

Well Name: POKER LAKE UNIT 19 DTD	Well Location: T24S / R30E / SEC 19 / NWNW /	County or Parish/State:
Well Number: 123H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM002860	Unit or CA Name:	Unit or CA Number: NMNM71016X
US Well Number: 3001553767	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2781294

Type of Submission: Notice of Intent

Date Sundry Submitted: 03/22/2024

Date proposed operation will begin: 04/12/2024

Type of Action: APD Change

Time Sundry Submitted: 03:08

**Procedure Description:** XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, FTP, LTP, BHL, casing sizes, cement, and proposed total depth. FROM: TO: SHL: 1309' FNL & 859' FWL of Section 19-T24S-R30E 1254' FNL & 859' FWL of Section 19-T24S-R30E FTP: 100' FSL & 1210' FWL of Section 18-T24S-R30E 100' FNL & 712' FWL of Section 19-T24S-R30E LTP: 2310' FSL & 110' FEL of Section 6-T24S-R30E 330' FSL & 712' FWL of Section 31-T24S-R30E BHL: 50' FSL & 1210' FWL of Section 6-T24S-R30E 230' FSL & 712' FWL of Section 31-T24S-R30E Proposed total depth will change from 26665' MD; 10526' TVD (Wolfcamp) to 25840' MD; TVD 10489' (Wolfcamp X). See attached Drilling Plan for updated cement and casing program. Attachments: C-102, Drilling Plan, Directional Drilling Plan, MBS, BOP Variance, Well Control Plan

NOI Attachments

Procedure Description

POKER\_LAKE\_UNIT\_19\_DTD\_123H\_Sundry\_Attachments\_20240322150746.pdf

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Conditions of Approval

Additional

Sec19\_24S\_30E\_NMP\_Sundry\_2781294\_Poker\_Lake\_Unit\_19\_DTD\_123H\_COAs\_20240404123624.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

<b>Operator Electronic Signature:</b> TERRA SEBASTIAN	<b>Signed on:</b> MAR 22, 2024 03:07 PM
<b>Name:</b> XTO PERMIAN OPERATING LLC	
<b>Title:</b> Regulatory Advisor	
<b>Street Address:</b> 6401 HOLIDAY HILL ROAD SUITE 200	
<b>City:</b> MIDLAND	<b>State:</b> TX
<b>Phone:</b> (432) 999-3107	
<b>Email address:</b> TERRA.B.SEBASTIAN@EXXONMOBIL.COM	

Field

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

BLM Point of Contact

<b>BLM POC Name:</b> CHRISTOPHER WALLS	<b>BLM POC Title:</b> Petroleum Engineer
<b>BLM POC Phone:</b> 5752342234	<b>BLM POC Email Address:</b> cwalls@blm.gov
<b>Disposition:</b> Approved	<b>Disposition Date:</b> 04/05/2024
<b>Signature:</b> Chris Walls	

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

5. Lease Serial No.	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No.	
9. API Well No.	
10. Field and Pool or Exploratory Area	11. Country or Parish, State

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

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

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

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

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

## Additional Information

## Additional Remarks

Attachments: C-102, Drilling Plan, Directional Drilling Plan, MBS, BOP Variance, Well Control Plan

## Location of Well

0. SHL: NWNW / 1309 FNL / 859 FWL / TWSP: 24S / RANGE: 30E / SECTION: 19 / LAT: 32.206604 / LONG: -103.926726 ( TVD: 0 feet, MD: 0 feet )  
PPP: SWSW / 330 FSL / 1210 FWL / TWSP: 24S / RANGE: 30E / SECTION: 7 / LAT: 32.22526 / LONG: -103.92567 ( TVD: 10526 feet, MD: 16200 feet )  
PPP: SWNW / 330 FSL / 1210 FWL / TWSP: 24S / RANGE: 30E / SECTION: 7 / LAT: 32.23244 / LONG: -103.92567 ( TVD: 10526 feet, MD: 18900 feet )  
PPP: NWSW / 330 FSL / 1210 FWL / TWSP: 24S / RANGE: 30E / SECTION: 7 / LAT: 32.22878 / LONG: -103.92567 ( TVD: 10526 feet, MD: 17600 feet )  
PPP: SWSW / 330 FSL / 1210 FWL / TWSP: 24S / RANGE: 30E / SECTION: 6 / LAT: 32.23989 / LONG: -103.92567 ( TVD: 10526 feet, MD: 21500 feet )  
PPP: SWSW / 100 FSL / 1210 FWL / TWSP: 24S / RANGE: 30E / SECTION: 18 / LAT: 32.210491 / LONG: -103.925601 ( TVD: 10526 feet, MD: 10905 feet )  
BHL: NWNW / 50 FNL / 1210 FWL / TWSP: 24S / RANGE: 30E / SECTION: 6 / LAT: 32.253814 / LONG: -103.925651 ( TVD: 10526 feet, MD: 26665 feet )

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	XTO Permian Operating LLC
<b>WELL NAME &amp; NO.:</b>	Poker Lake Unit 19 DTD 123H
<b>LOCATION:</b>	Sec 19-24S-30E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2781294** on 04/04/2024. Any previous COAs not addressed within the updated COAs still apply.*

### COA

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

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

### B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately 430 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. ***Set depth adjusted per BLM geologist.***
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead

- cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
- ❖ In 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 9-5/8" X 7-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the 7-5/8" casing to surface after the second stage BH to verify TOC.**

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

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

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
- Cement should tie-back at least **300 feet** into previous casing string (tieback increased due to not meeting 0.422" clearance requirement.) Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

### **C. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.



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

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

### **Unit Wells**

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

### **Commercial Well Determination**

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

### **BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (**Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP**)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

### **Offline Cementing**

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

## **GENERAL REQUIREMENTS**



The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

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

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
BLM NM CFO DrillingNotifications@blm.gov; (575) 361-2822

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

**A. CASING**

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80,

or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. **Wait on cement (WOC) for Potash Areas:** After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. **Wait on cement (WOC) for Water Basin:** After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

## **B. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of

API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - e. The results of the test shall be reported to the appropriate BLM office.
  - f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
  - h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.
- C. **DRILLING MUD:** Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.
- D. **WASTE MATERIAL AND FLUIDS:** All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

☒ AMENDED REPORT

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

## Kick Off Point (KOP)

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

## First Take Point (FTP)

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

## Last Take Point (LTP)

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

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

XTO Energy Inc.

Poker Lake Unit 19 DTD South 123H  
Projected TD: 25840.36' MD / 10489' TVD  
SHL: 1254' FNL & 859' FWL , Section 19, T24S, R30E  
BHL: 230' FSL & 712' FWL , Section 31, T24S, R30E  
Eddy County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	565'	Water
Top of Salt	968'	Water
Base of Salt	3161'	Water
Delaware	3355'	Water
Brushy Canyon	5853'	Water/Oil/Gas
Bone Spring	7149'	Water
Avalon	7319'	Water/Oil/Gas
1st Bone Spring	8135'	Water/Oil/Gas
2nd Bone Spring	8953'	Water/Oil/Gas
3rd Bone Spring	10047'	Water/Oil/Gas
Wolfcamp	10438'	Water/Oil/Gas
Wolfcamp X	10459'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>10489'</b>	<b>Water/Oil/Gas</b>

\*\*\* Hydrocarbons @ Brushy Canyon

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

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 9.625 inch casing @ 665' (303' 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 9701.87' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 25840.36 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 9401.87 feet).

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 665'	9.625	40	J-55	BTC	New	1.71	9.47	23.68
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	2.29	2.92	1.94
8.75	4000' – 9701.87'	7.625	29.7	HC L-80	Flush Joint	New	1.67	2.46	2.40
6.75	0' – 9601.87'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.88	1.98
6.75	9601.87' - 25840.36'	5.5	20	RY P-110	Semi-Flush	New	1.05	1.72	1.98

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





**Wellhead:**

Permanent Wellhead – Multibowl System

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

B. Tubing Head: 11" 10M bottom flange x 7-1/16" 15M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 7-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

#### 4. Cement Program

##### **Surface Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 665'**

Lead: 120 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft<sup>3</sup>/sx, 10.13 gal/sx water)

Tail: 130 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

Top of Cement: Surface

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

##### **2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 9701.87'**

###### 1st Stage

Optional Lead: 310 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 350 sxs Class C (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 5853

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

###### 2nd Stage

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

Tail: 660 sxs Class C (mixed at 14.8 ppg, 1.33 ft<sup>3</sup>/sx, 6.39 gal/sx water)

Top of Cement: 0

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

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (5853') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

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

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

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

##### **Production Casing: 5.5, 20 New Semi-Flush, RY P-110 casing to be set at +/- 25840.36'**

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 9401.87 feet

Tail: 1140 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 9901.87 feet

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

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

## 5. Pressure Control Equipment

Once the permanent WH is installed on the 9.625 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 10M Double Ram BOP. MASP should not exceed 4128 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 9.625, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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

hole on each of the wells.

