

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

<b>Well Name:</b> POKER LAKE UNIT 13-1 PC	<b>Well Location:</b> T24S / R29E / SEC 13 / SENE / 32.218561 / -103.932621	<b>County or Parish/State:</b> EDDY / NM
<b>Well Number:</b> 708H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM05912	<b>Unit or CA Name:</b> POKER LAKE UNIT	<b>Unit or CA Number:</b> NMNM71016X
<b>US Well Number:</b>	<b>Operator:</b> XTO PERMIAN OPERATING LLC	

**Notice of Intent**

**Sundry ID:** 2855416

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 05/30/2025

**Time Sundry Submitted:** 11:48

**Date proposed operation will begin:** 06/13/2025

**Procedure Description:** Poker Lake Unit 13-1 PC 708H XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include KOP, FTP, proposed total depth, and pool. FROM: TO: KOP: 2270' FNL & 965' FEL OF SECTION 13-T24S-R29E 1342' FNL & 704' FEL OF SECTION 13-T24S-R29E FTP: 2059' FNL & 449' FEL OF SECTION 13-T24S-R29E 1604' FNL & 697' FEL OF SECTION 13-T24S-R29E The proposed total depth is changing FROM 18237' MD; 9194' TVD TO 18211' MD; 9192' TVD. Pool code is changing FROM Pierce Crossing; Bone Spring, East (96473) TO Wildcat S243006B; LWR Bone Spring (97753) & Pierce Crossing; Bone Spring (96473). There is no new surface disturbance.

**NOI Attachments**

**Procedure Description**

POKER\_LAKE\_UNIT\_13\_1\_PC\_708H\_Sundry\_Docs\_20250530114700.pdf

**Well Name:** POKER LAKE UNIT 13-1  
PC

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SENE / 32.218561 / -103.932621

**County or Parish/State:** EDDY /  
NM

**Well Number:** 708H

**Type of Well:** OIL WELL

**Allottee or Tribe Name:**

**Lease Number:** NMNM05912

**Unit or CA Name:** POKER LAKE UNIT

**Unit or CA Number:**  
NMNM71016X

**US Well Number:**

**Operator:** XTO PERMIAN OPERATING  
LLC

### Conditions of Approval

#### Additional

242913\_Poker\_Lake\_Unit\_13\_1\_PC\_708H\_06\_09\_2025\_COAs\_20250609072849.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:** SAMANTHA WEIS

**Signed on:** MAY 30, 2025 11:48 AM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Permitting Advisor

**Street Address:** 22777 SPRINGWOODS VILLAGE PARKWAY

**City:** SPRING

**State:** TX

**Phone:** (832) 625-7361

**Email address:** SAMANTHA.R.BARTNIK@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:** 06/09/2025

**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.**

5. Lease Serial No.	NMNM05912
6. If Indian, Allottee or Tribe Name	

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

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		7. If Unit of CA/Agreement, Name and/or No. POKER LAKE UNIT/NMNM71016X
2. Name of Operator XTO PERMIAN OPERATING LLC		8. Well Name and No. POKER LAKE UNIT 13-1 PC/708H
3a. Address 6401 HOLIDAY HILL ROAD BLDG 5, MIDLAND,	3b. Phone No. (include area code) (432) 683-2277	9. API Well No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SEC 13/T24S/R29E/NMP		10. Field and Pool or Exploratory Area PIERCE CROSSING/BONE SPRING, EAST
		11. Country or Parish, State EDDY/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" 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 checked="" 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.)

Poker Lake Unit 13-1 PC 708H

XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include KOP, FTP, proposed total depth, and pool.

FROM: TO:

KOP: 2270 FNL & 965 FEL OF SECTION 13-T24S-R29E 1342 FNL & 704 FEL OF SECTION 13-T24S-R29E  
FTP: 2059' FNL & 449' FEL OF SECTION 13-T24S-R29E 1604' FNL & 697' FEL OF SECTION 13-T24S-R29E

The proposed total depth is changing FROM 18237 MD; 9194 TVD TO 18211 MD; 9192 TVD.

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) SAMANTHA WEIS / Ph: (832) 625-7361	Title Permitting Advisor
Signature (Electronic Submission)	Date 05/30/2025

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 06/09/2025
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 CARLSBAD

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

## Additional Information

### Additional Remarks

Pool code is changing FROM Pierce Crossing; Bone Spring, East (96473) TO Wildcat S243006B; LWR Bone Spring (97753) & Pierce Crossing; Bone Spring (96473).

There is no new surface disturbance.

### Location of Well

0. SHL: SENE / 2270 FNL / 965 FEL / TWSP: 24S / RANGE: 29E / SECTION: 13 / LAT: 32.218561 / LONG: -103.932621 ( TVD: 0 feet, MD: 0 feet )

PPP: SENE / 2059 FNL / 449 FEL / TWSP: 24S / RANGE: 29E / SECTION: 13 / LAT: 32.219134 / LONG: -103.930951 ( TVD: 9194 feet, MD: 9800 feet )

BHL: SESE / 50 FSL / 449 FEL / TWSP: 24S / RANGE: 29E / SECTION: 24 / LAT: 32.19577 / LONG: -103.930926 ( TVD: 9194 feet, MD: 18237 feet )

CONFIDENTIAL

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	XTO Permian Operating LLC
<b>WELL NAME &amp; NO.:</b>	Poker Lake Unit 13-1 PC 708H
<b>LOCATION:</b>	Section 13, T.24S., R.29E.
<b>COUNTY:</b>	Eddy County

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Wellhead Variance	<input type="radio"/> Diverter		
Other	<input type="checkbox"/> 4 String	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Open Annulus
Cementing	<input checked="" type="checkbox"/> Contingency Cement Squeeze	<input type="checkbox"/> EchoMeter	<input type="checkbox"/> Primary Cement Squeeze
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry		
Special Requirements Variance	<input checked="" type="checkbox"/> Break Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

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

**A. HYDROGEN SULFIDE**

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet 43 CFR part 3170 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

**B. CASING**

1. The **9-5/8** inch surface casing shall be set at approximately **400** 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. The surface hole shall be **12-1/4** inch in diameter.
  - 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:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.

**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. Operator must run one CBL per Well Pad.**

**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. **Cement excess calculates to 20% - more cement may be needed.**

### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **9-5/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR 3172** i must be followed.

### D. SPECIAL REQUIREMENT (S)

#### Unit Wells

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

#### Commercial Well Determination

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

**E. SPECIAL REQUIREMENT (S)**

**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 **43 CFR 3172**.
- 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

**EMAIL** or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

**[BLM\\_NM\\_CFO\\_DrillingNotifications@BLM.GOV](mailto:BLM_NM_CFO_DrillingNotifications@BLM.GOV)**

(575) 361-2822

Lea County

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
    - i. Notify the BLM when moving in and removing the Spudder Rig.
    - ii. 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.
    - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2<sup>nd</sup> 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

#### **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 of both lead and tail cement, 2) until cement has been in place at least 8 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-Q 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 3172**.

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:
  - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - ii. 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.
  - iii. Manufacturer representative shall install the test plug for the initial BOP test.
  - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - v. 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.
  - i. 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).
- ii. 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.)
  - iii. 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 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - iv. 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.
  - v. The results of the test shall be reported to the appropriate BLM office.
  - vi. 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.
  - vii. 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.
  - viii. 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 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.

JS 6/9/2025

C-102 Submit electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONVERSION DIVISION</b>		Revised July, 09 2024
	Submittal Type:	<input type="checkbox"/> Initial Submittal	
		<input checked="" type="checkbox"/> Amended Report	
		<input type="checkbox"/> As Drilled	

WELL LOCATION INFORMATION

API Number <b>30-015-</b>	Pool Code <b>97753</b>	Pool Name <b>WILDCAT S243006B; LWR BONE SPRING</b>
Property Code	Property Name <b>POKER LAKE UNIT 13-1 PC</b>	Well Number <b>708H</b>
OGRID No. <b>373075</b>	Operator Name <b>XTO PERMIAN OPERATING, LLC.</b>	Ground Level Elevation <b>3,114'</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

Surface Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	13	24S	29E		2,270 FNL	965 FEL	32.218561	-103.932621	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	24	24S	29E		50 FSL	449 FEL	32.195770	-103.930926	EDDY

Dedicated Acres <b>80.00</b>	Infill or Defining Well <b>INFILL</b>	Defining Well API	Overlapping Spacing Unit (Y/N) <b>Y</b>	Consolidation Code <b>U</b>
Order Numbers.			Well Setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	13	24S	29E		1,342 FNL	704 FEL	32.221107	-103.931772	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	13	24S	29E		1,604 FNL	697 FEL	32.220388	-103.931751	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	24	24S	29E		100 FSL	449 FEL	32.195907	-103.930927	EDDY

Unitized Area or Area of Interest <b>NMNM105422429</b>	Spacing Unit Type: <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Elevation <b>3,114'</b>
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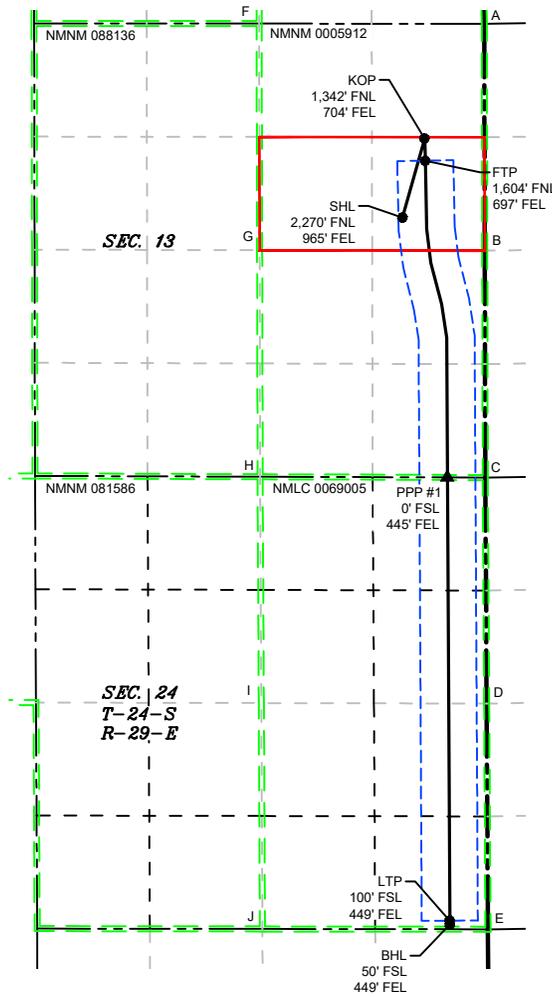
Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

P:\618.013 XTO Energy - NM\003 Poker Lake Unit\04 - 13-1,13-24 PC - EDDY\Wells\22 - PLU Pierce Canyon 13-1 708H\DWG\PLU 13-1 708H C-102.dwg

ACREAGE DEDICATION PLATS

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LEGEND

- SECTION LINE
- 330' BUFFER
- PPP
- TOWNSHIP LINE
- MINERAL LEASE
- WELL
- DEDICATED ACREAGE
- WELL BORE

WELL COORDINATE TABLE								
WELL	NAD 83 NME X	NAD 83 NME Y	NAD 83 LAT	NAD 83 LON	NAD 27 NME X	NAD 27 NME Y	NAD 27 LAT	NAD 27 LON
SHL	665,258.4	443,477.5	32.218561	-103.932621	624,074.9	443,418.1	32.218437	-103.932132
KOP	665,517.4	444,404.5	32.221107	-103.931772	624,333.9	444,345.1	32.220982	-103.931283
FTP	665,525.1	444,143.1	32.220388	-103.931751	624,341.6	444,083.7	32.220264	-103.931262
LTP	665,813.3	435,238.3	32.195907	-103.930927	624,629.5	435,179.1	32.195783	-103.930439
BHL	665,813.6	435,188.3	32.195770	-103.930926	624,629.8	435,129.1	32.195645	-103.930438
PPP #1	665,785.1	440,431.5	32.210183	-103.930955	624,601.5	440,372.2	32.210058	-103.930467

