

Well Name: POKER LAKE 23 DTD FEDERAL COM	Well Location: T24S / R30E / SEC 23 / SWSW /	County or Parish/State:
Well Number: 172H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM068905	Unit or CA Name:	Unit or CA Number:
US Well Number:	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2764697

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 12/05/2023

Time Sundry Submitted: 07:08

Date proposed operation will begin: 12/12/2023

Procedure Description: XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD (ID 10400078682): SHL, BHL, FTP, LTP, casing and cement changes. SHL: FROM: 406' FSL & 771' FWL of Section 14-T24S-R30E TO: 366' FSL & 771' FWL of Section 14-T24S-R30E BHL: FROM: 200' FNL & 1870' FWL of Section 2-T24S-R30E TO: 50' FNL & 2030' FWL of Section 2-T24S-R30E FTP: FROM: 100' FSL & 1870' FWL of Section 14-T24S-R30E TO: 500' FNL & 2030' FWL of Section 23-T24S-R30E LTP: FROM: 330' FNL & 1870' FWL of Section 2-T24S-R30E TO: 100' FNL & 2030' FWL of Section 2-T24S-R30E Casing and cement changes are listed on the attached drilling plan. We will be using a 4 string casing program. C-102, Drilling Plan, Directional Plan, Casing Spec Sheet and MultiBowl Schematic attached.

NOI Attachments

Procedure Description

- Proprietary_Connections_Performance_Data_6.0000_26.0000_0.4360__P110_RY_20231205190742.pdf
- 4_String_Slimhole_SDT_3301_1_20231205190725.pdf
- Well_Plan_Report___POKER_LAKE_UNIT_23_DTD_172H_20231205190645.pdf
- Drilling_Plan___PLU_23_DTD_172H_20231205190603.pdf
- POKER_LAKE_UNIT_23_DTD_172H_C_102_signed_12_4_2023_20231205190541.pdf

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Conditions of Approval

Additional

Sec_14_24S_30E_NMP_Sundry_2764697_Poker_Lake_23_DTD_Federal_Com_172H_COAs_20231226095917.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: DEC 05, 2023 07:07 PM
Name: XTO PERMIAN OPERATING LLC	
Title: Regulatory Analyst	
Street Address: 6401 HOLIDAY HILL ROAD BLDG 5	
City: MIDLAND	State: TX
Phone: (432) 620-6700	
Email address: RANELL.KLEIN@EXXONMOBIL.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: cwalls@blm.gov
Disposition: Approved	Disposition Date: 01/03/2024
Signature: Chris Walls	

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

SUBMIT IN TRIPLICATE - Other instructions on page 2		5. Lease Serial No.
1. Type of Well ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator		7. If Unit of CA/Agreement, Name and/or No.
3a. Address	3b. Phone No. (include area code)	8. Well Name and No.
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		9. API Well No.
		10. Field and Pool or Exploratory Area
		11. Country or Parish, State

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

TYPE OF SUBMISSION	TYPE OF ACTION				
☐ 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: SWSW / 406 FSL / 771 FWL / TWSP: 24S / RANGE: 30E / SECTION: 23 / LAT: 32.211731 / LONG: -103.857781 (TVD: 0 feet, MD: 0 feet)

PPP: SESW / 100 FSL / 1870 FWL / TWSP: 24S / RANGE: 30E / SECTION: 14 / LAT: 32.2109 / LONG: -103.85423 (TVD: 11590 feet, MD: 12100 feet)

BHL: LOT 3 / 200 FNL / 1870 FWL / TWSP: 24S / RANGE: 30E / SECTION: 2 / LAT: 32.253571 / LONG: -103.854199 (TVD: 11590 feet, MD: 27567 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 23 DTD Federal Com 172H
LOCATION:	Sec 14-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2764697** on 12/26/2023. Any previous COAs not addressed within the updated COAs still apply.*

NOTE: The attached drill plan had an error in Section 5. The replacement language for **Section 5: Pressure Control Equipment** is as follows,

The blow out preventer equipment (BOP) for surf casing / temp. wellhead will consist of a 21-1/4" minimum 2M Hydril. MASP should not exceed 873 psi. Once the permanent WH is installed on the 13-3/8 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M 3-Ram BOP. MASP should not exceed 3509 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).

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 **20** inch surface casing shall be set at approximately 830 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. ***Set depth adjusted per BLM geologist.***
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** 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.

Due to the high probability of not getting cement to surface during conventional top-out jobs in the area, ~10-20 ppb gravel will be added on the backside of the 1" to get cement to surface, if required. If these quantities are exceeded / procedure needs to be changed, contact the PE on-call line to discuss further remediation options.

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.
3. The minimum required fill of cement behind the **9-5/8** 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 6267'**
- b. Second stage:
 - Operator will perform bradenhead squeeze and top-out. Cement to tie back at least **500 feet** into previous casing string. Operator should provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

- ❖ In Secretary Potash Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Operator has proposed to pump down 13-3/8" X 9-5/8" 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 9-5/8" 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. Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

C. PRESSURE CONTROL

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

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated

date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

BOPE Break Testing Variance

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

Offline Cementing

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

GENERAL REQUIREMENTS

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

- a. Spudding well (minimum of 24 hours)

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

- **Eddy County (API No. / US Well No. contains 30-015-#####)**
Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, **BLM_NM_CFO_DrillingNotifications@BLM.GOV**
(575) 361-2822
- **Lea County (API No. / US Well No. contains 30-025-#####)**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e.

changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-

off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.



U. S. Steel Tubular Products

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

8/27/2021 1:46:58 PM



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

1.

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).
2.

Joint efficiencies are calculated by dividing the connection critical area by the pipe body area.
3.

Uniaxial bend rating shown is structural only.
4.

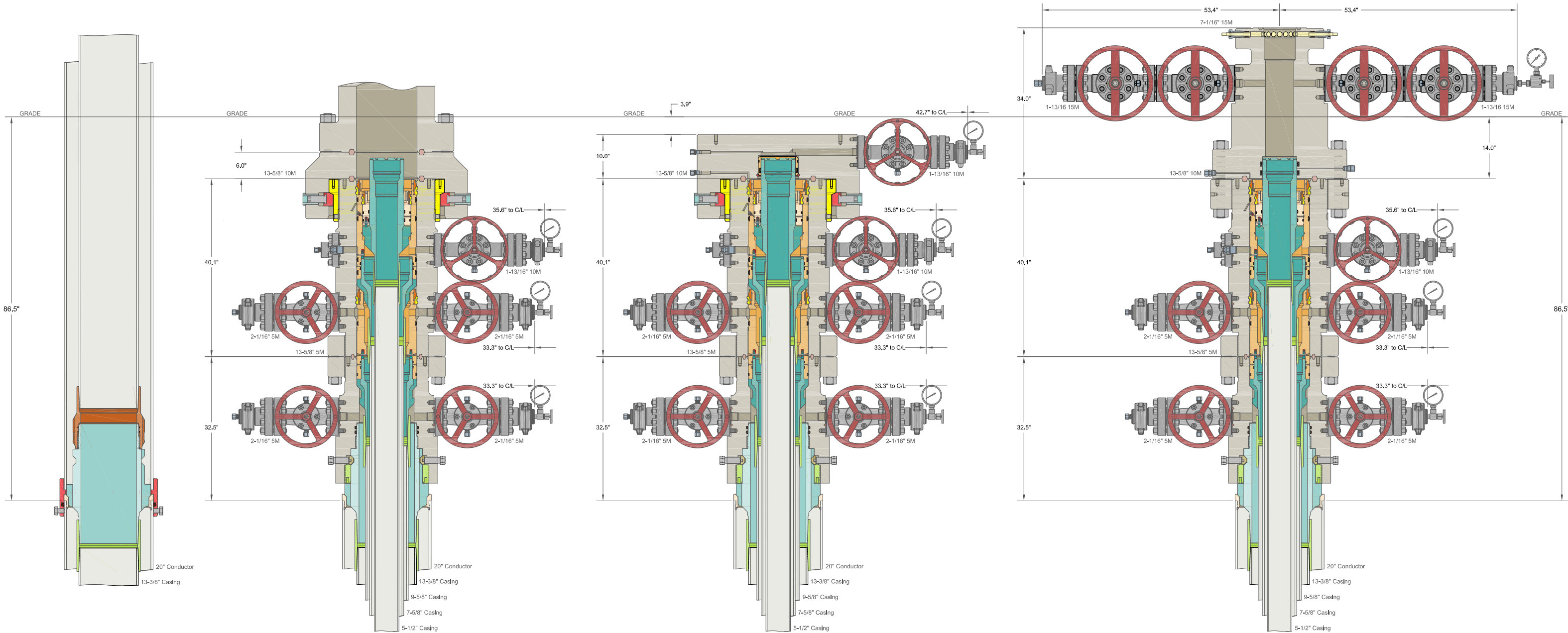
Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
5.

