

Lease Number: NMNM506A

Unit or CA Name: POKER LAKE UNIT

Unit or CA Number:
NMNM71016X

US Well Number: 3001554168

Operator: XTO PERMIAN OPERATING
LLC**Notice of Intent**

Sundry ID: 2823636

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/20/2024

Time Sundry Submitted: 01:34

Date proposed operation will begin: 12/18/2024

Procedure Description: Poker Lake Unit 15 TWR 113H SUNDRY LANGUAGE XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, KOP, FTP, LTP, BHL, Proposed total Depth, and Pool Code. There is no new surface disturbance. There is a dedicated acreage change. FROM: TO: SHL: 490' FNL & 460' FWL OF SECTION 22-T24S-R31E 510' FNL & 460' FWL OF SECTION 22-T24S-R31E KOP: 490' FNL & 460' FWL OF SECTION 22-T24S-R31E 616' FSL & 1661' FEL OF SECTION 16-T24S-31E FTP: 330' FNL & 110' FWL OF SECTION 22-T24S-R31E 100' FNL & 1660' FEL OF SECTION 21-T24S-R31E LTP: 2540' FNL & 110' FWL OF SECTION 34-T24S-R31E 100' FSL & 1660' FEL OF SECTION 28-T24S-R31E BHL: 2590' FNL & 110' FWL OF SECTION 34-T24S-R31E 50' FSL & 1660' FEL OF SECTION 28-T24S-R31E The proposed total depth is changing from 24013' MD; 10847' TVD (3rd Bone Spring Shale) to 20286' MD; 8906' TVD (Avalon). Pool Code is changing from 96403/Wildcat; Bone Spring to 96546/ Cotton Draw; Bone Spring, South A saturated salt brine will be utilized while drilling through the salt formations.

NOI Attachments**Procedure Description**

PLU_15_TWR___113H_Sundry_Attachments_20241210104521.pdf

US Well Number: 3001554168

Operator: XTO PERMIAN OPERATING
LLC**Conditions of Approval****Additional**

PLU_15_TRW_113H_COA_20241212091151.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:** DEC 10, 2024 10:46 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:** 12/13/2024**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.

5. Lease Serial No. NMNM0506A	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No. POKER LAKE UNIT/NMNM71016X	
8. Well Name and No. POKER LAKE UNIT 15 TWR/113H	
9. API Well No. 3001554168	
10. Field and Pool or Exploratory Area Wildcat; Bone Spring	11. Country or Parish, State EDDY/NM

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	
2. Name of Operator XTO PERMIAN OPERATING LLC	
3a. Address 6401 HOLIDAY HILL ROAD BLDG 5, MIDLAND,	3b. Phone No. (include area code) (432) 683-2277
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 22/T24S/R31E/NMP	

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 recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

Poker Lake Unit 15 TWR 113H

SUNDRY LANGUAGE

XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, KOP, FTP, LTP, BHL, Proposed total Depth, and Pool Code. There is no new surface disturbance. There is a dedicated acreage change.

FROM: TO:
SHL: 490 FNL & 460' FWL OF SECTION 22-T24S-R31E 510' FNL & 460' FWL OF SECTION 22-T24S-R31
KOP: 490 FNL & 460 FWL OF SECTION 22-T24S-R31E 616 FSL & 1661 FEL OF SECTION 16-T24S-31E
FTP: 330' FNL & 110' FWL OF SECTION 22-T24S-R31E 100' FNL & 1660' FEL OF SECTION 21-T24S-R31E
LTP: 2540' FNL & 110' FWL OF SECTION 34-T24S-R31E 100' FSL & 1660' FEL OF SECTION 28-T24S-R31E
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	Permitting Advisor Title
Signature (Electronic Submission)	Date 12/10/2024

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 12/13/2024
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

BHL: 2590' FNL & 110' FWL OF SECTION 34-T24S-R31E 50' FSL & 1660' FEL OF SECTION 28-T24S-R31E

The proposed total depth is changing from 24013 MD; 10847 TVD (3rd Bone Spring Shale) to 20286 MD; 8906 TVD (Avalon).

Pool Code is changing from 96403/Wildcat; Bone Spring to 96546/ Cotton Draw; Bone Spring, South

A saturated salt brine will be utilized while drilling through the salt formations.

Location of Well

0. SHL: NWNW / 490 FNL / 460 FWL / TWSP: 24S / RANGE: 31E / SECTION: 22 / LAT: 32.208748 / LONG: -103.772744 (TVD: 0 feet, MD: 0 feet)

PPP: NWNW / 330 FNL / 110 FWL / TWSP: 24S / RANGE: 31E / SECTION: 22 / LAT: 32.209187 / LONG: -103.773876 (TVD: 10825 feet, MD: 11200 feet)

PPP: NWNW / 330 FNL / 110 FWL / TWSP: 24S / RANGE: 31E / SECTION: 27 / LAT: 32.203245 / LONG: -103.773835 (TVD: 10834 feet, MD: 16500 feet)

BHL: SWNW / 2590 FNL / 110 FWL / TWSP: 24S / RANGE: 31E / SECTION: 34 / LAT: 32.173941 / LONG: -103.773813 (TVD: 10847 feet, MD: 24013 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO
LEASE NO.:	NMNM0506A
LOCATION:	Sec. 22, T.24 S, R 31 E
COUNTY:	Eddy County, New Mexico ▼
WELL NAME & NO.:	Poker Lake Unit 15 TWR 113H
SURFACE HOLE FOOTAGE:	510'/N & 460'/W
BOTTOM HOLE FOOTAGE:	50'/S & 1660'/E

*Changes approved through engineering via **Sundry 2823636** on 12-12-2024_. Any previous COAs not addressed within the updated COAs still apply.*

COA

H ₂ S	<input checked="" type="radio"/> No <input type="radio"/> Yes			
Potash / WIPP	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-Q	<input type="checkbox"/> Open Annulus <input type="checkbox"/> WIPP
	Choose an option (including blank option.)			
Cave / Karst	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High	<input type="radio"/> Critical
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both	<input type="radio"/> Diverter
Cementing	<input checked="" type="checkbox"/> Primary Squeeze	<input type="checkbox"/> Cont. Squeeze	<input checked="" type="checkbox"/> Echo Meter	<input type="checkbox"/> DV Tool
Special Req	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
Waste Prev.	<input type="radio"/> Self-Certification	<input type="radio"/> Waste Min. Plan	<input checked="" type="radio"/> APD Submitted prior to 06/10/2024	
Additional Language	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole	<input checked="" type="checkbox"/> Break Testing
	<input type="checkbox"/> Four-String	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Fluid-Filled	

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 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 **775** 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 7001'**
- b. **Second stage:** Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

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

Operator has proposed to pump down **Surface X Intermediate 1** 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 Surface casing to tieback requirements listed above 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 use a limited flush fluid volume of 1 bbl following backside cementing procedures.

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

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 **5000 (5M) psi**.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

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

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 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.

Engineer may elect to vary this language. Speak with Chris about implementing changes and whether that change seems reasonable.

Casing Clearance

String does not meet 0.422" clearance requirement per 43 CFR 3172. Cement tieback requirement increased 100' for Production casing tieback. Operator may contact approving engineer to discuss changing casing set depth or grade to meet clearance requirement.

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)

Contact Eddy County Petroleum Engineering Inspection Staff:

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

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 2nd 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 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. 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.

Approved by Zota Stevens on 12/12/2024

575-234-5998 / zstevens@blm.gov

☐ As Drilled

WELL LOCATION INFORMATION

API Number 30-015- 54168	Pool Code 96546	Pool Name COTTON DRAW; BONE SPRING, SOUTH
Property Code	Property Name POKER LAKE UNIT 15 TWR	Well Number 113H
OGRID No. 373075	Operator Name XTO PERMIAN OPERATING, LLC.	Ground Level Elevation 3,522'
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
D	22	24S	31E		510 FNL	460 FWL	32.208693	-103.772744	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
O	28	24S	31E		50 FSL	1,660 FEL	32.181194	-103.779547	EDDY

Dedicated Acres 640.00	Infill or Defining Well INFILL	Defining Well API 30-015-47225	Overlapping Spacing Unit (Y/N) N	Consolidation Code U
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
O	16	24S	31E		616 FSL	1,661 FEL	32.211784	-103.779603	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	21	24S	31E		100 FNL	1,660 FEL	32.209816	-103.779599	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
O	28	24S	31E		100 FSL	1,660 FEL	32.181331	-103.779548	EDDY

Unitized Area of Area of Interest NMNM105422429	Spacing Unit Type : <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Elevation 3,522'
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OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is vertical or directional well, 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 at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or a voluntary pooling agreement or a compulsory pooling order of heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or information) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Samantha Weis 11/15/2024
Signature Date

Samantha Weis

Printed Name

SURVEYOR CERTIFICATIONS

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



Signature and Seal of Professional Surveyor



MARK DILLON HARP 23786

Certificate Number

10/31/2024

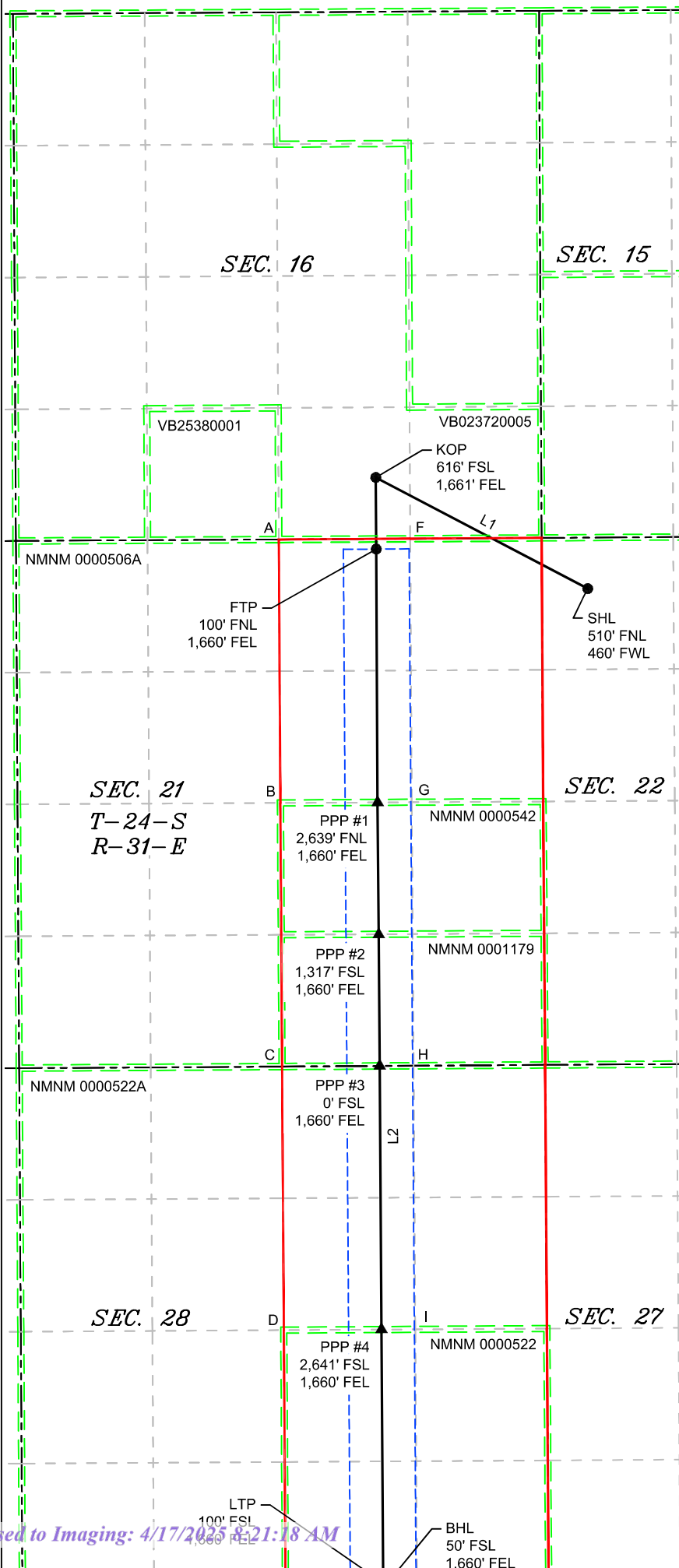
Date of Survey

LEGEND

	SECTION LINE
	PROPOSED WELL BORE
	NEW MEXICO MINERAL LEASE
	330' BUFFER
	ALLOCATION AREA

LINE TABLE		
LINE	AZIMUTH	LENGTH
L1	297°37'56"	2,401.01'
L2	179°37'00"	11,128.58'

