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.
NMNM0506A

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 15 TWR 127H

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

9. API Well No.
30-015-45202-00-X1

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

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

NM OIL CONSERVATION
ARTESIA DISTRICT

10. Field and Pool or Exploratory Area
DELAWARE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 15 T24S R31E SESE 330FSL 1260FEL
32.211018 N Lat, 103.761223 W Lon

MAR 1 1 2019

RECEIVED

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 Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A PD
	☐ 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 requests permission to change the drilling program per the attached procedure:

Accepted For Record
NMOCD
3-11-19

See COAs

ENTERED
3-11-19

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #455418 verified by the BLM Well Information System
For XTO PERMIAN OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER SANCHEZ on 02/22/2019 (19JAS0003SE)

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

Signature (Electronic Submission)
Date 02/21/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By APPROVED
Title
Date 2/22/19

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 ****

Revisions to Operator-Submitted EC Data for Sundry Notice #455418

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM0506A	NMNM0506A
Agreement:		891000303X (NMNM71016X)
Operator:	XTO PERMIAN OPERATING, LLC 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO PERMIAN OPERATING LLC 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707 Ph: 432.683 2277
Admin Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Tech Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Location: State: County:	 NM EDDY	 NM EDDY
Field/Pool:	PURPLE SAGE; WOLFCAMP	DELAWARE
Well/Facility:	POKER LAKE UNIT 15 TWR 127H Sec 15 T24S R31E Mer NMP SESE 330FSL 1260FEL	POKER LAKE UNIT 15 TWR 127H Sec 15 T24S R31E SESE 330FSL 1260FEL 32.211018 N Lat, 103.761223 W Lon

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

XTO Energy Inc.
PLU 15 Twin Wells Ranch #127H
Projected TD: 23206' MD / 12833' TVD
SHL: 330' FSL & 1260' FEL , Section 15, T24S, R31E
BHL: 200' FSL & 990' FEL , Section 27, T24S, R31E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Permian

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	736'	Water
Top of Salt	1094'	Water
Base of Salt	4280'	Water
Delaware	4503'	Water
Bone Spring	8356'	Water/Oil/Gas
1st Bone Spring Ss	9424'	Water/Oil/Gas
2nd Bone Spring Ss	10010'	Water/Oil/Gas
3rd Bone Spring Ss	11257'	Water/Oil/Gas
Wolfcamp	11695'	Water/Oil/Gas
Target/Land Curve	12833'	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 @ 890' (204' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8 inch casing at 4330' and circulating cement to surface. A 12-1/4 inch vertical hole will be drilled to 12210' and 9-5/8 inch casing ran and cemented 500' into the 13-3/8 inch casing. An 8-3/4 inch curve and lateral hole will be drilled to MD/TD and 5-1/2 casing will be set at TD and cemented back 300' into 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' – 890'	18-5/8"	87.5	STC	H-40	New	1.25	1.56	13.09
17-1/2"	0' – 4330'	13-3/8"	68	STC	J-55	New	1.19	1.48	4.33
12-1/4"	0' – 12210'	9-5/8"	40	LTC	HCL-80	New	1.01	1.43	2.34
8-3/4" x 8-1/2"	0' – 23206'	5-1/2"	17	BTC	P-110	New	1.12	1.30	2.00

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.

WELLHEAD:

Temporary Wellhead

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

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head (RSH System): 13-3/8" SOW bottom x 13-5/8" 3M top flange
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.
  - Operator will test the 9-5/8" casing per Onshore Order 2.
  - Wellhead manufacturer representative may not be present for BOP test plug installation

4. Cement Program

Surface Casing: 18-5/8", 87.5 New H-40, STC casing to be set at +/- 890'

Lead: 780 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 550 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

Intermediate Casing: 13-3/8", 68 New J-55, STC casing to be set at +/- 4330'

Lead: 2830 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 520 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

2nd Intermediate Casing: 9-5/8", 40 New HCL-80, LTC casing to be set at +/- 12210'

Lead: 1370 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft3/sx, 9.61 gal/sx water)

Tail: 420 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", 17 New P-110, BTC casing to be set at +/- 23206'

Tail: 2570 sxs VersaCem (mixed at 13.2 ppg, 1.33 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) for this well consists of a 13-5/8" minimum 10M Hydril and a 13-5/8" minimum 10M Double Ram BOP. MASP should not exceed 5852 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" 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When the 9-5/8" and 7" casing is set, the packoff seals will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M 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' to 890'	24"	FW/Native	8.4-8.8	35-40	NC
890' to 4330'	17-1/2"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
4330' to 12210'	12-1/4"	FW / Cut Brine	8.6-9	29-32	NC - 20
12210' to 23206'	8-3/4" x 8-1/2"	FW / Cut Brine / Polymer/ OBM	12.45-12.75	32-50	<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 13-3/8" 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 1st intermediate casing.

Open hole logging will include Quad Combo from bottom of curve to 13-3/8" casing shoe.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 160 to 180 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 8675 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.

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	-	-

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

<u>General Procedure While Drilling</u>

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
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 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.

