

Well Name: POKER LAKE 23 DTD FEDERAL COM	Well Location: T24S / R30E / SEC 23 / SWSW /	County or Parish/State:
Well Number: 171H	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: 2764696

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 12/05/2023

Time Sundry Submitted: 07:02

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 10400078622): SHL, BHL, FTP, LTP, casing and cement changes. SHL: FROM: 406' FSL & 711' FWL of Section 14-T24S-R30E TO: 366' FSL & 711' FWL of Section 14-T24S-R30E BHL: FROM: 200' FNL & 990' FWL of Section 2-T24S-R30E TO: 50' FNL & 1130' FWL of Section 2-T24S-R30E FTP: FROM: 100' FSL & 990' FWL of Section 14-T24S-R30E TO: 500' FNL & 1130' FWL of Section 23-T24S-R30E LTP: FROM: 330' FNL & 990' FWL of Section 2-T24S-R30E TO: 100' FNL & 1130' 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_20231205190154.pdf
- 4_String_Slimhole_SDT_3301_1_20231205190136.pdf
- Well_Plan_Report____POKER_LAKE_UNIT_23_DTD_171H_20231205190058.pdf
- Drilling_Plan____PLU_23_DTD_171H_20231205190008.pdf
- POKER_LAKE_UNIT_23_DTD_171H_C_102_signed_12_4_2023_20231205185933.pdf

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FEDERAL COM

Well Location: T24S / R30E / SEC 23 /
SWSW /

County or Parish/State:

Well Number: 171H

Type of Well: CONVENTIONAL GAS
WELL

Allottee or Tribe Name:

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Operator: XTO PERMIAN
OPERATING LLC

Conditions of Approval

Additional

Sec_14_24S_30E_NMP_Sundry_2764696_Poker_Lake_23_DTD_Federal_Com_171H_COAs_20231226095339.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 07:02 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.

5. Lease Serial No.	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No.	
9. API Well No.	
10. Field and Pool or Exploratory Area	
11. Country or Parish, State	

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well	
<input type="checkbox"/> Oil Well	<input type="checkbox"/> Gas Well <input type="checkbox"/> Other
2. Name of Operator	
3a. Address	3b. Phone No. (include area code)
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)	

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

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

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or 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 / 711 FWL / TWSP: 24S / RANGE: 30E / SECTION: 23 / LAT: 32.211731 / LONG: -103.857975 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 100 FSL / 990 FWL / TWSP: 24S / RANGE: 30E / SECTION: 14 / LAT: 32.210892 / LONG: -103.857076 (TVD: 11590 feet, MD: 12000 feet)

BHL: LOT 4 / 200 FNL / 990 FWL / TWSP: 24S / RANGE: 30E / SECTION: 2 / LAT: 32.253564 / LONG: -103.857046 (TVD: 11590 feet, MD: 27487 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 23 DTD Federal Com 171H
LOCATION:	Sec 14-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2764696** 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 3442 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	<input checked="" type="radio"/> No	<input type="radio"/> Yes		
Potash / WIPP	<input type="radio"/> None	<input checked="" type="radio"/> Secretary	<input type="radio"/> R-111-P	<input type="checkbox"/> WIPP
Cave / Karst	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High	<input type="radio"/> Critical
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both	<input type="radio"/> Diverter
Cementing	<input type="checkbox"/> Primary Squeeze	<input checked="" type="checkbox"/> Cont. Squeeze	<input checked="" type="checkbox"/> EchoMeter	<input type="checkbox"/> DV Tool
Special Req	<input checked="" type="checkbox"/> Break Testing	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Variance	<input checked="" type="checkbox"/> Flex Hose	<input type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Capitan Reef
Variance	<input type="checkbox"/> Four-String	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Fluid-Filled	<input type="checkbox"/> Open Annulus
<input type="checkbox"/> Batch APD / Sundry				

A. HYDROGEN SULFIDE

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

B. CASING

1. The **20** inch surface casing shall be set at approximately 832 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 **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 6259'**
- 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.

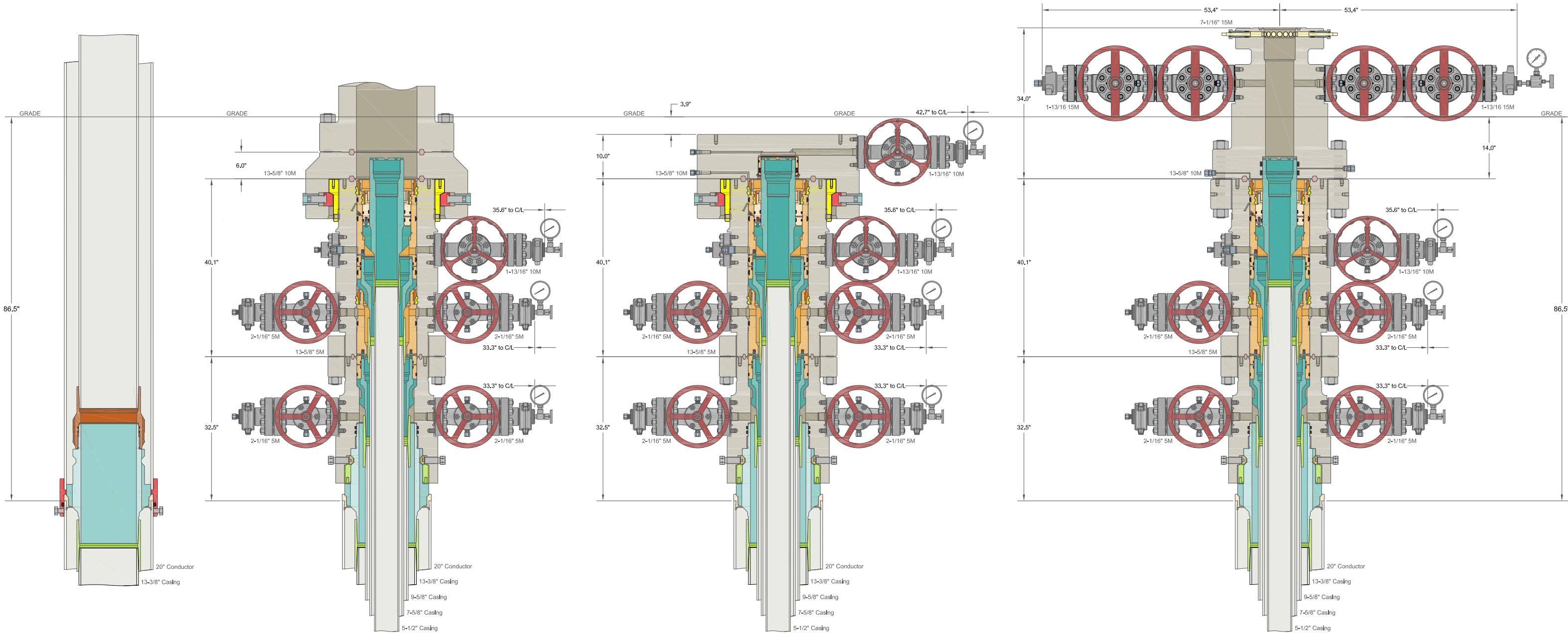
Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
5.