CORNER COORDINATE TABLE				
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C	666,230.7	440,429.8	625,047.1	440,370.5
D	666,247.3	437,782.5	625,063.6	437,723.3
E	666,262.9	435,137.6	625,079.1	435,078.4
F	663,570.2	445,748.2	622,386.8	445,688.8
G	663,576.0	443,093.9	622,392.5	443,034.6
H	663,581.8	440,439.6	622,398.2	440,380.3
I	663,595.7	437,788.4	622,412.0	437,729.1
J	663,609.5	435,141.5	622,425.8	435,082.3

I:\618.013 XTO Energy - NM\003 Poker Lake Unit\04 - 13-1,13-24 PC - EDDY\Wells\22 - PLU Pierce Canyon 13-1 708H\DWG\PLU 13-1 708H C-102.dwg

C-102  Submit electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONVERSION DIVISION</b>		Revised July, 09 2024
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WELL LOCATION INFORMATION

API Number <b>30-015-</b>	Pool Code <b>96473</b>	Pool Name <b>PIERCE CROSSING; BONE SPRING</b>
Property Code	Property Name <b>POKER LAKE UNIT 13-1 PC</b>	Well Number <b>708H</b>
OGRID No. <b>373075</b>	Operator Name <b>XTO PERMIAN OPERATING, LLC.</b>	Ground Level Elevation <b>3,114'</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

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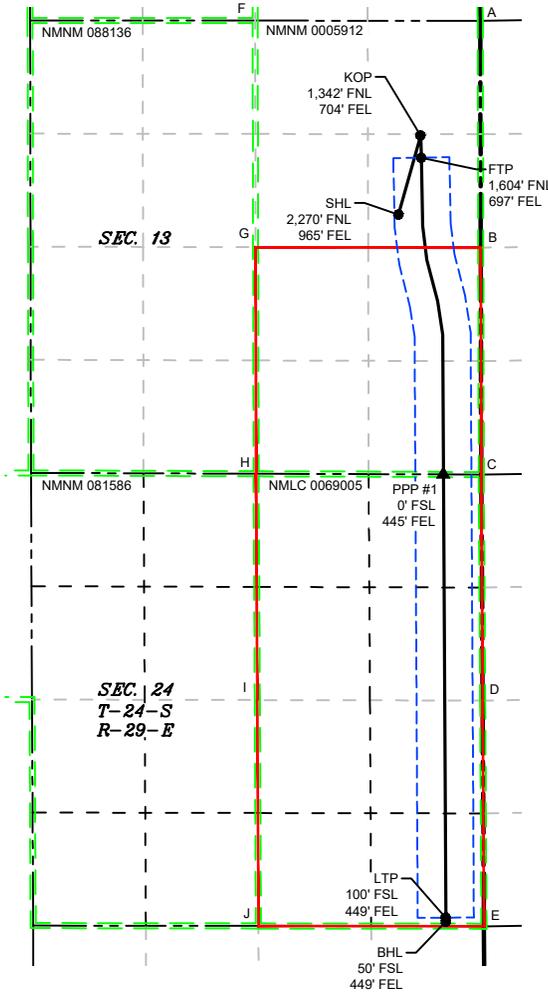
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G:\618.013 XTO Energy - NM\003 Poker Lake Unit\04 - 13-1,13-24 PC - EDDY\Wells\22 - PLU Pierce Canyon 13-1 708H C-102.dwg  
 G:\618.013 XTO Energy - NM\003 Poker Lake Unit\13-1 PC, 708H

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

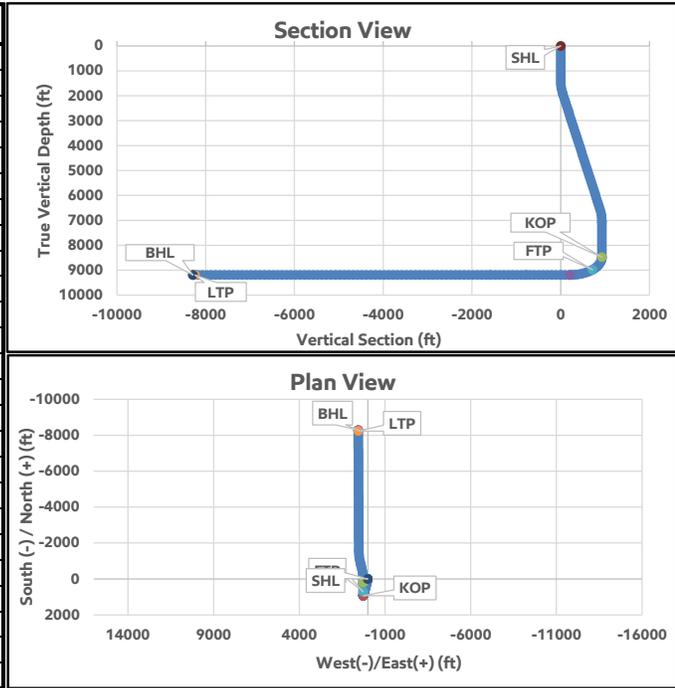
ExxonMobil  
Poker Lake Unit 13-1 PC 708H  
Projected TD: 18211' MD / 9192' TVD  
SHL: 2270' FNL & 965' FEL , Section 13, T24S, R29E  
BHL: 50' FSL & 449' FEL , Section 24, T24S, R29E  
Eddy County, NM

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	Water/Oil/Gas
Salado	749'	Water
Base of Salt	3157'	Water
Delaware	3360'	Water
Cherry Canyon	4256'	Water/Oil/Gas
Brushy Canyon	5806'	Water/Oil/Gas
Bone Spring Lm.	7110'	Water/Oil/Gas
Avalon Shale	7244'	Water/Oil/Gas
Avalon Lower	7789'	Water/Oil/Gas
1st Bone Spring Lime	7950'	Water/Oil/Gas
1st Bone Spring Sand	8101'	Water/Oil/Gas
2nd Bone Spring Lime	8430'	Water/Oil/Gas
2nd Bone Spring Sand	8960'	Water/Oil/Gas
3rd Bone Spring Lime		
3rd Bone Spring Upper Shale		
3rd Bone Spring Upper Shale Base		
3rd Bone Spring Lower Shale		
rd Bone Spring Lower Shale Marke		
3rd Bone Spring Sand		
Warwink		
Red Hills		
Wolfcamp A		
Wolfcamp B		
Wolfcamp C		
Wolfcamp D		
Landing	9192'	Water/Oil/Gas



	Inclination (°)	Azimuth (°)	True Vertical Depth (ft)	Y Offset (ft)	X Offset (ft)
SHL	0	0	0	0	0
KOP	0	0	8476	927	259
LP	90	179	9192	211	272
FTP	45	179	8982	717	263
LTP	90	180	9192	-8238	554
BHL	90	180	9192	-8288	555

Section 2 Summary:

\*\*\* Deepest Expected Groundwater Depth: 40' (per NM State Engineers Office).  
 No other formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 9-5/8" inch casing at 724' and circulating cement back to surface.

**3. Primary Casing Design**

**Primary Design:**

Hole Size (in.)	MD	Casing TVD	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25"	0' - 724'	724'	9-5/8"	40	J55	BTC	New	17.78	16.39	5.66
8.75"	0' - 4000'	3961'	7-5/8"	29.7	P110-ICY	Tenaris Wedge 511	New	6.00	8.58	3.48
8.75"	4000' - 8412'	8326'	7-5/8"	29.7	L80-IC	Tenaris Wedge 511	New	3.36	6.30	2.52
6.75"	0' - 8312'	8226'	5-1/2"	20	P110-CY	TPN	New	1.18	3.12	2.53
6.75"	8312' - 18211'	9192'	5-1/2"	20	P110-ICY	Tenaris Wedge 441	New	1.18	3.09	2.72

**Section 3 Summary:**

XTO will keep casing fluid filled to meet BLM's collapse requirement.  
The planned kick off point is located at: 8562' MD / 8476' TVD.

**Wellhead:**

A multi-bowl wellhead system will be utilized. The well design chosen is: 3-String Slim Non-Potash

Wellhead will be installed by manufacturer's representatives.

Manufacturer will monitor welding process to ensure appropriate temperature of seal.

**4. Cement Program**

Primary Cementing								
Hole Section	Slurry Type	No. Sacks	Density (ppg)	Yield (ft3/sack)	TOC (ft)	Casing Setting Depth (MD)	Excess (%)	Slurry Description
Surface 1	Lead	126	12.4	2.11	0	724	100%	Surface 1 Class C Lead Cement
Surface 1	Tail	141	14.8	1.33	424	724	100%	Surface 1 Class C Tail Cement
Intermediate 1	Lead							
Intermediate 1	Tail	244	14.8	1.45	5806	8,412	35%	Intermediate 1 Class C Tail Cement
Production 1	Lead							
Production 1	Tail	718	13.2	1.44	7912	18,211	25%	Production 1 Class C Tail Cement
Remedial Cementing								
Casing	Slurry Type	No. Sacks	Density (ppg)	Yield (ft3/sack)	Cemented Interval	Excess (%)	Slurry Description	
Intermediate 1	Bradenhead Squeeze	543	14.8	1.45	0 - 5806'	35%	Intermediate Class C Bradenhead Squeeze Cement	

**Section 4 Summary:**

\*Bradenhead Squeeze 2nd Stage Offline



**5. Pressure Control Equipment**

**Section 5 Summary:**

Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of a minimum 5M Hydril and a minimum 10M triple Ram BOP.

All BOP testing will be done by an independent service company. Operator will Test as per 43CFR-3172

**Requested Variances**

**4A) Offline Cementing Variance**

XOM 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. XOM 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. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence. The TA cap will also be installed when applicable per wellhead manufacturer's procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

**5A) Break Test Variance**

A break testing variance is requested to ONLY test broken pressure seals on the BOP equipment when moving from wellhead to wellhead for the intermediate hole sections which is in compliance with API Standard 53. The maximum anticipated surface pressure is less than 4800psi and the deepest intermediate casing point does not penetrate the Wolfcamp Formation.

**5B) Flex Hose Variance**

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.

**5C) 10M Annular Variance**

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

**8A) Open Hole Logging Variance**

Open hole logging will not be done on this well.

**10A) Spudder Rig Variance**

XOM requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing.

**10B) Batch Drilling Variance**

XOM requests a variance to be able to batch drill this well. In doing so, XOM will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. XOM will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XOM will begin drilling the production hole on each of the wells.

**6. Proposed Mud Circulation System**

INTERVAL	Hole Size	Mud Type	MW	Viscosity	Fluid Loss	Comments
			(ppg)	(sec/qt)	(cc)	
0' - 724'	12.25"	FW/Native	8.3 - 8.7	35-40	NC	Fresh Water or Native Water
724' - 8412'	8.75"	BDE/OBM or FW/Brine	9.5 - 10	30-32	NC	Fluid type will be based upon on well conditions. A fully saturated system will be used across the salt interval.
8412' - 18211'	6.75"	OBM	9 - 9.6	50-60	NC - 20	OBM or Cut Brine depending on Well Conditions

**Section 6 Summary:**

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

Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. An EDR (Electronic Drilling Recorder) 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**

**Section 7 Summary:**

A Kelly cock will be in the drill string at all times.

A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.

H2S monitors will be on location when drilling below the 9-5/8" casing.

**8. Logging, Coring and Testing Program**

**Section 8 Summary:**

Open hole logging will not be done on this well.

**9. Abnormal Pressures and Temperatures / Potential Hazards**

**Section 9 Summary:**

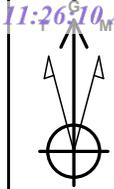
The estimated bottom hole temperature of 158F to 178F. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation is possible throughout the well.

