

<b>Well Name:</b> POKER LAKE UNIT 22 DTD	<b>Well Location:</b> T24S / R30E / SEC 22 / NWNW /	<b>County or Parish/State:</b>
<b>Well Number:</b> 122H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM068905	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3001549864	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> XTO PERMIAN OPERATING LLC

**Notice of Intent**

**Sundry ID:** 2761874

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 11/16/2023

**Time Sundry Submitted:** 11:44

**Date proposed operation will begin:** 11/27/2023

**Procedure Description:** XTO Permian Operating LLC. respectfully requests approval to make changes to the Approved APD as follows: SHL, BHL, FTP, LTP, Directional Drilling Plan, Casing and cement change. SHL: FROM: 1106' FNL & 175' FWL TO: 1011' FNL & 664' FWL of Section 22-T24S-R30E BHL: FROM: 200' FNL & 1634' FWL TO: 230' FNL & 1700' FWL of Section 3-T24S-R30E FTP: FROM: 100' FNL & 1577' FWL TO: 1011' FNL & 1700' FWL of Section 22-T24S-R30E LTP: FROM: 329' FNL & 1633' FWL TO: 330' FNL & 1700' FWL of Section 3-T24S-R30E DRILLING AND CASING PLAN: 6" P-110 26# production casing will be run instead of 5-1/2" P-110 23# production casing. ATTACHMENTS: New C-102, Drilling and Casing Plan, Directional Plan, Wellhead Design, Casing Spec Sheet, BOP Variance Request and Well Control Plan

**NOI Attachments**

**Procedure Description**

POKER\_LAKE\_UNIT\_22\_DTD\_122H\_C\_102\_signed\_11\_10\_2023\_20240111104919.pdf

PLU\_22\_DTD\_122H\_sundry\_attachments\_for\_APD\_Changes\_1\_11\_2024\_20240111104857.pdf

**Well Name:** POKER LAKE UNIT 22  
DTD

**Well Location:** T24S / R30E / SEC 22 /  
NWNW /

**County or Parish/State:**

**Well Number:** 122H

**Type of Well:** CONVENTIONAL GAS  
WELL

**Allottee or Tribe Name:**

**Lease Number:** NMNM068905

**Unit or CA Name:**

**Unit or CA Number:**

**US Well Number:** 3001549864

**Well Status:** Approved Application for  
Permit to Drill

**Operator:** XTO PERMIAN  
OPERATING LLC

### Conditions of Approval

#### Additional

Sec\_22\_24S\_30E\_NMP\_Sundry\_2762874\_Poker\_Lake\_Unit\_22\_DTD\_122H\_COAs\_20240125140437.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*

**Operator Electronic Signature:** RANELL (RUSTY) KLEIN

**Signed on:** JAN 11, 2024 10:49 AM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Regulatory Analyst

**Street Address:** 6401 HOLIDAY HILL ROAD BLDG 5

**City:** MIDLAND

**State:** TX

**Phone:** (432) 620-6700

**Email address:** RANELL.KLEIN@EXXONMOBIL.COM

### Field

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**

### BLM Point of Contact

**BLM POC Name:** CHRISTOPHER WALLS

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5752342234

**BLM POC Email Address:** cwalls@blm.gov

**Disposition:** Approved

**Disposition Date:** 01/26/2024

**Signature:** 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.**

<b>SUBMIT IN TRIPLICATE - Other instructions on page 2</b>		5. Lease Serial No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator		7. If Unit of CA/Agreement, Name and/or No.
3a. Address	3b. Phone No. (include area code)	8. Well Name and No.
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		9. API Well No.
		10. Field and Pool or Exploratory Area
		11. Country or Parish, State

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"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<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"/> 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 recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

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

### Location of Well

0. SHL: NWNW / 1106 FNL / 175 FWL / TWSP: 24S / RANGE: 30E / SECTION: 22 / LAT: 32.20746 / LONG: -103.877024 ( TVD: 0 feet, MD: 0 feet )

PPP: SWSE / 100 FSL / 1577 FWL / TWSP: 24S / RANGE: 30E / SECTION: 15 / LAT: 32.210805 / LONG: -103.872488 ( TVD: 11328 feet, MD: 14425 feet )

PPP: SWSE / 100 FSL / 1577 FWL / TWSP: 24S / RANGE: 30E / SECTION: 15 / LAT: 32.210805 / LONG: -103.872488 ( TVD: 11328 feet, MD: 11785 feet )

PPP: SESW / 300 FNL / 313 FWL / TWSP: 24S / RANGE: 30E / SECTION: 10 / LAT: 32.253158 / LONG: -103.876545 ( TVD: 11328 feet, MD: 17065 feet )

BHL: LOT 3 / 200 FNL / 1634 FWL / TWSP: 24S / RANGE: 30E / SECTION: 3 / LAT: 32.253522 / LONG: -103.872274 ( TVD: 11328 feet, MD: 27325 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 DTD 122H
<b>LOCATION:</b>	Sec 22-24S-30E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2761874** on 01/25/2024. 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 checked="" type="radio"/> Low	<input type="radio"/> Medium	<input 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 779 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 6227'**
- 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.

**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 **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. 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. **Variance approved to utilize a 5M annular tested to 5000 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**  
(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.

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

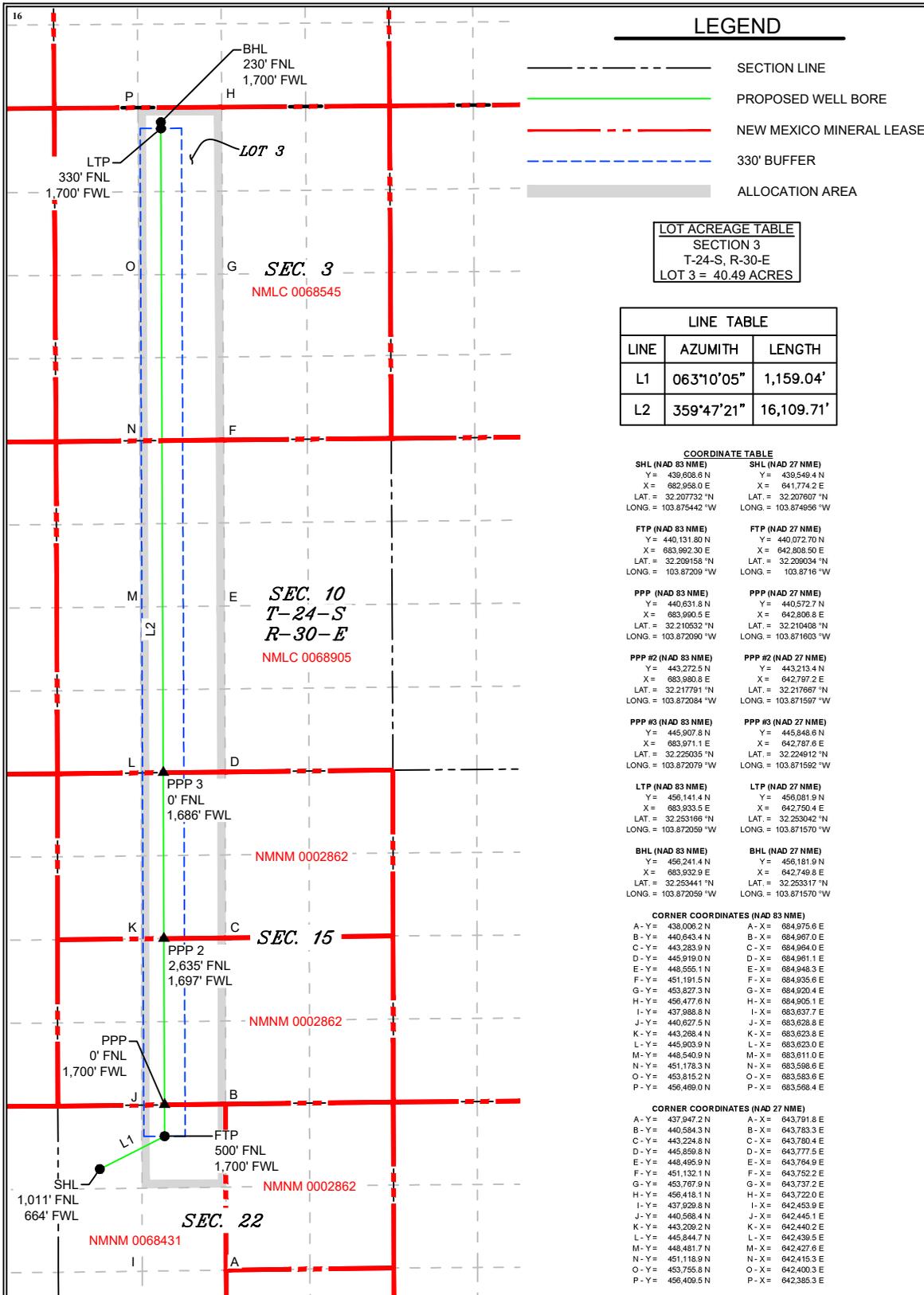
Table with 3 columns: API Number (30-015- 49864), Pool Code (98220), Pool Name (Purple Sage; Wolfcamp (gas)), Property Code (333192), Property Name (POKER LAKE UNIT 22 DTD), Well Number (122H), OGRID No. (373075), Operator Name (XTO PERMIAN OPERATING, LLC.), Elevation (3,406')

Table for Surface Location: UL or lot no. (D), Section (22), Township (24S), Range (30E), Lot Idn, Feet from the (1,011), North/South line (NORTH), Feet from the (664), East/West line (WEST), County (EDDY)

Table for Bottom Hole Location If Different From Surface: UL or lot no. (3), Section (3), Township (24S), Range (30E), Lot Idn, Feet from the (230), North/South line (NORTH), Feet from the (1,700), East/West line (WEST), County (EDDY)

Table for Well Details: Dedicated Acres (960.98), Joint or Infill, Consolidation Code, Order No.

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.