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 171H

Measured Depth: 26761.49 ft

TVD RKB: 9777.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 440987.80 ft

Easting: 647170.60 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 171H

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	
2256.37	23.13	164.99	2225.22	-222.37	59.64	2.00	0.00	2.00	
5246.21	23.13	164.99	4974.78	-1356.62	363.86	0.00	0.00	0.00	
6402.57	0.00	0.00	6100.00	-1578.99	423.50	-2.00	0.00	2.00	
9363.38	0.00	0.00	9060.80	-1578.99	423.50	0.00	0.00	0.00	
10488.38	90.00	359.78	9777.00	-862.80	420.80	8.00	0.00	8.00	FTP 4
26711.49	90.00	359.78	9777.00	15360.20	359.70	0.00	0.00	0.00	LTP 4
26761.49	90.00	359.78	9777.00	15410.20	359.51	0.00	0.00	0.00	BHL 4

Position Uncertainty

POKER LAKE UNIT 23 DTD 171H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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3000.000	23.127	164.986	2909.091	13.059	0.000	11.598	-0.000	4.854	0.000	0.000	13.420	11.201	98.997	MWD+IFR1+MS
3100.000	23.127	164.986	3001.054	13.417	0.000	12.043	-0.000	5.011	0.000	0.000	13.759	11.637	99.979	MWD+IFR1+MS
3200.000	23.127	164.986	3093.018	13.781	0.000	12.492	-0.000	5.172	0.000	0.000	14.105	12.075	101.037	MWD+IFR1+MS
3300.000	23.127	164.986	3184.981	14.149	0.000	12.943	-0.000	5.336	0.000	0.000	14.456	12.514	102.176	MWD+IFR1+MS
3400.000	23.127	164.986	3276.944	14.523	0.000	13.397	-0.000	5.503	0.000	0.000	14.813	12.954	103.401	MWD+IFR1+MS
3500.000	23.127	164.986	3368.908	14.901	0.000	13.854	-0.000	5.672	0.000	0.000	15.176	13.394	104.716	MWD+IFR1+MS
3600.000	23.127	164.986	3460.871	15.283	0.000	14.312	-0.000	5.844	0.000	0.000	15.545	13.835	106.125	MWD+IFR1+MS
3700.000	23.127	164.986	3552.835	15.669	0.000	14.772	-0.000	6.019	0.000	0.000	15.919	14.275	107.631	MWD+IFR1+MS
3800.000	23.127	164.986	3644.798	16.058	0.000	15.234	-0.000	6.196	0.000	0.000	16.299	14.715	109.234	MWD+IFR1+MS
3900.000	23.127	164.986	3736.762	16.451	0.000	15.698	-0.000	6.375	0.000	0.000	16.684	15.153	110.933	MWD+IFR1+MS
4000.000	23.127	164.986	3828.725	16.847	0.000	16.163	-0.000	6.556	0.000	0.000	17.074	15.591	112.723	MWD+IFR1+MS
4100.000	23.127	164.986	3920.688	17.245	0.000	16.629	-0.000	6.740	0.000	0.000	17.470	16.027	114.595	MWD+IFR1+MS
4200.000	23.127	164.986	4012.652	17.647	0.000	17.096	-0.000	6.925	0.000	0.000	17.872	16.462	116.540	MWD+IFR1+MS
4300.000	23.127	164.986	4104.615	18.051	0.000	17.565	-0.000	7.111	0.000	0.000	18.278	16.894	118.540	MWD+IFR1+MS
4400.000	23.127	164.986	4196.579	18.457	0.000	18.034	-0.000	7.300	0.000	0.000	18.690	17.324	120.579	MWD+IFR1+MS
4500.000	23.127	164.986	4288.542	18.865	0.000	18.505	-0.000	7.490	0.000	0.000	19.108	17.752	122.636	MWD+IFR1+MS
4600.000	23.127	164.986	4380.506	19.275	0.000	18.976	-0.000	7.682	0.000	0.000	19.530	18.178	124.690	MWD+IFR1+MS
4700.000	23.127	164.986	4472.469	19.688	0.000	19.448	-0.000	7.875	0.000	0.000	19.957	18.602	126.719	MWD+IFR1+MS
4800.000	23.127	164.986	4564.433	20.102	0.000	19.921	-0.000	8.070	0.000	0.000	20.389	19.023	128.704	MWD+IFR1+MS
4900.000	23.127	164.986	4656.396	20.518	0.000	20.395	-0.000	8.266	0.000	0.000	20.825	19.443	130.628	MWD+IFR1+MS
5000.000	23.127	164.986	4748.359	20.935	0.000	20.869	-0.000	8.464	0.000	0.000	21.265	19.860	132.476	MWD+IFR1+MS
5100.000	23.127	164.986	4840.323	21.354	0.000	21.344	-0.000	8.663	0.000	0.000	21.710	20.276	134.240	MWD+IFR1+MS
5200.000	23.127	164.986	4932.286	21.774	0.000	21.820	-0.000	8.864	0.000	0.000	22.157	20.690	-44.089	MWD+IFR1+MS
5246.208	23.127	164.986	4974.781	21.966	0.000	22.036	-0.000	8.956	0.000	0.000	22.360	20.881	-43.307	MWD+IFR1+MS
5300.000	22.051	164.986	5024.445	22.228	0.000	22.286	-0.000	9.064	0.000	0.000	22.596	21.103	-42.482	MWD+IFR1+MS
5400.000	20.051	164.986	5117.766	22.755	0.000	22.746	-0.000	9.278	0.000	0.000	23.054	21.544	-42.247	MWD+IFR1+MS
5500.000	18.051	164.986	5212.284	23.291	0.000	23.195	-0.000	9.491	0.000	0.000	23.521	22.005	-43.041	MWD+IFR1+MS
5600.000	16.051	164.986	5307.883	23.787	0.000	23.630	-0.000	9.686	0.000	0.000	23.977	22.458	-43.962	MWD+IFR1+MS
5700.000	14.051	164.986	5404.448	24.243	0.000	24.051	-0.000	9.864	0.000	0.000	24.422	22.900	135.000	MWD+IFR1+MS
5800.000	12.051	164.986	5501.859	24.657	0.000	24.456	-0.000	10.027	0.000	0.000	24.854	23.332	133.852	MWD+IFR1+MS
5900.000	10.051	164.986	5600.000	25.030	0.000	24.846	-0.000	10.176	0.000	0.000	25.273	23.750	132.608	MWD+IFR1+MS
6000.000	8.051	164.986	5698.750	25.362	0.000	25.221	-0.000	10.313	0.000	0.000	25.681	24.156	131.280	MWD+IFR1+MS
6100.000	6.051	164.986	5797.988	25.652	0.000	25.580	-0.000	10.440	0.000	0.000	26.076	24.546	129.883	MWD+IFR1+MS