Reference length is calculated by Joint Strength divided by Nominal Linear Weight, T&C with a 1.5 Safety factor.
6.

Coupling must meet minimum mechanical properties of the pipe.

Legal Notice

All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.



ALL DIMENSIONS APPROXIMATE			
CACTUS WELLHEAD LLC			
(20") x 13-3/8" x 9-5/8" x 7-5/8" x 5-1/2" MBU-4T-CFL-R-DBLO With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And Drilling & Skid Configurations			
XTO ENERGY INC DELAWARE BASIN		31MAR22	
DRAWN	VJK		
APPRV			
DRAWING NO.		SDT-3301	

Well Plan Report - POKER LAKE UNIT 23 DTD 172H

Measured Depth: 27016.69 ft

TVD RKB: 9970.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 440988.30 ft

Easting: 647230.60 ft

RKB: 3480.00 ft

Ground Level: 3480.00 ft

North Reference: Grid

Convergence Angle: 0.25 Deg

Plan Sections

POKER LAKE UNIT 23 DTD 172H

Measured				TVD			Build	Turn	Dogleg
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate	Target
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	
2201.69	22.03	141.22	2174.73	-163.11	131.05	2.00	0.00	2.00	
6463.49	22.03	141.22	6125.27	-1409.48	1132.45	0.00	0.00	0.00	
7565.18	0.00	0.00	7200.00	-1572.59	1263.50	-2.00	0.00	2.00	
9618.98	0.00	0.00	9253.80	-1572.59	1263.50	0.00	0.00	0.00	
10743.98	90.00	359.78	9970.00	-856.40	1260.80	8.00	0.00	8.00	FTP 5
26966.70	90.00	359.78	9970.00	15366.20	1199.60	0.00	0.00	0.00	LTP 5
27016.69	90.00	359.78	9970.00	15416.20	1199.41	0.00	0.00	0.00	BHL 5

Position Uncertainty

POKER LAKE UNIT 23 DTD 172H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.326	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.347	0.000	0.000	2.108	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.375	0.000	0.000	2.503	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.407	0.000	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.445	0.000	0.000	3.267	2.417	128.190	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.487	0.000	0.000	3.642	2.775	128.423	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.533	0.000	0.000	4.014	3.133	128.602	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.583	0.000	0.000	4.384	3.491	128.744	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.637	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	141.220	1199.980	4.379	0.000	4.999	-0.000	2.693	0.000	0.000	5.037	4.337	127.129	MWD+IFR1+MS
1300.000	4.000	141.220	1299.838	5.239	0.000	5.312	-0.000	2.753	0.000	0.000	5.559	4.983	99.508	MWD+IFR1+MS
1400.000	6.000	141.220	1399.452	5.991	0.000	5.631	-0.000	2.819	0.000	0.000	6.236	5.377	83.232	MWD+IFR1+MS
1500.000	8.000	141.220	1498.702	6.671	0.000	5.957	-0.000	2.892	0.000	0.000	6.910	5.709	77.094	MWD+IFR1+MS
1600.000	10.000	141.220	1597.465	7.298	0.000	6.288	-0.000	2.975	0.000	0.000	7.550	6.033	74.221	MWD+IFR1+MS
1700.000	12.000	141.220	1695.623	7.883	0.000	6.627	-0.000	3.070	0.000	0.000	8.156	6.359	72.629	MWD+IFR1+MS
1800.000	14.000	141.220	1793.055	8.435	0.000	6.973	-0.000	3.178	0.000	0.000	8.734	6.692	71.662	MWD+IFR1+MS
1900.000	16.000	141.220	1889.643	8.958	0.000	7.328	-0.000	3.301	0.000	0.000	9.286	7.033	71.051	MWD+IFR1+MS
2000.000	18.000	141.220	1985.268	9.458	0.000	7.692	-0.000	3.441	0.000	0.000	9.818	7.384	70.670	MWD+IFR1+MS
2100.000	20.000	141.220	2079.816	9.937	0.000	8.067	-0.000	3.599	0.000	0.000	10.332	7.747	70.452	MWD+IFR1+MS
2201.686	22.034	141.220	2174.732	10.415	0.000	8.462	-0.000	3.782	0.000	0.000	10.846	8.128	70.351	MWD+IFR1+MS
2300.000	22.034	141.220	2265.865	10.785	0.000	8.853	-0.000	3.916	0.000	0.000	11.200	8.507	70.878	MWD+IFR1+MS
2400.000	22.034	141.220	2358.562	11.085	0.000	9.259	-0.000	4.034	0.000	0.000	11.489	8.908	71.589	MWD+IFR1+MS
2500.000	22.034	141.220	2451.258	11.396	0.000	9.673	-0.000	4.157	0.000	0.000	11.788	9.316	72.354	MWD+IFR1+MS
2600.000	22.034	141.220	2543.954	11.715	0.000	10.094	-0.000	4.285	0.000	0.000	12.094	9.730	73.173	MWD+IFR1+MS
2700.000	22.034	141.220	2636.651	12.043	0.000	10.520	-0.000	4.419	0.000	0.000	12.409	10.148	74.052	MWD+IFR1+MS
2800.000	22.034	141.220	2729.347	12.377	0.000	10.951	-0.000	4.557	0.000	0.000	12.730	10.571	74.998	MWD+IFR1+MS
2900.000	22.034	141.220	2822.043	12.719	0.000	11.386	-0.000	4.699	0.000	0.000	13.059	10.997	76.015	MWD+IFR1+MS
3000.000	22.034	141.220	2914.740	13.067	0.000	11.826	-0.000	4.845	0.000	0.000	13.394	11.425	77.111	MWD+IFR1+MS

