Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM013413A

6. If Indian, Allotee or Tribe Name:

1a. Type of work: [✓] DRILL [ ] REENTER

1b. Type of Well: [ ] Oil Well [✓] Gas Well [ ] Other

1c. Type of Completion: [ ] Hydraulic Fracturing [✓] Single Zone [ ] Multiple Zone

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

8. Lease Name and Well No.: OXBOW 23/24 W1LI FED COM 1H

2. Name of Operator: MEWBOURNE OIL COMPANY

9. API Well No.: 30 015 47610

3a. Address: PO Box 5270 Hobbs NM 88240

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

10. Field and Pool, or Exploratory: WELCH / WOLFCAMP GAS Purple Sage;Wolfcamp

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

At surface: SWSW / 895 FSL / 242 FWL / LAT 32.1105951 / LONG -104.0657205

At proposed prod. zone: NESE / 2275 FSL / 330 FEL / LAT 32.1144542 / LONG -104.0332926

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 23 / T25S / R28E / NMP

14. Distance in miles and direction from nearest town or post office*: 8.5 miles

12. County or Parish: EDDY

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 330 feet

16. No of acres in lease: 1280

17. Spacing Unit dedicated to this well: 640

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

19. Proposed Depth: 10022 feet / 19766 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 2959 feet

22. Approximate date work will start*: 02/09/2019

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: (Electronic Submission)

Name *(Printed/Typed)*:

Date: 01/11/2019

Title:

Approved by *(Signature)*: (Electronic Submission)

Name *(Printed/Typed)*: Cody Layton / Ph: (575)234-5959

Date: 10/09/2020

Title: Assistant Field Manager Lands & Minerals

Office: 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.

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

- Will require a directional survey with the C-104
- Surface casing must be set 25' below top of Salt or Anhydrite in order to seal off protectable water

Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

APPROVED WITH CONDITIONS

SL

KP 10/27/2020 GEO Review

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 10/09/2020

Entered - KMS NMOCD

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30 015 47610	98220	PURPLE SAGE; WOLFCAMP GAS POOL

4 Property Code	5 Property Name	6 Well Number
329767	OXBOW 23/24 W1LI FED COM	1H
7 OGRID NO.	**8 Operator Name**	**9 Elevation**
14744	MEWBOURNE OIL COMPANY	2932'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
M	23	25S	28E		895	SOUTH	242	WEST	EDDY

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	24	25S	28E		2275	SOUTH	330	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
640			

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

16

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1940"
N: 403175.6 – E: 623953.6

B: FOUND BRASS CAP"1940"
N: 405835.8 – E: 623950.2

C: FOUND BRASS CAP "1940"
N: 408486.9 – E: 623947.7

D: FOUND BRASS CAP "1940"
N: 408535.5 – E: 626600.3

E: FOUND BRASS CAP "1940"
N: 408554.0 – E: 629241.2

F: FOUND BRASS CAP "1940"
N: 408522.6 – E: 631884.5

G: FOUND BRASS CAP "1940"
N: 408491.6 – E: 634526.9

H: FOUND BRASS CAP "1940"
N: 405832.9 – E: 634556.4

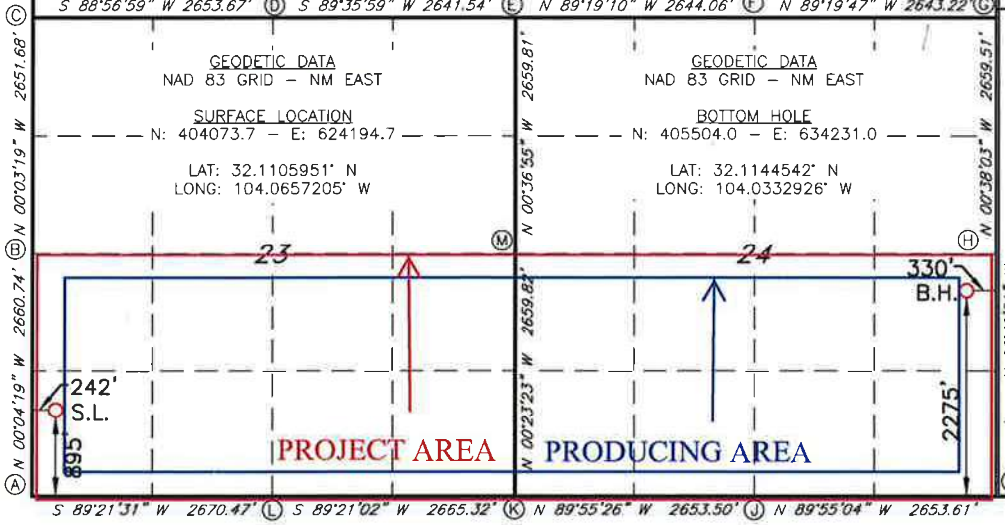
I: FOUND BRASS CAP "1940"
N: 403228.4 – E: 634593.8

J: FOUND BRASS CAP "1940"
N: 403232.2 – E: 631940.7

K FOUND BRASS CAP "1940"
N: 403235.7 – E: 629287.8

L: FOUND BRASS CAP "1940"
N: 403205.5 – E: 626623.3

M: FOUND BRASS CAP "1940"
N: 405894.9 – E: 629269.7



17 OPERATOR CERTIFICATION

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

Signature — Date: 1-9-19

BRADLEY BISHOP
Printed Name

BBISHOP@MEWBOURNE.COM
E-mail Address

18 SURVEYOR CERTIFICATION

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

11-13-2018
Date of Survey

Signature and Seal of Professional Surveyor

ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

REV: 1/6/18 BHL

Job No.: LS1804462R

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
MEWBOURNE OIL COMPANY	OXBOW 23/24 W1LI FED COM	1H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
L	23	25S	28E		2275	S	242	W	EDDY

Latitude	Longitude	NAD
32.1143895	-104.0657149	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
L	23	25S	28E		2275	S	330	W	EDDY

Latitude	Longitude	NAD
32.1143901	-104.0654306	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
I	24	25S	28E		2275	S	330	E	EDDY

Latitude	Longitude	NAD
32.1144542	-104.0332926	83

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

Is this well an infill well? [Y]

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

API #

Operator Name:	Property Name:	Well Number
MEWBOURNE OIL COMPANY	OXBOW 23/24 W1MP FED COM	1H

KZ 06/29/2018

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mewbourne Oil Company**
LEASE NO.:	**NMNM013413A**
WELL NAME & NO.:	Oxbow 23/24 W1LI Fed Com 1H
SURFACE HOLE FOOTAGE:	895'/S & 242'/W
BOTTOM HOLE FOOTAGE	2275'/S & 330'/E
LOCATION:	Section 23, T.25 S., R.28 E., NMPM
COUNTY:	Eddy County, New Mexico

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
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 **500** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

completing the cement job.

