

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

Well Name: POKER LAKE UNIT 20 DTD	Well Location: T24S / R30E / SEC 20 / NENE / 32.209259 / -103.896556	County or Parish/State: EDDY / NM
Well Number: 424H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMLC0068905	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: 2781329

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/23/2024

Time Sundry Submitted: 10:35

Date proposed operation will begin: 05/01/2024

Procedure Description: XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include FTP, LTP, BHL, casing sizes, cement, proposed total depth, and formation (pool). FROM: TO: FTP: 100' FSL & 110' FEL of Section 17-T24S-R30E 100' FNL & 50' FEL of Section 20-T24S-R30E LTP: 330' FNL & 110' FEL of Section 32-T23S-R30E 330' FSL & 49' FEL of Section 5-T25S-R30E BHL: 200' FNL & 110' FEL of Section 32-T23S-R30E 230' FSL & 49' FEL of Section 5-T25S-R30E Proposed total depth will change from 32240' MD; 11039' TVD (Wolfcamp) to 31423' MD; TVD 10858' (Wolfcamp). See attached Drilling Plan for updated cement and casing program. Attachments: C-102, Drilling Plan, Directional Drilling Plan, MBS, BOP Variance, Well Control Plan

NOI Attachments

Procedure Description

PLU_20_DTD_424H_BLM_APD_Change_Sundry_attachments_3.23.24_20240323103407.pdf

Well Name: POKER LAKE UNIT 20
DTD

Well Location: T24S / R30E / SEC 20 /
NENE / 32.209259 / -103.896556

County or Parish/State: EDDY /
NM

Well Number: 424H

Type of Well: CONVENTIONAL GAS
WELL

Allottee or Tribe Name:

Lease Number: NMLC0068905

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_2781329_Poker_Lake_Unit_20_DTD_424H_COAs_20240404133210.pdf

Sec_20_24S_30E_NMP_Sundry_2781329_Poker_Lake_Unit_20_DTD_424H_Eng_Worksheet_20240404133210.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: RICHARD REDUS

Signed on: MAR 23, 2024 10:35 AM

Name: XTO PERMIAN OPERATING LLC

Title: Permitting Manager

Street Address: 22777 SPRINGWOODS VILLAGE PARKWAY

City: SPRING

State: TX

Phone: (720) 539-1673

Email address: RICHARD.L.REDUS@EXXONMOBIL.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 05/03/2024

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

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

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

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

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

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Additional Remarks

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

Location of Well

0. SHL: NENE / 432 FNL / 517 FEL / TWSP: 24S / RANGE: 30E / SECTION: 20 / LAT: 32.209259 / LONG: -103.896556 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 100 FSL / 110 FEL / TWSP: 24S / RANGE: 30E / SECTION: 8 / LAT: 32.2255 / LONG: -103.89525 (TVD: 11039 feet, MD: 16700 feet)

PPP: SESE / 100 FSL / 110 FEL / TWSP: 24S / RANGE: 30E / SECTION: 5 / LAT: 32.24045 / LONG: -103.89542 (TVD: 11039 feet, MD: 22000 feet)

PPP: SESE / 100 FSL / 110 FEL / TWSP: 24S / RANGE: 30E / SECTION: 17 / LAT: 32.210728 / LONG: -103.895238 (TVD: 11039 feet, MD: 11400 feet)

PPP: NESE / 100 FSL / 110 FEL / TWSP: 24S / RANGE: 30E / SECTION: 17 / LAT: 32.21453 / LONG: -103.89525 (TVD: 11039 feet, MD: 12800 feet)

BHL: NENE / 200 FNL / 110 FEL / TWSP: 23S / RANGE: 30E / SECTION: 32 / LAT: 32.268082 / LONG: -103.895241 (TVD: 11039 feet, MD: 32240 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 20 424H
LOCATION:	Sec 20-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

Changes approved through engineering via **Sundry 2781329** on 04/04/2024. Any previous COAs not addressed within the updated COAs still apply.

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **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 integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

B. PRESSURE CONTROL

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

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

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

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

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

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

Sec 20-24S-30E-NMP Sundry 2781329 Poker Lake Unit 20 DTD 424H Eng Worksheet

Poker Lake Unit 20 DTD 424H

13 3/8	surface csg in a	17 1/2	inch hole.	Design Factors					Surface		
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	54.50	J 55	BTC	15.14	2.36	1.41	1,034	6	2.59	4.51	56,353
"B"			BTC				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,460				Tail Cmt	does not	circ to sfc.	Totals:	1,034			56,353
Comparison of Proposed to Minimum Required Cement Volumes											
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
17 1/2	0.6946	840	1415	718	97	8.90	1052	2M			1.56
Site plat (pipe ricks S or E) as per O.O.I.H.D.4.1. not found.											

9 5/8	casing inside the	13 3/8		Design Factors					Int 1		
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00	HCP 110	BTC	7.87	2.19	1.24	4,000	4	1.89	4.02	160,000
"B"	40.00	HCL 80	BTC	∞	2.19	0.9	5,972	3	1.37	4.02	238,880
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	9,972			398,880
The cement volume(s) are intended to achieve a top of				0	ft from surface or a			1034			overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
12 1/4	0.3132	2130	4367	3174	38	9.30	4187	5M			0.81
Class 'H' tail cmt yld > 1.20											
Burst Frac Gradient(s) for Segment(s): A, B, C, D = a, 1.44, c, d All > 0.70, OK.											

6	casing inside the	9 5/8		Design Factors					Prod 1		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	26.00	RY P 110	semi-Premiur	3.71	2.45	2.5	9,872	3	3.80	3.71	256,672
"B"	26.00	RY P 110	semi-Premiur	∞	2.45	2.5	21,552	3	3.80	3.71	560,352
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,172							Totals:	31,424			817,024
The cement volume(s) are intended to achieve a top of				9700	ft from surface or a			272			overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
8 1/2	0.1977	3650	5559	4304	29	12.40					0.81
Class 'C' tail cmt yld > 1.35											

#N/A	0	6		Design Factors					<Choose Casing>		
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"			0.00				0				0
"B"			0.00				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0			0
Cmt vol calc below includes this csg, TOC intended				#N/A	ft from surface or a			#N/A			overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A						
#N/A Capitan Reef est top XXXX.											

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

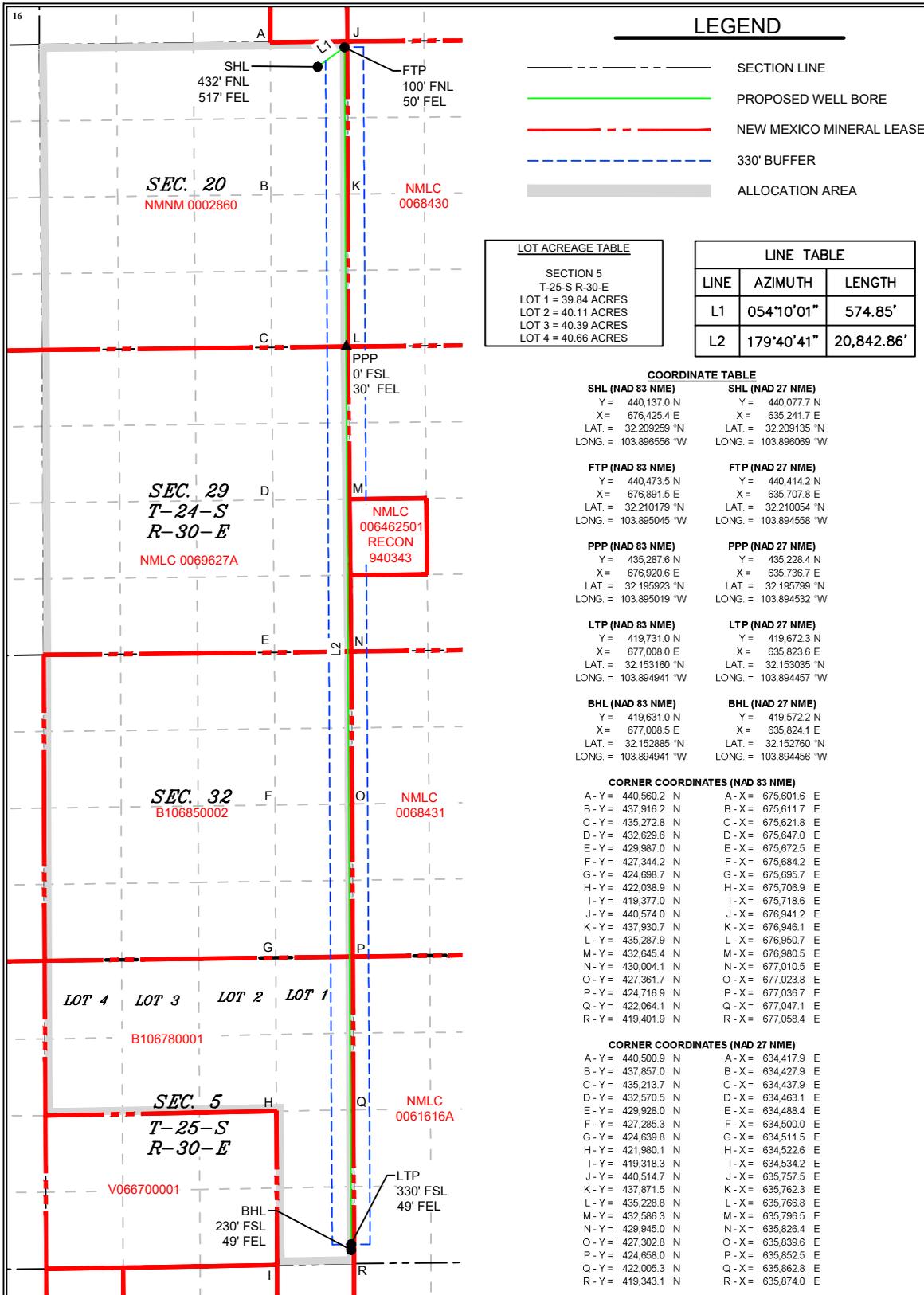
Table with 3 main columns: APD ID (10400087063), Pool Code (98220), Pool Name (Purple Sage;Wolfcamp (GAS)), Property Code, Property Name (POKER LAKE UNIT 20 DTD), Well Number (424H), OGRID No. (373075), Operator Name (XTO PERMIAN OPERATING, LLC), Elevation (3,295')

Surface Location table with columns: UL or lot no. (A), Section (20), Township (24S), Range (30E), Lot Idn, Feet from the (432), North/South line (NORTH), Feet from the (517), East/West line (EAST), County (EDDY)

Bottom Hole Location If Different From Surface table with columns: UL or lot no. (P), Section (5), Township (25S), Range (30E), Lot Idn, Feet from the (230), North/South line (SOUTH), Feet from the (49), East/West line (EAST), County (EDDY)

Dedicated Acres (2,321.00), Joint or Infill, Consolidation Code, Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



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

Manish Saini 03/21/2024
Signature Date
Manish Saini
Printed Name
manish.saini@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.

