

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CCO Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM117116
2. Name of Operator MEWBOURNE OIL COMPANY		6. If Indian, Allottee or Tribe Name
Contact: JACKIE LATHAN E-Mail: jlathan@mewbourne.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address PO BOX 5270 HOBBS, NM 88241	3b. Phone No. (include area code) Ph: 575-393-5905 Fx: 575-397-6252	8. Well Name and No. OWL DRAW 23 DM FED COM 1H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 14 T26S R27E SWSW 375FSL 990FWL		9. API Well No. 30-015-41448
		10. Field and Pool, or Exploratory WOLFCAMP SHALE
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

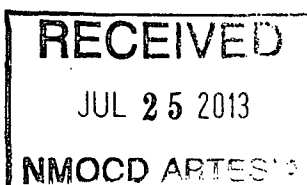
TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Mewbourne Oil Company has an approved APD for the above well. MOC would like to change the bottom hole location from 660' FSL & 660' FWL to 330' FSL & 660' FWL. This has been approved by NMOCD as of June 22, 2013. Please see attached directional plan, drilling program, C-102 & approval letter from NMOCD.

Bond on file: NM1693, Nationwide & NMB000919

Accepted for record
NMOCD 7/25/2013



**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct. Electronic Submission #212558 verified by the BLM Well Information System For MEWBOURNE OIL COMPANY, sent to the Carlsbad Committed to AFMSS for processing by KURT SIMMONS on 07/12/2013 ()	
Name (Printed/Typed) JACKIE LATHAN	Title AUTHORIZED REPRESENTATIVE
Signature (Electronic Submission)	Date 07/03/2013
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____
Conditions of approval, if any, are attached. Approval of this notice 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.	
Office _____	



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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

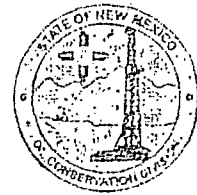
State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division



June 22, 2013

Mewbourne Oil Company
c/o Mr. James Bruce, Attorney

ADMINISTRATIVE NON-STANDARD LOCATION ORDER

Administrative Order NSL-6820
Administrative Application Reference No. pPRG1314341924

Mewbourne Oil Company
OGRID 14744
Owl Draw 23 DM Fed Com. Well No. 1H
API No. 30-015-41448

Proposed Location:

	<u>Footages</u>	<u>Unit</u>	<u>Sec.</u>	<u>Twsp</u>	<u>Range</u>	<u>County</u>
Surface	375 FSL & 990 FWL	M	14	26S	27E	Eddy
Penetration Point	210 FNL & 960 FWL	D	23	26S	27E	Eddy
Terminus	330 FSL & 660 FWL	M	23	26S	27E	Eddy

Proposed Project Area:

<u>Description</u>	<u>Acres</u>	<u>Pool</u>	<u>Pool Code</u>
W/2 of Section 23	320	Wildcat Wolfcamp gas	98017

Reference is made to your application received on May 22, 2103.

You have requested to drill this horizontal well at an unorthodox gas well location described above in the referenced pool or formation. This location is governed by statewide Rule 15.10.B [19.15.15.10.B NMAC], which provides for 320-acre units, with wells located at least 660 feet from a unit outer boundary, and Rule 15.16.14.B(2) [19.15.16.14.B(2) NMAC] concerning directional wells in designated project areas. This location is unorthodox because portions of the proposed completed interval are less than 660 feet from an outer boundary of the project area.

Your application has been duly filed under the provisions of Division Rules 15.13 [19.15.15.13 NMAC] and 4.12.A(2) [19.15.4.12.A(2) NMAC].

June 21, 2013

Page 2

It is our understanding that you are seeking this location for engineering reasons.

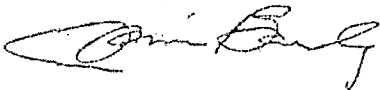
It is also understood that you have given due notice of this application to all operators or owners who are "affected persons," as defined in Rule 4.12.A(2), in all adjoining units towards which the proposed location encroaches.

Pursuant to the authority conferred by Division Rule 15.13.B, the above-described unorthodox location is hereby approved.

