

Well Name: POKER LAKE UNIT 20 DTD	Well Location: T24S / R30E / SEC 20 / NENE / 32.209455 / -103.898336	County or Parish/State: EDDY / NM
Well Number: 410H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMLC068905	Unit or CA Name: POKER LAKE UNIT	Unit or CA Number: NMNM71016X
US Well Number:	Operator: XTO PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2781322

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/23/2024

Time Sundry Submitted: 08:16

Date proposed operation will begin: 08/15/2024

Procedure Description: XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, FTP, LTP, BHL, casing sizes, cement, proposed total depth, and formation (pool). FROM: TO: SHL: 357' FNL & 1067' FEL Sec 20-T24S-R30E 337' FNL & 578' FEL Sec 20-T24S-R30E FTP: 100' FSL & 990' FEL Sec 17-T24S-R30E 100' FNL & 943' FEL Sec 20-T24S-R30E LTP: 330' FNL & 990' FEL Sec 32-T23S-R30E 330' FSL & 942' FEL Sec 5-T25S-R30E BHL: 200' FNL & 990' FEL Sec 32-T23S-R30E 230' FSL & 942' FEL Sec 5-T25S-R30E Proposed total depth will change from 31295' MD; 10102' TVD (Bone Spring) to 31412' MD; TVD 10853' (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_410H_BLM_Change_Sundry_Attachment_3.23.24_20240323081220.pdf

Well Name: POKER LAKE UNIT 20
DTD

Well Location: T24S / R30E / SEC 20 /
NENE / 32.209455 / -103.898336

County or Parish/State: EDDY /
NM

Well Number: 410H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMLC068905

Unit or CA Name: POKER LAKE UNIT

Unit or CA Number:
NMNM71016X

US Well Number:

Operator: XTO PERMIAN OPERATING
LLC

Conditions of Approval

Additional

Sec_20_24S_30E_NMP_Sundry_2781322_Poker_Lake_Unit_20_DTD_410H_COAs_20240404142505.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 08:16 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: 05/10/2024

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.

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

1. Type of Well

Oil Well Gas Well Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. (include area code)

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

TYPE OF SUBMISSION	TYPE OF ACTION				
<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 / 357 FNL / 1067 FEL / TWSP: 24S / RANGE: 30E / SECTION: 20 / LAT: 32.209455 / LONG: -103.898336 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 330 FSL / 990 FEL / TWSP: 24S / RANGE: 30E / SECTION: 8 / LAT: 32.22559 / LONG: -103.89809 (TVD: 10102 feet, MD: 15800 feet)

PPP: SESE / 100 FSL / 990 FEL / TWSP: 24S / RANGE: 30E / SECTION: 17 / LAT: 32.210712 / LONG: -103.898083 (TVD: 10102 feet, MD: 10500 feet)

PPP: NESE / 330 FSL / 990 FEL / TWSP: 24S / RANGE: 30E / SECTION: 17 / LAT: 32.2143 / LONG: -103.89809 (TVD: 10102 feet, MD: 11900 feet)

PPP: SESE / 330 FSL / 990 FEL / TWSP: 24S / RANGE: 30E / SECTION: 5 / LAT: 32.24015 / LONG: -103.89809 (TVD: 10102 feet, MD: 21100 feet)

BHL: NENE / 200 FNL / 990 FEL / TWSP: 23S / RANGE: 30E / SECTION: 32 / LAT: 32.268067 / LONG: -103.898088 (TVD: 10102 feet, MD: 31295 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 20 410H
LOCATION:	Sec 20-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

Changes approved through engineering via **Sundry 2781322** 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.

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

¹ APD ID 10400089260	² Pool Code 98220	³ Pool Name Purple Sage;Wolfcamp"
⁴ Property Code	⁵ Property Name POKER LAKE UNIT 20 DTD	⁶ Well Number 410H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC	⁹ Elevation 3,290'

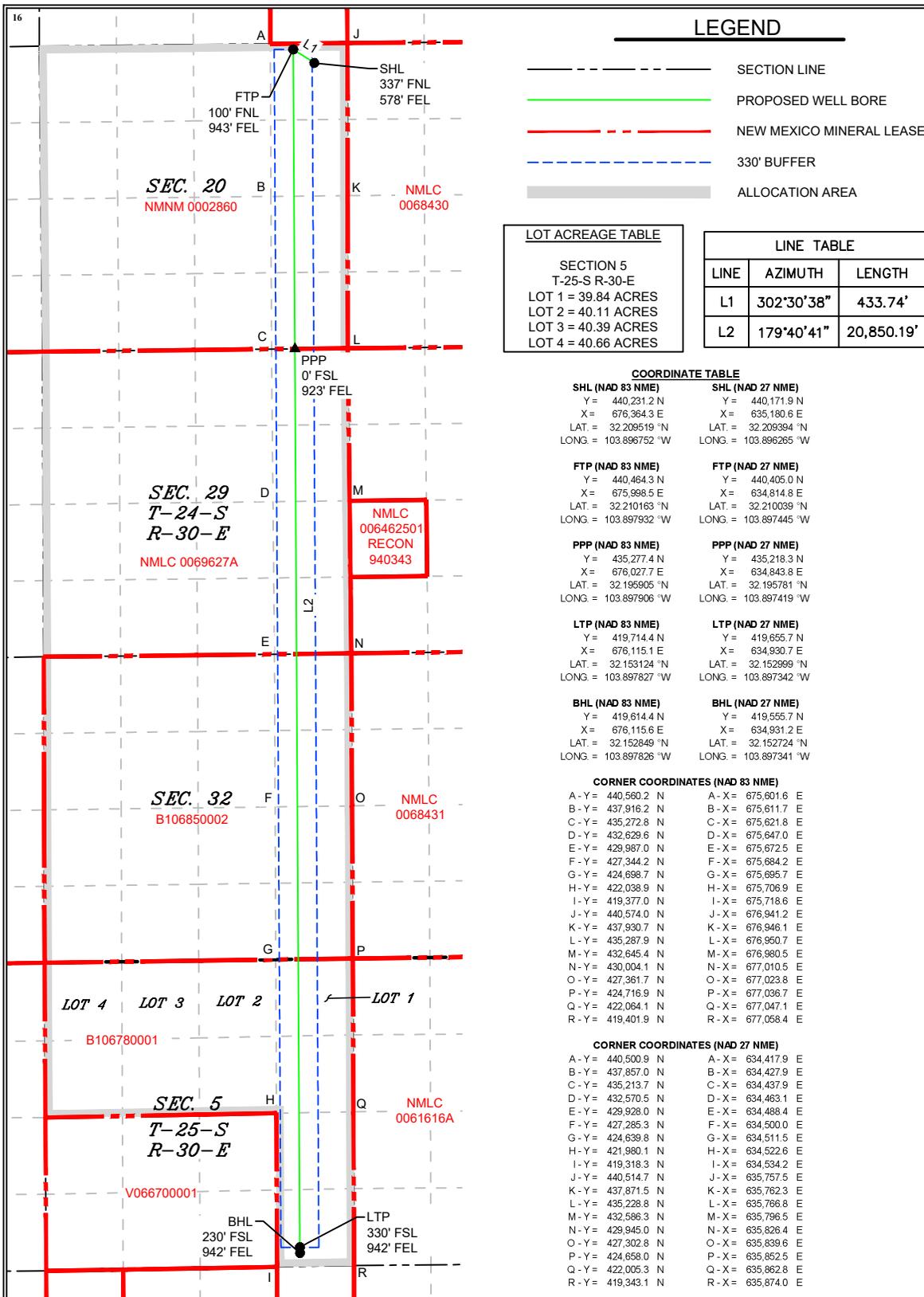
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	24S	30E		337	NORTH	578	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	5	25S	30E		230	SOUTH	942	EAST	EDDY
¹² Dedicated Acres 2,321.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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 23786
Certificate Number
RP/DB 618.013003.06-58

P:\618.013 XTO Energy - NM\003 Poker Lake Unit\06 - EDDY\Wells\58 - 410H\DWG\SOUTH 410H C-102.dwg

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

XTO Energy Inc.
 PLU 20 Dog Town Draw 410H
 Projected TD: 31412.47' MD / 10853' TVD
 SHL: 337' FNL & 578' FEL , Section 20, T24S, R30E
 BHL: 230' FSL & 942' 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	929'	Water
Top of Salt	1332'	Water
Base of Salt	3525'	Water
Delaware	3719'	Water
Brushy Canyon	6217'	Water/Oil/Gas
Bone Spring	7513'	Water
1st Bone Spring	8499'	Water/Oil/Gas
2nd Bone Spring	9317'	Water/Oil/Gas
3rd Bone Spring	10411'	Water/Oil/Gas
Wolfcamp	10802'	Water/Oil/Gas
Wolfcamp X	10823'	Water/Oil/Gas
Target/Land Curve	10853'	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 @ 1029' (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 9954.04' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 31412.47 MD/TD and 6 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 9654.04 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 1029'	13.375	54.5	J-55	BTC	New	1.16	2.51	16.21
12.25	0' – 4000'	9.625	40	HC P-110	BTC	New	1.85	2.31	3.18
12.25	4000' – 9954.04'	9.625	40	HC L-80	BTC	New	1.35	1.76	3.85
8.5	0' – 9854.04'	6	26	P-110	Semi-Premium	New	1.17	2.24	1.56
8.5	9854.04' - 31412.47'	6	26	P-110	Semi-Premium	New	1.17	2.04	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 +/- 1029'

