Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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 page 2

5. Lease Serial No.
NMLC063875

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM71016X

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

8. Well Name and No.
POKER LAKE UNIT 474Y 306402

2. Name of Operator
BOPCO, L.P. 260737
Contact: KELLY KARDOS
E-Mail: KELLY_KARDOS@XTOENERGY.COM

9. API Well No.
30-015-44938

3a. Address
6401 HOLIDAY HILL RD, BLDG 5
MIDLAND, TX 79707

3b. Phone No. (include area code)
Ph: 432-620-4374

10. Field and Pool or Exploratory Area
PURPLE SAGE-WOLFCAMP(GAS)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 27 T25S R30E Mer NMP NESE 1980FSL 980FEL

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE 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	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must 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 requests permission to skid the rig 30' North to re-drill the wellbore lost on the 474H and to change the well number to 474Y. A form 3160-3, drilling plan, directional drill plan and plat for the PLU 474Y is attached.....

Old SHL: 1980' FSL & 980' FEL, NESE Sec. 27 T25S, R30E
New SHL: 2010' FSL & 980' FEL, NESE Sec. 27, T25S, R30E

5/1/2018: Engineering review completed by M Hague

SEE ATTACHED FOR CONDITIONS OF APPROVAL

NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 01 2018

RECEIVED

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #412660 verified by the BLM Well Information System
For BOPCO, L.P., sent to the Carlsbad
Committed to AFMSS for processing by MUSTAFA HAQUE on 04/27/2018 ()

Name *(Printed/Typed)* KELLY KARDOS — Title REGULATORY COORDINATOR

Signature (Electronic Submission) — Date 04/27/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Cody Hughes — Title PET-LPN — Date 05/01/2018

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 CFO

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)

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

RWP 5-1-18

Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
SH: NMLC063875 / BH: NMLC069513

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

7. If Unit or CA Agreement, Name and No.
NMNM71016X

8. Lease Name and Well No.
POKER LAKE UNIT 474Y 306402

2. Name of Operator
BOPCO, L.P. 260737

9. API Well No.
30-015-44938

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
6401 HOLIDAY HILL RD, MIDLAND TX 79707	432-620-4374	PURPLE SAGE WOLFCAMP

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

At surface 2010' FSL & 980' FEL

At proposed prod. zone 1380' FSL & 990' FEL, NESE SEC. 27, T25S, R30E

11. Sec., T. R. M. or Blk. and Survey or Area
I-27-25S-30E

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
15 miles SE of Malaga, NM	EDDY	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 980'	16. No of acres in lease	17. Spacing Unit dedicated to this well
	320	960
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1360'	19. Proposed Depth	20. BLM/BIA Bond No. in file
		COB000050
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3290'	4/28/18	90 DAYS

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date
Kelly Kardos	KELLY KARDOS	4/27/18

Title
REGULATORY COORDINATOR

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Cody R Layton	Cody R Layton	05/01/2018
Title REGULATORY COORDINATOR	Office CFO	

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

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

NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 01 2018
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(Continued on page 2)

*(Instructions on page 2)

RP 5-1-18

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

XTO Energy Inc.
Poker Lake Unit 474Y
Projected TD: 26174' MD / 11442' TVD
SHL: 1950' FSL & 980' FEL , Section 27, T25S, R30E
BHL: 2440' FNL & 990' FEL , Section 10, T26S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	865'	Water
Top of Salt	1310'	Water
Base of Salt	3719'	Water
Delaware	3895'	Water
Bone Spring	7747'	Water/Oil/Gas
1st Bone Spring Ss	8682'	Water/Oil/Gas
2nd Bone Spring Ss	9426'	Water/Oil/Gas
3rd Bone Spring Ss	10653'	Water/Oil/Gas
Wolfcamp	11032'	Water/Oil/Gas
Target/Land Curve	11442'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon
*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 18-5/8 inch casing @ ~~1050'~~ 1195' (260' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8 inch casing at ~~3850'~~ 3910' and circulating cement to surface. The Delaware - 3rd Bone Spring will be isolated by setting 9-5/8 inch casing at 10500'. An 8-3/4 inch curve and lateral hole will be drilled to MD/TD and 5-1/2 inch casing will be set at TD and cemented back up to the 9-5/8 inch casing shoe.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – ~~1050'~~ 1195'	18-5/8"	87.5	STC	H-40	New	1.36	1.31	6.08
17-1/2"	0' – ~~3850'~~ 3910'	13-3/8"	68	STC	J-55	New	1.41	1.61	2.58
12-1/4"	0' – 10500'	9-5/8"	40	LTC	HCL-80	New	1.43	1.70	1.99
8-3/4"	0' – 26174'	5-1/2"	17	BTC	P-110	New	1.12	1.14	1.90