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

## 6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 665'	12.25	FW/Native	8.4-8.9	35-40	NC
665' - 9701.87'	8.75	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
9701.87' - 25840.36'	6.75	OBM	11.8-12.3	50-60	NC - 20

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

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

## 7. Auxiliary Well Control and Monitoring Equipment

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

## 8. Logging, Coring and Testing Program

Open hole logging will not be done on this well.

## 9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 170 to 190 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6436 psi.

## 10. Anticipated Starting Date and Duration of Operations

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

## Well Plan Report - Poker Lake Unit 19 DTD South 123H

Measured Depth: 25840.36 ft

TVD RKB: 10489.00 ft

### Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 439130.40 ft

Easting: 625913.80 ft

RKB: 3178.00 ft

Ground Level: 3146.00 ft

North Reference: Grid

Convergence Angle: 0.22 Deg

### Plan Sections

Poker Lake Unit 19 DTD South 123H

Measured				TVD			Build	Turn	Dogleg		
Depth	Inclination	Azimuth		RKB	Y Offset	X Offset	Rate	Rate	Rate	Target	
(ft)	(Deg)	(Deg)		(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)		
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		
1762.66	13.25	352.38		1756.76	75.62	-10.12	2.00	0.00	2.00		
6166.42	13.25	352.38		6043.24	1076.28	-144.08	0.00	0.00	0.00		
6829.07	0.00	0.00		6700.00	1151.90	-154.20	-2.00	0.00	2.00		
9901.87	0.00	0.00		9772.80	1151.90	-154.20	0.00	0.00	0.00		
11026.87	90.00	179.72		10489.00	435.71	-150.74	8.00	0.00	8.00		
25740.39	90.00	179.72		10489.00	-14277.64	-79.60	0.00	0.00	0.00	LTP 7	
25840.36	90.00	179.72		10489.00	-14377.60	-79.12	0.00	0.00	0.00	BHL 7	

### Position Uncertainty

Poker Lake Unit 19 DTD South 123H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	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	2.309	0.000	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	2.325	0.000	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	2.346	0.000	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	2.373	0.000	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	2.404	0.000	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	2.441	0.000	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	2.482	0.000	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	2.527	0.000	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	2.577	0.000	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	2.629	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	352.375	1199.980	4.843	0.000	4.704	0.000	2.685	0.000	0.000	5.259	4.237	123.388	MWD+IFR1+MS
1300.000	4.000	352.375	1299.838	5.659	0.000	5.056	0.000	2.745	0.000	0.000	5.990	4.670	113.485	MWD+IFR1+MS
1400.000	6.000	352.375	1399.452	6.384	0.000	5.407	0.000	2.810	0.000	0.000	6.690	5.047	108.590	MWD+IFR1+MS
1500.000	8.000	352.375	1498.702	7.046	0.000	5.759	0.000	2.882	0.000	0.000	7.350	5.406	105.843	MWD+IFR1+MS
1600.000	10.000	352.375	1597.465	7.659	0.000	6.110	0.000	2.965	0.000	0.000	7.973	5.758	104.129	MWD+IFR1+MS
1700.000	12.000	352.375	1695.623	8.233	0.000	6.463	0.000	3.059	0.000	0.000	8.565	6.108	102.978	MWD+IFR1+MS
1762.657	13.253	352.375	1756.763	8.458	0.000	6.675	0.000	3.107	0.000	0.000	8.809	6.326	102.714	MWD+IFR1+MS
1800.000	13.253	352.375	1793.112	8.565	0.000	6.798	0.000	3.133	0.000	0.000	8.912	6.455	102.694	MWD+IFR1+MS
1900.000	13.253	352.375	1890.449	8.850	0.000	7.143	0.000	3.215	0.000	0.000	9.189	6.808	102.878	MWD+IFR1+MS
2000.000	13.253	352.375	1987.785	9.153	0.000	7.504	0.000	3.302	0.000	0.000	9.489	7.169	103.271	MWD+IFR1+MS
2100.000	13.253	352.375	2085.122	9.464	0.000	7.867	0.000	3.392	0.000	0.000	9.796	7.532	103.652	MWD+IFR1+MS
2200.000	13.253	352.375	2182.459	9.780	0.000	8.232	0.000	3.486	0.000	0.000	10.109	7.896	104.022	MWD+IFR1+MS
2300.000	13.253	352.375	2279.795	10.102	0.000	8.599	0.000	3.582	0.000	0.000	10.426	8.262	104.380	MWD+IFR1+MS
2400.000	13.253	352.375	2377.132	10.428	0.000	8.966	0.000	3.682	0.000	0.000	10.748	8.629	104.728	MWD+IFR1+MS
2500.000	13.253	352.375	2474.469	10.759	0.000	9.335	0.000	3.784	0.000	0.000	11.073	8.997	105.066	MWD+IFR1+MS
2600.000	13.253	352.375	2571.805	11.094	0.000	9.705	0.000	3.888	0.000	0.000	11.403	9.366	105.393	MWD+IFR1+MS
2700.000	13.253	352.375	2669.142	11.433	0.000	10.076	0.000	3.995	0.000	0.000	11.736	9.735	105.710	MWD+IFR1+MS
2800.000	13.253	352.375	2766.479	11.776	0.000	10.447	0.000	4.103	0.000	0.000	12.073	10.106	106.018	MWD+IFR1+MS
2900.000	13.253	352.375	2863.815	12.121	0.000	10.820	0.000	4.214	0.000	0.000	12.412	10.477	106.316	MWD+IFR1+MS



