

<b>Well Name:</b> POKER LAKE UNIT 19 DTD	<b>Well Location:</b> T24S / R30E / SEC 19 / NENW / 32.207172 / -103.921517	<b>County or Parish/State:</b> EDDY / NM
<b>Well Number:</b> 311H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM002860	<b>Unit or CA Name:</b> POKER LAKE UNIT	<b>Unit or CA Number:</b> NMNM71016X
<b>US Well Number:</b> 3001553986	<b>Operator:</b> XTO PERMIAN OPERATING LLC	

**Notice of Intent**

**Sundry ID:** 2781306

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 03/22/2024

**Time Sundry Submitted:** 03:37

**Date proposed operation will begin:** 04/12/2024

**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: 1123' FNL & 2471' FWL of Section 19-T24S-R30E 1051' FNL & 2395' FEL of Section 19-T24S-R30E FTP: 100' FSL & 2410' FEL of Section 18-T24S-R30E 100' FNL & 1771' FEL of Section 19-T24S-R30E LTP: 2310' FSL & 2410' FEL of Section 31-T23S-R30E 330' FSL & 1784' FEL of Section 31-T24S-R30E BHL: 2440' FSL & 2410' FEL of Section 31-T23S-R30E 230' FSL & 1784' FEL of Section 31-T24S-R30E Proposed total depth will change from 27748' MD; 9140' TVD (Wildcat Bone Spring) to 26674' MD; TVD 11319' (Wolfcamp C). 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\_311H\_Sundry\_Attachments\_20240322153650.pdf

**Well Name:** POKER LAKE UNIT 19  
DTD

**Well Location:** T24S / R30E / SEC 19 /  
NENW / 32.207172 / -103.921517

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

**Well Number:** 311H

**Type of Well:** OIL WELL

**Allottee or Tribe Name:**

**Lease Number:** NMNM002860

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

**Unit or CA Number:**  
NMNM71016X

**US Well Number:** 3001553986

**Operator:** XTO PERMIAN OPERATING  
LLC

### Conditions of Approval

#### Additional

Sec19\_24S\_30E\_NMP\_Sundry\_2781306\_Poker\_Lake\_Unit\_19\_DTD\_311H\_COAs\_20240404110209.pdf

### Operator

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

**Operator Electronic Signature:** TERRA SEBASTIAN

**Signed on:** MAR 22, 2024 03:37 PM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Regulatory Advisor

**Street Address:** 6401 HOLIDAY HILL ROAD SUITE 200

**City:** MIDLAND

**State:** TX

**Phone:** (432) 999-3107

**Email address:** TERRA.B.SEBASTIAN@EXXONMOBIL.COM

### Field

**Representative Name:**

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:**

**Email address:**

### BLM Point of Contact

**BLM POC Name:** CHRISTOPHER WALLS

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5752342234

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

**Disposition:** Approved

**Disposition Date:** 05/09/2024

**Signature:** Chris Walls

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

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

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

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

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

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

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

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

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

## Additional Information

### Additional Remarks

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

### Location of Well

0. SHL: NENW / 1123 FNL / 2471 FWL / TWSP: 24S / RANGE: 30E / SECTION: 19 / LAT: 32.207172 / LONG: -103.921517 ( TVD: 0 feet, MD: 0 feet )

PPP: SWSE / 330 FSL / 2410 FEL / TWSP: 24S / RANGE: 30E / SECTION: 7 / LAT: 32.22581 / LONG: -103.92002 ( TVD: 9140 feet, MD: 14900 feet )

PPP: SWSE / 100 FSL / 2410 FEL / TWSP: 24S / RANGE: 30E / SECTION: 18 / LAT: 32.210552 / LONG: -103.920003 ( TVD: 9140 feet, MD: 9600 feet )

BHL: NWSE / 2440 FSL / 2410 FEL / TWSP: 23S / RANGE: 30E / SECTION: 31 / LAT: 32.260669 / LONG: -103.919982 ( TVD: 9140 feet, MD: 27748 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 311H
<b>LOCATION:</b>	Sec 19-24S-30E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

Changes approved through engineering via **Sundry 2781306** 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 **13-3/8** 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 **9-5/8** 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 13-3/8" X 9-5/8" 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 9-5/8" casing to surface after the second stage BH to verify TOC.**

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

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

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

### **C. PRESSURE CONTROL**

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

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

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

### **Unit Wells**

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

### **Commercial Well Determination**

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

### **BOPE Break Testing Variance**

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

### **Offline Cementing**

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

## **GENERAL REQUIREMENTS**

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

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

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

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

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

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

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

**A. CASING**

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

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

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

## **B. PRESSURE CONTROL**

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

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

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

- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. **DRILLING MUD:** Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. **WASTE MATERIAL AND FLUIDS:** All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-015-53986</b>	<sup>2</sup> Pool Code <b>98220</b>	<sup>3</sup> Pool Name <b>Purple Sage Wolfcamp</b>
<sup>4</sup> Property Code <b>333976</b>	<sup>5</sup> Property Name <b>POKER LAKE UNIT 19 DTD</b>	
<sup>7</sup> OGRID No. <b>373075</b>	<sup>8</sup> Operator Name <b>XTO PERMIAN OPERATING, LLC</b>	
		<sup>6</sup> Well Number <b>311H</b>
		<sup>9</sup> Elevation <b>3,174'</b>

<sup>10</sup> Surface Location

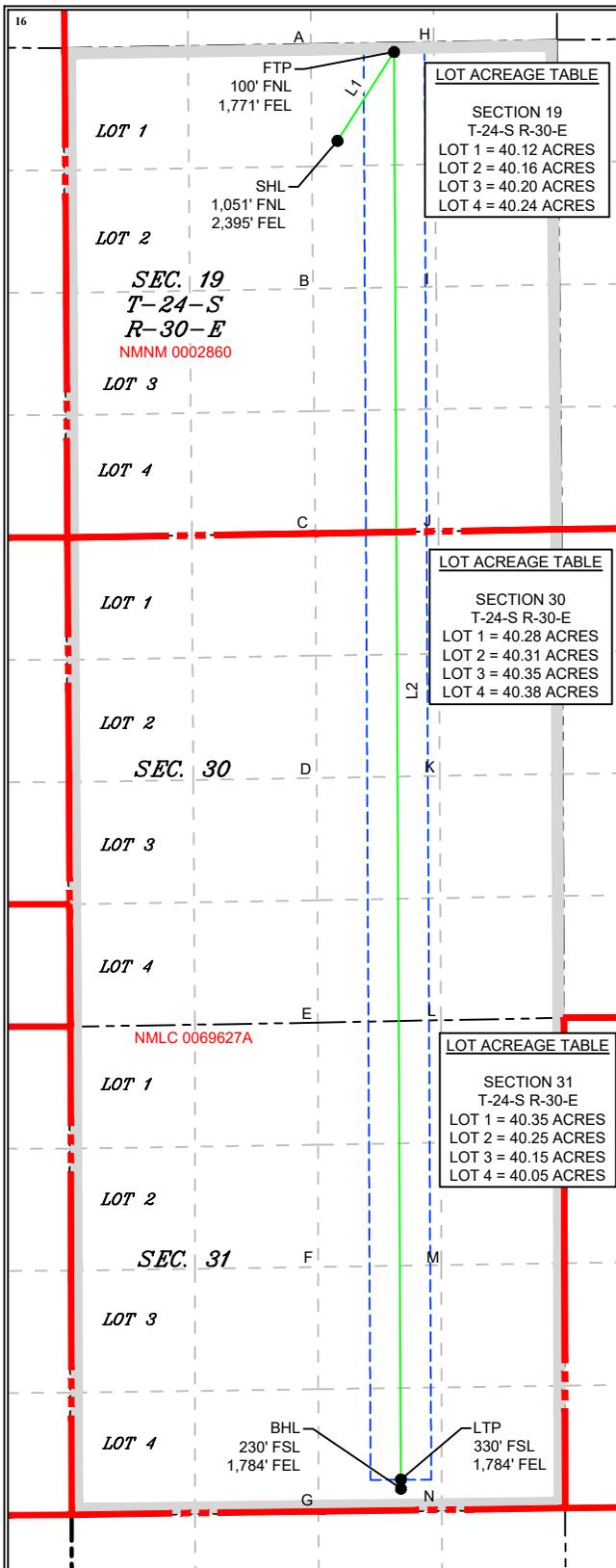
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>B</b>	<b>19</b>	<b>24S</b>	<b>30E</b>		<b>1,051</b>	<b>NORTH</b>	<b>2,395</b>	<b>EAST</b>	<b>EDDY</b>

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>O</b>	<b>31</b>	<b>24S</b>	<b>30E</b>		<b>230</b>	<b>SOUTH</b>	<b>1,784</b>	<b>EAST</b>	<b>EDDY</b>

<sup>12</sup> Dedicated Acres <b>1,922.84</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



LEGEND

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

LINE TABLE

LINE	AZIMUTH	LENGTH
L1	032°35'59"	1,141.08'
L2	179°43'17"	15,539.43'