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 13-3/8" & 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

Temporary Wellhead

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom
B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Wellhead manufacturer representative will not be present for BOP test plug installation

- Operator will test the 9-5/8" casing per BLM Onshor Order 2

4. Cement Program

Surface Casing: 18-5/8", 87.5 New H-40, STC casing to be set at +/- ~~1950'~~ 1140'

Lead: 2630 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 sxs Halcem-C(mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Tail Compressives: 12-hr = 900 psi 24 hr = 1500 psi

1st Intermediate Casing: 13-3/8", 68 New J-55, STC casing to be set at +/- ~~3950'~~ 3910'

Lead: 2630 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 sxs Halcem-C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 9-5/8", 40 New HCL-80, LTC casing to be set at +/- 10500'
ECP/DV Tool to be set at 3950'
1st Stage

Lead: 0 sxs Halcem-C (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 3080 sxs Halcem-C(mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Stage

Lead: 1140 sxs Halcem-C (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Tail Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Production Casing: 5-1/2", 17 New P-110, BTC casing to be set at +/- 26174'

Lead: 20 sxs NeoCem (mixed at 10.5 ppg, 2.69 ft3/sx, 12.26 gal/sx water)

Tail: 2980 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft3/sx, 8.38 gal/sx water)
Tail Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

5. Pressure Control Equipment

The blow out preventer equipment (BOP) on surface casing/temp. wellhead will consist of a 21-1/4" minimum 2M Hydril. MASP should not exceed 1195 psi.

Once the permanent WH is installed on the 13-3/8 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 4028 psi.

