

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>NMLC0061634B</b>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. <b>POKER LAKE / NMNM 071016X</b>
2. Name of Operator <b>XTO PERMIAN OPERATING LLC</b>		8. Lease Name and Well No.  <b>POKER LAKE UNIT 30 BS</b>  <b>156H</b>
3a. Address <b>6401 Holiday Hill Road, Bldg 5, Midland, TX 79707</b>	3b. Phone No. (include area code) <b>(432) 682-8873</b>	9. API Well No. <b>30-015-47191</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>SWNE / 2310 FNL / 1920 FEL / LAT 32.102189 / LONG -103.815086</b> At proposed prod. zone <b>SWSE / 200 FSL / 1357 FEL / LAT 32.079879 / LONG -103.813359</b>		10. Field and Pool, or Exploratory <b>PURPLE SAGE WOLFCAMP GAS/null</b>
11. Sec., T. R. M. or Blk. and Survey or Area <b>SEC 30/T25S/R31E/NMP</b>		
14. Distance in miles and direction from nearest town or post office*		12. County or Parish <b>EDDY</b>
13. State <b>NM</b>		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>330 feet</b>	16. No of acres in lease <b>1560.6</b>	17. Spacing Unit dedicated to this well <b>480.0</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>30 feet</b>	19. Proposed Depth <b>12492 feet / 20270 feet</b>	20. BLM/BIA Bond No. in file <b>FED: COB000050</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3365 feet</b>	22. Approximate date work will start* <b>01/01/2020</b>	23. Estimated duration <b>60 days</b>
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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 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). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) <b>KELLY KARDOS / Ph: (432) 682-8873</b>	Date <b>08/25/2019</b>
Title <b>Regulatory Coordinator</b>		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) <b>Christopher Walls / Ph: (575) 234-2234</b>	Date <b>05/22/2020</b>
Title <b>Petroleum Engineer</b>		
Office <b>Carlsbad Field Office</b>		

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.



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

<sup>1</sup> API Number 30-015-47191	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name PURPLE SAGE; WOLFCAMP
<sup>4</sup> Property Code 327328	<sup>5</sup> Property Name POKER LAKE UNIT 30 BS	<sup>6</sup> Well Number 156H
<sup>7</sup> OGRID No. 373075	<sup>8</sup> Operator Name XTO PERMIAN OPERATING, LLC.	<sup>9</sup> Elevation 3,365'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	30	25 S	31 E		2,310	NORTH	1,920	EAST	EDDY

<sup>11</sup> 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
O	31	25 S	31 E		200	SOUTH	1,357	EAST	EDDY

<sup>12</sup> Dedicated Acres 480	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.

	<p>GEODETIC COORDINATES SURFACE LOCATION NAD 27 NME Y= 401,240.6 X= 660,625.1 LAT.= 32.102064°N LONG.= 103.814607°W</p> <p>FIRST TAKE POINT NAD 27 NME Y= 400,550.1 X= 661,185.7 LAT.= 32.100158°N LONG.= 103.812807°W</p> <p>CORNER COORDINATES TABLE NAD 83 NME A - Y= 400,944.7 N, X= 701,070.7 E B - Y= 400,955.6 N, X= 702,400.1 E C - Y= 398,288.0 N, X= 701,058.4 E D - Y= 398,298.0 N, X= 702,389.1 E E - Y= 395,633.7 N, X= 701,071.1 E F - Y= 395,642.9 N, X= 702,401.5 E G - Y= 392,974.7 N, X= 701,083.8 E H - Y= 392,985.5 N, X= 702,412.9 E</p> <p>CORNER COORDINATES TABLE NAD 27 NME A - Y= 400,886.8 N, X= 659,885.2 E B - Y= 400,897.7 N, X= 661,214.6 E C - Y= 398,230.1 N, X= 659,872.8 E D - Y= 398,240.2 N, X= 661,203.5 E E - Y= 395,575.9 N, X= 659,885.4 E F - Y= 395,585.1 N, X= 661,215.8 E G - Y= 392,917.0 N, X= 659,898.0 E H - Y= 392,927.8 N, X= 661,227.1 E</p> <p>LAST TAKE POINT NAD 27 NME Y= 393,257.6 X= 661,198.0 LAT.= 32.080112°N LONG.= 103.812881°W</p> <p>BOTTOM HOLE LOCATION NAD 27 NME Y= 393,127.6 X= 661,198.5 LAT.= 32.079754°N LONG.= 103.812881°W</p>	<p>GEODETIC COORDINATES SURFACE LOCATION NAD 83 NME Y= 401,298.5 X= 701,810.6 LAT.= 32.102189°N LONG.= 103.815086°W</p> <p>FIRST TAKE POINT NAD 83 NME Y= 400,607.9 X= 702,371.2 LAT.= 32.100283°N LONG.= 103.813286°W</p>	<p><sup>17</sup> 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.</p> <p><i>Kelly Kardos</i> 7/22/19 Signature Date Kelly Kardos Printed Name kelly_kardos@xtoenergy.com E-mail Address</p>
	<p><sup>18</sup> 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.</p> <p>07-09-2019 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: </p> <p>MARK DILLON HARP 23786 Certificate Number LB 2017071033</p>		

Intent ☒ As Drilled ☐

API #								
Operator Name: XTO PERMIAN OPERATING, LLC			Property Name: POKER LAKE UNIT 30 BS			Well Number 156H		

Kick Off Point (KOP)

UL G	Section 30	Township 25S	Range 31E	Lot	Feet 2310	From N/S NORTH	Feet 1920	From E/W EAST	County EDDY
Latitude 32.102189					Longitude -103.815086				NAD 83

First Take Point (FTP)

UL J	Section 30	Township 25S	Range 31E	Lot	Feet 2310	From N/S SOUTH	Feet 1357	From E/W EAST	County EDDY
Latitude 32.100283					Longitude -103.813286				NAD 83

Last Take Point (LTP)

UL O	Section 31	Township 25S	Range 31E	Lot	Feet 330	From N/S SOUTH	Feet 1357	From E/W EAST	County EDDY
Latitude 32.080236					Longitude -103.813359				NAD 83

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 #								
Operator Name: XTO PERMIAN OPERATING, LLC			Property Name: POKER LAKE UNIT 30 BS			Well Number 105H		

KZ 06/29/2018

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	XTO Permian Operating LLC
<b>WELL NAME &amp; NO.:</b>	Poker Lake Unit 30 BS 156H
<b>LOCATION:</b>	Sec 30-25S-31E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit

## 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 890 feet (a minimum of 70 feet (Eddy County) 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.

**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 intermediate casing set at 4,150 feet 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 or potash.**

❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

**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 intermediate casing set at 10,300 feet is:

- Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

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

- Cement should tie-back at least **200 feet** into previous casing string. 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. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** 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. 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.

#### **D. SPECIAL REQUIREMENT (S)**

##### **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.

##### **Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months. (This is not necessary for secondary recovery unit wells)

## **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)

☒ 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 2<sup>nd</sup> 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 integrity 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 integrity 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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - 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.
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 not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for

the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# Operator Certification Data Report

06/18/2020

## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Kelly Kardos

**Signed on:** 08/23/2019

**Title:** Regulatory Coordinator

**Street Address:** 6401 Holiday Hill Road Bldg 5

**City:** Midland

**State:** TX

**Zip:** 79707

**Phone:** (432)620-4374

**Email address:** kelly\_kardos@xtoenergy.com

## Field Representative

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**



APD ID: 10400046395

Submission Date: 08/25/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS

Well Number: 156H

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

## Section 1 - General

APD ID: 10400046395

Tie to previous NOS? Y

Submission Date: 08/25/2019

BLM Office: CARLSBAD

User: Kelly Kardos

Title: Regulatory Coordinator

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMLC0061634B

Lease Acres: 1560.6

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? YES

Federal or Indian agreement: FEDERAL

Agreement number: NMNM071016X

Agreement name: POKER LAKE

Keep application confidential? NO

Permitting Agent? NO

APD Operator: XTO PERMIAN OPERATING LLC

Operator letter of designation:

## Operator Info

Operator Organization Name: XTO PERMIAN OPERATING LLC

Operator Address: 6401 Holiday Hill Road, Bldg 5

Zip: 79707

Operator PO Box:

Operator City: Midland

State: TX

Operator Phone: (432)682-8873

Operator Internet Address:

## Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: POKER LAKE UNIT 30 BS

Well Number: 156H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: PURPLE SAGE  
WOLFCAMP GAS

Pool Name:

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** POKER LAKE UNIT 30 BS

**Well Number:** 156H

**Is the proposed well in an area containing other mineral resources?** USEABLE WATER,NATURAL GAS,OIL

**Is the proposed well in a Helium production area?** N

**Use Existing Well Pad?** N

**New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**  
POKER LAKE UNIT 30 BS

**Number:** 3

**Well Class:** HORIZONTAL

**Number of Legs:** 1

**Well Work Type:** Drill

**Well Type:** CONVENTIONAL GAS WELL

**Describe Well Type:**

**Well sub-Type:** DELINEATION

**Describe sub-type:**

**Distance to town:**

**Distance to nearest well:** 30 FT

**Distance to lease line:** 330 FT

**Reservoir well spacing assigned across Measurement:** 480 Acres

**Well plat:** PLU\_30\_BS\_156H\_C102\_20190823100958.pdf

**Well work start Date:** 01/01/2020

**Duration:** 60 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:**

**Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	2310	FNL	1920	FEL	25S	31E	30	Aliquot SWNE	32.102189	-103.815086	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061634 B	3365	0	0	N
KOP Leg #1	2310	FNL	1920	FEL	25S	31E	30	Aliquot SWNE	32.102189	-103.815086	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061634 B	-8567	11954	11932	N
PPP Leg #1-1	330	FNL	1357	FEL	25S	31E	31	Aliquot NWNE	32.09308	-103.813359	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMLC0 061634 B	-9127	15157	12492	Y

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** POKER LAKE UNIT 30 BS

**Well Number:** 156H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-2	2310	FSL	1357	FEL	25S	31E	30	Aliquot NWSE	32.100283	- 103.813286	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 015775 6A	- 9127	12847	12492	Y
EXIT Leg #1	330	FSL	1357	FEL	25S	31E	31	Aliquot SWSE	32.080236	- 103.813359	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 015775 6A	- 9127	20140	12492	Y
BHL Leg #1	200	FSL	1357	FEL	25S	31E	31	Aliquot SWSE	32.079879	- 103.813359	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 015775 6A	- 9127	20270	12492	Y

APD ID: 10400046395

Submission Date: 08/25/2019

Highlighted data  
reflects the most  
recent changes

Operator Name: XTO PERMIAN OPERATING LLC

Well Name: POKER LAKE UNIT 30 BS

Well Number: 156H

[Show Final Text](#)

Well Type: CONVENTIONAL GAS WELL

Well Work Type: Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
522399	PERMIAN	3365	0	0	OTHER : Quaternary	NONE	N
522390	RUSTLER	2592	773	773	SILTSTONE	USEABLE WATER	N
522391	TOP SALT	2229	1136	1136	SALT	OTHER : Produced Water	N
522392	BASE OF SALT	-507	3872	3872	SALT	OTHER : Produced Water	N
522388	DELAWARE	-721	4086	4086	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
522389	BONE SPRING	-4663	8028	8028	SANDSTONE	NATURAL GAS, OIL, OTHER : Produced Water	N
522407	WOLFCAMP	-8026	11391	11391	SHALE	NATURAL GAS, OIL, OTHER : Produced Water	Y

## Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M

Rating Depth: 12492

**Equipment:** The blow out preventer equipment (BOP) on surface casing temporary wellhead will consist of a 21-1/4 minimum 2M Hydril. MASP should not exceed 1245 psi. Once the permanent wellhead is installed 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 5372 psi.

