U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

06/20/2024

Well Name: POKER LAKE UNIT 20 DTD

Well Location: T24S / R30E / SEC 20 / NENW / 32.207749 / -103.904756

County or Parish/State: EDDY / NM

Well Number: 221H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM02860

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: 2779002

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/11/2024

Time Sundry Submitted: 07:23

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 & 2300' FWL OF SECTION 20-T24S-R30E 910' FNL & 2300' FWL OF SECTION 20-T24S-R30E FTP: 100' FSL & 2530' FEL OF SECTION 17-T24S-R30E 100' FNL & 1353' FWL OF SECTION 20-T24S-R30E LTP: 330' FNL & 2530' FEL OF SECTION 32-T23S-R30E 2573' FNL & 1353' FWL OF SECTION 5-T25S-R30E BHL: 200' FNL & 2530' FEL OF SECTION 32-T23S-R30E 2623' FNL & 1353' FWL OF SECTION 5-T25S-R30E The proposed total depth is changing from 33089’ MD; 11870’ TVD (Wolfcamp) to 27775’ MD; 9514’ TVD (Bone Spring). Attachments: C-102, Drilling Plan, Directional Plan, MBS, BOP Variance and Well Control Plan.

NOI Attachments

Procedure Description

Wild_Well_Control_Plan_WWCP_20240311072256.pdf

BOP_Variance_new_Language_BOP_BTV_20240311072233.pdf

3_String_Bighole_Four_Miler_HBE0000833_20240311072216.pdf

Well_Plan_Report____Poker_Lake_Unit_20_DTD_South_221H_20240311072136.pdf

PLU_20_DTD_221H_Pad_B_Drilling_Plan__2_14_2024__20240311072112.pdf

POKER_LAKE_UNIT_20_DTD_221H_C_102_FINAL_signed_3_10_2024_20240311072059.pdf

Well Name: POKER LAKE UNIT 20 DTD

Well Location: T24S / R30E / SEC 20 / NENW / 32.207749 / -103.904756

County or Parish/State: EDDY / NM

Well Number: 221H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM02860

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_2779002_Poker_Lake_Unit_20_DTD_221H_COAs_20240404150041.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 07:23 AM

Name: XTO PERMIAN OPERATING LLC

Title: Regulatory Analyst

Street Address: 6401 HOLIDAY HILL ROAD BLDG 5

City: MIDLAND **State:** 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: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 06/20/2024

Signature: Chris Walls

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

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			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be 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 OFICE 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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand 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 / 2300 FWL / TWSP: 24S / RANGE: 30E / SECTION: 20 / LAT: 32.207749 / LONG: -103.904756 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 330 FSL / 2530 FEL / TWSP: 24S / RANGE: 30E / SECTION: 8 / LAT: 32.22542 / LONG: -103.90308 (TVD: 11870 feet, MD: 17600 feet)

PPP: SWSE / 100 FSL / 2530 FEL / TWSP: 24S / RANGE: 30E / SECTION: 17 / LAT: 32.210686 / LONG: -103.903062 (TVD: 11870 feet, MD: 12300 feet)

PPP: SWSE / 330 FSL / 2530 FEL / TWSP: 24S / RANGE: 30E / SECTION: 5 / LAT: 32.24001 / LONG: -103.90308 (TVD: 11870 feet, MD: 22900 feet)

BHL: NWNE / 200 FNL / 2530 FEL / TWSP: 23S / RANGE: 30E / SECTION: 32 / LAT: 32.268041 / LONG: -103.90307 (TVD: 11870 feet, MD: 33089 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 20 221H
LOCATION:	Sec 20-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2779002** on 04/04/2024. Any previous COAs not addressed within the updated COAs still apply.*

COA

H_2S	○ No	○ Yes		
Potash / WIPP	○ None	○ Secretary	○ R-111-P	☐ WIPP
Cave / Karst	○ Low	○ Medium	○ High	○ Critical
Wellhead	○ Conventional	○ Multibowl	○ Both	○ Diverter
Cementing	☐ Primary Squeeze	☑ Cont. Squeeze	☐ EchoMeter	☐ DV Tool
Special Req	☑ Break Testing	☐ Water Disposal	☐ COM	☑ Unit
Variance	☑ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☐ Capitan Reef
Variance	☐ Four-String	☑ Offline Cementing	☐ Fluid-Filled	☐ Open Annulus
☐ **Batch APD / Sundry**				

A. HYDROGEN SULFIDE

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

B. CASING

1. The **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 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

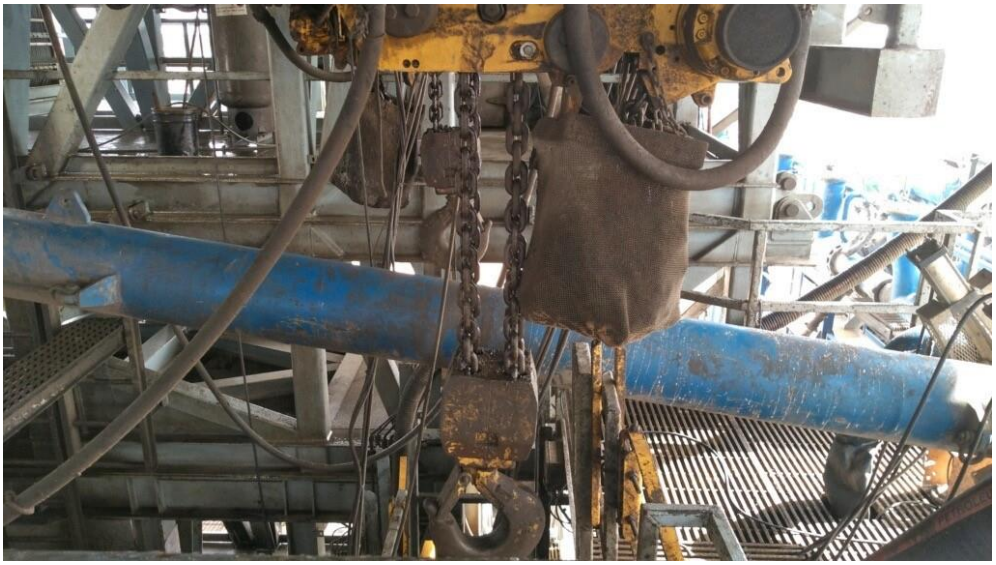


Figure 2: BOP Winch System

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 3170recognizes 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[ac] psig (MPa)	Pressure Test—High Pressure[ac]	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer[b]	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers[bd]	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes[e]	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

[a] Pressure test evaluation periods shall be a minimum of five minutes.
No visible leaks.
The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

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

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

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

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

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

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

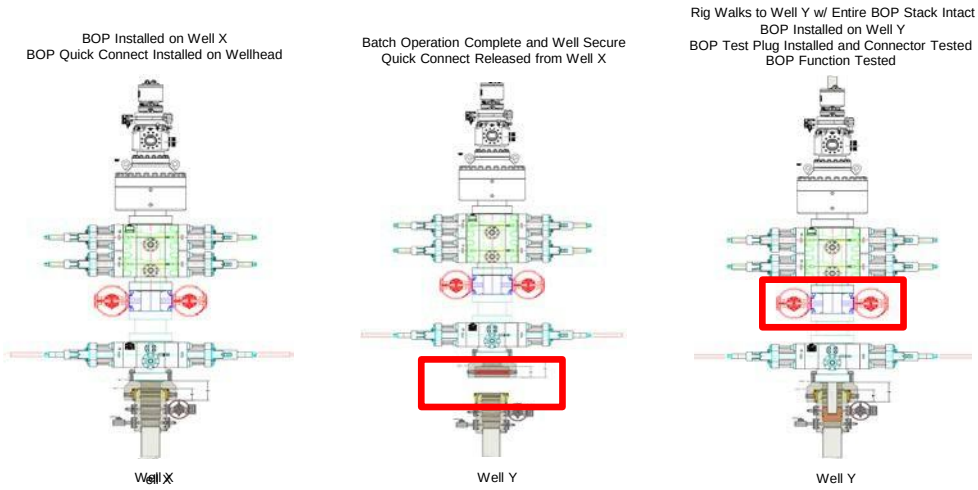
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of CFR Title 43 Part 3170 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