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

2. The **9-5/8** inch intermediate casing shall be set at approximately **2610** 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.**

❖ 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 8%, 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.

d. The minimum required fill of cement behind the **4-1/2** inch production liner is:

- Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

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

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

GENERAL REQUIREMENTS

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

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

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

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

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

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

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

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

A. CASING

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

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

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

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

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

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

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

B. PRESSURE CONTROL

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

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

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

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

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

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

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

hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

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

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

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

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

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

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

OTA03022020

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI FED COM **Well Number:** 1H

Is the proposed well in an area containing other mineral resources? NONE

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** OXBOW 23/24 LI & MP **Number:** 4

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

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 8.5 Miles **Distance to nearest well:** 50 FT **Distance to lease line:** 330 FT

Reservoir well spacing assigned acres Measurement: 640 Acres

Well plat: Oxbow23_24W1LIFedCom1H_wellplat_20190109140736.pdf

Well work start Date: 02/09/2019 **Duration:** 60 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:**

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	895	FSL	242	FWL	25S	28E	23	Aliquot SWSW	32.1105951	-104.0657205	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 013413A	2959	0	0	
KOP Leg #1	2275	FSL	242	FWL	25S	28E	23	Aliquot NWSW	32.1143895	-104.0657149	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 013413A	-6327	9399	9286	
PPP Leg #1-1	2275	FSL	1327	FEL	25S	28E	24	Aliquot NESE	32.1144482	-104.0365129	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 088128	-7046	18769	10005	

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI FED COM **Well Number:** 1H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-2	2275	FSL	1327	FWL	25S	28E	24	Aliquot NWSW	32.114318	-104.0450206	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 013413A	-7001	16134	9960	
PPP Leg #1-3	2275	FSL	330	FWL	25S	28E	23	Aliquot NWNW	32.1143901	-104.0654306	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 013413A	-6632	9721	9591	
EXIT Leg #1	2275	FSL	330	FEL	25S	28E	24	Aliquot NESE	32.1144542	-104.0332926	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 088128	-7063	19766	10022	
BHL Leg #1	2275	FSL	330	FEL	25S	28E	24	Aliquot NESE	32.1144542	-104.0332926	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 088128	-7063	19766	10022	

APD ID: 10400037793 **Submission Date:** 01/11/2019

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI 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
370482	UNKNOWN	2932	27	27		NONE	N
370473	CASTILE	1854	1145	1145	SALT	NONE	N
370474	BASE OF SALT	519	2480	2480	SALT	NONE	N
370475	LAMAR	339	2660	2660	LIMESTONE	NATURAL GAS, OIL	N
370476	BELL CANYON	309	2690	2690	SANDSTONE	NATURAL GAS, OIL	N
370483	CHERRY CANYON	-566	3565	3565	SANDSTONE	NATURAL GAS, OIL	N
370484	MANZANITA	-711	3710	3710	LIMESTONE	NATURAL GAS, OIL	N
370485	BRUSHY CANYON	-2211	5210	5210	SANDSTONE	NATURAL GAS, OIL	N
370477	BONE SPRING LIME	-3441	6440	6440	LIMESTONE, SHALE	NATURAL GAS, OIL	N
370478	BONE SPRING 1ST	-4301	7300	7300	SANDSTONE	NATURAL GAS, OIL	N
370479	BONE SPRING 2ND	-5096	8095	8095	SANDSTONE	NATURAL GAS, OIL	N
370480	BONE SPRING 3RD	-6216	9215	9215	SANDSTONE	NATURAL GAS, OIL	N
370481	WOLFCAMP	-6586	9585	9585	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI FED COM **Well Number:** 1H

Pressure Rating (PSI): 10M **Rating Depth:** 19766

Equipment: Annular, Blind Ram, Pipe Ram

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. Anchors are not required by manufacturer. A multi-bowl wellhead is being used. See attached schematic.
Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Choke Diagram Attachment:

Oxbow_23_24_W1LI_Fed_Com_1H_10M_Annular_BOP_Variance_20190110142616.doc

Oxbow_23_24_W1LI_Fed_Com_1H_10M_BOPE_Choke_Diagram_20190110142617.pdf

Oxbow_23_24_W1LI_Fed_Com_1H_Flex_Line_Specs_20190110142618.pdf

Oxbow_23_24_W1LI_Fed_Com_1H_Flex_Line_Specs_API_16C_20200117122044.pdf

BOP Diagram Attachment:

Oxbow_23_24_W1LI_Fed_Com_1H_10M_BOPE_Schematic_w_5M_Annular_20190110142650.pdf

Oxbow_23_24_W1LI_Fed_Com_1H_10M_Multi_Bowl_WH_Running_Proc_20190110142653.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	500	0	500			500	H-40	48	ST&C	3.37	7.56	DRY	13.42	DRY	22.54
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2610	0	2610			2610	J-55	36	LT&C	1.49	2.59	DRY	4.82	DRY	6
3	PRODUCTION	8.75	7.0	NEW	API	N	0	10289	0	9859			10289	HCP-110	26	LT&C	1.6	2.04	DRY	2.59	DRY	3.1
4	LINER	6.125	4.5	NEW	API	N	9399	19766	9286	10022			10367	P-110	13.5	LT&C	1.58	1.83	DRY	2.42	DRY	3.02

Casing Attachments

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI 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):

Oxbow_23_24_W1LI_Fed_Com_1H_Csg_Assumptions_20190110143117.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Oxbow_23_24_W1LI_Fed_Com_1H_Csg_Assumptions_20190110145659.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Oxbow_23_24_W1LI_Fed_Com_1H_Csg_Assumptions_20190110150331.pdf

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI 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):

Oxbow_23_24_W1LI_Fed_Com_1H_Csg_Assumptions_20190110150515.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	307	205	2.12	12.5	435	100	Class C	Salt, Gel, Extender, LCM
SURFACE	Tail		307	500	200	1.34	14.8	268	100	Class C	Retarder
INTERMEDIATE	Lead		0	1951	380	2.12	12.5	806	25	Class C	Salt, Gel, Extender, LCM
INTERMEDIATE	Tail		1951	2610	200	1.34	14.8	268	25	Class C	Retarder
PRODUCTION	Lead	3710	2410	3032	290	2.12	12.5	615	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		3032	3710	100	1.34	14.8	134	25	Class H	Retarder, Fluid Loss, Defoamer
PRODUCTION	Lead	3710	3710	7840	380	2.12	12.5	806	25	Class C	Gel, Retarder, Defoamer, Extender
PRODUCTION	Tail		7840	10289	400	1.18	15.6	472	25	Class H	none
LINER	Lead		9399	19766	415	2.97	11.2	1233	25	Class C	Salt, Gel, Fluid Loss, Retarder, Dispersant, Defoamer, Anti-Settling Agent

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI 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: Sufficient mud materials to maintain mud properties & meet minimum lost circulation and weight increase requirements will be kept on location at all times.

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	500	SPUD MUD	8.6	8.8							
500	2610	SALT SATURATED	10	10							
2610	9859	WATER-BASED MUD	8.6	9.7							
9859	10022	OIL-BASED MUD	10	13							MW up to 13.0 ppg may be required for shale control. The highest MW needed to balance formation pressure is expected to be 12.0 ppg.

