	0.00
12,300.0	89.98	179.69	11,444.2	-901.4	204.0	907.5	0.00	0.00	0.00
12,400.0	89.98	179.69	11,444.3	-1,001.4	204.6	1,007.5	0.00	0.00	0.00
12,500.0	89.98	179.69	11,444.3	-1,101.4	205.1	1,107.4	0.00	0.00	0.00
12,600.0	89.98	179.69	11,444.3	-1,201.4	205.7	1,207.4	0.00	0.00	0.00
12,700.0	89.98	179.69	11,444.4	-1,301.4	206.2	1,307.4	0.00	0.00	0.00
12,800.0	89.98	179.69	11,444.4	-1,401.4	206.8	1,407.3	0.00	0.00	0.00
12,900.0	89.98	179.69	11,444.5	-1,501.4	207.3	1,507.3	0.00	0.00	0.00
13,000.0	89.98	179.69	11,444.5	-1,601.4	207.9	1,607.3	0.00	0.00	0.00
13,100.0	89.98	179.69	11,444.6	-1,701.4	208.4	1,707.2	0.00	0.00	0.00
13,200.0	89.98	179.69	11,444.6	-1,801.4	209.0	1,807.2	0.00	0.00	0.00
13,300.0	89.98	179.69	11,444.6	-1,901.4	209.5	1,907.2	0.00	0.00	0.00
13,400.0	89.98	179.69	11,444.7	-2,001.4	210.1	2,007.1	0.00	0.00	0.00
13,400.0	89.98	179.69	11,444.7	-2,101.4	210.1	2,007.1	0.00	0.00	0.00
13,600.0	89.98	179.69	11,444.8	-2,201.4	210.0	2,207.1	0.00	0.00	0.00
	89.98	179.69	11,444.8	-2,301.4	211.2	2,207.1	0.00	0.00	0.00
13,700.0 13,800.0	89.98	179.69	11,444.9	-2,301.4	211.7	2,307.0	0.00	0.00	0.00
						2,506.9	0.00	0.00	0.00
13,900.0	89.98	179.69	11,444.9	-2,501.4	212.8		0.00	0.00	0.00
14,000.0	89.98	179.69	11,444.9	-2,601.4	213.4	2,606.9 2,706.9		0.00	
14,100.0	89.98	179.69	11,445.0	-2,701.4	213.9	•	0.00		0.00
14,200.0	89.98	179.69	11,445.0	-2,801.4	214.4	2,806.8	0.00	0.00	0.00
14,300.0	89,98	179.69	11,445.1	-2,901.4	215.0	2,906.8	0.00	0.00	0.00
14,400.0	89.98	179.69	11,445.1	-3,001.4	215.5	3,006.8	0.00	0.00	0.00
14,500.0	89.98	179.69	11,445.2	-3,101.4	216.1	3,106.7	0.00	0.00	0.00
14,600.0	89.98	179.69	11,445.2	-3,201.4	216.6	3,206.7	0.00	0.00	0.00
14,700.0	89.98	179.69	11,445.2	-3,301.4	217.2	3,306.7	0.00	0.00	0.00
14,800.0	89.98	179.69	11,445.3	-3,401.4	217.7	3,406.6	0.00	0.00	0.00
14,900.0	89.98	179.69	11,445.3	-3,501.4	218.3	3,506.6	0.00	0.00	0.00
15,000.0	89. <del>9</del> 8	179.69	11,445.4	-3,601.4	218.8	3,606.6	0.00	0.00	0.00

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Database:	Hobbs	Local Co-ordinate Reference:	Site Lindale 24/25 W1BG Fed #1H
Company:	Mewbourne Oil Company	TVD Reference:	WELL @ 3246.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	MD Reference:	WELL @ 3246.0usft (Original Well Elev)
Site:	Lindale 24/25 W1BG Fed #1H	North Reference:	Grid
Weil:	Sec 24, T26S, R30E	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 2333' FNL & 1650' FEL, Sec 25		
Design:	Design #1		