3/15/2024
Date of Survey
Signature and Seal of Professional Surveyor:

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR
MARK DILLON HARP 23786
Certificate Number
DB 618.013003.06-56

618.013 XTO Energy - NM\003 Poker Lake Unit\06 - PLU 20 DTD - EDDY\Wells\56 - 424H\DWG\SOUTH 424H C-102.dwg

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

XTO Energy Inc.
 PLU 20 Dog Town Draw 424H
 Projected TD: 31423.47' MD / 10858' TVD
 SHL: 432' FNL & 517' FEL , Section 20, T24S, R30E
 BHL: 230' FSL & 49' FEL , 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	934'	Water
Top of Salt	1337'	Water
Base of Salt	3530'	Water
Delaware	3724'	Water
Brushy Canyon	6222'	Water/Oil/Gas
Bone Spring	7518'	Water
1st Bone Spring	8504'	Water/Oil/Gas
2nd Bone Spring	9322'	Water/Oil/Gas
3rd Bone Spring	10416'	Water/Oil/Gas
Wolfcamp	10807'	Water/Oil/Gas
Wolfcamp X	10828'	Water/Oil/Gas
Target/Land Curve	10858'	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 @ 1034' (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 9972.34' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 31423.47 MD/TD and 6 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 9672.34 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 1034'	13.375	54.5	J-55	BTC	New	1.16	2.50	16.13
12.25	0' – 4000'	9.625	40	HC P-110	BTC	New	1.83	2.31	3.17
12.25	4000' – 9972.34'	9.625	40	HC L-80	BTC	New	1.33	1.75	3.83
8.5	0' – 9872.34'	6	26	P-110	Semi-Premium	New	1.17	2.22	1.56
8.5	9872.34' - 31423.47'	6	26	P-110	Semi-Premium	New	1.17	2.02	1.76

- 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 5.5" 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 +/- 1034'

Lead: 540 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 +/- 9972.34'

1st Stage

Optional Lead: 1050 sxs Class C (mixed at 10.5 ppg, 2.77 ft³/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 1080 sxs Class C (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6222

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: 2190 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 9-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6222') 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 +/- 31423.47'

Lead: 40 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 9672.34 feet

Tail: 3610 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 10172.34 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 4330 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 13.375, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 9.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each week.

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

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

hole on each of the wells.

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

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 1034'	17.5	FW/Native	8.4-8.9	35-40	NC
1034' - 9972.34'	12.25	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
9972.34' - 31423.47'	8.5	OBM	11.9-12.4	50-60	NC - 20

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

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

7. Auxiliary Well Control and Monitoring Equipment

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

8. Logging, Coring and Testing Program

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 175 to 195 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6719 psi.

10. Anticipated Starting Date and Duration of Operations

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

Well Plan Report - Poker Lake Unit 20 DTD South 424H

Measured Depth: 31423.47 ft

TVD RKB: 10858.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 440077.70 ft

Easting: 635241.70 ft

RKB: 3327.00 ft

Ground Level: 3295.00 ft

North Reference: Grid

Convergence Angle: 0.23 Deg

Plan Sections Poker Lake Unit 20 DTD South 424H

Measured Depth (ft)	Inclination (Deg)	Azimuth (Deg)	TVD		Y Offset (ft)	X Offset (ft)	Build Rate (Deg/100ft)	Turn Rate (Deg/100ft)	Dogleg	
			RKB (ft)	Y Offset (ft)					Rate (Deg/100ft)	Target
0.00	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	0.00	
1410.13	6.20	54.17	1409.53	9.82	13.60	2.00	0.00	2.00		
6420.41	6.20	54.17	6390.47	326.68	452.50	0.00	0.00	0.00		
6730.54	0.00	0.00	6700.00	336.50	466.10	-2.00	0.00	2.00		
10172.34	0.00	0.00	10141.80	336.50	466.10	0.00	0.00	0.00		
11297.34	90.00	179.68	10858.00	-379.69	470.10	8.00	0.00	8.00		
31323.31	90.00	179.68	10858.00	-20405.34	581.95	0.00	0.00	0.00	LTP 27	
31423.47	90.00	179.68	10858.00	-20505.50	582.50	0.00	0.00	0.00	BHL 27	

Position Uncertainty Poker Lake Unit 20 DTD South 424H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	of Bias (ft)	Error (ft)	Error (ft)	Azimuth (°)	Used
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.309	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.347	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	2.374	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	2.406	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	2.443	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	2.530	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	2.580	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	2.633	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	54.173	1199.980	5.232	0.000	4.277	0.000	2.689	0.000	0.000	5.262	4.242	134.086	MWD+IFR1+MS
1300.000	4.000	54.173	1299.838	5.982	0.000	4.664	0.000	2.749	0.000	0.000	5.992	4.663	-37.206	MWD+IFR1+MS
1400.000	6.000	54.173	1399.452	6.660	0.000	5.047	0.000	2.814	0.000	0.000	6.685	5.042	-32.900	MWD+IFR1+MS
1410.131	6.203	54.173	1409.525	6.686	0.000	5.083	0.000	2.818	0.000	0.000	6.713	5.078	-32.914	MWD+IFR1+MS
1500.000	6.203	54.173	1498.869	6.931	0.000	5.401	0.000	2.876	0.000	0.000	6.958	5.396	-32.844	MWD+IFR1+MS
1600.000	6.203	54.173	1598.283	7.226	0.000	5.778	0.000	2.946	0.000	0.000	7.252	5.771	-32.114	MWD+IFR1+MS
1700.000	6.203	54.173	1697.698	7.529	0.000	6.156	0.000	3.017	0.000	0.000	7.556	6.146	-31.286	MWD+IFR1+MS
1800.000	6.203	54.173	1797.112	7.837	0.000	6.532	0.000	3.092	0.000	0.000	7.865	6.519	-30.467	MWD+IFR1+MS
1900.000	6.203	54.173	1896.527	8.150	0.000	6.907	0.000	3.168	0.000	0.000	8.179	6.891	-29.658	MWD+IFR1+MS
2000.000	6.203	54.173	1995.942	8.468	0.000	7.281	0.000	3.247	0.000	0.000	8.498	7.261	-28.861	MWD+IFR1+MS
2100.000	6.203	54.173	2095.356	8.789	0.000	7.653	0.000	3.327	0.000	0.000	8.821	7.630	-28.076	MWD+IFR1+MS
2200.000	6.203	54.173	2194.771	9.114	0.000	8.025	0.000	3.410	0.000	0.000	9.147	7.998	-27.306	MWD+IFR1+MS
2300.000	6.203	54.173	2294.185	9.442	0.000	8.396	0.000	3.494	0.000	0.000	9.476	8.366	-26.551	MWD+IFR1+MS
2400.000	6.203	54.173	2393.600	9.772	0.000	8.767	0.000	3.580	0.000	0.000	9.808	8.732	-25.811	MWD+IFR1+MS
2500.000	6.203	54.173	2493.015	10.105	0.000	9.137	0.000	3.668	0.000	0.000	10.143	9.098	-25.088	MWD+IFR1+MS
2600.000	6.203	54.173	2592.429	10.441	0.000	9.506	0.000	3.757	0.000	0.000	10.480	9.464	-24.382	MWD+IFR1+MS
2700.000	6.203	54.173	2691.844	10.778	0.000	9.875	0.000	3.848	0.000	0.000	10.819	9.829	-23.694	MWD+IFR1+MS
2800.000	6.203	54.173	2791.258	11.117	0.000	10.243	0.000	3.940	0.000	0.000	11.160	10.194	-23.024	MWD+IFR1+MS
2900.000	6.203	54.173	2890.673	11.458	0.000	10.612	0.000	4.034	0.000	0.000	11.502	10.558	-22.372	MWD+IFR1+MS