Operator Name: MEWBOURNE OIL COMPANY

Well Name: OXBOW 23/24 W1LI FED COM **Well Number:** 1H

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from KOP (9399') to surface
Will run MWD GR from KOP (9399') to TD

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

CNL,GR,MWD,MUDLOG

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6775 **Anticipated Surface Pressure:** 4570.16

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:

Oxbow_23_24_W1LI_Fed_Com_1H_H2S_Plan_20190110151403.doc

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Oxbow_23_24_W1LI_Fed_Com_1H_Dir_Plan_20190110151439.pdf
Oxbow_23_24_W1LI_Fed_Com_1H_Dir_Plot_20190110151440.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Oxbow_23_24_W1LI_Fed_Com_1H_C101_20190110151508.pdf
Oxbow_23_24_W1LI_Fed_Com_1H_Drlg_Program_20190110151509.pdf

Other Variance attachment:

Mewbourne Oil Company, Oxbow 23/24 W1LI Fed Com #1H
Sec 23 & 24, T25S, R28E
SL: 895' FSL & 242' FWL (Sec 23)
BHL: 2275' FSL & 330' FEL (Sec 24)

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'	500'	13.375"	48	H40	STC	3.37	7.56	13.42	22.54
12.25"	0'	2610'	9.625"	36	J55	LTC	1.49	2.59	4.82	6.00
8.75"	0'	10289'	7"	26	HCP110	LTC	1.60	2.04	2.59	3.10
6.125"	9399'	19766'	4.5"	13.5	P110	LTC	1.58	1.83	2.42	3.02
			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, Oxbow 23/24 W1LI Fed Com #1H
Sec 23 & 24, T25S, R28E
SL: 895' FSL & 242' FWL (Sec 23)
BHL: 2275' FSL & 330' FEL (Sec 24)

2. Casing Program

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6.125"	9399'	19766'	4.5"	13.5	P110	LTC	1.58	1.83	2.42	3.02
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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
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If yes, does production casing cement tie back a minimum of 50' above the Reef?	
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Mewbourne Oil Company, Oxbow 23/24 W1LI Fed Com #1H
Sec 23 & 24, T25S, R28E
SL: 895' FSL & 242' FWL (Sec 23)
BHL: 2275' FSL & 330' FEL (Sec 24)

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17.5"	0'	500'	13.375"	48	H40	STC	3.37	7.56	13.42	22.54
12.25"	0'	2610'	9.625"	36	J55	LTC	1.49	2.59	4.82	6.00
8.75"	0'	10289'	7"	26	HCP110	LTC	1.60	2.04	2.59	3.10
6.125"	9399'	19766'	4.5"	13.5	P110	LTC	1.58	1.83	2.42	3.02
			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

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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 SOPA but not in R-111-P?	N
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Mewbourne Oil Company, Oxbow 23/24 W1LI Fed Com #1H
Sec 23 & 24, T25S, R28E
SL: 895' FSL & 242' FWL (Sec 23)
BHL: 2275' FSL & 330' FEL (Sec 24)

2. Casing Program

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17.5"	0'	500'	13.375"	48	H40	STC	3.37	7.56	13.42	22.54
12.25"	0'	2610'	9.625"	36	J55	LTC	1.49	2.59	4.82	6.00
8.75"	0'	10289'	7"	26	HCP110	LTC	1.60	2.04	2.59	3.10
6.125"	9399'	19766'	4.5"	13.5	P110	LTC	1.58	1.83	2.42	3.02
			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
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If yes, are there three strings cemented to surface?	

Mewbourne Oil Company

Eddy County, New Mexico NAD 83
Oxbow 23/24 W1LI Fed Com #1H
SL: 895 FSL & 242 FWL (Sec 23)
Sec 23, T25S, R28E
BHL: 2275 FSL & 330 FEL (Sec 24)

Plan: Design #1

Standard Planning Report

27 December, 2018

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Oxbow 23/24 W1LI Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Site:	Oxbow 23/24 W1LI Fed Com #1H	**North Reference:**	Grid
Well:	SL: 895 FSL & 242 FWL (Sec 23)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 2275 FSL & 330 FEL (Sec 24)		
Design:	Design #1		

Project Eddy 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 Oxbow 23/24 W1LI Fed Com #1H

Site Position:		**Northing:**	404,074.00 usft	**Latitude:**	32.1105959
From:	Map	**Easting:**	624,195.00 usft	**Longitude:**	-104.0657195
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.14 °

Well SL: 895 FSL & 242 FWL (Sec 23)

Well Position	**+N/-S**	0.0 usft	**Northing:**	404,074.00 usft	**Latitude:**	32.1105959
	+E/-W	0.0 usft	**Easting:**	624,195.00 usft	**Longitude:**	-104.0657195
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	2,959.0 usft	**Ground Level:**	2,932.0 usft

Wellbore BHL: 2275 FSL & 330 FEL (Sec 24)

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/27/2018	6.88	59.81	47,749

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	81.89

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,141.2	9.62	359.92	1,138.2	53.7	-0.1	1.50	1.50	0.00	359.92	
8,757.9	9.62	359.92	8,647.8	1,326.3	-1.9	0.00	0.00	0.00	0.00	
9,399.1	0.00	0.00	9,286.0	1,380.0	-2.0	1.50	-1.50	0.00	180.00	KOP: 2275 FSL & 242
10,289.4	89.01	89.71	9,859.0	1,382.8	561.2	10.00	10.00	0.00	89.71	
19,765.7	89.01	89.71	10,022.0	1,430.0	10,036.0	0.00	0.00	0.00	0.00	BHL: 2275 FSL & 330