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.
Signature: Rusty Klein
Date: 11-10-23

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.
Date of Survey: 10-27-2023
Signature and Seal of Professional Surveyor: Mark Dillon Harp

Professional Surveyor Seal for Mark Dillon Harp, New Mexico, License Number 23786. Certificate Number: 618.013003.08-09

Vertical text on the left margin: P:\618.013 XTO Energy - NM\003 Poker Lake Unit\08 - PLU 22 DTD - EDDY\Wells\09 - PLU 22 DTD - 122H\DWG\122H C-102.dwg

Intent  As Drilled

API # 30015		
Operator Name: XTO PERMIAN OPERATING, LLC	Property Name: Poker Lake Unit 22 DTD	Well Number 122H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	22	24S	30E		1,011	North	1,700	West	Eddy
Latitude 32.209158					Longitude 103.87209				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
3	3	24S	30E		330	North	1,700	West	Eddy
Latitude 32.253166					Longitude 103.872059				NAD 83

Is this well the defining well for the Horizontal Spacing Unit?

Is this well an infill well?

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

District I  
1625 N French Dr., Hobbs, NM 88240  
Phone (575) 393-6161 Fax: (575) 393-0720

District II  
811 S First St., Artesia, NM 88210  
Phone (575) 748-1283 Fax: (575) 748-9720

District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone (505) 334-6178 Fax: (505) 334-6170

District IV  
1220 S St. Francis Dr., Santa Fe, NM 87505  
Phone (505) 476-3460 Fax: (505) 476-3462

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

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

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 API Number <b>30-015- 49864</b>		2 Pool Code <b>98220</b>		3 Pool Name <b>Purple Sage; Wolfcamp (gas)</b>	
4 Property Code <b>333192</b>		5 Property Name <b>POKER LAKE UNIT 22 DTD</b>		6 Well Number <b>122H</b>	
7 OGRID No. <b>373075</b>		8 Operator Name <b>XTO PERMIAN OPERATING, LLC.</b>		9 Elevation <b>3,406'</b>	

**" Surface Location**

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
<b>D</b>	<b>22</b>	<b>24S</b>	<b>30E</b>		<b>1,011</b>	<b>NORTH</b>	<b>664</b>	<b>WEST</b>	<b>EDDY</b>

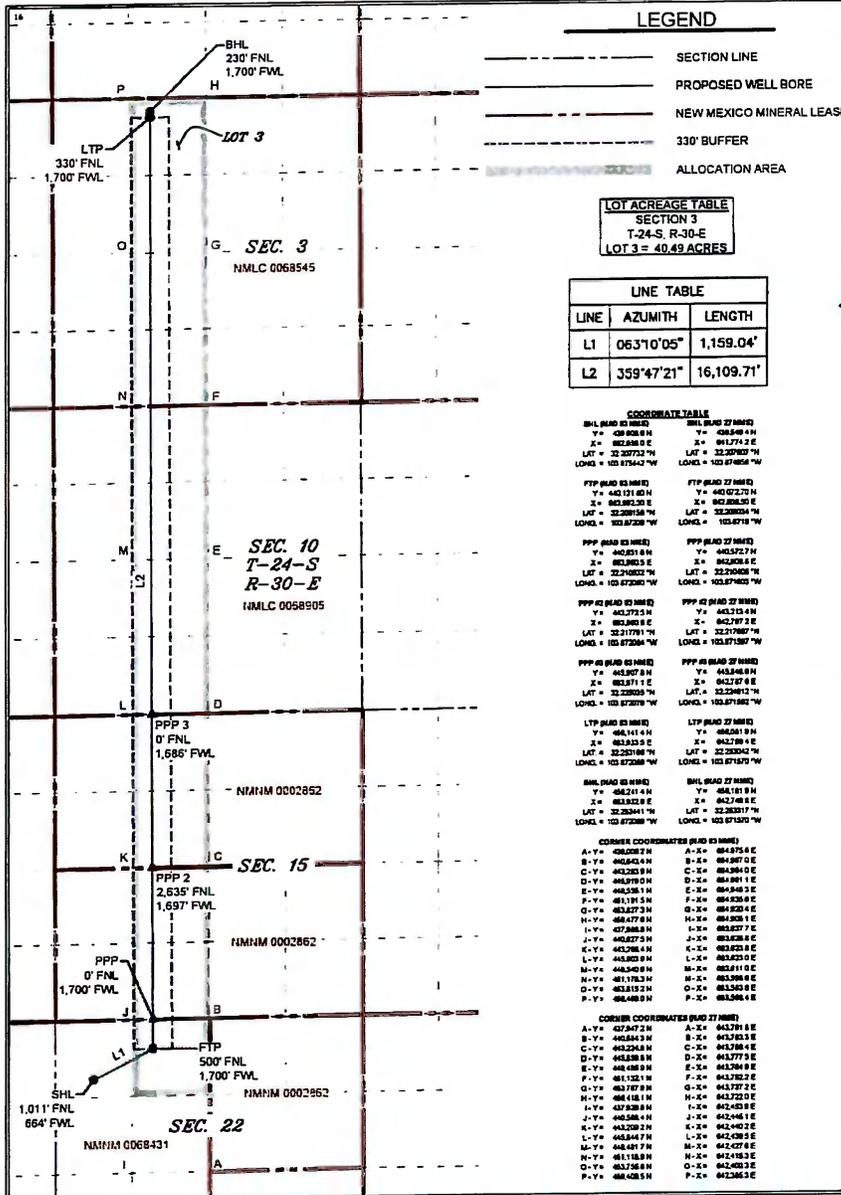
**" Bottom Hole Location If Different From Surface**

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
<b>3</b>	<b>3</b>	<b>24S</b>	<b>30E</b>		<b>230</b>	<b>NORTH</b>	<b>1,700</b>	<b>WEST</b>	<b>EDDY</b>

10 Dedicated Acres <b>960.98</b>	11 Joint or Infill	12 Consolidation Code	13 Order No.
-------------------------------------	--------------------	-----------------------	--------------

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:\618.013 XTO Energy - NM\003 Poker Lake Unit\08 - EDDY\Wells\09 - PLU 22 DTD - 122H\DWG\122H C-102.dwg



**LOT ACREAGE TABLE**

SECTION 3  
T-24-S, R-30-E  
LOT 3 = 40.49 ACRES

**LINE TABLE**

LINE	AZUMITH	LENGTH
L1	063°10'05"	1,159.04'
L2	359°47'21"	16,109.71'

**COORDINATE TABLE**

LINE	POINT	NORTHING	EASTING	
SHL (HEAD IS HOLE)	Y	408.908 H	X	802.288 O E
	Z	32.29732 W	LAT	32.29732 W
	LONG	103.87542 W	LONG	103.87542 W
FTP (HEAD IS HOLE)	Y	440.121 00 H	X	802.288 O E
	Z	32.289158 W	LAT	32.289158 W
	LONG	103.87208 W	LONG	103.87208 W
PPP (HEAD IS HOLE)	Y	402.272 5 H	X	802.288 O E
	Z	32.29732 W	LAT	32.29732 W
	LONG	103.87542 W	LONG	103.87542 W
LTP (HEAD IS HOLE)	Y	408.908 H	X	802.288 O E
	Z	32.29732 W	LAT	32.29732 W
	LONG	103.87542 W	LONG	103.87542 W
SHL (HEAD IS HOLE)	Y	408.908 H	X	802.288 O E
	Z	32.29732 W	LAT	32.29732 W
	LONG	103.87542 W	LONG	103.87542 W

**17 OPERATOR CERTIFICATION**

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

*[Signature]*  
Signature: **Rusty Klein**  
Date: **11-15-2023**

**RUSTY KLEIN**  
Printed Name

ranalklein@ ExxonMobil.com  
E-mail Address

**18 SURVEYOR CERTIFICATION**

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

**10-27-2023**  
Date of Survey

Signature and Seal of Professional Surveyor:

**MARK DILLON HARP**  
NEW MEXICO  
23786  
PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786  
Certificate Number

KC/AI/FP 618.013003.08-09

Intent  As Drilled

API # <b>30015</b>		
Operator Name: <b>XTO PERMIAN OPERATING, LLC</b>	Property Name: <b>Poker Lake Unit 22 DTD</b>	Well Number <b>122H</b>

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
<b>C</b>	<b>22</b>	<b>24S</b>	<b>30E</b>		<b>1,011</b>	<b>North</b>	<b>1,700</b>	<b>West</b>	<b>Eddy</b>
Latitude <b>32.209158</b>					Longitude <b>103.87209</b>				NAD <b>83</b>

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
<b>3</b>	<b>3</b>	<b>24S</b>	<b>30E</b>		<b>330</b>	<b>North</b>	<b>1,700</b>	<b>West</b>	<b>Eddy</b>
Latitude <b>32.253166</b>					Longitude <b>103.872059</b>				NAD <b>83</b>

Is this well the defining well for the Horizontal Spacing Unit?

Is this well an infill well?

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

XTO Energy Inc.  
POKER LAKE UNIT 22 DTD 122H  
Projected TD: 28721' MD / 12082' TVD  
SHL: 1011' FNL & 664' FWL , Section 22, T24S, R30E  
BHL: 230' FNL & 1700' FWL , Section 3, T24S, R30E  
Eddy County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	679'	Water
Top of Salt	1085'	Water
Base of Salt	3706'	Water
Delaware	3961'	Water
Brushy Canyon	6137'	Water/Oil/Gas
Bone Spring	7798'	Water
1st Bone Spring	8593'	Water/Oil/Gas
2nd Bone Spring	9113'	Water/Oil/Gas
3rd Bone Spring	9871'	Water/Oil/Gas
Wolfcamp	11026'	Water/Oil/Gas
Wolfcamp X	11067'	Water/Oil/Gas
Wolfcamp Y	11148'	Water/Oil/Gas
Wolfcamp A	11201'	Water/Oil/Gas
Wolfcamp B	11619'	Water/Oil/Gas
Wolfcamp D	11982'	Water/Oil/Gas
Target/Land Curve	12082'	Water/Oil/Gas

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

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13.375 inch casing @ 779' (306' 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 9.625 inch casing at 11165.8' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 28721 MD/TD and 6 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 10865.8 feet).

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 779'	13.375	68	HC L-80	BTC	New	1.64	7.91	29.17
12.25	0' – 4000'	9.625	40	HC P-110	BTC	New	1.44	2.14	2.83
12.25	4000' – 11165.8'	9.625	40	HC L-80	BTC	New	1.04	1.36	3.20
8.5	0' – 11065.8'	6	26	P-110	Semi-Flush	New	1.17	1.81	1.55
8.5	11065.8' - 28721'	6	26	P-110	Semi-Flush	New	1.17	1.66	1.77

- 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
- 9.625 Collapse analyzed using 50% evacuation based on regional experience.