Procedures

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

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

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



Summary

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

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

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

1. After a full BOP test is conducted on the first well on the pad.

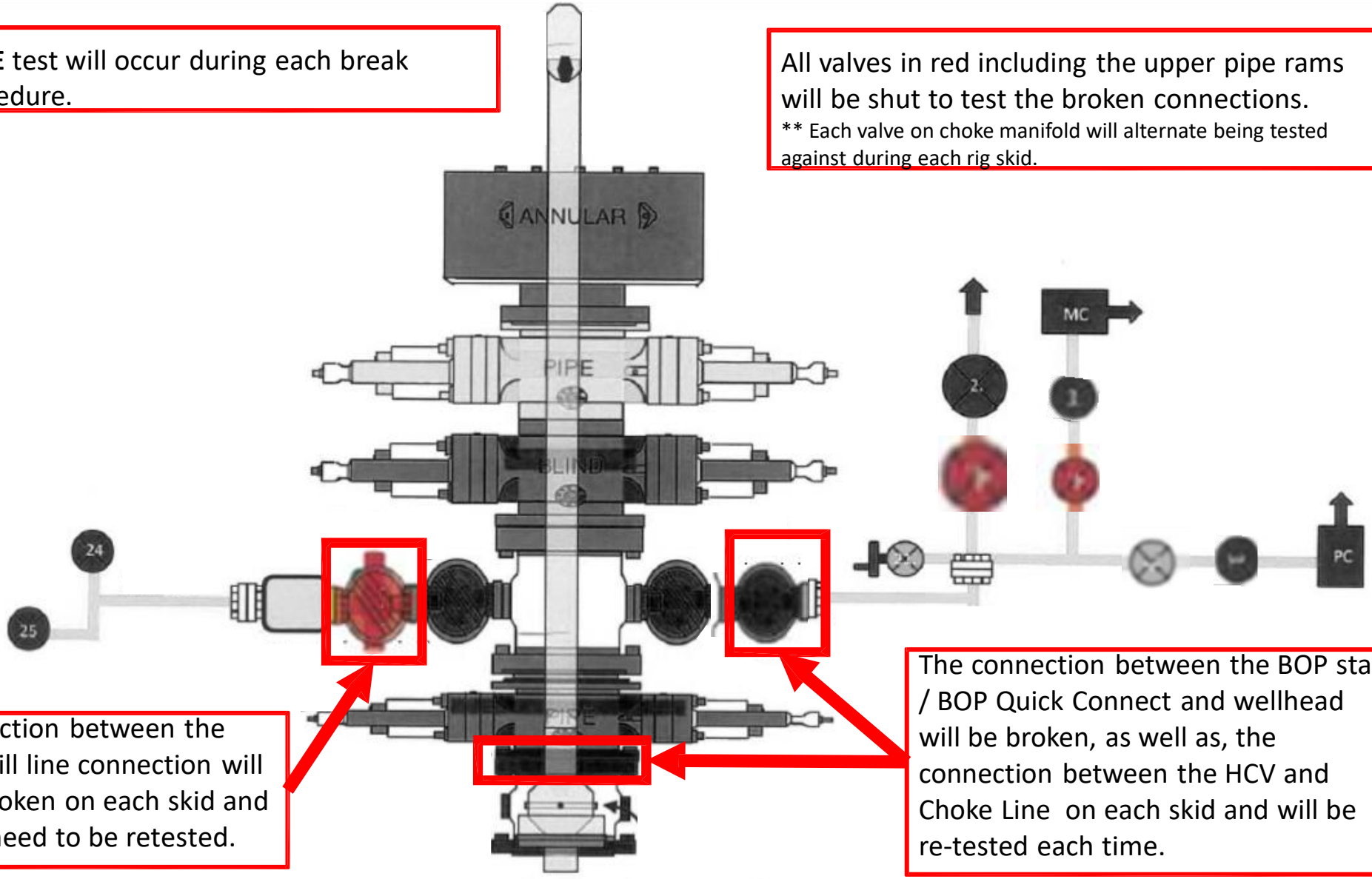
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.

3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.

4. Full BOP test will be required prior to drilling the production hole.

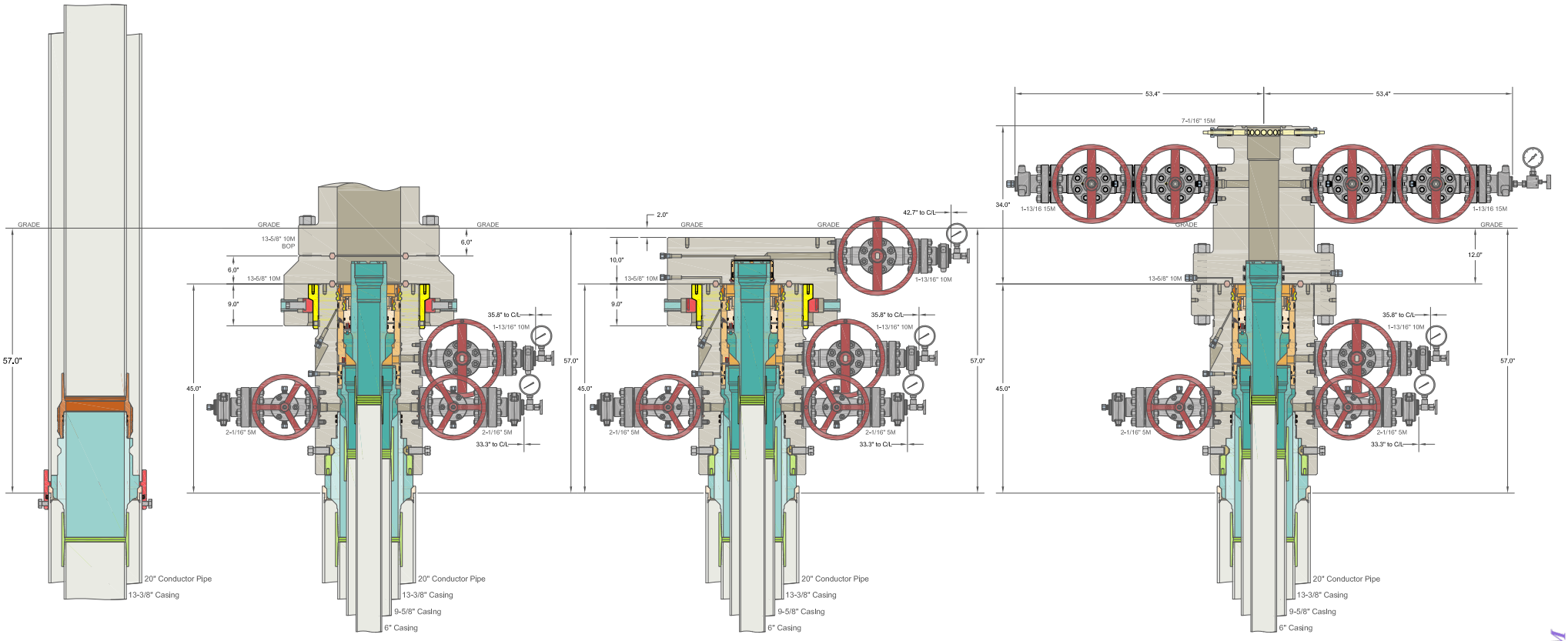
Only **ONE** test will occur during each break test procedure.

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.



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 221H

Measured Depth:	27775.00 ft
TVD RKB:	9514.00 ft
Location	
Cartographic Reference System:	New Mexico East - NAD 27
Northing:	439573.20 ft
Easting:	632707.20 ft
RKB:	3275.00 ft
Ground Level:	3243.00 ft
North Reference:	Grid
Convergence Angle:	0.23 Deg

Plan Sections Poker Lake Unit 20 DTD South 221H

Measured Depth (ft)	Inclination (Deg)	Azimuth (Deg)	TVD RKB (ft)	Y Offset (ft)	X Offset (ft)	Build Rate (Deg/100ft)	Turn Rate (Deg/100ft)	Dogleg Rate (Deg/100ft)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	
1957.82	17.16	309.94	1945.05	81.84	-97.73	2.00	0.00	2.00	
5317.19	17.16	309.94	5154.95	718.06	-857.47	0.00	0.00	0.00	
6175.00	0.00	0.00	6000.00	799.90	-955.20	-2.00	0.00	2.00	
8972.80	0.00	0.00	8797.80	799.90	-955.20	0.00	0.00	0.00	
10097.80	90.00	179.68	9514.00	83.71	-951.18	8.00	0.00	8.00	
27725.12	90.00	179.68	9514.00	-17543.32	-852.11	0.00	0.00	0.00	LTP 11
27775.00	90.00	179.68	9514.00	-17593.20	-851.83	0.00	0.00	0.00	BHL 11

Position Uncertainty Poker Lake Unit 20 DTD South 221H

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

Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	of Bias (ft)	Error (ft)	Error (ft)	Azimuth (°)	Used
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.309	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.346	0.000	0.000	2.108	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.373	0.000	0.000	2.503	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.405	0.000	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.442	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	309.943	1199.980	4.351	0.000	5.097	0.000	2.688	0.000	0.000	5.111	4.336	121.792	MWD+IFR1+MS
1300.000	4.000	309.943	1299.838	5.233	0.000	5.426	0.000	2.747	0.000	0.000	5.580	5.076	95.758	MWD+IFR1+MS
1400.000	6.000	309.943	1399.452	6.003	0.000	5.759	0.000	2.813	0.000	0.000	6.241	5.517	74.441	MWD+IFR1+MS
1500.000	8.000	309.943	1498.702	6.696	0.000	6.095	0.000	2.885	0.000	0.000	6.924	5.866	66.724	MWD+IFR1+MS
1600.000	10.000	309.943	1597.465	7.333	0.000	6.435	0.000	2.968	0.000	0.000	7.574	6.198	63.370	MWD+IFR1+MS
1700.000	12.000	309.943	1695.623	7.927	0.000	6.778	0.000	3.062	0.000	0.000	8.190	6.527	61.587	MWD+IFR1+MS
1800.000	14.000	309.943	1793.055	8.486	0.000	7.124	0.000	3.170	0.000	0.000	8.776	6.860	60.524	MWD+IFR1+MS
1900.000	16.000	309.943	1889.643	9.016	0.000	7.476	0.000	3.294	0.000	0.000	9.337	7.196	59.854	MWD+IFR1+MS
1957.816	17.156	309.943	1945.054	9.202	0.000	7.672	0.000	3.345	0.000	0.000	9.549	7.391	59.817	MWD+IFR1+MS
2000.000	17.156	309.943	1985.362	9.323	0.000	7.814	0.000	3.379	0.000	0.000	9.668	7.535	59.922	MWD+IFR1+MS
2100.000	17.156	309.943	2080.912	9.613	0.000	8.165	0.000	3.472	0.000	0.000	9.951	7.883	60.430	MWD+IFR1+MS
2200.000	17.156	309.943	2176.462	9.920	0.000	8.532	0.000	3.573	0.000	0.000	10.257	8.241	61.151	MWD+IFR1+MS
2300.000	17.156	309.943	2272.013	10.235	0.000	8.902	0.000	3.678	0.000	0.000	10.570	8.601	61.871	MWD+IFR1+MS
2400.000	17.156	309.943	2367.563	10.557	0.000	9.275	0.000	3.786	0.000	0.000	10.889	8.965	62.590	MWD+IFR1+MS
2500.000	17.156	309.943	2463.113	10.885	0.000	9.652	0.000	3.898	0.000	0.000	11.213	9.331	63.308	MWD+IFR1+MS
2600.000	17.156	309.943	2558.664	11.219	0.000	10.030	0.000	4.014	0.000	0.000	11.544	9.700	64.022	MWD+IFR1+MS
2700.000	17.156	309.943	2654.214	11.559	0.000	10.411	0.000	4.133	0.000	0.000	11.879	10.071	64.733	MWD+IFR1+MS
2800.000	17.156	309.943	2749.764	11.903	0.000	10.794	0.000	4.254	0.000	0.000	12.219	10.443	65.440	MWD+IFR1+MS
2900.000	17.156	309.943	2845.315	12.251	0.000	11.179	0.000	4.379	0.000	0.000	12.563	10.818	66.143	MWD+IFR1+MS