6200.000	4.051	164.986	5897.595	25.901	0.000	25.924	-0.000	10.557	0.000	0.000	26.459	24.922	128.435	MWD+IFR1+MS
6300.000	2.051	164.986	5997.448	26.108	0.000	26.252	-0.000	10.668	0.000	0.000	26.829	25.282	126.953	MWD+IFR1+MS
6402.574	0.000	0.000	6100.000	26.561	0.000	26.150	0.000	10.775	0.000	0.000	27.113	25.578	127.227	MWD+IFR1+MS
6500.000	0.000	0.000	6197.426	26.855	0.000	26.412	0.000	10.875	0.000	0.000	27.406	25.840	126.774	MWD+IFR1+MS
6600.000	0.000	0.000	6297.426	27.125	0.000	26.683	0.000	10.980	0.000	0.000	27.678	26.109	126.816	MWD+IFR1+MS
6700.000	0.000	0.000	6397.426	27.397	0.000	26.956	0.000	11.089	0.000	0.000	27.952	26.380	126.859	MWD+IFR1+MS
6800.000	0.000	0.000	6497.426	27.671	0.000	27.232	0.000	11.200	0.000	0.000	28.228	26.653	126.902	MWD+IFR1+MS
6900.000	0.000	0.000	6597.426	27.946	0.000	27.509	0.000	11.313	0.000	0.000	28.506	26.928	126.943	MWD+IFR1+MS
7000.000	0.000	0.000	6697.426	28.224	0.000	27.788	0.000	11.430	0.000	0.000	28.786	27.205	126.983	MWD+IFR1+MS
7100.000	0.000	0.000	6797.426	28.504	0.000	28.068	0.000	11.549	0.000	0.000	29.067	27.484	127.022	MWD+IFR1+MS
7200.000	0.000	0.000	6897.426	28.785	0.000	28.351	0.000	11.672	0.000	0.000	29.351	27.765	127.060	MWD+IFR1+MS
7300.000	0.000	0.000	6997.426	29.068	0.000	28.635	0.000	11.797	0.000	0.000	29.635	28.047	127.098	MWD+IFR1+MS
7400.000	0.000	0.000	7097.426	29.352	0.000	28.921	0.000	11.925	0.000	0.000	29.922	28.331	127.134	MWD+IFR1+MS
7500.000	0.000	0.000	7197.426	29.638	0.000	29.209	0.000	12.056	0.000	0.000	30.210	28.617	127.170	MWD+IFR1+MS
7600.000	0.000	0.000	7297.426	29.926	0.000	29.498	0.000	12.191	0.000	0.000	30.499	28.905	127.205	MWD+IFR1+MS
7700.000	0.000	0.000	7397.426	30.215	0.000	29.788	0.000	12.328	0.000	0.000	30.790	29.194	127.239	MWD+IFR1+MS
7800.000	0.000	0.000	7497.426	30.506	0.000	30.080	0.000	12.469	0.000	0.000	31.082	29.484	127.273	MWD+IFR1+MS
7900.000	0.000	0.000	7597.426	30.798	0.000	30.374	0.000	12.612	0.000	0.000	31.376	29.776	127.306	MWD+IFR1+MS
8000.000	0.000	0.000	7697.426	31.092	0.000	30.669	0.000	12.759	0.000	0.000	31.671	30.070	127.338	MWD+IFR1+MS
8100.000	0.000	0.000	7797.426	31.386	0.000	30.965	0.000	12.909	0.000	0.000	31.967	30.365	127.369	MWD+IFR1+MS
8200.000	0.000	0.000	7897.426	31.683	0.000	31.262	0.000	13.062	0.000	0.000	32.265	30.661	127.400	MWD+IFR1+MS
8300.000	0.000	0.000	7997.426	31.980	0.000	31.561	0.000	13.218	0.000	0.000	32.564	30.959	127.430	MWD+IFR1+MS
8400.000	0.000	0.000	8097.426	32.279	0.000	31.861	0.000	13.378	0.000	0.000	32.864	31.257	127.460	MWD+IFR1+MS
8500.000	0.000	0.000	8197.426	32.579	0.000	32.162	0.000	13.540	0.000	0.000	33.165	31.557	127.489	MWD+IFR1+MS
8600.000	0.000	0.000	8297.426	32.880	0.000	32.464	0.000	13.706	0.000	0.000	33.467	31.859	127.517	MWD+IFR1+MS
8700.000	0.000	0.000	8397.426	33.182	0.000	32.768	0.000	13.876	0.000	0.000	33.770	32.161	127.545	MWD+IFR1+MS
8800.000	0.000	0.000	8497.426	33.485	0.000	33.072	0.000	14.048	0.000	0.000	34.075	32.465	127.572	MWD+IFR1+MS
8900.000	0.000	0.000	8597.426	33.790	0.000	33.378	0.000	14.224	0.000	0.000	34.380	32.769	127.599	MWD+IFR1+MS
9000.000	0.000	0.000	8697.426	34.095	0.000	33.685	0.000	14.403	0.000	0.000	34.687	33.075	127.626	MWD+IFR1+MS
9100.000	0.000	0.000	8797.426	34.401	0.000	33.993	0.000	14.586	0.000	0.000	34.994	33.382	127.651	MWD+IFR1+MS
9200.000	0.000	0.000	8897.426	34.709	0.000	34.301	0.000	14.772	0.000	0.000	35.303	33.690	127.677	MWD+IFR1+MS
9300.000	0.000	0.000	8997.426	35.017	0.000	34.611	0.000	14.961	0.000	0.000	35.612	33.999	127.702	MWD+IFR1+MS
9363.377	0.000	0.000	9060.803	35.211	0.000	34.806	0.000	15.083	0.000	0.000	35.805	34.195	127.700	MWD+IFR1+MS