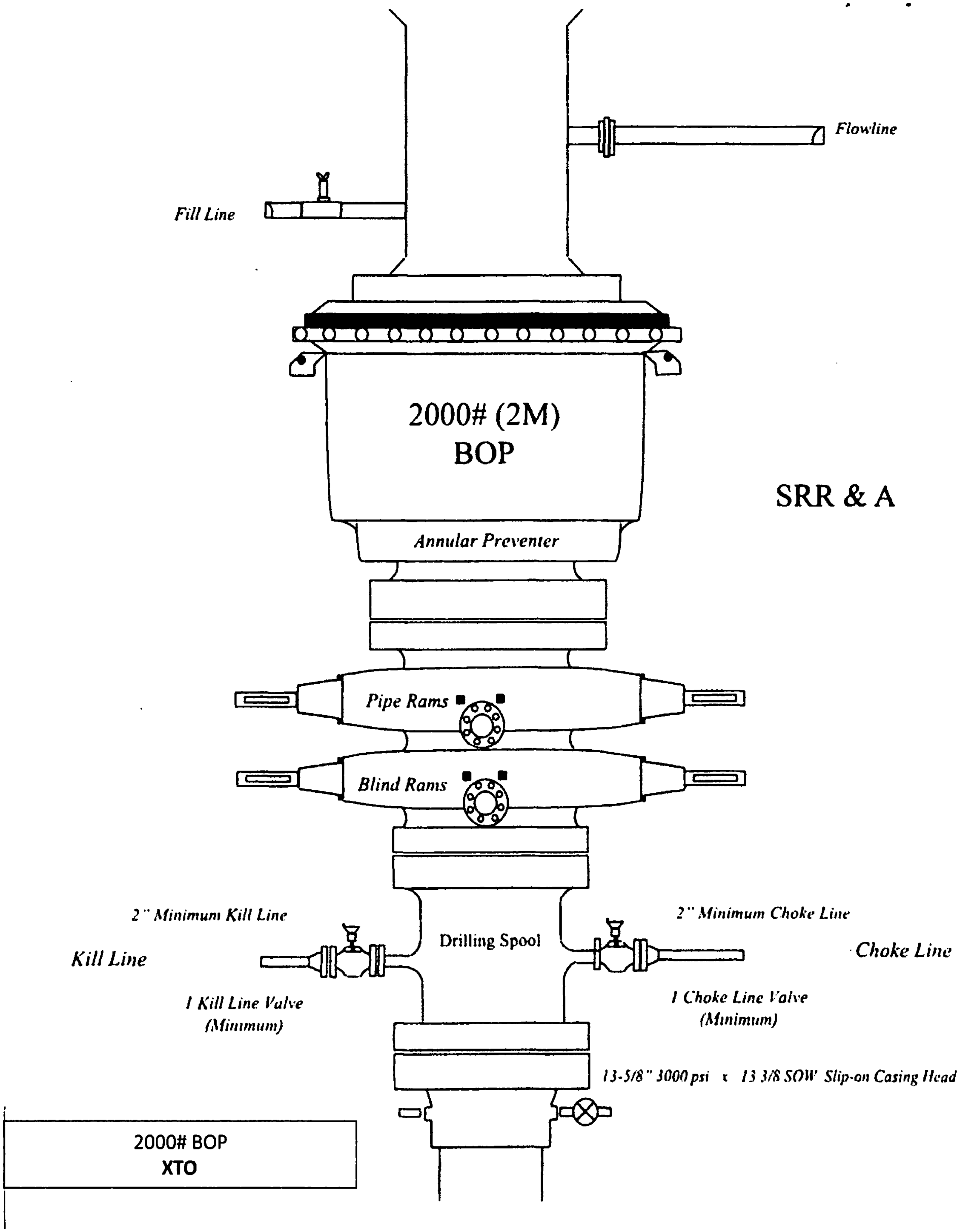
General Procedure With No Pipe In Hole (Open Hole)

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

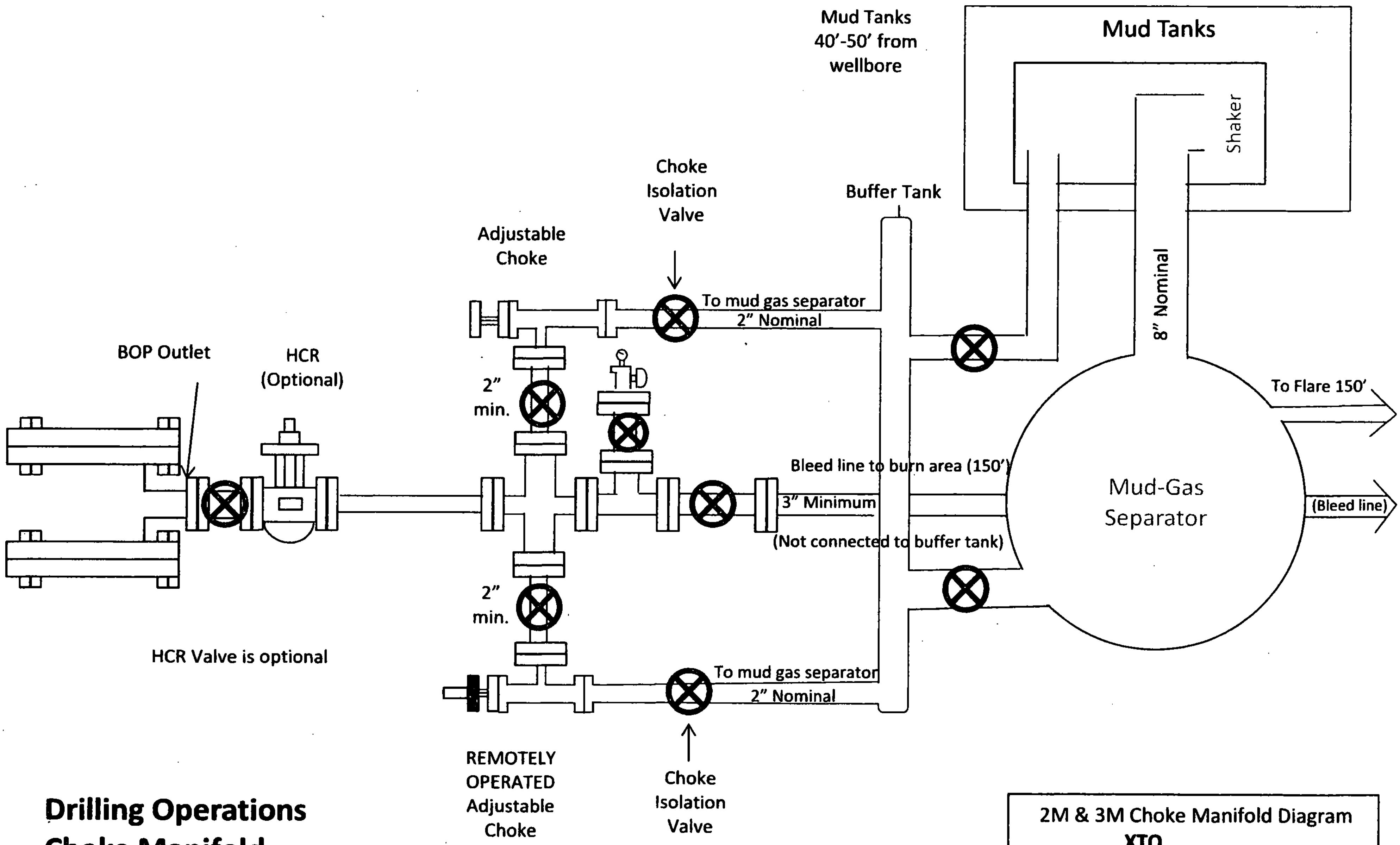
General Procedures While Pulling BHA Through Stack