3000.000	13.253	352.375	2961.152	12.470	0.000	11.193	0.000	4.327	0.000	0.000	12.754	10.849	106.605	MWD+IFR1+MS
3100.000	13.253	352.375	3058.489	12.820	0.000	11.566	0.000	4.442	0.000	0.000	13.098	11.221	106.886	MWD+IFR1+MS
3200.000	13.253	352.375	3155.825	13.174	0.000	11.940	0.000	4.559	0.000	0.000	13.444	11.594	107.157	MWD+IFR1+MS
3300.000	13.253	352.375	3253.162	13.529	0.000	12.315	0.000	4.678	0.000	0.000	13.793	11.968	107.420	MWD+IFR1+MS
3400.000	13.253	352.375	3350.499	13.887	0.000	12.690	0.000	4.798	0.000	0.000	14.144	12.342	107.675	MWD+IFR1+MS
3500.000	13.253	352.375	3447.835	14.247	0.000	13.065	0.000	4.920	0.000	0.000	14.496	12.716	107.922	MWD+IFR1+MS
3600.000	13.253	352.375	3545.172	14.608	0.000	13.441	0.000	5.044	0.000	0.000	14.850	13.091	108.161	MWD+IFR1+MS
3700.000	13.253	352.375	3642.509	14.971	0.000	13.817	0.000	5.169	0.000	0.000	15.206	13.466	108.393	MWD+IFR1+MS
3800.000	13.253	352.375	3739.845	15.335	0.000	14.194	0.000	5.296	0.000	0.000	15.563	13.841	108.617	MWD+IFR1+MS
3900.000	13.253	352.375	3837.182	15.701	0.000	14.571	0.000	5.425	0.000	0.000	15.921	14.217	108.834	MWD+IFR1+MS
4000.000	13.253	352.375	3934.519	16.068	0.000	14.948	0.000	5.555	0.000	0.000	16.281	14.592	109.044	MWD+IFR1+MS
4100.000	13.253	352.375	4031.855	16.437	0.000	15.325	0.000	5.687	0.000	0.000	16.641	14.969	109.248	MWD+IFR1+MS
4200.000	13.253	352.375	4129.192	16.806	0.000	15.703	0.000	5.820	0.000	0.000	17.003	15.345	109.445	MWD+IFR1+MS
4300.000	13.253	352.375	4226.529	17.177	0.000	16.081	0.000	5.955	0.000	0.000	17.366	15.722	109.636	MWD+IFR1+MS
4400.000	13.253	352.375	4323.866	17.549	0.000	16.459	0.000	6.092	0.000	0.000	17.730	16.099	109.820	MWD+IFR1+MS
4500.000	13.253	352.375	4421.202	17.921	0.000	16.837	0.000	6.230	0.000	0.000	18.095	16.476	109.999	MWD+IFR1+MS
4600.000	13.253	352.375	4518.539	18.295	0.000	17.215	0.000	6.370	0.000	0.000	18.460	16.853	110.171	MWD+IFR1+MS
4700.000	13.253	352.375	4615.876	18.669	0.000	17.594	0.000	6.511	0.000	0.000	18.827	17.230	110.338	MWD+IFR1+MS
4800.000	13.253	352.375	4713.212	19.044	0.000	17.972	0.000	6.654	0.000	0.000	19.194	17.608	110.500	MWD+IFR1+MS
4900.000	13.253	352.375	4810.549	19.420	0.000	18.351	0.000	6.799	0.000	0.000	19.562	17.986	110.656	MWD+IFR1+MS
5000.000	13.253	352.375	4907.886	19.796	0.000	18.730	0.000	6.946	0.000	0.000	19.930	18.363	110.806	MWD+IFR1+MS
5100.000	13.253	352.375	5005.222	20.173	0.000	19.109	0.000	7.094	0.000	0.000	20.300	18.742	110.952	MWD+IFR1+MS
5200.000	13.253	352.375	5102.559	20.551	0.000	19.488	0.000	7.243	0.000	0.000	20.669	19.120	111.092	MWD+IFR1+MS
5300.000	13.253	352.375	5199.896	20.930	0.000	19.868	0.000	7.395	0.000	0.000	21.040	19.498	111.228	MWD+IFR1+MS
5400.000	13.253	352.375	5297.232	21.308	0.000	20.247	0.000	7.548	0.000	0.000	21.411	19.876	111.359	MWD+IFR1+MS
5500.000	13.253	352.375	5394.569	21.688	0.000	20.627	0.000	7.703	0.000	0.000	21.782	20.255	111.485	MWD+IFR1+MS
5600.000	13.253	352.375	5491.906	22.068	0.000	21.006	0.000	7.860	0.000	0.000	22.154	20.634	111.607	MWD+IFR1+MS
5700.000	13.253	352.375	5589.242	22.448	0.000	21.386	0.000	8.018	0.000	0.000	22.526	21.013	111.724	MWD+IFR1+MS
5800.000	13.253	352.375	5686.579	22.829	0.000	21.766	0.000	8.178	0.000	0.000	22.899	21.391	111.837	MWD+IFR1+MS
5900.000	13.253	352.375	5783.916	23.210	0.000	22.146	0.000	8.340	0.000	0.000	23.272	21.771	111.946	MWD+IFR1+MS
6000.000	13.253	352.375	5881.252	23.592	0.000	22.526	0.000	8.504	0.000	0.000	23.646	22.150	112.050	MWD+IFR1+MS
6100.000	13.253	352.375	5978.589	23.974	0.000	22.906	0.000	8.670	0.000	0.000	24.020	22.529	112.151	MWD+IFR1+MS
6166.417	13.253	352.375	6043.237	24.226	0.000	23.155	0.000	8.781	0.000	0.000	24.264	22.780	112.159	MWD+IFR1+MS

6200.000	12.581	352.375	6075.970	24.364	0.000	23.280	0.000	8.838	0.000	0.000	24.386	22.907	112.141	MWD+IFR1+MS
6300.000	10.581	352.375	6173.929	24.799	0.000	23.651	0.000	9.009	0.000	0.000	24.790	23.284	111.593	MWD+IFR1+MS
6400.000	8.581	352.375	6272.529	25.258	0.000	24.021	0.000	9.179	0.000	0.000	25.246	23.658	110.527	MWD+IFR1+MS
6500.000	6.581	352.375	6371.650	25.678	0.000	24.384	0.000	9.342	0.000	0.000	25.696	24.026	109.579	MWD+IFR1+MS
6600.000	4.581	352.375	6471.171	26.059	0.000	24.741	0.000	9.498	0.000	0.000	26.138	24.385	108.742	MWD+IFR1+MS
6700.000	2.581	352.375	6570.970	26.401	0.000	25.090	0.000	9.648	0.000	0.000	26.571	24.737	108.006	MWD+IFR1+MS
6800.000	0.581	352.375	6670.927	26.704	0.000	25.433	0.000	9.794	0.000	0.000	26.994	25.081	107.362	MWD+IFR1+MS
6829.073	0.000	0.000	6700.000	26.924	0.000	25.354	0.000	9.836	0.000	0.000	27.089	25.178	107.346	MWD+IFR1+MS
6900.000	0.000	0.000	6770.927	27.150	0.000	25.590	0.000	9.938	0.000	0.000	27.314	25.415	107.377	MWD+IFR1+MS
7000.000	0.000	0.000	6870.927	27.470	0.000	25.928	0.000	10.084	0.000	0.000	27.635	25.752	107.514	MWD+IFR1+MS
7100.000	0.000	0.000	6970.927	27.793	0.000	26.268	0.000	10.233	0.000	0.000	27.960	26.090	107.694	MWD+IFR1+MS
7200.000	0.000	0.000	7070.927	28.116	0.000	26.609	0.000	10.385	0.000	0.000	28.286	26.428	107.872	MWD+IFR1+MS
7300.000	0.000	0.000	7170.927	28.441	0.000	26.950	0.000	10.540	0.000	0.000	28.613	26.767	108.049	MWD+IFR1+MS
7400.000	0.000	0.000	7270.927	28.766	0.000	27.291	0.000	10.698	0.000	0.000	28.940	27.106	108.223	MWD+IFR1+MS
7500.000	0.000	0.000	7370.927	29.092	0.000	27.633	0.000	10.859	0.000	0.000	29.268	27.446	108.396	MWD+IFR1+MS
7600.000	0.000	0.000	7470.927	29.419	0.000	27.975	0.000	11.023	0.000	0.000	29.597	27.786	108.567	MWD+IFR1+MS
7700.000	0.000	0.000	7570.927	29.746	0.000	28.318	0.000	11.190	0.000	0.000	29.927	28.127	108.736	MWD+IFR1+MS
7800.000	0.000	0.000	7670.927	30.074	0.000	28.661	0.000	11.359	0.000	0.000	30.257	28.468	108.903	MWD+IFR1+MS
7900.000	0.000	0.000	7770.927	30.403	0.000	29.005	0.000	11.532	0.000	0.000	30.588	28.810	109.068	MWD+IFR1+MS
8000.000	0.000	0.000	7870.927	30.733	0.000	29.349	0.000	11.708	0.000	0.000	30.919	29.152	109.232	MWD+IFR1+MS
8100.000	0.000	0.000	7970.927	31.063	0.000	29.693	0.000	11.887	0.000	0.000	31.252	29.494	109.393	MWD+IFR1+MS
8200.000	0.000	0.000	8070.927	31.393	0.000	30.037	0.000	12.069	0.000	0.000	31.584	29.837	109.553	MWD+IFR1+MS
8300.000	0.000	0.000	8170.927	31.725	0.000	30.382	0.000	12.254	0.000	0.000	31.918	30.179	109.711	MWD+IFR1+MS
8400.000	0.000	0.000	8270.927	32.057	0.000	30.727	0.000	12.442	0.000	0.000	32.252	30.523	109.868	MWD+IFR1+MS
8500.000	0.000	0.000	8370.927	32.389	0.000	31.073	0.000	12.633	0.000	0.000	32.586	30.866	110.023	MWD+IFR1+MS
8600.000	0.000	0.000	8470.927	32.722	0.000	31.419	0.000	12.828	0.000	0.000	32.921	31.210	110.176	MWD+IFR1+MS
8700.000	0.000	0.000	8570.927	33.056	0.000	31.765	0.000	13.025	0.000	0.000	33.257	31.554	110.327	MWD+IFR1+MS
8800.000	0.000	0.000	8670.927	33.390	0.000	32.111	0.000	13.226	0.000	0.000	33.593	31.899	110.477	MWD+IFR1+MS
8900.000	0.000	0.000	8770.927	33.725	0.000	32.458	0.000	13.429	0.000	0.000	33.929	32.244	110.625	MWD+IFR1+MS
9000.000	0.000	0.000	8870.927	34.060	0.000	32.804	0.000	13.636	0.000	0.000	34.266	32.589	110.772	MWD+IFR1+MS
9100.000	0.000	0.000	8970.927	34.395	0.000	33.152	0.000	13.846	0.000	0.000	34.604	32.934	110.917	MWD+IFR1+MS
9200.000	0.000	0.000	9070.927	34.731	0.000	33.499	0.000	14.059	0.000	0.000	34.942	33.280	111.060	MWD+IFR1+MS
9300.000	0.000	0.000	9170.927	35.068	0.000	33.846	0.000	14.275	0.000	0.000	35.280	33.625	111.202	MWD+IFR1+MS

