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

# Sundry Print Report

02/28/2025

**Well Name:** BIG EDDY UNIT DI 5 WEST 27-29

**Well Location:** T20S / R31E / SEC 27 / SWNE / 32.546191 / -103.855679

**County or Parish/State:** EDDY / NM

**Well Number:** 9H

**Type of Well:** OIL WELL

**Allottee or Tribe Name:**

**Lease Number:** NMLC070220

**Unit or CA Name:** BIG EDDY

**Unit or CA Number:** NMNM68294X

**US Well Number:**

**Operator:** XTO PERMIAN OPERATING LLC

## Notice of Intent

**Sundry ID:** 2830515

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 01/07/2025

**Time Sundry Submitted:** 02:20

**Date proposed operation will begin:** 01/17/2025

**Procedure Description:** Big Eddy Unit DI 5 West 27-29 9H APD ID# 10400093654 SUNDRY LANGUAGE XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, KOP, FTP, LTP, BHL, casing design, cement program, mud circulation system, proposed total depth and pool. FROM: TO: SHL: 1945' FNL & 2230' FEL OF SECTION 27-T20S-R31E 2145' FNL & 2230' FEL OF SECTION 27-T20S-R31E KOP: 1945' FNL & 2230' FEL OF SECTION 27-T20S-R31E 443' FSL & 1973' FEL OF SECTION 27-T20S-R31E FTP: 2310' FSL & 1980' FWL OF SECTION 27-T20S-R31E 440' FSL & 2588' FWL OF SECTION 27-T20S-R31E LTP: 2310' FSL & 100' FWL OF SECTION 29-T20S-R31E 440' FSL & 100' FWL OF SECTION 29-T20S-R31E BHL: 2310' FSL & 50' FWL OF SECTION 29-T20S-R31E 440' FSL & 50' FWL OF SECTION 29-T20S-R31E The proposed total depth is changing from 22678' MD/9730' TVD to 24144' MD/9660' TVD. The pool name is changing from WC-015 G-06 S203127G; Bone Spring to WC Williams Sink; Bone Spring. There are no changes requested to the facilities/surface usage that was approved along with the APD. See attached drilling program for the updated casing design, cement program and the mud circulation system.

## NOI Attachments

**Procedure Description**

Sundry_Attachments___BEU_DI_5W_27_29_9H_20250217102841.pdf

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**Unit or CA Name:** BIG EDDY

**Unit or CA Number:** NMNM68294X

**US Well Number:**

**Operator:** XTO PERMIAN OPERATING LLC

## Conditions of Approval

**Additional**

BEU_DI_5_West_27_29_9H_COA_20250227142846.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:** SRINIVAS LAGHUVARAPU

**Signed on:** FEB 17, 2025 10:28 AM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** REGULATORY ANALYST

**Street Address:** 22777 SPRINGWOODS VILLAGE PARKWAY

**City:** SPRING **State:** TX

**Phone:** (720) 539-1673

**Email address:** SRINIVAS.N.LAGHUVARAPU@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:** 02/28/2025

**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.

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

| TYPE OF SUBMISSION | TYPE OF ACTION | | | |
|---|---|---|---|---|
| ☐ Notice of Intent | ☐ Acidize | ☐ Deepen | ☐ Production (Start/Resume) | ☐ Water Shut-Off |
| | ☐ Alter Casing | ☐ Hydraulic Fracturing | ☐ Reclamation | ☐ Well Integrity |
| ☐ Subsequent Report | ☐ Casing Repair | ☐ New Construction | ☐ Recomplete | ☐ Other |
| | ☐ Change Plans | ☐ Plug and Abandon | ☐ Temporarily Abandon | |
| ☐ Final Abandonment Notice | ☐ 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 recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be 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 OFICE 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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

## Additional Information

### Additional Remarks

BHL: 2310' FSL & 50' FWL OF SECTION 29-T20S-R31E 440' FSL & 50' FWL OF SECTION 29-T20S-R31E

The proposed total depth is changing from 22678 MD/9730 TVD to 24144 MD/9660 TVD.

The pool name is changing from WC-015 G-06 S203127G; Bone Spring to WC Williams Sink; Bone Spring.

There are no changes requested to the facilities/surface usage that was approved along with the APD.

See attached drilling program for the updated casing design, cement program and the mud circulation system.

### Location of Well

0. SHL: SWNE / 1945 FNL / 2230 FEL / TWSP: 20S / RANGE: 31E / SECTION: 27 / LAT: 32.546191 / LONG: -103.855679 ( TVD: 0 feet, MD: 0 feet )

PPP: NESW / 2310 FSL / 1980 FWL / TWSP: 20S / RANGE: 31E / SECTION: 27 / LAT: 32.543367 / LONG: -103.86555 ( TVD: 9730 feet, MD: 10200 feet )

PPP: NESE / 2302 FSL / 0 FWL / TWSP: 20S / RANGE: 31E / SECTION: 28 / LAT: 32.543365 / LONG: -103.859124 ( TVD: 9730 feet, MD: 12800 feet )

BHL: NWSW / 2310 FSL / 50 FWL / TWSP: 20S / RANGE: 31E / SECTION: 29 / LAT: 32.543372 / LONG: -103.899804 ( TVD: 9730 feet, MD: 22678 feet )

# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | XTO |
| **LEASE NO.:** | **NMLC070220** |
| **LOCATION:** | Sec. 27, T. 20 S, R 31 E |
| **COUNTY:** | Eddy County, New Mexico |
| **WELL NAME & NO.:** | Big Eddy Unit DI 5 West 27-29 9H |
| **SURFACE HOLE FOOTAGE:** | 2145'/N & 2230'/E |
| **BOTTOM HOLE FOOTAGE:** | 440'/S & 50'/W |

*Changes approved through engineering via **Sundry 2832708_** on 2-27-2025_. Any previous COAs not addressed within the updated COAs still apply.*

COA

| | | | | |
|---|---|---|---|---|
| **$H_2S$** | ○ No | | ○ Yes | |
| **Potash / WIPP** | ○ None | ○ Secretary | ◉ R-111-Q | ☑ Open Annulus |
| | 4-String Design: Open 1st Int x Production Casing (ICP 2 above Relief Zone) | | | ☐ WIPP |
| **Cave / Karst** | ◉ Low | ○ Medium | ○ High | ○ Critical |
| **Wellhead** | ○ Conventional | ◉ Multibowl | ○ Both | ○ Diverter |
| **Cementing** | ☐ Primary Squeeze | ☐ Cont. Squeeze | ☐ EchoMeter | ☐ DV Tool |
| **Special Req** | ☐ Capitan Reef | ☐ Water Disposal | ☐ COM | ☑ Unit |
| **Waste Prev.** | ○ Self-Certification | ○ Waste Min. Plan | ◉ APD Submitted prior to 06/10/2024 | |
| **Additional Language** | ☑ Flex Hose | ☑ Casing Clearance | ☐ Pilot Hole | ☑ Break Testing |
| | ☑ Four-String | ☑ Offline Cementing | ☐ Fluid-Filled | |

## 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.

***APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the updated order.***

## B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **851** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch 1st 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 **7-5/8** 2nd Inch intermediate casing is:
    - Cement to surface. If cement does not circulate see B.1.a, c-d above.

❖ In Capitan Reef 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.

**Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following: **(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)** Switch to freshwater mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

❖ **A monitored open annulus will be incorporated during completion by leaving the Intermediate Casing x Production Casing annulus un-cemented and monitored inside the Intermediate String.** Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within **180 days.**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
    - Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. Operator shall provide method of verification.

## C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

    1. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

        a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
        b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
        c. Manufacturer representative shall install the test plug for the initial BOP test.
        d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
        e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

## D. SPECIAL REQUIREMENT (S)

**Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

**Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months. **(This is not necessary for secondary recovery unit wells)**

**BOPE Break Testing Variance**

- BOPE Break Testing is ONLY permitted for intervals utilizing a 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 **43 CFR 3172**.
- 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.

Engineer may elect to vary this language. Speak with Chris about implementing changes and whether that change seems reasonable.

**Casing Clearance**

String does not meet 0.422" clearance requirement per 43 CFR 3172. Cement tieback requirement increased 100' for Production casing tieback. Operator may contact approving engineer to discuss changing casing set depth or grade to meet clearance requirement.

# 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)

**Contact Eddy County Petroleum Engineering Inspection Staff:**

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; **BLM_NM_CFO_DrillingNotifications@BLM.GOV**; (575) 361-2822

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
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. 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.
        iii. BOP/BOPE test to be conducted per **43 CFR 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

## 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 of both lead and tail cement, 2) until cement has been in place at least 8 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-Q 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 3172**.
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:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. 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.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. 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.
    i. 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).
    ii. 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.)

iii. 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 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. 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.

v. The results of the test shall be reported to the appropriate BLM office.

vi. 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.

vii. 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.

viii. 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 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.