3100.000	22.034	141.220	3007.436	13.421	0.000	12.269	-0.000	4.995	0.000	0.000	13.736	11.856	78.293	MWD+IFR1+MS
3200.000	22.034	141.220	3100.132	13.780	0.000	12.715	-0.000	5.148	0.000	0.000	14.084	12.288	79.567	MWD+IFR1+MS
3300.000	22.034	141.220	3192.829	14.144	0.000	13.164	-0.000	5.304	0.000	0.000	14.438	12.721	80.940	MWD+IFR1+MS
3400.000	22.034	141.220	3285.525	14.513	0.000	13.615	-0.000	5.463	0.000	0.000	14.798	13.155	82.418	MWD+IFR1+MS
3500.000	22.034	141.220	3378.221	14.886	0.000	14.069	-0.000	5.624	0.000	0.000	15.163	13.589	84.004	MWD+IFR1+MS
3600.000	22.034	141.220	3470.917	15.262	0.000	14.525	-0.000	5.788	0.000	0.000	15.535	14.023	85.703	MWD+IFR1+MS
3700.000	22.034	141.220	3563.614	15.643	0.000	14.983	-0.000	5.955	0.000	0.000	15.913	14.456	87.512	MWD+IFR1+MS
3800.000	22.034	141.220	3656.310	16.027	0.000	15.442	-0.000	6.123	0.000	0.000	16.296	14.889	89.430	MWD+IFR1+MS
3900.000	22.034	141.220	3749.006	16.414	0.000	15.903	-0.000	6.294	0.000	0.000	16.685	15.319	91.447	MWD+IFR1+MS
4000.000	22.034	141.220	3841.703	16.804	0.000	16.366	-0.000	6.467	0.000	0.000	17.080	15.749	93.551	MWD+IFR1+MS
4100.000	22.034	141.220	3934.399	17.197	0.000	16.830	-0.000	6.641	0.000	0.000	17.481	16.176	95.724	MWD+IFR1+MS
4200.000	22.034	141.220	4027.095	17.592	0.000	17.295	-0.000	6.818	0.000	0.000	17.887	16.601	97.945	MWD+IFR1+MS
4300.000	22.034	141.220	4119.792	17.990	0.000	17.761	-0.000	6.996	0.000	0.000	18.300	17.023	100.188	MWD+IFR1+MS
4400.000	22.034	141.220	4212.488	18.390	0.000	18.228	-0.000	7.176	0.000	0.000	18.718	17.443	102.428	MWD+IFR1+MS
4500.000	22.034	141.220	4305.184	18.792	0.000	18.696	-0.000	7.358	0.000	0.000	19.141	17.861	104.636	MWD+IFR1+MS
4600.000	22.034	141.220	4397.881	19.196	0.000	19.165	-0.000	7.541	0.000	0.000	19.569	18.277	106.790	MWD+IFR1+MS
4700.000	22.034	141.220	4490.577	19.602	0.000	19.635	-0.000	7.726	0.000	0.000	20.002	18.690	108.867	MWD+IFR1+MS
4800.000	22.034	141.220	4583.273	20.009	0.000	20.106	-0.000	7.912	0.000	0.000	20.439	19.101	110.853	MWD+IFR1+MS
4900.000	22.034	141.220	4675.970	20.419	0.000	20.577	-0.000	8.100	0.000	0.000	20.881	19.511	112.736	MWD+IFR1+MS
5000.000	22.034	141.220	4768.666	20.829	0.000	21.049	-0.000	8.289	0.000	0.000	21.326	19.919	114.508	MWD+IFR1+MS
5100.000	22.034	141.220	4861.362	21.241	0.000	21.522	-0.000	8.480	0.000	0.000	21.775	20.325	116.167	MWD+IFR1+MS
5200.000	22.034	141.220	4954.059	21.655	0.000	21.995	-0.000	8.672	0.000	0.000	22.226	20.731	117.714	MWD+IFR1+MS
5300.000	22.034	141.220	5046.755	22.070	0.000	22.469	-0.000	8.866	0.000	0.000	22.681	21.135	119.152	MWD+IFR1+MS
5400.000	22.034	141.220	5139.451	22.486	0.000	22.943	-0.000	9.061	0.000	0.000	23.137	21.539	120.485	MWD+IFR1+MS
5500.000	22.034	141.220	5232.147	22.903	0.000	23.418	-0.000	9.257	0.000	0.000	23.596	21.942	121.720	MWD+IFR1+MS
5600.000	22.034	141.220	5324.844	23.321	0.000	23.893	-0.000	9.455	0.000	0.000	24.058	22.345	122.863	MWD+IFR1+MS
5700.000	22.034	141.220	5417.540	23.740	0.000	24.369	-0.000	9.654	0.000	0.000	24.520	22.747	123.921	MWD+IFR1+MS
5800.000	22.034	141.220	5510.236	24.160	0.000	24.845	-0.000	9.854	0.000	0.000	24.985	23.150	124.901	MWD+IFR1+MS
5900.000	22.034	141.220	5602.933	24.582	0.000	25.321	-0.000	10.056	0.000	0.000	25.451	23.552	125.808	MWD+IFR1+MS
6000.000	22.034	141.220	5695.629	25.004	0.000	25.798	-0.000	10.259	0.000	0.000	25.918	23.954	126.650	MWD+IFR1+MS
6100.000	22.034	141.220	5788.325	25.426	0.000	26.275	-0.000	10.464	0.000	0.000	26.386	24.356	127.431	MWD+IFR1+MS
6200.000	22.034	141.220	5881.022	25.850	0.000	26.753	-0.000	10.670	0.000	0.000	26.856	24.758	128.157	MWD+IFR1+MS
6300.000	22.034	141.220	5973.718	26.274	0.000	27.230	-0.000	10.878	0.000	0.000	27.326	25.161	128.833	MWD+IFR1+MS

6400.000	22.034	141.220	6066.414	26.699	0.000	27.708	-0.000	11.086	0.000	0.000	27.798	25.563	129.464	MWD+IFR1+MS
6463.491	22.034	141.220	6125.268	26.967	0.000	28.009	-0.000	11.219	0.000	0.000	28.094	25.818	129.892	MWD+IFR1+MS
6500.000	21.304	141.220	6159.197	27.143	0.000	28.181	-0.000	11.295	0.000	0.000	28.262	25.963	130.135	MWD+IFR1+MS
6600.000	19.304	141.220	6252.979	27.642	0.000	28.642	-0.000	11.511	0.000	0.000	28.721	26.393	130.346	MWD+IFR1+MS
6700.000	17.304	141.220	6347.915	28.149	0.000	29.090	-0.000	11.727	0.000	0.000	29.174	26.859	130.002	MWD+IFR1+MS
6800.000	15.304	141.220	6443.889	28.612	0.000	29.521	-0.000	11.927	0.000	0.000	29.610	27.318	129.594	MWD+IFR1+MS
6900.000	13.304	141.220	6540.784	29.029	0.000	29.935	-0.000	12.113	0.000	0.000	30.030	27.768	129.122	MWD+IFR1+MS
7000.000	11.304	141.220	6638.482	29.400	0.000	30.332	-0.000	12.286	0.000	0.000	30.435	28.208	128.585	MWD+IFR1+MS
7100.000	9.304	141.220	6736.864	29.725	0.000	30.712	-0.000	12.447	0.000	0.000	30.823	28.636	127.981	MWD+IFR1+MS
7200.000	7.304	141.220	6835.811	30.003	0.000	31.075	-0.000	12.597	0.000	0.000	31.195	29.052	127.309	MWD+IFR1+MS
7300.000	5.304	141.220	6935.201	30.235	0.000	31.421	-0.000	12.739	0.000	0.000	31.551	29.456	126.569	MWD+IFR1+MS
7400.000	3.304	141.220	7034.914	30.421	0.000	31.752	-0.000	12.873	0.000	0.000	31.893	29.845	125.761	MWD+IFR1+MS
7500.000	1.304	141.220	7134.829	30.561	0.000	32.066	-0.000	13.001	0.000	0.000	32.219	30.219	124.886	MWD+IFR1+MS
7565.177	0.000	0.000	7200.000	31.760	0.000	31.075	0.000	13.081	0.000	0.000	32.401	30.406	124.959	MWD+IFR1+MS
7600.000	0.000	0.000	7234.823	31.854	0.000	31.166	0.000	13.124	0.000	0.000	32.494	30.498	124.914	MWD+IFR1+MS
7700.000	0.000	0.000	7334.823	32.124	0.000	31.430	0.000	13.249	0.000	0.000	32.763	30.764	124.848	MWD+IFR1+MS
7800.000	0.000	0.000	7434.823	32.398	0.000	31.700	0.000	13.376	0.000	0.000	33.039	31.032	124.813	MWD+IFR1+MS
7900.000	0.000	0.000	7534.823	32.674	0.000	31.971	0.000	13.507	0.000	0.000	33.316	31.301	124.780	MWD+IFR1+MS
8000.000	0.000	0.000	7634.823	32.952	0.000	32.244	0.000	13.641	0.000	0.000	33.595	31.573	124.747	MWD+IFR1+MS
8100.000	0.000	0.000	7734.823	33.231	0.000	32.518	0.000	13.778	0.000	0.000	33.876	31.846	124.715	MWD+IFR1+MS
8200.000	0.000	0.000	7834.823	33.512	0.000	32.794	0.000	13.918	0.000	0.000	34.158	32.120	124.684	MWD+IFR1+MS
8300.000	0.000	0.000	7934.823	33.794	0.000	33.072	0.000	14.062	0.000	0.000	34.441	32.397	124.654	MWD+IFR1+MS
8400.000	0.000	0.000	8034.823	34.077	0.000	33.351	0.000	14.208	0.000	0.000	34.726	32.675	124.624	MWD+IFR1+MS
8500.000	0.000	0.000	8134.823	34.362	0.000	33.632	0.000	14.358	0.000	0.000	35.012	32.954	124.595	MWD+IFR1+MS
8600.000	0.000	0.000	8234.823	34.649	0.000	33.914	0.000	14.511	0.000	0.000	35.300	33.235	124.567	MWD+IFR1+MS
8700.000	0.000	0.000	8334.823	34.936	0.000	34.197	0.000	14.668	0.000	0.000	35.589	33.518	124.539	MWD+IFR1+MS
8800.000	0.000	0.000	8434.823	35.225	0.000	34.482	0.000	14.828	0.000	0.000	35.879	33.802	124.512	MWD+IFR1+MS
8900.000	0.000	0.000	8534.823	35.516	0.000	34.769	0.000	14.991	0.000	0.000	36.170	34.087	124.486	MWD+IFR1+MS
9000.000	0.000	0.000	8634.823	35.807	0.000	35.056	0.000	15.158	0.000	0.000	36.463	34.374	124.460	MWD+IFR1+MS
9100.000	0.000	0.000	8734.823	36.100	0.000	35.345	0.000	15.328	0.000	0.000	36.756	34.662	124.434	MWD+IFR1+MS
9200.000	0.000	0.000	8834.823	36.394	0.000	35.635	0.000	15.501	0.000	0.000	37.051	34.951	124.410	MWD+IFR1+MS
9300.000	0.000	0.000	8934.823	36.689	0.000	35.927	0.000	15.678	0.000	0.000	37.347	35.242	124.385	MWD+IFR1+MS
9400.000	0.000	0.000	9034.823	36.985	0.000	36.220	0.000	15.859	0.000	0.000	37.644	35.534	124.361	MWD+IFR1+MS

