

Well Name: POKER LAKE UNIT 22-3 BS	Well Location: T25S / R31E / SEC 22 / SWSW /	County or Parish/State:
Well Number: 111H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM0070707A	Unit or CA Name:	Unit or CA Number: NMNM07016X
US Well Number: 3001553895	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2769536

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 01/12/2024

Time Sundry Submitted: 08:07

Date proposed operation will begin: 01/29/2024

**Procedure Description:** XTO Permian Operating respectfully requests approval to make changes to the approved APD as follows: SHL: FROM: 540' FSL & 426' FWL of Section 22-T25S-R31E TO: 580' FSL & 426' FWL of Section 22-T25S-R31E FTP: FROM: 950' FSL & 810' FWL of Section 22-T25S-R31E TO: 1350' FSL & 400' FEL of Section 21-T25S-R31E BHL: FROM: 2590' FNL & 810' FWL of Section 3-T26S-R31E TO: 2655' FSL & 400' FEL of Section 16-T25S-R31E LTP: FROM: 2540' FNL & 810' FWL of Section 3-T26S-R31E TO: 2556' FSL & 400' FEL of Section 16-T25S-R31E The casing design will change by running a 7-5/8" 29.7# RYP-110 (0-4000') and 7-5/8" 29.7# HCL-80 (4000-10826') (flush joint strings) and the weight of the 5-1/2" casing will change from 5-1/2" 23# P-110 to 5-1/2" 20# RYP-110 casing. Attachments: C-102, Drilling Plan, Directional Plan and BOP Variance Request.

NOI Attachments

Procedure Description

- BOP\_Variance\_new\_Language\_BOP\_BTV\_20240112080446.pdf
- 3\_String\_Slimhole\_HBE0000479\_4\_20240112080422.pdf
- Well\_Plan\_Report\_\_\_\_PLU\_22\_3\_BS\_111H\_20240112075943.pdf
- POKER\_LAKE\_UNIT\_22\_3\_BS\_111H\_Drilling\_Plan\_1\_12\_2024\_20240112075911.pdf
- PLU\_22\_3\_BS\_111H\_signed\_C\_102\_1\_11\_2024\_20240112075852.pdf

<b>Well Name:</b> POKER LAKE UNIT 22-3 BS	<b>Well Location:</b> T25S / R31E / SEC 22 / SWSW /	<b>County or Parish/State:</b>
<b>Well Number:</b> 111H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM0070707A	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b> NMNM07016X
<b>US Well Number:</b> 3001553895	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> XTO PERMIAN OPERATING LLC

Conditions of Approval

Additional

Sec\_22\_25S\_31E\_NMP\_Sundry\_2769536\_Poker\_Lake\_Unit\_22\_3\_BS\_111H\_Eddy\_NMLC070707A\_XTO\_COAs\_20240216151310.pdf

Sec\_22\_25S\_31E\_NMP\_Sundry\_2769536\_Poker\_Lake\_Unit\_22\_3\_BS\_111H\_Eddy\_NMLC070707A\_XTO\_Eng\_Worksheet\_20240216151310.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

<b>Operator Electronic Signature:</b> RANELL (RUSTY) KLEIN	<b>Signed on:</b> JAN 12, 2024 08:05 AM
<b>Name:</b> XTO PERMIAN OPERATING LLC	
<b>Title:</b> Regulatory Analyst	
<b>Street Address:</b> 6401 HOLIDAY HILL ROAD BLDG 5	
<b>City:</b> MIDLAND	<b>State:</b> TX
<b>Phone:</b> (432) 620-6700	
<b>Email address:</b> RANELL.KLEIN@EXXONMOBIL.COM	

Field

<b>Representative Name:</b>		
<b>Street Address:</b>		
<b>City:</b>	<b>State:</b>	<b>Zip:</b>
<b>Phone:</b>		
<b>Email address:</b>		

BLM Point of Contact

<b>BLM POC Name:</b> CHRISTOPHER WALLS	<b>BLM POC Title:</b> Petroleum Engineer
<b>BLM POC Phone:</b> 5752342234	<b>BLM POC Email Address:</b> cwalls@blm.gov
<b>Disposition:</b> Approved	<b>Disposition Date:</b> 02/23/2024
<b>Signature:</b> Chris Walls	

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE** - Other instructions on page 2

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

### 1. Type of Well

☐ Oil Well      ☐ Gas Well      ☐ Other

8. Well Name and No.	
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2. Name of Operator

9. API Well No.	
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3a. Address

3b. Phone No. (include area code)

10. Field and Pool or Exploratory Area
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4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)

11. Country or Parish, State
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12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (*Printed/Typed*)

Title

Signature

Date \_\_\_\_\_

## THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by \_\_\_\_\_

Title

Date \_\_\_\_\_

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

Office

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13*: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

## Additional Information

### Additional Remarks

The casing design will change by running a 7-5/8 29.7# RYP-110 (0-4000) and 7-5/8 29.7# HCL-80 (4000-10826) (flush joint strings) and the weight of the 5-1/2 casing will change from 5-1/2 23# P-110 to 5-1/2 20# RYP-110 casing.

Attachments: C-102, Drilling Plan, Directional Plan and BOP Variance Request.

### Location of Well

0. SHL: SWSW / 540 FSL / 426 FWL / TWSP: 25S / RANGE: 31E / SECTION: 22 / LAT: 32.110033 / LONG: -103.773093 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNW / 330 FNL / 810 FWL / TWSP: 25S / RANGE: 31E / SECTION: 27 / LAT: 32.111161 / LONG: -103.771848 ( TVD: 11673 feet, MD: 13381 feet )

PPP: SWSW / 950 FSL / 810 FWL / TWSP: 25S / RANGE: 31E / SECTION: 22 / LAT: 32.111161 / LONG: -103.771848 ( TVD: 11673 feet, MD: 12061 feet )

PPP: NWNW / 330 FNL / 810 FWL / TWSP: 25S / RANGE: 31E / SECTION: 34 / LAT: 32.111161 / LONG: -103.771848 ( TVD: 11673 feet, MD: 18661 feet )

PPP: SWSW / 330 FSL / 810 FWL / TWSP: 25S / RANGE: 31E / SECTION: 34 / LAT: 32.111161 / LONG: -103.771848 ( TVD: 11673 feet, MD: 22621 feet )

BHL: SWNW / 2590 FNL / 810 FWL / TWSP: 26S / RANGE: 31E / SECTION: 3 / LAT: 32.072449 / LONG: -103.772007 ( TVD: 11673 feet, MD: 26144 feet )

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	XTO Permian Operating LLC
<b>WELL NAME &amp; NO.:</b>	Poker Lake Unit 22-3 BS 111H
<b>LOCATION:</b>	Sec 22-25S-31E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2769536** on 02/16/2024. Any previous COAs not addressed within the updated COAs still apply.*

### COA

<b>H<sub>2</sub>S</b>	<input checked="" type="radio"/> No	<input type="radio"/> Yes		
<b>Potash / WIPP</b>	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P	<input type="checkbox"/> WIPP
<b>Cave / Karst</b>	<input type="radio"/> Low	<input type="radio"/> Medium	<input checked="" type="radio"/> High	<input type="radio"/> Critical
<b>Wellhead</b>	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both	<input type="radio"/> Diverter
<b>Cementing</b>	<input type="checkbox"/> Primary Squeeze	<input checked="" type="checkbox"/> Cont. Squeeze	<input checked="" type="checkbox"/> EchoMeter	<input type="checkbox"/> DV Tool
<b>Special Req</b>	<input checked="" type="checkbox"/> Break Testing	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
<b>Variance</b>	<input checked="" type="checkbox"/> Flex Hose	<input type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Capitan Reef
<b>Variance</b>	<input type="checkbox"/> Four-String	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Fluid-Filled	<input type="checkbox"/> Open Annulus
<input type="checkbox"/> <b>Batch APD / Sundry</b>				

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 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 **9-5/8** inch surface casing shall be set at approximately 980 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) 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.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

- a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon at 6763'**
  - b. Second stage:
    - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
- ❖ In High 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.

**Operator has proposed to pump down 9-5/8" X 7-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the 7-5/8" casing to surface after the second stage BH to verify TOC.**

**Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out.**

**If cement does not reach surface, the next casing string must come to surface.**

**Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
- Cement should tie-back at least **300 feet** into previous casing string (due to not meeting the 0.422" clearance requirement per 43 CFR 3172.) 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, Capitan Reef, or potash.**

## 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. 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 43 CFR 3172 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.