**Requesting Variance?** YES

**Variance request:** XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint. 13-3/8" Collapse analyzed using 50% evacuation based on regional experience. 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 Permanent Wellhead – GE RSH Multibowl System A. Starting Head (RSH System): 13-3/8" SOW bottom x 13-5/8" 5M 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 8-5/8" casing per Onshore Order 2. Wellhead manufacturer representative may not be present for BOP test plug installation 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.

**Testing Procedure:** All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 13-5/8 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When the 11-3/4 and 8-5/8 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.

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** POKER LAKE UNIT 30 BS

**Well Number:** 156H

**Choke Diagram Attachment:**

PLU\_30\_BS\_2M3MCM\_20190808103915.pdf

PLU\_30\_BS\_10MCM\_20190809130606.pdf

**BOP Diagram Attachment:**

PLU\_30\_BS\_Multi\_20190808104125.pdf

PLU\_30\_BS\_2MBOP\_20190809133557.pdf

PLU\_30\_BS\_10MBOP\_20190809133611.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	24	18.625	NEW	API	N	0	930	0	930	3365	2435	930	J-55	87.5	BUTT	1.5	1.81	BUOY	16.89	DRY	16.89
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	4150	0	4150	3370	-785	4150	HCL-80	68	BUTT	2.31	1.67	DRY	10.41	DRY	10.41
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	11407	0	11407		-8042	11407	HCL-80	40	BUTT	1.27	1.02	DRY	2.77	DRY	2.77
4	PRODUCTION	8.75	5.5	NEW	API	N	0	20270	0	12492	3370	-9127	20270	P-110	17	BUTT	1.38	1.01	DRY	2.16	DRY	2.16

**Casing Attachments**

**Casing ID:** 1      **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

PLU\_30\_BS\_156H\_Csg\_20190823101757.pdf



**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** POKER LAKE UNIT 30 BS

**Well Number:** 156H

#### Casing Attachments

---

**Casing ID:** 2      **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

PLU\_30\_BS\_156H\_Csg\_20190823101818.pdf

---

**Casing ID:** 3      **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

PLU\_30\_BS\_156H\_Csg\_20190823101833.pdf

---

**Casing ID:** 4      **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

PLU\_30\_BS\_156H\_Csg\_20190823101906.pdf

---

## Section 4 - Cement

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** POKER LAKE UNIT 30 BS

**Well Number:** 156H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	930	840	1.87	12.8	1571	100	EconoCem-HLTRRC	none
SURFACE	Tail				550	14.8	1.35	743	100	Halcm-C	2% CaCl
INTERMEDIATE	Lead		0	4150	2450	1.88	12.8	4606	100	Halcm-C	2% CaCl
INTERMEDIATE	Tail				850	1.35	14.8	1148	100	Halcm-C	2% CaCl
INTERMEDIATE	Lead	4200	0	1140 7	1130	1.87	12.8	2113	100	Halcm-C	2% CaCl
INTERMEDIATE	Tail				390	1.35	14.8	527	100	Halcm-C	2% CaCl
INTERMEDIATE	Lead		4250	1140 7	2050	1.88	12.8	3854	100	Halcm-C	2%CaCl
INTERMEDIATE	Tail				470	1.33	14.8	625	100	Halcm-C	2%CaCl
PRODUCTION	Lead		0	2027 0	1840	1.88	11.5	3459. 2	20	Halcm-C	2%CaCl
PRODUCTION	Tail				2000	1.33	13.2	2660	20	VersaCem	none

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** The necessary mud products for weight addition and fluid loss control will be on location at all times.

**Describe the mud monitoring system utilized:** A Pason or Totco will be used to detect changes in loss or gain of mud volume.

### Circulating Medium Table

**Operator Name:** XTO PERMIAN OPERATING LLC**Well Name:** POKER LAKE UNIT 30 BS**Well Number:** 156H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1140 7	1249 2	OTHER : FW / Cut Brine / Poly / OBM	12.2	12.8							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
4150	1140 7	OTHER : FW / Cut Brine	9.1	9.5							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
0	930	OTHER : FW/Native	8.4	8.8							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
930	4150	OTHER : Brine/Gel Sweeps	9.8	10.2							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

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** POKER LAKE UNIT 30 BS

**Well Number:** 156H

## Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

Open hole logging to include Density/Neutron/PE/Dual Laterlog/Spectral Gamma from kick-off point to intermediate casing shoe.

**List of open and cased hole logs run in the well:**

CEMENT BOND LOG,COMPENSATED NEUTRON LOG,DIRECTIONAL SURVEY,GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,

**Coring operation description for the well:**

No coring will take place on this well.

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 8120

**Anticipated Surface Pressure:** 5371

**Anticipated Bottom Hole Temperature(F):** 170

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

Potential loss of circulation through the Capitan Reef.

**Contingency Plans geohazards description:**

The necessary mud products for weight addition and fluid loss control will be on location at all times.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. 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.

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

PLU\_30\_BS\_H2S\_Dia\_Pad\_3\_20190809134142.pdf

PLU\_30\_BS\_H2S\_Plan\_20190808111945.pdf

**Operator Name:** XTO PERMIAN OPERATING LLC

**Well Name:** POKER LAKE UNIT 30 BS

**Well Number:** 156H

## Section 8 - Other Information

### **Proposed horizontal/directional/multi-lateral plan submission:**

PLU\_30\_BS\_156H\_DD\_20190823102146.pdf

### **Other proposed operations facets description:**

The surface fresh water sands will be protected by setting 18-5/8 inch casing @ 930' (206' 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. A 12-1/4 inch vertical hole will be drilled to 11407' 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.

