

Well Name: POKER LAKE UNIT 19 DTD	Well Location: T24S / R30E / SEC 19 / NWNW / 32.206802 / -103.928214	County or Parish/State: EDDY / NM
Well Number: 112H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM002860	Unit or CA Name: POKER LAKE UNIT	Unit or CA Number: NMNM71016X
US Well Number: 3001553762	Operator: XTO PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2781291

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/22/2024

Time Sundry Submitted: 03:02

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: 1232' FNL & 399' FWL of Section 19-T24S-R30E 1160' FNL & 889' FWL of Section 19-T24S-R30E FTP: 100' FSL & 1430' FWL of Section 18-T24S-R30E 100' FNL & 1095' FWL of Section 19-T24S-R30E LTP: 2540' FSL & 1430' FWL of Section 31-T23S-R30E 330' FSL & 1095' FWL of Section 31-T24S-R30E BHL: 2590' FSL & 1430' FWL of Section 31-T23S-R30E 230' FSL & 1095' FWL of Section 31-T24S-R30E Proposed total depth will change from 30250' MD; 11435' TVD (Wolfcamp) to 26034' MD; TVD 10700' (Wolfcamp A). 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_112H_Sundry_Attachments_20240322150220.pdf

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Conditions of Approval

Additional

Sec19_24S_30E_NMP_Sundry_2781291_Poker_Lake_Unit_19_DTD_112H_COAs_20240408095011.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 26, 2024 10:40 AM

Name: XTO PERMIAN OPERATING LLC

Title: Regulatory Advisor

Street Address: 6401 HOLIDAY HILL ROAD SUITE 200

City: MIDLANDState: 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 <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name
		7. If Unit of CA/Agreement, Name and/or No.

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

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

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

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

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Additional Remarks

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

Location of Well

0. SHL: NWNW / 1232 FNL / 399 FWL / TWSP: 24S / RANGE: 30E / SECTION: 19 / LAT: 32.206802 / LONG: -103.928214 (TVD: 0 feet, MD: 0 feet)

PPP: SESW / 330 FSL / 1430 FWL / TWSP: 24S / RANGE: 30E / SECTION: 7 / LAT: 32.2254 / LONG: -103.92488 (TVD: 11435 feet, MD: 17200 feet)

PPP: SESW / 100 FSL / 1430 FWL / TWSP: 24S / RANGE: 30E / SECTION: 18 / LAT: 32.210499 / LONG: -103.92489 (TVD: 11435 feet, MD: 11900 feet)

PPP: NENW / 330 FSL / 1430 FWL / TWSP: 24S / RANGE: 30E / SECTION: 6 / LAT: 32.25056 / LONG: -103.92488 (TVD: 11435 feet, MD: 26500 feet)

BHL: NESW / 2590 FSL / 1430 FWL / TWSP: 23S / RANGE: 30E / SECTION: 31 / LAT: 32.261072 / LONG: -103.924942 (TVD: 11435 feet, MD: 30250 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 19 DTD 112H
LOCATION:	Sec 19-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2781291** on 04/08/2024. Any previous COAs not addressed within the updated COAs still apply.*

COA

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

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately 430 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. ***Set depth adjusted per BLM geologist.***
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead

cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

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

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the 7-5/8" casing to surface after the second stage BH to verify TOC.

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

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

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **300 feet** (due to not meeting 0.422" clearance requirement) 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. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

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

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

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

BOPE Break Testing Variance

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

Offline Cementing

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

GENERAL REQUIREMENTS

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

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

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

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

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

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

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

A. CASING

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

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

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

B. PRESSURE CONTROL

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

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

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

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

☒ AMENDED REPORT

DB 618.013003.05-36

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

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

First Take Point (FTP)

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

Last Take Point (LTP)

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

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

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

XTO Energy Inc.

Poker Lake Unit 19 DTD South 112H
Projected TD: 26034.24' MD / 10700' TVD
SHL: 1160' FNL & 889' FWL , Section 19, T24S, R30E
BHL: 230' FSL & 1095' FWL , Section 31, T24S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	566'	Water
Top of Salt	969'	Water
Base of Salt	3162'	Water
Delaware	3356'	Water
Brushy Canyon	5854'	Water/Oil/Gas
Bone Spring	7150'	Water
Avalon	7320'	Water/Oil/Gas
1st Bone Spring	8136'	Water/Oil/Gas
2nd Bone Spring	8954'	Water/Oil/Gas
3rd Bone Spring	10048'	Water/Oil/Gas
Wolfcamp	10439'	Water/Oil/Gas
Wolfcamp X	10460'	Water/Oil/Gas
Wolfcamp Y	10538'	Water/Oil/Gas
Wolfcamp A	10580'	Water/Oil/Gas
Target/Land Curve	10700'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

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

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 9.625 inch casing @ 666' (303' above the salt) and circulating cement back to surface. The intermediate will isolate from the top of salt down to the next casing seat by setting 7.625 inch casing at 9895.12' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 26034.24 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 9595.12 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 666'	9.625	40	J-55	BTC	New	1.68	9.45	23.65
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	2.34	2.92	1.90
8.75	4000' – 9895.12'	7.625	29.7	HC L-80	Flush Joint	New	1.70	2.42	2.32
6.75	0' – 9795.12'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.90	1.95
6.75	9795.12' - 26034.24'	5.5	20	RY P-110	Semi-Flush	New	1.05	1.73	1.95

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

· XTO requests to not utilize centralizers in the curve and lateral

· 7.625 Collapse analyzed using 50% evacuation based on regional experience.

· 5.5 Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

- Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less
- XTO requests the option to use 5" BTC Float equipment for the the production casing

Wellhead:

Permanent Wellhead – Multibowl System

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

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

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

4. Cement Program

Surface Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 666'

Lead: 120 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft3/sx, 10.13 gal/sx water)

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

Top of Cement: Surface

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

2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 9895.12'

1st Stage

Optional Lead: 310 sxs Class C (mixed at 10.5 ppg, 2.77 ft3/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 370 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 5854

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

2nd Stage

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

Tail: 660 sxs Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)

Top of Cement: 0

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

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (5854') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

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

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

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

Production Casing: 5.5, 20 New Semi-Flush, RY P-110 casing to be set at +/- 26034.24'

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 9595.12 feet

Tail: 1140 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 10095.12 feet

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

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

5. Pressure Control Equipment

Once the permanent WH is installed on the 9.625 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 10M Double Ram BOP. MASP should not exceed 4045 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

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

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

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

hole on each of the wells.