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

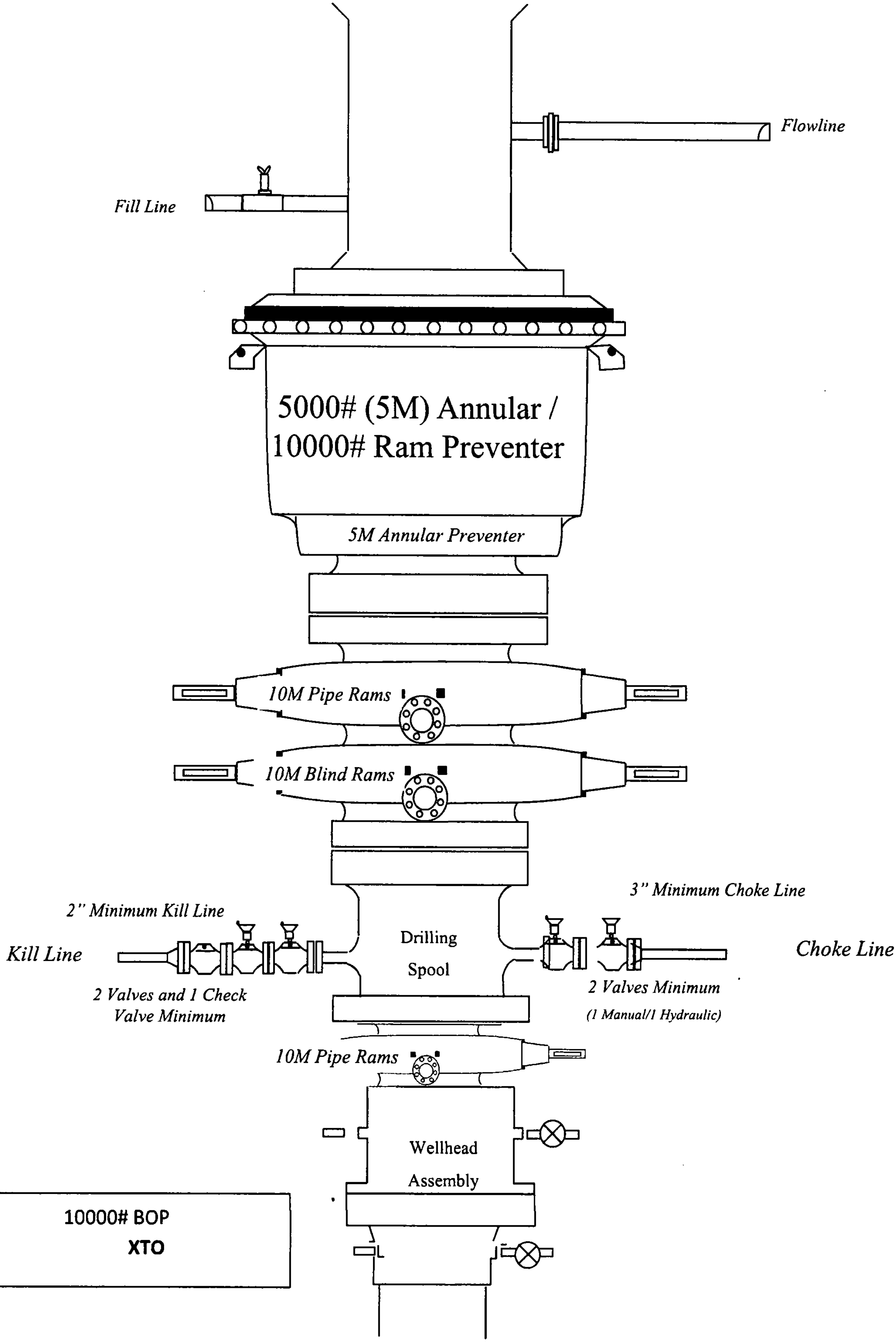


Flowline
Fill Line
2000# (2M)
BOP
SRR & A
Annular Preventer
Pipe Rams
Blind Rams
2" Minimum Kill Line
2" Minimum Choke Line
Drilling Spool
Kill Line
Choke Line
1 Kill Line Valve
(Minimum)
1 Choke Line Valve
(Minimum)
13-5/8" 3000 psi x 13 3/8 SOW Slip-on Casing Head
2000# BOP
XTO



