

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

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
☐ Oil Well ☐ Gas Well ☒ Other2. Name of Operator
BOPCO, L. P.3a. Address
P. O. Box 2760 Midland, TX 797023b. Phone No. (include area code)
432-683-22774. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SWSE, UL O 814' FSL & 1630' FEL, Sec 3, T25S-R30E, Lat: N32.154556, Long: W103.865008
2000' FSL, 2450' FWL, Sec 11, T25S-R30E, Lat: N32.143192, Lg: W103.851906

5. Lease Serial No.

SL: LC 061616A, BHL: LC 063873A

6. If Indian, Allottee or Tribe Name

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

Poker Lake Unit NMNM 71016X

8. Well Name and No.

PLU 376H

9. API Well No.

30-015-40435

10. Field and Pool, or Exploratory Area

Poker Lake SW (Delaware)

11. County or Parish, State

Eddy, New Mexico

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

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☒ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☐ Other

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 recompleat 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 recompleat 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.)

SWD 1370 APPROVED 12/2/12

BOPCO L.P. respectfully requests to convert the approved Poker Lake 376H APD from a horizontal oil well to a vertical SWD well. The surface location will not change and will remain at 814' FSL & 1630' FEL of Sec 3, T25S-R30E. The location footprint will change on the north side from 135' to 150' to allow room for a larger rig. Attached is exhibit D reflecting this change.

The well name will be changed from Poker Lake Unit 376H to PLU Pierce Canyon 3 Federal SWD 1. The proration units will be changed from 280 acres to 40 acres.

Attachments:

- 8pt drilling program with updated geology, casing program and cement program.
- Survey plats, reflecting name change.
- New facilities information for multisurface use plan.
- Rig foot print showing 150' on the north side of the location.

SEE ATTACHED FOR
CONDITIONS OF APPROVALSUBJECT TO LIKE
APPROVAL BY STATE

RECEIVED

NOV 19 2012

NMOCD ARTESIA

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Jenny Braden

Title Engineering Assistant

Signature

Jenny Braden

Date

10/9/12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ James Stovall

Title

FIELD MANAGER

Date

NOV 15 2012

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.

(Instructions on page 2)

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 16, 1910

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 96047	Pool Name Poker Lake SW (Delaware) <i>Devonian</i>
Property Code 306402	Property Name PLU PIERCE CANYON 3 FEDERAL SWD	Well Number 1
OGRID No. 260737	Operator Name BOPCO, L.P.	Elevation 3321'

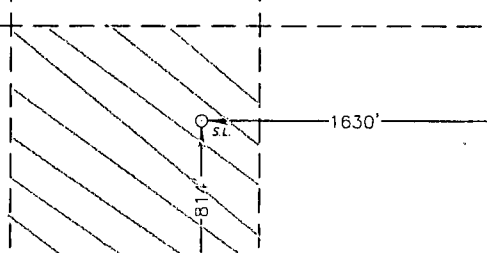
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	3	25 S	30 E		814	SOUTH	1630	EAST	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
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

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

<div><p>SURFACE LOCATION Lot - N 32°09'16.40" Long - W 103°51'54.03" NMSPE- N 420264.309 E 644935.227 (NAD-27)</p></div>	<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>Jeremy Braden</i> 10-2-12 Signature Date</p> <p>Jeremy Braden Printed Name jbraden@basspet.com Email Address</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>AUG 19 2013 Date Surveyed Signature & Seal of Professional Surveyor W.C. [Signature] Certificate No. Gary L. Jones 7977 BASIN SURVEYS 25011</p>
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20" OD Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 930' and cement circulated to surface.

13-3/8" OD salt protection casing will be set into the Lamar Lime at 4,115'. Cement will be circulated to surface.

9-5/8" OD protection\production casing will be set at approximately 300' into the Wolfcamp formation @ TVD of 11,289' and cemented in two stages with DV tool set at approximately 5,500'. Cement will be circulated to surface.

