Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia
RECEIVED
JAN 02 2013
NMOCD ARTESIA

FORM APPROVED
OM B 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.

5. Lease Serial No.
NMNM05039A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM071016X

1. Type of Well
☐ Oil Well ☐ ☐ Gas Well ☐ ☐ Other

8. Well Name and No.
PLU Ross Ranch 28-25-30 USA #1H

2. Name of Operator **BOPCO, L. P.**

9. API Well No.
30-015-40765

3a. Address
P. O. Box 2760 Midland, TX 79702

3b. Phone No. *(include area code)*
432-683-2277

10. Field and Pool, or Exploratory Area
Corral Canyon Bone Spring, South

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*

SHL: 150' FSL, 660' FWL, Sec. 28, T25S, R30E, Lat: N32.094024, Long: W103.892145
BHL: 100' FNL, 660' FWL, Sec. 28, T25S, R30E, Lat: N32.107825, Long: W103.892183

11. County or Parish, State
Eddy

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

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

BOPCO, L.P. respectfully requests the following changes for the above captioned well:

Deepen the 13-3/8", 48#, H-40, STC surface casing to a depth of 1,246'. Based on offsets and interpretation, our geology department believes top of salt to be at 1,266'. This will place us past any potential unconsolidated formations below the rustler and reduce the risk of lost returns drilling with brine water in the 11" intermediate section. Cement will be circulated to surface as per COA.

Deepen the 8-5/8", 32#, J-55, LTC intermediate casing to a depth of 3,437'. Based on offsets and interpretation, our geology department believes top of the lamar to be at 3,422'. This will place us 15' inside of the Lamar formation providing a competent casing shoe for the remainder of the well. Cement will be circulated to surface as per COA.

Deepen the 5-1/2", 17#, HCP-110, BTC casing to 13,675' while retaining the currently approved SHL & PBHL. This is based on the updated directional plan provided by Phoenix Technologies. Please see attached updated directional plan. We would also like to run 5-1/2", 17#, HCP-110, LTC to 8,383' (KOP) then crossing over to 5-1/2", 17#, HCP-110, BTC through the curve and lateral to the proposed depth of 13,675'. Updated casing S.F. for the 5-1/2", 17#, HCP-110, LTC are below:
Collapse - 1.68, Burst - 2.28, Tension - 3.46

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Christopher Giese Title **Drilling Engineer**

Signature [signature] Date 12/20/12

Accepted for record
NMOCD 1/3/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

APPROVED
DEC 28 2012
/s/ Chris Walls
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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)

PHOENIX
TECHNOLOGY SERVICES

Bopco L P

Eddy County NM (NAD 27)
PLU Ross Ranch 28 25 30 1H
Job # 1211257
Rig: Latshaw 14

Plan: Plan 1 12-18-2012

Bopco LP Planning Report

18 December, 2012

Company:	Bopco L P	Local Co-ordinate Reference:	Well Job # 1211257
Project:	Eddy County NM (NAD 27)	TVD Reference:	WELL @ 3213.00usft (Original Well Elev)
Site:	PLU Ross Ranch 28 25 30 1H	MD Reference:	WELL @ 3213.00usft (Original Well Elev)
Well:	Job # 1211257	North Reference:	Grid
Wellbore:	Rig: Latshaw 14	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1 12-18-2012	Database:	Compass5000

Project Eddy County NM (NAD 27)

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 PLU Ross Ranch 28 25 30 1H

Site Position:		Northing:	398,209.00 usft	Latitude:	32° 5' 38.4871 N
From:	Map	Easting:	636,627.00 usft	Longitude:	103° 53' 31.7206 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.23 °

Well Job # 1211257

Well Position	+N/-S	0.00 usft	Northing:	398,209.00 usft	Latitude:	32° 5' 38.4871 N
	+E/-W	0.00 usft	Easting:	636,627.00 usft	Longitude:	103° 53' 31.7206 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	17.00 usft	Ground Level:	3,196.00 usft

Wellbore Rig: Latshaw 14

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	12/18/12	7.54	59.97	48,353

Design Plan 1 12-18-2012

Audit Notes:

Version:		Phase:	PLAN	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.59

Survey Tool Program Date 12/18/12

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	13,675.18	Plan 1 12-18-2012 (Rig: Latshaw 14)		

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Well:	Job # 1211257	North Reference:	Grid
Wellbore:	Rig: Latshaw 14	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1 12-18-2012	Database:	Compass5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	3,213.00	0.00	0.00	0.00	0.00	0.00	398,209.00	636,627.00
8,382.50	0.00	0.00	-5,169.50	8,382.50	0.00	0.00	0.00	0.00	398,209.00	636,627.00
KOP Build @ 12°/100'										
8,460.00	9.30	359.59	-5,246.66	8,459.66	6.28	-0.04	6.28	12.00	398,215.28	636,626.96
8,550.00	20.10	359.59	-5,333.59	8,546.59	29.08	-0.21	29.08	12.00	398,238.08	636,626.79
8,640.00	30.90	359.59	-5,414.70	8,627.70	67.76	-0.48	67.76	12.00	398,276.76	636,626.52
8,730.00	41.70	359.59	-5,487.13	8,700.13	120.96	-0.87	120.96	12.00	398,329.96	636,626.13
8,820.00	52.50	359.59	-5,548.31	8,761.31	186.79	-1.34	186.79	12.00	398,395.79	636,625.66
8,910.00	63.30	359.59	-5,596.07	8,809.07	262.91	-1.88	262.92	12.00	398,471.91	636,625.12
9,000.00	74.09	359.59	-5,628.72	8,841.72	346.63	-2.48	346.64	12.00	398,555.63	636,624.52
9,090.00	84.89	359.59	-5,645.10	8,858.10	434.99	-3.11	435.00	12.00	398,643.99	636,623.89
9,132.56	90.00	359.59	-5,647.00	8,860.00	477.49	-3.42	477.50	12.00	398,686.49	636,623.58
LP @ 8860' TVD										
9,180.00	90.00	359.59	-5,647.00	8,860.00	524.93	-3.76	524.94	0.00	398,733.93	636,623.24
9,270.00	90.00	359.59	-5,647.00	8,860.00	614.93	-4.40	614.94	0.00	398,823.93	636,622.60
9,360.00	90.00	359.59	-5,647.00	8,860.00	704.93	-5.04	704.94	0.00	398,913.93	636,621.96
9,450.00	90.00	359.59	-5,647.00	8,860.00	794.92	-5.69	794.94	0.00	399,003.92	636,621.31
9,540.00	90.00	359.59	-5,647.00	8,860.00	884.92	-6.33	884.94	0.00	399,093.92	636,620.67
9,630.00	90.00	359.59	-5,647.00	8,860.00	974.92	-6.98	974.94	0.00	399,183.92	636,620.02
9,720.00	90.00	359.59	-5,647.00	8,860.00	1,064.92	-7.62	1,064.94	0.00	399,273.92	636,619.38
9,810.00	90.00	359.59	-5,647.00	8,860.00	1,154.92	-8.27	1,154.94	0.00	399,363.92	636,618.73
9,900.00	90.00	359.59	-5,647.00	8,860.00	1,244.91	-8.91	1,244.94	0.00	399,453.91	636,618.09
9,990.00	90.00	359.59	-5,647.00	8,860.00	1,334.91	-9.56	1,334.94	0.00	399,543.91	636,617.44
10,080.00	90.00	359.59	-5,647.00	8,860.00	1,424.91	-10.20	1,424.94	0.00	399,633.91	636,616.80
10,170.00	90.00	359.59	-5,647.00	8,860.00	1,514.91	-10.84	1,514.94	0.00	399,723.91	636,616.16
10,260.00	90.00	359.59	-5,647.00	8,860.00	1,604.90	-11.49	1,604.94	0.00	399,813.90	636,615.51
10,350.00	90.00	359.59	-5,647.00	8,860.00	1,694.90	-12.13	1,694.94	0.00	399,903.90	636,614.87