3000.000	6.203	54.173	2990.088	11.801	0.000	10.979	0.000	4.129	0.000	0.000	11.846	10.922	-21.738	MWD+IFR1+MS
3100.000	6.203	54.173	3089.502	12.145	0.000	11.347	0.000	4.226	0.000	0.000	12.192	11.286	-21.124	MWD+IFR1+MS
3200.000	6.203	54.173	3188.917	12.490	0.000	11.714	0.000	4.324	0.000	0.000	12.538	11.650	-20.527	MWD+IFR1+MS
3300.000	6.203	54.173	3288.331	12.836	0.000	12.081	0.000	4.423	0.000	0.000	12.886	12.014	-19.950	MWD+IFR1+MS
3400.000	6.203	54.173	3387.746	13.183	0.000	12.448	0.000	4.524	0.000	0.000	13.235	12.377	-19.390	MWD+IFR1+MS
3500.000	6.203	54.173	3487.161	13.532	0.000	12.814	0.000	4.627	0.000	0.000	13.584	12.740	-18.849	MWD+IFR1+MS
3600.000	6.203	54.173	3586.575	13.881	0.000	13.181	0.000	4.730	0.000	0.000	13.935	13.103	-18.326	MWD+IFR1+MS
3700.000	6.203	54.173	3685.990	14.231	0.000	13.547	0.000	4.836	0.000	0.000	14.286	13.467	-17.820	MWD+IFR1+MS
3800.000	6.203	54.173	3785.404	14.582	0.000	13.913	0.000	4.942	0.000	0.000	14.638	13.830	-17.332	MWD+IFR1+MS
3900.000	6.203	54.173	3884.819	14.934	0.000	14.279	0.000	5.050	0.000	0.000	14.991	14.193	-16.860	MWD+IFR1+MS
4000.000	6.203	54.173	3984.234	15.287	0.000	14.645	0.000	5.160	0.000	0.000	15.344	14.556	-16.405	MWD+IFR1+MS
4100.000	6.203	54.173	4083.648	15.640	0.000	15.010	0.000	5.271	0.000	0.000	15.698	14.918	-15.967	MWD+IFR1+MS
4200.000	6.203	54.173	4183.063	15.994	0.000	15.376	0.000	5.384	0.000	0.000	16.053	15.281	-15.544	MWD+IFR1+MS
4300.000	6.203	54.173	4282.477	16.348	0.000	15.741	0.000	5.498	0.000	0.000	16.408	15.644	-15.136	MWD+IFR1+MS
4400.000	6.203	54.173	4381.892	16.703	0.000	16.107	0.000	5.614	0.000	0.000	16.763	16.007	-14.744	MWD+IFR1+MS
4500.000	6.203	54.173	4481.307	17.058	0.000	16.472	0.000	5.732	0.000	0.000	17.119	16.370	-14.366	MWD+IFR1+MS
4600.000	6.203	54.173	4580.721	17.414	0.000	16.837	0.000	5.851	0.000	0.000	17.475	16.733	-14.002	MWD+IFR1+MS
4700.000	6.203	54.173	4680.136	17.770	0.000	17.202	0.000	5.972	0.000	0.000	17.832	17.095	-13.652	MWD+IFR1+MS
4800.000	6.203	54.173	4779.550	18.127	0.000	17.567	0.000	6.095	0.000	0.000	18.188	17.458	-13.315	MWD+IFR1+MS
4900.000	6.203	54.173	4878.965	18.484	0.000	17.932	0.000	6.219	0.000	0.000	18.546	17.821	-12.990	MWD+IFR1+MS
5000.000	6.203	54.173	4978.380	18.841	0.000	18.297	0.000	6.346	0.000	0.000	18.903	18.184	-12.679	MWD+IFR1+MS
5100.000	6.203	54.173	5077.794	19.199	0.000	18.662	0.000	6.474	0.000	0.000	19.261	18.547	-12.379	MWD+IFR1+MS
5200.000	6.203	54.173	5177.209	19.557	0.000	19.027	0.000	6.604	0.000	0.000	19.619	18.910	-12.091	MWD+IFR1+MS
5300.000	6.203	54.173	5276.623	19.915	0.000	19.391	0.000	6.735	0.000	0.000	19.977	19.273	-11.815	MWD+IFR1+MS
5400.000	6.203	54.173	5376.038	20.274	0.000	19.756	0.000	6.869	0.000	0.000	20.336	19.636	-11.549	MWD+IFR1+MS
5500.000	6.203	54.173	5475.453	20.633	0.000	20.120	0.000	7.005	0.000	0.000	20.694	19.999	-11.294	MWD+IFR1+MS
5600.000	6.203	54.173	5574.867	20.992	0.000	20.485	0.000	7.143	0.000	0.000	21.053	20.362	-11.049	MWD+IFR1+MS
5700.000	6.203	54.173	5674.282	21.352	0.000	20.850	0.000	7.282	0.000	0.000	21.412	20.725	-10.814	MWD+IFR1+MS
5800.000	6.203	54.173	5773.696	21.712	0.000	21.214	0.000	7.424	0.000	0.000	21.772	21.088	-10.589	MWD+IFR1+MS
5900.000	6.203	54.173	5873.111	22.072	0.000	21.578	0.000	7.568	0.000	0.000	22.131	21.451	-10.373	MWD+IFR1+MS
6000.000	6.203	54.173	5972.526	22.432	0.000	21.943	0.000	7.714	0.000	0.000	22.491	21.814	-10.166	MWD+IFR1+MS
6100.000	6.203	54.173	6071.940	22.792	0.000	22.307	0.000	7.862	0.000	0.000	22.850	22.177	-9.968	MWD+IFR1+MS
6200.000	6.203	54.173	6171.355	23.153	0.000	22.671	0.000	8.013	0.000	0.000	23.210	22.541	-9.778	MWD+IFR1+MS

6300.000	6.203	54.173	6270.769	23.513	0.000	23.036	0.000	8.165	0.000	0.000	23.570	22.904	-9.597	MWD+IFR1+MS
6400.000	6.203	54.173	6370.184	23.874	0.000	23.400	0.000	8.320	0.000	0.000	23.930	23.267	-9.423	MWD+IFR1+MS
6420.410	6.203	54.173	6390.475	23.947	0.000	23.473	0.000	8.352	0.000	0.000	24.001	23.341	-9.465	MWD+IFR1+MS
6500.000	4.611	54.173	6469.708	24.244	0.000	23.757	0.000	8.477	0.000	0.000	24.290	23.628	-9.828	MWD+IFR1+MS
6600.000	2.611	54.173	6569.504	24.664	0.000	24.115	0.000	8.635	0.000	0.000	24.724	23.988	-11.447	MWD+IFR1+MS
6700.000	0.611	54.173	6669.460	25.071	0.000	24.472	0.000	8.792	0.000	0.000	25.176	24.344	-12.934	MWD+IFR1+MS
6730.541	0.000	0.000	6700.000	24.494	0.000	25.239	0.000	8.839	0.000	0.000	25.281	24.451	-13.046	MWD+IFR1+MS
6800.000	0.000	0.000	6769.459	24.738	0.000	25.470	0.000	8.948	0.000	0.000	25.512	24.695	-13.217	MWD+IFR1+MS
6900.000	0.000	0.000	6869.459	25.090	0.000	25.806	0.000	9.106	0.000	0.000	25.850	25.045	-13.592	MWD+IFR1+MS
7000.000	0.000	0.000	6969.459	25.444	0.000	26.145	0.000	9.266	0.000	0.000	26.192	25.396	-14.093	MWD+IFR1+MS
7100.000	0.000	0.000	7069.459	25.798	0.000	26.485	0.000	9.430	0.000	0.000	26.534	25.747	-14.592	MWD+IFR1+MS
7200.000	0.000	0.000	7169.459	26.152	0.000	26.825	0.000	9.596	0.000	0.000	26.877	26.099	-15.090	MWD+IFR1+MS
7300.000	0.000	0.000	7269.459	26.507	0.000	27.165	0.000	9.764	0.000	0.000	27.220	26.450	-15.585	MWD+IFR1+MS
7400.000	0.000	0.000	7369.459	26.861	0.000	27.506	0.000	9.936	0.000	0.000	27.564	26.802	-16.078	MWD+IFR1+MS
7500.000	0.000	0.000	7469.459	27.216	0.000	27.847	0.000	10.110	0.000	0.000	27.908	27.154	-16.569	MWD+IFR1+MS
7600.000	0.000	0.000	7569.459	27.570	0.000	28.189	0.000	10.287	0.000	0.000	28.253	27.505	-17.056	MWD+IFR1+MS
7700.000	0.000	0.000	7669.459	27.925	0.000	28.531	0.000	10.466	0.000	0.000	28.598	27.857	-17.540	MWD+IFR1+MS
7800.000	0.000	0.000	7769.459	28.280	0.000	28.874	0.000	10.648	0.000	0.000	28.943	28.209	-18.020	MWD+IFR1+MS
7900.000	0.000	0.000	7869.459	28.635	0.000	29.217	0.000	10.833	0.000	0.000	29.289	28.561	-18.496	MWD+IFR1+MS
8000.000	0.000	0.000	7969.459	28.990	0.000	29.560	0.000	11.021	0.000	0.000	29.636	28.913	-18.969	MWD+IFR1+MS
8100.000	0.000	0.000	8069.459	29.345	0.000	29.904	0.000	11.212	0.000	0.000	29.983	29.265	-19.438	MWD+IFR1+MS
8200.000	0.000	0.000	8169.459	29.701	0.000	30.248	0.000	11.406	0.000	0.000	30.330	29.617	-19.902	MWD+IFR1+MS
8300.000	0.000	0.000	8269.459	30.056	0.000	30.592	0.000	11.602	0.000	0.000	30.677	29.969	-20.361	MWD+IFR1+MS
8400.000	0.000	0.000	8369.459	30.411	0.000	30.937	0.000	11.801	0.000	0.000	31.025	30.321	-20.816	MWD+IFR1+MS
8500.000	0.000	0.000	8469.459	30.767	0.000	31.282	0.000	12.003	0.000	0.000	31.373	30.674	-21.266	MWD+IFR1+MS
8600.000	0.000	0.000	8569.459	31.122	0.000	31.627	0.000	12.208	0.000	0.000	31.722	31.026	-21.711	MWD+IFR1+MS
8700.000	0.000	0.000	8669.459	31.478	0.000	31.973	0.000	12.416	0.000	0.000	32.070	31.378	-22.151	MWD+IFR1+MS
8800.000	0.000	0.000	8769.459	31.833	0.000	32.319	0.000	12.627	0.000	0.000	32.419	31.731	-22.585	MWD+IFR1+MS
8900.000	0.000	0.000	8869.459	32.189	0.000	32.665	0.000	12.841	0.000	0.000	32.769	32.083	-23.015	MWD+IFR1+MS
9000.000	0.000	0.000	8969.459	32.545	0.000	33.011	0.000	13.057	0.000	0.000	33.118	32.436	-23.438	MWD+IFR1+MS
9100.000	0.000	0.000	9069.459	32.901	0.000	33.358	0.000	13.277	0.000	0.000	33.468	32.788	-23.857	MWD+IFR1+MS
9200.000	0.000	0.000	9169.459	33.257	0.000	33.705	0.000	13.499	0.000	0.000	33.818	33.141	-24.269	MWD+IFR1+MS
9300.000	0.000	0.000	9269.459	33.612	0.000	34.052	0.000	13.725	0.000	0.000	34.169	33.494	-24.676	MWD+IFR1+MS