9400.000	0.000	0.000	9270.927	35.405	0.000	34.194	0.000	14.495	0.000	0.000	35.619	33.972	111.342	MWD+IFR1+MS
9500.000	0.000	0.000	9370.927	35.742	0.000	34.542	0.000	14.717	0.000	0.000	35.958	34.318	111.481	MWD+IFR1+MS
9600.000	0.000	0.000	9470.927	36.080	0.000	34.890	0.000	14.943	0.000	0.000	36.297	34.664	111.618	MWD+IFR1+MS
9700.000	0.000	0.000	9570.927	36.418	0.000	35.239	0.000	15.172	0.000	0.000	36.637	35.011	111.754	MWD+IFR1+MS
9800.000	0.000	0.000	9670.927	36.757	0.000	35.588	0.000	15.404	0.000	0.000	36.977	35.358	111.889	MWD+IFR1+MS
9901.873	0.000	0.000	9772.800	37.102	0.000	35.943	0.000	15.643	0.000	0.000	37.325	35.712	112.029	MWD+IFR1+MS
10000.000	7.850	179.723	9870.620	36.805	0.000	36.261	-0.000	15.882	0.000	0.000	37.819	36.056	109.454	MWD+IFR1+MS
10100.000	15.850	179.723	9968.409	36.813	0.000	36.547	-0.000	16.210	0.000	0.000	39.079	36.390	103.479	MWD+IFR1+MS
10200.000	23.850	179.723	10062.391	36.299	0.000	36.806	-0.000	16.710	0.000	0.000	40.233	36.665	100.927	MWD+IFR1+MS
10300.000	31.850	179.723	10150.737	35.318	0.000	37.035	-0.000	17.443	0.000	0.000	41.219	36.899	99.671	MWD+IFR1+MS
10400.000	39.850	179.723	10231.726	33.976	0.000	37.233	-0.000	18.434	0.000	0.000	42.020	37.096	99.024	MWD+IFR1+MS
10500.000	47.850	179.723	10303.783	32.412	0.000	37.399	-0.000	19.676	0.000	0.000	42.635	37.258	98.715	MWD+IFR1+MS
10600.000	55.850	179.723	10365.505	30.802	0.000	37.533	-0.000	21.135	0.000	0.000	43.073	37.387	98.612	MWD+IFR1+MS
10700.000	63.850	179.723	10415.690	29.360	0.000	37.635	-0.000	22.757	0.000	0.000	43.354	37.483	98.636	MWD+IFR1+MS
10800.000	71.850	179.723	10453.363	28.317	0.000	37.706	-0.000	24.482	0.000	0.000	43.505	37.549	98.725	MWD+IFR1+MS
10900.000	79.850	179.723	10477.789	27.891	0.000	37.747	-0.000	26.249	0.000	0.000	43.563	37.586	98.815	MWD+IFR1+MS
11000.000	87.850	179.723	10488.493	28.229	0.000	37.756	-0.000	27.997	0.000	0.000	43.570	37.595	98.835	MWD+IFR1+MS
11026.873	90.000	179.723	10488.997	28.090	0.000	37.752	-0.000	28.090	0.000	0.000	43.570	37.591	98.813	MWD+IFR1+MS
11100.000	90.000	179.723	10488.997	28.247	0.000	37.743	-0.000	28.247	0.000	0.000	43.569	37.584	98.754	MWD+IFR1+MS
11200.000	90.000	179.723	10488.997	28.456	0.000	37.747	-0.000	28.456	0.000	0.000	43.568	37.591	98.697	MWD+IFR1+MS
11300.000	90.000	179.723	10488.997	28.687	0.000	37.769	-0.000	28.687	0.000	0.000	43.568	37.614	98.662	MWD+IFR1+MS
11400.000	90.000	179.723	10488.997	28.937	0.000	37.806	-0.000	28.937	0.000	0.000	43.569	37.652	98.648	MWD+IFR1+MS
11500.000	90.000	179.723	10488.997	29.206	0.000	37.858	-0.000	29.206	0.000	0.000	43.570	37.706	98.653	MWD+IFR1+MS
11600.000	90.000	179.723	10488.997	29.493	0.000	37.926	-0.000	29.493	0.000	0.000	43.573	37.775	98.680	MWD+IFR1+MS
11700.000	90.000	179.723	10488.997	29.799	0.000	38.009	-0.000	29.799	0.000	0.000	43.576	37.858	98.728	MWD+IFR1+MS
11800.000	90.000	179.723	10488.997	30.121	0.000	38.107	-0.000	30.121	0.000	0.000	43.581	37.957	98.800	MWD+IFR1+MS
11900.000	90.000	179.723	10488.997	30.461	0.000	38.220	-0.000	30.461	0.000	0.000	43.586	38.070	98.896	MWD+IFR1+MS
12000.000	90.000	179.723	10488.997	30.817	0.000	38.348	-0.000	30.817	0.000	0.000	43.592	38.198	99.019	MWD+IFR1+MS
12100.000	90.000	179.723	10488.997	31.188	0.000	38.491	-0.000	31.188	0.000	0.000	43.599	38.340	99.172	MWD+IFR1+MS
12200.000	90.000	179.723	10488.997	31.575	0.000	38.649	-0.000	31.575	0.000	0.000	43.607	38.496	99.356	MWD+IFR1+MS
12300.000	90.000	179.723	10488.997	31.976	0.000	38.821	-0.000	31.976	0.000	0.000	43.616	38.667	99.578	MWD+IFR1+MS
12400.000	90.000	179.723	10488.997	32.392	0.000	39.007	-0.000	32.392	0.000	0.000	43.627	38.851	99.842	MWD+IFR1+MS
12500.000	90.000	179.723	10488.997	32.820	0.000	39.208	-0.000	32.820	0.000	0.000	43.638	39.049	100.154	MWD+IFR1+MS

