Form 3160-3
(June 2015)

OCD – HOBBS
11/17/2020
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM0000127A

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

7. If Unit or CA Agreement, Name and No.
NMNM135614

8. Lease Name and Well No.
SALADO DRAW 9 W0CN FED COM 1H [329858]

2. Name of Operator
MEWBOURNE OIL COMPANY [14744]

9. API Well No. 30-025-48039

3a. Address
PO Box 5270 Hobbs NM 88240

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

10. Field and Pool, or Exploratory [98097]
SANDERS TANK;UPPER WOLFCAMP

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface TR C / 345 FNL / 1900 FWL / LAT 32.0643295 / LONG -103.579642
At proposed prod. zone TR N / 100 FSL / 1652 FWL / LAT 32.0510453 / LONG -103.5804358

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 9 / T26S / R33E / NMP

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

12. County or Parish
LEA

13. State
NM

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

16. No of acres in lease
320

17. Spacing Unit dedicated to this well
160

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

19. Proposed Depth
12206 feet / 17183 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3308 feet

22. Approximate date work will start*
10/08/2019

23. Estimated duration
60 days

24. Attachments

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

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

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

Title: Regulatory

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	06/24/2020

Title	Office
Assistant Field Manager Lands & Minerals	CARLSBAD

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

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

GCP Rec 11/17/2020
Revised C-102 Rec 11/24/2020

KZ 11/24/2020

SL

APPROVED WITH CONDITIONS

Approval Date: 06/24/2020

(Continued on page 2)

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mewbourne Oil Company**
LEASE NO.:	**NMNM0000127A**
WELL NAME & NO.:	SALADO DRAW 9 W0CN FED COM #1H
SURFACE HOLE FOOTAGE:	345'/N & 1900'/W
BOTTOM HOLE FOOTAGE	100'/S & 1652'/W
LOCATION:	Section 9, T.26 S., R.33 E., NMP
COUNTY:	Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **960** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

completing the cement job.

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

2. The **9-5/8** inch intermediate casing shall be set at approximately **4835** feet. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
  Excess cement calculates to 19%, additional cement might be required.

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

3. The minimum required fill of cement behind the **7** inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
  Excess cement calculates to 1%, additional cement might be required.

Option 2:

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

b. 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.

c. 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.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.

d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
b. When the operator proposes to set surface casing with Spudder Rig
   - Notify the BLM when moving in and removing the Spudder Rig.
   - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
   - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours.

WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

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

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

    c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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

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

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

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

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

OTA04072020

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

MEWBOURNE OIL COMPANY

SALADO DRAW 9 W0CN FED COM 1H
Surface Hole Location: 345' FNL & 1900' FWL, Section 9, T. 26 S., R. 33 E.
Bottom Hole Location: 100' FSL & 1652' FWL, Section 9, T. 26 S, R 33 E.

SALADO DRAW 9 W1CN FED COM 2H
Surface Hole Location: 345' FNL & 1930' FWL, Section 9, T. 26 S., R. 33 E.
Bottom Hole Location: 100' FSL & 2310' FWL, Section 9, T. 26 S, R 33 E.

Lease Number NMNM0000127A

Lea County

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

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

V. SPECIAL REQUIREMENT(S)

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

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

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:
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.
- 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. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:
Tank battery locations and all facilities 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.

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. Leak detection plan will be submitted to BLM for approval.

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 ground water concerns:

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:
Kick off 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 from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, 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:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:

Annual pressure monitoring will be performed by the operator 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.

Watershed

- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.
- Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater.
- Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.
- The compacted berm shall be constructed at a minimum of 24 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.
- 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. (Any access road crossing the berm cannot be lower than the berm height.)
- 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 values 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.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be

constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

Turnouts

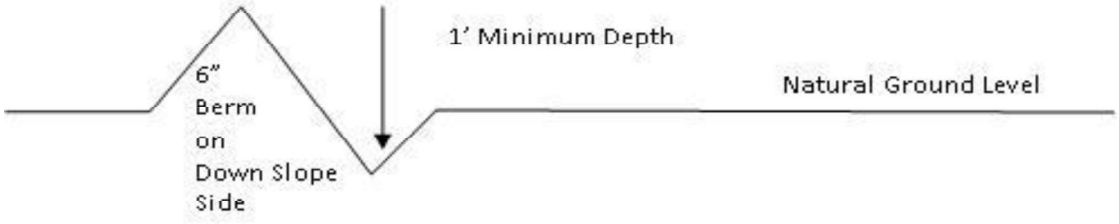
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

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

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

Construction Steps

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

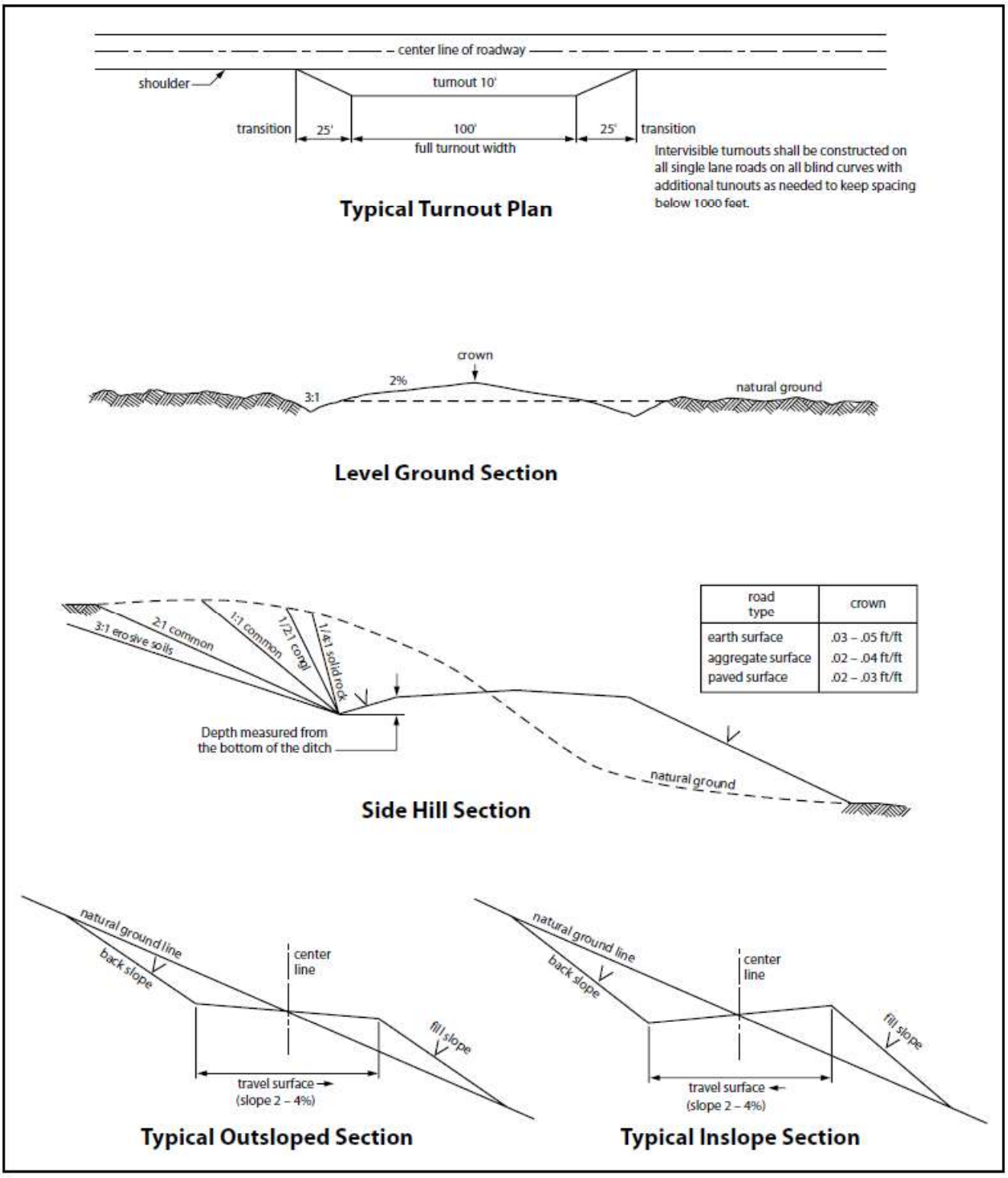


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

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

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

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

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review 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. 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. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq*. (1982) with regard 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 in particular, 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. 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, *et seq*. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq*.) 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 provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. 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 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 Holder, regardless of fault. Upon failure of 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/she 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 Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized

right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall 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 shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

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

8. 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 shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of **24** 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 shall 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.