9400.000	0.000	0.000	9369.459	33.968	0.000	34.399	0.000	13.953	0.000	0.000	34.519	33.847	-25.078	MWD+IFR1+MS
9500.000	0.000	0.000	9469.459	34.324	0.000	34.747	0.000	14.184	0.000	0.000	34.870	34.199	-25.473	MWD+IFR1+MS
9600.000	0.000	0.000	9569.459	34.681	0.000	35.095	0.000	14.419	0.000	0.000	35.221	34.552	-25.863	MWD+IFR1+MS
9700.000	0.000	0.000	9669.459	35.037	0.000	35.443	0.000	14.656	0.000	0.000	35.572	34.905	-26.247	MWD+IFR1+MS
9800.000	0.000	0.000	9769.459	35.393	0.000	35.791	0.000	14.896	0.000	0.000	35.924	35.258	-26.626	MWD+IFR1+MS
9900.000	0.000	0.000	9869.459	35.749	0.000	36.140	0.000	15.140	0.000	0.000	36.275	35.611	-26.998	MWD+IFR1+MS
10000.000	0.000	0.000	9969.459	36.105	0.000	36.488	0.000	15.386	0.000	0.000	36.627	35.964	-27.365	MWD+IFR1+MS
10100.000	0.000	0.000	10069.459	36.462	0.000	36.837	0.000	15.635	0.000	0.000	36.979	36.317	-27.726	MWD+IFR1+MS
10172.341	0.000	0.000	10141.800	36.718	0.000	37.088	0.000	15.818	0.000	0.000	37.231	36.573	-27.904	MWD+IFR1+MS
10200.000	2.213	179.680	10169.452	36.746	0.000	37.182	-0.000	15.887	0.000	0.000	37.322	36.667	-27.949	MWD+IFR1+MS
10300.000	10.213	179.680	10268.784	36.939	0.000	37.494	-0.000	16.159	0.000	0.000	37.834	37.240	130.381	MWD+IFR1+MS
10400.000	18.213	179.680	10365.645	37.244	0.000	37.794	-0.000	16.553	0.000	0.000	39.032	37.690	105.715	MWD+IFR1+MS
10500.000	26.213	179.680	10458.148	36.997	0.000	38.078	-0.000	17.135	0.000	0.000	40.200	37.995	100.689	MWD+IFR1+MS
10600.000	34.213	179.680	10544.494	36.259	0.000	38.340	-0.000	17.951	0.000	0.000	41.206	38.261	98.907	MWD+IFR1+MS
10700.000	42.213	179.680	10623.002	35.119	0.000	38.579	-0.000	19.015	0.000	0.000	42.027	38.499	98.160	MWD+IFR1+MS
10800.000	50.213	179.680	10692.144	33.693	0.000	38.794	-0.000	20.311	0.000	0.000	42.661	38.709	97.904	MWD+IFR1+MS
10900.000	58.213	179.680	10750.575	32.131	0.000	38.983	-0.000	21.799	0.000	0.000	43.116	38.891	97.945	MWD+IFR1+MS
11000.000	66.213	179.680	10797.156	30.619	0.000	39.145	-0.000	23.425	0.000	0.000	43.413	39.044	98.194	MWD+IFR1+MS
11100.000	74.213	179.680	10830.981	29.370	0.000	39.279	-0.000	25.129	0.000	0.000	43.580	39.167	98.591	MWD+IFR1+MS
11200.000	82.213	179.680	10851.392	28.605	0.000	39.385	-0.000	26.854	0.000	0.000	43.654	39.261	99.075	MWD+IFR1+MS
11297.341	90.000	179.680	10857.997	28.421	0.000	39.459	-0.000	28.421	0.000	0.000	43.677	39.325	99.543	MWD+IFR1+MS
11300.000	90.000	179.680	10857.997	28.425	0.000	39.460	-0.000	28.425	0.000	0.000	43.678	39.326	99.553	MWD+IFR1+MS
11400.000	90.000	179.680	10857.997	28.573	0.000	39.527	-0.000	28.573	0.000	0.000	43.693	39.381	100.015	MWD+IFR1+MS
11500.000	90.000	179.680	10857.997	28.746	0.000	39.611	-0.000	28.746	0.000	0.000	43.710	39.453	100.527	MWD+IFR1+MS
11600.000	90.000	179.680	10857.997	28.939	0.000	39.710	-0.000	28.939	0.000	0.000	43.728	39.538	101.086	MWD+IFR1+MS
11700.000	90.000	179.680	10857.997	29.153	0.000	39.823	-0.000	29.153	0.000	0.000	43.748	39.636	101.700	MWD+IFR1+MS
11800.000	90.000	179.680	10857.997	29.385	0.000	39.951	-0.000	29.385	0.000	0.000	43.770	39.748	102.376	MWD+IFR1+MS
11900.000	90.000	179.680	10857.997	29.637	0.000	40.093	-0.000	29.637	0.000	0.000	43.795	39.871	103.124	MWD+IFR1+MS
12000.000	90.000	179.680	10857.997	29.907	0.000	40.249	-0.000	29.907	0.000	0.000	43.823	40.007	103.956	MWD+IFR1+MS
12100.000	90.000	179.680	10857.997	30.195	0.000	40.419	-0.000	30.195	0.000	0.000	43.853	40.154	104.883	MWD+IFR1+MS
12200.000	90.000	179.680	10857.997	30.500	0.000	40.603	-0.000	30.500	0.000	0.000	43.887	40.312	105.923	MWD+IFR1+MS
12300.000	90.000	179.680	10857.997	30.823	0.000	40.800	-0.000	30.823	0.000	0.000	43.925	40.479	107.093	MWD+IFR1+MS
12400.000	90.000	179.680	10857.997	31.162	0.000	41.010	-0.000	31.162	0.000	0.000	43.968	40.656	108.416	MWD+IFR1+MS

12500.000	90.000	179.680	10857.997	31.517	0.000	41.234	-0.000	31.517	0.000	0.000	44.017	40.841	109.917	MWD+IFR1+MS
12600.000	90.000	179.680	10857.997	31.887	0.000	41.471	-0.000	31.887	0.000	0.000	44.072	41.033	111.623	MWD+IFR1+MS
12700.000	90.000	179.680	10857.997	32.272	0.000	41.720	-0.000	32.272	0.000	0.000	44.136	41.230	113.567	MWD+IFR1+MS
12800.000	90.000	179.680	10857.997	32.671	0.000	41.982	-0.000	32.671	0.000	0.000	44.209	41.429	115.778	MWD+IFR1+MS
12900.000	90.000	179.680	10857.997	33.084	0.000	42.256	-0.000	33.084	0.000	0.000	44.295	41.630	118.286	MWD+IFR1+MS
13000.000	90.000	179.680	10857.997	33.511	0.000	42.542	-0.000	33.511	0.000	0.000	44.395	41.829	121.108	MWD+IFR1+MS
13100.000	90.000	179.680	10857.997	33.950	0.000	42.840	-0.000	33.950	0.000	0.000	44.513	42.023	124.240	MWD+IFR1+MS
13200.000	90.000	179.680	10857.997	34.401	0.000	43.149	-0.000	34.401	0.000	0.000	44.650	42.209	127.651	MWD+IFR1+MS
13300.000	90.000	179.680	10857.997	34.865	0.000	43.470	-0.000	34.865	0.000	0.000	44.811	42.383	131.273	MWD+IFR1+MS
13400.000	90.000	179.680	10857.997	35.339	0.000	43.801	-0.000	35.339	0.000	0.000	44.996	42.545	-44.997	MWD+IFR1+MS
13500.000	90.000	179.680	10857.997	35.825	0.000	44.144	-0.000	35.825	0.000	0.000	45.207	42.692	-41.282	MWD+IFR1+MS
13600.000	90.000	179.680	10857.997	36.321	0.000	44.497	-0.000	36.321	0.000	0.000	45.445	42.823	-37.701	MWD+IFR1+MS
13700.000	90.000	179.680	10857.997	36.827	0.000	44.860	-0.000	36.827	0.000	0.000	45.709	42.940	-34.351	MWD+IFR1+MS
13800.000	90.000	179.680	10857.997	37.343	0.000	45.233	-0.000	37.343	0.000	0.000	45.997	43.043	-31.291	MWD+IFR1+MS
13900.000	90.000	179.680	10857.997	37.868	0.000	45.617	-0.000	37.868	0.000	0.000	46.307	43.134	-28.545	MWD+IFR1+MS
14000.000	90.000	179.680	10857.997	38.402	0.000	46.009	-0.000	38.402	0.000	0.000	46.638	43.215	-26.110	MWD+IFR1+MS
14100.000	90.000	179.680	10857.997	38.944	0.000	46.411	-0.000	38.944	0.000	0.000	46.986	43.287	-23.965	MWD+IFR1+MS
14200.000	90.000	179.680	10857.997	39.495	0.000	46.822	-0.000	39.495	0.000	0.000	47.352	43.353	-22.081	MWD+IFR1+MS
14300.000	90.000	179.680	10857.997	40.053	0.000	47.242	-0.000	40.053	0.000	0.000	47.732	43.413	-20.428	MWD+IFR1+MS
14400.000	90.000	179.680	10857.997	40.619	0.000	47.671	-0.000	40.619	0.000	0.000	48.126	43.468	-18.974	MWD+IFR1+MS
14500.000	90.000	179.680	10857.997	41.192	0.000	48.108	-0.000	41.192	0.000	0.000	48.533	43.520	-17.691	MWD+IFR1+MS
14600.000	90.000	179.680	10857.997	41.772	0.000	48.552	-0.000	41.772	0.000	0.000	48.952	43.569	-16.556	MWD+IFR1+MS
14700.000	90.000	179.680	10857.997	42.358	0.000	49.005	-0.000	42.358	0.000	0.000	49.381	43.615	-15.546	MWD+IFR1+MS
14800.000	90.000	179.680	10857.997	42.951	0.000	49.466	-0.000	42.951	0.000	0.000	49.821	43.659	-14.646	MWD+IFR1+MS
14900.000	90.000	179.680	10857.997	43.550	0.000	49.934	-0.000	43.550	0.000	0.000	50.271	43.702	-13.838	MWD+IFR1+MS
15000.000	90.000	179.680	10857.997	44.154	0.000	50.409	-0.000	44.154	0.000	0.000	50.729	43.743	-13.112	MWD+IFR1+MS
15100.000	90.000	179.680	10857.997	44.765	0.000	50.892	-0.000	44.765	0.000	0.000	51.197	43.784	-12.455	MWD+IFR1+MS
15200.000	90.000	179.680	10857.997	45.380	0.000	51.381	-0.000	45.380	0.000	0.000	51.672	43.823	-11.859	MWD+IFR1+MS
15300.000	90.000	179.680	10857.997	46.001	0.000	51.877	-0.000	46.001	0.000	0.000	52.156	43.862	-11.316	MWD+IFR1+MS
15400.000	90.000	179.680	10857.997	46.627	0.000	52.380	-0.000	46.627	0.000	0.000	52.647	43.901	-10.820	MWD+IFR1+MS
15500.000	90.000	179.680	10857.997	47.257	0.000	52.889	-0.000	47.257	0.000	0.000	53.145	43.939	-10.365	MWD+IFR1+MS
15600.000	90.000	179.680	10857.997	47.892	0.000	53.404	-0.000	47.892	0.000	0.000	53.650	43.977	-9.947	MWD+IFR1+MS
15700.000	90.000	179.680	10857.997	48.532	0.000	53.924	-0.000	48.532	0.000	0.000	54.162	44.014	-9.561	MWD+IFR1+MS