Planned Survey

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-Ŵ (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,100.0	89.98	179.69	11,445.4	-3,701.4	219.4	3,706.5	0.00	0.00	0.00
15,200.0	89.98	179.69	11,445.5	-3,801.4	219.9	3,806.5	0.00	0.00	0.00
15,300.0	89.98	179.69	11,445.5	-3,901.4	220.5	3,906.4	0.00	0.00	0.00
15,400.0	89.98	179.69	11,445.5	-4,001.4	221.0	4,006.4	0.00	0.00	0.00
15,500.0	89.98	179,69	11,445.6	-4,101.4	221.6	4,106.4	0.00	0.00	0.00
15,600.0	89.98	179.69	11,445.6	-4,201.4	222.1	4,206.3	0.00	0.00	0.00
15,700.0	89.98	179.69	11,445.7	-4,301.4	222.7	4,306.3	0.00	0.00	0.00
15,800.0	89.98	179.69	11,445.7	-4,401.4	223.2	4,406.3	0.00	0.00	0.00
15,900.0	89.98	179.69	11,445.7	-4,501.4	223.8	4,506.2	0.00	0.00	0.00
16,000.0	89.98	179.69	11,445.8	-4,601.4	224.3	4,606.2	0.00	0.00	0.00
16,100.0	89.98	179.69	11,445.8	-4,701.4	224.9	4,706.2	0.00	0.00	0.00
16,200.0	89.98	179.69	11,445.9	-4,801.4	225.4	4,806.1	0.00	0.00	0.00
16,300.0	89.98	179.69	11,445.9	-4,901.4	226.0	4,906.1	0.00	0.00	0.00
16,400.0	89.98	179.69	11,446.0	-5,001.4	226.5	5,006.1	0.00	0.00	0.00
16,500.0	89.98	179.69	11,446.0	-5,101.4	227.1	5,106.0	0.00	0.00	0.00
16,600.0	89,98	179.69	11,446.0	-5,201.4	227.6	5,206.0	0.00	0.00	0.00
16,700.0	89.98	179.69	11,446.1	-5,301.4	228.2	5,305.9	0.00	0.00	0.00
16,800.0	89.98	179.69	11,446.1	-5,401.4	228.7	5,405.9	0.00	0.00	0.00
16,900.0	89.98	179.69	11,446.2	-5,501.3	229.3	5,505.9	0.00	0.00	0.00
17,000.0	89.98	179.69	11,446.2	-5,601.3	229.8	5,605.8	0.00	0.00	0.00
17,100.0	89.98	179.69	11,446.3	-5,701.3	230.4	5,705.8	0.00	0.00	0.00
17,200.0	89.98	179.69	11,446.3	-5,801.3	230.9	5,805.8	0.00	0.00	0.00
17,300.0	89.98	179.69	11,446.3	-5,901.3	231.5	5,905.7	0.00	0.00	0.00
17,400.0	89.98	179.69	11,446.4	-6,001.3	232.0	6,005.7	0.00	0.00	0.00
17,500.0	89.98	179.69	11,446.4	-6,101.3	232.6	6,105.7	0.00	0.00	0.00
17,600.0	89.98	179.69	11,446.5	-6,201.3	233.1	6,205.6	0.00	0.00	0.00
17,700.0	89.98	179.69	11,446.5	-6,301.3	233.7	6,305.6	0.00	0.00	0.00
17,800.0	89.98	179.69	11,446.6	-6,401.3	234.2	6,405.6	0.00	0.00	0.00
17,900.0	89.98	179.69	11,446.6	-6,501.3	234.8	6,505.5	0.00	0.00	0.00
18,000.0	89.98	179.69	11,446.6	-6,601.3	235.3	6,605.5	0.00	0.00	0.00
18,100.0	89.98	179.69	11,446.7	-6,701.3	235.9	6,705.4	0.00	0.00	0.00
18,200.0	89.98	179.69	11,446.7	-6,801.3	236.4	6,805.4	0.00	0.00	0.00
18,300.0	89.98	179.69	11,446.8	-6,901.3	237.0	6,905.4	0.00	0.00	0.00
18,400.0	89.98	179.69	11,446.8	-7,001.3	237.5	7,005.3	0.00	0.00	0.00
18,500.0	89.98	179.69	11,446.8	-7,101.3	238.1	7,105.3	0.00	0.00	0.00
18,600.0	89.98	179.69	11,446.9	-7,201.3	238.6	7,205.3	0.00	0.00	0.00
18,700.0	89.98	179.69	11,446.9	-7,301.3	239.2	7,305.2	0.00	0.00	0.00
18,800.0	89.98	179.69	11,447.0	-7,401.3	239.7	7,405.2	0.00	0.00	0.00
18,854.7	89.98 FNL & 1650' FEL	179.69	11,447.0	-7,456.0	240.0	7,459.9	0.00	0.00	0.00

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Database:       Hobbs         Company:       Mewbourne Oil Company         Project:       Eddy County, New Mexico NAD 83         Site:       Lindale 24/25 W1BG Fed #1H         Nell:       Sec 24, T26S, R30E         Nellbore:       BHL: 2333' FNL & 1650' FEL, Sec 25         Design:       Design #1				Local Co-ordinate Reference:       Site Lindale 24/25 W1BG Fed #11         TVD Reference:       WELL @ 3246.0usft (Original Well         MD Reference:       WELL @ 3246.0usft (Original Well         North Reference:       Grid         Survey Calculation Method:       Minimum Curvature				ll Elev)	
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
SL: 205' FNL & 1850' FE - plan hits target cer - Point		0.00	0.0	0.0	0.0	376,751.00	696,650.00	32.0347779	-103.8321195
KOP: 10' FNL & 1650' Fl - plan hits target cer - Point		0.00	10,871.0	195.0	198.0	376,946.00	696,848.00	32.0353114	-103.8314776
FTP: 330' FNL & 1650' F - plan hits target cer - Point		0.00	11,385.1	-125.0	199.8	376,626.00	696,849.75	32.0344318	-103.8314768
LP: 583' FNL & 1650' FE - plan hits target cer - Point		0.00	11,444.0	-377.7	201.1	376,373.30	696,851.10	32.0337371	-103.8314762
BHL: 2333' FNL & 1650' - plan hits target cer - Point	0.00 hter	0.00	11,447.0	-7,456.0	240.0	369,295.00	696,890.00	32.0142792	-103.8314568

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Intent	x	As Drill	ed [	
API #				

Operator Name:	Property Name:	Well Number
Mewbourne Oil Co.	Lindale 24/25 W1BG Fed	1H

# Kick Off Point (KOP)

UL B	Section 24	Township 26S	Range 30E	Lot	Feet 10	From N/S N	Feet 1650	From E/W E	County Eddy
Latitude				Longitude		NAD			
32.0	32.0353114			-103.83	14776			83	

## First Take Point (FTP)

UL B	Section 24	Township 26S	Range 30E	Lot	Feet 330	From N/S N	Feet 1650	From E/W E	County Eddy
Latitu	Latitude				Longitude		NAD		
32.0	32.0344318			-103.831	4768	83			

# Last Take Point (LTP)

UL G	Section 25	Township 26S	Range 30E	Lot	Feet 2333	From N/S N	Feet 1650	From E/W E	County Eddy
Latitu	Latitude				Longitud	le		NAD	
32.0					-103.	8314568	}	83	

Is this well the defining well for the Horizontal Spacing Unit?