COORDINATE TABLE					
SHL (NAD 83 NME)			SHL (NAD 27 NME)		
Y =	440,108.8	N	Y =	440,049.9	N
X =	714,720.0	E	X =	673,536.0	E
LAT. =	32.208693	°N	LAT. =	32.208569	°N
LONG. =	103.772744	°W	LONG. =	103.772260	°W
KOP (NAD 83 NME)			KOP (NAD 27 NME)		
Y =	441,222.4	N	Y =	441,163.5	N
X =	712,592.8	E	X =	671,408.9	E
LAT. =	32.211784	°N	LAT. =	32.211661	°N
LONG. =	103.779603	°W	LONG. =	103.779119	°W
FTP (NAD 83 NME)			FTP (NAD 27 NME)		
Y =	440,506.2	N	Y =	440,447.3	N
X =	712,597.6	E	X =	671,413.6	E
LAT. =	32.209816	°N	LAT. =	32.209692	°N
LONG. =	103.779599	°W	LONG. =	103.779116	°W
PPP #1 (NAD 83 NME)			PPP #1 (NAD 27 NME)		
Y =	437,966.9	N	Y =	437,908.1	N
X =	712,610.8	E	X =	671,426.8	E
LAT. =	32.202835	°N	LAT. =	32.202712	°N
LONG. =	103.779599	°W	LONG. =	103.779115	°W
PPP #2 (NAD 83 NME)			PPP #2 (NAD 27 NME)		
Y =	436,642.7	N	Y =	436,584.0	N
X =	712,621.3	E	X =	671,437.2	E
LAT. =	32.199196	°N	LAT. =	32.199072	°N
LONG. =	103.779587	°W	LONG. =	103.779104	°W
PPP #3 (NAD 83 NME)			PPP #3 (NAD 27 NME)		
Y =	435,326.1	N	Y =	435,267.4	N
X =	712,631.5	E	X =	671,447.3	E
LAT. =	32.195576	°N	LAT. =	32.195453	°N
LONG. =	103.779576	°W	LONG. =	103.779093	°W
PPP #4 (NAD 83 NME)			PPP #4 (NAD 27 NME)		
Y =	432,684.9	N	Y =	432,626.2	N
X =	712,648.9	E	X =	671,464.6	E
LAT. =	32.188316	°N	LAT. =	32.188192	°N
LONG. =	103.779564	°W	LONG. =	103.779081	°W
LTP (NAD 83 NME)			LTP (NAD 27 NME)		
Y =	430,144.0	N	Y =	430,085.4	N
X =	712,666.9	E	X =	671,482.5	E
LAT. =	32.181331	°N	LAT. =	32.181207	°N
LONG. =	103.779548	°W	LONG. =	103.779065	°W
BHL (NAD 83 NME)			BHL (NAD 27 NME)		
Y =	430,094.0	N	Y =	430,035.4	N
X =	712,667.3	E	X =	671,482.9	E
LAT. =	32.181194	°N	LAT. =	32.181070	°N
LONG. =	103.779547	°W	LONG. =	103.779065	°W
CORNER COORDINATES (NAD 83 NME)					
A - Y =	440,600.6	N	A - X =	711,619.8	E
B - Y =	437,961.7	N	B - X =	711,636.0	E
C - Y =	435,320.3	N	C - X =	711,652.2	E
D - Y =	432,679.1	N	D - X =	711,669.5	E
E - Y =	430,038.2	N	E - X =	711,686.8	E
F - Y =	440,608.2	N	F - X =	712,938.4	E
G - Y =	437,968.7	N	G - X =	712,953.4	E
H - Y =	435,328.2	N	H - X =	712,971.8	E
I - Y =	432,686.9	N	I - X =	712,988.9	E
J - Y =	430,046.2	N	J - X =	713,007.4	E
CORNER COORDINATES (NAD 27 NME)					
A - Y =	440,541.7	N	A - X =	670,435.8	E
B - Y =	437,902.9	N	B - X =	670,451.9	E
C - Y =	435,261.5	N	C - X =	670,468.0	E
D - Y =	432,620.4	N	D - X =	670,485.2	E
E - Y =	429,979.6	N	E - X =	670,502.4	E



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

XTO Energy Inc.
POKER LAKE UNIT 15 TWR 113H
Projected TD: 20286' MD / 8906' TVD
SHL: 510' FNL & 460' FWL , Section 22, T24S, R31E
BHL: 50' FSL & 1660' FEL , Section 28, T24S, R31E
EDDY County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	651'	Water
Top of Salt	972'	Water
Base of Salt	4186'	Water
Delaware	4418'	Water
Brushy Canyon	6982'	Water/Oil/Gas
Bone Spring	8260'	Water
Avalon	8406'	Water/Oil/Gas
Target/Land Curve	8906'	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 9.625 inch casing @ 751' (221' above the salt) and circulating cement back to surface. The intermediate will isolate from the top of salt down to the next casing seat by setting 7.625 inch casing at 8549' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 20286 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 8249 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 751'	9.625	40	J-55	BTC	New	1.54	8.38	20.97
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	4.28	2.57	2.20
8.75	4000' – 8549'	7.625	29.7	HC L-80	Flush Joint	New	3.11	2.22	3.01
6.75	0' – 8449'	5.5	20	RY P-110	Semi-Premium / Freedom	New	1.26	2.81	2.37
6.75	8449' - 20286'	5.5	20	RY P-110	Semi-Flush / Talon	New	1.26	2.66	2.37

· XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing per this Sundry

Wellhead:

Operator will utilize Multi-Bowl System - See Attached

4. Cement Program

Surface Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 751'

Lead: 150 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft3/sx, 10.13 gal/sx water)

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

Top of Cement: Surface

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

Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 8549'

1st Stage

Optional Lead: 370 sxs Class C (mixed at 10.5 ppg, 2.77 ft3/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 140 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6982

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

2nd Stage

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

Tail: 790 sxs Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)

Top of Cement: 0

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

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6982') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

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

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

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

Production Casing: 5.5, 20 New Semi-Flush / Talon, RY P-110 casing to be set at +/- 20286'

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 8249 feet

Tail: 820 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 8749 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 casing, the blow out preventer equipment (BOP) will consist of 5M Hydril and 10M 3-Ram BOP.

All BOP testing will be done by an independent service company. Operator will test as per BLM CFR43-3172

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. .

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. 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)	Additional Comments
0' - 751'	12.25	FW/Native	8.4-8.9	35-40	NC	Fresh water or native water
751' - 4418'	8.75	Saturated brine	10.0-10.5	30-32	NC	Fully saturated salt across salado / salt
4418' - 8549'	8.75	Brine or Direct Emulsion	10-10.5	30-32	NC	Depending on well conditions
8549' - 20286'	6.75	OBM	9-9.5	50-60	NC - 20	N/A

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 surface casing with Saturated Salt. A saturated salt brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

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

8. Logging, Coring and Testing Program

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 155 to 175 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.

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.

Well Plan Report - PLU 15 Twin Wells Ranch-113H

Measured Depth: 20286.00 ft
TVD RKB: 8906.00 ft
Location
Cartographic Reference System: New Mexico East - NAD 27
Northing: 440049.90 ft
Easting: 673536.00 ft
RKB: 3554.00 ft
Ground Level: 3522.00 ft
North Reference: Grid
Convergence Angle: 0.30 Deg

Site: Pad 1
Slot: PLU 15 Twin Wells Ranch-113H

Plan Sections									
PLU 15 Twin Wells Ranch-113H									
Measured	TVD								
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Build	Turn	Dogleg	
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	Rate	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
2555.36	29.11	297.63	2493.56	167.80	-320.52	2.00	0.00	2.00	2.00
6003.73	29.11	297.63	5506.44	945.79	-1806.64	0.00	0.00	0.00	0.00
7459.08	0.00	0.00	6900.00	1113.58	-2127.16	-2.00	0.00	2.00	2.00
8748.88	0.00	0.00	8189.80	1113.58	-2127.16	0.00	0.00	0.00	0.00
9873.88	90.00	179.62	8906.00	397.40	-2122.40	8.00	0.00	8.00	FTP 8
20236.01	90.00	179.62	8906.00	-9964.50	-2053.50	0.00	0.00	0.00	LTP 8
20286.00	90.00	179.62	8906.00	-10014.49	-2053.17	0.00	0.00	0.00	BHL 8

Position Uncertainty
Measured
PLU 15 Twin Wells Ranch-113H

Magnitude
Semi-major
Semi-minor
Tool

Vertical
Lateral

Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	of Bias (ft)	Error (ft)	Error (ft)	Azimuth (°)	Used
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	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.326	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.348	0.000	2.108	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.375	0.000	2.503	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.408	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.446	0.000	3.267	2.417	128.190	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.488	0.000	3.642	2.775	128.423	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.534	0.000	4.014	3.133	128.602	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.585	0.000	4.384	3.491	128.744	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.638	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	297.632	1199.980	4.358	0.000	5.067	0.000	2.695	0.000	5.074	4.351	123.509	MWD+IFR1+MS
1300.000	4.000	297.632	1299.838	5.234	0.000	5.399	0.000	2.756	0.000	5.427	5.213	96.367	MWD+IFR1+MS
1400.000	6.000	297.632	1399.452	5.999	0.000	5.735	0.000	2.822	0.000	6.108	5.635	54.480	MWD+IFR1+MS
1500.000	8.000	297.632	1498.702	6.689	0.000	6.074	0.000	2.895	0.000	6.821	5.955	48.705	MWD+IFR1+MS
1600.000	10.000	297.632	1597.465	7.323	0.000	6.418	0.000	2.978	0.000	7.486	6.275	46.891	MWD+IFR1+MS
1700.000	12.000	297.632	1695.623	7.915	0.000	6.766	0.000	3.073	0.000	8.111	6.600	46.080	MWD+IFR1+MS
1800.000	14.000	297.632	1793.055	8.472	0.000	7.120	0.000	3.181	0.000	8.703	6.931	45.680	MWD+IFR1+MS
1900.000	16.000	297.632	1889.643	9.001	0.000	7.480	0.000	3.304	0.000	9.268	7.269	45.503	MWD+IFR1+MS
2000.000	18.000	297.632	1985.268	9.504	0.000	7.848	0.000	3.444	0.000	9.811	7.616	45.471	MWD+IFR1+MS
2100.000	20.000	297.632	2079.816	9.987	0.000	8.225	0.000	3.602	0.000	10.334	7.973	45.549	MWD+IFR1+MS
2200.000	22.000	297.632	2173.169	10.451	0.000	8.613	0.000	3.779	0.000	10.842	8.340	45.725	MWD+IFR1+MS
2300.000	24.000	297.632	2265.215	10.898	0.000	9.014	0.000	3.975	0.000	11.336	8.721	45.995	MWD+IFR1+MS
2400.000	26.000	297.632	2355.841	11.332	0.000	9.430	0.000	4.193	0.000	11.817	9.115	46.365	MWD+IFR1+MS
2500.000	28.000	297.632	2444.937	11.753	0.000	9.862	0.000	4.431	0.000	12.289	9.526	46.845	MWD+IFR1+MS
2555.356	29.107	297.632	2493.559	11.897	0.000	10.102	0.000	4.518	0.000	12.480	9.759	47.233	MWD+IFR1+MS
2600.000	29.107	297.632	2532.565	12.038	0.000	10.297	0.000	4.580	0.000	12.611	9.950	47.638	MWD+IFR1+MS
2700.000	29.107	297.632	2619.936	12.359	0.000	10.753	0.000	4.734	0.000	12.911	10.390	48.820	MWD+IFR1+MS
2800.000	29.107	297.632	2707.308	12.699	0.000	11.228	0.000	4.901	0.000	13.232	10.841	50.288	MWD+IFR1+MS
2900.000	29.107	297.632	2794.679	13.048	0.000	11.713	0.000	5.075	0.000	13.565	11.298	51.935	MWD+IFR1+MS