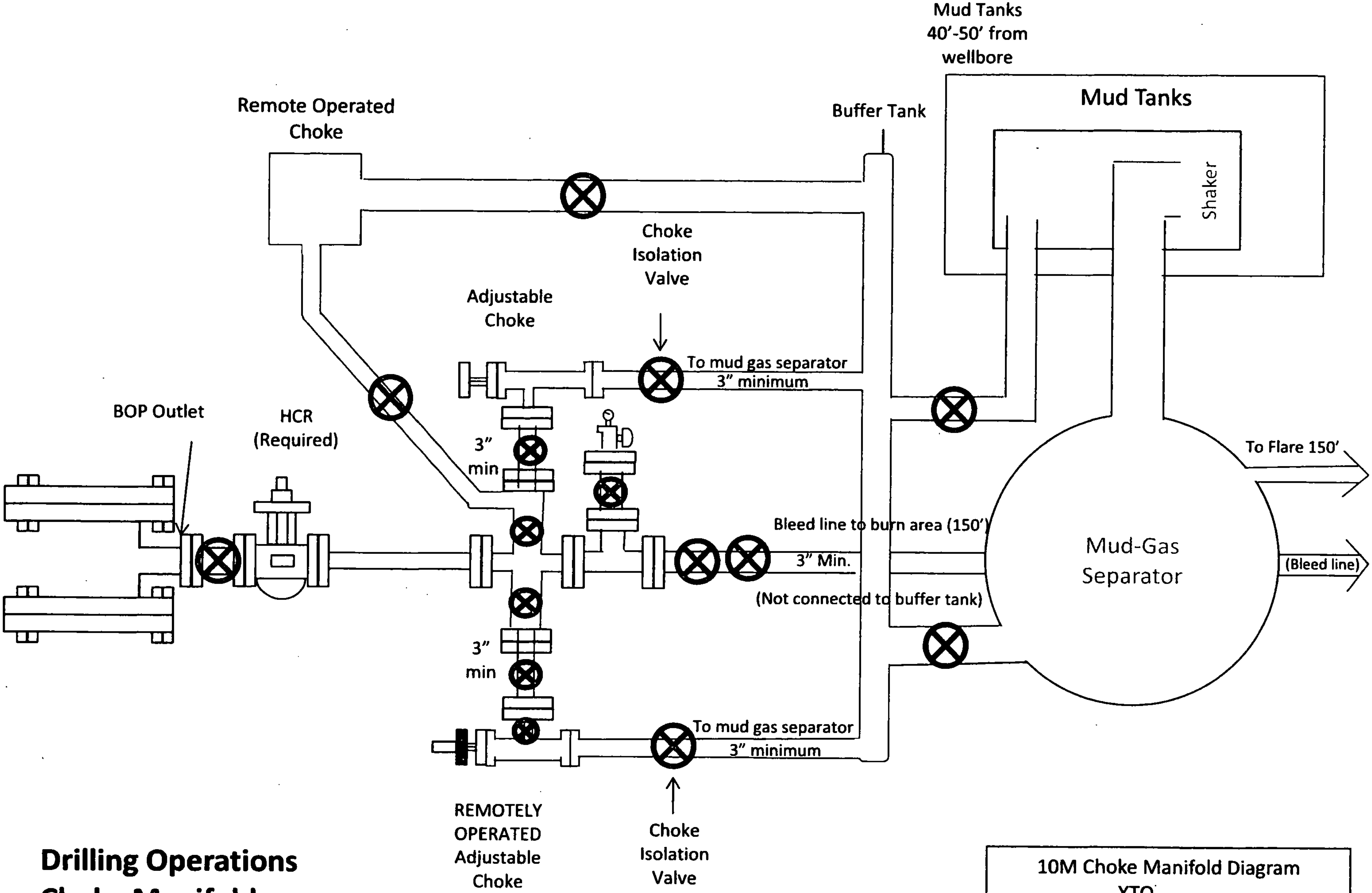
Drilling Operations
Choke Manifold
2M & 3M Service