Company:	Bopco L P	Local Co-ordinate Reference:	Well Job # 1211257
Project:	Eddy County NM (NAD 27)	TVD Reference:	WELL @ 3213.00usft (Original Well Elev)
Site:	PLU Ross Ranch 28 25 30 1H	MD Reference:	WELL @ 3213.00usft (Original Well Elev)
Well:	Job # 1211257	North Reference:	Grid
Wellbore:	Rig: Latshaw 14	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1 12-18-2012	Database:	Compass5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
10,440.00	90.00	359.59	-5,647.00	8,860.00	1,784.90	-12.78	1,784.94	0.00	399,993.90	636,614.22
10,530.00	90.00	359.59	-5,647.00	8,860.00	1,874.90	-13.42	1,874.94	0.00	400,083.90	636,613.58
10,620.00	90.00	359.59	-5,647.00	8,860.00	1,964.89	-14.07	1,964.94	0.00	400,173.89	636,612.93
10,710.00	90.00	359.59	-5,647.00	8,860.00	2,054.89	-14.71	2,054.94	0.00	400,263.89	636,612.29
10,800.00	90.00	359.59	-5,647.00	8,860.00	2,144.89	-15.36	2,144.94	0.00	400,353.89	636,611.64
10,890.00	90.00	359.59	-5,647.00	8,860.00	2,234.89	-16.00	2,234.94	0.00	400,443.89	636,611.00
10,980.00	90.00	359.59	-5,647.00	8,860.00	2,324.89	-16.65	2,324.94	0.00	400,533.89	636,610.35
11,070.00	90.00	359.59	-5,647.00	8,860.00	2,414.88	-17.29	2,414.94	0.00	400,623.88	636,609.71
11,160.00	90.00	359.59	-5,647.00	8,860.00	2,504.88	-17.94	2,504.94	0.00	400,713.88	636,609.06
11,250.00	90.00	359.59	-5,647.00	8,860.00	2,594.88	-18.59	2,594.94	0.00	400,803.88	636,608.41
11,340.00	90.00	359.59	-5,647.00	8,860.00	2,684.88	-19.23	2,684.94	0.00	400,893.88	636,607.77
11,430.00	90.00	359.59	-5,647.00	8,860.00	2,774.87	-19.88	2,774.94	0.00	400,983.87	636,607.12
11,520.00	90.00	359.59	-5,647.00	8,860.00	2,864.87	-20.52	2,864.94	0.00	401,073.87	636,606.48
11,610.00	90.00	359.59	-5,647.00	8,860.00	2,954.87	-21.17	2,954.94	0.00	401,163.87	636,605.83
11,700.00	90.00	359.59	-5,647.00	8,860.00	3,044.87	-21.81	3,044.94	0.00	401,253.87	636,605.19
11,790.00	90.00	359.59	-5,647.00	8,860.00	3,134.86	-22.46	3,134.94	0.00	401,343.86	636,604.54
11,880.00	90.00	359.59	-5,647.00	8,860.00	3,224.86	-23.11	3,224.94	0.00	401,433.86	636,603.89
11,970.00	90.00	359.59	-5,647.00	8,860.00	3,314.86	-23.75	3,314.94	0.00	401,523.86	636,603.25
12,060.00	90.00	359.59	-5,647.00	8,860.00	3,404.86	-24.40	3,404.94	0.00	401,613.86	636,602.60
12,150.00	90.00	359.59	-5,647.00	8,860.00	3,494.86	-25.04	3,494.94	0.00	401,703.86	636,601.96
12,240.00	90.00	359.59	-5,647.00	8,860.00	3,584.85	-25.69	3,584.94	0.00	401,793.85	636,601.31
12,330.00	90.00	359.59	-5,647.00	8,860.00	3,674.85	-26.34	3,674.94	0.00	401,883.85	636,600.66
12,420.00	90.00	359.59	-5,647.00	8,860.00	3,764.85	-26.98	3,764.94	0.00	401,973.85	636,600.02
12,510.00	90.00	359.59	-5,647.00	8,860.00	3,854.85	-27.63	3,854.94	0.00	402,063.85	636,599.37
12,600.00	90.00	359.59	-5,647.00	8,860.00	3,944.84	-28.27	3,944.94	0.00	402,153.84	636,598.73
12,690.00	90.00	359.59	-5,647.00	8,860.00	4,034.84	-28.92	4,034.94	0.00	402,243.84	636,598.08
12,780.00	90.00	359.59	-5,647.00	8,860.00	4,124.84	-29.57	4,124.94	0.00	402,333.84	636,597.43