This approval is subject to your being in compliance with all other applicable Division rules, including, but not limited to Division Rule 5.9 [19.15.15.9 NMAC].

Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

Sincerely,

A handwritten signature in black ink, appearing to read "Jami Bailey", is written over a horizontal line.

Jami Bailey
Director

JB/db

cc: New Mexico Oil Conservation Division – Artesia
United States Bureau of Land Management

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6176 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-5460 Fax: (505) 476-5462

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		Wildcat Wolfcamp
Property Code	Property Name	Well Number
	OWL DRAW 23 DM FED COM	1H
OGRID No.	Operator Name	Elevation
14744	MEWBOURNE OIL COMPANY	3152

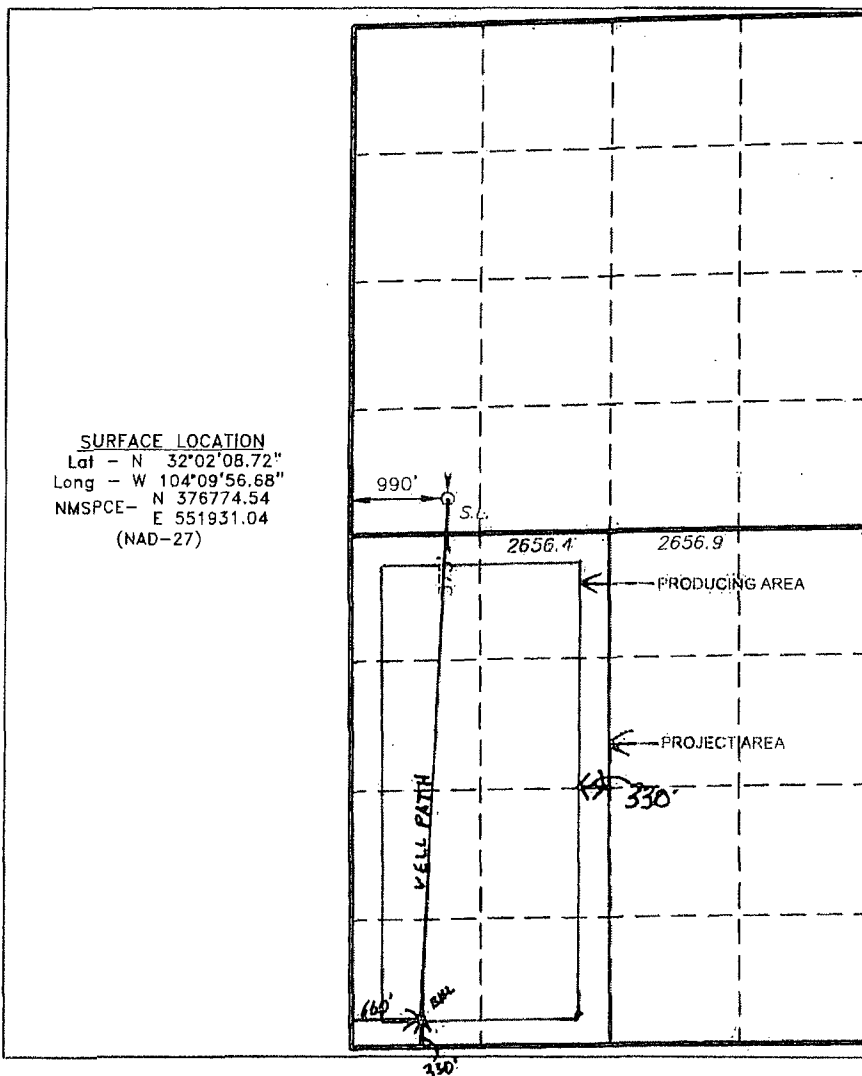
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	14	26 S	27 E		375	SOUTH	990	WEST	EDDY

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
M	23	26S	27E		330	SOUTH	660	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
320									

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Bradley Bishop 7-5-13
Signature Date

BRADLEY BISHOP
Printed Name

Email Address

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.

