Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOCD Artesia

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.
NMLC063136A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000303X

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

8. Well Name and No.
POKER LAKE UNIT 28 BS 128H

2. Name of Operator
XTO PERMIAN OPERATING LLC
Contact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.
30-015-45485-00-X1

3a. Address
6401 HOLIDAY HILL ROAD 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 28 T25S R31E SENE 2310FNL 630FEL
32.102200 N Lat, 103.776573 W Lon

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 PD
	☐ 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.

XTO Permian Operating, LLC., respectfully requests permission to make the following changes to the original APD:

Change from a 3-string casing design to a 4-string casing design.

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 21 2019

Attachments:
Drilling Program
Multibowl Diagram/BOP/CK/FH

RECEIVED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #470455 verified by the BLM Well Information System
For XTO PERMIAN OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 06/25/2019 (19PP2564SE)

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

APPROVED

Signature (Electronic Submission) — Date 06/25/2019 — JUL 17 2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ — Title BUREAU OF LAND MANAGEMENT ROSWELL FIELD OFFICE — Date

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

RWP 10-24-19

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

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

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

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015- 45485	98220	PURPLE SAGE; WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
	POKER LAKE UNIT 28 BS	128H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,338'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	28	25 S	31 E		2,310	NORTH	630	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	4	26 S	31 E		200	SOUTH	330	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
800			

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.

[16]

GEODETIC COORDINATES NAD 27 NME
SURFACE LOCATION
Y= 401,304.7
X= 672,551.1
LAT.= 32.102077'N
LONG.= 103.776093'W

GEODETIC COORDINATES NAD 83 NME
SURFACE LOCATION
Y= 401,362.6
X= 713,736.7
LAT.= 32.102201'N
LONG.= 103.776571'W

FIRST TAKE POINT NAD 27 NME
Y= 400,628.1
X= 672,849.7
LAT.= 32.100213'N
LONG.= 103.775140'W

FIRST TAKE POINT NAD 83 NME
Y= 400,685.9
X= 714,035.4
LAT.= 32.100337'N
LONG.= 103.775618'W

CORNER COORDINATES TABLE NAD 27 NME
A - Y= 400,969.2 N, X= 673,180.1 E
B - Y= 400,962.8 N, X= 671,850.9 E
C - Y= 398,320.0 N, X= 673,176.8 E
D - Y= 398,312.1 N, X= 671,845.7 E
E - Y= 395,671.4 N, X= 673,189.8 E
F - Y= 395,661.9 N, X= 671,859.4 E
G - Y= 393,022.8 N, X= 673,202.8 E
H - Y= 393,012.5 N, X= 671,873.1 E
I - Y= 390,358.7 N, X= 673,210.7 E
J - Y= 390,347.9 N, X= 671,881.5 E
K - Y= 387,693.4 N, X= 670,218.1 E
L - Y= 387,683.4 N, X= 671,889.6 E

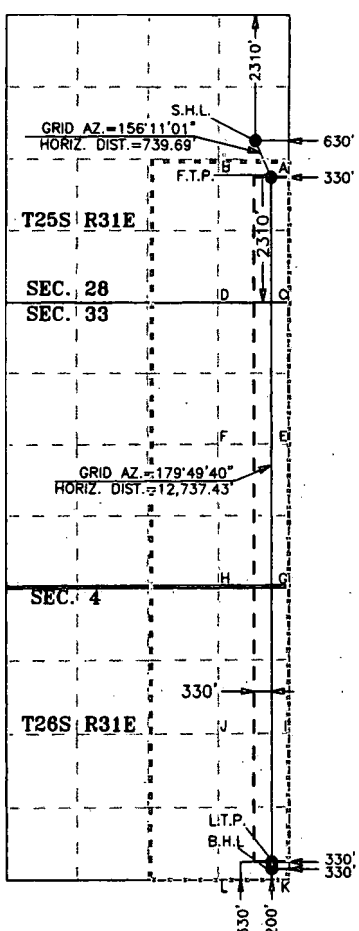
CORNER COORDINATES TABLE NAD 83 NME
A - Y= 401,027.1 N, X= 714,365.8 E
B - Y= 401,020.7 N, X= 713,036.5 E
C - Y= 398,377.8 N, X= 714,362.6 E
D - Y= 398,369.9 N, X= 713,031.4 E
E - Y= 395,729.1 N, X= 714,375.7 E
F - Y= 395,719.6 N, X= 713,045.2 E
G - Y= 393,080.5 N, X= 714,388.8 E
H - Y= 393,070.2 N, X= 713,059.0 E
I - Y= 390,416.3 N, X= 714,396.8 E
J - Y= 390,405.5 N, X= 713,067.5 E
K - Y= 387,751.0 N, X= 711,404.2 E
L - Y= 387,741.0 N, X= 713,075.8 E

LAST TAKE POINT NAD 27 NME
Y= 388,020.9
X= 672,887.1
LAT.= 32.065556'N
LONG.= 103.775230'W

LAST TAKE POINT NAD 83 NME
Y= 388,078.5
X= 714,073.3
LAT.= 32.065681'N
LONG.= 103.775706'W

BOTTOM HOLE LOCATION NAD 27 NME
Y= 387,890.9
X= 672,887.4
LAT. = 32.065199'N
LONG.= 103.775231'W

BOTTOM HOLE LOCATION NAD 83 NME
Y= 387,948.5
X= 714,073.6
LAT. = 32.065323'N
LONG.= 103.775707'W



[17] OPERATOR CERTIFICATION

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

Kelly Kardos — 6-25-19
Signature — Date

Kelly Kardos
Printed Name

kelly_kardos@xtoenergy.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

05-14-2019
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number

AW/TM 2017071000

Intent [X] As Drilled [ ]