3000.000	17.156	309.943	2940.865	12.604	0.000	11.566	0.000	4.505	0.000	0.000	12.911	11.193	66.840	MWD+IFR1+MS
3100.000	17.156	309.943	3036.415	12.960	0.000	11.953	0.000	4.635	0.000	0.000	13.263	11.570	67.531	MWD+IFR1+MS
3200.000	17.156	309.943	3131.966	13.320	0.000	12.343	0.000	4.767	0.000	0.000	13.618	11.949	68.215	MWD+IFR1+MS
3300.000	17.156	309.943	3227.516	13.682	0.000	12.733	0.000	4.900	0.000	0.000	13.976	12.328	68.892	MWD+IFR1+MS
3400.000	17.156	309.943	3323.067	14.048	0.000	13.125	0.000	5.036	0.000	0.000	14.337	12.708	69.561	MWD+IFR1+MS
3500.000	17.156	309.943	3418.617	14.416	0.000	13.517	0.000	5.174	0.000	0.000	14.700	13.089	70.222	MWD+IFR1+MS
3600.000	17.156	309.943	3514.167	14.787	0.000	13.910	0.000	5.314	0.000	0.000	15.066	13.471	70.874	MWD+IFR1+MS
3700.000	17.156	309.943	3609.718	15.160	0.000	14.305	0.000	5.456	0.000	0.000	15.435	13.854	71.517	MWD+IFR1+MS
3800.000	17.156	309.943	3705.268	15.536	0.000	14.700	0.000	5.599	0.000	0.000	15.805	14.237	72.150	MWD+IFR1+MS
3900.000	17.156	309.943	3800.818	15.913	0.000	15.095	0.000	5.744	0.000	0.000	16.178	14.621	72.774	MWD+IFR1+MS
4000.000	17.156	309.943	3896.369	16.292	0.000	15.492	0.000	5.891	0.000	0.000	16.552	15.006	73.387	MWD+IFR1+MS
4100.000	17.156	309.943	3991.919	16.673	0.000	15.889	0.000	6.040	0.000	0.000	16.928	15.391	73.990	MWD+IFR1+MS
4200.000	17.156	309.943	4087.469	17.055	0.000	16.286	0.000	6.190	0.000	0.000	17.306	15.776	74.582	MWD+IFR1+MS
4300.000	17.156	309.943	4183.020	17.439	0.000	16.684	0.000	6.342	0.000	0.000	17.686	16.162	75.163	MWD+IFR1+MS
4400.000	17.156	309.943	4278.570	17.824	0.000	17.083	0.000	6.495	0.000	0.000	18.066	16.548	75.732	MWD+IFR1+MS
4500.000	17.156	309.943	4374.120	18.211	0.000	17.482	0.000	6.650	0.000	0.000	18.448	16.935	76.291	MWD+IFR1+MS
4600.000	17.156	309.943	4469.671	18.599	0.000	17.881	0.000	6.806	0.000	0.000	18.832	17.322	76.838	MWD+IFR1+MS
4700.000	17.156	309.943	4565.221	18.988	0.000	18.281	0.000	6.964	0.000	0.000	19.216	17.710	77.374	MWD+IFR1+MS
4800.000	17.156	309.943	4660.771	19.378	0.000	18.681	0.000	7.124	0.000	0.000	19.602	18.098	77.899	MWD+IFR1+MS
4900.000	17.156	309.943	4756.322	19.769	0.000	19.082	0.000	7.285	0.000	0.000	19.989	18.486	78.412	MWD+IFR1+MS
5000.000	17.156	309.943	4851.872	20.161	0.000	19.482	0.000	7.448	0.000	0.000	20.377	18.874	78.913	MWD+IFR1+MS
5100.000	17.156	309.943	4947.423	20.554	0.000	19.883	0.000	7.612	0.000	0.000	20.765	19.263	79.403	MWD+IFR1+MS
5200.000	17.156	309.943	5042.973	20.947	0.000	20.285	0.000	7.778	0.000	0.000	21.155	19.652	79.882	MWD+IFR1+MS
5300.000	17.156	309.943	5138.523	21.342	0.000	20.687	0.000	7.945	0.000	0.000	21.545	20.041	80.350	MWD+IFR1+MS
5317.187	17.156	309.943	5154.946	21.409	0.000	20.754	0.000	7.973	0.000	0.000	21.610	20.108	80.417	MWD+IFR1+MS
5400.000	15.500	309.943	5234.416	21.778	0.000	21.078	0.000	8.114	0.000	0.000	21.932	20.431	80.495	MWD+IFR1+MS
5500.000	13.500	309.943	5331.225	22.277	0.000	21.468	0.000	8.294	0.000	0.000	22.383	20.831	79.285	MWD+IFR1+MS
5600.000	11.500	309.943	5428.850	22.759	0.000	21.850	0.000	8.463	0.000	0.000	22.843	21.225	77.846	MWD+IFR1+MS
5700.000	9.500	309.943	5527.170	23.203	0.000	22.223	0.000	8.621	0.000	0.000	23.296	21.610	76.499	MWD+IFR1+MS
5800.000	7.500	309.943	5626.067	23.608	0.000	22.586	0.000	8.768	0.000	0.000	23.741	21.984	75.250	MWD+IFR1+MS
5900.000	5.500	309.943	5725.419	23.975	0.000	22.941	0.000	8.906	0.000	0.000	24.177	22.348	74.103	MWD+IFR1+MS
6000.000	3.500	309.943	5825.106	24.304	0.000	23.286	0.000	9.036	0.000	0.000	24.603	22.702	73.058	MWD+IFR1+MS
6100.000	1.500	309.943	5925.006	24.594	0.000	23.622	0.000	9.160	0.000	0.000	25.019	23.045	72.114	MWD+IFR1+MS