- 6 Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- XTO requests the option to use 5" BTC Float equipment for the the production casing

**Wellhead:**

Permanent Wellhead – Multibowl System

A. Starting Head: 13-5/8" 10M top flange x 13-3/8" SOW bottom (or equivalent)

B. Tubing Head: 13-5/8" 10M bottom flange x 7-1/16" 15M top flange (or equivalent)

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

#### 4. Cement Program

##### **Surface Casing: 13.375, 68 New BTC, HC L-80 casing to be set at +/- 779'**

Lead: 350 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft<sup>3</sup>/sx, 10.13 gal/sx water)

Tail: 300 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

Top of Cement: Surface

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

##### **2nd Intermediate Casing: 9.625, 40 New casing to be set at +/- 11165.8'**

###### 1st Stage

Optional Lead: 1040 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 1450 sxs Class C (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6137

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

###### 2nd Stage

Lead: 0 sxs Class C (mixed at 12.9 ppg, 2.16 ft<sup>3</sup>/sx, 9.61 gal/sx water)

Tail: 2160 sxs Class C (mixed at 14.8 ppg, 1.33 ft<sup>3</sup>/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 (6137') 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: 6, 26 New Semi-Flush, P-110 casing to be set at +/- 28721'**

Lead: 50 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 10865.8 feet

Tail: 2930 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 11487 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 13.375 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 10M Double Ram BOP. MASP should not exceed 5509 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 13.375, 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When nipping up on the 9.625, the BOP will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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' - 779'	17.5	FW/Native	7.9-8.9	35-40	NC
779' - 11165.8'	12.25	FW / Cut Brine / Direct Emulsion	9-10	30-32	NC
11165.8' - 28721'	8.5	OBM	12.5-13.5	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 13.375 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 185 to 205 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 8167 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.

11/8/23, 11:38 AM

Well Plan Report

30-015-49864

# Well Plan Report - POKER LAKE UNIT 22 DTD 122H

**Measured Depth:** 28721.31 ft  
**TVD RKB:** 12082.00 ft  
**Location**  
**Cartographic Reference System:** New Mexico East - NAD 27  
**Northing:** 439549.40 ft  
**Easting:** 641774.20 ft  
**RKB:** 3438.00 ft  
**Ground Level:** 3406.00 ft  
**North Reference:** Grid  
**Convergence Angle:** 0.24 Deg

## Plan Sections POKER LAKE UNIT 22 DTD 122H

Measured Depth (ft)	Inclination (Deg)	Azimuth (Deg)	RKB (ft)	TVD	Y Offset (ft)	X Offset (ft)	Build Rate (Deg/100ft)	Turn Rate (Deg/100ft)	Dogleg Rate (Deg/100ft)	Target
0.00	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	0.00
1791.89	13.84	100.54	1785.18		-15.21	81.74	2.00	0.00	2.00	8.00 FTP 12
5506.33	13.84	100.54	5391.82		-177.69	955.16	0.00	0.00	0.00	0.00 LTP 12
6198.22	0.00	0.00	6077.00		-192.89	1036.90	-2.00	0.00	2.00	0.00 BHL 12
11487.02	0.00	0.00	11365.80		-192.89	1036.90	0.00	0.00	0.00	
12612.02	90.00	359.79	12082.00		523.30	1034.30	8.00	0.00	8.00	
28621.33	90.00	359.79	12082.00		16532.50	976.20	0.00	0.00	0.00	
28721.31	90.00	359.79	12082.00		16632.49	975.84	0.00	0.00	0.00	

## Position Uncertainty Measured POKER LAKE UNIT 22 DTD 122H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor Tool
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11/8/23, 11:38 AM

Well Plan Report

Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Azimuth Used (°)	Error (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	0.000
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.751	0.000	0.220	112.264	0.220
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	1.259	0.000	0.627	122.711	0.627
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	1.698	0.000	0.986	125.469	0.986
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.347	0.000	2.108	0.000	1.344	126.713	1.344
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.374	0.000	2.503	0.000	1.701	127.419	1.701
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.407	0.000	2.888	0.000	2.059	127.873	2.059
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.444	0.000	3.267	0.000	2.417	128.190	2.417
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.486	0.000	3.642	0.000	2.775	128.423	2.775
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.532	0.000	4.014	0.000	3.133	128.602	3.133
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.582	0.000	4.384	0.000	3.491	128.744	3.491
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.635	0.000	4.752	0.000	3.849	128.859	3.849
1200.000	2.000	100.538	1199.980	4.612	0.000	4.869	-0.000	2.692	0.000	5.099	0.000	4.357	-44.552	4.357
1300.000	4.000	100.538	1299.838	5.436	0.000	5.207	-0.000	2.752	0.000	5.534	0.000	5.111	-17.506	5.111
1400.000	6.000	100.538	1399.452	6.165	0.000	5.550	-0.000	2.818	0.000	6.184	0.000	5.547	7.042	5.547
1500.000	8.000	100.538	1498.702	6.828	0.000	5.897	-0.000	2.891	0.000	6.862	0.000	5.891	14.971	5.891
1600.000	10.000	100.538	1597.465	7.442	0.000	6.249	-0.000	2.974	0.000	7.507	0.000	6.223	18.280	6.223
1700.000	12.000	100.538	1695.623	8.016	0.000	6.606	-0.000	3.068	0.000	8.116	0.000	6.558	20.075	6.558
1791.890	13.838	100.538	1785.183	8.470	0.000	6.936	-0.000	3.160	0.000	8.605	0.000	6.871	21.015	6.871
1800.000	13.838	100.538	1793.058	8.491	0.000	6.963	-0.000	3.161	0.000	8.628	0.000	6.899	21.014	6.899
1900.000	13.838	100.538	1890.156	8.759	0.000	7.315	-0.000	3.242	0.000	8.890	0.000	7.251	21.384	7.251
2000.000	13.838	100.538	1987.253	9.050	0.000	7.690	-0.000	3.330	0.000	9.179	0.000	7.619	22.271	7.619
2100.000	13.838	100.538	2084.351	9.349	0.000	8.068	-0.000	3.421	0.000	9.477	0.000	7.991	23.175	7.991
2200.000	13.838	100.538	2181.449	9.655	0.000	8.450	-0.000	3.515	0.000	9.780	0.000	8.366	24.098	8.366
2300.000	13.838	100.538	2278.546	9.967	0.000	8.834	-0.000	3.612	0.000	10.090	0.000	8.743	25.044	8.743
2400.000	13.838	100.538	2375.644	10.285	0.000	9.221	-0.000	3.712	0.000	10.406	0.000	9.123	26.018	9.123
2500.000	13.838	100.538	2472.742	10.609	0.000	9.609	-0.000	3.815	0.000	10.727	0.000	9.505	27.022	9.505
2600.000	13.838	100.538	2569.839	10.937	0.000	10.000	-0.000	3.920	0.000	11.053	0.000	9.889	28.063	9.889
2700.000	13.838	100.538	2666.937	11.270	0.000	10.392	-0.000	4.028	0.000	11.383	0.000	10.274	29.143	10.274
2800.000	13.838	100.538	2764.035	11.607	0.000	10.786	-0.000	4.137	0.000	11.717	0.000	10.660	30.268	10.660
2900.000	13.838	100.538	2861.132	11.947	0.000	11.181	-0.000	4.249	0.000	12.055	0.000	11.047	31.443	11.047

11/8/23, 11:38 AM

Well Plan Report

3000.000	13.838	100.538	2958.230	12.291	0.000	11.577	-0.000	4.363	0.000	0.000	12.397	11.435	32.672	MWD+IFR1+MS
3100.000	13.838	100.538	3055.328	12.638	0.000	11.974	-0.000	4.478	0.000	0.000	12.742	11.824	33.962	MWD+IFR1+MS
3200.000	13.838	100.538	3152.425	12.987	0.000	12.372	-0.000	4.596	0.000	0.000	13.090	12.214	35.315	MWD+IFR1+MS
3300.000	13.838	100.538	3249.523	13.340	0.000	12.771	-0.000	4.715	0.000	0.000	13.442	12.604	36.739	MWD+IFR1+MS
3400.000	13.838	100.538	3346.621	13.694	0.000	13.171	-0.000	4.836	0.000	0.000	13.796	12.994	38.236	MWD+IFR1+MS
3500.000	13.838	100.538	3443.718	14.051	0.000	13.572	-0.000	4.959	0.000	0.000	14.153	13.384	39.809	MWD+IFR1+MS
3600.000	13.838	100.538	3540.816	14.411	0.000	13.973	-0.000	5.083	0.000	0.000	14.513	13.774	41.463	MWD+IFR1+MS
3700.000	13.838	100.538	3637.914	14.772	0.000	14.375	-0.000	5.209	0.000	0.000	14.875	14.164	43.196	MWD+IFR1+MS
3800.000	13.838	100.538	3735.011	15.134	0.000	14.777	-0.000	5.336	0.000	0.000	15.240	14.554	45.008	MWD+IFR1+MS
3900.000	13.838	100.538	3832.109	15.499	0.000	15.180	-0.000	5.466	0.000	0.000	15.607	14.943	46.896	MWD+IFR1+MS
4000.000	13.838	100.538	3929.207	15.865	0.000	15.583	-0.000	5.596	0.000	0.000	15.977	15.332	48.853	MWD+IFR1+MS
4100.000	13.838	100.538	4026.304	16.232	0.000	15.987	-0.000	5.728	0.000	0.000	16.350	15.721	50.870	MWD+IFR1+MS
4200.000	13.838	100.538	4123.402	16.601	0.000	16.391	-0.000	5.862	0.000	0.000	16.725	16.108	52.935	MWD+IFR1+MS
4300.000	13.838	100.538	4220.500	16.971	0.000	16.796	-0.000	5.997	0.000	0.000	17.102	16.495	55.034	MWD+IFR1+MS
4400.000	13.838	100.538	4317.597	17.342	0.000	17.201	-0.000	6.134	0.000	0.000	17.481	16.881	57.150	MWD+IFR1+MS
4500.000	13.838	100.538	4414.695	17.715	0.000	17.606	-0.000	6.272	0.000	0.000	17.863	17.267	59.265	MWD+IFR1+MS
4600.000	13.838	100.538	4511.793	18.088	0.000	18.012	-0.000	6.411	0.000	0.000	18.247	17.651	61.362	MWD+IFR1+MS
4700.000	13.838	100.538	4608.890	18.462	0.000	18.418	-0.000	6.553	0.000	0.000	18.633	18.035	63.422	MWD+IFR1+MS
4800.000	13.838	100.538	4705.988	18.837	0.000	18.824	-0.000	6.696	0.000	0.000	19.021	18.418	65.432	MWD+IFR1+MS
4900.000	13.838	100.538	4803.086	19.214	0.000	19.230	-0.000	6.840	0.000	0.000	19.410	18.801	67.376	MWD+IFR1+MS
5000.000	13.838	100.538	4900.183	19.590	0.000	19.637	-0.000	6.986	0.000	0.000	19.802	19.183	69.246	MWD+IFR1+MS
5100.000	13.838	100.538	4997.281	19.968	0.000	20.043	-0.000	7.133	0.000	0.000	20.194	19.564	71.032	MWD+IFR1+MS
5200.000	13.838	100.538	5094.379	20.346	0.000	20.450	-0.000	7.283	0.000	0.000	20.589	19.945	72.732	MWD+IFR1+MS
5300.000	13.838	100.538	5191.476	20.726	0.000	20.858	-0.000	7.433	0.000	0.000	20.984	20.325	74.341	MWD+IFR1+MS
5400.000	13.838	100.538	5288.574	21.105	0.000	21.265	-0.000	7.586	0.000	0.000	21.381	20.705	75.860	MWD+IFR1+MS
5506.329	13.838	100.538	5391.817	21.511	0.000	21.699	-0.000	7.750	0.000	0.000	21.806	21.109	77.317	MWD+IFR1+MS
5600.000	11.964	100.538	5483.120	21.923	0.000	22.076	-0.000	7.899	0.000	0.000	22.186	21.481	77.063	MWD+IFR1+MS
5700.000	9.964	100.538	5581.289	22.403	0.000	22.466	-0.000	8.061	0.000	0.000	22.602	21.920	73.762	MWD+IFR1+MS
5800.000	7.964	100.538	5680.063	22.855	0.000	22.844	-0.000	8.215	0.000	0.000	23.017	22.350	69.774	MWD+IFR1+MS
5900.000	5.964	100.538	5779.320	23.270	0.000	23.211	-0.000	8.359	0.000	0.000	23.427	22.763	65.550	MWD+IFR1+MS
6000.000	3.964	100.538	5878.940	23.648	0.000	23.566	-0.000	8.497	0.000	0.000	23.834	23.158	61.293	MWD+IFR1+MS
6100.000	1.964	100.538	5978.801	23.989	0.000	23.910	-0.000	8.628	0.000	0.000	24.238	23.535	57.223	MWD+IFR1+MS
6198.219	0.000	0.000	6077.000	24.356	0.000	24.087	0.000	8.752	0.000	0.000	24.543	23.896	57.266	MWD+IFR1+MS