API #
30-015-45485

Operator Name:	Property Name:	Well Number
XTO Permian Operating, LLC	Poker Lake Unit 28 BS	128H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
H	28	25S	31E		2310	North	630	East	Eddy

Latitude	Longitude	NAD
32.102201	-103.776571	NAD83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
I	28	25S	31E		2310	South	330	East	Eddy

Latitude	Longitude	NAD
32.100337	-103.775618	NAD83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	4	26S	30E		330	South	330	East	Eddy

Latitude	Longitude	NAD
32.065681	-103.775706	NAD83

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

Is this well an infill well? [Y]

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

API #
30-015-45540

Operator Name:	Property Name:	Well Number
XTO Permian Operating, LLC	Poker Lake Unit 28 BS	108H

KZ 06/29/2018

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

XTO Energy Inc.
Poker Lake Unit 28 BS 128H
Projected TD: 24805' MD / 11710' TVD
SHL: 2310' FNL & 630' FEL , Section 28, T25S, R31E
BHL: 200' FSL & 330' FEL , Section 4, T26S, R31E
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	949'	Water
Top of Salt	1312'	Water
Base of Salt	4048'	Water
Delaware	4262'	Water
Bone Spring	8204'	Water/Oil/Gas
3rd Bone Spring Lime	10284'	Water/Oil/Gas
Wolfcamp	11572'	Water/Oil/Gas
Wolfcamp Y	11692'	Water/Oil/Gas
Target/Land Curve	11710'	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 @ 1130' (182' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8 inch casing at 4150' and circulating cement to surface. 9-5/8 inch intermediate casing will be set at 10430' and cemented into the 13-3/8 inch casing shoe. An 8-3/4 inch curve and lateral hole will be drilled to TD, where 5-1/2 inch casing will be set 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' – 1130'	18-5/8"	87.5	STC	J-55	New	1.75	1.59	7.63
17-1/2"	0' – 4150'	13-3/8"	68	STC	J-55	New	1.31	1.49	2.39
12-1/4"	0' – 10430'	9-5/8"	40	LTC	HCL-80	New	1.39	1.58	2.01
8-3/4"	0' – 24805'	5-1/2"	20	BTC	P-110	New	1.33	1.65	1.93

- XTO requests to not utilize centralizers in the curve and lateral
- 18-5/8" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 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
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichver is less

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" 10M top flange x 13-3/8" SOW bottom
B. Tubing Head: 13-5/8" 10M bottom flange x 7" 15M top flange
- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 18-5/8", 87.5 New J-55, STC casing to be set at +/- 1130'

Lead: 2860 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
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 +/- 4150'

Lead: 2860 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 sxs Halcem-C + 2% CaCl (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 +/- 10430'

Lead: 1890 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)
Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Production Casing: 5-1/2", 20 New P-110, BTC casing to be set at +/- 24805'

Tail: 2910 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft3/sx, 8.38 gal/sx water)
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 1288 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 3-Ram BOP. MASP should not exceed 4122 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M). Also a variance is requested to test the 5M annular to 70% of working pressure at 3500 psi.

All BOP testing will be done by an independent service company. When nippling up on the 13-5/8" 5M bradenhead and flange, the BOP test will be limited to 5000 psi. Since a multibowl system will be used, subsequent BOP pressure tests will be performed as necessary based on required testing schedule (i.e., at least every 30 days). 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' - 1130'	24"	FW/Native	8.4-8.8	35-40	NC
1130' - 4150'	17-1/2"	Brine	9.8-10.2	30-32	NC
4150' to 10430'	12-1/4"	FW/Cut Brine	8.7-10.0	30-32	NC
10430' to 24805'	8-3/4"	FW / Cut Brine / Polymer	10.7 - 11	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.

7. Auxiliary Well Control and Monitoring Equipment

A. A Kelly cock will be in the drill string at all times.
B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
C. H2S monitors will be on location when drilling below the 13-3/8" casing.

8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

Open hole logging will include quad combo.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 155 to 175 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6698 psi.

10. Anticipated Starting Date and Duration of Operations

Road and location construction will begin after Santa Fe and BLM have approved the APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 40 days. If production casing is run, an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

Schlumberger

XTO Energy PLU 28 BS 128H Rev3 JP 03May19 Proposal Geodetic Report

(Def Plan)

Report Date:	May 03, 2019 - 09:25 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	XTO Energy	**Vertical Section Azimuth:**	179.830 ° (Grid North)
Field:	NM Eddy County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	XTO Energy PLU 28 Big Sinks 128H / New Slot	**TVD Reference Datum:**	RKB
Well:	PLU 28 BS 128H	**TVD Reference Elevation:**	3370.000 ft above MSL
Borehole:	PLU 28 BS 128H	**Seabed / Ground Elevation:**	3338.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.687 °
Survey Name:	XTO Energy PLU 28 BS 128H Rev3 JP 03May19	**Total Gravity Field Strength:**	998.4234mgn (9.80665 Based)
Survey Date:	April 26, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	104.282 ° / 13683.958 ft / 6.480 / 1.169	**Total Magnetic Field Strength:**	47808.144 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.728 °
Location Lat / Long:	N 32° 6' 7.47676", W 103° 46' 33.93584"	**Declination Date:**	May 03, 2019
Location Grid N/E Y/X:	N 401304.700 ftUS, E 672551.000 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.2961 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99994319	**Grid Convergence Used:**	0.2961 °
Version / Patch:	2.10.760.0	**Total Corr Mag North->Grid North:**	6.3913 °
		Local Coord Referenced To:	Well Head