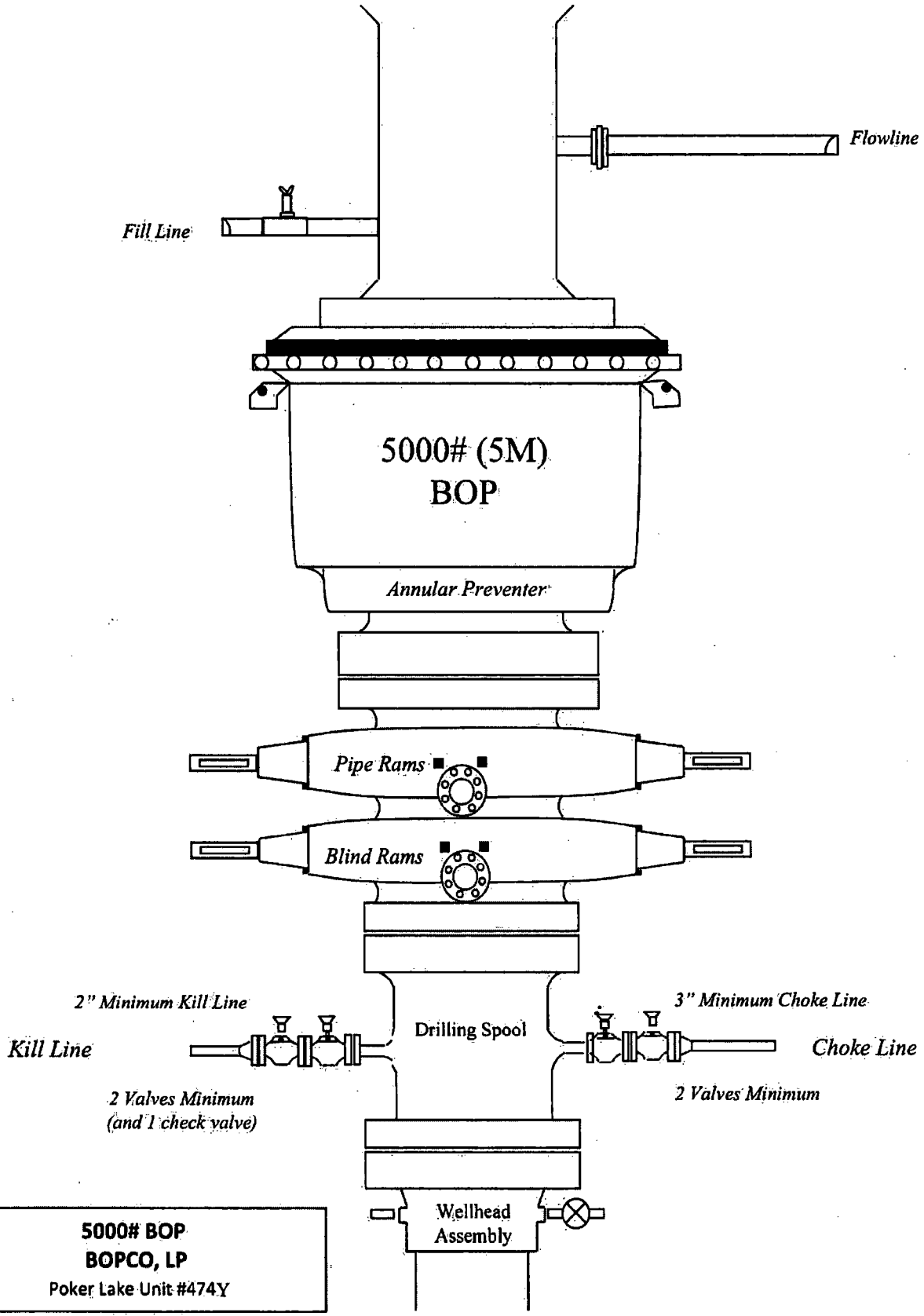
All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 13-5/8" 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nippling up on the 9-5/8", the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