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 +/- 9954.04'

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 @ 6217
 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 (6217') 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 +/- 31412.47'

Lead: 40 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 9654.04 feet
 Tail: 3610 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 10154.04 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 4272 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' - 1029'	17.5	FW/Native	8.4-8.9	35-40	NC
1029' - 9954.04'	12.25	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
9954.04' - 31412.47'	8.5	OBM	11.8-12.3	50-60	NC - 20

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

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

7. Auxiliary Well Control and Monitoring Equipment

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

8. Logging, Coring and Testing Program

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 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 6659 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 410H

Measured Depth: 31412.47 ft

TVD RKB: 10853.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 440171.90 ft

Easting: 635180.60 ft

RKB: 3322.00 ft

Ground Level: 3290.00 ft

North Reference: Grid

Convergence Angle: 0.23 Deg

Plan Sections Poker Lake Unit 20 DTD South 410H

Measured Depth (ft)	Inclination (Deg)	Azimuth (Deg)	TVD		Y Offset (ft)	X Offset (ft)	Build	Turn	Dogleg	Target
			RKB (ft)	Y Offset (ft)			Rate (Deg/100ft)	Rate (Deg/100ft)	Rate (Deg/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00		
1330.95	4.62	302.51	1330.70	5.00	-7.85	2.00	0.00	2.00		
6486.30	4.62	302.51	6469.30	228.10	-357.95	0.00	0.00	0.00		
6717.24	0.00	0.00	6700.00	233.10	-365.80	-2.00	0.00	2.00		
10154.04	0.00	0.00	10136.80	233.10	-365.80	0.00	0.00	0.00		
11279.04	90.00	179.68	10853.00	-483.09	-361.80	8.00	0.00	8.00		
31312.46	90.00	179.68	10853.00	-20516.19	-249.91	0.00	0.00	0.00	LTP 23	
31412.47	90.00	179.68	10853.00	-20616.20	-249.35	0.00	0.00	0.00	BHL 23	

Position Uncertainty Poker Lake Unit 20 DTD South 410H

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	302.507	1199.980	4.345	0.000	5.088	0.000	2.689	0.000	0.000	5.088	4.347	122.720	MWD+IFR1+MS
1300.000	4.000	302.507	1299.838	5.226	0.000	5.418	0.000	2.749	0.000	0.000	5.487	5.160	94.714	MWD+IFR1+MS
1330.945	4.619	302.507	1330.695	5.338	0.000	5.512	0.000	2.765	0.000	0.000	5.590	5.267	92.608	MWD+IFR1+MS
1400.000	4.619	302.507	1399.526	5.564	0.000	5.725	0.000	2.808	0.000	0.000	5.812	5.484	91.148	MWD+IFR1+MS
1500.000	4.619	302.507	1499.201	5.897	0.000	6.055	0.000	2.874	0.000	0.000	6.160	5.798	89.561	MWD+IFR1+MS
1600.000	4.619	302.507	1598.876	6.243	0.000	6.397	0.000	2.943	0.000	0.000	6.525	6.118	87.942	MWD+IFR1+MS
1700.000	4.619	302.507	1698.551	6.590	0.000	6.740	0.000	3.013	0.000	0.000	6.890	6.441	86.765	MWD+IFR1+MS
1800.000	4.619	302.507	1798.227	6.938	0.000	7.086	0.000	3.087	0.000	0.000	7.255	6.767	85.870	MWD+IFR1+MS
1900.000	4.619	302.507	1897.902	7.289	0.000	7.432	0.000	3.162	0.000	0.000	7.621	7.097	85.167	MWD+IFR1+MS
2000.000	4.619	302.507	1997.577	7.640	0.000	7.780	0.000	3.239	0.000	0.000	7.986	7.430	84.599	MWD+IFR1+MS
2100.000	4.619	302.507	2097.252	7.992	0.000	8.130	0.000	3.318	0.000	0.000	8.351	7.765	84.131	MWD+IFR1+MS
2200.000	4.619	302.507	2196.928	8.346	0.000	8.480	0.000	3.399	0.000	0.000	8.715	8.102	83.737	MWD+IFR1+MS
2300.000	4.619	302.507	2296.603	8.700	0.000	8.831	0.000	3.482	0.000	0.000	9.080	8.441	83.401	MWD+IFR1+MS
2400.000	4.619	302.507	2396.278	9.055	0.000	9.183	0.000	3.566	0.000	0.000	9.445	8.781	83.110	MWD+IFR1+MS
2500.000	4.619	302.507	2495.953	9.410	0.000	9.536	0.000	3.652	0.000	0.000	9.809	9.123	82.855	MWD+IFR1+MS
2600.000	4.619	302.507	2595.629	9.766	0.000	9.889	0.000	3.740	0.000	0.000	10.173	9.467	82.629	MWD+IFR1+MS
2700.000	4.619	302.507	2695.304	10.122	0.000	10.243	0.000	3.828	0.000	0.000	10.538	9.812	82.428	MWD+IFR1+MS
2800.000	4.619	302.507	2794.979	10.479	0.000	10.597	0.000	3.919	0.000	0.000	10.902	10.157	82.248	MWD+IFR1+MS
2900.000	4.619	302.507	2894.654	10.837	0.000	10.952	0.000	4.010	0.000	0.000	11.266	10.504	82.084	MWD+IFR1+MS

3000.000	4.619	302.507	2994.329	11.194	0.000	11.307	0.000	4.103	0.000	0.000	11.630	10.852	81.935	MWD+IFR1+MS
3100.000	4.619	302.507	3094.005	11.552	0.000	11.663	0.000	4.198	0.000	0.000	11.994	11.200	81.798	MWD+IFR1+MS
3200.000	4.619	302.507	3193.680	11.911	0.000	12.019	0.000	4.294	0.000	0.000	12.357	11.549	81.672	MWD+IFR1+MS
3300.000	4.619	302.507	3293.355	12.269	0.000	12.375	0.000	4.391	0.000	0.000	12.721	11.899	81.555	MWD+IFR1+MS
3400.000	4.619	302.507	3393.030	12.628	0.000	12.731	0.000	4.489	0.000	0.000	13.085	12.250	81.446	MWD+IFR1+MS
3500.000	4.619	302.507	3492.706	12.987	0.000	13.088	0.000	4.589	0.000	0.000	13.449	12.601	81.345	MWD+IFR1+MS
3600.000	4.619	302.507	3592.381	13.347	0.000	13.445	0.000	4.691	0.000	0.000	13.812	12.952	81.250	MWD+IFR1+MS
3700.000	4.619	302.507	3692.056	13.706	0.000	13.802	0.000	4.794	0.000	0.000	14.176	13.304	81.160	MWD+IFR1+MS
3800.000	4.619	302.507	3791.731	14.066	0.000	14.160	0.000	4.898	0.000	0.000	14.539	13.657	81.076	MWD+IFR1+MS
3900.000	4.619	302.507	3891.407	14.426	0.000	14.517	0.000	5.004	0.000	0.000	14.903	14.009	80.996	MWD+IFR1+MS
4000.000	4.619	302.507	3991.082	14.786	0.000	14.875	0.000	5.111	0.000	0.000	15.266	14.363	80.920	MWD+IFR1+MS
4100.000	4.619	302.507	4090.757	15.146	0.000	15.233	0.000	5.220	0.000	0.000	15.630	14.716	80.848	MWD+IFR1+MS
4200.000	4.619	302.507	4190.432	15.506	0.000	15.591	0.000	5.331	0.000	0.000	15.993	15.070	80.779	MWD+IFR1+MS
4300.000	4.619	302.507	4290.108	15.866	0.000	15.949	0.000	5.443	0.000	0.000	16.357	15.424	80.713	MWD+IFR1+MS
4400.000	4.619	302.507	4389.783	16.227	0.000	16.308	0.000	5.556	0.000	0.000	16.720	15.779	80.649	MWD+IFR1+MS
4500.000	4.619	302.507	4489.458	16.588	0.000	16.666	0.000	5.672	0.000	0.000	17.083	16.134	80.589	MWD+IFR1+MS
4600.000	4.619	302.507	4589.133	16.948	0.000	17.025	0.000	5.789	0.000	0.000	17.447	16.489	80.530	MWD+IFR1+MS
4700.000	4.619	302.507	4688.808	17.309	0.000	17.384	0.000	5.908	0.000	0.000	17.810	16.844	80.474	MWD+IFR1+MS
4800.000	4.619	302.507	4788.484	17.670	0.000	17.742	0.000	6.028	0.000	0.000	18.173	17.199	80.420	MWD+IFR1+MS
4900.000	4.619	302.507	4888.159	18.031	0.000	18.101	0.000	6.150	0.000	0.000	18.537	17.555	80.367	MWD+IFR1+MS
5000.000	4.619	302.507	4987.834	18.392	0.000	18.460	0.000	6.275	0.000	0.000	18.900	17.911	80.316	MWD+IFR1+MS
5100.000	4.619	302.507	5087.509	18.753	0.000	18.820	0.000	6.401	0.000	0.000	19.263	18.267	80.266	MWD+IFR1+MS
5200.000	4.619	302.507	5187.185	19.114	0.000	19.179	0.000	6.529	0.000	0.000	19.626	18.623	80.218	MWD+IFR1+MS
5300.000	4.619	302.507	5286.860	19.476	0.000	19.538	0.000	6.658	0.000	0.000	19.990	18.980	80.172	MWD+IFR1+MS
5400.000	4.619	302.507	5386.535	19.837	0.000	19.897	0.000	6.790	0.000	0.000	20.353	19.336	80.126	MWD+IFR1+MS
5500.000	4.619	302.507	5486.210	20.198	0.000	20.257	0.000	6.924	0.000	0.000	20.716	19.693	80.082	MWD+IFR1+MS
5600.000	4.619	302.507	5585.886	20.560	0.000	20.616	0.000	7.060	0.000	0.000	21.079	20.050	80.038	MWD+IFR1+MS
5700.000	4.619	302.507	5685.561	20.921	0.000	20.976	0.000	7.198	0.000	0.000	21.442	20.407	79.996	MWD+IFR1+MS
5800.000	4.619	302.507	5785.236	21.283	0.000	21.335	0.000	7.338	0.000	0.000	21.805	20.764	79.954	MWD+IFR1+MS
5900.000	4.619	302.507	5884.911	21.645	0.000	21.695	0.000	7.480	0.000	0.000	22.168	21.121	79.914	MWD+IFR1+MS
6000.000	4.619	302.507	5984.587	22.006	0.000	22.055	0.000	7.624	0.000	0.000	22.532	21.478	79.874	MWD+IFR1+MS
6100.000	4.619	302.507	6084.262	22.368	0.000	22.414	0.000	7.771	0.000	0.000	22.895	21.836	79.835	MWD+IFR1+MS
6200.000	4.619	302.507	6183.937	22.730	0.000	22.774	0.000	7.920	0.000	0.000	23.258	22.193	79.796	MWD+IFR1+MS