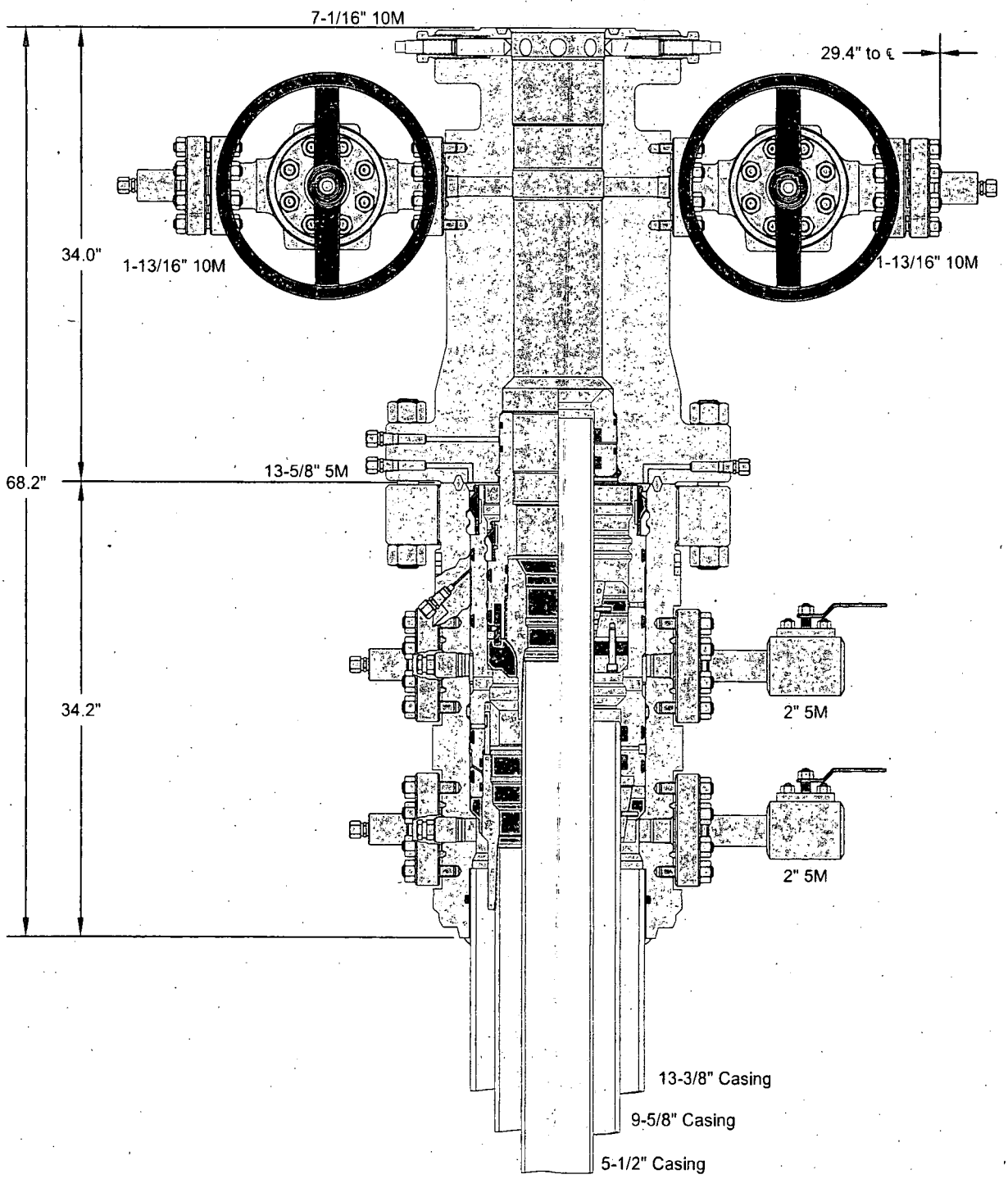
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	401304.70	672551.00	N 32 6 7.48	W 103 46 33.94
Build 1.5° DLS	4100.00	0.00	95.58	4100.00	0.00	0.00	0.00	0.00	401304.70	672551.00	N 32 6 7.48	W 103 46 33.94
Hold	4566.11	6.99	95.58	4564.95	2.84	-2.76	28.27	1.50	401301.94	672579.27	N 32 6 7.45	W 103 46 33.61
Drop 1.5° DLS	6550.96	6.99	95.58	6535.05	27.04	-26.24	268.73	0.00	401278.46	672819.71	N 32 6 7.20	W 103 46 30.81
Hold	7017.07	0.00	95.58	7000.00	29.88	-29.00	297.00	1.50	401275.70	672847.98	N 32 6 7.17	W 103 46 30.49
KOP, Build 8° DLS	11010.88	0.00	95.58	10993.81	29.88	-29.00	297.00	0.00	401275.70	672847.98	N 32 6 7.17	W 103 46 30.49
Landing Point	12139.61	90.30	179.83	11710.00	749.81	-748.93	299.10	8.00	400555.82	672850.08	N 32 6 0.05	W 103 46 30.50
PLU 28 BS 128H - BHL	24805.40	90.30	179.83	11644.00	13415.43	-13414.49	336.02	0.00	387891.00	672887.00	N 32 3 54.72	W 103 46 30.84

Survey Type: 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	32.000	1/100.000	30.000	30.000		NAL_MWD_1.0_DEG-Depth Only	PLU 28 BS 128H / XTO Energy PLU 28 BS 128H Rev3 JP 03May19
	1	32.000	24805.402	1/100.000	30.000	30.000		NAL_MWD_1.0_DEG	PLU 28 BS 128H / XTO Energy PLU 28 BS 128H Rev3 JP

GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE.