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Wellbore:	Rig: Latshaw 14	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1 12-18-2012	Database:	Compass5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
12,870.00	90.00	359.59	-5,647.00	8,860.00	4,214.84	-30.21	4,214.94	0.00	402,423.84	636,596.79
12,960.00	90.00	359.59	-5,647.00	8,860.00	4,304.83	-30.86	4,304.94	0.00	402,513.83	636,596.14
13,050.00	90.00	359.59	-5,647.00	8,860.00	4,394.83	-31.51	4,394.94	0.00	402,603.83	636,595.49
13,140.00	90.00	359.59	-5,647.00	8,860.00	4,484.83	-32.15	4,484.94	0.00	402,693.83	636,594.85
13,230.00	90.00	359.59	-5,647.00	8,860.00	4,574.83	-32.80	4,574.94	0.00	402,783.83	636,594.20
13,320.00	90.00	359.59	-5,647.00	8,860.00	4,664.82	-33.45	4,664.94	0.00	402,873.82	636,593.55
13,410.00	90.00	359.59	-5,647.00	8,860.00	4,754.82	-34.09	4,754.94	0.00	402,963.82	636,592.91
13,500.00	90.00	359.59	-5,647.00	8,860.00	4,844.82	-34.74	4,844.94	0.00	403,053.82	636,592.26
13,590.00	90.00	359.59	-5,647.00	8,860.00	4,934.82	-35.39	4,934.94	0.00	403,143.82	636,591.61
13,675.00	90.00	359.59	-5,647.00	8,860.00	5,019.82	-36.00	5,019.94	0.00	403,228.82	636,591.00
TD @ 13675.18' MD										
13,675.18	90.00	359.59	-5,647.00	8,860.00	5,020.00	-36.00	5,020.13	0.02	403,229.00	636,591.00

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,757.00	7,757.00	Upper Avalon Shale		0.00	359.59
5,628.00	5,628.00	Brushy Canyon		0.00	359.59
8,117.00	8,117.00	Lower Avalon Shale		0.00	359.59
7,551.00	7,551.00	Bone Spring		0.00	359.59
9,079.00	8,857.00	Target Shale		0.00	359.59
8,655.66	8,641.00	Top of First Bone Spring		0.00	359.59

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Well:	Job # 1211257	North Reference:	Grid
Wellbore:	Rig: Latshaw 14	Survey Calculation Method:	Minimum Curvature
Design:	Plan 1 12-18-2012	Database:	Compass5000

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
8,382.50	8,382.50	0.00	0.00	KOP Build @ 12°/100'
9,132.56	8,860.00	477.49	-3.42	LP @ 8860' TVD
13,675.00	8,860.00	5,019.82	-36.00	TD @ 13675.18' MD

Checked By: _____ Approved By: _____ Date: _____

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, LP
LEASE NO.:	NM050339A
WELL NAME & NO.:	1H-PLU ROSS RANCH 28 25 30 USA
SURFACE HOLE FOOTAGE:	150'/S. & 660'/W.
BOTTOM HOLE FOOTAGE	100'/N. & 660'/W.
LOCATION:	Section 28, 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. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, please 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 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.

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 water flows in the Castile, Salado, Delaware and Bone Springs Groups
Possible lost circulation in the Delaware and Bone Spring formations

1. The **13-3/8** inch surface casing shall be set at **approximately 1246 feet (below the Magenta Dolomite member of 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 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 **8-5/8** inch intermediate casing 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.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

a. First stage to DV tool:

☒ 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 should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification.

4. 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 **3000 (3M)** 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. 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.

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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