6300.000	4.619	302.507	6283.612	23.092	0.000	23.134	0.000	8.071	0.000	0.000	23.621	22.551	79.758	MWD+IFR1+MS
6400.000	4.619	302.507	6383.287	23.453	0.000	23.494	0.000	8.224	0.000	0.000	23.984	22.908	79.721	MWD+IFR1+MS
6486.297	4.619	302.507	6469.305	23.764	0.000	23.803	0.000	8.358	0.000	0.000	24.294	23.217	79.696	MWD+IFR1+MS
6500.000	4.345	302.507	6482.965	23.814	0.000	23.851	0.000	8.380	0.000	0.000	24.342	23.266	79.695	MWD+IFR1+MS
6600.000	2.345	302.507	6582.790	24.197	0.000	24.204	0.000	8.537	0.000	0.000	24.716	23.634	78.764	MWD+IFR1+MS
6700.000	0.345	302.507	6682.757	24.624	0.000	24.560	0.000	8.695	0.000	0.000	25.145	24.019	76.088	MWD+IFR1+MS
6717.243	0.000	0.000	6700.000	25.140	0.000	24.146	0.000	8.722	0.000	0.000	25.204	24.079	76.079	MWD+IFR1+MS
6800.000	0.000	0.000	6782.757	25.422	0.000	24.433	0.000	8.853	0.000	0.000	25.484	24.369	76.249	MWD+IFR1+MS
6900.000	0.000	0.000	6882.757	25.765	0.000	24.786	0.000	9.014	0.000	0.000	25.823	24.725	76.607	MWD+IFR1+MS
7000.000	0.000	0.000	6982.757	26.110	0.000	25.139	0.000	9.177	0.000	0.000	26.164	25.084	77.021	MWD+IFR1+MS
7100.000	0.000	0.000	7082.757	26.456	0.000	25.493	0.000	9.343	0.000	0.000	26.505	25.442	77.436	MWD+IFR1+MS
7200.000	0.000	0.000	7182.757	26.802	0.000	25.847	0.000	9.511	0.000	0.000	26.847	25.800	77.854	MWD+IFR1+MS
7300.000	0.000	0.000	7282.757	27.148	0.000	26.201	0.000	9.682	0.000	0.000	27.190	26.157	78.273	MWD+IFR1+MS
7400.000	0.000	0.000	7382.757	27.494	0.000	26.555	0.000	9.855	0.000	0.000	27.532	26.515	78.693	MWD+IFR1+MS
7500.000	0.000	0.000	7482.757	27.841	0.000	26.909	0.000	10.032	0.000	0.000	27.876	26.873	79.114	MWD+IFR1+MS
7600.000	0.000	0.000	7582.757	28.188	0.000	27.264	0.000	10.211	0.000	0.000	28.220	27.230	79.536	MWD+IFR1+MS
7700.000	0.000	0.000	7682.757	28.535	0.000	27.618	0.000	10.392	0.000	0.000	28.564	27.588	79.959	MWD+IFR1+MS
7800.000	0.000	0.000	7782.757	28.882	0.000	27.973	0.000	10.577	0.000	0.000	28.909	27.945	80.383	MWD+IFR1+MS
7900.000	0.000	0.000	7882.757	29.230	0.000	28.327	0.000	10.764	0.000	0.000	29.254	28.303	80.806	MWD+IFR1+MS
8000.000	0.000	0.000	7982.757	29.578	0.000	28.682	0.000	10.954	0.000	0.000	29.600	28.660	81.230	MWD+IFR1+MS
8100.000	0.000	0.000	8082.757	29.927	0.000	29.037	0.000	11.147	0.000	0.000	29.946	29.017	81.655	MWD+IFR1+MS
8200.000	0.000	0.000	8182.757	30.275	0.000	29.392	0.000	11.342	0.000	0.000	30.292	29.374	82.079	MWD+IFR1+MS
8300.000	0.000	0.000	8282.757	30.624	0.000	29.747	0.000	11.540	0.000	0.000	30.639	29.731	82.502	MWD+IFR1+MS
8400.000	0.000	0.000	8382.757	30.973	0.000	30.102	0.000	11.741	0.000	0.000	30.986	30.088	82.925	MWD+IFR1+MS
8500.000	0.000	0.000	8482.757	31.322	0.000	30.457	0.000	11.945	0.000	0.000	31.334	30.445	83.347	MWD+IFR1+MS
8600.000	0.000	0.000	8582.757	31.672	0.000	30.813	0.000	12.152	0.000	0.000	31.682	30.802	83.769	MWD+IFR1+MS
8700.000	0.000	0.000	8682.757	32.021	0.000	31.168	0.000	12.362	0.000	0.000	32.030	31.159	84.189	MWD+IFR1+MS
8800.000	0.000	0.000	8782.757	32.371	0.000	31.523	0.000	12.574	0.000	0.000	32.379	31.516	84.608	MWD+IFR1+MS
8900.000	0.000	0.000	8882.757	32.721	0.000	31.879	0.000	12.790	0.000	0.000	32.727	31.872	85.026	MWD+IFR1+MS
9000.000	0.000	0.000	8982.757	33.071	0.000	32.234	0.000	13.008	0.000	0.000	33.076	32.229	85.442	MWD+IFR1+MS
9100.000	0.000	0.000	9082.757	33.422	0.000	32.590	0.000	13.229	0.000	0.000	33.426	32.586	85.856	MWD+IFR1+MS
9200.000	0.000	0.000	9182.757	33.772	0.000	32.946	0.000	13.454	0.000	0.000	33.776	32.942	86.269	MWD+IFR1+MS
9300.000	0.000	0.000	9282.757	34.123	0.000	33.301	0.000	13.681	0.000	0.000	34.125	33.299	86.679	MWD+IFR1+MS