### **Other proposed operations facets attachment:**

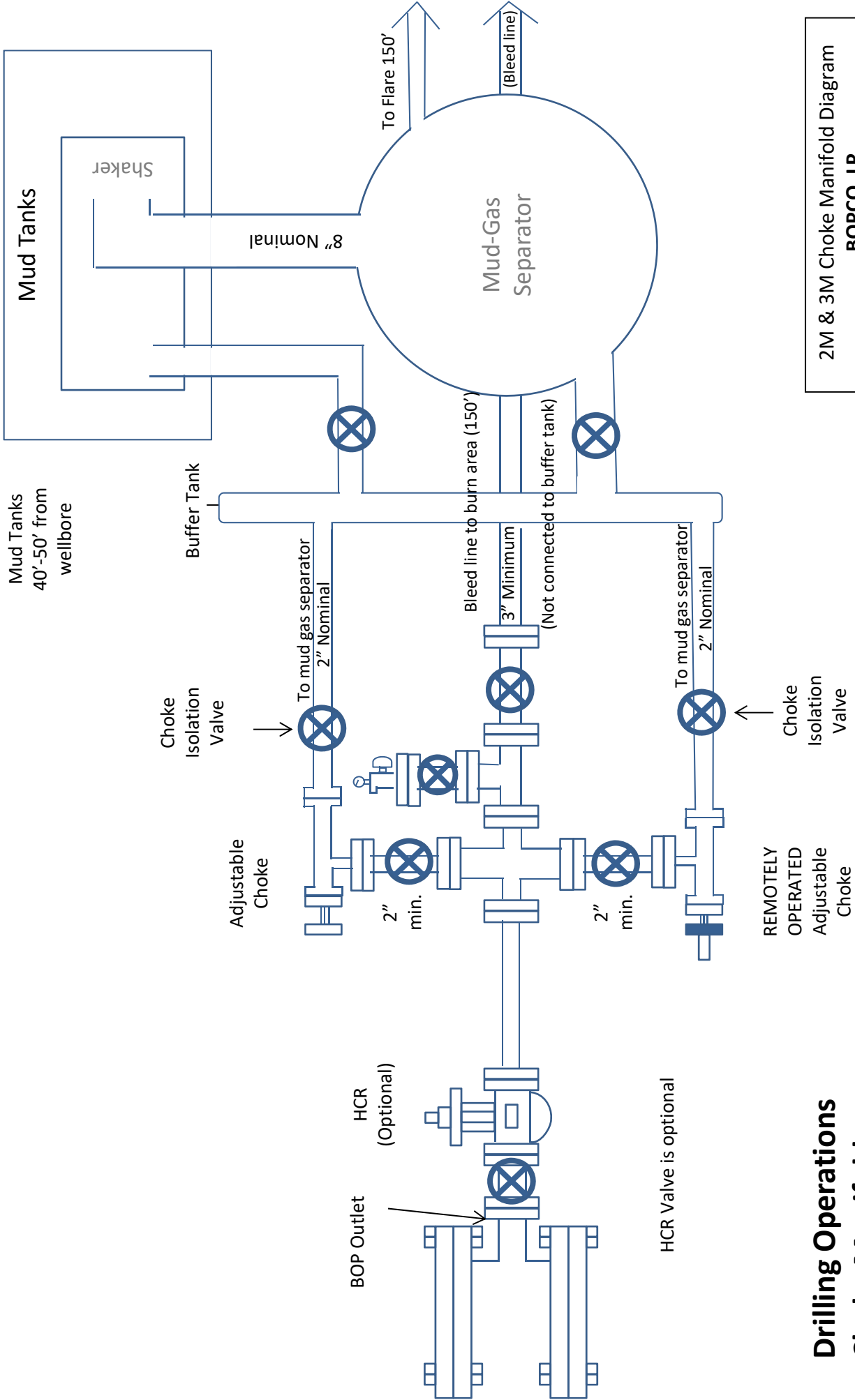
PLU\_30\_BS\_\_GCPE\_20190808112147.pdf

PLU\_30\_BS\_\_GCPW\_20190808112156.pdf

### **Other Variance attachment:**

PLU\_30\_BS\_FH\_20190808112305.pdf

PLU\_30\_BS\_WWC\_20190809134239.pdf



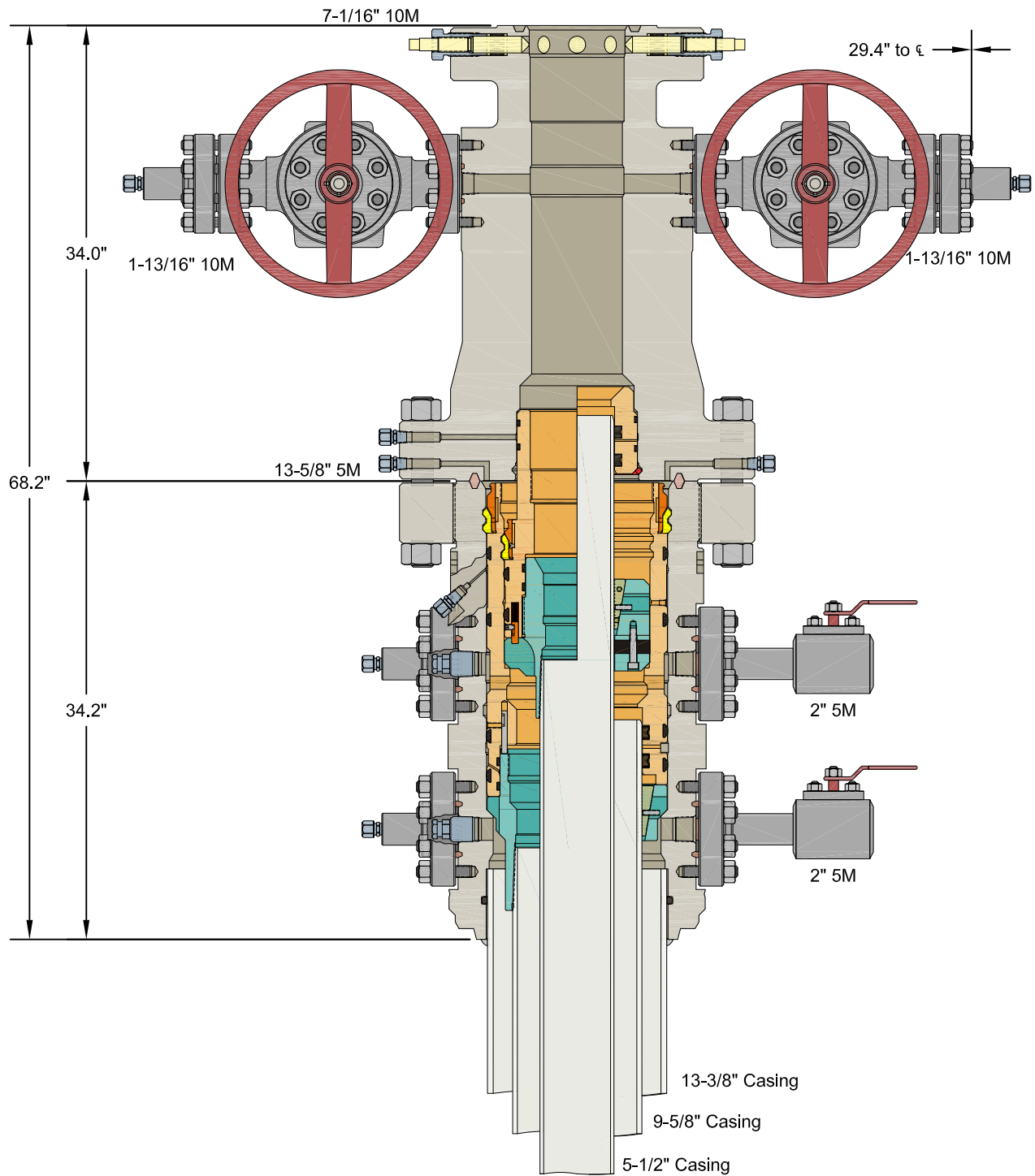
2M & 3M Choke Manifold Diagram  
BOPCO, LP

**Drilling Operations  
Choke Manifold  
2M & 3M Service**





GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE

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XTO ENERGY, INC.

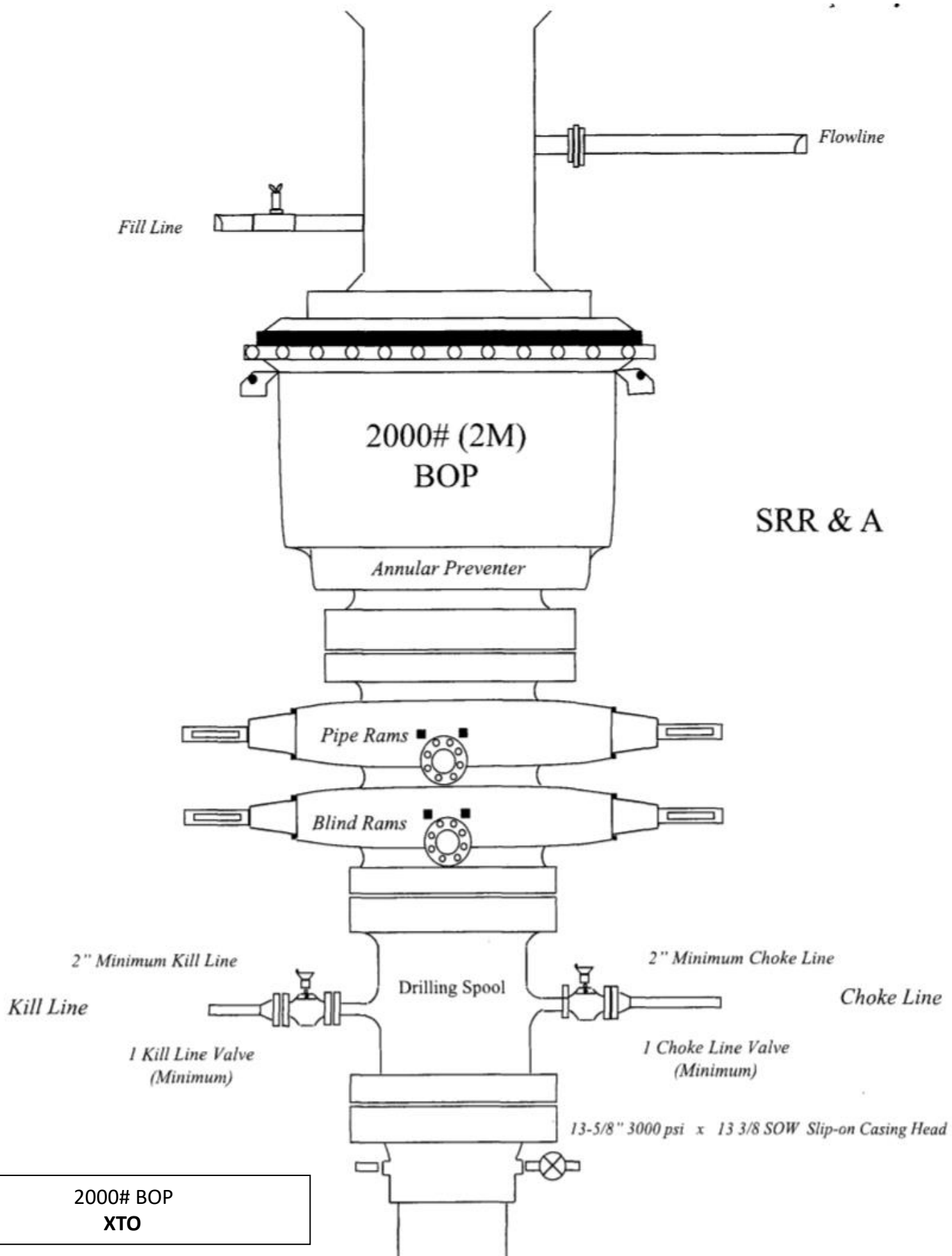
13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead  
Assembly, With T-EBS-F Tubing Head

DRAWN VJK 16FEB17

APPRV KN 16FEB17

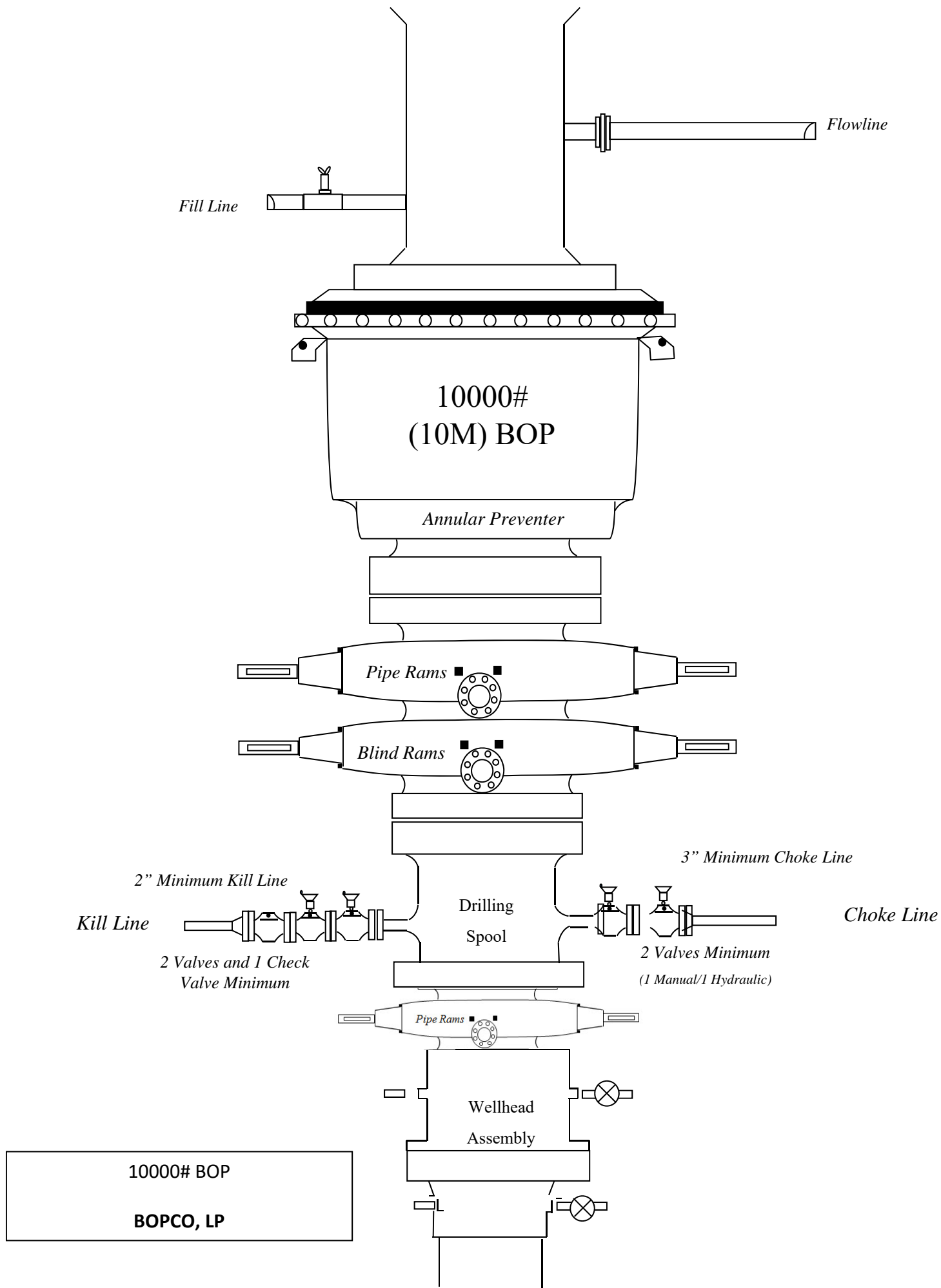
FOR REFERENCE ONLY  
DRAWING NO. 10012842





