

Well Name: POKER LAKE UNIT 22 DTD	Well Location: T24S / R30E / SEC 22 / NWNW /	County or Parish/State:
Well Number: 102H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM068905	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001549854	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2761866

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/16/2023

Time Sundry Submitted: 11:31

Date proposed operation will begin: 11/28/2023

Procedure Description: XTO Permian Operating LLC. respectfully requests approval to make changes to the Approved APD as follows: SHL, BHL, FTP, LTP, Directional Drilling Plan, Casing and cement change. SHL: FROM: 1106' FNL & 145' FWL TO: 1011' FNL & 634' FWL of Section 22-T24S-R30E BHL: FROM: 199' FNL & 1194 FWL TO: 230' FNL & 620' FWL of Section 3-T24S-R30E FTP: FROM: 100' FNL & 1137' FWL TO: 500' FNL & 620' FWL of Section 22-T24S-R30E LTP: FROM: 329' FNL & 1193' FWL TO: 330' FNL & 620' FWL of Section 3-T24S-R30E DRILLING AND CASING PLAN: 6" P-110 26# production casing will be run instead of 5-1/2" P-110 23# production casing. ATTACHMENTS: New C-102, Drilling and Casing Plan, Directional Plan, Wellhead Design, Casing Spec Sheet, BOP Variance Request and Well Control Plan

NOI Attachments

Procedure Description

PLU_22_DTD_102H_sundry_attachments_for_APD_Changes_1_11_2024_20240111105106.pdf

POKER_LAKE_UNIT_22_DTD_102H_C_102_signed_12_20_2023_20231220154259.pdf

Received by OCD: 1/29/2024 9:51:28 AM

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Conditions of Approval

Additional

Sec_22_24S_30E_NMP_Sundry_2762866_Poker_Lake_Unit_22_DTD_102H_COAs_20240125140640.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: RANELL (RUSTY) KLEIN

Signed on: JAN 11, 2024 10:51 AM

Name: XTO PERMIAN OPERATING LLC

Title: Regulatory Analyst

Street Address: 6401 HOLIDAY HILL ROAD BLDG 5

City: MIDLANDState: TX

Phone: (432) 620-6700

Email address: RANELL.KLEIN@EXXONMOBIL.COM

Field

Representative Name:

Street Address:

City:State:Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 01/26/2024

Signature: Chris Walls

Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021
SUNDRY NOTICES AND REPORTS ON WELLS <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name

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

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

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

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

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Location of Well

0. SHL: NWNW / 1106 FNL / 145 FWL / TWSP: 24S / RANGE: 30E / SECTION: 22 / LAT: 32.207459 / LONG: -103.877121 (TVD: 0 feet, MD: 0 feet)

PPP: SWNW / 100 FSL / 257 FWL / TWSP: 24S / RANGE: 30E / SECTION: 15 / LAT: 32.223256 / LONG: -103.866721 (TVD: 11099 feet, MD: 14144 feet)

PPP: SWSW / 100 FSL / 1137 FWL / TWSP: 24S / RANGE: 30E / SECTION: 15 / LAT: 32.210795 / LONG: -103.87391 (TVD: 11099 feet, MD: 11504 feet)

PPP: SWSW / 300 FNL / 313 FWL / TWSP: 24S / RANGE: 30E / SECTION: 10 / LAT: 32.253158 / LONG: -103.876545 (TVD: 11099 feet, MD: 16784 feet)

BHL: LOT 4 / 199 FNL / 1194 FWL / TWSP: 24S / RANGE: 30E / SECTION: 3 / LAT: 32.253523 / LONG: -103.873697 (TVD: 11099 feet, MD: 27048 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 22 DTD 102H
LOCATION:	Sec 22-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2761866** on 01/25/2024. Any previous COAs not addressed within the updated COAs still apply.*

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately 775 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.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

- a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon at 6227'**
- b. Second stage:
 - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified.

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

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

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

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

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **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 10,000 (10M) psi. **Variance approved to utilize a 5M annular tested to 5000 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:

- Spudding well (minimum of 24 hours)
 - Setting and/or Cementing of all casing strings (minimum of 4 hours)
 - 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
- 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.
 - 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).
 - 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) 193-0720

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

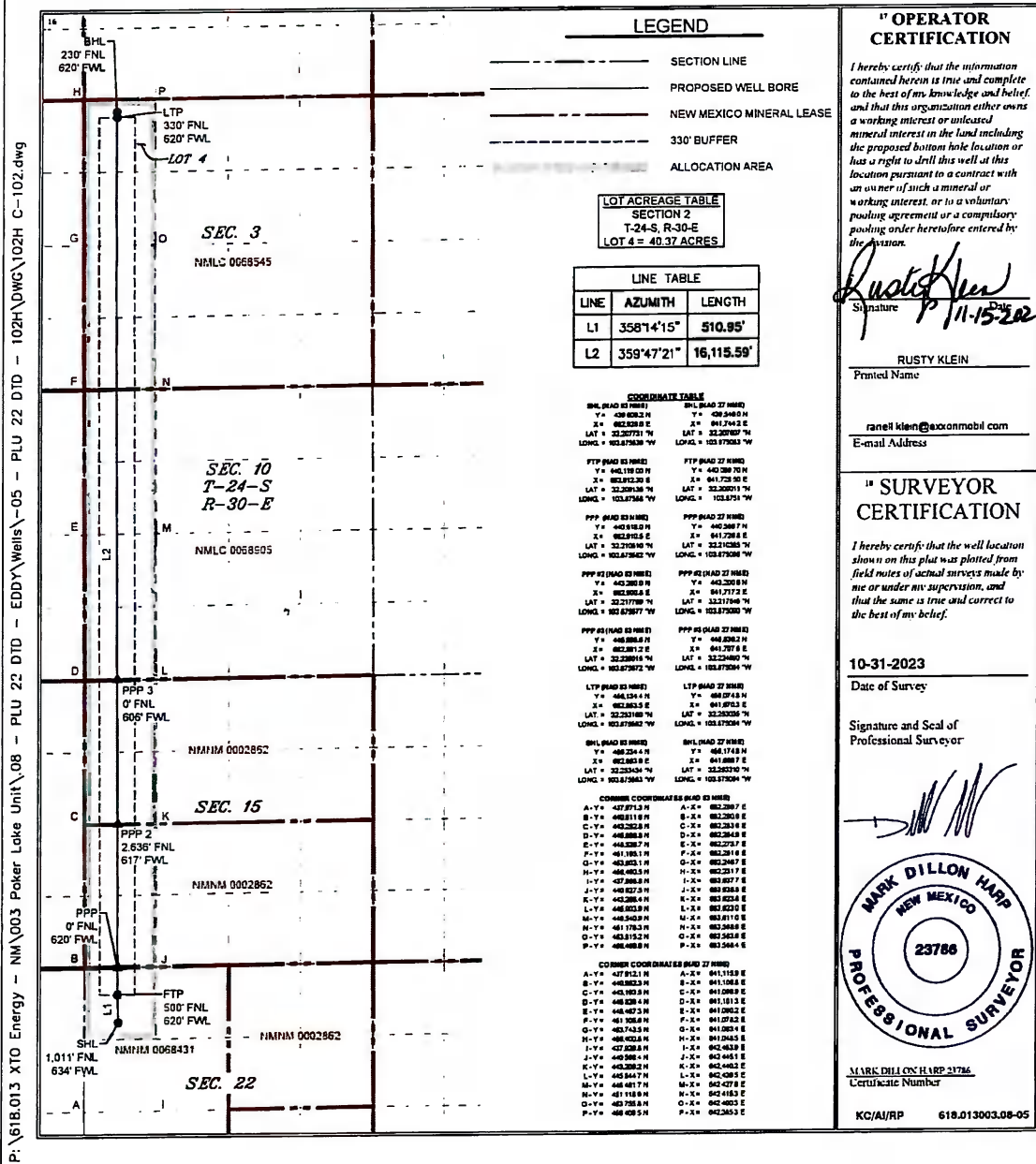
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-49854			² Pool Code 98220			³ Pool Name Purple Sage, Wolfcamp (gas)			
⁴ Property Code 333192			⁵ Property Name POKER LAKE UNIT 22 DTD				⁶ Well Number 102H		
⁷ OGRID No. 373075			⁸ Operator Name XTO PERMIAN OPERATING, LLC.				⁹ Elevation 3,406'		
" Surface Location									
¹⁰ UL or lot no. D	¹¹ Section 22	¹² Township 24S	¹³ Range 30E	¹⁴ Lot Idn	¹⁵ Feet from the 1,011	¹⁶ North/South line NORTH	¹⁷ Feet from the 634	¹⁸ East/West line WEST	¹⁹ Count EDDY
" Bottom Hole Location If Different From Surface									
¹⁰ UL or lot no. 4	¹¹ Section 3	¹² Township 24S	¹³ Range 30E	¹⁴ Lot Idn	¹⁵ Feet from the 230	¹⁶ North/South line NORTH	¹⁷ Feet from the 620	¹⁸ East/West line WEST	¹⁹ Count EDDY
²⁰ Dedicated Acres 961.04		²¹ Joint or Infill		²² Consolidation Code		²³ 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.