6175.003	0.000	0.000	6000.000	25.108	0.000	23.480	0.000	9.249	0.000	0.000	25.286	23.288	72.301	MWD+IFR1+MS
6200.000	0.000	0.000	6024.997	25.185	0.000	23.558	0.000	9.279	0.000	0.000	25.361	23.368	72.365	MWD+IFR1+MS
6300.000	0.000	0.000	6124.997	25.491	0.000	23.876	0.000	9.398	0.000	0.000	25.660	23.694	72.618	MWD+IFR1+MS
6400.000	0.000	0.000	6224.997	25.803	0.000	24.199	0.000	9.521	0.000	0.000	25.963	24.027	72.980	MWD+IFR1+MS
6500.000	0.000	0.000	6324.997	26.116	0.000	24.523	0.000	9.646	0.000	0.000	26.267	24.361	73.344	MWD+IFR1+MS
6600.000	0.000	0.000	6424.997	26.430	0.000	24.848	0.000	9.773	0.000	0.000	26.573	24.695	73.709	MWD+IFR1+MS
6700.000	0.000	0.000	6524.997	26.745	0.000	25.174	0.000	9.904	0.000	0.000	26.880	25.030	74.077	MWD+IFR1+MS
6800.000	0.000	0.000	6624.997	27.062	0.000	25.501	0.000	10.037	0.000	0.000	27.189	25.365	74.446	MWD+IFR1+MS
6900.000	0.000	0.000	6724.997	27.379	0.000	25.828	0.000	10.173	0.000	0.000	27.499	25.701	74.817	MWD+IFR1+MS
7000.000	0.000	0.000	6824.997	27.697	0.000	26.157	0.000	10.312	0.000	0.000	27.810	26.037	75.189	MWD+IFR1+MS
7100.000	0.000	0.000	6924.997	28.017	0.000	26.486	0.000	10.454	0.000	0.000	28.122	26.374	75.562	MWD+IFR1+MS
7200.000	0.000	0.000	7024.997	28.337	0.000	26.816	0.000	10.599	0.000	0.000	28.436	26.711	75.937	MWD+IFR1+MS
7300.000	0.000	0.000	7124.997	28.658	0.000	27.146	0.000	10.747	0.000	0.000	28.751	27.048	76.313	MWD+IFR1+MS
7400.000	0.000	0.000	7224.997	28.980	0.000	27.478	0.000	10.898	0.000	0.000	29.067	27.386	76.690	MWD+IFR1+MS
7500.000	0.000	0.000	7324.997	29.303	0.000	27.810	0.000	11.052	0.000	0.000	29.384	27.724	77.068	MWD+IFR1+MS
7600.000	0.000	0.000	7424.997	29.627	0.000	28.143	0.000	11.208	0.000	0.000	29.702	28.063	77.447	MWD+IFR1+MS
7700.000	0.000	0.000	7524.997	29.951	0.000	28.476	0.000	11.368	0.000	0.000	30.022	28.402	77.826	MWD+IFR1+MS
7800.000	0.000	0.000	7624.997	30.277	0.000	28.810	0.000	11.531	0.000	0.000	30.342	28.741	78.206	MWD+IFR1+MS
7900.000	0.000	0.000	7724.997	30.603	0.000	29.144	0.000	11.697	0.000	0.000	30.663	29.081	78.586	MWD+IFR1+MS
8000.000	0.000	0.000	7824.997	30.929	0.000	29.479	0.000	11.866	0.000	0.000	30.985	29.421	78.966	MWD+IFR1+MS
8100.000	0.000	0.000	7924.997	31.257	0.000	29.815	0.000	12.038	0.000	0.000	31.308	29.761	79.347	MWD+IFR1+MS
8200.000	0.000	0.000	8024.997	31.585	0.000	30.151	0.000	12.213	0.000	0.000	31.632	30.101	79.727	MWD+IFR1+MS
8300.000	0.000	0.000	8124.997	31.914	0.000	30.488	0.000	12.391	0.000	0.000	31.957	30.442	80.107	MWD+IFR1+MS
8400.000	0.000	0.000	8224.997	32.243	0.000	30.825	0.000	12.573	0.000	0.000	32.283	30.783	80.487	MWD+IFR1+MS
8500.000	0.000	0.000	8324.997	32.573	0.000	31.163	0.000	12.757	0.000	0.000	32.610	31.124	80.866	MWD+IFR1+MS
8600.000	0.000	0.000	8424.997	32.904	0.000	31.501	0.000	12.945	0.000	0.000	32.937	31.466	81.245	MWD+IFR1+MS
8700.000	0.000	0.000	8524.997	33.235	0.000	31.839	0.000	13.136	0.000	0.000	33.265	31.808	81.623	MWD+IFR1+MS
8800.000	0.000	0.000	8624.997	33.567	0.000	32.178	0.000	13.330	0.000	0.000	33.594	32.150	82.001	MWD+IFR1+MS
8900.000	0.000	0.000	8724.997	33.899	0.000	32.518	0.000	13.527	0.000	0.000	33.924	32.492	82.377	MWD+IFR1+MS
8972.803	0.000	0.000	8797.800	34.139	0.000	32.763	0.000	13.673	0.000	0.000	34.163	32.739	82.580	MWD+IFR1+MS
9000.000	2.176	179.678	8824.990	34.086	0.000	32.848	-0.000	13.727	0.000	0.000	34.247	32.826	82.621	MWD+IFR1+MS
9100.000	10.176	179.678	8924.329	34.014	0.000	33.145	-0.000	13.949	0.000	0.000	35.006	33.135	85.624	MWD+IFR1+MS
9200.000	18.176	179.678	9021.206	34.152	0.000	33.424	-0.000	14.316	0.000	0.000	36.380	33.424	88.863	MWD+IFR1+MS

9300.000	26.176	179.678	9113.733	33.790	0.000	33.680	-0.000	14.910	0.000	0.000	37.586	33.680	90.300	MWD+IFR1+MS
9400.000	34.176	179.678	9200.112	33.002	0.000	33.910	-0.000	15.786	0.000	0.000	38.601	33.906	91.135	MWD+IFR1+MS
9500.000	42.176	179.678	9278.660	31.891	0.000	34.112	-0.000	16.955	0.000	0.000	39.415	34.105	91.690	MWD+IFR1+MS
9600.000	50.176	179.678	9347.849	30.585	0.000	34.287	-0.000	18.387	0.000	0.000	40.031	34.276	92.078	MWD+IFR1+MS
9700.000	58.176	179.678	9406.331	29.246	0.000	34.435	-0.000	20.030	0.000	0.000	40.463	34.421	92.340	MWD+IFR1+MS
9800.000	66.176	179.678	9452.969	28.064	0.000	34.555	-0.000	21.819	0.000	0.000	40.732	34.539	92.481	MWD+IFR1+MS
9900.000	74.176	179.678	9486.855	27.245	0.000	34.648	-0.000	23.683	0.000	0.000	40.870	34.631	92.489	MWD+IFR1+MS
10000.000	82.176	179.678	9507.330	26.971	0.000	34.713	-0.000	25.560	0.000	0.000	40.918	34.698	92.335	MWD+IFR1+MS
10097.803	90.000	179.678	9513.997	27.282	0.000	34.750	-0.000	27.282	0.000	0.000	40.922	34.739	92.000	MWD+IFR1+MS
10100.000	90.000	179.678	9513.997	27.287	0.000	34.750	-0.000	27.287	0.000	0.000	40.922	34.739	91.990	MWD+IFR1+MS
10200.000	90.000	179.678	9513.997	27.504	0.000	34.780	-0.000	27.504	0.000	0.000	40.921	34.773	91.546	MWD+IFR1+MS
10300.000	90.000	179.678	9513.997	27.746	0.000	34.830	-0.000	27.746	0.000	0.000	40.920	34.826	91.103	MWD+IFR1+MS
10400.000	90.000	179.678	9513.997	28.008	0.000	34.897	-0.000	28.008	0.000	0.000	40.921	34.895	90.654	MWD+IFR1+MS
10500.000	90.000	179.678	9513.997	28.290	0.000	34.981	-0.000	28.290	0.000	0.000	40.923	34.980	90.198	MWD+IFR1+MS
10600.000	90.000	179.678	9513.997	28.590	0.000	35.081	-0.000	28.590	0.000	0.000	40.927	35.081	89.730	MWD+IFR1+MS
10700.000	90.000	179.678	9513.997	28.909	0.000	35.197	-0.000	28.909	0.000	0.000	40.931	35.197	89.246	MWD+IFR1+MS
10800.000	90.000	179.678	9513.997	29.245	0.000	35.330	-0.000	29.245	0.000	0.000	40.937	35.328	88.743	MWD+IFR1+MS
10900.000	90.000	179.678	9513.997	29.598	0.000	35.478	-0.000	29.598	0.000	0.000	40.944	35.475	88.215	MWD+IFR1+MS
11000.000	90.000	179.678	9513.997	29.967	0.000	35.643	-0.000	29.967	0.000	0.000	40.953	35.636	87.656	MWD+IFR1+MS
11100.000	90.000	179.678	9513.997	30.353	0.000	35.823	-0.000	30.353	0.000	0.000	40.963	35.811	87.060	MWD+IFR1+MS
11200.000	90.000	179.678	9513.997	30.753	0.000	36.018	-0.000	30.753	0.000	0.000	40.975	36.001	86.418	MWD+IFR1+MS
11300.000	90.000	179.678	9513.997	31.168	0.000	36.229	-0.000	31.168	0.000	0.000	40.989	36.205	85.721	MWD+IFR1+MS
11400.000	90.000	179.678	9513.997	31.598	0.000	36.455	-0.000	31.598	0.000	0.000	41.005	36.422	84.956	MWD+IFR1+MS
11500.000	90.000	179.678	9513.997	32.040	0.000	36.695	-0.000	32.040	0.000	0.000	41.023	36.651	84.108	MWD+IFR1+MS
11600.000	90.000	179.678	9513.997	32.496	0.000	36.949	-0.000	32.496	0.000	0.000	41.044	36.893	83.159	MWD+IFR1+MS
11700.000	90.000	179.678	9513.997	32.964	0.000	37.217	-0.000	32.964	0.000	0.000	41.068	37.145	82.085	MWD+IFR1+MS
11800.000	90.000	179.678	9513.997	33.444	0.000	37.500	-0.000	33.444	0.000	0.000	41.096	37.409	80.854	MWD+IFR1+MS
11900.000	90.000	179.678	9513.997	33.935	0.000	37.795	-0.000	33.935	0.000	0.000	41.128	37.681	79.429	MWD+IFR1+MS
12000.000	90.000	179.678	9513.997	34.437	0.000	38.104	-0.000	34.437	0.000	0.000	41.166	37.961	77.756	MWD+IFR1+MS
12100.000	90.000	179.678	9513.997	34.950	0.000	38.425	-0.000	34.950	0.000	0.000	41.212	38.248	75.772	MWD+IFR1+MS
12200.000	90.000	179.678	9513.997	35.472	0.000	38.759	-0.000	35.472	0.000	0.000	41.267	38.537	73.391	MWD+IFR1+MS
12300.000	90.000	179.678	9513.997	36.004	0.000	39.105	-0.000	36.004	0.000	0.000	41.334	38.827	70.512	MWD+IFR1+MS
12400.000	90.000	179.678	9513.997	36.545	0.000	39.463	-0.000	36.545	0.000	0.000	41.419	39.112	67.026	MWD+IFR1+MS