**Approved by Zota Stevens on 2/27/2025**
575-234-5998 / zstevens@blm.gov

| C-102<br>Sumbit electronically<br>Via OCD Permitting | State of New Mexico<br>Energy, Minerals & Natural Resources Department<br>OIL CONVERSION DIVISION | Revised July, 09 2024 |
|---|---|---|
| | | Submittal Type: ☐ Initial Submittal ☒ Amended Report ☐ As Drilled |

**WELL LOCATION INFORMATION**

| API Number | Pool Code | Pool Name |
|---|---|---|
| 30-015- | 97650 | WC WILLIAMS SINK; BONE SPRING |

| Property Code | Property Name | Well Number |
|---|---|---|
| | BIG EDDY UNIT DI 5 WEST 27-29 | 9H |

| OGRID No. | Operator Name | Ground Level Elevation |
|---|---|---|
| 373075 | XTO PERMIAN OPERATING, LLC. | 3,525' |

Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal | Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

**Surface Hole Location**

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| G | 27 | 20S | 31E | | 2,145 FNL | 2,230 FEL | 32.545641 | -103.855680 | EDDY |

**Bottom Hole Location**

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 29 | 20S | 31E | | 440 FSL | 50 FWL | 32.538234 | -103.899800 | EDDY |

| Dedicated Acres | Infill or Defining Well | Defining Well API | Overlapping Spacing Unit (Y/N) | Consolidation Code |
|---|---|---|---|---|
| 800.00 | INFILL | | N | U |

Order Numbers. | Well Setbacks are under Common Ownership: ☒ Yes ☐ No

**Kick Off Point (KOP)**

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| O | 27 | 20S | 31E | | 443 FSL | 1,973 FEL | 32.538216 | -103.854851 | EDDY |

**First Take Point (FTP)**

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| N | 27 | 20S | 31E | | 440 FSL | 2,588 FWL | 32.538217 | -103.857174 | EDDY |

**Last Take Point (LTP)**

| UL | Section | Township | Range | Lot | Ft. from N/S | Ft. from E/W | Latitude | Longitude | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 29 | 20S | 31E | | 440 FSL | 100 FWL | 32.538234 | -103.899637 | EDDY |

| Unitized Area or Area of Interest | Spacing Unit Type : ☒ Horizontal ☐ Vertical | Ground Elevation |
|---|---|---|
| NMNM-105467880 | | 3,525' |

OPERATOR CERTIFICATIONS

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

*If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or information) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.*

Srinivas Naveen 1/6/25

Signature Date

Srinivas Naveen Laghuvarapu

Printed Name

srinivas.n.laghuvarapu@exxonmobil.com

Email Address

SURVEYOR CERTIFICATIONS

*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief*

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

MARK DILLON HARP 23786 — Certificate Number

1/3/2025 — Date of Survey

YH 618.013004.04-09

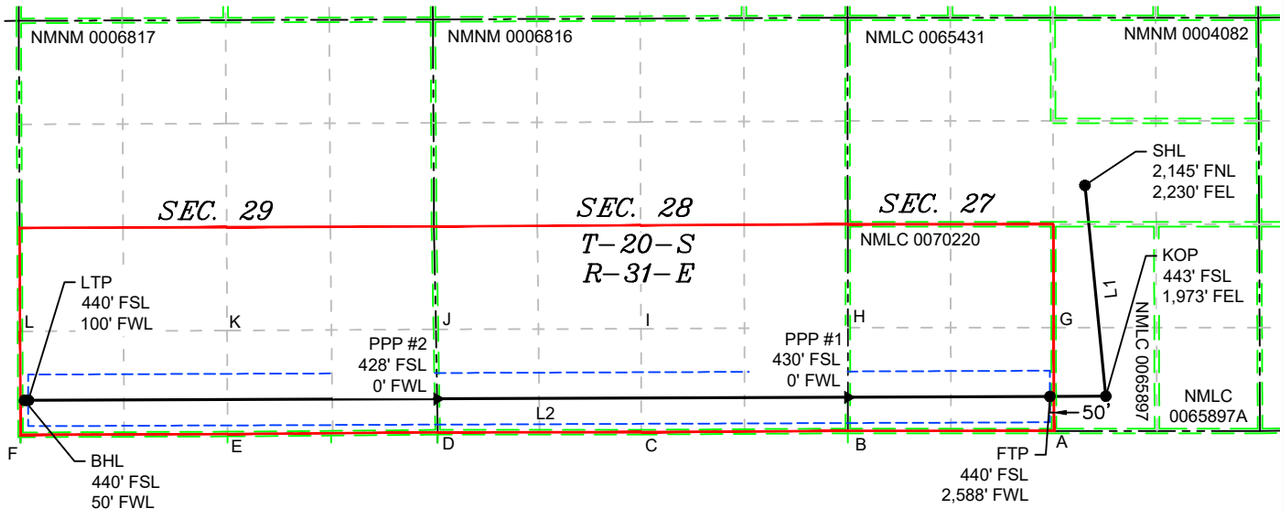
*Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.*

P:\618.013 XTO Energy - NM\004 Big Eddy Unit - Eddy Lea\04 - BEU DI 5 - EDDY\Wells\09 WEST 27-29 9H\DWG\9H C-102.dwg

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is a directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other then the First Take Point and Last Take Point) that is closest to any outer boundary of the tract.

Surveyor shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land in not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.




| LINE TABLE | | |
|---|---|---|
| LINE | AZIMUTH | LENGTH |
| L1 | 174°20'09" | 2,713.22' |
| L2 | 269°46'55" | 13,851.93' |

LEGEND

- SECTION LINE
- PROPOSED WELL BORE
- NEW MEXICO MINERAL LEASE
- 330' BUFFER
- ALLOCATION AREA

**COORDINATE TABLE**

| SHL (NAD 83 NME) | | | KOP (NAD 83 NME) | | | FTP (NAD 83 NME) | | | PPP #1 (NAD 83 NME) | | | PPP #2 (NAD 83 NME) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Y = | 562,564.8 | N | Y = | 559,864.8 | N | Y = | 559,862.1 | N | Y = | 559,852.3 | N | Y = | 559,832.2 | N |
| X = | 688,521.4 | E | X = | 688,789.2 | E | X = | 688,073.1 | E | X = | 685,485.3 | E | X = | 680,224.4 | E |
| LAT. = | 32.545641 | °N | LAT. = | 32.538216 | °N | LAT. = | 32.538217 | °N | LAT. = | 32.538222 | °N | LAT. = | 32.538229 | °N |
| LONG. = | 103.855680 | °W | LONG. = | 103.854851 | °W | LONG. = | 103.857174 | °W | LONG. = | 103.865572 | °W | LONG. = | 103.882643 | °W |
| | | | LTP (NAD 83 NME) | | | | | | BHL (NAD 83 NME) | | | | | |
| | | | Y = | 559,812.3 | N | | | | Y = | 559,812.1 | N | | | |
| | | | X = | 674,987.3 | E | | | | X = | 674,937.3 | E | | | |
| | | | LAT. = | 32.538234 | °N | | | | LAT. = | 32.538234 | °N | | | |
| | | | LONG. = | 103.899637 | °W | | | | LONG. = | 103.899800 | °W | | | |
| **SHL (NAD 27 NME)** | | | **KOP (NAD 27 NME)** | | | **FTP (NAD 27 NME)** | | | **PPP #1 (NAD 27 NME)** | | | **PPP #2 (NAD 27 NME)** | | |
| Y = | 562,503.1 | N | Y = | 559,803.1 | N | Y = | 559,800.4 | N | Y = | 559,790.6 | N | Y = | 559,770.5 | N |
| X = | 647,341.8 | E | X = | 647,609.5 | E | X = | 646,893.4 | E | X = | 644,305.6 | E | X = | 639,044.7 | E |
| LAT. = | 32.545520 | °N | LAT. = | 32.538095 | °N | LAT. = | 32.538097 | °N | LAT. = | 32.538101 | °N | LAT. = | 32.538108 | °N |
| LONG. = | 103.855179 | °W | LONG. = | 103.854350 | °W | LONG. = | 103.856673 | °W | LONG. = | 103.865070 | °W | LONG. = | 103.882141 | °W |
| | | | LTP (NAD 27 NME) | | | | | | BHL (NAD 27 NME) | | | | | |
| | | | Y = | 559,750.6 | N | | | | Y = | 559,750.4 | N | | | |
| | | | X = | 633,807.6 | E | | | | X = | 633,757.6 | E | | | |
| | | | LAT. = | 32.538113 | °N | | | | LAT. = | 32.538113 | °N | | | |
| | | | LONG. = | 103.899135 | °W | | | | LONG. = | 103.899298 | °W | | | |

