

Well Name: POKER LAKE UNIT 20 DTD	Well Location: T24S / R30E / SEC 20 / NENW / 32.207751 / -103.904465	County or Parish/State: EDDY / NM
Well Number: 224H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMLC068905	Unit or CA Name: POKER LAKE UNIT	Unit or CA Number: NMNM71016X
US Well Number:	Operator: XTO PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2779003

Type of Submission: Notice of Intent      Type of Action: APD Change

Date Sundry Submitted: 03/11/2024      Time Sundry Submitted: 07:30

Date proposed operation will begin: 04/01/2024

**Procedure Description:** XTO Permian Operating, LLC. respectfully requests approval to make changes to the approved APD as follows: SHL, FTP, LTP, BHL and drilling plan. Casing sizes are not changing but casing and cement program are being updated. FROM: TO: SHL: 965' FNL & 2390' FWL OF SECTION 20-T24S-R30E 910' FNL & 2390' FWL OF SECTION 20-T24S-R30E FTP: 100' FSL & 770' FEL OF SECTION 17-T24S-R30E 100' FNL & 2628' FWL OF SECTION 20-T24S-R30E LTP : 330' FNL & 770' FEL OF SECTION 32-T23S-R30E 2337' FNL & 2628' FWL OF SECTION 5-T25S-R30E BHL: 200' FNL & 770' FEL OF SECTION 32-T23S-R30E 2437' FNL & 2628' FWL OF SECTION 5-T25S-R30E The proposed total depth is changing from 33340' MD; 11889' TVD (Wolfcamp) to 28730' MD; 10757' TVD (Wolfcamp). Attachments: C-102, Drilling Plan, Directional Plan, MBS, BOP Variance and Well Control Plan.

NOI Attachments

Procedure Description

- Wild\_Well\_Control\_Plan\_WWCP\_20240311072941.pdf
- BOP\_Variance\_new\_Language\_BOP\_BTV\_20240311072930.pdf
- 3\_String\_Bighole\_Four\_Miler\_HBE0000833\_20240311072901.pdf
- Well\_Plan\_Report\_\_\_\_Poker\_Lake\_Unit\_20\_DTD\_South\_224H\_20240311072836.pdf
- PLU\_20\_DTD\_224H\_Pad\_B\_Drilling\_Plan\_\_2\_14\_2024\_\_20240311072819.pdf
- POKER\_LAKE\_UNIT\_20\_DTD\_224H\_C\_102\_signed\_3\_10\_2024\_20240311072648.pdf

Received by OCD: 6/27/2024 12:37:27 PM

Page 2 of 42

Well Name: POKER LAKE UNIT 20 DTD	Well Location: T24S / R30E / SEC 20 / NENW / 32.207751 / -103.904465	County or Parish/State: EDDY / NM
Well Number: 224H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMLC068905	Unit or CA Name: POKER LAKE UNIT	Unit or CA Number: NMNM71016X
US Well Number:	Operator: XTO PERMIAN OPERATING LLC	

Conditions of Approval

Additional

Sec\_20\_24S\_30E\_NMP\_Sundry\_2779003\_Poker\_Lake\_Unit\_20\_DTD\_224H\_COAs\_20240404145341.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: RANELL (RUSTY) KLEIN

Signed on: MAR 11, 2024 07:29 AM

Name: XTO PERMIAN OPERATING LLC

Title: Regulatory Analyst

Street Address: 6401 HOLIDAY HILL ROAD BLDG 5

City: MIDLANDState: TX

Phone: (432) 620-6700

Email address: RANELL.KLEIN@EXXONMOBIL.COM

Field

Representative Name:

Street Address:

City:State:Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CODY LAYTON

BLM POC Title: Assistant Field Manager Lands & Minerals

BLM POC Phone: 5752345959

BLM POC Email Address: clayton@blm.gov

Disposition: Approved

Disposition Date: 06/26/2024

Signature: Cody R. Layton

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

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

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

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

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

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

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

## Additional Information

### Location of Well

0. SHL: NENW / 965 FNL / 2390 FWL / TWSP: 24S / RANGE: 30E / SECTION: 20 / LAT: 32.207751 / LONG: -103.904465 ( TVD: 0 feet, MD: 0 feet )  
PPP: SESE / 330 FSL / 770 FEL / TWSP: 24S / RANGE: 30E / SECTION: 8 / LAT: 32.2254 / LONG: -103.89736 ( TVD: 11889 feet, MD: 17800 feet )  
PPP: SESE / 100 FSL / 770 FEL / TWSP: 24S / RANGE: 30E / SECTION: 17 / LAT: 32.210716 / LONG: -103.897372 ( TVD: 11889 feet, MD: 12500 feet )  
PPP: NESE / 330 FSL / 770 FEL / TWSP: 24S / RANGE: 30E / SECTION: 17 / LAT: 32.21459 / LONG: -103.89736 ( TVD: 11889 feet, MD: 13900 feet )  
PPP: SESE / 330 FSL / 770 FEL / TWSP: 24S / RANGE: 30E / SECTION: 5 / LAT: 32.23996 / LONG: -103.89736 ( TVD: 11889 feet, MD: 23100 feet )  
BHL: NENE / 200 FNL / 770 FEL / TWSP: 23S / RANGE: 30E / SECTION: 32 / LAT: 32.268071 / LONG: -103.897376 ( TVD: 11889 feet, MD: 33340 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 20 224H
<b>LOCATION:</b>	Sec 20-24S-30E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2779003** 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 checked="" type="radio"/> Low	<input 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 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 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 700 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.**

**Operator has proposed to pump down 13-3/8" X 9-5/8" annulus after primary cementing stage. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to the BLM.**

**If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.**

3. The minimum required fill of cement behind the **6** inch production casing is:
- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

### **C. PRESSURE CONTROL**

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

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

### **Unit Wells**

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

### **Commercial Well Determination**

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

### **BOPE Break Testing Variance**

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

### **Offline Cementing**

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

## **GENERAL REQUIREMENTS**

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

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

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

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

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

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

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

**A. CASING**

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. **Wait on cement (WOC) for Potash Areas:** After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

**B. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
  - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear

chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

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

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

## 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 Onshore O&G Order No. 2 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

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out 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% 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

**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

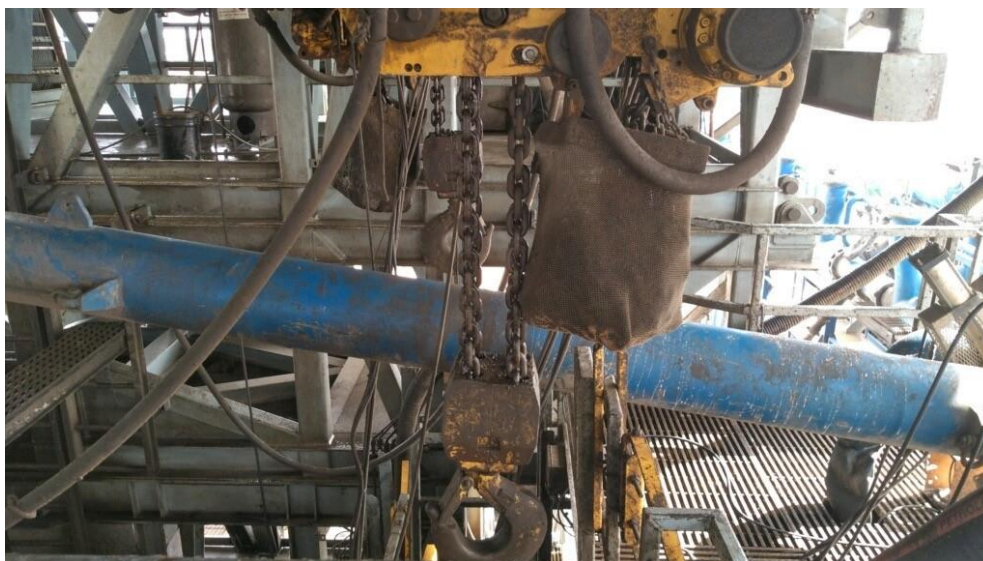


Figure 2: BOP Winch System

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>a</sup>	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers <sup>bd</sup>	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes <sup>a</sup>	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes <sup>a</sup>	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

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

No visible leaks.