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).

Seed Mixture 3, for Shallow 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 no 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	lb/acre
Plains Bristlegrass (*Setaria macrostachya*)	1.0
Green Sprangletop (*Leptochloa dubia*)	2.0
Sideoats Grama (*Bouteloua curtipendula)*	5.0

*Pounds of pure live seed:

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

APD ID: 10400041946 **Submission Date:** 08/30/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: SALADO DRAW 9 W0CN FED COM **Well Number:** 1H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
459323	UNKNOWN	3335	27	27		NONE	N
459334	RUSTLER	2490	845	845	ANHYDRITE, DOLOMITE	USEABLE WATER	N
459335	TOP SALT	2119	1216	1216	SALT	NONE	N
459324	BOTTOM SALT	-1345	4680	4680	SALT	NONE	N
459331	LAMAR	-1575	4910	4910	LIMESTONE	NATURAL GAS, OIL	N
459327	BELL CANYON	-1605	4940	4940	SANDSTONE	NATURAL GAS, OIL	N
459328	CHERRY CANYON	-2705	6040	6040	SANDSTONE	NATURAL GAS, OIL	N
459329	MANZANITA	-2854	6189	6189	LIMESTONE	NATURAL GAS, OIL	N
459322	BONE SPRING	-5625	8960	8960	LIMESTONE, SHALE	NATURAL GAS, OIL	N
459325	BONE SPRING 1ST	-6630	9965	9965	SANDSTONE	NATURAL GAS, OIL	N
459326	BONE SPRING 2ND	-7185	10520	10520	SANDSTONE	NATURAL GAS, OIL	N
459333	BONE SPRING 3RD	-8270	11605	11605	SANDSTONE	NATURAL GAS, OIL	N
459330	WOLFCAMP	-8630	11965	11965	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: MEWBOURNE OIL COMPANY

Well Name: SALADO DRAW 9 W0CN FED COM **Well Number:** 1H

Pressure Rating (PSI): 10M **Rating Depth:** 17183

Equipment: Annular, Pipe Rams, Blind Rams

Requesting Variance? YES

Variance request: Request variance for the use of a flexible choke line from the BOP to Choke Manifold. Anchors not required by manufacturer. A multi-bowl wellhead will be 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. See attached schematics.

Choke Diagram Attachment:

Salado_Draw_9_W0CN_Fed_Com_1H_10M_BOPE_Choke_Diagram_rev_1_15_19_20190829105627.xlsx

Salado_Draw_9_W0CN_Fed_Com_1H_Flex_Line_Specs_API_16C_20190829105628.pdf

Salado_Draw_9_W0CN_Fed_Com_1H_Flex_Line_Specs_20190829105628.pdf

BOP Diagram Attachment:

Salado_Draw_9_W0CN_Fed_Com_1H_10M_Annular_BOP_Variance_20190829105654.doc

Salado_Draw_9_W0CN_Fed_Com_1H_10M_BOPE_Schematic_w_5M_Annular_20190829105654.pdf

Salado_Draw_9_W0CN_Fed_Com_1H_10M_Multi_Bowl_WH_Running_Proc_20190829105656.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	920	0	920	3326	2321	920	H-40	48	ST&C	1.83	4.11	DRY	7.29	DRY	12.25
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4835	0	4835	3326	-1574	4835	L-80	40	LT&C	1.23	2.29	DRY	3.76	DRY	4.74
3	PRODUCTION	8.75	7.0	NEW	API	N	0	12350	0	12350	3326	9167	12350	HCP-110	26	LT&C	1.29	1.65	DRY	2.16	DRY	2.58
4	LINER	6.125	4.5	NEW	API	N	11732	17183	11724	12206	-9167	-9187	5451	P-110	13.5	LT&C	1.4	1.63	DRY	4.59	DRY	5.73

Casing Attachments

Operator Name: MEWBOURNE OIL COMPANY

Well Name: SALADO DRAW 9 W0CN FED COM **Well Number:** 1H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Salado_Draw_9_W0CN_Fed_Com_1H_Csg_Assumptions_20190829105900.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Salado_Draw_9_W0CN_Fed_Com_1H_Csg_Assumptions_20190829110012.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Salado_Draw_9_W0CN_Fed_Com_1H_Csg_Assumptions_20190829110100.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: SALADO DRAW 9 W0CN FED COM **Well Number:** 1H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Salado_Draw_9_W0CN_Fed_Com_1H_Csg_Assumptions_20190829110252.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	728	480	2.12	12.5	1018	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		728	920	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	4145	760	2.12	12.5	1611	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		4145	4835	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	6189	4635	5503	80	2.12	12.5	170	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		5503	6189	100	1.34	14.8	134	25	Class C	Retarder
PRODUCTION	Lead	6189	6189	9868	330	2.12	12.5	700	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		9868	12350	400	1.18	15.6	472	25	Class H	Retarder, Fluid Loss, Defoamer
LINER	Lead		11732	17183	220	2.97	11.2	653	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Operator Name: MEWBOURNE OIL COMPANY

Well Name: SALADO DRAW 9 W0CN FED COM **Well Number:** 1H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	920	SPUD MUD	8.6	8.8							
920	4835	SALT SATURATED	10	10							
4835	12180	WATER-BASED MUD	8.6	9.5							
12180	12206	OIL-BASED MUD	10	13							

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (11732') to surface.
Will run MWD GR from KOP (11732') to TD.