9400.000	0.000	0.000	9382.757	34.474	0.000	33.657	0.000	13.911	0.000	0.000	34.476	33.655	87.087	MWD+IFR1+MS
9500.000	0.000	0.000	9482.757	34.825	0.000	34.013	0.000	14.144	0.000	0.000	34.826	34.012	87.493	MWD+IFR1+MS
9600.000	0.000	0.000	9582.757	35.176	0.000	34.369	0.000	14.380	0.000	0.000	35.177	34.368	87.896	MWD+IFR1+MS
9700.000	0.000	0.000	9682.757	35.527	0.000	34.725	0.000	14.618	0.000	0.000	35.528	34.724	88.296	MWD+IFR1+MS
9800.000	0.000	0.000	9782.757	35.878	0.000	35.081	0.000	14.860	0.000	0.000	35.879	35.081	88.694	MWD+IFR1+MS
9900.000	0.000	0.000	9882.757	36.230	0.000	35.437	0.000	15.105	0.000	0.000	36.230	35.437	89.089	MWD+IFR1+MS
10000.000	0.000	0.000	9982.757	36.582	0.000	35.793	0.000	15.353	0.000	0.000	36.582	35.793	89.481	MWD+IFR1+MS
10100.000	0.000	0.000	10082.757	36.934	0.000	36.149	0.000	15.603	0.000	0.000	36.934	36.149	89.869	MWD+IFR1+MS
10154.043	0.000	0.000	10136.800	37.122	0.000	36.340	0.000	15.740	0.000	0.000	37.122	36.340	89.946	MWD+IFR1+MS
10200.000	3.677	179.680	10182.726	37.171	0.000	36.494	-0.000	15.857	0.000	0.000	37.285	36.494	89.948	MWD+IFR1+MS
10300.000	11.677	179.680	10281.749	37.422	0.000	36.812	-0.000	16.141	0.000	0.000	38.188	36.810	91.510	MWD+IFR1+MS
10400.000	19.677	179.680	10377.951	37.624	0.000	37.118	-0.000	16.566	0.000	0.000	39.507	37.112	92.435	MWD+IFR1+MS
10500.000	27.677	179.680	10469.459	37.273	0.000	37.406	-0.000	17.192	0.000	0.000	40.667	37.395	92.842	MWD+IFR1+MS
10600.000	35.677	179.680	10554.493	36.435	0.000	37.673	-0.000	18.057	0.000	0.000	41.647	37.658	93.112	MWD+IFR1+MS
10700.000	43.677	179.680	10631.396	35.200	0.000	37.918	-0.000	19.169	0.000	0.000	42.438	37.898	93.329	MWD+IFR1+MS
10800.000	51.677	179.680	10698.673	33.691	0.000	38.138	-0.000	20.505	0.000	0.000	43.040	38.114	93.518	MWD+IFR1+MS
10900.000	59.677	179.680	10755.014	32.064	0.000	38.332	-0.000	22.024	0.000	0.000	43.465	38.305	93.681	MWD+IFR1+MS
11000.000	67.677	179.680	10799.321	30.512	0.000	38.499	-0.000	23.670	0.000	0.000	43.733	38.470	93.808	MWD+IFR1+MS
11100.000	75.677	179.680	10830.734	29.256	0.000	38.639	-0.000	25.382	0.000	0.000	43.874	38.609	93.877	MWD+IFR1+MS
11200.000	83.677	179.680	10848.640	28.522	0.000	38.750	-0.000	27.103	0.000	0.000	43.927	38.721	93.856	MWD+IFR1+MS
11279.043	90.000	179.680	10852.997	27.989	0.000	38.815	-0.000	27.989	0.000	0.000	43.935	38.788	93.736	MWD+IFR1+MS
11300.000	90.000	179.680	10852.997	28.028	0.000	38.829	-0.000	28.028	0.000	0.000	43.936	38.802	93.693	MWD+IFR1+MS
11400.000	90.000	179.680	10852.997	28.177	0.000	38.909	-0.000	28.177	0.000	0.000	43.938	38.885	93.495	MWD+IFR1+MS
11500.000	90.000	179.680	10852.997	28.351	0.000	39.007	-0.000	28.351	0.000	0.000	43.941	38.986	93.303	MWD+IFR1+MS
11600.000	90.000	179.680	10852.997	28.545	0.000	39.120	-0.000	28.545	0.000	0.000	43.945	39.101	93.113	MWD+IFR1+MS
11700.000	90.000	179.680	10852.997	28.760	0.000	39.247	-0.000	28.760	0.000	0.000	43.950	39.231	92.923	MWD+IFR1+MS
11800.000	90.000	179.680	10852.997	28.994	0.000	39.389	-0.000	28.994	0.000	0.000	43.955	39.375	92.734	MWD+IFR1+MS
11900.000	90.000	179.680	10852.997	29.247	0.000	39.545	-0.000	29.247	0.000	0.000	43.961	39.533	92.541	MWD+IFR1+MS
12000.000	90.000	179.680	10852.997	29.519	0.000	39.715	-0.000	29.519	0.000	0.000	43.968	39.705	92.345	MWD+IFR1+MS
12100.000	90.000	179.680	10852.997	29.809	0.000	39.899	-0.000	29.809	0.000	0.000	43.975	39.891	92.141	MWD+IFR1+MS
12200.000	90.000	179.680	10852.997	30.117	0.000	40.097	-0.000	30.117	0.000	0.000	43.984	40.091	91.927	MWD+IFR1+MS
12300.000	90.000	179.680	10852.997	30.442	0.000	40.309	-0.000	30.442	0.000	0.000	43.993	40.304	91.700	MWD+IFR1+MS
12400.000	90.000	179.680	10852.997	30.783	0.000	40.534	-0.000	30.783	0.000	0.000	44.002	40.530	91.454	MWD+IFR1+MS

12500.000	90.000	179.680	10852.997	31.141	0.000	40.772	-0.000	31.141	0.000	0.000	44.013	40.769	91.184	MWD+IFR1+MS
12600.000	90.000	179.680	10852.997	31.514	0.000	41.023	-0.000	31.514	0.000	0.000	44.024	41.021	90.879	MWD+IFR1+MS
12700.000	90.000	179.680	10852.997	31.902	0.000	41.286	-0.000	31.902	0.000	0.000	44.036	41.286	90.528	MWD+IFR1+MS
12800.000	90.000	179.680	10852.997	32.304	0.000	41.562	-0.000	32.304	0.000	0.000	44.048	41.562	90.112	MWD+IFR1+MS
12900.000	90.000	179.680	10852.997	32.720	0.000	41.851	-0.000	32.720	0.000	0.000	44.062	41.850	89.600	MWD+IFR1+MS
13000.000	90.000	179.680	10852.997	33.150	0.000	42.151	-0.000	33.150	0.000	0.000	44.076	42.150	88.943	MWD+IFR1+MS
13100.000	90.000	179.680	10852.997	33.592	0.000	42.462	-0.000	33.592	0.000	0.000	44.092	42.461	88.054	MWD+IFR1+MS
13200.000	90.000	179.680	10852.997	34.047	0.000	42.786	-0.000	34.047	0.000	0.000	44.110	42.782	86.757	MWD+IFR1+MS
13300.000	90.000	179.680	10852.997	34.514	0.000	43.120	-0.000	34.514	0.000	0.000	44.130	43.112	84.658	MWD+IFR1+MS
13400.000	90.000	179.680	10852.997	34.992	0.000	43.466	-0.000	34.992	0.000	0.000	44.157	43.448	80.657	MWD+IFR1+MS
13500.000	90.000	179.680	10852.997	35.481	0.000	43.822	-0.000	35.481	0.000	0.000	44.201	43.776	70.710	MWD+IFR1+MS
13600.000	90.000	179.680	10852.997	35.980	0.000	44.188	-0.000	35.980	0.000	0.000	44.332	44.030	43.377	MWD+IFR1+MS
13700.000	90.000	179.680	10852.997	36.489	0.000	44.564	-0.000	36.489	0.000	0.000	44.631	44.125	21.023	MWD+IFR1+MS
13800.000	90.000	179.680	10852.997	37.008	0.000	44.951	-0.000	37.008	0.000	0.000	44.997	44.164	13.384	MWD+IFR1+MS
13900.000	90.000	179.680	10852.997	37.537	0.000	45.347	-0.000	37.537	0.000	0.000	45.385	44.192	10.068	MWD+IFR1+MS
14000.000	90.000	179.680	10852.997	38.074	0.000	45.752	-0.000	38.074	0.000	0.000	45.787	44.216	8.248	MWD+IFR1+MS
14100.000	90.000	179.680	10852.997	38.620	0.000	46.167	-0.000	38.620	0.000	0.000	46.199	44.238	7.098	MWD+IFR1+MS
14200.000	90.000	179.680	10852.997	39.173	0.000	46.590	-0.000	39.173	0.000	0.000	46.621	44.261	6.302	MWD+IFR1+MS
14300.000	90.000	179.680	10852.997	39.735	0.000	47.023	-0.000	39.735	0.000	0.000	47.052	44.283	5.715	MWD+IFR1+MS
14400.000	90.000	179.680	10852.997	40.304	0.000	47.463	-0.000	40.304	0.000	0.000	47.492	44.306	5.261	MWD+IFR1+MS
14500.000	90.000	179.680	10852.997	40.880	0.000	47.912	-0.000	40.880	0.000	0.000	47.941	44.329	4.898	MWD+IFR1+MS
14600.000	90.000	179.680	10852.997	41.463	0.000	48.369	-0.000	41.463	0.000	0.000	48.397	44.352	4.599	MWD+IFR1+MS
14700.000	90.000	179.680	10852.997	42.053	0.000	48.833	-0.000	42.053	0.000	0.000	48.861	44.376	4.348	MWD+IFR1+MS
14800.000	90.000	179.680	10852.997	42.648	0.000	49.305	-0.000	42.648	0.000	0.000	49.333	44.401	4.133	MWD+IFR1+MS
14900.000	90.000	179.680	10852.997	43.250	0.000	49.784	-0.000	43.250	0.000	0.000	49.812	44.426	3.947	MWD+IFR1+MS
15000.000	90.000	179.680	10852.997	43.858	0.000	50.270	-0.000	43.858	0.000	0.000	50.299	44.451	3.782	MWD+IFR1+MS
15100.000	90.000	179.680	10852.997	44.471	0.000	50.764	-0.000	44.471	0.000	0.000	50.792	44.477	3.636	MWD+IFR1+MS
15200.000	90.000	179.680	10852.997	45.090	0.000	51.263	-0.000	45.090	0.000	0.000	51.292	44.504	3.504	MWD+IFR1+MS
15300.000	90.000	179.680	10852.997	45.713	0.000	51.770	-0.000	45.713	0.000	0.000	51.798	44.531	3.385	MWD+IFR1+MS
15400.000	90.000	179.680	10852.997	46.342	0.000	52.283	-0.000	46.342	0.000	0.000	52.311	44.559	3.276	MWD+IFR1+MS
15500.000	90.000	179.680	10852.997	46.975	0.000	52.801	-0.000	46.975	0.000	0.000	52.830	44.587	3.176	MWD+IFR1+MS
15600.000	90.000	179.680	10852.997	47.613	0.000	53.326	-0.000	47.613	0.000	0.000	53.354	44.616	3.084	MWD+IFR1+MS
15700.000	90.000	179.680	10852.997	48.255	0.000	53.857	-0.000	48.255	0.000	0.000	53.885	44.645	2.999	MWD+IFR1+MS