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

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

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

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

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

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

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

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

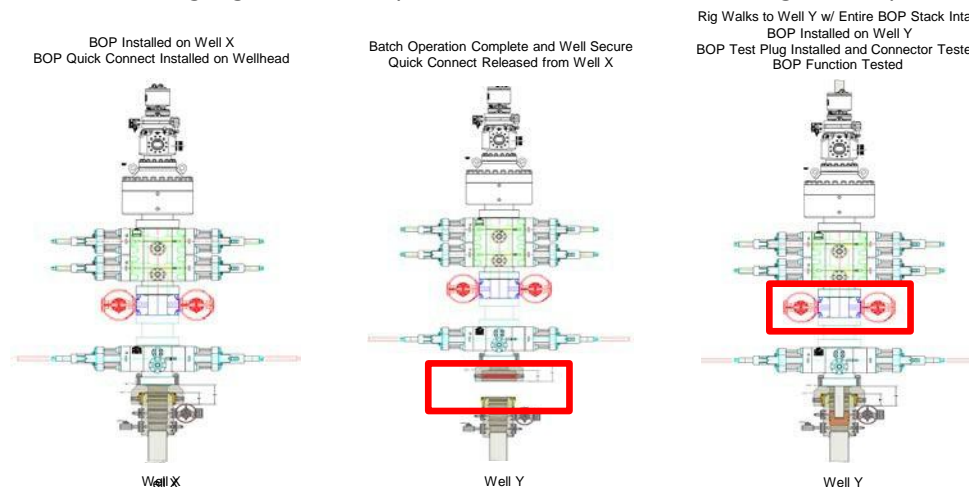
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

### **Procedures**

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

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

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



### **Summary**

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

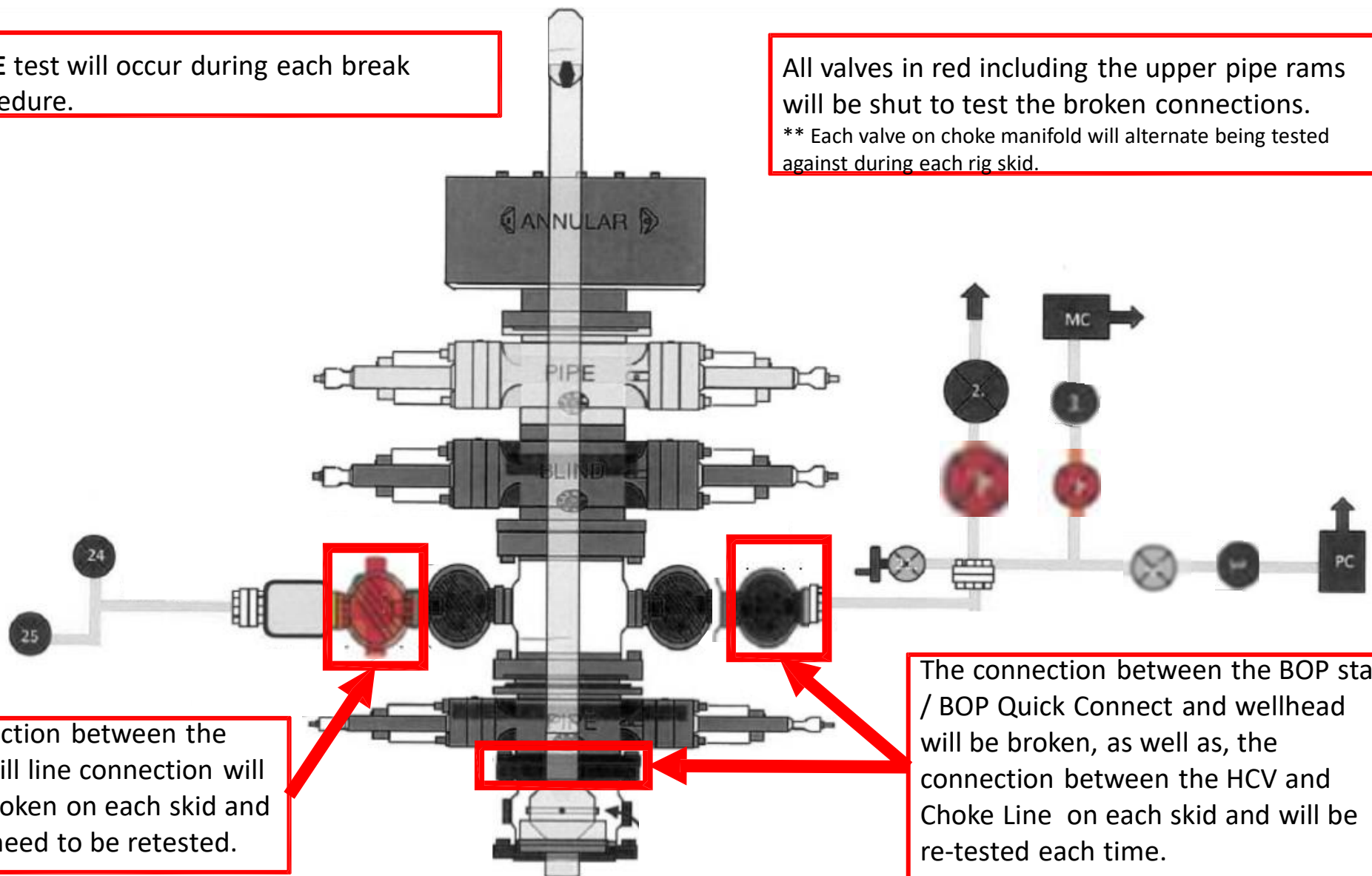
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

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

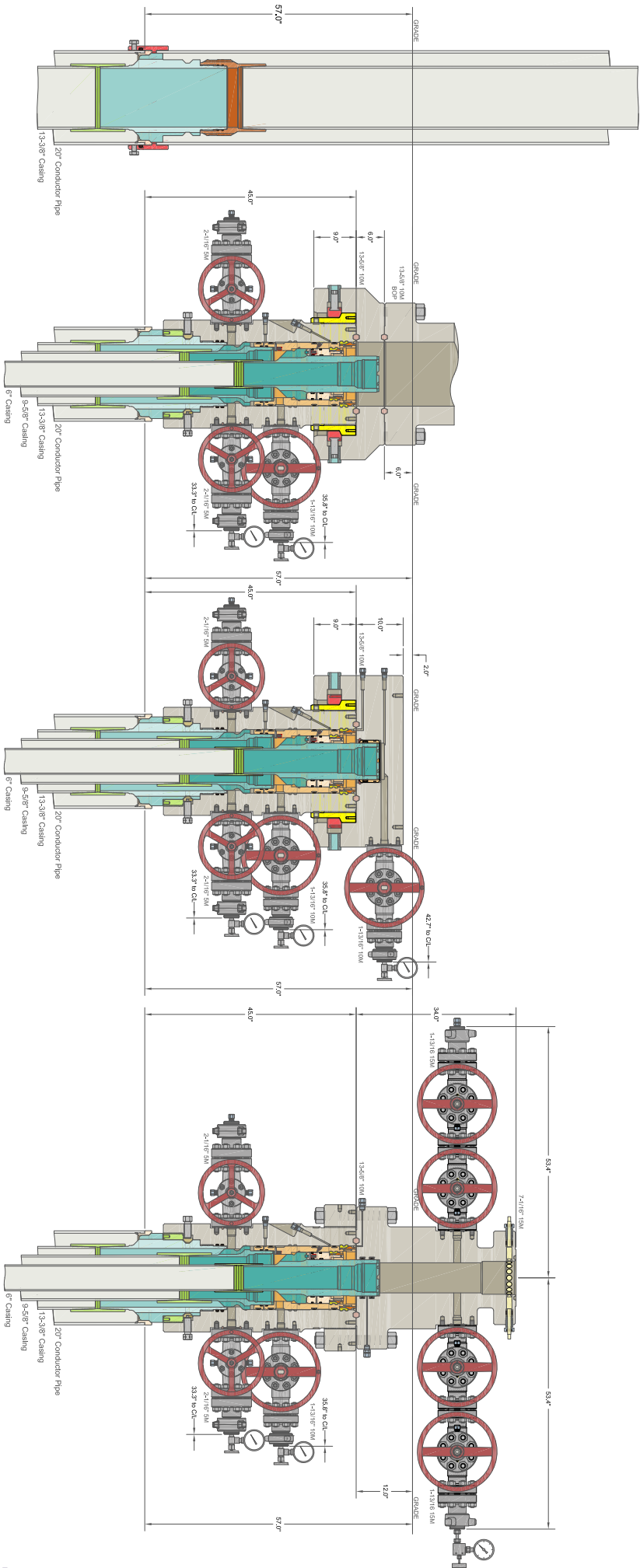
Only **ONE** test will occur during each break test procedure.

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



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

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



INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PERMISSIBLE ONLY AS PROVIDED BY CONTRACT OR AS EXPRESSLY AUTHORIZED BY CACTUS WELLHEAD, LLC.

ALL DIMENSIONS APPROXIMATE

# CACTUS WELLHEAD LLC

XTO ENERGY INC  
DELAWARE BASIN

(20") x 13-3/8" x 9-5/8" x 6" 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	DLE	04NOV22
APPRV		
DRAWING NO.	HBE0000833	

Well Plan Report - Poker Lake Unit 20 DTD South 224H

Measured Depth:	28730.20 ft
TVD RKB:	10757.00 ft
Location	
Cartographic Reference System:	New Mexico East - NAD 27
Northing:	439574.10 ft
Easting:	632797.20 ft
RKB:	3276.00 ft
Ground Level:	3244.06 ft
North Reference:	Grid
Convergence Angle:	0.23 Deg

Plan SectionsPoker Lake Unit 20 DTD South 224H

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	
1649.29	10.99	15.79	1645.93	50.52	14.28	2.00	0.00	2.00	
5528.52	10.99	15.79	5454.07	761.88	215.42	0.00	0.00	0.00	
6077.81	0.00	0.00	6000.00	812.40	229.70	-2.00	0.00	2.00	
10118.61	0.00	0.00	10040.80	812.40	229.70	0.00	0.00	0.00	
11243.61	90.00	179.68	10757.00	96.21	233.72	8.00	0.00	8.00	
11496.36	90.00	179.68	10757.00	-156.54	235.15	0.00	0.00	0.00	LTP 14
28730.20	90.00	179.68	10757.00	-17390.10	332.00	0.00	0.00	0.00	BHL 14

Position UncertaintyPoker Lake Unit 20 DTD South 224H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
----------	-----	----------	---------	----------	-----------	------------	------------	------------	------