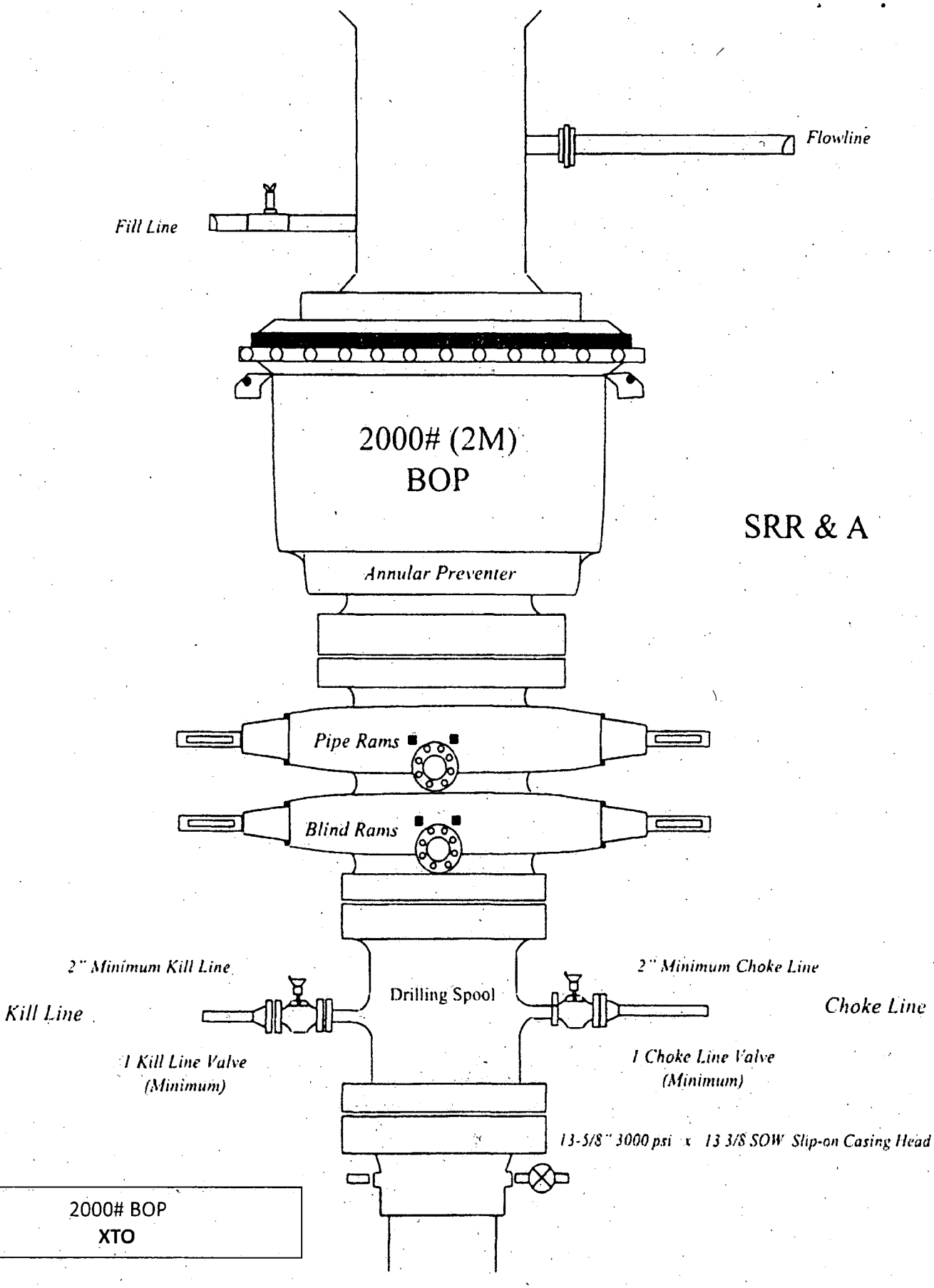
XTO ENERGY, INC.

13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead Assembly, With T-EBS-F Tubing Head