9500.000	0.000	0.000	9134.823	37.282	0.000	36.513	0.000	16.042	0.000	0.000	37.942	35.827	124.338	MWD+IFR1+MS
9600.000	0.000	0.000	9234.823	37.581	0.000	36.808	0.000	16.230	0.000	0.000	38.241	36.121	124.315	MWD+IFR1+MS
9618.980	0.000	0.000	9253.803	37.636	0.000	36.864	0.000	16.266	0.000	0.000	38.297	36.177	124.303	MWD+IFR1+MS
9700.000	6.482	359.784	9334.650	37.115	0.000	37.101	0.000	16.419	0.000	0.000	38.619	36.437	122.893	MWD+IFR1+MS
9800.000	14.482	359.784	9432.902	36.735	0.000	37.369	0.000	16.672	0.000	0.000	39.591	36.857	115.022	MWD+IFR1+MS
9900.000	22.482	359.784	9527.667	36.039	0.000	37.613	0.000	17.100	0.000	0.000	40.675	37.186	109.847	MWD+IFR1+MS
10000.000	30.482	359.784	9617.102	34.903	0.000	37.832	0.000	17.763	0.000	0.000	41.631	37.439	107.170	MWD+IFR1+MS
10100.000	38.482	359.784	9699.466	33.449	0.000	38.024	0.000	18.698	0.000	0.000	42.421	37.641	105.752	MWD+IFR1+MS
10200.000	46.482	359.784	9773.156	31.832	0.000	38.189	0.000	19.905	0.000	0.000	43.034	37.805	105.035	MWD+IFR1+MS
10300.000	54.482	359.784	9836.737	30.245	0.000	38.330	0.000	21.352	0.000	0.000	43.474	37.936	104.738	MWD+IFR1+MS
10400.000	62.482	359.784	9888.971	28.916	0.000	38.446	0.000	22.986	0.000	0.000	43.758	38.041	104.693	MWD+IFR1+MS
10500.000	70.482	359.784	9928.843	28.082	0.000	38.540	0.000	24.744	0.000	0.000	43.912	38.126	104.779	MWD+IFR1+MS
10600.000	78.482	359.784	9955.576	27.943	0.000	38.613	0.000	26.559	0.000	0.000	43.969	38.194	104.882	MWD+IFR1+MS
10700.000	86.482	359.784	9968.650	28.605	0.000	38.665	0.000	28.369	0.000	0.000	43.969	38.250	104.883	MWD+IFR1+MS
10743.980	90.000	359.784	9970.000	28.640	0.000	38.679	0.000	28.640	0.000	0.000	43.962	38.270	104.803	MWD+IFR1+MS
10800.000	90.000	359.784	9970.000	28.822	0.000	38.696	0.000	28.822	0.000	0.000	43.953	38.297	104.682	MWD+IFR1+MS
10900.000	90.000	359.784	9970.000	29.118	0.000	38.749	0.000	29.118	0.000	0.000	43.939	38.364	104.512	MWD+IFR1+MS
11000.000	90.000	359.784	9970.000	29.434	0.000	38.823	0.000	29.434	0.000	0.000	43.926	38.452	104.387	MWD+IFR1+MS
11100.000	90.000	359.784	9970.000	29.768	0.000	38.917	0.000	29.768	0.000	0.000	43.916	38.559	104.306	MWD+IFR1+MS
11200.000	90.000	359.784	9970.000	30.118	0.000	39.031	0.000	30.118	0.000	0.000	43.907	38.684	104.270	MWD+IFR1+MS
11300.000	90.000	359.784	9970.000	30.485	0.000	39.164	0.000	30.485	0.000	0.000	43.899	38.827	104.281	MWD+IFR1+MS
11400.000	90.000	359.784	9970.000	30.867	0.000	39.317	0.000	30.867	0.000	0.000	43.893	38.989	104.345	MWD+IFR1+MS
11500.000	90.000	359.784	9970.000	31.264	0.000	39.488	0.000	31.264	0.000	0.000	43.889	39.168	104.467	MWD+IFR1+MS
11600.000	90.000	359.784	9970.000	31.676	0.000	39.679	0.000	31.676	0.000	0.000	43.886	39.365	104.654	MWD+IFR1+MS
11700.000	90.000	359.784	9970.000	32.102	0.000	39.887	0.000	32.102	0.000	0.000	43.885	39.579	104.918	MWD+IFR1+MS
11800.000	90.000	359.784	9970.000	32.541	0.000	40.115	0.000	32.541	0.000	0.000	43.886	39.810	105.274	MWD+IFR1+MS
11900.000	90.000	359.784	9970.000	32.992	0.000	40.360	0.000	32.992	0.000	0.000	43.889	40.057	105.740	MWD+IFR1+MS
12000.000	90.000	359.784	9970.000	33.457	0.000	40.622	0.000	33.457	0.000	0.000	43.895	40.320	106.344	MWD+IFR1+MS
12100.000	90.000	359.784	9970.000	33.932	0.000	40.902	0.000	33.932	0.000	0.000	43.903	40.598	107.124	MWD+IFR1+MS
12200.000	90.000	359.784	9970.000	34.420	0.000	41.199	0.000	34.420	0.000	0.000	43.915	40.889	108.135	MWD+IFR1+MS
12300.000	90.000	359.784	9970.000	34.918	0.000	41.513	0.000	34.918	0.000	0.000	43.932	41.193	109.457	MWD+IFR1+MS
12400.000	90.000	359.784	9970.000	35.426	0.000	41.842	0.000	35.426	0.000	0.000	43.955	41.508	111.211	MWD+IFR1+MS
12500.000	90.000	359.784	9970.000	35.944	0.000	42.188	0.000	35.944	0.000	0.000	43.987	41.829	113.579	MWD+IFR1+MS