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 Co.	Lindale 24/25 W1AH Fed	1H
		KZ 0C /20 /2010

KZ 06/29/2018

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# 1. Geologic Formations

TVD of target	11,447'	Pilot hole depth	NA
MD at TD:	18,855'	Deepest expected fresh water:	225'

Basin			
Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	919	Water	
Top Salt	1		
Castile	2301		
Base Salt	3639		
Lamar	3754	Oil/Gas	
Bell Canyon	3789	Oil/Gas	
Cherry Canyon	4682	Oil/Gas	
Manzanita Marker	4858		
Brushy Canyon	5876	Oil/Gas	
Bone Spring	7687	Oil/Gas	
1 <sup>st</sup> Bone Spring Sand			
2 <sup>nd</sup> Bone Spring Sand			
3 <sup>rd</sup> Bone Spring Sand			
Abo			
Wolfcamp	10950	Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

# 2. Casing Program

Hole	Casing	Interval	Csg.	Weight	Grade	Grade Conn. SF		SF	SF Jt	SF Body
Size	From	То	Size	(lbs)	A Statistics Statistics		Collapse	Burst	Tension	Tension
17.5"	0'	1000'	13.375"	48	H40	STC	1.65	3.70	6.71	11.27
12.25"	0'	3700'	9.625"	40	J55	LTC	1.34	2.05	3.47	5.76
8.75"	0'	11,600'	7"	26	HCP110	LTC	1.31	1.76	2.16	2.75
6.125"	10,877'	18,418'	4.5"	13.5	P110	LTC	1.79	2.08	3.14	3.92
В	LM Minii	num Safe	ty 1.125	1	1.6 Dr	y 1.6 D	)ry			•
		Facto	or		1.8 We	et 1.8 W	Vet			

	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.					
Is premium or uncommon casing planned? If yes attach casing specification sheet.					
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y				
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y				
Is well located within Capitan Reef?	N				
If yes, does production casing cement tie back a minimum of 50' above the Reef? Is well within the designated 4 string boundary.					
Is well located in SOPA but not in R-111-P?	N				
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?					
Is well located in R-111-P and SOPA?	N				
If yes, are the first three strings cemented to surface?					
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?					
Is well located in high Cave/Karst?	Y				
If yes, are there two strings cemented to surface?	Y				
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	* <u>8 ( Å) (</u> ) (				

Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

# 3. Cementing Program

Casing	<b># Sks</b>	Wt. lb/ gal	Yld ft3/ sack	H20 gal/ sk	500# Comp. Strength (hours)	Slurry Description	
Surf.	535	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.	600	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.	380	12.5	2.12	11	9	Lead: Class H + Gel + Retarder + Defoamer +	
Stg 1						Extender	
Ŭ	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer	
					ECP/DV T	'ool @ 4858'	
Prod.	65	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer +	
Stg 2						Extender	
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder	
Liner	325	11.2	2.97	17	16	Class H + 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, etc.

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	3500'	25%
Liner	10,877'	25%

## 4. Pressure Control Equipment

Variance: None

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

		er, a pressure integrity test of each casing shoe shall be performed. Will be tested in dance with Onshore Oil and Gas Order #2 III.B.1.i.	
	1	iance is requested for the use of a flexible choke line from the BOP to Choke	
Y	Manifold. See attached for specs and hydrostatic test chart.		
	Ν	Are anchors required by manufacturer?	
Y A multibowl wellhead is being used. The BOP will be tested per Onsho installation on the surface casing which will cover testing requirements		Itibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after lation on the surface casing which will cover testing requirements for a maximum of ys. If any seal subject to test pressure is broken the system must be tested.	
		Provide description here: See attached schematic.	

# 5. Mud Program

	VD	Туре	Weight (ppg)	Viscosity	Water Loss
From	То		·运用了发行等所买户之中。 11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	na ha na hair.	化磷酸盐酸盐 基勒斯 化合金
0'	1000'	Spud Mud	8.6-8.8	28-34	N/C
1000'	3700'	BW	10.0	28-34	N/C
3700'	11,417'	FW w/ Polymer	8.6-9.7	28-34	N/C
11,417'	11,447'	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. MW up to 13.0 ppg may be required for shale control. The highest mud weight needed to balance formation is expected to be 12.0 ppg.

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

# 6. Logging and Testing Procedures

Logging, Coring and Testing.			
X	Will run GR/CNL from KOP (10,877') 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	
Х	Gamma Ray	10,877' (KOP) to TD	
	Density		
-	CBL		
	Mud log		
	PEX		

### 7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7143 psi
Abnormal Temperature	No

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

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

	H2S is present	
X	H2S Plan attached	

### 8. Other facets of operation

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

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Attachments

\_\_\_\_ Directional Plan \_\_\_\_ Other, describe .