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

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 666'	12.25	FW/Native	8.4-8.9	35-40	NC
666' - 9895.12'	8.75	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
9895.12' - 26034.24'	6.75	OBM	11.5-12	50-60	NC - 20

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

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

7. Auxiliary Well Control and Monitoring Equipment

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

8. Logging, Coring and Testing Program

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 170 to 190 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6399 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 112H

Measured Depth: 26034.24 ft

TVD RKB: 10700.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 439225.60 ft

Easting: 625942.80 ft

RKB: 3179.00 ft

Ground Level: 3147.00 ft

North Reference: Grid

Convergence Angle: 0.22 Deg

Plan Sections

Poker Lake Unit 19 DTD South 112H

Measured			TVD			Build	Turn	Dogleg		
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate	Target	
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00		
1712.08	12.24	10.64	1707.43	64.02	12.03	2.00	0.00	2.00		
6199.24	12.24	10.64	6092.57	999.08	187.77	0.00	0.00	0.00		
6811.32	0.00	0.00	6700.00	1063.10	199.80	-2.00	0.00	2.00		
10095.12	0.00	0.00	9983.80	1063.10	199.80	0.00	0.00	0.00		
11220.12	90.00	179.72	10700.00	346.91	203.26	8.00	0.00	8.00		
11622.19	90.00	179.72	10700.00	-55.16	205.20	0.00	0.00	0.00	LTP 4	
26034.24	90.00	179.72	10700.00	-14467.03	274.88	0.00	0.00	0.00	BHL 4	

Position Uncertainty

Poker Lake Unit 19 DTD South 112H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.309	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.346	0.000	0.000	2.108	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.373	0.000	0.000	2.503	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.404	0.000	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.441	0.000	0.000	3.267	2.417	128.190	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.482	0.000	0.000	3.642	2.775	128.423	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.527	0.000	0.000	4.014	3.133	128.602	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.577	0.000	0.000	4.384	3.491	128.744	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.629	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	10.644	1199.980	5.106	0.000	4.435	0.000	2.685	0.000	0.000	5.295	4.210	126.356	MWD+IFR1+MS
1300.000	4.000	10.644	1299.838	5.884	0.000	4.805	0.000	2.745	0.000	0.000	6.071	4.579	122.076	MWD+IFR1+MS
1400.000	6.000	10.644	1399.452	6.584	0.000	5.173	0.000	2.810	0.000	0.000	6.782	4.937	120.033	MWD+IFR1+MS
1500.000	8.000	10.644	1498.702	7.225	0.000	5.538	0.000	2.882	0.000	0.000	7.441	5.291	118.851	MWD+IFR1+MS
1600.000	10.000	10.644	1597.465	7.822	0.000	5.902	0.000	2.965	0.000	0.000	8.061	5.644	118.088	MWD+IFR1+MS
1700.000	12.000	10.644	1695.623	8.383	0.000	6.266	0.000	3.059	0.000	0.000	8.647	5.998	117.563	MWD+IFR1+MS
1712.081	12.242	10.644	1707.435	8.411	0.000	6.306	0.000	3.062	0.000	0.000	8.681	6.041	117.531	MWD+IFR1+MS
1800.000	12.242	10.644	1793.355	8.651	0.000	6.609	0.000	3.129	0.000	0.000	8.913	6.355	117.533	MWD+IFR1+MS
1900.000	12.242	10.644	1891.081	8.942	0.000	6.974	0.000	3.211	0.000	0.000	9.199	6.724	117.817	MWD+IFR1+MS
2000.000	12.242	10.644	1988.807	9.242	0.000	7.345	0.000	3.296	0.000	0.000	9.496	7.095	118.145	MWD+IFR1+MS
2100.000	12.242	10.644	2086.534	9.549	0.000	7.716	0.000	3.385	0.000	0.000	9.798	7.468	118.467	MWD+IFR1+MS
2200.000	12.242	10.644	2184.260	9.861	0.000	8.089	0.000	3.477	0.000	0.000	10.106	7.842	118.782	MWD+IFR1+MS
2300.000	12.242	10.644	2281.986	10.179	0.000	8.463	0.000	3.571	0.000	0.000	10.419	8.217	119.090	MWD+IFR1+MS
2400.000	12.242	10.644	2379.712	10.502	0.000	8.838	0.000	3.668	0.000	0.000	10.736	8.592	119.393	MWD+IFR1+MS
2500.000	12.242	10.644	2477.438	10.829	0.000	9.213	0.000	3.767	0.000	0.000	11.058	8.968	119.690	MWD+IFR1+MS
2600.000	12.242	10.644	2575.165	11.160	0.000	9.589	0.000	3.868	0.000	0.000	11.383	9.344	119.982	MWD+IFR1+MS
2700.000	12.242	10.644	2672.891	11.494	0.000	9.966	0.000	3.972	0.000	0.000	11.711	9.721	120.268	MWD+IFR1+MS
2800.000	12.242	10.644	2770.617	11.832	0.000	10.343	0.000	4.078	0.000	0.000	12.043	10.099	120.548	MWD+IFR1+MS
2900.000	12.242	10.644	2868.343	12.173	0.000	10.721	0.000	4.186	0.000	0.000	12.378	10.477	120.824	MWD+IFR1+MS

3000.000	12.242	10.644	2966.070	12.516	0.000	11.099	0.000	4.295	0.000	0.000	12.715	10.855	121.096	MWD+IFR1+MS
3100.000	12.242	10.644	3063.796	12.863	0.000	11.477	0.000	4.407	0.000	0.000	13.054	11.234	121.362	MWD+IFR1+MS
3200.000	12.242	10.644	3161.522	13.211	0.000	11.856	0.000	4.520	0.000	0.000	13.396	11.612	121.624	MWD+IFR1+MS
3300.000	12.242	10.644	3259.248	13.562	0.000	12.235	0.000	4.635	0.000	0.000	13.740	11.991	121.882	MWD+IFR1+MS
3400.000	12.242	10.644	3356.974	13.915	0.000	12.615	0.000	4.752	0.000	0.000	14.086	12.371	122.136	MWD+IFR1+MS
3500.000	12.242	10.644	3454.701	14.270	0.000	12.994	0.000	4.870	0.000	0.000	14.434	12.750	122.385	MWD+IFR1+MS
3600.000	12.242	10.644	3552.427	14.626	0.000	13.374	0.000	4.990	0.000	0.000	14.784	13.130	122.631	MWD+IFR1+MS
3700.000	12.242	10.644	3650.153	14.984	0.000	13.754	0.000	5.112	0.000	0.000	15.135	13.510	122.873	MWD+IFR1+MS
3800.000	12.242	10.644	3747.879	15.344	0.000	14.135	0.000	5.235	0.000	0.000	15.487	13.890	123.112	MWD+IFR1+MS
3900.000	12.242	10.644	3845.606	15.705	0.000	14.515	0.000	5.360	0.000	0.000	15.841	14.271	123.347	MWD+IFR1+MS
4000.000	12.242	10.644	3943.332	16.067	0.000	14.896	0.000	5.486	0.000	0.000	16.196	14.651	123.578	MWD+IFR1+MS
4100.000	12.242	10.644	4041.058	16.430	0.000	15.277	0.000	5.614	0.000	0.000	16.552	15.032	123.807	MWD+IFR1+MS
4200.000	12.242	10.644	4138.784	16.795	0.000	15.658	0.000	5.744	0.000	0.000	16.910	15.413	124.032	MWD+IFR1+MS
4300.000	12.242	10.644	4236.510	17.161	0.000	16.039	0.000	5.875	0.000	0.000	17.268	15.793	124.254	MWD+IFR1+MS
4400.000	12.242	10.644	4334.237	17.527	0.000	16.420	0.000	6.008	0.000	0.000	17.627	16.174	124.473	MWD+IFR1+MS
4500.000	12.242	10.644	4431.963	17.895	0.000	16.802	0.000	6.142	0.000	0.000	17.988	16.556	124.689	MWD+IFR1+MS
4600.000	12.242	10.644	4529.689	18.263	0.000	17.183	0.000	6.278	0.000	0.000	18.349	16.937	124.902	MWD+IFR1+MS
4700.000	12.242	10.644	4627.415	18.632	0.000	17.565	0.000	6.416	0.000	0.000	18.711	17.318	125.113	MWD+IFR1+MS
4800.000	12.242	10.644	4725.142	19.003	0.000	17.947	0.000	6.555	0.000	0.000	19.074	17.700	125.321	MWD+IFR1+MS
4900.000	12.242	10.644	4822.868	19.373	0.000	18.328	0.000	6.696	0.000	0.000	19.437	18.081	125.526	MWD+IFR1+MS
5000.000	12.242	10.644	4920.594	19.745	0.000	18.710	0.000	6.839	0.000	0.000	19.801	18.463	125.729	MWD+IFR1+MS
5100.000	12.242	10.644	5018.320	20.117	0.000	19.092	0.000	6.983	0.000	0.000	20.166	18.844	125.929	MWD+IFR1+MS
5200.000	12.242	10.644	5116.046	20.490	0.000	19.474	0.000	7.129	0.000	0.000	20.532	19.226	126.127	MWD+IFR1+MS
5300.000	12.242	10.644	5213.773	20.863	0.000	19.856	0.000	7.277	0.000	0.000	20.898	19.608	126.322	MWD+IFR1+MS
5400.000	12.242	10.644	5311.499	21.237	0.000	20.239	0.000	7.427	0.000	0.000	21.264	19.990	126.515	MWD+IFR1+MS
5500.000	12.242	10.644	5409.225	21.611	0.000	20.621	0.000	7.578	0.000	0.000	21.632	20.372	126.706	MWD+IFR1+MS
5600.000	12.242	10.644	5506.951	21.986	0.000	21.003	0.000	7.732	0.000	0.000	21.999	20.754	126.895	MWD+IFR1+MS
5700.000	12.242	10.644	5604.678	22.362	0.000	21.386	0.000	7.887	0.000	0.000	22.367	21.136	127.081	MWD+IFR1+MS
5800.000	12.242	10.644	5702.404	22.738	0.000	21.768	0.000	8.044	0.000	0.000	22.736	21.518	127.265	MWD+IFR1+MS
5900.000	12.242	10.644	5800.130	23.114	0.000	22.150	0.000	8.202	0.000	0.000	23.105	21.900	127.446	MWD+IFR1+MS
6000.000	12.242	10.644	5897.856	23.491	0.000	22.533	0.000	8.363	0.000	0.000	23.475	22.282	127.626	MWD+IFR1+MS
6100.000	12.242	10.644	5995.582	23.868	0.000	22.916	0.000	8.526	0.000	0.000	23.844	22.665	127.804	MWD+IFR1+MS
6199.239	12.242	10.644	6092.565	24.242	0.000	23.295	0.000	8.689	0.000	0.000	24.212	23.044	127.974	MWD+IFR1+MS