JANUARY 17 2013
Date Surveyed
Signature of Surveyor
Professional Surveyor
No. 7977
Certificate No. Jones 7977
BASIN SURVEYS 27951

Drilling Program
Mewbourne Oil Company
Owl Draw 23 DM Fed Com #1H
375' FSL & 990' FWL
Sec. 14 T26S R27E
Eddy, County, NM

1. The estimated (TVD) tops of geological markers are as follows:

Rustler	470'
Top of Salt	570'
Base of Salt	2050'
Delaware	2300'
Bell Canyon	2350'
Cherry Canyon	3300'
Manzanita Marker	3350'
Brushy Canyon	4250'
*Bone Springs	5850'
*1 st Bone Spring Sand	6900'
*2 nd Bone Spring Sand	7500'
*Wolfcamp	8900'

2. Estimated depths of anticipated fresh water, oil, or gas:

Water	Fresh water is anticipated @ 25' and will be protected by setting surface casing at ^{900'} 405' and cementing to surface.
Hydrocarbons	Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as necessary.

3. Pressure control equipment:

See COA
A 2000# WP Annular will be installed after running 13 3/8" casing. A 5000# WP Double Ram BOP and 5000# WP Annular will be installed after running 7" & 9 5/8" casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOPE will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use.
Will test the 13 3/8" Annular to 1000#, 7" & 9 5/8" BOPE to 5000# and the Annular to 2500# with a third party testing company before drilling below each shoe, but will test again, if needed, in 30 days from the 1st test as per BLM Onshore Oil and Gas Order #2.

4. Drilling Program:

MOC proposes to drill a vertical wellbore to 9489' & kick off to horizontal @ 10062' TVD. The well will be drilled to 15153' MD (10032' TVD). See attached directional plan.

5. Proposed casing and cementing program:

A. Casing Program:

See COA

<u>Hole Size</u>	<u>Casing</u>	<u>Wt/Ft.</u>	<u>Grade</u>	<u>Depth</u>	<u>Jt Type</u>
17 1/2"	13 3/8" (new)	48#	H40	0'- ^{400'} 405'	ST&C
12 1/4"	9 5/8" (new)	36#	J55	0'- ^{2100'} 2250'	LT&C
8 3/4"	7" (new)	26#	P110	0-9489' MD	LT&C
8 3/4"	7" (new)	26#	P110	9489'-10393'	MDBT&C
6 1/8"	4 1/2" (new)	13.5#	P110	10193'-TD	LT&C

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

*Subject to availability of casing.

B. Cementing Program:

- i. Surface Casing: 550 sks class "C" w/2% CaCl_2 . Yield at 1.34 cuft/sk. Cmt circulated to surface w/100% excess.
- ii. Intermediate Casing: 300 sacks *Lite "C" (35:65:4) cement w/salt and lost circulation material additives. Yield at 2.13 cuft/sk. 200 sks class "C" neat. Yield at 1.33 cuft/sk. Cmt circulated to surface w/25% excess.
- iii. Production Casing: 550 sacks *Lite "C" (60:40:0) cement w/salt and fluid loss additives. Yield at 2.12 cuft/sk. 400 sks class "H" w/salt and fluid loss additives. Yield at 1.18 cuft/sk. Cmt calculated to tieback 200' into intermediate casing @ 2050' w/25% excess.
- iv. Production Liner: This will be a Packer/Port completion from TD up inside 7" casing with packer type liner hanger.

*Referring to above blends of lite cement: (wt% fly ash : wt% cement : wt% bentonite of the total of first two numbers). Generic names of additives are used since the availability of specific company and products are unknown at this time.

**Mewbourne Oil Company reserves the right to change cement designs as hole conditions may warrant.*

6. Mud Program:

See COA

Interval	Type System	Weight	Viscosity	Fluid Loss
0'-498' 400'	FW spud mud	8.6-9.0	32-34	NA
475'-2250' 2100'	Brine water	10.0	29-30	NA
2250'-9489'	FW mud	8.7-9.2	28-30	15
9489'-TD	FW w/Polymer	9.2-10.0	32-35	15

*Visual mud monitoring system shall be in place to detect volume changes indicating loss or gain of circulation fluid volume. Sufficient mud materials will be kept on location at all times to combat abnormal conditions.

7. Evaluation Program:

Samples: 10' samples from surface casing to TD
Logging: GR, CNL & Gyro from KOP-100' (9389') to surface and GR from KOP to TD.

8. Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	120 degree F
Maximum bottom hole pressure:	8.3 lbs/gal gradient or less (10032' x .43668 = 4380.78 psi.)

9. Anticipated Starting Date:

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 45 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

Mewbourne Oil Co

Eddy County, New Mexico

Sec 14, T26S, R27E

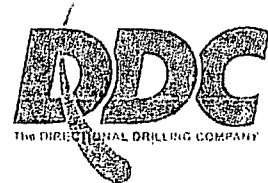
Owl Draw 23 DM Fed Com #1H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

21 February, 2013



DDC

Well Planning Report



Database: EDM 5000.1 Single User Db
 Company: Mewbourne Oil Co
 Project: Eddy County, New Mexico
 Site: Sec 14, T26S, R27E
 Well: Owl Draw 23 DM Fed Com #1H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Owl Draw 23 DM Fed Com #1H
 TVD Reference: WELL @ 3172.0usft (Patterson #75)
 MD Reference: WELL @ 3172.0usft (Patterson #75)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Eddy County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site: Sec 14, T26S, R27E

Site Position: Northing: 376,774.54 usft Latitude: 32° 2' 8.725 N
 From: Map Easting: 551,931.04 usft Longitude: 104° 9' 56.686 W
 Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.09 °

Well: Owl Draw 23 DM Fed Com #1H

Well Position: +N/-S 0.0 usft Northing: 376,774.54 usft Latitude: 32° 2' 8.725 N
 +E/-W 0.0 usft Easting: 551,931.04 usft Longitude: 104° 9' 56.686 W
 Position Uncertainty: 0.0 usft Wellhead Elevation: Ground Level: 3,152.0 usft

Wellbore: Wellbore #1

Magnetics: Model Name: Sample Date: Declination (°): Dip Angle (°): Field Strength (nT)

IGRF2010 2/21/2013 7.64 59.87 48,270

Design: Design #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.0

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

0.0 0.0 0.0 183.18

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	
9,489.1	0.00	0.00	9,489.1	0.0	0.0	0.00	0.00	0.00	0.00	
10,392.7	90.36	183.18	10,062.0	-575.7	-32.0	10.00	10.00	-19.57	183.18	
15,152.8	90.36	183.18	10,032.0	-5,328.4	-295.8	0.00	0.00	0.00	0.00	PBHL Owl Draw 23