11/8/23, 11:38 AM

Well Plan Report

6200.000	0.000	0.000	6078.781	24.361	0.000	24.092	0.000	8.755	0.000	24.549	23.901	57.278	MWD+IFR1+MS
6300.000	0.000	0.000	6178.781	24.676	0.000	24.395	0.000	8.880	0.000	24.854	24.213	58.019	MWD+IFR1+MS
6400.000	0.000	0.000	6278.781	24.997	0.000	24.704	0.000	9.009	0.000	25.162	24.536	58.983	MWD+IFR1+MS
6500.000	0.000	0.000	6378.781	25.319	0.000	25.014	0.000	9.140	0.000	25.471	24.860	59.968	MWD+IFR1+MS
6600.000	0.000	0.000	6478.781	25.643	0.000	25.326	0.000	9.273	0.000	25.782	25.184	60.973	MWD+IFR1+MS
6700.000	0.000	0.000	6578.781	25.967	0.000	25.639	0.000	9.410	0.000	26.095	25.509	61.996	MWD+IFR1+MS
6800.000	0.000	0.000	6678.781	26.292	0.000	25.953	0.000	9.549	0.000	26.409	25.834	63.034	MWD+IFR1+MS
6900.000	0.000	0.000	6778.781	26.618	0.000	26.268	0.000	9.691	0.000	26.725	26.160	64.085	MWD+IFR1+MS
7000.000	0.000	0.000	6878.781	26.944	0.000	26.585	0.000	9.835	0.000	27.042	26.486	65.146	MWD+IFR1+MS
7100.000	0.000	0.000	6978.781	27.272	0.000	26.902	0.000	9.983	0.000	27.360	26.812	66.215	MWD+IFR1+MS
7200.000	0.000	0.000	7078.781	27.600	0.000	27.221	0.000	10.133	0.000	27.680	27.139	67.289	MWD+IFR1+MS
7300.000	0.000	0.000	7178.781	27.929	0.000	27.540	0.000	10.286	0.000	28.001	27.467	68.365	MWD+IFR1+MS
7400.000	0.000	0.000	7278.781	28.259	0.000	27.860	0.000	10.442	0.000	28.323	27.795	69.439	MWD+IFR1+MS
7500.000	0.000	0.000	7378.781	28.589	0.000	28.182	0.000	10.601	0.000	28.647	28.123	70.509	MWD+IFR1+MS
7600.000	0.000	0.000	7478.781	28.920	0.000	28.504	0.000	10.762	0.000	28.972	28.452	71.572	MWD+IFR1+MS
7700.000	0.000	0.000	7578.781	29.252	0.000	28.827	0.000	10.927	0.000	29.298	28.781	72.624	MWD+IFR1+MS
7800.000	0.000	0.000	7678.781	29.584	0.000	29.151	0.000	11.095	0.000	29.624	29.110	73.664	MWD+IFR1+MS
7900.000	0.000	0.000	7778.781	29.917	0.000	29.476	0.000	11.265	0.000	29.953	29.440	74.689	MWD+IFR1+MS
8000.000	0.000	0.000	7878.781	30.251	0.000	29.801	0.000	11.439	0.000	30.282	29.770	75.696	MWD+IFR1+MS
8100.000	0.000	0.000	7978.781	30.585	0.000	30.127	0.000	11.615	0.000	30.612	30.100	76.684	MWD+IFR1+MS
8200.000	0.000	0.000	8078.781	30.919	0.000	30.454	0.000	11.795	0.000	30.943	30.431	77.651	MWD+IFR1+MS
8300.000	0.000	0.000	8178.781	31.254	0.000	30.782	0.000	11.977	0.000	31.274	30.762	78.596	MWD+IFR1+MS
8400.000	0.000	0.000	8278.781	31.590	0.000	31.110	0.000	12.163	0.000	31.607	31.093	79.516	MWD+IFR1+MS
8500.000	0.000	0.000	8378.781	31.926	0.000	31.439	0.000	12.351	0.000	31.940	31.425	80.412	MWD+IFR1+MS
8600.000	0.000	0.000	8478.781	32.263	0.000	31.769	0.000	12.543	0.000	32.275	31.757	81.283	MWD+IFR1+MS
8700.000	0.000	0.000	8578.781	32.600	0.000	32.099	0.000	12.738	0.000	32.610	32.089	82.127	MWD+IFR1+MS
8800.000	0.000	0.000	8678.781	32.938	0.000	32.430	0.000	12.935	0.000	32.945	32.422	82.946	MWD+IFR1+MS
8900.000	0.000	0.000	8778.781	33.276	0.000	32.761	0.000	13.136	0.000	33.282	32.755	83.738	MWD+IFR1+MS
9000.000	0.000	0.000	8878.781	33.614	0.000	33.093	0.000	13.340	0.000	33.619	33.088	84.504	MWD+IFR1+MS
9100.000	0.000	0.000	8978.781	33.953	0.000	33.426	0.000	13.547	0.000	33.957	33.422	85.244	MWD+IFR1+MS
9200.000	0.000	0.000	9078.781	34.292	0.000	33.759	0.000	13.757	0.000	34.295	33.756	85.959	MWD+IFR1+MS
9300.000	0.000	0.000	9178.781	34.632	0.000	34.092	0.000	13.971	0.000	34.634	34.090	86.648	MWD+IFR1+MS
9400.000	0.000	0.000	9278.781	34.972	0.000	34.426	0.000	14.187	0.000	34.973	34.425	87.313	MWD+IFR1+MS