**10. Anticipated Starting Date and Duration of Operations**

**Section 10 Summary:**

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





Azimuths to Grid North  
 True North: -0.21°  
 Magnetic North: 6.19°  
 Magnetic Field  
 Strength: 47182.9nT  
 Dip Angle: 59.76°  
 Date: 1/30/2024  
 Model: IGRF2020

Ground Elevation: 3112.0  
 RKB Elevation: 3112+30 @ 3142.0usft  
 Rig Name:

Northing 443384.61 Easting 624078.26 Latitude 32° 13' 6.041 N Longitude 103° 55' 55.638 W

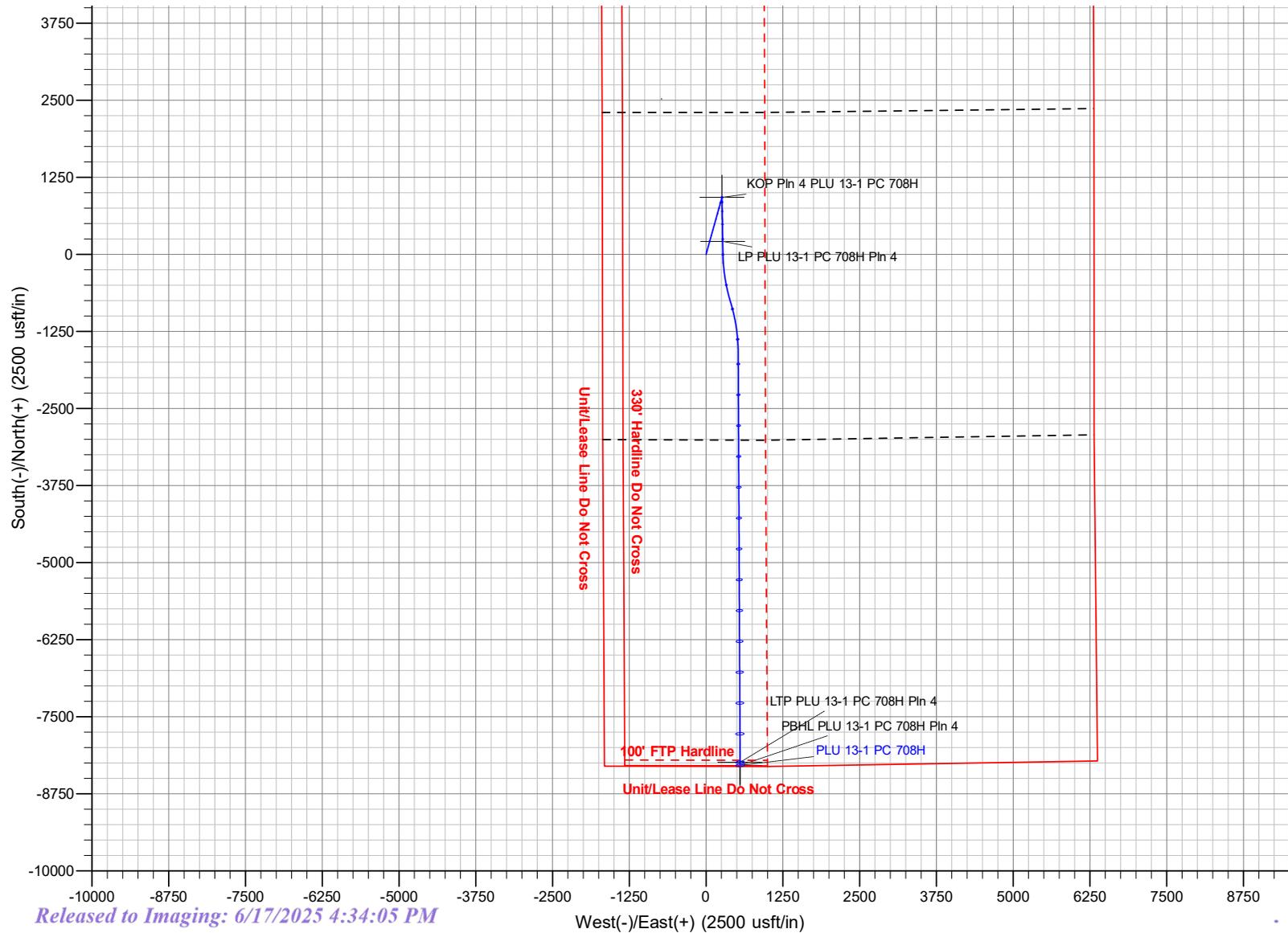
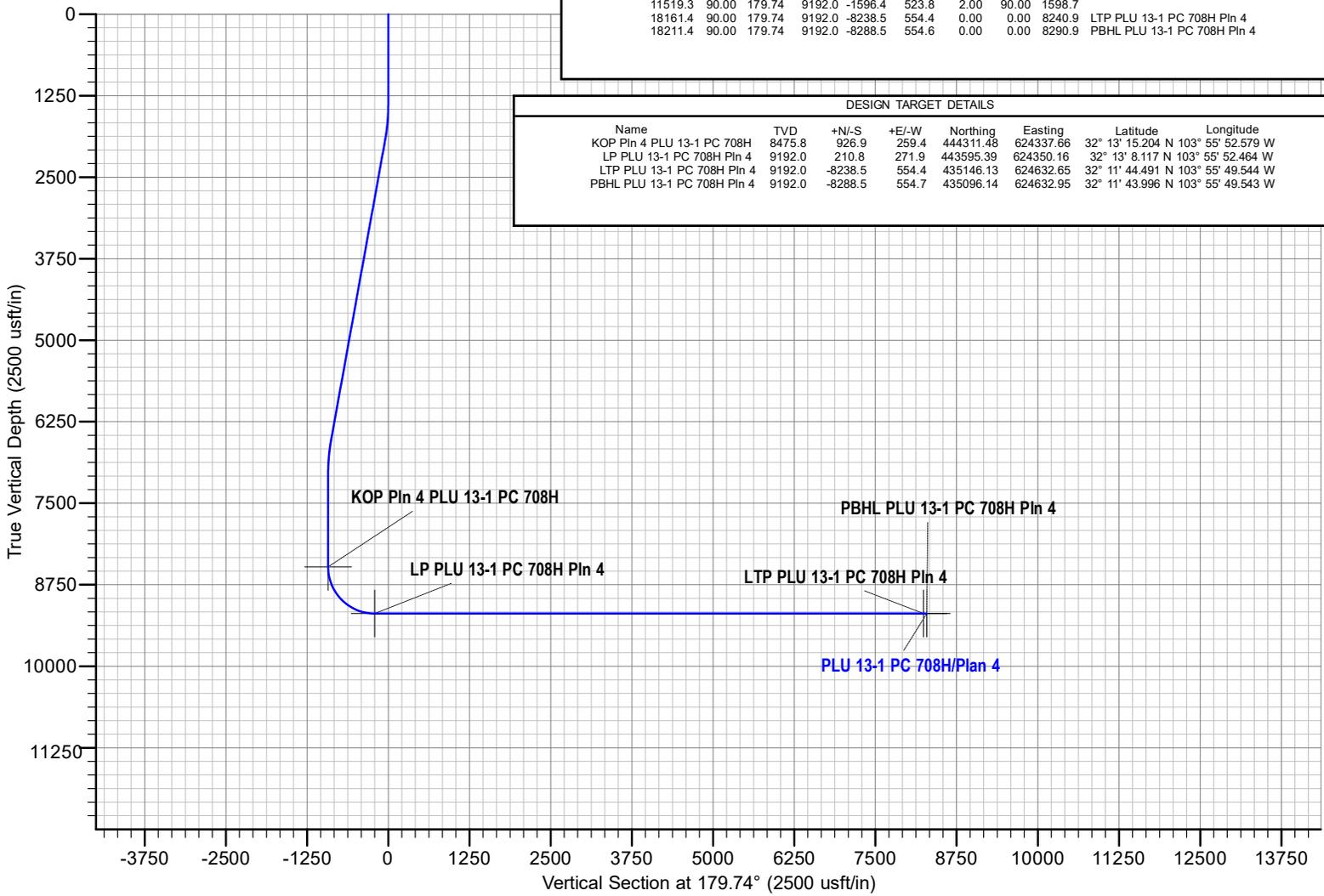
**Project: Eddy County, NM (NAD 27 NME) PLU 13-1-24 PC**  
**Site: PLU 13-1-24 PC Pad C - Project for Ayush**  
**Well: PLU 13-1 PC 708H**  
**Wellbore: OH**  
**Design: Plan 4**

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
1932.8	10.66	15.64	1929.7	47.6	13.3	2.00	15.64	-47.5	
6603.9	10.66	15.64	6520.3	879.3	246.1	0.00	0.00	-878.2	
7136.7	0.00	0.00	7050.0	926.9	259.4	2.00	180.00	-925.7	
8562.5	0.00	0.00	8475.8	926.9	259.4	0.00	0.00	-925.7	KOP Pin 4 PLU 13-1 PC 708H
9687.5	90.00	179.00	9192.0	210.8	271.9	8.00	179.00	-209.5	
9887.5	90.00	179.00	9192.0	10.8	275.4	0.00	0.00	-9.6	
10685.0	90.00	163.05	9192.0	-774.4	399.4	2.00	-90.00	776.2	
11519.3	90.00	179.74	9192.0	-1596.4	523.8	2.00	90.00	1598.7	
18161.4	90.00	179.74	9192.0	-8238.5	554.4	0.00	0.00	8240.9	LTP PLU 13-1 PC 708H Pin 4
18211.4	90.00	179.74	9192.0	-8288.5	554.6	0.00	0.00	8290.9	PBHL PLU 13-1 PC 708H Pin 4

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP Pin 4 PLU 13-1 PC 708H	8475.8	926.9	259.4	444311.48	624337.66	32° 13' 15.204 N	103° 55' 52.579 W
LP PLU 13-1 PC 708H Pin 4	9192.0	210.8	271.9	443595.39	624350.16	32° 13' 8.117 N	103° 55' 52.464 W
LTP PLU 13-1 PC 708H Pin 4	9192.0	-8238.5	554.4	435146.13	624632.65	32° 11' 44.491 N	103° 55' 49.544 W
PBHL PLU 13-1 PC 708H Pin 4	9192.0	-8288.5	554.7	435096.14	624632.95	32° 11' 43.996 N	103° 55' 49.543 W



COMPANY ROC  
 FIELD \*HP 532/547/549/552 - Eddy County, NM (NAD 27 NME)  
 SITE PLU 13-1-24 PC Pad C - Project for Ayush  
 WELL PLU 13-1 PC 708H  
 WELLPATH OH  
 DESIGN Plan 4  
 DEPTHUN1 (ft)

WELL INFO  
 MAP DATL NAD 1927 (NADCON CONUS)  
 MAP SYSTI US State Plane 1927 (Exact solution)  
 MAP ZONE New Mexico East 3001  
 WELL LAT 32.21835  
 WELL LON -103.932  
 WELL EW I 624078.3  
 WELL NS N 443384.6  
 CONVERGI 0.21  
 MAGMOD IGRF2020  
 DECLINATI 6.4  
 NORTH RE Grid  
 GROUND E 3112  
 KB ELEVN 3142  
 VS AZI 179.74

SURVEY TYPE INFORMATION  
 H 0.00 - 18211.44 PLAN 4 : XOM\_R2OWSG MWD+IFR1+MS

SURVEY LIST

Measured MD	Inclination INC	Azimuth AZI	Course CL	Ler TVD	True SSTVD	Vertic TVD	SubSea NS	Local N/-S EW	Local E/-W X	Easting	Northing Y
0	0	0	0	0	0	3142	0	0	0	624078.3	443384.6
100	0	0	0	100	100	3042	0	0	0	624078.3	443384.6
200	0	0	0	100	200	2942	0	0	0	624078.3	443384.6
300	0	0	0	100	300	2842	0	0	0	624078.3	443384.6
400	0	0	0	100	400	2742	0	0	0	624078.3	443384.6
500	0	0	0	100	500	2642	0	0	0	624078.3	443384.6
600	0	0	0	100	600	2542	0	0	0	624078.3	443384.6
700	0	0	0	100	700	2442	0	0	0	624078.3	443384.6
800	0	0	0	100	800	2342	0	0	0	624078.3	443384.6
900	0	0	0	100	900	2242	0	0	0	624078.3	443384.6
1000	0	0	0	100	1000	2142	0	0	0	624078.3	443384.6
1100	0	0	0	100	1100	2042	0	0	0	624078.3	443384.6
1200	0	0	0	100	1200	1942	0	0	0	624078.3	443384.6
1300	0	0	0	100	1300	1842	0	0	0	624078.3	443384.6
1400	0	0	0	100	1400	1742	0	0	0	624078.3	443384.6
1500	2	15.635	100	1499.98	1642.02	1.681	0.47	624078.7	443386.3		
1600	4	15.635	100	1599.838	1542.162	6.72	1.881	624080.1	443391.3		