DDC

Well Planning Report



Database: EDM 5000.1 Single User Db
Company: Mewbourne Oil Co
Project: Eddy County, New Mexico
Site: Sec 14, T26S, R27E
Well: Owl Draw 23 DM Fed Com #1H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Owl Draw 23 DM Fed Com #1H
TVD Reference: WELL @ 3172.0usft (Patterson #75)
MD Reference: WELL @ 3172.0usft (Patterson #75)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
Build 10° / 100'									
9,489.1	0.00	0.00	9,489.1	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	1.09	183.18	9,500.0	-0.1	0.0	0.1	10.00	10.00	0.00
9,600.0	11.09	183.18	9,599.3	-10.7	-0.6	10.7	10.00	10.00	0.00
9,700.0	21.09	183.18	9,695.3	-38.3	-2.1	38.4	10.00	10.00	0.00
9,800.0	31.09	183.18	9,785.0	-82.2	-4.6	82.3	10.00	10.00	0.00
9,900.0	41.09	183.18	9,865.7	-140.9	-7.8	141.1	10.00	10.00	0.00
10,000.0	51.09	183.18	9,934.9	-212.8	-11.8	213.1	10.00	10.00	0.00
10,100.0	61.09	183.18	9,990.7	-295.5	-16.4	296.0	10.00	10.00	0.00
10,200.0	71.09	183.18	10,031.1	-386.7	-21.5	387.3	10.00	10.00	0.00
10,300.0	81.09	183.18	10,055.1	-483.5	-26.8	484.2	10.00	10.00	0.00
EOB @ 90.36° Inc / 183.18° Azm / 10062' TVD									
10,392.7	90.36	183.18	10,062.0	-575.7	-32.0	576.6	10.00	10.00	0.00
10,400.0	90.36	183.18	10,062.0	-583.0	-32.4	583.9	0.00	0.00	0.00
10,500.0	90.36	183.18	10,061.4	-682.8	-37.9	683.9	0.00	0.00	0.00
10,600.0	90.36	183.18	10,060.7	-782.6	-43.4	783.9	0.00	0.00	0.00
10,700.0	90.36	183.18	10,060.1	-882.5	-49.0	883.9	0.00	0.00	0.00
10,800.0	90.36	183.18	10,059.5	-982.3	-54.5	983.8	0.00	0.00	0.00
10,900.0	90.36	183.18	10,058.8	-1,082.2	-60.1	1,083.8	0.00	0.00	0.00
11,000.0	90.36	183.18	10,058.2	-1,182.0	-65.6	1,183.8	0.00	0.00	0.00
11,100.0	90.36	183.18	10,057.6	-1,281.9	-71.2	1,283.8	0.00	0.00	0.00
11,200.0	90.36	183.18	10,057.0	-1,381.7	-76.7	1,383.8	0.00	0.00	0.00
11,300.0	90.36	183.18	10,056.3	-1,481.6	-82.2	1,483.8	0.00	0.00	0.00
11,400.0	90.36	183.18	10,055.7	-1,581.4	-87.8	1,583.8	0.00	0.00	0.00
11,500.0	90.36	183.18	10,055.1	-1,681.2	-93.3	1,683.8	0.00	0.00	0.00
11,600.0	90.36	183.18	10,054.4	-1,781.1	-98.9	1,783.8	0.00	0.00	0.00
11,700.0	90.36	183.18	10,053.8	-1,880.9	-104.4	1,883.8	0.00	0.00	0.00
11,800.0	90.36	183.18	10,053.2	-1,980.8	-110.0	1,983.8	0.00	0.00	0.00
11,900.0	90.36	183.18	10,052.5	-2,080.6	-115.5	2,083.8	0.00	0.00	0.00
12,000.0	90.36	183.18	10,051.9	-2,180.5	-121.0	2,183.8	0.00	0.00	0.00
12,100.0	90.36	183.18	10,051.3	-2,280.3	-126.6	2,283.8	0.00	0.00	0.00
12,200.0	90.36	183.18	10,050.6	-2,380.2	-132.1	2,383.8	0.00	0.00	0.00
12,300.0	90.36	183.18	10,050.0	-2,480.0	-137.7	2,483.8	0.00	0.00	0.00
12,400.0	90.36	183.18	10,049.4	-2,579.8	-143.2	2,583.8	0.00	0.00	0.00
12,500.0	90.36	183.18	10,048.7	-2,679.7	-148.8	2,683.8	0.00	0.00	0.00
12,600.0	90.36	183.18	10,048.1	-2,779.5	-154.3	2,783.8	0.00	0.00	0.00
12,700.0	90.36	183.18	10,047.5	-2,879.4	-159.8	2,883.8	0.00	0.00	0.00
12,800.0	90.36	183.18	10,046.9	-2,979.2	-165.4	2,983.8	0.00	0.00	0.00
12,900.0	90.36	183.18	10,046.2	-3,079.1	-170.9	3,083.8	0.00	0.00	0.00
13,000.0	90.36	183.18	10,045.6	-3,178.9	-176.5	3,183.8	0.00	0.00	0.00
13,100.0	90.36	183.18	10,045.0	-3,278.8	-182.0	3,283.8	0.00	0.00	0.00
13,200.0	90.36	183.18	10,044.3	-3,378.6	-187.6	3,383.8	0.00	0.00	0.00
13,300.0	90.36	183.18	10,043.7	-3,478.4	-193.1	3,483.8	0.00	0.00	0.00
13,400.0	90.36	183.18	10,043.1	-3,578.3	-198.6	3,583.8	0.00	0.00	0.00
13,500.0	90.36	183.18	10,042.4	-3,678.1	-204.2	3,683.8	0.00	0.00	0.00
13,600.0	90.36	183.18	10,041.8	-3,778.0	-209.7	3,783.8	0.00	0.00	0.00
13,700.0	90.36	183.18	10,041.2	-3,877.8	-215.3	3,883.8	0.00	0.00	0.00
13,800.0	90.36	183.18	10,040.5	-3,977.7	-220.8	3,983.8	0.00	0.00	0.00
13,900.0	90.36	183.18	10,039.9	-4,077.5	-226.4	4,083.8	0.00	0.00	0.00
14,000.0	90.36	183.18	10,039.3	-4,177.4	-231.9	4,183.8	0.00	0.00	0.00
14,100.0	90.36	183.18	10,038.6	-4,277.2	-237.4	4,283.8	0.00	0.00	0.00
14,200.0	90.36	183.18	10,038.0	-4,377.0	-243.0	4,383.8	0.00	0.00	0.00
14,300.0	90.36	183.18	10,037.4	-4,476.9	-248.5	4,483.8	0.00	0.00	0.00
14,400.0	90.36	183.18	10,036.8	-4,576.7	-254.1	4,583.8	0.00	0.00	0.00