Drilling procedure, BOP diagram, and anticipated tops are attached.

This well is located outside the R111 Potash area and Secretary's Potash area.

The surface location is nonstandard and located inside the Poker Lake Unit.

Surface Lease Numbers- Federal Lease: NMCL 0061616A

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BOPCO, L.P., 201 Main Street, Ft. Worth, TX, 76102. Bond No. COB000050 (Nationwide).

EIGHT POINT DRILLING PROGRAM **BOPCO, L.P.**

NAME OF WELL: PLU Pierce Canyon 3 Federal SWD 1

LEGAL DESCRIPTION - SURFACE: 814' FSL, 1,630' FEL, Section 3, T25S, R30E, Eddy County, NM.

POINT 1: ESTIMATED FORMATION TOPS (See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3,346' (estimated)
GL 3,321'

Formation Description	Est from KB (TVD)	Est (MD)	SUB-SEA TOP	BEARING
T/Fresh Water	400'	400'	+ 2,791'	Fresh Water
T/Rustler	946'	946'	+ 2,400'	Barren
T/Salado	1,346'	1,346'	+ 2,000'	Barren
T/Lamar	3,948'	3,948'	- 602'	Oil/Gas
Delaware Sand	3,981'	3,981'	- 635'	Oil/Gas
Bone Spring	7,736'	7,736'	- 4,390'	Oil/Gas
Wolfcamp	10,989'	10,989'	- 7,643'	Oil/Gas
Middle Wolfcamp	12,339'	12,339'	- 8,993'	Oil/Gas
Strawn	13,369'	13,369'	- 10,023'	Oil/Gas
Atoka	13,434'	13,434'	- 10,088'	Oil/Gas
Morrow	14,196'	14,196'	- 10,850'	Oil/Gas
Middle Morrow	14,761'	14,761'	- 11,415'	Oil/Gas
Lower Morrow	15,245'	15,245'	- 11,899'	Oil/Gas
Mississippian Lime	16,031'	16,031'	- 12,685'	Oil/Gas
Woodford	16,331'	16,331'	- 12,985'	Oil/Gas
Devonian	16,471'	16,471'	- 13,125'	Disposal Zone
Ordovician Montoya	17,570'	17,570'	- 14,224'	Disposal Zone
TD	17,975'	17,975'	- 14,629'	Disposal Zone

POINT 3: CASING PROGRAM

TYPE	INTERVAL MD	HOLE SIZE	PURPOSE	INSTALLATION TYPE
30"	0' - 120'	36"		
20", 133 ppf, J-55, BTC	0' - 1,335'	26"	Surface	New
13-3/8", 68 ppf, HCN-80, BTC	0' - 4,000'	17-1/2"	Potash	New
9-5/8", 53.50 ppf, L-80, LTC	0' - 7,500'	12-1/4"	Production	New
9-5/8", 53.50 ppf, HCL-80, LTC	7,500' - 11,289'	12-1/4"	Production	New
7-5/8", 39 ppf, P-110 Ultra FJ	11,089' - 14,500'	8-1/2"	Prod. Liner	New
7-5/8", 42.80 ppf, P-110 Ultra FJ	14,500' - 16,500'	8-1/2"	Prod Liner.	New

9-5/8" Casing will be Special drift to 8.5".

CASING DESIGN SAFETY FACTORS:

TYPE	TENSION	COLLAPSE	BURST
20", 94 ppf, J-55, BTC	13.92	2.29	2.89
13-3/8", 68 ppf, HCN-80, BTC	6.78	1.29	2.25
9-5/8", 53.50 ppf, L-80, LTC	2.41	1.35	1.67
9-5/8", 53.50 ppf, HCL-80, LTC	7.18	1.50	1.66
7-5/8", 39 ppf, P-110 Ultra FJ	10.72	1.14	1.60
7-5/8", 42.80 ppf, P-110 Ultra FJ	15.10	1.29	1.77

9-5/8" Casing will be Special drift to 8.5".