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	2.405	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	2.442	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	2.484	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	2.529	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	2.579	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	2.632	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	15.788	1199.980	5.164	0.000	4.370	0.000	2.688	0.000	0.000	5.300	4.207	127.301	MWD+IFR1+MS
1300.000	4.000	15.788	1299.838	5.934	0.000	4.746	0.000	2.747	0.000	0.000	6.082	4.567	124.541	MWD+IFR1+MS
1400.000	6.000	15.788	1399.452	6.627	0.000	5.119	0.000	2.813	0.000	0.000	6.794	4.923	123.232	MWD+IFR1+MS
1500.000	8.000	15.788	1498.702	7.264	0.000	5.489	0.000	2.885	0.000	0.000	7.454	5.277	122.474	MWD+IFR1+MS
1600.000	10.000	15.788	1597.465	7.857	0.000	5.858	0.000	2.968	0.000	0.000	8.073	5.631	121.985	MWD+IFR1+MS
1649.292	10.986	15.788	1645.933	8.015	0.000	6.028	0.000	3.000	0.000	0.000	8.245	5.806	121.874	MWD+IFR1+MS
1700.000	10.986	15.788	1695.711	8.158	0.000	6.202	0.000	3.035	0.000	0.000	8.384	5.985	121.840	MWD+IFR1+MS
1800.000	10.986	15.788	1793.879	8.442	0.000	6.559	0.000	3.112	0.000	0.000	8.662	6.349	122.014	MWD+IFR1+MS
1900.000	10.986	15.788	1892.046	8.742	0.000	6.930	0.000	3.193	0.000	0.000	8.960	6.719	122.395	MWD+IFR1+MS
2000.000	10.986	15.788	1990.214	9.048	0.000	7.301	0.000	3.277	0.000	0.000	9.265	7.090	122.765	MWD+IFR1+MS
2100.000	10.986	15.788	2088.381	9.360	0.000	7.672	0.000	3.364	0.000	0.000	9.574	7.461	123.122	MWD+IFR1+MS
2200.000	10.986	15.788	2186.548	9.677	0.000	8.043	0.000	3.454	0.000	0.000	9.888	7.832	123.468	MWD+IFR1+MS
2300.000	10.986	15.788	2284.716	9.999	0.000	8.415	0.000	3.546	0.000	0.000	10.207	8.203	123.803	MWD+IFR1+MS
2400.000	10.986	15.788	2382.883	10.325	0.000	8.787	0.000	3.640	0.000	0.000	10.529	8.574	124.127	MWD+IFR1+MS
2500.000	10.986	15.788	2481.051	10.654	0.000	9.159	0.000	3.736	0.000	0.000	10.855	8.945	124.439	MWD+IFR1+MS
2600.000	10.986	15.788	2579.218	10.988	0.000	9.531	0.000	3.835	0.000	0.000	11.184	9.317	124.742	MWD+IFR1+MS
2700.000	10.986	15.788	2677.386	11.324	0.000	9.903	0.000	3.935	0.000	0.000	11.517	9.689	125.034	MWD+IFR1+MS
2800.000	10.986	15.788	2775.553	11.663	0.000	10.276	0.000	4.037	0.000	0.000	11.851	10.060	125.316	MWD+IFR1+MS
2900.000	10.986	15.788	2873.720	12.005	0.000	10.648	0.000	4.141	0.000	0.000	12.189	10.432	125.588	MWD+IFR1+MS

3000.000	10.986	15.788	2971.888	12.349	0.000	11.021	0.000	4.247	0.000	0.000	12.529	10.804	125.850	MWD+IFR1+MS
3100.000	10.986	15.788	3070.055	12.696	0.000	11.394	0.000	4.355	0.000	0.000	12.870	11.176	126.104	MWD+IFR1+MS
3200.000	10.986	15.788	3168.223	13.045	0.000	11.767	0.000	4.464	0.000	0.000	13.214	11.548	126.348	MWD+IFR1+MS
3300.000	10.986	15.788	3266.390	13.395	0.000	12.139	0.000	4.574	0.000	0.000	13.559	11.921	126.583	MWD+IFR1+MS
3400.000	10.986	15.788	3364.558	13.747	0.000	12.512	0.000	4.687	0.000	0.000	13.907	12.293	126.810	MWD+IFR1+MS
3500.000	10.986	15.788	3462.725	14.101	0.000	12.885	0.000	4.801	0.000	0.000	14.255	12.665	127.029	MWD+IFR1+MS
3600.000	10.986	15.788	3560.892	14.456	0.000	13.258	0.000	4.916	0.000	0.000	14.605	13.038	127.239	MWD+IFR1+MS
3700.000	10.986	15.788	3659.060	14.813	0.000	13.631	0.000	5.033	0.000	0.000	14.957	13.411	127.442	MWD+IFR1+MS
3800.000	10.986	15.788	3757.227	15.171	0.000	14.004	0.000	5.152	0.000	0.000	15.309	13.783	127.636	MWD+IFR1+MS
3900.000	10.986	15.788	3855.395	15.530	0.000	14.378	0.000	5.272	0.000	0.000	15.663	14.156	127.824	MWD+IFR1+MS
4000.000	10.986	15.788	3953.562	15.891	0.000	14.751	0.000	5.393	0.000	0.000	16.018	14.529	128.004	MWD+IFR1+MS
4100.000	10.986	15.788	4051.730	16.252	0.000	15.124	0.000	5.517	0.000	0.000	16.373	14.902	128.177	MWD+IFR1+MS
4200.000	10.986	15.788	4149.897	16.614	0.000	15.497	0.000	5.641	0.000	0.000	16.730	15.275	128.343	MWD+IFR1+MS
4300.000	10.986	15.788	4248.064	16.978	0.000	15.871	0.000	5.768	0.000	0.000	17.088	15.648	128.502	MWD+IFR1+MS
4400.000	10.986	15.788	4346.232	17.342	0.000	16.244	0.000	5.896	0.000	0.000	17.446	16.021	128.655	MWD+IFR1+MS
4500.000	10.986	15.788	4444.399	17.707	0.000	16.617	0.000	6.025	0.000	0.000	17.805	16.394	128.802	MWD+IFR1+MS
4600.000	10.986	15.788	4542.567	18.072	0.000	16.991	0.000	6.156	0.000	0.000	18.165	16.767	128.942	MWD+IFR1+MS
4700.000	10.986	15.788	4640.734	18.439	0.000	17.364	0.000	6.289	0.000	0.000	18.525	17.140	129.076	MWD+IFR1+MS
4800.000	10.986	15.788	4738.902	18.806	0.000	17.737	0.000	6.423	0.000	0.000	18.887	17.513	129.205	MWD+IFR1+MS
4900.000	10.986	15.788	4837.069	19.174	0.000	18.111	0.000	6.559	0.000	0.000	19.248	17.887	129.328	MWD+IFR1+MS
5000.000	10.986	15.788	4935.236	19.542	0.000	18.484	0.000	6.697	0.000	0.000	19.611	18.260	129.445	MWD+IFR1+MS
5100.000	10.986	15.788	5033.404	19.911	0.000	18.858	0.000	6.837	0.000	0.000	19.974	18.634	129.557	MWD+IFR1+MS
5200.000	10.986	15.788	5131.571	20.280	0.000	19.231	0.000	6.978	0.000	0.000	20.337	19.007	129.663	MWD+IFR1+MS
5300.000	10.986	15.788	5229.739	20.650	0.000	19.605	0.000	7.121	0.000	0.000	20.701	19.381	129.765	MWD+IFR1+MS
5400.000	10.986	15.788	5327.906	21.020	0.000	19.978	0.000	7.265	0.000	0.000	21.065	19.754	129.861	MWD+IFR1+MS
5500.000	10.986	15.788	5426.074	21.391	0.000	20.352	0.000	7.412	0.000	0.000	21.430	20.128	129.952	MWD+IFR1+MS
5528.516	10.986	15.788	5454.067	21.495	0.000	20.456	0.000	7.454	0.000	0.000	21.530	20.234	129.913	MWD+IFR1+MS
5600.000	9.556	15.788	5524.404	21.780	0.000	20.717	0.000	7.561	0.000	0.000	21.790	20.498	129.753	MWD+IFR1+MS
5700.000	7.556	15.788	5623.286	22.229	0.000	21.083	0.000	7.713	0.000	0.000	22.228	20.866	128.959	MWD+IFR1+MS
5800.000	5.556	15.788	5722.627	22.676	0.000	21.446	0.000	7.860	0.000	0.000	22.692	21.229	128.081	MWD+IFR1+MS
5900.000	3.556	15.788	5822.306	23.088	0.000	21.804	0.000	8.002	0.000	0.000	23.149	21.586	127.344	MWD+IFR1+MS
6000.000	1.556	15.788	5922.201	23.465	0.000	22.156	0.000	8.138	0.000	0.000	23.598	21.937	126.728	MWD+IFR1+MS
6077.809	0.000	0.000	6000.000	23.323	0.000	22.813	0.000	8.242	0.000	0.000	23.900	22.207	126.227	MWD+IFR1+MS