# **WAFMSS**

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

# SUPO Data Report

· Carlos and a second

- Part

APD ID: 10400038829

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: LINDALE 24/25 W1BG FED

Well Type: CONVENTIONAL GAS WELL

# Section 1 - Existing Roads

Will existing roads be used? YES

### Existing Road Map:

Lindale24\_25W1BGFed1H\_existingroadmap\_20190205094713.pdf

Existing Road Purpose: ACCESS, FLUID TRANSPORT

# 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? YES

New Road Map:

Lindale24\_25W1BGFed1H\_newroadmap\_20190205094738.pdf

New road type: RESOURCE

Length: 889.87 Feet Width (ft.): 30

Max slope (%): 3

Max grade (%): 3

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: None

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

## Submission Date: 02/12/2019

Well Number: 1H Well Work Type: Drill Highlighted data reflects the most recent changes

Show Final Text

Row(s) Exist? NO

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

#### Turnout? Y

Access surfacing type: OTHER

Access topsoil source: OFFSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth:

Offsite topsoil source description: Topsoil will be on edge of lease road.

Onsite topsoil removal process:

Access other construction information: None

Access miscellaneous information: None

Number of access turnouts: 6

Access turnout map:

#### Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: None

Road Drainage Control Structures (DCS) description: None

Road Drainage Control Structures (DCS) attachment:

### Access Additional Attachments

Additional Attachment(s):

# **Section 3 - Location of Existing Wells**

Existing Wells Map? YES

Attach Well map:

Lindale24\_25W1BGFed1H\_existingwellmap\_20190205094812.pdf

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

**Production Facilities description:** Battery is off site to the south of the Lindale 24/25 AH well pad. Flowline to come from the Lindale 24/25 BG well pad over to the said battery 1972.41'. **Production Facilities map:** 

Lindale24\_25W1BGFed1H\_productionfacilitymap\_20190205094902.pdf Lindale24\_25W1BGFed1H\_flowlinemap\_20190205094911.pdf

Operator Nan	ne: MEWBOURNE	OIL COMPANY
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Well Name: LINDALE 24/25 W1BG FED

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Well Number: 1H

Water source use type: DUST CONTROL, INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING Describe type: Source latitude: 32.31967 Source datum: NAD83 Water source permit type: WATER WELL Source land ownership: PRIVATE Water source transport method: TRUCKING Source transportation land ownership: COMMERCIAL Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	Water source type: IRRIGATION Source longitude: -103.48492 Source volume (acre-feet): 0.2595907
Source latitude: 32.31967 Source datum: NAD83 Water source permit type: WATER WELL Source land ownership: PRIVATE Water source transport method: TRUCKING Source transportation land ownership: COMMERCIAL Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	
Source datum: NAD83 Water source permit type: WATER WELL Source land ownership: PRIVATE Water source transport method: TRUCKING Source transportation land ownership: COMMERCIAL Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	Source volume (acre-feet): 0.2595907
Water source permit type: WATER WELL Source land ownership: PRIVATE Water source transport method: TRUCKING Source transportation land ownership: COMMERCIAL Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	Source volume (acre-feet): 0.2595907
Source land ownership: PRIVATE Water source transport method: TRUCKING Source transportation land ownership: COMMERCIAL Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	Source volume (acre-feet): 0.2595907
Water source transport method: TRUCKING Source transportation land ownership: COMMERCIAL Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	Source volume (acre-feet): 0.2595907
Source transportation land ownership: COMMERCIAL Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	Source volume (acre-feet): 0.2595907
Water source volume (barrels): 2014 Source volume (gal): 84588 Water source use type: DUST CONTROL,	Source volume (acre-feet): 0.2595907
Source volume (gal): 84588 Water source use type: DUST CONTROL,	Source volume (acre-feet): 0.2595907
Water source use type: DUST CONTROL,	
INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING Describe type:	Water source type: IRRIGATION Source longitude: -103.8013
Source latitude: 32.05537	
Source datum: NAD83	
Water source permit type: WATER WELL	
Source land ownership: FEDERAL	
Water source transport method: TRUCKING	
Source transportation land ownership: COMMERCIAL	
Water source volume (barrels): 2014	Source volume (acre-feet): 0.2595907
Source volume (gal): 84588	
ater source and transportation map:	
dale24_25W1BGFed1H_watersourceandtransmap_20190205095309.p	pdf
ater source comments: Both Sources shown on one map	
w water well? NO	
New Water Well Info	

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

.

Operator Name: MEWBOURNE OIL COMPANY Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

Aquifer comments:

Aquifer documentation:

Well depth (ft):	Well casing type:
Well casing outside diameter (in.):	Well casing inside diameter (in.):
New water well casing?	Used casing source:
Drilling method:	Drill material:
Grout material:	Grout depth:
Casing length (ft.):	Casing top depth (ft.):
Well Production type:	Completion Method:
Water well additional information:	
State appropriation permit:	
Additional information attachment:	

### Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche - both sources shown on one map.

Construction Materials source location attachment:

Lindale24\_25W1BGFed1H\_calichesourceandtransmap\_20190205100419.pdf

# Section 7 - Methods for Handling Waste

Waste type: SEWAGE

Waste content description: Human waste & grey water

Amount of waste: 1500 gallons

Waste disposal frequency : Weekly

Safe containment description: 2,000 gallon plastic container

Safe containmant attachment:

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

FACILITY Disposal type description:

Disposal location description: City of Carlsbad Water Treatment facility

Waste type: DRILLING

Waste content description: Drill cuttings

Amount of waste: 940 barrels

Waste disposal frequency : One Time Only

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

#### **Operator Name: MEWBOURNE OIL COMPANY**

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

#### Safe containmant attachment:

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

**Disposal type description:** 

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

Waste type: GARBAGE

Waste content description: Garbage & trash

Amount of waste: 1500 pounds

Waste disposal frequency : One Time Only

Safe containment description: Enclosed trash trailer

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Waste Management facility in Carlsbad.

**Reserve Pit** 

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

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

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

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

**Reserve pit liner** 

Reserve pit liner specifications and installation description

Сι	ıtti	nas	Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

**Description of cuttings location** 

Cuttings area length (ft.)