9400.000	2.930	359.784	9097.410	34.973	0.000	34.922	0.000	15.153	0.000	0.000	35.919	34.308	127.611	MWD+IFR1+MS
9500.000	10.930	359.784	9196.599	34.497	0.000	35.213	0.000	15.365	0.000	0.000	36.601	34.735	119.868	MWD+IFR1+MS
9600.000	18.930	359.784	9293.145	34.159	0.000	35.484	0.000	15.721	0.000	0.000	37.778	35.143	110.540	MWD+IFR1+MS
9700.000	26.930	359.784	9385.168	33.367	0.000	35.731	0.000	16.294	0.000	0.000	38.856	35.440	106.393	MWD+IFR1+MS
9800.000	34.930	359.784	9470.878	32.223	0.000	35.953	0.000	17.139	0.000	0.000	39.768	35.680	104.362	MWD+IFR1+MS
9900.000	42.930	359.784	9548.607	30.861	0.000	36.149	0.000	18.269	0.000	0.000	40.492	35.880	103.346	MWD+IFR1+MS
10000.000	50.930	359.784	9616.840	29.449	0.000	36.320	0.000	19.662	0.000	0.000	41.030	36.047	102.898	MWD+IFR1+MS
10100.000	58.930	359.784	9674.252	28.188	0.000	36.468	0.000	21.266	0.000	0.000	41.395	36.186	102.800	MWD+IFR1+MS
10200.000	66.930	359.784	9719.723	27.296	0.000	36.593	0.000	23.020	0.000	0.000	41.612	36.300	102.922	MWD+IFR1+MS
10300.000	74.930	359.784	9752.369	26.975	0.000	36.698	0.000	24.856	0.000	0.000	41.715	36.394	103.160	MWD+IFR1+MS
10400.000	82.930	359.784	9771.554	27.361	0.000	36.782	0.000	26.709	0.000	0.000	41.743	36.470	103.405	MWD+IFR1+MS
10488.377	90.000	359.784	9777.000	28.020	0.000	36.837	0.000	28.020	0.000	0.000	41.741	36.523	103.518	MWD+IFR1+MS
10500.000	90.000	359.784	9777.000	28.053	0.000	36.842	0.000	28.053	0.000	0.000	41.741	36.529	103.520	MWD+IFR1+MS
10600.000	90.000	359.784	9777.000	28.319	0.000	36.907	0.000	28.319	0.000	0.000	41.739	36.594	103.594	MWD+IFR1+MS
10700.000	90.000	359.784	9777.000	28.608	0.000	36.995	0.000	28.608	0.000	0.000	41.739	36.683	103.729	MWD+IFR1+MS
10800.000	90.000	359.784	9777.000	28.916	0.000	37.105	0.000	28.916	0.000	0.000	41.740	36.791	103.921	MWD+IFR1+MS
10900.000	90.000	359.784	9777.000	29.241	0.000	37.235	0.000	29.241	0.000	0.000	41.743	36.919	104.176	MWD+IFR1+MS
11000.000	90.000	359.784	9777.000	29.584	0.000	37.385	0.000	29.584	0.000	0.000	41.749	37.065	104.500	MWD+IFR1+MS
11100.000	90.000	359.784	9777.000	29.943	0.000	37.555	0.000	29.943	0.000	0.000	41.756	37.230	104.903	MWD+IFR1+MS
11200.000	90.000	359.784	9777.000	30.319	0.000	37.745	0.000	30.319	0.000	0.000	41.765	37.413	105.399	MWD+IFR1+MS
11300.000	90.000	359.784	9777.000	30.710	0.000	37.955	0.000	30.710	0.000	0.000	41.777	37.614	106.003	MWD+IFR1+MS
11400.000	90.000	359.784	9777.000	31.115	0.000	38.184	0.000	31.115	0.000	0.000	41.792	37.831	106.736	MWD+IFR1+MS
11500.000	90.000	359.784	9777.000	31.535	0.000	38.431	0.000	31.535	0.000	0.000	41.810	38.064	107.626	MWD+IFR1+MS
11600.000	90.000	359.784	9777.000	31.969	0.000	38.697	0.000	31.969	0.000	0.000	41.833	38.312	108.711	MWD+IFR1+MS
11700.000	90.000	359.784	9777.000	32.416	0.000	38.982	0.000	32.416	0.000	0.000	41.861	38.573	110.037	MWD+IFR1+MS
11800.000	90.000	359.784	9777.000	32.876	0.000	39.283	0.000	32.876	0.000	0.000	41.897	38.845	111.672	MWD+IFR1+MS
11900.000	90.000	359.784	9777.000	33.348	0.000	39.602	0.000	33.348	0.000	0.000	41.941	39.126	113.698	MWD+IFR1+MS
12000.000	90.000	359.784	9777.000	33.831	0.000	39.938	0.000	33.831	0.000	0.000	41.997	39.413	116.225	MWD+IFR1+MS
12100.000	90.000	359.784	9777.000	34.326	0.000	40.291	0.000	34.326	0.000	0.000	42.069	39.700	119.382	MWD+IFR1+MS
12200.000	90.000	359.784	9777.000	34.831	0.000	40.659	0.000	34.831	0.000	0.000	42.163	39.982	123.300	MWD+IFR1+MS
12300.000	90.000	359.784	9777.000	35.347	0.000	41.043	0.000	35.347	0.000	0.000	42.288	40.249	128.054	MWD+IFR1+MS
12400.000	90.000	359.784	9777.000	35.872	0.000	41.443	0.000	35.872	0.000	0.000	42.452	40.494	133.568	MWD+IFR1+MS
12500.000	90.000	359.784	9777.000	36.406	0.000	41.857	0.000	36.406	0.000	0.000	42.662	40.706	-40.472	MWD+IFR1+MS