12600.000	90.000	179.723	10488.997	33.262	0.000	39.422	-0.000	33.262	0.000	0.000	43.651	39.259	100.524	MWD+IFR1+MS
12700.000	90.000	179.723	10488.997	33.716	0.000	39.650	-0.000	33.716	0.000	0.000	43.665	39.483	100.961	MWD+IFR1+MS
12800.000	90.000	179.723	10488.997	34.183	0.000	39.891	-0.000	34.183	0.000	0.000	43.681	39.719	101.480	MWD+IFR1+MS
12900.000	90.000	179.723	10488.997	34.660	0.000	40.146	-0.000	34.660	0.000	0.000	43.699	39.967	102.099	MWD+IFR1+MS
13000.000	90.000	179.723	10488.997	35.149	0.000	40.413	-0.000	35.149	0.000	0.000	43.719	40.226	102.842	MWD+IFR1+MS
13100.000	90.000	179.723	10488.997	35.649	0.000	40.693	-0.000	35.649	0.000	0.000	43.741	40.495	103.743	MWD+IFR1+MS
13200.000	90.000	179.723	10488.997	36.158	0.000	40.985	-0.000	36.158	0.000	0.000	43.767	40.775	104.847	MWD+IFR1+MS
13300.000	90.000	179.723	10488.997	36.677	0.000	41.290	-0.000	36.677	0.000	0.000	43.796	41.063	106.219	MWD+IFR1+MS
13400.000	90.000	179.723	10488.997	37.206	0.000	41.606	-0.000	37.206	0.000	0.000	43.832	41.358	107.948	MWD+IFR1+MS
13500.000	90.000	179.723	10488.997	37.743	0.000	41.934	-0.000	37.743	0.000	0.000	43.874	41.657	110.166	MWD+IFR1+MS
13600.000	90.000	179.723	10488.997	38.289	0.000	42.273	-0.000	38.289	0.000	0.000	43.927	41.958	113.056	MWD+IFR1+MS
13700.000	90.000	179.723	10488.997	38.843	0.000	42.624	-0.000	38.843	0.000	0.000	43.996	42.255	116.868	MWD+IFR1+MS
13800.000	90.000	179.723	10488.997	39.405	0.000	42.985	-0.000	39.405	0.000	0.000	44.088	42.541	121.882	MWD+IFR1+MS
13900.000	90.000	179.723	10488.997	39.975	0.000	43.356	-0.000	39.975	0.000	0.000	44.214	42.803	128.270	MWD+IFR1+MS
14000.000	90.000	179.723	10488.997	40.552	0.000	43.738	-0.000	40.552	0.000	0.000	44.387	43.029	-44.225	MWD+IFR1+MS
14100.000	90.000	179.723	10488.997	41.135	0.000	44.130	-0.000	41.135	0.000	0.000	44.615	43.211	-36.479	MWD+IFR1+MS
14200.000	90.000	179.723	10488.997	41.725	0.000	44.532	-0.000	41.725	0.000	0.000	44.896	43.349	-29.533	MWD+IFR1+MS
14300.000	90.000	179.723	10488.997	42.322	0.000	44.943	-0.000	42.322	0.000	0.000	45.222	43.453	-23.919	MWD+IFR1+MS
14400.000	90.000	179.723	10488.997	42.924	0.000	45.363	-0.000	42.924	0.000	0.000	45.583	43.532	-19.608	MWD+IFR1+MS
14500.000	90.000	179.723	10488.997	43.533	0.000	45.792	-0.000	43.533	0.000	0.000	45.969	43.595	-16.338	MWD+IFR1+MS
14600.000	90.000	179.723	10488.997	44.147	0.000	46.230	-0.000	44.147	0.000	0.000	46.376	43.647	-13.837	MWD+IFR1+MS
14700.000	90.000	179.723	10488.997	44.766	0.000	46.676	-0.000	44.766	0.000	0.000	46.798	43.692	-11.894	MWD+IFR1+MS
14800.000	90.000	179.723	10488.997	45.390	0.000	47.130	-0.000	45.390	0.000	0.000	47.234	43.732	-10.356	MWD+IFR1+MS
14900.000	90.000	179.723	10488.997	46.020	0.000	47.593	-0.000	46.020	0.000	0.000	47.682	43.769	-9.117	MWD+IFR1+MS
15000.000	90.000	179.723	10488.997	46.654	0.000	48.063	-0.000	46.654	0.000	0.000	48.140	43.803	-8.103	MWD+IFR1+MS
15100.000	90.000	179.723	10488.997	47.292	0.000	48.541	-0.000	47.292	0.000	0.000	48.608	43.836	-7.260	MWD+IFR1+MS
15200.000	90.000	179.723	10488.997	47.935	0.000	49.026	-0.000	47.935	0.000	0.000	49.085	43.868	-6.552	MWD+IFR1+MS
15300.000	90.000	179.723	10488.997	48.582	0.000	49.518	-0.000	48.582	0.000	0.000	49.570	43.899	-5.949	MWD+IFR1+MS
15400.000	90.000	179.723	10488.997	49.233	0.000	50.017	-0.000	49.233	0.000	0.000	50.063	43.930	-5.431	MWD+IFR1+MS
15500.000	90.000	179.723	10488.997	49.888	0.000	50.523	-0.000	49.888	0.000	0.000	50.564	43.961	-4.982	MWD+IFR1+MS
15600.000	90.000	179.723	10488.997	50.547	0.000	51.035	-0.000	50.547	0.000	0.000	51.072	43.991	-4.589	MWD+IFR1+MS
15700.000	90.000	179.723	10488.997	51.209	0.000	51.553	-0.000	51.209	0.000	0.000	51.587	44.021	-4.244	MWD+IFR1+MS
15800.000	90.000	179.723	10488.997	51.875	0.000	52.078	-0.000	51.875	0.000	0.000	52.108	44.051	-3.938	MWD+IFR1+MS



15900.000	90.000	179.723	10488.997	52.544	0.000	52.608	-0.000	52.544	0.000	0.000	52.635	44.082	-3.666	MWD+IFR1+MS
16000.000	90.000	179.723	10488.997	53.216	0.000	53.144	-0.000	53.216	0.000	0.000	53.169	44.113	-3.422	MWD+IFR1+MS
16100.000	90.000	179.723	10488.997	53.891	0.000	53.686	-0.000	53.891	0.000	0.000	53.709	44.144	-3.203	MWD+IFR1+MS
16200.000	90.000	179.723	10488.997	54.569	0.000	54.233	-0.000	54.569	0.000	0.000	54.254	44.175	-3.005	MWD+IFR1+MS
16300.000	90.000	179.723	10488.997	55.250	0.000	54.785	-0.000	55.250	0.000	0.000	54.804	44.206	-2.826	MWD+IFR1+MS
16400.000	90.000	179.723	10488.997	55.933	0.000	55.343	-0.000	55.933	0.000	0.000	55.360	44.238	-2.662	MWD+IFR1+MS
16500.000	90.000	179.723	10488.997	56.619	0.000	55.905	-0.000	56.619	0.000	0.000	55.921	44.271	-2.513	MWD+IFR1+MS
16600.000	90.000	179.723	10488.997	57.308	0.000	56.472	-0.000	57.308	0.000	0.000	56.487	44.303	-2.377	MWD+IFR1+MS
16700.000	90.000	179.723	10488.997	57.999	0.000	57.044	-0.000	57.999	0.000	0.000	57.057	44.336	-2.251	MWD+IFR1+MS
16800.000	90.000	179.723	10488.997	58.693	0.000	57.620	-0.000	58.693	0.000	0.000	57.632	44.370	-2.136	MWD+IFR1+MS
16900.000	90.000	179.723	10488.997	59.389	0.000	58.201	-0.000	59.389	0.000	0.000	58.212	44.404	-2.029	MWD+IFR1+MS
17000.000	90.000	179.723	10488.997	60.087	0.000	58.785	-0.000	60.087	0.000	0.000	58.796	44.438	-1.930	MWD+IFR1+MS
17100.000	90.000	179.723	10488.997	60.787	0.000	59.374	-0.000	60.787	0.000	0.000	59.384	44.473	-1.839	MWD+IFR1+MS
17200.000	90.000	179.723	10488.997	61.489	0.000	59.967	-0.000	61.489	0.000	0.000	59.976	44.509	-1.754	MWD+IFR1+MS
17300.000	90.000	179.723	10488.997	62.193	0.000	60.564	-0.000	62.193	0.000	0.000	60.572	44.544	-1.675	MWD+IFR1+MS
17400.000	90.000	179.723	10488.997	62.899	0.000	61.165	-0.000	62.899	0.000	0.000	61.172	44.581	-1.601	MWD+IFR1+MS
17500.000	90.000	179.723	10488.997	63.607	0.000	61.769	-0.000	63.607	0.000	0.000	61.776	44.618	-1.533	MWD+IFR1+MS
17600.000	90.000	179.723	10488.997	64.317	0.000	62.377	-0.000	64.317	0.000	0.000	62.383	44.655	-1.468	MWD+IFR1+MS
17700.000	90.000	179.723	10488.997	65.028	0.000	62.988	-0.000	65.028	0.000	0.000	62.994	44.692	-1.408	MWD+IFR1+MS
17800.000	90.000	179.723	10488.997	65.741	0.000	63.602	-0.000	65.741	0.000	0.000	63.608	44.731	-1.351	MWD+IFR1+MS
17900.000	90.000	179.723	10488.997	66.456	0.000	64.220	-0.000	66.456	0.000	0.000	64.225	44.769	-1.298	MWD+IFR1+MS
18000.000	90.000	179.723	10488.997	67.172	0.000	64.841	-0.000	67.172	0.000	0.000	64.846	44.809	-1.248	MWD+IFR1+MS
18100.000	90.000	179.723	10488.997	67.890	0.000	65.465	-0.000	67.890	0.000	0.000	65.470	44.848	-1.201	MWD+IFR1+MS
18200.000	90.000	179.723	10488.997	68.609	0.000	66.092	-0.000	68.609	0.000	0.000	66.096	44.888	-1.157	MWD+IFR1+MS
18300.000	90.000	179.723	10488.997	69.330	0.000	66.722	-0.000	69.330	0.000	0.000	66.726	44.929	-1.115	MWD+IFR1+MS
18400.000	90.000	179.723	10488.997	70.052	0.000	67.355	-0.000	70.052	0.000	0.000	67.358	44.970	-1.075	MWD+IFR1+MS
18500.000	90.000	179.723	10488.997	70.775	0.000	67.990	-0.000	70.775	0.000	0.000	67.993	45.012	-1.038	MWD+IFR1+MS
18600.000	90.000	179.723	10488.997	71.500	0.000	68.628	-0.000	71.500	0.000	0.000	68.631	45.054	-1.002	MWD+IFR1+MS
18700.000	90.000	179.723	10488.997	72.226	0.000	69.269	-0.000	72.226	0.000	0.000	69.272	45.097	-0.969	MWD+IFR1+MS
18800.000	90.000	179.723	10488.997	72.953	0.000	69.912	-0.000	72.953	0.000	0.000	69.915	45.140	-0.937	MWD+IFR1+MS
18900.000	90.000	179.723	10488.997	73.681	0.000	70.557	-0.000	73.681	0.000	0.000	70.560	45.183	-0.907	MWD+IFR1+MS
19000.000	90.000	179.723	10488.997	74.411	0.000	71.205	-0.000	74.411	0.000	0.000	71.208	45.227	-0.878	MWD+IFR1+MS
19100.000	90.000	179.723	10488.997	75.141	0.000	71.856	-0.000	75.141	0.000	0.000	71.858	45.272	-0.850	MWD+IFR1+MS