| CORNER COORDINATES (NAD 83 NME) | | | | | | CORNER COORDINATES (NAD 27 NME) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A - Y = | 559,422.1 | N | A - X = | 688,124.2 | E | A - Y = | 559,360.4 | N | A - X = | 646,944.5 | E |
| B - Y = | 559,421.8 | N | B - X = | 685,485.7 | E | B - Y = | 559,360.1 | N | B - X = | 644,306.0 | E |
| C - Y = | 559,405.9 | N | C - X = | 682,840.1 | E | C - Y = | 559,344.2 | N | C - X = | 641,660.5 | E |
| D - Y = | 559,404.2 | N | D - X = | 680,232.0 | E | D - Y = | 559,342.5 | N | D - X = | 639,052.2 | E |
| E - Y = | 559,381.4 | N | E - X = | 677,541.0 | E | E - Y = | 559,319.7 | N | E - X = | 636,361.3 | E |
| F - Y = | 559,371.9 | N | F - X = | 674,889.4 | E | F - Y = | 559,310.2 | N | F - X = | 633,709.6 | E |
| G - Y = | 560,743.9 | N | G - X = | 688,120.8 | E | G - Y = | 560,682.3 | N | G - X = | 646,941.1 | E |
| H - Y = | 560,743.8 | N | H - X = | 685,484.5 | E | H - Y = | 560,682.1 | N | H - X = | 644,304.9 | E |
| I - Y = | 560,729.1 | N | I - X = | 682,836.3 | E | I - Y = | 560,667.4 | N | I - X = | 641,656.7 | E |
| J - Y = | 560,721.4 | N | J - X = | 680,208.8 | E | J - Y = | 560,659.7 | N | J - X = | 639,029.1 | E |
| K - Y = | 560,705.3 | N | K - X = | 677,534.9 | E | K - Y = | 560,643.5 | N | K - X = | 636,355.2 | E |
| L - Y = | 560,695.7 | N | L - X = | 674,883.3 | E | L - Y = | 560,634.0 | N | L - X = | 633,703.6 | E |

YH 618.013004.04-09

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

XTO Energy Inc.
BIG EDDY UNIT DI 5 WEST 27-29 9H
Projected TD: 24144' MD / 9660' TVD
SHL: 2145' FNL & 2230' FEL , Section 27, T20S, R31E
BHL: 440' FSL & 50' FWL , Section 29, T20S, R31E
EDDY County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

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

| Formation | Well Depth (TVD) | Water/Oil/Gas |
|---|---|---|
| Rustler | 675' | Water |
| Top of Salt | 951' | Water |
| Base of Salt | 2203' | Water |
| Capitan | 2863' | Water |
| Delaware | 3938' | Water |
| Brushy Canyon | 5895' | Water/Oil/Gas |
| Bone Spring | 7471' | Water |
| Avalon | 7666' | Water/Oil/Gas |
| 1st Bone Spring | 8404' | Water/Oil/Gas |
| 2nd Bone Spring | 9106' | Water/Oil/Gas |
| Target/Land Curve | 9660' | 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 surface casing @ 851' (100' above the salt) and circulating cement back to surface. The salt will be isolated by setting first intermediate casing at 2303' and circulating cement to surface. The second intermediate will isolate Capitan Reef to ~50' inside Delaware formation and cemented to surface a. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 24144 MD/TD and 5.5 inch production casing will be set at TD and cemented to a estimated TOC 7471 feet

**3. Casing Design**

| Hole Size | Depth | OD Csg | Weight | Grade | Collar | New/Used | SF Burst | SF Collapse | SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17.5 | 0' – 851' | 13.375 | 54.5 | J-55 | BTC | New | 3.97 | 3.04 | 19.60 |
| 12.25 | 0' – 2303' | 9.625 | 40 | J-55 | BTC | New | 4.17 | 3.93 | 6.84 |
| 8.75 | 0' – 2403' | 7.625 | 29.7 | HC L-80 | Flush Joint | New | 2.18 | 5.05 | 3.43 |
| 8.75 | 2403' – 3988' | 7.625 | 29.7 | HC L-80 | Flush Joint | New | 2.18 | 8.53 | 9.21 |
| 6.75 | 0' – 3888' | 5.5 | 20 | RY P-110 | Semi-Premium / Freedom | New | 1.05 | 5.23 | 2.05 |
| 6.75 | 3888' - 24144' | 5.5 | 20 | RY P-110 | Semi-Flush / Talon | New | 1.05 | 2.10 | 2.74 |

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

**Wellhead:**

*Permanent Wellhead*
Multibowl System for 4 String desing as per attachement.

**4. Cement Program**

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.

***Surface Casing: 13.375, 54.5 New BTC, J-55 casing to be set at +/- 851'***

Optional Lead: 570 sxs EconoCem-HLTRRC (mixed at 12.8 ppg, 1.33 ft3/sx, 10.13 gal/sx water)
Tail: 310 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

***1st Intermediate Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 2303'***

Lead: 450 sxs Class C (mixed at 14.8 ppg, 2.06 ft3/sx, 10.13 gal/sx water)
Tail: 60 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: 7.625, 29.7 New casing to be set at +/- 3988'***
Lead: 90 sxs Class C (mixed at 10.5 ppg, 2.77 ft3/sx, 15.59 gal/sx water)
TOC: 0
Tail: 210 sxs Class C (mixed at 14.8 ppg, 1.27 ft3/sx, 6.39 gal/sx water)
TOC: @ 2863
Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests to pump a single stage cement job on the second intermediate casing string, with slurries pumped conventionally with the first slurry top of cement at Capitan Reef (2863') and the second slurry performed with planned cement from the Capitan Reef to surface.

***Production Casing: 5.5, 20 New Semi-Flush / Talon, RY P-110 casing to be set at +/- 24144'***

Lead: 80 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 7471 feet
Tail: 900 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 9883.73 feet
Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

XTO requests to pump a single stage cement job on the 5.5” Production casing string with two slurries pumped conventionally, the first slurry with calculated top of cement at KOP @ 9883.73' MD, and the second slurry with planned cement from KOP base of brushy Canyon.

A post completion bradenhead squeeze will be performed to tie back the 2nd intermediate x production casing annulus TOC into the 2nd intermediate shoe but below of potash interval

**5. Pressure Control Equipment**

Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of a 5M Hydril and a 10M Triple Ram BOP.

All BOP testing will be done by an independent service company. Operator will test as per CFR 43-3172

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold.

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 break testing 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.

**6. Proposed Mud Circulation System**

| INTERVAL | Hole Size | Mud Type | MW (ppg) | Viscosity (sec/qt) | Fluid Loss (cc) | ***Additional Comments.*** |
|---|---|---|---|---|---|---|
| 0' - 851' | 17.5 | FW/Native | 8.4-8.9 | 35-40 | NC | Fresh water or native water |
| 851' - 2303' | 12.25 | Sat Brine | 10-10.5 | 30-32 | NC | Fully saturated brine across salado / salt |
| 2303' to 3988' | 8.75 | FW | 8.8-9.3 | 30-32 | NC | FW across Cap Reef |
| 3988' to 24144' | 6.75 | OBM | 10.5-11 | 50-60 | NC - 20 | OBM or Brine depending well conditions. |

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 surface casing. A fully saturated brine 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 EDR system will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

**7. Auxiliary Well Control and Monitoring Equipment**

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

**8. Logging, Coring and Testing Program**

Open hole logging will not be done on this well.

**9. Abnormal Pressures and Temperatures / Potential Hazards**

None Anticipated. BHT of 160 to 180 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 5274 psi.