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: SALADO DRAW 9 W0CN FED COM **Well Number:** 1H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7617 **Anticipated Surface Pressure:** 4931.68

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:

Salado_Draw_9_W0CN_Fed_Com_1H_H2S_Plan_20190829110912.doc

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Salado_Draw_9_W0CN_Fed_Com_1H_Dir_Plan_20190829110941.pdf

Salado_Draw_9_W0CN_Fed_Com_1H_Dir_Plot_20190829110941.pdf

Other proposed operations facets description:

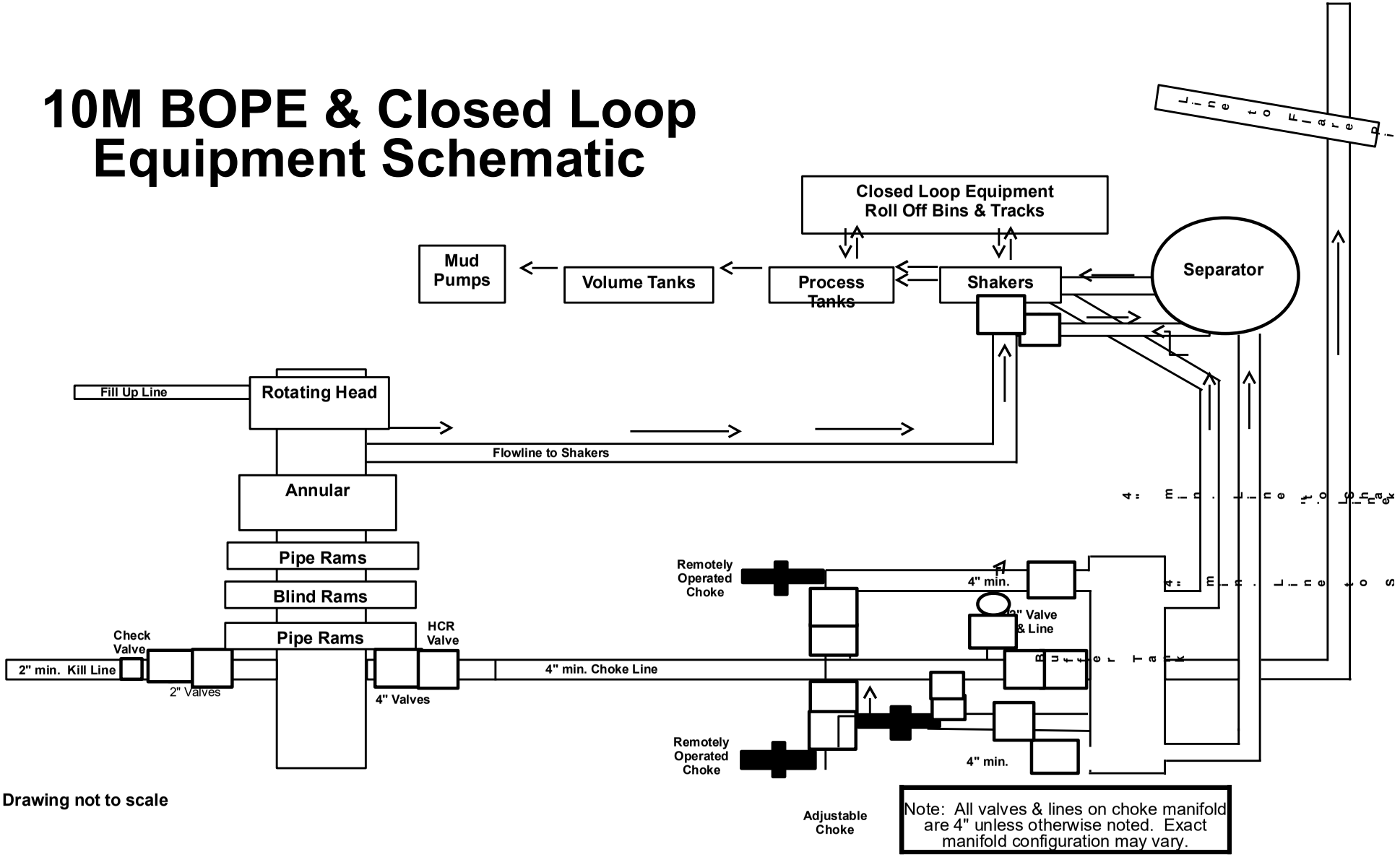
Other proposed operations facets attachment:

Salado_Draw_9_W0CN_Fed_Com_1H_C101_20190829110956.pdf

Salado_Draw_9_W0CN_Fed_Com_1H_Drlg_Program_20190829151114.pdf

Other Variance attachment:

10M BOPE & Closed Loop Equipment Schematic



Drawing not to scale

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

10,000 PSI Annular BOP Variance Request

Mewbourne Oil Company request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

12-1/4" Intermediate Hole Section 10M psi Requirement					
Component	**OD**	**Primary Preventer**	**RWP**	**Alternate Preventer(s)**	**RWP**
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"- 8.000"	Annular	5M	-	-
Mud Motor	8.000"- 9.625"	Annular	5M	-	-
Intermediate Casing	9.625"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

8-3/4" Production Hole Section 10M psi Requirement					
Component	**OD**	**Primary Preventer**	**RWP**	**Alternate Preventer(s)**	**RWP**
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"- 8.000"	Annular	5M	-	-
Mud Motor	6.750"- 8.000"	Annular	5M	-	-
Production Casing	7"	Annular	5M	-	-

Open-Hole	-	Blind Rams	10M	-	-

6-1/8" Lateral Hole Section 10M psi Requirement					
Component	**OD**	**Primary Preventer**	**RWP**	**Alternate Preventer(s)**	**RWP**
Drillpipe	4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
DCs and MWD tools	4.750"- 5.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Mud Motor	4.750"- 5.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Production Casing	4.500"	Annular	5M	Upper 3.5"-5.5" VBR Upper 3.5"-5.5" VBR	10M 10M
Open-Hole	-	Blind Rams	10M	-	-

VBR = Variable Bore Ram

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the Mewbourne Oil Company drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)

5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

<u>General Procedure While Tripping</u>

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

<u>General Procedure While Running Production Casing</u>

1. Sound alarm (alert crew)

2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

<u>General Procedure With No Pipe In Hole (Open Hole)</u>

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

<u>General Procedures While Pulling BHA Through Stack</u>

1. PRIOR to pulling last joint of drillpipe through stack:
    a. Perform flow check. If flowing, continue to (b).
    b. Sound alarm (alert crew)
    c. Stab full-opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper variable bore rams
    e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP & SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
    a. Sound alarm (alert crew)
    b. Stab crossover and full-opening safety valve and close
    c. Space out drill string with upset just beneath the upper variable bore rams
    d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP & SICP
        ii. Pit gain

iii. Time

h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:

    a. Sound alarm (alert crew)

    b. If possible, pull string clear of the stack and follow "Open Hole" procedure.

    c. If impossible to pull string clear of the stack:

    d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close

    e. Space out drill string with tooljoint just beneath the upper variable bore ram

    f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)

    g. Confirm shut-in

    h. Notify toolpusher/company representative

    i. Read and record the following:

        i. SIDPP & SICP

        ii. Pit gain

        iii. Time

    j. Regroup and identify forward plan

Mewbourne Oil Company, Salado Draw 9 W0CN Fed Com #1H
Sec 9, T26S, R33E
SL: 345' FNL & 1900' FWL
BHL: 100' FSL & 1652' FWL

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	920'	13.375"	48	H40	STC	1.83	4.11	7.29	12.25
12.25"	0'	4835'	9.625"	40	L80	LTC	1.23	2.29	3.76	4.74
8.75"	0'	12,350'	7"	26	HCP110	LTC	1.29	1.65	2.16	2.58
6.125"	11,732'	17,183'	4.5"	13.5	P110	LTC	1.40	1.63	4.59	5.73
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

Must have table for contingency casing

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

Mewbourne Oil Company, Salado Draw 9 W0CN Fed Com #1H
Sec 9, T26S, R33E
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8.75"	0'	12,350'	7"	26	HCP110	LTC	1.29	1.65	2.16	2.58
6.125"	11,732'	17,183'	4.5"	13.5	P110	LTC	1.40	1.63	4.59	5.73
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Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
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If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Salado Draw 9 W0CN Fed Com #1H
Sec 9, T26S, R33E
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Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
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Will the pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
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If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Mewbourne Oil Company, Salado Draw 9 W0CN Fed Com #1H
Sec 9, T26S, R33E
SL: 345' FNL & 1900' FWL
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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?	
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Is well located in R-111-P and SOPA?	N
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Is 2nd string set 100' to 600' below the base of salt?	
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If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Hydrogen Sulfide Drilling Operations Plan
Mewbourne Oil Company