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3000.000	29.107	297.632	2882.050	13.407	0.000	12.205	0.000	5.257	0.000	0.000	13.910	11.758	53.775	MWD+IFR1+MS
3100.000	29.107	297.632	2969.421	13.775	0.000	12.705	0.000	5.445	0.000	0.000	14.266	12.220	55.820	MWD+IFR1+MS
3200.000	29.107	297.632	3056.792	14.150	0.000	13.211	0.000	5.639	0.000	0.000	14.635	12.682	58.076	MWD+IFR1+MS
3300.000	29.107	297.632	3144.164	14.533	0.000	13.722	0.000	5.838	0.000	0.000	15.017	13.143	60.538	MWD+IFR1+MS
3400.000	29.107	297.632	3231.535	14.922	0.000	14.239	0.000	6.042	0.000	0.000	15.412	13.601	63.189	MWD+IFR1+MS
3500.000	29.107	297.632	3318.906	15.318	0.000	14.760	0.000	6.250	0.000	0.000	15.820	14.055	65.996	MWD+IFR1+MS
3600.000	29.107	297.632	3406.277	15.720	0.000	15.286	0.000	6.463	0.000	0.000	16.242	14.505	68.909	MWD+IFR1+MS
3700.000	29.107	297.632	3493.648	16.126	0.000	15.814	0.000	6.679	0.000	0.000	16.678	14.949	71.869	MWD+IFR1+MS
3800.000	29.107	297.632	3581.019	16.538	0.000	16.347	0.000	6.898	0.000	0.000	17.127	15.388	74.809	MWD+IFR1+MS
3900.000	29.107	297.632	3668.391	16.954	0.000	16.882	0.000	7.120	0.000	0.000	17.588	15.821	77.666	MWD+IFR1+MS
4000.000	29.107	297.632	3755.762	17.375	0.000	17.419	0.000	7.345	0.000	0.000	18.062	16.248	80.387	MWD+IFR1+MS
4100.000	29.107	297.632	3843.133	17.799	0.000	17.960	0.000	7.573	0.000	0.000	18.546	16.671	82.933	MWD+IFR1+MS
4200.000	29.107	297.632	3930.504	18.227	0.000	18.502	0.000	7.803	0.000	0.000	19.039	17.090	85.284	MWD+IFR1+MS
4300.000	29.107	297.632	4017.875	18.659	0.000	19.047	0.000	8.036	0.000	0.000	19.542	17.505	87.430	MWD+IFR1+MS
4400.000	29.107	297.632	4105.246	19.093	0.000	19.593	0.000	8.271	0.000	0.000	20.051	17.918	89.375	MWD+IFR1+MS
4500.000	29.107	297.632	4192.618	19.531	0.000	20.142	0.000	8.507	0.000	0.000	20.568	18.328	91.129	MWD+IFR1+MS
4600.000	29.107	297.632	4279.989	19.972	0.000	20.691	0.000	8.746	0.000	0.000	21.090	18.737	92.707	MWD+IFR1+MS
4700.000	29.107	297.632	4367.360	20.415	0.000	21.243	0.000	8.986	0.000	0.000	21.617	19.145	94.125	MWD+IFR1+MS
4800.000	29.107	297.632	4454.731	20.860	0.000	21.795	0.000	9.228	0.000	0.000	22.148	19.552	95.399	MWD+IFR1+MS
4900.000	29.107	297.632	4542.102	21.308	0.000	22.349	0.000	9.472	0.000	0.000	22.683	19.959	96.545	MWD+IFR1+MS
5000.000	29.107	297.632	4629.474	21.758	0.000	22.904	0.000	9.717	0.000	0.000	23.221	20.365	97.578	MWD+IFR1+MS
5100.000	29.107	297.632	4716.845	22.210	0.000	23.460	0.000	9.963	0.000	0.000	23.763	20.772	98.511	MWD+IFR1+MS
5200.000	29.107	297.632	4804.216	22.663	0.000	24.017	0.000	10.211	0.000	0.000	24.307	21.179	99.355	MWD+IFR1+MS
5300.000	29.107	297.632	4891.587	23.119	0.000	24.575	0.000	10.461	0.000	0.000	24.853	21.587	100.122	MWD+IFR1+MS
5400.000	29.107	297.632	4978.958	23.576	0.000	25.134	0.000	10.712	0.000	0.000	25.402	21.994	100.820	MWD+IFR1+MS
5500.000	29.107	297.632	5066.329	24.035	0.000	25.694	0.000	10.964	0.000	0.000	25.952	22.403	101.458	MWD+IFR1+MS
5600.000	29.107	297.632	5153.701	24.495	0.000	26.254	0.000	11.217	0.000	0.000	26.504	22.812	102.041	MWD+IFR1+MS
5700.000	29.107	297.632	5241.072	24.957	0.000	26.816	0.000	11.471	0.000	0.000	27.057	23.222	102.576	MWD+IFR1+MS
5800.000	29.107	297.632	5328.443	25.420	0.000	27.378	0.000	11.727	0.000	0.000	27.612	23.632	103.069	MWD+IFR1+MS
5900.000	29.107	297.632	5415.814	25.884	0.000	27.940	0.000	11.984	0.000	0.000	28.168	24.043	103.523	MWD+IFR1+MS
6003.726	29.107	297.632	5506.441	26.368	0.000	28.525	0.000	12.252	0.000	0.000	28.747	24.471	103.953	MWD+IFR1+MS
6100.000	27.182	297.632	5591.327	26.925	0.000	29.056	0.000	12.510	0.000	0.000	29.278	24.885	104.147	MWD+IFR1+MS
6200.000	25.182	297.632	5681.063	27.521	0.000	29.585	0.000	12.788	0.000	0.000	29.813	25.356	104.047	MWD+IFR1+MS

6300.000	23.182	297.632	5772.283	28.075	0.000	30.089	0.000	13.046	0.000	0.000	30.326	25.826	103.874	MWD+IFR1+MS
6400.000	21.182	297.632	5864.878	28.583	0.000	30.570	0.000	13.283	0.000	0.000	30.815	26.291	103.649	MWD+IFR1+MS
6500.000	19.182	297.632	5958.733	29.043	0.000	31.026	0.000	13.499	0.000	0.000	31.282	26.750	103.376	MWD+IFR1+MS
6600.000	17.182	297.632	6053.736	29.456	0.000	31.459	0.000	13.698	0.000	0.000	31.727	27.200	103.059	MWD+IFR1+MS
6700.000	15.182	297.632	6149.769	29.822	0.000	31.869	0.000	13.879	0.000	0.000	32.149	27.641	102.700	MWD+IFR1+MS
6800.000	13.182	297.632	6246.717	30.139	0.000	32.257	0.000	14.044	0.000	0.000	32.550	28.071	102.302	MWD+IFR1+MS
6900.000	11.182	297.632	6344.460	30.407	0.000	32.623	0.000	14.195	0.000	0.000	32.930	28.489	101.867	MWD+IFR1+MS
7000.000	9.182	297.632	6442.880	30.628	0.000	32.969	0.000	14.333	0.000	0.000	33.291	28.895	101.400	MWD+IFR1+MS
7100.000	7.182	297.632	6541.858	30.800	0.000	33.294	0.000	14.460	0.000	0.000	33.633	29.287	100.904	MWD+IFR1+MS
7200.000	5.182	297.632	6641.271	30.924	0.000	33.601	0.000	14.577	0.000	0.000	33.956	29.665	100.382	MWD+IFR1+MS
7300.000	3.182	297.632	6741.000	31.000	0.000	33.890	0.000	14.686	0.000	0.000	34.263	30.028	99.839	MWD+IFR1+MS
7400.000	1.182	297.632	6840.922	31.029	0.000	34.163	0.000	14.789	0.000	0.000	34.554	30.375	99.280	MWD+IFR1+MS
7459.082	0.000	0.000	6900.000	34.615	0.000	30.652	0.000	14.847	0.000	0.000	34.715	30.538	99.196	MWD+IFR1+MS
7500.000	0.000	0.000	6940.918	34.721	0.000	30.759	0.000	14.886	0.000	0.000	34.822	30.645	99.220	MWD+IFR1+MS
7600.000	0.000	0.000	7040.918	34.980	0.000	31.026	0.000	14.985	0.000	0.000	35.083	30.910	99.300	MWD+IFR1+MS
7700.000	0.000	0.000	7140.918	35.243	0.000	31.297	0.000	15.087	0.000	0.000	35.348	31.178	99.415	MWD+IFR1+MS
7800.000	0.000	0.000	7240.918	35.508	0.000	31.570	0.000	15.192	0.000	0.000	35.616	31.448	99.527	MWD+IFR1+MS
7900.000	0.000	0.000	7340.918	35.775	0.000	31.844	0.000	15.299	0.000	0.000	35.885	31.720	99.639	MWD+IFR1+MS
8000.000	0.000	0.000	7440.918	36.043	0.000	32.121	0.000	15.410	0.000	0.000	36.156	31.994	99.749	MWD+IFR1+MS
8100.000	0.000	0.000	7540.918	36.313	0.000	32.399	0.000	15.524	0.000	0.000	36.428	32.269	99.857	MWD+IFR1+MS
8200.000	0.000	0.000	7640.918	36.584	0.000	32.678	0.000	15.640	0.000	0.000	36.702	32.546	99.963	MWD+IFR1+MS
8300.000	0.000	0.000	7740.918	36.857	0.000	32.959	0.000	15.760	0.000	0.000	36.977	32.824	100.068	MWD+IFR1+MS
8400.000	0.000	0.000	7840.918	37.131	0.000	33.242	0.000	15.883	0.000	0.000	37.253	33.104	100.172	MWD+IFR1+MS
8500.000	0.000	0.000	7940.918	37.407	0.000	33.525	0.000	16.008	0.000	0.000	37.532	33.386	100.274	MWD+IFR1+MS
8600.000	0.000	0.000	8040.918	37.684	0.000	33.811	0.000	16.138	0.000	0.000	37.811	33.668	100.374	MWD+IFR1+MS
8700.000	0.000	0.000	8140.918	37.962	0.000	34.098	0.000	16.270	0.000	0.000	38.092	33.953	100.474	MWD+IFR1+MS
8748.885	0.000	0.000	8189.803	38.097	0.000	34.236	0.000	16.336	0.000	0.000	38.227	34.091	100.499	MWD+IFR1+MS
8800.000	4.089	179.619	8240.875	37.786	0.000	34.385	-0.000	16.405	0.000	0.000	38.373	34.229	100.497	MWD+IFR1+MS
8900.000	12.089	179.619	8339.799	37.343	0.000	34.635	-0.000	16.578	0.000	0.000	39.204	34.481	99.673	MWD+IFR1+MS
9000.000	20.089	179.619	8435.804	36.847	0.000	34.862	-0.000	16.917	0.000	0.000	40.386	34.709	98.694	MWD+IFR1+MS
9100.000	28.089	179.619	8527.021	35.885	0.000	35.063	-0.000	17.492	0.000	0.000	41.412	34.907	98.142	MWD+IFR1+MS
9200.000	36.089	179.619	8611.675	34.563	0.000	35.238	-0.000	18.354	0.000	0.000	42.265	35.077	97.827	MWD+IFR1+MS
9300.000	44.089	179.619	8688.117	33.020	0.000	35.388	-0.000	19.512	0.000	0.000	42.938	35.222	97.640	MWD+IFR1+MS