15800.000	90.000	179.680	10857.997	49.175	0.000	54.451	-0.000	49.175	0.000	0.000	54.680	44.052	-9.204	MWD+IFR1+MS
15900.000	90.000	179.680	10857.997	49.823	0.000	54.983	-0.000	49.823	0.000	0.000	55.205	44.090	-8.873	MWD+IFR1+MS
16000.000	90.000	179.680	10857.997	50.475	0.000	55.521	-0.000	50.475	0.000	0.000	55.735	44.127	-8.565	MWD+IFR1+MS
16100.000	90.000	179.680	10857.997	51.130	0.000	56.064	-0.000	51.130	0.000	0.000	56.272	44.165	-8.278	MWD+IFR1+MS
16200.000	90.000	179.680	10857.997	51.789	0.000	56.612	-0.000	51.789	0.000	0.000	56.813	44.203	-8.010	MWD+IFR1+MS
16300.000	90.000	179.680	10857.997	52.451	0.000	57.166	-0.000	52.451	0.000	0.000	57.361	44.241	-7.759	MWD+IFR1+MS
16400.000	90.000	179.680	10857.997	53.117	0.000	57.724	-0.000	53.117	0.000	0.000	57.913	44.280	-7.524	MWD+IFR1+MS
16500.000	90.000	179.680	10857.997	53.786	0.000	58.286	-0.000	53.786	0.000	0.000	58.470	44.318	-7.302	MWD+IFR1+MS
16600.000	90.000	179.680	10857.997	54.458	0.000	58.854	-0.000	54.458	0.000	0.000	59.033	44.357	-7.094	MWD+IFR1+MS
16700.000	90.000	179.680	10857.997	55.133	0.000	59.425	-0.000	55.133	0.000	0.000	59.600	44.396	-6.898	MWD+IFR1+MS
16800.000	90.000	179.680	10857.997	55.811	0.000	60.001	-0.000	55.811	0.000	0.000	60.171	44.436	-6.713	MWD+IFR1+MS
16900.000	90.000	179.680	10857.997	56.491	0.000	60.582	-0.000	56.491	0.000	0.000	60.747	44.476	-6.537	MWD+IFR1+MS
17000.000	90.000	179.680	10857.997	57.175	0.000	61.166	-0.000	57.175	0.000	0.000	61.328	44.516	-6.371	MWD+IFR1+MS
17100.000	90.000	179.680	10857.997	57.861	0.000	61.754	-0.000	57.861	0.000	0.000	61.912	44.557	-6.214	MWD+IFR1+MS
17200.000	90.000	179.680	10857.997	58.549	0.000	62.347	-0.000	58.549	0.000	0.000	62.500	44.598	-6.064	MWD+IFR1+MS
17300.000	90.000	179.680	10857.997	59.240	0.000	62.943	-0.000	59.240	0.000	0.000	63.093	44.639	-5.922	MWD+IFR1+MS
17400.000	90.000	179.680	10857.997	59.933	0.000	63.542	-0.000	59.933	0.000	0.000	63.689	44.681	-5.786	MWD+IFR1+MS
17500.000	90.000	179.680	10857.997	60.628	0.000	64.145	-0.000	60.628	0.000	0.000	64.289	44.723	-5.657	MWD+IFR1+MS
17600.000	90.000	179.680	10857.997	61.326	0.000	64.752	-0.000	61.326	0.000	0.000	64.892	44.765	-5.534	MWD+IFR1+MS
17700.000	90.000	179.680	10857.997	62.025	0.000	65.362	-0.000	62.025	0.000	0.000	65.499	44.808	-5.416	MWD+IFR1+MS
17800.000	90.000	179.680	10857.997	62.727	0.000	65.975	-0.000	62.727	0.000	0.000	66.109	44.852	-5.304	MWD+IFR1+MS
17900.000	90.000	179.680	10857.997	63.430	0.000	66.591	-0.000	63.430	0.000	0.000	66.723	44.895	-5.196	MWD+IFR1+MS
18000.000	90.000	179.680	10857.997	64.136	0.000	67.210	-0.000	64.136	0.000	0.000	67.340	44.940	-5.093	MWD+IFR1+MS
18100.000	90.000	179.680	10857.997	64.843	0.000	67.833	-0.000	64.843	0.000	0.000	67.959	44.984	-4.994	MWD+IFR1+MS
18200.000	90.000	179.680	10857.997	65.552	0.000	68.458	-0.000	65.552	0.000	0.000	68.582	45.029	-4.899	MWD+IFR1+MS
18300.000	90.000	179.680	10857.997	66.263	0.000	69.086	-0.000	66.263	0.000	0.000	69.208	45.075	-4.808	MWD+IFR1+MS
18400.000	90.000	179.680	10857.997	66.975	0.000	69.717	-0.000	66.975	0.000	0.000	69.836	45.121	-4.721	MWD+IFR1+MS
18500.000	90.000	179.680	10857.997	67.689	0.000	70.350	-0.000	67.689	0.000	0.000	70.468	45.167	-4.636	MWD+IFR1+MS
18600.000	90.000	179.680	10857.997	68.405	0.000	70.986	-0.000	68.405	0.000	0.000	71.102	45.214	-4.555	MWD+IFR1+MS
18700.000	90.000	179.680	10857.997	69.122	0.000	71.625	-0.000	69.122	0.000	0.000	71.738	45.262	-4.477	MWD+IFR1+MS
18800.000	90.000	179.680	10857.997	69.840	0.000	72.266	-0.000	69.840	0.000	0.000	72.377	45.310	-4.402	MWD+IFR1+MS
18900.000	90.000	179.680	10857.997	70.560	0.000	72.909	-0.000	70.560	0.000	0.000	73.019	45.358	-4.329	MWD+IFR1+MS
19000.000	90.000	179.680	10857.997	71.281	0.000	73.555	-0.000	71.281	0.000	0.000	73.663	45.407	-4.259	MWD+IFR1+MS

19100.000	90.000	179.680	10857.997	72.004	0.000	74.203	-0.000	72.004	0.000	0.000	74.309	45.456	-4.191	MWD+IFR1+MS
19200.000	90.000	179.680	10857.997	72.728	0.000	74.854	-0.000	72.728	0.000	0.000	74.958	45.506	-4.126	MWD+IFR1+MS
19300.000	90.000	179.680	10857.997	73.453	0.000	75.506	-0.000	73.453	0.000	0.000	75.609	45.556	-4.063	MWD+IFR1+MS
19400.000	90.000	179.680	10857.997	74.179	0.000	76.161	-0.000	74.179	0.000	0.000	76.262	45.607	-4.001	MWD+IFR1+MS
19500.000	90.000	179.680	10857.997	74.907	0.000	76.817	-0.000	74.907	0.000	0.000	76.917	45.658	-3.942	MWD+IFR1+MS
19600.000	90.000	179.680	10857.997	75.635	0.000	77.476	-0.000	75.635	0.000	0.000	77.574	45.709	-3.885	MWD+IFR1+MS
19700.000	90.000	179.680	10857.997	76.365	0.000	78.136	-0.000	76.365	0.000	0.000	78.233	45.761	-3.829	MWD+IFR1+MS
19800.000	90.000	179.680	10857.997	77.096	0.000	78.799	-0.000	77.096	0.000	0.000	78.894	45.814	-3.775	MWD+IFR1+MS
19900.000	90.000	179.680	10857.997	77.828	0.000	79.463	-0.000	77.828	0.000	0.000	79.557	45.867	-3.723	MWD+IFR1+MS
20000.000	90.000	179.680	10857.997	78.561	0.000	80.129	-0.000	78.561	0.000	0.000	80.222	45.920	-3.672	MWD+IFR1+MS
20100.000	90.000	179.680	10857.997	79.295	0.000	80.797	-0.000	79.295	0.000	0.000	80.888	45.974	-3.623	MWD+IFR1+MS
20200.000	90.000	179.680	10857.997	80.030	0.000	81.467	-0.000	80.030	0.000	0.000	81.557	46.029	-3.575	MWD+IFR1+MS
20300.000	90.000	179.680	10857.997	80.765	0.000	82.138	-0.000	80.765	0.000	0.000	82.227	46.083	-3.529	MWD+IFR1+MS
20400.000	90.000	179.680	10857.997	81.502	0.000	82.811	-0.000	81.502	0.000	0.000	82.898	46.139	-3.484	MWD+IFR1+MS
20500.000	90.000	179.680	10857.997	82.240	0.000	83.486	-0.000	82.240	0.000	0.000	83.572	46.194	-3.440	MWD+IFR1+MS
20600.000	90.000	179.680	10857.997	82.978	0.000	84.162	-0.000	82.978	0.000	0.000	84.247	46.251	-3.397	MWD+IFR1+MS
20700.000	90.000	179.680	10857.997	83.718	0.000	84.839	-0.000	83.718	0.000	0.000	84.923	46.307	-3.356	MWD+IFR1+MS
20800.000	90.000	179.680	10857.997	84.458	0.000	85.518	-0.000	84.458	0.000	0.000	85.601	46.365	-3.315	MWD+IFR1+MS
20900.000	90.000	179.680	10857.997	85.199	0.000	86.199	-0.000	85.199	0.000	0.000	86.281	46.422	-3.276	MWD+IFR1+MS
21000.000	90.000	179.680	10857.997	85.941	0.000	86.881	-0.000	85.941	0.000	0.000	86.961	46.480	-3.238	MWD+IFR1+MS
21100.000	90.000	179.680	10857.997	86.683	0.000	87.564	-0.000	86.683	0.000	0.000	87.644	46.539	-3.200	MWD+IFR1+MS
21200.000	90.000	179.680	10857.997	87.426	0.000	88.249	-0.000	87.426	0.000	0.000	88.327	46.598	-3.164	MWD+IFR1+MS
21300.000	90.000	179.680	10857.997	88.170	0.000	88.935	-0.000	88.170	0.000	0.000	89.012	46.657	-3.128	MWD+IFR1+MS
21400.000	90.000	179.680	10857.997	88.915	0.000	89.622	-0.000	88.915	0.000	0.000	89.699	46.717	-3.094	MWD+IFR1+MS
21500.000	90.000	179.680	10857.997	89.660	0.000	90.311	-0.000	89.660	0.000	0.000	90.386	46.778	-3.060	MWD+IFR1+MS
21600.000	90.000	179.680	10857.997	90.406	0.000	91.001	-0.000	90.406	0.000	0.000	91.075	46.839	-3.027	MWD+IFR1+MS
21700.000	90.000	179.680	10857.997	91.153	0.000	91.692	-0.000	91.153	0.000	0.000	91.765	46.900	-2.995	MWD+IFR1+MS
21800.000	90.000	179.680	10857.997	91.900	0.000	92.384	-0.000	91.900	0.000	0.000	92.457	46.962	-2.963	MWD+IFR1+MS
21900.000	90.000	179.680	10857.997	92.648	0.000	93.077	-0.000	92.648	0.000	0.000	93.149	47.024	-2.933	MWD+IFR1+MS
22000.000	90.000	179.680	10857.997	93.397	0.000	93.772	-0.000	93.397	0.000	0.000	93.843	47.086	-2.903	MWD+IFR1+MS
22100.000	90.000	179.680	10857.997	94.146	0.000	94.467	-0.000	94.146	0.000	0.000	94.538	47.150	-2.873	MWD+IFR1+MS
22200.000	90.000	179.680	10857.997	94.895	0.000	95.164	-0.000	94.895	0.000	0.000	95.233	47.213	-2.845	MWD+IFR1+MS
22300.000	90.000	179.680	10857.997	95.646	0.000	95.861	-0.000	95.646	0.000	0.000	95.930	47.277	-2.817	MWD+IFR1+MS