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Oxbow 23/24 W1LI Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Site:	Oxbow 23/24 W1LI Fed Com #1H	**North Reference:**	Grid
Well:	SL: 895 FSL & 242 FWL (Sec 23)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 2275 FSL & 330 FEL (Sec 24)		
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: 895 FSL & 242 FWL (Sec 23)									
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	1.50	359.92	600.0	1.3	0.0	0.2	1.50	1.50	0.00
700.0	3.00	359.92	699.9	5.2	0.0	0.7	1.50	1.50	0.00
800.0	4.50	359.92	799.7	11.8	0.0	1.6	1.50	1.50	0.00
900.0	6.00	359.92	899.3	20.9	0.0	2.9	1.50	1.50	0.00
1,000.0	7.50	359.92	998.6	32.7	0.0	4.6	1.50	1.50	0.00
1,100.0	9.00	359.92	1,097.5	47.0	-0.1	6.6	1.50	1.50	0.00
1,141.2	9.62	359.92	1,138.2	53.7	-0.1	7.5	1.50	1.50	0.00
1,200.0	9.62	359.92	1,196.2	63.5	-0.1	8.9	0.00	0.00	0.00
1,300.0	9.62	359.92	1,294.8	80.2	-0.1	11.2	0.00	0.00	0.00
1,400.0	9.62	359.92	1,393.4	96.9	-0.1	13.5	0.00	0.00	0.00
1,500.0	9.62	359.92	1,491.9	113.6	-0.2	15.9	0.00	0.00	0.00
1,600.0	9.62	359.92	1,590.5	130.3	-0.2	18.2	0.00	0.00	0.00
1,700.0	9.62	359.92	1,689.1	147.1	-0.2	20.5	0.00	0.00	0.00
1,800.0	9.62	359.92	1,787.7	163.8	-0.2	22.9	0.00	0.00	0.00
1,900.0	9.62	359.92	1,886.3	180.5	-0.3	25.2	0.00	0.00	0.00
2,000.0	9.62	359.92	1,984.9	197.2	-0.3	27.5	0.00	0.00	0.00
2,100.0	9.62	359.92	2,083.5	213.9	-0.3	29.9	0.00	0.00	0.00
2,200.0	9.62	359.92	2,182.1	230.6	-0.3	32.2	0.00	0.00	0.00
2,300.0	9.62	359.92	2,280.7	247.3	-0.4	34.5	0.00	0.00	0.00
2,400.0	9.62	359.92	2,379.3	264.0	-0.4	36.9	0.00	0.00	0.00
2,500.0	9.62	359.92	2,477.9	280.7	-0.4	39.2	0.00	0.00	0.00
2,600.0	9.62	359.92	2,576.5	297.4	-0.4	41.5	0.00	0.00	0.00
2,700.0	9.62	359.92	2,675.1	314.1	-0.5	43.9	0.00	0.00	0.00
2,800.0	9.62	359.92	2,773.7	330.8	-0.5	46.2	0.00	0.00	0.00
2,900.0	9.62	359.92	2,872.3	347.6	-0.5	48.5	0.00	0.00	0.00
3,000.0	9.62	359.92	2,970.9	364.3	-0.5	50.9	0.00	0.00	0.00
3,100.0	9.62	359.92	3,069.5	381.0	-0.6	53.2	0.00	0.00	0.00
3,200.0	9.62	359.92	3,168.1	397.7	-0.6	55.5	0.00	0.00	0.00
3,300.0	9.62	359.92	3,266.6	414.4	-0.6	57.9	0.00	0.00	0.00
3,400.0	9.62	359.92	3,365.2	431.1	-0.6	60.2	0.00	0.00	0.00
3,500.0	9.62	359.92	3,463.8	447.8	-0.6	62.5	0.00	0.00	0.00
3,600.0	9.62	359.92	3,562.4	464.5	-0.7	64.9	0.00	0.00	0.00
3,700.0	9.62	359.92	3,661.0	481.2	-0.7	67.2	0.00	0.00	0.00
3,800.0	9.62	359.92	3,759.6	497.9	-0.7	69.5	0.00	0.00	0.00
3,900.0	9.62	359.92	3,858.2	514.6	-0.7	71.9	0.00	0.00	0.00
4,000.0	9.62	359.92	3,956.8	531.3	-0.8	74.2	0.00	0.00	0.00
4,100.0	9.62	359.92	4,055.4	548.1	-0.8	76.5	0.00	0.00	0.00
4,200.0	9.62	359.92	4,154.0	564.8	-0.8	78.9	0.00	0.00	0.00
4,300.0	9.62	359.92	4,252.6	581.5	-0.8	81.2	0.00	0.00	0.00
4,400.0	9.62	359.92	4,351.2	598.2	-0.9	83.5	0.00	0.00	0.00
4,500.0	9.62	359.92	4,449.8	614.9	-0.9	85.9	0.00	0.00	0.00
4,600.0	9.62	359.92	4,548.4	631.6	-0.9	88.2	0.00	0.00	0.00
4,700.0	9.62	359.92	4,647.0	648.3	-0.9	90.5	0.00	0.00	0.00
4,800.0	9.62	359.92	4,745.6	665.0	-1.0	92.9	0.00	0.00	0.00
4,900.0	9.62	359.92	4,844.2	681.7	-1.0	95.2	0.00	0.00	0.00
5,000.0	9.62	359.92	4,942.7	698.4	-1.0	97.5	0.00	0.00	0.00
5,100.0	9.62	359.92	5,041.3	715.1	-1.0	99.9	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Oxbow 23/24 W1LI Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Site:	Oxbow 23/24 W1LI Fed Com #1H	**North Reference:**	Grid
Well:	SL: 895 FSL & 242 FWL (Sec 23)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 2275 FSL & 330 FEL (Sec 24)		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	9.62	359.92	5,139.9	731.8	-1.1	102.2	0.00	0.00	0.00
5,300.0	9.62	359.92	5,238.5	748.6	-1.1	104.5	0.00	0.00	0.00
5,400.0	9.62	359.92	5,337.1	765.3	-1.1	106.9	0.00	0.00	0.00
5,500.0	9.62	359.92	5,435.7	782.0	-1.1	109.2	0.00	0.00	0.00
5,600.0	9.62	359.92	5,534.3	798.7	-1.2	111.5	0.00	0.00	0.00
5,700.0	9.62	359.92	5,632.9	815.4	-1.2	113.9	0.00	0.00	0.00
5,800.0	9.62	359.92	5,731.5	832.1	-1.2	116.2	0.00	0.00	0.00
5,900.0	9.62	359.92	5,830.1	848.8	-1.2	118.5	0.00	0.00	0.00
6,000.0	9.62	359.92	5,928.7	865.5	-1.3	120.8	0.00	0.00	0.00
6,100.0	9.62	359.92	6,027.3	882.2	-1.3	123.2	0.00	0.00	0.00
6,200.0	9.62	359.92	6,125.9	898.9	-1.3	125.5	0.00	0.00	0.00
6,300.0	9.62	359.92	6,224.5	915.6	-1.3	127.8	0.00	0.00	0.00
6,400.0	9.62	359.92	6,323.1	932.3	-1.4	130.2	0.00	0.00	0.00
6,500.0	9.62	359.92	6,421.7	949.1	-1.4	132.5	0.00	0.00	0.00
6,600.0	9.62	359.92	6,520.3	965.8	-1.4	134.8	0.00	0.00	0.00
6,700.0	9.62	359.92	6,618.9	982.5	-1.4	137.2	0.00	0.00	0.00
6,800.0	9.62	359.92	6,717.4	999.2	-1.4	139.5	0.00	0.00	0.00
6,900.0	9.62	359.92	6,816.0	1,015.9	-1.5	141.8	0.00	0.00	0.00
7,000.0	9.62	359.92	6,914.6	1,032.6	-1.5	144.2	0.00	0.00	0.00
7,100.0	9.62	359.92	7,013.2	1,049.3	-1.5	146.5	0.00	0.00	0.00
7,200.0	9.62	359.92	7,111.8	1,066.0	-1.5	148.8	0.00	0.00	0.00
7,300.0	9.62	359.92	7,210.4	1,082.7	-1.6	151.2	0.00	0.00	0.00
7,400.0	9.62	359.92	7,309.0	1,099.4	-1.6	153.5	0.00	0.00	0.00
7,500.0	9.62	359.92	7,407.6	1,116.1	-1.6	155.8	0.00	0.00	0.00
7,600.0	9.62	359.92	7,506.2	1,132.8	-1.6	158.2	0.00	0.00	0.00
7,700.0	9.62	359.92	7,604.8	1,149.6	-1.7	160.5	0.00	0.00	0.00
7,800.0	9.62	359.92	7,703.4	1,166.3	-1.7	162.8	0.00	0.00	0.00
7,900.0	9.62	359.92	7,802.0	1,183.0	-1.7	165.2	0.00	0.00	0.00
8,000.0	9.62	359.92	7,900.6	1,199.7	-1.7	167.5	0.00	0.00	0.00
8,100.0	9.62	359.92	7,999.2	1,216.4	-1.8	169.8	0.00	0.00	0.00
8,200.0	9.62	359.92	8,097.8	1,233.1	-1.8	172.2	0.00	0.00	0.00