COORDINATE TABLE

POINT	NAD 83 NME	NAD 27 NME
SHL	Y = 439,427.7 N X = 669,197.2 E LAT. = 32.207388 °N LONG. = 103.919935 °W	Y = 439,368.5 N X = 628,013.6 E LAT. = 32.207264 °N LONG. = 103.919447 °W
FTP	Y = 440,389.1 N X = 669,812.0 E LAT. = 32.210024 °N LONG. = 103.917935 °W	Y = 440,329.8 N X = 628,628.4 E LAT. = 32.209900 °N LONG. = 103.917447 °W
LTP	Y = 424,949.8 N X = 669,887.3 E LAT. = 32.167583 °N LONG. = 103.917885 °W	Y = 424,890.9 N X = 628,703.2 E LAT. = 32.167458 °N LONG. = 103.917398 °W
BHL	Y = 424,849.8 N X = 669,887.6 E LAT. = 32.167308 °N LONG. = 103.917885 °W	Y = 424,790.9 N X = 628,703.4 E LAT. = 32.167183 °N LONG. = 103.917399 °W

CORNER COORDINATES (NAD 83 NME)

A - Y = 440,474.2 N	A - X = 668,907.4 E
B - Y = 437,827.7 N	B - X = 668,932.1 E
C - Y = 435,182.2 N	C - X = 668,956.9 E
D - Y = 432,537.8 N	D - X = 668,971.2 E
E - Y = 429,892.6 N	E - X = 668,985.5 E
F - Y = 427,251.3 N	F - X = 668,987.7 E
G - Y = 424,607.8 N	G - X = 668,989.9 E
H - Y = 440,496.2 N	H - X = 670,244.6 E
I - Y = 437,850.2 N	I - X = 670,270.4 E
J - Y = 435,204.8 N	J - X = 670,296.6 E
K - Y = 432,560.0 N	K - X = 670,309.1 E
L - Y = 429,918.6 N	L - X = 670,321.8 E
M - Y = 427,271.5 N	M - X = 670,326.5 E
N - Y = 424,625.7 N	N - X = 670,331.2 E

CORNER COORDINATES (NAD 27 NME)

A - Y = 440,414.9 N	A - X = 627,723.8 E
B - Y = 437,768.5 N	B - X = 627,748.4 E
C - Y = 435,123.0 N	C - X = 627,773.1 E
D - Y = 432,478.7 N	D - X = 627,787.3 E
E - Y = 429,833.6 N	E - X = 627,801.5 E
F - Y = 427,192.4 N	F - X = 627,803.6 E
G - Y = 424,548.9 N	G - X = 627,805.8 E
H - Y = 440,436.9 N	H - X = 629,060.9 E
I - Y = 437,791.0 N	I - X = 629,086.7 E
J - Y = 435,145.6 N	J - X = 629,112.8 E
K - Y = 432,500.9 N	K - X = 629,125.2 E
L - Y = 429,859.6 N	L - X = 629,137.8 E
M - Y = 427,212.6 N	M - X = 629,142.4 E
N - Y = 424,566.8 N	N - X = 629,147.0 E

<sup>17</sup> OPERATOR CERTIFICATION

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

Terra Sebastian 3/19/24  
Signature Date

Terra Sebastian  
Printed Name

terra.b.sebastian@exxonmobil.com  
E-mail Address

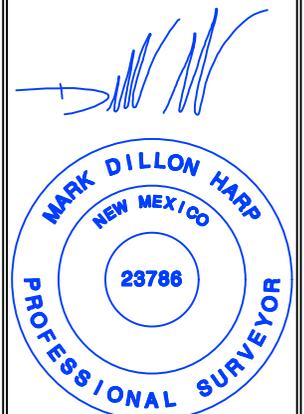
<sup>18</sup> SURVEYOR CERTIFICATION

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

02/09/2024

Date of Survey

Signature and Seal of  
Professional Surveyor:



MARK DILLON HARP 23786  
Certificate Number

RP 618.013003.05-51

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.  
 PLU 19 Dog Town Draw 311H  
 Projected TD: 26674.39' MD / 11319' TVD  
 SHL: 1051' FNL & 2395' FEL , Section 19, T24S, R30E  
 BHL: 230' FSL & 1784' FEL , 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	643'	Water
Top of Salt	1046'	Water
Base of Salt	3239'	Water
Delaware	3433'	Water
Brushy Canyon	5931'	Water/Oil/Gas
Bone Spring	7227'	Water
1st Bone Spring	8213'	Water/Oil/Gas
2nd Bone Spring	9031'	Water/Oil/Gas
3rd Bone Spring	10125'	Water/Oil/Gas
Wolfcamp	10516'	Water/Oil/Gas
Wolfcamp X	10537'	Water/Oil/Gas
Wolfcamp Y	10615'	Water/Oil/Gas
Wolfcamp A	10657'	Water/Oil/Gas
Wolfcamp B	10991'	Water/Oil/Gas
Wolfcamp C	11199'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>11319'</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 13.375 inch casing @ 743' (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 9.625 inch casing at 10527' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 26674.39 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 10227 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 743'	13.375	54.5	J-55	BTC	New	1.12	3.48	22.45
12.25	0' – 4000'	9.625	40	HC P-110	BTC	New	1.99	2.34	3.01
12.25	4000' – 10527'	9.625	40	HC L-80	BTC	New	1.44	1.70	3.51
8.5	0' – 10427'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.86	1.88
8.5	10427' - 26674.39'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.71	1.88

- XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing per this Sundry
- XTO requests to not utilize centralizers in the curve and lateral
- 9.625 Collapse analyzed using 50% evacuation based on regional experience.

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

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

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

#### 4. Cement Program

##### **Surface Casing: 13.375, 54.5 New BTC, J-55 casing to be set at +/- 743'**

Lead: 320 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft<sup>3</sup>/sx, 10.13 gal/sx water)

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

Top of Cement: Surface

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

##### **2nd Intermediate Casing: 9.625, 40 New casing to be set at +/- 10527'**

###### 1st Stage

Optional Lead: 1000 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 1330 sxs Class C (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 5931

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: 2090 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 (5931') 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-Premium, RY P-110 casing to be set at +/- 26674.39'**

Lead: 50 sxs NeoCem (mixed at 13.2 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 10227 feet

Tail: 3140 sxs VersaCem (mixed at 14.5 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 10727 feet

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

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

## 5. Pressure Control Equipment

Once the permanent WH is installed on the 13.375 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 10M Double Ram BOP. MASP should not exceed 3984 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 13.375, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 9.625, 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' - 743'	17.5	FW/Native	8.4-8.9	35-40	NC
743' - 10527'	12.25	FW / Cut Brine / Direct Emulsion	8.7-9.2	30-32	NC
10527' - 26674.39'	8.5	OBM	11-11.5	50-60	NC - 20

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

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

**7. Auxiliary Well Control and Monitoring Equipment**

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 13.375 casing.

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

Open hole logging will not be done on this well.

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

None Anticipated. BHT of 175 to 195 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 6474 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 311H

**Measured Depth:** 26674.39 ft

**TVD RKB:** 11319.00 ft

**Location**

**Cartographic Reference System:** New Mexico East - NAD 27

**Northing:** 439368.50 ft

**Easting:** 628013.60 ft

**RKB:** 3206.00 ft

**Ground Level:** 3174.00 ft

**North Reference:** Grid

**Convergence Angle:** 0.22 Deg

**Plan Sections** Poker Lake Unit 19 DTD South 311H

Measured			TVD			Build	Turn	Dogleg
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft) Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00
1749.33	12.99	32.60	1743.78	61.73	39.48	2.00	0.00	2.00
6174.96	12.99	32.60	6056.22	899.57	575.32	0.00	0.00	0.00
6824.29	0.00	0.00	6700.00	961.30	614.80	-2.00	0.00	2.00
10727.09	0.00	0.00	10602.80	961.30	614.80	0.00	0.00	0.00
11852.09	90.00	179.72	11319.00	245.11	618.27	8.00	0.00	8.00
12517.18	90.00	179.72	11319.00	-419.97	621.50	0.00	0.00	0.00 LTP 19
26674.39	90.00	179.72	11319.00	-14577.02	690.19	0.00	0.00	0.00 BHL 19