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (20")

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).
Collapse	A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
Burst	A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

PROTECTIVE CASING - (13-3/8")

Tension	A 1.6 design factor utilizing the effects of buoyancy (10.2 ppg).
Collapse	A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered. In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.
Burst	A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

Production CASING - (9-5/8")

Tension	A 1.6 design factor utilizing the effects of buoyancy (9.5 ppg).
Collapse	A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
Burst	A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

Production Liner - (7-5/8")

Tension	A 1.6 design factor utilizing the effects of buoyancy (12.5 ppg).
Collapse	A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.
Burst	A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM 2)

The BOPE when rigged up on the 20" surface casing head (17-1/2" hole) will consist of 20" annular and diverter system per Diagram B (2,000 psi WP). The annular when installed on surface casing will be tested to 1,000 psi. There will be a 6", 5000 psi gate valve installed on the drilling spool for fill up. The choke manifold system will be rigged up to the hydraulic gate valve on the drilling spool.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 10M will be installed, used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed

After running the 9-5/8" intermediate casing, a 13-5/8" BOP/BOPE system with a minimum rating of 10M will be installed on the 9-5/8" intermediate casing spool (8-1/2" open hole), used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

After running the 7-5/8" liner, a 13-5/8" BOP/BOPE system with a minimum rating of 10M will be installed on the 9-5/8" intermediate casing spool (8-3/4" open hole), used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

H2S contingency

H2S monitors shall be installed prior to drilling out the surface shoe. If H2S is encountered in quantities greater than 10 PPM, the well will be shut in and H2S equipment will be installed, including a flare line that will be extended pursuant to onshore oil and gas order #6.

These tests will be performed:

- a) Upon installation
- b) After any component changes
- c) Thirty days after a previous test
- d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

BOPCO, L.P. would like to request a variance to use an armored, 3" or 3.5", 10,000 psi WP flex hose for the choke line in the drilling of the well if the rig is equip with hose. (See specification for hose that might be used, attached with APD exhibits). This is rig equipment and will help quicken nipple up time thus saving money without a safety problem. The hose itself is rated to 10,000 psi, and has 10,000 psi flanges on each end. This well is to be drilled to 17,975' MD (17,975' TVD) and max surface pressure should be +/- 4083 psi as prescribed in onshore order #2 shown as max BHP minus 0.22 psi/ft.

Please refer to diagram 2 for choke manifold and closed loop system layout. If an armored flex hose is utilized, the company man will have all of the proper certified paper work for that hose available on location. Please refer to diagram 2 for choke manifold and closed loop system layout.

POINT 5: MUD PROGRAM

<u>DEPTH</u>	<u>MUD TYPE</u>	<u>WEIGHT</u>	<u>FV</u>	<u>PV</u>	<u>YP</u>	<u>FL</u>	<u>Ph</u>
0 – 1,336'	FW Spud Mud	8.5 – 9.2	70-40	20	12	NC	10.0
1,336' – 4,000'	Brine Water	9.8 – 10.2	28-32	NC	NC	NC	10.0
4,000' – 9,000'	FW/Gel	8.7 – 9.0	28-32	NC	NC	NC	9.5 -10.5
9,000' – 11,500'	Cut Brine\Brine Mud	9.0 – 9.5	34-42	10	8	< 25	9.5 – 10.5
11,500' – 16,300'	XCD Brine Mud	11.0 – 13.0	45-48	20	10	< 5	9.5 – 10.5
16,300' – 17,975'	Fresh Water Mud	8.4 – 8.6	28-30	NC	NC	NC	9.5 – 10.5

NOTE: May increase vis for logging purposes only.

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING
None anticipated.

B) LOGGING

Run #1: GR, Neutron-Density, Resistivity, Dipole Sonic from top of Delaware to TD.
Cased hole GR-Neutron to surface.