##### **BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (**Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP**)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).



- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

**Offline Cementing**

Contact the BLM prior to the commencement of any offline cementing procedure.

## 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 (API No. / US Well No. contains 30-015-#####)**

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
[BLM\\_NM\\_CFO\\_DrillingNotifications@blm.gov](mailto:BLM_NM_CFO_DrillingNotifications@blm.gov); (575) 361-2822

**Lea County (API No. / US Well No. contains 30-025-#####)**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240; (575) 689-5981

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 **43 CFR part 3170 Subpart 3172** 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 **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.
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 **43 CFR part 3170 Subpart 3172** 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 cement), 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** 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 **43 CFR part 3170 Subpart 3172**.

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.

Sec 22-25S-31E-NMP\_Sundry 2769536\_Poker Lake Unit 22-3 BS 111H\_Eddy\_NMLC070707A\_XTO\_Eng  
Worksheet

## Poker Lake Unit 22-3 BS 111H

9 5/8	surface csg in a	12 1/4	inch hole.	Design Factors					Surface		
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00	J 55	BTC	16.07	5.67	1.9	980	9	3.30	10.82	39,200
"B"			BTC				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500				Tail Cmt	does not	circ to sfc.	Totals:	980			39,200
<u>Comparison of Proposed to Minimum Required Cement Volumes</u>											
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
12 1/4	0.3132	350	587	307	91	8.90	1198	2M			0.81
Site plot (pipe racks S or E) as per O O I DED 4.1, not found.											

7 5/8	casing inside the	9 5/8	Design Factors					Int 1			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70	RY P 110	Flush Joint	4.70	2.57	1.54	4,000	5	2.51	4.47	118,800
"B"	29.70	HCL 80	Flush Joint	∞	2.78	1.12	6,826	3	1.83	4.83	202,732
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	10,826	321,532		
The cement volume(s) are intended to achieve a top of					0	ft from surface or a		980	overlap.		
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg		
8 3/4	0.1005	730	1497	1096	37	10.00	3769	5M	0.56		

Tail cmt											
5 1/2 casing inside the			7 5/8		Design Factors				Prod 1		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	RY P 110	Semi-Premiur	2.99	1.81	2.06	10,726	2	3.35	2.94	214,520
"B"	20.00	RY P 110	Semi-Flush	∞	1.81	2.06	8,024	2	3.35	2.94	160,480
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,360							Totals:	18,750	375,000		
The cement volume(s) are intended to achieve a top of				9800	ft from surface or a		1026		overlap.		
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg		
6 3/4	0.0835	570	884	757	17	11.00			0.23		
Class 'C' tail cmt yld > 1.35											

#N/A											
0	5 1/2	Design Factors					<Choose Casing>				
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"			0.00				0				0
"B"			0.00				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0			0
Cmt vol calc below includes this csg, TOC intended				#N/A	ft from surface or a			#N/A			overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A						
#N/A Capitan Reef est top XXXX.											



**Subject: Request for a Variance Allowing break Testing of the Blowout Preventer Equipment (BOPE)**

XTO Energy requests a variance to ONLY test broken pressure seals on the BOPE and function test BOP when skidding a drilling rig between multiple wells on a pad.

**Background**

Onshore Oil and Gas Order CFR Title 43 Part 3170, Drilling Operations, Sections III.A.2.i.iv.B states that the BOP test must be performed whenever any seal subject to test pressure is broken. The current interpretation of the Bureau of Land Management (BLM) requires a complete BOP test and not just a test of the affected component. CFR Title 43 Part 3170 states, "Some situation may exist either on a well-by-well basis or field-wide basis whereby it is commonly accepted practice to vary a particular minimum standard(s) established in this order. This situation can be resolved by requesting a variance...". XTO Energy feels the break testing the BOPE is such a situation. Therefore, as per CFR Title 43 Part 3170, XTO Energy submits this request for the variance.

**Supporting Documentation**

CFR Title 43 Part 3170 became effective on December 19, 1988 and has remained the standard for regulating BLM onshore drilling operations for over 30 years. During this time there have been significant changes in drilling technology. BLM continues to use the variance request process to allow for the use of modern technology and acceptable engineering practices that have arisen since CFR Title 43 Part 3170 was originally released. The XTO Energy drilling rig fleet has many modern upgrades that allow the intact BOP stack to be moved between well slots on a multi-well pad, as well as, wellhead designs that incorporate quick connects facilitating release of the BOP from the wellhead without breaking any BOP stack components apart. These technologies have been used extensively offshore, and other regulators, API, and many operators around the world have endorsed break testing as safe and reliable.



Figure 1: Winch System attached to BOP Stack





Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. CFR Title 43 Part 3170 recognizes API recommended Practices (RP) 53 in its original development. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (Fifth Edition, December 2018, Annex C, Table C.4) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 5.3.7.1 states “A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component.” See Table C.4 below for reference.

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API STANDARD 53

Table C.4—Initial Pressure Testing, Surface BOP Stacks

Component to be Pressure Tested	Pressure Test—Low Pressure <sup>ac</sup> psig (MPa)	Pressure Test—High Pressure <sup>ac</sup>	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer <sup>a</sup>	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers <sup>bd</sup>	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes <sup>a</sup>	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes <sup>a</sup>	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

<sup>a</sup> Pressure test evaluation periods shall be a minimum of five minutes.

No visible leaks.

The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

<sup>b</sup> Annular(s) and VBR(s) shall be pressure tested on the largest and smallest OD drill pipe to be used in well program.

<sup>c</sup> For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

<sup>d</sup> For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

<sup>e</sup> Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specification and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations.

Break testing has been approved by the BLM in the past with other operators based on the detailed information provided in this document.

XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of CFR Title 43 Part 3170 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after

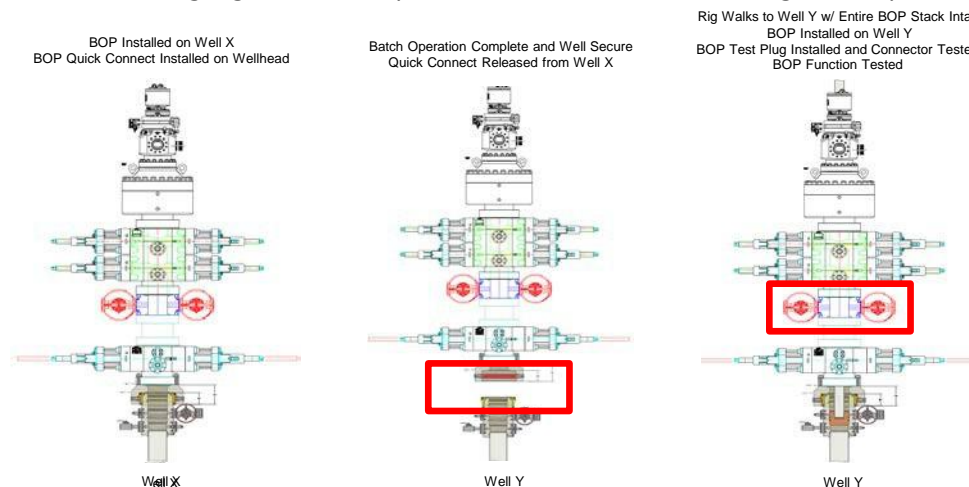
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

### **Procedures**

1. XTO Energy will use this document for our break testing plan for New Mexico Delaware basin. The summary below will be referenced in the APD or Sundry Notice and receive approval prior to implementing this variance.
2. XTO Energy will perform BOP break testing on multi-wells pads where multiple intermediate sections can be drilled and cased within the 21-day BOP test window.
  - a. A full BOP test will be conducted on the first well on the pad.
  - b. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
    - i. Our Lower WC targets set the intermediate casing shoe no deeper than the Wolfcamp B.
    - ii. Our Upper WC targets set the intermediate casing shoe shallower than the Wolfcamp B.
  - c. A Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
  - d. A full BOP test will be required prior to drilling any production hole.
3. After performing a complete BOP test on the first well, the intermediate hole section will be drilled and cased, two breaks would be made on the BOP equipment.
  - a. Between the HCV valve and choke line connection
  - b. Between the BOP quick connect and the wellhead
4. The BOP is then lifted and removed from the wellhead by a hydraulic system.
5. After skidding to the next well, the BOP is moved to the wellhead by the same hydraulic system and installed.
6. The connections mentioned in 3a and 3b will then be reconnected.
7. Install test plug into the wellhead using test joint or drill pipe.
8. A shell test is performed against the upper pipe rams testing the two breaks.
9. The shell test will consist of a 250 psi low test and a high test to the value submitted in the APD or Sundry (e.g. 5,000 psi or 10,000psi).
10. Function test will be performed on the following components: lower pipe rams, blind rams, and annular.