1. General Requirements

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

2. Hydrogen Sulfide Training

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

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

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

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

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

3. Hydrogen Sulfide Safety Equipment and Systems

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

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

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

3. Hydrogen Sulfide Protection and Monitoring Equipment

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

4. Visual Warning Systems

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

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

4. Mud Program

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

5. Metallurgy

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

6. Communications

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

7. Well Testing

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

8. Emergency Phone Numbers

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

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

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

Mewbourne Oil Company

Lea County, New Mexico NAD 83
Salado Draw 9 W0CN Fed Com #1H
SL: 345 FNL & 1900 FWL
Sec 9, T26S, R33E
BHL: 100 FSL & 1652FWL

Plan: Design #1

Standard Planning Report

26 July, 2019

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Salado Draw 9 W0CN Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Site:	Salado Draw 9 W0CN Fed Com #1H	**North Reference:**	Grid
Well:	SL: 345 FNL & 1900 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100 FSL & 1652FWL		
Design:	Design #1		

Project	Lea County, New Mexico NAD 83		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Salado Draw 9 W0CN Fed Com #1H				
Site Position:		**Northing:**	387,955.90 usft	**Latitude:**	32.0643295
From:	Map	**Easting:**	774,812.50 usft	**Longitude:**	-103.5796420
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.40 °

Well	SL: 345 FNL & 1900 FWL					
Well Position	**+N/-S**	0.0 usft	**Northing:**	387,955.90 usft	**Latitude:**	32.0643295
	+E/-W	0.0 usft	**Easting:**	774,812.50 usft	**Longitude:**	-103.5796420
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	3,335.0 usft	**Ground Level:**	3,308.0 usft

Wellbore	BHL: 100 FSL & 1652FWL				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	3/20/2019	6.62	59.84	47,745

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	182.51	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
920.0	0.00	0.00	920.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,072.4	2.29	323.94	1,072.4	2.5	-1.8	1.50	1.50	0.00	323.94	
11,580.0	2.29	323.94	11,571.6	341.3	-248.5	0.00	0.00	0.00	0.00	
11,732.4	0.00	0.00	11,724.0	343.8	-250.3	1.50	-1.50	0.00	180.00	KOP: 10 FNL & 1652
12,481.2	89.94	179.58	12,201.0	-132.7	-246.8	12.01	12.01	0.00	179.58	
17,183.0	89.94	179.58	12,206.0	-4,834.3	-212.2	0.00	0.00	0.00	0.00	BHL: 100 FSL & 1652