**10. Anticipated Starting Date and Duration of Operations**

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

# Well Plan Report

| | |
|---|---|
| **Measured Depth:** | 24144.63 ft |
| **TVD RKB:** | 9660.00 ft |
| **Location** | |
| **Cartographic Reference System:** | New Mexico East - NAD 27 |
| **Northing:** | 562503.10 ft |
| **Easting:** | 647341.80 ft |
| **RKB:** | 3557.00 ft |
| **Ground Level:** | 3525.00 ft |
| **North Reference:** | Grid |
| **Convergence Angle:** | 0.26 Deg |

**Plan Sections**

| Measured Depth (ft) | Inclination (Deg) | Azimuth (Deg) | TVD RKB (ft) | Y Offset (ft) | X Offset (ft) | Build Rate (Deg/100ft) | Turn Rate (Deg/100ft) | Dogleg Rate (Deg/100ft) | Target |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2300.00 | 0.00 | 0.00 | 2300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4955.23 | 53.10 | 174.34 | 4591.06 | -1139.30 | 113.00 | 2.00 | 0.00 | 2.00 | |
| 5484.70 | 53.10 | 174.34 | 4908.94 | -1560.67 | 154.79 | 0.00 | 0.00 | 0.00 | |
| 8139.93 | 0.00 | 0.00 | 7200.00 | -2699.97 | 267.79 | -2.00 | 0.00 | 2.00 | |
| 9883.73 | 0.00 | 0.00 | 8943.80 | -2699.97 | 267.79 | 0.00 | 0.00 | 0.00 | |
| 11008.73 | 90.00 | 269.78 | 9660.00 | -2702.70 | -448.40 | 8.00 | 0.00 | 8.00 | FTP 2 |
| 24094.62 | 90.00 | 269.78 | 9660.00 | -2752.50 | -13534.20 | 0.00 | 0.00 | 0.00 | LTP 2 |
| 24144.63 | 90.00 | 269.78 | 9660.00 | -2752.69 | -13584.20 | 0.00 | 0.00 | 0.00 | BHL 2 |

**Position Uncertainty**

| Measured | TVD | Highside | Lateral | Vertical | Magnitude | Semi-major | Semi-minor | Semi-minor | Tool |
|---|---|---|---|---|---|---|---|---|---|