8,300.0	9.62	359.92	8,196.4	1,249.8	-1.8	174.5	0.00	0.00	0.00
8,400.0	9.62	359.92	8,295.0	1,266.5	-1.8	176.8	0.00	0.00	0.00
8,500.0	9.62	359.92	8,393.5	1,283.2	-1.9	179.2	0.00	0.00	0.00
8,600.0	9.62	359.92	8,492.1	1,299.9	-1.9	181.5	0.00	0.00	0.00
8,700.0	9.62	359.92	8,590.7	1,316.6	-1.9	183.8	0.00	0.00	0.00
8,757.9	9.62	359.92	8,647.8	1,326.3	-1.9	185.2	0.00	0.00	0.00
8,800.0	8.99	359.92	8,689.4	1,333.1	-1.9	186.1	1.50	-1.50	0.00
8,900.0	7.49	359.92	8,788.3	1,347.4	-2.0	188.1	1.50	-1.50	0.00
9,000.0	5.99	359.92	8,887.6	1,359.2	-2.0	189.8	1.50	-1.50	0.00
9,100.0	4.49	359.92	8,987.2	1,368.3	-2.0	191.1	1.50	-1.50	0.00
9,200.0	2.99	359.92	9,087.0	1,374.8	-2.0	192.0	1.50	-1.50	0.00
9,300.0	1.49	359.92	9,186.9	1,378.7	-2.0	192.5	1.50	-1.50	0.00
9,399.1	0.00	0.00	9,286.0	1,380.0	-2.0	192.7	1.50	-1.50	0.00
KOP: 2275 FSL & 242 FWL (Sec 23)									
9,400.0	0.09	89.71	9,286.9	1,380.0	-2.0	192.7	10.00	10.00	0.00
9,500.0	10.09	89.71	9,386.4	1,380.0	6.9	201.5	10.00	10.00	0.00
9,600.0	20.09	89.71	9,482.8	1,380.2	32.9	227.2	10.00	10.00	0.00
9,700.0	30.09	89.71	9,573.3	1,380.4	75.2	269.2	10.00	10.00	0.00
9,720.9	32.17	89.71	9,591.1	1,380.4	86.0	279.9	10.00	10.00	0.00
FTP: 2275 FSL & 330 FWL (Sec 23)									
9,800.0	40.08	89.71	9,655.0	1,380.7	132.6	326.0	10.00	10.00	0.00
9,900.0	50.08	89.71	9,725.5	1,381.0	203.3	396.1	10.00	10.00	0.00
10,000.0	60.08	89.71	9,782.7	1,381.4	285.2	477.2	10.00	10.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Oxbow 23/24 W1LI Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Site:	Oxbow 23/24 W1LI Fed Com #1H	**North Reference:**	Grid
Well:	SL: 895 FSL & 242 FWL (Sec 23)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 2275 FSL & 330 FEL (Sec 24)		
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)
10,100.0	70.08	89.71	9,824.8	1,381.9	375.8	567.0	10.00	10.00	0.00
10,200.0	80.07	89.71	9,850.5	1,382.4	472.3	662.6	10.00	10.00	0.00
10,289.4	89.01	89.71	9,859.0	1,382.8	561.2	750.7	10.00	10.00	0.00
10,300.0	89.01	89.71	9,859.2	1,382.9	571.8	761.1	0.00	0.00	0.00
10,400.0	89.01	89.71	9,860.9	1,383.4	671.8	860.2	0.00	0.00	0.00
10,500.0	89.01	89.71	9,862.6	1,383.9	771.8	959.3	0.00	0.00	0.00
10,600.0	89.01	89.71	9,864.3	1,384.4	871.7	1,058.3	0.00	0.00	0.00
10,700.0	89.01	89.71	9,866.1	1,384.9	971.7	1,157.4	0.00	0.00	0.00
10,800.0	89.01	89.71	9,867.8	1,385.3	1,071.7	1,256.4	0.00	0.00	0.00
10,900.0	89.01	89.71	9,869.5	1,385.8	1,171.7	1,355.5	0.00	0.00	0.00
11,000.0	89.01	89.71	9,871.2	1,386.3	1,271.7	1,454.5	0.00	0.00	0.00
11,100.0	89.01	89.71	9,872.9	1,386.8	1,371.7	1,553.6	0.00	0.00	0.00
11,200.0	89.01	89.71	9,874.7	1,387.3	1,471.6	1,652.6	0.00	0.00	0.00
11,300.0	89.01	89.71	9,876.4	1,387.8	1,571.6	1,751.7	0.00	0.00	0.00
11,400.0	89.01	89.71	9,878.1	1,388.3	1,671.6	1,850.7	0.00	0.00	0.00
11,500.0	89.01	89.71	9,879.8	1,388.8	1,771.6	1,949.8	0.00	0.00	0.00
11,600.0	89.01	89.71	9,881.5	1,389.3	1,871.6	2,048.9	0.00	0.00	0.00
11,700.0	89.01	89.71	9,883.3	1,389.8	1,971.6	2,147.9	0.00	0.00	0.00
11,800.0	89.01	89.71	9,885.0	1,390.3	2,071.6	2,247.0	0.00	0.00	0.00
11,900.0	89.01	89.71	9,886.7	1,390.8	2,171.5	2,346.0	0.00	0.00	0.00
12,000.0	89.01	89.71	9,888.4	1,391.3	2,271.5	2,445.1	0.00	0.00	0.00
12,100.0	89.01	89.71	9,890.1	1,391.8	2,371.5	2,544.1	0.00	0.00	0.00
12,200.0	89.01	89.71	9,891.9	1,392.3	2,471.5	2,643.2	0.00	0.00	0.00
12,300.0	89.01	89.71	9,893.6	1,392.8	2,571.5	2,742.2	0.00	0.00	0.00
12,400.0	89.01	89.71	9,895.3	1,393.3	2,671.5	2,841.3	0.00	0.00	0.00
12,500.0	89.01	89.71	9,897.0	1,393.8	2,771.4	2,940.3	0.00	0.00	0.00
12,600.0	89.01	89.71	9,898.7	1,394.3	2,871.4	3,039.4	0.00	0.00	0.00
12,700.0	89.01	89.71	9,900.5	1,394.8	2,971.4	3,138.5	0.00	0.00	0.00
12,800.0	89.01	89.71	9,902.2	1,395.3	3,071.4	3,237.5	0.00	0.00	0.00
12,900.0	89.01	89.71	9,903.9	1,395.8	3,171.4	3,336.6	0.00	0.00	0.00
13,000.0	89.01	89.71	9,905.6	1,396.3	3,271.4	3,435.6	0.00	0.00	0.00
13,100.0	89.01	89.71	9,907.3	1,396.8	3,371.3	3,534.7	0.00	0.00	0.00
13,200.0	89.01	89.71	9,909.1	1,397.3	3,471.3	3,633.7	0.00	0.00	0.00
13,300.0	89.01	89.71	9,910.8	1,397.8	3,571.3	3,732.8	0.00	0.00	0.00
13,400.0	89.01	89.71	9,912.5	1,398.3	3,671.3	3,831.8	0.00	0.00	0.00
13,500.0	89.01	89.71	9,914.2	1,398.8	3,771.3	3,930.9	0.00	0.00	0.00
13,600.0	89.01	89.71	9,915.9	1,399.3	3,871.3	4,029.9	0.00	0.00	0.00
13,700.0	89.01	89.71	9,917.7	1,399.8	3,971.2	4,129.0	0.00	0.00	0.00
13,800.0	89.01	89.71	9,919.4	1,400.3	4,071.2	4,228.1	0.00	0.00	0.00
13,900.0	89.01	89.71	9,921.1	1,400.8	4,171.2	4,327.1	0.00	0.00	0.00
14,000.0	89.01	89.71	9,922.8	1,401.3	4,271.2	4,426.2	0.00	0.00	0.00
14,100.0	89.01	89.71	9,924.5	1,401.8	4,371.2	4,525.2	0.00	0.00	0.00
14,200.0	89.01	89.71	9,926.3	1,402.3	4,471.2	4,624.3	0.00	0.00	0.00
14,300.0	89.01	89.71	9,928.0	1,402.8	4,571.2	4,723.3	0.00	0.00	0.00
14,400.0	89.01	89.71	9,929.7	1,403.3	4,671.1	4,822.4	0.00	0.00	0.00
14,500.0	89.01	89.71	9,931.4	1,403.8	4,771.1	4,921.4	0.00	0.00	0.00
14,600.0	89.01	89.71	9,933.1	1,404.3	4,871.1	5,020.5	0.00	0.00	0.00
14,700.0	89.01	89.71	9,934.9	1,404.8	4,971.1	5,119.5	0.00	0.00	0.00
14,800.0	89.01	89.71	9,936.6	1,405.3	5,071.1	5,218.6	0.00	0.00	0.00
14,900.0	89.01	89.71	9,938.3	1,405.8	5,171.1	5,317.7	0.00	0.00	0.00
15,000.0	89.01	89.71	9,940.0	1,406.3	5,271.0	5,416.7	0.00	0.00	0.00
15,100.0	89.01	89.71	9,941.7	1,406.8	5,371.0	5,515.8	0.00	0.00	0.00
15,200.0	89.01	89.71	9,943.5	1,407.3	5,471.0	5,614.8	0.00	0.00	0.00
15,300.0	89.01	89.71	9,945.2	1,407.8	5,571.0	5,713.9	0.00	0.00	0.00