Intent ☒ As Drilled ☐

API # 30015		
Operator Name: XTO PERMIAN OPERATING, LLC	Property Name: Poker Lake Unit 22 DTD	Well Number 102H

Kick Off Point (KOP)

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

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	22	24S	30E		500	North	620	West	Eddy
Latitude 32.209135					Longitude 103.87558				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
4	3	24S	30E		330	North	620	East	Eddy
Latitude 32.253160					Longitude 103.875572				NAD 83

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

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

XTO Energy Inc.
POKER LAKE UNIT 22 DTD 102H
Projected TD: 28610' MD / 12082' TVD
SHL: 1011' FNL & 634' FWL , Section 22, T24S, R30E
BHL: 230' FNL & 620' FWL , Section 3, T24S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	675'	Water
Top of Salt	1078'	Water
Base of Salt	3703'	Water
Delaware	3955'	Water
Brushy Canyon	6141'	Water/Oil/Gas
Bone Spring	7786'	Water
1st Bone Spring	8580'	Water/Oil/Gas
2nd Bone Spring	9097'	Water/Oil/Gas
3rd Bone Spring	9854'	Water/Oil/Gas
Wolfcamp	11009'	Water/Oil/Gas
Wolfcamp X	11047'	Water/Oil/Gas
Wolfcamp Y	11128'	Water/Oil/Gas
Wolfcamp A	11184'	Water/Oil/Gas
Wolfcamp B	11590'	Water/Oil/Gas
Wolfcamp D	11982'	Water/Oil/Gas
Target/Land Curve	12082'	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 @ 775' (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 11165.8' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 28610 MD/TD and 6 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 10865.8 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 775'	13.375	68	HC L-80	BTC	New	1.64	7.85	29.32
12.25	0' – 4000'	9.625	40	HC P-110	BTC	New	1.44	2.14	2.83
12.25	4000' – 11165.8'	9.625	40	HC L-80	BTC	New	1.04	1.36	3.20
8.5	0' – 11065.8'	6	26	P-110	Semi-Flush	New	1.17	1.81	1.56
8.5	11065.8' - 28610'	6	26	P-110	Semi-Flush	New	1.17	1.66	1.78

- 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
- XTO requests the option to use 5" BTC Float equipment for the the production casing

Wellhead:

Permanent Wellhead – Multibowl System

- A. Starting Head: 13-5/8" 10M top flange x 13-3/8" SOW bottom (or equivalent)
- B. Tubing Head: 13-5/8" 10M bottom flange x 7-1/16" 15M top flange (or equivalent)
 - Wellhead will be installed by manufacturer's representatives.
 - Manufacturer will monitor welding process to ensure appropriate temperature of seal.
 - Operator will test the 9-5/8" casing per BLM Onshore Order 2
 - Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 13.375, 68 New BTC, HC L-80 casing to be set at +/- 775'

Lead: 350 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 +/- 11165.8'

1st Stage

Optional Lead: 1040 sxs Class C (mixed at 10.5 ppg, 2.77 ft³/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 1450 sxs Class C (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6141

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: 2160 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Top of Cement: 0

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

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6141') 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-Flush, P-110 casing to be set at +/- 28610'

Lead: 40 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 10865.8 feet

Tail: 2930 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 11370 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 5509 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, 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When nipping up on the 9.625, the BOP will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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

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

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 775'	17.5	FW/Native	8-9	35-40	NC
775' - 11165.8'	12.25	FW / Cut Brine / Direct Emulsion	9-10	30-32	NC
11165.8' - 28610'	8.5	OBM	12.5-13.5	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

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 185 to 205 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 8167 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.

11/8/23, 11:36 AM

Well Plan Report

Well Plan Report - POKER LAKE UNIT 22 DTD 102H 30-015-49854

Measured Depth: 28610.00 ft
TVD RKB: 12082.00 ft
Location
Cartographic Reference System: New Mexico East - NAD 27
Northing: 439549.00 ft
Easting: 641744.20 ft
RKB: 3438.00 ft
Ground Level: 3406.00 ft
North Reference: Grid
Convergence Angle: 0.24 Deg

Plan Sections POKER LAKE UNIT 22 DTD 102H

Measured	Depth (ft)	Inclination (Deg)	Azimuth (Deg)	TVD RKB (ft)	Y Offset (ft)	X Offset (ft)	Build		Turn		Dogleg	
							Rate (Deg/100ft)	Magnitude	Rate (Deg/100ft)	Semi-minor	Rate (Deg/100ft)	Target
	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	
	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00		0.00		0.00	
	1220.83	2.42	183.65	1220.79	-2.54	-0.16	2.00		0.00		2.00	
	5983.48	2.42	183.65	5979.21	-202.95	-12.94	0.00		0.00		0.00	
	6104.31	0.00	0.00	6100.00	-205.49	-13.10	-2.00		0.00		2.00	
	11370.10	0.00	0.00	11365.80	-205.49	-13.10	0.00		0.00		0.00	
	12495.10	90.00	359.79	12082.00	510.70	-15.70	8.00		0.00		8.00	FTP 10
	28510.31	90.00	359.79	12082.00	16525.80	-73.90	0.00		0.00		0.00	LTP 10
	28610.31	90.00	359.79	12082.00	16625.80	-74.26	0.00		0.00		0.00	BHL 10

Position Uncertainty POKER LAKE UNIT 22 DTD 102H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Tool
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Well Plan Report

Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	Error	Azimuth Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000 MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.751	112.260 MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	1.259	122.728 MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	1.698	125.475 MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.347	0.000	2.108	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	2.503	127.421 MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.407	0.000	2.888	127.870 MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.444	0.000	3.267	128.192 MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.333	0.000	3.138	0.000	2.486	0.000	3.642	128.446 MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.501	0.000	2.532	0.000	4.014	128.582 MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.057	0.000	3.865	0.000	2.582	0.000	4.384	128.759 MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.418	0.000	4.227	0.000	2.635	0.000	4.752	128.868 MWD+IFR1+MS
1200.000	1.999	183.600	1199.980	5.009	-0.000	4.481	0.000	2.692	0.000	5.083	126.089 MWD+IFR1+MS
1220.800	2.416	183.600	1220.792	5.114	-0.000	4.542	0.000	2.703	0.000	5.148	125.747 MWD+IFR1+MS
1300.000	2.416	183.600	1299.894	5.368	-0.000	4.787	0.000	2.751	0.000	5.384	125.436 MWD+IFR1+MS
1400.000	2.416	183.600	1399.805	5.705	-0.000	5.123	0.000	2.813	0.000	5.715	125.883 MWD+IFR1+MS
1500.000	2.416	183.600	1499.716	6.053	-0.000	5.469	0.000	2.879	0.000	6.061	126.491 MWD+IFR1+MS
1600.000	2.416	183.600	1599.627	6.404	-0.000	5.817	0.000	2.947	0.000	6.408	126.989 MWD+IFR1+MS
1700.000	2.416	183.600	1699.538	6.757	-0.000	6.166	0.000	3.017	0.000	6.756	127.450 MWD+IFR1+MS
1800.000	2.416	183.600	1799.449	7.112	-0.000	6.518	0.000	3.089	0.000	7.106	127.879 MWD+IFR1+MS
1900.000	2.416	183.600	1899.360	7.469	-0.000	6.870	0.000	3.162	0.000	7.457	128.261 MWD+IFR1+MS
2000.000	2.416	183.600	1999.271	7.827	-0.000	7.223	0.000	3.239	0.000	7.809	128.624 MWD+IFR1+MS
2100.000	2.416	183.600	2099.182	8.188	-0.000	7.577	0.000	3.317	0.000	8.162	128.930 MWD+IFR1+MS
2200.000	2.416	183.600	2199.093	8.549	-0.000	7.932	0.000	3.396	0.000	8.515	129.245 MWD+IFR1+MS
2300.000	2.416	183.600	2299.004	8.911	-0.000	8.286	0.000	3.477	0.000	8.869	129.493 MWD+IFR1+MS
2400.000	2.416	183.600	2398.916	9.275	-0.000	8.642	0.000	3.559	0.000	9.224	129.756 MWD+IFR1+MS
2500.000	2.416	183.600	2498.827	9.639	-0.000	8.999	0.000	3.643	0.000	9.579	130.013 MWD+IFR1+MS
2600.000	2.416	183.600	2598.738	10.003	-0.000	9.356	0.000	3.728	0.000	9.934	130.250 MWD+IFR1+MS
2700.000	2.416	183.600	2698.649	10.369	-0.000	9.713	0.000	3.814	0.000	10.290	130.452 MWD+IFR1+MS
2800.000	2.416	183.600	2798.560	10.730	-0.000	10.067	0.000	3.903	0.000	10.642	130.700 MWD+IFR1+MS
2900.000	2.416	183.600	2898.471	11.099	-0.000	10.426	0.000	3.992	0.000	11.001	130.857 MWD+IFR1+MS