| Depth (ft) | Inclination (°) | Azimuth (°) | RKB (ft) | Error (ft) | Bias (ft) | Error (ft) | Bias (ft) | Error (ft) | Bias (ft) | of Bias (ft) | Error (ft) | Error (ft) | Azimuth (°) | Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | XOMR2_OWSG MWD+IFR1+MS |
| 100.000 | 0.000 | 0.000 | 100.000 | 0.358 | 0.000 | 0.179 | 0.000 | 2.300 | 0.000 | 0.000 | 0.358 | 0.179 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 200.000 | 0.000 | 0.000 | 200.000 | 0.717 | 0.000 | 0.538 | 0.000 | 2.310 | 0.000 | 0.000 | 0.717 | 0.538 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 300.000 | 0.000 | 0.000 | 300.000 | 1.075 | 0.000 | 0.896 | 0.000 | 2.326 | 0.000 | 0.000 | 1.075 | 0.896 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 400.000 | 0.000 | 0.000 | 400.000 | 1.434 | 0.000 | 1.255 | 0.000 | 2.348 | 0.000 | 0.000 | 1.434 | 1.255 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 500.000 | 0.000 | 0.000 | 500.000 | 1.792 | 0.000 | 1.613 | 0.000 | 2.375 | 0.000 | 0.000 | 1.792 | 1.613 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 600.000 | 0.000 | 0.000 | 600.000 | 2.151 | 0.000 | 1.972 | 0.000 | 2.408 | 0.000 | 0.000 | 2.151 | 1.972 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 700.000 | 0.000 | 0.000 | 700.000 | 2.509 | 0.000 | 2.330 | 0.000 | 2.446 | 0.000 | 0.000 | 2.509 | 2.330 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 800.000 | 0.000 | 0.000 | 800.000 | 2.868 | 0.000 | 2.689 | 0.000 | 2.488 | 0.000 | 0.000 | 2.868 | 2.689 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 900.000 | 0.000 | 0.000 | 900.000 | 3.226 | 0.000 | 3.047 | 0.000 | 2.534 | 0.000 | 0.000 | 3.226 | 3.047 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1000.000 | 0.000 | 0.000 | 1000.000 | 3.585 | 0.000 | 3.405 | 0.000 | 2.585 | 0.000 | 0.000 | 3.585 | 3.405 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1100.000 | 0.000 | 0.000 | 1100.000 | 3.943 | 0.000 | 3.764 | 0.000 | 2.639 | 0.000 | 0.000 | 3.943 | 3.764 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1200.000 | 0.000 | 0.000 | 1200.000 | 4.302 | 0.000 | 4.122 | 0.000 | 2.696 | 0.000 | 0.000 | 4.302 | 4.122 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1300.000 | 0.000 | 0.000 | 1300.000 | 4.660 | 0.000 | 4.481 | 0.000 | 2.756 | 0.000 | 0.000 | 4.660 | 4.481 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1400.000 | 0.000 | 0.000 | 1400.000 | 5.019 | 0.000 | 4.839 | 0.000 | 2.819 | 0.000 | 0.000 | 5.019 | 4.839 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1500.000 | 0.000 | 0.000 | 1500.000 | 5.377 | 0.000 | 5.198 | 0.000 | 2.884 | 0.000 | 0.000 | 5.377 | 5.198 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1600.000 | 0.000 | 0.000 | 1600.000 | 5.736 | 0.000 | 5.556 | 0.000 | 2.952 | 0.000 | 0.000 | 5.736 | 5.556 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1700.000 | 0.000 | 0.000 | 1700.000 | 6.094 | 0.000 | 5.915 | 0.000 | 3.022 | 0.000 | 0.000 | 6.094 | 5.915 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 1800.000 | 0.000 | 0.000 | 1800.000 | 6.452 | 0.000 | 6.273 | 0.000 | 3.094 | 0.000 | 0.000 | 6.452 | 6.273 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1900.000 | 0.000 | 0.000 | 1900.000 | 6.811 | 0.000 | 6.632 | 0.000 | 3.167 | 0.000 | 0.000 | 6.811 | 6.632 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 2000.000 | 0.000 | 0.000 | 2000.000 | 7.169 | 0.000 | 6.990 | 0.000 | 3.243 | 0.000 | 0.000 | 7.169 | 6.990 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 2100.000 | 0.000 | 0.000 | 2100.000 | 7.528 | 0.000 | 7.349 | 0.000 | 3.320 | 0.000 | 0.000 | 7.528 | 7.349 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 2200.000 | 0.000 | 0.000 | 2200.000 | 7.886 | 0.000 | 7.707 | 0.000 | 3.399 | 0.000 | 0.000 | 7.886 | 7.707 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 2300.000 | 0.000 | 0.000 | 2300.000 | 8.245 | 0.000 | 8.066 | 0.000 | 3.479 | 0.000 | 0.000 | 8.245 | 8.066 | 90.000 | XOMR2_OWSG MWD+IFR1+MS |
| 2400.000 | 2.000 | 174.336 | 2399.980 | 8.579 | 0.000 | 8.407 | -0.000 | 3.560 | 0.000 | 0.000 | 8.585 | 8.405 | 90.010 | XOMR2_OWSG MWD+IFR1+MS |
| 2500.000 | 4.000 | 174.336 | 2499.838 | 8.889 | 0.000 | 8.730 | -0.000 | 3.641 | 0.000 | 0.000 | 8.910 | 8.728 | 90.025 | XOMR2_OWSG MWD+IFR1+MS |
| 2600.000 | 6.000 | 174.336 | 2599.452 | 9.192 | 0.000 | 9.054 | -0.000 | 3.722 | 0.000 | 0.000 | 9.236 | 9.052 | 90.062 | XOMR2_OWSG MWD+IFR1+MS |
| 2700.000 | 8.000 | 174.336 | 2698.702 | 9.486 | 0.000 | 9.380 | -0.000 | 3.803 | 0.000 | 0.000 | 9.564 | 9.378 | 90.129 | XOMR2_OWSG MWD+IFR1+MS |
| 2800.000 | 10.000 | 174.336 | 2797.465 | 9.773 | 0.000 | 9.708 | -0.000 | 3.885 | 0.000 | 0.000 | 9.893 | 9.706 | 90.240 | XOMR2_OWSG MWD+IFR1+MS |
| 2900.000 | 12.000 | 174.336 | 2895.623 | 10.051 | 0.000 | 10.038 | -0.000 | 3.967 | 0.000 | 0.000 | 10.223 | 10.036 | 90.406 | XOMR2_OWSG MWD+IFR1+MS |
| 3000.000 | 14.000 | 174.336 | 2993.055 | 10.321 | 0.000 | 10.371 | -0.000 | 4.051 | 0.000 | 0.000 | 10.554 | 10.369 | 90.644 | XOMR2_OWSG MWD+IFR1+MS |
| 3100.000 | 16.000 | 174.336 | 3089.643 | 10.582 | 0.000 | 10.707 | -0.000 | 4.138 | 0.000 | 0.000 | 10.885 | 10.704 | 90.980 | XOMR2_OWSG MWD+IFR1+MS |
| 3200.000 | 18.000 | 174.336 | 3185.268 | 10.837 | 0.000 | 11.046 | -0.000 | 4.228 | 0.000 | 0.000 | 11.216 | 11.043 | 91.453 | XOMR2_OWSG MWD+IFR1+MS |
| 3300.000 | 20.000 | 174.336 | 3279.816 | 11.083 | 0.000 | 11.389 | -0.000 | 4.323 | 0.000 | 0.000 | 11.548 | 11.386 | 92.132 | XOMR2_OWSG MWD+IFR1+MS |
| 3400.000 | 22.000 | 174.336 | 3373.169 | 11.324 | 0.000 | 11.738 | -0.000 | 4.424 | 0.000 | 0.000 | 11.881 | 11.734 | 93.146 | XOMR2_OWSG MWD+IFR1+MS |
| 3500.000 | 24.000 | 174.336 | 3465.215 | 11.558 | 0.000 | 12.091 | -0.000 | 4.533 | 0.000 | 0.000 | 12.214 | 12.087 | 94.763 | XOMR2_OWSG MWD+IFR1+MS |
| 3600.000 | 26.000 | 174.336 | 3555.841 | 11.786 | 0.000 | 12.451 | -0.000 | 4.651 | 0.000 | 0.000 | 12.547 | 12.445 | 97.629 | XOMR2_OWSG MWD+IFR1+MS |
| 3700.000 | 28.000 | 174.336 | 3644.937 | 12.010 | 0.000 | 12.817 | -0.000 | 4.780 | 0.000 | 0.000 | 12.882 | 12.809 | 103.674 | XOMR2_OWSG MWD+IFR1+MS |
| 3800.000 | 30.000 | 174.336 | 3732.394 | 12.230 | 0.000 | 13.190 | -0.000 | 4.923 | 0.000 | 0.000 | 13.223 | 13.174 | 119.547 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3900.000 | 32.000 | 174.336 | 3818.107 | 12.447 | 0.000 | 13.571 | -0.000 | 5.080 | 0.000 | 0.000 | 13.583 | 13.527 | -32.960 | XOMR2_OWSG MWD+IFR1+MS |