15800.000	90.000	179.680	10852.997	48.901	0.000	54.393	-0.000	48.901	0.000	0.000	54.421	44.675	2.919	MWD+IFR1+MS
15900.000	90.000	179.680	10852.997	49.552	0.000	54.934	-0.000	49.552	0.000	0.000	54.963	44.705	2.845	MWD+IFR1+MS
16000.000	90.000	179.680	10852.997	50.206	0.000	55.481	-0.000	50.206	0.000	0.000	55.509	44.736	2.775	MWD+IFR1+MS
16100.000	90.000	179.680	10852.997	50.863	0.000	56.033	-0.000	50.863	0.000	0.000	56.061	44.768	2.709	MWD+IFR1+MS
16200.000	90.000	179.680	10852.997	51.525	0.000	56.590	-0.000	51.525	0.000	0.000	56.618	44.800	2.647	MWD+IFR1+MS
16300.000	90.000	179.680	10852.997	52.190	0.000	57.152	-0.000	52.190	0.000	0.000	57.180	44.833	2.589	MWD+IFR1+MS
16400.000	90.000	179.680	10852.997	52.858	0.000	57.718	-0.000	52.858	0.000	0.000	57.747	44.866	2.533	MWD+IFR1+MS
16500.000	90.000	179.680	10852.997	53.529	0.000	58.289	-0.000	53.529	0.000	0.000	58.318	44.900	2.480	MWD+IFR1+MS
16600.000	90.000	179.680	10852.997	54.203	0.000	58.865	-0.000	54.203	0.000	0.000	58.893	44.934	2.430	MWD+IFR1+MS
16700.000	90.000	179.680	10852.997	54.880	0.000	59.444	-0.000	54.880	0.000	0.000	59.473	44.969	2.381	MWD+IFR1+MS
16800.000	90.000	179.680	10852.997	55.560	0.000	60.028	-0.000	55.560	0.000	0.000	60.056	45.004	2.335	MWD+IFR1+MS
16900.000	90.000	179.680	10852.997	56.243	0.000	60.616	-0.000	56.243	0.000	0.000	60.644	45.040	2.291	MWD+IFR1+MS
17000.000	90.000	179.680	10852.997	56.929	0.000	61.208	-0.000	56.929	0.000	0.000	61.236	45.077	2.249	MWD+IFR1+MS
17100.000	90.000	179.680	10852.997	57.617	0.000	61.804	-0.000	57.617	0.000	0.000	61.832	45.114	2.208	MWD+IFR1+MS
17200.000	90.000	179.680	10852.997	58.307	0.000	62.403	-0.000	58.307	0.000	0.000	62.431	45.151	2.169	MWD+IFR1+MS
17300.000	90.000	179.680	10852.997	59.000	0.000	63.006	-0.000	59.000	0.000	0.000	63.034	45.189	2.132	MWD+IFR1+MS
17400.000	90.000	179.680	10852.997	59.695	0.000	63.612	-0.000	59.695	0.000	0.000	63.640	45.228	2.095	MWD+IFR1+MS
17500.000	90.000	179.680	10852.997	60.392	0.000	64.222	-0.000	60.392	0.000	0.000	64.250	45.267	2.060	MWD+IFR1+MS
17600.000	90.000	179.680	10852.997	61.091	0.000	64.836	-0.000	61.091	0.000	0.000	64.863	45.307	2.027	MWD+IFR1+MS
17700.000	90.000	179.680	10852.997	61.793	0.000	65.452	-0.000	61.793	0.000	0.000	65.480	45.347	1.994	MWD+IFR1+MS
17800.000	90.000	179.680	10852.997	62.496	0.000	66.071	-0.000	62.496	0.000	0.000	66.099	45.388	1.962	MWD+IFR1+MS
17900.000	90.000	179.680	10852.997	63.201	0.000	66.694	-0.000	63.201	0.000	0.000	66.722	45.430	1.932	MWD+IFR1+MS
18000.000	90.000	179.680	10852.997	63.909	0.000	67.319	-0.000	63.909	0.000	0.000	67.347	45.472	1.902	MWD+IFR1+MS
18100.000	90.000	179.680	10852.997	64.617	0.000	67.948	-0.000	64.617	0.000	0.000	67.975	45.514	1.873	MWD+IFR1+MS
18200.000	90.000	179.680	10852.997	65.328	0.000	68.579	-0.000	65.328	0.000	0.000	68.606	45.557	1.846	MWD+IFR1+MS
18300.000	90.000	179.680	10852.997	66.041	0.000	69.213	-0.000	66.041	0.000	0.000	69.240	45.600	1.819	MWD+IFR1+MS
18400.000	90.000	179.680	10852.997	66.755	0.000	69.849	-0.000	66.755	0.000	0.000	69.876	45.645	1.792	MWD+IFR1+MS
18500.000	90.000	179.680	10852.997	67.470	0.000	70.488	-0.000	67.470	0.000	0.000	70.515	45.689	1.767	MWD+IFR1+MS
18600.000	90.000	179.680	10852.997	68.187	0.000	71.130	-0.000	68.187	0.000	0.000	71.157	45.734	1.742	MWD+IFR1+MS
18700.000	90.000	179.680	10852.997	68.906	0.000	71.774	-0.000	68.906	0.000	0.000	71.801	45.780	1.718	MWD+IFR1+MS
18800.000	90.000	179.680	10852.997	69.626	0.000	72.420	-0.000	69.626	0.000	0.000	72.447	45.826	1.694	MWD+IFR1+MS
18900.000	90.000	179.680	10852.997	70.347	0.000	73.069	-0.000	70.347	0.000	0.000	73.096	45.872	1.671	MWD+IFR1+MS
19000.000	90.000	179.680	10852.997	71.070	0.000	73.720	-0.000	71.070	0.000	0.000	73.746	45.920	1.649	MWD+IFR1+MS