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Salado Draw 9 W0CN Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Site:	Salado Draw 9 W0CN Fed Com #1H	**North Reference:**	Grid
Well:	SL: 345 FNL & 1900 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100 FSL & 1652FWL		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
SL: 345 FNL & 1900 FWL									
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
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	1.20	323.94	1,000.0	0.7	-0.5	-0.7	1.50	1.50	0.00
1,072.4	2.29	323.94	1,072.4	2.5	-1.8	-2.4	1.50	1.50	0.00
1,100.0	2.29	323.94	1,099.9	3.3	-2.4	-3.2	0.00	0.00	0.00
1,200.0	2.29	323.94	1,199.9	6.6	-4.8	-6.4	0.00	0.00	0.00
1,300.0	2.29	323.94	1,299.8	9.8	-7.1	-9.5	0.00	0.00	0.00
1,400.0	2.29	323.94	1,399.7	13.0	-9.5	-12.6	0.00	0.00	0.00
1,500.0	2.29	323.94	1,499.6	16.2	-11.8	-15.7	0.00	0.00	0.00
1,600.0	2.29	323.94	1,599.5	19.5	-14.2	-18.8	0.00	0.00	0.00
1,700.0	2.29	323.94	1,699.5	22.7	-16.5	-22.0	0.00	0.00	0.00
1,800.0	2.29	323.94	1,799.4	25.9	-18.9	-25.1	0.00	0.00	0.00
1,900.0	2.29	323.94	1,899.3	29.1	-21.2	-28.2	0.00	0.00	0.00
2,000.0	2.29	323.94	1,999.2	32.4	-23.6	-31.3	0.00	0.00	0.00
2,100.0	2.29	323.94	2,099.1	35.6	-25.9	-34.4	0.00	0.00	0.00
2,200.0	2.29	323.94	2,199.1	38.8	-28.3	-37.5	0.00	0.00	0.00
2,300.0	2.29	323.94	2,299.0	42.0	-30.6	-40.7	0.00	0.00	0.00
2,400.0	2.29	323.94	2,398.9	45.3	-33.0	-43.8	0.00	0.00	0.00
2,500.0	2.29	323.94	2,498.8	48.5	-35.3	-46.9	0.00	0.00	0.00
2,600.0	2.29	323.94	2,598.7	51.7	-37.7	-50.0	0.00	0.00	0.00
2,700.0	2.29	323.94	2,698.7	54.9	-40.0	-53.1	0.00	0.00	0.00
2,800.0	2.29	323.94	2,798.6	58.2	-42.4	-56.3	0.00	0.00	0.00
2,900.0	2.29	323.94	2,898.5	61.4	-44.7	-59.4	0.00	0.00	0.00
3,000.0	2.29	323.94	2,998.4	64.6	-47.0	-62.5	0.00	0.00	0.00
3,100.0	2.29	323.94	3,098.3	67.9	-49.4	-65.6	0.00	0.00	0.00
3,200.0	2.29	323.94	3,198.3	71.1	-51.7	-68.7	0.00	0.00	0.00
3,300.0	2.29	323.94	3,298.2	74.3	-54.1	-71.9	0.00	0.00	0.00
3,400.0	2.29	323.94	3,398.1	77.5	-56.4	-75.0	0.00	0.00	0.00
3,500.0	2.29	323.94	3,498.0	80.8	-58.8	-78.1	0.00	0.00	0.00
3,600.0	2.29	323.94	3,597.9	84.0	-61.1	-81.2	0.00	0.00	0.00
3,700.0	2.29	323.94	3,697.9	87.2	-63.5	-84.3	0.00	0.00	0.00
3,800.0	2.29	323.94	3,797.8	90.4	-65.8	-87.5	0.00	0.00	0.00
3,900.0	2.29	323.94	3,897.7	93.7	-68.2	-90.6	0.00	0.00	0.00
4,000.0	2.29	323.94	3,997.6	96.9	-70.5	-93.7	0.00	0.00	0.00
4,100.0	2.29	323.94	4,097.5	100.1	-72.9	-96.8	0.00	0.00	0.00
4,200.0	2.29	323.94	4,197.5	103.3	-75.2	-99.9	0.00	0.00	0.00
4,300.0	2.29	323.94	4,297.4	106.6	-77.6	-103.0	0.00	0.00	0.00
4,400.0	2.29	323.94	4,397.3	109.8	-79.9	-106.2	0.00	0.00	0.00
4,500.0	2.29	323.94	4,497.2	113.0	-82.3	-109.3	0.00	0.00	0.00
4,600.0	2.29	323.94	4,597.2	116.2	-84.6	-112.4	0.00	0.00	0.00
4,700.0	2.29	323.94	4,697.1	119.5	-87.0	-115.5	0.00	0.00	0.00
4,800.0	2.29	323.94	4,797.0	122.7	-89.3	-118.6	0.00	0.00	0.00
4,900.0	2.29	323.94	4,896.9	125.9	-91.7	-121.8	0.00	0.00	0.00
5,000.0	2.29	323.94	4,996.8	129.1	-94.0	-124.9	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Salado Draw 9 W0CN Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Site:	Salado Draw 9 W0CN Fed Com #1H	**North Reference:**	Grid
Well:	SL: 345 FNL & 1900 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100 FSL & 1652FWL		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.0	2.29	323.94	5,096.8	132.4	-96.4	-128.0	0.00	0.00	0.00
5,200.0	2.29	323.94	5,196.7	135.6	-98.7	-131.1	0.00	0.00	0.00
5,300.0	2.29	323.94	5,296.6	138.8	-101.1	-134.2	0.00	0.00	0.00
5,400.0	2.29	323.94	5,396.5	142.0	-103.4	-137.4	0.00	0.00	0.00
5,500.0	2.29	323.94	5,496.4	145.3	-105.8	-140.5	0.00	0.00	0.00
5,600.0	2.29	323.94	5,596.4	148.5	-108.1	-143.6	0.00	0.00	0.00
5,700.0	2.29	323.94	5,696.3	151.7	-110.4	-146.7	0.00	0.00	0.00
5,800.0	2.29	323.94	5,796.2	154.9	-112.8	-149.8	0.00	0.00	0.00
5,900.0	2.29	323.94	5,896.1	158.2	-115.1	-153.0	0.00	0.00	0.00
6,000.0	2.29	323.94	5,996.0	161.4	-117.5	-156.1	0.00	0.00	0.00
6,100.0	2.29	323.94	6,096.0	164.6	-119.8	-159.2	0.00	0.00	0.00
6,200.0	2.29	323.94	6,195.9	167.8	-122.2	-162.3	0.00	0.00	0.00
6,300.0	2.29	323.94	6,295.8	171.1	-124.5	-165.4	0.00	0.00	0.00
6,400.0	2.29	323.94	6,395.7	174.3	-126.9	-168.5	0.00	0.00	0.00
6,500.0	2.29	323.94	6,495.6	177.5	-129.2	-171.7	0.00	0.00	0.00
6,600.0	2.29	323.94	6,595.6	180.7	-131.6	-174.8	0.00	0.00	0.00
6,700.0	2.29	323.94	6,695.5	184.0	-133.9	-177.9	0.00	0.00	0.00
6,800.0	2.29	323.94	6,795.4	187.2	-136.3	-181.0	0.00	0.00	0.00
6,900.0	2.29	323.94	6,895.3	190.4	-138.6	-184.1	0.00	0.00	0.00
7,000.0	2.29	323.94	6,995.2	193.6	-141.0	-187.3	0.00	0.00	0.00
7,100.0	2.29	323.94	7,095.2	196.9	-143.3	-190.4	0.00	0.00	0.00
7,200.0	2.29	323.94	7,195.1	200.1	-145.7	-193.5	0.00	0.00	0.00
7,300.0	2.29	323.94	7,295.0	203.3	-148.0	-196.6	0.00	0.00	0.00
7,400.0	2.29	323.94	7,394.9	206.5	-150.4	-199.7	0.00	0.00	0.00
7,500.0	2.29	323.94	7,494.8	209.8	-152.7	-202.9	0.00	0.00	0.00
7,600.0	2.29	323.94	7,594.8	213.0	-155.1	-206.0	0.00	0.00	0.00
7,700.0	2.29	323.94	7,694.7	216.2	-157.4	-209.1	0.00	0.00	0.00
7,800.0	2.29	323.94	7,794.6	219.4	-159.8	-212.2	0.00	0.00	0.00
7,900.0	2.29	323.94	7,894.5	222.7	-162.1	-215.3	0.00	0.00	0.00
8,000.0	2.29	323.94	7,994.4	225.9	-164.5	-218.5	0.00	0.00	0.00
8,100.0	2.29	323.94	8,094.4	229.1	-166.8	-221.6	0.00	0.00	0.00
8,200.0	2.29	323.94	8,194.3	232.3	-169.1	-224.7	0.00	0.00	0.00
8,300.0	2.29	323.94	8,294.2	235.6	-171.5	-227.8	0.00	0.00	0.00
8,400.0	2.29	323.94	8,394.1	238.8	-173.8	-230.9	0.00	0.00	0.00
8,500.0	2.29	323.94	8,494.0	242.0	-176.2	-234.0	0.00	0.00	0.00
8,600.0	2.29	323.94	8,594.0	245.2	-178.5	-237.2	0.00	0.00	0.00
8,700.0	2.29	323.94	8,693.9	248.5	-180.9	-240.3	0.00	0.00	0.00
8,800.0	2.29	323.94	8,793.8	251.7	-183.2	-243.4	0.00	0.00	0.00
8,900.0	2.29	323.94	8,893.7	254.9	-185.6	-246.5	0.00	0.00	0.00
9,000.0	2.29	323.94	8,993.6	258.1	-187.9	-249.6	0.00	0.00	0.00
9,100.0	2.29	323.94	9,093.6	261.4	-190.3	-252.8	0.00	0.00	0.00
9,200.0	2.29	323.94	9,193.5	264.6	-192.6	-255.9	0.00	0.00	0.00
9,300.0	2.29	323.94	9,293.4	267.8	-195.0	-259.0	0.00	0.00	0.00
9,400.0	2.29	323.94	9,393.3	271.0	-197.3	-262.1	0.00	0.00	0.00
9,500.0	2.29	323.94	9,493.3	274.3	-199.7	-265.2	0.00	0.00	0.00
9,600.0	2.29	323.94	9,593.2	277.5	-202.0	-268.4	0.00	0.00	0.00
9,700.0	2.29	323.94	9,693.1	280.7	-204.4	-271.5	0.00	0.00	0.00
9,800.0	2.29	323.94	9,793.0	283.9	-206.7	-274.6	0.00	0.00	0.00
9,900.0	2.29	323.94	9,892.9	287.2	-209.1	-277.7	0.00	0.00	0.00
10,000.0	2.29	323.94	9,992.9	290.4	-211.4	-280.8	0.00	0.00	0.00
10,100.0	2.29	323.94	10,092.8	293.6	-213.8	-284.0	0.00	0.00	0.00
10,200.0	2.29	323.94	10,192.7	296.8	-216.1	-287.1	0.00	0.00	0.00
10,300.0	2.29	323.94	10,292.6	300.1	-218.5	-290.2	0.00	0.00	0.00
10,400.0	2.29	323.94	10,392.5	303.3	-220.8	-293.3	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Salado Draw 9 W0CN Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Site:	Salado Draw 9 W0CN Fed Com #1H	**North Reference:**	Grid
Well:	SL: 345 FNL & 1900 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100 FSL & 1652FWL		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.0	2.29	323.94	10,492.5	306.5	-223.2	-296.4	0.00	0.00	0.00
10,600.0	2.29	323.94	10,592.4	309.7	-225.5	-299.5	0.00	0.00	0.00
10,700.0	2.29	323.94	10,692.3	313.0	-227.8	-302.7	0.00	0.00	0.00
10,800.0	2.29	323.94	10,792.2	316.2	-230.2	-305.8	0.00	0.00	0.00
10,900.0	2.29	323.94	10,892.1	319.4	-232.5	-308.9	0.00	0.00	0.00
11,000.0	2.29	323.94	10,992.1	322.6	-234.9	-312.0	0.00	0.00	0.00
11,100.0	2.29	323.94	11,092.0	325.9	-237.2	-315.1	0.00	0.00	0.00
11,200.0	2.29	323.94	11,191.9	329.1	-239.6	-318.3	0.00	0.00	0.00
11,300.0	2.29	323.94	11,291.8	332.3	-241.9	-321.4	0.00	0.00	0.00
11,400.0	2.29	323.94	11,391.7	335.5	-244.3	-324.5	0.00	0.00	0.00
11,500.0	2.29	323.94	11,491.7	338.8	-246.6	-327.6	0.00	0.00	0.00
11,580.0	2.29	323.94	11,571.6	341.3	-248.5	-330.1	0.00	0.00	0.00
11,600.0	1.99	323.94	11,591.6	341.9	-248.9	-330.7	1.50	-1.50	0.00
11,700.0	0.49	323.94	11,691.6	343.7	-250.2	-332.4	1.50	-1.50	0.00
11,732.4	0.00	0.00	11,724.0	343.8	-250.3	-332.5	1.50	-1.50	0.00
KOP: 10 FNL & 1652 FWL									
11,800.0	8.11	179.58	11,791.3	339.0	-250.3	-327.7	12.01	12.01	0.00
11,900.0	20.13	179.58	11,888.1	314.7	-250.1	-303.4	12.01	12.01	0.00
12,000.0	32.14	179.58	11,977.7	270.7	-249.8	-259.5	12.01	12.01	0.00
12,030.3	35.77	179.58	12,002.8	253.8	-249.6	-242.6	12.01	12.01	0.00
FTP: 100 FNL & 1652 FWL									
12,100.0	44.15	179.58	12,056.2	209.1	-249.3	-197.9	12.01	12.01	0.00
12,200.0	56.16	179.58	12,120.2	132.4	-248.7	-121.4	12.01	12.01	0.00
12,300.0	68.17	179.58	12,166.8	44.2	-248.1	-33.2	12.01	12.01	0.00
12,400.0	80.18	179.58	12,194.0	-51.9	-247.4	62.7	12.01	12.01	0.00
12,481.2	89.94	179.58	12,201.0	-132.7	-246.8	143.4	12.01	12.01	0.00
12,500.0	89.94	179.58	12,201.0	-151.5	-246.7	162.1	0.00	0.00	0.00
12,600.0	89.94	179.58	12,201.1	-251.5	-245.9	262.0	0.00	0.00	0.00
12,700.0	89.94	179.58	12,201.2	-351.5	-245.2	361.9	0.00	0.00	0.00
12,800.0	89.94	179.58	12,201.3	-451.5	-244.4	461.7	0.00	0.00	0.00
12,900.0	89.94	179.58	12,201.4	-551.5	-243.7	561.6	0.00	0.00	0.00
13,000.0	89.94	179.58	12,201.6	-651.5	-243.0	661.5	0.00	0.00	0.00
13,100.0	89.94	179.58	12,201.7	-751.5	-242.2	761.4	0.00	0.00	0.00
13,200.0	89.94	179.58	12,201.8	-851.5	-241.5	861.2	0.00	0.00	0.00
13,300.0	89.94	179.58	12,201.9	-951.4	-240.8	961.1	0.00	0.00	0.00
13,400.0	89.94	179.58	12,202.0	-1,051.4	-240.0	1,061.0	0.00	0.00	0.00
13,500.0	89.94	179.58	12,202.1	-1,151.4	-239.3	1,160.8	0.00	0.00	0.00
13,600.0	89.94	179.58	12,202.2	-1,251.4	-238.6	1,260.7	0.00	0.00	0.00
13,700.0	89.94	179.58	12,202.3	-1,351.4	-237.8	1,360.6	0.00	0.00	0.00
13,800.0	89.94	179.58	12,202.4	-1,451.4	-237.1	1,460.4	0.00	0.00	0.00
13,900.0	89.94	179.58	12,202.5	-1,551.4	-236.4	1,560.3	0.00	0.00	0.00
14,000.0	89.94	179.58	12,202.6	-1,651.4	-235.6	1,660.2	0.00	0.00	0.00
14,100.0	89.94	179.58	12,202.7	-1,751.4	-234.9	1,760.0	0.00	0.00	0.00
14,200.0	89.94	179.58	12,202.8	-1,851.4	-234.1	1,859.9	0.00	0.00	0.00
14,300.0	89.94	179.58	12,202.9	-1,951.4	-233.4	1,959.8	0.00	0.00	0.00
14,400.0	89.94	179.58	12,203.0	-2,051.4	-232.7	2,059.6	0.00	0.00	0.00
14,500.0	89.94	179.58	12,203.1	-2,151.4	-231.9	2,159.5	0.00	0.00	0.00
14,600.0	89.94	179.58	12,203.3	-2,251.4	-231.2	2,259.4	0.00	0.00	0.00
14,644.9	89.94	179.58	12,203.3	-2,296.3	-230.9	2,304.2	0.00	0.00	0.00
PPP2: 2638 FSL & 1652 FWL									
14,700.0	89.94	179.58	12,203.4	-2,351.4	-230.5	2,359.3	0.00	0.00	0.00
14,800.0	89.94	179.58	12,203.5	-2,451.4	-229.7	2,459.1	0.00	0.00	0.00
14,900.0	89.94	179.58	12,203.6	-2,551.4	-229.0	2,559.0	0.00	0.00	0.00