11/8/23, 11:36 AM

Well Plan Report

3000.000	2.416	183.600	2998.382	11.466	-0.000	10.782	0.000	4.083	0.000	0.000	11.356	10.432	131.003	MWD+IFR1+MS
3100.000	2.416	183.600	3098.293	11.835	-0.000	11.141	0.000	4.175	0.000	0.000	11.714	10.788	131.137	MWD+IFR1+MS
3200.000	2.416	183.600	3198.204	12.202	-0.000	11.501	0.000	4.267	0.000	0.000	12.071	11.144	131.398	MWD+IFR1+MS
3300.000	2.416	183.600	3298.115	12.570	-0.000	11.859	0.000	4.362	0.000	0.000	12.428	11.499	131.511	MWD+IFR1+MS
3400.000	2.416	183.600	3398.026	12.937	-0.000	12.218	0.000	4.459	0.000	0.000	12.785	11.855	131.744	MWD+IFR1+MS
3500.000	2.416	183.600	3497.937	13.306	-0.000	12.579	0.000	4.555	0.000	0.000	13.144	12.212	131.961	MWD+IFR1+MS
3600.000	2.416	183.600	3597.848	13.677	-0.000	12.938	0.000	4.654	0.000	0.000	13.502	12.569	132.051	MWD+IFR1+MS
3700.000	2.416	183.600	3697.759	14.045	-0.000	13.298	0.000	4.754	0.000	0.000	13.860	12.926	132.247	MWD+IFR1+MS
3800.000	2.416	183.600	3797.670	14.416	-0.000	13.657	0.000	4.855	0.000	0.000	14.219	13.283	132.324	MWD+IFR1+MS
3900.000	2.416	183.600	3897.582	14.784	-0.000	14.016	0.000	4.958	0.000	0.000	14.576	13.640	132.503	MWD+IFR1+MS
4000.000	2.416	183.600	3997.493	15.155	-0.000	14.378	0.000	5.063	0.000	0.000	14.935	13.998	132.674	MWD+IFR1+MS
4100.000	2.416	183.600	4097.404	15.527	-0.000	14.737	0.000	5.168	0.000	0.000	15.294	14.356	132.733	MWD+IFR1+MS
4200.000	2.416	183.600	4197.315	15.897	-0.000	15.097	0.000	5.275	0.000	0.000	15.653	14.713	132.890	MWD+IFR1+MS
4300.000	2.416	183.600	4297.226	16.268	-0.000	15.456	0.000	5.384	0.000	0.000	16.011	15.071	132.940	MWD+IFR1+MS
4400.000	2.416	183.600	4397.137	16.638	-0.000	15.819	0.000	5.495	0.000	0.000	16.371	15.430	133.180	MWD+IFR1+MS
4500.000	2.416	183.600	4497.048	17.009	-0.000	16.177	0.000	5.606	0.000	0.000	16.729	15.787	133.222	MWD+IFR1+MS
4600.000	2.416	183.600	4596.959	17.379	-0.000	16.539	0.000	5.720	0.000	0.000	17.088	16.146	133.445	MWD+IFR1+MS
4700.000	2.416	183.600	4696.870	17.750	-0.000	16.900	0.000	5.836	0.000	0.000	17.448	16.504	133.569	MWD+IFR1+MS
4800.000	2.416	183.600	4796.781	18.122	-0.000	17.259	0.000	5.953	0.000	0.000	17.806	16.862	133.599	MWD+IFR1+MS
4900.000	2.416	183.600	4896.692	18.493	-0.000	17.621	0.000	6.072	0.000	0.000	18.166	17.222	133.800	MWD+IFR1+MS
5000.000	2.416	183.600	4996.603	18.865	-0.000	17.980	0.000	6.193	0.000	0.000	18.525	17.579	133.825	MWD+IFR1+MS
5100.000	2.416	183.600	5096.514	19.236	-0.000	18.342	0.000	6.315	0.000	0.000	18.884	17.938	134.013	MWD+IFR1+MS
5200.000	2.416	183.600	5196.425	19.608	-0.000	18.702	0.000	6.440	0.000	0.000	19.244	18.297	134.114	MWD+IFR1+MS
5300.000	2.416	183.600	5296.337	19.981	-0.000	19.064	0.000	6.567	0.000	0.000	19.604	18.657	134.210	MWD+IFR1+MS
5400.000	2.416	183.600	5396.248	20.352	-0.000	19.424	0.000	6.695	0.000	0.000	19.963	19.015	134.302	MWD+IFR1+MS
5500.000	2.416	183.600	5496.159	20.725	-0.000	19.785	0.000	6.825	0.000	0.000	20.323	19.374	134.392	MWD+IFR1+MS
5600.000	2.416	183.600	5596.070	21.096	-0.000	20.147	0.000	6.958	0.000	0.000	20.683	19.734	134.552	MWD+IFR1+MS
5700.000	2.416	183.600	5695.981	21.468	-0.000	20.507	0.000	7.092	0.000	0.000	21.042	20.093	134.633	MWD+IFR1+MS
5800.000	2.416	183.600	5795.892	21.839	-0.000	20.869	0.000	7.229	0.000	0.000	21.402	20.451	134.784	MWD+IFR1+MS
5900.000	2.416	183.600	5895.803	22.211	-0.000	21.229	0.000	7.368	0.000	0.000	21.761	20.810	134.858	MWD+IFR1+MS
5983.400	2.416	183.600	5979.208	22.519	-0.000	21.528	0.000	7.485	0.000	0.000	22.057	21.109	134.930	MWD+IFR1+MS
6000.000	2.086	183.600	5995.716	22.467	-0.000	21.588	0.000	7.509	0.000	0.000	22.116	21.171	134.930	MWD+IFR1+MS
6104.300	0.000	0.000	6100.000	22.027	0.000	21.998	0.000	7.658	0.000	0.000	22.479	21.536	134.102	MWD+IFR1+MS

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6200.000	0.000	0.000	6195.693	22.385	0.000	22.316	0.000	7.796	0.000	0.000	22.829	21.862	132.943	MWD+IFR1+MS
6300.000	0.000	0.000	6295.693	22.720	0.000	22.645	0.000	7.942	0.000	0.000	23.162	22.193	132.781	MWD+IFR1+MS
6400.000	0.000	0.000	6395.693	23.056	0.000	22.978	0.000	8.091	0.000	0.000	23.498	22.527	132.688	MWD+IFR1+MS
6500.000	0.000	0.000	6495.693	23.392	0.000	23.311	0.000	8.243	0.000	0.000	23.833	22.861	132.598	MWD+IFR1+MS
6600.000	0.000	0.000	6595.693	23.730	0.000	23.645	0.000	8.396	0.000	0.000	24.169	23.196	132.512	MWD+IFR1+MS
6700.000	0.000	0.000	6695.693	24.067	0.000	23.979	0.000	8.552	0.000	0.000	24.506	23.530	132.428	MWD+IFR1+MS
6800.000	0.000	0.000	6795.693	24.405	0.000	24.315	0.000	8.710	0.000	0.000	24.843	23.866	132.347	MWD+IFR1+MS
6900.000	0.000	0.000	6895.693	24.743	0.000	24.652	0.000	8.871	0.000	0.000	25.181	24.203	132.328	MWD+IFR1+MS
7000.000	0.000	0.000	6995.693	25.082	0.000	24.988	0.000	9.035	0.000	0.000	25.520	24.540	132.250	MWD+IFR1+MS
7100.000	0.000	0.000	7095.693	25.422	0.000	25.326	0.000	9.201	0.000	0.000	25.860	24.879	132.176	MWD+IFR1+MS
7200.000	0.000	0.000	7195.693	25.762	0.000	25.663	0.000	9.369	0.000	0.000	26.199	25.217	132.103	MWD+IFR1+MS
7300.000	0.000	0.000	7295.693	26.104	0.000	26.002	0.000	9.540	0.000	0.000	26.540	25.556	132.032	MWD+IFR1+MS
7400.000	0.000	0.000	7395.693	26.444	0.000	26.340	0.000	9.714	0.000	0.000	26.880	25.895	131.964	MWD+IFR1+MS
7500.000	0.000	0.000	7495.693	26.786	0.000	26.680	0.000	9.890	0.000	0.000	27.222	26.235	131.897	MWD+IFR1+MS
7600.000	0.000	0.000	7595.693	27.127	0.000	27.019	0.000	10.065	0.000	0.000	27.562	26.575	131.832	MWD+IFR1+MS
7700.000	0.000	0.000	7695.693	27.470	0.000	27.359	0.000	10.247	0.000	0.000	27.904	26.916	131.769	MWD+IFR1+MS
7800.000	0.000	0.000	7795.693	27.814	0.000	27.700	0.000	10.431	0.000	0.000	28.247	27.258	131.708	MWD+IFR1+MS
7900.000	0.000	0.000	7895.693	28.157	0.000	28.041	0.000	10.621	0.000	0.000	28.590	27.599	131.648	MWD+IFR1+MS
8000.000	0.000	0.000	7995.693	28.501	0.000	28.383	0.000	10.807	0.000	0.000	28.934	27.942	131.590	MWD+IFR1+MS
8100.000	0.000	0.000	8095.693	28.844	0.000	28.725	0.000	11.000	0.000	0.000	29.277	28.284	131.533	MWD+IFR1+MS
8200.000	0.000	0.000	8195.693	29.189	0.000	29.067	0.000	11.198	0.000	0.000	29.621	28.627	131.478	MWD+IFR1+MS
8300.000	0.000	0.000	8295.693	29.533	0.000	29.411	0.000	11.397	0.000	0.000	29.965	28.970	131.473	MWD+IFR1+MS
8400.000	0.000	0.000	8395.693	29.878	0.000	29.754	0.000	11.597	0.000	0.000	30.310	29.314	131.420	MWD+IFR1+MS
8500.000	0.000	0.000	8495.693	30.224	0.000	30.097	0.000	11.798	0.000	0.000	30.655	29.658	131.320	MWD+IFR1+MS
8600.000	0.000	0.000	8595.693	30.570	0.000	30.440	0.000	12.004	0.000	0.000	31.000	30.002	131.270	MWD+IFR1+MS
8700.000	0.000	0.000	8695.693	30.916	0.000	30.785	0.000	12.215	0.000	0.000	31.346	30.347	131.222	MWD+IFR1+MS
8800.000	0.000	0.000	8795.693	31.262	0.000	31.130	0.000	12.426	0.000	0.000	31.692	30.693	131.220	MWD+IFR1+MS
8900.000	0.000	0.000	8895.693	31.609	0.000	31.474	0.000	12.641	0.000	0.000	32.037	31.037	131.128	MWD+IFR1+MS
9000.000	0.000	0.000	8995.693	31.953	0.000	31.812	0.000	12.861	0.000	0.000	32.379	31.378	130.949	MWD+IFR1+MS
9100.000	0.000	0.000	9095.693	32.296	0.000	32.156	0.000	13.081	0.000	0.000	32.723	31.721	130.994	MWD+IFR1+MS
9200.000	0.000	0.000	9195.693	32.650	0.000	32.512	0.000	13.304	0.000	0.000	33.078	32.076	131.038	MWD+IFR1+MS
9300.000	0.000	0.000	9295.693	32.985	0.000	32.848	0.000	13.531	0.000	0.000	33.414	32.411	131.081	MWD+IFR1+MS
9400.000	0.000	0.000	9395.693	33.332	0.000	33.196	0.000	13.759	0.000	0.000	33.762	32.759	131.122	MWD+IFR1+MS