9400.000	52.089	179.619	8754.860	31.429	0.000	35.514	-0.000	20.938	0.000	0.000	43.435	35.344	97.512	MWD+IFR1+MS
9500.000	60.089	179.619	8810.605	29.997	0.000	35.617	-0.000	22.578	0.000	0.000	43.767	35.448	97.383	MWD+IFR1+MS
9600.000	68.089	179.619	8854.266	28.949	0.000	35.700	-0.000	24.367	0.000	0.000	43.958	35.536	97.203	MWD+IFR1+MS
9700.000	76.089	179.619	8884.995	28.492	0.000	35.764	-0.000	26.234	0.000	0.000	44.039	35.612	96.916	MWD+IFR1+MS
9800.000	84.089	179.619	8902.192	28.770	0.000	35.809	-0.000	28.112	0.000	0.000	44.047	35.676	96.470	MWD+IFR1+MS
9873.885	90.000	179.619	8906.000	28.988	0.000	35.828	-0.000	28.988	0.000	0.000	44.032	35.714	95.999	MWD+IFR1+MS
9900.000	90.000	179.619	8906.000	29.093	0.000	35.833	-0.000	29.093	0.000	0.000	44.027	35.725	95.812	MWD+IFR1+MS
10000.000	90.000	179.619	8906.000	29.451	0.000	35.869	-0.000	29.451	0.000	0.000	44.007	35.786	95.101	MWD+IFR1+MS
10100.000	90.000	179.619	8906.000	29.830	0.000	35.931	-0.000	29.830	0.000	0.000	43.990	35.868	94.390	MWD+IFR1+MS
10200.000	90.000	179.619	8906.000	30.224	0.000	36.013	-0.000	30.224	0.000	0.000	43.976	35.969	93.672	MWD+IFR1+MS
10300.000	90.000	179.619	8906.000	30.633	0.000	36.118	-0.000	30.633	0.000	0.000	43.965	36.088	92.943	MWD+IFR1+MS
10400.000	90.000	179.619	8906.000	31.057	0.000	36.243	-0.000	31.057	0.000	0.000	43.957	36.225	92.199	MWD+IFR1+MS
10500.000	90.000	179.619	8906.000	31.495	0.000	36.389	-0.000	31.495	0.000	0.000	43.951	36.380	91.434	MWD+IFR1+MS
10600.000	90.000	179.619	8906.000	31.946	0.000	36.555	-0.000	31.946	0.000	0.000	43.949	36.553	90.642	MWD+IFR1+MS
10700.000	90.000	179.619	8906.000	32.409	0.000	36.742	-0.000	32.409	0.000	0.000	43.950	36.742	89.816	MWD+IFR1+MS
10800.000	90.000	179.619	8906.000	32.885	0.000	36.949	-0.000	32.885	0.000	0.000	43.954	36.948	88.950	MWD+IFR1+MS
10900.000	90.000	179.619	8906.000	33.372	0.000	37.176	-0.000	33.372	0.000	0.000	43.961	37.171	88.033	MWD+IFR1+MS
11000.000	90.000	179.619	8906.000	33.871	0.000	37.422	-0.000	33.871	0.000	0.000	43.973	37.408	87.055	MWD+IFR1+MS
11100.000	90.000	179.619	8906.000	34.380	0.000	37.687	-0.000	34.380	0.000	0.000	43.989	37.660	86.006	MWD+IFR1+MS
11200.000	90.000	179.619	8906.000	34.900	0.000	37.971	-0.000	34.900	0.000	0.000	44.009	37.926	84.870	MWD+IFR1+MS
11300.000	90.000	179.619	8906.000	35.429	0.000	38.273	-0.000	35.429	0.000	0.000	44.035	38.205	83.631	MWD+IFR1+MS
11400.000	90.000	179.619	8906.000	35.968	0.000	38.593	-0.000	35.968	0.000	0.000	44.067	38.495	82.269	MWD+IFR1+MS
11500.000	90.000	179.619	8906.000	36.516	0.000	38.929	-0.000	36.516	0.000	0.000	44.107	38.795	80.761	MWD+IFR1+MS
11600.000	90.000	179.619	8906.000	37.072	0.000	39.283	-0.000	37.072	0.000	0.000	44.155	39.104	79.079	MWD+IFR1+MS
11700.000	90.000	179.619	8906.000	37.636	0.000	39.653	-0.000	37.636	0.000	0.000	44.213	39.419	77.193	MWD+IFR1+MS
11800.000	90.000	179.619	8906.000	38.208	0.000	40.039	-0.000	38.208	0.000	0.000	44.283	39.737	75.068	MWD+IFR1+MS
11900.000	90.000	179.619	8906.000	38.787	0.000	40.441	-0.000	38.787	0.000	0.000	44.368	40.057	72.669	MWD+IFR1+MS
12000.000	90.000	179.619	8906.000	39.374	0.000	40.858	-0.000	39.374	0.000	0.000	44.471	40.373	69.963	MWD+IFR1+MS
12100.000	90.000	179.619	8906.000	39.967	0.000	41.289	-0.000	39.967	0.000	0.000	44.596	40.683	66.927	MWD+IFR1+MS
12200.000	90.000	179.619	8906.000	40.567	0.000	41.734	-0.000	40.567	0.000	0.000	44.746	40.981	63.560	MWD+IFR1+MS
12300.000	90.000	179.619	8906.000	41.173	0.000	42.193	-0.000	41.173	0.000	0.000	44.927	41.263	59.893	MWD+IFR1+MS
12400.000	90.000	179.619	8906.000	41.786	0.000	42.666	-0.000	41.786	0.000	0.000	45.143	41.523	55.999	MWD+IFR1+MS
12500.000	90.000	179.619	8906.000	42.403	0.000	43.151	-0.000	42.403	0.000	0.000	45.396	41.759	51.992	MWD+IFR1+MS

12600.000	90.000	179.619	8906.000	43.026	0.000	43.648	-0.000	43.026	0.000	45.688	41.969	48.007	MWD+IFR1+MS
12700.000	90.000	179.619	8906.000	43.655	0.000	44.157	-0.000	43.655	0.000	46.019	42.151	44.178	MWD+IFR1+MS
12800.000	90.000	179.619	8906.000	44.288	0.000	44.678	-0.000	44.288	0.000	46.388	42.309	40.610	MWD+IFR1+MS
12900.000	90.000	179.619	8906.000	44.926	0.000	45.211	-0.000	44.926	0.000	46.790	42.444	37.362	MWD+IFR1+MS
13000.000	90.000	179.619	8906.000	45.569	0.000	45.753	-0.000	45.569	0.000	47.224	42.559	34.458	MWD+IFR1+MS
13100.000	90.000	179.619	8906.000	46.216	0.000	46.307	-0.000	46.216	0.000	47.684	42.657	31.889	MWD+IFR1+MS
13200.000	90.000	179.619	8906.000	46.868	0.000	46.870	-0.000	46.868	0.000	48.168	42.743	29.628	MWD+IFR1+MS
13300.000	90.000	179.619	8906.000	47.523	0.000	47.443	-0.000	47.523	0.000	48.674	42.817	27.643	MWD+IFR1+MS
13400.000	90.000	179.619	8906.000	48.182	0.000	48.025	-0.000	48.182	0.000	49.198	42.882	25.898	MWD+IFR1+MS
13500.000	90.000	179.619	8906.000	48.845	0.000	48.616	-0.000	48.845	0.000	49.739	42.940	24.359	MWD+IFR1+MS
13600.000	90.000	179.619	8906.000	49.512	0.000	49.216	-0.000	49.512	0.000	50.294	42.991	22.997	MWD+IFR1+MS
13700.000	90.000	179.619	8906.000	50.182	0.000	49.825	-0.000	50.182	0.000	50.864	43.039	21.787	MWD+IFR1+MS
13800.000	90.000	179.619	8906.000	50.855	0.000	50.441	-0.000	50.855	0.000	51.445	43.082	20.705	MWD+IFR1+MS
13900.000	90.000	179.619	8906.000	51.531	0.000	51.065	-0.000	51.531	0.000	52.038	43.122	19.734	MWD+IFR1+MS
14000.000	90.000	179.619	8906.000	52.211	0.000	51.696	-0.000	52.211	0.000	52.642	43.159	18.859	MWD+IFR1+MS
14100.000	90.000	179.619	8906.000	52.893	0.000	52.335	-0.000	52.893	0.000	53.255	43.195	18.065	MWD+IFR1+MS
14200.000	90.000	179.619	8906.000	53.578	0.000	52.981	-0.000	53.578	0.000	53.878	43.228	17.343	MWD+IFR1+MS
14300.000	90.000	179.619	8906.000	54.266	0.000	53.633	-0.000	54.266	0.000	54.509	43.260	16.683	MWD+IFR1+MS
14400.000	90.000	179.619	8906.000	54.957	0.000	54.292	-0.000	54.957	0.000	55.148	43.291	16.077	MWD+IFR1+MS
14500.000	90.000	179.619	8906.000	55.650	0.000	54.957	-0.000	55.650	0.000	55.795	43.321	15.520	MWD+IFR1+MS
14600.000	90.000	179.619	8906.000	56.345	0.000	55.628	-0.000	56.345	0.000	56.449	43.351	15.004	MWD+IFR1+MS
14700.000	90.000	179.619	8906.000	57.043	0.000	56.305	-0.000	57.043	0.000	57.110	43.379	14.526	MWD+IFR1+MS
14800.000	90.000	179.619	8906.000	57.742	0.000	56.987	-0.000	57.742	0.000	57.777	43.407	14.082	MWD+IFR1+MS
14900.000	90.000	179.619	8906.000	58.445	0.000	57.675	-0.000	58.445	0.000	58.451	43.435	13.667	MWD+IFR1+MS
15000.000	90.000	179.619	8906.000	59.149	0.000	58.367	-0.000	59.149	0.000	59.131	43.463	13.279	MWD+IFR1+MS
15100.000	90.000	179.619	8906.000	59.855	0.000	59.065	-0.000	59.855	0.000	59.816	43.490	12.916	MWD+IFR1+MS
15200.000	90.000	179.619	8906.000	60.563	0.000	59.768	-0.000	60.563	0.000	60.507	43.517	12.574	MWD+IFR1+MS
15300.000	90.000	179.619	8906.000	61.273	0.000	60.475	-0.000	61.273	0.000	61.203	43.544	12.253	MWD+IFR1+MS
15400.000	90.000	179.619	8906.000	61.985	0.000	61.187	-0.000	61.985	0.000	61.904	43.571	11.949	MWD+IFR1+MS
15500.000	90.000	179.619	8906.000	62.698	0.000	61.904	-0.000	62.698	0.000	62.610	43.599	11.662	MWD+IFR1+MS
15600.000	90.000	179.619	8906.000	63.413	0.000	62.624	-0.000	63.413	0.000	63.320	43.626	11.390	MWD+IFR1+MS
15700.000	90.000	179.619	8906.000	64.130	0.000	63.348	-0.000	64.130	0.000	64.035	43.653	11.132	MWD+IFR1+MS
15800.000	90.000	179.619	8906.000	64.849	0.000	64.077	-0.000	64.849	0.000	64.754	43.681	10.887	MWD+IFR1+MS