Cuttings area depth (ft.)

Cuttings area width (ft.)

Cuttings area volume (cu. yd.)

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

WCuttings area liner

**Operator Name: MEWBOURNE OIL COMPANY** 

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

Cuttings area liner specifications and installation description

**Section 8 - Ancillary Facilities** 

Are you requesting any Ancillary Facilities?: NO Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Lindale24\_25W1BGFed1H\_wellsitelayout\_20190205100500.pdf

Comments:

# Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: LINDALE 24/25 BG WELLS Multiple Well Pad Number: 2

**Recontouring attachment:** 

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

Wellpad long term disturbance (acres): 2.48	Wellpad short term disturbance (acres): 1.47
Access road long term disturbance (acres): 0	Access road short term disturbance (acres): 0
Pipeline long term disturbance (acres): 0	Pipeline short term disturbance (acres): 0
Other long term disturbance (acres): 0	Other short term disturbance (acres): 0
Total long term disturbance: 2.48	Total short term disturbance: 1.47

**Disturbance Comments:** In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging. **Reconstruction method:** The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

**Topsoil redistribution:** Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

Soil treatment: NA

Existing Vegetation at the well pad: Various brush & grasses

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Various brush & grasses Existing Vegetation Community at the road attachment: Existing Vegetation Community at the pipeline: NA Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: NA Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO Seed harvest description: Seed harvest description attachment:

#### Seed Management

### Seed Table

Seed type: Seed name:

-----

Source name:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed source:

Source address:

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

Seed Type

Pounds/Acre

Seed reclamation attachment:

### Operator Contact/Responsible Official Contact Info

First Name: Bradley

Last Name: Bishop

Phone: (575)393-5905

Email: bbishop@mewbourne.com

**Seedbed prep:** Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites. **Seed BMP:** To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used.

Seed method: drilling or broadcasting seed over entire reclaimed area.

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: NA

Weed treatment plan attachment:

**Monitoring plan description:** vii. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion and invasive/noxious weeds are controlled. **Monitoring plan attachment:** 

Success standards: regrowth within 1 full growing season of reclamation.

Pit closure description: NA

Pit closure attachment:

# Section 11 - Surface Ownership

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

**COE Local Office:** 

**DOD Local Office:** 

NPS Local Office:

State Local Office:

Military Local Office:

Well Name: LINDALE 24/25 W1BG FED

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Well Number: 1H

USFWS Local Office:	
Other Local Office:	
USFS Region:	
USFS Forest/Grassland: US	FS Ranger District:
Fee Owner:       Pecos Valley Artesian Convservation       Fee O         District       Email         Phone:       (575)622-7000	Owner Address:
Surface use plan certification: NO Surface use plan certification document:	
Surface access agreement or bond: Agreement	5
Surface Access Agreement Need description: SUA in pl	ace
Surface Access Bond BLM or Forest Service:	
BLM Surface Access Bond number:	
USFS Surface access bond number:	
Disturbance type: WELL PAD	
Describe:	
Surface Owner: BUREAU OF LAND MANAGEMENT	
Other surface owner description:	
BIA Local Office:	
BOR Local Office:	
COE Local Office:	
DOD Local Office:	
NPS Local Office:	
State Local Office:	
Military Local Office:	
USFWS Local Office:	
Other Local Office:	
USFS Region:	
USFS Forest/Grassland: US	FS Ranger District:

#### Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

Fee Owner: Pecos Valley Artesian Conservation District Phone: (575)622-7000

Fee Owner Address:

Email:

Surface use plan certification: NO Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SUA in place

Surface Access Bond BLM or Forest Service:

**BLM Surface Access Bond number:** 

USFS Surface access bond number:

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

**BOR Local Office:** 

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

**USFWS Local Office:** 

Other Local Office:

USFS Region:

**USFS Forest/Grassland:** 

USFS Ranger District:

Page 10 of 11

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

# Section 12 - Other Information

Right of Way needed? NO

Use APD as ROW?

ROW Type(s):