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9500.000	0.000	0.000	9495.693	33.690	0.000	33.541	0.000	13.993	0.000	0.000	34.114	33.109	130.743	MWD+IFR1+MS
9600.000	0.000	0.000	9595.693	34.029	0.000	33.897	0.000	14.227	0.000	0.000	34.461	33.458	131.204	MWD+IFR1+MS
9700.000	0.000	0.000	9695.693	34.380	0.000	34.234	0.000	14.467	0.000	0.000	34.806	33.801	130.832	MWD+IFR1+MS
9800.000	0.000	0.000	9795.693	34.728	0.000	34.583	0.000	14.707	0.000	0.000	35.155	34.149	130.874	MWD+IFR1+MS
9900.000	0.000	0.000	9895.693	35.086	0.000	34.928	0.000	14.950	0.000	0.000	35.507	34.500	130.515	MWD+IFR1+MS
10000.000	0.000	0.000	9995.693	35.426	0.000	35.285	0.000	15.199	0.000	0.000	35.855	34.849	130.958	MWD+IFR1+MS
10100.000	0.000	0.000	10095.693	35.777	0.000	35.623	0.000	15.447	0.000	0.000	36.201	35.193	130.604	MWD+IFR1+MS
10200.000	0.000	0.000	10195.693	36.125	0.000	35.972	0.000	15.700	0.000	0.000	36.549	35.541	130.647	MWD+IFR1+MS
10300.000	0.000	0.000	10295.693	36.483	0.000	36.318	0.000	15.956	0.000	0.000	36.902	35.892	130.305	MWD+IFR1+MS
10400.000	0.000	0.000	10395.693	36.824	0.000	36.674	0.000	16.214	0.000	0.000	37.250	36.242	130.732	MWD+IFR1+MS
10500.000	0.000	0.000	10495.693	37.175	0.000	37.027	0.000	16.477	0.000	0.000	37.602	36.594	130.772	MWD+IFR1+MS
10600.000	0.000	0.000	10595.693	37.523	0.000	37.376	0.000	16.742	0.000	0.000	37.951	36.942	130.813	MWD+IFR1+MS
10700.000	0.000	0.000	10695.693	37.881	0.000	37.723	0.000	17.009	0.000	0.000	38.304	37.294	130.481	MWD+IFR1+MS
10800.000	0.000	0.000	10795.693	38.223	0.000	38.066	0.000	17.280	0.000	0.000	38.646	37.636	130.523	MWD+IFR1+MS
10900.000	0.000	0.000	10895.693	38.575	0.000	38.419	0.000	17.553	0.000	0.000	38.999	37.988	130.564	MWD+IFR1+MS
11000.000	0.000	0.000	10995.693	38.923	0.000	38.769	0.000	17.830	0.000	0.000	39.348	38.337	130.605	MWD+IFR1+MS
11100.000	0.000	0.000	11095.693	39.281	0.000	39.115	0.000	18.111	0.000	0.000	39.701	38.689	130.288	MWD+IFR1+MS
11200.000	0.000	0.000	11195.693	39.636	0.000	39.472	0.000	18.393	0.000	0.000	40.057	39.044	130.330	MWD+IFR1+MS
11300.000	0.000	0.000	11295.693	39.987	0.000	39.812	0.000	18.679	0.000	0.000	40.404	39.389	130.022	MWD+IFR1+MS
11370.000	0.000	0.000	11365.803	40.224	0.000	40.062	0.000	18.881	0.000	0.000	40.645	39.635	130.386	MWD+IFR1+MS
11400.000	2.391	359.700	11395.684	38.584	0.000	40.167	0.000	18.968	0.000	0.000	40.751	39.741	130.043	MWD+IFR1+MS
11500.000	10.390	359.700	11494.982	32.359	0.000	40.515	0.000	19.274	0.000	0.000	41.404	40.208	119.943	MWD+IFR1+MS
11600.000	18.390	359.700	11591.765	24.090	0.000	40.847	0.000	19.682	0.000	0.000	42.574	40.651	108.138	MWD+IFR1+MS
11700.000	26.390	359.700	11684.151	9.600	0.000	41.165	0.000	20.246	0.000	0.000	43.689	41.004	103.666	MWD+IFR1+MS
11800.000	34.390	359.700	11770.340	18.910	0.000	41.468	0.000	21.005	0.000	0.000	44.651	41.319	101.673	MWD+IFR1+MS
11900.000	42.390	359.700	11848.655	26.551	0.000	41.745	0.000	21.975	0.000	0.000	45.437	41.599	100.695	MWD+IFR1+MS
12000.000	50.390	359.700	11917.572	29.947	0.000	42.008	0.000	23.147	0.000	0.000	46.051	41.861	100.262	MWD+IFR1+MS
12100.000	58.390	359.700	11975.750	29.889	0.000	42.246	0.000	24.491	0.000	0.000	46.488	42.093	100.176	MWD+IFR1+MS
12200.000	66.390	359.700	12022.055	26.117	0.000	42.447	0.000	25.967	0.000	0.000	46.784	42.288	100.263	MWD+IFR1+MS
12300.000	74.390	359.700	12055.588	16.553	0.000	42.635	0.000	27.523	0.000	0.000	46.941	42.469	100.559	MWD+IFR1+MS
12400.000	82.390	359.700	12075.694	17.152	0.000	42.788	0.000	29.105	0.000	0.000	47.011	42.614	100.893	MWD+IFR1+MS
12495.000	90.000	359.700	12082.000	30.460	0.000	42.904	0.000	30.460	0.000	0.000	47.037	42.726	101.158	MWD+IFR1+MS
12500.000	90.000	359.700	12082.000	30.466	0.000	42.916	0.000	30.466	0.000	0.000	47.038	42.737	101.186	MWD+IFR1+MS

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12600.000	90.000	359.700	12082.000	30.594	0.000	43.032	0.000	30.594	0.000	47.042	42.850	101.477	MWD+IFR1+MS
12700.000	90.000	359.700	12082.000	30.746	0.000	43.172	0.000	30.746	0.000	47.057	42.984	101.815	MWD+IFR1+MS
12800.000	90.000	359.700	12082.000	30.916	0.000	43.333	0.000	30.916	0.000	47.074	43.140	102.238	MWD+IFR1+MS
12900.000	90.000	359.700	12082.000	31.106	0.000	43.506	0.000	31.106	0.000	47.081	43.305	102.765	MWD+IFR1+MS
13000.000	90.000	359.700	12082.000	31.315	0.000	43.701	0.000	31.315	0.000	47.101	43.491	103.373	MWD+IFR1+MS
13100.000	90.000	359.700	12082.000	31.540	0.000	43.906	0.000	31.540	0.000	47.122	43.687	104.083	MWD+IFR1+MS
13200.000	90.000	359.700	12082.000	31.780	0.000	44.134	0.000	31.780	0.000	47.145	43.901	104.960	MWD+IFR1+MS
13300.000	90.000	359.700	12082.000	32.047	0.000	44.382	0.000	32.047	0.000	47.172	44.134	106.050	MWD+IFR1+MS
13400.000	90.000	359.700	12082.000	32.311	0.000	44.641	0.000	32.311	0.000	47.202	44.373	107.355	MWD+IFR1+MS
13500.000	90.000	359.700	12082.000	32.619	0.000	44.909	0.000	32.619	0.000	47.237	44.617	108.926	MWD+IFR1+MS
13600.000	90.000	359.700	12082.000	32.924	0.000	45.208	0.000	32.924	0.000	47.280	44.885	111.011	MWD+IFR1+MS
13700.000	90.000	359.700	12082.000	33.257	0.000	45.506	0.000	33.257	0.000	47.330	45.143	113.494	MWD+IFR1+MS
13800.000	90.000	359.700	12082.000	33.586	0.000	45.834	0.000	33.586	0.000	47.405	45.418	116.697	MWD+IFR1+MS
13900.000	90.000	359.700	12082.000	33.956	0.000	46.160	0.000	33.956	0.000	47.486	45.673	120.674	MWD+IFR1+MS
14000.000	90.000	359.700	12082.000	34.322	0.000	46.516	0.000	34.322	0.000	47.599	45.928	125.865	MWD+IFR1+MS
14100.000	90.000	359.700	12082.000	34.699	0.000	46.880	0.000	34.699	0.000	47.752	46.160	131.737	MWD+IFR1+MS
14200.000	90.000	359.700	12082.000	35.100	0.000	47.252	0.000	35.100	0.000	47.941	46.353	-41.741	MWD+IFR1+MS
14300.000	90.000	359.700	12082.000	35.511	0.000	47.642	0.000	35.511	0.000	48.186	46.520	-35.381	MWD+IFR1+MS
14400.000	90.000	359.700	12082.000	35.930	0.000	48.050	0.000	35.930	0.000	48.478	46.646	-29.452	MWD+IFR1+MS
14500.000	90.000	359.700	12082.000	36.373	0.000	48.464	0.000	36.373	0.000	48.810	46.751	-24.711	MWD+IFR1+MS
14600.000	90.000	359.700	12082.000	36.824	0.000	48.885	0.000	36.824	0.000	49.169	46.833	-20.937	MWD+IFR1+MS
14700.000	90.000	359.700	12082.000	37.283	0.000	49.333	0.000	37.283	0.000	49.569	46.903	-17.828	MWD+IFR1+MS
14800.000	90.000	359.700	12082.000	37.749	0.000	49.777	0.000	37.749	0.000	49.978	46.960	-15.448	MWD+IFR1+MS
14900.000	90.000	359.700	12082.000	38.223	0.000	50.247	0.000	38.223	0.000	50.418	47.000	-13.435	MWD+IFR1+MS
15000.000	90.000	359.700	12082.000	38.717	0.000	50.723	0.000	38.717	0.000	50.871	47.044	-11.864	MWD+IFR1+MS
15100.000	90.000	359.700	12082.000	39.217	0.000	51.203	0.000	39.217	0.000	51.333	47.084	-10.587	MWD+IFR1+MS
15200.000	90.000	359.700	12082.000	39.724	0.000	51.699	0.000	39.724	0.000	51.814	47.131	-9.532	MWD+IFR1+MS
15300.000	90.000	359.700	12082.000	40.237	0.000	52.199	0.000	40.237	0.000	52.302	47.164	-8.633	MWD+IFR1+MS
15400.000	90.000	359.700	12082.000	40.768	0.000	52.714	0.000	40.768	0.000	52.806	47.196	-7.860	MWD+IFR1+MS
15500.000	90.000	359.700	12082.000	41.292	0.000	53.243	0.000	41.292	0.000	53.326	47.227	-7.192	MWD+IFR1+MS
15600.000	90.000	359.700	12082.000	41.833	0.000	53.775	0.000	41.833	0.000	53.850	47.267	-6.629	MWD+IFR1+MS
15700.000	90.000	359.700	12082.000	42.391	0.000	54.321	0.000	42.391	0.000	54.389	47.295	-6.124	MWD+IFR1+MS
15800.000	90.000	359.700	12082.000	42.942	0.000	54.871	0.000	42.942	0.000	54.933	47.322	-5.685	MWD+IFR1+MS