6100.000	0.000	0.000	6022.191	23.396	0.000	22.886	0.000	8.272	0.000	0.000	23.972	22.283	126.202	MWD+IFR1+MS
6200.000	0.000	0.000	6122.191	23.726	0.000	23.220	0.000	8.405	0.000	0.000	24.295	22.625	126.171	MWD+IFR1+MS
6300.000	0.000	0.000	6222.191	24.062	0.000	23.559	0.000	8.541	0.000	0.000	24.627	22.968	126.189	MWD+IFR1+MS
6400.000	0.000	0.000	6322.191	24.398	0.000	23.899	0.000	8.680	0.000	0.000	24.961	23.311	126.207	MWD+IFR1+MS
6500.000	0.000	0.000	6422.191	24.734	0.000	24.240	0.000	8.821	0.000	0.000	25.295	23.654	126.225	MWD+IFR1+MS
6600.000	0.000	0.000	6522.191	25.072	0.000	24.581	0.000	8.965	0.000	0.000	25.630	23.998	126.243	MWD+IFR1+MS
6700.000	0.000	0.000	6622.191	25.409	0.000	24.922	0.000	9.111	0.000	0.000	25.965	24.343	126.260	MWD+IFR1+MS
6800.000	0.000	0.000	6722.191	25.748	0.000	25.264	0.000	9.260	0.000	0.000	26.301	24.687	126.277	MWD+IFR1+MS
6900.000	0.000	0.000	6822.191	26.087	0.000	25.607	0.000	9.412	0.000	0.000	26.638	25.033	126.294	MWD+IFR1+MS
7000.000	0.000	0.000	6922.191	26.426	0.000	25.949	0.000	9.567	0.000	0.000	26.975	25.378	126.311	MWD+IFR1+MS
7100.000	0.000	0.000	7022.191	26.766	0.000	26.293	0.000	9.724	0.000	0.000	27.313	25.724	126.327	MWD+IFR1+MS
7200.000	0.000	0.000	7122.191	27.106	0.000	26.636	0.000	9.884	0.000	0.000	27.651	26.070	126.343	MWD+IFR1+MS
7300.000	0.000	0.000	7222.191	27.447	0.000	26.980	0.000	10.047	0.000	0.000	27.990	26.417	126.359	MWD+IFR1+MS
7400.000	0.000	0.000	7322.191	27.789	0.000	27.325	0.000	10.213	0.000	0.000	28.329	26.764	126.375	MWD+IFR1+MS
7500.000	0.000	0.000	7422.191	28.130	0.000	27.669	0.000	10.381	0.000	0.000	28.669	27.111	126.390	MWD+IFR1+MS
7600.000	0.000	0.000	7522.191	28.473	0.000	28.014	0.000	10.553	0.000	0.000	29.009	27.458	126.405	MWD+IFR1+MS
7700.000	0.000	0.000	7622.191	28.815	0.000	28.360	0.000	10.727	0.000	0.000	29.350	27.806	126.420	MWD+IFR1+MS
7800.000	0.000	0.000	7722.191	29.158	0.000	28.706	0.000	10.904	0.000	0.000	29.691	28.154	126.434	MWD+IFR1+MS
7900.000	0.000	0.000	7822.191	29.501	0.000	29.052	0.000	11.084	0.000	0.000	30.032	28.502	126.449	MWD+IFR1+MS
8000.000	0.000	0.000	7922.191	29.845	0.000	29.398	0.000	11.267	0.000	0.000	30.374	28.851	126.463	MWD+IFR1+MS
8100.000	0.000	0.000	8022.191	30.189	0.000	29.745	0.000	11.453	0.000	0.000	30.716	29.200	126.477	MWD+IFR1+MS
8200.000	0.000	0.000	8122.191	30.533	0.000	30.092	0.000	11.641	0.000	0.000	31.059	29.549	126.491	MWD+IFR1+MS
8300.000	0.000	0.000	8222.191	30.878	0.000	30.439	0.000	11.833	0.000	0.000	31.402	29.898	126.505	MWD+IFR1+MS
8400.000	0.000	0.000	8322.191	31.223	0.000	30.786	0.000	12.028	0.000	0.000	31.745	30.247	126.518	MWD+IFR1+MS
8500.000	0.000	0.000	8422.191	31.568	0.000	31.134	0.000	12.225	0.000	0.000	32.089	30.597	126.531	MWD+IFR1+MS
8600.000	0.000	0.000	8522.191	31.914	0.000	31.482	0.000	12.426	0.000	0.000	32.433	30.947	126.544	MWD+IFR1+MS
8700.000	0.000	0.000	8622.191	32.260	0.000	31.830	0.000	12.629	0.000	0.000	32.777	31.297	126.557	MWD+IFR1+MS
8800.000	0.000	0.000	8722.191	32.606	0.000	32.178	0.000	12.836	0.000	0.000	33.121	31.647	126.570	MWD+IFR1+MS
8900.000	0.000	0.000	8822.191	32.952	0.000	32.527	0.000	13.045	0.000	0.000	33.466	31.998	126.582	MWD+IFR1+MS
9000.000	0.000	0.000	8922.191	33.299	0.000	32.876	0.000	13.258	0.000	0.000	33.811	32.348	126.595	MWD+IFR1+MS
9100.000	0.000	0.000	9022.191	33.646	0.000	33.225	0.000	13.473	0.000	0.000	34.157	32.699	126.607	MWD+IFR1+MS
9200.000	0.000	0.000	9122.191	33.993	0.000	33.574	0.000	13.692	0.000	0.000	34.503	33.050	126.619	MWD+IFR1+MS
9300.000	0.000	0.000	9222.191	34.340	0.000	33.923	0.000	13.914	0.000	0.000	34.848	33.401	126.631	MWD+IFR1+MS

9400.000	0.000	0.000	9322.191	34.688	0.000	34.273	0.000	14.138	0.000	0.000	35.195	33.752	126.642	MWD+IFR1+MS
9500.000	0.000	0.000	9422.191	35.036	0.000	34.623	0.000	14.366	0.000	0.000	35.541	34.104	126.654	MWD+IFR1+MS
9600.000	0.000	0.000	9522.191	35.384	0.000	34.973	0.000	14.597	0.000	0.000	35.888	34.455	126.665	MWD+IFR1+MS
9700.000	0.000	0.000	9622.191	35.732	0.000	35.323	0.000	14.830	0.000	0.000	36.235	34.807	126.676	MWD+IFR1+MS
9800.000	0.000	0.000	9722.191	36.080	0.000	35.673	0.000	15.067	0.000	0.000	36.582	35.159	126.688	MWD+IFR1+MS
9900.000	0.000	0.000	9822.191	36.429	0.000	36.024	0.000	15.307	0.000	0.000	36.929	35.511	126.698	MWD+IFR1+MS
10000.000	0.000	0.000	9922.191	36.778	0.000	36.374	0.000	15.550	0.000	0.000	37.277	35.863	126.709	MWD+IFR1+MS
10100.000	0.000	0.000	10022.191	37.127	0.000	36.725	0.000	15.796	0.000	0.000	37.624	36.215	126.720	MWD+IFR1+MS
10118.609	0.000	0.000	10040.800	37.191	0.000	36.789	0.000	15.843	0.000	0.000	37.687	36.281	126.712	MWD+IFR1+MS
10200.000	6.511	179.678	10122.016	37.063	0.000	37.061	-0.000	16.045	0.000	0.000	38.027	36.585	124.480	MWD+IFR1+MS
10300.000	14.511	179.678	10220.258	37.162	0.000	37.356	-0.000	16.357	0.000	0.000	39.037	37.042	112.801	MWD+IFR1+MS
10400.000	22.511	179.678	10315.007	36.905	0.000	37.631	-0.000	16.833	0.000	0.000	40.187	37.389	106.459	MWD+IFR1+MS
10500.000	30.511	179.678	10404.419	36.148	0.000	37.879	-0.000	17.528	0.000	0.000	41.207	37.668	103.520	MWD+IFR1+MS
10600.000	38.511	179.678	10486.754	34.982	0.000	38.101	-0.000	18.473	0.000	0.000	42.057	37.901	102.011	MWD+IFR1+MS
10700.000	46.511	179.678	10560.408	33.526	0.000	38.293	-0.000	19.664	0.000	0.000	42.726	38.097	101.231	MWD+IFR1+MS
10800.000	54.511	179.678	10623.949	31.936	0.000	38.456	-0.000	21.072	0.000	0.000	43.217	38.257	100.884	MWD+IFR1+MS
10900.000	62.511	179.678	10676.140	30.402	0.000	38.590	-0.000	22.649	0.000	0.000	43.546	38.385	100.818	MWD+IFR1+MS
11000.000	70.511	179.678	10715.964	29.146	0.000	38.694	-0.000	24.336	0.000	0.000	43.739	38.480	100.934	MWD+IFR1+MS
11100.000	78.511	179.678	10742.648	28.391	0.000	38.768	-0.000	26.073	0.000	0.000	43.829	38.545	101.150	MWD+IFR1+MS
11200.000	86.511	179.678	10755.670	28.325	0.000	38.812	-0.000	27.802	0.000	0.000	43.857	38.581	101.375	MWD+IFR1+MS
11243.609	90.000	179.678	10756.997	28.021	0.000	38.819	-0.000	28.021	0.000	0.000	43.860	38.586	101.436	MWD+IFR1+MS
11300.000	90.000	179.678	10756.997	28.141	0.000	38.827	-0.000	28.141	0.000	0.000	43.864	38.591	101.513	MWD+IFR1+MS
11400.000	90.000	179.678	10756.997	28.325	0.000	38.857	-0.000	28.325	0.000	0.000	43.873	38.615	101.683	MWD+IFR1+MS
11496.362	90.000	179.678	10756.997	28.523	0.000	38.902	-0.000	28.523	0.000	0.000	43.882	38.653	101.879	MWD+IFR1+MS
11500.000	90.000	179.678	10756.997	28.530	0.000	38.903	-0.000	28.530	0.000	0.000	43.882	38.655	101.887	MWD+IFR1+MS
11600.000	90.000	179.678	10756.997	28.752	0.000	38.962	-0.000	28.752	0.000	0.000	43.892	38.706	102.118	MWD+IFR1+MS
11700.000	90.000	179.678	10756.997	28.998	0.000	39.039	-0.000	28.998	0.000	0.000	43.904	38.775	102.393	MWD+IFR1+MS
11800.000	90.000	179.678	10756.997	29.263	0.000	39.131	-0.000	29.263	0.000	0.000	43.918	38.858	102.707	MWD+IFR1+MS
11900.000	90.000	179.678	10756.997	29.546	0.000	39.237	-0.000	29.546	0.000	0.000	43.933	38.954	103.064	MWD+IFR1+MS
12000.000	90.000	179.678	10756.997	29.847	0.000	39.358	-0.000	29.847	0.000	0.000	43.950	39.065	103.468	MWD+IFR1+MS
12100.000	90.000	179.678	10756.997	30.166	0.000	39.494	-0.000	30.166	0.000	0.000	43.968	39.188	103.925	MWD+IFR1+MS
12200.000	90.000	179.678	10756.997	30.502	0.000	39.644	-0.000	30.502	0.000	0.000	43.989	39.324	104.441	MWD+IFR1+MS
12300.000	90.000	179.678	10756.997	30.853	0.000	39.808	-0.000	30.853	0.000	0.000	44.012	39.473	105.025	MWD+IFR1+MS