6300.000	10.226	10.644	6191.390	24.680	0.000	23.677	0.000	8.859	0.000	0.000	24.620	23.425	127.719	MWD+IFR1+MS
6400.000	8.226	10.644	6290.092	25.144	0.000	24.049	0.000	9.029	0.000	0.000	25.078	23.800	126.549	MWD+IFR1+MS
6500.000	6.226	10.644	6389.292	25.570	0.000	24.413	0.000	9.192	0.000	0.000	25.528	24.166	125.525	MWD+IFR1+MS
6600.000	4.226	10.644	6488.871	25.957	0.000	24.769	0.000	9.349	0.000	0.000	25.971	24.524	124.626	MWD+IFR1+MS
6700.000	2.226	10.644	6588.708	26.305	0.000	25.117	0.000	9.501	0.000	0.000	26.406	24.873	123.841	MWD+IFR1+MS
6800.000	0.226	10.644	6688.680	26.615	0.000	25.457	0.000	9.648	0.000	0.000	26.831	25.213	123.159	MWD+IFR1+MS
6811.320	0.000	0.000	6700.000	26.394	0.000	25.745	0.000	9.665	0.000	0.000	26.867	25.251	123.147	MWD+IFR1+MS
6900.000	0.000	0.000	6788.680	26.682	0.000	26.034	0.000	9.795	0.000	0.000	27.149	25.547	123.070	MWD+IFR1+MS
7000.000	0.000	0.000	6888.680	27.010	0.000	26.365	0.000	9.944	0.000	0.000	27.475	25.881	123.062	MWD+IFR1+MS
7100.000	0.000	0.000	6988.680	27.340	0.000	26.698	0.000	10.096	0.000	0.000	27.802	26.216	123.065	MWD+IFR1+MS
7200.000	0.000	0.000	7088.680	27.670	0.000	27.032	0.000	10.251	0.000	0.000	28.131	26.552	123.068	MWD+IFR1+MS
7300.000	0.000	0.000	7188.680	28.002	0.000	27.366	0.000	10.408	0.000	0.000	28.461	26.888	123.071	MWD+IFR1+MS
7400.000	0.000	0.000	7288.680	28.334	0.000	27.701	0.000	10.569	0.000	0.000	28.791	27.225	123.074	MWD+IFR1+MS
7500.000	0.000	0.000	7388.680	28.666	0.000	28.036	0.000	10.733	0.000	0.000	29.121	27.563	123.077	MWD+IFR1+MS
7600.000	0.000	0.000	7488.680	28.999	0.000	28.372	0.000	10.899	0.000	0.000	29.453	27.901	123.080	MWD+IFR1+MS
7700.000	0.000	0.000	7588.680	29.333	0.000	28.709	0.000	11.069	0.000	0.000	29.785	28.239	123.082	MWD+IFR1+MS
7800.000	0.000	0.000	7688.680	29.667	0.000	29.046	0.000	11.241	0.000	0.000	30.118	28.578	123.085	MWD+IFR1+MS
7900.000	0.000	0.000	7788.680	30.002	0.000	29.383	0.000	11.417	0.000	0.000	30.451	28.918	123.088	MWD+IFR1+MS
8000.000	0.000	0.000	7888.680	30.338	0.000	29.721	0.000	11.595	0.000	0.000	30.785	29.258	123.090	MWD+IFR1+MS
8100.000	0.000	0.000	7988.680	30.674	0.000	30.060	0.000	11.777	0.000	0.000	31.119	29.598	123.093	MWD+IFR1+MS
8200.000	0.000	0.000	8088.680	31.010	0.000	30.398	0.000	11.961	0.000	0.000	31.454	29.939	123.096	MWD+IFR1+MS
8300.000	0.000	0.000	8188.680	31.347	0.000	30.738	0.000	12.149	0.000	0.000	31.789	30.280	123.098	MWD+IFR1+MS
8400.000	0.000	0.000	8288.680	31.684	0.000	31.078	0.000	12.339	0.000	0.000	32.125	30.622	123.101	MWD+IFR1+MS
8500.000	0.000	0.000	8388.680	32.022	0.000	31.418	0.000	12.533	0.000	0.000	32.462	30.963	123.103	MWD+IFR1+MS
8600.000	0.000	0.000	8488.680	32.360	0.000	31.758	0.000	12.730	0.000	0.000	32.799	31.306	123.105	MWD+IFR1+MS
8700.000	0.000	0.000	8588.680	32.699	0.000	32.099	0.000	12.929	0.000	0.000	33.136	31.648	123.108	MWD+IFR1+MS
8800.000	0.000	0.000	8688.680	33.038	0.000	32.441	0.000	13.132	0.000	0.000	33.474	31.992	123.110	MWD+IFR1+MS
8900.000	0.000	0.000	8788.680	33.378	0.000	32.783	0.000	13.338	0.000	0.000	33.812	32.335	123.112	MWD+IFR1+MS
9000.000	0.000	0.000	8888.680	33.718	0.000	33.125	0.000	13.547	0.000	0.000	34.150	32.679	123.115	MWD+IFR1+MS
9100.000	0.000	0.000	8988.680	34.058	0.000	33.467	0.000	13.759	0.000	0.000	34.489	33.023	123.117	MWD+IFR1+MS
9200.000	0.000	0.000	9088.680	34.399	0.000	33.810	0.000	13.975	0.000	0.000	34.829	33.367	123.119	MWD+IFR1+MS
9300.000	0.000	0.000	9188.680	34.740	0.000	34.153	0.000	14.193	0.000	0.000	35.168	33.711	123.121	MWD+IFR1+MS
9400.000	0.000	0.000	9288.680	35.081	0.000	34.496	0.000	14.414	0.000	0.000	35.509	34.056	123.123	MWD+IFR1+MS