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15900.000	90.000	359.700	12082.000	43.509	0.000	55.433	0.000	43.509	0.000	0.000	55.490	47.359	-5.299	MWD+IFR1+MS
16000.000	90.000	359.700	12082.000	44.079	0.000	55.998	0.000	44.079	0.000	0.000	56.051	47.395	-4.958	MWD+IFR1+MS
16100.000	90.000	359.700	12082.000	44.654	0.000	56.575	0.000	44.654	0.000	0.000	56.624	47.421	-4.645	MWD+IFR1+MS
16200.000	90.000	359.700	12082.000	45.233	0.000	57.165	0.000	45.233	0.000	0.000	57.209	47.456	-4.367	MWD+IFR1+MS
16300.000	90.000	359.700	12082.000	45.826	0.000	57.756	0.000	45.826	0.000	0.000	57.798	47.491	-4.117	MWD+IFR1+MS
16400.000	90.000	359.700	12082.000	46.422	0.000	58.351	0.000	46.422	0.000	0.000	58.389	47.515	-3.889	MWD+IFR1+MS
16500.000	90.000	359.700	12082.000	47.021	0.000	58.964	0.000	47.021	0.000	0.000	59.000	47.550	-3.680	MWD+IFR1+MS
16600.000	90.000	359.700	12082.000	47.624	0.000	59.572	0.000	47.624	0.000	0.000	59.605	47.584	-3.494	MWD+IFR1+MS
16700.000	90.000	359.700	12082.000	48.239	0.000	60.198	0.000	48.239	0.000	0.000	60.229	47.618	-3.319	MWD+IFR1+MS
16800.000	90.000	359.700	12082.000	48.857	0.000	60.818	0.000	48.857	0.000	0.000	60.847	47.651	-3.162	MWD+IFR1+MS
16900.000	90.000	359.700	12082.000	49.477	0.000	61.456	0.000	49.477	0.000	0.000	61.483	47.685	-3.014	MWD+IFR1+MS
17000.000	90.000	359.700	12082.000	50.100	0.000	62.095	0.000	50.100	0.000	0.000	62.121	47.728	-2.880	MWD+IFR1+MS
17100.000	90.000	359.700	12082.000	50.735	0.000	62.736	0.000	50.735	0.000	0.000	62.760	47.762	-2.756	MWD+IFR1+MS
17200.000	90.000	359.700	12082.000	51.361	0.000	63.386	0.000	51.361	0.000	0.000	63.409	47.795	-2.639	MWD+IFR1+MS
17300.000	90.000	359.700	12082.000	52.000	0.000	64.045	0.000	52.000	0.000	0.000	64.067	47.838	-2.531	MWD+IFR1+MS
17400.000	90.000	359.700	12082.000	52.650	0.000	64.705	0.000	52.650	0.000	0.000	64.726	47.871	-2.430	MWD+IFR1+MS
17500.000	90.000	359.700	12082.000	53.292	0.000	65.367	0.000	53.292	0.000	0.000	65.386	47.903	-2.336	MWD+IFR1+MS
17600.000	90.000	359.700	12082.000	53.944	0.000	66.036	0.000	53.944	0.000	0.000	66.054	47.946	-2.249	MWD+IFR1+MS
17700.000	90.000	359.700	12082.000	54.599	0.000	66.714	0.000	54.599	0.000	0.000	66.731	47.989	-2.167	MWD+IFR1+MS
17800.000	90.000	359.700	12082.000	55.254	0.000	67.400	0.000	55.254	0.000	0.000	67.416	48.021	-2.088	MWD+IFR1+MS
17900.000	90.000	359.700	12082.000	55.911	0.000	68.079	0.000	55.911	0.000	0.000	68.095	48.064	-2.017	MWD+IFR1+MS
18000.000	90.000	359.700	12082.000	56.577	0.000	68.773	0.000	56.577	0.000	0.000	68.788	48.106	-1.948	MWD+IFR1+MS
18100.000	90.000	359.700	12082.000	57.236	0.000	69.468	0.000	57.236	0.000	0.000	69.482	48.149	-1.884	MWD+IFR1+MS
18200.000	90.000	359.700	12082.000	57.905	0.000	70.163	0.000	57.905	0.000	0.000	70.176	48.181	-1.823	MWD+IFR1+MS
18300.000	90.000	359.700	12082.000	58.583	0.000	70.865	0.000	58.583	0.000	0.000	70.877	48.223	-1.765	MWD+IFR1+MS
18400.000	90.000	359.700	12082.000	59.254	0.000	71.574	0.000	59.254	0.000	0.000	71.586	48.265	-1.711	MWD+IFR1+MS
18500.000	90.000	359.700	12082.000	59.933	0.000	72.283	0.000	59.933	0.000	0.000	72.294	48.307	-1.659	MWD+IFR1+MS
18600.000	90.000	359.700	12082.000	60.614	0.000	72.999	0.000	60.614	0.000	0.000	73.009	48.359	-1.611	MWD+IFR1+MS
18700.000	90.000	359.700	12082.000	61.294	0.000	73.714	0.000	61.294	0.000	0.000	73.725	48.401	-1.565	MWD+IFR1+MS
18800.000	90.000	359.700	12082.000	61.984	0.000	74.437	0.000	61.984	0.000	0.000	74.446	48.443	-1.521	MWD+IFR1+MS
18900.000	90.000	359.700	12082.000	62.666	0.000	75.159	0.000	62.666	0.000	0.000	75.168	48.485	-1.479	MWD+IFR1+MS
19000.000	90.000	359.700	12082.000	63.356	0.000	75.887	0.000	63.356	0.000	0.000	75.896	48.537	-1.439	MWD+IFR1+MS
19100.000	90.000	359.700	12082.000	64.047	0.000	76.621	0.000	64.047	0.000	0.000	76.630	48.579	-1.401	MWD+IFR1+MS