12600.000	90.000	359.784	9777.000	36.950	0.000	42.285	0.000	36.950	0.000	0.000	42.925	40.882	-34.570	MWD+IFR1+MS
12700.000	90.000	359.784	9777.000	37.502	0.000	42.727	0.000	37.502	0.000	0.000	43.236	41.022	-29.198	MWD+IFR1+MS
12800.000	90.000	359.784	9777.000	38.062	0.000	43.182	0.000	38.062	0.000	0.000	43.592	41.133	-24.616	MWD+IFR1+MS
12900.000	90.000	359.784	9777.000	38.630	0.000	43.651	0.000	38.630	0.000	0.000	43.985	41.220	-20.854	MWD+IFR1+MS
13000.000	90.000	359.784	9777.000	39.206	0.000	44.132	0.000	39.206	0.000	0.000	44.408	41.289	-17.817	MWD+IFR1+MS
13100.000	90.000	359.784	9777.000	39.788	0.000	44.625	0.000	39.788	0.000	0.000	44.857	41.346	-15.371	MWD+IFR1+MS
13200.000	90.000	359.784	9777.000	40.378	0.000	45.131	0.000	40.378	0.000	0.000	45.326	41.394	-13.390	MWD+IFR1+MS
13300.000	90.000	359.784	9777.000	40.974	0.000	45.647	0.000	40.974	0.000	0.000	45.815	41.436	-11.772	MWD+IFR1+MS
13400.000	90.000	359.784	9777.000	41.576	0.000	46.175	0.000	41.576	0.000	0.000	46.320	41.472	-10.436	MWD+IFR1+MS
13500.000	90.000	359.784	9777.000	42.185	0.000	46.713	0.000	42.185	0.000	0.000	46.839	41.505	-9.320	MWD+IFR1+MS
13600.000	90.000	359.784	9777.000	42.799	0.000	47.261	0.000	42.799	0.000	0.000	47.372	41.536	-8.380	MWD+IFR1+MS
13700.000	90.000	359.784	9777.000	43.418	0.000	47.820	0.000	43.418	0.000	0.000	47.917	41.564	-7.579	MWD+IFR1+MS
13800.000	90.000	359.784	9777.000	44.043	0.000	48.388	0.000	44.043	0.000	0.000	48.474	41.591	-6.891	MWD+IFR1+MS
13900.000	90.000	359.784	9777.000	44.673	0.000	48.965	0.000	44.673	0.000	0.000	49.042	41.616	-6.295	MWD+IFR1+MS
14000.000	90.000	359.784	9777.000	45.308	0.000	49.551	0.000	45.308	0.000	0.000	49.620	41.641	-5.775	MWD+IFR1+MS
14100.000	90.000	359.784	9777.000	45.947	0.000	50.146	0.000	45.947	0.000	0.000	50.208	41.666	-5.319	MWD+IFR1+MS
14200.000	90.000	359.784	9777.000	46.591	0.000	50.749	0.000	46.591	0.000	0.000	50.805	41.689	-4.915	MWD+IFR1+MS
14300.000	90.000	359.784	9777.000	47.239	0.000	51.361	0.000	47.239	0.000	0.000	51.411	41.713	-4.557	MWD+IFR1+MS
14400.000	90.000	359.784	9777.000	47.891	0.000	51.979	0.000	47.891	0.000	0.000	52.025	41.737	-4.237	MWD+IFR1+MS
14500.000	90.000	359.784	9777.000	48.547	0.000	52.606	0.000	48.547	0.000	0.000	52.647	41.760	-3.950	MWD+IFR1+MS
14600.000	90.000	359.784	9777.000	49.207	0.000	53.239	0.000	49.207	0.000	0.000	53.277	41.783	-3.691	MWD+IFR1+MS
14700.000	90.000	359.784	9777.000	49.871	0.000	53.880	0.000	49.871	0.000	0.000	53.914	41.807	-3.458	MWD+IFR1+MS
14800.000	90.000	359.784	9777.000	50.538	0.000	54.527	0.000	50.538	0.000	0.000	54.559	41.831	-3.245	MWD+IFR1+MS
14900.000	90.000	359.784	9777.000	51.208	0.000	55.181	0.000	51.208	0.000	0.000	55.210	41.855	-3.052	MWD+IFR1+MS
15000.000	90.000	359.784	9777.000	51.881	0.000	55.841	0.000	51.881	0.000	0.000	55.867	41.879	-2.876	MWD+IFR1+MS
15100.000	90.000	359.784	9777.000	52.558	0.000	56.507	0.000	52.558	0.000	0.000	56.531	41.903	-2.714	MWD+IFR1+MS
15200.000	90.000	359.784	9777.000	53.237	0.000	57.178	0.000	53.237	0.000	0.000	57.201	41.928	-2.566	MWD+IFR1+MS
15300.000	90.000	359.784	9777.000	53.920	0.000	57.856	0.000	53.920	0.000	0.000	57.876	41.953	-2.429	MWD+IFR1+MS
15400.000	90.000	359.784	9777.000	54.605	0.000	58.538	0.000	54.605	0.000	0.000	58.557	41.978	-2.303	MWD+IFR1+MS
15500.000	90.000	359.784	9777.000	55.293	0.000	59.226	0.000	55.293	0.000	0.000	59.244	42.004	-2.186	MWD+IFR1+MS
15600.000	90.000	359.784	9777.000	55.983	0.000	59.920	0.000	55.983	0.000	0.000	59.936	42.030	-2.078	MWD+IFR1+MS
15700.000	90.000	359.784	9777.000	56.676	0.000	60.617	0.000	56.676	0.000	0.000	60.632	42.056	-1.977	MWD+IFR1+MS
15800.000	90.000	359.784	9777.000	57.371	0.000	61.320	0.000	57.371	0.000	0.000	61.334	42.083	-1.884	MWD+IFR1+MS