1700	6	15.635	100	1699.452	1442.548	15.113	4.23	624082.5	443399.7
1800	8	15.635	100	1798.702	1343.298	26.848	7.514	624085.8	443411.5
1900	10	15.635	100	1897.465	1244.535	41.912	11.73	624090	443426.5
1932.763	10.655	15.635	32.763	1929.698	1212.302	47.568	13.313	624091.6	443432.2
2000	10.655	15.635	67.237	1995.775	1146.225	59.54	16.663	624094.9	443444.2
2100	10.655	15.635	100	2094.051	1047.949	77.346	21.647	624099.9	443462
2200	10.655	15.635	100	2192.327	949.673	95.152	26.63	624104.9	443479.8
2300	10.655	15.635	100	2290.602	851.398	112.958	31.613	624109.9	443497.6
2400	10.655	15.635	100	2388.878	753.122	130.763	36.596	624114.9	443515.4
2500	10.655	15.635	100	2487.154	654.846	148.569	41.58	624119.8	443533.2
2600	10.655	15.635	100	2585.43	556.57	166.375	46.563	624124.8	443551
2700	10.655	15.635	100	2683.705	458.295	184.181	51.546	624129.8	443568.8
2800	10.655	15.635	100	2781.981	360.019	201.987	56.529	624134.8	443586.6
2900	10.655	15.635	100	2880.257	261.743	219.792	61.513	624139.8	443604.4
3000	10.655	15.635	100	2978.533	163.467	237.598	66.496	624144.8	443622.2
3100	10.655	15.635	100	3076.808	65.192	255.404	71.479	624149.7	443640
3200	10.655	15.635	100	3175.084	-33.084	273.21	76.462	624154.7	443657.8
3300	10.655	15.635	100	3273.36	-131.36	291.015	81.445	624159.7	443675.6
3400	10.655	15.635	100	3371.636	-229.636	308.821	86.429	624164.7	443693.4
3500	10.655	15.635	100	3469.911	-327.911	326.627	91.412	624169.7	443711.2
3600	10.655	15.635	100	3568.187	-426.187	344.433	96.395	624174.7	443729
3700	10.655	15.635	100	3666.463	-524.463	362.238	101.378	624179.6	443746.8
3800	10.655	15.635	100	3764.739	-622.739	380.044	106.362	624184.6	443764.7
3900	10.655	15.635	100	3863.014	-721.014	397.85	111.345	624189.6	443782.5
4000	10.655	15.635	100	3961.29	-819.29	415.656	116.328	624194.6	443800.3
4100	10.655	15.635	100	4059.566	-917.566	433.461	121.311	624199.6	443818.1
4200	10.655	15.635	100	4157.841	-1015.84	451.267	126.295	624204.6	443835.9
4300	10.655	15.635	100	4256.117	-1114.12	469.073	131.278	624209.5	443853.7
4400	10.655	15.635	100	4354.393	-1212.39	486.879	136.261	624214.5	443871.5
4500	10.655	15.635	100	4452.669	-1310.67	504.684	141.244	624219.5	443889.3
4600	10.655	15.635	100	4550.944	-1408.94	522.49	146.228	624224.5	443907.1
4700	10.655	15.635	100	4649.22	-1507.22	540.296	151.211	624229.5	443924.9
4800	10.655	15.635	100	4747.496	-1605.5	558.102	156.194	624234.5	443942.7
4900	10.655	15.635	100	4845.772	-1703.77	575.907	161.177	624239.4	443960.5
5000	10.655	15.635	100	4944.047	-1802.05	593.713	166.161	624244.4	443978.3
5100	10.655	15.635	100	5042.323	-1900.32	611.519	171.144	624249.4	443996.1
5200	10.655	15.635	100	5140.599	-1998.6	629.325	176.127	624254.4	444013.9
5300	10.655	15.635	100	5238.875	-2096.88	647.13	181.11	624259.4	444031.7
5400	10.655	15.635	100	5337.15	-2195.15	664.936	186.093	624264.4	444049.5
5500	10.655	15.635	100	5435.426	-2293.43	682.742	191.077	624269.3	444067.4
5600	10.655	15.635	100	5533.702	-2391.7	700.548	196.06	624274.3	444085.2
5700	10.655	15.635	100	5631.978	-2489.98	718.353	201.043	624279.3	444103
5800	10.655	15.635	100	5730.253	-2588.25	736.159	206.026	624284.3	444120.8
5900	10.655	15.635	100	5828.529	-2686.53	753.965	211.01	624289.3	444138.6
6000	10.655	15.635	100	5926.805	-2784.81	771.771	215.993	624294.3	444156.4
6100	10.655	15.635	100	6025.081	-2883.08	789.576	220.976	624299.2	444174.2
6200	10.655	15.635	100	6123.356	-2981.36	807.382	225.959	624304.2	444192

6300	10.655	15.635	100	6221.632	-3079.63	825.188	230.943	624309.2	444209.8
6400	10.655	15.635	100	6319.908	-3177.91	842.994	235.926	624314.2	444227.6
6500	10.655	15.635	100	6418.184	-3276.18	860.8	240.909	624319.2	444245.4
6603.91	10.655	15.635	103.91	6520.302	-3378.3	879.302	246.087	624324.3	444263.9
6700	8.733	15.635	96.09	6615.015	-3473.02	894.883	250.448	624328.7	444279.5
6800	6.733	15.635	100	6714.101	-3572.1	907.841	254.074	624332.3	444292.5
6900	4.733	15.635	100	6813.595	-3671.6	917.461	256.767	624335	444302.1
7000	2.733	15.635	100	6913.378	-3771.38	923.731	258.522	624336.8	444308.3
7100	0.733	15.635	100	7013.327	-3871.33	926.644	259.337	624337.6	444311.3
7136.674	0	0	36.674	7050	-3908	926.87	259.4	624337.7	444311.5
7200	0	0	63.326	7113.326	-3971.33	926.87	259.4	624337.7	444311.5
7300	0	0	100	7213.326	-4071.33	926.87	259.4	624337.7	444311.5
7400	0	0	100	7313.326	-4171.33	926.87	259.4	624337.7	444311.5
7500	0	0	100	7413.326	-4271.33	926.87	259.4	624337.7	444311.5
7600	0	0	100	7513.326	-4371.33	926.87	259.4	624337.7	444311.5
7700	0	0	100	7613.326	-4471.33	926.87	259.4	624337.7	444311.5
7800	0	0	100	7713.326	-4571.33	926.87	259.4	624337.7	444311.5
7900	0	0	100	7813.326	-4671.33	926.87	259.4	624337.7	444311.5
8000	0	0	100	7913.326	-4771.33	926.87	259.4	624337.7	444311.5
8100	0	0	100	8013.326	-4871.33	926.87	259.4	624337.7	444311.5
8200	0	0	100	8113.326	-4971.33	926.87	259.4	624337.7	444311.5
8300	0	0	100	8213.326	-5071.33	926.87	259.4	624337.7	444311.5
8400	0	0	100	8313.326	-5171.33	926.87	259.4	624337.7	444311.5
8500	0	0	100	8413.326	-5271.33	926.87	259.4	624337.7	444311.5
8562.474	0	0	62.474	8475.8	-5333.8	926.87	259.4	624337.7	444311.5
8600	3.002	179	37.526	8513.309	-5371.31	925.887	259.417	624337.7	444310.5
8650	7.002	179	50	8563.109	-5421.11	921.529	259.493	624337.8	444306.1
8700	11.002	179	50	8612.483	-5470.48	913.708	259.63	624337.9	444298.3
8750	15.002	179	50	8661.191	-5519.19	902.463	259.826	624338.1	444287.1
8800	19.002	179	50	8708.996	-5567	887.848	260.081	624338.3	444272.5
8850	23.002	179	50	8755.665	-5613.67	869.934	260.394	624338.7	444254.5
8900	27.002	179	50	8800.97	-5658.97	848.809	260.763	624339	444233.4
8950	31.002	179	50	8844.691	-5702.69	824.576	261.186	624339.4	444209.2
9000	35.002	179	50	8886.615	-5744.62	797.352	261.661	624339.9	444182
9050	39.002	179	50	8926.538	-5784.54	767.27	262.186	624340.4	444151.9
9100	43.002	179	50	8964.265	-5822.27	734.478	262.758	624341	444119.1
9150	47.002	179	50	8999.611	-5857.61	699.134	263.375	624341.6	444083.7
9200	51.002	179	50	9032.406	-5890.41	661.41	264.034	624342.3	444046
9250	55.002	179	50	9062.49	-5920.49	621.492	264.73	624343	444006.1
9300	59.002	179	50	9089.714	-5947.71	579.572	265.462	624343.7	443964.2
9350	63.002	179	50	9113.948	-5971.95	535.856	266.225	624344.5	443920.5
9400	67.002	179	50	9135.073	-5993.07	490.556	267.016	624345.3	443875.2
9450	71.002	179	50	9152.986	-6010.99	443.892	267.83	624346.1	443828.5
9500	75.002	179	50	9167.6	-6025.6	396.094	268.665	624346.9	443780.7
9550	79.002	179	50	9178.844	-6036.84	347.392	269.515	624347.8	443732
9600	83.002	179	50	9186.662	-6044.66	298.025	270.377	624348.6	443682.6
9650	87.002	179	50	9191.017	-6049.02	248.233	271.246	624349.5	443632.8