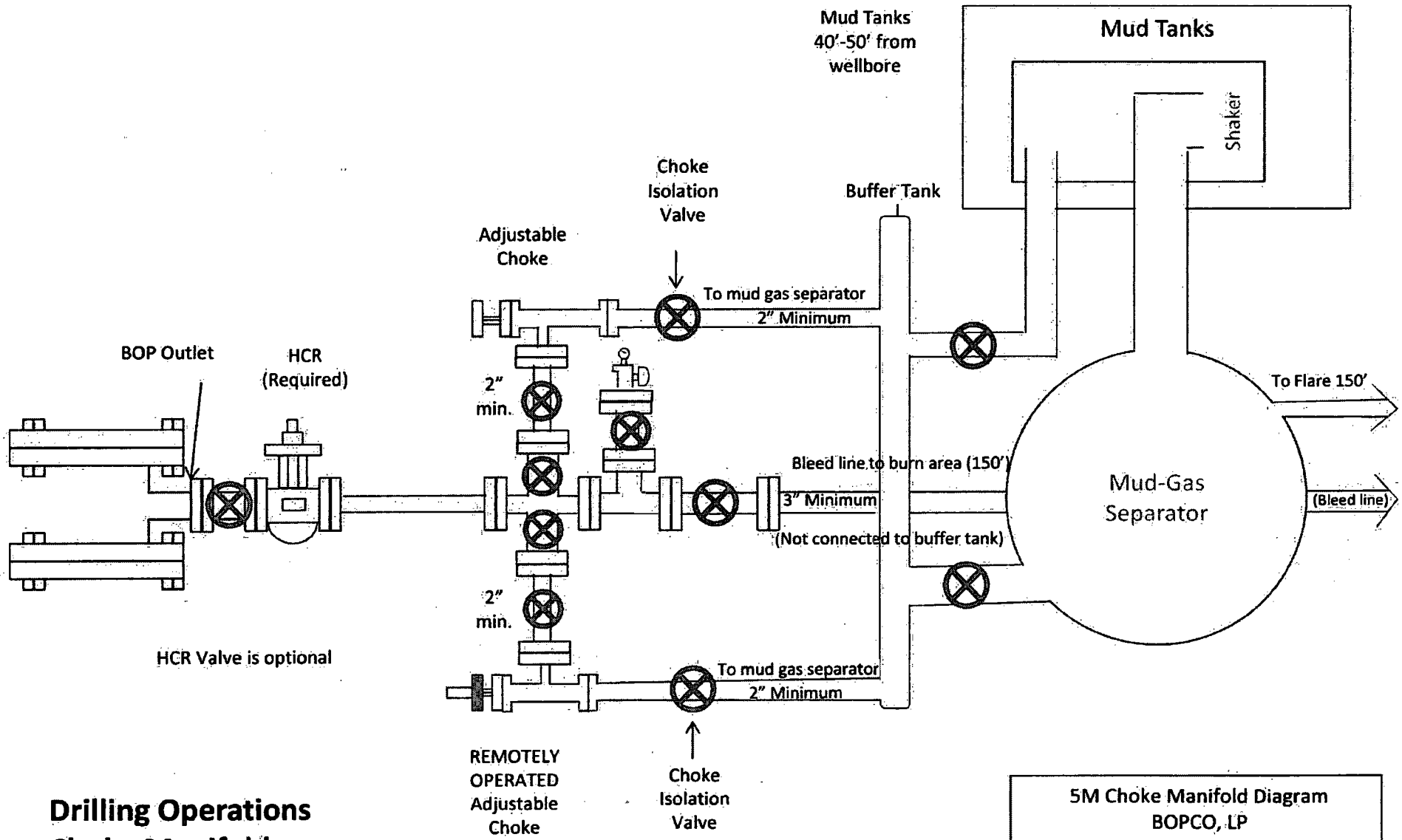
6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 1050' 1130'	24"	FW/Native	8.4-8.8	35-40	NC
1050' - 3850' 3910'	17-1/2"	Brine	9.8-10.2	30-32	NC
3850' to 10500'	12-1/4"	FW	8.7-9.0	30-32	NC
10500' to 26174'	8-3/4"	FW / Cut Brine / Polymer	8.4 - 8.7	29-32	NC - 20

The necessary mud products for weight addition and fluid loss control will be on location at all times. Spud with fresh water/native mud. Drill out from under 18-5/8" surface casing with brine solution. A 9.8ppg-10.2ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.



5000# BOP
BOPCO, LP
Poker Lake Unit #474Y



Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
BOPCO, LP
Poker Lake Unit #474Y

GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	NORMA

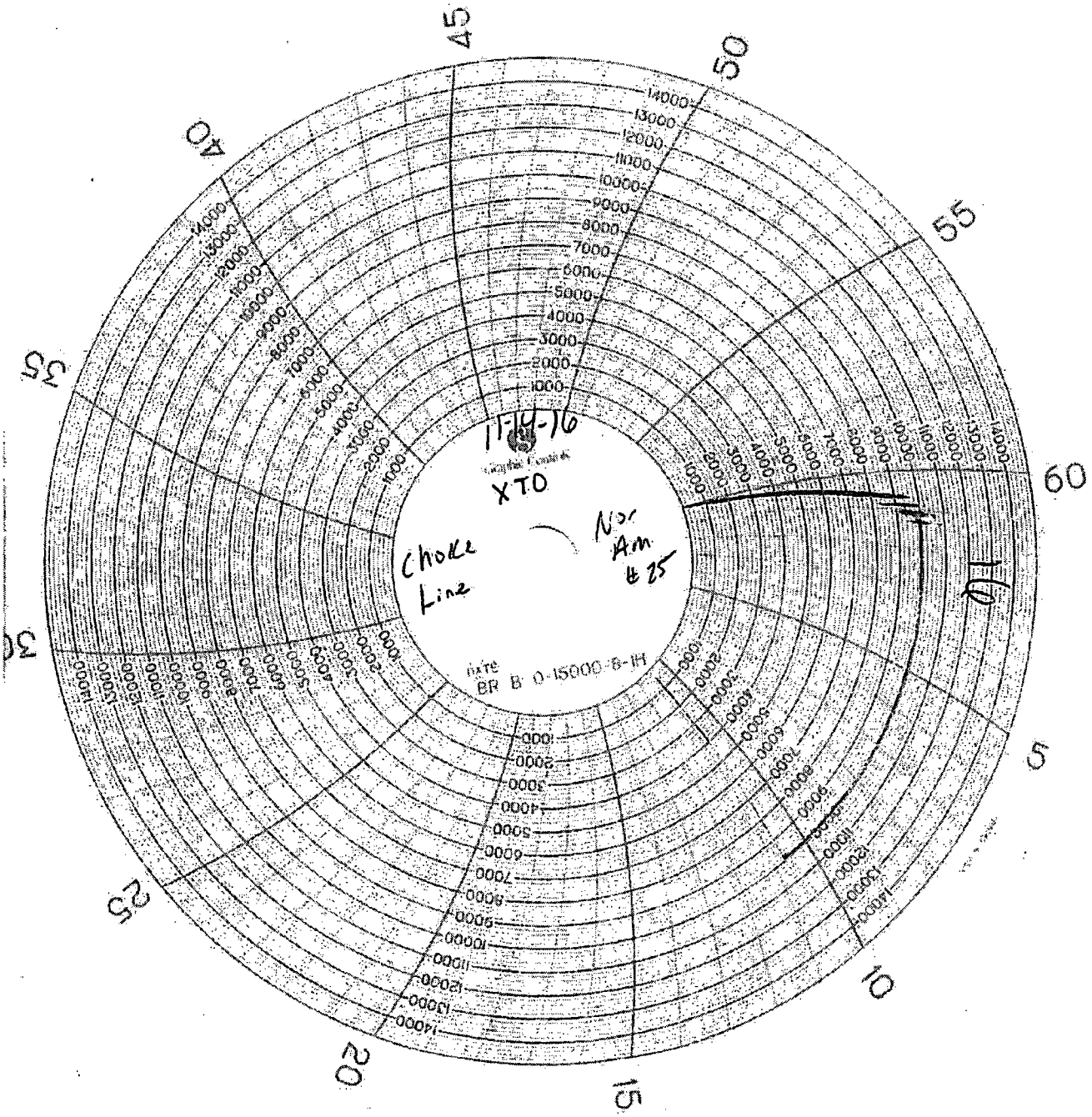
Product Description:	FD3.0-2.0R41/16.5KFLGE/E LE