19100.000	90.000	179.680	10852.997	71.794	0.000	74.373	-0.000	71.794	0.000	0.000	74.399	45.967	1.627	MWD+IFR1+MS
19200.000	90.000	179.680	10852.997	72.519	0.000	75.028	-0.000	72.519	0.000	0.000	75.055	46.015	1.605	MWD+IFR1+MS
19300.000	90.000	179.680	10852.997	73.246	0.000	75.685	-0.000	73.246	0.000	0.000	75.712	46.064	1.585	MWD+IFR1+MS
19400.000	90.000	179.680	10852.997	73.973	0.000	76.345	-0.000	73.973	0.000	0.000	76.371	46.113	1.564	MWD+IFR1+MS
19500.000	90.000	179.680	10852.997	74.702	0.000	77.006	-0.000	74.702	0.000	0.000	77.032	46.163	1.545	MWD+IFR1+MS
19600.000	90.000	179.680	10852.997	75.432	0.000	77.669	-0.000	75.432	0.000	0.000	77.695	46.213	1.525	MWD+IFR1+MS
19700.000	90.000	179.680	10852.997	76.163	0.000	78.334	-0.000	76.163	0.000	0.000	78.360	46.264	1.506	MWD+IFR1+MS
19800.000	90.000	179.680	10852.997	76.895	0.000	79.001	-0.000	76.895	0.000	0.000	79.027	46.315	1.488	MWD+IFR1+MS
19900.000	90.000	179.680	10852.997	77.628	0.000	79.670	-0.000	77.628	0.000	0.000	79.695	46.367	1.470	MWD+IFR1+MS
20000.000	90.000	179.680	10852.997	78.363	0.000	80.340	-0.000	78.363	0.000	0.000	80.366	46.419	1.452	MWD+IFR1+MS
20100.000	90.000	179.680	10852.997	79.098	0.000	81.012	-0.000	79.098	0.000	0.000	81.038	46.472	1.435	MWD+IFR1+MS
20200.000	90.000	179.680	10852.997	79.834	0.000	81.686	-0.000	79.834	0.000	0.000	81.711	46.525	1.418	MWD+IFR1+MS
20300.000	90.000	179.680	10852.997	80.571	0.000	82.361	-0.000	80.571	0.000	0.000	82.386	46.579	1.401	MWD+IFR1+MS
20400.000	90.000	179.680	10852.997	81.309	0.000	83.038	-0.000	81.309	0.000	0.000	83.063	46.633	1.385	MWD+IFR1+MS
20500.000	90.000	179.680	10852.997	82.047	0.000	83.717	-0.000	82.047	0.000	0.000	83.742	46.688	1.369	MWD+IFR1+MS
20600.000	90.000	179.680	10852.997	82.787	0.000	84.396	-0.000	82.787	0.000	0.000	84.421	46.743	1.353	MWD+IFR1+MS
20700.000	90.000	179.680	10852.997	83.528	0.000	85.078	-0.000	83.528	0.000	0.000	85.103	46.798	1.338	MWD+IFR1+MS
20800.000	90.000	179.680	10852.997	84.269	0.000	85.761	-0.000	84.269	0.000	0.000	85.785	46.855	1.323	MWD+IFR1+MS
20900.000	90.000	179.680	10852.997	85.011	0.000	86.445	-0.000	85.011	0.000	0.000	86.469	46.911	1.308	MWD+IFR1+MS
21000.000	90.000	179.680	10852.997	85.754	0.000	87.130	-0.000	85.754	0.000	0.000	87.155	46.968	1.294	MWD+IFR1+MS
21100.000	90.000	179.680	10852.997	86.497	0.000	87.817	-0.000	86.497	0.000	0.000	87.842	47.026	1.279	MWD+IFR1+MS
21200.000	90.000	179.680	10852.997	87.241	0.000	88.505	-0.000	87.241	0.000	0.000	88.530	47.084	1.266	MWD+IFR1+MS
21300.000	90.000	179.680	10852.997	87.986	0.000	89.195	-0.000	87.986	0.000	0.000	89.219	47.143	1.252	MWD+IFR1+MS
21400.000	90.000	179.680	10852.997	88.732	0.000	89.885	-0.000	88.732	0.000	0.000	89.909	47.202	1.238	MWD+IFR1+MS
21500.000	90.000	179.680	10852.997	89.478	0.000	90.577	-0.000	89.478	0.000	0.000	90.601	47.261	1.225	MWD+IFR1+MS
21600.000	90.000	179.680	10852.997	90.225	0.000	91.270	-0.000	90.225	0.000	0.000	91.294	47.321	1.212	MWD+IFR1+MS
21700.000	90.000	179.680	10852.997	90.973	0.000	91.964	-0.000	90.973	0.000	0.000	91.988	47.381	1.200	MWD+IFR1+MS
21800.000	90.000	179.680	10852.997	91.721	0.000	92.660	-0.000	91.721	0.000	0.000	92.683	47.442	1.187	MWD+IFR1+MS
21900.000	90.000	179.680	10852.997	92.470	0.000	93.356	-0.000	92.470	0.000	0.000	93.380	47.504	1.175	MWD+IFR1+MS
22000.000	90.000	179.680	10852.997	93.219	0.000	94.053	-0.000	93.219	0.000	0.000	94.077	47.566	1.163	MWD+IFR1+MS
22100.000	90.000	179.680	10852.997	93.969	0.000	94.752	-0.000	93.969	0.000	0.000	94.775	47.628	1.151	MWD+IFR1+MS
22200.000	90.000	179.680	10852.997	94.720	0.000	95.451	-0.000	94.720	0.000	0.000	95.475	47.691	1.139	MWD+IFR1+MS
22300.000	90.000	179.680	10852.997	95.471	0.000	96.152	-0.000	95.471	0.000	0.000	96.175	47.754	1.128	MWD+IFR1+MS

22400.000	90.000	179.680	10852.997	96.222	0.000	96.854	-0.000	96.222	0.000	0.000	96.877	47.817	1.116	MWD+IFR1+MS
22500.000	90.000	179.680	10852.997	96.975	0.000	97.556	-0.000	96.975	0.000	0.000	97.579	47.882	1.105	MWD+IFR1+MS
22600.000	90.000	179.680	10852.997	97.727	0.000	98.259	-0.000	97.727	0.000	0.000	98.282	47.946	1.094	MWD+IFR1+MS
22700.000	90.000	179.680	10852.997	98.481	0.000	98.964	-0.000	98.481	0.000	0.000	98.987	48.011	1.084	MWD+IFR1+MS
22800.000	90.000	179.680	10852.997	99.234	0.000	99.669	-0.000	99.234	0.000	0.000	99.692	48.077	1.073	MWD+IFR1+MS
22900.000	90.000	179.680	10852.997	99.988	0.000	100.375	-0.000	99.988	0.000	0.000	100.398	48.143	1.063	MWD+IFR1+MS
23000.000	90.000	179.680	10852.997	100.743	0.000	101.082	-0.000	100.743	0.000	0.000	101.105	48.209	1.052	MWD+IFR1+MS
23100.000	90.000	179.680	10852.997	101.498	0.000	101.790	-0.000	101.498	0.000	0.000	101.812	48.276	1.042	MWD+IFR1+MS
23200.000	90.000	179.680	10852.997	102.254	0.000	102.499	-0.000	102.254	0.000	0.000	102.521	48.343	1.032	MWD+IFR1+MS
23300.000	90.000	179.680	10852.997	103.010	0.000	103.208	-0.000	103.010	0.000	0.000	103.230	48.411	1.023	MWD+IFR1+MS
23400.000	90.000	179.680	10852.997	103.766	0.000	103.919	-0.000	103.766	0.000	0.000	103.941	48.479	1.013	MWD+IFR1+MS
23500.000	90.000	179.680	10852.997	104.523	0.000	104.630	-0.000	104.523	0.000	0.000	104.652	48.547	1.003	MWD+IFR1+MS
23600.000	90.000	179.680	10852.997	105.280	0.000	105.342	-0.000	105.280	0.000	0.000	105.363	48.616	0.994	MWD+IFR1+MS
23700.000	90.000	179.680	10852.997	106.038	0.000	106.054	-0.000	106.038	0.000	0.000	106.076	48.686	0.985	MWD+IFR1+MS
23800.000	90.000	179.680	10852.997	106.796	0.000	106.767	-0.000	106.796	0.000	0.000	106.789	48.756	0.976	MWD+IFR1+MS
23900.000	90.000	179.680	10852.997	107.554	0.000	107.482	-0.000	107.554	0.000	0.000	107.503	48.826	0.967	MWD+IFR1+MS
24000.000	90.000	179.680	10852.997	108.313	0.000	108.196	-0.000	108.313	0.000	0.000	108.218	48.897	0.958	MWD+IFR1+MS
24100.000	90.000	179.680	10852.997	109.072	0.000	108.912	-0.000	109.072	0.000	0.000	108.933	48.968	0.949	MWD+IFR1+MS
24200.000	90.000	179.680	10852.997	109.831	0.000	109.628	-0.000	109.831	0.000	0.000	109.649	49.039	0.941	MWD+IFR1+MS
24300.000	90.000	179.680	10852.997	110.591	0.000	110.345	-0.000	110.591	0.000	0.000	110.366	49.111	0.932	MWD+IFR1+MS
24400.000	90.000	179.680	10852.997	111.351	0.000	111.062	-0.000	111.351	0.000	0.000	111.083	49.184	0.924	MWD+IFR1+MS
24500.000	90.000	179.680	10852.997	112.112	0.000	111.780	-0.000	112.112	0.000	0.000	111.801	49.256	0.916	MWD+IFR1+MS
24600.000	90.000	179.680	10852.997	112.873	0.000	112.499	-0.000	112.873	0.000	0.000	112.520	49.330	0.907	MWD+IFR1+MS
24700.000	90.000	179.680	10852.997	113.634	0.000	113.218	-0.000	113.634	0.000	0.000	113.239	49.403	0.899	MWD+IFR1+MS
24800.000	90.000	179.680	10852.997	114.396	0.000	113.938	-0.000	114.396	0.000	0.000	113.959	49.477	0.891	MWD+IFR1+MS
24900.000	90.000	179.680	10852.997	115.157	0.000	114.659	-0.000	115.157	0.000	0.000	114.679	49.552	0.884	MWD+IFR1+MS
25000.000	90.000	179.680	10852.997	115.919	0.000	115.380	-0.000	115.919	0.000	0.000	115.400	49.627	0.876	MWD+IFR1+MS
25100.000	90.000	179.680	10852.997	116.682	0.000	116.101	-0.000	116.682	0.000	0.000	116.122	49.702	0.868	MWD+IFR1+MS
25200.000	90.000	179.680	10852.997	117.445	0.000	116.824	-0.000	117.445	0.000	0.000	116.844	49.778	0.861	MWD+IFR1+MS
25300.000	90.000	179.680	10852.997	118.208	0.000	117.546	-0.000	118.208	0.000	0.000	117.566	49.854	0.853	MWD+IFR1+MS
25400.000	90.000	179.680	10852.997	118.971	0.000	118.270	-0.000	118.971	0.000	0.000	118.290	49.930	0.846	MWD+IFR1+MS
25500.000	90.000	179.680	10852.997	119.735	0.000	118.993	-0.000	119.735	0.000	0.000	119.013	50.007	0.839	MWD+IFR1+MS
25600.000	90.000	179.680	10852.997	120.498	0.000	119.718	-0.000	120.498	0.000	0.000	119.738	50.084	0.832	MWD+IFR1+MS