15900.000	90.000	359.784	9777.000	58.069	0.000	62.027	0.000	58.069	0.000	0.000	62.040	42.110	-1.797	MWD+IFR1+MS
16000.000	90.000	359.784	9777.000	58.768	0.000	62.739	0.000	58.768	0.000	0.000	62.751	42.138	-1.715	MWD+IFR1+MS
16100.000	90.000	359.784	9777.000	59.470	0.000	63.455	0.000	59.470	0.000	0.000	63.466	42.166	-1.639	MWD+IFR1+MS
16200.000	90.000	359.784	9777.000	60.174	0.000	64.174	0.000	60.174	0.000	0.000	64.185	42.194	-1.568	MWD+IFR1+MS
16300.000	90.000	359.784	9777.000	60.880	0.000	64.898	0.000	60.880	0.000	0.000	64.908	42.223	-1.501	MWD+IFR1+MS
16400.000	90.000	359.784	9777.000	61.588	0.000	65.626	0.000	61.588	0.000	0.000	65.635	42.252	-1.439	MWD+IFR1+MS
16500.000	90.000	359.784	9777.000	62.297	0.000	66.357	0.000	62.297	0.000	0.000	66.366	42.282	-1.380	MWD+IFR1+MS
16600.000	90.000	359.784	9777.000	63.009	0.000	67.092	0.000	63.009	0.000	0.000	67.100	42.312	-1.324	MWD+IFR1+MS
16700.000	90.000	359.784	9777.000	63.722	0.000	67.831	0.000	63.722	0.000	0.000	67.838	42.342	-1.272	MWD+IFR1+MS
16800.000	90.000	359.784	9777.000	64.437	0.000	68.573	0.000	64.437	0.000	0.000	68.579	42.374	-1.223	MWD+IFR1+MS
16900.000	90.000	359.784	9777.000	65.153	0.000	69.318	0.000	65.153	0.000	0.000	69.324	42.405	-1.176	MWD+IFR1+MS
17000.000	90.000	359.784	9777.000	65.871	0.000	70.066	0.000	65.871	0.000	0.000	70.072	42.437	-1.132	MWD+IFR1+MS
17100.000	90.000	359.784	9777.000	66.590	0.000	70.817	0.000	66.590	0.000	0.000	70.823	42.469	-1.091	MWD+IFR1+MS
17200.000	90.000	359.784	9777.000	67.311	0.000	71.572	0.000	67.311	0.000	0.000	71.577	42.502	-1.051	MWD+IFR1+MS
17300.000	90.000	359.784	9777.000	68.034	0.000	72.329	0.000	68.034	0.000	0.000	72.333	42.535	-1.014	MWD+IFR1+MS
17400.000	90.000	359.784	9777.000	68.757	0.000	73.089	0.000	68.757	0.000	0.000	73.093	42.569	-0.979	MWD+IFR1+MS
17500.000	90.000	359.784	9777.000	69.482	0.000	73.851	0.000	69.482	0.000	0.000	73.855	42.603	-0.945	MWD+IFR1+MS
17600.000	90.000	359.784	9777.000	70.209	0.000	74.616	0.000	70.209	0.000	0.000	74.620	42.638	-0.913	MWD+IFR1+MS
17700.000	90.000	359.784	9777.000	70.936	0.000	75.384	0.000	70.936	0.000	0.000	75.387	42.673	-0.883	MWD+IFR1+MS
17800.000	90.000	359.784	9777.000	71.665	0.000	76.154	0.000	71.665	0.000	0.000	76.157	42.709	-0.854	MWD+IFR1+MS
17900.000	90.000	359.784	9777.000	72.395	0.000	76.927	0.000	72.395	0.000	0.000	76.930	42.745	-0.826	MWD+IFR1+MS
18000.000	90.000	359.784	9777.000	73.126	0.000	77.701	0.000	73.126	0.000	0.000	77.704	42.781	-0.800	MWD+IFR1+MS
18100.000	90.000	359.784	9777.000	73.858	0.000	78.478	0.000	73.858	0.000	0.000	78.481	42.818	-0.775	MWD+IFR1+MS
18200.000	90.000	359.784	9777.000	74.591	0.000	79.258	0.000	74.591	0.000	0.000	79.260	42.856	-0.751	MWD+

19200.000	90.000	359.784	9777.000	81.976	0.000	87.156	0.000	81.976	0.000	0.000	87.157	43.255	-0.563	MWD+IFR1+MS
19300.000	90.000	359.784	9777.000	82.719	0.000	87.955	0.000	82.719	0.000	0.000	87.957	43.297	-0.549	MWD+IFR1+MS
19400.000	90.000	359.784	9777.000	83.463	0.000	88.756	0.000	83.463	0.000	0.000	88.757	43.340	-0.534	MWD+IFR1+MS
19500.000	90.000	359.784	9777.000	84.208	0.000	89.559	0.000	84.208	0.000	0.000	89.560	43.384	-0.521	MWD+IFR1+MS
19600.000	90.000	359.784	9777.000	84.953	0.000	90.362	0.000	84.953	0.000	0.000	90.363	43.427	-0.508	MWD+IFR1+MS
19700.000	90.000	359.784	9777.000	85.699	0.000	91.168	0.000	85.699	0.000	0.000	91.169	43.472	-0.495	MWD+IFR1+MS
19800.000	90.000	359.784	9777.000	86.446	0.000	91.974	0.000	86.446	0.000	0.000	91.975	43.516	-0.483	MWD+IFR1+MS
19900.000	90.000	359.784	9777.000	87.194	0.000	92.782	0.000	87.194	0.000	0.000	92.783	43.562	-0.471	MWD+IFR1+MS
20000.000	90.000	359.784	9777.000	87.942	0.000	93.592	0.000	87.942	0.000	0.000	93.592	43.607	-0.460	MWD+IFR1+MS
20100.000	90.000	359.784	9777.000	88.691	0.000	94.402	0.000	88.691	0.000	0.000	94.403	43.653	-0.449	MWD+IFR1+MS
20200.000	90.000	359.784	9777.000	89.440	0.000	95.214	0.000	89.440	0.000	0.000	95.215	43.700	-0.439	MWD+IFR1+MS
20300.000	90.000	359.784	9777.000	90.190	0.000	96.027	0.000	90.190	0.000	0.000	96.028	43.747	-0.429	MWD+IFR1+MS
20400.000	90.000	359.784	9777.000	90.940	0.000	96.841	0.000	90.940	0.000	0.000	96.842	43.794	-0.420	MWD+IFR1+MS
20500.000	90.000	359.784	9777.000	91.692	0.000	97.657	0.000	91.692	0.000	0.000	97.657	43.842	-0.410	MWD+IFR1+MS
20600.000	90.000	359.784	9777.000	92.443	0.000	98.473	0.000	92.443	0.000	0.000	98.474	43.890	-0.401	MWD+IFR1+MS
20700.000	90.000	359.784	9777.000	93.195	0.000	99.291	0.000	93.195	0.000	0.000	99.291	43.939	-0.393	MWD+IFR1+MS
20800.000	90.000	359.784	9777.000	93.948	0.000	100.109	0.000	93.948	0.000	0.000	100.110	43.988	-0.384	MWD+IFR1+MS
20900.000	90.000	359.784	9777.000	94.701	0.000	100.929	0.000	94.701	0.000	0.000	100.930	44.037	-0.376	MWD+IFR1+MS
21000.000	90.000	359.784	9777.000	95.455	0.000	101.750	0.000	95.455	0.000	0.000	101.750	44.087	-0.369	MWD+IFR1+MS
21100.000	90.000	359.784	9777.000	96.210	0.000	102.572	0.000	96.210	0.000	0.000	102.572	44.138	-0.361	MWD+IFR1+MS
21200.000	90.000	359.784	9777.000	96.964	0.000	103.394	0.000	96.964	0.000	0.000	103.395	44.189	-0.354	MWD+IFR1+MS
21300.000	90.000	359.784	9777.000	97.720	0.000	104.218	0.000	97.720	0.000	0.000	104.218	44.240	-0.347	MWD+IFR1+MS
21400.000	90.000	359.784	9777.000	98.475	0.000	105.043	0.000	98.475	0.000	0.000	105.043	44.292	-0.340	MWD+IFR1+MS
21500.000	90.000	359.784	9777.000	99.231	0.000	105.868	0.000	99.231	0.000	0.000	105.868	44.344	-0.334	MWD+IFR1+MS
21600.000	90.000	359.784	9777.000	99.988	0.000	106.694	0.000	99.988	0.000	0.000	106.695	44.396	-0.327	MWD+IFR1+MS
21700.000	90.000	359.784	9777.000	100.745	0.000	107.522	0.000	100.745	0.000	0.000	107.522	44.449	-0.321	MWD+IFR1+MS
21800.000	90.000	359.784	9777.000	101.502	0.000	108.350	0.000	101.502	0.000	0.000	108.350	44.503	-0.315	MWD+IFR1+MS
21900.000	90.000	359.784	9777.000	102.260	0.000	109.179	0.000	102.260	0.000	0.000	109.179	44.556	-0.310	MWD+IFR1+MS
22000.000	90.000	359.784	9777.000	103.019	0.000	110.008	0.000	103.019	0.000	0.000	110.008	44.611	-0.304	MWD+IFR1+MS
22100.000	90.000	359.784	9777.000	103.777	0.000	110.839	0.000	103.777	0.000	0.000	110.839	44.665	-0.299	MWD+IFR1+MS
22200.000	90.000	359.784	9777.000	104.536	0.000	111.670	0.000	104.536	0.000	0.000	111.670	44.720	-0.294	MWD+IFR1+MS
22300.000	90.000	359.784	9777.000	105.296	0.000	112.502	0.000	105.296	0.000	0.000	112.502	44.776	-0.289	MWD+IFR1+MS
22400.000	90.000	359.784	9777.000	106.056	0.000	113.335	0.000	106.056	0.000	0.000	113.335	44.832	-0.284	MWD+IFR1+MS