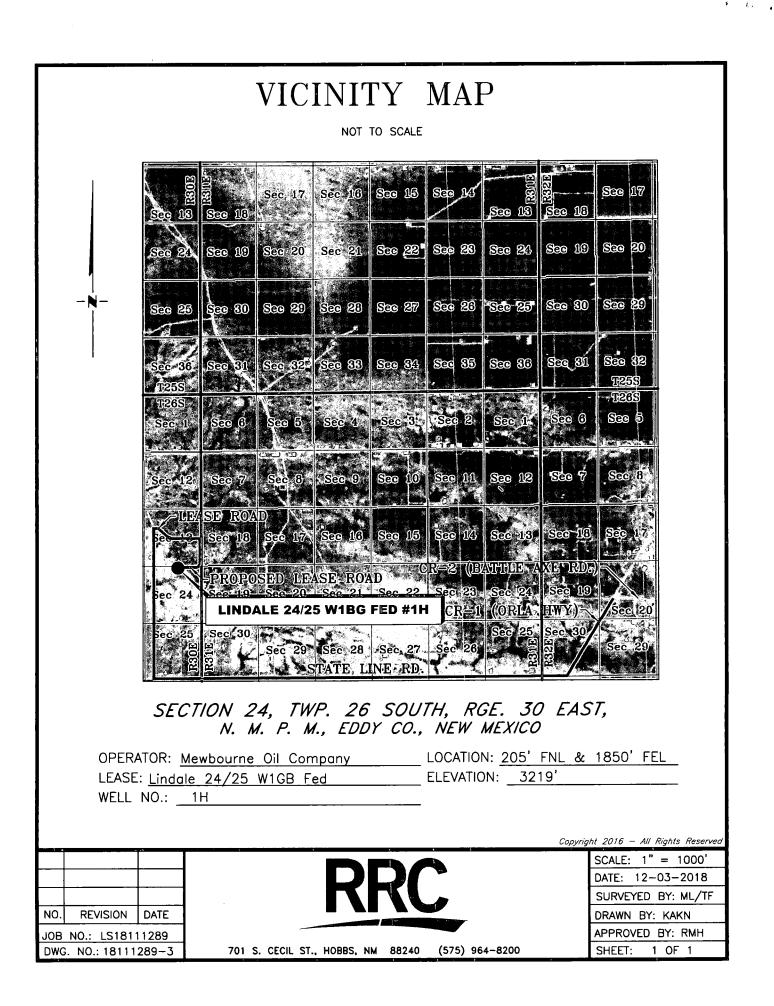
**ROW Applications** 

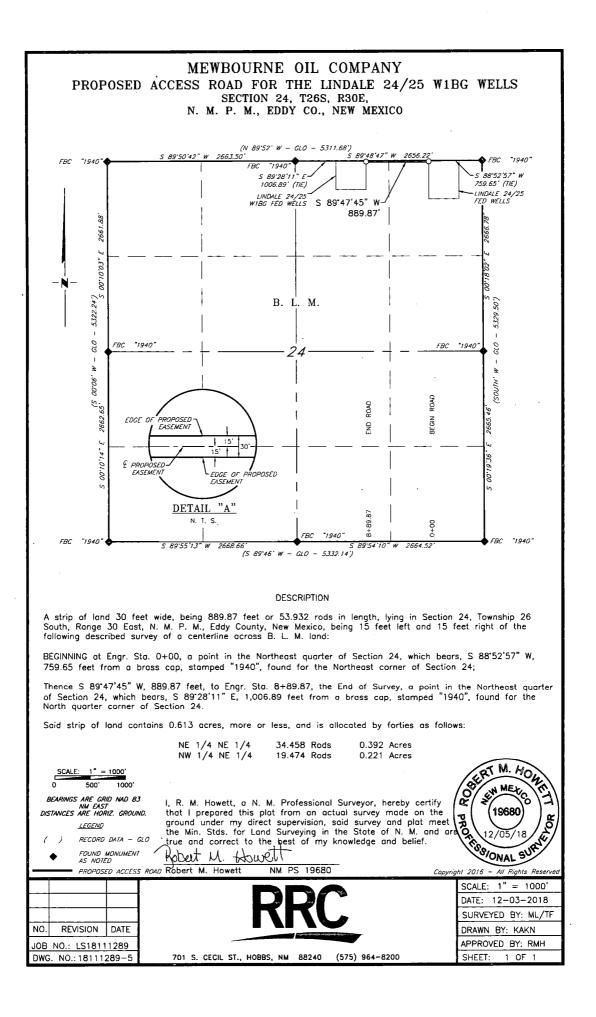
SUPO Additional Information: DEC 05 2018 Met w/RRC Surveying & staked location @ 205' FNL & 1850' FEL, Sec 24, T26S, R30E, Eddy Co., NM. (Elevation @ 3219'). Approx. 900 of new road needed off the NE corner heading E to Lindale AH pad. Topsoil W. Reclaim all sides 60. Flow line staked along proposed road to AH battery. Location is in MOA. Will require BLM onsite. Lat: 32.03477678 N, Long: -103.83212011 W NAD 83. (BPS) DEC 20 2018 Met w/Paul Murphy (BLM-NRS) & Kyle Rybacki (BLM-Cave/Karst). Location approved. (BPS Use a previously conducted onsite? NO

Previous Onsite information:

### **Other SUPO Attachment**

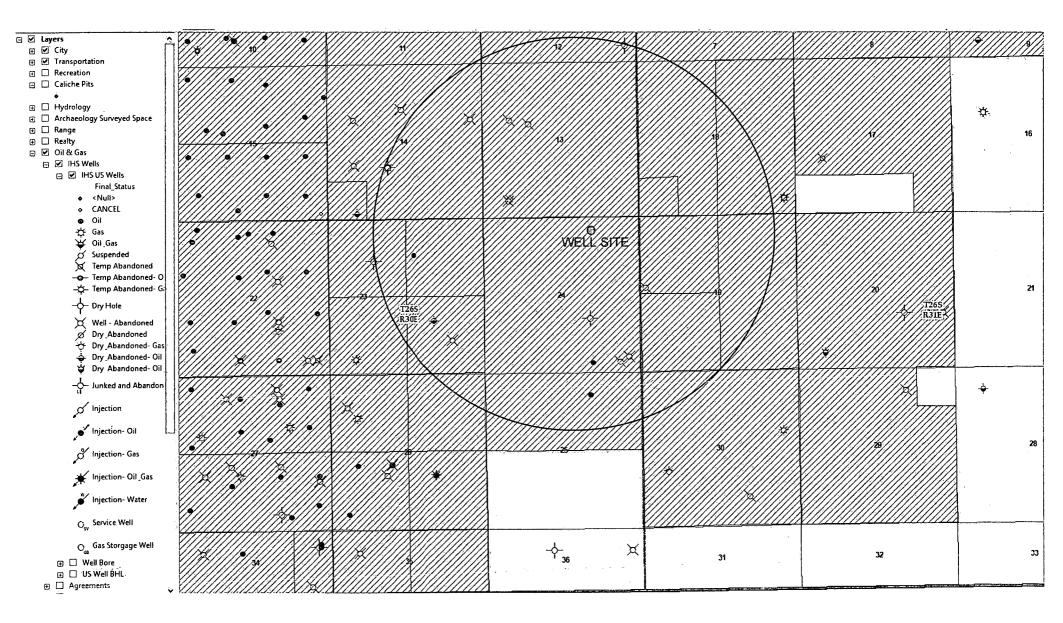
Lindale24\_25W1BGFed1H\_gascaptureplan\_20190205101227.pdf Lindale24\_25W1BGFed1H\_interimreclamationdiagram\_20190205101250.pdf