9687.474	90	179	37.474	9191.997	-6050	210.782	271.899	624350.2	443595.4
9700	90	179	12.526	9191.997	-6050	198.257	272.118	624350.4	443582.9
9800	90	179	100	9191.997	-6050	98.273	273.863	624352.1	443482.9
9887.474	90	179	87.474	9191.997	-6050	10.812	275.39	624353.7	443395.4
9900	90	178.749	12.526	9191.997	-6050	-1.712	275.636	624353.9	443382.9
10000	90	176.749	100	9191.997	-6050	-101.629	279.563	624357.8	443283
10100	90	174.749	100	9191.997	-6050	-201.349	286.974	624365.2	443183.3
10200	90	172.749	100	9191.997	-6050	-300.75	297.861	624376.1	443083.9
10300	90	170.749	100	9191.997	-6050	-399.71	312.21	624390.5	442984.9
10400	90	168.749	100	9191.997	-6050	-498.109	330.005	624408.3	442886.5
10500	90	166.749	100	9191.997	-6050	-595.827	351.222	624429.5	442788.8
10600	90	164.749	100	9191.997	-6050	-692.745	375.837	624454.1	442691.9
10684.97	90	163.05	84.974	9191.997	-6050	-774.382	399.401	624477.7	442610.2
10700	90	163.351	15.026	9191.997	-6050	-788.767	403.744	624482	442595.8
10800	90	165.351	100	9191.997	-6050	-885.056	430.718	624509	442499.6
10900	90	167.351	100	9191.997	-6050	-982.226	454.315	624532.6	442402.4
11000	90	169.351	100	9191.997	-6050	-1080.16	474.506	624552.8	442304.4
11100	90	171.351	100	9191.997	-6050	-1178.74	491.268	624569.5	442205.9
11200	90	173.351	100	9191.997	-6050	-1277.85	504.578	624582.8	442106.8
11300	90	175.351	100	9191.997	-6050	-1377.36	514.422	624592.7	442007.3
11400	90	177.351	100	9191.997	-6050	-1477.15	520.787	624599	441907.5
11500	90	179.351	100	9191.997	-6050	-1577.1	523.665	624601.9	441807.5
11519.29	90	179.736	19.288	9191.997	-6050	-1596.39	523.819	624602.1	441788.2
11600	90	179.736	80.712	9191.997	-6050	-1677.1	524.19	624602.5	441707.5
11700	90	179.736	100	9191.997	-6050	-1777.1	524.65	624602.9	441607.5
11800	90	179.736	100	9191.998	-6050	-1877.1	525.111	624603.4	441507.5
11900	90	179.736	100	9191.998	-6050	-1977.1	525.571	624603.8	441407.5
12000	90	179.736	100	9191.998	-6050	-2077.1	526.031	624604.3	441307.5
12100	90	179.736	100	9191.998	-6050	-2177.1	526.492	624604.8	441207.5
12200	90	179.736	100	9191.998	-6050	-2277.09	526.952	624605.2	441107.5
12300	90	179.736	100	9191.998	-6050	-2377.09	527.412	624605.7	441007.5
12400	90	179.736	100	9191.998	-6050	-2477.09	527.872	624606.1	440907.5
12500	90	179.736	100	9191.998	-6050	-2577.09	528.333	624606.6	440807.5
12600	90	179.736	100	9191.998	-6050	-2677.09	528.793	624607.1	440707.5
12700	90	179.736	100	9191.998	-6050	-2777.09	529.253	624607.5	440607.5
12800	90	179.736	100	9191.998	-6050	-2877.09	529.713	624608	440507.5
12900	90	179.736	100	9191.998	-6050	-2977.09	530.174	624608.4	440407.5
13000	90	179.736	100	9191.998	-6050	-3077.09	530.634	624608.9	440307.5
13100	90	179.736	100	9191.998	-6050	-3177.08	531.094	624609.4	440207.5
13200	90	179.736	100	9191.998	-6050	-3277.08	531.554	624609.8	440107.5
13300	90	179.736	100	9191.998	-6050	-3377.08	532.015	624610.3	440007.5
13400	90	179.736	100	9191.998	-6050	-3477.08	532.475	624610.7	439907.5
13500	90	179.736	100	9191.998	-6050	-3577.08	532.935	624611.2	439807.5
13600	90	179.736	100	9191.998	-6050	-3677.08	533.395	624611.7	439707.5
13700	90	179.736	100	9191.998	-6050	-3777.08	533.856	624612.1	439607.5
13800	90	179.736	100	9191.998	-6050	-3877.08	534.316	624612.6	439507.5
13900	90	179.736	100	9191.998	-6050	-3977.08	534.776	624613	439407.5

14000	90	179.736	100	9191.998	-6050	-4077.08	535.236	624613.5	439307.5
14100	90	179.736	100	9191.998	-6050	-4177.07	535.697	624614	439207.5
14200	90	179.736	100	9191.998	-6050	-4277.07	536.157	624614.4	439107.5
14300	90	179.736	100	9191.998	-6050	-4377.07	536.617	624614.9	439007.5
14400	90	179.736	100	9191.999	-6050	-4477.07	537.078	624615.3	438907.5
14500	90	179.736	100	9191.999	-6050	-4577.07	537.538	624615.8	438807.5
14600	90	179.736	100	9191.999	-6050	-4677.07	537.998	624616.3	438707.5
14700	90	179.736	100	9191.999	-6050	-4777.07	538.458	624616.7	438607.5
14800	90	179.736	100	9191.999	-6050	-4877.07	538.919	624617.2	438507.5
14900	90	179.736	100	9191.999	-6050	-4977.07	539.379	624617.6	438407.5
15000	90	179.736	100	9191.999	-6050	-5077.06	539.839	624618.1	438307.5
15100	90	179.736	100	9191.999	-6050	-5177.06	540.299	624618.6	438207.5
15200	90	179.736	100	9191.999	-6050	-5277.06	540.76	624619	438107.5
15300	90	179.736	100	9191.999	-6050	-5377.06	541.22	624619.5	438007.5
15400	90	179.736	100	9191.999	-6050	-5477.06	541.68	624619.9	437907.6
15500	90	179.736	100	9191.999	-6050	-5577.06	542.14	624620.4	437807.6
15600	90	179.736	100	9191.999	-6050	-5677.06	542.601	624620.9	437707.6
15700	90	179.736	100	9191.999	-6050	-5777.06	543.061	624621.3	437607.6
15800	90	179.736	100	9191.999	-6050	-5877.06	543.521	624621.8	437507.6
15900	90	179.736	100	9191.999	-6050	-5977.06	543.981	624622.2	437407.6
16000	90	179.736	100	9191.999	-6050	-6077.05	544.442	624622.7	437307.6
16100	90	179.736	100	9191.999	-6050	-6177.05	544.902	624623.2	437207.6
16200	90	179.736	100	9191.999	-6050	-6277.05	545.362	624623.6	437107.6
16300	90	179.736	100	9191.999	-6050	-6377.05	545.822	624624.1	437007.6
16400	90	179.736	100	9191.999	-6050	-6477.05	546.283	624624.5	436907.6
16500	90	179.736	100	9191.999	-6050	-6577.05	546.743	624625	436807.6
16600	90	179.736	100	9191.999	-6050	-6677.05	547.203	624625.5	436707.6
16700	90	179.736	100	9191.999	-6050	-6777.05	547.664	624625.9	436607.6
16800	90	179.736	100	9191.999	-6050	-6877.05	548.124	624626.4	436507.6
16900	90	179.736	100	9192	-6050	-6977.04	548.584	624626.8	436407.6
17000	90	179.736	100	9192	-6050	-7077.04	549.044	624627.3	436307.6
17100	90	179.736	100	9192	-6050	-7177.04	549.505	624627.8	436207.6
17200	90	179.736	100	9192	-6050	-7277.04	549.965	624628.2	436107.6
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17400	90	179.736	100	9192	-6050	-7477.04	550.885	624629.1	435907.6
17500	90	179.736	100	9192	-6050	-7577.04	551.346	624629.6	435807.6
17600	90	179.736	100	9192	-6050	-7677.04	551.806	624630.1	435707.6
17700	90	179.736	100	9192	-6050	-7777.04	552.266	624630.5	435607.6
17800	90	179.736	100	9192	-6050	-7877.03	552.726	624631	435507.6
17900	90	179.736	100	9192	-6050	-7977.03	553.187	624631.4	435407.6
18000	90	179.736	100	9192	-6050	-8077.03	553.647	624631.9	435307.6
18100	90	179.736	100	9192	-6050	-8177.03	554.107	624632.4	435207.6
18161.45	90	179.736	61.449	9192	-6050	-8238.48	554.39	624632.7	435146.1
18200	90	179.736	38.551	9192	-6050	-8277.03	554.567	624632.8	435107.6
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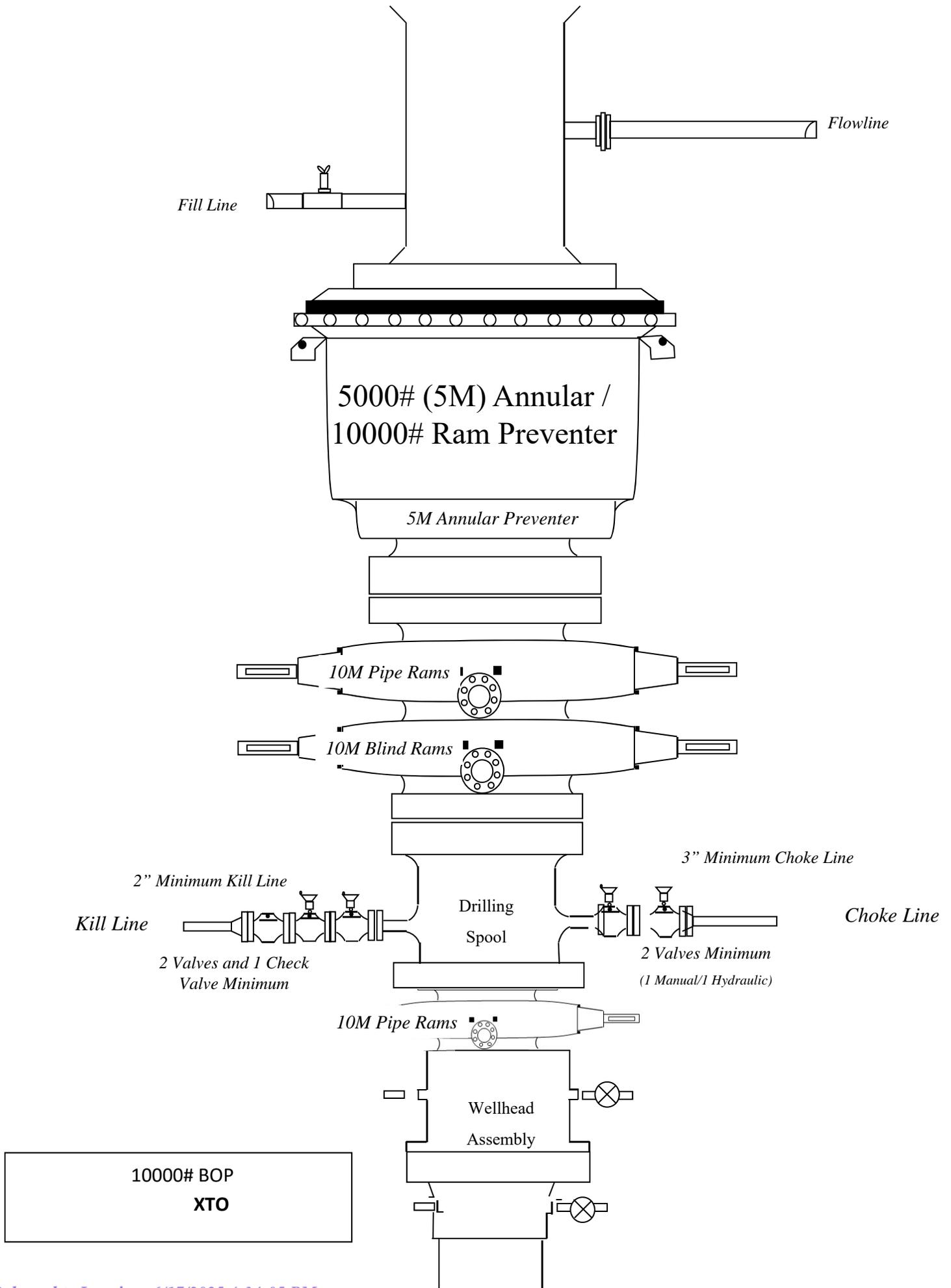
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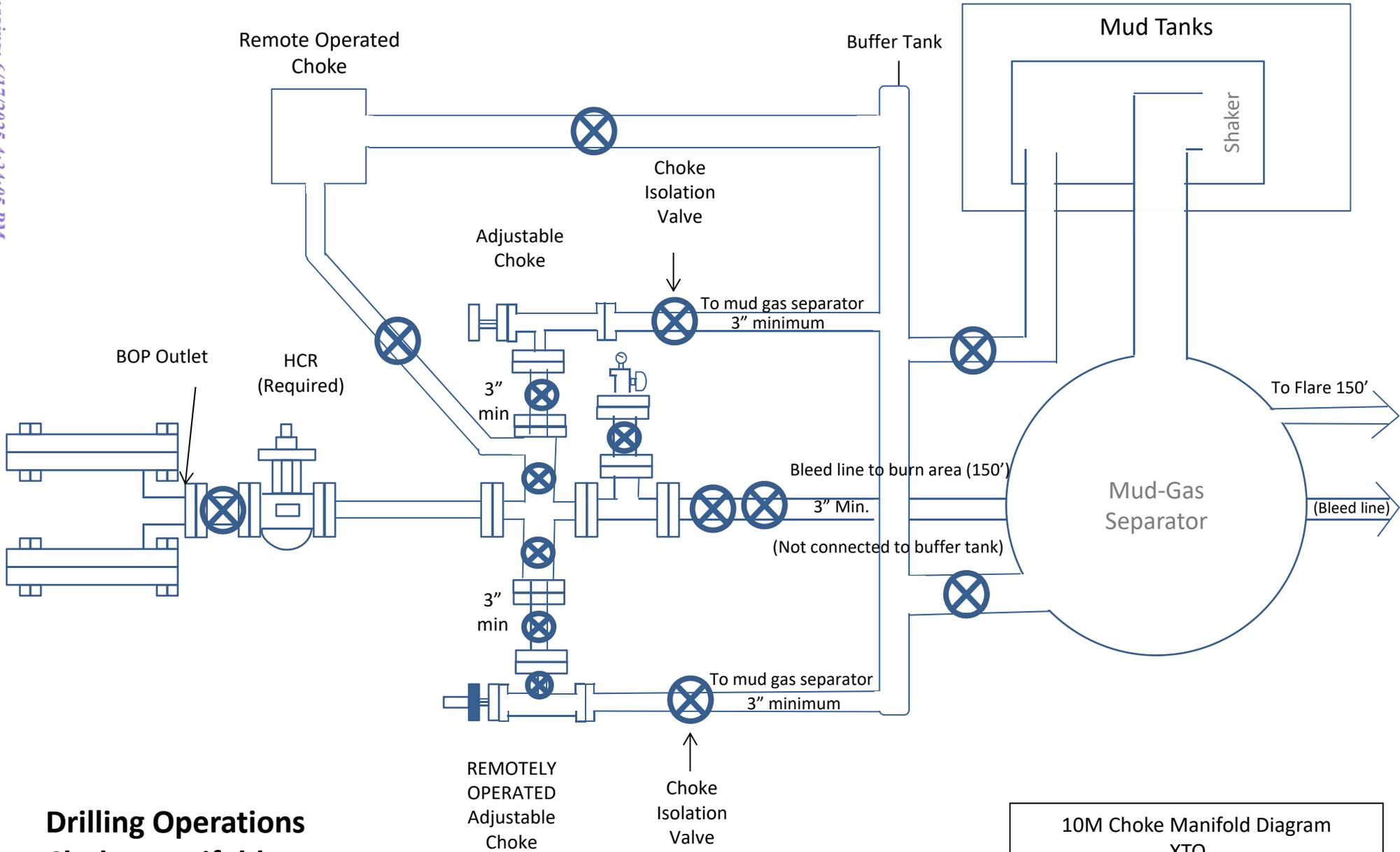