9500.000	0.000	0.000	9388.680	35.423	0.000	34.840	0.000	14.639	0.000	0.000	35.849	34.402	123.126	MWD+IFR1+MS
9600.000	0.000	0.000	9488.680	35.765	0.000	35.184	0.000	14.867	0.000	0.000	36.190	34.747	123.128	MWD+IFR1+MS
9700.000	0.000	0.000	9588.680	36.107	0.000	35.528	0.000	15.098	0.000	0.000	36.531	35.093	123.130	MWD+IFR1+MS
9800.000	0.000	0.000	9688.680	36.450	0.000	35.873	0.000	15.332	0.000	0.000	36.873	35.439	123.132	MWD+IFR1+MS
9900.000	0.000	0.000	9788.680	36.793	0.000	36.218	0.000	15.569	0.000	0.000	37.214	35.785	123.134	MWD+IFR1+MS
10000.000	0.000	0.000	9888.680	37.136	0.000	36.563	0.000	15.809	0.000	0.000	37.557	36.131	123.136	MWD+IFR1+MS
10095.120	0.000	0.000	9983.800	37.463	0.000	36.891	0.000	16.041	0.000	0.000	37.881	36.461	123.131	MWD+IFR1+MS
10100.000	0.390	179.723	9988.680	37.447	0.000	36.913	-0.000	16.053	0.000	0.000	37.897	36.477	123.132	MWD+IFR1+MS
10200.000	8.390	179.723	10088.306	37.231	0.000	37.219	-0.000	16.306	0.000	0.000	38.427	36.850	118.405	MWD+IFR1+MS
10300.000	16.390	179.723	10185.897	37.264	0.000	37.506	-0.000	16.650	0.000	0.000	39.624	37.256	108.424	MWD+IFR1+MS
10400.000	24.390	179.723	10279.555	36.751	0.000	37.768	-0.000	17.165	0.000	0.000	40.739	37.561	104.225	MWD+IFR1+MS
10500.000	32.390	179.723	10367.456	35.769	0.000	38.003	-0.000	17.908	0.000	0.000	41.701	37.814	102.163	MWD+IFR1+MS
10600.000	40.390	179.723	10447.890	34.423	0.000	38.211	-0.000	18.902	0.000	0.000	42.486	38.028	101.081	MWD+IFR1+MS
10700.000	48.390	179.723	10519.291	32.851	0.000	38.390	-0.000	20.141	0.000	0.000	43.089	38.208	100.537	MWD+IFR1+MS
10800.000	56.390	179.723	10580.269	31.229	0.000	38.542	-0.000	21.588	0.000	0.000	43.520	38.356	100.330	MWD+IFR1+MS
10900.000	64.390	179.723	10629.638	29.767	0.000	38.668	-0.000	23.194	0.000	0.000	43.796	38.475	100.348	MWD+IFR1+MS
11000.000	72.390	179.723	10666.436	28.698	0.000	38.768	-0.000	24.898	0.000	0.000	43.946	38.567	100.512	MWD+IFR1+MS
11100.000	80.390	179.723	10689.948	28.240	0.000	38.843	-0.000	26.640	0.000	0.000	44.007	38.633	100.747	MWD+IFR1+MS
11200.000	88.390	179.723	10699.715	28.543	0.000	38.893	-0.000	28.362	0.000	0.000	44.021	38.676	100.964	MWD+IFR1+MS
11220.120	90.000	179.723	10699.997	28.418	0.000	38.898	-0.000	28.418	0.000	0.000	44.022	38.681	100.990	MWD+IFR1+MS
11300.000	90.000	179.723	10699.997	28.575	0.000	38.926	-0.000	28.575	0.000	0.000	44.027	38.705	101.113	MWD+IFR1+MS
11400.000	90.000	179.723	10699.997	28.777	0.000	38.983	-0.000	28.777	0.000	0.000	44.033	38.756	101.311	MWD+IFR1+MS
11500.000	90.000	179.723	10699.997	28.999	0.000	39.061	-0.000	28.999	0.000	0.000	44.041	38.828	101.554	MWD+IFR1+MS
11600.000	90.000	179.723	10699.997	29.240	0.000	39.158	-0.000	29.240	0.000	0.000	44.051	38.918	101.844	MWD+IFR1+MS
11622.191	90.000	179.723	10699.997	29.295	0.000	39.180	-0.000	29.295	0.000	0.000	44.053	38.938	101.910	MWD+IFR1+MS
11700.000	90.000	179.723	10699.997	29.496	0.000	39.269	-0.000	29.496	0.000	0.000	44.062	39.020	102.172	MWD+IFR1+MS
11800.000	90.000	179.723	10699.997	29.773	0.000	39.404	-0.000	29.773	0.000	0.000	44.075	39.146	102.568	MWD+IFR1+MS
11900.000	90.000	179.723	10699.997	30.070	0.000	39.560	-0.000	30.070	0.000	0.000	44.090	39.291	103.031	MWD+IFR1+MS
12000.000	90.000	179.723	10699.997	30.384	0.000	39.734	-0.000	30.384	0.000	0.000	44.107	39.453	103.570	MWD+IFR1+MS
12100.000	90.000	179.723	10699.997	30.716	0.000	39.927	-0.000	30.716	0.000	0.000	44.126	39.632	104.195	MWD+IFR1+MS
12200.000	90.000	179.723	10699.997	31.063	0.000	40.138	-0.000	31.063	0.000	0.000	44.149	39.826	104.922	MWD+IFR1+MS
12300.000	90.000	179.723	10699.997	31.426	0.000	40.368	-0.000	31.426	0.000	0.000	44.174	40.037	105.770	MWD+IFR1+MS
12400.000	90.000	179.723	10699.997	31.804	0.000	40.615	-0.000	31.804	0.000	0.000	44.204	40.262	106.764	MWD+IFR1+MS