**Position Uncertainty** Poker Lake Unit 19 DTD South 311H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	of Bias (ft)	Error (ft)	Error (ft)	Azimuth (°)	Used
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	2.405	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	2.483	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	2.528	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	2.630	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	32.601	1199.980	5.279	0.000	4.232	0.000	2.686	0.000	0.000	5.300	4.209	130.439	MWD+IFR1+MS
1300.000	4.000	32.601	1299.838	6.030	0.000	4.621	0.000	2.745	0.000	0.000	6.080	4.569	132.552	MWD+IFR1+MS
1400.000	6.000	32.601	1399.452	6.710	0.000	5.005	0.000	2.810	0.000	0.000	6.789	4.926	133.543	MWD+IFR1+MS
1500.000	8.000	32.601	1498.702	7.336	0.000	5.385	0.000	2.883	0.000	0.000	7.446	5.283	134.115	MWD+IFR1+MS
1600.000	10.000	32.601	1597.465	7.920	0.000	5.763	0.000	2.966	0.000	0.000	8.062	5.639	134.489	MWD+IFR1+MS
1700.000	12.000	32.601	1695.623	8.470	0.000	6.138	0.000	3.060	0.000	0.000	8.646	5.997	134.755	MWD+IFR1+MS
1749.328	12.987	32.601	1743.783	8.618	0.000	6.313	0.000	3.094	0.000	0.000	8.813	6.173	134.728	MWD+IFR1+MS
1800.000	12.987	32.601	1793.158	8.757	0.000	6.491	0.000	3.131	0.000	0.000	8.949	6.355	134.700	MWD+IFR1+MS
1900.000	12.987	32.601	1890.601	9.035	0.000	6.857	0.000	3.213	0.000	0.000	9.220	6.725	134.843	MWD+IFR1+MS
2000.000	12.987	32.601	1988.043	9.330	0.000	7.235	0.000	3.299	0.000	0.000	9.510	7.103	-44.818	MWD+IFR1+MS
2100.000	12.987	32.601	2085.485	9.632	0.000	7.614	0.000	3.389	0.000	0.000	9.806	7.481	-44.487	MWD+IFR1+MS
2200.000	12.987	32.601	2182.928	9.940	0.000	7.993	0.000	3.482	0.000	0.000	10.109	7.859	-44.163	MWD+IFR1+MS
2300.000	12.987	32.601	2280.370	10.254	0.000	8.372	0.000	3.578	0.000	0.000	10.416	8.238	-43.846	MWD+IFR1+MS
2400.000	12.987	32.601	2377.812	10.573	0.000	8.751	0.000	3.677	0.000	0.000	10.729	8.616	-43.536	MWD+IFR1+MS
2500.000	12.987	32.601	2475.254	10.897	0.000	9.131	0.000	3.778	0.000	0.000	11.046	8.995	-43.233	MWD+IFR1+MS
2600.000	12.987	32.601	2572.697	11.225	0.000	9.511	0.000	3.882	0.000	0.000	11.367	9.375	-42.938	MWD+IFR1+MS
2700.000	12.987	32.601	2670.139	11.557	0.000	9.891	0.000	3.988	0.000	0.000	11.692	9.754	-42.649	MWD+IFR1+MS
2800.000	12.987	32.601	2767.581	11.893	0.000	10.271	0.000	4.096	0.000	0.000	12.021	10.134	-42.367	MWD+IFR1+MS
2900.000	12.987	32.601	2865.024	12.232	0.000	10.652	0.000	4.206	0.000	0.000	12.353	10.513	-42.092	MWD+IFR1+MS

3000.000	12.987	32.601	2962.466	12.574	0.000	11.032	0.000	4.318	0.000	0.000	12.687	10.893	-41.824	MWD+IFR1+MS
3100.000	12.987	32.601	3059.908	12.920	0.000	11.413	0.000	4.431	0.000	0.000	13.025	11.273	-41.562	MWD+IFR1+MS
3200.000	12.987	32.601	3157.350	13.267	0.000	11.794	0.000	4.547	0.000	0.000	13.364	11.653	-41.307	MWD+IFR1+MS
3300.000	12.987	32.601	3254.793	13.618	0.000	12.174	0.000	4.665	0.000	0.000	13.706	12.034	-41.058	MWD+IFR1+MS
3400.000	12.987	32.601	3352.235	13.970	0.000	12.555	0.000	4.784	0.000	0.000	14.051	12.414	-40.816	MWD+IFR1+MS
3500.000	12.987	32.601	3449.677	14.325	0.000	12.936	0.000	4.905	0.000	0.000	14.397	12.794	-40.581	MWD+IFR1+MS
3600.000	12.987	32.601	3547.119	14.681	0.000	13.317	0.000	5.027	0.000	0.000	14.745	13.175	-40.351	MWD+IFR1+MS
3700.000	12.987	32.601	3644.562	15.039	0.000	13.698	0.000	5.152	0.000	0.000	15.095	13.556	-40.128	MWD+IFR1+MS
3800.000	12.987	32.601	3742.004	15.399	0.000	14.079	0.000	5.277	0.000	0.000	15.446	13.936	-39.911	MWD+IFR1+MS
3900.000	12.987	32.601	3839.446	15.761	0.000	14.461	0.000	5.405	0.000	0.000	15.799	14.317	-39.700	MWD+IFR1+MS
4000.000	12.987	32.601	3936.889	16.123	0.000	14.842	0.000	5.534	0.000	0.000	16.153	14.698	-39.495	MWD+IFR1+MS
4100.000	12.987	32.601	4034.331	16.488	0.000	15.223	0.000	5.664	0.000	0.000	16.509	15.079	-39.296	MWD+IFR1+MS
4200.000	12.987	32.601	4131.773	16.853	0.000	15.604	0.000	5.797	0.000	0.000	16.865	15.460	-39.102	MWD+IFR1+MS
4300.000	12.987	32.601	4229.215	17.220	0.000	15.986	0.000	5.930	0.000	0.000	17.223	15.841	-38.915	MWD+IFR1+MS
4400.000	12.987	32.601	4326.658	17.588	0.000	16.367	0.000	6.066	0.000	0.000	17.582	16.223	-38.733	MWD+IFR1+MS
4500.000	12.987	32.601	4424.100	17.957	0.000	16.748	0.000	6.203	0.000	0.000	17.942	16.604	-38.556	MWD+IFR1+MS
4600.000	12.987	32.601	4521.542	18.326	0.000	17.130	0.000	6.341	0.000	0.000	18.303	16.985	-38.385	MWD+IFR1+MS
4700.000	12.987	32.601	4618.985	18.697	0.000	17.511	0.000	6.481	0.000	0.000	18.665	17.367	-38.220	MWD+IFR1+MS
4800.000	12.987	32.601	4716.427	19.069	0.000	17.893	0.000	6.623	0.000	0.000	19.027	17.748	-38.060	MWD+IFR1+MS
4900.000	12.987	32.601	4813.869	19.441	0.000	18.274	0.000	6.767	0.000	0.000	19.391	18.130	-37.906	MWD+IFR1+MS
5000.000	12.987	32.601	4911.311	19.814	0.000	18.656	0.000	6.912	0.000	0.000	19.755	18.511	-37.756	MWD+IFR1+MS
5100.000	12.987	32.601	5008.754	20.188	0.000	19.037	0.000	7.059	0.000	0.000	20.120	18.893	-37.612	MWD+IFR1+MS
5200.000	12.987	32.601	5106.196	20.563	0.000	19.419	0.000	7.207	0.000	0.000	20.485	19.274	-37.473	MWD+IFR1+MS
5300.000	12.987	32.601	5203.638	20.938	0.000	19.801	0.000	7.357	0.000	0.000	20.852	19.656	-37.340	MWD+IFR1+MS
5400.000	12.987	32.601	5301.080	21.314	0.000	20.182	0.000	7.509	0.000	0.000	21.218	20.038	-37.211	MWD+IFR1+MS
5500.000	12.987	32.601	5398.523	21.691	0.000	20.564	0.000	7.663	0.000	0.000	21.586	20.420	-37.087	MWD+IFR1+MS
5600.000	12.987	32.601	5495.965	22.068	0.000	20.945	0.000	7.818	0.000	0.000	21.954	20.802	-36.969	MWD+IFR1+MS
5700.000	12.987	32.601	5593.407	22.445	0.000	21.327	0.000	7.976	0.000	0.000	22.322	21.184	-36.855	MWD+IFR1+MS
5800.000	12.987	32.601	5690.850	22.823	0.000	21.709	0.000	8.135	0.000	0.000	22.691	21.566	-36.746	MWD+IFR1+MS
5900.000	12.987	32.601	5788.292	23.202	0.000	22.090	0.000	8.295	0.000	0.000	23.061	21.948	-36.642	MWD+IFR1+MS
6000.000	12.987	32.601	5885.734	23.581	0.000	22.472	0.000	8.458	0.000	0.000	23.430	22.330	-36.543	MWD+IFR1+MS
6100.000	12.987	32.601	5983.176	23.960	0.000	22.854	0.000	8.623	0.000	0.000	23.801	22.712	-36.449	MWD+IFR1+MS
6174.958	12.987	32.601	6056.217	24.242	0.000	23.137	0.000	8.747	0.000	0.000	24.075	22.997	-36.479	MWD+IFR1+MS