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19200.000	90.000	359.700	12082.000	64.746	0.000	77.355	0.000	64.746	0.000	77.363	48.631	-1.365	MWD+IFR1+MS
19300.000	90.000	359.700	12082.000	65.437	0.000	78.088	0.000	65.437	0.000	78.096	48.672	-1.331	MWD+IFR1+MS
19400.000	90.000	359.700	12082.000	66.136	0.000	78.828	0.000	66.136	0.000	78.835	48.724	-1.298	MWD+IFR1+MS
19500.000	90.000	359.700	12082.000	66.836	0.000	79.573	0.000	66.836	0.000	79.580	48.765	-1.266	MWD+IFR1+MS
19600.000	90.000	359.700	12082.000	67.543	0.000	80.317	0.000	67.543	0.000	80.324	48.817	-1.236	MWD+IFR1+MS
19700.000	90.000	359.700	12082.000	68.242	0.000	81.067	0.000	68.242	0.000	81.073	48.869	-1.207	MWD+IFR1+MS
19800.000	90.000	359.700	12082.000	68.949	0.000	81.816	0.000	68.949	0.000	81.822	48.920	-1.180	MWD+IFR1+MS
19900.000	90.000	359.700	12082.000	69.656	0.000	82.570	0.000	69.656	0.000	82.576	48.972	-1.153	MWD+IFR1+MS
20000.000	90.000	359.700	12082.000	70.363	0.000	83.330	0.000	70.363	0.000	83.335	49.023	-1.128	MWD+IFR1+MS
20100.000	90.000	359.700	12082.000	71.077	0.000	84.088	0.000	71.077	0.000	84.094	49.074	-1.103	MWD+IFR1+MS
20200.000	90.000	359.700	12082.000	71.784	0.000	84.846	0.000	71.784	0.000	84.851	49.125	-1.080	MWD+IFR1+MS
20300.000	90.000	359.700	12082.000	72.498	0.000	85.608	0.000	72.498	0.000	85.614	49.176	-1.058	MWD+IFR1+MS
20400.000	90.000	359.700	12082.000	73.212	0.000	86.376	0.000	73.212	0.000	86.381	49.228	-1.036	MWD+IFR1+MS
20500.000	90.000	359.700	12082.000	73.932	0.000	87.143	0.000	73.932	0.000	87.147	49.279	-1.015	MWD+IFR1+MS
20600.000	90.000	359.700	12082.000	74.646	0.000	87.914	0.000	74.646	0.000	87.918	49.340	-0.995	MWD+IFR1+MS
20700.000	90.000	359.700	12082.000	75.366	0.000	88.684	0.000	75.366	0.000	88.688	49.391	-0.976	MWD+IFR1+MS
20800.000	90.000	359.700	12082.000	76.085	0.000	89.458	0.000	76.085	0.000	89.463	49.451	-0.957	MWD+IFR1+MS
20900.000	90.000	359.700	12082.000	76.811	0.000	90.232	0.000	76.811	0.000	90.236	49.502	-0.939	MWD+IFR1+MS
21000.000	90.000	359.700	12082.000	77.531	0.000	91.010	0.000	77.531	0.000	91.014	49.563	-0.922	MWD+IFR1+MS
21100.000	90.000	359.700	12082.000	78.256	0.000	91.792	0.000	78.256	0.000	91.796	49.614	-0.905	MWD+IFR1+MS
21200.000	90.000	359.700	12082.000	78.981	0.000	92.573	0.000	78.981	0.000	92.577	49.674	-0.889	MWD+IFR1+MS
21300.000	90.000	359.700	12082.000	79.706	0.000	93.353	0.000	79.706	0.000	93.357	49.735	-0.874	MWD+IFR1+MS
21400.000	90.000	359.700	12082.000	80.436	0.000	94.143	0.000	80.436	0.000	94.146	49.795	-0.859	MWD+IFR1+MS
21500.000	90.000	359.700	12082.000	81.160	0.000	94.925	0.000	81.160	0.000	94.928	49.846	-0.845	MWD+IFR1+MS
21600.000	90.000	359.700	12082.000	81.890	0.000	95.717	0.000	81.890	0.000	95.720	49.906	-0.830	MWD+IFR1+MS
21700.000	90.000	359.700	12082.000	82.620	0.000	96.503	0.000	82.620	0.000	96.506	49.966	-0.817	MWD+IFR1+MS
21800.000	90.000	359.700	12082.000	83.355	0.000	97.298	0.000	83.355	0.000	97.300	50.026	-0.804	MWD+IFR1+MS
21900.000	90.000	359.700	12082.000	84.083	0.000	98.091	0.000	84.083	0.000	98.094	50.096	-0.791	MWD+IFR1+MS
22000.000	90.000	359.700	12082.000	84.817	0.000	98.883	0.000	84.817	0.000	98.886	50.156	-0.779	MWD+IFR1+MS
22100.000	90.000	359.700	12082.000	85.551	0.000	99.679	0.000	85.551	0.000	99.681	50.216	-0.767	MWD+IFR1+MS
22200.000	90.000	359.700	12082.000	86.290	0.000	100.453	0.000	86.290	0.000	100.456	50.276	-0.756	MWD+IFR1+MS
22300.000	90.000	359.700	12082.000	87.023	0.000	101.246	0.000	87.023	0.000	101.249	50.346	-0.745	MWD+IFR1+MS
22400.000	90.000	359.700	12082.000	87.761	0.000	102.034	0.000	87.761	0.000	102.036	50.405	-0.734	MWD+IFR1+MS

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22500.000	90.000	359.700	12082.000	88.499	0.000	102.863	0.000	88.499	0.000	0.000	102.865	50.465	-0.723	MWD+IFR1+MS
22600.000	90.000	359.700	12082.000	89.236	0.000	103.638	0.000	89.236	0.000	0.000	103.640	50.534	-0.713	MWD+IFR1+MS
22700.000	90.000	359.700	12082.000	89.978	0.000	104.455	0.000	89.978	0.000	0.000	104.457	50.604	-0.703	MWD+IFR1+MS
22800.000	90.000	359.700	12082.000	90.714	0.000	105.266	0.000	90.714	0.000	0.000	105.268	50.663	-0.694	MWD+IFR1+MS
22900.000	90.000	359.700	12082.000	91.455	0.000	106.070	0.000	91.455	0.000	0.000	106.072	50.732	-0.684	MWD+IFR1+MS
23000.000	90.000	359.700	12082.000	92.201	0.000	106.868	0.000	92.201	0.000	0.000	106.870	50.801	-0.675	MWD+IFR1+MS
23100.000	90.000	359.700	12082.000	92.941	0.000	107.707	0.000	92.941	0.000	0.000	107.709	50.870	-0.666	MWD+IFR1+MS
23200.000	90.000	359.700	12082.000	93.686	0.000	108.494	0.000	93.686	0.000	0.000	108.495	50.929	-0.658	MWD+IFR1+MS
23300.000	90.000	359.700	12082.000	94.425	0.000	109.320	0.000	94.425	0.000	0.000	109.322	50.998	-0.650	MWD+IFR1+MS
23400.000	90.000	359.700	12082.000	95.174	0.000	110.140	0.000	95.174	0.000	0.000	110.142	51.067	-0.641	MWD+IFR1+MS
23500.000	90.000	359.700	12082.000	95.917	0.000	110.954	0.000	95.917	0.000	0.000	110.956	51.135	-0.633	MWD+IFR1+MS
23600.000	90.000	359.700	12082.000	96.659	0.000	111.763	0.000	96.659	0.000	0.000	111.764	51.213	-0.626	MWD+IFR1+MS
23700.000	90.000	359.700	12082.000	97.406	0.000	112.565	0.000	97.406	0.000	0.000	112.566	51.282	-0.619	MWD+IFR1+MS
23800.000	90.000	359.700	12082.000	98.153	0.000	113.362	0.000	98.153	0.000	0.000	113.363	51.350	-0.611	MWD+IFR1+MS
23900.000	90.000	359.700	12082.000	98.904	0.000	114.197	0.000	98.904	0.000	0.000	114.198	51.418	-0.604	MWD+IFR1+MS
24000.000	90.000	359.700	12082.000	99.649	0.000	115.025	0.000	99.649	0.000	0.000	115.027	51.496	-0.597	MWD+IFR1+MS
24100.000	90.000	359.700	12082.000	100.399	0.000	115.848	0.000	100.399	0.000	0.000	115.850	51.564	-0.590	MWD+IFR1+MS
24200.000	90.000	359.700	12082.000	101.143	0.000	116.666	0.000	101.143	0.000	0.000	116.667	51.642	-0.584	MWD+IFR1+MS
24300.000	90.000	359.700	12082.000	101.882	0.000	117.477	0.000	101.882	0.000	0.000	117.478	51.709	-0.578	MWD+IFR1+MS
24400.000	90.000	359.700	12082.000	102.616	0.000	118.283	0.000	102.616	0.000	0.000	118.284	51.787	-0.572	MWD+IFR1+MS
24500.000	90.000	359.700	12082.000	103.392	0.000	119.125	0.000	103.392	0.000	0.000	119.126	51.854	-0.565	MWD+IFR1+MS
24600.000	90.000	359.700	12082.000	104.115	0.000	119.920	0.000	104.115	0.000	0.000	119.921	51.932	-0.560	MWD+IFR1+MS
24700.000	90.000	359.700	12082.000	104.881	0.000	120.751	0.000	104.881	0.000	0.000	120.752	52.009	-0.554	MWD+IFR1+MS
24800.000	90.000	359.700	12082.000	105.641	0.000	121.577	0.000	105.641	0.000	0.000	121.578	52.085	-0.548	MWD+IFR1+MS
24900.000	90.000	359.700	12082.000	106.395	0.000	122.396	0.000	106.395	0.000	0.000	122.397	52.162	-0.543	MWD+IFR1+MS
25000.000	90.000	359.700	12082.000	107.145	0.000	123.251	0.000	107.145	0.000	0.000	123.252	52.239	-0.537	MWD+IFR1+MS
25100.000	90.000	359.700	12082.000	107.889	0.000	124.060	0.000	107.889	0.000	0.000	124.061	52.315	-0.532	MWD+IFR1+MS
25200.000	90.000	359.700	12082.000	108.628	0.000	124.904	0.000	108.628	0.000	0.000	124.904	52.392	-0.527	MWD+IFR1+MS
25300.000	90.000	359.700	12082.000	109.407	0.000	125.741	0.000	109.407	0.000	0.000	125.742	52.468	-0.522	MWD+IFR1+MS
25400.000	90.000	359.700	12082.000	110.136	0.000	126.574	0.000	110.136	0.000	0.000	126.574	52.544	-0.517	MWD+IFR1+MS
25500.000	90.000	359.700	12082.000	110.905	0.000	127.401	0.000	110.905	0.000	0.000	127.401	52.621	-0.512	MWD+IFR1+MS
25600.000	90.000	359.700	12082.000	111.669	0.000	128.222	0.000	111.669	0.000	0.000	128.223	52.706	-0.508	MWD+IFR1+MS
25700.000	90.000	359.700	12082.000	112.428	0.000	129.038	0.000	112.428	0.000	0.000	129.039	52.782	-0.503	MWD+IFR1+MS