12400.000	90.000	179.678	10756.997	31.221	0.000	39.986	-0.000	31.221	0.000	0.000	44.037	39.634	105.685	MWD+IFR1+MS
12500.000	90.000	179.678	10756.997	31.604	0.000	40.178	-0.000	31.604	0.000	0.000	44.065	39.807	106.433	MWD+IFR1+MS
12600.000	90.000	179.678	10756.997	32.002	0.000	40.383	-0.000	32.002	0.000	0.000	44.096	39.990	107.283	MWD+IFR1+MS
12700.000	90.000	179.678	10756.997	32.413	0.000	40.602	-0.000	32.413	0.000	0.000	44.131	40.184	108.250	MWD+IFR1+MS
12800.000	90.000	179.678	10756.997	32.838	0.000	40.834	-0.000	32.838	0.000	0.000	44.170	40.388	109.355	MWD+IFR1+MS
12900.000	90.000	179.678	10756.997	33.277	0.000	41.079	-0.000	33.277	0.000	0.000	44.214	40.600	110.621	MWD+IFR1+MS
13000.000	90.000	179.678	10756.997	33.728	0.000	41.337	-0.000	33.728	0.000	0.000	44.265	40.819	112.076	MWD+IFR1+MS
13100.000	90.000	179.678	10756.997	34.191	0.000	41.607	-0.000	34.191	0.000	0.000	44.322	41.044	113.750	MWD+IFR1+MS
13200.000	90.000	179.678	10756.997	34.665	0.000	41.890	-0.000	34.665	0.000	0.000	44.389	41.273	115.680	MWD+IFR1+MS
13300.000	90.000	179.678	10756.997	35.151	0.000	42.184	-0.000	35.151	0.000	0.000	44.466	41.504	117.900	MWD+IFR1+MS
13400.000	90.000	179.678	10756.997	35.647	0.000	42.490	-0.000	35.647	0.000	0.000	44.556	41.734	120.444	MWD+IFR1+MS
13500.000	90.000	179.678	10756.997	36.154	0.000	42.808	-0.000	36.154	0.000	0.000	44.662	41.960	123.333	MWD+IFR1+MS
13600.000	90.000	179.678	10756.997	36.670	0.000	43.137	-0.000	36.670	0.000	0.000	44.788	42.179	126.567	MWD+IFR1+MS
13700.000	90.000	179.678	10756.997	37.196	0.000	43.477	-0.000	37.196	0.000	0.000	44.936	42.387	130.109	MWD+IFR1+MS
13800.000	90.000	179.678	10756.997	37.731	0.000	43.828	-0.000	37.731	0.000	0.000	45.109	42.581	133.878	MWD+IFR1+MS
13900.000	90.000	179.678	10756.997	38.274	0.000	44.189	-0.000	38.274	0.000	0.000	45.310	42.758	-42.247	MWD+IFR1+MS
14000.000	90.000	179.678	10756.997	38.825	0.000	44.560	-0.000	38.825	0.000	0.000	45.541	42.917	-38.407	MWD+IFR1+MS
14100.000	90.000	179.678	10756.997	39.385	0.000	44.942	-0.000	39.385	0.000	0.000	45.800	43.057	-34.738	MWD+IFR1+MS
14200.000	90.000	179.678	10756.997	39.952	0.000	45.333	-0.000	39.952	0.000	0.000	46.087	43.180	-31.341	MWD+IFR1+MS
14300.000	90.000	179.678	10756.997	40.527	0.000	45.734	-0.000	40.527	0.000	0.000	46.399	43.288	-28.273	MWD+IFR1+MS
14400.000	90.000	179.678	10756.997	41.108	0.000	46.143	-0.000	41.108	0.000	0.000	46.734	43.383	-25.551	MWD+IFR1+MS
14500.000	90.000	179.678	10756.997	41.696	0.000	46.562	-0.000	41.696	0.000	0.000	47.090	43.466	-23.161	MWD+IFR1+MS
14600.000	90.000	179.678	10756.997	42.290	0.000	46.990	-0.000	42.290	0.000	0.000	47.465	43.541	-21.077	MWD+IFR1+MS
14700.000	90.000	179.678	10756.997	42.891	0.000	47.426	-0.000	42.891	0.000	0.000	47.855	43.608	-19.262	MWD+IFR1+MS
14800.000	90.000	179.678	10756.997	43.497	0.000	47.870	-0.000	43.497	0.000	0.000	48.261	43.669	-17.680	MWD+IFR1+MS
14900.000	90.000	179.678	10756.997	44.109	0.000	48.322	-0.000	44.109	0.000	0.000	48.680	43.725	-16.298	MWD+IFR1+MS
15000.000	90.000	179.678	10756.997	44.727	0.000	48.783	-0.000	44.727	0.000	0.000	49.111	43.777	-15.086	MWD+IFR1+MS
15100.000	90.000	179.678	10756.997	45.349	0.000	49.250	-0.000	45.349	0.000	0.000	49.554	43.827	-14.019	MWD+IFR1+MS
15200.000	90.000	179.678	10756.997	45.977	0.000	49.726	-0.000	45.977	0.000	0.000	50.007	43.873	-13.075	MWD+IFR1+MS
15300.000	90.000	179.678	10756.997	46.609	0.000	50.208	-0.000	46.609	0.000	0.000	50.470	43.918	-12.237	MWD+IFR1+MS
15400.000	90.000	179.678	10756.997	47.246	0.000	50.697	-0.000	47.246	0.000	0.000	50.942	43.961	-11.488	MWD+IFR1+MS
15500.000	90.000	179.678	10756.997	47.887	0.000	51.193	-0.000	47.887	0.000	0.000	51.422	44.003	-10.817	MWD+IFR1+MS
15600.000	90.000	179.678	10756.997	48.533	0.000	51.696	-0.000	48.533	0.000	0.000	51.911	44.044	-10.213	MWD+IFR1+MS