22400.000	90.000	179.680	10857.997	96.396	0.000	96.560	-0.000	96.396	0.000	0.000	96.628	47.342	-2.789	MWD+IFR1+MS
22500.000	90.000	179.680	10857.997	97.148	0.000	97.260	-0.000	97.148	0.000	0.000	97.327	47.406	-2.763	MWD+IFR1+MS
22600.000	90.000	179.680	10857.997	97.900	0.000	97.960	-0.000	97.900	0.000	0.000	98.027	47.472	-2.736	MWD+IFR1+MS
22700.000	90.000	179.680	10857.997	98.652	0.000	98.662	-0.000	98.652	0.000	0.000	98.728	47.538	-2.711	MWD+IFR1+MS
22800.000	90.000	179.680	10857.997	99.405	0.000	99.365	-0.000	99.405	0.000	0.000	99.430	47.604	-2.685	MWD+IFR1+MS
22900.000	90.000	179.680	10857.997	100.158	0.000	100.068	-0.000	100.158	0.000	0.000	100.133	47.670	-2.661	MWD+IFR1+MS
23000.000	90.000	179.680	10857.997	100.912	0.000	100.773	-0.000	100.912	0.000	0.000	100.837	47.738	-2.637	MWD+IFR1+MS
23100.000	90.000	179.680	10857.997	101.666	0.000	101.478	-0.000	101.666	0.000	0.000	101.541	47.805	-2.613	MWD+IFR1+MS
23200.000	90.000	179.680	10857.997	102.421	0.000	102.184	-0.000	102.421	0.000	0.000	102.247	47.873	-2.590	MWD+IFR1+MS
23300.000	90.000	179.680	10857.997	103.176	0.000	102.891	-0.000	103.176	0.000	0.000	102.953	47.941	-2.567	MWD+IFR1+MS
23400.000	90.000	179.680	10857.997	103.932	0.000	103.599	-0.000	103.932	0.000	0.000	103.660	48.010	-2.545	MWD+IFR1+MS
23500.000	90.000	179.680	10857.997	104.688	0.000	104.308	-0.000	104.688	0.000	0.000	104.368	48.079	-2.523	MWD+IFR1+MS
23600.000	90.000	179.680	10857.997	105.445	0.000	105.017	-0.000	105.445	0.000	0.000	105.077	48.149	-2.502	MWD+IFR1+MS
23700.000	90.000	179.680	10857.997	106.202	0.000	105.727	-0.000	106.202	0.000	0.000	105.787	48.219	-2.481	MWD+IFR1+MS
23800.000	90.000	179.680	10857.997	106.959	0.000	106.438	-0.000	106.959	0.000	0.000	106.497	48.290	-2.460	MWD+IFR1+MS
23900.000	90.000	179.680	10857.997	107.717	0.000	107.150	-0.000	107.717	0.000	0.000	107.209	48.361	-2.440	MWD+IFR1+MS
24000.000	90.000	179.680	10857.997	108.475	0.000	107.863	-0.000	108.475	0.000	0.000	107.921	48.432	-2.420	MWD+IFR1+MS
24100.000	90.000	179.680	10857.997	109.233	0.000	108.576	-0.000	109.233	0.000	0.000	108.633	48.504	-2.401	MWD+IFR1+MS
24200.000	90.000	179.680	10857.997	109.992	0.000	109.290	-0.000	109.992	0.000	0.000	109.347	48.576	-2.382	MWD+IFR1+MS
24300.000	90.000	179.680	10857.997	110.751	0.000	110.004	-0.000	110.751	0.000	0.000	110.061	48.649	-2.363	MWD+IFR1+MS
24400.000	90.000	179.680	10857.997	111.511	0.000	110.720	-0.000	111.511	0.000	0.000	110.776	48.722	-2.345	MWD+IFR1+MS
24500.000	90.000	179.680	10857.997	112.271	0.000	111.436	-0.000	112.271	0.000	0.000	111.491	48.795	-2.327	MWD+IFR1+MS
24600.000	90.000	179.680	10857.997	113.031	0.000	112.152	-0.000	113.031	0.000	0.000	112.207	48.869	-2.309	MWD+IFR1+MS
24700.000	90.000	179.680	10857.997	113.792	0.000	112.870	-0.000	113.792	0.000	0.000	112.924	48.943	-2.292	MWD+IFR1+MS
24800.000	90.000	179.680	10857.997	114.552	0.000	113.588	-0.000	114.552	0.000	0.000	113.641	49.018	-2.274	MWD+IFR1+MS
24900.000	90.000	179.680	10857.997	115.314	0.000	114.306	-0.000	115.314	0.000	0.000	114.359	49.093	-2.258	MWD+IFR1+MS
25000.000	90.000	179.680	10857.997	116.075	0.000	115.025	-0.000	116.075	0.000	0.000	115.078	49.168	-2.241	MWD+IFR1+MS
25100.000	90.000	179.680	10857.997	116.837	0.000	115.745	-0.000	116.837	0.000	0.000	115.797	49.244	-2.225	MWD+IFR1+MS
25200.000	90.000	179.680	10857.997	117.599	0.000	116.465	-0.000	117.599	0.000	0.000	116.517	49.320	-2.209	MWD+IFR1+MS
25300.000	90.000	179.680	10857.997	118.362	0.000	117.186	-0.000	118.362	0.000	0.000	117.238	49.397	-2.193	MWD+IFR1+MS
25400.000	90.000	179.680	10857.997	119.124	0.000	117.908	-0.000	119.124	0.000	0.000	117.959	49.474	-2.178	MWD+IFR1+MS
25500.000	90.000	179.680	10857.997	119.887	0.000	118.630	-0.000	119.887	0.000	0.000	118.680	49.552	-2.162	MWD+IFR1+MS
25600.000	90.000	179.680	10857.997	120.651	0.000	119.352	-0.000	120.651	0.000	0.000	119.402	49.629	-2.147	MWD+IFR1+MS