11. For a multi-well pad the same two breaks on the BOP would be made and on the next wells and steps 4 through 10 would be repeated.
12. A second break test would only be done if the intermediate hole section being drilled could not be completed within the 21 day BOP test window.

*Note: Picture below highlights BOP components that will be tested during batch operations*



### Summary

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API Standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

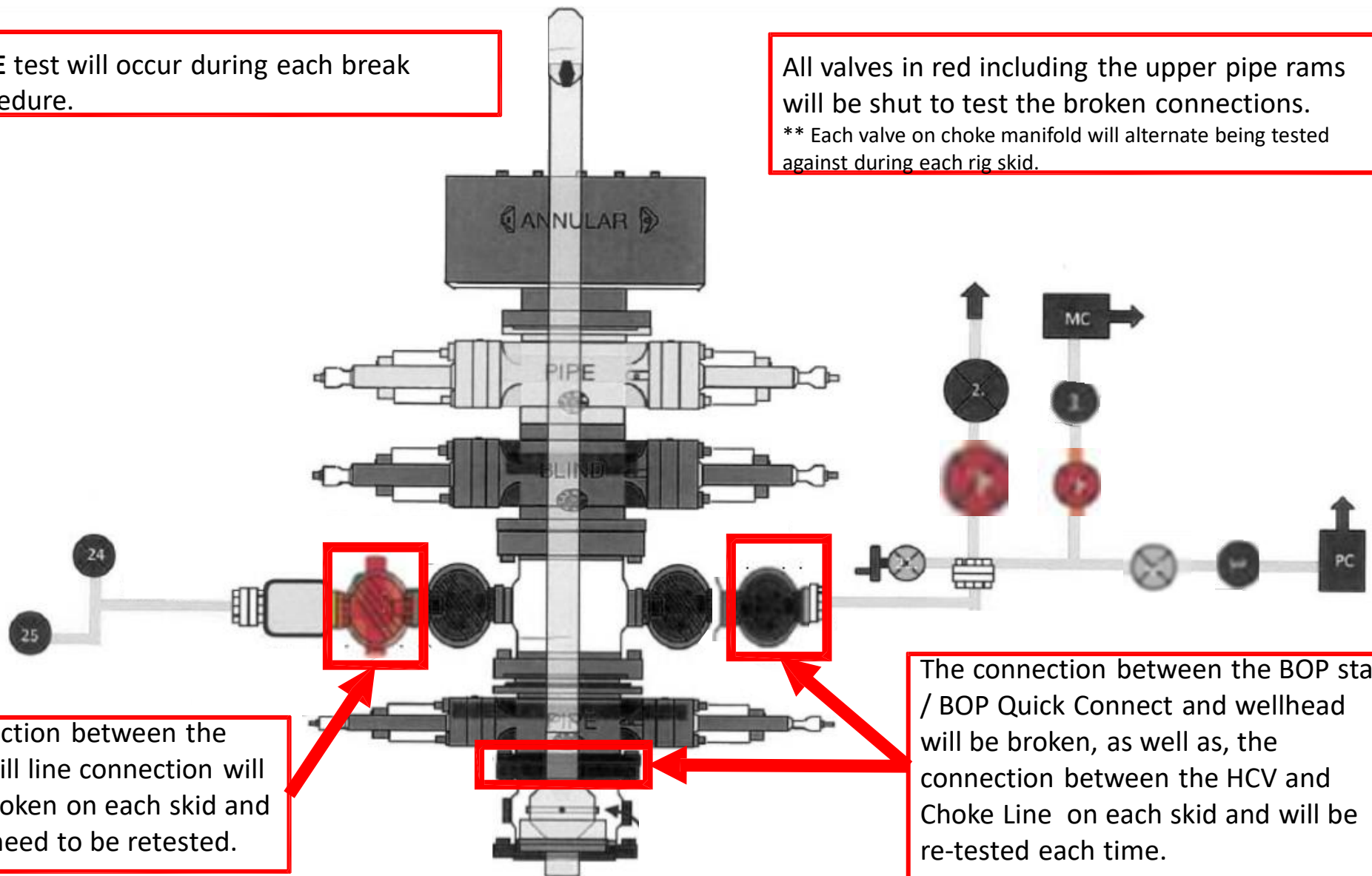
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met:

1. After a full BOP test is conducted on the first well on the pad.
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
4. Full BOP test will be required prior to drilling the production hole.

Only **ONE** test will occur during each break test procedure.

All valves in red including the upper pipe rams will be shut to test the broken connections.  
\*\* Each valve on choke manifold will alternate being tested against during each rig skid.



The connection between the HCV and kill line connection will **NOT** be broken on each skid and does not need to be retested.

The connection between the BOP stack / BOP Quick Connect and wellhead will be broken, as well as, the connection between the HCV and Choke Line on each skid and will be re-tested each time.





DRAWN	VJK	31MAR22
APPRV		
DRAWING NO. HBE0000479		

## Well Plan Report - PLU 22-3 BS 111H

Measured Depth: 18749.75 ft

TVD RKB: 11678.00 ft

### Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 404199.30 ft

Easting: 673612.90 ft

RKB: 3374.00 ft

Ground Level: 3342.00 ft

North Reference: Grid

Convergence Angle: 0.30 Deg

### Plan Sections PLU 22-3 BS 111H

Measured		TVD		Build		Turn	Dogleg	
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft) Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00
1556.24	9.12	273.46	1554.31	2.19	-36.19	2.00	0.00	2.00
6307.74	9.12	273.46	6245.69	47.72	-788.32	0.00	0.00	0.00
6763.98	0.00	0.00	6700.00	49.91	-824.51	-2.00	0.00	2.00
11025.78	0.00	0.00	10961.80	49.91	-824.51	0.00	0.00	0.00
12150.78	90.00	359.80	11678.00	766.10	-827.00	8.00	0.00	8.00 FTP 111H
18650.72	90.00	359.80	11678.00	7266.00	-849.60	0.00	0.00	0.00 LTP 111H
18749.75	90.00	359.80	11678.00	7365.03	-849.94	0.00	0.00	0.00 BHL 111H

### Position Uncertainty PLU 22-3 BS 111H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	XOM_R2OWSG MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.358	0.000	0.179	0.000	2.300	0.000	0.000	0.358	0.179	90.000	XOM_R2OWSG MWD+IFR1+MS
200.000	0.000	0.000	200.000	0.717	0.000	0.538	0.000	2.310	0.000	0.000	0.717	0.538	90.000	XOM_R2OWSG MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.075	0.000	0.896	0.000	2.325	0.000	0.000	1.075	0.896	90.000	XOM_R2OWSG MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.434	0.000	1.255	0.000	2.347	0.000	0.000	1.434	1.255	90.000	XOM_R2OWSG MWD+IFR1+MS
500.000	0.000	0.000	500.000	1.792	0.000	1.613	0.000	2.374	0.000	0.000	1.792	1.613	90.000	XOM_R2OWSG MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.151	0.000	1.972	0.000	2.406	0.000	0.000	2.151	1.972	90.000	XOM_R2OWSG MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.509	0.000	2.330	0.000	2.443	0.000	0.000	2.509	2.330	90.000	XOM_R2OWSG MWD+IFR1+MS
800.000	0.000	0.000	800.000	2.868	0.000	2.689	0.000	2.485	0.000	0.000	2.868	2.689	90.000	XOM_R2OWSG MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.226	0.000	3.047	0.000	2.531	0.000	0.000	3.226	3.047	90.000	XOM_R2OWSG MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	3.585	0.000	3.405	0.000	2.581	0.000	0.000	3.585	3.405	90.000	XOM_R2OWSG MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	3.943	0.000	3.764	0.000	2.634	0.000	0.000	3.943	3.764	90.000	XOM_R2OWSG MWD+IFR1+MS
1200.000	2.000	273.464	1199.980	4.113	0.000	4.293	0.000	2.690	0.000	0.000	4.294	4.114	89.923	XOM_R2OWSG MWD+IFR1+MS
1300.000	4.000	273.464	1299.838	4.451	0.000	4.639	0.000	2.747	0.000	0.000	4.640	4.459	89.719	XOM_R2OWSG MWD+IFR1+MS
1400.000	6.000	273.464	1399.452	4.786	0.000	4.989	0.000	2.805	0.000	0.000	4.990	4.807	89.435	XOM_R2OWSG MWD+IFR1+MS
1500.000	8.000	273.464	1498.702	5.118	0.000	5.342	0.000	2.865	0.000	0.000	5.343	5.156	89.060	XOM_R2OWSG MWD+IFR1+MS
1556.236	9.125	273.464	1554.310	5.303	0.000	5.542	0.000	2.897	0.000	0.000	5.543	5.354	88.779	XOM_R2OWSG MWD+IFR1+MS
1600.000	9.125	273.464	1597.520	5.457	0.000	5.698	0.000	2.925	0.000	0.000	5.699	5.507	88.586	XOM_R2OWSG MWD+IFR1+MS
1700.000	9.125	273.464	1696.255	5.810	0.000	6.058	0.000	2.998	0.000	0.000	6.060	5.856	88.218	XOM_R2OWSG MWD+IFR1+MS