| 4000.000 | 34.000 | 174.336 | 3901.970 | 12.661 | 0.000 | 13.961 | -0.000 | 5.254 | 0.000 | 0.000 | 13.966 | 13.864 | -19.036 | XOMR2_OWSG MWD+IFR1+MS |
| 4100.000 | 36.000 | 174.336 | 3983.881 | 12.874 | 0.000 | 14.359 | -0.000 | 5.447 | 0.000 | 0.000 | 14.362 | 14.197 | -13.622 | XOMR2_OWSG MWD+IFR1+MS |
| 4200.000 | 38.000 | 174.336 | 4063.740 | 13.085 | 0.000 | 14.766 | -0.000 | 5.661 | 0.000 | 0.000 | 14.769 | 14.526 | -10.978 | XOMR2_OWSG MWD+IFR1+MS |
| 4300.000 | 40.000 | 174.336 | 4141.451 | 13.296 | 0.000 | 15.184 | -0.000 | 5.897 | 0.000 | 0.000 | 15.185 | 14.853 | -9.454 | XOMR2_OWSG MWD+IFR1+MS |
| 4400.000 | 42.000 | 174.336 | 4216.918 | 13.508 | 0.000 | 15.611 | -0.000 | 6.157 | 0.000 | 0.000 | 15.612 | 15.176 | -8.481 | XOMR2_OWSG MWD+IFR1+MS |
| 4500.000 | 44.000 | 174.336 | 4290.050 | 13.721 | 0.000 | 16.048 | -0.000 | 6.442 | 0.000 | 0.000 | 16.049 | 15.496 | -7.815 | XOMR2_OWSG MWD+IFR1+MS |
| 4600.000 | 46.000 | 174.336 | 4360.757 | 13.936 | 0.000 | 16.496 | -0.000 | 6.753 | 0.000 | 0.000 | 16.496 | 15.811 | -7.338 | XOMR2_OWSG MWD+IFR1+MS |
| 4700.000 | 48.000 | 174.336 | 4428.953 | 14.153 | 0.000 | 16.954 | -0.000 | 7.091 | 0.000 | 0.000 | 16.955 | 16.121 | -6.984 | XOMR2_OWSG MWD+IFR1+MS |
| 4800.000 | 50.000 | 174.336 | 4494.556 | 14.372 | 0.000 | 17.423 | -0.000 | 7.456 | 0.000 | 0.000 | 17.424 | 16.425 | -6.715 | XOMR2_OWSG MWD+IFR1+MS |
| 4900.000 | 52.000 | 174.336 | 4557.485 | 14.595 | 0.000 | 17.903 | -0.000 | 7.848 | 0.000 | 0.000 | 17.904 | 16.721 | -6.507 | XOMR2_OWSG MWD+IFR1+MS |
| 4955.227 | 53.105 | 174.336 | 4591.064 | 14.720 | 0.000 | 18.172 | -0.000 | 8.074 | 0.000 | 0.000 | 18.172 | 16.883 | -6.414 | XOMR2_OWSG MWD+IFR1+MS |
| 5000.000 | 53.105 | 174.336 | 4617.944 | 14.957 | 0.000 | 18.391 | -0.000 | 8.266 | 0.000 | 0.000 | 18.392 | 17.012 | -6.346 | XOMR2_OWSG MWD+IFR1+MS |
| 5100.000 | 53.105 | 174.336 | 4677.979 | 15.493 | 0.000 | 18.893 | -0.000 | 8.709 | 0.000 | 0.000 | 18.893 | 17.300 | -6.217 | XOMR2_OWSG MWD+IFR1+MS |
| 5200.000 | 53.105 | 174.336 | 4738.015 | 16.040 | 0.000 | 19.404 | -0.000 | 9.162 | 0.000 | 0.000 | 19.404 | 17.593 | -6.116 | XOMR2_OWSG MWD+IFR1+MS |
| 5300.000 | 53.105 | 174.336 | 4798.051 | 16.595 | 0.000 | 19.924 | -0.000 | 9.625 | 0.000 | 0.000 | 19.924 | 17.891 | -6.034 | XOMR2_OWSG MWD+IFR1+MS |
| 5400.000 | 53.105 | 174.336 | 4858.087 | 17.158 | 0.000 | 20.452 | -0.000 | 10.095 | 0.000 | 0.000 | 20.452 | 18.193 | -5.967 | XOMR2_OWSG MWD+IFR1+MS |
| 5484.699 | 53.105 | 174.336 | 4908.936 | 17.641 | 0.000 | 20.906 | -0.000 | 10.498 | 0.000 | 0.000 | 20.906 | 18.452 | -5.918 | XOMR2_OWSG MWD+IFR1+MS |
| 5500.000 | 52.799 | 174.336 | 4918.155 | 17.772 | 0.000 | 20.987 | -0.000 | 10.572 | 0.000 | 0.000 | 20.987 | 18.499 | -5.910 | XOMR2_OWSG MWD+IFR1+MS |
| 5600.000 | 50.799 | 174.336 | 4979.995 | 18.619 | 0.000 | 21.529 | -0.000 | 11.048 | 0.000 | 0.000 | 21.529 | 18.816 | -5.862 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5700.000 | 48.799 | 174.336 | 5044.539 | 19.444 | 0.000 | 22.074 | -0.000 | 11.514 | 0.000 | 0.000 | 22.074 | 19.148 | -5.821 | XOMR2_OWSG MWD+IFR1+MS |
| 5800.000 | 46.799 | 174.336 | 5111.710 | 20.245 | 0.000 | 22.620 | -0.000 | 11.965 | 0.000 | 0.000 | 22.620 | 19.495 | -5.785 | XOMR2_OWSG MWD+IFR1+MS |
| 5900.000 | 44.799 | 174.336 | 5181.424 | 21.019 | 0.000 | 23.165 | -0.000 | 12.399 | 0.000 | 0.000 | 23.166 | 19.857 | -5.753 | XOMR2_OWSG MWD+IFR1+MS |
| 6000.000 | 42.799 | 174.336 | 5253.599 | 21.765 | 0.000 | 23.708 | -0.000 | 12.815 | 0.000 | 0.000 | 23.708 | 20.232 | -5.724 | XOMR2_OWSG MWD+IFR1+MS |
| 6100.000 | 40.799 | 174.336 | 5328.144 | 22.479 | 0.000 | 24.247 | -0.000 | 13.211 | 0.000 | 0.000 | 24.247 | 20.618 | -5.697 | XOMR2_OWSG MWD+IFR1+MS |
| 6200.000 | 38.799 | 174.336 | 5404.970 | 23.161 | 0.000 | 24.781 | -0.000 | 13.588 | 0.000 | 0.000 | 24.781 | 21.014 | -5.673 | XOMR2_OWSG MWD+IFR1+MS |
| 6300.000 | 36.799 | 174.336 | 5483.983 | 23.808 | 0.000 | 25.308 | -0.000 | 13.944 | 0.000 | 0.000 | 25.308 | 21.418 | -5.650 | XOMR2_OWSG MWD+IFR1+MS |
| 6400.000 | 34.799 | 174.336 | 5565.087 | 24.420 | 0.000 | 25.827 | -0.000 | 14.281 | 0.000 | 0.000 | 25.827 | 21.829 | -5.628 | XOMR2_OWSG MWD+IFR1+MS |
| 6500.000 | 32.799 | 174.336 | 5648.183 | 24.994 | 0.000 | 26.337 | -0.000 | 14.597 | 0.000 | 0.000 | 26.337 | 22.244 | -5.607 | XOMR2_OWSG MWD+IFR1+MS |
| 6600.000 | 30.799 | 174.336 | 5733.169 | 25.529 | 0.000 | 26.838 | -0.000 | 14.893 | 0.000 | 0.000 | 26.838 | 22.663 | -5.588 | XOMR2_OWSG MWD+IFR1+MS |
| 6700.000 | 28.799 | 174.336 | 5819.942 | 26.025 | 0.000 | 27.328 | -0.000 | 15.169 | 0.000 | 0.000 | 27.328 | 23.083 | -5.570 | XOMR2_OWSG MWD+IFR1+MS |
| 6800.000 | 26.799 | 174.336 | 5908.397 | 26.479 | 0.000 | 27.807 | -0.000 | 15.426 | 0.000 | 0.000 | 27.807 | 23.502 | -5.552 | XOMR2_OWSG MWD+IFR1+MS |
| 6900.000 | 24.799 | 174.336 | 5998.426 | 26.893 | 0.000 | 28.273 | -0.000 | 15.664 | 0.000 | 0.000 | 28.273 | 23.920 | -5.535 | XOMR2_OWSG MWD+IFR1+MS |
| 7000.000 | 22.799 | 174.336 | 6089.918 | 27.264 | 0.000 | 28.727 | -0.000 | 15.884 | 0.000 | 0.000 | 28.727 | 24.334 | -5.519 | XOMR2_OWSG MWD+IFR1+MS |
| 7100.000 | 20.799 | 174.336 | 6182.763 | 27.591 | 0.000 | 29.168 | -0.000 | 16.087 | 0.000 | 0.000 | 29.168 | 24.743 | -5.504 | XOMR2_OWSG MWD+IFR1+MS |
| 7200.000 | 18.799 | 174.336 | 6276.847 | 27.876 | 0.000 | 29.595 | -0.000 | 16.274 | 0.000 | 0.000 | 29.595 | 25.146 | -5.490 | XOMR2_OWSG MWD+IFR1+MS |
| 7300.000 | 16.799 | 174.336 | 6372.056 | 28.116 | 0.000 | 30.008 | -0.000 | 16.446 | 0.000 | 0.000 | 30.008 | 25.541 | -5.477 | XOMR2_OWSG MWD+IFR1+MS |
| 7400.000 | 14.799 | 174.336 | 6468.274 | 28.312 | 0.000 | 30.406 | -0.000 | 16.604 | 0.000 | 0.000 | 30.406 | 25.927 | -5.464 | XOMR2_OWSG MWD+IFR1+MS |
| 7500.000 | 12.799 | 174.336 | 6565.383 | 28.464 | 0.000 | 30.790 | -0.000 | 16.748 | 0.000 | 0.000 | 30.790 | 26.303 | -5.452 | XOMR2_OWSG MWD+IFR1+MS |
| 7600.000 | 10.799 | 174.336 | 6663.265 | 28.572 | 0.000 | 31.159 | -0.000 | 16.881 | 0.000 | 0.000 | 31.159 | 26.667 | -5.442 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7700.000 | 8.799 | 174.336 | 6761.801 | 28.636 | 0.000 | 31.513 | -0.000 | 17.004 | 0.000 | 0.000 | 31.513 | 27.020 | -5.431 | XOMR2_OWSG MWD+IFR1+MS |