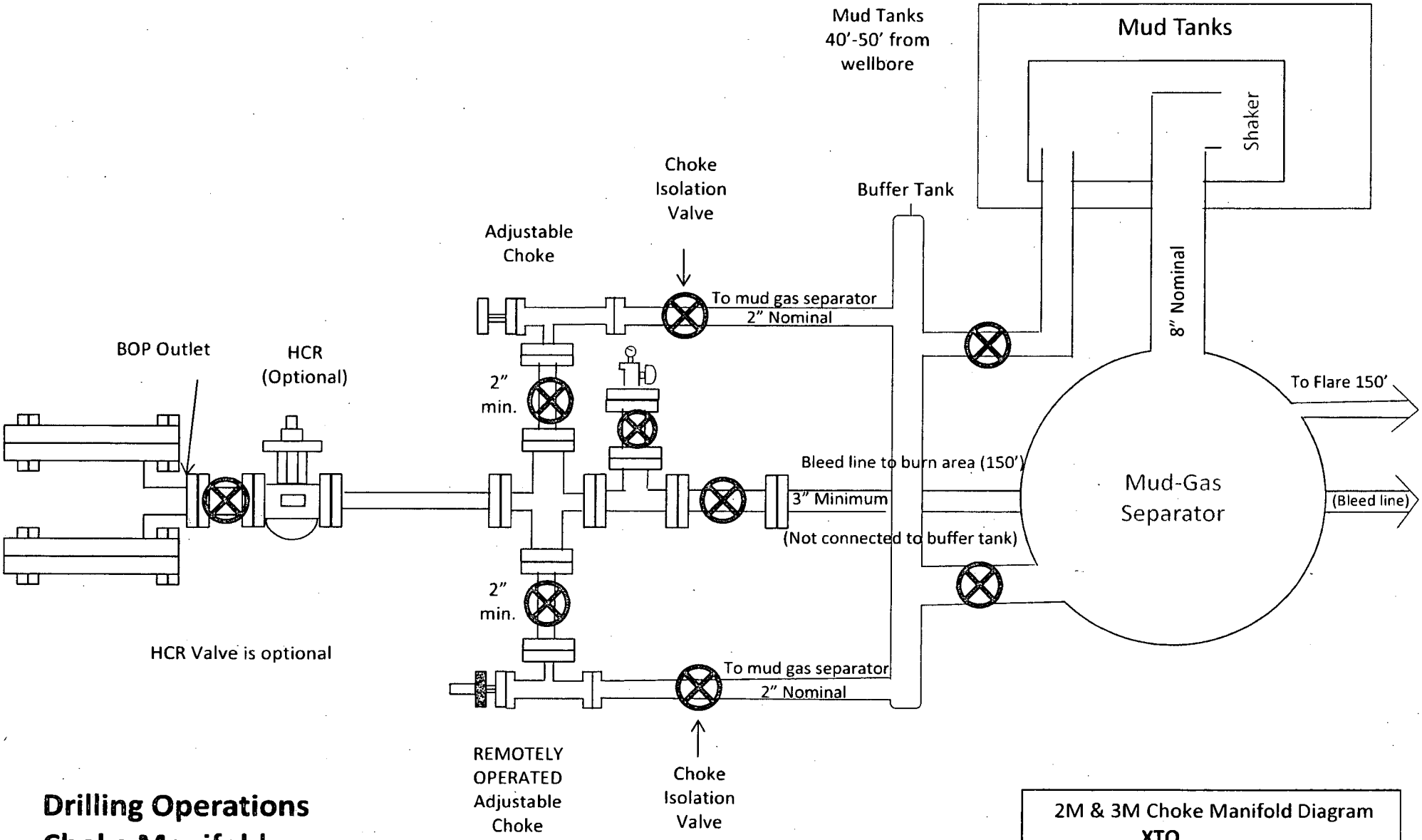
DRAWN	VJK	16FEB17
APPRV	KN	16FEB17

FOR REFERENCE ONLY

DRAWING NO. 10012842

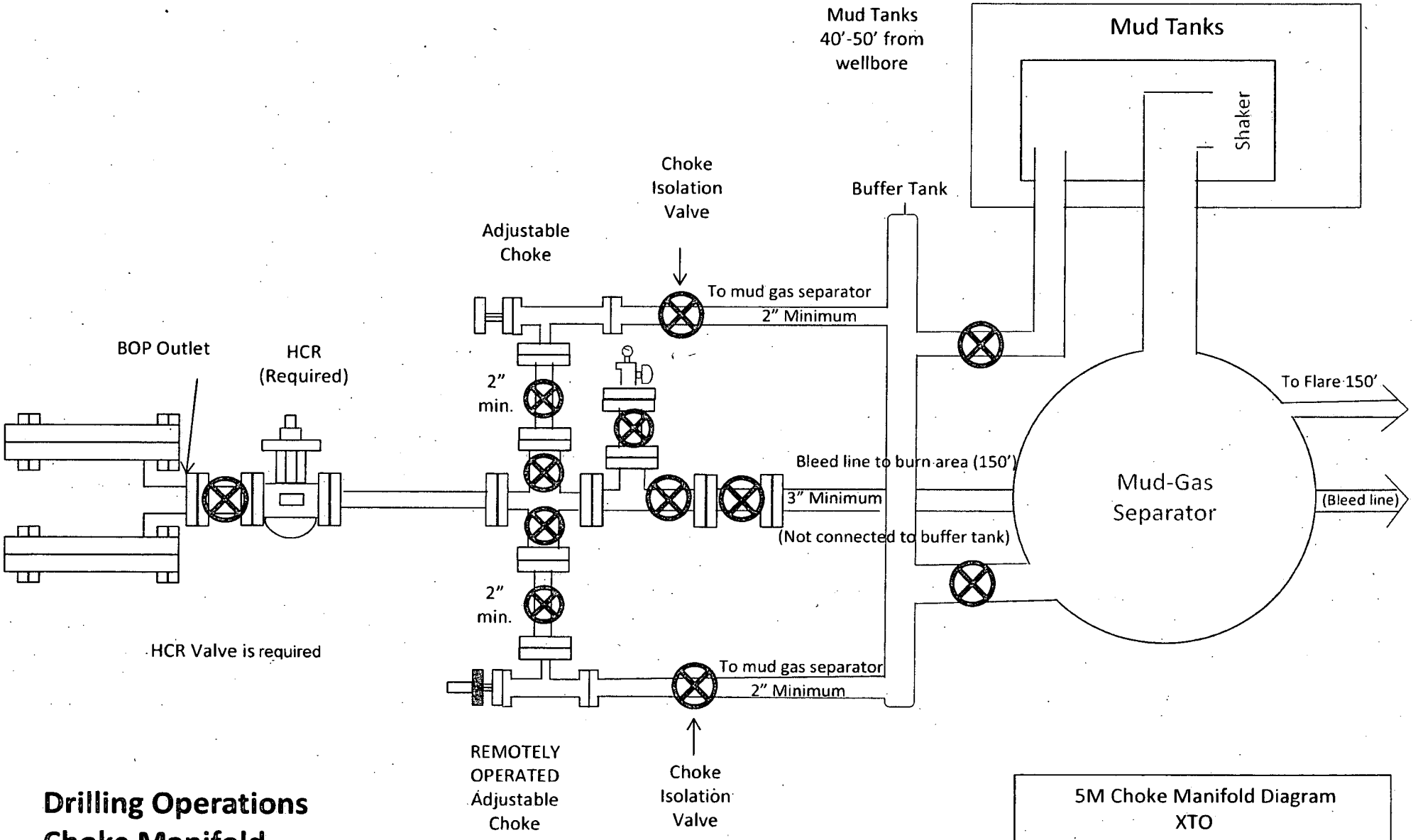

Flowline
Fill Line
2000# (2M)
BOP
SRR & A
Annular Preventer
Pipe Rams
Blind Rams
2" Minimum Kill Line
Kill Line