22500.000	90.000	359.784	9777.000	106.816	0.000	114.168	0.000	106.816	0.000	0.000	114.168	44.888	-0.279	MWD+IFR1+MS
22600.000	90.000	359.784	9777.000	107.576	0.000	115.002	0.000	107.576	0.000	0.000	115.003	44.945	-0.275	MWD+IFR1+MS
22700.000	90.000	359.784	9777.000	108.337	0.000	115.837	0.000	108.337	0.000	0.000	115.837	45.002	-0.270	MWD+IFR1+MS
22800.000	90.000	359.784	9777.000	109.098	0.000	116.673	0.000	109.098	0.000	0.000	116.673	45.060	-0.266	MWD+IFR1+MS
22900.000	90.000	359.784	9777.000	109.860	0.000	117.509	0.000	109.860	0.000	0.000	117.509	45.118	-0.262	MWD+IFR1+MS
23000.000	90.000	359.784	9777.000	110.622	0.000	118.346	0.000	110.622	0.000	0.000	118.346	45.176	-0.258	MWD+IFR1+MS
23100.000	90.000	359.784	9777.000	111.384	0.000	119.183	0.000	111.384	0.000	0.000	119.183	45.235	-0.254	MWD+IFR1+MS
23200.000	90.000	359.784	9777.000	112.146	0.000	120.021	0.000	112.146	0.000	0.000	120.022	45.294	-0.250	MWD+IFR1+MS
23300.000	90.000	359.784	9777.000	112.909	0.000	120.860	0.000	112.909	0.000	0.000	120.860	45.354	-0.247	MWD+IFR1+MS
23400.000	90.000	359.784	9777.000	113.672	0.000	121.699	0.000	113.672	0.000	0.000	121.699	45.414	-0.243	MWD+IFR1+MS
23500.000	90.000	359.784	9777.000	114.435	0.000	122.539	0.000	114.435	0.000	0.000	122.539	45.474	-0.240	MWD+IFR1+MS
23600.000	90.000	359.784	9777.000	115.199	0.000	123.380	0.000	115.199	0.000	0.000	123.380	45.535	-0.236	MWD+IFR1+MS
23700.000	90.000	359.784	9777.000	115.963	0.000	124.221	0.000	115.963	0.000	0.000	124.221	45.596	-0.233	MWD+IFR1+MS
23800.000	90.000	359.784	9777.000	116.727	0.000	125.062	0.000	116.727	0.000	0.000	125.062	45.657	-0.230	MWD+IFR1+MS
23900.000	90.000	359.784	9777.000	117.492	0.000	125.904	0.000	117.492	0.000	0.000	125.904	45.719	-0.227	MWD+IFR1+MS
24000.000	90.000	359.784	9777.000	118.257	0.000	126.747	0.000	118.257	0.000	0.000	126.747	45.782	-0.224	MWD+IFR1+MS
24100.000	90.000	359.784	9777.000	119.022	0.000	127.590	0.000	119.022	0.000	0.000	127.590	45.845	-0.221	MWD+IFR1+MS
24200.000	90.000	359.784	9777.000	119.787	0.000	128.434	0.000	119.787	0.000	0.000	128.434	45.908	-0.218	MWD+IFR1+MS
24300.000	90.000	359.784	9777.000	120.552	0.000	129.278	0.000	120.552	0.000	0.000	129.278	45.971	-0.215	MWD+IFR1+MS
24400.000	90.000	359.784	9777.000	121.318	0.000	130.123	0.000	121.318	0.000	0.000	130.123	46.035	-0.213	MWD+IFR1+MS
24500.000	90.000	359.784	9777.000	122.084	0.000	130.968	0.000	122.084	0.000	0.000	130.968	46.099	-0.210	MWD+IFR1+MS
24600.000	90.000	359.784	9777.000	122.850	0.000	131.813	0.000	122.850	0.000	0.000	131.813	46.164	-0.208	MWD+IFR1+MS
24700.000	90.000	359.784	9777.000	123.617	0.000	132.659	0.000	123.617	0.000	0.000	132.659	46.229	-0.205	MWD+IFR1+MS
24800.000	90.000	359.784	9777.000	124.384	0.000	133.506	0.000	124.384	0.000	0.000	133.506	46.294	-0.203	MWD+IFR1+MS
24900.000	90.000	359.784	9777.000	125.151	0.000	134.353	0.000	125.151	0.000	0.000	134.353	46.360	-0.201	MWD+IFR1+MS
25000.000	90.000	359.784	9777.000	125.918	0.000	135.200	0.000	125.918	0.000	0.000	135.200	46.426	-0.198	MWD+IFR1+MS
25100.000	90.000	359.784	9777.000	126.685	0.000	136.048	0.000	126.685	0.000	0.000	136.048	46.493	-0.196	MWD+IFR1+MS
25200.000	90.000	359.784	9777.000	127.453	0.000	136.896	0.000	127.453	0.000	0.000	136.896	46.560	-0.194	MWD+IFR1+MS
25300.000	90.000	359.784	9777.000	128.221	0.000	137.744	0.000	128.221	0.000	0.000	137.744	46.627	-0.192	MWD+IFR1+MS
25400.000	90.000	359.784	9777.000	128.989	0.000	138.593	0.000	128.989	0.000	0.000	138.593	46.695	-0.190	MWD+IFR1+MS
25500.000	90.000	359.784	9777.000	129.757	0.000	139.443	0.000	129.757	0.000	0.000	139.443	46.763	-0.188	MWD+IFR1+MS
25600.000	90.000	359.784	9777.000	130.525	0.000	140.292	0.000	130.525	0.000	0.000	140.293	46.831	-0.186	MWD+IFR1+MS
25700.000	90.000	359.784	9777.000	131.294	0.000	141.143	0.000	131.294	0.000	0.000	141.143	46.900	-0.185	MWD+IFR1+MS