12600.000	90.000	359.784	9970.000	36.472	0.000	42.549	0.000	36.472	0.000	0.000	44.032	42.153	116.839	MWD+IFR1+MS
12700.000	90.000	359.784	9970.000	37.009	0.000	42.925	0.000	37.009	0.000	0.000	44.098	42.472	121.387	MWD+IFR1+MS
12800.000	90.000	359.784	9970.000	37.555	0.000	43.315	0.000	37.555	0.000	0.000	44.197	42.773	127.669	MWD+IFR1+MS
12900.000	90.000	359.784	9970.000	38.109	0.000	43.720	0.000	38.109	0.000	0.000	44.348	43.037	-44.202	MWD+IFR1+MS
13000.000	90.000	359.784	9970.000	38.671	0.000	44.139	0.000	38.671	0.000	0.000	44.567	43.246	-35.121	MWD+IFR1+MS
13100.000	90.000	359.784	9970.000	39.241	0.000	44.571	0.000	39.241	0.000	0.000	44.860	43.396	-26.775	MWD+IFR1+MS
13200.000	90.000	359.784	9970.000	39.818	0.000	45.016	0.000	39.818	0.000	0.000	45.214	43.498	-20.215	MWD+IFR1+MS
13300.000	90.000	359.784	9970.000	40.402	0.000	45.474	0.000	40.402	0.000	0.000	45.612	43.569	-15.427	MWD+IFR1+MS
13400.000	90.000	359.784	9970.000	40.993	0.000	45.945	0.000	40.993	0.000	0.000	46.043	43.621	-11.980	MWD+IFR1+MS
13500.000	90.000	359.784	9970.000	41.590	0.000	46.427	0.000	41.590	0.000	0.000	46.498	43.660	-9.460	MWD+IFR1+MS
13600.000	90.000	359.784	9970.000	42.193	0.000	46.921	0.000	42.193	0.000	0.000	46.973	43.692	-7.576	MWD+IFR1+MS
13700.000	90.000	359.784	9970.000	42.802	0.000	47.426	0.000	42.802	0.000	0.000	47.464	43.719	-6.132	MWD+IFR1+MS
13800.000	90.000	359.784	9970.000	43.417	0.000	47.942	0.000	43.417	0.000	0.000	47.970	43.743	-5.002	MWD+IFR1+MS
13900.000	90.000	359.784	9970.000	44.037	0.000	48.468	0.000	44.037	0.000	0.000	48.489	43.764	-4.100	MWD+IFR1+MS
14000.000	90.000	359.784	9970.000	44.663	0.000	49.005	0.000	44.663	0.000	0.000	49.020	43.785	-3.368	MWD+IFR1+MS
14100.000	90.000	359.784	9970.000	45.293	0.000	49.551	0.000	45.293	0.000	0.000	49.562	43.804	-2.766	MWD+IFR1+MS
14200.000	90.000	359.784	9970.000	45.928	0.000	50.107	0.000	45.928	0.000	0.000	50.114	43.823	-2.265	MWD+IFR1+MS
14300.000	90.000	359.784	9970.000	46.568	0.000	50.672	0.000	46.568	0.000	0.000	50.677	43.841	-1.843	MWD+IFR1+MS
14400.000	90.000	359.784	9970.000	47.212	0.000	51.246	0.000	47.212	0.000	0.000	51.250	43.859	-1.485	MWD+IFR1+MS
14500.000	90.000	359.784	9970.000	47.860	0.000	51.829	0.000	47.860	0.000	0.000	51.831	43.877	-1.178	MWD+IFR1+MS
14600.000	90.000	359.784	9970.000	48.513	0.000	52.420	0.000	48.513	0.000	0.000	52.421	43.895	-0.914	MWD+IFR1+MS
14700.000	90.000	359.784	9970.000	49.169	0.000	53.019	0.000	49.169	0.000	0.000	53.019	43.914	-0.685	MWD+IFR1+MS
14800.000	90.000	359.784	9970.000	49.829	0.000	53.626	0.000	49.829	0.000	0.000	53.626	43.932	-0.485	MWD+IFR1+MS
14900.000	90.000	359.784	9970.000	50.492	0.000	54.240	0.000	50.492	0.000	0.000	54.240	43.951	-0.311	MWD+IFR1+MS
15000.000	90.000	359.784	9970.000	51.159	0.000	54.862	0.000	51.159	0.000	0.000	54.862	43.970	-0.157	MWD+IFR1+MS
15100.000	90.000	359.784	9970.000	51.829	0.000	55.490	0.000	51.829	0.000	0.000	55.490	43.990	-0.021	MWD+IFR1+MS
15200.000	90.000	359.784	9970.000	52.503	0.000	56.125	0.000	52.503	0.000	0.000	56.126	44.010	0.099	MWD+IFR1+MS
15300.000	90.000	359.784	9970.000	53.179	0.000	56.767	0.000	53.179	0.000	0.000	56.768	44.030	0.205	MWD+IFR1+MS
15400.000	90.000	359.784	9970.000	53.859	0.000	57.416	0.000	53.859	0.000	0.000	57.417	44.051	0.300	MWD+IFR1+MS
15500.000	90.000	359.784	9970.000	54.541	0.000	58.070	0.000	54.541	0.000	0.000	58.071	44.072	0.385	MWD+IFR1+MS
15600.000	90.000	359.784	9970.000	55.226	0.000	58.730	0.000	55.226	0.000	0.000	58.732	44.093	0.461	MWD+IFR1+MS
15700.000	90.000	359.784	9970.000	55.913	0.000	59.396	0.000	55.913	0.000	0.000	59.399	44.115	0.529	MWD+IFR1+MS
15800.000	90.000	359.784	9970.000	56.603	0.000	60.068	0.000	56.603	0.000	0.000	60.071	44.138	0.589	MWD+IFR1+MS