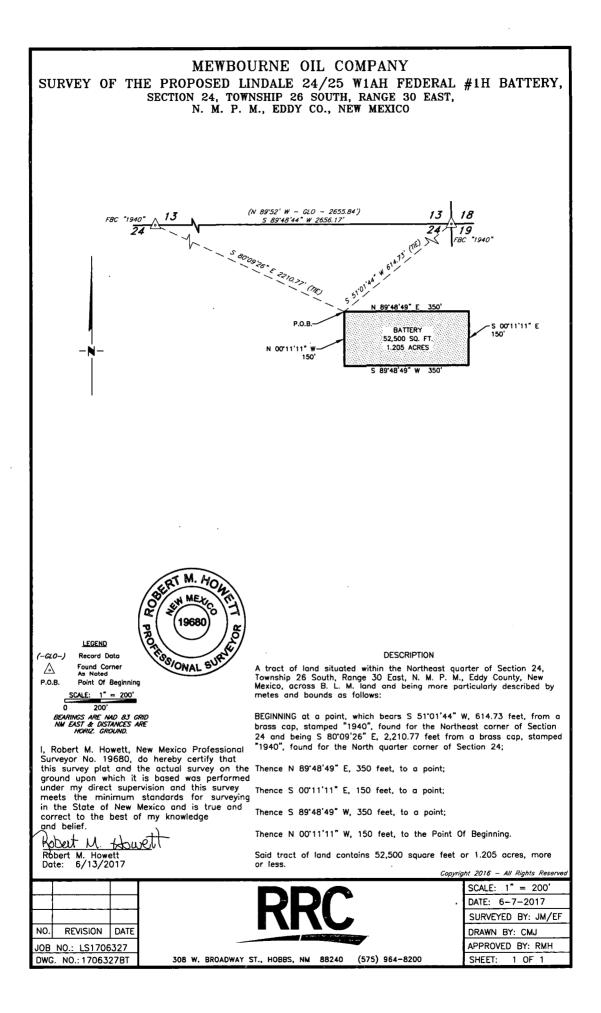


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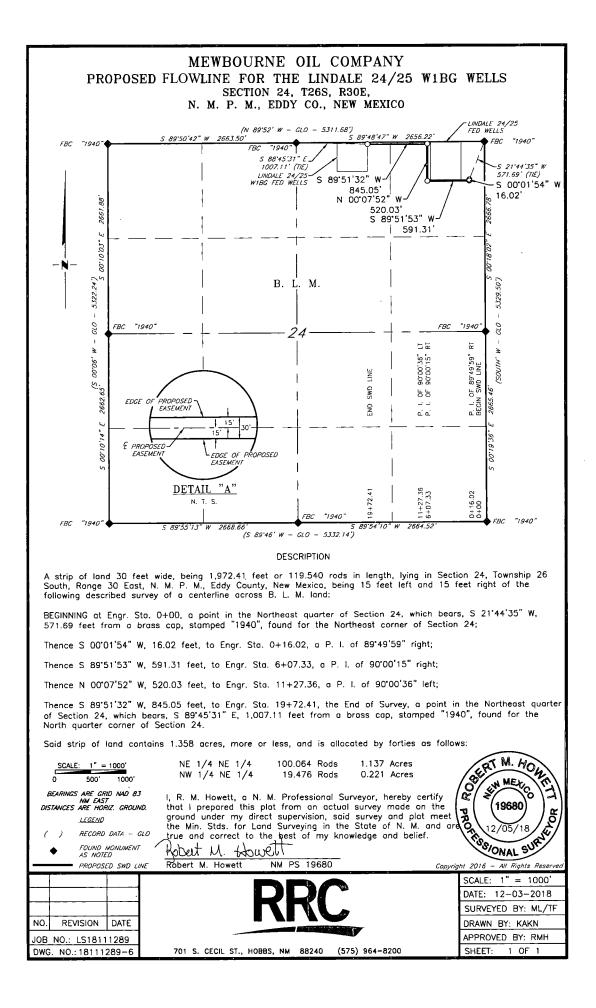
# LINDALE 24/25 W1BG FED #1H EXISTING WELL MAP