25700.000	90.000	179.680	10857.997	121.414	0.000	120.075	-0.000	121.414	0.000	0.000	120.125	49.708	-2.133	MWD+IFR1+MS
25800.000	90.000	179.680	10857.997	122.178	0.000	120.799	-0.000	122.178	0.000	0.000	120.848	49.786	-2.118	MWD+IFR1+MS
25900.000	90.000	179.680	10857.997	122.942	0.000	121.523	-0.000	122.942	0.000	0.000	121.572	49.865	-2.104	MWD+IFR1+MS
26000.000	90.000	179.680	10857.997	123.707	0.000	122.248	-0.000	123.707	0.000	0.000	122.296	49.945	-2.090	MWD+IFR1+MS
26100.000	90.000	179.680	10857.997	124.471	0.000	122.973	-0.000	124.471	0.000	0.000	123.021	50.024	-2.076	MWD+IFR1+MS
26200.000	90.000	179.680	10857.997	125.236	0.000	123.698	-0.000	125.236	0.000	0.000	123.746	50.105	-2.062	MWD+IFR1+MS
26300.000	90.000	179.680	10857.997	126.001	0.000	124.425	-0.000	126.001	0.000	0.000	124.472	50.185	-2.049	MWD+IFR1+MS
26400.000	90.000	179.680	10857.997	126.767	0.000	125.151	-0.000	126.767	0.000	0.000	125.198	50.266	-2.036	MWD+IFR1+MS
26500.000	90.000	179.680	10857.997	127.532	0.000	125.878	-0.000	127.532	0.000	0.000	125.925	50.347	-2.023	MWD+IFR1+MS
26600.000	90.000	179.680	10857.997	128.298	0.000	126.606	-0.000	128.298	0.000	0.000	126.652	50.429	-2.010	MWD+IFR1+MS
26700.000	90.000	179.680	10857.997	129.064	0.000	127.333	-0.000	129.064	0.000	0.000	127.379	50.511	-1.997	MWD+IFR1+MS
26800.000	90.000	179.680	10857.997	129.830	0.000	128.062	-0.000	129.830	0.000	0.000	128.108	50.593	-1.985	MWD+IFR1+MS
26900.000	90.000	179.680	10857.997	130.597	0.000	128.791	-0.000	130.597	0.000	0.000	128.836	50.676	-1.973	MWD+IFR1+MS
27000.000	90.000	179.680	10857.997	131.363	0.000	129.520	-0.000	131.363	0.000	0.000	129.565	50.759	-1.961	MWD+IFR1+MS
27100.000	90.000	179.680	10857.997	132.130	0.000	130.250	-0.000	132.130	0.000	0.000	130.294	50.843	-1.949	MWD+IFR1+MS
27200.000	90.000	179.680	10857.997	132.898	0.000	130.980	-0.000	132.898	0.000	0.000	131.024	50.927	-1.937	MWD+IFR1+MS
27300.000	90.000	179.680	10857.997	133.665	0.000	131.710	-0.000	133.665	0.000	0.000	131.754	51.011	-1.926	MWD+IFR1+MS
27400.000	90.000	179.680	10857.997	134.432	0.000	132.441	-0.000	134.432	0.000	0.000	132.484	51.096	-1.914	MWD+IFR1+MS
27500.000	90.000	179.680	10857.997	135.200	0.000	133.172	-0.000	135.200	0.000	0.000	133.215	51.181	-1.903	MWD+IFR1+MS
27600.000	90.000	179.680	10857.997	135.968	0.000	133.904	-0.000	135.968	0.000	0.000	133.947	51.266	-1.892	MWD+IFR1+MS
27700.000	90.000	179.680	10857.997	136.736	0.000	134.636	-0.000	136.736	0.000	0.000	134.678	51.352	-1.881	MWD+IFR1+MS
27800.000	90.000	179.680	10857.997	137.504	0.000	135.368	-0.000	137.504	0.000	0.000	135.410	51.438	-1.870	MWD+IFR1+MS
27900.000	90.000	179.680	10857.997	138.273	0.000	136.101	-0.000	138.273	0.000	0.000	136.143	51.524	-1.860	MWD+IFR1+MS
28000.000	90.000	179.680	10857.997	139.042	0.000	136.834	-0.000	139.042	0.000	0.000	136.876	51.611	-1.849	MWD+IFR1+MS
28100.000	90.000	179.680	10857.997	139.811	0.000	137.567	-0.000	139.811	0.000	0.000	137.609	51.698	-1.839	MWD+IFR1+MS
28200.000	90.000	179.680	10857.997	140.580	0.000	138.301	-0.000	140.580	0.000	0.000	138.342	51.785	-1.829	MWD+IFR1+MS
28300.000	90.000	179.680	10857.997	141.349	0.000	139.035	-0.000	141.349	0.000	0.000	139.076	51.873	-1.819	MWD+IFR1+MS
28400.000	90.000	179.680	10857.997	142.118	0.000	139.770	-0.000	142.118	0.000	0.000	139.810	51.961	-1.809	MWD+IFR1+MS
28500.000	90.000	179.680	10857.997	142.888	0.000	140.505	-0.000	142.888	0.000	0.000	140.545	52.050	-1.799	MWD+IFR1+MS
28600.000	90.000	179.680	10857.997	143.657	0.000	141.240	-0.000	143.657	0.000	0.000	141.280	52.139	-1.789	MWD+IFR1+MS
28700.000	90.000	179.680	10857.997	144.427	0.000	141.975	-0.000	144.427	0.000	0.000	142.015	52.228	-1.780	MWD+IFR1+MS
28800.000	90.000	179.680	10857.997	145.197	0.000	142.711	-0.000	145.197	0.000	0.000	142.751	52.317	-1.770	MWD+IFR1+MS
28900.000	90.000	179.680	10857.997	145.967	0.000	143.447	-0.000	145.967	0.000	0.000	143.486	52.407	-1.761	MWD+IFR1+MS

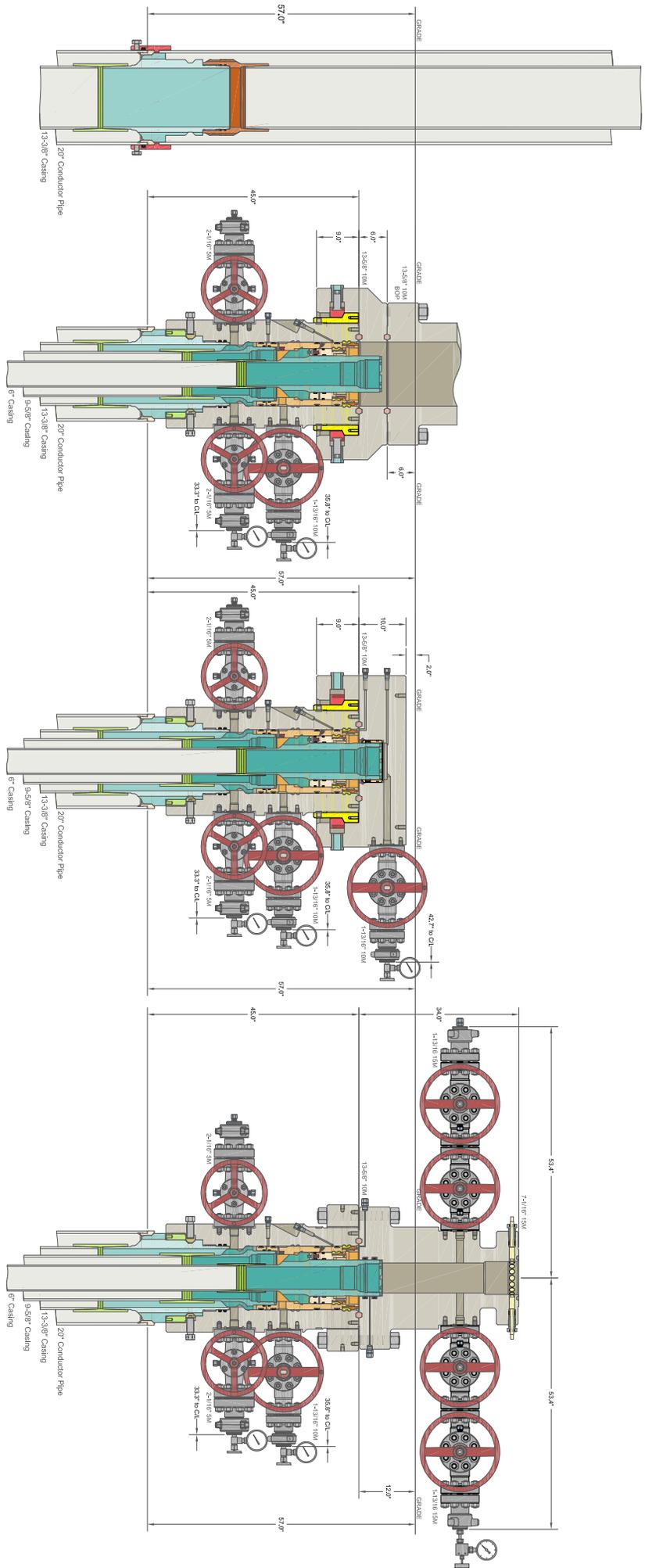
29000.000	90.000	179.680	10857.997	146.738	0.000	144.183	-0.000	146.738	0.000	0.000	144.222	52.497	-1.752	MWD+IFR1+MS
29100.000	90.000	179.680	10857.997	147.508	0.000	144.920	-0.000	147.508	0.000	0.000	144.959	52.588	-1.743	MWD+IFR1+MS
29200.000	90.000	179.680	10857.997	148.279	0.000	145.657	-0.000	148.279	0.000	0.000	145.696	52.679	-1.734	MWD+IFR1+MS
29300.000	90.000	179.680	10857.997	149.050	0.000	146.394	-0.000	149.050	0.000	0.000	146.433	52.770	-1.725	MWD+IFR1+MS
29400.000	90.000	179.680	10857.997	149.821	0.000	147.132	-0.000	149.821	0.000	0.000	147.170	52.861	-1.716	MWD+IFR1+MS
29500.000	90.000	179.680	10857.997	150.592	0.000	147.870	-0.000	150.592	0.000	0.000	147.908	52.953	-1.708	MWD+IFR1+MS
29600.000	90.000	179.680	10857.997	151.363	0.000	148.608	-0.000	151.363	0.000	0.000	148.646	53.045	-1.699	MWD+IFR1+MS
29700.000	90.000	179.680	10857.997	152.134	0.000	149.346	-0.000	152.134	0.000	0.000	149.384	53.138	-1.691	MWD+IFR1+MS
29800.000	90.000	179.680	10857.997	152.906	0.000	150.085	-0.000	152.906	0.000	0.000	150.122	53.230	-1.683	MWD+IFR1+MS
29900.000	90.000	179.680	10857.997	153.677	0.000	150.824	-0.000	153.677	0.000	0.000	150.861	53.324	-1.674	MWD+IFR1+MS
30000.000	90.000	179.680	10857.997	154.449	0.000	151.563	-0.000	154.449	0.000	0.000	151.600	53.417	-1.666	MWD+IFR1+MS
30100.000	90.000	179.680	10857.997	155.221	0.000	152.303	-0.000	155.221	0.000	0.000	152.339	53.511	-1.658	MWD+IFR1+MS
30200.000	90.000	179.680	10857.997	155.993	0.000	153.042	-0.000	155.993	0.000	0.000	153.079	53.605	-1.650	MWD+IFR1+MS
30300.000	90.000	179.680	10857.997	156.765	0.000	153.782	-0.000	156.765	0.000	0.000	153.818	53.699	-1.642	MWD+IFR1+MS
30400.000	90.000	179.680	10857.997	157.538	0.000	154.523	-0.000	157.538	0.000	0.000	154.558	53.794	-1.635	MWD+IFR1+MS
30500.000	90.000	179.680	10857.997	158.310	0.000	155.263	-0.000	158.310	0.000	0.000	155.299	53.889	-1.627	MWD+IFR1+MS
30600.000	90.000	179.680	10857.997	159.082	0.000	156.004	-0.000	159.082	0.000	0.000	156.039	53.984	-1.620	MWD+IFR1+MS
30700.000	90.000	179.680	10857.997	159.855	0.000	156.745	-0.000	159.855	0.000	0.000	156.780	54.080	-1.612	MWD+IFR1+MS
30800.000	90.000	179.680	10857.997	160.628	0.000	157.486	-0.000	160.628	0.000	0.000	157.521	54.175	-1.605	MWD+IFR1+MS
30900.000	90.000	179.680	10857.997	161.401	0.000	158.228	-0.000	161.401	0.000	0.000	158.262	54.272	-1.597	MWD+IFR1+MS
31000.000	90.000	179.680	10857.997	162.174	0.000	158.969	-0.000	162.174	0.000	0.000	159.004	54.368	-1.590	MWD+IFR1+MS
31100.000	90.000	179.680	10857.997	162.947	0.000	159.711	-0.000	162.947	0.000	0.000	159.745	54.465	-1.583	MWD+IFR1+MS
31200.000	90.000	179.680	10857.997	163.720	0.000	160.453	-0.000	163.720	0.000	0.000	160.487	54.562	-1.576	MWD+IFR1+MS
31300.000	90.000	179.680	10857.997	164.493	0.000	161.195	-0.000	164.493	0.000	0.000	161.229	54.659	-1.569	MWD+IFR1+MS
31323.311	90.000	179.680	10857.997	164.673	0.000	161.368	-0.000	164.673	0.000	0.000	161.402	54.682	-1.567	MWD+IFR1+MS
31400.000	90.000	179.680	10857.997	165.266	0.000	161.937	-0.000	165.266	0.000	0.000	161.970	54.757	-1.562	MWD+IFR1+MS
31423.466	90.000	179.680	10857.997	165.447	0.000	162.111	-0.000	165.447	0.000	0.000	162.144	54.780	-1.561	MWD+IFR1+MS