6200.000	12.486	32.601	6080.643	24.345	0.000	23.231	0.000	8.789	0.000	0.000	24.165	23.092	-36.527	MWD+IFR1+MS
6300.000	10.486	32.601	6178.635	24.774	0.000	23.604	0.000	8.958	0.000	0.000	24.564	23.468	-36.979	MWD+IFR1+MS
6400.000	8.486	32.601	6277.263	25.234	0.000	23.975	0.000	9.129	0.000	0.000	25.026	23.837	-37.714	MWD+IFR1+MS
6500.000	6.486	32.601	6376.406	25.655	0.000	24.340	0.000	9.291	0.000	0.000	25.481	24.200	-38.330	MWD+IFR1+MS
6600.000	4.486	32.601	6475.943	26.037	0.000	24.697	0.000	9.447	0.000	0.000	25.927	24.555	-38.843	MWD+IFR1+MS
6700.000	2.486	32.601	6575.753	26.380	0.000	25.048	0.000	9.597	0.000	0.000	26.364	24.903	-39.266	MWD+IFR1+MS
6800.000	0.486	32.601	6675.714	26.684	0.000	25.392	0.000	9.743	0.000	0.000	26.791	25.243	-39.609	MWD+IFR1+MS
6824.286	0.000	0.000	6700.000	25.964	0.000	26.252	0.000	9.778	0.000	0.000	26.869	25.325	-39.641	MWD+IFR1+MS
6900.000	0.000	0.000	6775.714	26.215	0.000	26.494	0.000	9.887	0.000	0.000	27.108	25.579	-39.740	MWD+IFR1+MS
7000.000	0.000	0.000	6875.714	26.547	0.000	26.818	0.000	10.034	0.000	0.000	27.429	25.915	-39.846	MWD+IFR1+MS
7100.000	0.000	0.000	6975.714	26.882	0.000	27.145	0.000	10.183	0.000	0.000	27.755	26.251	-39.963	MWD+IFR1+MS
7200.000	0.000	0.000	7075.714	27.217	0.000	27.472	0.000	10.336	0.000	0.000	28.081	26.588	-40.078	MWD+IFR1+MS
7300.000	0.000	0.000	7175.714	27.553	0.000	27.801	0.000	10.491	0.000	0.000	28.409	26.925	-40.191	MWD+IFR1+MS
7400.000	0.000	0.000	7275.714	27.889	0.000	28.130	0.000	10.649	0.000	0.000	28.737	27.263	-40.304	MWD+IFR1+MS
7500.000	0.000	0.000	7375.714	28.226	0.000	28.459	0.000	10.810	0.000	0.000	29.065	27.602	-40.415	MWD+IFR1+MS
7600.000	0.000	0.000	7475.714	28.564	0.000	28.790	0.000	10.974	0.000	0.000	29.395	27.941	-40.526	MWD+IFR1+MS
7700.000	0.000	0.000	7575.714	28.902	0.000	29.121	0.000	11.141	0.000	0.000	29.725	28.280	-40.635	MWD+IFR1+MS
7800.000	0.000	0.000	7675.714	29.240	0.000	29.453	0.000	11.311	0.000	0.000	30.056	28.620	-40.743	MWD+IFR1+MS
7900.000	0.000	0.000	7775.714	29.579	0.000	29.785	0.000	11.484	0.000	0.000	30.387	28.961	-40.850	MWD+IFR1+MS
8000.000	0.000	0.000	7875.714	29.919	0.000	30.118	0.000	11.660	0.000	0.000	30.719	29.301	-40.956	MWD+IFR1+MS
8100.000	0.000	0.000	7975.714	30.259	0.000	30.452	0.000	11.839	0.000	0.000	31.052	29.642	-41.060	MWD+IFR1+MS
8200.000	0.000	0.000	8075.714	30.599	0.000	30.786	0.000	12.021	0.000	0.000	31.385	29.984	-41.164	MWD+IFR1+MS
8300.000	0.000	0.000	8175.714	30.940	0.000	31.120	0.000	12.207	0.000	0.000	31.719	30.326	-41.267	MWD+IFR1+MS
8400.000	0.000	0.000	8275.714	31.281	0.000	31.456	0.000	12.395	0.000	0.000	32.053	30.668	-41.368	MWD+IFR1+MS
8500.000	0.000	0.000	8375.714	31.622	0.000	31.791	0.000	12.586	0.000	0.000	32.388	31.011	-41.469	MWD+IFR1+MS
8600.000	0.000	0.000	8475.714	31.964	0.000	32.128	0.000	12.781	0.000	0.000	32.723	31.354	-41.568	MWD+IFR1+MS
8700.000	0.000	0.000	8575.714	32.306	0.000	32.464	0.000	12.978	0.000	0.000	33.059	31.697	-41.667	MWD+IFR1+MS
8800.000	0.000	0.000	8675.714	32.649	0.000	32.801	0.000	13.179	0.000	0.000	33.395	32.041	-41.765	MWD+IFR1+MS
8900.000	0.000	0.000	8775.714	32.992	0.000	33.139	0.000	13.383	0.000	0.000	33.732	32.385	-41.861	MWD+IFR1+MS
9000.000	0.000	0.000	8875.714	33.335	0.000	33.477	0.000	13.589	0.000	0.000	34.069	32.729	-41.957	MWD+IFR1+MS
9100.000	0.000	0.000	8975.714	33.678	0.000	33.815	0.000	13.800	0.000	0.000	34.407	33.074	-42.052	MWD+IFR1+MS
9200.000	0.000	0.000	9075.714	34.022	0.000	34.154	0.000	14.013	0.000	0.000	34.745	33.419	-42.145	MWD+IFR1+MS
9300.000	0.000	0.000	9175.714	34.366	0.000	34.493	0.000	14.229	0.000	0.000	35.083	33.764	-42.238	MWD+IFR1+MS

9400.000	0.000	0.000	9275.714	34.711	0.000	34.833	0.000	14.448	0.000	0.000	35.422	34.109	-42.330	MWD+IFR1+MS
9500.000	0.000	0.000	9375.714	35.056	0.000	35.173	0.000	14.671	0.000	0.000	35.762	34.455	-42.421	MWD+IFR1+MS
9600.000	0.000	0.000	9475.714	35.401	0.000	35.513	0.000	14.897	0.000	0.000	36.101	34.801	-42.511	MWD+IFR1+MS
9700.000	0.000	0.000	9575.714	35.746	0.000	35.854	0.000	15.126	0.000	0.000	36.441	35.147	-42.600	MWD+IFR1+MS
9800.000	0.000	0.000	9675.714	36.091	0.000	36.195	0.000	15.358	0.000	0.000	36.782	35.493	-42.689	MWD+IFR1+MS
9900.000	0.000	0.000	9775.714	36.437	0.000	36.537	0.000	15.593	0.000	0.000	37.122	35.840	-42.776	MWD+IFR1+MS
10000.000	0.000	0.000	9875.714	36.783	0.000	36.878	0.000	15.831	0.000	0.000	37.464	36.187	-42.863	MWD+IFR1+MS
10100.000	0.000	0.000	9975.714	37.129	0.000	37.220	0.000	16.073	0.000	0.000	37.805	36.534	-42.949	MWD+IFR1+MS
10200.000	0.000	0.000	10075.714	37.476	0.000	37.563	0.000	16.318	0.000	0.000	38.147	36.881	-43.034	MWD+IFR1+MS
10300.000	0.000	0.000	10175.714	37.823	0.000	37.905	0.000	16.565	0.000	0.000	38.489	37.229	-43.118	MWD+IFR1+MS
10400.000	0.000	0.000	10275.714	38.169	0.000	38.248	0.000	16.817	0.000	0.000	38.831	37.576	-43.201	MWD+IFR1+MS
10500.000	0.000	0.000	10375.714	38.517	0.000	38.591	0.000	17.071	0.000	0.000	39.174	37.924	-43.284	MWD+IFR1+MS
10600.000	0.000	0.000	10475.714	38.864	0.000	38.935	0.000	17.328	0.000	0.000	39.516	38.272	-43.365	MWD+IFR1+MS
10700.000	0.000	0.000	10575.714	39.211	0.000	39.279	0.000	17.589	0.000	0.000	39.860	38.621	-43.446	MWD+IFR1+MS
10727.086	0.000	0.000	10602.800	39.304	0.000	39.371	0.000	17.660	0.000	0.000	39.951	38.715	-43.466	MWD+IFR1+MS
10800.000	5.833	179.722	10675.588	39.115	0.000	39.609	-0.000	17.851	0.000	0.000	40.215	38.988	134.871	MWD+IFR1+MS
10900.000	13.833	179.722	10774.039	39.038	0.000	39.901	-0.000	18.160	0.000	0.000	41.025	39.521	119.652	MWD+IFR1+MS
11000.000	21.833	179.722	10869.157	38.668	0.000	40.171	-0.000	18.613	0.000	0.000	42.089	39.912	109.660	MWD+IFR1+MS
11100.000	29.833	179.722	10959.090	37.791	0.000	40.414	-0.000	19.260	0.000	0.000	43.063	40.200	105.333	MWD+IFR1+MS
11200.000	37.833	179.722	11042.089	36.502	0.000	40.629	-0.000	20.135	0.000	0.000	43.885	40.434	103.216	MWD+IFR1+MS
11300.000	45.833	179.722	11116.538	34.930	0.000	40.815	-0.000	21.242	0.000	0.000	44.534	40.626	102.146	MWD+IFR1+MS
11400.000	53.833	179.722	11180.987	33.237	0.000	40.970	-0.000	22.560	0.000	0.000	45.014	40.779	101.668	MWD+IFR1+MS
11500.000	61.833	179.722	11234.182	31.625	0.000	41.094	-0.000	24.048	0.000	0.000	45.339	40.896	101.573	MWD+IFR1+MS
11600.000	69.833	179.722	11275.089	30.324	0.000	41.187	-0.000	25.653	0.000	0.000	45.531	40.979	101.735	MWD+IFR1+MS
11700.000	77.833	179.722	11302.910	29.565	0.000	41.249	-0.000	27.318	0.000	0.000	45.624	41.028	102.060	MWD+IFR1+MS
11800.000	85.833	179.722	11317.104	29.534	0.000	41.281	-0.000	28.986	0.000	0.000	45.656	41.045	102.440	MWD+IFR1+MS
11852.086	90.000	179.722	11318.997	29.307	0.000	41.283	-0.000	29.307	0.000	0.000	45.664	41.041	102.604	MWD+IFR1+MS
11900.000	90.000	179.722	11318.997	29.416	0.000	41.282	-0.000	29.416	0.000	0.000	45.670	41.033	102.751	MWD+IFR1+MS
12000.000	90.000	179.722	11318.997	29.609	0.000	41.294	-0.000	29.609	0.000	0.000	45.685	41.032	103.091	MWD+IFR1+MS
12100.000	90.000	179.722	11318.997	29.823	0.000	41.323	-0.000	29.823	0.000	0.000	45.701	41.046	103.471	MWD+IFR1+MS
12200.000	90.000	179.722	11318.997	30.057	0.000	41.365	-0.000	30.057	0.000	0.000	45.719	41.072	103.888	MWD+IFR1+MS
12300.000	90.000	179.722	11318.997	30.309	0.000	41.422	-0.000	30.309	0.000	0.000	45.739	41.112	104.344	MWD+IFR1+MS
12400.000	90.000	179.722	11318.997	30.579	0.000	41.493	-0.000	30.579	0.000	0.000	45.761	41.164	104.844	MWD+IFR1+MS