1800.000	9.125	273.464	1794.989	6.166	0.000	6.420	0.000	3.074	0.000	0.000	6.422	6.206	87.824	XOM_R2OWSG MWD+IFR1+MS
1900.000	9.125	273.464	1893.724	6.524	0.000	6.784	0.000	3.152	0.000	0.000	6.787	6.559	87.417	XOM_R2OWSG MWD+IFR1+MS
2000.000	9.125	273.464	1992.458	6.885	0.000	7.150	0.000	3.234	0.000	0.000	7.153	6.914	87.007	XOM_R2OWSG MWD+IFR1+MS
2100.000	9.125	273.464	2091.193	7.246	0.000	7.517	0.000	3.317	0.000	0.000	7.520	7.271	86.598	XOM_R2OWSG MWD+IFR1+MS
2200.000	9.125	273.464	2189.927	7.610	0.000	7.885	0.000	3.403	0.000	0.000	7.889	7.628	86.196	XOM_R2OWSG MWD+IFR1+MS
2300.000	9.125	273.464	2288.662	7.974	0.000	8.254	0.000	3.491	0.000	0.000	8.259	7.987	85.802	XOM_R2OWSG MWD+IFR1+MS
2400.000	9.125	273.464	2387.396	8.339	0.000	8.624	0.000	3.581	0.000	0.000	8.629	8.347	85.419	XOM_R2OWSG MWD+IFR1+MS
2500.000	9.125	273.464	2486.131	8.705	0.000	8.995	0.000	3.673	0.000	0.000	9.001	8.708	85.047	XOM_R2OWSG MWD+IFR1+MS
2600.000	9.125	273.464	2584.866	9.072	0.000	9.366	0.000	3.767	0.000	0.000	9.373	9.069	84.687	XOM_R2OWSG MWD+IFR1+MS
2700.000	9.125	273.464	2683.600	9.440	0.000	9.738	0.000	3.863	0.000	0.000	9.746	9.432	84.339	XOM_R2OWSG MWD+IFR1+MS
2800.000	9.125	273.464	2782.335	9.808	0.000	10.111	0.000	3.960	0.000	0.000	10.120	9.794	84.004	XOM_R2OWSG MWD+IFR1+MS
2900.000	9.125	273.464	2881.069	10.177	0.000	10.484	0.000	4.059	0.000	0.000	10.494	10.158	83.681	XOM_R2OWSG MWD+IFR1+MS
3000.000	9.125	273.464	2979.804	10.546	0.000	10.858	0.000	4.159	0.000	0.000	10.868	10.521	83.369	XOM_R2OWSG MWD+IFR1+MS
3100.000	9.125	273.464	3078.538	10.916	0.000	11.232	0.000	4.261	0.000	0.000	11.243	10.885	83.070	XOM_R2OWSG MWD+IFR1+MS
3200.000	9.125	273.464	3177.273	11.286	0.000	11.606	0.000	4.365	0.000	0.000	11.618	11.250	82.782	XOM_R2OWSG MWD+IFR1+MS
3300.000	9.125	273.464	3276.007	11.657	0.000	11.980	0.000	4.470	0.000	0.000	11.994	11.615	82.504	XOM_R2OWSG MWD+IFR1+MS
3400.000	9.125	273.464	3374.742	12.028	0.000	12.355	0.000	4.576	0.000	0.000	12.370	11.980	82.237	XOM_R2OWSG MWD+IFR1+MS
3500.000	9.125	273.464	3473.476	12.399	0.000	12.731	0.000	4.684	0.000	0.000	12.746	12.346	81.980	XOM_R2OWSG MWD+IFR1+MS
3600.000	9.125	273.464	3572.211	12.770	0.000	13.106	0.000	4.794	0.000	0.000	13.123	12.711	81.732	XOM_R2OWSG MWD+IFR1+MS
3700.000	9.125	273.464	3670.946	13.142	0.000	13.481	0.000	4.905	0.000	0.000	13.499	13.077	81.494	XOM_R2OWSG MWD+IFR1+MS

3800.000	9.125	273.464	3769.680	13.514	0.000	13.857	0.000	5.017	0.000	0.000	13.876	13.444	81.264	XOM_R2OWSG MWD+IFR1+MS
3900.000	9.125	273.464	3868.415	13.886	0.000	14.233	0.000	5.131	0.000	0.000	14.254	13.810	81.043	XOM_R2OWSG MWD+IFR1+MS
4000.000	9.125	273.464	3967.149	14.258	0.000	14.609	0.000	5.247	0.000	0.000	14.631	14.177	80.829	XOM_R2OWSG MWD+IFR1+MS
4100.000	9.125	273.464	4065.884	14.630	0.000	14.986	0.000	5.364	0.000	0.000	15.008	14.543	80.623	XOM_R2OWSG MWD+IFR1+MS
4200.000	9.125	273.464	4164.618	15.003	0.000	15.362	0.000	5.482	0.000	0.000	15.386	14.910	80.424	XOM_R2OWSG MWD+IFR1+MS
4300.000	9.125	273.464	4263.353	15.376	0.000	15.739	0.000	5.603	0.000	0.000	15.764	15.277	80.232	XOM_R2OWSG MWD+IFR1+MS
4400.000	9.125	273.464	4362.087	15.749	0.000	16.116	0.000	5.724	0.000	0.000	16.142	15.645	80.046	XOM_R2OWSG MWD+IFR1+MS
4500.000	9.125	273.464	4460.822	16.122	0.000	16.492	0.000	5.848	0.000	0.000	16.520	16.012	79.866	XOM_R2OWSG MWD+IFR1+MS
4600.000	9.125	273.464	4559.556	16.495	0.000	16.869	0.000	5.973	0.000	0.000	16.898	16.380	79.692	XOM_R2OWSG MWD+IFR1+MS
4700.000	9.125	273.464	4658.291	16.868	0.000	17.246	0.000	6.099	0.000	0.000	17.277	16.747	79.524	XOM_R2OWSG MWD+IFR1+MS
4800.000	9.125	273.464	4757.026	17.242	0.000	17.624	0.000	6.227	0.000	0.000	17.655	17.115	79.361	XOM_R2OWSG MWD+IFR1+MS
4900.000	9.125	273.464	4855.760	17.615	0.000	18.001	0.000	6.357	0.000	0.000	18.034	17.483	79.203	XOM_R2OWSG MWD+IFR1+MS
5000.000	9.125	273.464	4954.495	17.989	0.000	18.378	0.000	6.489	0.000	0.000	18.413	17.851	79.050	XOM_R2OWSG MWD+IFR1+MS
5100.000	9.125	273.464	5053.229	18.362	0.000	18.756	0.000	6.622	0.000	0.000	18.791	18.219	78.902	XOM_R2OWSG MWD+IFR1+MS
5200.000	9.125	273.464	5151.964	18.736	0.000	19.133	0.000	6.757	0.000	0.000	19.170	18.587	78.758	XOM_R2OWSG MWD+IFR1+MS
5300.000	9.125	273.464	5250.698	19.110	0.000	19.511	0.000	6.894	0.000	0.000	19.549	18.955	78.618	XOM_R2OWSG MWD+IFR1+MS
5400.000	9.125	273.464	5349.433	19.484	0.000	19.888	0.000	7.033	0.000	0.000	19.928	19.323	78.482	XOM_R2OWSG MWD+IFR1+MS
5500.000	9.125	273.464	5448.167	19.858	0.000	20.266	0.000	7.174	0.000	0.000	20.307	19.692	78.350	XOM_R2OWSG MWD+IFR1+MS
5600.000	9.125	273.464	5546.902	20.232	0.000	20.644	0.000	7.316	0.000	0.000	20.687	20.060	78.221	XOM_R2OWSG MWD+IFR1+MS
5700.000	9.125	273.464	5645.636	20.606	0.000	21.022	0.000	7.461	0.000	0.000	21.066	20.428	78.096	XOM_R2OWSG MWD+IFR1+MS