11/8/23, 11:38 AM		Well Plan Report												
9500.000	0.000	0.000	9378.781	35.312	0.000	34.761	0.000	14.406	0.000	0.000	35.313	34.760	87.954	MWD+IFR1+MS
9600.000	0.000	0.000	9478.781	35.653	0.000	35.096	0.000	14.629	0.000	0.000	35.653	35.096	88.572	MWD+IFR1+MS
9700.000	0.000	0.000	9578.781	35.994	0.000	35.431	0.000	14.855	0.000	0.000	35.994	35.431	89.167	MWD+IFR1+MS
9800.000	0.000	0.000	9678.781	36.335	0.000	35.767	0.000	15.084	0.000	0.000	36.335	35.767	89.741	MWD+IFR1+MS
9900.000	0.000	0.000	9778.781	36.677	0.000	36.104	0.000	15.316	0.000	0.000	36.677	36.104	90.293	MWD+IFR1+MS
10000.000	0.000	0.000	9878.781	37.019	0.000	36.441	0.000	15.551	0.000	0.000	37.019	36.440	90.825	MWD+IFR1+MS
10100.000	0.000	0.000	9978.781	37.361	0.000	36.778	0.000	15.789	0.000	0.000	37.362	36.777	91.337	MWD+IFR1+MS
10200.000	0.000	0.000	10078.781	37.704	0.000	37.115	0.000	16.031	0.000	0.000	37.705	37.115	91.830	MWD+IFR1+MS
10300.000	0.000	0.000	10178.781	38.047	0.000	37.453	0.000	16.275	0.000	0.000	38.048	37.452	92.306	MWD+IFR1+MS
10400.000	0.000	0.000	10278.781	38.390	0.000	37.792	0.000	16.523	0.000	0.000	38.392	37.790	92.764	MWD+IFR1+MS
10500.000	0.000	0.000	10378.781	38.734	0.000	38.130	0.000	16.774	0.000	0.000	38.736	38.129	93.205	MWD+IFR1+MS
10600.000	0.000	0.000	10478.781	39.078	0.000	38.470	0.000	17.028	0.000	0.000	39.080	38.467	93.630	MWD+IFR1+MS
10700.000	0.000	0.000	10578.781	39.422	0.000	38.809	0.000	17.285	0.000	0.000	39.425	38.806	94.041	MWD+IFR1+MS
10800.000	0.000	0.000	10678.781	39.766	0.000	39.149	0.000	17.546	0.000	0.000	39.770	39.145	94.436	MWD+IFR1+MS
10900.000	0.000	0.000	10778.781	40.110	0.000	39.489	0.000	17.809	0.000	0.000	40.115	39.484	94.817	MWD+IFR1+MS
11000.000	0.000	0.000	10878.781	40.455	0.000	39.829	0.000	18.076	0.000	0.000	40.460	39.824	95.186	MWD+IFR1+MS
11100.000	0.000	0.000	10978.781	40.800	0.000	40.170	0.000	18.346	0.000	0.000	40.806	40.164	95.541	MWD+IFR1+MS
11200.000	0.000	0.000	11078.781	41.145	0.000	40.511	0.000	18.619	0.000	0.000	41.152	40.504	95.884	MWD+IFR1+MS
11300.000	0.000	0.000	11178.781	41.491	0.000	40.852	0.000	18.896	0.000	0.000	41.498	40.845	96.215	MWD+IFR1+MS
11400.000	0.000	0.000	11278.781	41.837	0.000	41.194	0.000	19.175	0.000	0.000	41.845	41.185	96.535	MWD+IFR1+MS
11487.021	0.000	0.000	11365.803	42.137	0.000	41.491	0.000	19.421	0.000	0.000	42.146	41.481	96.729	MWD+IFR1+MS
11500.000	1.038	359.792	11378.781	42.164	0.000	41.535	0.000	19.458	0.000	0.000	42.190	41.525	96.728	MWD+IFR1+MS
11600.000	9.038	359.792	11478.313	42.337	0.000	41.868	0.000	19.754	0.000	0.000	42.846	41.857	95.809	MWD+IFR1+MS
11700.000	17.038	359.792	11575.656	42.563	0.000	42.192	0.000	20.138	0.000	0.000	44.111	42.176	94.900	MWD+IFR1+MS
11800.000	25.038	359.792	11668.915	42.176	0.000	42.498	0.000	20.670	0.000	0.000	45.246	42.477	94.745	MWD+IFR1+MS
11900.000	33.038	359.792	11756.273	41.238	0.000	42.784	0.000	21.396	0.000	0.000	46.225	42.756	94.781	MWD+IFR1+MS
12000.000	41.038	359.792	11836.032	39.840	0.000	43.046	0.000	22.335	0.000	0.000	47.031	43.013	94.893	MWD+IFR1+MS
12100.000	49.038	359.792	11906.638	38.104	0.000	43.283	0.000	23.482	0.000	0.000	47.662	43.244	95.036	MWD+IFR1+MS
12200.000	57.038	359.792	11966.717	36.192	0.000	43.494	0.000	24.811	0.000	0.000	48.121	43.451	95.178	MWD+IFR1+MS
12300.000	65.038	359.792	12015.100	34.303	0.000	43.679	0.000	26.280	0.000	0.000	48.424	43.633	95.289	MWD+IFR1+MS
12400.000	73.038	359.792	12050.845	32.675	0.000	43.837	0.000	27.840	0.000	0.000	48.596	43.790	95.331	MWD+IFR1+MS
12500.000	81.038	359.792	12073.257	31.563	0.000	43.968	0.000	29.436	0.000	0.000	48.670	43.923	95.254	MWD+IFR1+MS
12600.000	89.038	359.792	12081.899	31.191	0.000	44.071	0.000	31.017	0.000	0.000	48.686	44.030	94.998	MWD+IFR1+MS

11/8/23, 11:38 AM

Well Plan Report

12612.021	90,000	359,792	12082,000	31,042	0,000	44,080	0,000	31,042	0,000	48,686	44,041	94,950	MWD+IFR1+MS
12700,000	90,000	359,792	12082,000	31,198	0,000	44,159	0,000	31,198	0,000	48,686	44,125	94,598	MWD+IFR1+MS
12800,000	90,000	359,792	12082,000	31,388	0,000	44,267	0,000	31,388	0,000	48,687	44,240	94,202	MWD+IFR1+MS
12900,000	90,000	359,792	12082,000	31,597	0,000	44,394	0,000	31,597	0,000	48,689	44,372	93,800	MWD+IFR1+MS
13000,000	90,000	359,792	12082,000	31,824	0,000	44,537	0,000	31,824	0,000	48,692	44,520	93,389	MWD+IFR1+MS
13100,000	90,000	359,792	12082,000	32,069	0,000	44,697	0,000	32,069	0,000	48,696	44,685	92,963	MWD+IFR1+MS
13200,000	90,000	359,792	12082,000	32,331	0,000	44,875	0,000	32,331	0,000	48,701	44,866	92,514	MWD+IFR1+MS
13300,000	90,000	359,792	12082,000	32,609	0,000	45,068	0,000	32,609	0,000	48,707	45,062	92,033	MWD+IFR1+MS
13400,000	90,000	359,792	12082,000	32,904	0,000	45,278	0,000	32,904	0,000	48,715	45,275	91,511	MWD+IFR1+MS
13500,000	90,000	359,792	12082,000	33,215	0,000	45,504	0,000	33,215	0,000	48,723	45,503	90,930	MWD+IFR1+MS
13600,000	90,000	359,792	12082,000	33,542	0,000	45,746	0,000	33,542	0,000	48,733	45,746	90,272	MWD+IFR1+MS
13700,000	90,000	359,792	12082,000	33,883	0,000	46,003	0,000	33,883	0,000	48,745	46,003	89,505	MWD+IFR1+MS
13800,000	90,000	359,792	12082,000	34,239	0,000	46,276	0,000	34,239	0,000	48,758	46,275	88,586	MWD+IFR1+MS
13900,000	90,000	359,792	12082,000	34,609	0,000	46,564	0,000	34,609	0,000	48,774	46,560	87,446	MWD+IFR1+MS
14000,000	90,000	359,792	12082,000	34,993	0,000	46,867	0,000	34,993	0,000	48,792	46,858	85,973	MWD+IFR1+MS
14100,000	90,000	359,792	12082,000	35,390	0,000	47,184	0,000	35,390	0,000	48,814	47,166	83,970	MWD+IFR1+MS
14200,000	90,000	359,792	12082,000	35,800	0,000	47,515	0,000	35,800	0,000	48,843	47,483	81,074	MWD+IFR1+MS
14300,000	90,000	359,792	12082,000	36,223	0,000	47,860	0,000	36,223	0,000	48,884	47,803	76,556	MWD+IFR1+MS
14400,000	90,000	359,792	12082,000	36,657	0,000	48,219	0,000	36,657	0,000	48,948	48,113	68,969	MWD+IFR1+MS
14500,000	90,000	359,792	12082,000	37,103	0,000	48,591	0,000	37,103	0,000	49,066	48,383	56,377	MWD+IFR1+MS
14600,000	90,000	359,792	12082,000	37,559	0,000	48,976	0,000	37,559	0,000	49,279	48,572	40,767	MWD+IFR1+MS
14700,000	90,000	359,792	12082,000	38,027	0,000	49,374	0,000	38,027	0,000	49,588	48,679	28,882	MWD+IFR1+MS
14800,000	90,000	359,792	12082,000	38,505	0,000	49,785	0,000	38,505	0,000	49,953	48,741	21,826	MWD+IFR1+MS
14900,000	90,000	359,792	12082,000	38,993	0,000	50,207	0,000	38,993	0,000	50,352	48,783	17,606	MWD+IFR1+MS
15000,000	90,000	359,792	12082,000	39,490	0,000	50,641	0,000	39,490	0,000	50,771	48,817	14,888	MWD+IFR1+MS
15100,000	90,000	359,792	12082,000	39,997	0,000	51,087	0,000	39,997	0,000	51,208	48,846	13,011	MWD+IFR1+MS
15200,000	90,000	359,792	12082,000	40,512	0,000	51,544	0,000	40,512	0,000	51,658	48,872	11,639	MWD+IFR1+MS
15300,000	90,000	359,792	12082,000	41,036	0,000	52,011	0,000	41,036	0,000	52,121	48,897	10,591	MWD+IFR1+MS
15400,000	90,000	359,792	12082,000	41,568	0,000	52,490	0,000	41,568	0,000	52,596	48,922	9,762	MWD+IFR1+MS
15500,000	90,000	359,792	12082,000	42,109	0,000	52,979	0,000	42,109	0,000	53,082	48,946	9,088	MWD+IFR1+MS
15600,000	90,000	359,792	12082,000	42,656	0,000	53,477	0,000	42,656	0,000	53,579	48,971	8,526	MWD+IFR1+MS
15700,000	90,000	359,792	12082,000	43,211	0,000	53,986	0,000	43,211	0,000	54,086	48,995	8,051	MWD+IFR1+MS
15800,000	90,000	359,792	12082,000	43,773	0,000	54,504	0,000	43,773	0,000	54,603	49,020	7,641	MWD+IFR1+MS