Drilling Spool
2" Minimum Choke Line
Choke Line
1 Kill Line Valve
(Minimum)
1 Choke Line Valve
(Minimum)
13-5/8" 3000 psi x 13 3/8 SOW Slip-on Casing Head

2000# BOP
XTO



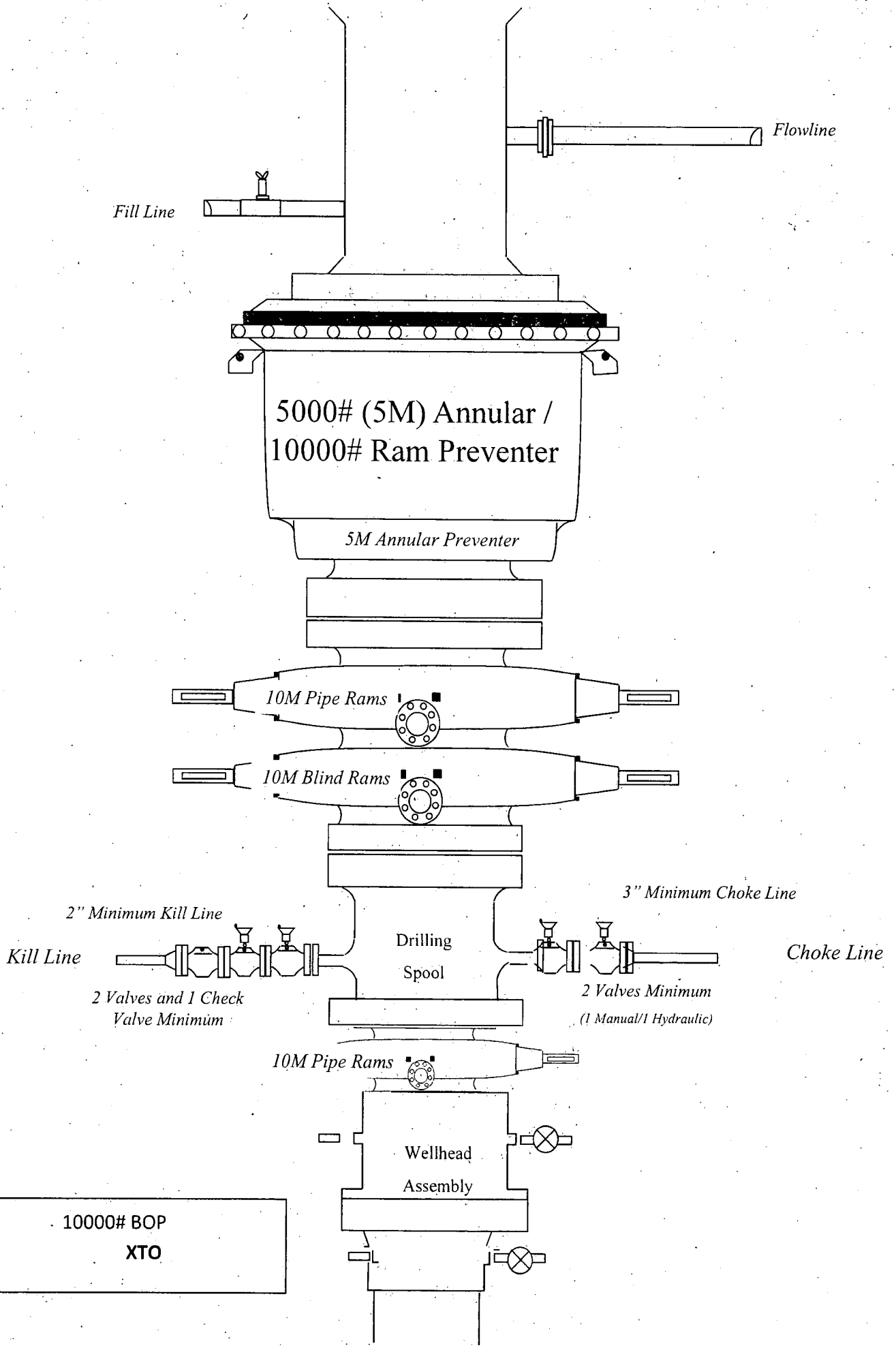
Drilling Operations
Choke Manifold
2M & 3M Service