25700.000	90.000	179.680	10852.997	121.263	0.000	120.443	-0.000	121.263	0.000	0.000	120.462	50.162	0.825	MWD+IFR1+MS
25800.000	90.000	179.680	10852.997	122.027	0.000	121.168	-0.000	122.027	0.000	0.000	121.188	50.240	0.818	MWD+IFR1+MS
25900.000	90.000	179.680	10852.997	122.792	0.000	121.894	-0.000	122.792	0.000	0.000	121.914	50.318	0.811	MWD+IFR1+MS
26000.000	90.000	179.680	10852.997	123.556	0.000	122.620	-0.000	123.556	0.000	0.000	122.640	50.397	0.804	MWD+IFR1+MS
26100.000	90.000	179.680	10852.997	124.322	0.000	123.347	-0.000	124.322	0.000	0.000	123.367	50.476	0.797	MWD+IFR1+MS
26200.000	90.000	179.680	10852.997	125.087	0.000	124.074	-0.000	125.087	0.000	0.000	124.094	50.556	0.791	MWD+IFR1+MS
26300.000	90.000	179.680	10852.997	125.853	0.000	124.802	-0.000	125.853	0.000	0.000	124.821	50.636	0.784	MWD+IFR1+MS
26400.000	90.000	179.680	10852.997	126.618	0.000	125.530	-0.000	126.618	0.000	0.000	125.549	50.716	0.778	MWD+IFR1+MS
26500.000	90.000	179.680	10852.997	127.384	0.000	126.259	-0.000	127.384	0.000	0.000	126.278	50.797	0.771	MWD+IFR1+MS
26600.000	90.000	179.680	10852.997	128.151	0.000	126.988	-0.000	128.151	0.000	0.000	127.007	50.878	0.765	MWD+IFR1+MS
26700.000	90.000	179.680	10852.997	128.917	0.000	127.717	-0.000	128.917	0.000	0.000	127.736	50.960	0.759	MWD+IFR1+MS
26800.000	90.000	179.680	10852.997	129.684	0.000	128.447	-0.000	129.684	0.000	0.000	128.466	51.042	0.753	MWD+IFR1+MS
26900.000	90.000	179.680	10852.997	130.451	0.000	129.178	-0.000	130.451	0.000	0.000	129.196	51.124	0.747	MWD+IFR1+MS
27000.000	90.000	179.680	10852.997	131.218	0.000	129.908	-0.000	131.218	0.000	0.000	129.927	51.207	0.741	MWD+IFR1+MS
27100.000	90.000	179.680	10852.997	131.986	0.000	130.639	-0.000	131.986	0.000	0.000	130.658	51.290	0.735	MWD+IFR1+MS
27200.000	90.000	179.680	10852.997	132.753	0.000	131.371	-0.000	132.753	0.000	0.000	131.390	51.373	0.729	MWD+IFR1+MS
27300.000	90.000	179.680	10852.997	133.521	0.000	132.103	-0.000	133.521	0.000	0.000	132.121	51.457	0.723	MWD+IFR1+MS
27400.000	90.000	179.680	10852.997	134.289	0.000	132.835	-0.000	134.289	0.000	0.000	132.854	51.541	0.717	MWD+IFR1+MS
27500.000	90.000	179.680	10852.997	135.057	0.000	133.568	-0.000	135.057	0.000	0.000	133.586	51.625	0.712	MWD+IFR1+MS
27600.000	90.000	179.680	10852.997	135.826	0.000	134.301	-0.000	135.826	0.000	0.000	134.319	51.710	0.706	MWD+IFR1+MS
27700.000	90.000	179.680	10852.997	136.594	0.000	135.034	-0.000	136.594	0.000	0.000	135.052	51.795	0.700	MWD+IFR1+MS
27800.000	90.000	179.680	10852.997	137.363	0.000	135.768	-0.000	137.363	0.000	0.000	135.786	51.881	0.695	MWD+IFR1+MS
27900.000	90.000	179.680	10852.997	138.132	0.000	136.502	-0.000	138.132	0.000	0.000	136.520	51.967	0.689	MWD+IFR1+MS
28000.000	90.000	179.680	10852.997	138.901	0.000	137.236	-0.000	138.901	0.000	0.000	137.255	52.053	0.684	MWD+IFR1+MS
28100.000	90.000	179.680	10852.997	139.670	0.000	137.971	-0.000	139.670	0.000	0.000	137.989	52.140	0.679	MWD+IFR1+MS
28200.000	90.000	179.680	10852.997	140.440	0.000	138.706	-0.000	140.440	0.000	0.000	138.724	52.226	0.673	MWD+IFR1+MS
28300.000	90.000	179.680	10852.997	141.209	0.000	139.442	-0.000	141.209	0.000	0.000	139.460	52.314	0.668	MWD+IFR1+MS
28400.000	90.000	179.680	10852.997	141.979	0.000	140.178	-0.000	141.979	0.000	0.000	140.195	52.401	0.663	MWD+IFR1+MS
28500.000	90.000	179.680	10852.997	142.749	0.000	140.914	-0.000	142.749	0.000	0.000	140.931	52.489	0.658	MWD+IFR1+MS
28600.000	90.000	179.680	10852.997	143.519	0.000	141.650	-0.000	143.519	0.000	0.000	141.668	52.578	0.653	MWD+IFR1+MS
28700.000	90.000	179.680	10852.997	144.289	0.000	142.387	-0.000	144.289	0.000	0.000	142.404	52.666	0.648	MWD+IFR1+MS
28800.000	90.000	179.680	10852.997	145.060	0.000	143.124	-0.000	145.060	0.000	0.000	143.141	52.755	0.643	MWD+IFR1+MS
28900.000	90.000	179.680	10852.997	145.830	0.000	143.861	-0.000	145.830	0.000	0.000	143.878	52.845	0.638	MWD+IFR1+MS

29000.000	90.000	179.680	10852.997	146.601	0.000	144.599	-0.000	146.601	0.000	0.000	144.616	52.934	0.633	MWD+IFR1+MS
29100.000	90.000	179.680	10852.997	147.372	0.000	145.336	-0.000	147.372	0.000	0.000	145.354	53.024	0.629	MWD+IFR1+MS
29200.000	90.000	179.680	10852.997	148.143	0.000	146.075	-0.000	148.143	0.000	0.000	146.092	53.115	0.624	MWD+IFR1+MS
29300.000	90.000	179.680	10852.997	148.914	0.000	146.813	-0.000	148.914	0.000	0.000	146.830	53.205	0.619	MWD+IFR1+MS
29400.000	90.000	179.680	10852.997	149.685	0.000	147.552	-0.000	149.685	0.000	0.000	147.569	53.296	0.614	MWD+IFR1+MS
29500.000	90.000	179.680	10852.997	150.457	0.000	148.291	-0.000	150.457	0.000	0.000	148.308	53.388	0.610	MWD+IFR1+MS
29600.000	90.000	179.680	10852.997	151.228	0.000	149.030	-0.000	151.228	0.000	0.000	149.047	53.479	0.605	MWD+IFR1+MS
29700.000	90.000	179.680	10852.997	152.000	0.000	149.770	-0.000	152.000	0.000	0.000	149.786	53.571	0.601	MWD+IFR1+MS
29800.000	90.000	179.680	10852.997	152.772	0.000	150.509	-0.000	152.772	0.000	0.000	150.526	53.664	0.596	MWD+IFR1+MS
29900.000	90.000	179.680	10852.997	153.544	0.000	151.249	-0.000	153.544	0.000	0.000	151.266	53.756	0.592	MWD+IFR1+MS
30000.000	90.000	179.680	10852.997	154.316	0.000	151.990	-0.000	154.316	0.000	0.000	152.006	53.849	0.588	MWD+IFR1+MS
30100.000	90.000	179.680	10852.997	155.088	0.000	152.730	-0.000	155.088	0.000	0.000	152.747	53.942	0.583	MWD+IFR1+MS
30200.000	90.000	179.680	10852.997	155.861	0.000	153.471	-0.000	155.861	0.000	0.000	153.488	54.036	0.579	MWD+IFR1+MS
30300.000	90.000	179.680	10852.997	156.633	0.000	154.212	-0.000	156.633	0.000	0.000	154.229	54.130	0.575	MWD+IFR1+MS
30400.000	90.000	179.680	10852.997	157.406	0.000	154.953	-0.000	157.406	0.000	0.000	154.970	54.224	0.570	MWD+IFR1+MS
30500.000	90.000	179.680	10852.997	158.178	0.000	155.695	-0.000	158.178	0.000	0.000	155.711	54.319	0.566	MWD+IFR1+MS
30600.000	90.000	179.680	10852.997	158.951	0.000	156.437	-0.000	158.951	0.000	0.000	156.453	54.413	0.562	MWD+IFR1+MS
30700.000	90.000	179.680	10852.997	159.724	0.000	157.179	-0.000	159.724	0.000	0.000	157.195	54.508	0.558	MWD+IFR1+MS
30800.000	90.000	179.680	10852.997	160.497	0.000	157.921	-0.000	160.497	0.000	0.000	157.937	54.604	0.554	MWD+IFR1+MS
30900.000	90.000	179.680	10852.997	161.270	0.000	158.663	-0.000	161.270	0.000	0.000	158.679	54.700	0.550	MWD+IFR1+MS
31000.000	90.000	179.680	10852.997	162.044	0.000	159.406	-0.000	162.044	0.000	0.000	159.422	54.796	0.546	MWD+IFR1+MS
31100.000	90.000	179.680	10852.997	162.817	0.000	160.149	-0.000	162.817	0.000	0.000	160.165	54.892	0.542	MWD+IFR1+MS
31200.000	90.000	179.680	10852.997	163.591	0.000	160.892	-0.000	163.591	0.000	0.000	160.908	54.989	0.538	MWD+IFR1+MS
31300.000	90.000	179.680	10852.997	164.364	0.000	161.635	-0.000	164.364	0.000	0.000	161.651	55.086	0.534	MWD+IFR1+MS
31312.460	90.000	179.680	10852.997	164.460	0.000	161.727	-0.000	164.460	0.000	0.000	161.743	55.098	0.534	MWD+IFR1+MS
31400.000	90.000	179.680	10852.997	165.137	0.000	162.377	-0.000	165.137	0.000	0.000	162.393	55.183	0.530	MWD+IFR1+MS
31412.471	90.000	179.680	10852.997	165.233	0.000	162.470	-0.000	165.233	0.000	0.000	162.486	55.195	0.530	MWD+IFR1+MS