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32.19559	-103.93	0	0	0	8279.461
32.19556	-103.93	0	0	0	8290.902



Bleed line will discharge 100' from wellhead for non-H2S situations and 150' from wellhead for H2S situations.



**Drilling Operations**  
**Choke Manifold**  
**10M Service**

10M Choke Manifold Diagram  
 XTO



# TenarisHydril Wedge 511



Coupling	Pipe Body
Grade: P110-ICY	Grade: P110-ICY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	7.625 in.	Wall Thickness	0.375 in.	Grade	P110-ICY
Min. Wall Thickness	90.00 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

### Pipe Body Data

Geometry				Performance	
Nominal OD	7.625 in.	Wall Thickness	0.375 in.	Body Yield Strength	1068 x1000 lb
Nominal Weight	29.70 lb/ft	Plain End Weight	29.06 lb/ft	Min. Internal Yield Pressure	11,070 psi
Drift	6.750 in.	OD Tolerance	API	SMYS	125,000 psi
Nominal ID	6.875 in.			Collapse Pressure	7360 psi

### Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	7.625 in.	Tension Efficiency	61.10 %	Minimum	5900 ft-lb
Connection ID	6.787 in.	Joint Yield Strength	653 x1000 lb	Optimum	7100 ft-lb
Make-up Loss	3.704 in.	Internal Pressure Capacity	11,070 psi	Maximum	10,300 ft-lb
Threads per inch	3.28	Compression Efficiency	73.80 %		
Connection OD Option	Regular	Compression Strength	788 x1000 lb	Operation Limit Torques	
		Max. Allowable Bending	45.83 °/100 ft	Operating Torque	55,000 ft-lb
		External Pressure Capacity	7360 psi	Yield Torque	82,000 ft-lb

### Notes

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# TenarisHydril Wedge 511



Coupling	Pipe Body
Grade: L80-IC	Grade: L80-IC
Body: Red	1st Band: Red
1st Band: Brown	2nd Band: Brown
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	7.625 in.	Wall Thickness	0.375 in.	Grade	L80-IC
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

### Pipe Body Data

Geometry				Performance	
Nominal OD	7.625 in.	Wall Thickness	0.375 in.	Body Yield Strength	683 x1000 lb
Nominal Weight	29.70 lb/ft	Plain End Weight	29.06 lb/ft	Min. Internal Yield Pressure	6890 psi
Drift	6.750 in.	OD Tolerance	API	SMYS	80,000 psi
Nominal ID	6.875 in.			Collapse Pressure	5900 psi

### Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	7.625 in.	Tension Efficiency	61.10 %	Minimum	5900 ft-lb
Connection ID	6.787 in.	Joint Yield Strength	417 x1000 lb	Optimum	7100 ft-lb
Make-up Loss	3.704 in.	Internal Pressure Capacity	6890 psi	Maximum	10,300 ft-lb
Threads per inch	3.28	Compression Efficiency	73.80 %		
Connection OD Option	Regular	Compression Strength	504 x1000 lb	Operation Limit Torques	
		Max. Allowable Bending	29.33 °/100 ft	Operating Torque	35,000 ft-lb
		External Pressure Capacity	5900 psi	Yield Torque	52,000 ft-lb

### Notes

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TPN™



Coupling	Pipe Body
Grade: P110-CY	Grade: P110-CY
Body: White	1st Band: White
1st Band: Grey	2nd Band: Grey
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-CY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Wall Thickness	0.361 in.
Nominal Weight	20.00 lb/ft	Plain End Weight	19.83 lb/ft
Drift	4.653 in.	OD Tolerance	API
Nominal ID	4.778 in.		
		Body Yield Strength	641 x1000 lb
		Min. Internal Yield Pressure	12,640 psi
		SMYS	110,000 psi
		Collapse Pressure	11,100 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.300 in.	Tension Efficiency	100 %	Minimum	13,860 ft-lb
Coupling Length	8.408 in.	Joint Yield Strength	641 x1000 lb	Optimum	15,400 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	12,640 psi	Maximum	16,940 ft-lb
Make-up Loss	4.204 in.	Compression Efficiency	100 %		
Threads per inch	5	Compression Strength	641 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	92 °/100 ft	Operating Torque	26,350 ft-lb
		External Pressure Capacity	11,100 psi	Yield Torque	29,300 ft-lb

Notes

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PI/CIII



# TenarisHydril Wedge 441®



Coupling	Pipe Body
Grade: P110-ICY	Grade: P110-ICY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-ICY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

### Pipe Body Data

Geometry				Performance	
Nominal OD	5.500 in.	Wall Thickness	0.361 in.	Body Yield Strength	729 x1000 lb
Nominal Weight	20.00 lb/ft	Plain End Weight	19.83 lb/ft	Min. Internal Yield Pressure	14,360 psi
Drift	4.653 in.	OD Tolerance	API	SMYS	125,000 psi
Nominal ID	4.778 in.			Collapse Pressure	12,300 psi

### Connection Data

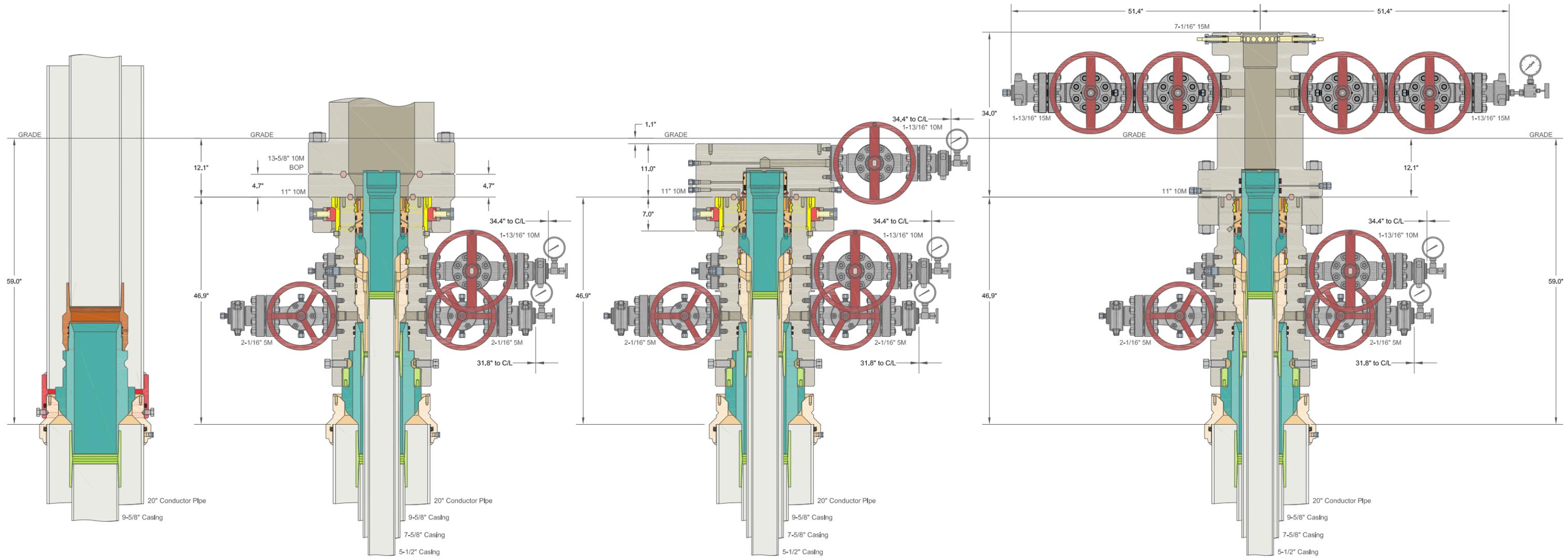
Geometry		Performance		Make-Up Torques	
Connection OD	5.852 in.	Tension Efficiency	81.50 %	Minimum	15,000 ft-lb
Coupling Length	8.714 in.	Joint Yield Strength	594 x1000 lb	Optimum	16,000 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	14,360 psi	Maximum	19,200 ft-lb
Make-up Loss	3.780 in.	Compression Efficiency	81.50 %		
Threads per inch	3.40	Compression Strength	594 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	84.76 °/100 ft	Operating Torque	36,000 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	42,000 ft-lb
				Buck-On	
				Minimum	19,200 ft-lb
				Maximum	20,700 ft-lb

### Notes

This connection is fully interchangeable with:  
 Wedge 441® - 5.5 in. - 0.304 (17.00) in. (lb/ft)  
 Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) / 0.415 (23.00) in. (lb/ft)  
 Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

For the latest performance data, always visit our website: [www.tenaris.com](http://www.tenaris.com)  
 For further information on concepts indicated in this datasheet, download the Datasheet Manual from [www.tenaris.com](http://www.tenaris.com)

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ALL DIMENSIONS APPROXIMATE

<b>CACTUS WELLHEAD LLC</b>			XTO ENERGY INC DELAWARE BASIN		
20" x 9-5/8" x 7-5/8" x 5-1/2" MBU-T-CFL-R-DBLO Wellhead With 11" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head And 9-5/8", 7-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers			DRAWN	VJK	31MAR22
			APPRV		
			DRAWING NO.	HBE0000479	

XTO respectfully requests approval to utilize a spudder rig to pre-set surface casing.

Description of Operations:

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
  - a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
  - b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wing valves.
  - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling Operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nipped up and tested on the wellhead before drilling operations resume on each well.
  - a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
  - b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations
7. XTO will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, XTO will secure the wellhead area by placing a guard rail around the cellar area.