19200.000	90.000	179.723	10488.997	75.873	0.000	72.508	-0.000	75.873	0.000	0.000	72.510	45.317	-0.824	MWD+IFR1+MS
19300.000	90.000	179.723	10488.997	76.605	0.000	73.163	-0.000	76.605	0.000	0.000	73.165	45.363	-0.800	MWD+IFR1+MS
19400.000	90.000	179.723	10488.997	77.339	0.000	73.820	-0.000	77.339	0.000	0.000	73.822	45.409	-0.776	MWD+IFR1+MS
19500.000	90.000	179.723	10488.997	78.074	0.000	74.479	-0.000	78.074	0.000	0.000	74.480	45.455	-0.754	MWD+IFR1+MS
19600.000	90.000	179.723	10488.997	78.810	0.000	75.140	-0.000	78.810	0.000	0.000	75.141	45.503	-0.732	MWD+IFR1+MS
19700.000	90.000	179.723	10488.997	79.546	0.000	75.803	-0.000	79.546	0.000	0.000	75.804	45.550	-0.712	MWD+IFR1+MS
19800.000	90.000	179.723	10488.997	80.284	0.000	76.468	-0.000	80.284	0.000	0.000	76.469	45.598	-0.692	MWD+IFR1+MS
19900.000	90.000	179.723	10488.997	81.022	0.000	77.134	-0.000	81.022	0.000	0.000	77.135	45.647	-0.673	MWD+IFR1+MS
20000.000	90.000	179.723	10488.997	81.762	0.000	77.803	-0.000	81.762	0.000	0.000	77.804	45.696	-0.656	MWD+IFR1+MS
20100.000	90.000	179.723	10488.997	82.502	0.000	78.473	-0.000	82.502	0.000	0.000	78.474	45.745	-0.638	MWD+IFR1+MS
20200.000	90.000	179.723	10488.997	83.243	0.000	79.145	-0.000	83.243	0.000	0.000	79.146	45.795	-0.622	MWD+IFR1+MS
20300.000	90.000	179.723	10488.997	83.984	0.000	79.819	-0.000	83.984	0.000	0.000	79.820	45.846	-0.606	MWD+IFR1+MS
20400.000	90.000	179.723	10488.997	84.727	0.000	80.494	-0.000	84.727	0.000	0.000	80.495	45.897	-0.591	MWD+IFR1+MS
20500.000	90.000	179.723	10488.997	85.470	0.000	81.171	-0.000	85.470	0.000	0.000	81.172	45.948	-0.577	MWD+IFR1+MS
20600.000	90.000	179.723	10488.997	86.214	0.000	81.850	-0.000	86.214	0.000	0.000	81.850	46.000	-0.563	MWD+IFR1+MS
20700.000	90.000	179.723	10488.997	86.959	0.000	82.530	-0.000	86.959	0.000	0.000	82.530	46.052	-0.550	MWD+IFR1+MS
20800.000	90.000	179.723	10488.997	87.704	0.000	83.211	-0.000	87.704	0.000	0.000	83.212	46.105	-0.537	MWD+IFR1+MS
20900.000	90.000	179.723	10488.997	88.451	0.000	83.894	-0.000	88.451	0.000	0.000	83.895	46.159	-0.525	MWD+IFR1+MS
21000.000	90.000	179.723	10488.997	89.197	0.000	84.578	-0.000	89.197	0.000	0.000	84.579	46.212	-0.513	MWD+IFR1+MS
21100.000	90.000	179.723	10488.997	89.945	0.000	85.264	-0.000	89.945	0.000	0.000	85.265	46.267	-0.502	MWD+IFR1+MS
21200.000	90.000	179.723	10488.997	90.693	0.000	85.951	-0.000	90.693	0.000	0.000	85.952	46.321	-0.491	MWD+IFR1+MS
21300.000	90.000	179.723	10488.997	91.442	0.000	86.640	-0.000	91.442	0.000	0.000	86.640	46.377	-0.481	MWD+IFR1+MS
21400.000	90.000	179.723	10488.997	92.191	0.000	87.329	-0.000	92.191	0.000	0.000	87.330	46.432	-0.471	MWD+IFR1+MS
21500.000	90.000	179.723	10488.997	92.941	0.000	88.020	-0.000	92.941	0.000	0.000	88.021	46.489	-0.461	MWD+IFR1+MS
21600.000	90.000	179.723	10488.997	93.691	0.000	88.713	-0.000	93.691	0.000	0.000	88.713	46.545	-0.452	MWD+IFR1+MS
21700.000	90.000	179.723	10488.997	94.442	0.000	89.406	-0.000	94.442	0.000	0.000	89.406	46.602	-0.443	MWD+IFR1+MS
21800.000	90.000	179.723	10488.997	95.194	0.000	90.101	-0.000	95.194	0.000	0.000	90.101	46.660	-0.434	MWD+IFR1+MS
21900.000	90.000	179.723	10488.997	95.946	0.000	90.796	-0.000	95.946	0.000	0.000	90.796	46.718	-0.426	MWD+IFR1+MS
22000.000	90.000	179.723	10488.997	96.698	0.000	91.493	-0.000	96.698	0.000	0.000	91.493	46.776	-0.418	MWD+IFR1+MS
22100.000	90.000	179.723	10488.997	97.451	0.000	92.191	-0.000	97.451	0.000	0.000	92.191	46.835	-0.410	MWD+IFR1+MS
22200.000	90.000	179.723	10488.997	98.205	0.000	92.890	-0.000	98.205	0.000	0.000	92.890	46.895	-0.402	MWD+IFR1+MS
22300.000	90.000	179.723	10488.997	98.959	0.000	93.590	-0.000	98.959	0.000	0.000	93.590	46.955	-0.395	MWD+IFR1+MS
22400.000	90.000	179.723	10488.997	99.714	0.000	94.291	-0.000	99.714	0.000	0.000	94.291	47.015	-0.388	MWD+IFR1+MS