2M & 3M Choke Manifold Diagram
XTO



10000# BOP

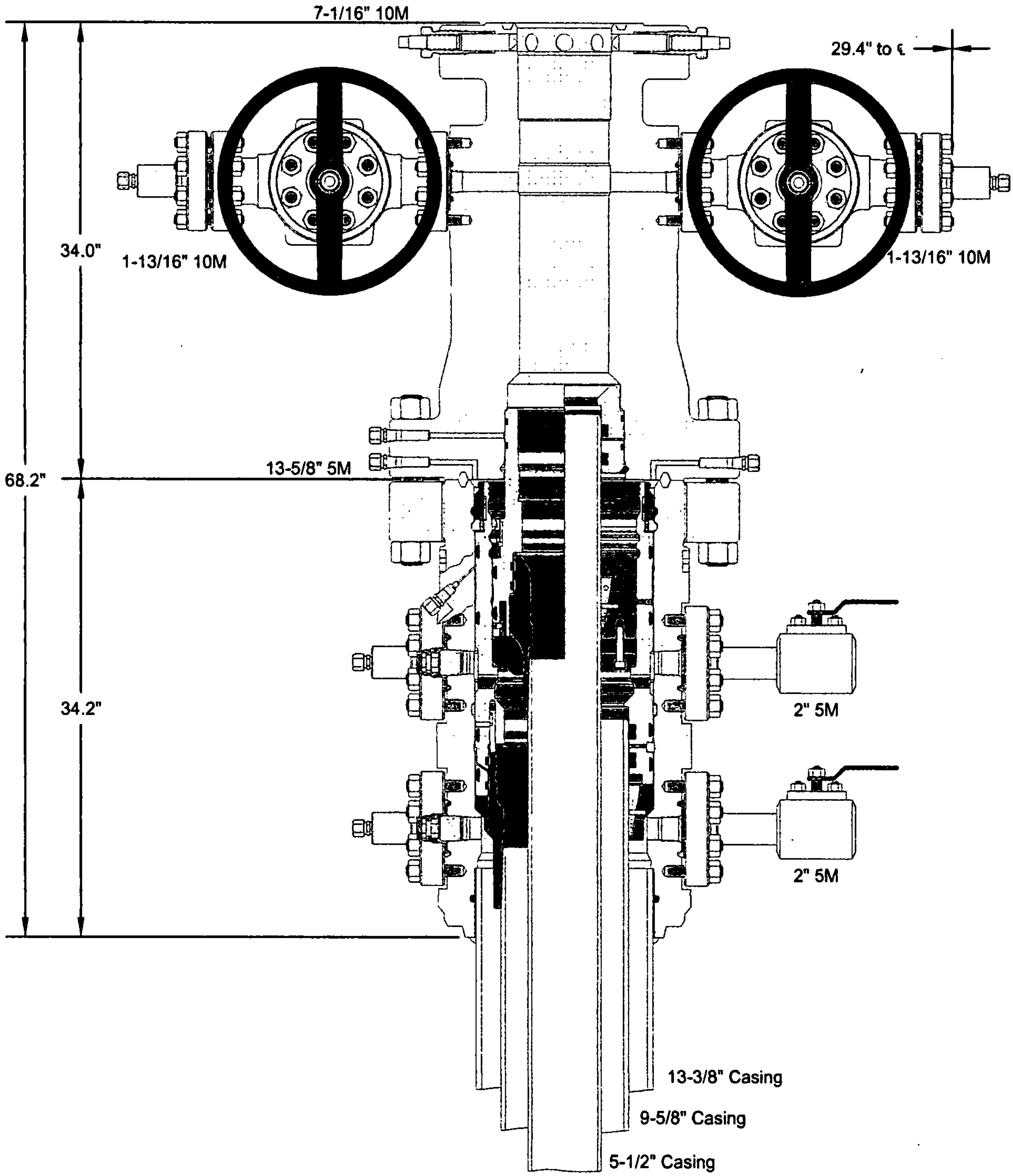
XTO



Drilling Operations
Choke Manifold
10M Service

10M Choke Manifold Diagram
XTO

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

XTO ENERGY

Project: Eddy County, NM (NAD-27)
Site: PLU 15 Twin Wells Ranch
Well: #127H
Wellbore: OH
Design: PERMIT Rev1

PROJECT DETAILS: Eddy County, NM (NAD-27)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: #127H

Rig Name: Unknown
RKB= 27' @ 3593.00usft (Unknown)
Ground Level: 3566.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	440914.00	677095.70	32.210893	-103.760737

DESIGN TARGET DETAILS

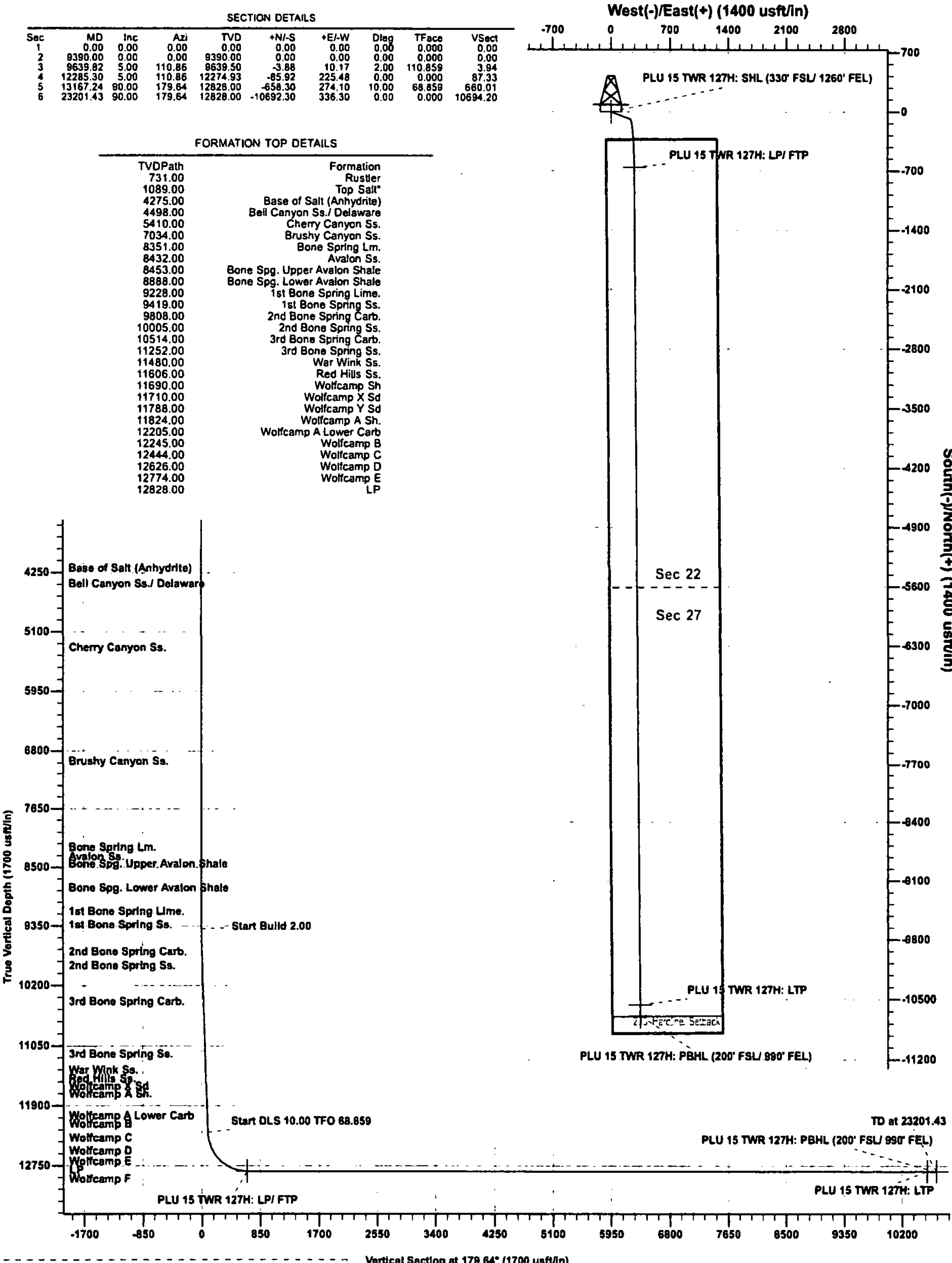
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PLU 15 TWR 127H: SHL (330' FSL/ 1260' FEL)	0.00	0.00	0.00	440914.00	677095.70	32.210893	-103.760737	Point
PLU 15 TWR 127H: LP/ FTP	12828.00	-658.30	274.10	440255.70	677369.80	32.209079	-103.759862	Point
PLU 15 TWR 127H: LTP	12828.00	-10562.30	335.60	430351.70	677431.30	32.181854	-103.759834	Point
PLU 15 TWR 127H: PBHL (200' FSL/ 990' FEL)	12828.00	-10692.30	336.30	430221.70	677432.00	32.181496	-103.759834	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
2	9390.00	0.00	0.00	9390.00	0.00	0.00	0.00	0.000	0.00
3	9639.82	5.00	110.86	9639.50	-3.88	10.17	2.00	110.859	3.94
4	12285.30	5.00	110.86	12274.93	-85.92	225.48	0.00	0.000	87.33
5	13167.24	90.00	179.64	12828.00	-658.30	274.10	10.00	68.859	660.01
6	23201.43	90.00	179.64	12828.00	-10692.30	336.30	0.00	0.000	10694.20