12500.000	90.000	179.678	9513.997	37.095	0.000	39.832	-0.000	37.095	0.000	0.000	41.525	39.387	62.838	MWD+IFR1+MS
12600.000	90.000	179.678	9513.997	37.653	0.000	40.212	-0.000	37.653	0.000	0.000	41.661	39.644	57.930	MWD+IFR1+MS
12700.000	90.000	179.678	9513.997	38.219	0.000	40.604	-0.000	38.219	0.000	0.000	41.834	39.876	52.434	MWD+IFR1+MS
12800.000	90.000	179.678	9513.997	38.793	0.000	41.006	-0.000	38.793	0.000	0.000	42.048	40.076	46.670	MWD+IFR1+MS
12900.000	90.000	179.678	9513.997	39.374	0.000	41.418	-0.000	39.374	0.000	0.000	42.307	40.244	41.065	MWD+IFR1+MS
13000.000	90.000	179.678	9513.997	39.962	0.000	41.840	-0.000	39.962	0.000	0.000	42.607	40.381	35.984	MWD+IFR1+MS
13100.000	90.000	179.678	9513.997	40.556	0.000	42.272	-0.000	40.556	0.000	0.000	42.943	40.491	31.609	MWD+IFR1+MS
13200.000	90.000	179.678	9513.997	41.157	0.000	42.713	-0.000	41.157	0.000	0.000	43.310	40.581	27.956	MWD+IFR1+MS
13300.000	90.000	179.678	9513.997	41.765	0.000	43.163	-0.000	41.765	0.000	0.000	43.702	40.655	24.946	MWD+IFR1+MS
13400.000	90.000	179.678	9513.997	42.378	0.000	43.622	-0.000	42.378	0.000	0.000	44.115	40.718	22.469	MWD+IFR1+MS
13500.000	90.000	179.678	9513.997	42.996	0.000	44.090	-0.000	42.996	0.000	0.000	44.545	40.772	20.419	MWD+IFR1+MS
13600.000	90.000	179.678	9513.997	43.620	0.000	44.565	-0.000	43.620	0.000	0.000	44.990	40.820	18.709	MWD+IFR1+MS
13700.000	90.000	179.678	9513.997	44.249	0.000	45.049	-0.000	44.249	0.000	0.000	45.448	40.864	17.268	MWD+IFR1+MS
13800.000	90.000	179.678	9513.997	44.883	0.000	45.541	-0.000	44.883	0.000	0.000	45.918	40.904	16.041	MWD+IFR1+MS
13900.000	90.000	179.678	9513.997	45.521	0.000	46.040	-0.000	45.521	0.000	0.000	46.399	40.941	14.985	MWD+IFR1+MS
14000.000	90.000	179.678	9513.997	46.165	0.000	46.546	-0.000	46.165	0.000	0.000	46.889	40.977	14.069	MWD+IFR1+MS
14100.000	90.000	179.678	9513.997	46.812	0.000	47.059	-0.000	46.812	0.000	0.000	47.388	41.011	13.267	MWD+IFR1+MS
14200.000	90.000	179.678	9513.997	47.464	0.000	47.579	-0.000	47.464	0.000	0.000	47.896	41.044	12.559	MWD+IFR1+MS
14300.000	90.000	179.678	9513.997	48.119	0.000	48.106	-0.000	48.119	0.000	0.000	48.412	41.076	11.929	MWD+IFR1+MS
14400.000	90.000	179.678	9513.997	48.778	0.000	48.638	-0.000	48.778	0.000	0.000	48.935	41.107	11.366	MWD+IFR1+MS
14500.000	90.000	179.678	9513.997	49.442	0.000	49.178	-0.000	49.442	0.000	0.000	49.465	41.138	10.859	MWD+IFR1+MS
14600.000	90.000	179.678	9513.997	50.108	0.000	49.723	-0.000	50.108	0.000	0.000	50.002	41.169	10.400	MWD+IFR1+MS
14700.000	90.000	179.678	9513.997	50.778	0.000	50.273	-0.000	50.778	0.000	0.000	50.545	41.200	9.982	MWD+IFR1+MS
14800.000	90.000	179.678	9513.997	51.451	0.000	50.830	-0.000	51.451	0.000	0.000	51.095	41.230	9.600	MWD+IFR1+MS
14900.000	90.000	179.678	9513.997	52.128	0.000	51.391	-0.000	52.128	0.000	0.000	51.650	41.261	9.249	MWD+IFR1+MS
15000.000	90.000	179.678	9513.997	52.807	0.000	51.958	-0.000	52.807	0.000	0.000	52.211	41.291	8.926	MWD+IFR1+MS
15100.000	90.000	179.678	9513.997	53.489	0.000	52.530	-0.000	53.489	0.000	0.000	52.778	41.322	8.627	MWD+IFR1+MS
15200.000	90.000	179.678	9513.997	54.174	0.000	53.107	-0.000	54.174	0.000	0.000	53.350	41.353	8.350	MWD+IFR1+MS
15300.000	90.000	179.678	9513.997	54.862	0.000	53.689	-0.000	54.862	0.000	0.000	53.926	41.384	8.092	MWD+IFR1+MS
15400.000	90.000	179.678	9513.997	55.552	0.000	54.275	-0.000	55.552	0.000	0.000	54.508	41.415	7.851	MWD+IFR1+MS
15500.000	90.000	179.678	9513.997	56.245	0.000	54.865	-0.000	56.245	0.000	0.000	55.094	41.447	7.625	MWD+IFR1+MS
15600.000	90.000	179.678	9513.997	56.940	0.000	55.460	-0.000	56.940	0.000	0.000	55.685	41.479	7.414	MWD+IFR1+MS
15700.000	90.000	179.678	9513.997	57.637	0.000	56.059	-0.000	57.637	0.000	0.000	56.280	41.511	7.215	MWD+IFR1+MS

15800.000	90.000	179.678	9513.997	58.337	0.000	56.662	-0.000	58.337	0.000	0.000	56.879	41.544	7.027	MWD+IFR1+MS
15900.000	90.000	179.678	9513.997	59.038	0.000	57.269	-0.000	59.038	0.000	0.000	57.483	41.577	6.850	MWD+IFR1+MS
16000.000	90.000	179.678	9513.997	59.742	0.000	57.879	-0.000	59.742	0.000	0.000	58.090	41.610	6.682	MWD+IFR1+MS
16100.000	90.000	179.678	9513.997	60.448	0.000	58.494	-0.000	60.448	0.000	0.000	58.701	41.644	6.523	MWD+IFR1+MS
16200.000	90.000	179.678	9513.997	61.156	0.000	59.112	-0.000	61.156	0.000	0.000	59.316	41.678	6.372	MWD+IFR1+MS
16300.000	90.000	179.678	9513.997	61.865	0.000	59.733	-0.000	61.865	0.000	0.000	59.934	41.712	6.229	MWD+IFR1+MS
16400.000	90.000	179.678	9513.997	62.577	0.000	60.357	-0.000	62.577	0.000	0.000	60.556	41.747	6.092	MWD+IFR1+MS
16500.000	90.000	179.678	9513.997	63.290	0.000	60.985	-0.000	63.290	0.000	0.000	61.181	41.782	5.962	MWD+IFR1+MS
16600.000	90.000	179.678	9513.997	64.005	0.000	61.616	-0.000	64.005	0.000	0.000	61.809	41.818	5.838	MWD+IFR1+MS
16700.000	90.000	179.678	9513.997	64.721	0.000	62.250	-0.000	64.721	0.000	0.000	62.441	41.854	5.719	MWD+IFR1+MS
16800.000	90.000	179.678	9513.997	65.439	0.000	62.887	-0.000	65.439	0.000	0.000	63.075	41.890	5.605	MWD+IFR1+MS
16900.000	90.000	179.678	9513.997	66.159	0.000	63.526	-0.000	66.159	0.000	0.000	63.712	41.927	5.496	MWD+IFR1+MS
17000.000	90.000	179.678	9513.997	66.880	0.000	64.169	-0.000	66.880	0.000	0.000	64.352	41.964	5.391	MWD+IFR1+MS
17100.000	90.000	179.678	9513.997	67.602	0.000	64.814	-0.000	67.602	0.000	0.000	64.995	42.002	5.291	MWD+IFR1+MS
17200.000	90.000	179.678	9513.997	68.326	0.000	65.462	-0.000	68.326	0.000	0.000	65.641	42.040	5.194	MWD+IFR1+MS
17300.000	90.000	179.678	9513.997	69.051	0.000	66.112	-0.000	69.051	0.000	0.000	66.289	42.079	5.101	MWD+IFR1+MS
17400.000	90.000	179.678	9513.997	69.777	0.000	66.764	-0.000	69.777	0.000	0.000	66.939	42.118	5.011	MWD+IFR1+MS
17500.000	90.000	179.678	9513.997	70.505	0.000	67.419	-0.000	70.505	0.000	0.000	67.592	42.158	4.925	MWD+IFR1+MS
17600.000	90.000	179.678	9513.997	71.234	0.000	68.077	-0.000	71.234	0.000	0.000	68.248	42.198	4.842	MWD+IFR1+MS
17700.000	90.000	179.678	9513.997	71.964	0.000	68.736	-0.000	71.964	0.000	0.000	68.905	42.238	4.762	MWD+IFR1+MS
17800.000	90.000	179.678	9513.997	72.695	0.000	69.398	-0.000	72.695	0.000	0.000	69.565	42.279	4.684	MWD+IFR1+MS
17900.000	90.000	179.678	9513.997	73.427	0.000	70.062	-0.000	73.427	0.000	0.000	70.227	42.320	4.609	MWD+IFR1+MS
18000.000	90.000	179.678	9513.997	74.161	0.000	70.728	-0.000	74.161	0.000	0.000	70.892	42.362	4.536	MWD+IFR1+MS
18100.000	90.000	179.678	9513.997	74.895	0.000	71.396	-0.000	74.895	0.000	0.000	71.558	42.404	4.466	MWD+IFR1+MS
18200.000	90.000	179.678	9513.997	75.631	0.000	72.066	-0.000	75.631	0.000	0.000	72.226	42.447	4.398	MWD+IFR1+MS
18300.000	90.000	179.678	9513.997	76.367	0.000	72.738	-0.000	76.367	0.000	0.000	72.896	42.490	4.332	MWD+IFR1+MS
18400.000	90.000	179.678	9513.997	77.104	0.000	73.411	-0.000	77.104	0.000	0.000	73.568	42.533	4.268	MWD+IFR1+MS
18500.000	90.000	179.678	9513.997	77.843	0.000	74.087	-0.000	77.843	0.000	0.000	74.242	42.577	4.206	MWD+IFR1+MS
18600.000	90.000	179.678	9513.997	78.582	0.000	74.764	-0.000	78.582	0.000	0.000	74.918	42.622	4.146	MWD+IFR1+MS
18700.000	90.000	179.678	9513.997	79.322	0.000	75.443	-0.000	79.322	0.000	0.000	75.595	42.666	4.087	MWD+IFR1+MS
18800.000	90.000	179.678	9513.997	80.063	0.000	76.123	-0.000	80.063	0.000	0.000	76.274	42.712	4.030	MWD+IFR1+MS
18900.000	90.000	179.678	9513.997	80.804	0.000	76.805	-0.000	80.804	0.000	0.000	76.955	42.757	3.975	MWD+IFR1+MS
19000.000	90.000	179.678	9513.997	81.547	0.000	77.489	-0.000	81.547	0.000	0.000	77.637	42.804	3.921	MWD+IFR1+MS