5800.000	9.125	273.464	5744.371	20.980	0.000	21.399	0.000	7.607	0.000	0.000	21.445	20.797	77.974	XOM_R2OWSG MWD+IFR1+MS
5900.000	9.125	273.464	5843.106	21.354	0.000	21.777	0.000	7.756	0.000	0.000	21.824	21.166	77.855	XOM_R2OWSG MWD+IFR1+MS
6000.000	9.125	273.464	5941.840	21.729	0.000	22.155	0.000	7.906	0.000	0.000	22.204	21.534	77.739	XOM_R2OWSG MWD+IFR1+MS
6100.000	9.125	273.464	6040.575	22.103	0.000	22.533	0.000	8.059	0.000	0.000	22.583	21.903	77.626	XOM_R2OWSG MWD+IFR1+MS
6200.000	9.125	273.464	6139.309	22.477	0.000	22.911	0.000	8.213	0.000	0.000	22.963	22.272	77.516	XOM_R2OWSG MWD+IFR1+MS
6307.744	9.125	273.464	6245.690	22.881	0.000	23.319	0.000	8.382	0.000	0.000	23.372	22.669	77.401	XOM_R2OWSG MWD+IFR1+MS
6400.000	7.280	273.464	6336.998	23.233	0.000	23.664	0.000	8.528	0.000	0.000	23.719	23.008	77.302	XOM_R2OWSG MWD+IFR1+MS
6500.000	5.280	273.464	6436.393	23.585	0.000	24.031	0.000	8.686	0.000	0.000	24.087	23.370	77.184	XOM_R2OWSG MWD+IFR1+MS
6600.000	3.280	273.464	6536.109	23.905	0.000	24.390	0.000	8.841	0.000	0.000	24.446	23.727	77.055	XOM_R2OWSG MWD+IFR1+MS
6700.000	1.280	273.464	6636.025	24.192	0.000	24.740	0.000	8.993	0.000	0.000	24.798	24.078	76.931	XOM_R2OWSG MWD+IFR1+MS
6763.980	0.000	0.000	6700.000	24.980	0.000	24.334	0.000	9.090	0.000	0.000	25.016	24.296	76.964	XOM_R2OWSG MWD+IFR1+MS
6800.000	0.000	0.000	6736.020	25.102	0.000	24.454	0.000	9.144	0.000	0.000	25.137	24.417	77.042	XOM_R2OWSG MWD+IFR1+MS
6900.000	0.000	0.000	6836.020	25.439	0.000	24.788	0.000	9.296	0.000	0.000	25.473	24.753	77.255	XOM_R2OWSG MWD+IFR1+MS
7000.000	0.000	0.000	6936.020	25.777	0.000	25.123	0.000	9.451	0.000	0.000	25.810	25.089	77.461	XOM_R2OWSG MWD+IFR1+MS
7100.000	0.000	0.000	7036.020	26.115	0.000	25.459	0.000	9.608	0.000	0.000	26.148	25.426	77.662	XOM_R2OWSG MWD+IFR1+MS
7200.000	0.000	0.000	7136.020	26.454	0.000	25.795	0.000	9.768	0.000	0.000	26.486	25.763	77.858	XOM_R2OWSG MWD+IFR1+MS
7300.000	0.000	0.000	7236.020	26.793	0.000	26.132	0.000	9.931	0.000	0.000	26.824	26.101	78.048	XOM_R2OWSG MWD+IFR1+MS
7400.000	0.000	0.000	7336.020	27.133	0.000	26.470	0.000	10.097	0.000	0.000	27.163	26.439	78.233	XOM_R2OWSG MWD+IFR1+MS
7500.000	0.000	0.000	7436.020	27.474	0.000	26.808	0.000	10.265	0.000	0.000	27.503	26.778	78.413	XOM_R2OWSG MWD+IFR1+MS
7600.000	0.000	0.000	7536.020	27.815	0.000	27.146	0.000	10.436	0.000	0.000	27.843	27.117	78.588	XOM_R2OWSG MWD+IFR1+MS

7700.000	0.000	0.000	7636.020	28.156	0.000	27.485	0.000	10.611	0.000	0.000	28.183	27.457	78.759	XOM_R2OWSG MWD+IFR1+MS
7800.000	0.000	0.000	7736.020	28.498	0.000	27.825	0.000	10.787	0.000	0.000	28.524	27.798	78.925	XOM_R2OWSG MWD+IFR1+MS
7900.000	0.000	0.000	7836.020	28.840	0.000	28.165	0.000	10.967	0.000	0.000	28.865	28.138	79.088	XOM_R2OWSG MWD+IFR1+MS
8000.000	0.000	0.000	7936.020	29.182	0.000	28.505	0.000	11.150	0.000	0.000	29.207	28.480	79.246	XOM_R2OWSG MWD+IFR1+MS
8100.000	0.000	0.000	8036.020	29.525	0.000	28.846	0.000	11.335	0.000	0.000	29.549	28.821	79.400	XOM_R2OWSG MWD+IFR1+MS
8200.000	0.000	0.000	8136.020	29.868	0.000	29.187	0.000	11.524	0.000	0.000	29.892	29.163	79.550	XOM_R2OWSG MWD+IFR1+MS
8300.000	0.000	0.000	8236.020	30.212	0.000	29.529	0.000	11.715	0.000	0.000	30.235	29.506	79.696	XOM_R2OWSG MWD+IFR1+MS
8400.000	0.000	0.000	8336.020	30.556	0.000	29.871	0.000	11.909	0.000	0.000	30.578	29.848	79.839	XOM_R2OWSG MWD+IFR1+MS
8500.000	0.000	0.000	8436.020	30.900	0.000	30.214	0.000	12.106	0.000	0.000	30.922	30.191	79.979	XOM_R2OWSG MWD+IFR1+MS
8600.000	0.000	0.000	8536.020	31.245	0.000	30.557	0.000	12.306	0.000	0.000	31.266	30.535	80.115	XOM_R2OWSG MWD+IFR1+MS
8700.000	0.000	0.000	8636.020	31.590	0.000	30.900	0.000	12.509	0.000	0.000	31.610	30.879	80.248	XOM_R2OWSG MWD+IFR1+MS
8800.000	0.000	0.000	8736.020	31.935	0.000	31.243	0.000	12.715	0.000	0.000	31.955	31.223	80.378	XOM_R2OWSG MWD+IFR1+MS
8900.000	0.000	0.000	8836.020	32.280	0.000	31.587	0.000	12.924	0.000	0.000	32.300	31.567	80.505	XOM_R2OWSG MWD+IFR1+MS
9000.000	0.000	0.000	8936.020	32.626	0.000	31.931	0.000	13.136	0.000	0.000	32.645	31.912	80.629	XOM_R2OWSG MWD+IFR1+MS
9100.000	0.000	0.000	9036.020	32.972	0.000	32.276	0.000	13.351	0.000	0.000	32.991	32.257	80.750	XOM_R2OWSG MWD+IFR1+MS
9200.000	0.000	0.000	9136.020	33.318	0.000	32.621	0.000	13.569	0.000	0.000	33.337	32.602	80.868	XOM_R2OWSG MWD+IFR1+MS
9300.000	0.000	0.000	9236.020	33.665	0.000	32.966	0.000	13.790	0.000	0.000	33.683	32.948	80.984	XOM_R2OWSG MWD+IFR1+MS
9400.000	0.000	0.000	9336.020	34.012	0.000	33.311	0.000	14.014	0.000	0.000	34.029	33.293	81.097	XOM_R2OWSG MWD+IFR1+MS
9500.000	0.000	0.000	9436.020	34.359	0.000	33.657	0.000	14.241	0.000	0.000	34.376	33.640	81.208	XOM_R2OWSG MWD+IFR1+MS
9600.000	0.000	0.000	9536.020	34.706	0.000	34.003	0.000	14.472	0.000	0.000	34.723	33.986	81.316	XOM_R2OWSG MWD+IFR1+MS