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Oxbow 23/24 W1LI Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Site:	Oxbow 23/24 W1LI Fed Com #1H	**North Reference:**	Grid
Well:	SL: 895 FSL & 242 FWL (Sec 23)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 2275 FSL & 330 FEL (Sec 24)		
Design:	Design #1		

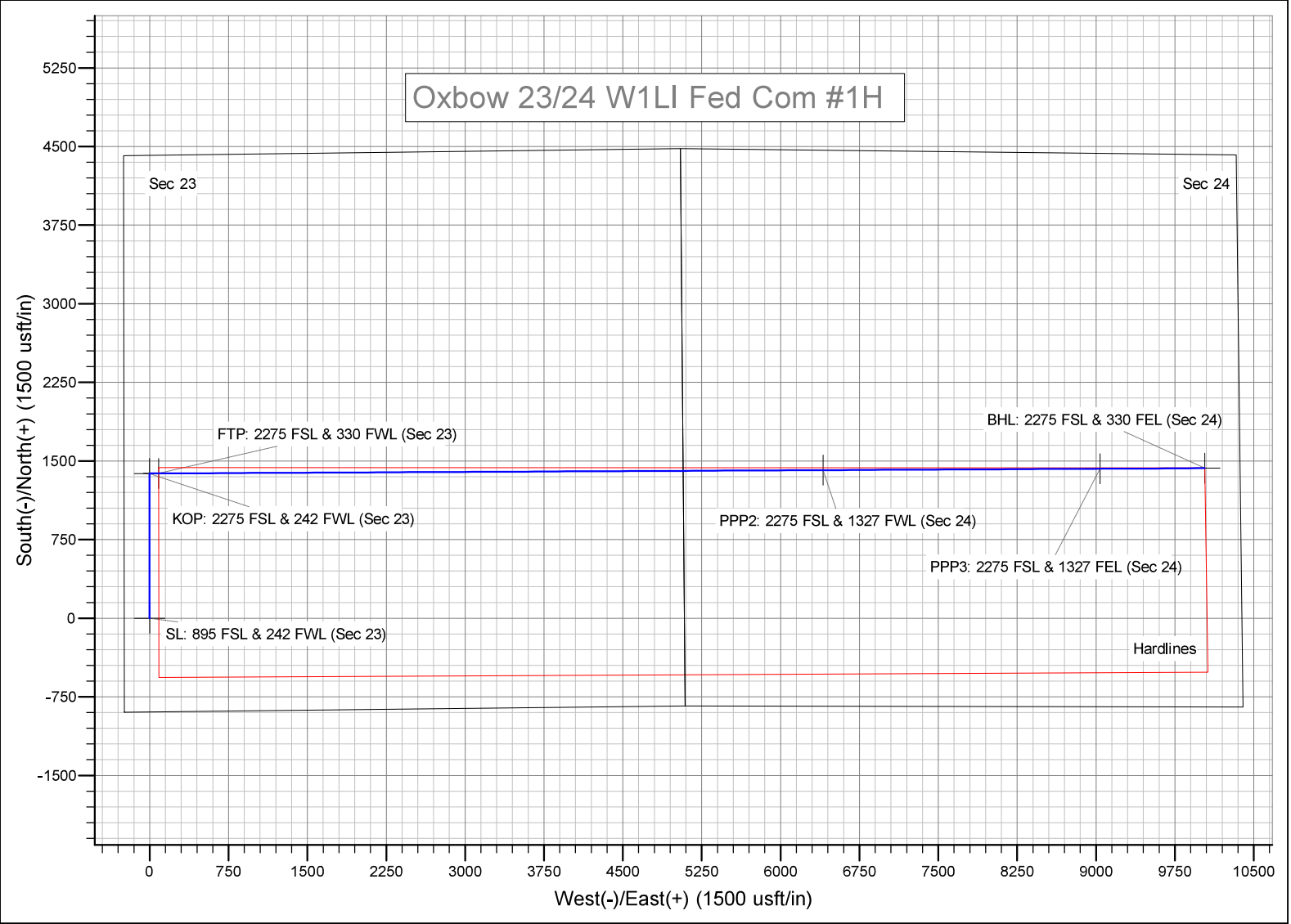
Planned Survey

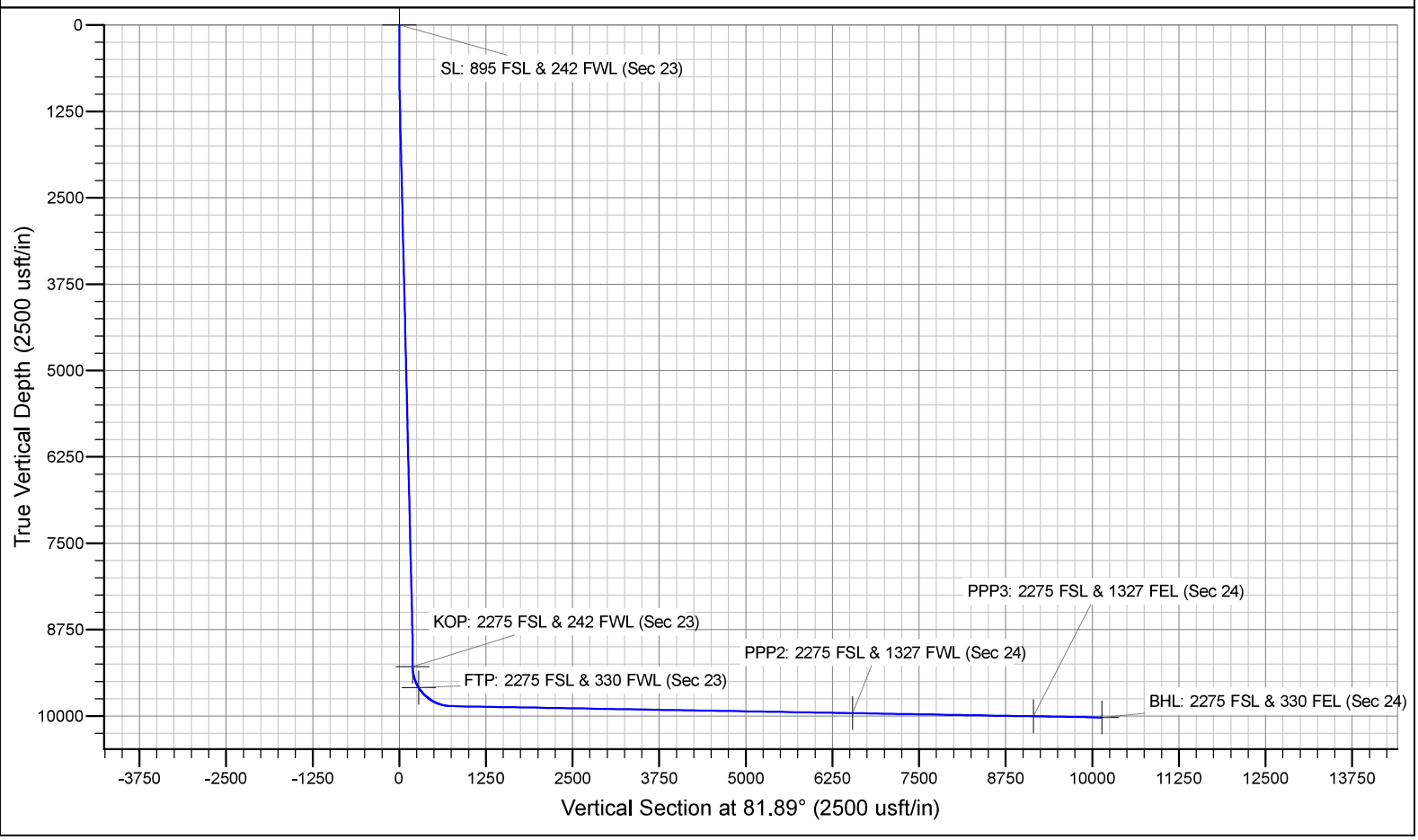
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,400.0	89.01	89.71	9,946.9	1,408.3	5,671.0	5,812.9	0.00	0.00	0.00
15,500.0	89.01	89.71	9,948.6	1,408.8	5,771.0	5,912.0	0.00	0.00	0.00
15,600.0	89.01	89.71	9,950.3	1,409.3	5,870.9	6,011.0	0.00	0.00	0.00
15,700.0	89.01	89.71	9,952.1	1,409.8	5,970.9	6,110.1	0.00	0.00	0.00
15,800.0	89.01	89.71	9,953.8	1,410.2	6,070.9	6,209.1	0.00	0.00	0.00
15,900.0	89.01	89.71	9,955.5	1,410.7	6,170.9	6,308.2	0.00	0.00	0.00
16,000.0	89.01	89.71	9,957.2	1,411.2	6,270.9	6,407.2	0.00	0.00	0.00
16,100.0	89.01	89.71	9,958.9	1,411.7	6,370.9	6,506.3	0.00	0.00	0.00
16,134.1	89.01	89.71	9,959.5	1,411.9	6,405.0	6,540.1	0.00	0.00	0.00
PPP2: 2275 FSL & 1327 FWL (Sec 24)									
16,200.0	89.01	89.71	9,960.7	1,412.2	6,470.8	6,605.4	0.00	0.00	0.00
16,300.0	89.01	89.71	9,962.4	1,412.7	6,570.8	6,704.4	0.00	0.00	0.00
16,400.0	89.01	89.71	9,964.1	1,413.2	6,670.8	6,803.5	0.00	0.00	0.00
16,500.0	89.01	89.71	9,965.8	1,413.7	6,770.8	6,902.5	0.00	0.00	0.00
16,600.0	89.01	89.71	9,967.5	1,414.2	6,870.8	7,001.6	0.00	0.00	0.00
16,700.0	89.01	89.71	9,969.3	1,414.7	6,970.8	7,100.6	0.00	0.00	0.00
16,800.0	89.01	89.71	9,971.0	1,415.2	7,070.8	7,199.7	0.00	0.00	0.00
16,900.0	89.01	89.71	9,972.7	1,415.7	7,170.7	7,298.7	0.00	0.00	0.00
17,000.0	89.01	89.71	9,974.4	1,416.2	7,270.7	7,397.8	0.00	0.00	0.00
17,100.0	89.01	89.71	9,976.1	1,416.7	7,370.7	7,496.8	0.00	0.00	0.00
17,200.0	89.01	89.71	9,977.9	1,417.2	7,470.7	7,595.9	0.00	0.00	0.00