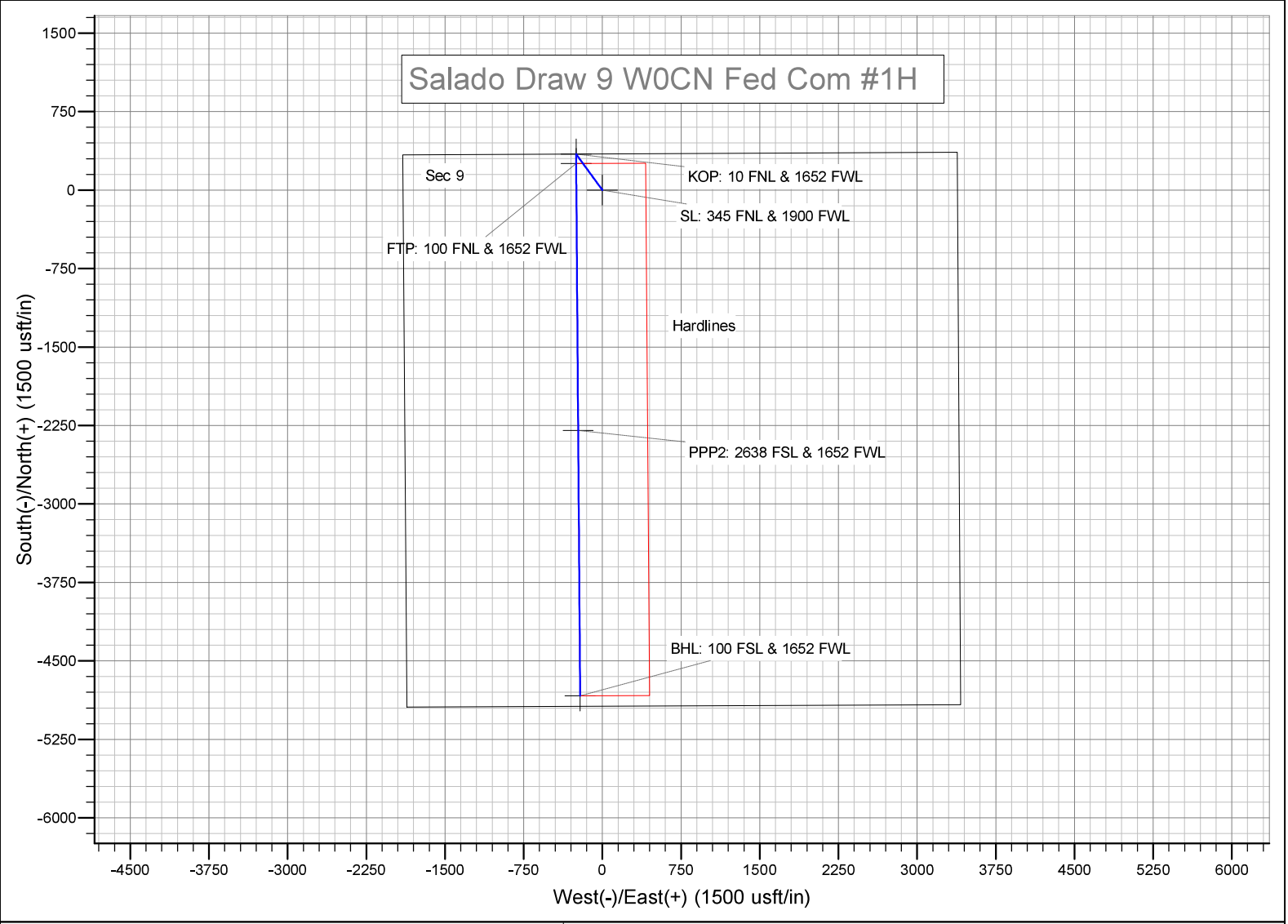
Database:	Hobbs	**Local Co-ordinate Reference:**	Site Salado Draw 9 W0CN Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Project:	Lea County, New Mexico NAD 83	**MD Reference:**	WELL @ 3335.0usft (Original Well Elev)
Site:	Salado Draw 9 W0CN Fed Com #1H	**North Reference:**	Grid
Well:	SL: 345 FNL & 1900 FWL	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 100 FSL & 1652FWL		
Design:	Design #1		