15700.000	90.000	179.678	10756.997	49.182	0.000	52.205	-0.000	49.182	0.000	0.000	52.408	44.084	-9.667	MWD+IFR1+MS
15800.000	90.000	179.678	10756.997	49.836	0.000	52.720	-0.000	49.836	0.000	0.000	52.911	44.124	-9.172	MWD+IFR1+MS
15900.000	90.000	179.678	10756.997	50.493	0.000	53.242	-0.000	50.493	0.000	0.000	53.422	44.163	-8.720	MWD+IFR1+MS
16000.000	90.000	179.678	10756.997	51.154	0.000	53.769	-0.000	51.154	0.000	0.000	53.940	44.201	-8.308	MWD+IFR1+MS
16100.000	90.000	179.678	10756.997	51.818	0.000	54.302	-0.000	51.818	0.000	0.000	54.464	44.240	-7.930	MWD+IFR1+MS
16200.000	90.000	179.678	10756.997	52.485	0.000	54.840	-0.000	52.485	0.000	0.000	54.995	44.278	-7.583	MWD+IFR1+MS
16300.000	90.000	179.678	10756.997	53.156	0.000	55.384	-0.000	53.156	0.000	0.000	55.531	44.316	-7.263	MWD+IFR1+MS
16400.000	90.000	179.678	10756.997	53.830	0.000	55.933	-0.000	53.830	0.000	0.000	56.073	44.354	-6.967	MWD+IFR1+MS
16500.000	90.000	179.678	10756.997	54.507	0.000	56.486	-0.000	54.507	0.000	0.000	56.621	44.393	-6.692	MWD+IFR1+MS
16600.000	90.000	179.678	10756.997	55.186	0.000	57.045	-0.000	55.186	0.000	0.000	57.174	44.431	-6.437	MWD+IFR1+MS
16700.000	90.000	179.678	10756.997	55.869	0.000	57.609	-0.000	55.869	0.000	0.000	57.732	44.470	-6.200	MWD+IFR1+MS
16800.000	90.000	179.678	10756.997	56.554	0.000	58.177	-0.000	56.554	0.000	0.000	58.295	44.508	-5.979	MWD+IFR1+MS
16900.000	90.000	179.678	10756.997	57.242	0.000	58.750	-0.000	57.242	0.000	0.000	58.863	44.547	-5.772	MWD+IFR1+MS
17000.000	90.000	179.678	10756.997	57.932	0.000	59.327	-0.000	57.932	0.000	0.000	59.436	44.586	-5.578	MWD+IFR1+MS
17100.000	90.000	179.678	10756.997	58.624	0.000	59.908	-0.000	58.624	0.000	0.000	60.013	44.626	-5.396	MWD+IFR1+MS
17200.000	90.000	179.678	10756.997	59.319	0.000	60.493	-0.000	59.319	0.000	0.000	60.594	44.665	-5.225	MWD+IFR1+MS
17300.000	90.000	179.678	10756.997	60.016	0.000	61.083	-0.000	60.016	0.000	0.000	61.180	44.705	-5.064	MWD+IFR1+MS
17400.000	90.000	179.678	10756.997	60.715	0.000	61.676	-0.000	60.715	0.000	0.000	61.770	44.746	-4.913	MWD+IFR1+MS
17500.000	90.000	179.678	10756.997	61.416	0.000	62.273	-0.000	61.416	0.000	0.000	62.364	44.787	-4.770	MWD+IFR1+MS
17600.000	90.000	179.678	10756.997	62.120	0.000	62.873	-0.000	62.120	0.000	0.000	62.961	44.828	-4.634	MWD+IFR1+MS
17700.000	90.000	179.678	10756.997	62.825	0.000	63.477	-0.000	62.825	0.000	0.000	63.562	44.869	-4.506	MWD+IFR1+MS
17800.000	90.000	179.678	10756.997	63.532	0.000	64.085	-0.000	63.532	0.000	0.000	64.167	44.911	-4.385	MWD+IFR1+MS
17900.000	90.000	179.678	10756.997	64.241	0.000	64.696	-0.000	64.241	0.000	0.000	64.776	44.953	-4.269	MWD+IFR1+MS
18000.000	90.000	179.678	10756.997	64.951	0.000	65.310	-0.000	64.951	0.000	0.000	65.387	44.996	-4.160	MWD+IFR1+MS
18100.000	90.000	179.678	10756.997	65.664	0.000	65.928	-0.000	65.664	0.000	0.000	66.003	45.039	-4.055	MWD+IFR1+MS
18200.000	90.000	179.678	10756.997	66.377	0.000	66.548	-0.000	66.377	0.000	0.000	66.621	45.082	-3.956	MWD+IFR1+MS
18300.000	90.000	179.678	10756.997	67.093	0.000	67.172	-0.000	67.093	0.000	0.000	67.242	45.126	-3.862	MWD+IFR1+MS
18400.000	90.000	179.678	10756.997	67.810	0.000	67.798	-0.000	67.810	0.000	0.000	67.867	45.170	-3.771	MWD+IFR1+MS
18500.000	90.000	179.678	10756.997	68.528	0.000	68.427	-0.000	68.528	0.000	0.000	68.494	45.215	-3.685	MWD+IFR1+MS
18600.000	90.000	179.678	10756.997	69.248	0.000	69.059	-0.000	69.248	0.000	0.000	69.124	45.260	-3.603	MWD+IFR1+MS
18700.000	90.000	179.678	10756.997	69.970	0.000	69.694	-0.000	69.970	0.000	0.000	69.757	45.306	-3.524	MWD+IFR1+MS
18800.000	90.000	179.678	10756.997	70.692	0.000	70.331	-0.000	70.692	0.000	0.000	70.392	45.352	-3.449	MWD+IFR1+MS
18900.000	90.000	179.678	10756.997	71.416	0.000	70.971	-0.000	71.416	0.000	0.000	71.031	45.398	-3.376	MWD+IFR1+MS

19000.000	90.000	179.678	10756.997	72.142	0.000	71.613	-0.000	72.142	0.000	0.000	71.671	45.445	-3.307	MWD+IFR1+MS
19100.000	90.000	179.678	10756.997	72.868	0.000	72.258	-0.000	72.868	0.000	0.000	72.315	45.493	-3.240	MWD+IFR1+MS
19200.000	90.000	179.678	10756.997	73.596	0.000	72.905	-0.000	73.596	0.000	0.000	72.960	45.541	-3.176	MWD+IFR1+MS
19300.000	90.000	179.678	10756.997	74.325	0.000	73.554	-0.000	74.325	0.000	0.000	73.608	45.589	-3.115	MWD+IFR1+MS
19400.000	90.000	179.678	10756.997	75.055	0.000	74.206	-0.000	75.055	0.000	0.000	74.258	45.638	-3.056	MWD+IFR1+MS
19500.000	90.000	179.678	10756.997	75.786	0.000	74.859	-0.000	75.786	0.000	0.000	74.911	45.687	-2.999	MWD+IFR1+MS
19600.000	90.000	179.678	10756.997	76.518	0.000	75.515	-0.000	76.518	0.000	0.000	75.565	45.736	-2.944	MWD+IFR1+MS
19700.000	90.000	179.678	10756.997	77.251	0.000	76.173	-0.000	77.251	0.000	0.000	76.222	45.787	-2.891	MWD+IFR1+MS
19800.000	90.000	179.678	10756.997	77.985	0.000	76.833	-0.000	77.985	0.000	0.000	76.881	45.837	-2.841	MWD+IFR1+MS
19900.000	90.000	179.678	10756.997	78.720	0.000	77.494	-0.000	78.720	0.000	0.000	77.541	45.888	-2.792	MWD+IFR1+MS
20000.000	90.000	179.678	10756.997	79.457	0.000	78.158	-0.000	79.457	0.000	0.000	78.204	45.940	-2.744	MWD+IFR1+MS
20100.000	90.000	179.678	10756.997	80.194	0.000	78.824	-0.000	80.194	0.000	0.000	78.868	45.992	-2.698	MWD+IFR1+MS
20200.000	90.000	179.678	10756.997	80.932	0.000	79.491	-0.000	80.932	0.000	0.000	79.535	46.044	-2.654	MWD+IFR1+MS
20300.000	90.000	179.678	10756.997	81.670	0.000	80.160	-0.000	81.670	0.000	0.000	80.203	46.097	-2.612	MWD+IFR1+MS
20400.000	90.000	179.678	10756.997	82.410	0.000	80.831	-0.000	82.410	0.000	0.000	80.873	46.150	-2.570	MWD+IFR1+MS
20500.000	90.000	179.678	10756.997	83.151	0.000	81.503	-0.000	83.151	0.000	0.000	81.544	46.204	-2.530	MWD+IFR1+MS
20600.000	90.000	179.678	10756.997	83.892	0.000	82.177	-0.000	83.892	0.000	0.000	82.218	46.259	-2.492	MWD+IFR1+MS
20700.000	90.000	179.678	10756.997	84.634	0.000	82.853	-0.000	84.634	0.000	0.000	82.892	46.313	-2.454	MWD+IFR1+MS
20800.000	90.000	179.678	10756.997	85.377	0.000	83.530	-0.000	85.377	0.000	0.000	83.569	46.369	-2.418	MWD+IFR1+MS
20900.000	90.000	179.678	10756.997	86.120	0.000	84.209	-0.000	86.120	0.000	0.000	84.247	46.424	-2.383	MWD+IFR1+MS
21000.000	90.000	179.678	10756.997	86.865	0.000	84.889	-0.000	86.865	0.000	0.000	84.926	46.480	-2.348	MWD+IFR1+MS
21100.000	90.000	179.678	10756.997	87.610	0.000	85.571	-0.000	87.610	0.000	0.000	85.607	46.537	-2.315	MWD+IFR1+MS
21200.000	90.000	179.678	10756.997	88.355	0.000	86.254	-0.000	88.355	0.000	0.000	86.290	46.594	-2.283	MWD+IFR1+MS
21300.000	90.000	179.678	10756.997	89.102	0.000	86.938	-0.000	89.102	0.000	0.000	86.973	46.652	-2.252	MWD+IFR1+MS
21400.000	90.000	179.678	10756.997	89.849	0.000	87.624	-0.000	89.849	0.000	0.000	87.658	46.709	-2.222	MWD+IFR1+MS
21500.000	90.000	179.678	10756.997	90.596	0.000	88.311	-0.000	90.596	0.000	0.000	88.345	46.768	-2.192	MWD+IFR1+MS
21600.000	90.000	179.678	10756.997	91.345	0.000	88.999	-0.000	91.345	0.000	0.000	89.033	46.827	-2.164	MWD+IFR1+MS
21700.000	90.000	179.678	10756.997	92.094	0.000	89.689	-0.000	92.094	0.000	0.000	89.722	46.886	-2.136	MWD+IFR1+MS
21800.000	90.000	179.678	10756.997	92.843	0.000	90.380	-0.000	92.843	0.000	0.000	90.412	46.946	-2.109	MWD+IFR1+MS
21900.000	90.000	179.678	10756.997	93.593	0.000	91.072	-0.000	93.593	0.000	0.000	91.103	47.006	-2.082	MWD+IFR1+MS
22000.000	90.000	179.678	10756.997	94.344	0.000	91.765	-0.000	94.344	0.000	0.000	91.796	47.067	-2.057	MWD+IFR1+MS
22100.000	90.000	179.678	10756.997	95.095	0.000	92.459	-0.000	95.095	0.000	0.000	92.490	47.128	-2.032	MWD+IFR1+MS
22200.000	90.000	179.678	10756.997	95.847	0.000	93.155	-0.000	95.847	0.000	0.000	93.185	47.189	-2.007	MWD+IFR1+MS