11/8/23, 11:38 AM

Well Plan Report

15900.000	90.000	359.792	12082.000	44.342	0.000	55.031	0.000	44.342	0.000	55.129	49.045	7.284	MWD+IFR1+MS
16000.000	90.000	359.792	12082.000	44.918	0.000	55.567	0.000	44.918	0.000	55.664	49.071	6.968	MWD+IFR1+MS
16100.000	90.000	359.792	12082.000	45.499	0.000	56.112	0.000	45.499	0.000	56.208	49.097	6.687	MWD+IFR1+MS
16200.000	90.000	359.792	12082.000	46.087	0.000	56.665	0.000	46.087	0.000	56.761	49.124	6.435	MWD+IFR1+MS
16300.000	90.000	359.792	12082.000	46.680	0.000	57.227	0.000	46.680	0.000	57.322	49.151	6.206	MWD+IFR1+MS
16400.000	90.000	359.792	12082.000	47.279	0.000	57.796	0.000	47.279	0.000	57.891	49.178	5.998	MWD+IFR1+MS
16500.000	90.000	359.792	12082.000	47.884	0.000	58.374	0.000	47.884	0.000	58.467	49.206	5.807	MWD+IFR1+MS
16600.000	90.000	359.792	12082.000	48.493	0.000	58.958	0.000	48.493	0.000	59.052	49.235	5.631	MWD+IFR1+MS
16700.000	90.000	359.792	12082.000	49.108	0.000	59.550	0.000	49.108	0.000	59.643	49.264	5.468	MWD+IFR1+MS
16800.000	90.000	359.792	12082.000	49.727	0.000	60.149	0.000	49.727	0.000	60.242	49.294	5.316	MWD+IFR1+MS
16900.000	90.000	359.792	12082.000	50.351	0.000	60.755	0.000	50.351	0.000	60.847	49.324	5.175	MWD+IFR1+MS
17000.000	90.000	359.792	12082.000	50.979	0.000	61.368	0.000	50.979	0.000	61.459	49.355	5.043	MWD+IFR1+MS
17100.000	90.000	359.792	12082.000	51.612	0.000	61.987	0.000	51.612	0.000	62.078	49.387	4.918	MWD+IFR1+MS
17200.000	90.000	359.792	12082.000	52.249	0.000	62.612	0.000	52.249	0.000	62.703	49.419	4.801	MWD+IFR1+MS
17300.000	90.000	359.792	12082.000	52.889	0.000	63.244	0.000	52.889	0.000	63.334	49.451	4.691	MWD+IFR1+MS
17400.000	90.000	359.792	12082.000	53.534	0.000	63.881	0.000	53.534	0.000	63.971	49.485	4.587	MWD+IFR1+MS
17500.000	90.000	359.792	12082.000	54.182	0.000	64.524	0.000	54.182	0.000	64.614	49.518	4.487	MWD+IFR1+MS
17600.000	90.000	359.792	12082.000	54.834	0.000	65.173	0.000	54.834	0.000	65.262	49.553	4.393	MWD+IFR1+MS
17700.000	90.000	359.792	12082.000	55.489	0.000	65.827	0.000	55.489	0.000	65.915	49.588	4.304	MWD+IFR1+MS
17800.000	90.000	359.792	12082.000	56.148	0.000	66.486	0.000	56.148	0.000	66.574	49.623	4.218	MWD+IFR1+MS
17900.000	90.000	359.792	12082.000	56.810	0.000	67.150	0.000	56.810	0.000	67.238	49.660	4.136	MWD+IFR1+MS
18000.000	90.000	359.792	12082.000	57.475	0.000	67.820	0.000	57.475	0.000	67.907	49.696	4.058	MWD+IFR1+MS
18100.000	90.000	359.792	12082.000	58.143	0.000	68.494	0.000	58.143	0.000	68.581	49.734	3.984	MWD+IFR1+MS
18200.000	90.000	359.792	12082.000	58.814	0.000	69.172	0.000	58.814	0.000	69.259	49.771	3.912	MWD+IFR1+MS
18300.000	90.000	359.792	12082.000	59.487	0.000	69.856	0.000	59.487	0.000	69.942	49.810	3.843	MWD+IFR1+MS
18400.000	90.000	359.792	12082.000	60.163	0.000	70.543	0.000	60.163	0.000	70.629	49.849	3.777	MWD+IFR1+MS
18500.000	90.000	359.792	12082.000	60.842	0.000	71.235	0.000	60.842	0.000	71.320	49.889	3.713	MWD+IFR1+MS
18600.000	90.000	359.792	12082.000	61.524	0.000	71.931	0.000	61.524	0.000	72.016	49.929	3.651	MWD+IFR1+MS
18700.000	90.000	359.792	12082.000	62.208	0.000	72.631	0.000	62.208	0.000	72.715	49.970	3.592	MWD+IFR1+MS
18800.000	90.000	359.792	12082.000	62.894	0.000	73.335	0.000	62.894	0.000	73.419	50.011	3.535	MWD+IFR1+MS
18900.000	90.000	359.792	12082.000	63.582	0.000	74.042	0.000	63.582	0.000	74.126	50.053	3.480	MWD+IFR1+MS
19000.000	90.000	359.792	12082.000	64.273	0.000	74.754	0.000	64.273	0.000	74.837	50.095	3.426	MWD+IFR1+MS
19100.000	90.000	359.792	12082.000	64.966	0.000	75.469	0.000	64.966	0.000	75.551	50.138	3.374	MWD+IFR1+MS

11/8/23, 11:38 AM

Well Plan Report

19200.000	90.000	359.792	12082.000	65.661	0.000	76.187	0.000	65.661	0.000	76.269	50.182	3.324	MWD+IFR1+MS
19300.000	90.000	359.792	12082.000	66.358	0.000	76.909	0.000	66.358	0.000	76.990	50.226	3.276	MWD+IFR1+MS
19400.000	90.000	359.792	12082.000	67.056	0.000	77.634	0.000	67.056	0.000	77.715	50.271	3.229	MWD+IFR1+MS
19500.000	90.000	359.792	12082.000	67.757	0.000	78.362	0.000	67.757	0.000	78.443	50.316	3.183	MWD+IFR1+MS
19600.000	90.000	359.792	12082.000	68.460	0.000	79.093	0.000	68.460	0.000	79.174	50.362	3.139	MWD+IFR1+MS
19700.000	90.000	359.792	12082.000	69.164	0.000	79.827	0.000	69.164	0.000	79.907	50.408	3.096	MWD+IFR1+MS
19800.000	90.000	359.792	12082.000	69.870	0.000	80.565	0.000	69.870	0.000	80.644	50.455	3.054	MWD+IFR1+MS
19900.000	90.000	359.792	12082.000	70.578	0.000	81.305	0.000	70.578	0.000	81.384	50.503	3.013	MWD+IFR1+MS
20000.000	90.000	359.792	12082.000	71.287	0.000	82.048	0.000	71.287	0.000	82.126	50.551	2.974	MWD+IFR1+MS
20100.000	90.000	359.792	12082.000	71.998	0.000	82.793	0.000	71.998	0.000	82.872	50.600	2.935	MWD+IFR1+MS
20200.000	90.000	359.792	12082.000	72.710	0.000	83.542	0.000	72.710	0.000	83.619	50.649	2.898	MWD+IFR1+MS
20300.000	90.000	359.792	12082.000	73.424	0.000	84.292	0.000	73.424	0.000	84.370	50.699	2.861	MWD+IFR1+MS
20400.000	90.000	359.792	12082.000	74.139	0.000	85.046	0.000	74.139	0.000	85.123	50.749	2.826	MWD+IFR1+MS
20500.000	90.000	359.792	12082.000	74.856	0.000	85.801	0.000	74.856	0.000	85.878	50.800	2.791	MWD+IFR1+MS
20600.000	90.000	359.792	12082.000	75.574	0.000	86.560	0.000	75.574	0.000	86.636	50.851	2.757	MWD+IFR1+MS
20700.000	90.000	359.792	12082.000	76.294	0.000	87.320	0.000	76.294	0.000	87.395	50.903	2.724	MWD+IFR1+MS
20800.000	90.000	359.792	12082.000	77.014	0.000	88.083	0.000	77.014	0.000	88.158	50.956	2.692	MWD+IFR1+MS
20900.000	90.000	359.792	12082.000	77.736	0.000	88.847	0.000	77.736	0.000	88.922	51.009	2.660	MWD+IFR1+MS
21000.000	90.000	359.792	12082.000	78.459	0.000	89.614	0.000	78.459	0.000	89.689	51.062	2.630	MWD+IFR1+MS
21100.000	90.000	359.792	12082.000	79.183	0.000	90.383	0.000	79.183	0.000	90.457	51.116	2.600	MWD+IFR1+MS
21200.000	90.000	359.792	12082.000	79.909	0.000	91.154	0.000	79.909	0.000	91.228	51.171	2.570	MWD+IFR1+MS
21300.000	90.000	359.792	12082.000	80.635	0.000	91.927	0.000	80.635	0.000	92.000	51.226	2.541	MWD+IFR1+MS
21400.000	90.000	359.792	12082.000	81.363	0.000	92.702	0.000	81.363	0.000	92.775	51.282	2.513	MWD+IFR1+MS
21500.000	90.000	359.792	12082.000	82.092	0.000	93.479	0.000	82.092	0.000	93.551	51.338	2.486	MWD+IFR1+MS
21600.000	90.000	359.792	12082.000	82.821	0.000	94.258	0.000	82.821	0.000	94.329	51.395	2.459	MWD+IFR1+MS
21700.000	90.000	359.792	12082.000	83.552	0.000	95.038	0.000	83.552	0.000	95.110	51.452	2.433	MWD+IFR1+MS
21800.000	90.000	359.792	12082.000	84.284	0.000	95.820	0.000	84.284	0.000	95.891	51.510	2.407	MWD+IFR1+MS
21900.000	90.000	359.792	12082.000	85.016	0.000	96.604	0.000	85.016	0.000	96.675	51.568	2.382	MWD+IFR1+MS
22000.000	90.000	359.792	12082.000	85.750	0.000	97.390	0.000	85.750	0.000	97.460	51.627	2.357	MWD+IFR1+MS
22100.000	90.000	359.792	12082.000	86.484	0.000	98.177	0.000	86.484	0.000	98.247	51.686	2.333	MWD+IFR1+MS
22200.000	90.000	359.792	12082.000	87.220	0.000	98.965	0.000	87.220	0.000	99.035	51.746	2.309	MWD+IFR1+MS
22300.000	90.000	359.792	12082.000	87.956	0.000	99.756	0.000	87.956	0.000	99.825	51.806	2.285	MWD+IFR1+MS
22400.000	90.000	359.792	12082.000	88.693	0.000	100.547	0.000	88.693	0.000	100.616	51.867	2.263	MWD+IFR1+MS