**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.

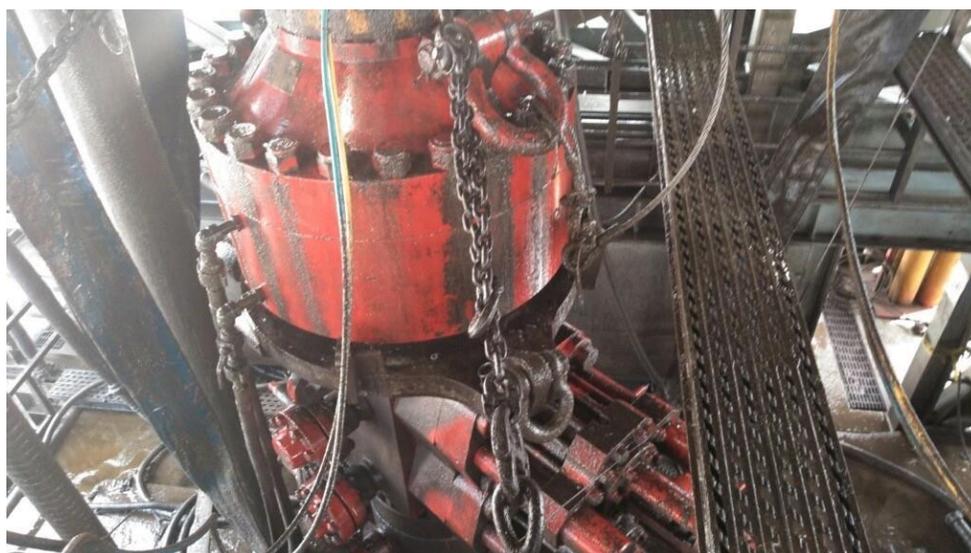


Figure 1: Winch System attached to BOP Stack

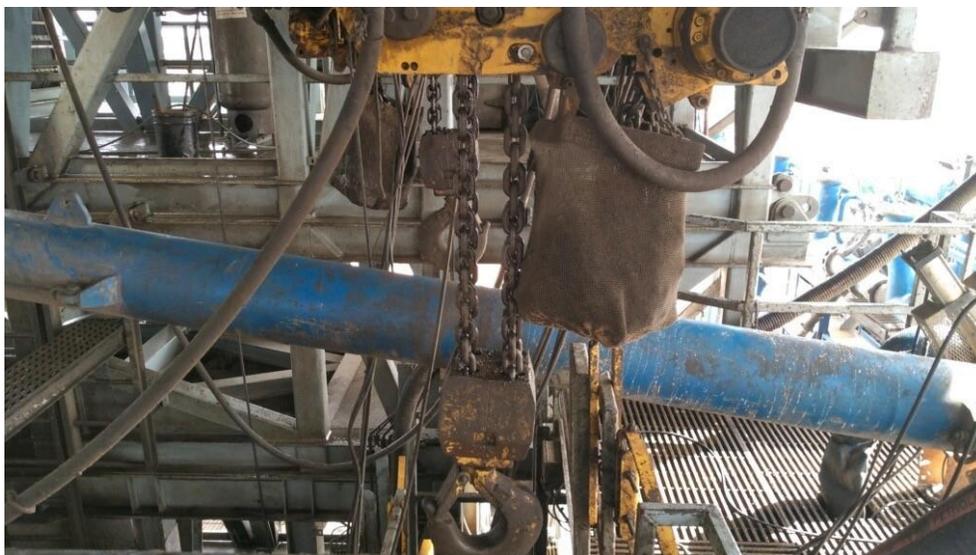


Figure 2: BOP Winch System

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>3c</sup> psig (MPa)	Pressure Test—High Pressure <sup>3c</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>3d</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>e</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>e</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>3</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.

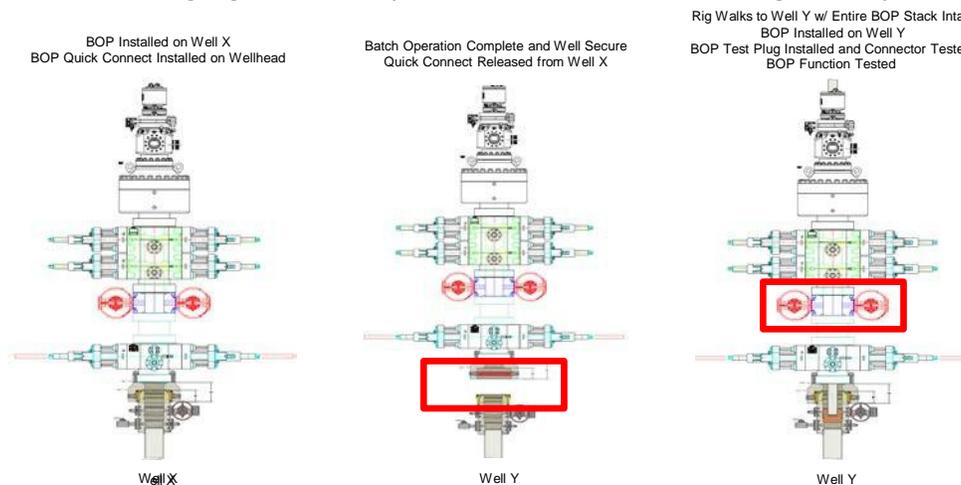
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317.0 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of CFR Title 43 Part 317.0 (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 317.0.

### **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.

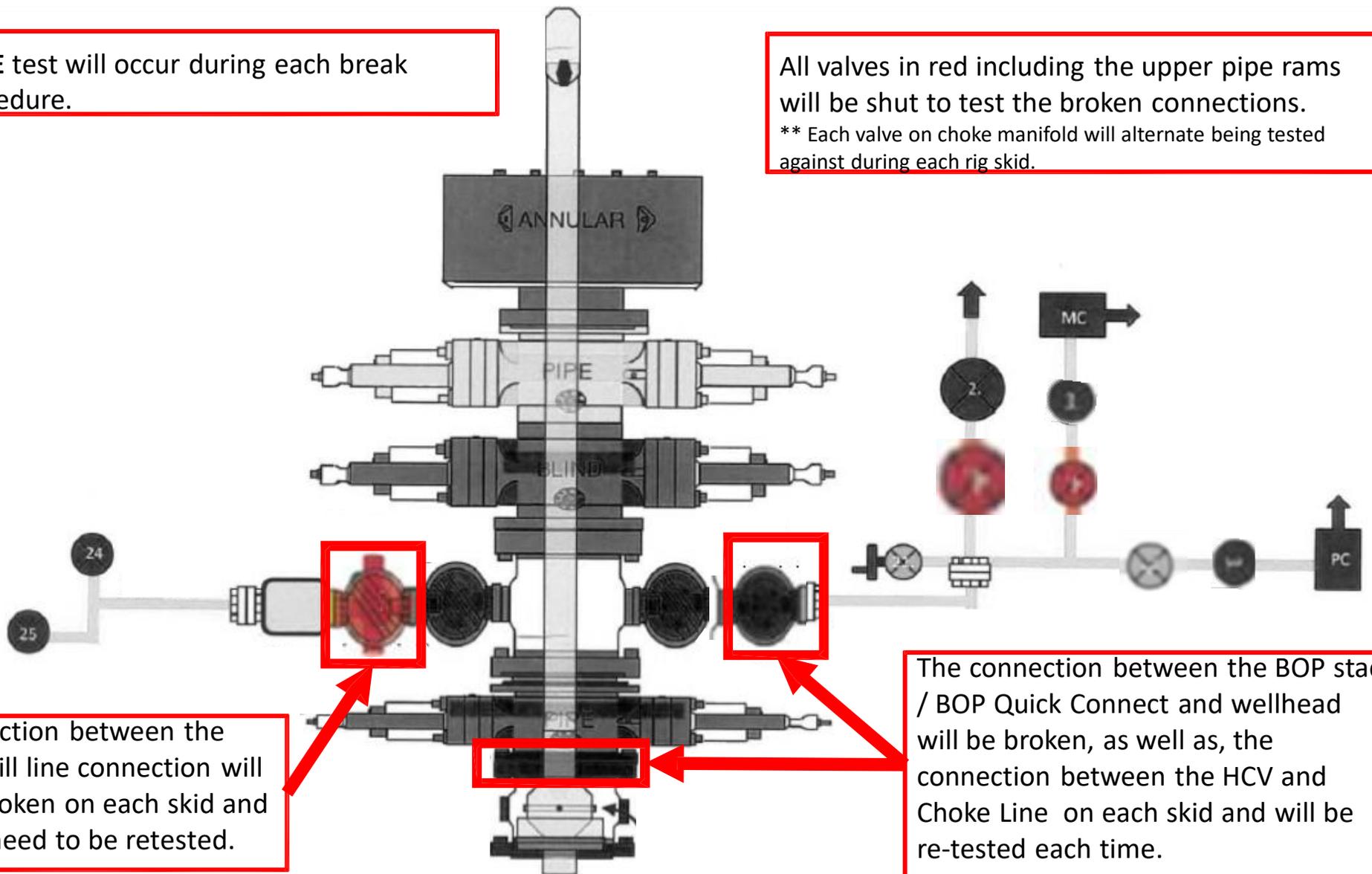
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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 skid.



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

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



# BLACK GOLD®

**GATES ENGINEERING & SERVICES NORTH AMERICA**  
7603 Prairie Oak Dr.  
Houston, TX. 77086

PHONE: +1 (281) 602-4100  
FAX: +1 (281) 602-4147  
EMAIL: gesna.quality@gates.com  
WEB: www.gates.com/oilandgas

*NEW CHOKE HOSE  
INSTALLED 02-10-2024*

## CERTIFICATE OF CONFORMANCE

This is to verify that the items detailed below meet the requirements of the Customer's Purchase Order referenced herein, and are in Conformance with applicable specifications, and that Records of Required Tests are on file and subject to examination. The following items were inspected and hydrostatically tested at **Gates Engineering & Services North America** facilities in Houston, TX, USA.

<b>CUSTOMER:</b>	NABORS DRILLING TECHNOLOGIES USA DBA NABORS DRILLING USA
<b>CUSTOMER P.O.#:</b>	15582803 (TAG NABORS PO #15582803 SN 74621 ASSET 66-1531)
<b>CUSTOMER P/N:</b>	IMR RETEST SN 74621 ASSET #66-1531
<b>PART DESCRIPTION:</b>	RETEST OF CUSTOMER 3" X 45 FT 16C CHOKE & KILL HOSE ASSEMBLY C/W 4 1/16" 10K FLANGES
<b>SALES ORDER #:</b>	529480
<b>QUANTITY:</b>	1
<b>SERIAL #:</b>	74621 H3-012524-1

**SIGNATURE:** *F. OSMOS*

**TITLE:** QUALITY ASSURANCE

**DATE:** 1/25/2024



H3-15/16

1/25/2024 11:48:06 AM

# TEST REPORT

### CUSTOMER

Company: Nabors Industries Inc.  
 Production description: 74621/66-1531  
 Sales order #: 529480  
 Customer reference: FG1213

### TEST OBJECT

Serial number: H3-012524-1  
 Lot number:  
 Description: 74621/66-1531  
 Hose ID: 3" 16C CK  
 Part number:

### TEST INFORMATION

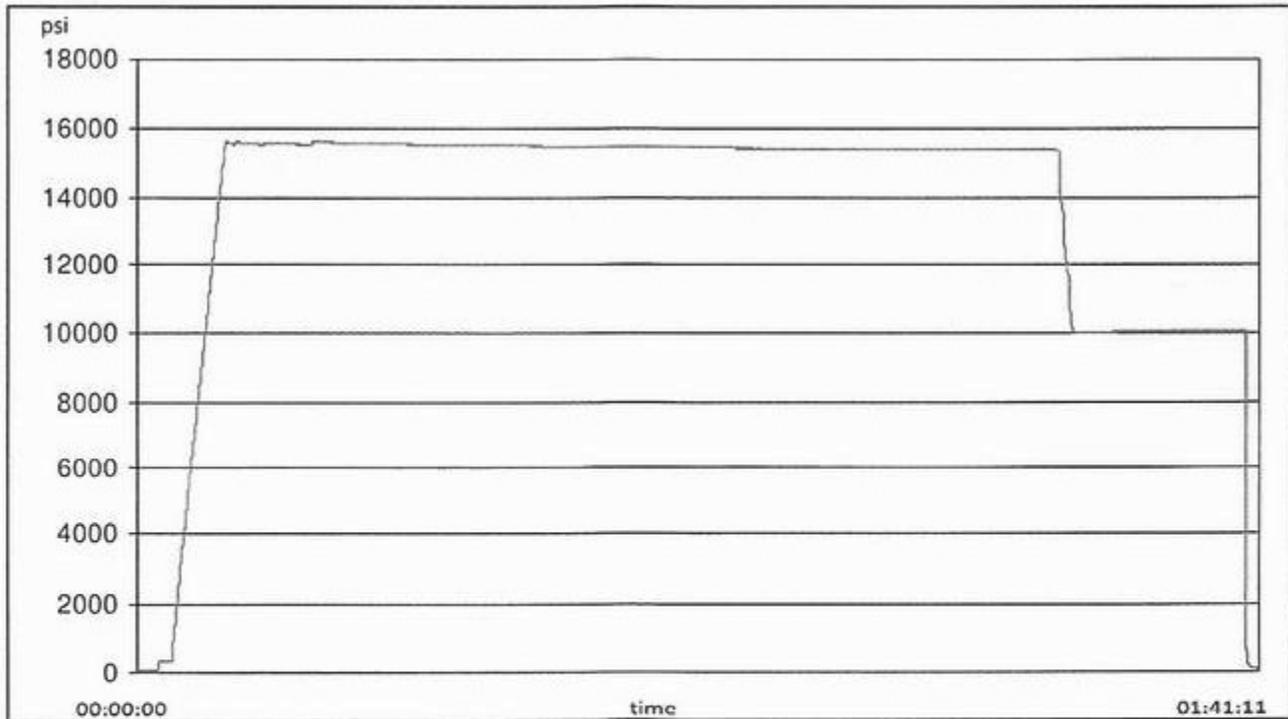
Test procedure: GTS-04-053  
 Test pressure: 15000.00 psi  
 Test pressure hold: 3600.00 sec  
 Work pressure: 10000.00 psi  
 Work pressure hold: 900.00 sec  
 Length difference: 0.00 %  
 Length difference: 0.00 inch

Fitting 1: 3.0 x 4-1/16 10K  
 Part number:  
 Description:  
 Fitting 2: 3.0 x 4-1/16 10K  
 Part number:  
 Description:

Visual check:  
 Pressure test result: PASS  
 Length measurement result:

Length: 45 feet

Test operator: Travis





H3-15/16

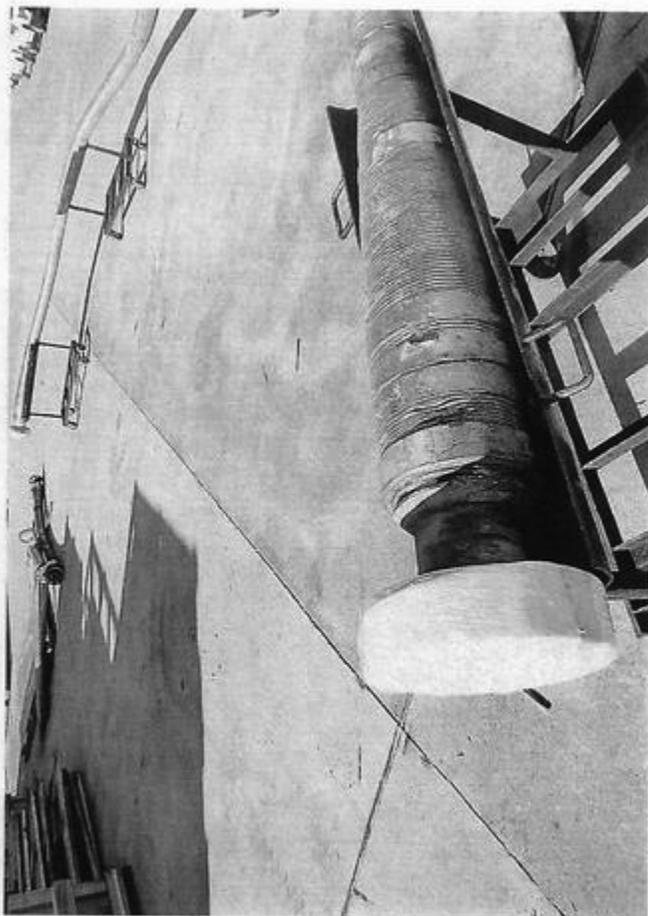
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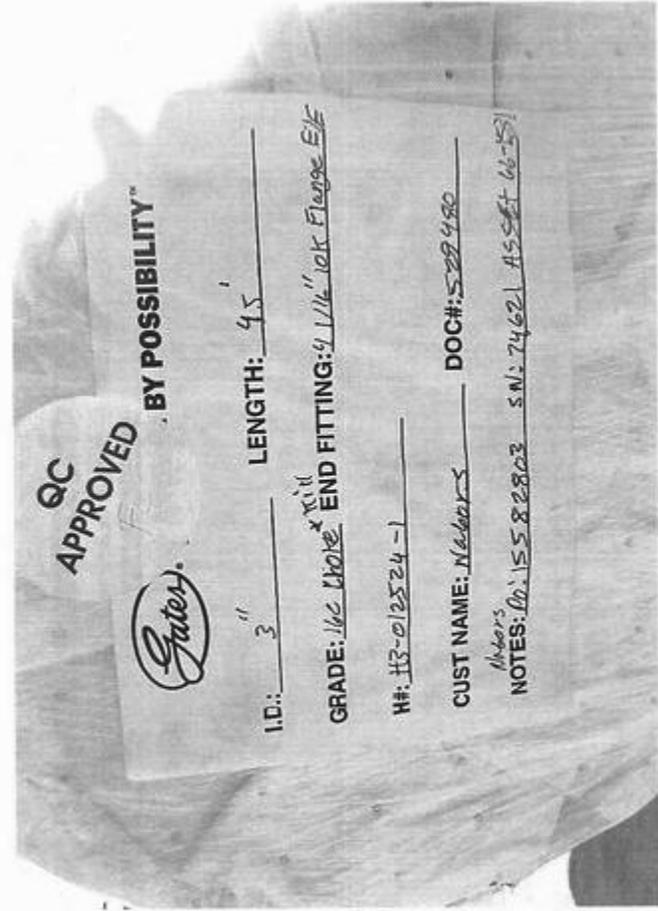
# TEST REPORT

## GAUGE TRACEABILITY

Description	Serial number	Calibration date	Calibration due date
S-25-A-W	110D3PHO	2023-06-06	2024-06-06
S-25-A-W	110IQWDG	2023-05-16	2024-05-16

### Comment





## XTO Permian Operating, LLC Offline Cementing Variance Request

XTO requests the option to cement the surface and intermediate casing strings offline as a prudent batch drilling efficiency of acreage development.

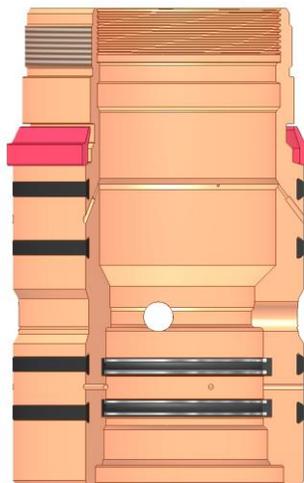
### 1. Cement Program

No changes to the cement program will take place for offline cementing.

### 2. Offline Cementing Procedure

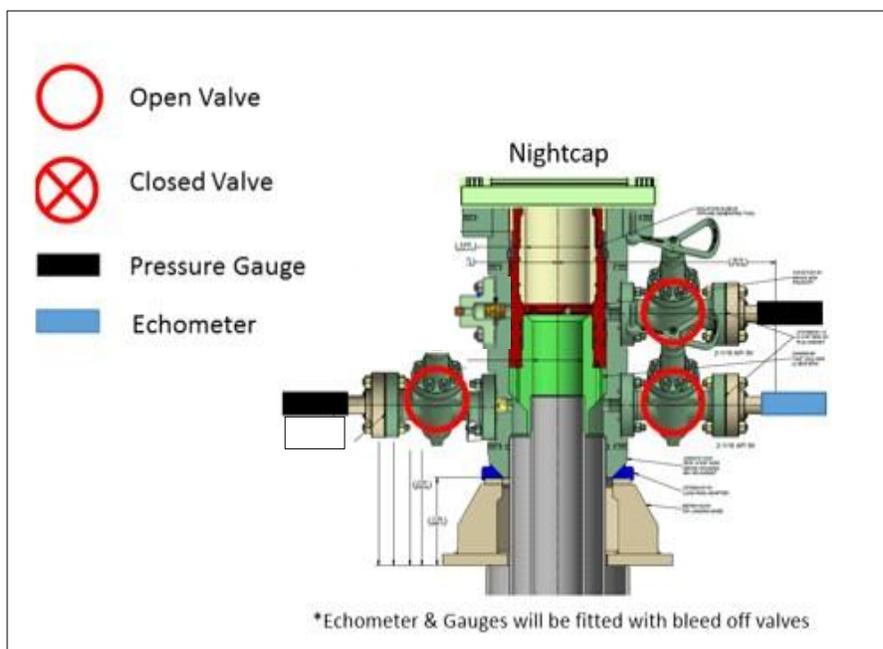
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal. Pressure ratings of wellhead components and valves is 5,000 psi.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
  - a. If any barrier fails to test, the BOP stack will not be nipped down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



Annular packoff with both external and internal seals

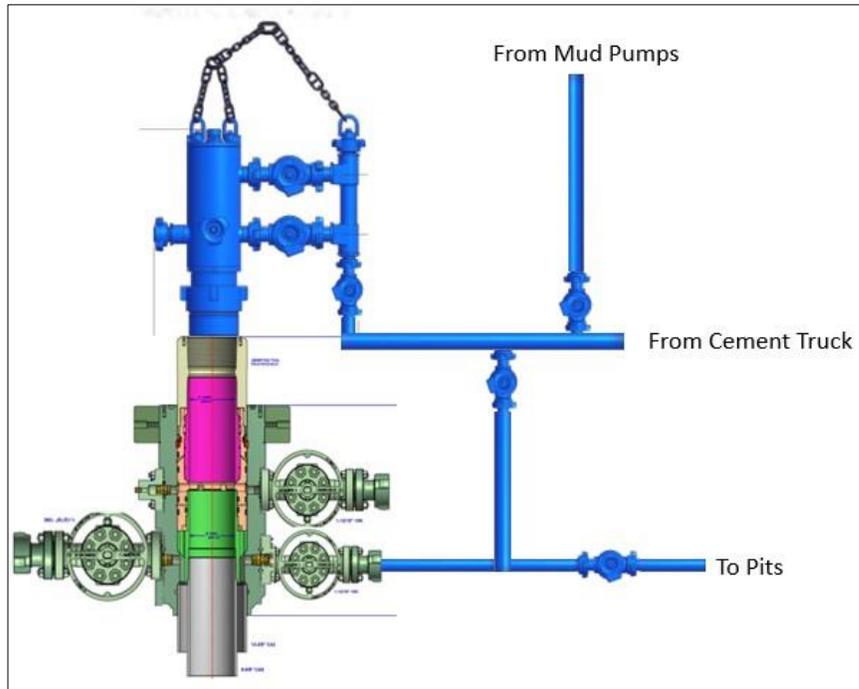
## XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nipping up for further remediation.
  - a. Well Control Plan
    - i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
    - ii. Rig pumps or a 3<sup>rd</sup> party pump will be tied into the upper casing valve to pump down the casing ID
    - iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
    - iv. Once influx is circulated out of the hole, kill weight mud will be circulated
    - v. Well will be confirmed static
    - vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment

**XTO Permian Operating, LLC Offline Cementing Variance Request**



Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
  - a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
  - b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 474007

**CONDITIONS**

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 474007
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	6/17/2025