Mud Logger: Rigged up at 100'

C) CONVENTIONAL CORING

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT ³ /SX
SURFACE:						
Lead: 0' – 836'	1510	836'	Cemex premium Plus C + bentonite + CaCl ₂	8.79	13.70	1.68
20" Tail: 836' – 1,336'	1180	500'	Cemex Premium Plus C + CaCl ₂	6.48	14.80	1.35
INTERMEDIATE:						
Lead: 0' – 3,500'	2400	3500'	Class C + 0.1% HR-601, 3% salt	9.88	12.90	1.83
13 3/8" Tail: 3,500' – 4,000'	585	500'	HalCem C	6.34	14.80	1.33
Production Stage 1:						
Lead: 5,500' – 8,000'	610	2500'	Econ Cem + 0.57 Lap-1 + 5#sk Kol-Seal + 8#sk CaCl ₂ + 0.77 HR-800 + 0.47 CFR-3	14.65	11.75	2.60
Tail: 8,000' – 11,289'	330	3289'	HalCem H + 0.67 Halad 9 + 0.27 HR-80D + 3#Sk Kol-Seal	4.86	15.85	1.17
9 5/8" DV Tool @ 5,500'						
Production Stage 2:						
Lead: 0' – 5,000'	720	5000'	Tuned Light + 1.25 #sk CFR-3 + 0.15 #sk WG-17 + 1 #sk CaCl ₂ + 20 #sk HGS 6000 + 3 #sk Kol-Seal + 1 #sk Cal-Seal 60	13.14	9.80	3.00
Tail: 5,000' – 5,500'	245	500'	HalCem C + 0.4% Halad 9	6.34	14.80	1.33
Production Liner						
7 5/8" Tail: 11,800' – 16,500'	450	4700'	VersaCem H + 0.5% Halad – 344 + 0.30% HR-601	5.05	14.40	1.24

Cement excesses will be as follows:

Surface – 100% excess with cement circulated to surface.

1st Intermediate – 50% excess above fluid caliper with cement circulated to surface.

Production- Production Liner – 50% above gauge hole or 35% above electric log caliper with cement circulated 500' up into the 9-5/8" 1st intermediate casing.

7 7/8" liner top 200' above 9 5/8" shoe
Cement volumes will be adjusted proportionately for depth changes of the multi stage tool.

E) H₂S SAFETY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located inside the H₂S area, H₂S equipment will be rigged up after setting surface casing. For the wells located inside the H₂S area the flare pit will be located 150' from the location. For wells located outside the H₂S area flare pit will be located 100' away from the location. **(See page 6 of Survey plat package and diagram 2)** There is not any H₂S anticipated in the area, although in the event that H₂S is encountered, the H₂S contingency plan attached will be implemented. **(Please refer to diagram 2 for choke manifold and closed loop system layout.) Please refer to H₂S location diagram for location of important H₂S safety items.**

F) CLOSED LOOP AND CHOKE MANIFOLD

Please see diagram 2.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. Lost circulation may exist, but not likely, in the Delaware Section from 3,981'- 7,900' TVD. Once in the Bone Spring, pore pressures will gradually increase to the top of the Wolfcamp. 9-5/8" casing will be set in the Wolfcamp and pore pressures will continue to increase through the Strawn and Atoka sections. A 7-5/8" production liner will be set into the Devonian with mud weights at 12.5 ppg or less. The Devonian BHP is 7200 psi and can be drilled with 8.5 ppg fresh water. Maximum surface pressures in the Devonian if productive could be 7944 psi with 7500 ppm H₂S and 5% CO₂.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

110 days drilling operations

10 days completion operations

POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

- A) No existing production facilities operated by BOPCO, L.P. are located within one mile of the PLU Pierce Canyon 3 Federal SWD 1.