9700.000	0.000	0.000	9636.020	35.054	0.000	34.349	0.000	14.705	0.000	0.000	35.070	34.332	81.422	XOM_R2OWSG MWD+IFR1+MS
9800.000	0.000	0.000	9736.020	35.401	0.000	34.695	0.000	14.941	0.000	0.000	35.417	34.679	81.526	XOM_R2OWSG MWD+IFR1+MS
9900.000	0.000	0.000	9836.020	35.749	0.000	35.042	0.000	15.180	0.000	0.000	35.765	35.026	81.628	XOM_R2OWSG MWD+IFR1+MS
10000.000	0.000	0.000	9936.020	36.097	0.000	35.389	0.000	15.422	0.000	0.000	36.113	35.374	81.727	XOM_R2OWSG MWD+IFR1+MS
10100.000	0.000	0.000	10036.020	36.446	0.000	35.736	0.000	15.668	0.000	0.000	36.461	35.721	81.825	XOM_R2OWSG MWD+IFR1+MS
10200.000	0.000	0.000	10136.020	36.794	0.000	36.084	0.000	15.916	0.000	0.000	36.809	36.069	81.920	XOM_R2OWSG MWD+IFR1+MS
10300.000	0.000	0.000	10236.020	37.143	0.000	36.431	0.000	16.167	0.000	0.000	37.157	36.417	82.014	XOM_R2OWSG MWD+IFR1+MS
10400.000	0.000	0.000	10336.020	37.492	0.000	36.779	0.000	16.422	0.000	0.000	37.506	36.765	82.105	XOM_R2OWSG MWD+IFR1+MS
10500.000	0.000	0.000	10436.020	37.841	0.000	37.127	0.000	16.680	0.000	0.000	37.855	37.113	82.195	XOM_R2OWSG MWD+IFR1+MS
10600.000	0.000	0.000	10536.020	38.190	0.000	37.475	0.000	16.940	0.000	0.000	38.203	37.462	82.283	XOM_R2OWSG MWD+IFR1+MS
10700.000	0.000	0.000	10636.020	38.540	0.000	37.823	0.000	17.204	0.000	0.000	38.553	37.810	82.370	XOM_R2OWSG MWD+IFR1+MS
10800.000	0.000	0.000	10736.020	38.889	0.000	38.172	0.000	17.471	0.000	0.000	38.902	38.159	82.454	XOM_R2OWSG MWD+IFR1+MS
10900.000	0.000	0.000	10836.020	39.239	0.000	38.521	0.000	17.741	0.000	0.000	39.251	38.508	82.537	XOM_R2OWSG MWD+IFR1+MS
11000.000	0.000	0.000	10936.020	39.589	0.000	38.870	0.000	18.014	0.000	0.000	39.601	38.857	82.619	XOM_R2OWSG MWD+IFR1+MS
11025.783	0.000	0.000	10961.803	39.679	0.000	38.960	0.000	18.085	0.000	0.000	39.691	38.947	82.639	XOM_R2OWSG MWD+IFR1+MS
11100.000	5.937	359.801	11035.887	39.798	0.000	39.217	0.000	18.289	0.000	0.000	39.951	39.205	82.624	XOM_R2OWSG MWD+IFR1+MS
11200.000	13.937	359.801	11134.307	39.422	0.000	39.557	0.000	18.560	0.000	0.000	40.295	39.544	82.372	XOM_R2OWSG MWD+IFR1+MS
11300.000	21.937	359.801	11229.369	38.447	0.000	39.885	0.000	18.820	0.000	0.000	40.622	39.871	81.866	XOM_R2OWSG MWD+IFR1+MS
11400.000	29.937	359.801	11319.223	36.911	0.000	40.196	0.000	19.066	0.000	0.000	40.923	40.179	81.134	XOM_R2OWSG MWD+IFR1+MS
11500.000	37.937	359.801	11402.120	34.877	0.000	40.488	0.000	19.294	0.000	0.000	41.189	40.468	80.207	XOM_R2OWSG MWD+IFR1+MS

11600.000	45.937	359.801	11476.448	32.437	0.000	40.758	0.000	19.507	0.000	0.000	41.415	40.734	79.108	XOM_R2OWSG MWD+IFR1+MS
11700.000	53.937	359.801	11540.758	29.722	0.000	41.003	0.000	19.707	0.000	0.000	41.597	40.977	77.841	XOM_R2OWSG MWD+IFR1+MS
11800.000	61.937	359.801	11593.799	26.915	0.000	41.225	0.000	19.899	0.000	0.000	41.733	41.195	76.380	XOM_R2OWSG MWD+IFR1+MS
11900.000	69.937	359.801	11634.540	24.265	0.000	41.420	0.000	20.088	0.000	0.000	41.826	41.390	74.663	XOM_R2OWSG MWD+IFR1+MS
12000.000	77.937	359.801	11662.186	22.103	0.000	41.589	0.000	20.281	0.000	0.000	41.880	41.561	72.572	XOM_R2OWSG MWD+IFR1+MS
12100.000	85.937	359.801	11676.200	20.805	0.000	41.731	0.000	20.479	0.000	0.000	41.902	41.708	69.862	XOM_R2OWSG MWD+IFR1+MS
12150.783	90.000	359.801	11678.000	20.583	0.000	41.791	0.000	20.583	0.000	0.000	41.904	41.773	68.284	XOM_R2OWSG MWD+IFR1+MS
12200.000	90.000	359.801	11678.000	20.688	0.000	41.847	0.000	20.688	0.000	0.000	41.902	41.834	64.233	XOM_R2OWSG MWD+IFR1+MS
12300.000	90.000	359.801	11678.000	20.921	0.000	41.978	0.000	20.921	0.000	0.000	41.979	41.896	-7.105	XOM_R2OWSG MWD+IFR1+MS
12400.000	90.000	359.801	11678.000	21.182	0.000	42.127	0.000	21.182	0.000	0.000	42.136	41.896	-11.545	XOM_R2OWSG MWD+IFR1+MS
12500.000	90.000	359.801	11678.000	21.467	0.000	42.294	0.000	21.467	0.000	0.000	42.311	41.898	-11.953	XOM_R2OWSG MWD+IFR1+MS
12600.000	90.000	359.801	11678.000	21.777	0.000	42.478	0.000	21.777	0.000	0.000	42.502	41.900	-11.779	XOM_R2OWSG MWD+IFR1+MS
12700.000	90.000	359.801	11678.000	22.111	0.000	42.680	0.000	22.111	0.000	0.000	42.710	41.904	-11.444	XOM_R2OWSG MWD+IFR1+MS
12800.000	90.000	359.801	11678.000	22.467	0.000	42.899	0.000	22.467	0.000	0.000	42.935	41.909	-11.060	XOM_R2OWSG MWD+IFR1+MS
12900.000	90.000	359.801	11678.000	22.845	0.000	43.135	0.000	22.845	0.000	0.000	43.176	41.916	-10.667	XOM_R2OWSG MWD+IFR1+MS
13000.000	90.000	359.801	11678.000	23.243	0.000	43.387	0.000	23.243	0.000	0.000	43.433	41.923	-10.284	XOM_R2OWSG MWD+IFR1+MS
13100.000	90.000	359.801	11678.000	23.660	0.000	43.656	0.000	23.660	0.000	0.000	43.705	41.932	-9.916	XOM_R2OWSG MWD+IFR1+MS
13200.000	90.000	359.801	11678.000	24.096	0.000	43.941	0.000	24.096	0.000	0.000	43.994	41.941	-9.566	XOM_R2OWSG MWD+IFR1+MS
13300.000	90.000	359.801	11678.000	24.549	0.000	44.241	0.000	24.549	0.000	0.000	44.297	41.952	-9.236	XOM_R2OWSG MWD+IFR1+MS
13400.000	90.000	359.801	11678.000	25.018	0.000	44.557	0.000	25.018	0.000	0.000	44.616	41.964	-8.924	XOM_R2OWSG MWD+IFR1+MS