15900.000	90.000	359.784	9970.000	57.296	0.000	60.745	0.000	57.296	0.000	0.000	60.748	44.161	0.644	MWD+IFR1+MS
16000.000	90.000	359.784	9970.000	57.991	0.000	61.427	0.000	57.991	0.000	0.000	61.431	44.184	0.693	MWD+IFR1+MS
16100.000	90.000	359.784	9970.000	58.688	0.000	62.114	0.000	58.688	0.000	0.000	62.118	44.208	0.737	MWD+IFR1+MS
16200.000	90.000	359.784	9970.000	59.387	0.000	62.806	0.000	59.387	0.000	0.000	62.811	44.232	0.777	MWD+IFR1+MS
16300.000	90.000	359.784	9970.000	60.089	0.000	63.502	0.000	60.089	0.000	0.000	63.508	44.257	0.812	MWD+IFR1+MS
16400.000	90.000	359.784	9970.000	60.792	0.000	64.203	0.000	60.792	0.000	0.000	64.209	44.282	0.844	MWD+IFR1+MS
16500.000	90.000	359.784	9970.000	61.497	0.000	64.909	0.000	61.497	0.000	0.000	64.915	44.308	0.873	MWD+IFR1+MS
16600.000	90.000	359.784	9970.000	62.205	0.000	65.619	0.000	62.205	0.000	0.000	65.625	44.334	0.899	MWD+IFR1+MS
16700.000	90.000	359.784	9970.000	62.914	0.000	66.332	0.000	62.914	0.000	0.000	66.340	44.361	0.923	MWD+IFR1+MS
16800.000	90.000	359.784	9970.000	63.625	0.000	67.050	0.000	63.625	0.000	0.000	67.058	44.388	0.944	MWD+IFR1+MS
16900.000	90.000	359.784	9970.000	64.338	0.000	67.772	0.000	64.338	0.000	0.000	67.780	44.416	0.962	MWD+IFR1+MS
17000.000	90.000	359.784	9970.000	65.052	0.000	68.497	0.000	65.052	0.000	0.000	68.506	44.444	0.979	MWD+IFR1+MS
17100.000	90.000	359.784	9970.000	65.768	0.000	69.226	0.000	65.768	0.000	0.000	69.235	44.473	0.994	MWD+IFR1+MS
17200.000	90.000	359.784	9970.000	66.485	0.000	69.959	0.000	66.485	0.000	0.000	69.968	44.502	1.007	MWD+IFR1+MS
17300.000	90.000	359.784	9970.000	67.204	0.000	70.694	0.000	67.204	0.000	0.000	70.704	44.531	1.019	MWD+IFR1+MS
17400.000	90.000	359.784	9970.000	67.925	0.000	71.434	0.000	67.925	0.000	0.000	71.444	44.561	1.030	MWD+IFR1+MS
17500.000	90.000	359.784	9970.000	68.647	0.000	72.176	0.000	68.647	0.000	0.000	72.187	44.592	1.039	MWD+IFR1+MS
17600.000	90.000	359.784	9970.000	69.370	0.000	72.921	0.000	69.370	0.000	0.000	72.932	44.623	1.047	MWD+IFR1+MS
17700.000	90.000	359.784	9970.000	70.094	0.000	73.670	0.000	70.094	0.000	0.000	73.681	44.655	1.054	MWD+IFR1+MS
17800.000	90.000	359.784	9970.000	70.820	0.000	74.421	0.000	70.820	0.000	0.000	74.433	44.687	1.060	MWD+IFR1+MS
17900.000	90.000	359.784	9970.000	71.547	0.000	75.175	0.000	71.547	0.000	0.000	75.187	44.719	1.065	MWD+IFR1+MS
18000.000	90.000	359.784	9970.000	72.276	0.000	75.932	0.000	72.276	0.000	0.000	75.944	44.752	1.070	MWD+IFR1+MS
18100.000	90.000	359.784	9970.000	73.005	0.000	76.691	0.000	73.005	0.000	0.000	76.704	44.786	1.073	MWD+IFR1+MS
18200.000	90.000	359.784	9970.000	73.736	0.000	77.453	0.000	73.736	0.000	0.000	77.466	44.820	1.076	MWD+IFR1+MS
18300.000	90.000	359.784	9970.000	74.467	0.000	78.218	0.000	74.467	0.000	0.000	78.231	44.854	1.079	MWD+IFR1+MS
18400.000	90.000	359.784	9970.000	75.200	0.000	78.984	0.000	75.200	0.000	0.000	78.998	44.889	1.080	MWD+IFR1+MS
18500.000	90.000	359.784	9970.000	75.934	0.000	79.754	0.000	75.934	0.000	0.000	79.768	44.925	1.081	MWD+IFR1+MS
18600.000	90.000	359.784	9970.000	76.669	0.000	80.525	0.000	76.669	0.000	0.000	80.540	44.961	1.082	MWD+IFR1+MS
18700.000	90.000	359.784	9970.000	77.405	0.000	81.299	0.000	77.405	0.000	0.000	81.314	44.997	1.082	MWD+IFR1+MS
18800.000	90.000	359.784	9970.000	78.141	0.000	82.075	0.000	78.141	0.000	0.000	82.090	45.034	1.082	MWD+IFR1+MS
18900.000	90.000	359.784	9970.000	78.879	0.000	82.853	0.000	78.879	0.000	0.000	82.868	45.071	1.081	MWD+IFR1+MS
19000.000	90.000	359.784	9970.000	79.618	0.000	83.633	0.000	79.618	0.000	0.000	83.648	45.109	1.080	MWD+IFR1+MS
19100.000	90.000	359.784	9970.000	80.357	0.000	84.415	0.000	80.357	0.000	0.000	84.431	45.147	1.079	MWD+IFR1+MS

19200.000	90.000	359.784	9970.000	81.097	0.000	85.199	0.000	81.097	0.000	0.000	85.215	45.186	1.077	MWD+IFR1+MS
19300.000	90.000	359.784	9970.000	81.839	0.000	85.985	0.000	81.839	0.000	0.000	86.001	45.225	1.075	MWD+IFR1+MS
19400.000	90.000	359.784	9970.000	82.581	0.000	86.773	0.000	82.581	0.000	0.000	86.789	45.265	1.073	MWD+IFR1+MS
19500.000	90.000	359.784	9970.000	83.323	0.000	87.562	0.000	83.323	0.000	0.000	87.578	45.305	1.071	MWD+IFR1+MS
19600.000	90.000	359.784	9970.000	84.067	0.000	88.353	0.000	84.067	0.000	0.000	88.370	45.346	1.068	MWD+IFR1+MS
19700.000	90.000	359.784	9970.000	84.811	0.000	89.146	0.000	84.811	0.000	0.000	89.163	45.387	1.065	MWD+IFR1+MS
19800.000	90.000	359.784	9970.000	85.556	0.000	89.941	0.000	85.556	0.000	0.000	89.957	45.428	1.062	MWD+IFR1+MS
19900.000	90.000	359.784	9970.000	86.302	0.000	90.737	0.000	86.302	0.000	0.000	90.753	45.470	1.059	MWD+IFR1+MS
20000.000	90.000	359.784	9970.000	87.048	0.000	91.534	0.000	87.048	0.000	0.000	91.551	45.513	1.056	MWD+IFR1+MS
20100.000	90.000	359.784	9970.000	87.795	0.000	92.333	0.000	87.795	0.000	0.000	92.350	45.556	1.052	MWD+IFR1+MS
20200.000	90.000	359.784	9970.000	88.543	0.000	93.134	0.000	88.543	0.000	0.000	93.151	45.599	1.049	MWD+IFR1+MS
20300.000	90.000	359.784	9970.000	89.291	0.000	93.936	0.000	89.291	0.000	0.000	93.953	45.643	1.045	MWD+IFR1+MS
20400.000	90.000	359.784	9970.000	90.040	0.000	94.739	0.000	90.040	0.000	0.000	94.757	45.687	1.041	MWD+IFR1+MS
20500.000	90.000	359.784	9970.000	90.789	0.000	95.544	0.000	90.789	0.000	0.000	95.562	45.732	1.037	MWD+IFR1+MS
20600.000	90.000	359.784	9970.000	91.540	0.000	96.350	0.000	91.540	0.000	0.000	96.368	45.777	1.033	MWD+IFR1+MS
20700.000	90.000	359.784	9970.000	92.290	0.000	97.158	0.000	92.290	0.000	0.000	97.176	45.823	1.029	MWD+IFR1+MS
20800.000	90.000	359.784	9970.000	93.042	0.000	97.966	0.000	93.042	0.000	0.000	97.984	45.869	1.024	MWD+IFR1+MS
20900.000	90.000	359.784	9970.000	93.793	0.000	98.776	0.000	93.793	0.000	0.000	98.794	45.915	1.020	MWD+IFR1+MS
21000.000	90.000	359.784	9970.000	94.546	0.000	99.587	0.000	94.546	0.000	0.000	99.606	45.962	1.016	MWD+IFR1+MS
21100.000	90.000	359.784	9970.000	95.299	0.000	100.400	0.000	95.299	0.000	0.000	100.418	46.010	1.011	MWD+IFR1+MS
21200.000	90.000	359.784	9970.000	96.052	0.000	101.213	0.000	96.052	0.000	0.000	101.231	46.058	1.007	MWD+IFR1+MS
21300.000	90.000	359.784	9970.000	96.806	0.000	102.028	0.000	96.806	0.000	0.000	102.046	46.106	1.002	MWD+IFR1+MS
21400.000	90.000	359.784	9970.000	97.560	0.000	102.843	0.000	97.560	0.000	0.000	102.862	46.155	0.997	MWD+IFR1+MS
21500.000	90.000	359.784	9970.000	98.315	0.000	103.660	0.000	98.315	0.000	0.000	103.679	46.204	0.993	MWD+IFR1+MS
21600.000	90.000	359.784	9970.000	99.070	0.000	104.478	0.000	99.070	0.000	0.000	104.496	46.253	0.988	MWD+IFR1+MS
21700.000	90.000	359.784	9970.000	99.826	0.000	105.297	0.000	99.826	0.000	0.000	105.315	46.303	0.983	MWD+IFR1+MS
21800.000	90.000	359.784	9970.000	100.582	0.000	106.116	0.000	100.582	0.000	0.000	106.135	46.354	0.979	MWD+IFR1+MS
21900.000	90.000	359.784	9970.000	101.339	0.000	106.937	0.000	101.339	0.000	0.000	106.956	46.405	0.974	MWD+IFR1+MS
22000.000	90.000	359.784	9970.000	102.096	0.000	107.759	0.000	102.096	0.000	0.000	107.778	46.456	0.969	MWD+IFR1+MS
22100.000	90.000	359.784	9970.000	102.854	0.000	108.581	0.000	102.854	0.000	0.000	108.600	46.508	0.964	MWD+IFR1+MS
22200.000	90.000	359.784	9970.000	103.612	0.000	109.405	0.000	103.612	0.000	0.000	109.424	46.560	0.960	MWD+IFR1+MS
22300.000	90.000	359.784	9970.000	104.370	0.000	110.229	0.000	104.370	0.000	0.000	110.248	46.613	0.955	MWD+IFR1+MS
22400.000	90.000	359.784	9970.000	105.129	0.000	111.054	0.000	105.129	0.000	0.000	111.073	46.666	0.950	MWD+IFR1+MS