12500.000	90.000	179.722	11318.997	30.867	0.000	41.578	-0.000	30.867	0.000	0.000	45.785	41.228	105.392	MWD+IFR1+MS
12517.175	90.000	179.722	11318.997	30.917	0.000	41.592	-0.000	30.917	0.000	0.000	45.789	41.240	105.487	MWD+IFR1+MS
12600.000	90.000	179.722	11318.997	31.167	0.000	41.672	-0.000	31.167	0.000	0.000	45.811	41.301	105.976	MWD+IFR1+MS
12700.000	90.000	179.722	11318.997	31.488	0.000	41.784	-0.000	31.488	0.000	0.000	45.840	41.389	106.630	MWD+IFR1+MS
12800.000	90.000	179.722	11318.997	31.825	0.000	41.910	-0.000	31.825	0.000	0.000	45.872	41.489	107.350	MWD+IFR1+MS
12900.000	90.000	179.722	11318.997	32.179	0.000	42.049	-0.000	32.179	0.000	0.000	45.907	41.600	108.141	MWD+IFR1+MS
13000.000	90.000	179.722	11318.997	32.547	0.000	42.203	-0.000	32.547	0.000	0.000	45.945	41.721	109.010	MWD+IFR1+MS
13100.000	90.000	179.722	11318.997	32.930	0.000	42.369	-0.000	32.930	0.000	0.000	45.987	41.853	109.967	MWD+IFR1+MS
13200.000	90.000	179.722	11318.997	33.327	0.000	42.549	-0.000	33.327	0.000	0.000	46.034	41.993	111.022	MWD+IFR1+MS
13300.000	90.000	179.722	11318.997	33.737	0.000	42.741	-0.000	33.737	0.000	0.000	46.086	42.143	112.186	MWD+IFR1+MS
13400.000	90.000	179.722	11318.997	34.161	0.000	42.947	-0.000	34.161	0.000	0.000	46.144	42.300	113.470	MWD+IFR1+MS
13500.000	90.000	179.722	11318.997	34.597	0.000	43.164	-0.000	34.597	0.000	0.000	46.208	42.463	114.886	MWD+IFR1+MS
13600.000	90.000	179.722	11318.997	35.046	0.000	43.395	-0.000	35.046	0.000	0.000	46.280	42.632	116.447	MWD+IFR1+MS
13700.000	90.000	179.722	11318.997	35.506	0.000	43.637	-0.000	35.506	0.000	0.000	46.360	42.806	118.164	MWD+IFR1+MS
13800.000	90.000	179.722	11318.997	35.977	0.000	43.892	-0.000	35.977	0.000	0.000	46.450	42.982	120.045	MWD+IFR1+MS
13900.000	90.000	179.722	11318.997	36.460	0.000	44.158	-0.000	36.460	0.000	0.000	46.552	43.159	122.095	MWD+IFR1+MS
14000.000	90.000	179.722	11318.997	36.952	0.000	44.436	-0.000	36.952	0.000	0.000	46.667	43.335	124.314	MWD+IFR1+MS
14100.000	90.000	179.722	11318.997	37.455	0.000	44.726	-0.000	37.455	0.000	0.000	46.796	43.509	126.690	MWD+IFR1+MS
14200.000	90.000	179.722	11318.997	37.967	0.000	45.026	-0.000	37.967	0.000	0.000	46.941	43.679	129.205	MWD+IFR1+MS
14300.000	90.000	179.722	11318.997	38.488	0.000	45.337	-0.000	38.488	0.000	0.000	47.103	43.842	131.828	MWD+IFR1+MS
14400.000	90.000	179.722	11318.997	39.018	0.000	45.660	-0.000	39.018	0.000	0.000	47.285	43.998	134.519	MWD+IFR1+MS
14500.000	90.000	179.722	11318.997	39.557	0.000	45.992	-0.000	39.557	0.000	0.000	47.486	44.146	-42.769	MWD+IFR1+MS
14600.000	90.000	179.722	11318.997	40.103	0.000	46.335	-0.000	40.103	0.000	0.000	47.708	44.283	-40.086	MWD+IFR1+MS
14700.000	90.000	179.722	11318.997	40.658	0.000	46.688	-0.000	40.658	0.000	0.000	47.950	44.411	-37.476	MWD+IFR1+MS
14800.000	90.000	179.722	11318.997	41.220	0.000	47.051	-0.000	41.220	0.000	0.000	48.213	44.530	-34.980	MWD+IFR1+MS
14900.000	90.000	179.722	11318.997	41.789	0.000	47.423	-0.000	41.789	0.000	0.000	48.495	44.639	-32.624	MWD+IFR1+MS
15000.000	90.000	179.722	11318.997	42.365	0.000	47.805	-0.000	42.365	0.000	0.000	48.796	44.739	-30.428	MWD+IFR1+MS
15100.000	90.000	179.722	11318.997	42.948	0.000	48.196	-0.000	42.948	0.000	0.000	49.114	44.831	-28.400	MWD+IFR1+MS
15200.000	90.000	179.722	11318.997	43.537	0.000	48.595	-0.000	43.537	0.000	0.000	49.449	44.916	-26.538	MWD+IFR1+MS
15300.000	90.000	179.722	11318.997	44.132	0.000	49.004	-0.000	44.132	0.000	0.000	49.800	44.995	-24.838	MWD+IFR1+MS
15400.000	90.000	179.722	11318.997	44.733	0.000	49.421	-0.000	44.733	0.000	0.000	50.166	45.068	-23.290	MWD+IFR1+MS
15500.000	90.000	179.722	11318.997	45.339	0.000	49.846	-0.000	45.339	0.000	0.000	50.545	45.136	-21.884	MWD+IFR1+MS
15600.000	90.000	179.722	11318.997	45.951	0.000	50.279	-0.000	45.951	0.000	0.000	50.936	45.201	-20.605	MWD+IFR1+MS

15700.000	90.000	179.722	11318.997	46.569	0.000	50.720	-0.000	46.569	0.000	0.000	51.340	45.262	-19.443	MWD+IFR1+MS
15800.000	90.000	179.722	11318.997	47.191	0.000	51.169	-0.000	47.191	0.000	0.000	51.755	45.319	-18.386	MWD+IFR1+MS
15900.000	90.000	179.722	11318.997	47.818	0.000	51.625	-0.000	47.818	0.000	0.000	52.181	45.375	-17.423	MWD+IFR1+MS
16000.000	90.000	179.722	11318.997	48.449	0.000	52.089	-0.000	48.449	0.000	0.000	52.617	45.428	-16.543	MWD+IFR1+MS
16100.000	90.000	179.722	11318.997	49.085	0.000	52.559	-0.000	49.085	0.000	0.000	53.062	45.479	-15.738	MWD+IFR1+MS
16200.000	90.000	179.722	11318.997	49.725	0.000	53.036	-0.000	49.725	0.000	0.000	53.516	45.529	-15.001	MWD+IFR1+MS
16300.000	90.000	179.722	11318.997	50.370	0.000	53.521	-0.000	50.370	0.000	0.000	53.979	45.578	-14.323	MWD+IFR1+MS
16400.000	90.000	179.722	11318.997	51.018	0.000	54.011	-0.000	51.018	0.000	0.000	54.450	45.625	-13.699	MWD+IFR1+MS
16500.000	90.000	179.722	11318.997	51.670	0.000	54.508	-0.000	51.670	0.000	0.000	54.929	45.672	-13.123	MWD+IFR1+MS
16600.000	90.000	179.722	11318.997	52.325	0.000	55.011	-0.000	52.325	0.000	0.000	55.415	45.718	-12.590	MWD+IFR1+MS
16700.000	90.000	179.722	11318.997	52.985	0.000	55.520	-0.000	52.985	0.000	0.000	55.909	45.763	-12.096	MWD+IFR1+MS
16800.000	90.000	179.722	11318.997	53.647	0.000	56.035	-0.000	53.647	0.000	0.000	56.409	45.808	-11.637	MWD+IFR1+MS
16900.000	90.000	179.722	11318.997	54.313	0.000	56.556	-0.000	54.313	0.000	0.000	56.916	45.852	-11.210	MWD+IFR1+MS
17000.000	90.000	179.722	11318.997	54.982	0.000	57.082	-0.000	54.982	0.000	0.000	57.430	45.896	-10.811	MWD+IFR1+MS
17100.000	90.000	179.722	11318.997	55.654	0.000	57.613	-0.000	55.654	0.000	0.000	57.949	45.940	-10.439	MWD+IFR1+MS
17200.000	90.000	179.722	11318.997	56.329	0.000	58.150	-0.000	56.329	0.000	0.000	58.475	45.984	-10.090	MWD+IFR1+MS
17300.000	90.000	179.722	11318.997	57.006	0.000	58.692	-0.000	57.006	0.000	0.000	59.006	46.027	-9.764	MWD+IFR1+MS
17400.000	90.000	179.722	11318.997	57.687	0.000	59.239	-0.000	57.687	0.000	0.000	59.543	46.071	-9.457	MWD+IFR1+MS
17500.000	90.000	179.722	11318.997	58.370	0.000	59.790	-0.000	58.370	0.000	0.000	60.086	46.115	-9.168	MWD+IFR1+MS
17600.000	90.000	179.722	11318.997	59.056	0.000	60.346	-0.000	59.056	0.000	0.000	60.633	46.159	-8.895	MWD+IFR1+MS
17700.000	90.000	179.722	11318.997	59.744	0.000	60.907	-0.000	59.744	0.000	0.000	61.186	46.203	-8.638	MWD+IFR1+MS
17800.000	90.000	179.722	11318.997	60.434	0.000	61.472	-0.000	60.434	0.000	0.000	61.743	46.247	-8.396	MWD+IFR1+MS
17900.000	90.000	179.722	11318.997	61.127	0.000	62.042	-0.000	61.127	0.000	0.000	62.305	46.291	-8.166	MWD+IFR1+MS
18000.000	90.000	179.722	11318.997	61.821	0.000	62.615	-0.000	61.821	0.000	0.000	62.872	46.335	-7.948	MWD+IFR1+MS
18100.000	90.000	179.722	11318.997	62.518	0.000	63.193	-0.000	62.518	0.000	0.000	63.443	46.380	-7.741	MWD+IFR1+MS
18200.000	90.000	179.722	11318.997	63.217	0.000	63.775	-0.000	63.217	0.000	0.000	64.018	46.425	-7.545	MWD+IFR1+MS
18300.000	90.000	179.722	11318.997	63.918	0.000	64.360	-0.000	63.918	0.000	0.000	64.597	46.470	-7.358	MWD+IFR1+MS
18400.000	90.000	179.722	11318.997	64.621	0.000	64.949	-0.000	64.621	0.000	0.000	65.181	46.516	-7.181	MWD+IFR1+MS
18500.000	90.000	179.722	11318.997	65.326	0.000	65.542	-0.000	65.326	0.000	0.000	65.768	46.562	-7.011	MWD+IFR1+MS
18600.000	90.000	179.722	11318.997	66.033	0.000	66.139	-0.000	66.033	0.000	0.000	66.359	46.608	-6.850	MWD+IFR1+MS
18700.000	90.000	179.722	11318.997	66.741	0.000	66.739	-0.000	66.741	0.000	0.000	66.954	46.654	-6.695	MWD+IFR1+MS
18800.000	90.000	179.722	11318.997	67.451	0.000	67.342	-0.000	67.451	0.000	0.000	67.552	46.701	-6.548	MWD+IFR1+MS
18900.000	90.000	179.722	11318.997	68.163	0.000	67.948	-0.000	68.163	0.000	0.000	68.154	46.748	-6.406	MWD+IFR1+MS