13500.000	90.000	359.801	11678.000	25.503	0.000	44.888	0.000	25.503	0.000	0.000	44.950	41.976	-8.630	XOM_R2OWSG MWD+IFR1+MS
13600.000	90.000	359.801	11678.000	26.003	0.000	45.233	0.000	26.003	0.000	0.000	45.298	41.990	-8.354	XOM_R2OWSG MWD+IFR1+MS
13700.000	90.000	359.801	11678.000	26.516	0.000	45.593	0.000	26.516	0.000	0.000	45.660	42.004	-8.093	XOM_R2OWSG MWD+IFR1+MS
13800.000	90.000	359.801	11678.000	27.043	0.000	45.967	0.000	27.043	0.000	0.000	46.036	42.019	-7.848	XOM_R2OWSG MWD+IFR1+MS
13900.000	90.000	359.801	11678.000	27.582	0.000	46.355	0.000	27.582	0.000	0.000	46.425	42.035	-7.616	XOM_R2OWSG MWD+IFR1+MS
14000.000	90.000	359.801	11678.000	28.132	0.000	46.756	0.000	28.132	0.000	0.000	46.828	42.052	-7.397	XOM_R2OWSG MWD+IFR1+MS
14100.000	90.000	359.801	11678.000	28.693	0.000	47.171	0.000	28.693	0.000	0.000	47.243	42.070	-7.190	XOM_R2OWSG MWD+IFR1+MS
14200.000	90.000	359.801	11678.000	29.265	0.000	47.598	0.000	29.265	0.000	0.000	47.671	42.089	-6.994	XOM_R2OWSG MWD+IFR1+MS
14300.000	90.000	359.801	11678.000	29.846	0.000	48.037	0.000	29.846	0.000	0.000	48.112	42.108	-6.808	XOM_R2OWSG MWD+IFR1+MS
14400.000	90.000	359.801	11678.000	30.436	0.000	48.488	0.000	30.436	0.000	0.000	48.564	42.128	-6.632	XOM_R2OWSG MWD+IFR1+MS
14500.000	90.000	359.801	11678.000	31.035	0.000	48.951	0.000	31.035	0.000	0.000	49.027	42.149	-6.464	XOM_R2OWSG MWD+IFR1+MS
14600.000	90.000	359.801	11678.000	31.642	0.000	49.426	0.000	31.642	0.000	0.000	49.502	42.170	-6.305	XOM_R2OWSG MWD+IFR1+MS
14700.000	90.000	359.801	11678.000	32.257	0.000	49.911	0.000	32.257	0.000	0.000	49.988	42.193	-6.154	XOM_R2OWSG MWD+IFR1+MS
14800.000	90.000	359.801	11678.000	32.879	0.000	50.407	0.000	32.879	0.000	0.000	50.485	42.216	-6.009	XOM_R2OWSG MWD+IFR1+MS
14900.000	90.000	359.801	11678.000	33.508	0.000	50.914	0.000	33.508	0.000	0.000	50.992	42.240	-5.871	XOM_R2OWSG MWD+IFR1+MS
15000.000	90.000	359.801	11678.000	34.143	0.000	51.430	0.000	34.143	0.000	0.000	51.509	42.264	-5.740	XOM_R2OWSG MWD+IFR1+MS
15100.000	90.000	359.801	11678.000	34.784	0.000	51.956	0.000	34.784	0.000	0.000	52.035	42.290	-5.614	XOM_R2OWSG MWD+IFR1+MS
15200.000	90.000	359.801	11678.000	35.432	0.000	52.492	0.000	35.432	0.000	0.000	52.571	42.316	-5.494	XOM_R2OWSG MWD+IFR1+MS
15300.000	90.000	359.801	11678.000	36.084	0.000	53.037	0.000	36.084	0.000	0.000	53.116	42.342	-5.379	XOM_R2OWSG MWD+IFR1+MS
15400.000	90.000	359.801	11678.000	36.742	0.000	53.592	0.000	36.742	0.000	0.000	53.671	42.370	-5.268	XOM_R2OWSG MWD+IFR1+MS



15500.000	90.000	359.801	11678.000	37.405	0.000	54.154	0.000	37.405	0.000	0.000	54.233	42.398	-5.163	XOM_R2OWSG MWD+IFR1+MS
15600.000	90.000	359.801	11678.000	38.072	0.000	54.725	0.000	38.072	0.000	0.000	54.804	42.427	-5.061	XOM_R2OWSG MWD+IFR1+MS
15700.000	90.000	359.801	11678.000	38.744	0.000	55.305	0.000	38.744	0.000	0.000	55.383	42.456	-4.964	XOM_R2OWSG MWD+IFR1+MS
15800.000	90.000	359.801	11678.000	39.420	0.000	55.892	0.000	39.420	0.000	0.000	55.970	42.486	-4.870	XOM_R2OWSG MWD+IFR1+MS
15900.000	90.000	359.801	11678.000	40.100	0.000	56.486	0.000	40.100	0.000	0.000	56.565	42.517	-4.780	XOM_R2OWSG MWD+IFR1+MS
16000.000	90.000	359.801	11678.000	40.783	0.000	57.088	0.000	40.783	0.000	0.000	57.167	42.549	-4.693	XOM_R2OWSG MWD+IFR1+MS
16100.000	90.000	359.801	11678.000	41.470	0.000	57.698	0.000	41.470	0.000	0.000	57.776	42.581	-4.609	XOM_R2OWSG MWD+IFR1+MS
16200.000	90.000	359.801	11678.000	42.161	0.000	58.314	0.000	42.161	0.000	0.000	58.392	42.614	-4.529	XOM_R2OWSG MWD+IFR1+MS
16300.000	90.000	359.801	11678.000	42.855	0.000	58.937	0.000	42.855	0.000	0.000	59.014	42.647	-4.451	XOM_R2OWSG MWD+IFR1+MS
16400.000	90.000	359.801	11678.000	43.552	0.000	59.566	0.000	43.552	0.000	0.000	59.644	42.682	-4.376	XOM_R2OWSG MWD+IFR1+MS
16500.000	90.000	359.801	11678.000	44.252	0.000	60.202	0.000	44.252	0.000	0.000	60.279	42.717	-4.303	XOM_R2OWSG MWD+IFR1+MS
16600.000	90.000	359.801	11678.000	44.955	0.000	60.844	0.000	44.955	0.000	0.000	60.921	42.752	-4.233	XOM_R2OWSG MWD+IFR1+MS
16700.000	90.000	359.801	11678.000	45.660	0.000	61.492	0.000	45.660	0.000	0.000	61.568	42.789	-4.166	XOM_R2OWSG MWD+IFR1+MS
16800.000	90.000	359.801	11678.000	46.368	0.000	62.145	0.000	46.368	0.000	0.000	62.221	42.825	-4.100	XOM_R2OWSG MWD+IFR1+MS
16900.000	90.000	359.801	11678.000	47.078	0.000	62.804	0.000	47.078	0.000	0.000	62.880	42.863	-4.037	XOM_R2OWSG MWD+IFR1+MS
17000.000	90.000	359.801	11678.000	47.791	0.000	63.469	0.000	47.791	0.000	0.000	63.544	42.901	-3.975	XOM_R2OWSG MWD+IFR1+MS
17100.000	90.000	359.801	11678.000	48.506	0.000	64.138	0.000	48.506	0.000	0.000	64.213	42.940	-3.916	XOM_R2OWSG MWD+IFR1+MS
17200.000	90.000	359.801	11678.000	49.223	0.000	64.813	0.000	49.223	0.000	0.000	64.887	42.980	-3.858	XOM_R2OWSG MWD+IFR1+MS
17300.000	90.000	359.801	11678.000	49.942	0.000	65.493	0.000	49.942	0.000	0.000	65.567	43.020	-3.803	XOM_R2OWSG MWD+IFR1+MS
17400.000	90.000	359.801	11678.000	50.663	0.000	66.177	0.000	50.663	0.000	0.000	66.250	43.061	-3.748	XOM_R2OWSG MWD+IFR1+MS