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25800.000	90.000	359.700	12082.000	113.181	0.000	129.888	0.000	113.181	0.000	0.000	129.889	52.858	-0.499	MWD+IFR1+MS
25900.000	90.000	359.700	12082.000	113.930	0.000	130.694	0.000	113.930	0.000	0.000	130.695	52.943	-0.494	MWD+IFR1+MS
26000.000	90.000	359.700	12082.000	114.673	0.000	131.533	0.000	114.673	0.000	0.000	131.533	53.018	-0.490	MWD+IFR1+MS
26100.000	90.000	359.700	12082.000	115.456	0.000	132.367	0.000	115.456	0.000	0.000	132.367	53.103	-0.486	MWD+IFR1+MS
26200.000	90.000	359.700	12082.000	116.190	0.000	133.195	0.000	116.190	0.000	0.000	133.196	53.188	-0.482	MWD+IFR1+MS
26300.000	90.000	359.700	12082.000	116.962	0.000	134.056	0.000	116.962	0.000	0.000	134.056	53.272	-0.478	MWD+IFR1+MS
26400.000	90.000	359.700	12082.000	117.729	0.000	134.874	0.000	117.729	0.000	0.000	134.874	53.347	-0.474	MWD+IFR1+MS
26500.000	90.000	359.700	12082.000	118.491	0.000	135.724	0.000	118.491	0.000	0.000	135.724	53.432	-0.470	MWD+IFR1+MS
26600.000	90.000	359.700	12082.000	119.248	0.000	136.568	0.000	119.248	0.000	0.000	136.569	53.516	-0.466	MWD+IFR1+MS
26700.000	90.000	359.700	12082.000	120.000	0.000	137.408	0.000	120.000	0.000	0.000	137.408	53.600	-0.463	MWD+IFR1+MS
26800.000	90.000	359.700	12082.000	120.748	0.000	138.242	0.000	120.748	0.000	0.000	138.243	53.684	-0.459	MWD+IFR1+MS
26900.000	90.000	359.700	12082.000	121.532	0.000	139.072	0.000	121.532	0.000	0.000	139.072	53.768	-0.456	MWD+IFR1+MS
27000.000	90.000	359.700	12082.000	122.270	0.000	139.896	0.000	122.270	0.000	0.000	139.897	53.851	-0.452	MWD+IFR1+MS
27100.000	90.000	359.700	12082.000	123.045	0.000	140.751	0.000	123.045	0.000	0.000	140.752	53.944	-0.449	MWD+IFR1+MS
27200.000	90.000	359.700	12082.000	123.814	0.000	141.601	0.000	123.814	0.000	0.000	141.602	54.027	-0.445	MWD+IFR1+MS
27300.000	90.000	359.700	12082.000	124.579	0.000	142.411	0.000	124.579	0.000	0.000	142.412	54.111	-0.443	MWD+IFR1+MS
27400.000	90.000	359.700	12082.000	125.340	0.000	143.286	0.000	125.340	0.000	0.000	143.287	54.203	-0.439	MWD+IFR1+MS
27500.000	90.000	359.700	12082.000	126.095	0.000	144.121	0.000	126.095	0.000	0.000	144.122	54.286	-0.436	MWD+IFR1+MS
27600.000	90.000	359.700	12082.000	126.846	0.000	144.951	0.000	126.846	0.000	0.000	144.952	54.378	-0.433	MWD+IFR1+MS
27700.000	90.000	359.700	12082.000	127.632	0.000	145.811	0.000	127.632	0.000	0.000	145.812	54.461	-0.430	MWD+IFR1+MS
27800.000	90.000	359.700	12082.000	128.374	0.000	146.632	0.000	128.374	0.000	0.000	146.632	54.552	-0.427	MWD+IFR1+MS
27900.000	90.000	359.700	12082.000	129.151	0.000	147.482	0.000	129.151	0.000	0.000	147.482	54.635	-0.424	MWD+IFR1+MS
28000.000	90.000	359.700	12082.000	129.923	0.000	148.327	0.000	129.923	0.000	0.000	148.327	54.726	-0.422	MWD+IFR1+MS
28100.000	90.000	359.700	12082.000	130.652	0.000	149.168	0.000	130.652	0.000	0.000	149.168	54.818	-0.419	MWD+IFR1+MS
28200.000	90.000	359.700	12082.000	131.415	0.000	150.003	0.000	131.415	0.000	0.000	150.003	54.909	-0.416	MWD+IFR1+MS
28300.000	90.000	359.700	12082.000	132.212	0.000	150.867	0.000	132.212	0.000	0.000	150.868	55.000	-0.413	MWD+IFR1+MS
28400.000	90.000	359.700	12082.000	132.966	0.000	151.694	0.000	132.966	0.000	0.000	151.694	55.091	-0.411	MWD+IFR1+MS
28500.000	90.000	359.700	12082.000	133.716	0.000	152.548	0.000	133.716	0.000	0.000	152.548	55.181	-0.408	MWD+IFR1+MS
28510.000	90.000	359.700	12082.000	133.791	0.000	152.647	0.000	133.791	0.000	0.000	152.647	55.190	-0.408	MWD+IFR1+MS
28600.000	90.000	359.700	12082.000	134.499	0.000	153.398	0.000	134.499	0.000	0.000	153.398	55.272	-0.406	MWD+IFR1+MS
28610.000	90.000	359.700	12082.000	134.573	0.000	153.496	0.000	134.573	0.000	0.000	153.496	55.281	-0.405	MWD+IFR1+MS

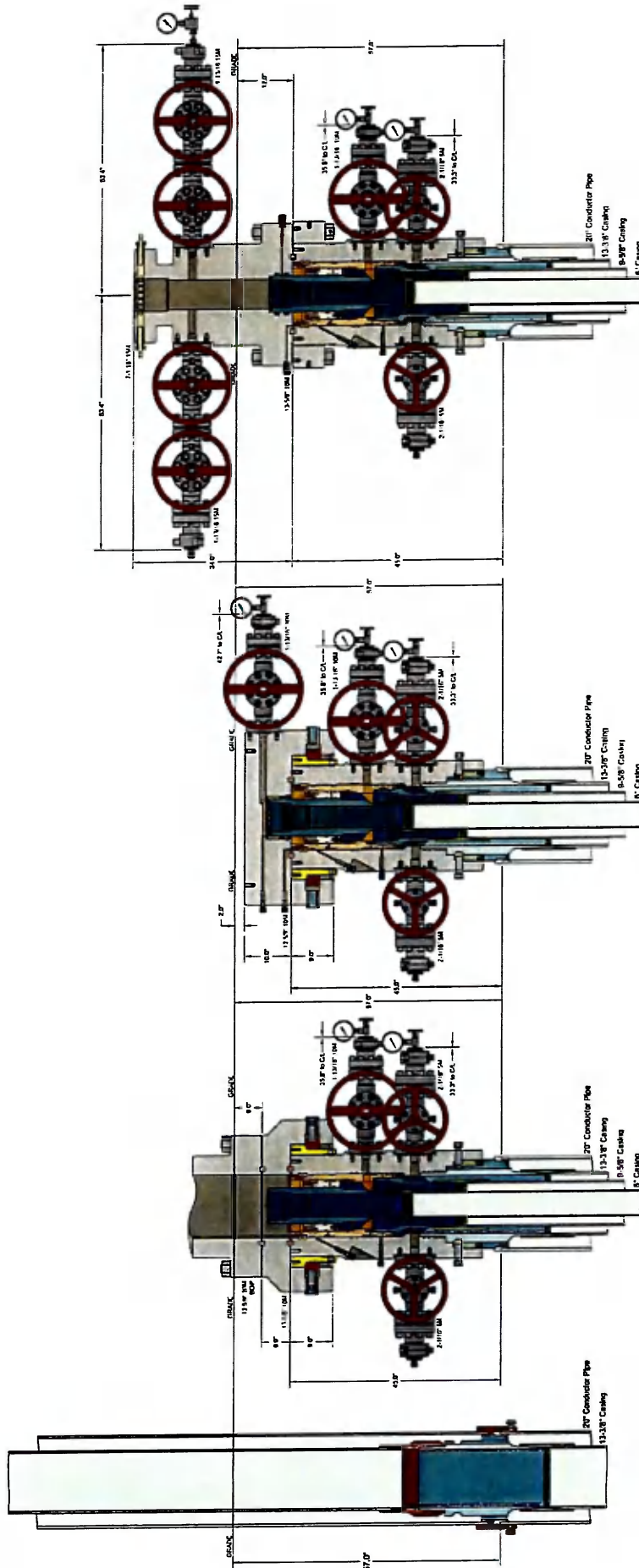
Plan Targets

POKER LAKE UNIT 22 DTD 102H

file:///C:/Users/arsriva/Landmark/DecisionSpace/WellPlanning/Reports/POKERLAKEUNIT22DTD102H.HTM

10/11

11/8/23, 11:36 AM	Well Plan Report			
	Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)
	FTP 10	12495.04	440059.70	641728.50
	LTP 10	28510.32	456074.80	641670.30
	BHL 10	28610.24	456174.80	641669.70
				TVD MSL Target Shape (ft)
				8644.00 RECTANGLE
				8644.00 RECTANGLE
				8644.00 RECTANGLE



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ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

XTO ENERGY INC
DELAWARE BASIN

(20") x 13-3/8" x 9-5/8" x 6" MBU-3T-CFL-R-DBLO-SF Wellhead
With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head
And Drilling & Skid Configurations

DRAWN	DLE	04NOV22
APPRV		

DRAWING NO. HBE00000833



U. S. Steel Tubular Products

2/22/2022 2:07:15 PM

6.000" 26.00lb/ft (0.436" Wall) P110 HP USS-FREEDOM HTQ®

MECHANICAL PROPERTIES	Pipe	USS-FREEDOM HTQ®		
Minimum Yield Strength	125,000	—	psi	—
Maximum Yield Strength	140,000	—	psi	—
Minimum Tensile Strength	130,000	—	psi	—
DIMENSIONS	Pipe	USS-FREEDOM HTQ®		
Outside Diameter	6.000	6.875	in.	—
Wall Thickness	0.436	—	in.	—
Inside Diameter	5.128	5.128	in.	—
Standard Drift	5.003	5.003	in.	—
Alternate Drift	—	—	in.	—
Nominal Linear Weight, T&C	26.00	—	lb/ft	—
Plain End Weight	25.93	—	lb/ft	—
SECTION AREA	Pipe	USS-FREEDOM HTQ®		
Critical Area	7.621	7.621	sq. in.	—
Joint Efficiency	—	100.0	%	—
PERFORMANCE	Pipe	USS-FREEDOM HTQ®		
Minimum Collapse Pressure	15,550	15,550	psi	—
Minimum Internal Yield Pressure	15,920	15,920	psi	—
Minimum Pipe Body Yield Strength	953,000	—	lb	—
Joint Strength	—	953,000	lb	—
Compression Rating	—	953,000	lb	—
Reference Length [4]	—	24,492	ft	—
Maximum Uniaxial Bend Rating [2]	—	95.5	deg/100 ft	—
MAKE-UP DATA	Pipe	USS-FREEDOM HTQ®		
Make-Up Loss	—	4.31	in.	—
Minimum Make-Up Torque [3]	—	15,000	ft-lb	—
Maximum Make-Up Torque [3]	—	21,000	ft-lb	—
Maximum Operating Torque[3]	—	44,000	ft-lb	—

UNCONTROLLED

Notes

- Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- Uniaxial bending rating shown is structural only, and equal to compression efficiency.
- Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.