12500.000	90.000	179.723	10699.997	32.197	0.000	40.880	-0.000	32.197	0.000	0.000	44.238	40.500	107.932	MWD+IFR1+MS
12600.000	90.000	179.723	10699.997	32.605	0.000	41.162	-0.000	32.605	0.000	0.000	44.278	40.750	109.315	MWD+IFR1+MS
12700.000	90.000	179.723	10699.997	33.025	0.000	41.461	-0.000	33.025	0.000	0.000	44.325	41.011	110.959	MWD+IFR1+MS
12800.000	90.000	179.723	10699.997	33.459	0.000	41.776	-0.000	33.459	0.000	0.000	44.381	41.279	112.925	MWD+IFR1+MS
12900.000	90.000	179.723	10699.997	33.906	0.000	42.107	-0.000	33.906	0.000	0.000	44.449	41.553	115.283	MWD+IFR1+MS
13000.000	90.000	179.723	10699.997	34.365	0.000	42.454	-0.000	34.365	0.000	0.000	44.532	41.828	118.111	MWD+IFR1+MS
13100.000	90.000	179.723	10699.997	34.835	0.000	42.816	-0.000	34.835	0.000	0.000	44.634	42.099	121.480	MWD+IFR1+MS
13200.000	90.000	179.723	10699.997	35.316	0.000	43.193	-0.000	35.316	0.000	0.000	44.762	42.360	125.428	MWD+IFR1+MS
13300.000	90.000	179.723	10699.997	35.809	0.000	43.585	-0.000	35.809	0.000	0.000	44.921	42.606	129.919	MWD+IFR1+MS
13400.000	90.000	179.723	10699.997	36.311	0.000	43.991	-0.000	36.311	0.000	0.000	45.117	42.828	134.803	MWD+IFR1+MS
13500.000	90.000	179.723	10699.997	36.824	0.000	44.410	-0.000	36.824	0.000	0.000	45.355	43.024	-40.181	MWD+IFR1+MS
13600.000	90.000	179.723	10699.997	37.345	0.000	44.843	-0.000	37.345	0.000	0.000	45.635	43.191	-35.337	MWD+IFR1+MS
13700.000	90.000	179.723	10699.997	37.876	0.000	45.289	-0.000	37.876	0.000	0.000	45.957	43.330	-30.913	MWD+IFR1+MS
13800.000	90.000	179.723	10699.997	38.416	0.000	45.748	-0.000	38.416	0.000	0.000	46.315	43.446	-27.041	MWD+IFR1+MS
13900.000	90.000	179.723	10699.997	38.964	0.000	46.218	-0.000	38.964	0.000	0.000	46.706	43.542	-23.742	MWD+IFR1+MS
14000.000	90.000	179.723	10699.997	39.520	0.000	46.701	-0.000	39.520	0.000	0.000	47.124	43.623	-20.970	MWD+IFR1+MS
14100.000	90.000	179.723	10699.997	40.083	0.000	47.195	-0.000	40.083	0.000	0.000	47.566	43.692	-18.652	MWD+IFR1+MS
14200.000	90.000	179.723	10699.997	40.654	0.000	47.700	-0.000	40.654	0.000	0.000	48.029	43.753	-16.710	MWD+IFR1+MS
14300.000	90.000	179.723	10699.997	41.232	0.000	48.217	-0.000	41.232	0.000	0.000	48.509	43.806	-15.076	MWD+IFR1+MS
14400.000	90.000	179.723	10699.997	41.817	0.000	48.743	-0.000	41.817	0.000	0.000	49.006	43.855	-13.691	MWD+IFR1+MS
14500.000	90.000	179.723	10699.997	42.408	0.000	49.280	-0.000	42.408	0.000	0.000	49.518	43.899	-12.509	MWD+IFR1+MS
14600.000	90.000	179.723	10699.997	43.006	0.000	49.826	-0.000	43.006	0.000	0.000	50.043	43.941	-11.492	MWD+IFR1+MS
14700.000	90.000	179.723	10699.997	43.609	0.000	50.382	-0.000	43.609	0.000	0.000	50.581	43.980	-10.610	MWD+IFR1+MS
14800.000	90.000	179.723	10699.997	44.218	0.000	50.947	-0.000	44.218	0.000	0.000	51.130	44.017	-9.841	MWD+IFR1+MS
14900.000	90.000	179.723	10699.997	44.832	0.000	51.521	-0.000	44.832	0.000	0.000	51.690	44.053	-9.165	MWD+IFR1+MS
15000.000	90.000	179.723	10699.997	45.452	0.000	52.103	-0.000	45.452	0.000	0.000	52.260	44.087	-8.567	MWD+IFR1+MS
15100.000	90.000	179.723	10699.997	46.077	0.000	52.694	-0.000	46.077	0.000	0.000	52.840	44.121	-8.036	MWD+IFR1+MS
15200.000	90.000	179.723	10699.997	46.706	0.000	53.293	-0.000	46.706	0.000	0.000	53.429	44.155	-7.561	MWD+IFR1+MS
15300.000	90.000	179.723	10699.997	47.341	0.000	53.899	-0.000	47.341	0.000	0.000	54.027	44.187	-7.134	MWD+IFR1+MS
15400.000	90.000	179.723	10699.997	47.979	0.000	54.513	-0.000	47.979	0.000	0.000	54.633	44.220	-6.749	MWD+IFR1+MS
15500.000	90.000	179.723	10699.997	48.622	0.000	55.134	-0.000	48.622	0.000	0.000	55.247	44.252	-6.400	MWD+IFR1+MS
15600.000	90.000	179.723	10699.997	49.269	0.000	55.763	-0.000	49.269	0.000	0.000	55.869	44.285	-6.082	MWD+IFR1+MS
15700.000	90.000	179.723	10699.997	49.920	0.000	56.398	-0.000	49.920	0.000	0.000	56.498	44.317	-5.792	MWD+IFR1+MS