17500.000	90.000	359.801	11678.000	51.386	0.000	66.866	0.000	51.386	0.000	0.000	66.939	43.102	-3.696	XOM_R2OWSG MWD+IFR1+MS
17600.000	90.000	359.801	11678.000	52.111	0.000	67.559	0.000	52.111	0.000	0.000	67.632	43.144	-3.645	XOM_R2OWSG MWD+IFR1+MS
17700.000	90.000	359.801	11678.000	52.837	0.000	68.257	0.000	52.837	0.000	0.000	68.329	43.187	-3.595	XOM_R2OWSG MWD+IFR1+MS
17800.000	90.000	359.801	11678.000	53.565	0.000	68.959	0.000	53.565	0.000	0.000	69.031	43.230	-3.547	XOM_R2OWSG MWD+IFR1+MS
17900.000	90.000	359.801	11678.000	54.295	0.000	69.665	0.000	54.295	0.000	0.000	69.736	43.274	-3.500	XOM_R2OWSG MWD+IFR1+MS
18000.000	90.000	359.801	11678.000	55.026	0.000	70.375	0.000	55.026	0.000	0.000	70.446	43.319	-3.454	XOM_R2OWSG MWD+IFR1+MS
18100.000	90.000	359.801	11678.000	55.759	0.000	71.089	0.000	55.759	0.000	0.000	71.159	43.364	-3.410	XOM_R2OWSG MWD+IFR1+MS
18200.000	90.000	359.801	11678.000	56.493	0.000	71.806	0.000	56.493	0.000	0.000	71.876	43.410	-3.367	XOM_R2OWSG MWD+IFR1+MS
18300.000	90.000	359.801	11678.000	57.228	0.000	72.527	0.000	57.228	0.000	0.000	72.596	43.456	-3.325	XOM_R2OWSG MWD+IFR1+MS
18400.000	90.000	359.801	11678.000	57.965	0.000	73.252	0.000	57.965	0.000	0.000	73.321	43.503	-3.284	XOM_R2OWSG MWD+IFR1+MS
18500.000	90.000	359.801	11678.000	58.703	0.000	73.980	0.000	58.703	0.000	0.000	74.048	43.551	-3.244	XOM_R2OWSG MWD+IFR1+MS
18600.000	90.000	359.801	11678.000	59.442	0.000	74.711	0.000	59.442	0.000	0.000	74.779	43.599	-3.205	XOM_R2OWSG MWD+IFR1+MS
18650.722	90.000	359.801	11678.000	59.817	0.000	75.082	0.000	59.817	0.000	0.000	75.150	43.624	-3.186	XOM_R2OWSG MWD+IFR1+MS
18700.000	90.000	359.801	11678.000	60.182	0.000	75.444	0.000	60.182	0.000	0.000	75.511	43.648	-3.167	XOM_R2OWSG MWD+IFR1+MS
18749.753	90.000	359.801	11678.000	60.551	0.000	75.809	0.000	60.551	0.000	0.000	75.877	43.673	-3.149	XOM_R2OWSG MWD+IFR1+MS

## Plan Targets

PLU 22-3 BS 111H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 111H	12150.77	404965.40	672785.90	8304.00	CIRCLE
LTP 111H	18650.72	411465.30	672763.30	8304.00	CIRCLE
BHL 111H	18749.72	411564.30	672762.70	8304.00	CIRCLE

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

XTO Energy Inc.  
POKER LAKE UNIT 22-3 BS 111H  
Projected TD: 18749.75' MD / 11678' TVD  
SHL: 580' FSL & 426' FWL , Section 22, T25S, R31E  
BHL: 2655' FSL & 400' FEL , Section 16, T25S, R31E  
Eddy County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	880'	Water
Top of Salt	1196'	Water
Base of Salt	4067'	Water
Delaware	4282'	Water
Brushy Canyon	6763'	Water/Oil/Gas
Bone Spring	8245'	Water
1st Bone Spring	9086'	Water/Oil/Gas
2nd Bone Spring	9643'	Water/Oil/Gas
3rd Bone Spring	10336'	Water/Oil/Gas
Wolfcamp	11618'	Water/Oil/Gas
Wolfcamp X	11643'	Water/Oil/Gas
Wolfcamp Y	11741'	Water/Oil/Gas
Wolfcamp A	11788'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>11678'</b>	<b>Water/Oil/Gas</b>

\*\*\* Hydrocarbons @ Brushy Canyon

\*\*\* Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 9.625 inch casing @ 980' (216' above the salt) and circulating cement back to surface. The intermediate will isolate from the top of salt down to the next casing seat by setting 7.625 inch casing at 10825.78' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 18749.75 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 10525.78 feet).

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 980'	9.625	40	J-55	BTC	New	1.33	6.42	16.07
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	2.48	2.71	1.74
8.75	4000' – 10825.78'	7.625	29.7	HC L-80	Flush Joint	New	1.81	1.92	2.00
6.75	0' – 10725.78'	5.5	20	RY P-110	Semi-Premium	New	1.26	1.90	2.22
6.75	10725.78' - 18749.75'	5.5	20	RY P-110	Semi-Flush	New	1.26	1.74	2.22

- XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing per this Sundry
- XTO requests to not utilize centralizers in the curve and lateral
- 7.625 Collapse analyzed using 50% evacuation based on regional experience.
- 5.5 Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less
- XTO requests the option to use 5" BTC Float equipment for the the production casing

**Wellhead:**

*Permanent Wellhead – Multibowl System*

A. Starting Head: 11" 10M top flange x 9-5/8" bottom

B. Tubing Head: 11" 10M bottom flange x 7-1/16" 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 7-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

#### 4. Cement Program

##### **Surface Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 980'**

Lead: 220 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft3/sx, 10.13 gal/sx water)

Tail: 130 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

Top of Cement: Surface

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

##### **2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 10825.78'**

###### 1st Stage

Optional Lead: 360 sxs Class C (mixed at 10.5 ppg, 2.77 ft3/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 370 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6763

Compressives: 12-hr = 900 psi 24 hr = 1150 psi

###### 2nd Stage

Lead: 0 sxs Class C (mixed at 12.9 ppg, 2.16 ft3/sx, 9.61 gal/sx water)

Tail: 760 sxs Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)

Top of Cement: 0

Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6763') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

XTO will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

XTO requests to pump an Optional Lead if well conditions dictate in an attempt to bring cement inside the first intermediate casing. If cement reaches the desired height, the BLM will be notified and the second stage bradenhead squeeze and subsequent TOC verification will be negated.

XTO requests the option to conduct the bradenhead squeeze and TOC verification offline as per standard approval from BLM when unplanned remediation is needed and batch drilling is approved. In the event the bradenhead is conducted, we will ensure the first stage cement job is cemented properly and the well is static with floats holding and no pressure on the csg annulus as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

##### **Production Casing: 5.5, 20 New Semi-Flush, RY P-110 casing to be set at +/- 18749.75'**

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 10525.78 feet

Tail: 550 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 11025.78 feet

Compressives: 12-hr = 800 psi 24 hr = 1500 psi

XTO requests the option to offline cement and remediate (if needed) surface and intermediate casing strings where batch drilling is approved and if unplanned remediation is needed. XTO will ensure well is static with no pressure on the csg annulus, as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed when applicable per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence.

## 5. Pressure Control Equipment

Once the permanent WH is installed on the 9.625 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 3807 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

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 9.625, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per Cactus recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production

hole on each of the wells.

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. Based on discussions with the BLM on February 27th 2020, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met: 1. After a full BOP test is conducted on the first well on the pad 2. When skidding to drill an intermediate section that does not penetrate into the Wolfcamp.

## 6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 980'	12.25	FW/Native	8.4-8.9	35-40	NC
980' - 10825.78'	8.75	FW / Cut Brine / Direct Emulsion	9.5-10	30-32	NC
10825.78' - 18749.75'	6.75	OBM	10.5-11	50-60	NC - 20

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

Spud with fresh water/native mud. Drill out from under 9-5/8" surface casing with brine solution. A 9.7 ppg - 10.2 ppg cut brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

## 7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 9.625 casing.

## 8. Logging, Coring and Testing Program

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

Open hole logging will not be done on this well.

## 9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 180 to 200 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6376 psi.

## 10. Anticipated Starting Date and Duration of Operations

Anticipated spud date will be after BLM approval. Move in operations and drilling is expected to take 40 days.



☒ AMENDED REPORT

**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  
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**District III**  
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**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 317031

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 317031
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing, then a CBL is required.	3/1/2024