19100.000	90.000	179.678	9513.997	82.290	0.000	78.174	-0.000	82.290	0.000	0.000	78.321	42.850	3.869	MWD+IFR1+MS
19200.000	90.000	179.678	9513.997	83.034	0.000	78.860	-0.000	83.034	0.000	0.000	79.006	42.897	3.818	MWD+IFR1+MS
19300.000	90.000	179.678	9513.997	83.779	0.000	79.549	-0.000	83.779	0.000	0.000	79.693	42.945	3.768	MWD+IFR1+MS
19400.000	90.000	179.678	9513.997	84.525	0.000	80.238	-0.000	84.525	0.000	0.000	80.381	42.993	3.720	MWD+IFR1+MS
19500.000	90.000	179.678	9513.997	85.271	0.000	80.929	-0.000	85.271	0.000	0.000	81.070	43.041	3.673	MWD+IFR1+MS
19600.000	90.000	179.678	9513.997	86.018	0.000	81.621	-0.000	86.018	0.000	0.000	81.761	43.090	3.627	MWD+IFR1+MS
19700.000	90.000	179.678	9513.997	86.766	0.000	82.315	-0.000	86.766	0.000	0.000	82.453	43.139	3.582	MWD+IFR1+MS
19800.000	90.000	179.678	9513.997	87.514	0.000	83.009	-0.000	87.514	0.000	0.000	83.147	43.189	3.538	MWD+IFR1+MS
19900.000	90.000	179.678	9513.997	88.263	0.000	83.705	-0.000	88.263	0.000	0.000	83.842	43.239	3.496	MWD+IFR1+MS
20000.000	90.000	179.678	9513.997	89.012	0.000	84.402	-0.000	89.012	0.000	0.000	84.538	43.289	3.454	MWD+IFR1+MS
20100.000	90.000	179.678	9513.997	89.763	0.000	85.101	-0.000	89.763	0.000	0.000	85.235	43.340	3.413	MWD+IFR1+MS
20200.000	90.000	179.678	9513.997	90.513	0.000	85.800	-0.000	90.513	0.000	0.000	85.933	43.392	3.373	MWD+IFR1+MS
20300.000	90.000	179.678	9513.997	91.265	0.000	86.501	-0.000	91.265	0.000	0.000	86.633	43.444	3.334	MWD+IFR1+MS
20400.000	90.000	179.678	9513.997	92.016	0.000	87.203	-0.000	92.016	0.000	0.000	87.334	43.496	3.296	MWD+IFR1+MS
20500.000	90.000	179.678	9513.997	92.769	0.000	87.905	-0.000	92.769	0.000	0.000	88.035	43.549	3.259	MWD+IFR1+MS
20600.000	90.000	179.678	9513.997	93.522	0.000	88.609	-0.000	93.522	0.000	0.000	88.738	43.602	3.223	MWD+IFR1+MS
20700.000	90.000	179.678	9513.997	94.275	0.000	89.314	-0.000	94.275	0.000	0.000	89.442	43.655	3.187	MWD+IFR1+MS
20800.000	90.000	179.678	9513.997	95.029	0.000	90.020	-0.000	95.029	0.000	0.000	90.147	43.709	3.152	MWD+IFR1+MS
20900.000	90.000	179.678	9513.997	95.783	0.000	90.727	-0.000	95.783	0.000	0.000	90.852	43.764	3.118	MWD+IFR1+MS
21000.000	90.000	179.678	9513.997	96.538	0.000	91.435	-0.000	96.538	0.000	0.000	91.559	43.819	3.085	MWD+IFR1+MS
21100.000	90.000	179.678	9513.997	97.294	0.000	92.143	-0.000	97.294	0.000	0.000	92.267	43.874	3.052	MWD+IFR1+MS
21200.000	90.000	179.678	9513.997	98.050	0.000	92.853	-0.000	98.050	0.000	0.000	92.976	43.930	3.020	MWD+IFR1+MS
21300.000	90.000	179.678	9513.997	98.806	0.000	93.563	-0.000	98.806	0.000	0.000	93.685	43.986	2.988	MWD+IFR1+MS
21400.000	90.000	179.678	9513.997	99.563	0.000	94.275	-0.000	99.563	0.000	0.000	94.395	44.042	2.958	MWD+IFR1+MS
21500.000	90.000	179.678	9513.997	100.320	0.000	94.987	-0.000	100.320	0.000	0.000	95.107	44.099	2.927	MWD+IFR1+MS
21600.000	90.000	179.678	9513.997	101.078	0.000	95.700	-0.000	101.078	0.000	0.000	95.819	44.156	2.898	MWD+IFR1+MS
21700.000	90.000	179.678	9513.997	101.836	0.000	96.414	-0.000	101.836	0.000	0.000	96.532	44.214	2.869	MWD+IFR1+MS
21800.000	90.000	179.678	9513.997	102.594	0.000	97.128	-0.000	102.594	0.000	0.000	97.245	44.272	2.840	MWD+IFR1+MS
21900.000	90.000	179.678	9513.997	103.353	0.000	97.843	-0.000	103.353	0.000	0.000	97.960	44.331	2.812	MWD+IFR1+MS
22000.000	90.000	179.678	9513.997	104.112	0.000	98.560	-0.000	104.112	0.000	0.000	98.675	44.390	2.785	MWD+IFR1+MS
22100.000	90.000	179.678	9513.997	104.872	0.000	99.276	-0.000	104.872	0.000	0.000	99.391	44.449	2.758	MWD+IFR1+MS
22200.000	90.000	179.678	9513.997	105.632	0.000	99.994	-0.000	105.632	0.000	0.000	100.108	44.509	2.731	MWD+IFR1+MS
22300.000	90.000	179.678	9513.997	106.392	0.000	100.712	-0.000	106.392	0.000	0.000	100.826	44.569	2.705	MWD+IFR1+MS