SRR & A

2000# BOP  
XTO



### Casing Assumption Worksheet

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 930'	18-5/8"	87.5	BTC	J-55	New	1.81	1.50	16.89
17-1/2"	0' – 4150'	13-3/8"	68	BTC	HCL-80	New	1.67	2.31	10.41
12-1/4"	0' – 11407'	9-5/8"	40	BTC	HCL-80	New	1.02	1.27	2.77
8-3/4"	0' – 20270'	5-1/2"	17	BTC	P-110	New	1.01	1.38	2.16

- 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, whichever is less

#### Wellhead:

##### *Temporary Wellhead*

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

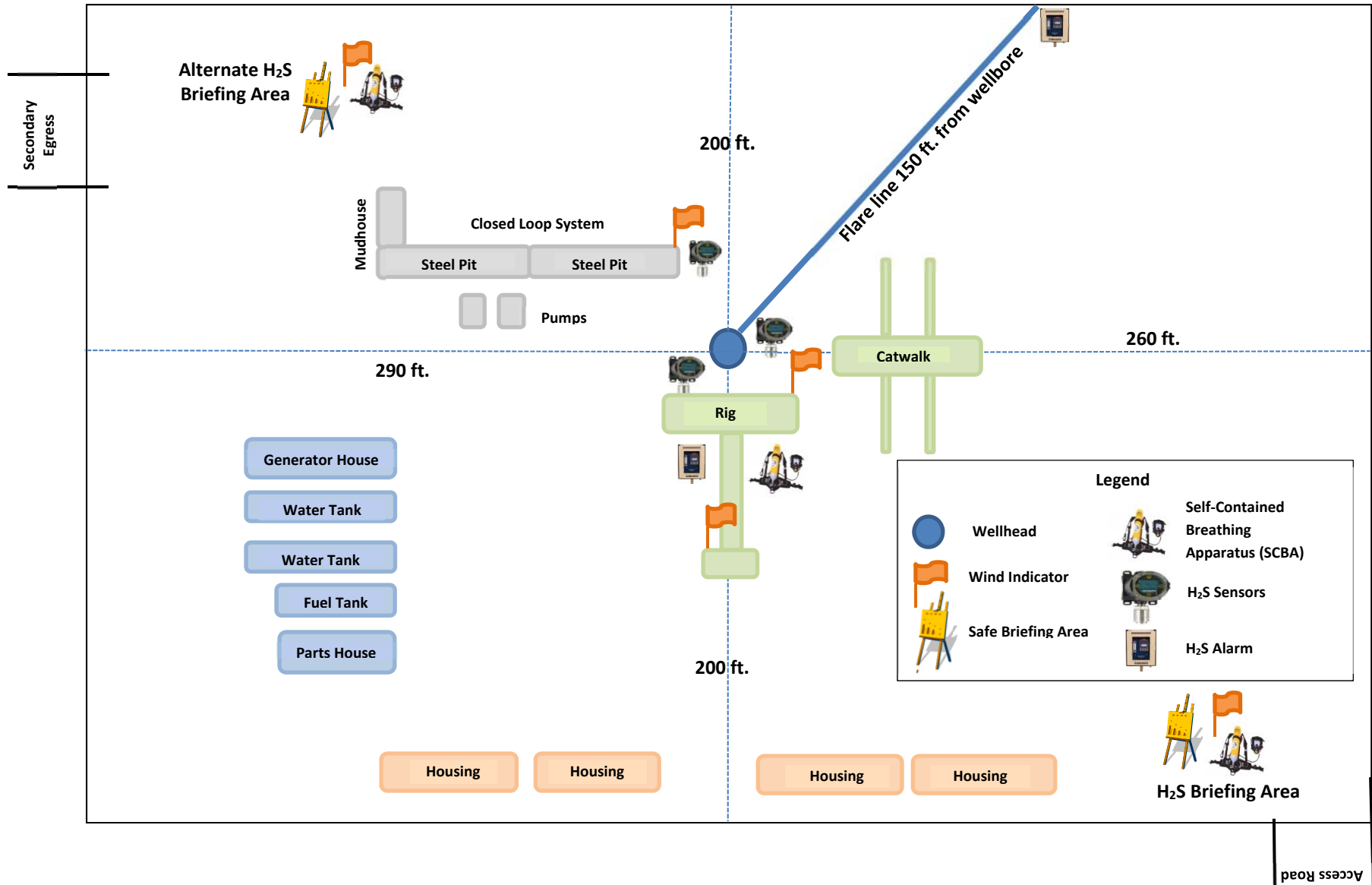
##### *Permanent Wellhead – GE RSH Multibowl System*

- 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

↑  
S  
|

Prevailing Winds  
Direction SW

## H<sub>2</sub>S Briefing Areas and Alarm Locations





## **HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN**

**Assumed 100 ppm ROE = 3000'**

100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

### **Emergency Procedures**

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - o Detection of H<sub>2</sub>S, and
  - o Measures for protection against the gas,
  - o Equipment used for protection and emergency response.

### **Ignition of Gas source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

### **Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air = 1	2 ppm	N/A	1000 ppm

### **Contacting Authorities**

All XTO location personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

## **CARLSBAD OFFICE – EDDY & LEA COUNTIES**

3104 E. Greene St., Carlsbad, NM 88220  
Carlsbad, NM

575-887-7329

### **XTO PERSONNEL:**

Kendall Decker, Drilling Manager	903-521-6477
Milton Turman, Drilling Superintendent	817-524-5107
Jeff Raines, Construction Foreman	432-557-3159
Toady Sanders, EH & S Manager	903-520-1601
Wes McSpadden, Production Foreman	575-441-1147

### **SHERIFF DEPARTMENTS:**

Eddy County	575-887-7551
Lea County	575-396-3611

### **NEW MEXICO STATE POLICE:**

575-392-5588

### **FIRE DEPARTMENTS:**

	911
Carlsbad	575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359

### **HOSPITALS:**

	911
Carlsbad Medical Emergency	575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	575-396-2359

### **AGENT NOTIFICATIONS:**

#### **For Lea County:**

Bureau of Land Management – Hobbs	575-393-3612
New Mexico Oil Conservation Division – Hobbs	575-393-6161

#### **For Eddy County:**

Bureau of Land Management - Carlsbad	575-234-5972
New Mexico Oil Conservation Division - Artesia	575-748-1283



## **XTO Energy**

**Eddy County, NM (NAD-27)**

**PLU 30 Big Sinks**

**#156H**

**OH**

**Plan: PERMIT**

## **Standard Planning Report**

**01 August, 2019**



Project: Eddy County, NM (NAD-27)  
Site: PLU 30 Big Sinks  
Well: #156H  
Wellbore: OH  
Design: PERMIT

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: #156H

Rig Name:		RKB = 25' @ 3390.00usft			
Ground Level:		3365.00			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	401240.60	660625.10	32.1020643	-103.8146066