17,300.0	89.01	89.71	9,979.6	1,417.7	7,570.7	7,695.0	0.00	0.00	0.00
17,400.0	89.01	89.71	9,981.3	1,418.2	7,670.7	7,794.0	0.00	0.00	0.00
17,500.0	89.01	89.71	9,983.0	1,418.7	7,770.6	7,893.1	0.00	0.00	0.00
17,600.0	89.01	89.71	9,984.7	1,419.2	7,870.6	7,992.1	0.00	0.00	0.00
17,700.0	89.01	89.71	9,986.5	1,419.7	7,970.6	8,091.2	0.00	0.00	0.00
17,800.0	89.01	89.71	9,988.2	1,420.2	8,070.6	8,190.2	0.00	0.00	0.00
17,900.0	89.01	89.71	9,989.9	1,420.7	8,170.6	8,289.3	0.00	0.00	0.00
18,000.0	89.01	89.71	9,991.6	1,421.2	8,270.6	8,388.3	0.00	0.00	0.00
18,100.0	89.01	89.71	9,993.3	1,421.7	8,370.5	8,487.4	0.00	0.00	0.00
18,200.0	89.01	89.71	9,995.1	1,422.2	8,470.5	8,586.4	0.00	0.00	0.00
18,300.0	89.01	89.71	9,996.8	1,422.7	8,570.5	8,685.5	0.00	0.00	0.00
18,400.0	89.01	89.71	9,998.5	1,423.2	8,670.5	8,784.6	0.00	0.00	0.00
18,500.0	89.01	89.71	10,000.2	1,423.7	8,770.5	8,883.6	0.00	0.00	0.00
18,600.0	89.01	89.71	10,001.9	1,424.2	8,870.5	8,982.7	0.00	0.00	0.00
18,700.0	89.01	89.71	10,003.7	1,424.7	8,970.4	9,081.7	0.00	0.00	0.00
18,768.6	89.01	89.71	10,004.8	1,425.0	9,039.0	9,149.6	0.00	0.00	0.00
PPP3: 2275 FSL & 1327 FEL (Sec 24)									
18,800.0	89.01	89.71	10,005.4	1,425.2	9,070.4	9,180.8	0.00	0.00	0.00
18,900.0	89.01	89.71	10,007.1	1,425.7	9,170.4	9,279.8	0.00	0.00	0.00
19,000.0	89.01	89.71	10,008.8	1,426.2	9,270.4	9,378.9	0.00	0.00	0.00
19,100.0	89.01	89.71	10,010.5	1,426.7	9,370.4	9,477.9	0.00	0.00	0.00
19,200.0	89.01	89.71	10,012.3	1,427.2	9,470.4	9,577.0	0.00	0.00	0.00
19,300.0	89.01	89.71	10,014.0	1,427.7	9,570.4	9,676.0	0.00	0.00	0.00
19,400.0	89.01	89.71	10,015.7	1,428.2	9,670.3	9,775.1	0.00	0.00	0.00
19,500.0	89.01	89.71	10,017.4	1,428.7	9,770.3	9,874.2	0.00	0.00	0.00
19,600.0	89.01	89.71	10,019.1	1,429.2	9,870.3	9,973.2	0.00	0.00	0.00
19,700.0	89.01	89.71	10,020.9	1,429.7	9,970.3	10,072.3	0.00	0.00	0.00
19,765.7	89.01	89.71	10,022.0	1,430.0	10,036.0	10,137.4	0.00	0.00	0.00
BHL: 2275 FSL & 330 FEL (Sec 24)									