22500.000	90.000	359.784	9970.000	105.888	0.000	111.881	0.000	105.888	0.000	0.000	111.900	46.719	0.945	MWD+IFR1+MS
22600.000	90.000	359.784	9970.000	106.647	0.000	112.707	0.000	106.647	0.000	0.000	112.727	46.773	0.940	MWD+IFR1+MS
22700.000	90.000	359.784	9970.000	107.407	0.000	113.535	0.000	107.407	0.000	0.000	113.554	46.828	0.936	MWD+IFR1+MS
22800.000	90.000	359.784	9970.000	108.167	0.000	114.364	0.000	108.167	0.000	0.000	114.383	46.882	0.931	MWD+IFR1+MS
22900.000	90.000	359.784	9970.000	108.927	0.000	115.193	0.000	108.927	0.000	0.000	115.212	46.937	0.926	MWD+IFR1+MS
23000.000	90.000	359.784	9970.000	109.688	0.000	116.023	0.000	109.688	0.000	0.000	116.042	46.993	0.921	MWD+IFR1+MS
23100.000	90.000	359.784	9970.000	110.450	0.000	116.854	0.000	110.450	0.000	0.000	116.873	47.049	0.916	MWD+IFR1+MS
23200.000	90.000	359.784	9970.000	111.211	0.000	117.685	0.000	111.211	0.000	0.000	117.705	47.105	0.912	MWD+IFR1+MS
23300.000	90.000	359.784	9970.000	111.973	0.000	118.518	0.000	111.973	0.000	0.000	118.537	47.162	0.907	MWD+IFR1+MS
23400.000	90.000	359.784	9970.000	112.735	0.000	119.351	0.000	112.735	0.000	0.000	119.370	47.219	0.902	MWD+IFR1+MS
23500.000	90.000	359.784	9970.000	113.497	0.000	120.184	0.000	113.497	0.000	0.000	120.203	47.277	0.897	MWD+IFR1+MS
23600.000	90.000	359.784	9970.000	114.260	0.000	121.019	0.000	114.260	0.000	0.000	121.038	47.335	0.892	MWD+IFR1+MS
23700.000	90.000	359.784	9970.000	115.023	0.000	121.853	0.000	115.023	0.000	0.000	121.873	47.393	0.888	MWD+IFR1+MS
23800.000	90.000	359.784	9970.000	115.787	0.000	122.689	0.000	115.787	0.000	0.000	122.708	47.452	0.883	MWD+IFR1+MS
23900.000	90.000	359.784	9970.000	116.550	0.000	123.525	0.000	116.550	0.000	0.000	123.544	47.512	0.878	MWD+IFR1+MS
24000.000	90.000	359.784	9970.000	117.314	0.000	124.362	0.000	117.314	0.000	0.000	124.381	47.571	0.874	MWD+IFR1+MS
24100.000	90.000	359.784	9970.000	118.078	0.000	125.199	0.000	118.078	0.000	0.000	125.219	47.631	0.869	MWD+IFR1+MS
24200.000	90.000	359.784	9970.000	118.843	0.000	126.037	0.000	118.843	0.000	0.000	126.057	47.692	0.864	MWD+IFR1+MS
24300.000	90.000	359.784	9970.000	119.608	0.000	126.876	0.000	119.608	0.000	0.000	126.895	47.752	0.860	MWD+IFR1+MS
24400.000	90.000	359.784	9970.000	120.373	0.000	127.715	0.000	120.373	0.000	0.000	127.734	47.814	0.855	MWD+IFR1+MS
24500.000	90.000	359.784	9970.000	121.138	0.000	128.555	0.000	121.138	0.000	0.000	128.574	47.875	0.851	MWD+IFR1+MS
24600.000	90.000	359.784	9970.000	121.903	0.000	129.395	0.000	121.903	0.000	0.000	129.414	47.937	0.846	MWD+IFR1+MS
24700.000	90.000	359.784	9970.000	122.669	0.000	130.236	0.000	122.669	0.000	0.000	130.255	48.000	0.842	MWD+IFR1+MS
24800.000	90.000	359.784	9970.000	123.435	0.000	131.077	0.000	123.435	0.000	0.000	131.096	48.062	0.837	MWD+IFR1+MS
24900.000	90.000	359.784	9970.000	124.201	0.000	131.919	0.000	124.201	0.000	0.000	131.938	48.126	0.833	MWD+IFR1+MS
25000.000	90.000	359.784	9970.000	124.968	0.000	132.761	0.000	124.968	0.000	0.000	132.781	48.189	0.828	MWD+IFR1+MS
25100.000	90.000	359.784	9970.000	125.734	0.000	133.604	0.000	125.734	0.000	0.000	133.623	48.253	0.824	MWD+IFR1+MS
25200.000	90.000	359.784	9970.000	126.501	0.000	134.448	0.000	126.501	0.000	0.000	134.467	48.317	0.819	MWD+IFR1+MS
25300.000	90.000	359.784	9970.000	127.268	0.000	135.291	0.000	127.268	0.000	0.000	135.311	48.382	0.815	MWD+IFR1+MS
25400.000	90.000	359.784	9970.000	128.035	0.000	136.136	0.000	128.035	0.000	0.000	136.155	48.447	0.811	MWD+IFR1+MS
25500.000	90.000	359.784	9970.000	128.803	0.000	136.980	0.000	128.803	0.000	0.000	136.999	48.513	0.806	MWD+IFR1+MS
25600.000	90.000	359.784	9970.000	129.571	0.000	137.826	0.000	129.571	0.000	0.000	137.845	48.578	0.802	MWD+IFR1+MS
25700.000	90.000	359.784	9970.000	130.339	0.000	138.671	0.000	130.339	0.000	0.000	138.690	48.645	0.798	MWD+IFR1+MS