FORMATION TOP DETAILS

TVDPath	Formation
731.00	Rustler
1089.00	Top Salt*
4275.00	Base of Salt (Anhydrite)
4498.00	Bell Canyon Ss./ Delaware
5410.00	Cherry Canyon Ss.
7034.00	Brushy Canyon Ss.
8351.00	Bone Spring Lm.
8432.00	Avalon Ss.
8453.00	Bone Spg. Upper Avalon Shale
8888.00	Bone Spg. Lower Avalon Shale
9228.00	1st Bone Spring Lime.
9419.00	1st Bone Spring Ss.
9808.00	2nd Bone Spring Carb.
10005.00	2nd Bone Spring Ss.
10514.00	3rd Bone Spring Carb.
11252.00	3rd Bone Spring Ss.
11480.00	War Wink Ss.
11606.00	Red Hills Ss.
11690.00	Wolfcamp Sh
11710.00	Wolfcamp X Sd
11788.00	Wolfcamp Y Sd
11824.00	Wolfcamp A Sh.
12205.00	Wolfcamp A Lower Carb
12245.00	Wolfcamp B
12444.00	Wolfcamp C
12626.00	Wolfcamp D
12774.00	Wolfcamp E
12828.00	LP



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Prototype are at the sole risk and responsibility of the customer.

Plan: PERMIT Rev1 (#127H/OH)

Created By: Prototype Well Planning, LLC Date: 10:54, December 06 2018

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

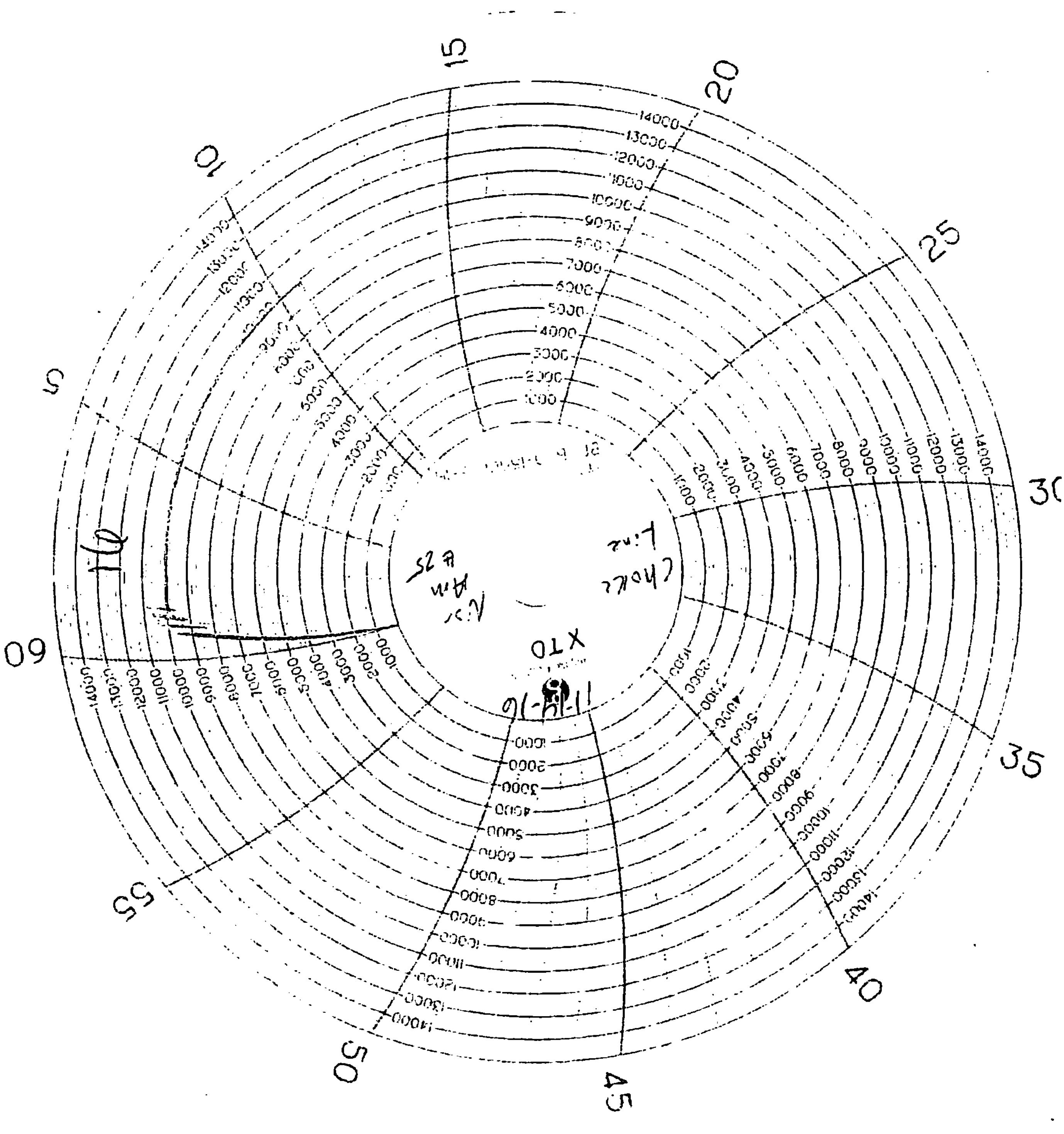
Product Description: FD3.042.0R41/16.5KFLGE/E LE