15800.000	90.000	179.723	10699.997	50.575	0.000	57.039	-0.000	50.575	0.000	0.000	57.134	44.349	-5.527	MWD+IFR1+MS
15900.000	90.000	179.723	10699.997	51.233	0.000	57.687	-0.000	51.233	0.000	0.000	57.777	44.382	-5.283	MWD+IFR1+MS
16000.000	90.000	179.723	10699.997	51.895	0.000	58.341	-0.000	51.895	0.000	0.000	58.426	44.414	-5.058	MWD+IFR1+MS
16100.000	90.000	179.723	10699.997	52.561	0.000	59.000	-0.000	52.561	0.000	0.000	59.082	44.447	-4.850	MWD+IFR1+MS
16200.000	90.000	179.723	10699.997	53.229	0.000	59.666	-0.000	53.229	0.000	0.000	59.744	44.480	-4.657	MWD+IFR1+MS
16300.000	90.000	179.723	10699.997	53.901	0.000	60.337	-0.000	53.901	0.000	0.000	60.411	44.514	-4.479	MWD+IFR1+MS
16400.000	90.000	179.723	10699.997	54.576	0.000	61.013	-0.000	54.576	0.000	0.000	61.084	44.547	-4.312	MWD+IFR1+MS
16500.000	90.000	179.723	10699.997	55.254	0.000	61.695	-0.000	55.254	0.000	0.000	61.763	44.581	-4.157	MWD+IFR1+MS
16600.000	90.000	179.723	10699.997	55.934	0.000	62.381	-0.000	55.934	0.000	0.000	62.446	44.616	-4.012	MWD+IFR1+MS
16700.000	90.000	179.723	10699.997	56.617	0.000	63.073	-0.000	56.617	0.000	0.000	63.135	44.650	-3.876	MWD+IFR1+MS
16800.000	90.000	179.723	10699.997	57.303	0.000	63.769	-0.000	57.303	0.000	0.000	63.828	44.686	-3.748	MWD+IFR1+MS
16900.000	90.000	179.723	10699.997	57.991	0.000	64.469	-0.000	57.991	0.000	0.000	64.526	44.721	-3.629	MWD+IFR1+MS
17000.000	90.000	179.723	10699.997	58.682	0.000	65.174	-0.000	58.682	0.000	0.000	65.229	44.757	-3.516	MWD+IFR1+MS
17100.000	90.000	179.723	10699.997	59.375	0.000	65.883	-0.000	59.375	0.000	0.000	65.936	44.793	-3.410	MWD+IFR1+MS
17200.000	90.000	179.723	10699.997	60.070	0.000	66.596	-0.000	60.070	0.000	0.000	66.647	44.830	-3.309	MWD+IFR1+MS
17300.000	90.000	179.723	10699.997	60.768	0.000	67.313	-0.000	60.768	0.000	0.000	67.362	44.867	-3.214	MWD+IFR1+MS
17400.000	90.000	179.723	10699.997	61.467	0.000	68.034	-0.000	61.467	0.000	0.000	68.082	44.905	-3.125	MWD+IFR1+MS
17500.000	90.000	179.723	10699.997	62.169	0.000	68.759	-0.000	62.169	0.000	0.000	68.805	44.943	-3.040	MWD+IFR1+MS
17600.000	90.000	179.723	10699.997	62.872	0.000	69.487	-0.000	62.872	0.000	0.000	69.532	44.981	-2.959	MWD+IFR1+MS
17700.000	90.000	179.723	10699.997	63.578	0.000	70.219	-0.000	63.578	0.000	0.000	70.262	45.020	-2.882	MWD+IFR1+MS
17800.000	90.000	179.723	10699.997	64.285	0.000	70.954	-0.000	64.285	0.000	0.000	70.996	45.060	-2.810	MWD+IFR1+MS
17900.000	90.000	179.723	10699.997	64.994	0.000	71.693	-0.000	64.994	0.000	0.000	71.733	45.099	-2.740	MWD+IFR1+MS
18000.000	90.000	179.723	10699.997	65.705	0.000	72.434	-0.000	65.705	0.000	0.000	72.473	45.140	-2.674	MWD+IFR1+MS
18100.000	90.000	179.723	10699.997	66.418	0.000	73.179	-0.000	66.418	0.000	0.000	73.217	45.181	-2.611	MWD+IFR1+MS
18200.000	90.000	179.723	10699.997	67.132	0.000	73.927	-0.000	67.132	0.000	0.000	73.963	45.222	-2.551	MWD+IFR1+MS
18300.000	90.000	179.723	10699.997	67.847	0.000	74.677	-0.000	67.847	0.000	0.000	74.713	45.264	-2.493	MWD+IFR1+MS
18400.000	90.000	179.723	10699.997	68.565	0.000	75.431	-0.000	68.565	0.000	0.000	75.465	45.306	-2.438	MWD+IFR1+MS
18500.000	90.000	179.723	10699.997	69.283	0.000	76.187	-0.000	69.283	0.000	0.000	76.220	45.349	-2.386	MWD+IFR1+MS
18600.000	90.000	179.723	10699.997	70.003	0.000	76.946	-0.000	70.003	0.000	0.000	76.978	45.392	-2.335	MWD+IFR1+MS
18700.000	90.000	179.723	10699.997	70.725	0.000	77.707	-0.000	70.725	0.000	0.000	77.739	45.435	-2.287	MWD+IFR1+MS
18800.000	90.000	179.723	10699.997	71.447	0.000	78.471	-0.000	71.447	0.000	0.000	78.502	45.480	-2.241	MWD+IFR1+MS
18900.000	90.000	179.723	10699.997	72.171	0.000	79.237	-0.000	72.171	0.000	0.000	79.267	45.524	-2.196	MWD+IFR1+MS
19000.000	90.000	179.723	10699.997	72.897	0.000	80.006	-0.000	72.897	0.000	0.000	80.035	45.569	-2.153	MWD+IFR1+MS

19100.000	90.000	179.723	10699.997	73.623	0.000	80.777	-0.000	73.623	0.000	0.000	80.805	45.615	-2.112	MWD+IFR1+MS
19200.000	90.000	179.723	10699.997	74.351	0.000	81.550	-0.000	74.351	0.000	0.000	81.578	45.661	-2.073	MWD+IFR1+MS
19300.000	90.000	179.723	10699.997	75.080	0.000	82.325	-0.000	75.080	0.000	0.000	82.352	45.708	-2.035	MWD+IFR1+MS
19400.000	90.000	179.723	10699.997	75.810	0.000	83.103	-0.000	75.810	0.000	0.000	83.129	45.755	-1.998	MWD+IFR1+MS
19500.000	90.000	179.723	10699.997	76.541	0.000	83.882	-0.000	76.541	0.000	0.000	83.908	45.802	-1.963	MWD+IFR1+MS
19600.000	90.000	179.723	10699.997	77.273	0.000	84.664	-0.000	77.273	0.000	0.000	84.689	45.850	-1.929	MWD+IFR1+MS
19700.000	90.000	179.723	10699.997	78.006	0.000	85.447	-0.000	78.006	0.000	0.000	85.471	45.899	-1.896	MWD+IFR1+MS
19800.000	90.000	179.723	10699.997	78.740	0.000	86.232	-0.000	78.740	0.000	0.000	86.256	45.948	-1.864	MWD+IFR1+MS
19900.000	90.000	179.723	10699.997	79.476	0.000	87.019	-0.000	79.476	0.000	0.000	87.043	45.997	-1.833	MWD+IFR1+MS
20000.000	90.000	179.723	10699.997	80.212	0.000	87.808	-0.000	80.212	0.000	0.000	87.831	46.047	-1.804	MWD+IFR1+MS
20100.000	90.000	179.723	10699.997	80.949	0.000	88.599	-0.000	80.949	0.000	0.000	88.621	46.098	-1.775	MWD+IFR1+MS
20200.000	90.000	179.723	10699.997	81.686	0.000	89.391	-0.000	81.686	0.000	0.000	89.413	46.149	-1.748	MWD+IFR1+MS
20300.000	90.000	179.723	10699.997	82.425	0.000	90.185	-0.000	82.425	0.000	0.000	90.206	46.200	-1.721	MWD+IFR1+MS
20400.000	90.000	179.723	10699.997	83.165	0.000	90.981	-0.000	83.165	0.000	0.000	91.001	46.252	-1.695	MWD+IFR1+MS
20500.000	90.000	179.723	10699.997	83.905	0.000	91.778	-0.000	83.905	0.000	0.000	91.798	46.305	-1.670	MWD+IFR1+MS
20600.000	90.000	179.723	10699.997	84.646	0.000	92.576	-0.000	84.646	0.000	0.000	92.596	46.357	-1.645	MWD+IFR1+MS
20700.000	90.000	179.723	10699.997	85.388	0.000	93.376	-0.000	85.388	0.000	0.000	93.396	46.411	-1.622	MWD+IFR1+MS
20800.000	90.000	179.723	10699.997	86.131	0.000	94.178	-0.000	86.131	0.000	0.000	94.197	46.465	-1.599	MWD+IFR1+MS
20900.000	90.000	179.723	10699.997	86.875	0.000	94.981	-0.000	86.875	0.000	0.000	94.999	46.519	-1.577	MWD+IFR1+MS
21000.000	90.000	179.723	10699.997	87.619	0.000	95.785	-0.000	87.619	0.000	0.000	95.803	46.574	-1.555	MWD+IFR1+MS
21100.000	90.000	179.723	10699.997	88.364	0.000	96.590	-0.000	88.364	0.000	0.000	96.608	46.629	-1.534	MWD+IFR1+MS
21200.000	90.000	179.723	10699.997	89.109	0.000	97.397	-0.000	89.109	0.000	0.000	97.415	46.685	-1.514	MWD+IFR1+MS
21300.000	90.000	179.723	10699.997	89.855	0.000	98.206	-0.000	89.855	0.000	0.000	98.223	46.741	-1.494	MWD+IFR1+MS
21400.000	90.000	179.723	10699.997	90.602	0.000	99.015	-0.000	90.602	0.000	0.000	99.032	46.798	-1.475	MWD+IFR1+MS
21500.000	90.000	179.723	10699.997	91.350	0.000	99.826	-0.000	91.350	0.000	0.000	99.842	46.855	-1.457	MWD+IFR1+MS
21600.000	90.000	179.723	10699.997	92.098	0.000	100.637	-0.000	92.098	0.000	0.000	100.654	46.912	-1.439	MWD+IFR1+MS
21700.000	90.000	179.723	10699.997	92.847	0.000	101.450	-0.000	92.847	0.000	0.000	101.466	46.970	-1.421	MWD+IFR1+MS
21800.000	90.000	179.723	10699.997	93.596	0.000	102.264	-0.000	93.596	0.000	0.000	102.280	47.029	-1.404	MWD+IFR1+MS
21900.000	90.000	179.723	10699.997	94.346	0.000	103.079	-0.000	94.346	0.000	0.000	103.095	47.088	-1.387	MWD+IFR1+MS
22000.000	90.000	179.723	10699.997	95.097	0.000	103.896	-0.000	95.097	0.000	0.000	103.911	47.147	-1.371	MWD+IFR1+MS
22100.000	90.000	179.723	10699.997	95.848	0.000	104.713	-0.000	95.848	0.000	0.000	104.728	47.207	-1.355	MWD+IFR1+MS
22200.000	90.000	179.723	10699.997	96.599	0.000	105.531	-0.000	96.599	0.000	0.000	105.546	47.268	-1.340	MWD+IFR1+MS
22300.000	90.000	179.723	10699.997	97.351	0.000	106.350	-0.000	97.351	0.000	0.000	106.365	47.329	-1.325	MWD+IFR1+MS