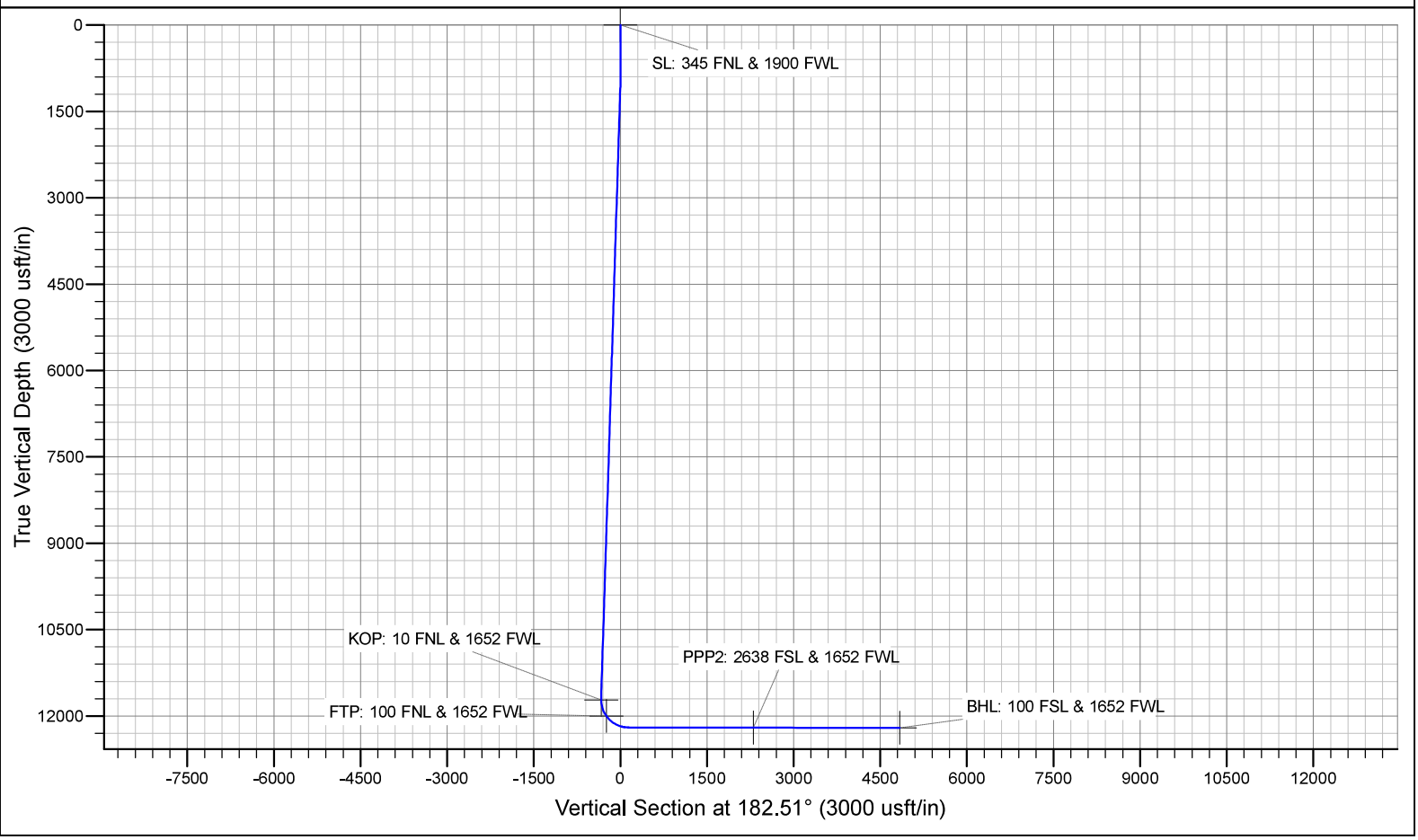
Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,000.0	89.94	179.58	12,203.7	-2,651.4	-228.3	2,658.9	0.00	0.00	0.00
15,100.0	89.94	179.58	12,203.8	-2,751.4	-227.5	2,758.7	0.00	0.00	0.00
15,200.0	89.94	179.58	12,203.9	-2,851.4	-226.8	2,858.6	0.00	0.00	0.00
15,300.0	89.94	179.58	12,204.0	-2,951.4	-226.1	2,958.5	0.00	0.00	0.00
15,400.0	89.94	179.58	12,204.1	-3,051.4	-225.3	3,058.3	0.00	0.00	0.00
15,500.0	89.94	179.58	12,204.2	-3,151.4	-224.6	3,158.2	0.00	0.00	0.00
15,600.0	89.94	179.58	12,204.3	-3,251.4	-223.8	3,258.1	0.00	0.00	0.00
15,700.0	89.94	179.58	12,204.4	-3,351.4	-223.1	3,357.9	0.00	0.00	0.00
15,800.0	89.94	179.58	12,204.5	-3,451.4	-222.4	3,457.8	0.00	0.00	0.00
15,900.0	89.94	179.58	12,204.6	-3,551.4	-221.6	3,557.7	0.00	0.00	0.00
16,000.0	89.94	179.58	12,204.7	-3,651.4	-220.9	3,657.5	0.00	0.00	0.00
16,100.0	89.94	179.58	12,204.8	-3,751.4	-220.2	3,757.4	0.00	0.00	0.00
16,200.0	89.94	179.58	12,205.0	-3,851.4	-219.4	3,857.3	0.00	0.00	0.00
16,300.0	89.94	179.58	12,205.1	-3,951.4	-218.7	3,957.2	0.00	0.00	0.00
16,400.0	89.94	179.58	12,205.2	-4,051.4	-218.0	4,057.0	0.00	0.00	0.00
16,500.0	89.94	179.58	12,205.3	-4,151.4	-217.2	4,156.9	0.00	0.00	0.00
16,600.0	89.94	179.58	12,205.4	-4,251.4	-216.5	4,256.8	0.00	0.00	0.00
16,700.0	89.94	179.58	12,205.5	-4,351.4	-215.8	4,356.6	0.00	0.00	0.00
16,800.0	89.94	179.58	12,205.6	-4,451.4	-215.0	4,456.5	0.00	0.00	0.00
16,900.0	89.94	179.58	12,205.7	-4,551.3	-214.3	4,556.4	0.00	0.00	0.00
17,000.0	89.94	179.58	12,205.8	-4,651.3	-213.5	4,656.2	0.00	0.00	0.00
17,100.0	89.94	179.58	12,205.9	-4,751.3	-212.8	4,756.1	0.00	0.00	0.00
17,183.0	89.94	179.58	12,206.0	-4,834.3	-212.2	4,839.0	0.00	0.00	0.00
BHL: 100 FSL & 1652 FWL									