Database:	Hobbs	**Local Co-ordinate Reference:**	Site Oxbow 23/24 W1LI Fed Com #1H
Company:	Mewbourne Oil Company	**TVD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Project:	Eddy County, New Mexico NAD 83	**MD Reference:**	WELL @ 2959.0usft (Original Well Elev)
Site:	Oxbow 23/24 W1LI Fed Com #1H	**North Reference:**	Grid
Well:	SL: 895 FSL & 242 FWL (Sec 23)	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	BHL: 2275 FSL & 330 FEL (Sec 24)		
Design:	Design #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL: 895 FSL & 242 FWL - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	404,074.00	624,195.00	32.1105959	-104.0657195
KOP: 2275 FSL & 242 F - plan hits target center - Point	0.00	0.00	9,286.0	1,380.0	-2.0	405,454.00	624,193.00	32.1143895	-104.0657149
FTP: 2275 FSL & 330 F\ - plan hits target center - Point	0.00	0.00	9,591.2	1,380.4	86.0	405,454.44	624,281.00	32.1143901	-104.0654306
PPP2: 2275 FSL & 1327 - plan hits target center - Point	0.00	0.01	9,959.5	1,411.9	6,405.0	405,485.91	630,600.00	32.1144318	-104.0450206
PPP3: 2275 FSL & 1327 - plan hits target center - Point	0.00	0.00	10,004.8	1,425.0	9,039.0	405,499.03	633,234.00	32.1144482	-104.0365129
BHL: 2275 FSL & 330 FI - plan hits target center - Point	0.00	0.00	10,022.0	1,430.0	10,036.0	405,504.00	634,231.00	32.1144542	-104.0332926


Oxbow 23/24 W1LI Fed Com #1H
Sec 23
Sec 24
FTP: 2275 FSL & 330 FWL (Sec 23)
KOP: 2275 FSL & 242 FWL (Sec 23)
SL: 895 FSL & 242 FWL (Sec 23)
PPP2: 2275 FSL & 1327 FWL (Sec 24)
PPP3: 2275 FSL & 1327 FEL (Sec 24)
BHL: 2275 FSL & 330 FEL (Sec 24)
Hardlines
South(-)/North(+) (1500 usft/in)
West(-)/East(+) (1500 usft/in)
5250
4500
3750
3000
2250
1500
750
0
-750
-1500
0
750
1500
2250
3000
3750
4500
5250
6000
6750
7500
8250
9000
9750
10500


SL: 895 FSL & 242 FWL (Sec 23)
KOP: 2275 FSL & 242 FWL (Sec 23)
FTP: 2275 FSL & 330 FWL (Sec 23)
PPP2: 2275 FSL & 1327 FWL (Sec 24)
PPP3: 2275 FSL & 1327 FEL (Sec 24)
BHL: 2275 FSL & 330 FEL (Sec 24)
True Vertical Depth (2500 usft/in)
Vertical Section at 81.89° (2500 usft/in)
0
1250
2500
3750
5000
6250
7500
8750
10000
-3750
-2500
-1250
0
1250
2500
3750
5000
6250
7500
8750
10000
11250
12500
13750

Mewbourne Oil Company, Oxbow 23/24 W1LI Fed Com #1H
Sec 23 & 24, T25S, R28E
SL: 895' FSL & 242' FWL (Sec 23)
BHL: 2275' FSL & 330' FEL (Sec 24)

1. Geologic Formations

TVD of target	10,022'	Pilot hole depth	NA
MD at TD:	19,766'	Deepest expected fresh water:	55'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface		
Castile	1145		
Top of Salt			
Base of Salt	2480		
Lamar	2660		
Bell Canyon	2690		
Cherry Canyon	3565		
Manzanita Marker	3710		
Brushy Canyon	5210		
Bone Spring	6440	Oil/Gas	
1st Bone Spring Sand	7300		
2nd Bone Spring Sand	8095		
3rd Bone Spring Sand	9215		
Abo			
Wolfcamp	9585	Target Zone	
Devonian			
Fusselman			
Ellenburger			
Granite Wash			

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

Mewbourne Oil Company, Oxbow 23/24 W1LI Fed Com #1H
Sec 23 & 24, T25S, R28E
SL: 895' FSL & 242' FWL (Sec 23)
BHL: 2275' FSL & 330' FEL (Sec 24)

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'	500'	13.375"	48	H40	STC	3.37	7.56	13.42	22.54
12.25"	0'	2610'	9.625"	36	J55	LTC	1.49	2.59	4.82	6.00
8.75"	0'	10289'	7"	26	HCP110	LTC	1.60	2.04	2.59	3.10
6.125"	9399'	19766'	4.5"	13.5	P110	LTC	1.58	1.83	2.42	3.02
			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?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	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.	205	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.	380	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	380	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 @ 3710'						
Prod. Stg 2	290	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	415	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	2410'	25%
Liner	9399'	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	5,000#
			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	500	FW Gel	8.6-8.8	28-34	N/C
500	2610	Saturated Brine	10.0	28-34	N/C
2610	9859	Cut Brine	8.6-9.5	28-34	N/C
9286	10022	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 (9,399') 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	9,399' (KOP) to TD
	Density	
	CBL	
	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	6775 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

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

GAS CAPTURE PLAN

Date: 1-8-19

☒ 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
Oxbow 23/24 W1LI Fed Com #1H		M-23-25S-28E		895' FSL & 242' 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 Western and will be connected to Western low/high pressure gathering system located in EDDY County, New Mexico. It will require 3,400 ' of pipeline to connect the facility to low/high pressure gathering system. Mewbourne Oil Company provides (periodically) to Western a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Mewbourne Oil Company and Western have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Western Processing Plant located in Sec. 36, Blk. 58 T1S, Culberson County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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