22500.000	90.000	179.723	10488.997	100.469	0.000	94.993	-0.000	100.469	0.000	0.000	94.993	47.076	-0.381	MWD+IFR1+MS
22600.000	90.000	179.723	10488.997	101.224	0.000	95.696	-0.000	101.224	0.000	0.000	95.696	47.137	-0.375	MWD+IFR1+MS
22700.000	90.000	179.723	10488.997	101.980	0.000	96.400	-0.000	101.980	0.000	0.000	96.400	47.198	-0.369	MWD+IFR1+MS
22800.000	90.000	179.723	10488.997	102.736	0.000	97.105	-0.000	102.736	0.000	0.000	97.105	47.261	-0.363	MWD+IFR1+MS
22900.000	90.000	179.723	10488.997	103.493	0.000	97.811	-0.000	103.493	0.000	0.000	97.811	47.323	-0.357	MWD+IFR1+MS
23000.000	90.000	179.723	10488.997	104.250	0.000	98.517	-0.000	104.250	0.000	0.000	98.517	47.386	-0.351	MWD+IFR1+MS
23100.000	90.000	179.723	10488.997	105.008	0.000	99.225	-0.000	105.008	0.000	0.000	99.225	47.450	-0.346	MWD+IFR1+MS
23200.000	90.000	179.723	10488.997	105.766	0.000	99.933	-0.000	105.766	0.000	0.000	99.933	47.513	-0.340	MWD+IFR1+MS
23300.000	90.000	179.723	10488.997	106.524	0.000	100.642	-0.000	106.524	0.000	0.000	100.642	47.578	-0.335	MWD+IFR1+MS
23400.000	90.000	179.723	10488.997	107.283	0.000	101.352	-0.000	107.283	0.000	0.000	101.352	47.642	-0.330	MWD+IFR1+MS
23500.000	90.000	179.723	10488.997	108.042	0.000	102.063	-0.000	108.042	0.000	0.000	102.063	47.708	-0.326	MWD+IFR1+MS
23600.000	90.000	179.723	10488.997	108.802	0.000	102.775	-0.000	108.802	0.000	0.000	102.775	47.773	-0.321	MWD+IFR1+MS
23700.000	90.000	179.723	10488.997	109.561	0.000	103.487	-0.000	109.561	0.000	0.000	103.487	47.839	-0.316	MWD+IFR1+MS
23800.000	90.000	179.723	10488.997	110.322	0.000	104.201	-0.000	110.322	0.000	0.000	104.201	47.906	-0.312	MWD+IFR1+MS
23900.000	90.000	179.723	10488.997	111.082	0.000	104.914	-0.000	111.082	0.000	0.000	104.914	47.973	-0.308	MWD+IFR1+MS
24000.000	90.000	179.723	10488.997	111.843	0.000	105.629	-0.000	111.843	0.000	0.000	105.629	48.040	-0.304	MWD+IFR1+MS
24100.000	90.000	179.723	10488.997	112.604	0.000	106.344	-0.000	112.604	0.000	0.000	106.344	48.108	-0.300	MWD+IFR1+MS
24200.000	90.000	179.723	10488.997	113.366	0.000	107.060	-0.000	113.366	0.000	0.000	107.060	48.176	-0.296	MWD+IFR1+MS
24300.000	90.000	179.723	10488.997	114.128	0.000	107.777	-0.000	114.128	0.000	0.000	107.777	48.244	-0.292	MWD+IFR1+MS
24400.000	90.000	179.723	10488.997	114.890	0.000	108.495	-0.000	114.890	0.000	0.000	108.495	48.313	-0.289	MWD+IFR1+MS
24500.000	90.000	179.723	10488.997	115.652	0.000	109.213	-0.000	115.652	0.000	0.000	109.213	48.383	-0.285	MWD+IFR1+MS
24600.000	90.000	179.723	10488.997	116.415	0.000	109.931	-0.000	116.415	0.000	0.000	109.931	48.453	-0.282	MWD+IFR1+MS
24700.000	90.000	179.723	10488.997	117.178	0.000	110.651	-0.000	117.178	0.000	0.000	110.651	48.523	-0.279	MWD+IFR1+MS
24800.000	90.000	179.723	10488.997	117.941	0.000	111.370	-0.000	117.941	0.000	0.000	111.370	48.594	-0.275	MWD+IFR1+MS
24900.000	90.000	179.723	10488.997	118.705	0.000	112.091	-0.000	118.705	0.000	0.000	112.091	48.665	-0.272	MWD+IFR1+MS
25000.000	90.000	179.723	10488.997	119.469	0.000	112.812	-0.000	119.469	0.000	0.000	112.812	48.736	-0.269	MWD+IFR1+MS
25100.000	90.000	179.723	10488.997	120.233	0.000	113.534	-0.000	120.233	0.000	0.000	113.534	48.808	-0.266	MWD+IFR1+MS
25200.000	90.000	179.723	10488.997	120.997	0.000	114.256	-0.000	120.997	0.000	0.000	114.256	48.880	-0.264	MWD+IFR1+MS
25300.000	90.000	179.723	10488.997	121.762	0.000	114.979	-0.000	121.762	0.000	0.000	114.979	48.953	-0.261	MWD+IFR1+MS
25400.000	90.000	179.723	10488.997	122.527	0.000	115.702	-0.000	122.527	0.000	0.000	115.702	49.026	-0.258	MWD+IFR1+MS
25500.000	90.000	179.723	10488.997	123.292	0.000	116.426	-0.000	123.292	0.000	0.000	116.426	49.099	-0.256	MWD+IFR1+MS
25600.000	90.000	179.723	10488.997	124.058	0.000	117.151	-0.000	124.058	0.000	0.000	117.151	49.173	-0.253	MWD+IFR1+MS
25700.000	90.000	179.723	10488.997	124.823	0.000	117.876	-0.000	124.823	0.000	0.000	117.876	49.248	-0.251	MWD+IFR1+MS



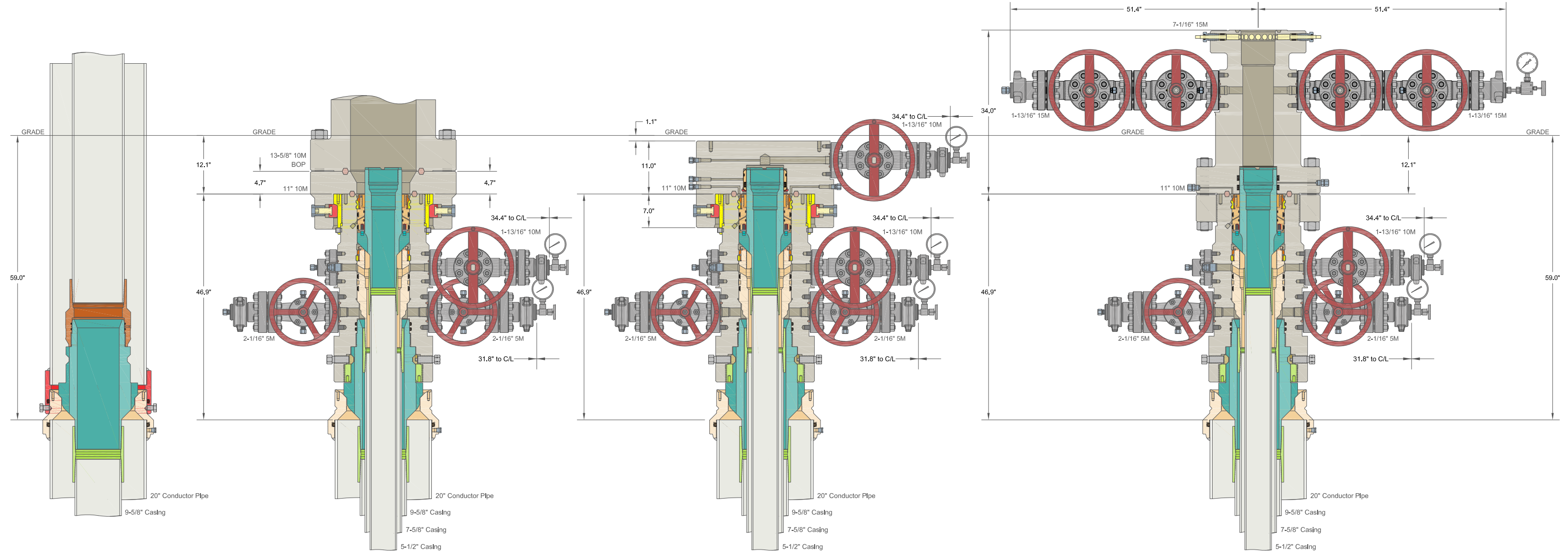
25740.393	90.000	179.723	10488.997	125.132	0.000	118.168	-0.000	125.132	0.000	0.000	118.168	49.278	-0.250	MWD+IFR1+MS
25800.000	90.000	179.723	10488.997	125.588	0.000	118.599	-0.000	125.588	0.000	0.000	118.599	49.322	-0.248	MWD+IFR1+MS
25840.358	90.000	179.723	10488.997	125.897	0.000	118.891	-0.000	125.897	0.000	0.000	118.891	49.353	-0.248	MWD+IFR1+MS

Plan Targets

Poker Lake Unit 19 DTD South 123H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 7	10799.67	440282.30	625759.60	7311.00	RECTANGLE
LTP 7	25740.36	424852.80	625834.30	7311.00	RECTANGLE
BHL 7	25840.36	424752.80	625834.60	7311.00	RECTANGLE

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

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

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

**Background**

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

**Supporting Documentation**

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



Figure 1: Winch System attached to BOP Stack





Figure 2: BOP Winch System

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

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API STANDARD 53

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

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

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

No visible leaks.