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 :	

Form PTC - 01 Rev.0 2



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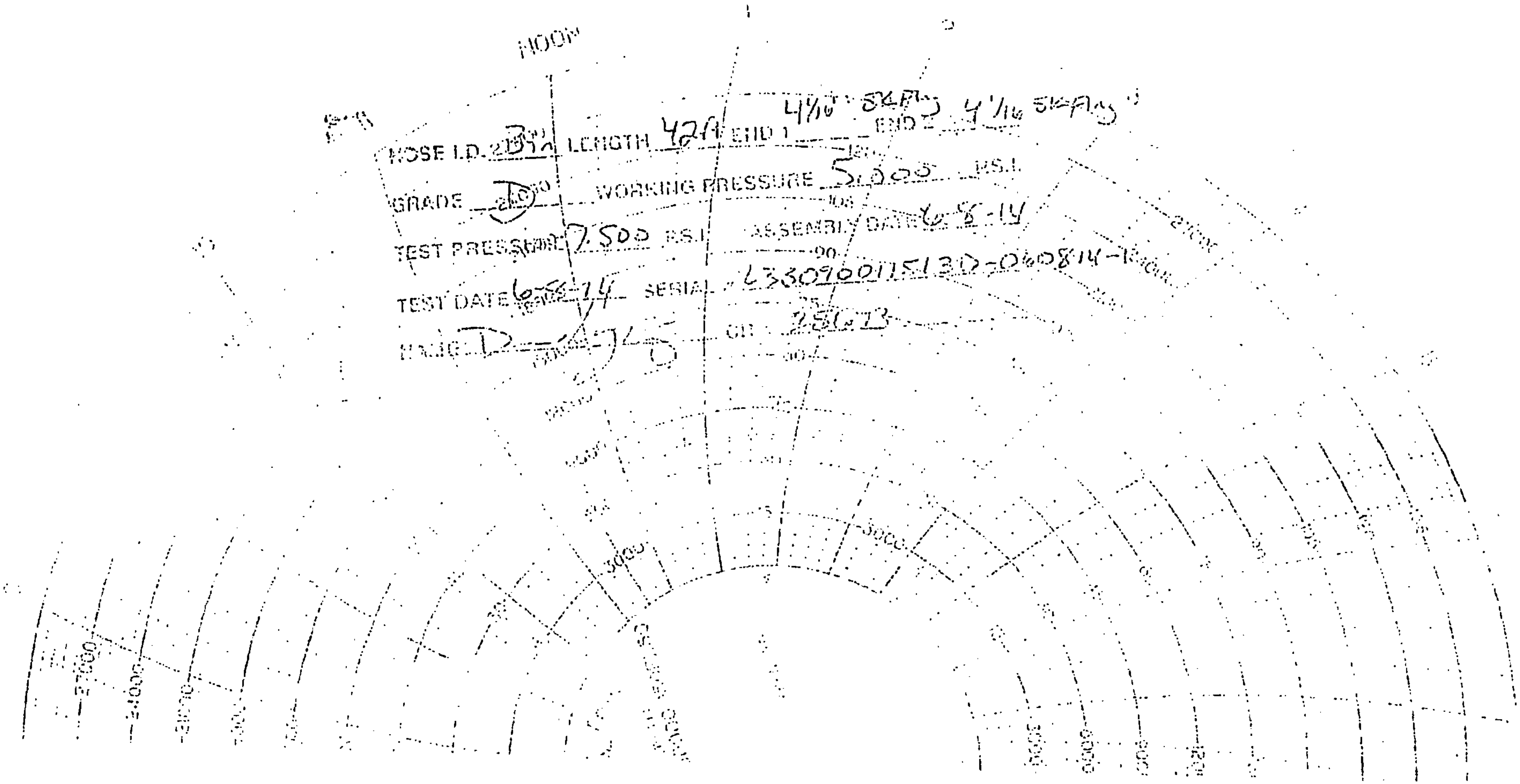

NOON
HOSE I.D. 3" LENGTH 42ft END 1 4 1/16" 5K Flg END 2 4 1/16 5K Flg
GRADE D WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I. ASSEMBLY DATE 6-8-14
TEST DATE 6-8-14 SERIAL # 63309001151 3D-060814-1
D-4745
25673
3000

Surface Cement		Intermediate Cement		2nd Intermediate Cement		Production Cement	
Top of Cement:	0 ft, MD	Top of Cement:	0 ft, MD	Top of Cement:	3830 ft, MD	Top of Cement:	11,910 ft, MD
Casing Shoe:	890 ft, MD	Casing Shoe:	4330 ft, MD	Casing Shoe:	12,210 ft, MD	Casing Shoe:	23,206 ft, MD
Hole Size:	24 in	Hole Size:	17.5 in	Hole Size:	12.25 in	Hole Size:	8.75 in
Casing Size:	18.625 in	Casing Size:	13.375 in	Casing Size:	9.625 in	Casing Size:	5.5 in
Lead		Lead		Lead			
% Excess, OH	100 %	% Excess, OH	100 %	% Excess, OH	20 %		
yield	1.87 ft^3 / sack	yield	1.88 ft^3 / sack	yield	1.88 ft^3 / sack		
TOC for Lead	0 ft, MD	TOC for Lead	0 ft, MD	TOC for Lead	3830 ft, MD		
Tail		Tail		Tail		Tail	
% Excess, OH	100 %	% Excess, OH	100 %	% Excess, OH	20 %	% Excess, OH	20 %
yield	1.35 ft^3 / sack	yield	1.33 ft^3 / sack	yield	1.33 ft^3 / sack	yield	1.33 ft^3 / sack
TOC for Tail	590 ft, MD	TOC for Tail	3830 ft, MD	TOC for Tail	10,710 ft, MD	TOC for Tail	11,910 ft, MD
Lead Calcs		*Lead Calcs*		*Lead Calcs*			
Annular Volume:	1474.61 ft^3 (w/ excess)	Annular Volume:	5321.22 ft^3 (w/ excess)	Annular Volume:	2585.82 ft^3 (w/ excess)		
Cement Volume:	788.6 sacks	Cement Volume:	2830.4 sacks	Cement Volume:	1375.4 sacks		
Tail Calcs		*Tail Calcs*		*Tail Calcs*		*Tail Calcs*	
Annular Volume:	749.80 ft^3 (w/ excess)	Annular Volume:	694.68 ft^3 (w/ excess)	Annular Volume:	563.77 ft^3 (w/ excess)	Annular Volume:	3424.18 ft^3 (w/ exce
Cement Volume:	555.4 sacks	Cement Volume:	522.3 sacks	Cement Volume:	423.9 sacks	Cement Volume:	2574.6 sacks