- B) New Facilities in the Event of Production:

New facilities will be built at the PLU Pierce Canyon 3 Federal SWD 1 location. It will be furnished with permanent produced water storage tanks and H-Pumps for injection. A short 10" SWD line will be laid, buried, and tied into an existing 10" SWD transfer line that runs by the proposed location; however a tap must be installed. This location will be on permanent power

- C) Rehabilitation of Disturbed Areas Unnecessary for Production:

Following the construction, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas unnecessary for use will be graded to blend in with the surrounding topography (see Point 10)

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

- A) Location and Type of Water Supply

Fresh water will be hauled from Johnson Station 50 miles east of Carlsbad, New Mexico or other commercial facilities. Brine water will be hauled from commercial facilities.

- B) Water Transportation System

Water hauling to the location will be over the existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

- A) Materials

On-site caliche will be used. If this is not sufficient, caliche will be hauled from a BLM approved pit.

- B) Land Ownership

Federally Owned

- C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site

- D) Access Roads

See the Well Pad Layout and Aerial Map of the survey plat (Sheet 1 and 4 of plat package)



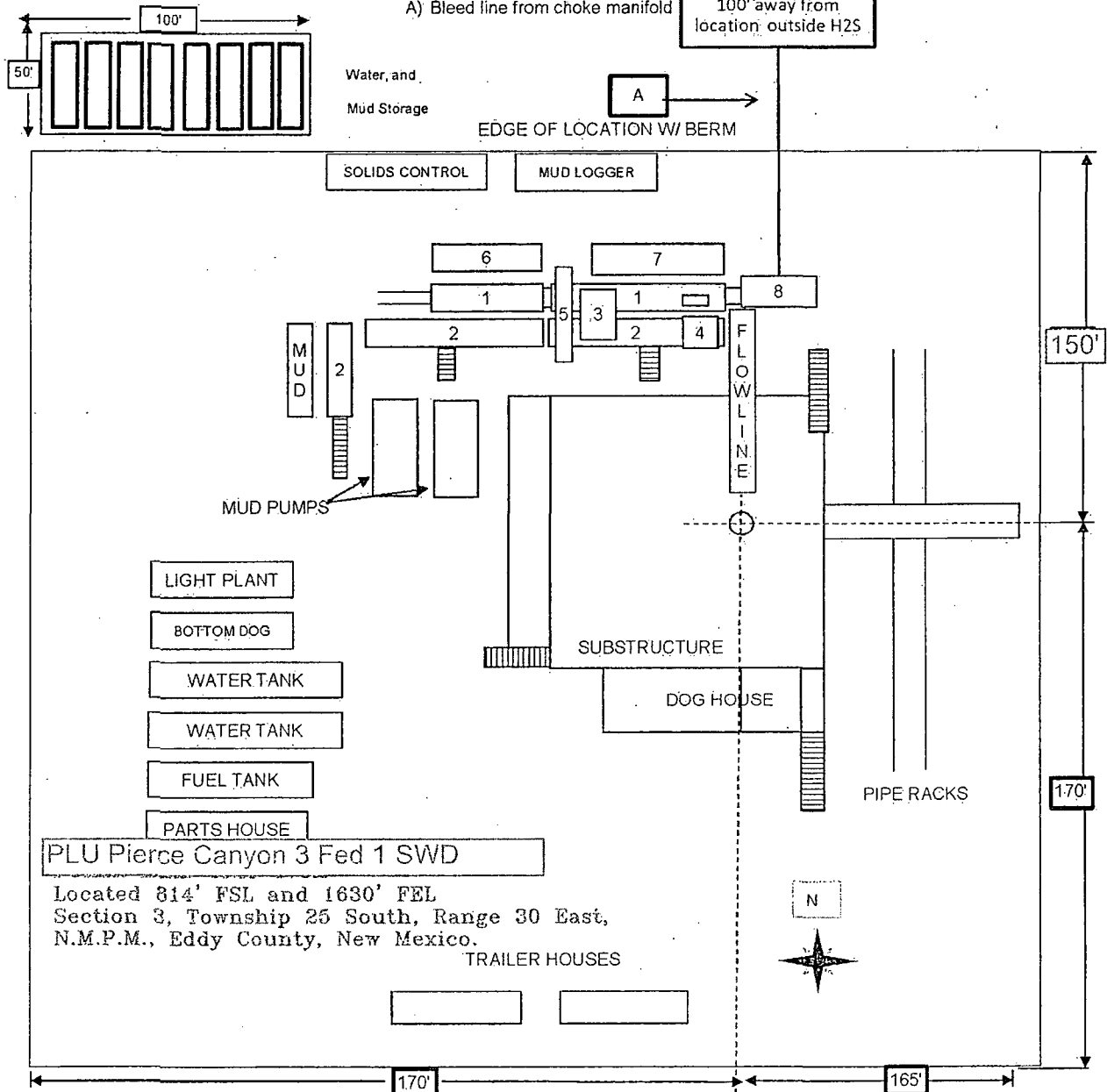
RIG LAYOUT

Exhibit "D"

RIG LAYOUT SCHEMATIC INCLUSIVE OF CLOSED-LOOP DESIGN PLAN

Solids Control Equipment Legend

- | | |
|-----------------------------------|--------------------|
| 1) Roll Off Bin | 5) Centrifuge |
| 2) Steel Tank | 6) Dewatering Unit |
| 3) Mud Cleaner | 7) Catch Tank |
| 4) Shaker | 8) Choke Manifold |
| A) Bleed line from choke manifold | |



P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 25011

Survey Date: 08-18-2011

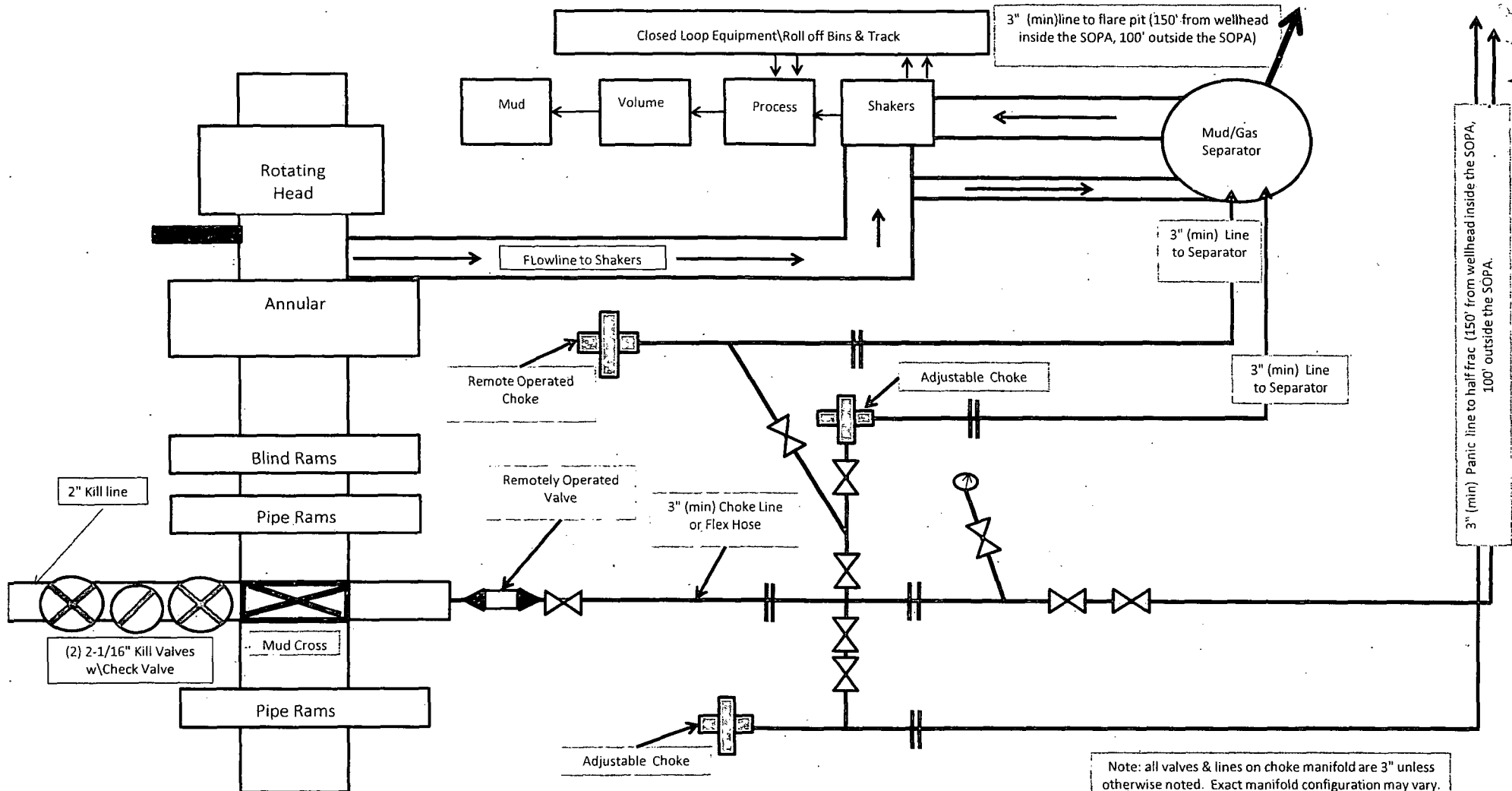
Scale: 1" = 2000'