22400.000	90.000	179.678	9513.997	107.152	0.000	101.431	-0.000	107.152	0.000	0.000	101.544	44.630	2.680	MWD+IFR1+MS
22500.000	90.000	179.678	9513.997	107.913	0.000	102.151	-0.000	107.913	0.000	0.000	102.263	44.691	2.654	MWD+IFR1+MS
22600.000	90.000	179.678	9513.997	108.675	0.000	102.871	-0.000	108.675	0.000	0.000	102.982	44.752	2.630	MWD+IFR1+MS
22700.000	90.000	179.678	9513.997	109.436	0.000	103.592	-0.000	109.436	0.000	0.000	103.702	44.814	2.606	MWD+IFR1+MS
22800.000	90.000	179.678	9513.997	110.198	0.000	104.314	-0.000	110.198	0.000	0.000	104.423	44.876	2.582	MWD+IFR1+MS
22900.000	90.000	179.678	9513.997	110.961	0.000	105.036	-0.000	110.961	0.000	0.000	105.145	44.939	2.558	MWD+IFR1+MS
23000.000	90.000	179.678	9513.997	111.723	0.000	105.759	-0.000	111.723	0.000	0.000	105.867	45.001	2.535	MWD+IFR1+MS
23100.000	90.000	179.678	9513.997	112.486	0.000	106.482	-0.000	112.486	0.000	0.000	106.589	45.065	2.513	MWD+IFR1+MS
23200.000	90.000	179.678	9513.997	113.250	0.000	107.206	-0.000	113.250	0.000	0.000	107.313	45.129	2.490	MWD+IFR1+MS
23300.000	90.000	179.678	9513.997	114.013	0.000	107.931	-0.000	114.013	0.000	0.000	108.037	45.193	2.468	MWD+IFR1+MS
23400.000	90.000	179.678	9513.997	114.777	0.000	108.656	-0.000	114.777	0.000	0.000	108.761	45.257	2.447	MWD+IFR1+MS
23500.000	90.000	179.678	9513.997	115.541	0.000	109.382	-0.000	115.541	0.000	0.000	109.486	45.322	2.426	MWD+IFR1+MS
23600.000	90.000	179.678	9513.997	116.305	0.000	110.108	-0.000	116.305	0.000	0.000	110.212	45.387	2.405	MWD+IFR1+MS
23700.000	90.000	179.678	9513.997	117.070	0.000	110.835	-0.000	117.070	0.000	0.000	110.938	45.453	2.384	MWD+IFR1+MS
23800.000	90.000	179.678	9513.997	117.835	0.000	111.562	-0.000	117.835	0.000	0.000	111.664	45.519	2.364	MWD+IFR1+MS
23900.000	90.000	179.678	9513.997	118.600	0.000	112.290	-0.000	118.600	0.000	0.000	112.392	45.585	2.344	MWD+IFR1+MS
24000.000	90.000	179.678	9513.997	119.366	0.000	113.018	-0.000	119.366	0.000	0.000	113.119	45.652	2.324	MWD+IFR1+MS
24100.000	90.000	179.678	9513.997	120.131	0.000	113.747	-0.000	120.131	0.000	0.000	113.847	45.719	2.305	MWD+IFR1+MS
24200.000	90.000	179.678	9513.997	120.897	0.000	114.476	-0.000	120.897	0.000	0.000	114.576	45.787	2.286	MWD+IFR1+MS
24300.000	90.000	179.678	9513.997	121.663	0.000	115.206	-0.000	121.663	0.000	0.000	115.305	45.855	2.267	MWD+IFR1+MS
24400.000	90.000	179.678	9513.997	122.430	0.000	115.936	-0.000	122.430	0.000	0.000	116.035	45.923	2.249	MWD+IFR1+MS
24500.000	90.000	179.678	9513.997	123.196	0.000	116.667	-0.000	123.196	0.000	0.000	116.765	45.992	2.231	MWD+IFR1+MS
24600.000	90.000	179.678	9513.997	123.963	0.000	117.398	-0.000	123.963	0.000	0.000	117.495	46.060	2.213	MWD+IFR1+MS
24700.000	90.000	179.678	9513.997	124.730	0.000	118.130	-0.000	124.730	0.000	0.000	118.226	46.130	2.195	MWD+IFR1+MS
24800.000	90.000	179.678	9513.997	125.497	0.000	118.862	-0.000	125.497	0.000	0.000	118.958	46.200	2.178	MWD+IFR1+MS
24900.000	90.000	179.678	9513.997	126.265	0.000	119.594	-0.000	126.265	0.000	0.000	119.689	46.270	2.161	MWD+IFR1+MS
25000.000	90.000	179.678	9513.997	127.033	0.000	120.327	-0.000	127.033	0.000	0.000	120.422	46.340	2.144	MWD+IFR1+MS
25100.000	90.000	179.678	9513.997	127.801	0.000	121.060	-0.000	127.801	0.000	0.000	121.154	46.411	2.127	MWD+IFR1+MS
25200.000	90.000	179.678	9513.997	128.569	0.000	121.794	-0.000	128.569	0.000	0.000	121.887	46.482	2.110	MWD+IFR1+MS
25300.000	90.000	179.678	9513.997	129.337	0.000	122.528	-0.000	129.337	0.000	0.000	122.621	46.554	2.094	MWD+IFR1+MS
25400.000	90.000	179.678	9513.997	130.106	0.000	123.262	-0.000	130.106	0.000	0.000	123.355	46.625	2.078	MWD+IFR1+MS
25500.000	90.000	179.678	9513.997	130.874	0.000	123.997	-0.000	130.874	0.000	0.000	124.089	46.698	2.062	MWD+IFR1+MS
25600.000	90.000	179.678	9513.997	131.643	0.000	124.732	-0.000	131.643	0.000	0.000	124.824	46.770	2.047	MWD+IFR1+MS

25700.000	90.000	179.678	9513.997	132.412	0.000	125.467	-0.000	132.412	0.000	0.000	125.558	46.843	2.031	MWD+IFR1+MS
25800.000	90.000	179.678	9513.997	133.182	0.000	126.203	-0.000	133.182	0.000	0.000	126.294	46.916	2.016	MWD+IFR1+MS
25900.000	90.000	179.678	9513.997	133.951	0.000	126.939	-0.000	133.951	0.000	0.000	127.030	46.990	2.001	MWD+IFR1+MS
26000.000	90.000	179.678	9513.997	134.721	0.000	127.676	-0.000	134.721	0.000	0.000	127.766	47.064	1.987	MWD+IFR1+MS
26100.000	90.000	179.678	9513.997	135.490	0.000	128.413	-0.000	135.490	0.000	0.000	128.502	47.138	1.972	MWD+IFR1+MS
26200.000	90.000	179.678	9513.997	136.260	0.000	129.150	-0.000	136.260	0.000	0.000	129.239	47.213	1.958	MWD+IFR1+MS
26300.000	90.000	179.678	9513.997	137.031	0.000	129.888	-0.000	137.031	0.000	0.000	129.976	47.288	1.943	MWD+IFR1+MS
26400.000	90.000	179.678	9513.997	137.801	0.000	130.625	-0.000	137.801	0.000	0.000	130.713	47.363	1.929	MWD+IFR1+MS
26500.000	90.000	179.678	9513.997	138.571	0.000	131.364	-0.000	138.571	0.000	0.000	131.451	47.439	1.916	MWD+IFR1+MS
26600.000	90.000	179.678	9513.997	139.342	0.000	132.102	-0.000	139.342	0.000	0.000	132.189	47.515	1.902	MWD+IFR1+MS
26700.000	90.000	179.678	9513.997	140.113	0.000	132.841	-0.000	140.113	0.000	0.000	132.927	47.591	1.888	MWD+IFR1+MS
26800.000	90.000	179.678	9513.997	140.884	0.000	133.580	-0.000	140.884	0.000	0.000	133.666	47.668	1.875	MWD+IFR1+MS
26900.000	90.000	179.678	9513.997	141.655	0.000	134.320	-0.000	141.655	0.000	0.000	134.405	47.745	1.862	MWD+IFR1+MS
27000.000	90.000	179.678	9513.997	142.426	0.000	135.059	-0.000	142.426	0.000	0.000	135.144	47.822	1.849	MWD+IFR1+MS
27100.000	90.000	179.678	9513.997	143.197	0.000	135.799	-0.000	143.197	0.000	0.000	135.884	47.899	1.836	MWD+IFR1+MS
27200.000	90.000	179.678	9513.997	143.969	0.000	136.539	-0.000	143.969	0.000	0.000	136.623	47.977	1.823	MWD+IFR1+MS
27300.000	90.000	179.678	9513.997	144.741	0.000	137.280	-0.000	144.741	0.000	0.000	137.364	48.056	1.811	MWD+IFR1+MS
27400.000	90.000	179.678	9513.997	145.512	0.000	138.021	-0.000	145.512	0.000	0.000	138.104	48.134	1.798	MWD+IFR1+MS
27500.000	90.000	179.678	9513.997	146.284	0.000	138.762	-0.000	146.284	0.000	0.000	138.845	48.213	1.786	MWD+IFR1+MS
27600.000	90.000	179.678	9513.997	147.057	0.000	139.503	-0.000	147.057	0.000	0.000	139.586	48.292	1.774	MWD+IFR1+MS
27700.000	90.000	179.678	9513.997	147.829	0.000	140.245	-0.000	147.829	0.000	0.000	140.327	48.372	1.762	MWD+IFR1+MS
27725.117	90.000	179.678	9513.997	148.022	0.000	140.431	-0.000	148.022	0.000	0.000	140.512	48.392	1.759	MWD+IFR1+MS
27775.000	90.000	179.678	9513.997	148.407	0.000	140.800	-0.000	148.407	0.000	0.000	140.881	48.432	1.753	MWD+IFR1+MS

Plan Targets Poker Lake Unit 20 DTD South 221H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 11	9799.62	440373.10	631752.00	6239.00	RECTANGLE
SHL 11	11274.80	439573.29	632707.08	5737.56	RECTANGLE
LTP 11	27725.00	422030.00	631855.10	6239.00	RECTANGLE
BHL 11	27775.00	421980.00	631855.30	6239.00	RECTANGLE