11/8/23, 11:38 AM

Well Plan Report

22500.000	90.000	359.792	12082.000	89.431	0.000	101.341	0.000	89.431	0.000	101.409	51.928	2.240	MWD+IFR1+MS
22600.000	90.000	359.792	12082.000	90.169	0.000	102.135	0.000	90.169	0.000	102.203	51.990	2.218	MWD+IFR1+MS
22700.000	90.000	359.792	12082.000	90.909	0.000	102.931	0.000	90.909	0.000	102.999	52.053	2.197	MWD+IFR1+MS
22800.000	90.000	359.792	12082.000	91.649	0.000	103.729	0.000	91.649	0.000	103.796	52.115	2.175	MWD+IFR1+MS
22900.000	90.000	359.792	12082.000	92.389	0.000	104.527	0.000	92.389	0.000	104.594	52.179	2.155	MWD+IFR1+MS
23000.000	90.000	359.792	12082.000	93.131	0.000	105.327	0.000	93.131	0.000	105.394	52.243	2.134	MWD+IFR1+MS
23100.000	90.000	359.792	12082.000	93.873	0.000	106.129	0.000	93.873	0.000	106.195	52.307	2.114	MWD+IFR1+MS
23200.000	90.000	359.792	12082.000	94.616	0.000	106.931	0.000	94.616	0.000	106.997	52.372	2.094	MWD+IFR1+MS
23300.000	90.000	359.792	12082.000	95.360	0.000	107.735	0.000	95.360	0.000	107.801	52.437	2.075	MWD+IFR1+MS
23400.000	90.000	359.792	12082.000	96.104	0.000	108.540	0.000	96.104	0.000	108.605	52.503	2.056	MWD+IFR1+MS
23500.000	90.000	359.792	12082.000	96.849	0.000	109.346	0.000	96.849	0.000	109.411	52.570	2.037	MWD+IFR1+MS
23600.000	90.000	359.792	12082.000	97.595	0.000	110.154	0.000	97.595	0.000	110.218	52.636	2.019	MWD+IFR1+MS
23700.000	90.000	359.792	12082.000	98.341	0.000	110.962	0.000	98.341	0.000	111.026	52.704	2.001	MWD+IFR1+MS
23800.000	90.000	359.792	12082.000	99.088	0.000	111.772	0.000	99.088	0.000	111.835	52.772	1.983	MWD+IFR1+MS
23900.000	90.000	359.792	12082.000	99.835	0.000	112.582	0.000	99.835	0.000	112.645	52.840	1.966	MWD+IFR1+MS
24000.000	90.000	359.792	12082.000	100.583	0.000	113.394	0.000	100.583	0.000	113.457	52.909	1.948	MWD+IFR1+MS
24100.000	90.000	359.792	12082.000	101.331	0.000	114.207	0.000	101.331	0.000	114.269	52.978	1.932	MWD+IFR1+MS
24200.000	90.000	359.792	12082.000	102.081	0.000	115.020	0.000	102.081	0.000	115.082	53.048	1.915	MWD+IFR1+MS
24300.000	90.000	359.792	12082.000	102.830	0.000	115.835	0.000	102.830	0.000	115.897	53.118	1.899	MWD+IFR1+MS
24400.000	90.000	359.792	12082.000	103.580	0.000	116.650	0.000	103.580	0.000	116.712	53.188	1.882	MWD+IFR1+MS
24500.000	90.000	359.792	12082.000	104.331	0.000	117.467	0.000	104.331	0.000	117.528	53.260	1.867	MWD+IFR1+MS
24600.000	90.000	359.792	12082.000	105.082	0.000	118.284	0.000	105.082	0.000	118.345	53.331	1.851	MWD+IFR1+MS
24700.000	90.000	359.792	12082.000	105.833	0.000	119.103	0.000	105.833	0.000	119.163	53.403	1.836	MWD+IFR1+MS
24800.000	90.000	359.792	12082.000	106.585	0.000	119.922	0.000	106.585	0.000	119.982	53.476	1.821	MWD+IFR1+MS
24900.000	90.000	359.792	12082.000	107.338	0.000	120.742	0.000	107.338	0.000	120.802	53.549	1.806	MWD+IFR1+MS
25000.000	90.000	359.792	12082.000	108.091	0.000	121.563	0.000	108.091	0.000	121.623	53.622	1.791	MWD+IFR1+MS
25100.000	90.000	359.792	12082.000	108.844	0.000	122.385	0.000	108.844	0.000	122.444	53.696	1.776	MWD+IFR1+MS
25200.000	90.000	359.792	12082.000	109.598	0.000	123.208	0.000	109.598	0.000	123.267	53.771	1.762	MWD+IFR1+MS
25300.000	90.000	359.792	12082.000	110.353	0.000	124.031	0.000	110.353	0.000	124.090	53.845	1.748	MWD+IFR1+MS
25400.000	90.000	359.792	12082.000	111.107	0.000	124.855	0.000	111.107	0.000	124.914	53.921	1.734	MWD+IFR1+MS
25500.000	90.000	359.792	12082.000	111.862	0.000	125.680	0.000	111.862	0.000	125.738	53.996	1.721	MWD+IFR1+MS
25600.000	90.000	359.792	12082.000	112.618	0.000	126.506	0.000	112.618	0.000	126.564	54.073	1.707	MWD+IFR1+MS
25700.000	90.000	359.792	12082.000	113.374	0.000	127.332	0.000	113.374	0.000	127.390	54.149	1.694	MWD+IFR1+MS

Well Plan Report

11/8/23, 11:38 AM

25800.000	90.000	359.792	12082.000	114.130	0.000	128.159	0.000	114.130	0.000	0.000	128.217	54.226	1.681	MWD+IFR1+MS
25900.000	90.000	359.792	12082.000	114.887	0.000	128.987	0.000	114.887	0.000	0.000	129.044	54.304	1.668	MWD+IFR1+MS
26000.000	90.000	359.792	12082.000	115.644	0.000	129.816	0.000	115.644	0.000	0.000	129.872	54.382	1.655	MWD+IFR1+MS
26100.000	90.000	359.792	12082.000	116.402	0.000	130.645	0.000	116.402	0.000	0.000	130.701	54.460	1.643	MWD+IFR1+MS
26200.000	90.000	359.792	12082.000	117.159	0.000	131.475	0.000	117.159	0.000	0.000	131.531	54.539	1.631	MWD+IFR1+MS
26300.000	90.000	359.792	12082.000	117.918	0.000	132.306	0.000	117.918	0.000	0.000	132.361	54.618	1.618	MWD+IFR1+MS
26400.000	90.000	359.792	12082.000	118.676	0.000	133.137	0.000	118.676	0.000	0.000	133.192	54.698	1.606	MWD+IFR1+MS
26500.000	90.000	359.792	12082.000	119.435	0.000	133.969	0.000	119.435	0.000	0.000	134.024	54.778	1.595	MWD+IFR1+MS
26600.000	90.000	359.792	12082.000	120.194	0.000	134.801	0.000	120.194	0.000	0.000	134.856	54.859	1.583	MWD+IFR1+MS
26700.000	90.000	359.792	12082.000	120.954	0.000	135.634	0.000	120.954	0.000	0.000	135.689	54.940	1.571	MWD+IFR1+MS
26800.000	90.000	359.792	12082.000	121.713	0.000	136.468	0.000	121.713	0.000	0.000	136.522	55.021	1.560	MWD+IFR1+MS
26900.000	90.000	359.792	12082.000	122.474	0.000	137.302	0.000	122.474	0.000	0.000	137.356	55.103	1.549	MWD+IFR1+MS
27000.000	90.000	359.792	12082.000	123.234	0.000	138.137	0.000	123.234	0.000	0.000	138.191	55.185	1.538	MWD+IFR1+MS
27100.000	90.000	359.792	12082.000	123.995	0.000	138.973	0.000	123.995	0.000	0.000	139.026	55.268	1.527	MWD+IFR1+MS
27200.000	90.000	359.792	12082.000	124.756	0.000	139.808	0.000	124.756	0.000	0.000	139.862	55.351	1.516	MWD+IFR1+MS
27300.000	90.000	359.792	12082.000	125.517	0.000	140.645	0.000	125.517	0.000	0.000	140.698	55.435	1.505	MWD+IFR1+MS
27400.000	90.000	359.792	12082.000	126.279	0.000	141.482	0.000	126.279	0.000	0.000	141.535	55.519	1.495	MWD+IFR1+MS
27500.000	90.000	359.792	12082.000	127.041	0.000	142.320	0.000	127.041	0.000	0.000	142.372	55.603	1.484	MWD+IFR1+MS
27600.000	90.000	359.792	12082.000	127.803	0.000	143.158	0.000	127.803	0.000	0.000	143.210	55.688	1.474	MWD+IFR1+MS
27700.000	90.000	359.792	12082.000	128.565	0.000	143.996	0.000	128.565	0.000	0.000	144.048	55.773	1.464	MWD+IFR1+MS
27800.000	90.000	359.792	12082.000	129.328	0.000	144.835	0.000	129.328	0.000	0.000	144.887	55.858	1.454	MWD+IFR1+MS
27900.000	90.000	359.792	12082.000	130.091	0.000	145.675	0.000	130.091	0.000	0.000	145.727	55.944	1.444	MWD+IFR1+MS
28000.000	90.000	359.792	12082.000	130.854	0.000	146.515	0.000	130.854	0.000	0.000	146.567	56.031	1.434	MWD+IFR1+MS
28100.000	90.000	359.792	12082.000	131.618	0.000	147.356	0.000	131.618	0.000	0.000	147.407	56.118	1.424	MWD+IFR1+MS
28200.000	90.000	359.792	12082.000	132.382	0.000	148.197	0.000	132.382	0.000	0.000	148.248	56.205	1.415	MWD+IFR1+MS
28300.000	90.000	359.792	12082.000	133.146	0.000	149.038	0.000	133.146	0.000	0.000	149.089	56.292	1.405	MWD+IFR1+MS
28400.000	90.000	359.792	12082.000	133.910	0.000	149.880	0.000	133.910	0.000	0.000	149.931	56.380	1.396	MWD+IFR1+MS
28500.000	90.000	359.792	12082.000	134.674	0.000	150.723	0.000	134.674	0.000	0.000	150.773	56.469	1.387	MWD+IFR1+MS
28600.000	90.000	359.792	12082.000	135.439	0.000	151.565	0.000	135.439	0.000	0.000	151.615	56.558	1.378	MWD+IFR1+MS
28621.327	90.000	359.792	12082.000	135.602	0.000	151.745	0.000	135.602	0.000	0.000	151.795	56.576	1.376	MWD+IFR1+MS
28700.000	90.000	359.792	12082.000	136.203	0.000	152.407	0.000	136.203	0.000	0.000	152.457	56.647	1.369	MWD+IFR1+MS
28721.313	90.000	359.792	12082.000	136.366	0.000	152.566	0.000	136.366	0.000	0.000	152.636	56.666	1.367	MWD+IFR1+MS

Well Plan Report

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Plan Targets

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 12	12612.02	440072.70	642808.50	8644.00	RECTANGLE
LTP 12	28621.33	456081.90	642750.40	8644.00	RECTANGLE
BHL 12	28721.55	456181.90	642749.80	8644.00	RECTANGLE