19000.000	90.000	179.722	11318.997	68.876	0.000	68.558	-0.000	68.876	0.000	0.000	68.759	46.796	-6.271	MWD+IFR1+MS
19100.000	90.000	179.722	11318.997	69.591	0.000	69.171	-0.000	69.591	0.000	0.000	69.368	46.844	-6.142	MWD+IFR1+MS
19200.000	90.000	179.722	11318.997	70.307	0.000	69.787	-0.000	70.307	0.000	0.000	69.980	46.893	-6.017	MWD+IFR1+MS
19300.000	90.000	179.722	11318.997	71.025	0.000	70.405	-0.000	71.025	0.000	0.000	70.594	46.941	-5.898	MWD+IFR1+MS
19400.000	90.000	179.722	11318.997	71.744	0.000	71.027	-0.000	71.744	0.000	0.000	71.212	46.991	-5.784	MWD+IFR1+MS
19500.000	90.000	179.722	11318.997	72.465	0.000	71.651	-0.000	72.465	0.000	0.000	71.833	47.040	-5.673	MWD+IFR1+MS
19600.000	90.000	179.722	11318.997	73.187	0.000	72.278	-0.000	73.187	0.000	0.000	72.456	47.090	-5.567	MWD+IFR1+MS
19700.000	90.000	179.722	11318.997	73.910	0.000	72.908	-0.000	73.910	0.000	0.000	73.083	47.141	-5.465	MWD+IFR1+MS
19800.000	90.000	179.722	11318.997	74.634	0.000	73.541	-0.000	74.634	0.000	0.000	73.712	47.192	-5.367	MWD+IFR1+MS
19900.000	90.000	179.722	11318.997	75.360	0.000	74.175	-0.000	75.360	0.000	0.000	74.343	47.243	-5.272	MWD+IFR1+MS
20000.000	90.000	179.722	11318.997	76.087	0.000	74.813	-0.000	76.087	0.000	0.000	74.978	47.295	-5.181	MWD+IFR1+MS
20100.000	90.000	179.722	11318.997	76.814	0.000	75.452	-0.000	76.814	0.000	0.000	75.614	47.347	-5.093	MWD+IFR1+MS
20200.000	90.000	179.722	11318.997	77.543	0.000	76.094	-0.000	77.543	0.000	0.000	76.253	47.400	-5.007	MWD+IFR1+MS
20300.000	90.000	179.722	11318.997	78.274	0.000	76.739	-0.000	78.274	0.000	0.000	76.895	47.453	-4.925	MWD+IFR1+MS
20400.000	90.000	179.722	11318.997	79.005	0.000	77.385	-0.000	79.005	0.000	0.000	77.539	47.506	-4.845	MWD+IFR1+MS
20500.000	90.000	179.722	11318.997	79.737	0.000	78.034	-0.000	79.737	0.000	0.000	78.185	47.560	-4.769	MWD+IFR1+MS
20600.000	90.000	179.722	11318.997	80.470	0.000	78.684	-0.000	80.470	0.000	0.000	78.833	47.615	-4.694	MWD+IFR1+MS
20700.000	90.000	179.722	11318.997	81.204	0.000	79.337	-0.000	81.204	0.000	0.000	79.483	47.670	-4.622	MWD+IFR1+MS
20800.000	90.000	179.722	11318.997	81.939	0.000	79.992	-0.000	81.939	0.000	0.000	80.136	47.725	-4.552	MWD+IFR1+MS
20900.000	90.000	179.722	11318.997	82.675	0.000	80.649	-0.000	82.675	0.000	0.000	80.790	47.781	-4.484	MWD+IFR1+MS
21000.000	90.000	179.722	11318.997	83.412	0.000	81.307	-0.000	83.412	0.000	0.000	81.446	47.837	-4.419	MWD+IFR1+MS
21100.000	90.000	179.722	11318.997	84.150	0.000	81.968	-0.000	84.150	0.000	0.000	82.105	47.894	-4.355	MWD+IFR1+MS
21200.000	90.000	179.722	11318.997	84.888	0.000	82.630	-0.000	84.888	0.000	0.000	82.765	47.951	-4.293	MWD+IFR1+MS
21300.000	90.000	179.722	11318.997	85.628	0.000	83.294	-0.000	85.628	0.000	0.000	83.427	48.009	-4.233	MWD+IFR1+MS
21400.000	90.000	179.722	11318.997	86.368	0.000	83.960	-0.000	86.368	0.000	0.000	84.091	48.067	-4.175	MWD+IFR1+MS
21500.000	90.000	179.722	11318.997	87.109	0.000	84.627	-0.000	87.109	0.000	0.000	84.756	48.126	-4.118	MWD+IFR1+MS
21600.000	90.000	179.722	11318.997	87.851	0.000	85.296	-0.000	87.851	0.000	0.000	85.423	48.185	-4.063	MWD+IFR1+MS
21700.000	90.000	179.722	11318.997	88.593	0.000	85.967	-0.000	88.593	0.000	0.000	86.092	48.244	-4.010	MWD+IFR1+MS
21800.000	90.000	179.722	11318.997	89.336	0.000	86.639	-0.000	89.336	0.000	0.000	86.763	48.304	-3.957	MWD+IFR1+MS
21900.000	90.000	179.722	11318.997	90.080	0.000	87.313	-0.000	90.080	0.000	0.000	87.435	48.365	-3.907	MWD+IFR1+MS
22000.000	90.000	179.722	11318.997	90.825	0.000	87.989	-0.000	90.825	0.000	0.000	88.109	48.426	-3.857	MWD+IFR1+MS
22100.000	90.000	179.722	11318.997	91.570	0.000	88.665	-0.000	91.570	0.000	0.000	88.784	48.487	-3.809	MWD+IFR1+MS
22200.000	90.000	179.722	11318.997	92.316	0.000	89.344	-0.000	92.316	0.000	0.000	89.460	48.549	-3.763	MWD+IFR1+MS