25800.000	90.000	359.784	9970.000	131.107	0.000	139.517	0.000	131.107	0.000	0.000	139.536	48.711	0.793	MWD+IFR1+MS
25900.000	90.000	359.784	9970.000	131.875	0.000	140.364	0.000	131.875	0.000	0.000	140.383	48.778	0.789	MWD+IFR1+MS
26000.000	90.000	359.784	9970.000	132.644	0.000	141.211	0.000	132.644	0.000	0.000	141.230	48.845	0.785	MWD+IFR1+MS
26100.000	90.000	359.784	9970.000	133.412	0.000	142.058	0.000	133.412	0.000	0.000	142.077	48.913	0.781	MWD+IFR1+MS
26200.000	90.000	359.784	9970.000	134.181	0.000	142.906	0.000	134.181	0.000	0.000	142.925	48.981	0.777	MWD+IFR1+MS
26300.000	90.000	359.784	9970.000	134.950	0.000	143.754	0.000	134.950	0.000	0.000	143.773	49.049	0.772	MWD+IFR1+MS
26400.000	90.000	359.784	9970.000	135.720	0.000	144.602	0.000	135.720	0.000	0.000	144.621	49.118	0.768	MWD+IFR1+MS
26500.000	90.000	359.784	9970.000	136.489	0.000	145.451	0.000	136.489	0.000	0.000	145.470	49.187	0.764	MWD+IFR1+MS
26600.000	90.000	359.784	9970.000	137.259	0.000	146.300	0.000	137.259	0.000	0.000	146.319	49.257	0.760	MWD+IFR1+MS
26700.000	90.000	359.784	9970.000	138.028	0.000	147.150	0.000	138.028	0.000	0.000	147.169	49.327	0.756	MWD+IFR1+MS
26800.000	90.000	359.784	9970.000	138.798	0.000	148.000	0.000	138.798	0.000	0.000	148.019	49.397	0.752	MWD+IFR1+MS
26900.000	90.000	359.784	9970.000	139.568	0.000	148.850	0.000	139.568	0.000	0.000	148.869	49.467	0.748	MWD+IFR1+MS
26966.695	90.000	359.784	9970.000	140.082	0.000	149.417	0.000	140.082	0.000	0.000	149.436	49.515	0.746	MWD+IFR1+MS
27000.000	90.000	359.784	9970.000	140.338	0.000	149.700	0.000	140.338	0.000	0.000	149.718	49.538	0.744	MWD+IFR1+MS
27016.695	90.000	359.784	9970.000	140.466	0.000	149.841	0.000	140.466	0.000	0.000	149.860	49.550	0.744	MWD+IFR1+MS

Plan Targets

POKER LAKE UNIT 23 DTD 172H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 5	10743.97	440131.90	648491.40	6490.00	RECTANGLE
LTP 5	26966.70	456354.50	648430.20	6490.00	RECTANGLE
BHL 5	27016.71	456404.50	648430.00	6490.00	RECTANGLE

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

XTO Energy Inc.
POKER LAKE UNIT 23 DTD 172H
Projected TD: 27017' MD / 9970' TVD
SHL: 366' FSL & 771' FWL , Section 14, T24S, R30E
BHL: 50' FNL & 2030' FWL , Section 2, 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	641'	Water
Top of Salt	998'	Water
Base of Salt	3847'	Water
Delaware	4058'	Water
Brushy Canyon	6267'	Water/Oil/Gas
Bone Spring	7924'	Water
1st Bone Spring Ss	8866'	Water/Oil/Gas
2nd Bone Spring Ss	9734'	Water/Oil/Gas
Target/Land Curve	9970'	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 20 inch casing @ 973' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13.375 inch casing at 3947' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 9.625 inch casing at 9054' and cementing to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 27017 MD/TD and 5.5 inch production casing will be set at TD and cemented back up to 2nd intermediate (estimated TOC 8754 feet) per Potash regulations.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
26	0' – 973'	20	169	K-55	BTC	New	3.86	6.10	16.35
17.5	0' – 3947'	13.375	54.5	J-55	BTC	New	1.22	1.27	4.23
12.25	0' – 4047'	9.625	40	HC P-110	BTC	New	2.25	2.23	3.50
12.25	4047' – 9054'	9.625	40	HC L-80	BTC	New	1.64	2.59	4.57
8.5	0' – 8954'	5.5	23	RY P-110	Semi-Premium	New	1.21	2.84	1.93
8.5	8954' - 27017'	5.5	23	RY P-110	Semi-Flush	New	1.21	2.55	4.11

· Production casing meets the clearance requirements as tapered string crosses over before encountering the intermediate shoe, per Onshore Order 2.3.B.1

· XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface and intermediate 1 casing per this Sundry

· XTO requests to not utilize centralizers in the curve and lateral

· 13.375 Collapse analyzed using 50% evacuation based on regional experience.

· 9.625 Collapse analyzed using 50% evacuation based on regional experience.

· 5.5 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: 24" 5M QC x 13-3/8" bottom

B. Tubing Head: 13-5/8" 10M bottom flange x 7-1/16" 15M top flange

· Wellhead will be installed by manufacturer's representatives.

· Manufacturer will monitor welding process to ensure appropriate temperature of seal.

· Operator will test the 7-5/8" casing per BLM Onshore Order 2

· Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 20, 169 New BTC, K-55 casing to be set at +/- 973'

Optional Lead: 1520 sxs EconoCem-HLTRRC (mixed at 12.8 ppg, 1.33 ft³/sx, 10.13 gal/sx water)
 Tail: 670 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
 Top of Cement: Surface
 Compressives: 12-hr = 250 psi 24 hr = 500 psi

Due to the high probability of not getting cement to surface during conventional top-out jobs in the area, ~10-20 ppb gravel will be added on the backside of the 1" to get cement to surface, if required.

1st Intermediate Casing: 13.375, 54.5 New BTC, J-55 casing to be set at +/- 3947'

Lead: 1840 sxs Class C (mixed at 14.8 ppg, 2.06 ft³/sx, 10.13 gal/sx water)
 Tail: 150 sxs Class C + 2% CaCl (mixed at 15.6 ppg, 2.06 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 +/- 9054'

1st Stage

Optional Lead: 390 sxs Class C (mixed at 10.5 ppg, 2.77 ft³/sx, 15.59 gal/sx water)
 TOC: 3647
 Tail: 920 sxs Class C (mixed at 14.8 ppg, 1.27 ft³/sx, 6.39 gal/sx water)
 TOC: Brushy Canyon @ 6267
 Compressives: 12-hr = 900 psi 24 hr = 1150 psi

2nd Stage - bradenhead contingency

Tail: 420 sxs Class C (mixed at 14.8 ppg, 2.77 ft³/sx, 6.39 gal/sx water)
 Top of Cement: 3647
 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 (6267") and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface.

XTO requests to pump an Optional Lead if well conditions dictate in an attempt to bring cement to surface. 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 wellhead provider procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

Production Casing: 5.5, 23 New Semi-Flush, RY P-110 casing to be set at +/- 27017'

Lead: 80 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 8754 feet
 Tail: 3030 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 9619 feet
 Compressives: 12-hr = 1375 psi 24 hr = 2285 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 20 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 3509 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 conducted to at least 50% of the rated working pressure. When nipping up on the 20, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 9.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each 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' - 973'	26	FW/Native	8.1-8.6	35-40	NC
973' - 3947'	17.5	Brine	8.5-9	30-32	NC
3947' to 9054'	12.25	BDE/OBM or FW/Brine	9-9.5	30-32	NC
9054' to 27017'	8.5	OBM	11-11.5	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 13-3/8" surface casing with brine solution. A 10.0 ppg -10.5 ppg 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 20 casing.

8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing where necessary. Otherwise, gamma ray will be utilized while actively drilling.

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 165 to 185 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 5703 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.

APD ID 1000078682

DB/RP 618.013003.09-12

Intent ☒ As Drilled ☐

API # 30015		
Operator Name: XTO PERMIAN OPERATING, LLC	Property Name: Poker Lake Unit 23 DTD	Well Number 172H

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 C	Section 23	Township 24S	Range 30E	Lot	Feet 500	From N/S North	Feet 2,030	From E/W West	County Eddy
Latitude 32.209252					Longitude 103.85372				NAD 83

Last Take Point (LTP)

UL 3	Section 2	Township 24S	Range 30E	Lot	Feet 100	From N/S North	Feet 2,030	From E/W West	County Eddy
Latitude 32.253847					Longitude 103.853682				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 299608

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 299608
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply.	1/9/2024