Date: 08-22-2011

BOPCO, L.P.

Sheet 6 of 6 Sheets

focused on excellence
in the oilfield



10M Choke Manifold And Closed Loop System
Diagram 2



Midwest Hose
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer: LATSHAW

PO#: RIG# 7

HOSE SPECIFICATIONS

Type: C & K

Length: 40'

I.D. 3 1/2 INCHES

O.D. 5 16/64 - 5 18/64 INCHES

WORKING PRESSURE

10,000 PSI

TEST PRESSURE

15,000 PSI

BURST PRESSURE

PSI

COUPLINGS

Type of Fitting

4 1/16 10K

Type of Coupling

SWAGED

Die Size

5.75

Crimp Specification

5 50/64 - 5 48/64

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE

15 MINUTES

ACTUAL BURST PRESSURE

0 PSI

VERIFICATION

SO#

110479

ASSET#

SERIAL#

7496

COMMENTS:

DATE

12/10/2011

TESTED BY

BOBBY FINK

APPROVED BY

MENDI SMILEY



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Report

June 3, 2011

Customer: Latshaw

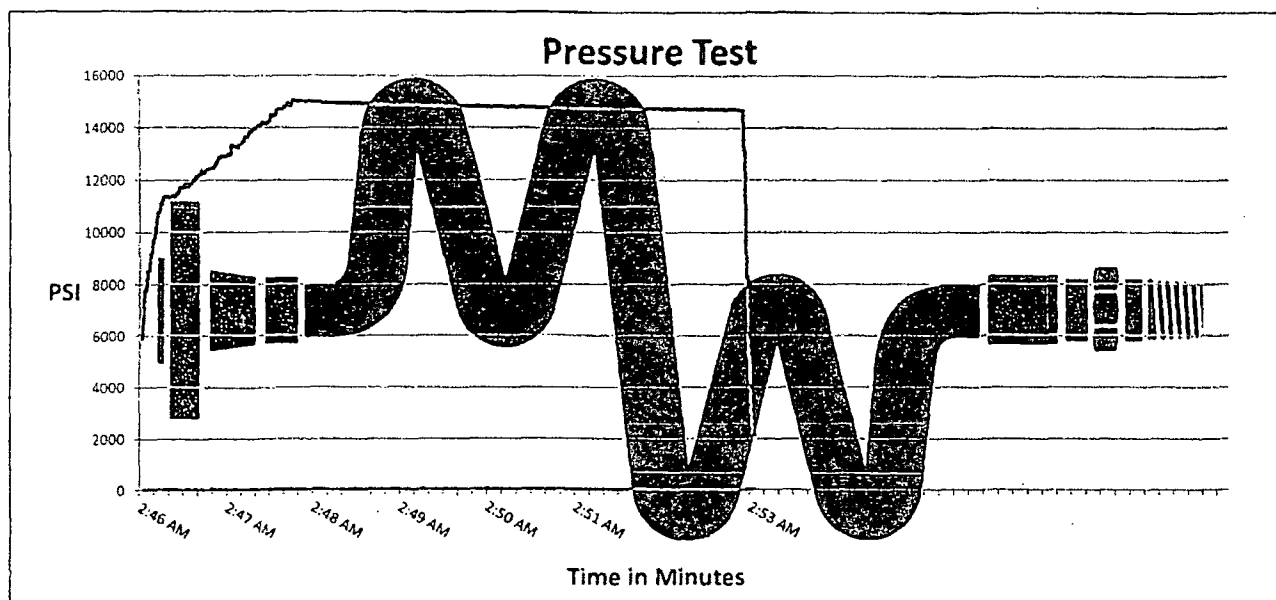
Purchase Order: RIG# 7

Hose Specifications

<u>Hose Type</u>	<u>Length</u>
E	40
<u>I.D.</u>	<u>O.D.</u>
4"	5 1/4"
<u>Working Pressure</u>	<u>Burst Pressure</u>
10000 PSI	Standard Safety Multiplier Applies

Verification

<u>Type of Fitting</u>	<u>Coupling Method</u>
4 1/16 10K	Swage
<u>Die Size</u>	<u>Final O.D.</u>
5.75	5.49/64
<u>Serial #</u>	<u>Sales Order</u>
7496	110479



Test Pressure
15000 PSI

Time Held at Test Pressure
2/4 Minutes

Actual Burst Pressure

Peak Pressure
15131 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Donnie Mclemore

Approved By: Kim Thomas

x

x

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO
LEASE NO.:	NMLC061616A
WELL NAME & NO.:	PLU Piecre Canyon 3 Federal SWD 1
SURFACE HOLE FOOTAGE:	814' FSL & 1630' FEL
LOCATION:	Section 3, T.25 S., R.30 E., NMPM
COUNTY:	Eddy County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

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

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, provide measured values 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 are 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.**

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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. 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

Possible lost circulation in the Delaware.

Possible water flows in the Castile, Salado and Delaware.

- 1. The 20 inch surface casing shall be set at approximately 933 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If the salt is encountered set the casing 25 feet above the top of 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 **13-3/8** inch intermediate casing is:
(Casing must be set in the base of the Castile or the Lamar)
 - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.
- 3. The minimum required fill of cement behind the **9-5/8** inch production casing is:
 - a. First stage to DV tool, cement shall:
 - ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.
 - b. Second stage above DV tool, cement shall:
 - ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.
- 4. The minimum required fill of cement behind the **7-5/8** inch production liner is:
 - ☒ Cement to top of liner. If cement does not circulate, contact the appropriate BLM office.
- 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. Variance approved to use flex line from BOP to choke manifold. 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.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. 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.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** intermediate casing shoe shall be **10,000 (10M) psi. 10M 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.**
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. 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 results of the test shall be reported to the appropriate BLM office.
- d. 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.**
- e. 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.
- f. 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. 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.

E. DRILL STEM TEST

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

F. 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.

CRW 111512