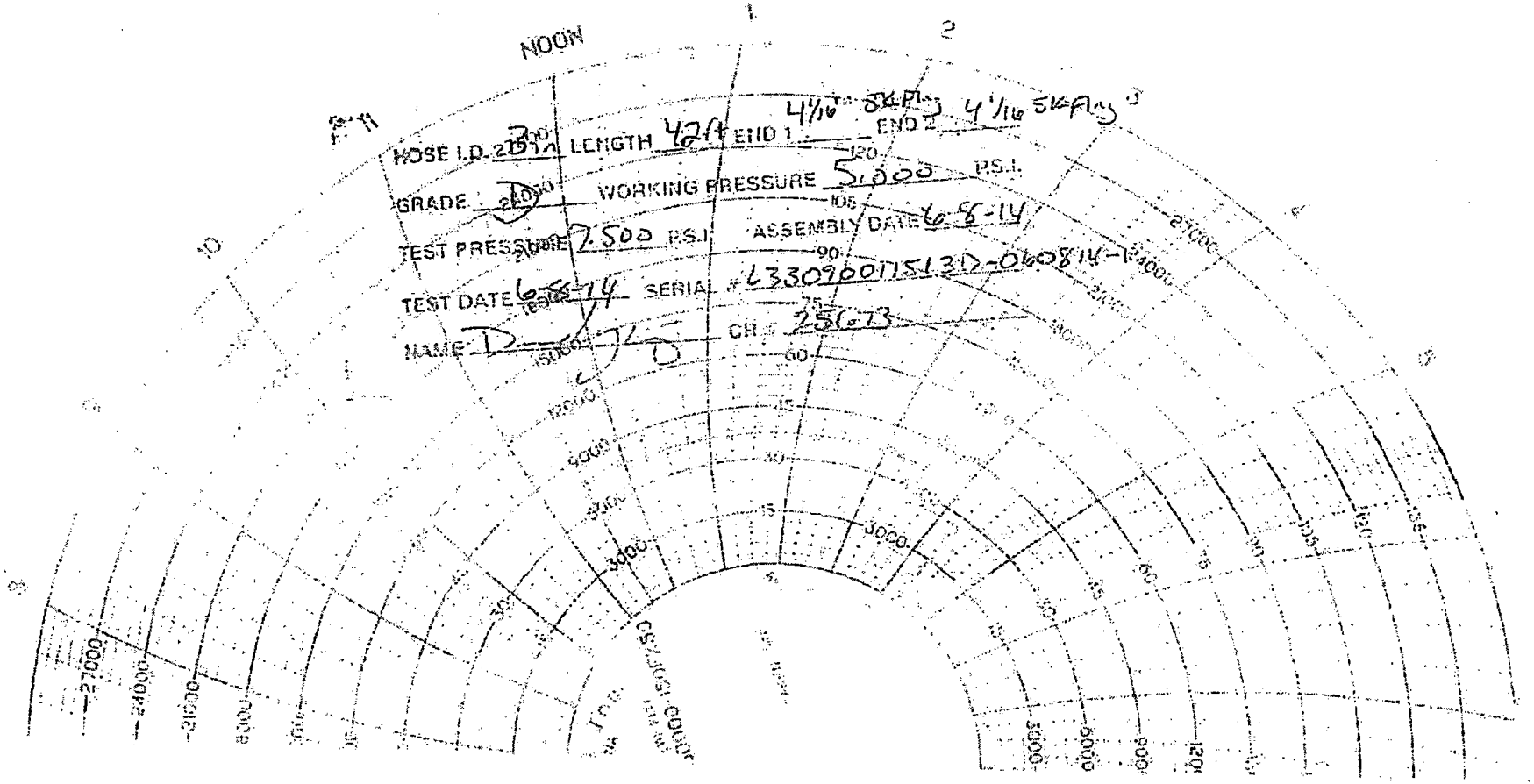
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L3309001513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality:	QUALITY	Technical Supervisor :	PRODUCTION
Date :	6/8/2014	Date :	6/8/2014
Signature :		Signature :	

Form PTC - 01 Rev.0.2


11-14-16
XTO
Choke Line
Nor Am #25
BR B 0-15000-6-IH


NOON
HOSE I.D. 2 1/2"
LENGTH 42"
END 1 4 1/16" 5K FLG
END 2 4 1/16 5K FLG
GRADE D
WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I.
ASSEMBLY DATE 6-6-14
TEST DATE 6-6-14
SERIAL # 633090011513D-060814-1
NAME D
CR 256-73

Schlumberger

XTO Poker Lake Unit 474Y Rev2 OaB 27Apr18 Proposal Report

(Non-Def Plan)