25800.000	90.000	359.784	9777.000	132.062	0.000	141.993	0.000	132.062	0.000	0.000	141.993	46.969	-0.183	MWD+IFR1+MS
25900.000	90.000	359.784	9777.000	132.831	0.000	142.844	0.000	132.831	0.000	0.000	142.844	47.039	-0.181	MWD+IFR1+MS
26000.000	90.000	359.784	9777.000	133.601	0.000	143.695	0.000	133.601	0.000	0.000	143.695	47.108	-0.179	MWD+IFR1+MS
26100.000	90.000	359.784	9777.000	134.370	0.000	144.547	0.000	134.370	0.000	0.000	144.547	47.179	-0.178	MWD+IFR1+MS
26200.000	90.000	359.784	9777.000	135.139	0.000	145.399	0.000	135.139	0.000	0.000	145.399	47.249	-0.176	MWD+IFR1+MS
26300.000	90.000	359.784	9777.000	135.909	0.000	146.251	0.000	135.909	0.000	0.000	146.251	47.320	-0.175	MWD+IFR1+MS
26400.000	90.000	359.784	9777.000	136.679	0.000	147.104	0.000	136.679	0.000	0.000	147.104	47.391	-0.173	MWD+IFR1+MS
26500.000	90.000	359.784	9777.000	137.449	0.000	147.957	0.000	137.449	0.000	0.000	147.957	47.463	-0.172	MWD+IFR1+MS
26600.000	90.000	359.784	9777.000	138.219	0.000	148.810	0.000	138.219	0.000	0.000	148.810	47.535	-0.170	MWD+IFR1+MS
26700.000	90.000	359.784	9777.000	138.990	0.000	149.664	0.000	138.990	0.000	0.000	149.664	47.607	-0.169	MWD+IFR1+MS
26711.492	90.000	359.784	9777.000	139.078	0.000	149.761	0.000	139.078	0.000	0.000	149.761	47.615	-0.169	MWD+IFR1+MS
26761.489	90.000	359.784	9777.000	139.463	0.000	150.187	0.000	139.463	0.000	0.000	150.187	47.652	-0.168	MWD+IFR1+MS

Plan Targets

POKER LAKE UNIT 23 DTD 171H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 4	10488.32	440125.00	647591.40	6297.00	RECTANGLE
LTP 4	26711.49	456348.00	647530.30	6297.00	RECTANGLE
BHL 4	26761.60	456398.00	647530.00	6297.00	RECTANGLE

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

XTO Energy Inc.
POKER LAKE UNIT 23 DTD 171H
Projected TD: 26761' MD / 9777' TVD
SHL: 366' FSL & 711' FWL , Section 14, T24S, R30E
BHL: 50' FNL & 1130' 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	643'	Water
Top of Salt	998'	Water
Base of Salt	3841'	Water
Delaware	4049'	Water
Brushy Canyon	6259'	Water/Oil/Gas
Bone Spring	7914'	Water
1st Bone Spring Ss	8854'	Water/Oil/Gas
2nd Bone Spring Ss	9723'	Water/Oil/Gas
Target/Land Curve	9777'	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 3941' 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 8861' and cementing to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 26761 MD/TD and 5.5 inch production casing will be set at TD and cemented back up to 2nd intermediate (estimated TOC 8561 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' – 3941'	13.375	54.5	J-55	BTC	New	1.25	1.27	4.23
12.25	0' – 4041'	9.625	40	HC P-110	BTC	New	2.30	2.24	3.57
12.25	4041' – 8861'	9.625	40	HC L-80	BTC	New	1.67	2.65	4.75
8.5	0' – 8761'	5.5	23	RY P-110	Semi-Premium	New	1.21	2.90	1.96
8.5	8761' - 26761'	5.5	23	RY P-110	Semi-Flush	New	1.21	2.60	4.14

· 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 +/- 3941'

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 +/- 8861'

1st Stage

Optional Lead: 390 sxs Class C (mixed at 10.5 ppg, 2.77 ft³/sx, 15.59 gal/sx water)
 TOC: 3641
 Tail: 860 sxs Class C (mixed at 14.8 ppg, 1.27 ft³/sx, 6.39 gal/sx water)
 TOC: Brushy Canyon @ 6259
 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: 3641
 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 (6259') 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 +/- 26761'

Lead: 70 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 8561 feet
 Tail: 3030 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 9363 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 3442 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' - 3941'	17.5	Brine	8.5-9	30-32	NC
3941' to 8861'	12.25	BDE/OBM or FW/Brine	9-9.5	30-32	NC
8861' to 26761'	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 5592 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 10400078622

DB/RP 618.013003.09-11

Intent ☒ As Drilled ☐

API # 30015		
Operator Name: XTO PERMIAN OPERATING, LLC	Property Name: Poker Lake Unit 23 DTD	Well Number 171H

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 D	Section 23	Township 24S	Range 30E	Lot	Feet 500	From N/S North	Feet 1,130	From E/W West	County Eddy
Latitude 32.209244					Longitude 103.85663				NAD 83

Last Take Point (LTP)

UL 4	Section 2	Township 24S	Range 30E	Lot	Feet 100	From N/S North	Feet 1,130	From E/W West	County Eddy
Latitude 32.253840					Longitude 103.856593				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 299607

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 299607
	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