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

XTO Energy Inc.
PLU 20 Dog Town Draw 221H
Projected TD: 27775' MD / 9514' TVD
SHL: 910' FNL & 2300' FWL , Section 20, T24S, R30E
BHL: 2623' FNL & 1353' 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	807'	Water
Top of Salt	1210'	Water
Base of Salt	3403'	Water
Delaware	3597'	Water
Brushy Canyon	6095'	Water/Oil/Gas
Bone Spring	7391'	Water
1st Bone Spring	8377'	Water/Oil/Gas
2nd Bone Spring	9195'	Water/Oil/Gas
Target/Land Curve	9514'	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 @ 907' (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 8772.8' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 27775 MD/TD and 6 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 8472.8 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 907'	13.375	54.5	J-55	BTC	New	1.51	2.85	18.39
12.25	0' – 4000'	9.625	40	HC P-110	BTC	New	3.28	2.48	3.61
12.25	4000' – 8772.8'	9.625	40	HC L-80	BTC	New	2.39	2.29	4.80
8.5	0' – 8672.8'	6	26	P-110	Semi-Premium	New	1.17	3.31	1.76
8.5	8672.8' - 27775'	6	26	P-110	Semi-Premium	New	1.17	3.01	1.98

· XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface casing per this Sundry
· XTO requests to not utilize centralizers in the curve and lateral
· 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 +/- 907'

Lead: 450 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Top of Cement: Surface
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 9.625, 40 New casing to be set at +/- 8772.8'
1st Stage
Optional Lead: 1030 sxs Class C (mixed at 10.5 ppg, 2.77 ft3/sx, 15.59 gal/sx water)
TOC: Surface
Tail: 770 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
TOC: Brushy Canyon @ 6095
Compressives: 12-hr = 900 psi 24 hr = 1150 psi

2nd Stage
Lead: 0 sxs Class C (mixed at 12.9 ppg, 2.16 ft3/sx, 9.61 gal/sx water)
Tail: 2150 sxs Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Top of Cement: 0
Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6095') 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 +/- 27775'

Lead: 40 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 8472.8 feet
Tail: 3200 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 8972.8 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 2409 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 nippling up on the 13.375, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nippling up on the 9.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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

on each of the wells.

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

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 907'	17.5	FW/Native	8.4-8.9	35-40	NC
907' - 8772.8'	12.25	FW / Cut Brine / Direct Emulsion	8.2-8.7	30-32	NC
8772.8' - 27775'	8.5	OBM	9.1-9.6	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 160 to 180 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 4502 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 10400089329

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-		Undesignated; Bone Spring

[4] Property Code	[5] Property Name	[6] Well Number
	POKER LAKE UNIT 20 DTD	221H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC	3,243'

[10] Surface Location

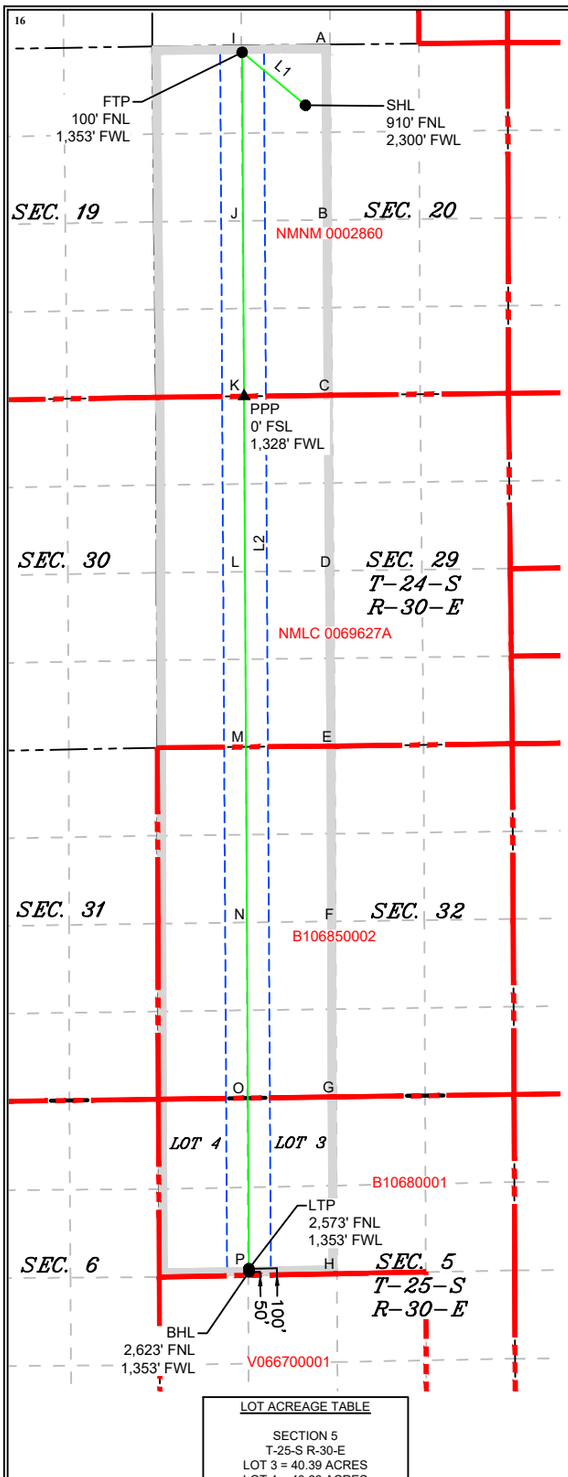
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	20	24S	30E		910	NORTH	2,300	WEST	EDDY

[11] 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		2,623	NORTH	1,353	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
1,121.05			

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.



LOT ACREAGE TABLE

SECTION 5
T-25-S R-30-E
LOT 3 = 40.39 ACRES
LOT 4 = 40.66 ACRES

LEGEND

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

LINE TABLE		
LINE	AZIMUTH	LENGTH
L1	309°56'42"	1,245.92'
L2	179°40'35"	18,393.87'

COORDINATE TABLE

	SHL (NAD 83 NME)	SHL (NAD 27 NME)
Y =	439,632.4 N	439,573.2 N
X =	673,890.9 E	632,707.2 E
LAT. =	32.207900 °N	32.207776 °N
LONG. =	103.904757 °W	103.904270 °W

	FTP (NAD 83 NME)	FTP (NAD 27 NME)
Y =	440,432.4 N	440,373.1 N
X =	672,935.7 E	631,752.0 E
LAT. =	32.210109 °N	32.209985 °N
LONG. =	103.907835 °W	103.907348 °W

	PPP (NAD 83 NME)	PPP (NAD 27 NME)
Y =	435,242.5 N	435,183.4 N
X =	672,965.0 E	631,781.2 E
LAT. =	32.195843 °N	32.195719 °N
LONG. =	103.907807 °W	103.907320 °W

	LTP (NAD 83 NME)	LTP (NAD 27 NME)
Y =	422,088.8 N	422,030.0 N
X =	673,039.3 E	631,855.1 E
LAT. =	32.159685 °N	32.159560 °N
LONG. =	103.907735 °W	103.907249 °W

	BHL (NAD 83 NME)	BHL (NAD 27 NME)
Y =	422,038.8 N	421,980.0 N
X =	673,039.6 E	631,855.3 E
LAT. =	32.159547 °N	32.159422 °N
LONG. =	103.907735 °W	103.907249 °W

CORNER COORDINATES (NAD 83 NME)

A - Y =	440,546.3 N	A - X =	674,262.0 E
B - Y =	437,901.7 N	B - X =	674,277.4 E
C - Y =	435,257.7 N	C - X =	674,292.8 E
D - Y =	432,613.8 N	D - X =	674,313.6 E
E - Y =	429,970.0 N	E - X =	674,334.4 E
F - Y =	427,326.7 N	F - X =	674,344.5 E
G - Y =	424,680.6 N	G - X =	674,354.7 E
H - Y =	422,013.8 N	H - X =	674,366.7 E
I - Y =	440,532.2 N	I - X =	672,921.8 E
J - Y =	437,887.3 N	J - X =	672,943.1 E
K - Y =	435,242.5 N	K - X =	672,964.6 E
L - Y =	432,598.0 N	L - X =	672,980.4 E
M - Y =	429,957.3 N	M - X =	672,996.3 E
N - Y =	427,309.2 N	N - X =	673,004.9 E
O - Y =	424,662.1 N	O - X =	673,013.6 E
P - Y =	421,988.6 N	P - X =	673,026.9 E

CORNER COORDINATES (NAD 27 NME)

A - Y =	440,487.1 N	A - X =	633,078.3 E
B - Y =	437,842.5 N	B - X =	633,093.6 E
C - Y =	435,198.6 N	C - X =	633,108.9 E
D - Y =	432,554.7 N	D - X =	633,129.7 E
E - Y =	429,911.0 N	E - X =	633,150.4 E
F - Y =	427,267.8 N	F - X =	633,160.4 E
G - Y =	424,621.7 N	G - X =	633,170.5 E
H - Y =	421,954.9 N	H - X =	633,182.4 E
I - Y =	440,472.9 N	I - X =	631,738.2 E
J - Y =	437,828.0 N	J - X =	631,759.3 E
K - Y =	435,183.4 N	K - X =	631,780.7 E
L - Y =	432,538.9 N	L - X =	631,796.4 E
M - Y =	429,898.2 N	M - X =	631,812.3 E
N - Y =	427,250.3 N	N - X =	631,820.8 E
O - Y =	424,603.2 N	O - X =	631,829.4 E
P - Y =	421,929.7 N	P - X =	631,842.6 E

[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 618.013003.06-43

J:\618.013 XTO Energy – NM\003 Poker Lake Unit\06 – PLU 20 DTD – EDDY\Wells\43 – 221H\DWG\SOUTH 221H C-102.dwg

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 356349

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 356349
	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.	6/21/2024
ward.rikala	A NSP may be required.	6/21/2024