2M & 3M Choke Manifold Diagram
XTO



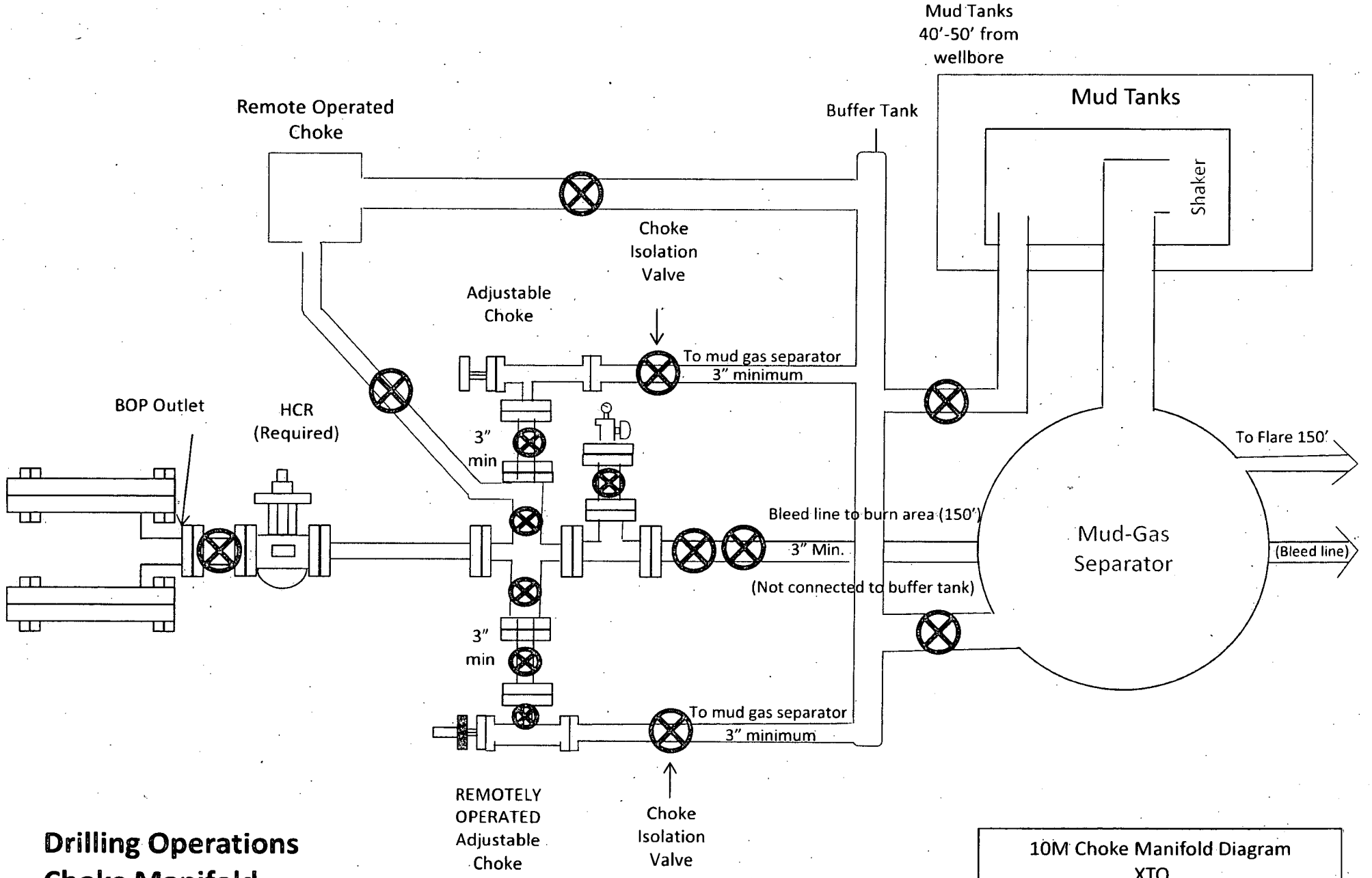
Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
XTO



10000# BOP

XTO



Drilling Operations
Choke Manifold
10M Service

10M Choke Manifold Diagram
XTO

10,000 PSI Annular BOP Variance Request

XTO Energy/XTO Permian Op. request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOPL).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

8-1/2" Production Hole Section 10M psi Requirement					
Component	**OD**	**Primary Preventer**	**RWP**	**Alternate Preventer(s)**	**RWP**
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP & SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:
    a. Perform flow check. If flowing, continue to (b).
    b. Sound alarm (alert crew)
    c. Stab full-opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper variable bore rams
    e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP & SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
    a. Sound alarm (alert crew)
    b. Stab crossover and full-opening safety valve and close
    c. Space out drill string with upset just beneath the upper variable bore rams
    d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP & SICP

ii. Pit gain
iii. Time

h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
   a. Sound alarm (alert crew)
   b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
   c. If impossible to pull string clear of the stack:
   d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
   e. Space out drill string with tooljoint just beneath the upper variable bore ram
   f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
   g. Confirm shut-in
   h. Notify toolpusher/company representative
   i. Read and record the following:
      i. SIDPP & SICP
      ii. Pit gain
      iii. Time
   j. Regroup and identify forward plan