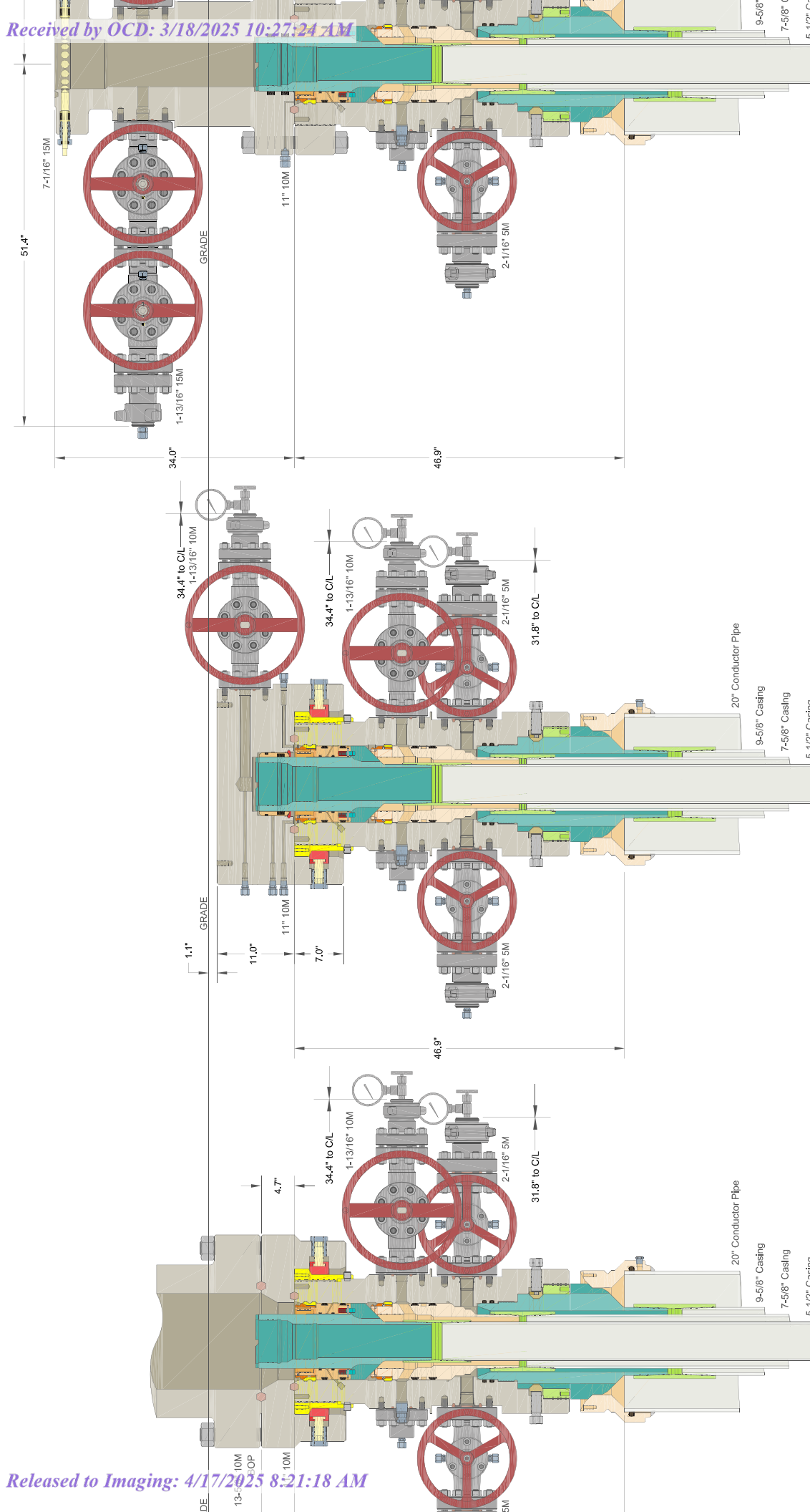
15900.000	90.000	179.619	8906.000	65.568	0.000	64.809	-0.000	65.568	0.000	65.477	43.708	10.653	MWD+IFR1+MS
16000.000	90.000	179.619	8906.000	66.290	0.000	65.545	-0.000	66.290	0.000	66.204	43.736	10.431	MWD+IFR1+MS
16100.000	90.000	179.619	8906.000	67.013	0.000	66.284	-0.000	67.013	0.000	66.936	43.764	10.218	MWD+IFR1+MS
16200.000	90.000	179.619	8906.000	67.737	0.000	67.027	-0.000	67.737	0.000	67.670	43.793	10.015	MWD+IFR1+MS
16300.000	90.000	179.619	8906.000	68.462	0.000	67.773	-0.000	68.462	0.000	68.409	43.821	9.821	MWD+IFR1+MS
16400.000	90.000	179.619	8906.000	69.189	0.000	68.522	-0.000	69.189	0.000	69.150	43.850	9.634	MWD+IFR1+MS
16500.000	90.000	179.619	8906.000	69.917	0.000	69.275	-0.000	69.917	0.000	69.895	43.879	9.456	MWD+IFR1+MS
16600.000	90.000	179.619	8906.000	70.647	0.000	70.030	-0.000	70.647	0.000	70.644	43.909	9.284	MWD+IFR1+MS
16700.000	90.000	179.619	8906.000	71.377	0.000	70.788	-0.000	71.377	0.000	71.395	43.938	9.119	MWD+IFR1+MS
16800.000	90.000	179.619	8906.000	72.109	0.000	71.549	-0.000	72.109	0.000	72.149	43.968	8.961	MWD+IFR1+MS
16900.000	90.000	179.619	8906.000	72.841	0.000	72.313	-0.000	72.841	0.000	72.906	43.999	8.808	MWD+IFR1+MS
17000.000	90.000	179.619	8906.000	73.575	0.000	73.079	-0.000	73.575	0.000	73.666	44.029	8.661	MWD+IFR1+MS
17100.000	90.000	179.619	8906.000	74.310	0.000	73.848	-0.000	74.310	0.000	74.429	44.060	8.519	MWD+IFR1+MS
17200.000	90.000	179.619	8906.000	75.046	0.000	74.620	-0.000	75.046	0.000	75.194	44.092	8.382	MWD+IFR1+MS
17300.000	90.000	179.619	8906.000	75.783	0.000	75.393	-0.000	75.783	0.000	75.962	44.123	8.250	MWD+IFR1+MS
17400.000	90.000	179.619	8906.000	76.520	0.000	76.170	-0.000	76.520	0.000	76.733	44.155	8.122	MWD+IFR1+MS
17500.000	90.000	179.619	8906.000	77.259	0.000	76.948	-0.000	77.259	0.000	77.505	44.188	7.998	MWD+IFR1+MS
17600.000	90.000	179.619	8906.000	77.999	0.000	77.728	-0.000	77.999	0.000	78.280	44.221	7.878	MWD+IFR1+MS
17700.000	90.000	179.619	8906.000	78.739	0.000	78.511	-0.000	78.739	0.000	79.058	44.254	7.762	MWD+IFR1+MS
17800.000	90.000	179.619	8906.000	79.480	0.000	79.296	-0.000	79.480	0.000	79.837	44.287	7.649	MWD+IFR1+MS
17900.000	90.000	179.619	8906.000	80.223	0.000	80.083	-0.000	80.223	0.000	80.619	44.321	7.540	MWD+IFR1+MS
18000.000	90.000	179.619	8906.000	80.966	0.000	80.871	-0.000	80.966	0.000	81.402	44.355	7.434	MWD+IFR1+MS
18100.000	90.000	179.619	8906.000	81.709	0.000	81.662	-0.000	81.709	0.000	82.188	44.390	7.331	MWD+IFR1+MS
18200.000	90.000	179.619	8906.000	82.454	0.000	82.454	-0.000	82.454	0.000	82.975	44.425	7.232	MWD+IFR1+MS
18300.000	90.000	179.619	8906.000	83.199	0.000	83.248	-0.000	83.199	0.000	83.764	44.460	7.134	MWD+IFR1+MS
18400.000	90.000	179.619	8906.000	83.945	0.000	84.044	-0.000	83.945	0.000	84.556	44.496	7.040	MWD+IFR1+MS
18500.000	90.000	179.619	8906.000	84.692	0.000	84.842	-0.000	84.692	0.000	85.349	44.532	6.948	MWD+IFR1+MS
18600.000	90.000	179.619	8906.000	85.439	0.000	85.641	-0.000	85.439	0.000	86.143	44.569	6.859	MWD+IFR1+MS
18700.000	90.000	179.619	8906.000	86.187	0.000	86.442	-0.000	86.187	0.000	86.940	44.605	6.772	MWD+IFR1+MS
18800.000	90.000	179.619	8906.000	86.936	0.000	87.244	-0.000	86.936	0.000	87.738	44.643	6.687	MWD+IFR1+MS
18900.000	90.000	179.619	8906.000	87.685	0.000	88.048	-0.000	87.685	0.000	88.537	44.680	6.604	MWD+IFR1+MS
19000.000	90.000	179.619	8906.000	88.435	0.000	88.853	-0.000	88.435	0.000	89.338	44.718	6.524	MWD+IFR1+MS
19100.000	90.000	179.619	8906.000	89.185	0.000	89.660	-0.000	89.185	0.000	90.141	44.757	6.445	MWD+IFR1+MS

19200.000	90.000	179.619	8906.000	89.937	0.000	90.468	-0.000	89.937	0.000	90.945	44.795	6.369	MWD+IFR1+MS
19300.000	90.000	179.619	8906.000	90.688	0.000	91.277	-0.000	90.688	0.000	91.750	44.835	6.294	MWD+IFR1+MS
19400.000	90.000	179.619	8906.000	91.440	0.000	92.088	-0.000	91.440	0.000	92.557	44.874	6.221	MWD+IFR1+MS
19500.000	90.000	179.619	8906.000	92.193	0.000	92.900	-0.000	92.193	0.000	93.365	44.914	6.149	MWD+IFR1+MS
19600.000	90.000	179.619	8906.000	92.946	0.000	93.713	-0.000	92.946	0.000	94.174	44.954	6.080	MWD+IFR1+MS
19700.000	90.000	179.619	8906.000	93.700	0.000	94.527	-0.000	93.700	0.000	94.985	44.995	6.012	MWD+IFR1+MS
19800.000	90.000	179.619	8906.000	94.455	0.000	95.343	-0.000	94.455	0.000	95.797	45.036	5.945	MWD+IFR1+MS
19900.000	90.000	179.619	8906.000	95.209	0.000	96.160	-0.000	95.209	0.000	96.610	45.078	5.880	MWD+IFR1+MS
20000.000	90.000	179.619	8906.000	95.965	0.000	96.977	-0.000	95.965	0.000	97.424	45.120	5.816	MWD+IFR1+MS
20100.000	90.000	179.619	8906.000	96.720	0.000	97.796	-0.000	96.720	0.000	98.240	45.162	5.754	MWD+IFR1+MS
20200.000	90.000	179.619	8906.000	97.477	0.000	98.616	-0.000	97.477	0.000	99.056	45.204	5.693	MWD+IFR1+MS
20236.014	90.000	179.619	8906.000	97.749	0.000	98.911	-0.000	97.749	0.000	99.350	45.220	5.671	MWD+IFR1+MS
20286.001	90.000	179.619	8906.000	98.126	0.000	99.320	-0.000	98.126	0.000	99.757	45.241	5.642	MWD+IFR1+MS

Plan Targets

PLU 15 Twin Wells Ranch-113H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 8	9873.85	440447.30	671413.60	5352.00	CIRCLE
LTP 8	20236.01	430085.40	671482.50	5352.00	CIRCLE
BHL 8	20286.07	430035.40	671482.90	5352.00	CIRCLE





U. S. Steel Tubular Products

5.500" 20.00lb/ft (0.361" Wall) P110 RY USS-FREEDOM HTQ®



MECHANICAL PROPERTIES	Pipe	USS-FREEDOM HTQ®		—
Minimum Yield Strength	110,000	—	psi	—
Maximum Yield Strength	125,000	—	psi	—
Minimum Tensile Strength	125,000	—	psi	—
DIMENSIONS	Pipe	USS-FREEDOM HTQ®		—
Outside Diameter	5.500	6.300	in.	—
Wall Thickness	0.361	--	in.	—
Inside Diameter	4.778	4.778	in.	—
Standard Drift	4.653	4.653	in.	—
Alternate Drift	--	--	in.	—
Nominal Linear Weight, T&C	20.00	--	lb/ft	—
Plain End Weight	19.83	--	lb/ft	—
SECTION AREA	Pipe	USS-FREEDOM HTQ®		—
Critical Area	5.828	5.828	sq. in.	—
Joint Efficiency	—	100.0	%	—
PERFORMANCE	Pipe	USS-FREEDOM HTQ®		—
Minimum Collapse Pressure	11,100	11,100	psi	—
Minimum Internal Yield Pressure	12,640	12,640	psi	—
Minimum Pipe Body Yield Strength	641,000	--	lb	—
Joint Strength	--	641,000	lb	—
Compression Rating	--	641,000	lb	—
Reference Length [4]	--	21,370	ft	—
Maximum Uniaxial Bend Rating [2]	--	91.7	deg/100 ft	—
MAKE-UP DATA	Pipe	USS-FREEDOM HTQ®		—
Make-Up Loss	--	4.13	in.	—
Minimum Make-Up Torque [3]	--	15,000	ft-lb	—
Maximum Make-Up Torque [3]	--	21,000	ft-lb	—
Maximum Operating Torque[3]	--	29,500	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