22400.000	90.000	179.723	10699.997	98.104	0.000	107.171	-0.000	98.104	0.000	0.000	107.185	47.390	-1.310	MWD+IFR1+MS
22500.000	90.000	179.723	10699.997	98.857	0.000	107.992	-0.000	98.857	0.000	0.000	108.006	47.452	-1.296	MWD+IFR1+MS
22600.000	90.000	179.723	10699.997	99.611	0.000	108.814	-0.000	99.611	0.000	0.000	108.828	47.514	-1.282	MWD+IFR1+MS
22700.000	90.000	179.723	10699.997	100.365	0.000	109.637	-0.000	100.365	0.000	0.000	109.650	47.576	-1.268	MWD+IFR1+MS
22800.000	90.000	179.723	10699.997	101.119	0.000	110.461	-0.000	101.119	0.000	0.000	110.474	47.640	-1.255	MWD+IFR1+MS
22900.000	90.000	179.723	10699.997	101.874	0.000	111.286	-0.000	101.874	0.000	0.000	111.299	47.703	-1.242	MWD+IFR1+MS
23000.000	90.000	179.723	10699.997	102.630	0.000	112.111	-0.000	102.630	0.000	0.000	112.124	47.767	-1.229	MWD+IFR1+MS
23100.000	90.000	179.723	10699.997	103.386	0.000	112.938	-0.000	103.386	0.000	0.000	112.950	47.832	-1.217	MWD+IFR1+MS
23200.000	90.000	179.723	10699.997	104.142	0.000	113.765	-0.000	104.142	0.000	0.000	113.778	47.896	-1.205	MWD+IFR1+MS
23300.000	90.000	179.723	10699.997	104.899	0.000	114.593	-0.000	104.899	0.000	0.000	114.605	47.962	-1.193	MWD+IFR1+MS
23400.000	90.000	179.723	10699.997	105.656	0.000	115.422	-0.000	105.656	0.000	0.000	115.434	48.028	-1.182	MWD+IFR1+MS
23500.000	90.000	179.723	10699.997	106.413	0.000	116.252	-0.000	106.413	0.000	0.000	116.264	48.094	-1.170	MWD+IFR1+MS
23600.000	90.000	179.723	10699.997	107.171	0.000	117.082	-0.000	107.171	0.000	0.000	117.094	48.160	-1.159	MWD+IFR1+MS
23700.000	90.000	179.723	10699.997	107.930	0.000	117.913	-0.000	107.930	0.000	0.000	117.925	48.227	-1.148	MWD+IFR1+MS
23800.000	90.000	179.723	10699.997	108.688	0.000	118.745	-0.000	108.688	0.000	0.000	118.756	48.295	-1.138	MWD+IFR1+MS
23900.000	90.000	179.723	10699.997	109.447	0.000	119.578	-0.000	109.447	0.000	0.000	119.589	48.363	-1.128	MWD+IFR1+MS
24000.000	90.000	179.723	10699.997	110.207	0.000	120.411	-0.000	110.207	0.000	0.000	120.422	48.431	-1.118	MWD+IFR1+MS
24100.000	90.000	179.723	10699.997	110.966	0.000	121.245	-0.000	110.966	0.000	0.000	121.255	48.500	-1.108	MWD+IFR1+MS
24200.000	90.000	179.723	10699.997	111.727	0.000	122.079	-0.000	111.727	0.000	0.000	122.090	48.569	-1.098	MWD+IFR1+MS
24300.000	90.000	179.723	10699.997	112.487	0.000	122.914	-0.000	112.487	0.000	0.000	122.925	48.639	-1.089	MWD+IFR1+MS
24400.000	90.000	179.723	10699.997	113.248	0.000	123.750	-0.000	113.248	0.000	0.000	123.761	48.709	-1.079	MWD+IFR1+MS
24500.000	90.000	179.723	10699.997	114.009	0.000	124.587	-0.000	114.009	0.000	0.000	124.597	48.780	-1.070	MWD+IFR1+MS
24600.000	90.000	179.723	10699.997	114.770	0.000	125.424	-0.000	114.770	0.000	0.000	125.434	48.851	-1.061	MWD+IFR1+MS
24700.000	90.000	179.723	10699.997	115.532	0.000	126.261	-0.000	115.532	0.000	0.000	126.271	48.922	-1.053	MWD+IFR1+MS
24800.000	90.000	179.723	10699.997	116.294	0.000	127.100	-0.000	116.294	0.000	0.000	127.109	48.994	-1.044	MWD+IFR1+MS
24900.000	90.000	179.723	10699.997	117.057	0.000	127.938	-0.000	117.057	0.000	0.000	127.948	49.066	-1.036	MWD+IFR1+MS
25000.000	90.000	179.723	10699.997	117.819	0.000	128.778	-0.000	117.819	0.000	0.000	128.787	49.138	-1.028	MWD+IFR1+MS
25100.000	90.000	179.723	10699.997	118.582	0.000	129.618	-0.000	118.582	0.000	0.000	129.627	49.211	-1.020	MWD+IFR1+MS
25200.000	90.000	179.723	10699.997	119.345	0.000	130.458	-0.000	119.345	0.000	0.000	130.467	49.285	-1.012	MWD+IFR1+MS
25300.000	90.000	179.723	10699.997	120.109	0.000	131.299	-0.000	120.109	0.000	0.000	131.308	49.359	-1.004	MWD+IFR1+MS
25400.000	90.000	179.723	10699.997	120.873	0.000	132.140	-0.000	120.873	0.000	0.000	132.149	49.433	-0.996	MWD+IFR1+MS
25500.000	90.000	179.723	10699.997	121.637	0.000	132.982	-0.000	121.637	0.000	0.000	132.991	49.508	-0.989	MWD+IFR1+MS
25600.000	90.000	179.723	10699.997	122.401	0.000	133.825	-0.000	122.401	0.000	0.000	133.834	49.583	-0.982	MWD+IFR1+MS