DDC

Well Planning Report



Database: EDM 5000.1 Single User.Db
 Company: Mewbourne Oil Co
 Project: Eddy County, New Mexico
 Site: Sec 14, T26S, R27E
 Well: Owl Draw 23 DM Fed Com #1H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Owl Draw 23 DM Fed Com #1H
 TVD Reference: WELL @ 3172.0usft (Patterson #75)
 MD Reference: WELL @ 3172.0usft (Patterson #75)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
14,500.0	90.36	183.18	10,036.1	-4,676.6	-259.6	4,683.8	0.00	0.00	0.00
14,600.0	90.36	183.18	10,035.5	-4,776.4	-265.2	4,783.8	0.00	0.00	0.00
14,700.0	90.36	183.18	10,034.9	-4,876.3	-270.7	4,883.8	0.00	0.00	0.00
14,800.0	90.36	183.18	10,034.2	-4,976.1	-276.2	4,983.8	0.00	0.00	0.00
14,900.0	90.36	183.18	10,033.6	-5,076.0	-281.8	5,083.8	0.00	0.00	0.00
15,000.0	90.36	183.18	10,033.0	-5,175.8	-287.3	5,183.8	0.00	0.00	0.00
15,100.0	90.36	183.18	10,032.3	-5,275.6	-292.9	5,283.8	0.00	0.00	0.00
TD @ 15153' MD / 10032' TVD									
15,152.8	90.36	183.18	10,032.0	-5,328.4	-295.8	5,336.6	0.00	0.00	0.00