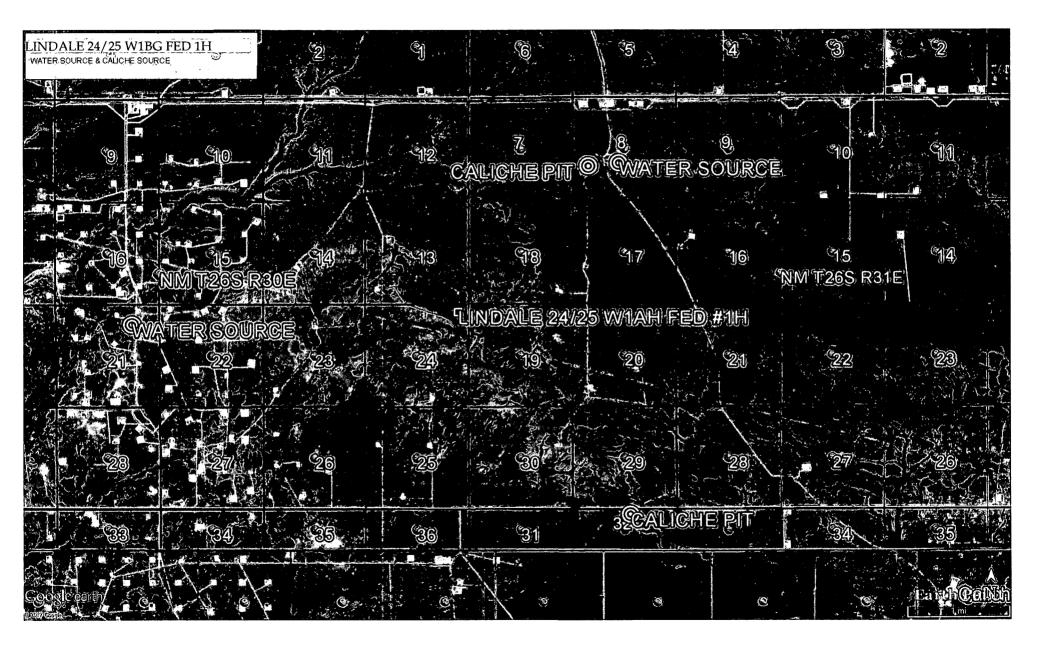
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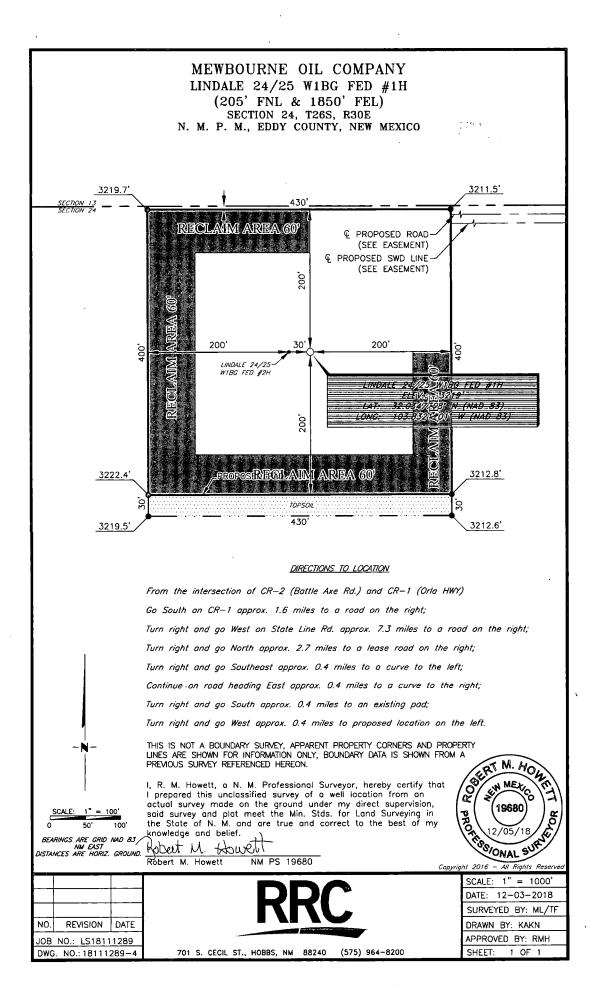
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U.S. Department of the Interior BUREAU OF LAND MANAGEMENT PWD Data Report

APD ID: 10400038829

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LINDALE 24/25 W1BG FED

Well Type: CONVENTIONAL GAS WELL

Well Number: 1H Well Work Type: Drill

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Submission Date: 02/12/2019

Section 1 - General

Would you like to address long-term produced water disposal? NO

# Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO Produced Water Disposal (PWD) Location: PWD surface owner: Lined pit PWD on or off channel: Lined pit PWD discharge volume (bbl/day): Lined pit specifications: Pit liner description: Pit liner manufacturers information: Precipitated solids disposal: Decribe precipitated solids disposal: Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

PWD disturbance (acres):

Well Name: LINDALE 24/25 W1BG FED

8.9

Well Number: 1H

Lined pit Monitor description: Lined pit Monitor attachment: Lined pit: do you have a reclamation bond for the pit? Is the reclamation bond a rider under the BLM bond? Lined pit bond number: Lined pit bond amount:

Additional bond information attachment:

# Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres):

PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Assigned injection well API number?

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

**Underground Injection Control (UIC) Permit?** 

**UIC Permit attachment:** 

### Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

# **Section 6 - Other**

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Other PWD discharge volume (bbl/day):

PWD disturbance (acres):

Injection well name:

#### Injection well API number:

**PWD disturbance (acres):** 

PWD disturbance (acres):

Well Name: LINDALE 24/25 W1BG FED

Well Number: 1H

.

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

# **WAFMSS**

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



Highlighted data reflects the most

recent changes

Show Final Text

- Charles

APD ID: 10400038829

Operator Name: MEWBOURNE OIL COMPANY

Well Name: LINDALE 24/25 W1BG FED

Well Type: CONVENTIONAL GAS WELL

# **Bond Information**

Federal/Indian APD: FED

BLM Bond number: NM1693

**BIA Bond number:** 

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

**Reclamation bond amount:** 

**Reclamation bond rider amount:** 

Additional reclamation bond information attachment:

Submission Date: 02/12/2019 Well Number: 1H Well Work Type: Drill