25700.000	90.000	179.723	10699.997	123.166	0.000	134.668	-0.000	123.166	0.000	0.000	134.676	49.658	-0.975	MWD+IFR1+MS
25800.000	90.000	179.723	10699.997	123.930	0.000	135.511	-0.000	123.930	0.000	0.000	135.520	49.734	-0.968	MWD+IFR1+MS
25900.000	90.000	179.723	10699.997	124.695	0.000	136.355	-0.000	124.695	0.000	0.000	136.364	49.810	-0.961	MWD+IFR1+MS
26000.000	90.000	179.723	10699.997	125.461	0.000	137.200	-0.000	125.461	0.000	0.000	137.208	49.887	-0.954	MWD+IFR1+MS
26034.235	90.000	179.723	10699.997	125.722	0.000	137.488	-0.000	125.722	0.000	0.000	137.496	49.913	-0.952	MWD+IFR1+MS

Plan Targets

Poker Lake Unit 19 DTD South 112H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 4	11000.91	440288.70	626142.60	7521.00	RECTANGLE
LTP 4	25934.90	424857.90	626217.30	7521.00	RECTANGLE
BHL 4	26034.93	424757.90	626217.50	7521.00	RECTANGLE

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ALL DIMENSIONS APPROXIMATE

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

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

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

Background

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

Supporting Documentation

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



Figure 1: Winch System attached to BOP Stack



Figure 2: BOP Winch System

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

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API STANDARD 53

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

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

^a Pressure test evaluation periods shall be a minimum of five minutes.

No visible leaks.

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

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

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

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

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

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

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

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

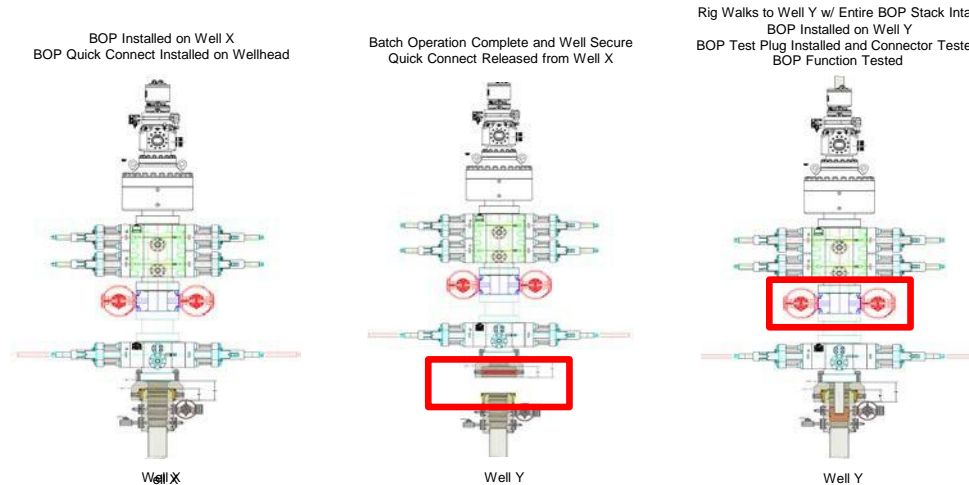
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

Procedures

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

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

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



Summary

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

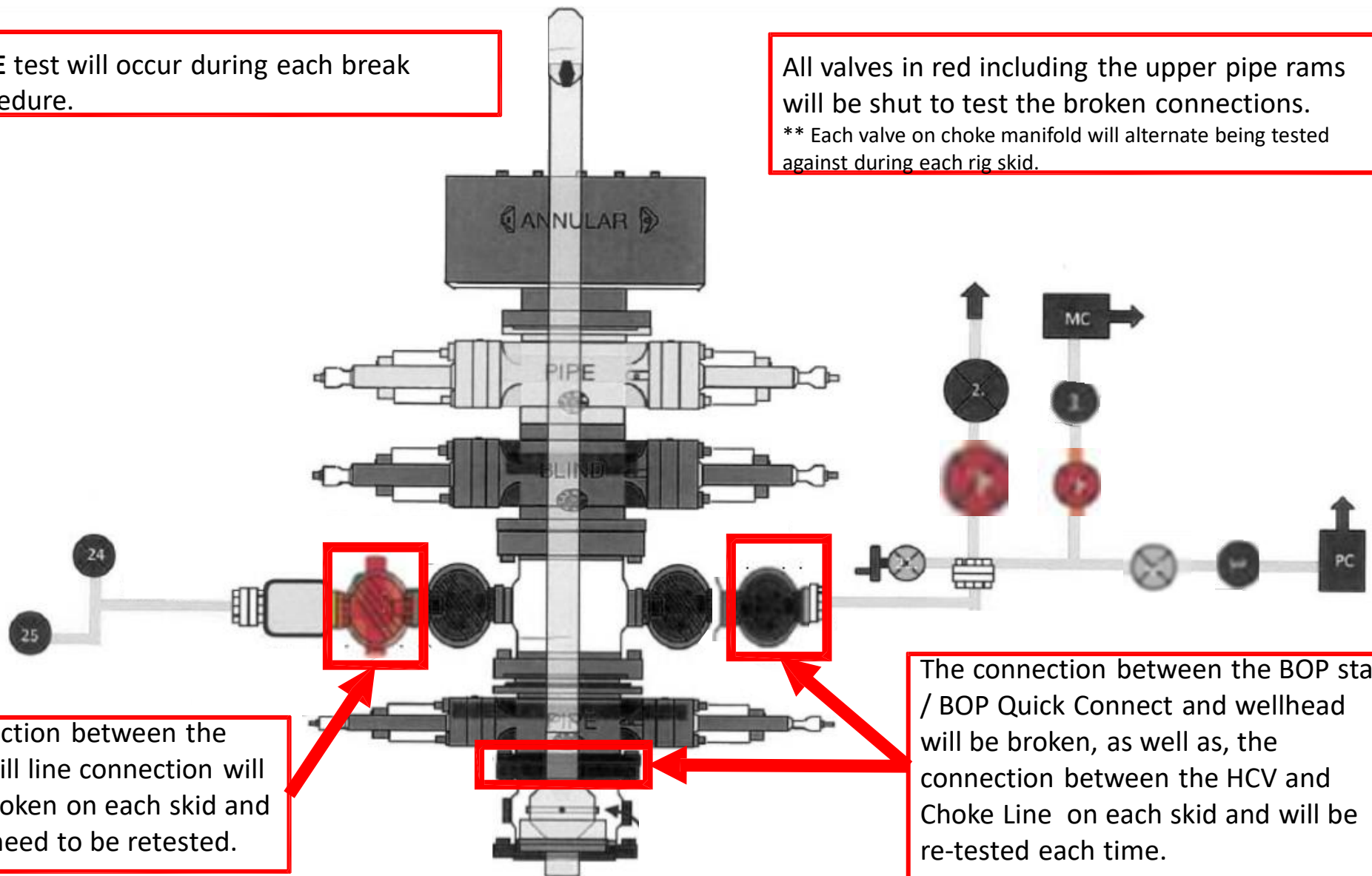
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

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

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

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



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

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

10,000 PSI Annular BOP Variance Request

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

1. Component and Preventer Compatibility Tables

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

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

2. Well Control Procedures

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

General Procedure While Drilling

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

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

General Procedure While Tripping

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

General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

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District III
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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 342692

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 342692
	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