Plan Targets

Poker Lake Unit 20 DTD South 410H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 23	10997.31	440405.00	634814.80	7531.00	RECTANGLE
SHL 24	11226.33	440172.46	635240.61	7389.73	RECTANGLE

LTP 23	31312.48	419655.70	634930.70	7531.00 RECTANGLE
BHL 23	31412.47	419555.70	634931.20	7531.00 RECTANGLE

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

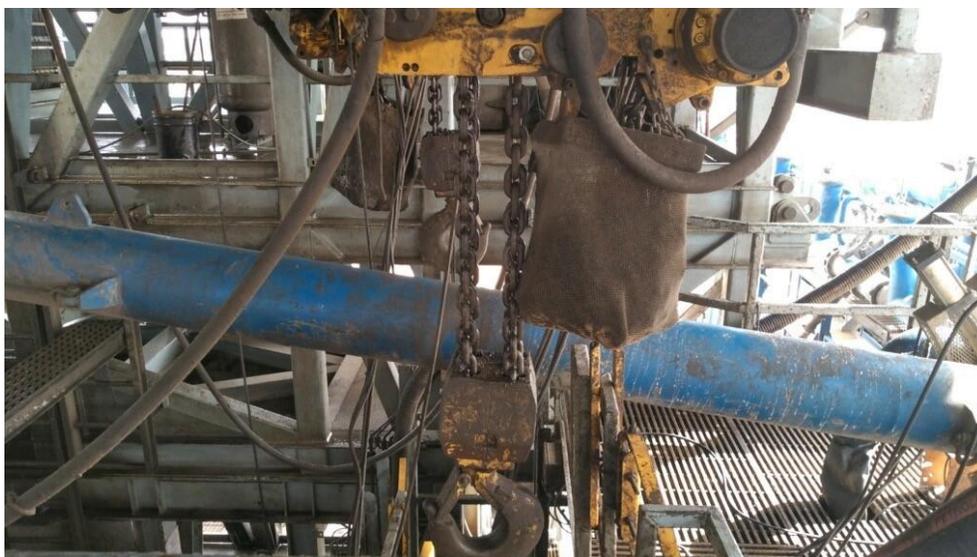


Figure 2: BOP Winch System

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.

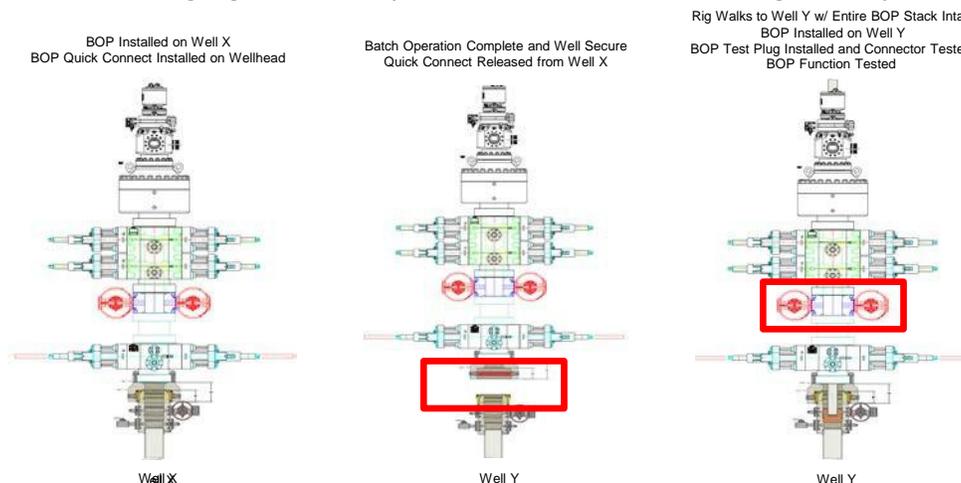
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often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

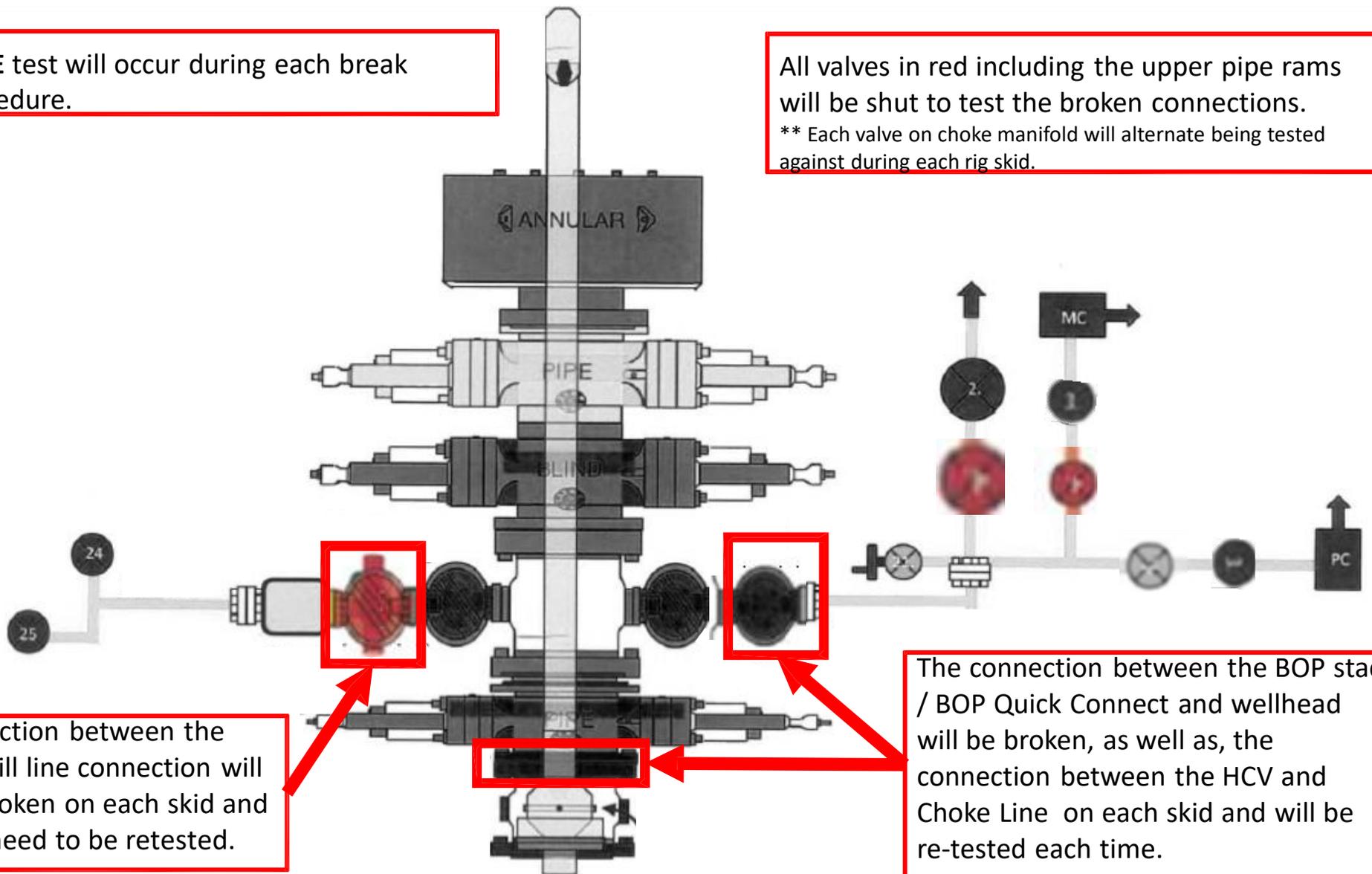
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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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 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 342952

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 342952
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	6/7/2024