22300.000	90.000	179.678	10756.997	96.599	0.000	93.852	-0.000	96.599	0.000	0.000	93.881	47.252	-1.984	MWD+IFR1+MS
22400.000	90.000	179.678	10756.997	97.352	0.000	94.549	-0.000	97.352	0.000	0.000	94.578	47.314	-1.961	MWD+IFR1+MS
22500.000	90.000	179.678	10756.997	98.105	0.000	95.248	-0.000	98.105	0.000	0.000	95.276	47.377	-1.938	MWD+IFR1+MS
22600.000	90.000	179.678	10756.997	98.859	0.000	95.947	-0.000	98.859	0.000	0.000	95.976	47.440	-1.916	MWD+IFR1+MS
22700.000	90.000	179.678	10756.997	99.613	0.000	96.648	-0.000	99.613	0.000	0.000	96.676	47.504	-1.895	MWD+IFR1+MS
22800.000	90.000	179.678	10756.997	100.368	0.000	97.350	-0.000	100.368	0.000	0.000	97.377	47.568	-1.874	MWD+IFR1+MS
22900.000	90.000	179.678	10756.997	101.123	0.000	98.052	-0.000	101.123	0.000	0.000	98.079	47.633	-1.854	MWD+IFR1+MS
23000.000	90.000	179.678	10756.997	101.878	0.000	98.756	-0.000	101.878	0.000	0.000	98.782	47.698	-1.834	MWD+IFR1+MS
23100.000	90.000	179.678	10756.997	102.635	0.000	99.461	-0.000	102.635	0.000	0.000	99.486	47.764	-1.814	MWD+IFR1+MS
23200.000	90.000	179.678	10756.997	103.391	0.000	100.166	-0.000	103.391	0.000	0.000	100.191	47.830	-1.795	MWD+IFR1+MS
23300.000	90.000	179.678	10756.997	104.148	0.000	100.872	-0.000	104.148	0.000	0.000	100.897	47.896	-1.777	MWD+IFR1+MS
23400.000	90.000	179.678	10756.997	104.905	0.000	101.579	-0.000	104.905	0.000	0.000	101.604	47.963	-1.759	MWD+IFR1+MS
23500.000	90.000	179.678	10756.997	105.663	0.000	102.287	-0.000	105.663	0.000	0.000	102.312	48.030	-1.741	MWD+IFR1+MS
23600.000	90.000	179.678	10756.997	106.421	0.000	102.996	-0.000	106.421	0.000	0.000	103.020	48.098	-1.724	MWD+IFR1+MS
23700.000	90.000	179.678	10756.997	107.179	0.000	103.706	-0.000	107.179	0.000	0.000	103.729	48.166	-1.707	MWD+IFR1+MS
23800.000	90.000	179.678	10756.997	107.938	0.000	104.416	-0.000	107.938	0.000	0.000	104.439	48.235	-1.690	MWD+IFR1+MS
23900.000	90.000	179.678	10756.997	108.698	0.000	105.127	-0.000	108.698	0.000	0.000	105.150	48.304	-1.674	MWD+IFR1+MS
24000.000	90.000	179.678	10756.997	109.457	0.000	105.839	-0.000	109.457	0.000	0.000	105.862	48.373	-1.659	MWD+IFR1+MS
24100.000	90.000	179.678	10756.997	110.217	0.000	106.552	-0.000	110.217	0.000	0.000	106.574	48.443	-1.643	MWD+IFR1+MS
24200.000	90.000	179.678	10756.997	110.977	0.000	107.265	-0.000	110.977	0.000	0.000	107.287	48.513	-1.628	MWD+IFR1+MS
24300.000	90.000	179.678	10756.997	111.738	0.000	107.979	-0.000	111.738	0.000	0.000	108.001	48.584	-1.613	MWD+IFR1+MS
24400.000	90.000	179.678	10756.997	112.499	0.000	108.694	-0.000	112.499	0.000	0.000	108.716	48.655	-1.599	MWD+IFR1+MS
24500.000	90.000	179.678	10756.997	113.260	0.000	109.409	-0.000	113.260	0.000	0.000	109.431	48.726	-1.584	MWD+IFR1+MS
24600.000	90.000	179.678	10756.997	114.022	0.000	110.126	-0.000	114.022	0.000	0.000	110.147	48.798	-1.570	MWD+IFR1+MS
24700.000	90.000	179.678	10756.997	114.784	0.000	110.842	-0.000	114.784	0.000	0.000	110.863	48.870	-1.557	MWD+IFR1+MS
24800.000	90.000	179.678	10756.997	115.546	0.000	111.560	-0.000	115.546	0.000	0.000	111.580	48.943	-1.543	MWD+IFR1+MS
24900.000	90.000	179.678	10756.997	116.308	0.000	112.278	-0.000	116.308	0.000	0.000	112.298	49.016	-1.530	MWD+IFR1+MS
25000.000	90.000	179.678	10756.997	117.071	0.000	112.997	-0.000	117.071	0.000	0.000	113.017	49.090	-1.517	MWD+IFR1+MS
25100.000	90.000	179.678	10756.997	117.834	0.000	113.716	-0.000	117.834	0.000	0.000	113.736	49.164	-1.505	MWD+IFR1+MS
25200.000	90.000	179.678	10756.997	118.598	0.000	114.436	-0.000	118.598	0.000	0.000	114.455	49.238	-1.493	MWD+IFR1+MS
25300.000	90.000	179.678	10756.997	119.361	0.000	115.157	-0.000	119.361	0.000	0.000	115.176	49.313	-1.480	MWD+IFR1+MS
25400.000	90.000	179.678	10756.997	120.125	0.000	115.878	-0.000	120.125	0.000	0.000	115.897	49.388	-1.469	MWD+IFR1+MS
25500.000	90.000	179.678	10756.997	120.890	0.000	116.599	-0.000	120.890	0.000	0.000	116.618	49.464	-1.457	MWD+IFR1+MS

25600.000	90.000	179.678	10756.997	121.654	0.000	117.322	-0.000	121.654	0.000	0.000	117.340	49.539	-1.445	MWD+IFR1+MS
25700.000	90.000	179.678	10756.997	122.419	0.000	118.044	-0.000	122.419	0.000	0.000	118.063	49.616	-1.434	MWD+IFR1+MS
25800.000	90.000	179.678	10756.997	123.184	0.000	118.768	-0.000	123.184	0.000	0.000	118.786	49.692	-1.423	MWD+IFR1+MS
25900.000	90.000	179.678	10756.997	123.949	0.000	119.491	-0.000	123.949	0.000	0.000	119.509	49.770	-1.412	MWD+IFR1+MS
26000.000	90.000	179.678	10756.997	124.714	0.000	120.216	-0.000	124.714	0.000	0.000	120.234	49.847	-1.402	MWD+IFR1+MS
26100.000	90.000	179.678	10756.997	125.480	0.000	120.941	-0.000	125.480	0.000	0.000	120.958	49.925	-1.391	MWD+IFR1+MS
26200.000	90.000	179.678	10756.997	126.246	0.000	121.666	-0.000	126.246	0.000	0.000	121.683	50.003	-1.381	MWD+IFR1+MS
26300.000	90.000	179.678	10756.997	127.012	0.000	122.392	-0.000	127.012	0.000	0.000	122.409	50.082	-1.371	MWD+IFR1+MS
26400.000	90.000	179.678	10756.997	127.779	0.000	123.118	-0.000	127.779	0.000	0.000	123.135	50.161	-1.361	MWD+IFR1+MS
26500.000	90.000	179.678	10756.997	128.545	0.000	123.845	-0.000	128.545	0.000	0.000	123.862	50.240	-1.352	MWD+IFR1+MS
26600.000	90.000	179.678	10756.997	129.312	0.000	124.572	-0.000	129.312	0.000	0.000	124.589	50.320	-1.342	MWD+IFR1+MS
26700.000	90.000	179.678	10756.997	130.079	0.000	125.300	-0.000	130.079	0.000	0.000	125.316	50.400	-1.333	MWD+IFR1+MS
26800.000	90.000	179.678	10756.997	130.846	0.000	126.028	-0.000	130.846	0.000	0.000	126.044	50.481	-1.323	MWD+IFR1+MS
26900.000	90.000	179.678	10756.997	131.614	0.000	126.757	-0.000	131.614	0.000	0.000	126.773	50.562	-1.314	MWD+IFR1+MS
27000.000	90.000	179.678	10756.997	132.382	0.000	127.486	-0.000	132.382	0.000	0.000	127.502	50.643	-1.305	MWD+IFR1+MS
27100.000	90.000	179.678	10756.997	133.149	0.000	128.215	-0.000	133.149	0.000	0.000	128.231	50.725	-1.297	MWD+IFR1+MS
27200.000	90.000	179.678	10756.997	133.917	0.000	128.945	-0.000	133.917	0.000	0.000	128.961	50.807	-1.288	MWD+IFR1+MS
27300.000	90.000	179.678	10756.997	134.686	0.000	129.676	-0.000	134.686	0.000	0.000	129.691	50.889	-1.280	MWD+IFR1+MS
27400.000	90.000	179.678	10756.997	135.454	0.000	130.406	-0.000	135.454	0.000	0.000	130.421	50.972	-1.271	MWD+IFR1+MS
27500.000	90.000	179.678	10756.997	136.223	0.000	131.137	-0.000	136.223	0.000	0.000	131.152	51.055	-1.263	MWD+IFR1+MS
27600.000	90.000	179.678	10756.997	136.992	0.000	131.869	-0.000	136.992	0.000	0.000	131.884	51.139	-1.255	MWD+IFR1+MS
27700.000	90.000	179.678	10756.997	137.761	0.000	132.601	-0.000	137.761	0.000	0.000	132.616	51.222	-1.247	MWD+IFR1+MS
27800.000	90.000	179.678	10756.997	138.530	0.000	133.333	-0.000	138.530	0.000	0.000	133.348	51.307	-1.239	MWD+IFR1+MS
27900.000	90.000	179.678	10756.997	139.299	0.000	134.066	-0.000	139.299	0.000	0.000	134.080	51.391	-1.232	MWD+IFR1+MS
28000.000	90.000	179.678	10756.997	140.069	0.000	134.799	-0.000	140.069	0.000	0.000	134.813	51.476	-1.224	MWD+IFR1+MS
28100.000	90.000	179.678	10756.997	140.838	0.000	135.532	-0.000	140.838	0.000	0.000	135.546	51.561	-1.217	MWD+IFR1+MS
28200.000	90.000	179.678	10756.997	141.608	0.000	136.266	-0.000	141.608	0.000	0.000	136.280	51.647	-1.209	MWD+IFR1+MS
28300.000	90.000	179.678	10756.997	142.378	0.000	137.000	-0.000	142.378	0.000	0.000	137.014	51.733	-1.202	MWD+IFR1+MS
28400.000	90.000	179.678	10756.997	143.148	0.000	137.734	-0.000	143.148	0.000	0.000	137.748	51.819	-1.195	MWD+IFR1+MS
28500.000	90.000	179.678	10756.997	143.919	0.000	138.469	-0.000	143.919	0.000	0.000	138.483	51.906	-1.188	MWD+IFR1+MS
28600.000	90.000	179.678	10756.997	144.689	0.000	139.204	-0.000	144.689	0.000	0.000	139.218	51.993	-1.181	MWD+IFR1+MS
28700.000	90.000	179.678	10756.997	145.460	0.000	139.940	-0.000	145.460	0.000	0.000	139.953	52.080	-1.174	MWD+IFR1+MS
28730.201	90.000	179.678	10756.997	145.692	0.000	140.161	-0.000	145.692	0.000	0.000	140.174	52.107	-1.172	MWD+IFR1+MS