Design Targets

Target Name

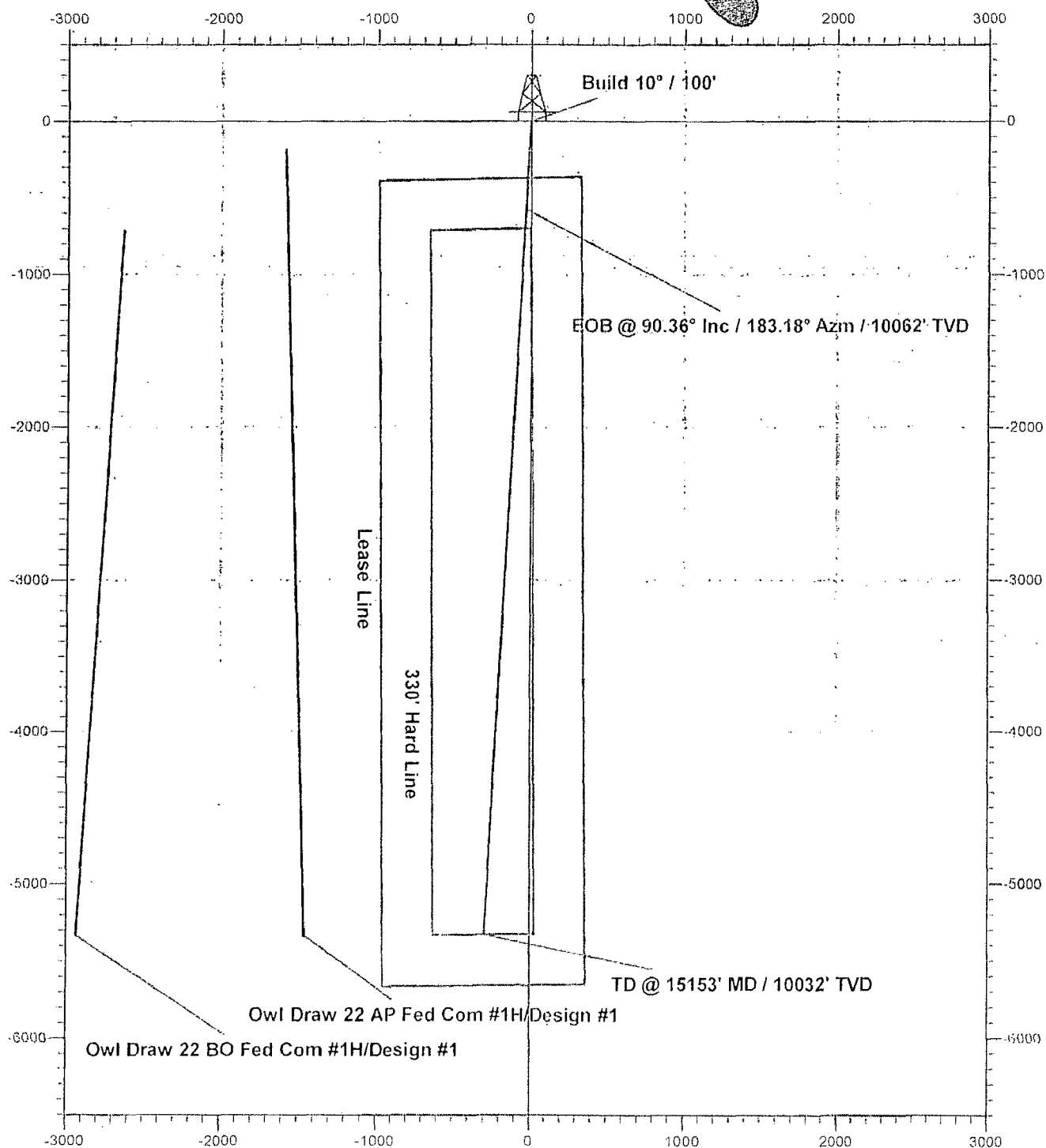
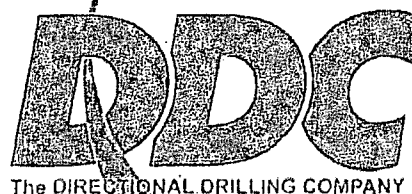
hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
PBHL Owl Draw 23 D	0.00	0.00	10,032.0	-5,328.4	-295.8	371,446.14	551,635.24	32° 1' 15.997 N	104° 10' 0.218 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,489.1	9,489.1	0.0	0.0	Build 10° / 100'
10,392.7	10,062.0	-575.7	-32.0	EOB @ 90.36° Inc / 183.18° Azm / 10062' TVD
15,152.8	10,032.0	-5,328.4	-295.8	TD @ 15153' MD / 10032' TVD