DESIGN TARGET DETAILS

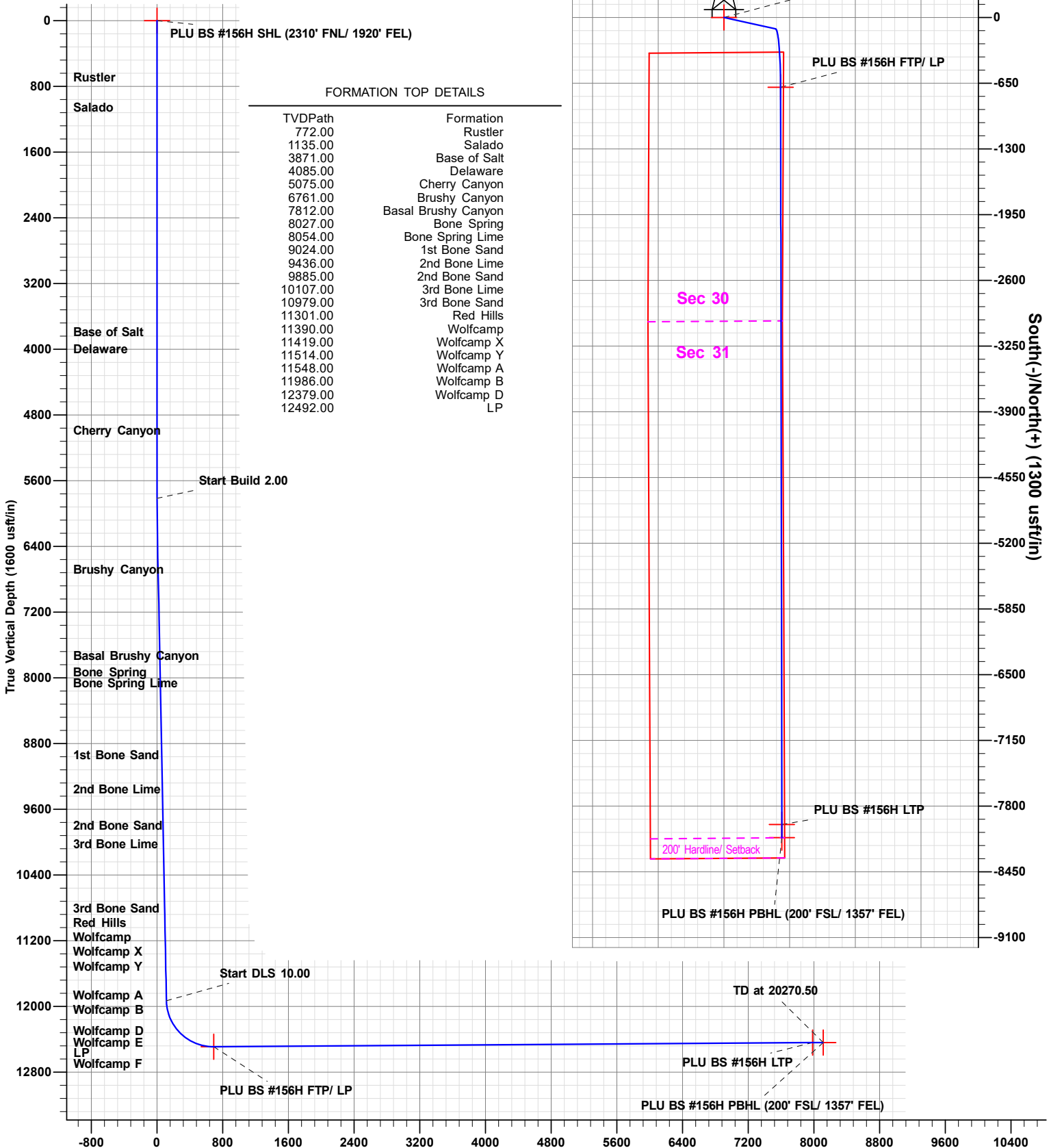
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PLU BS #156H SHL (2310' FNL/ 1920' FEL)	0.00	0.00	0.00	401240.60	660625.10	32.1020643	-103.8146066	Point
PLU BS #156H PBHL (200' FSL/ 1357' FEL)	12440.18	-8113.00	573.40	393127.60	661198.50	32.0797545	-103.8128814	Point
PLU BS #156H LTP	12441.09	-7983.00	572.90	393257.60	661198.00	32.0801119	-103.8128810	Point
PLU BS #156H FTP/ LP	12492.00	-690.50	560.60	400550.10	661185.70	32.1001587	-103.8128071	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	0.00	0.00
2	5815.00	0.00	0.00	5815.00	0.00	0.00	0.00	0.00	0.00
3	6064.88	5.00	102.54	6064.56	-2.36	10.63	2.00	102.54	2.38
4	11954.75	5.00	102.54	11932.04	-113.74	511.49	0.00	0.00	114.64
5	12847.81	90.40	179.90	12492.00	-690.50	560.60	10.00	77.38	691.48
6	20140.50	90.40	179.90	12441.09	-7983.00	573.18	0.00	0.00	7983.99
7	20270.50	90.40	179.90	12440.18	-8113.00	573.40	0.00	0.00	8113.99

FORMATION TOP DETAILS

TVDPATH	Formation
772.00	Rustler
1135.00	Salado
3871.00	Base of Salt
4085.00	Delaware
5075.00	Cherry Canyon
6761.00	Brushy Canyon
7812.00	Basal Brushy Canyon
8027.00	Bone Spring
8054.00	Bone Spring Lime
9024.00	1st Bone Sand
9436.00	2nd Bone Lime
9885.00	2nd Bone Sand
10107.00	3rd Bone Lime
10979.00	3rd Bone Sand
11301.00	Red Hills
11390.00	Wolfcamp
11419.00	Wolfcamp X
11514.00	Wolfcamp Y
11548.00	Wolfcamp A
11986.00	Wolfcamp B
12379.00	Wolfcamp D
12492.00	LP



Vertical Section at 179.90° (1600 usft/in)

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 user.

Plan: PERMIT (#156H/OH)

Created By: Matthew May Date: 14:36, August 01 2019





## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #156H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Site:</b>	PLU 30 Big Sinks	<b>North Reference:</b>	Grid
<b>Well:</b>	#156H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

<b>Project</b>	Eddy County, NM (NAD-27)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

Site		PLU 30 Big Sinks				
Site Position:		Northing:	401,221.20 usft	Latitude:	32.1020486	
From:	Map	Easting:	657,754.30 usft	Longitude:	-103.8238776	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.27 °

Well	#156H					
Well Position	+N/-S	19.40 usft	Northing:	401,240.60 usft	Latitude:	32.1020643
	+E/-W	2,870.80 usft	Easting:	660,625.10 usft	Longitude:	-103.8146066
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,365.00 usft

<b>Wellbore</b>	OH			
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<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	08/01/19	6.83	59.88	47,623

<b>Design</b>	PERMIT			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	179.90

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,815.00	0.00	0.00	5,815.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,064.88	5.00	102.54	6,064.56	-2.36	10.63	2.00	2.00	0.00	102.54	
11,954.75	5.00	102.54	11,932.04	-113.74	511.49	0.00	0.00	0.00	0.00	
12,847.81	90.40	179.90	12,492.00	-690.50	560.60	10.00	9.56	8.66	77.38	PLU BS #156H FTF
20,140.50	90.40	179.90	12,441.09	-7,983.00	573.18	0.00	0.00	0.00	0.00	PLU BS #156H LTF
20,270.50	90.40	179.90	12,440.18	-8,113.00	573.40	0.00	0.00	0.00	0.00	PLU BS #156H PBI



## Planning Report

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<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Site:</b>	PLU 30 Big Sinks	<b>North Reference:</b>	Grid
<b>Well:</b>	#156H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
772.00	0.00	0.00	772.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Rustler</b>									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,135.00	0.00	0.00	1,135.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Salado</b>									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,871.00	0.00	0.00	3,871.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Base of Salt</b>									
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,085.00	0.00	0.00	4,085.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Delaware</b>									
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00



## Planning Report

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<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Site:</b>	PLU 30 Big Sinks	<b>North Reference:</b>	Grid
<b>Well:</b>	#156H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,075.00	0.00	0.00	5,075.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,815.00	0.00	0.00	5,815.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	1.70	102.54	5,899.99	-0.27	1.23	0.28	2.00	2.00	0.00
6,000.00	3.70	102.54	5,999.87	-1.30	5.83	1.31	2.00	2.00	0.00
6,064.88	5.00	102.54	6,064.56	-2.36	10.63	2.38	2.00	2.00	0.00
6,100.00	5.00	102.54	6,099.55	-3.03	13.62	3.05	0.00	0.00	0.00
6,200.00	5.00	102.54	6,199.17	-4.92	22.12	4.96	0.00	0.00	0.00
6,300.00	5.00	102.54	6,298.79	-6.81	30.63	6.86	0.00	0.00	0.00
6,400.00	5.00	102.54	6,398.41	-8.70	39.13	8.77	0.00	0.00	0.00
6,500.00	5.00	102.54	6,498.03	-10.59	47.63	10.68	0.00	0.00	0.00
6,600.00	5.00	102.54	6,597.65	-12.48	56.14	12.58	0.00	0.00	0.00
6,700.00	5.00	102.54	6,697.27	-14.37	64.64	14.49	0.00	0.00	0.00
6,763.97	5.00	102.54	6,761.00	-15.58	70.08	15.71	0.00	0.00	0.00
Brushy Canyon									
6,800.00	5.00	102.54	6,796.89	-16.27	73.14	16.39	0.00	0.00	0.00
6,900.00	5.00	102.54	6,896.51	-18.16	81.65	18.30	0.00	0.00	0.00
7,000.00	5.00	102.54	6,996.13	-20.05	90.15	20.21	0.00	0.00	0.00
7,100.00	5.00	102.54	7,095.75	-21.94	98.65	22.11	0.00	0.00	0.00
7,200.00	5.00	102.54	7,195.37	-23.83	107.16	24.02	0.00	0.00	0.00
7,300.00	5.00	102.54	7,294.99	-25.72	115.66	25.92	0.00	0.00	0.00
7,400.00	5.00	102.54	7,394.61	-27.61	124.17	27.83	0.00	0.00	0.00
7,500.00	5.00	102.54	7,494.23	-29.50	132.67	29.73	0.00	0.00	0.00
7,600.00	5.00	102.54	7,593.85	-31.39	141.17	31.64	0.00	0.00	0.00
7,700.00	5.00	102.54	7,693.47	-33.29	149.68	33.55	0.00	0.00	0.00
7,800.00	5.00	102.54	7,793.09	-35.18	158.18	35.45	0.00	0.00	0.00
7,818.99	5.00	102.54	7,812.00	-35.54	159.79	35.81	0.00	0.00	0.00
Basal Brushy Canyon									
7,900.00	5.00	102.54	7,892.71	-37.07	166.68	37.36	0.00	0.00	0.00
8,000.00	5.00	102.54	7,992.33	-38.96	175.19	39.26	0.00	0.00	0.00
8,034.81	5.00	102.54	8,027.00	-39.62	178.15	39.93	0.00	0.00	0.00
Bone Spring									
8,061.91	5.00	102.54	8,054.00	-40.13	180.45	40.44	0.00	0.00	0.00
Bone Spring Lime									
8,100.00	5.00	102.54	8,091.95	-40.85	183.69	41.17	0.00	0.00	0.00
8,200.00	5.00	102.54	8,191.57	-42.74	192.20	43.08	0.00	0.00	0.00
8,300.00	5.00	102.54	8,291.19	-44.63	200.70	44.98	0.00	0.00	0.00
8,400.00	5.00	102.54	8,390.81	-46.52	209.20	46.89	0.00	0.00	0.00
8,500.00	5.00	102.54	8,490.43	-48.41	217.71	48.79	0.00	0.00	0.00
8,600.00	5.00	102.54	8,590.05	-50.30	226.21	50.70	0.00	0.00	0.00