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Spring, Texas 77380

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connections@uss.com
www.ussttubular.com



U. S. Steel Tubular Products

8/27/2021 1:48:58 PM

6.000" 26.00lb/ft (0.436" Wall) P110 RY USS-TALON HTQ™



MECHANICAL PROPERTIES	Pipe	USS-TALON HTQ™		[6]
Minimum Yield Strength	110,000	—	psi	—
Maximum Yield Strength	125,000	—	psi	—
Minimum Tensile Strength	125,000	—	psi	—
DIMENSIONS	Pipe	USS-TALON HTQ™		—
Outside Diameter	6.000	6.875	in.	—
Wall Thickness	0.436	—	in.	—
Inside Diameter	5.128	5.128	in.	—
Standard Drift	5.003	5.003	in.	—
Alternate Drift	—	—	in.	—
Nominal Linear Weight, T&C	26.00	—	lb/ft	—
Plain End Weight	25.93	—	lb/ft	—
SECTION AREA	Pipe	USS-TALON HTQ™		—
Critical Area	7.621	7.621	sq. in.	—
Joint Efficiency	—	100.0	%	[2]
PERFORMANCE	Pipe	USS-TALON HTQ™		—
Minimum Collapse Pressure	13,570	13,570	psi	—
Minimum Internal Yield Pressure	14,010	14,010	psi	—
Minimum Pipe Body Yield Strength	838,000	—	lb	—
Joint Strength	—	838,000	lb	—
Compression Rating	—	838,000	lb	—
Reference Length	—	21,490	ft	[5]
Maximum Uniaxial Bend Rating	—	84.0	deg/100 ft	[3]
MAKE-UP DATA	Pipe	USS-TALON HTQ™		—
Make-Up Loss	—	5.58	in.	—
Minimum Make-Up Torque	—	22,500	ft-lb	[4]
Maximum Make-Up Torque	—	25,500	ft-lb	[4]
Maximum Operating Torque	—	48,900	ft-lb	[4]

UNCONTROLLED

Notes

- Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- Joint efficiencies are calculated by dividing the connection critical area by the pipe body area.
- Uniaxial bend rating shown is structural only.
- Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- Reference length is calculated by Joint Strength divided by Nominal Linear Weight, T&C with a 1.5 Safety factor.
- Coupling must meet minimum mechanical properties of the pipe.

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

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

Background

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

Supporting Documentation

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



Figure 1: Winch System attached to BOP Stack



Figure 2: BOP Winch System

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

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API STANDARD 53

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

Component to be Pressure Tested	Pressure Test—Low Pressure ^a psig (MPa)	Pressure Test—High Pressure ^a	
		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 ^c	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 ^d	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes ^d	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 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of CFR Title 43 Part 3170 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after

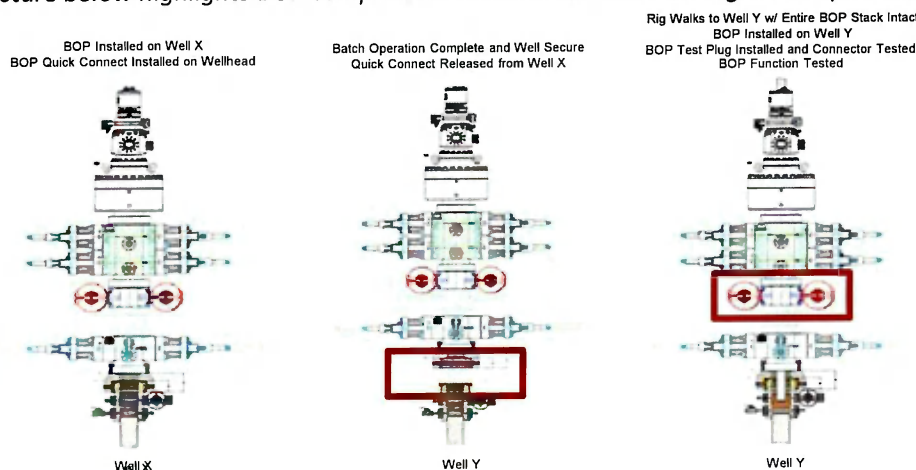
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

Procedures

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

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

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



Summary

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

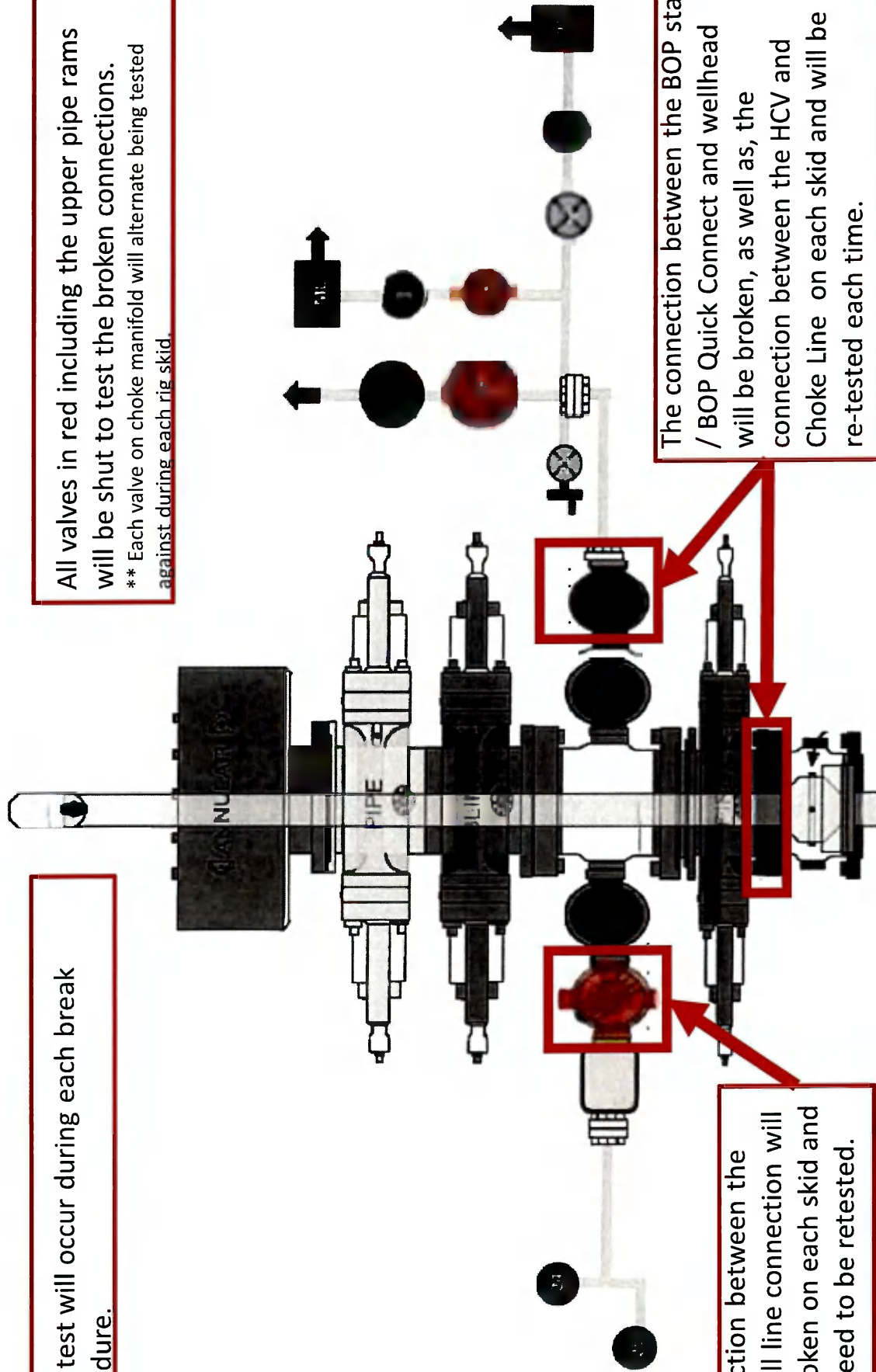
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

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

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

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



The connection between the 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.

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

Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

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

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

General Procedure While Tripping

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

General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

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

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

Intent ☒ As Drilled ☐

API # 30015		
Operator Name: XTO PERMIAN OPERATING, LLC	Property Name: Poker Lake Unit 22 DTD	Well Number 102H

Kick Off Point (KOP)

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

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	22	24S	30E		500	North	620	West	Eddy
Latitude 32.209135					Longitude 103.87558				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
4	3	24S	30E		330	North	620	East	Eddy
Latitude 32.253160					Longitude 103.875572				NAD 83

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

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 308880

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 308880
	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 does not circulate during cementing operations, then a CBL is required.	2/23/2024