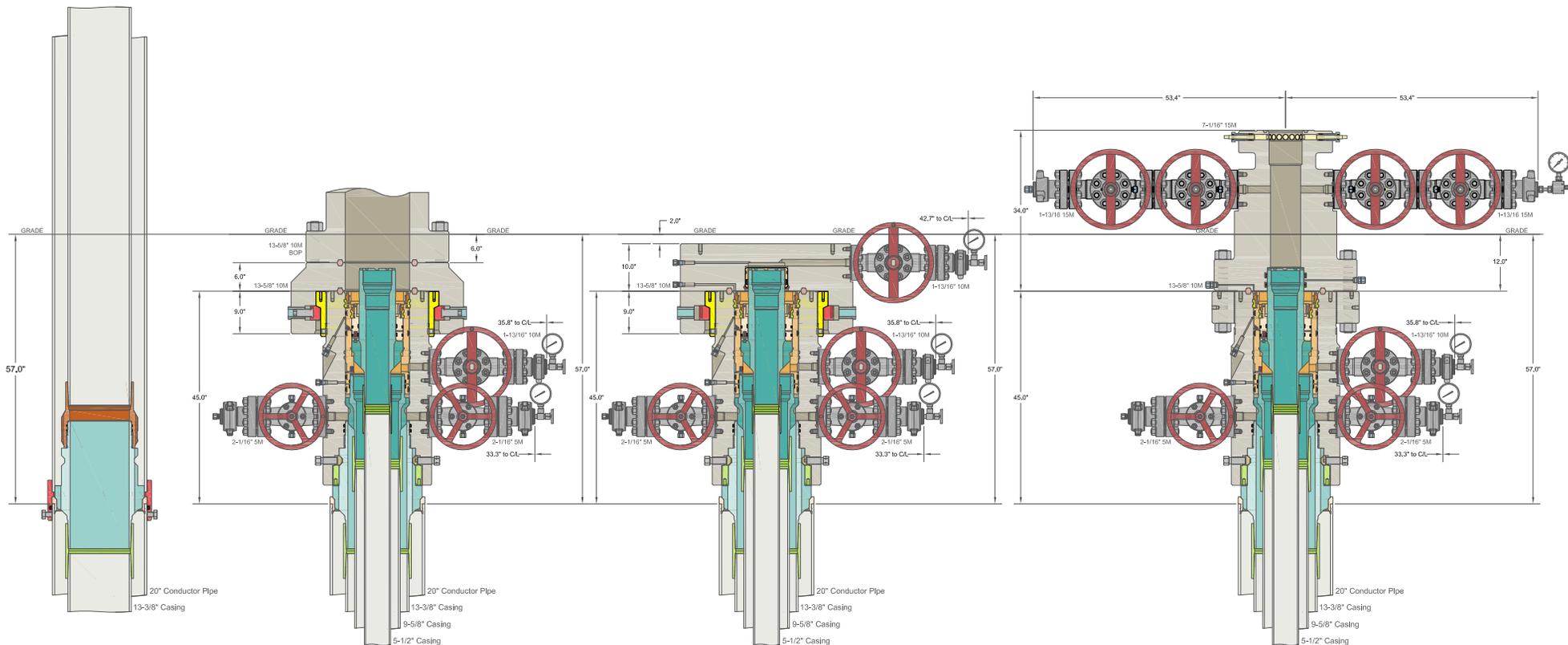
22300.000	90.000	179.722	11318.997	93.063	0.000	90.023	-0.000	93.063	0.000	0.000	90.138	48.611	-3.717	MWD+IFR1+MS
22400.000	90.000	179.722	11318.997	93.810	0.000	90.704	-0.000	93.810	0.000	0.000	90.818	48.674	-3.673	MWD+IFR1+MS
22500.000	90.000	179.722	11318.997	94.558	0.000	91.387	-0.000	94.558	0.000	0.000	91.499	48.737	-3.629	MWD+IFR1+MS
22600.000	90.000	179.722	11318.997	95.306	0.000	92.070	-0.000	95.306	0.000	0.000	92.181	48.801	-3.587	MWD+IFR1+MS
22700.000	90.000	179.722	11318.997	96.055	0.000	92.755	-0.000	96.055	0.000	0.000	92.864	48.865	-3.546	MWD+IFR1+MS
22800.000	90.000	179.722	11318.997	96.804	0.000	93.441	-0.000	96.804	0.000	0.000	93.549	48.930	-3.505	MWD+IFR1+MS
22900.000	90.000	179.722	11318.997	97.555	0.000	94.129	-0.000	97.555	0.000	0.000	94.235	48.995	-3.466	MWD+IFR1+MS
23000.000	90.000	179.722	11318.997	98.305	0.000	94.817	-0.000	98.305	0.000	0.000	94.923	49.060	-3.428	MWD+IFR1+MS
23100.000	90.000	179.722	11318.997	99.056	0.000	95.507	-0.000	99.056	0.000	0.000	95.611	49.126	-3.390	MWD+IFR1+MS
23200.000	90.000	179.722	11318.997	99.808	0.000	96.198	-0.000	99.808	0.000	0.000	96.301	49.193	-3.354	MWD+IFR1+MS
23300.000	90.000	179.722	11318.997	100.560	0.000	96.890	-0.000	100.560	0.000	0.000	96.991	49.260	-3.318	MWD+IFR1+MS
23400.000	90.000	179.722	11318.997	101.313	0.000	97.583	-0.000	101.313	0.000	0.000	97.683	49.327	-3.283	MWD+IFR1+MS
23500.000	90.000	179.722	11318.997	102.066	0.000	98.278	-0.000	102.066	0.000	0.000	98.376	49.395	-3.249	MWD+IFR1+MS
23600.000	90.000	179.722	11318.997	102.820	0.000	98.973	-0.000	102.820	0.000	0.000	99.070	49.463	-3.215	MWD+IFR1+MS
23700.000	90.000	179.722	11318.997	103.574	0.000	99.669	-0.000	103.574	0.000	0.000	99.766	49.532	-3.183	MWD+IFR1+MS
23800.000	90.000	179.722	11318.997	104.328	0.000	100.366	-0.000	104.328	0.000	0.000	100.462	49.601	-3.151	MWD+IFR1+MS
23900.000	90.000	179.722	11318.997	105.083	0.000	101.065	-0.000	105.083	0.000	0.000	101.159	49.670	-3.119	MWD+IFR1+MS
24000.000	90.000	179.722	11318.997	105.839	0.000	101.764	-0.000	105.839	0.000	0.000	101.857	49.740	-3.089	MWD+IFR1+MS
24100.000	90.000	179.722	11318.997	106.595	0.000	102.464	-0.000	106.595	0.000	0.000	102.556	49.811	-3.059	MWD+IFR1+MS
24200.000	90.000	179.722	11318.997	107.351	0.000	103.165	-0.000	107.351	0.000	0.000	103.256	49.882	-3.029	MWD+IFR1+MS
24300.000	90.000	179.722	11318.997	108.108	0.000	103.867	-0.000	108.108	0.000	0.000	103.958	49.953	-3.001	MWD+IFR1+MS
24400.000	90.000	179.722	11318.997	108.865	0.000	104.570	-0.000	108.865	0.000	0.000	104.659	50.025	-2.972	MWD+IFR1+MS
24500.000	90.000	179.722	11318.997	109.622	0.000	105.274	-0.000	109.622	0.000	0.000	105.362	50.097	-2.945	MWD+IFR1+MS
24600.000	90.000	179.722	11318.997	110.380	0.000	105.979	-0.000	110.380	0.000	0.000	106.066	50.170	-2.918	MWD+IFR1+MS
24700.000	90.000	179.722	11318.997	111.138	0.000	106.684	-0.000	111.138	0.000	0.000	106.771	50.243	-2.891	MWD+IFR1+MS
24800.000	90.000	179.722	11318.997	111.897	0.000	107.391	-0.000	111.897	0.000	0.000	107.476	50.316	-2.865	MWD+IFR1+MS
24900.000	90.000	179.722	11318.997	112.656	0.000	108.098	-0.000	112.656	0.000	0.000	108.182	50.390	-2.840	MWD+IFR1+MS
25000.000	90.000	179.722	11318.997	113.415	0.000	108.806	-0.000	113.415	0.000	0.000	108.889	50.465	-2.815	MWD+IFR1+MS
25100.000	90.000	179.722	11318.997	114.175	0.000	109.514	-0.000	114.175	0.000	0.000	109.597	50.540	-2.790	MWD+IFR1+MS
25200.000	90.000	179.722	11318.997	114.935	0.000	110.224	-0.000	114.935	0.000	0.000	110.306	50.615	-2.766	MWD+IFR1+MS
25300.000	90.000	179.722	11318.997	115.695	0.000	110.934	-0.000	115.695	0.000	0.000	111.015	50.690	-2.742	MWD+IFR1+MS
25400.000	90.000	179.722	11318.997	116.456	0.000	111.645	-0.000	116.456	0.000	0.000	111.725	50.766	-2.719	MWD+IFR1+MS
25500.000	90.000	179.722	11318.997	117.217	0.000	112.356	-0.000	117.217	0.000	0.000	112.436	50.843	-2.696	MWD+IFR1+MS

25600.000	90.000	179.722	11318.997	117.978	0.000	113.069	-0.000	117.978	0.000	0.000	113.148	50.920	-2.674	MWD+IFR1+MS
25700.000	90.000	179.722	11318.997	118.739	0.000	113.782	-0.000	118.739	0.000	0.000	113.860	50.997	-2.652	MWD+IFR1+MS
25800.000	90.000	179.722	11318.997	119.501	0.000	114.496	-0.000	119.501	0.000	0.000	114.573	51.075	-2.631	MWD+IFR1+MS
25900.000	90.000	179.722	11318.997	120.263	0.000	115.210	-0.000	120.263	0.000	0.000	115.287	51.153	-2.609	MWD+IFR1+MS
26000.000	90.000	179.722	11318.997	121.026	0.000	115.925	-0.000	121.026	0.000	0.000	116.001	51.232	-2.589	MWD+IFR1+MS
26100.000	90.000	179.722	11318.997	121.789	0.000	116.641	-0.000	121.789	0.000	0.000	116.716	51.311	-2.568	MWD+IFR1+MS
26200.000	90.000	179.722	11318.997	122.552	0.000	117.357	-0.000	122.552	0.000	0.000	117.431	51.390	-2.548	MWD+IFR1+MS
26300.000	90.000	179.722	11318.997	123.315	0.000	118.074	-0.000	123.315	0.000	0.000	118.148	51.470	-2.528	MWD+IFR1+MS
26400.000	90.000	179.722	11318.997	124.079	0.000	118.791	-0.000	124.079	0.000	0.000	118.865	51.550	-2.509	MWD+IFR1+MS
26500.000	90.000	179.722	11318.997	124.842	0.000	119.510	-0.000	124.842	0.000	0.000	119.582	51.631	-2.490	MWD+IFR1+MS
26600.000	90.000	179.722	11318.997	125.606	0.000	120.228	-0.000	125.606	0.000	0.000	120.300	51.712	-2.471	MWD+IFR1+MS
26674.391	90.000	179.722	11318.997	126.175	0.000	120.763	-0.000	126.175	0.000	0.000	120.834	51.772	-2.457	MWD+IFR1+MS