Plan Targets

Poker Lake Unit 20 DTD South 224H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 14	10997.51	440386.50	633026.90	7481.00	RECTANGLE
SHL 14	11564.12	439574.01	632797.08	7365.52	RECTANGLE
LTP 14	28630.20	422284.00	633128.70	7481.00	RECTANGLE
BHL 14	28730.20	422184.00	633129.20	7481.00	RECTANGLE

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

XTO Energy Inc.  
PLU 20 Dog Town Draw  
Projected TD: 28730.2' MD / 10757' TVD  
SHL: 910' FNL & 2390' FWL , Section 20, T24S, R30E  
BHL: 2437' FNL & 2628' FWL , Section 5, T25S, 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	833'	Water
Top of Salt	1236'	Water
Base of Salt	3429'	Water
Delaware	3623'	Water
Brushy Canyon	6121'	Water/Oil/Gas
Bone Spring	7417'	Water
1st Bone Spring	8403'	Water/Oil/Gas
2nd Bone Spring	9221'	Water/Oil/Gas
3rd Bone Spring	10315'	Water/Oil/Gas
Wolfcamp	10706'	Water/Oil/Gas
Wolfcamp X	10727'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>10757'</b>	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 13.375 inch casing @ 933' (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 9918.61' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 28730.2 MD/TD and 6 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 9618.61 feet).

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 933'	13.375	54.5	J-55	BTC	New	1.16	2.77	17.88
12.25	0' – 4000'	9.625	40	HC P-110	BTC	New	1.87	2.31	3.19
12.25	4000' – 9918.61'	9.625	40	HC L-80	BTC	New	1.36	1.76	3.87
8.5	0' – 9818.61'	6	26	P-110	Semi-Premium	New	1.17	2.25	1.64
8.5	9818.61' - 28730.2'	6	26	P-110	Semi-Premium	New	1.17	2.06	1.86

- 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.
- 6 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 +/- 933'**

Lead: 470 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 +/- 9918.61'**

###### 1st Stage

Optional Lead: 1030 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 1100 sxs Class C (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6121

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: 2160 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 9-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6121') 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: 6, 26 New Semi-Premium, P-110 casing to be set at +/- 28730.2'**

Lead: 40 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 9618.61 feet

Tail: 3160 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 10118.61 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 4234 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 week.

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' - 933'	17.5	FW/Native	8.4-8.9	35-40	NC
933' - 9918.61'	12.25	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
9918.61' - 28730.2'	8.5	OBM	11.8-12.3	50-60	NC - 20

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

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

## 7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 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 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 6600 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.

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  
APD ID 10400089312

WELL LOCATION AND ACREAGE DEDICATION PLAT

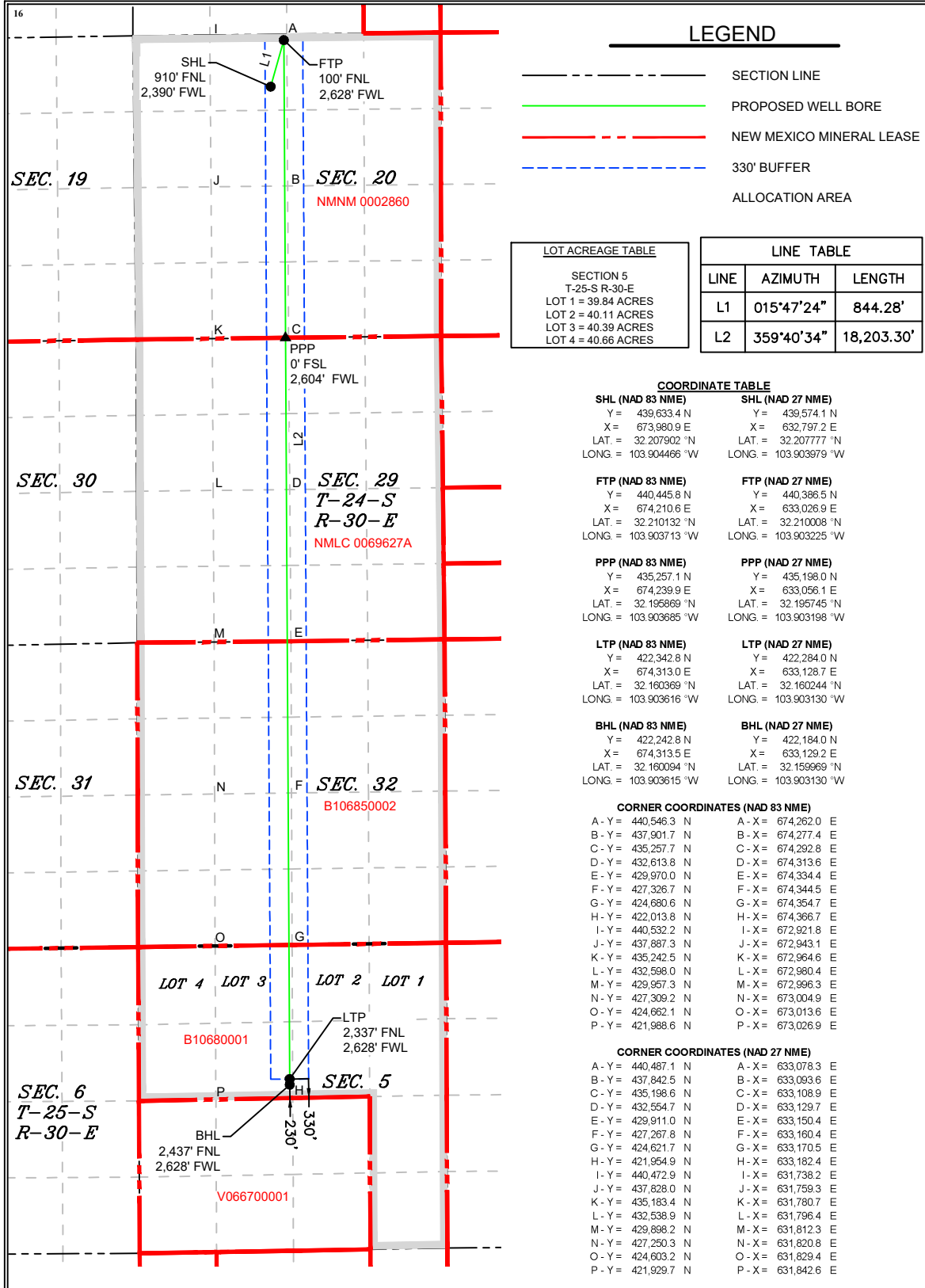
<sup>1</sup> API Number 30-015-	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage; Wolfcamp (gas)
<sup>4</sup> Property Code	<sup>5</sup> Property Name POKER LAKE UNIT 20 DTD	<sup>6</sup> Well Number 224H
<sup>7</sup> OGRID No. 373075	<sup>8</sup> Operator Name XTO PERMIAN OPERATING, LLC	<sup>9</sup> Elevation 3,244'

<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
C	20	24S	30E		910	NORTH	2,390	WEST	EDDY

<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
F	5	25S	30E		2,437	NORTH	2,628	WEST	EDDY

<sup>12</sup> Dedicated Acres 2,321.00	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
---	-------------------------------	----------------------------------	-------------------------

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.



**17 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.

Rusty Klein 3-10-24  
Signature Date

RUSTY KLEIN  
Printed Name

ranell.klein@exxonmobil.com  
E-mail Address

**18 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  
NEW MEXICO  
23786  
PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786  
Certificate Number

RP 618.013003.06-46

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

**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 Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 359225

CONDITIONS

Operator:  XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID:  373075
	Action Number:  359225
	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.	6/28/2024