Plan Targets

Poker Lake Unit 20 DTD South 424H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 27	10999.54	440414.20	635707.80	7531.00	RECTANGLE
LTP 27	31323.38	419672.30	635823.60	7531.00	RECTANGLE

BHL 27	31423.57	419572.20	635824.10	7531.00 RECTANGLE
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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	

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

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

Background

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

Supporting Documentation

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



Figure 1: Winch System attached to BOP Stack

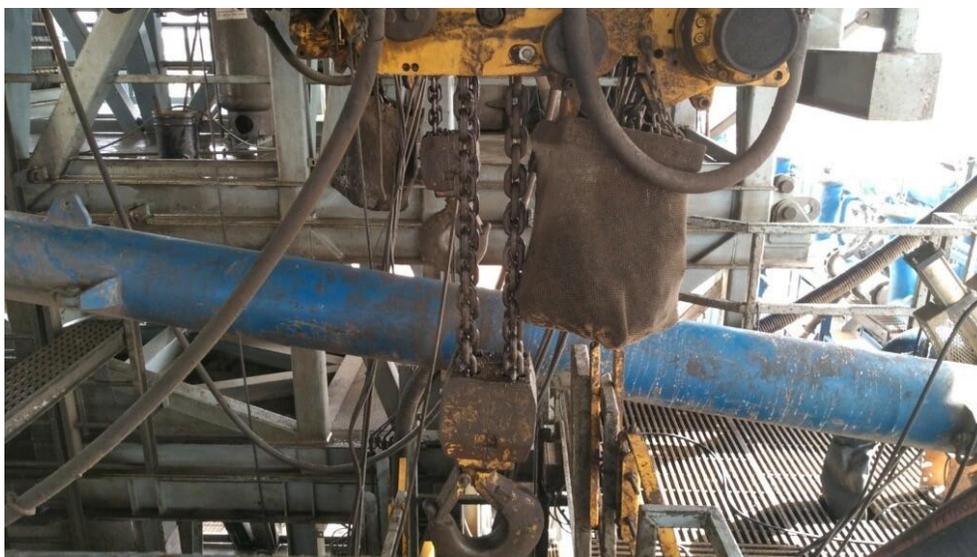


Figure 2: BOP Winch System

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

62 API STANDARD 53			
Table C.4—Initial Pressure Testing, Surface BOP Stacks			
Component to be Pressure Tested	Pressure Test—Low Pressure ^{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.

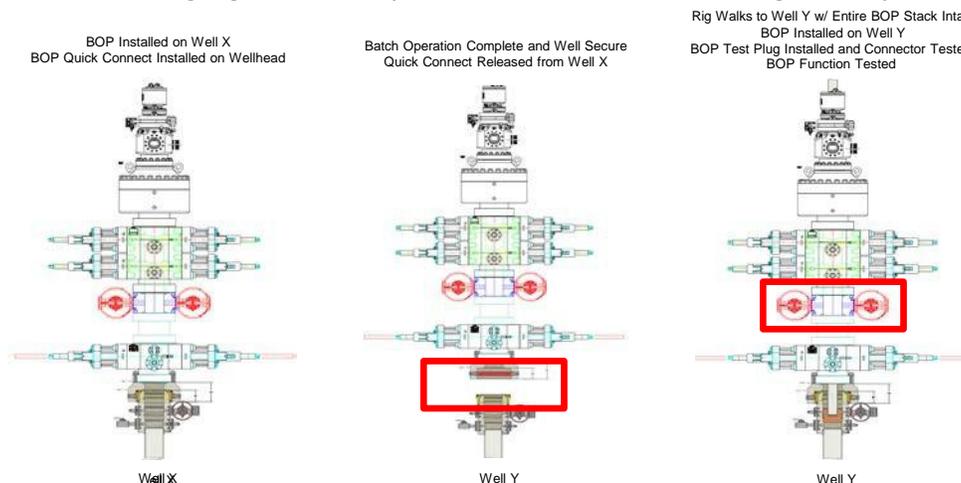
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often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

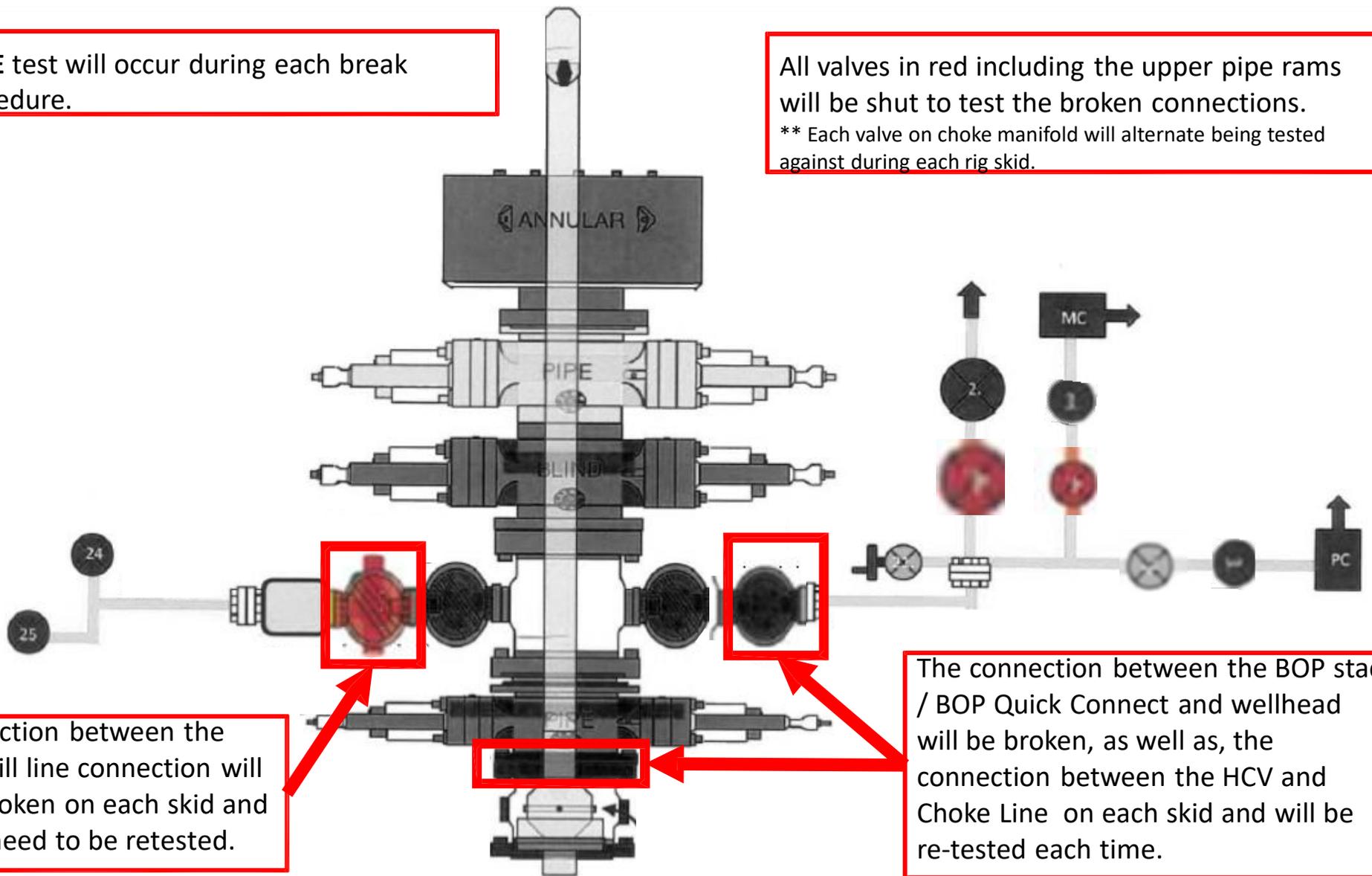
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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 skid.



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

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

10,000 PSI Annular BOP Variance Request

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

1. Component and Preventer Compatibility Tables

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

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

2. Well Control Procedures

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

General Procedure While Drilling

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

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

General Procedure While Tripping

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

General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

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

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
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CONDITIONS

Action 342223

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 342223
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	5/17/2024