**Plan Targets**

Poker Lake Unit 19 DTD South 311H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 19	11596.92	440329.80	628628.40	8113.00	RECTANGLE
SHL 25	4067.56	440156.89	628755.65	0.00	RECTANGLE
LTP 19	26574.97	424890.90	628703.20	8113.00	RECTANGLE
BHL 19	26675.09	424790.90	628703.40	8113.00	RECTANGLE



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ALL DIMENSIONS APPROXIMATE

<b>CACTUS WELLHEAD LLC</b>		<b>XTO ENERGY INC DELAWARE BASIN</b>	
(20") x 13-3/8" x 9-5/8" x 5-1/2" MBU-3T-CFL-R-DBLO-SF Wellhead With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And Drilling & Skid Configurations		DRAWN	VJK
		APPRV	31MAR22
		DRAWING NO.	SDT-2856

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

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

**Background**

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

**Supporting Documentation**

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



Figure 1: Winch System attached to BOP Stack

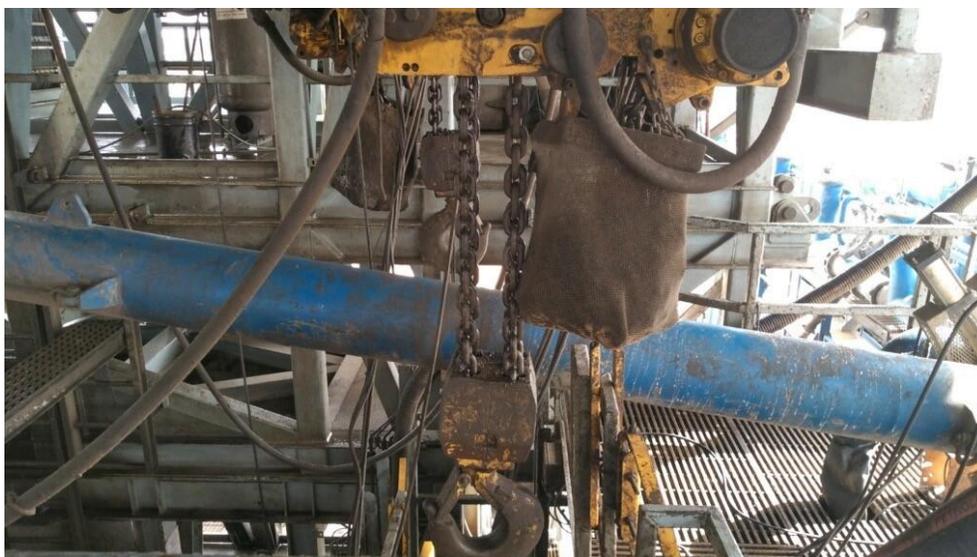


Figure 2: BOP Winch System

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

62 API STANDARD 53			
Table C.4—Initial Pressure Testing, Surface BOP Stacks			
Component to be Pressure Tested	Pressure Test—Low Pressure <sup>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>b</sup>	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers <sup>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>e</sup>	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes <sup>e</sup>	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	
<sup>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.

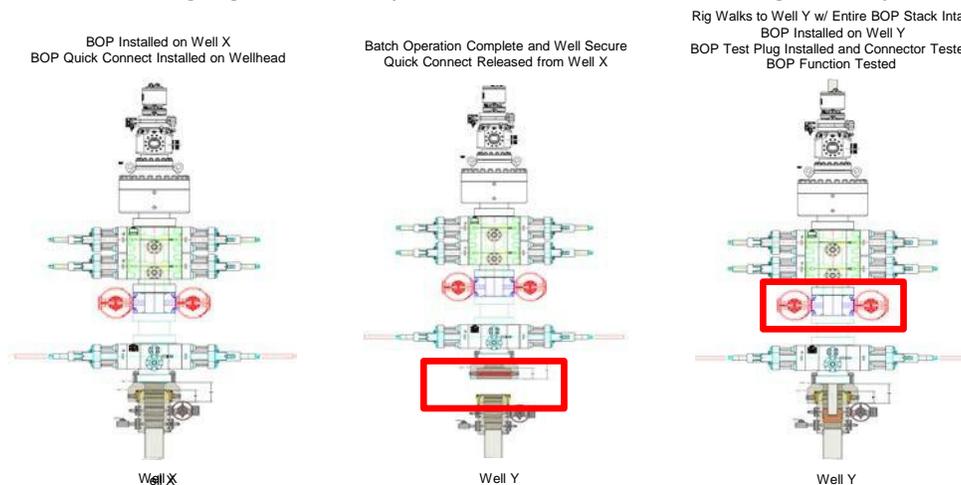
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often 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.

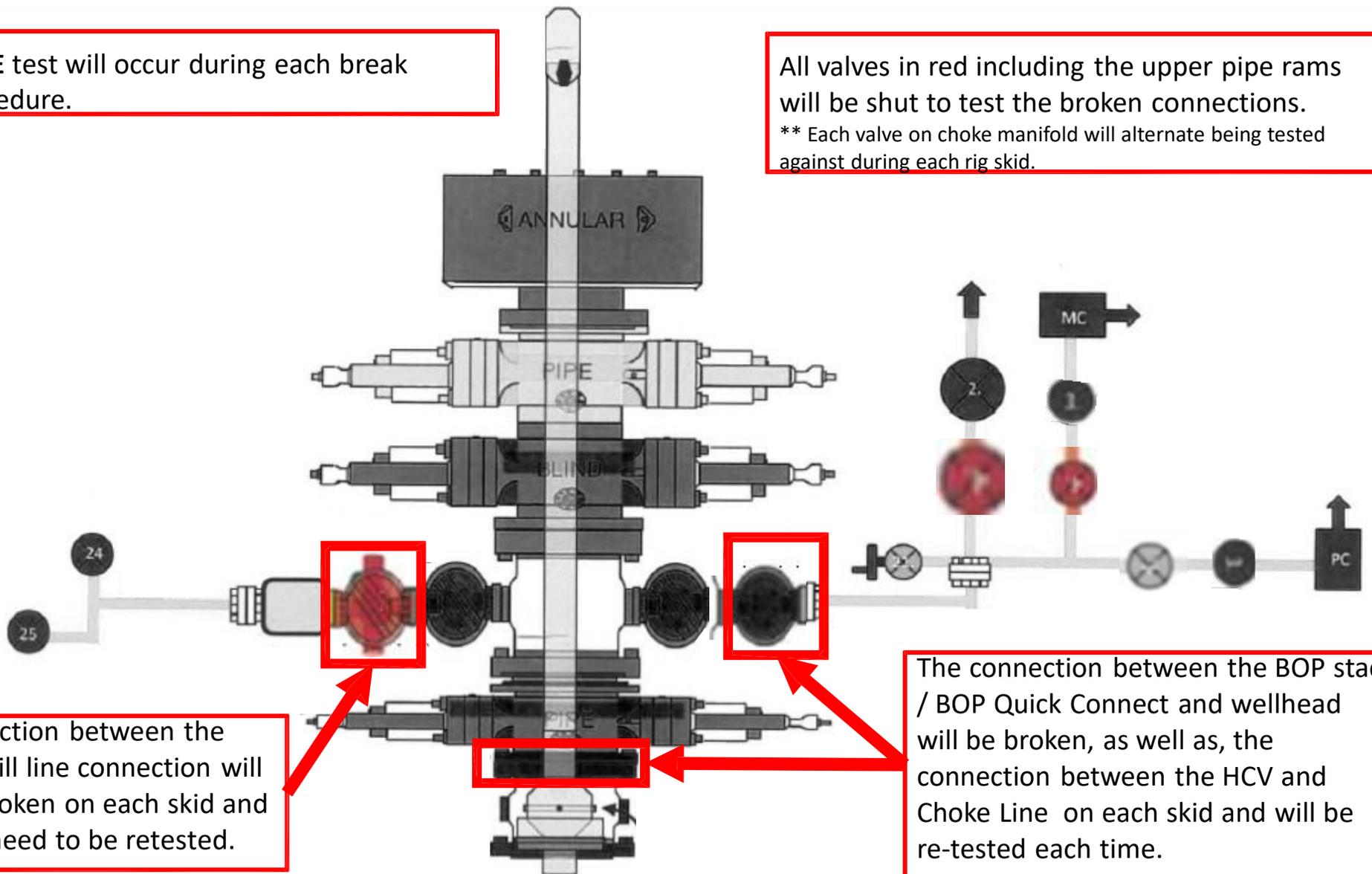
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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 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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**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
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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 342696

**CONDITIONS**

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 342696
	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.	5/30/2024