| 7800.000 | 6.799 | 174.336 | 6860.871 | 28.657 | 0.000 | 31.851 | -0.000 | 17.117 | 0.000 | 0.000 | 31.851 | 27.360 | -5.422 | XOMR2_OWSG MWD+IFR1+MS |
| 7900.000 | 4.799 | 174.336 | 6960.355 | 28.634 | 0.000 | 32.175 | -0.000 | 17.223 | 0.000 | 0.000 | 32.175 | 27.686 | -5.414 | XOMR2_OWSG MWD+IFR1+MS |
| 8000.000 | 2.799 | 174.336 | 7060.130 | 28.570 | 0.000 | 32.483 | -0.000 | 17.323 | 0.000 | 0.000 | 32.483 | 27.998 | -5.407 | XOMR2_OWSG MWD+IFR1+MS |
| 8100.000 | 0.799 | 174.336 | 7160.076 | 28.464 | 0.000 | 32.776 | -0.000 | 17.417 | 0.000 | 0.000 | 32.776 | 28.295 | -5.400 | XOMR2_OWSG MWD+IFR1+MS |
| 8139.926 | 0.000 | 0.000 | 7200.000 | 28.451 | 0.000 | 32.846 | 0.000 | 17.454 | 0.000 | 0.000 | 32.883 | 28.408 | -5.403 | XOMR2_OWSG MWD+IFR1+MS |
| 8200.000 | 0.000 | 0.000 | 7260.074 | 28.617 | 0.000 | 32.997 | 0.000 | 17.509 | 0.000 | 0.000 | 33.034 | 28.574 | -5.416 | XOMR2_OWSG MWD+IFR1+MS |
| 8300.000 | 0.000 | 0.000 | 7360.074 | 28.894 | 0.000 | 33.250 | 0.000 | 17.603 | 0.000 | 0.000 | 33.287 | 28.852 | -5.437 | XOMR2_OWSG MWD+IFR1+MS |
| 8400.000 | 0.000 | 0.000 | 7460.074 | 29.174 | 0.000 | 33.505 | 0.000 | 17.700 | 0.000 | 0.000 | 33.542 | 29.131 | -5.457 | XOMR2_OWSG MWD+IFR1+MS |
| 8500.000 | 0.000 | 0.000 | 7560.074 | 29.455 | 0.000 | 33.761 | 0.000 | 17.800 | 0.000 | 0.000 | 33.799 | 29.412 | -5.478 | XOMR2_OWSG MWD+IFR1+MS |
| 8600.000 | 0.000 | 0.000 | 7660.074 | 29.738 | 0.000 | 34.020 | 0.000 | 17.902 | 0.000 | 0.000 | 34.057 | 29.695 | -5.498 | XOMR2_OWSG MWD+IFR1+MS |
| 8700.000 | 0.000 | 0.000 | 7760.074 | 30.022 | 0.000 | 34.280 | 0.000 | 18.008 | 0.000 | 0.000 | 34.318 | 29.979 | -5.518 | XOMR2_OWSG MWD+IFR1+MS |
| 8800.000 | 0.000 | 0.000 | 7860.074 | 30.308 | 0.000 | 34.542 | 0.000 | 18.117 | 0.000 | 0.000 | 34.580 | 30.265 | -5.538 | XOMR2_OWSG MWD+IFR1+MS |
| 8900.000 | 0.000 | 0.000 | 7960.074 | 30.595 | 0.000 | 34.806 | 0.000 | 18.228 | 0.000 | 0.000 | 34.844 | 30.552 | -5.558 | XOMR2_OWSG MWD+IFR1+MS |
| 9000.000 | 0.000 | 0.000 | 8060.074 | 30.884 | 0.000 | 35.071 | 0.000 | 18.343 | 0.000 | 0.000 | 35.109 | 30.841 | -5.578 | XOMR2_OWSG MWD+IFR1+MS |
| 9100.000 | 0.000 | 0.000 | 8160.074 | 31.175 | 0.000 | 35.338 | 0.000 | 18.461 | 0.000 | 0.000 | 35.376 | 31.132 | -5.598 | XOMR2_OWSG MWD+IFR1+MS |
| 9200.000 | 0.000 | 0.000 | 8260.074 | 31.467 | 0.000 | 35.607 | 0.000 | 18.582 | 0.000 | 0.000 | 35.645 | 31.423 | -5.618 | XOMR2_OWSG MWD+IFR1+MS |
| 9300.000 | 0.000 | 0.000 | 8360.074 | 31.760 | 0.000 | 35.877 | 0.000 | 18.707 | 0.000 | 0.000 | 35.915 | 31.717 | -5.637 | XOMR2_OWSG MWD+IFR1+MS |
| 9400.000 | 0.000 | 0.000 | 8460.074 | 32.054 | 0.000 | 36.149 | 0.000 | 18.835 | 0.000 | 0.000 | 36.187 | 32.011 | -5.657 | XOMR2_OWSG MWD+IFR1+MS |
| 9500.000 | 0.000 | 0.000 | 8560.074 | 32.350 | 0.000 | 36.422 | 0.000 | 18.966 | 0.000 | 0.000 | 36.461 | 32.307 | -5.676 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9600.000 | 0.000 | 0.000 | 8660.074 | 32.647 | 0.000 | 36.697 | 0.000 | 19.100 | 0.000 | 0.000 | 36.735 | 32.604 | -5.695 | XOMR2_OWSG MWD+IFR1+MS |
| 9700.000 | 0.000 | 0.000 | 8760.074 | 32.945 | 0.000 | 36.973 | 0.000 | 19.238 | 0.000 | 0.000 | 37.012 | 32.902 | -5.714 | XOMR2_OWSG MWD+IFR1+MS |
| 9800.000 | 0.000 | 0.000 | 8860.074 | 33.245 | 0.000 | 37.251 | 0.000 | 19.379 | 0.000 | 0.000 | 37.289 | 33.201 | -5.733 | XOMR2_OWSG MWD+IFR1+MS |
| 9883.728 | 0.000 | 0.000 | 8943.803 | 33.496 | 0.000 | 37.484 | 0.000 | 19.500 | 0.000 | 0.000 | 37.523 | 33.453 | -5.749 | XOMR2_OWSG MWD+IFR1+MS |
| 9900.000 | 1.302 | 269.782 | 8960.073 | 37.503 | -0.000 | 33.542 | 0.000 | 19.524 | 0.000 | 0.000 | 37.569 | 33.502 | -5.746 | XOMR2_OWSG MWD+IFR1+MS |
| 10000.000 | 9.302 | 269.782 | 9059.564 | 37.293 | -0.000 | 33.837 | 0.000 | 19.675 | 0.000 | 0.000 | 37.850 | 33.797 | -5.726 | XOMR2_OWSG MWD+IFR1+MS |
| 10100.000 | 17.302 | 269.782 | 9156.802 | 36.572 | -0.000 | 34.122 | 0.000 | 19.844 | 0.000 | 0.000 | 38.120 | 34.081 | -5.778 | XOMR2_OWSG MWD+IFR1+MS |
| 10200.000 | 25.302 | 269.782 | 9249.895 | 35.384 | -0.000 | 34.393 | 0.000 | 20.042 | 0.000 | 0.000 | 38.369 | 34.351 | -5.890 | XOMR2_OWSG MWD+IFR1+MS |
| 10300.000 | 33.302 | 269.782 | 9337.029 | 33.797 | -0.000 | 34.648 | 0.000 | 20.283 | 0.000 | 0.000 | 38.590 | 34.605 | -6.030 | XOMR2_OWSG MWD+IFR1+MS |
| 10400.000 | 41.302 | 269.782 | 9416.510 | 31.905 | -0.000 | 34.888 | 0.000 | 20.574 | 0.000 | 0.000 | 38.779 | 34.843 | -6.149 | XOMR2_OWSG MWD+IFR1+MS |
| 10500.000 | 49.302 | 269.782 | 9486.791 | 29.834 | -0.000 | 35.113 | 0.000 | 20.922 | 0.000 | 0.000 | 38.931 | 35.069 | -6.181 | XOMR2_OWSG MWD+IFR1+MS |
| 10600.000 | 57.302 | 269.782 | 9546.502 | 27.745 | -0.000 | 35.326 | 0.000 | 21.327 | 0.000 | 0.000 | 39.047 | 35.285 | -6.056 | XOMR2_OWSG MWD+IFR1+MS |
| 10700.000 | 65.302 | 269.782 | 9594.483 | 25.839 | -0.000 | 35.532 | 0.000 | 21.788 | 0.000 | 0.000 | 39.125 | 35.497 | -5.686 | XOMR2_OWSG MWD+IFR1+MS |
| 10800.000 | 73.302 | 269.782 | 9629.799 | 24.344 | -0.000 | 35.732 | 0.000 | 22.297 | 0.000 | 0.000 | 39.169 | 35.708 | -4.970 | XOMR2_OWSG MWD+IFR1+MS |
| 10900.000 | 81.302 | 269.782 | 9651.763 | 23.487 | -0.000 | 35.929 | 0.000 | 22.842 | 0.000 | 0.000 | 39.188 | 35.916 | -3.786 | XOMR2_OWSG MWD+IFR1+MS |
| 11008.728 | 90.000 | 269.782 | 9660.000 | 23.458 | 0.000 | 36.137 | 0.000 | 23.458 | 0.000 | 0.000 | 39.190 | 36.134 | -1.810 | XOMR2_OWSG MWD+IFR1+MS |
| 11100.000 | 90.000 | 269.782 | 9660.000 | 23.986 | 0.000 | 36.321 | 0.000 | 23.986 | 0.000 | 0.000 | 39.193 | 36.321 | 0.315 | XOMR2_OWSG MWD+IFR1+MS |
| 11200.000 | 90.000 | 269.782 | 9660.000 | 24.575 | 0.000 | 36.555 | 0.000 | 24.575 | 0.000 | 0.000 | 39.205 | 36.546 | 2.983 | XOMR2_OWSG MWD+IFR1+MS |
| 11300.000 | 90.000 | 269.782 | 9660.000 | 25.175 | 0.000 | 36.822 | 0.000 | 25.175 | 0.000 | 0.000 | 39.231 | 36.791 | 6.147 | XOMR2_OWSG MWD+IFR1+MS |
| 11400.000 | 90.000 | 269.782 | 9660.000 | 25.784 | 0.000 | 37.121 | 0.000 | 25.784 | 0.000 | 0.000 | 39.276 | 37.049 | 9.991 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11500.000 | 90.000 | 269.782 | 9660.000 | 26.403 | 0.000 | 37.451 | 0.000 | 26.403 | 0.000 | 0.000 | 39.346 | 37.312 | 14.732 | XOMR2_OWSG MWD+IFR1+MS |