5.500" 20.00lb/ft (0.361" Wall) P110 RY USS-TALON HTQ™ RD

				
MECHANICAL PROPERTIES	Pipe	USS-TALON HTQ™ RD		[6]
Minimum Yield Strength	110,000	—	psi	—
Maximum Yield Strength	125,000	—	psi	—
Minimum Tensile Strength	125,000	—	psi	—
DIMENSIONS	Pipe	USS-TALON HTQ™ RD		—
Outside Diameter	5.500	5.900	in.	—
Wall Thickness	0.361	--	in.	—
Inside Diameter	4.778	4.778	in.	—
Standard Drift	4.653	4.653	in.	—
Alternate Drift	—	--	in.	—
Nominal Linear Weight, T&C	20.00	--	lb/ft	—
Plain End Weight	19.83	--	lb/ft	—
SECTION AREA	Pipe	USS-TALON HTQ™ RD		—
Critical Area	5.828	5.828	sq. in.	--
Joint Efficiency	--	100.0	%	[2]
PERFORMANCE	Pipe	USS-TALON HTQ™ RD		—
Minimum Collapse Pressure	11,100	11,100	psi	--
Minimum Internal Yield Pressure	12,640	12,640	psi	--
Minimum Pipe Body Yield Strength	641,000	--	lb	--
Joint Strength	--	641,000	lb	--
Compression Rating	--	641,000	lb	--
Reference Length	--	21,370	ft	[5]
Maximum Uniaxial Bend Rating	--	91.7	deg/100 ft	[3]
MAKE-UP DATA	Pipe	USS-TALON HTQ™ RD		—
Make-Up Loss	--	5.58	in.	--
Minimum Make-Up Torque	--	17,000	ft-lb	[4]
Maximum Make-Up Torque	--	20,000	ft-lb	[4]
Maximum Operating Torque	--	39,500	ft-lb	[4]

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Notes

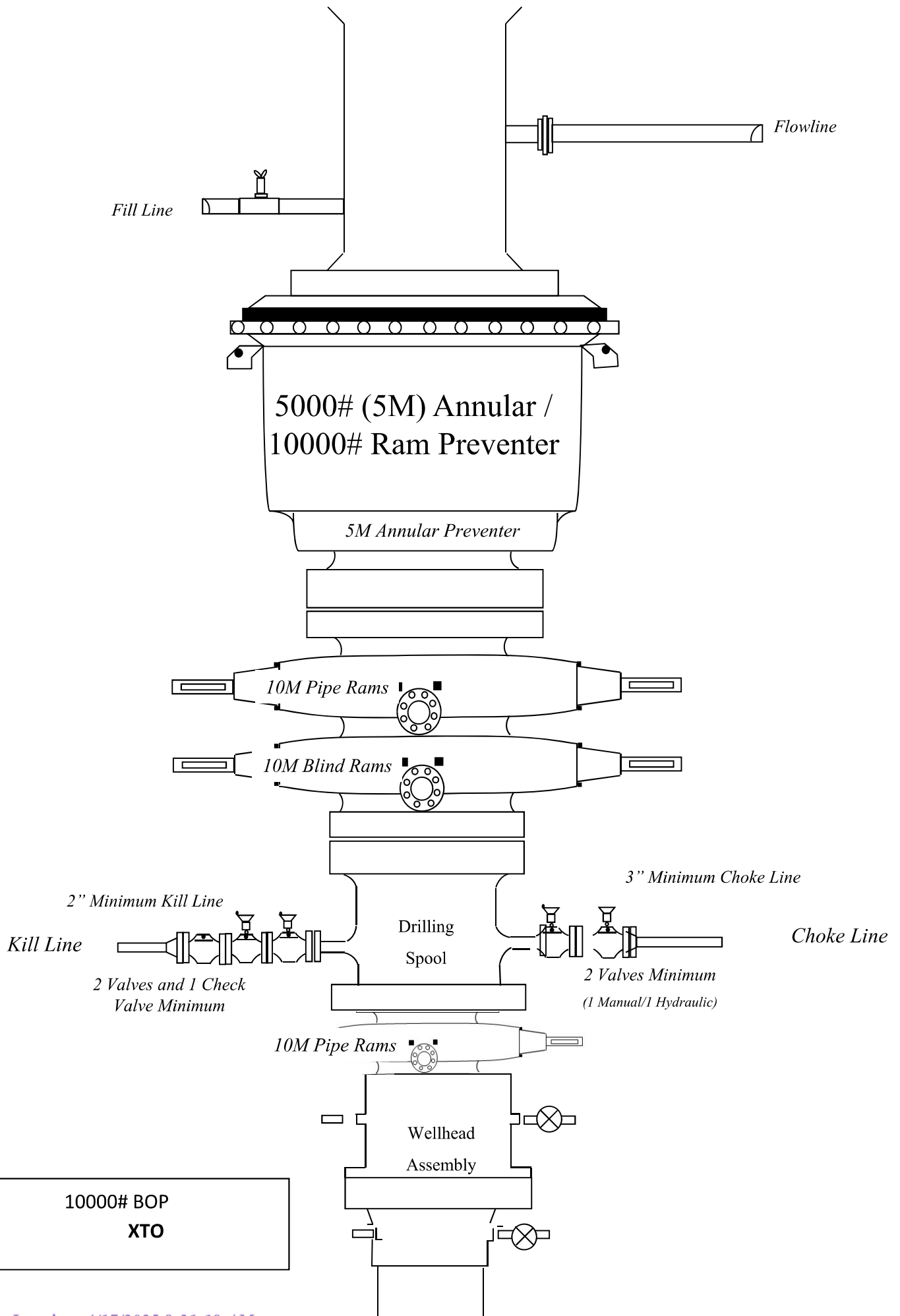
- Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (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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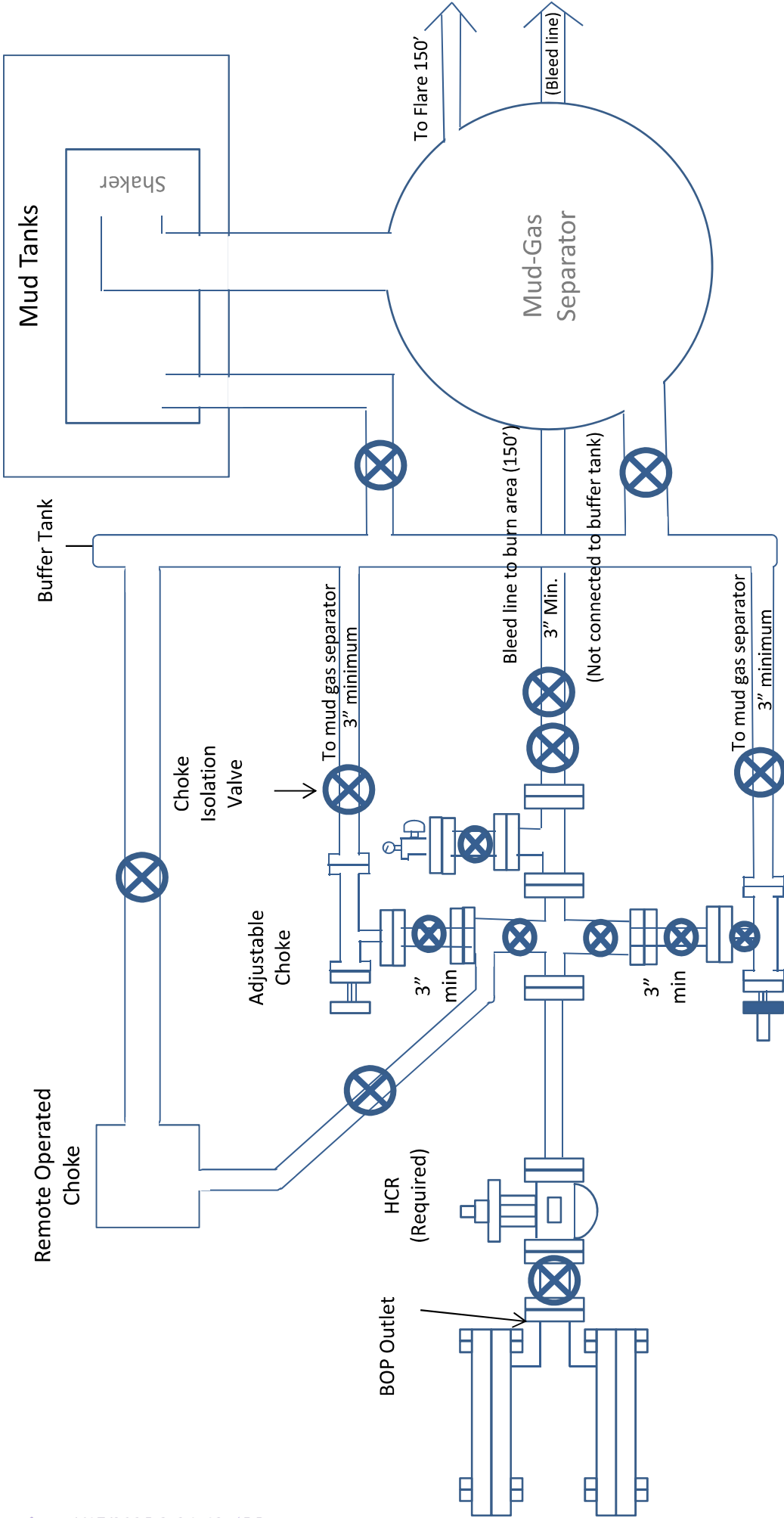
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U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com