Report Date:	April 27, 2018 - 08:43 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	XTO	**Vertical Section Azimuth:**	179.777 ° (Grid North)
Field:	NM Eddy County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	XTO Poker Lake Unit 474Y / XTO Poker Lake Unit 474Y	**TVD Reference Datum:**	RKB
Well:	XTO Poker Lake Unit 474Y	**TVD Reference Elevation:**	3312.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3290.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.845 °
Survey Name:	XTO Poker Lake Unit 474Y Rev2 OaB 27Apr18	**Total Gravity Field Strength:**	998.4267mgn (9.80665 Based)
Survey Date:	April 23, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	90.000 ° / 15039.407 ft / 6.491 / 1.314	**Total Magnetic Field Strength:**	47940.823 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.787 °
Location Lat / Long:	N 32° 5' 57.28847", W 103° 51' 47.22765"	**Declination Date:**	April 25, 2018
Location Grid N/E Y/X:	N 400148.800 flUS, E 645607.500 flUS	**Magnetic Declination Model:**	HDGM 2018
CRS Grid Convergence Angle:	0.2499 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99993337	**Grid Convergence Used:**	0.2499 °
Version / Patch:	2.10.696.0	**Total Corr Mag North->Grid North:**	6.5946 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	179.82M
Rustler	*664.00*	*0.00*	*179.82*	*664.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
Top Salt	*1199.00*	*0.00*	*179.82*	*1199.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
Base Salt	*3697.00*	*0.00*	*179.82*	*3697.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
Delaware	*3895.00*	*0.00*	*179.82*	*3895.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
Cherry Canyon	*4762.00*	*0.00*	*179.82*	*4762.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
Brushy Canyon	*6044.00*	*0.00*	*179.82*	*6044.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
Bone Spring	*7747.00*	*0.00*	*179.82*	*7747.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
1st Bone Spring Ss	*8682.00*	*0.00*	*179.82*	*8682.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
2nd Bone Spring Ss	*9426.00*	*0.00*	*179.82*	*9426.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
3rd Bone Spring Ss	*10653.00*	*0.00*	*179.82*	*10653.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*179.82M*
KOP - Build 8°/100' DLS	10725.80	0.00	179.82	10725.80	0.00	0.00	0.00	0.00	0.00	0.00	179.82M
Wolfcamp	*11075.76*	*28.00*	*179.82*	*11062.00*	*83.81*	*-83.81*	*0.26*	*83.81*	*179.82*	*8.00*	*HS*
Wolfcamp A	*11208.78*	*38.64*	*179.82*	*11173.00*	*156.78*	*-156.77*	*0.49*	*156.78*	*179.82*	*8.00*	*HS*
Landing Point	11650.80	90.00	179.82	11442.00	716.20	-716.19	2.28	716.20	179.82	8.00	HS
XTO Poker Lake Unit 474Y - PBHL	26174.01	90.00	179.82	11442.00	15039.40	-15039.33	47.40	15039.41	179.82	0.00	

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev.0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size Casing Diameter (in)	(in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	22.000	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG-Depth Only	Original Borehole / XTO Poker Lake Unit 474Y Rev2 OaB 27Apr18
	1	22.000	26174.012	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / XTO Poker Lake Unit 474Y Rev2 OaB

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BOPCO, L.P.**
LEASE NO.:	**NMNM-05039A**
WELL NAME & NO.:	**Poker Lake Unit 474Y**
SURFACE HOLE FOOTAGE:	**2010' FSL & 0980' FEL**
BOTTOM HOLE FOOTAGE	**2440' FNL & 990' FEL Sec. 10, T. 26 S., R 30 E.**
LOCATION:	**Section 27, T. 25 S., R 30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	◉ Conventional	○ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. Hydrogen Sulfide

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

B. CASING

1. The **18 5/8** inch surface casing shall be set at approximately **1190** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

   b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

First intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **13-3/8** inch first intermediate casing, which shall be set at approximately **3910** feet, is:

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

Second intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **9-5/8** inch second intermediate casing is:

Operator has proposed DV tool at depth of 3950', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

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

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

    - Cement should tie-back **200'** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **18 5/8** inch surface casing shoe shall be **2000 (2M)** psi **Annular. In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13 3/8** first intermediate casing shoe shall be **5000 (5M)** psi.

D. SPECIAL REQUIREMENT(S)

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

GENERAL REQUIREMENTS

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

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

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as

well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

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

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

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

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

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

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a

larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

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

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

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

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

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

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

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

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

c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

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

e. 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. 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.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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