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: 345 FNL & 1900 FW - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	387,955.90	774,812.50	32.0643295	-103.5796420
KOP: 10 FNL & 1652 FV - plan hits target center - Point	0.00	0.00	11,724.0	343.8	-250.3	388,299.70	774,562.20	32.0652793	-103.5804422
FTP: 100 FNL & 1652 F\ - plan hits target center - Point	0.00	0.00	12,002.9	253.8	-249.6	388,209.70	774,562.86	32.0650319	-103.5804421
PPP2: 2638 FSL & 1652 - plan hits target center - Point	0.00	0.00	12,203.3	-2,296.3	-230.9	385,659.60	774,581.62	32.0580220	-103.5804390
BHL: 100 FSL & 1652 F\ - plan hits target center - Point	0.00	0.00	12,206.0	-4,834.3	-212.2	383,121.60	774,600.30	32.0510453	-103.5804358


Salado Draw 9 W0CN Fed Com #1H
Sec 9
KOP: 10 FNL & 1652 FWL
SL: 345 FNL & 1900 FWL
FTP: 100 FNL & 1652 FWL
Hardlines
PPP2: 2638 FSL & 1652 FWL
BHL: 100 FSL & 1652 FWL
South(-)/North(+) (1500 usft/in)
West(-)/East(+) (1500 usft/in)
1500
750
0
-750
-1500
-2250
-3000
-3750
-4500
-5250
-6000
-4500
-3750
-3000
-2250
-1500
-750
0
750
1500
2250
3000
3750
4500
5250
6000


SL: 345 FNL & 1900 FWL
KOP: 10 FNL & 1652 FWL
PPP2: 2638 FSL & 1652 FWL
FTP: 100 FNL & 1652 FWL
BHL: 100 FSL & 1652 FWL
True Vertical Depth (3000 usft/in)
Vertical Section at 182.51° (3000 usft/in)
0
1500
3000
4500
6000
7500
9000
10500
12000
-7500
-6000
-4500
-3000
-1500
0
1500
3000
4500
6000
7500
9000
10500
12000

Mewbourne Oil Company, Salado Draw 9 W0CN Fed Com #1H
Sec 9, T26S, R33E
SL: 345' FNL & 1900' FWL
BHL: 100' FSL & 1652' FWL

1. Geologic Formations

TVD of target	12,206'	Pilot hole depth	NA
MD at TD:	17,183'	Deepest expected fresh water:	105'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Rustler	845		
Top of Salt	1216		
Base of Salt	4680		
Lamar	4910	Oil	
Bell Canyon	4940		
Cherry Canyon	6040		
Manzanita Marker	6189		
Brushy Canyon			
Bone Spring	8960	Oil/Gas	
1st Bone Spring Sand	9965		
2nd Bone Spring Sand	10520		
3rd Bone Spring Sand	11605		
Abo			
Wolfcamp	11965	Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company, Salado Draw 9 W0CN Fed Com #1H
Sec 9, T26S, R33E
SL: 345' FNL & 1900' FWL
BHL: 100' FSL & 1652' FWL

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Jt Tension	SF Body Tension
17.5"	0'	920'	13.375"	48	H40	STC	1.83	4.11	7.29	12.25
12.25"	0'	4835'	9.625"	40	L80	LTC	1.23	2.29	3.76	4.74
8.75"	0'	12,350'	7"	26	HCP110	LTC	1.29	1.65	2.16	2.58
6.125"	11,732'	17,183'	4.5"	13.5	P110	LTC	1.40	1.63	4.59	5.73
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

Must have table for contingency casing

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

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/ sk	500# Comp. Strength (hours)	Slurry Description
Surf.	480	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.	760	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. Stg 1	330	12.5	2.12	11	9	Lead: Class C + Gel + Retarder + Defoamer + Extender
	400	15.6	1.18	5.2	10	Tail: Class H + Retarder + Fluid Loss + Defoamer
ECP/DV Tool @ 6189'						
Prod. Stg 2	80	12.5	2.12	11	10	Lead: Class C + Salt + Gel + Extender + LCM
	100	14.8	1.34	6.3	8	Tail: Class C + Retarder
Liner	220	11.2	2.97	18	16	Class C + Salt + Gel + Fluid Loss + Retarder + Dispersant + Defoamer + Anti-Settling Agent

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

Casing String	TOC	% Excess
Surface	0'	100%
Intermediate	0'	25%
Production	4,635'	25%
Liner	11,732'	25%

4. Pressure Control Equipment

Y	Variance: A variance is requested for use of a 5000 psi annular BOP with the 10,000 psi BOP stack. Please see attached description and procedure.

BOP installed and tested before drilling which hole?	Size?	System Rated WP	Type	✓	Tested to:
12-1/4"	13-5/8"	10M	Annular	X	5000#
			Blind Ram	X	10,000#
			Pipe Ram	X	
			Double Ram		
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	N Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. • Provide description here: See attached schematic.

5. Mud Program

TVD		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	920	FW Gel	8.6-8.8	28-34	N/C
920	4835	Saturated Brine	10.0	28-34	N/C
4835	12201	Cut Brine	8.6-9.5	28-34	N/C
12201	12206	OBM	10.0-13.0	30-40	<10cc

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

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

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from KOP (11,732') to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
X	Gamma Ray	11,732' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7617 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.

Attachments
___ Directional Plan
___ Other, describe

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
MEWBOURNE OIL COMPANY	SALADO DRAW 9 W0CN FED COM	1H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	9	26S	33E		10	N	1652	W	LEA

Latitude	Longitude	NAD
32.0652793	-103.5804422	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	9	26S	33E		100	N	1652	W	LEA

Latitude	Longitude	NAD
32.0650319	-103.5804421	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	9	26S	33E		100	S	1652	W	LEA

Latitude	Longitude	NAD
32.0510453	-103.5804358	83

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

Is this well an infill well? [N]

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

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original
to Appropriate
District Office

OCD – HOBBS
11/17/2020
RECEIVED

GAS CAPTURE PLAN

Date: 5-10-19

☒ Original
☐ Amended - Reason for Amendment:

Operator & OGRID No.: Mewbourne Oil Company - 14744

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Salado Draw 9 W0CN Fed Com #1H	30-025-48039	C - 9 - 26S - 33E	345 FNL & 1900 FWL	0	NA	ONLINE AFTER FRAC

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Energy Transfer and will be connected to Energy Transfer low/high pressure gathering system located in _____ County, New Mexico. It will require _____' of pipeline to connect the facility to low/high pressure gathering system. Mewbourne Oil Company provides (periodically) to Energy Transfer a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Mewbourne Oil Company and Energy Transfer have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Energy Transfer Processing Plant located in Sec. 33, Twn. 24S, Rng. 37E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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