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

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

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

Background

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

Supporting Documentation

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

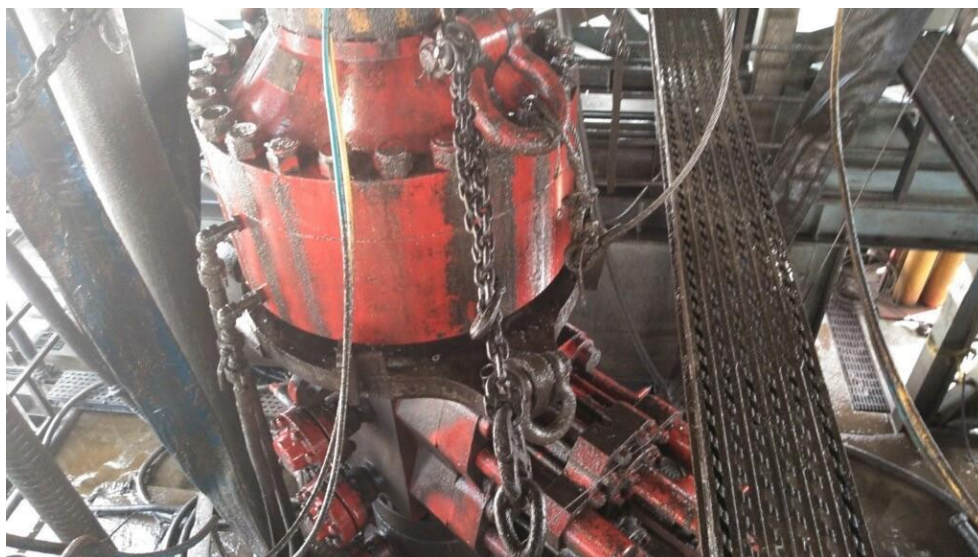


Figure 1: Winch System attached to BOP Stack

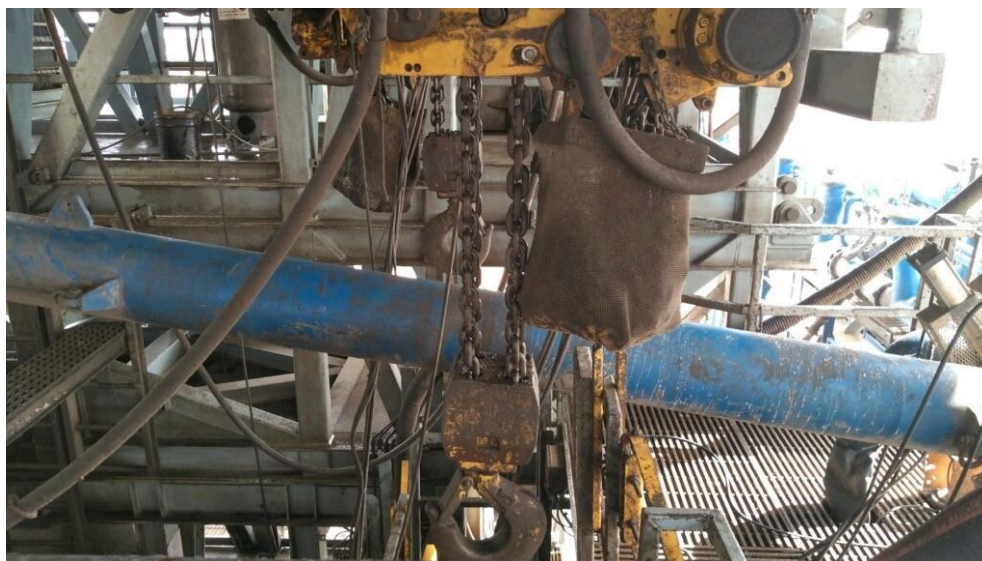


Figure 2: BOP Winch System

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

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API STANDARD 53

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

Component to be Pressure Tested	Pressure Test—Low Pressure ^{ac} psig (MPa)	Pressure Test—High Pressure ^{ac}	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer ^b	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 ^{bd}	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 ^e	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes ^e	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	

^a 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.

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

^c 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.

^d 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.

^e Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

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

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

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

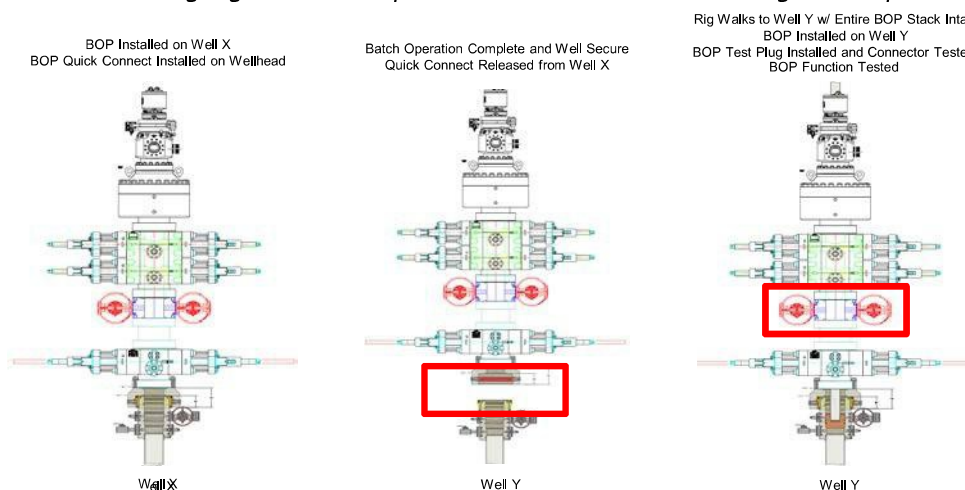
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

Procedures

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

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

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



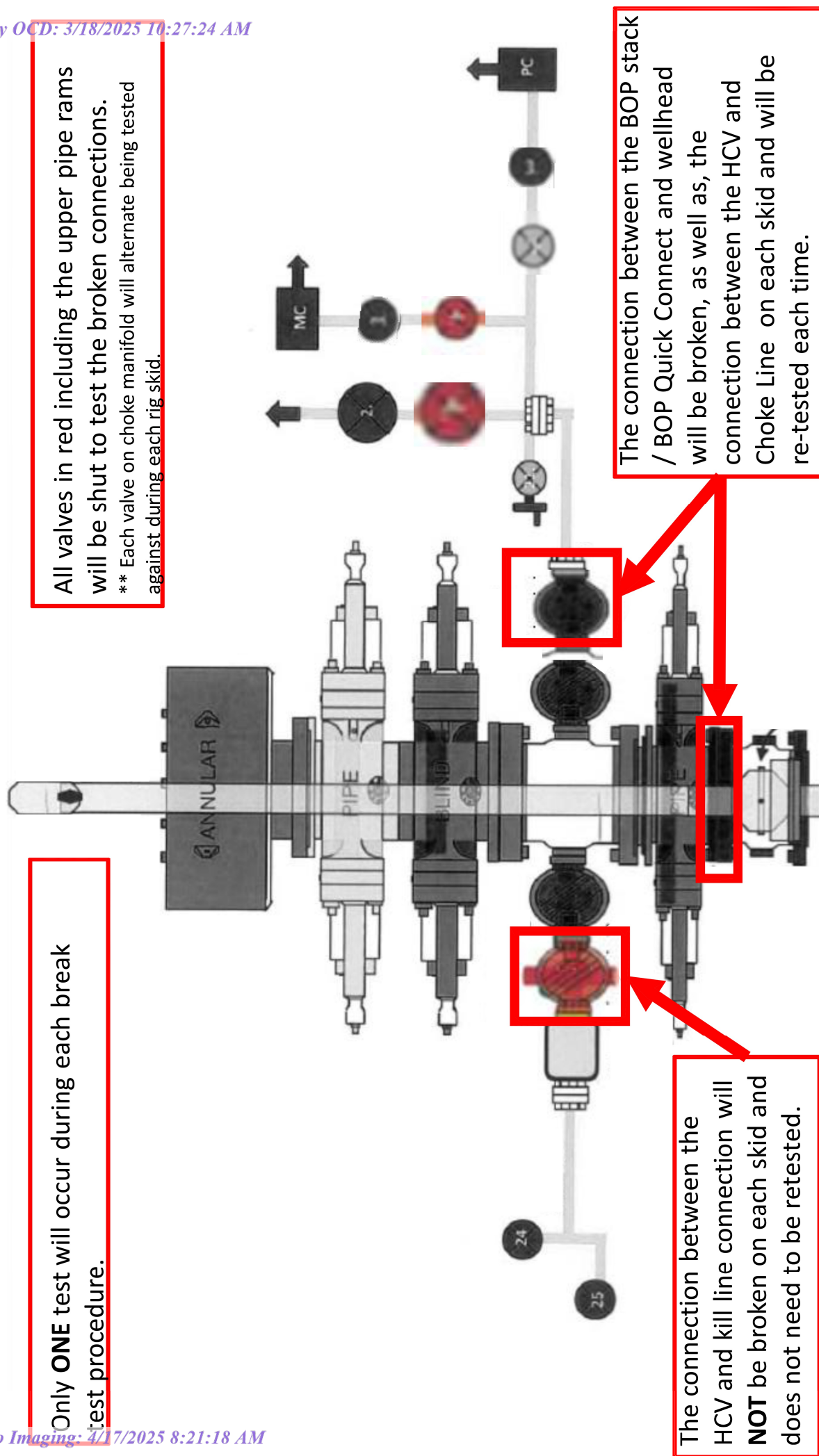
Summary

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

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

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

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



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.

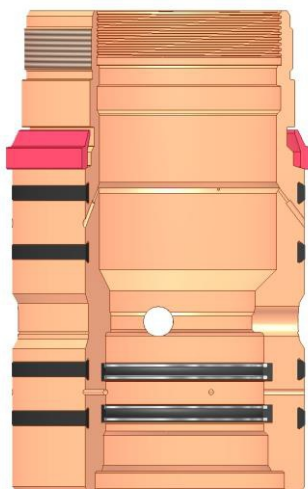
1. Cement Program

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

2. Offline Cementing Procedure

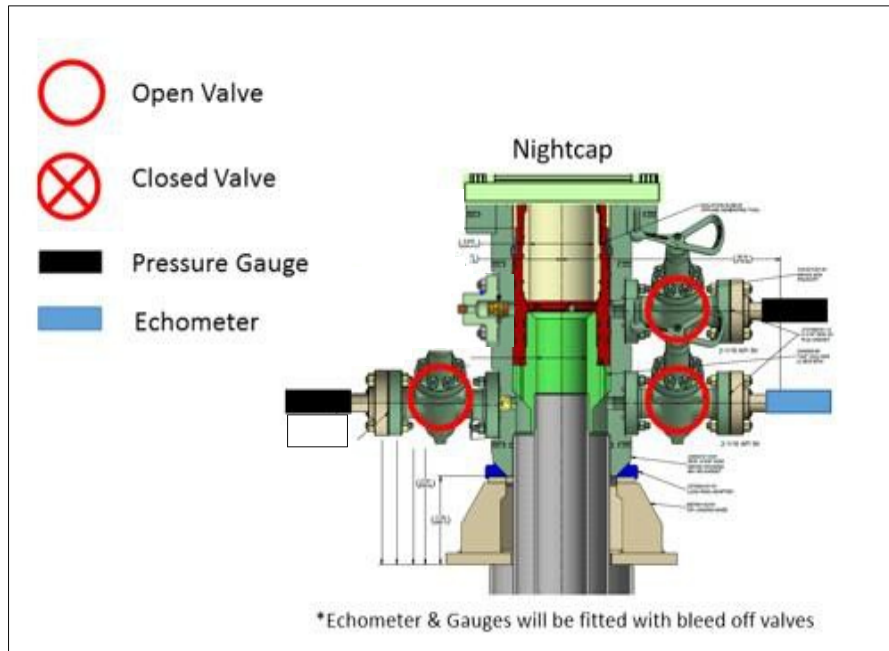
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

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.



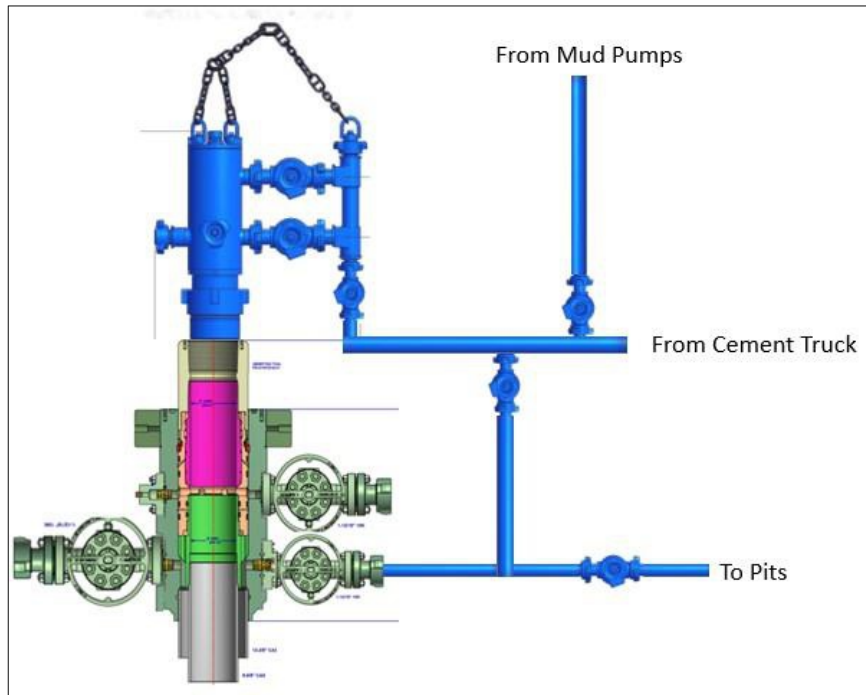
Annular packoff with both external and internal seals

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 3rd 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.