## Planning Report

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<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Site:</b>	PLU 30 Big Sinks	<b>North Reference:</b>	Grid
<b>Well:</b>	#156H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,700.00	5.00	102.54	8,689.67	-52.20	234.71	52.61	0.00	0.00	0.00
8,800.00	5.00	102.54	8,789.29	-54.09	243.22	54.51	0.00	0.00	0.00
8,900.00	5.00	102.54	8,888.91	-55.98	251.72	56.42	0.00	0.00	0.00
9,000.00	5.00	102.54	8,988.53	-57.87	260.22	58.32	0.00	0.00	0.00
9,035.61	5.00	102.54	9,024.00	-58.54	263.25	59.00	0.00	0.00	0.00
<b>1st Bone Sand</b>									
9,100.00	5.00	102.54	9,088.14	-59.76	268.73	60.23	0.00	0.00	0.00
9,200.00	5.00	102.54	9,187.76	-61.65	277.23	62.13	0.00	0.00	0.00
9,300.00	5.00	102.54	9,287.38	-63.54	285.74	64.04	0.00	0.00	0.00
9,400.00	5.00	102.54	9,387.00	-65.43	294.24	65.95	0.00	0.00	0.00
9,449.18	5.00	102.54	9,436.00	-66.36	298.42	66.88	0.00	0.00	0.00
<b>2nd Bone Lime</b>									
9,500.00	5.00	102.54	9,486.62	-67.32	302.74	67.85	0.00	0.00	0.00
9,600.00	5.00	102.54	9,586.24	-69.22	311.25	69.76	0.00	0.00	0.00
9,700.00	5.00	102.54	9,685.86	-71.11	319.75	71.66	0.00	0.00	0.00
9,800.00	5.00	102.54	9,785.48	-73.00	328.25	73.57	0.00	0.00	0.00
9,899.90	5.00	102.54	9,885.00	-74.89	336.75	75.47	0.00	0.00	0.00
<b>2nd Bone Sand</b>									
9,900.00	5.00	102.54	9,885.10	-74.89	336.76	75.48	0.00	0.00	0.00
10,000.00	5.00	102.54	9,984.72	-76.78	345.26	77.38	0.00	0.00	0.00
10,100.00	5.00	102.54	10,084.34	-78.67	353.77	79.29	0.00	0.00	0.00
10,122.74	5.00	102.54	10,107.00	-79.10	355.70	79.72	0.00	0.00	0.00
<b>3rd Bone Lime</b>									
10,200.00	5.00	102.54	10,183.96	-80.56	362.27	81.19	0.00	0.00	0.00
10,300.00	5.00	102.54	10,283.58	-82.45	370.77	83.10	0.00	0.00	0.00
10,400.00	5.00	102.54	10,383.20	-84.34	379.28	85.01	0.00	0.00	0.00
10,500.00	5.00	102.54	10,482.82	-86.23	387.78	86.91	0.00	0.00	0.00
10,600.00	5.00	102.54	10,582.44	-88.13	396.28	88.82	0.00	0.00	0.00
10,700.00	5.00	102.54	10,682.06	-90.02	404.79	90.72	0.00	0.00	0.00
10,800.00	5.00	102.54	10,781.68	-91.91	413.29	92.63	0.00	0.00	0.00
10,900.00	5.00	102.54	10,881.30	-93.80	421.79	94.53	0.00	0.00	0.00
10,998.07	5.00	102.54	10,979.00	-95.65	430.13	96.40	0.00	0.00	0.00
<b>3rd Bone Sand</b>									
11,000.00	5.00	102.54	10,980.92	-95.69	430.30	96.44	0.00	0.00	0.00
11,100.00	5.00	102.54	11,080.54	-97.58	438.80	98.35	0.00	0.00	0.00
11,200.00	5.00	102.54	11,180.16	-99.47	447.31	100.25	0.00	0.00	0.00
11,300.00	5.00	102.54	11,279.78	-101.36	455.81	102.16	0.00	0.00	0.00
11,321.30	5.00	102.54	11,301.00	-101.77	457.62	102.56	0.00	0.00	0.00
<b>Red Hills</b>									
11,400.00	5.00	102.54	11,379.40	-103.25	464.31	104.06	0.00	0.00	0.00
11,410.64	5.00	102.54	11,390.00	-103.46	465.22	104.27	0.00	0.00	0.00
<b>Wolfcamp</b>									
11,439.75	5.00	102.54	11,419.00	-104.01	467.69	104.82	0.00	0.00	0.00
<b>Wolfcamp X</b>									
11,500.00	5.00	102.54	11,479.02	-105.15	472.82	105.97	0.00	0.00	0.00
11,535.11	5.00	102.54	11,514.00	-105.81	475.80	106.64	0.00	0.00	0.00
<b>Wolfcamp Y</b>									
11,569.24	5.00	102.54	11,548.00	-106.45	478.71	107.29	0.00	0.00	0.00
<b>Wolfcamp A</b>									
11,600.00	5.00	102.54	11,578.64	-107.04	481.32	107.88	0.00	0.00	0.00
11,700.00	5.00	102.54	11,678.26	-108.93	489.82	109.78	0.00	0.00	0.00
11,800.00	5.00	102.54	11,777.88	-110.82	498.33	111.69	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #156H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Site:</b>	PLU 30 Big Sinks	<b>North Reference:</b>	Grid
<b>Well:</b>	#156H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,900.00	5.00	102.54	11,877.50	-112.71	506.83	113.59	0.00	0.00	0.00
11,954.75	5.00	102.54	11,932.04	-113.74	511.49	114.64	0.00	0.00	0.00
12,000.00	7.44	139.05	11,977.04	-116.39	515.33	117.28	10.00	5.39	80.67
12,009.04	8.14	143.24	11,986.00	-117.34	516.10	118.24	10.00	7.78	46.44
<b>Wolfcamp B</b>									
12,050.00	11.67	155.48	12,026.34	-123.44	519.56	124.34	10.00	8.63	29.87
12,100.00	16.35	162.96	12,074.85	-134.77	523.72	135.69	10.00	9.34	14.95
12,150.00	21.16	167.14	12,122.18	-150.31	527.79	151.23	10.00	9.64	8.36
12,200.00	26.05	169.81	12,167.98	-169.93	531.75	170.85	10.00	9.77	5.36
12,250.00	30.97	171.69	12,211.91	-193.48	535.55	194.41	10.00	9.84	3.76
12,300.00	35.91	173.10	12,253.62	-220.78	539.17	221.72	10.00	9.88	2.81
12,350.00	40.86	174.21	12,292.80	-251.63	542.59	252.57	10.00	9.91	2.21
12,400.00	45.82	175.11	12,329.15	-285.79	545.77	286.74	10.00	9.92	1.81
12,450.00	50.79	175.88	12,362.40	-322.99	548.69	323.95	10.00	9.93	1.53
12,477.05	53.48	176.24	12,379.00	-344.30	550.16	345.26	10.00	9.94	1.36
<b>Wolfcamp D</b>									
12,500.00	55.76	176.54	12,392.29	-362.97	551.33	363.93	10.00	9.95	1.28
12,550.00	60.74	177.13	12,418.59	-405.41	553.68	406.38	10.00	9.95	1.18
12,600.00	65.71	177.66	12,441.11	-449.99	555.70	450.96	10.00	9.95	1.07
12,650.00	70.69	178.15	12,459.67	-496.37	557.39	497.34	10.00	9.96	0.99
12,700.00	75.67	178.62	12,474.13	-544.20	558.74	545.17	10.00	9.96	0.93
12,750.00	80.65	179.06	12,484.38	-593.11	559.72	594.08	10.00	9.96	0.89
12,800.00	85.64	179.49	12,490.35	-642.73	560.35	643.71	10.00	9.96	0.86
12,847.81	90.40	179.90	12,492.00	-690.50	560.60	691.48	10.00	9.96	0.85
<b>LP</b>									
12,900.00	90.40	179.90	12,491.64	-742.69	560.69	743.66	0.00	0.00	0.00
13,000.00	90.40	179.90	12,490.94	-842.68	560.86	843.66	0.00	0.00	0.00
13,100.00	90.40	179.90	12,490.24	-942.68	561.03	943.66	0.00	0.00	0.00
13,200.00	90.40	179.90	12,489.54	-1,042.68	561.21	1,043.66	0.00	0.00	0.00
13,300.00	90.40	179.90	12,488.84	-1,142.68	561.38	1,143.65	0.00	0.00	0.00
13,400.00	90.40	179.90	12,488.15	-1,242.67	561.55	1,243.65	0.00	0.00	0.00
13,500.00	90.40	179.90	12,487.45	-1,342.67	561.72	1,343.65	0.00	0.00	0.00
13,600.00	90.40	179.90	12,486.75	-1,442.67	561.90	1,443.65	0.00	0.00	0.00
13,700.00	90.40	179.90	12,486.05	-1,542.67	562.07	1,543.64	0.00	0.00	0.00
13,800.00	90.40	179.90	12,485.35	-1,642.66	562.24	1,643.64	0.00	0.00	0.00
13,900.00	90.40	179.90	12,484.65	-1,742.66	562.41	1,743.64	0.00	0.00	0.00
14,000.00	90.40	179.90	12,483.96	-1,842.66	562.59	1,843.64	0.00	0.00	0.00
14,100.00	90.40	179.90	12,483.26	-1,942.66	562.76	1,943.63	0.00	0.00	0.00
14,200.00	90.40	179.90	12,482.56	-2,042.65	562.93	2,043.63	0.00	0.00	0.00
14,300.00	90.40	179.90	12,481.86	-2,142.65	563.10	2,143.63	0.00	0.00	0.00
14,400.00	90.40	179.90	12,481.16	-2,242.65	563.28	2,243.63	0.00	0.00	0.00
14,500.00	90.40	179.90	12,480.47	-2,342.64	563.45	2,343.62	0.00	0.00	0.00
14,600.00	90.40	179.90	12,479.77	-2,442.64	563.62	2,443.62	0.00	0.00	0.00
14,700.00	90.40	179.90	12,479.07	-2,542.64	563.79	2,543.62	0.00	0.00	0.00
14,800.00	90.40	179.90	12,478.37	-2,642.64	563.97	2,643.62	0.00	0.00	0.00
14,900.00	90.40	179.90	12,477.67	-2,742.63	564.14	2,743.61	0.00	0.00	0.00
15,000.00	90.40	179.90	12,476.98	-2,842.63	564.31	2,843.61	0.00	0.00	0.00
15,100.00	90.40	179.90	12,476.28	-2,942.63	564.48	2,943.61	0.00	0.00	0.00
15,200.00	90.40	179.90	12,475.58	-3,042.63	564.66	3,043.61	0.00	0.00	0.00
15,300.00	90.40	179.90	12,474.88	-3,142.62	564.83	3,143.61	0.00	0.00	0.00
15,400.00	90.40	179.90	12,474.18	-3,242.62	565.00	3,243.60	0.00	0.00	0.00
15,500.00	90.40	179.90	12,473.48	-3,342.62	565.17	3,343.60	0.00	0.00	0.00
15,600.00	90.40	179.90	12,472.79	-3,442.62	565.35	3,443.60	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #156H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Site:</b>	PLU 30 Big Sinks	<b>North Reference:</b>	Grid
<b>Well:</b>	#156H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,700.00	90.40	179.90	12,472.09	-3,542.61	565.52	3,543.60	0.00	0.00	0.00
15,800.00	90.40	179.90	12,471.39	-3,642.61	565.69	3,643.59	0.00	0.00	0.00
15,900.00	90.40	179.90	12,470.69	-3,742.61	565.86	3,743.59	0.00	0.00	0.00
16,000.00	90.40	179.90	12,469.99	-3,842.61	566.04	3,843.59	0.00	0.00	0.00
16,100.00	90.40	179.90	12,469.30	-3,942.60	566.21	3,943.59	0.00	0.00	0.00
16,200.00	90.40	179.90	12,468.60	-4,042.60	566.38	4,043.58	0.00	0.00	0.00
16,300.00	90.40	179.90	12,467.90	-4,142.60	566.55	4,143.58	0.00	0.00	0.00
16,400.00	90.40	179.90	12,467.20	-4,242.60	566.73	4,243.58	0.00	0.00	0.00
16,500.00	90.40	179.90	12,466.50	-4,342.59	566.90	4,343.58	0.00	0.00	0.00
16,600.00	90.40	179.90	12,465.81	-4,442.59	567.07	4,443.57	0.00	0.00	0.00
16,700.00	90.40	179.90	12,465.11	-4,542.59	567.24	4,543.57	0.00	0.00	0.00
16,800.00	90.40	179.90	12,464.41	-4,642.59	567.42	4,643.57	0.00	0.00	0.00
16,900.00	90.40	179.90	12,463.71	-4,742.58	567.59	4,743.57	0.00	0.00	0.00
17,000.00	90.40	179.90	12,463.01	-4,842.58	567.76	4,843.56	0.00	0.00	0.00
17,100.00	90.40	179.90	12,462.31	-4,942.58	567.93	4,943.56	0.00	0.00	0.00
17,200.00	90.40	179.90	12,461.62	-5,042.58	568.11	5,043.56	0.00	0.00	0.00
17,300.00	90.40	179.90	12,460.92	-5,142.57	568.28	5,143.56	0.00	0.00	0.00
17,400.00	90.40	179.90	12,460.22	-5,242.57	568.45	5,243.55	0.00	0.00	0.00
17,500.00	90.40	179.90	12,459.52	-5,342.57	568.62	5,343.55	0.00	0.00	0.00
17,600.00	90.40	179.90	12,458.82	-5,442.56	568.79	5,443.55	0.00	0.00	0.00
17,700.00	90.40	179.90	12,458.13	-5,542.56	568.97	5,543.55	0.00	0.00	0.00
17,800.00	90.40	179.90	12,457.43	-5,642.56	569.14	5,643.54	0.00	0.00	0.00
17,900.00	90.40	179.90	12,456.73	-5,742.56	569.31	5,743.54	0.00	0.00	0.00
18,000.00	90.40	179.90	12,456.03	-5,842.55	569.48	5,843.54	0.00	0.00	0.00
18,100.00	90.40	179.90	12,455.33	-5,942.55	569.66	5,943.54	0.00	0.00	0.00
18,200.00	90.40	179.90	12,454.64	-6,042.55	569.83	6,043.53	0.00	0.00	0.00
18,300.00	90.40	179.90	12,453.94	-6,142.55	570.00	6,143.53	0.00	0.00	0.00
18,400.00	90.40	179.90	12,453.24	-6,242.54	570.17	6,243.53	0.00	0.00	0.00
18,500.00	90.40	179.90	12,452.54	-6,342.54	570.35	6,343.53	0.00	0.00	0.00
18,600.00	90.40	179.90	12,451.84	-6,442.54	570.52	6,443.52	0.00	0.00	0.00
18,700.00	90.40	179.90	12,451.14	-6,542.54	570.69	6,543.52	0.00	0.00	0.00
18,800.00	90.40	179.90	12,450.45	-6,642.53	570.86	6,643.52	0.00	0.00	0.00
18,900.00	90.40	179.90	12,449.75	-6,742.53	571.04	6,743.52	0.00	0.00	0.00
19,000.00	90.40	179.90	12,449.05	-6,842.53	571.21	6,843.52	0.00	0.00	0.00
19,100.00	90.40	179.90	12,448.35	-6,942.53	571.38	6,943.51	0.00	0.00	0.00
19,200.00	90.40	179.90	12,447.65	-7,042.52	571.55	7,043.51	0.00	0.00	0.00
19,300.00	90.40	179.90	12,446.96	-7,142.52	571.73	7,143.51	0.00	0.00	0.00
19,400.00	90.40	179.90	12,446.26	-7,242.52	571.90	7,243.51	0.00	0.00	0.00
19,500.00	90.40	179.90	12,445.56	-7,342.52	572.07	7,343.50	0.00	0.00	0.00
19,600.00	90.40	179.90	12,444.86	-7,442.51	572.24	7,443.50	0.00	0.00	0.00
19,700.00	90.40	179.90	12,444.16	-7,542.51	572.42	7,543.50	0.00	0.00	0.00
19,800.00	90.40	179.90	12,443.47	-7,642.51	572.59	7,643.50	0.00	0.00	0.00
19,900.00	90.40	179.90	12,442.77	-7,742.51	572.76	7,743.49	0.00	0.00	0.00
20,000.00	90.40	179.90	12,442.07	-7,842.50	572.93	7,843.49	0.00	0.00	0.00
20,100.00	90.40	179.90	12,441.37	-7,942.50	573.11	7,943.49	0.00	0.00	0.00
20,140.50	90.40	179.90	12,441.09	-7,983.00	573.18	7,983.99	0.00	0.00	0.00
20,200.00	90.40	179.90	12,440.67	-8,042.50	573.28	8,043.49	0.00	0.00	0.00
20,270.50	90.40	179.90	12,440.18	-8,113.00	573.40	8,113.99	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #156H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 3390.00usft
<b>Site:</b>	PLU 30 Big Sinks	<b>North Reference:</b>	Grid
<b>Well:</b>	#156H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PERMIT		