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

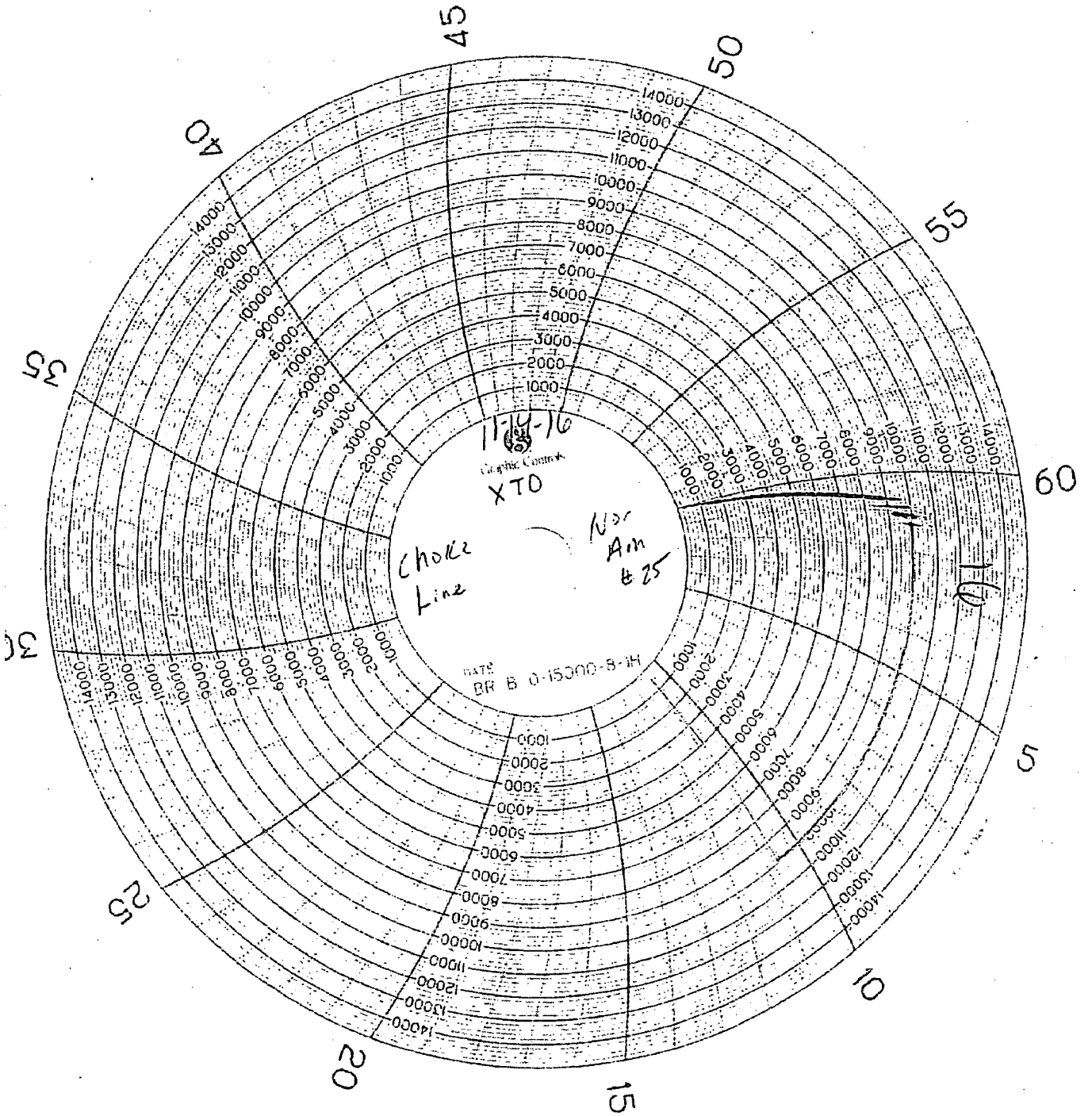
GRADE D PRESSURE TEST CERTIFICATE

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-i2.0R41/16.5KFLGE/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 :	L33090011513D-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 :	


11-14-16
Graphic Controls
XTO
Choke Line
Nor Am #25
RATE
BR B 0-15000-8-1H
45
50
55
60
40
35
30
25
20
15
10
5

PECOS DISTRICT DRILLING
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Permian Operating, LLC**
LEASE NO.:	**NMLC-063136A**
WELL NAME & NO.:	**Poker Lake Unit 28 BS 128H**
SURFACE HOLE FOOTAGE:	**2310' FNL & 0630' FEL**
BOTTOM HOLE FOOTAGE	**0200' FSL & 0330' FEL Sec. 04, T. 26 S., R 31 E.**
LOCATION:	**Section 28, T. 25 S., R 31 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

The original COAs still stand with the following drilling modifications:

Commercial Well Determination
A commercial well determination shall be submitted after production has been established for at least six months.

Unit Wells
The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please 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 is located, this does not include the dog house or stairway area.

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

B. CASING

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

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

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.

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.

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

Medium Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Red beds, Rustler, and Delaware.
Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

1. The **18-5/8** inch surface casing shall be set at approximately **1130** feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet 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.

13-3/8'' 1st Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If cement does not circulate to surface on the 13-3/8'' 1st intermediate casing, the cement on the 9-5/8'' 2nd casing must come to surface.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

3. 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.

4. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 1st intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8 1st intermediate casing shoe shall be 5000 (5M) psi.**
    a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
    b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
    c. **Manufacturer representative shall install the test plug for the initial BOP test.**
    d. **Operator shall perform the 9-5/8" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.**
    e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

Variance approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi.)

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

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**.

c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. 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.

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

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

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

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

D. 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.

JAM 071719