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.

**BLACK GOLD®**

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Pralrie 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.

CUSTOMER: NABORS DRILLING TECHNOLOGIES USA DBA NABORS DRILLING USA
CUSTOMER P.O.#: 15582803 (TAG NABORS PO #15582803 SN 74621 ASSET 66-1531)
CUSTOMER P/N: IMR RETEST SN 74621 ASSET #66-1531

PART DESCRIPTION: RETEST OF CUSTOMER 3" X 45 FT 16C CHOKE & KILL HOSE ASSEMBLY C/W 4 1/16" 10K FLANGES

SALES ORDER #: 529480
QUANTITY: 1
SERIAL #: 74621 H3-012524-1

SIGNATURE:*F. Cismos***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:

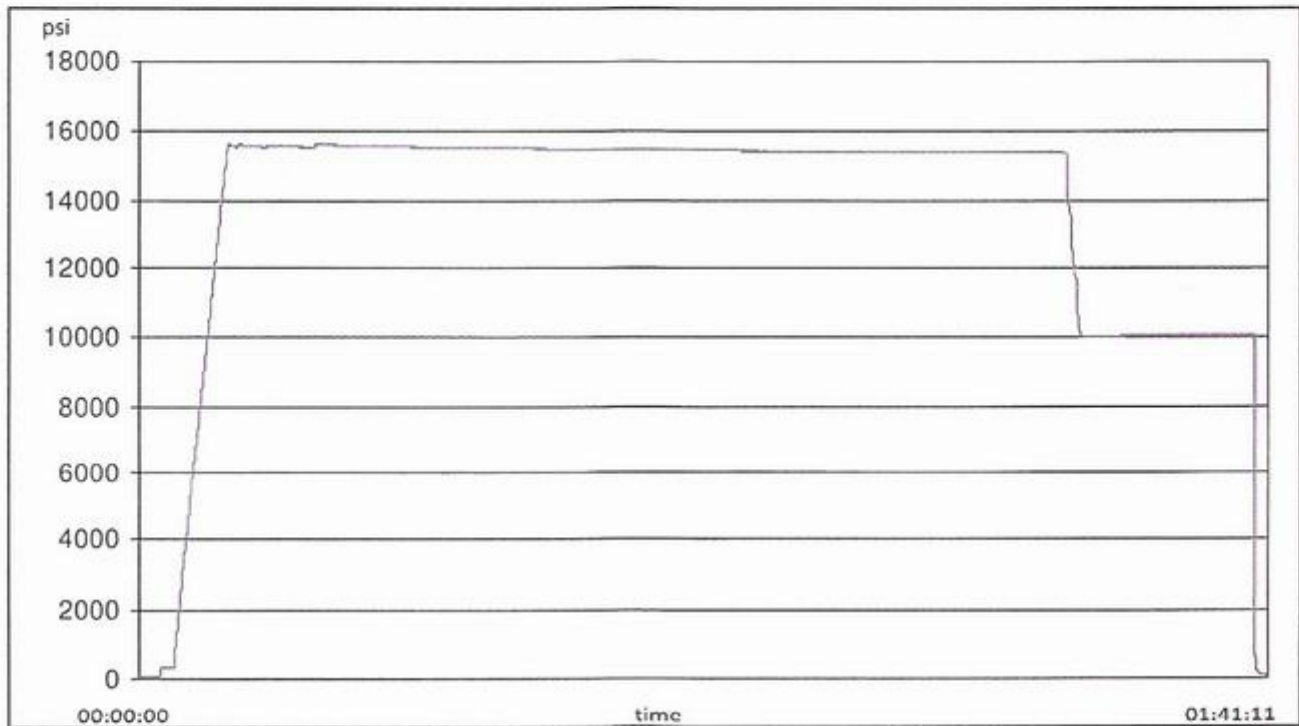
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





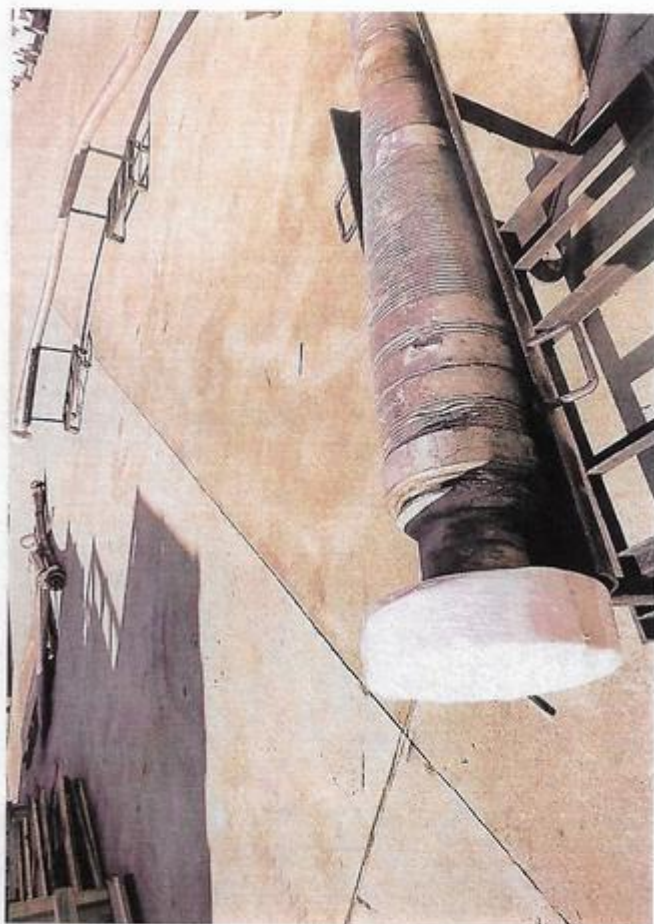
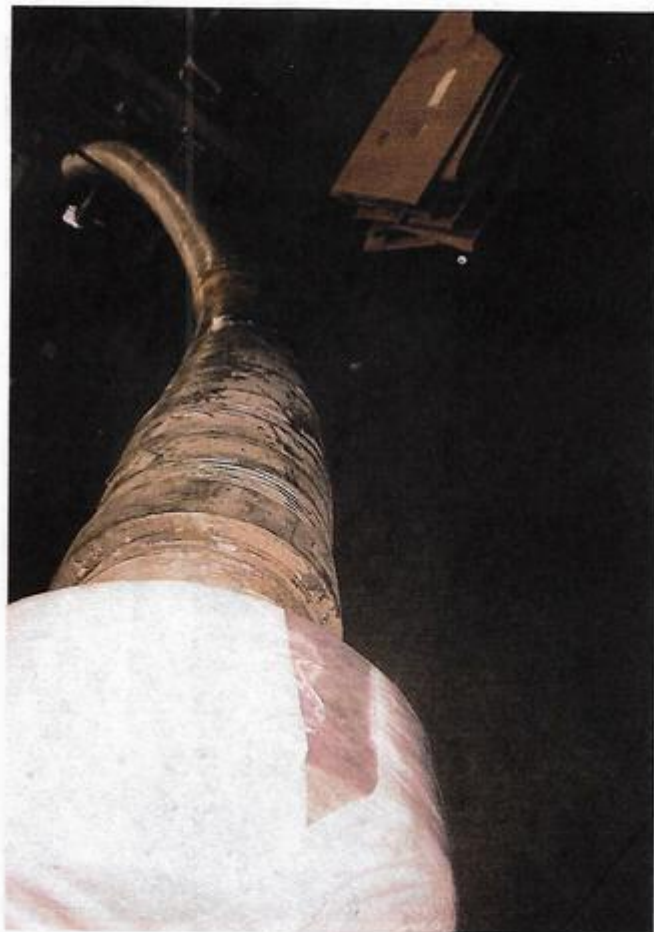
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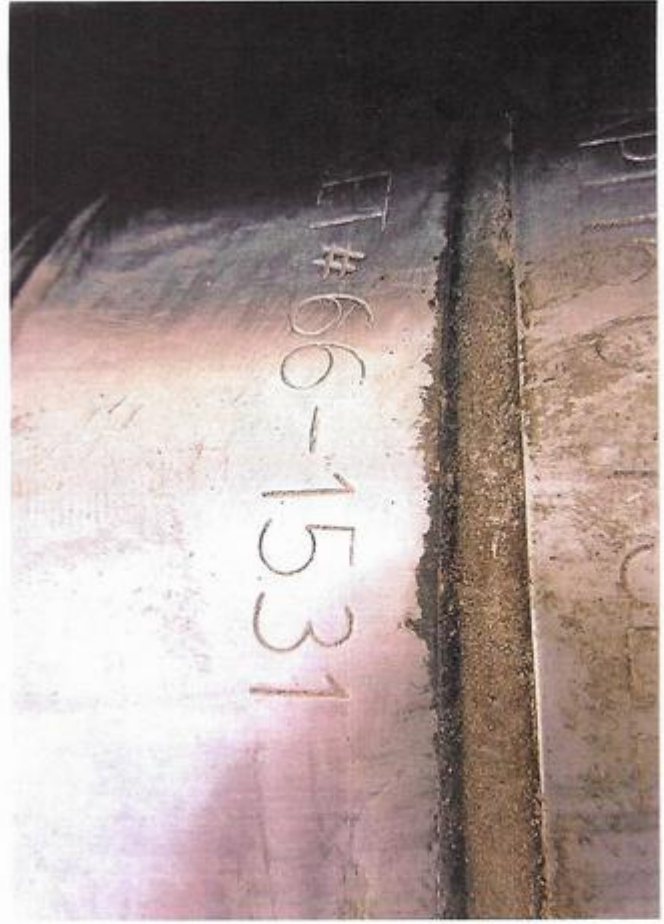
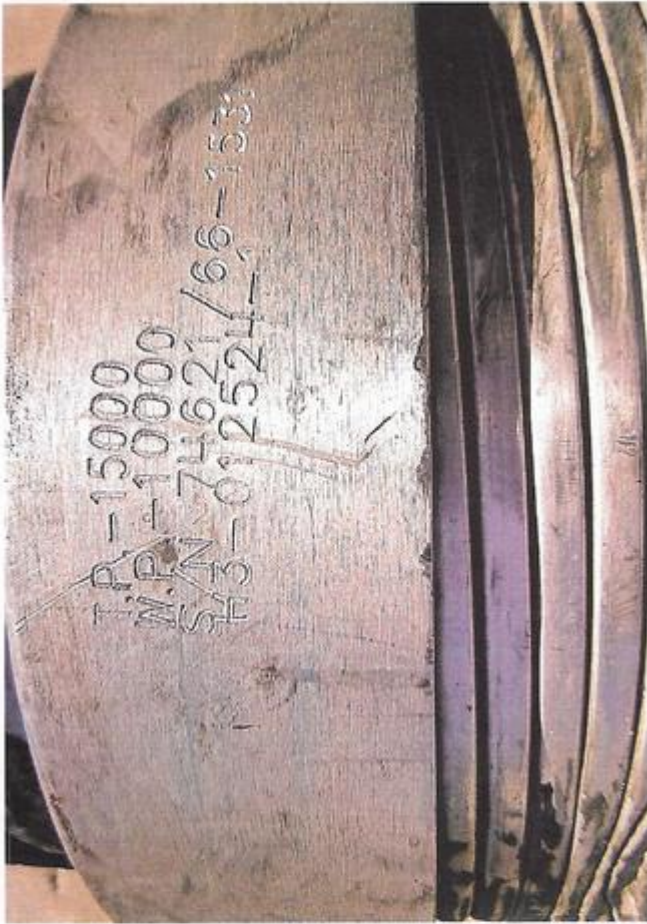
TEST REPORT

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

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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 443513

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 443513
	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.	4/17/2025