### Design Targets

#### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PLU BS #156H SHL (: - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	401,240.60	660,625.10	32.1020643	-103.8146066
PLU BS #156H PBHL - plan hits target center - Point	0.00	0.00	12,440.18	-8,113.00	573.40	393,127.60	661,198.50	32.0797545	-103.8128814
PLU BS #156H LTP - plan misses target center by 0.28usft at 20140.50usft MD (12441.09 TVD, -7983.00 N, 573.18 E) - Point	0.00	0.00	12,441.09	-7,983.00	572.90	393,257.60	661,198.00	32.0801119	-103.8128810
PLU BS #156H FTP/I - plan hits target center - Point	0.00	0.00	12,492.00	-690.50	560.60	400,550.10	661,185.70	32.1001587	-103.8128071

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
772.00	772.00	Rustler			
1,135.00	1,135.00	Salado			
3,871.00	3,871.00	Base of Salt			
4,085.00	4,085.00	Delaware			
5,075.00	5,075.00	Cherry Canyon			
6,763.97	6,761.00	Brushy Canyon			
7,818.99	7,812.00	Basal Brushy Canyon			
8,034.81	8,027.00	Bone Spring			
8,061.91	8,054.00	Bone Spring Lime			
9,035.61	9,024.00	1st Bone Sand			
9,449.18	9,436.00	2nd Bone Lime			
9,899.90	9,885.00	2nd Bone Sand			
10,122.74	10,107.00	3rd Bone Lime			
10,998.07	10,979.00	3rd Bone Sand			
11,321.30	11,301.00	Red Hills			
11,410.64	11,390.00	Wolfcamp			
11,439.75	11,419.00	Wolfcamp X			
11,535.11	11,514.00	Wolfcamp Y			
11,569.24	11,548.00	Wolfcamp A			
12,009.04	11,986.00	Wolfcamp B			
12,477.05	12,379.00	Wolfcamp D			
12,847.81	12,492.00	LP			

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit Original  
to Appropriate  
District Office

## GAS CAPTURE PLAN

Date: 7/26/19

☒ Original Operator & OGRID No.: XTO Permian Operating, LLC [373075]  
☐ Amended - Reason for Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### Well(s)/Production Facility – Name of facility: Poker Lake Unit 30 BS East CTB

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Poker Lake Unit 30 BS 101H		E-30-25S-31E	2310' FNL & 455' FWL	2600	Flared/Sold	
Poker Lake Unit 30 BS 161H		E-30-25S-31E	2310' FNL & 395' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 121H		E-30-25S-31E	2310' FNL & 425' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 152H		E-30-25S-31E	2310' FNL & 485' FWL	2900	Flared/Sold	
Poker Lake Unit 30 BS 122H		E-30-25S-31E	2310' FNL & 515' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 103H		F-30-25S-31E	2310' FNL & 1980' FWL	2600	Flared/Sold	
Poker Lake Unit 30 BS 163H		F-30-25S-31E	2310' FNL & 1920' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 153H		F-30-25S-31E	2310' FNL & 1950' FWL	2900	Flared/Sold	
Poker Lake Unit 30 BS 124H		F-30-25S-31E	2310' FNL & 2010' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 164H		F-30-25S-31E	2310' FNL & 2040' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 105H		G-30-25S-31E	2310' FNL & 1980' FEL	2600	Flared/Sold	
Poker Lake Unit 30 BS 155H		G-30-25S-31E	2310' FNL & 2040' FEL	2900	Flared/Sold	
Poker Lake Unit 30 BS 125H		G-30-25S-31E	2310' FNL & 2010' FEL	2800	Flared/Sold	
Poker Lake Unit 30 BS 166H		G-30-25S-31E	2310' FNL & 1950' FEL	4500	Flared/Sold	
Poker Lake Unit 30 BS 156H		G-30-25S-31E	2310' FNL & 1920' FEL	2900	Flared/Sold	
Poker Lake Unit 30 BS 107H		H-30-25S-31E	2310' FNL & 660' FEL	2600	Flared/Sold	
Poker Lake Unit 30 BS 127H		H-30-25S-31E	2310' FNL & 720' FEL	2900	Flared/Sold	
Poker Lake Unit 30 BS 167H		H-30-25S-31E	2310' FNL & 690' FEL	4500	Flared/Sold	
Poker Lake Unit 30 BS 128H		H-30-25S-31E	2310' FNL & 630' FEL	2800	Flared/Sold	
Poker Lake Unit 30 BS 158H		H-30-25S-31E	2310' FNL & 600' FEL	2900	Flared/Sold	



### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enlink and will be connected to Enlink low/high pressure gathering system located in Loving County, Texas. It will require 850.35' of pipeline to connect the facility to low/high pressure gathering system. XTO PERMIAN OPERATING, LLC provides (periodically) to Enlink a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO PERMIAN OPERATING, LLC and Enlink have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enlink Processing Plant located in Block 27, Sec. 4, Loving County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### **Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Enlink system at that time. Based on current information, it is XTO PERMIAN OPERATING, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit Original  
to Appropriate  
District Office

## GAS CAPTURE PLAN

Date: 7/26/19

☒ Original Operator & OGRID No.: XTO Permian Operating, LLC [373075]  
☐ Amended - Reason for Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### Well(s)/Production Facility – Name of facility: Poker Lake Unit 30 BS West CTB

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Poker Lake Unit 30 BS 101H		E-30-25S-31E	2310' FNL & 455' FWL	2600	Flared/Sold	
Poker Lake Unit 30 BS 161H		E-30-25S-31E	2310' FNL & 395' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 121H		E-30-25S-31E	2310' FNL & 425' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 152H		E-30-25S-31E	2310' FNL & 485' FWL	2900	Flared/Sold	
Poker Lake Unit 30 BS 122H		E-30-25S-31E	2310' FNL & 515' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 103H		F-30-25S-31E	2310' FNL & 1980' FWL	2600	Flared/Sold	
Poker Lake Unit 30 BS 163H		F-30-25S-31E	2310' FNL & 1920' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 153H		F-30-25S-31E	2310' FNL & 1950' FWL	2900	Flared/Sold	
Poker Lake Unit 30 BS 124H		F-30-25S-31E	2310' FNL & 2010' FWL	2800	Flared/Sold	
Poker Lake Unit 30 BS 164H		F-30-25S-31E	2310' FNL & 2040' FWL	4500	Flared/Sold	
Poker Lake Unit 30 BS 105H		G-30-25S-31E	2310' FNL & 1980' FEL	2600	Flared/Sold	
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### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enlink and will be connected to Enlink low/high pressure gathering system located in Loving County, Texas. It will require 610.58' of pipeline to connect the facility to low/high pressure gathering system. XTO PERMIAN OPERATING, LLC provides (periodically) to Enlink a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, XTO PERMIAN OPERATING, LLC and Enlink have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enlink Processing Plant located in Block 27, Sec. 4, Loving County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### **Flowback Strategy**

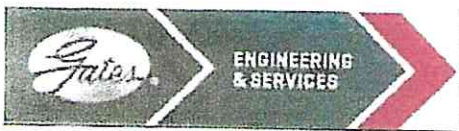
After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Enlink system at that time. Based on current information, it is XTO PERMIAN OPERATING, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

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  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



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

PHONE: 361-887-9807  
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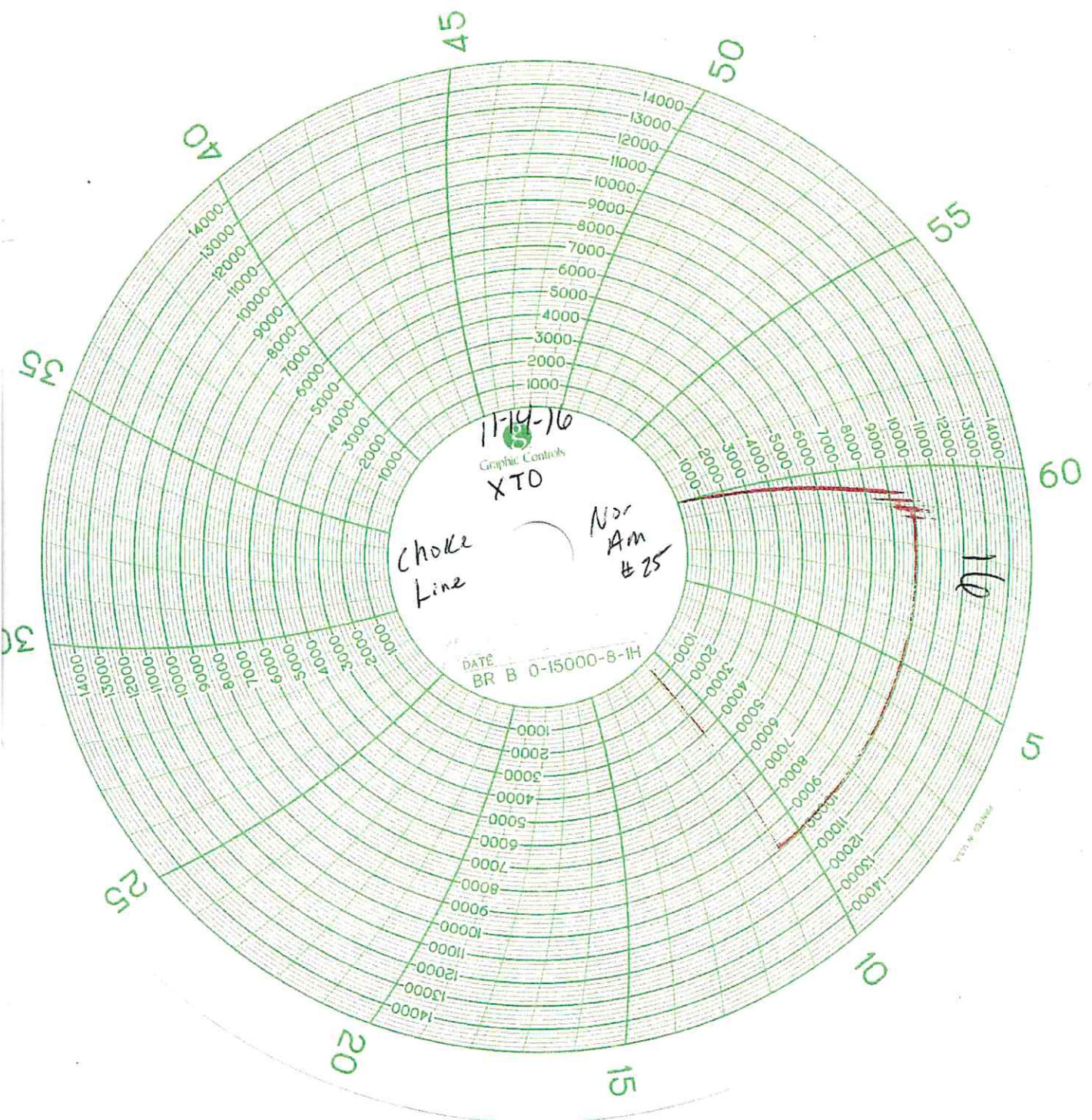
### GRADE D PRESSURE TEST CERTIFICATE

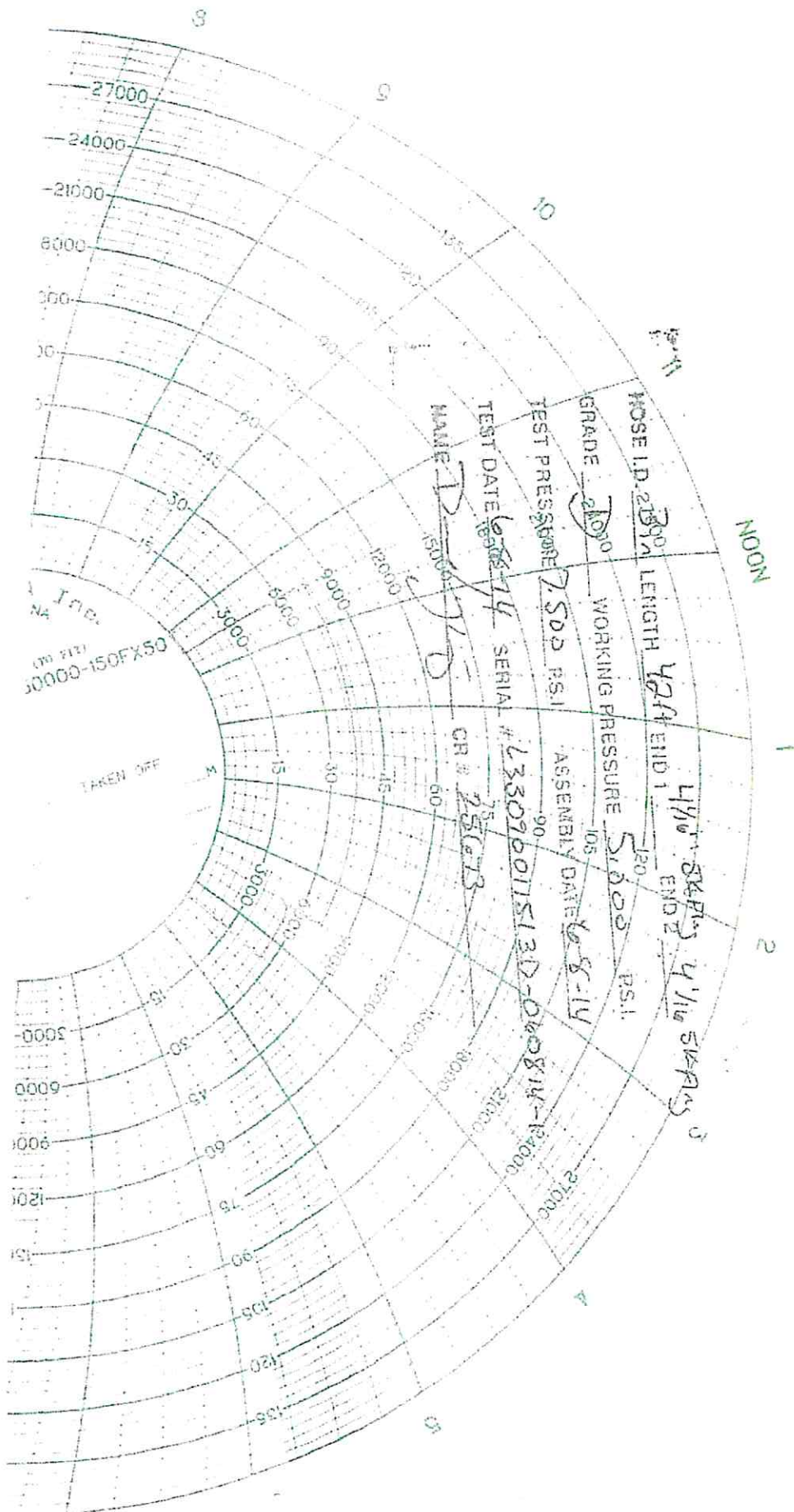
Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	NORMA
Product Description:	FD3.042.0R41/16.5KFLGE/E LE		
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	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 :	







## 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.

### **General Procedure While Drilling**

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