U.S. Steel Tubular Products Site (http://usstubular.com/)

(/)

Home (http://usstubular.com/) > Pipe Body and API Connections Performance Data (http://usstubular.com/connections/api/)

Pipe Body and API Connections Performance Data

9.625" 40.00lbs/ft (0.395" Wall) P110 HC PDF

Back to Previous List

New Search

~~(http://usstubular.com/connections/api/)~~

USC

3/6/2018 2:26:02 PM

Mechanical Properties	Pipe	BTC	LTC
Minimum Yield Strength	110,000	--	--
Maximum Yield Strength	140,000	--	--
Minimum Tensile Strength	125,000	--	--
Dimensions	**Pipe**	**BTC**	**LTC**
Outside Diameter	9.625	10.625	10.625
Wall Thickness	0.395	--	--
Inside Diameter	8.835	8.835	8.835

Dimensions	Pipe	BTC	LTC
Standard Drift	8.679	8.679	8.679
Alternate Drift	8.750	8.750	8.750
Nominal Linear Weight, T&C	40.00	--	--
Plain End Weight	38.97	--	--
Performance	**Pipe**	**BTC**	**LTC**
Minimum Collapse Pressure	4,230	4,230	4,230
Minimum Internal Yield Pressure	7,910	7,910	7,910
Minimum Pipe Body Yield Strength	1,260	--	--
Joint Strength	--	1,266	988
Reference Length	--	21,097	16,465
Make-Up Data	**Pipe**	**BTC**	**LTC**
Make-Up Loss	--	4.81	4.75
Minimum Make-Up Torque	--	--	7,410
Maximum Make-Up Torque	--	--	12,350

Legal Notice

Gmail

Jennifer Mason <jmason1626@gmail.com>

Fwd: [EXTERNAL] XTO Energy - Poker LAke Unit 15 TWR EC#453876 and other wells

1 message

Sanchez, Jennifer <j1sanchez@blm.gov> Fri, Feb 22, 2019 at 8:59 AM
To: Jennifer Mason <jmason1626@gmail.com>

---------- Forwarded message ---------
From: **Peroyea, Trey** <Trey_Peroyea@xtoenergy.com>
Date: Thu, Feb 21, 2019 at 10:06 AM
Subject: [EXTERNAL] XTO Energy - Poker LAke Unit 15 TWR EC#453876 and other wells
To: j1sanchez@blm.gov <j1sanchez@blm.gov>
Cc: Rabadue, Stephanie <Stephanie_Rabadue@xtoenergy.com>, Kardos, Kelly <Kelly_Kardos@xtoenergy.com>

Hello Jennifer,

Based on our experience in the area, below is what should have been added to the sundry for the well above as well as any of the wells in the general area. Please let me know if there are any questions or concerns. Thanks.

- 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

Kind Regards,

Trey Peroyea

Drilling Engineer

XTO Energy Inc.

6401 N. Holiday Hill Road, Building 5

Midland, Texas 79707

Office: (432) 620-4383 | Mobile: (817) 269-4678

trey_peroyea@xtoenergy.com

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Petroleum Engineer
Bureau of Land Management

PECOS DISTRICT DRILLING
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Permian Operating, LLC**
LEASE NO.:	**NMNM-0506A**
WELL NAME & NO.:	**Poker Lake Unit 15 TWR 127H**
SURFACE HOLE FOOTAGE:	**0330' FSL & 1260' FEL**
BOTTOM HOLE FOOTAGE	**0200' FSL & 0990' FEL Sec. 27, T. 24 S., R 31 E.**
LOCATION:	**Section 15, T. 24 S., R 31 E., NMPM**
COUNTY:	**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.

- **DRILLING OPERATIONS REQUIREMENTS**

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

- Spudding well (minimum of 24 hours)
- Setting and/or Cementing of all casing strings (minimum of 4 hours)
- BOPE tests (minimum of 4 hours)

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

- **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.**

- 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.**

- 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.

- **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.**

- 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.

<u>Wait on cement (WOC) for Potash Areas:</u>
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 <u>24 hours</u>. WOC time will be recorded in the driller's log.

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.

Secretary's Potash
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Red Beds, Rustler, and Delaware.
Abnormal pressure may be encountered in the 3rd Bone Spring and all subsequent formations.

- The **18-5/8** inch surface casing shall be set at approximately **890** 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.

  - 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.

  - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**

  - 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.

  - 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.

- 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 potash.**

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.

9-5/8'' 2nd Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

- The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is:

  Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due potash. <u>Excess calculates to negative 20% - Additional cement will be required.</u>**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

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

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

  Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Excess calculates to 21% - Additional cement may be required**

- 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.

- **PRESSURE CONTROL**

- 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 53.

- 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. These documents shall be posted in the company man's trailer and on the rig floor. 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).

- Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **18-5/8"** surface casing shoe shall be psi.

- **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8" casing shoe shall be psi.**
    - **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
    - **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.**
    - **Manufacturer representative shall install the test plug for the initial BOP test.**
    - **Operator shall perform the 8-5/8" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.**
    - **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.)

10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

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

    - 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).

- The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

- 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.

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

- 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.**

- 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.

- 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.

- **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.

- **DRILL STEM TEST**

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

- **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 022119