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

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

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

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

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

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

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

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

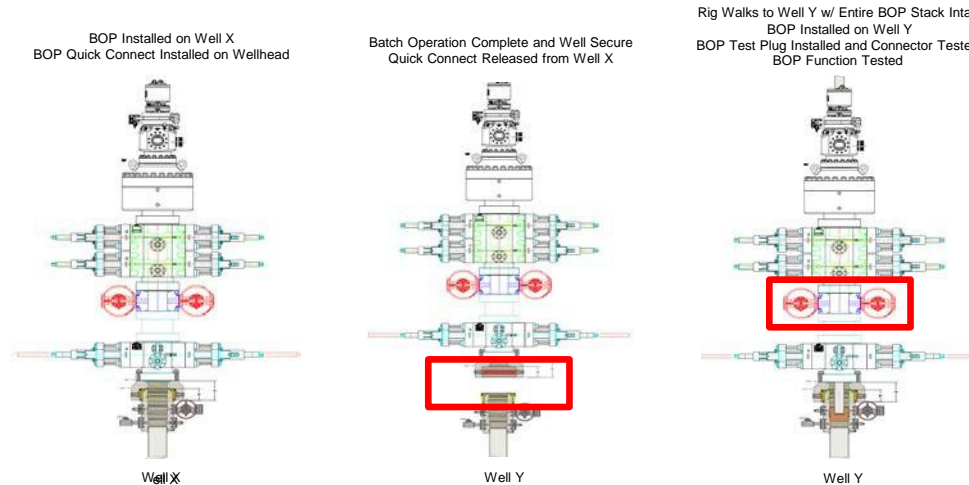
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

### **Procedures**

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

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

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



### **Summary**

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

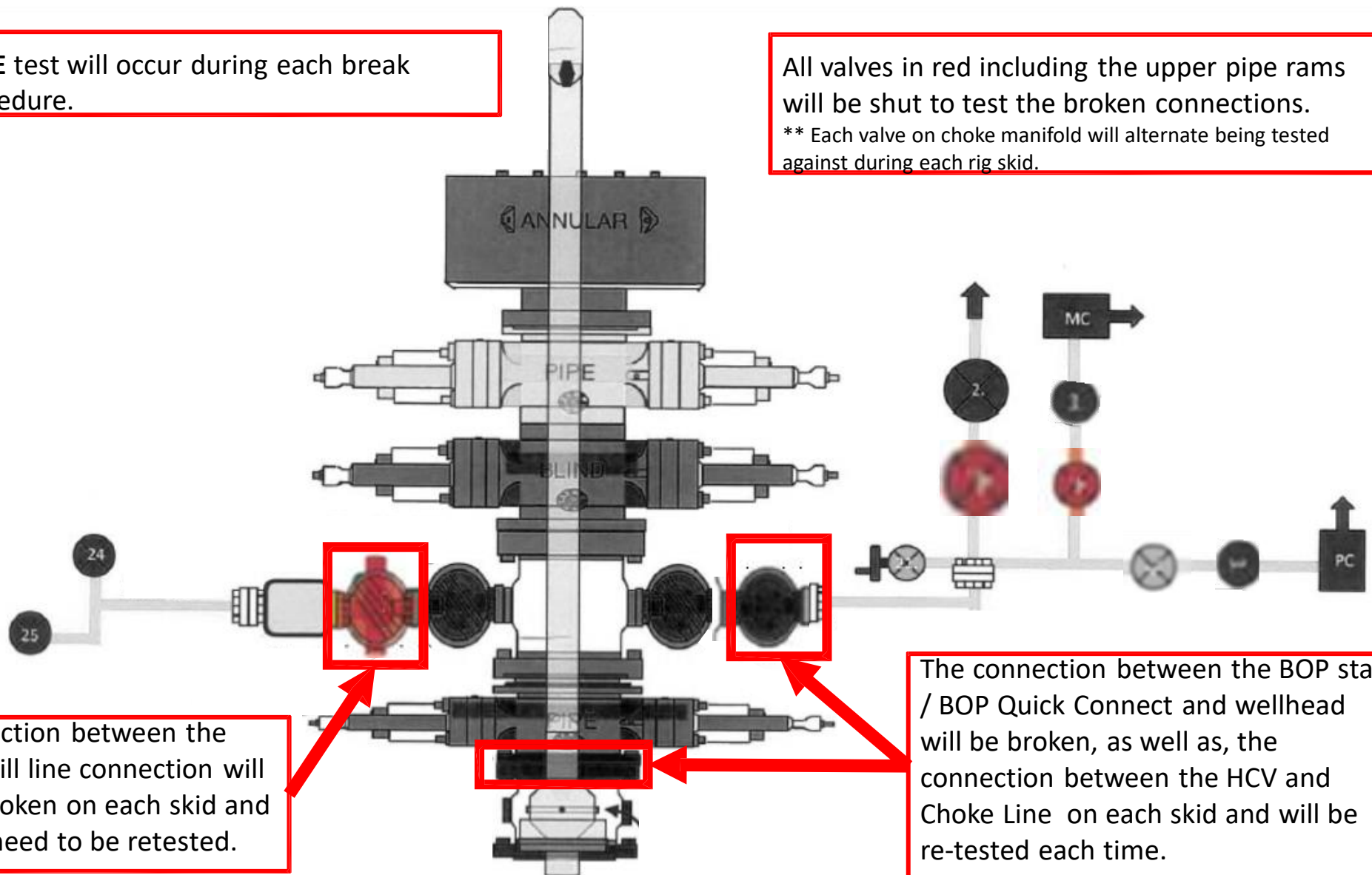
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

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

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

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



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

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



### 10,000 PSI Annular BOP Variance Request

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

#### 1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

8-1/2" Production Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

## 2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per 43.CFR.3172 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

### General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
  - a. SIDPP & SICP
  - b. Pit gain
  - c. Time
8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

#### General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
  - a. SIDPP & SICP
  - b. Pit gain
  - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

#### General Procedure While Running Production Casing

- a. Sound alarm (alert crew)
- b. Stab crossover and full-opening safety valve and close
- c. Space out string
- d. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- e. Confirm shut-in
- f. Notify toolpusher/company representative
- g. Read and record the following:
  - a. SIDPP & SICP
  - b. Pit gain
  - c. Time
- h. Regroup and identify forward plan
- i. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
  - a. SICP
  - b. Pit gain
  - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:
  - a. Perform flow check. If flowing, continue to (b).
  - b. Sound alarm (alert crew)
  - c. Stab full-opening safety valve and close
  - d. Space out drill string with tool joint just beneath the upper variable bore rams
  - e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
  - f. Confirm shut-in
  - g. Notify toolpusher/company representative
  - h. Read and record the following:
    - i. SIDPP & SICP
    - ii. Pit gain
    - iii. Time
  - i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
  - a. Sound alarm (alert crew)
  - b. Stab crossover and full-opening safety valve and close
  - c. Space out drill string with upset just beneath the upper variable bore rams
  - d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
  - e. Confirm shut-in
  - f. Notify toolpusher/company representative
  - g. Read and record the following:
    - i. SIDPP & SICP
    - ii. Pit gain
    - iii. Time

- h. Regroup and identify forward plan
  - 3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
    - a. Sound alarm (alert crew)
    - b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
    - c. If impossible to pull string clear of the stack:
    - d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
    - e. Space out drill string with tooljoint just beneath the upper variable bore ram
    - f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
    - g. Confirm shut-in
    - h. Notify toolpusher/company representative
    - i. Read and record the following:
      - i. SIDPP & SICP
      - ii. Pit gain
      - iii. Time
    - j. Regroup and identify forward plan

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

CONDITIONS  
  
Action 330413

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 330413
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	4/18/2024