**U. S. Steel Tubular Products**  
**6.000" 26.00lb/ft (0.436" Wall) P110 HP USS-FREEDOM HTQ®**

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MECHANICAL PROPERTIES	Pipe	USS-FREEDOM HTQ®		
Minimum Yield Strength	125,000	—	psi	—
Maximum Yield Strength	140,000	—	psi	—
Minimum Tensile Strength	130,000	—	psi	—
DIMENSIONS	Pipe	USS-FREEDOM HTQ®		
Outside Diameter	6.000	6.875	in.	—
Wall Thickness	0.436	—	in.	—
Inside Diameter	5.128	5.128	in.	—
Standard Drift	5.003	5.003	in.	—
Alternate Drift	—	—	in.	—
Nominal Linear Weight, T&C	26.00	—	lb/ft	—
Plain End Weight	25.93	—	lb/ft	—
SECTION AREA	Pipe	USS-FREEDOM HTQ®		
Critical Area	7.621	7.621	sq. in.	—
Joint Efficiency	—	100.0	%	—
PERFORMANCE	Pipe	USS-FREEDOM HTQ®		
Minimum Collapse Pressure	15,550	15,550	psi	—
Minimum Internal Yield Pressure	15,920	15,920	psi	—
Minimum Pipe Body Yield Strength	953,000	—	lb	—
Joint Strength	—	953,000	lb	—
Compression Rating	—	953,000	lb	—
Reference Length [4]	—	24,492	ft	—
Maximum Uniaxial Bend Rating [2]	—	95.5	deg/100 ft	—
MAKE-UP DATA	Pipe	USS-FREEDOM HTQ®		
Make-Up Loss	—	4.31	in.	—
Minimum Make-Up Torque [3]	—	15,000	ft-lb	—
Maximum Make-Up Torque [3]	—	21,000	ft-lb	—
Maximum Operating Torque[3]	—	44,000	ft-lb	—

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**Notes**

- Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- Uniaxial bending rating shown is structural only, and equal to compression efficiency.
- Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.

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U. S. Steel Tubular Products  
 460 Wildwood Forest Drive, Suite 300S  
 Spring, Texas 77380  
 1-877-893-9461  
 connections@uss.com  
 www.usstubular.com



**U. S. Steel Tubular Products**  
**6.000" 26.00lb/ft (0.436" Wall) P110 RY USS-TALON HTQ™**

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MECHANICAL PROPERTIES	Pipe	USS-TALON HTQ™		[6]
Minimum Yield Strength	110,000	—	psi	—
Maximum Yield Strength	125,000	—	psi	—
Minimum Tensile Strength	125,000	—	psi	—
DIMENSIONS	Pipe	USS-TALON HTQ™		—
Outside Diameter	6.000	6.875	in.	—
Wall Thickness	0.436	—	in.	—
Inside Diameter	5.128	5.128	in.	—
Standard Drift	5.003	5.003	in.	—
Alternate Drift	—	—	in.	—
Nominal Linear Weight, T&C	26.00	—	lb/ft	—
Plain End Weight	25.93	—	lb/ft	—
SECTION AREA	Pipe	USS-TALON HTQ™		—
Critical Area	7.621	7.621	sq. in.	—
Joint Efficiency	—	100.0	%	[2]
PERFORMANCE	Pipe	USS-TALON HTQ™		—
Minimum Collapse Pressure	13,570	13,570	psi	—
Minimum Internal Yield Pressure	14,010	14,010	psi	—
Minimum Pipe Body Yield Strength	838,000	—	lb	—
Joint Strength	—	838,000	lb	—
Compression Rating	—	838,000	lb	—
Reference Length	—	21,490	ft	[5]
Maximum Uniaxial Bend Rating	—	84.0	deg/100 ft	[3]
MAKE-UP DATA	Pipe	USS-TALON HTQ™		—
Make-Up Loss	—	5.58	in.	—
Minimum Make-Up Torque	—	22,500	ft-lb	[4]
Maximum Make-Up Torque	—	25,500	ft-lb	[4]
Maximum Operating Torque	—	48,900	ft-lb	[4]

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**Notes**

- Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- Joint efficiencies are calculated by dividing the connection critical area by the pipe body area.
- Uniaxial bend rating shown is structural only.
- Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- Reference length is calculated by Joint Strength divided by Nominal Linear Weight, T&C with a 1.5 Safety factor.
- Coupling must meet minimum mechanical properties of the pipe.

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U. S. Steel Tubular Products  
 460 Wildwood Forest Drive, Suite 300S  
 Spring, Texas 77380  
 1-877-893-9461  
 connections@uss.com  
 www.usstubular.com

**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.

62 API STANDARD 53			
Table C.4—Initial Pressure Testing. Surface BOP Stacks			
Component to be Pressure Tested	Pressure Test—Low Pressure <sup>a,c</sup> psig (MPa)	Pressure Test—High Pressure <sup>a,c</sup>	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer <sup>b</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>a,c</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.

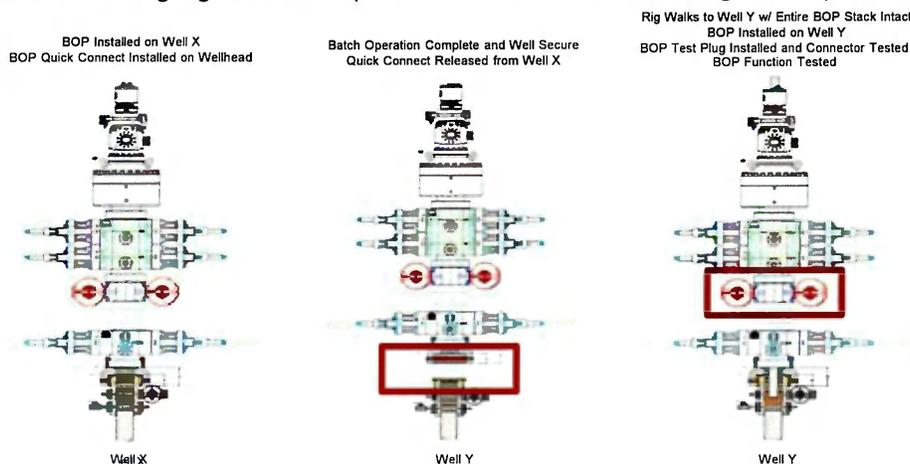
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often 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.

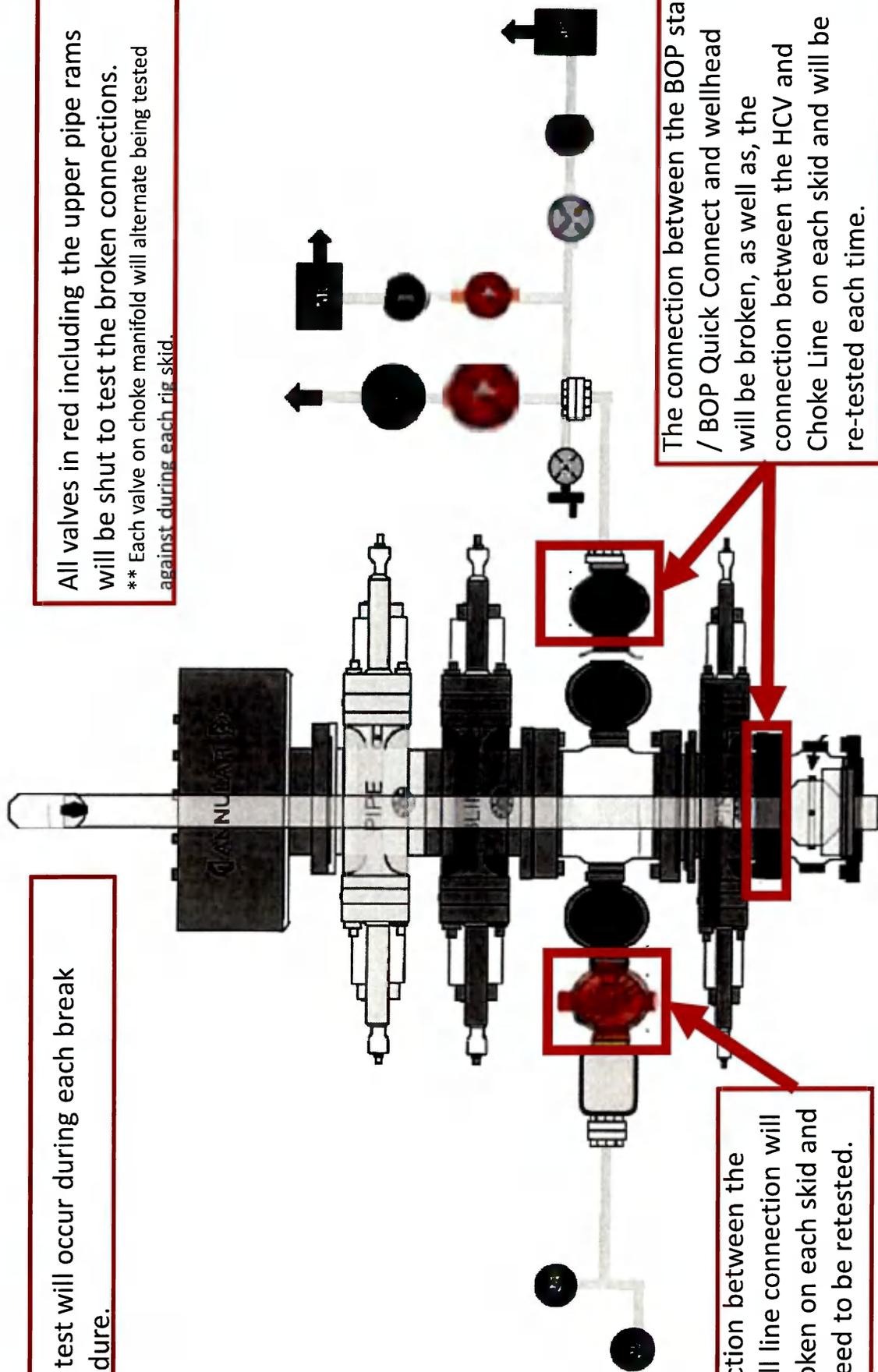
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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.



## 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

**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 Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 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 308869

**CONDITIONS**

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 308869
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply.	2/1/2024