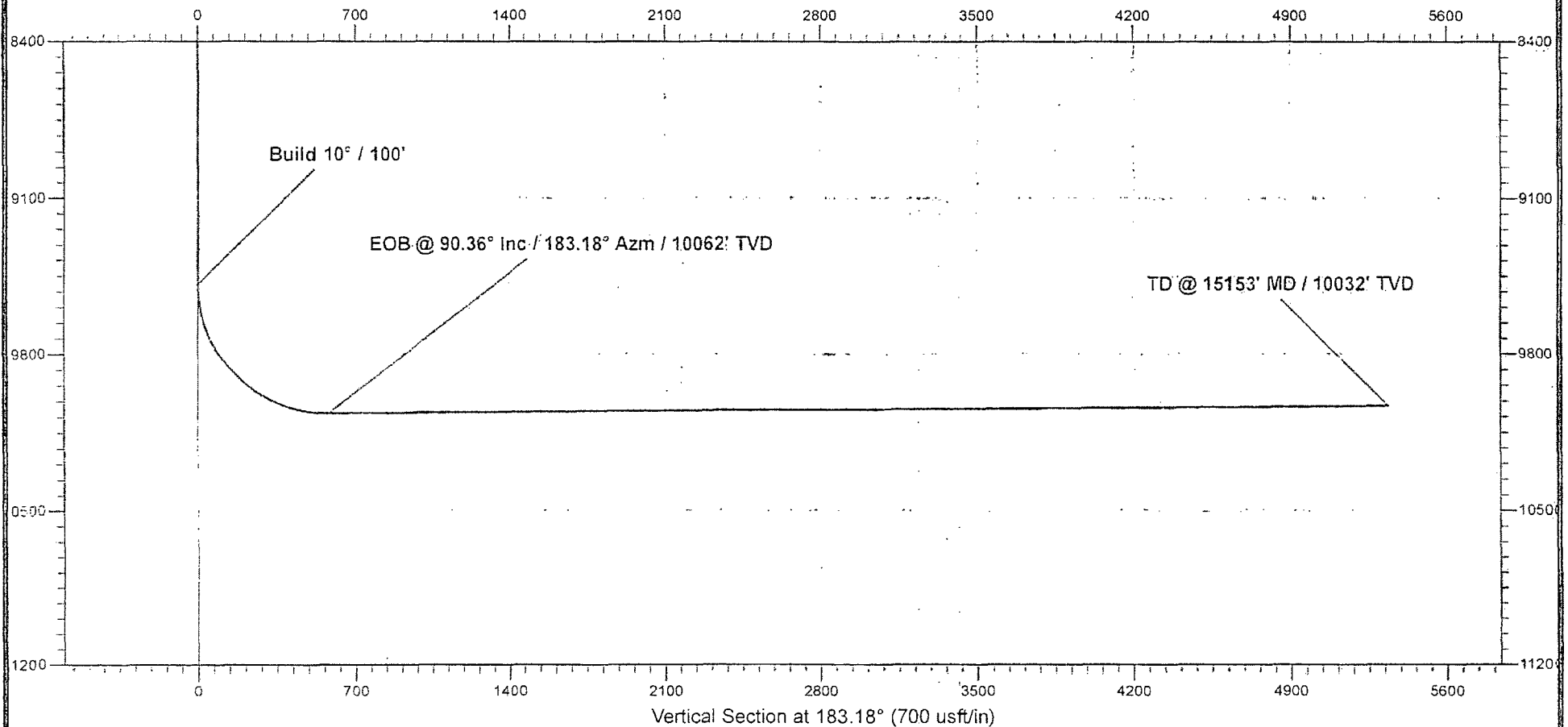
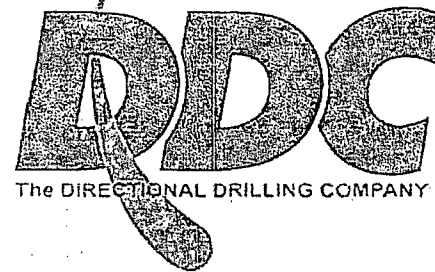
Mewbourne Oil Company

Eddy County, New Mexico
Owl Draw 23 DM Fed Com #1H
Quote 130197
Design #1



Mewbourne Oil Company

Eddy County, New Mexico
Owl Draw 23 DM Fed Com #1H
Quote 130197
Design #1



PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Mewbourne Oil Company
LEASE NO.:	NMNM-117116
WELL NAME & NO.:	Owl Draw 23 DM Fed Com 1H
SURFACE HOLE FOOTAGE:	0375' FSL & 0990' FWL
BOTTOM HOLE FOOTAGE:	0330' FSL & 0660' FWL Sec 23, T. 26 S., R 27 E.
LOCATION:	Section 14, T. 26 S., R 27 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS 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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**
2. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. 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 is located, this does not include the dog house or stairway area.

4. 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.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. 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.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

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

Medium Cave/Karst

Possibility of water flows in the Salado.

Possibility of lost circulation in the Delaware.

Abnormal Pressures may be encountered in the Wolfcamp Formation.

1. The **13-3/8** inch surface casing shall be set at approximately **400** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - 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 is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **2100** feet, is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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

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

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

☒ Cement not required – Packer/Port system to be used.

5. 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.

C. 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi. **5M 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. 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. 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 (18 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).
- c. 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.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. 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.**
- f. 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.
- g. 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.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. 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.

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