| 11600.000 | 90.000 | 269.782 | 9660.000 | 27.031 | 0.000 | 37.812 | 0.000 | 27.031 | 0.000 | 0.000 | 39.453 | 37.570 | 20.549 | XOMR2_OWSG MWD+IFR1+MS |
| 11700.000 | 90.000 | 269.782 | 9660.000 | 27.667 | 0.000 | 38.202 | 0.000 | 27.667 | 0.000 | 0.000 | 39.609 | 37.808 | 27.411 | XOMR2_OWSG MWD+IFR1+MS |
| 11800.000 | 90.000 | 269.782 | 9660.000 | 28.310 | 0.000 | 38.621 | 0.000 | 28.310 | 0.000 | 0.000 | 39.827 | 38.011 | 34.882 | XOMR2_OWSG MWD+IFR1+MS |
| 11900.000 | 90.000 | 269.782 | 9660.000 | 28.960 | 0.000 | 39.068 | 0.000 | 28.960 | 0.000 | 0.000 | 40.115 | 38.173 | 42.173 | XOMR2_OWSG MWD+IFR1+MS |
| 12000.000 | 90.000 | 269.782 | 9660.000 | 29.617 | 0.000 | 39.542 | 0.000 | 29.617 | 0.000 | 0.000 | 40.471 | 38.295 | 48.588 | XOMR2_OWSG MWD+IFR1+MS |
| 12100.000 | 90.000 | 269.782 | 9660.000 | 30.279 | 0.000 | 40.041 | 0.000 | 30.279 | 0.000 | 0.000 | 40.884 | 38.385 | 53.856 | XOMR2_OWSG MWD+IFR1+MS |
| 12200.000 | 90.000 | 269.782 | 9660.000 | 30.948 | 0.000 | 40.566 | 0.000 | 30.948 | 0.000 | 0.000 | 41.346 | 38.451 | 58.048 | XOMR2_OWSG MWD+IFR1+MS |
| 12300.000 | 90.000 | 269.782 | 9660.000 | 31.621 | 0.000 | 41.114 | 0.000 | 31.621 | 0.000 | 0.000 | 41.848 | 38.501 | 61.369 | XOMR2_OWSG MWD+IFR1+MS |
| 12400.000 | 90.000 | 269.782 | 9660.000 | 32.300 | 0.000 | 41.686 | 0.000 | 32.300 | 0.000 | 0.000 | 42.384 | 38.540 | 64.024 | XOMR2_OWSG MWD+IFR1+MS |
| 12500.000 | 90.000 | 269.782 | 9660.000 | 32.984 | 0.000 | 42.279 | 0.000 | 32.984 | 0.000 | 0.000 | 42.951 | 38.571 | 66.179 | XOMR2_OWSG MWD+IFR1+MS |
| 12600.000 | 90.000 | 269.782 | 9660.000 | 33.672 | 0.000 | 42.894 | 0.000 | 33.672 | 0.000 | 0.000 | 43.543 | 38.598 | 67.958 | XOMR2_OWSG MWD+IFR1+MS |
| 12700.000 | 90.000 | 269.782 | 9660.000 | 34.364 | 0.000 | 43.529 | 0.000 | 34.364 | 0.000 | 0.000 | 44.160 | 38.621 | 69.449 | XOMR2_OWSG MWD+IFR1+MS |
| 12800.000 | 90.000 | 269.782 | 9660.000 | 35.060 | 0.000 | 44.183 | 0.000 | 35.060 | 0.000 | 0.000 | 44.799 | 38.642 | 70.718 | XOMR2_OWSG MWD+IFR1+MS |
| 12900.000 | 90.000 | 269.782 | 9660.000 | 35.759 | 0.000 | 44.856 | 0.000 | 35.759 | 0.000 | 0.000 | 45.459 | 38.661 | 71.812 | XOMR2_OWSG MWD+IFR1+MS |
| 13000.000 | 90.000 | 269.782 | 9660.000 | 36.463 | 0.000 | 45.547 | 0.000 | 36.463 | 0.000 | 0.000 | 46.138 | 38.678 | 72.767 | XOMR2_OWSG MWD+IFR1+MS |
| 13100.000 | 90.000 | 269.782 | 9660.000 | 37.169 | 0.000 | 46.255 | 0.000 | 37.169 | 0.000 | 0.000 | 46.835 | 38.696 | 73.608 | XOMR2_OWSG MWD+IFR1+MS |
| 13200.000 | 90.000 | 269.782 | 9660.000 | 37.879 | 0.000 | 46.978 | 0.000 | 37.879 | 0.000 | 0.000 | 47.549 | 38.712 | 74.356 | XOMR2_OWSG MWD+IFR1+MS |
| 13300.000 | 90.000 | 269.782 | 9660.000 | 38.591 | 0.000 | 47.718 | 0.000 | 38.591 | 0.000 | 0.000 | 48.279 | 38.729 | 75.026 | XOMR2_OWSG MWD+IFR1+MS |
| 13400.000 | 90.000 | 269.782 | 9660.000 | 39.306 | 0.000 | 48.472 | 0.000 | 39.306 | 0.000 | 0.000 | 49.025 | 38.745 | 75.631 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13500.000 | 90.000 | 269.782 | 9660.000 | 40.024 | 0.000 | 49.240 | 0.000 | 40.024 | 0.000 | 0.000 | 49.785 | 38.762 | 76.181 | XOMR2_OWSG MWD+IFR1+MS |
| 13600.000 | 90.000 | 269.782 | 9660.000 | 40.744 | 0.000 | 50.021 | 0.000 | 40.744 | 0.000 | 0.000 | 50.559 | 38.779 | 76.683 | XOMR2_OWSG MWD+IFR1+MS |
| 13700.000 | 90.000 | 269.782 | 9660.000 | 41.467 | 0.000 | 50.816 | 0.000 | 41.467 | 0.000 | 0.000 | 51.346 | 38.796 | 77.144 | XOMR2_OWSG MWD+IFR1+MS |
| 13800.000 | 90.000 | 269.782 | 9660.000 | 42.191 | 0.000 | 51.622 | 0.000 | 42.191 | 0.000 | 0.000 | 52.145 | 38.813 | 77.569 | XOMR2_OWSG MWD+IFR1+MS |
| 13900.000 | 90.000 | 269.782 | 9660.000 | 42.918 | 0.000 | 52.440 | 0.000 | 42.918 | 0.000 | 0.000 | 52.956 | 38.831 | 77.962 | XOMR2_OWSG MWD+IFR1+MS |
| 14000.000 | 90.000 | 269.782 | 9660.000 | 43.647 | 0.000 | 53.269 | 0.000 | 43.647 | 0.000 | 0.000 | 53.779 | 38.849 | 78.328 | XOMR2_OWSG MWD+IFR1+MS |
| 14100.000 | 90.000 | 269.782 | 9660.000 | 44.378 | 0.000 | 54.109 | 0.000 | 44.378 | 0.000 | 0.000 | 54.612 | 38.868 | 78.669 | XOMR2_OWSG MWD+IFR1+MS |
| 14200.000 | 90.000 | 269.782 | 9660.000 | 45.111 | 0.000 | 54.959 | 0.000 | 45.111 | 0.000 | 0.000 | 55.456 | 38.887 | 78.987 | XOMR2_OWSG MWD+IFR1+MS |
| 14300.000 | 90.000 | 269.782 | 9660.000 | 45.845 | 0.000 | 55.819 | 0.000 | 45.845 | 0.000 | 0.000 | 56.309 | 38.906 | 79.286 | XOMR2_OWSG MWD+IFR1+MS |
| 14400.000 | 90.000 | 269.782 | 9660.000 | 46.581 | 0.000 | 56.687 | 0.000 | 46.581 | 0.000 | 0.000 | 57.172 | 38.927 | 79.567 | XOMR2_OWSG MWD+IFR1+MS |
| 14500.000 | 90.000 | 269.782 | 9660.000 | 47.319 | 0.000 | 57.565 | 0.000 | 47.319 | 0.000 | 0.000 | 58.043 | 38.947 | 79.832 | XOMR2_OWSG MWD+IFR1+MS |
| 14600.000 | 90.000 | 269.782 | 9660.000 | 48.058 | 0.000 | 58.451 | 0.000 | 48.058 | 0.000 | 0.000 | 58.923 | 38.968 | 80.082 | XOMR2_OWSG MWD+IFR1+MS |
| 14700.000 | 90.000 | 269.782 | 9660.000 | 48.798 | 0.000 | 59.345 | 0.000 | 48.798 | 0.000 | 0.000 | 59.811 | 38.990 | 80.319 | XOMR2_OWSG MWD+IFR1+MS |
| 14800.000 | 90.000 | 269.782 | 9660.000 | 49.540 | 0.000 | 60.246 | 0.000 | 49.540 | 0.000 | 0.000 | 60.707 | 39.012 | 80.543 | XOMR2_OWSG MWD+IFR1+MS |
| 14900.000 | 90.000 | 269.782 | 9660.000 | 50.283 | 0.000 | 61.155 | 0.000 | 50.283 | 0.000 | 0.000 | 61.611 | 39.035 | 80.756 | XOMR2_OWSG MWD+IFR1+MS |
| 15000.000 | 90.000 | 269.782 | 9660.000 | 51.028 | 0.000 | 62.071 | 0.000 | 51.028 | 0.000 | 0.000 | 62.521 | 39.058 | 80.958 | XOMR2_OWSG MWD+IFR1+MS |
| 15100.000 | 90.000 | 269.782 | 9660.000 | 51.773 | 0.000 | 62.994 | 0.000 | 51.773 | 0.000 | 0.000 | 63.438 | 39.082 | 81.151 | XOMR2_OWSG MWD+IFR1+MS |
| 15200.000 | 90.000 | 269.782 | 9660.000 | 52.520 | 0.000 | 63.923 | 0.000 | 52.520 | 0.000 | 0.000 | 64.362 | 39.106 | 81.335 | XOMR2_OWSG MWD+IFR1+MS |
| 15300.000 | 90.000 | 269.782 | 9660.000 | 53.268 | 0.000 | 64.858 | 0.000 | 53.268 | 0.000 | 0.000 | 65.292 | 39.131 | 81.511 | XOMR2_OWSG MWD+IFR1+MS |
| 15400.000 | 90.000 | 269.782 | 9660.000 | 54.017 | 0.000 | 65.799 | 0.000 | 54.017 | 0.000 | 0.000 | 66.228 | 39.157 | 81.679 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15500.000 | 90.000 | 269.782 | 9660.000 | 54.767 | 0.000 | 66.745 | 0.000 | 54.767 | 0.000 | 0.000 | 67.170 | 39.183 | 81.840 | XOMR2_OWSG MWD+IFR1+MS |
| 15600.000 | 90.000 | 269.782 | 9660.000 | 55.518 | 0.000 | 67.697 | 0.000 | 55.518 | 0.000 | 0.000 | 68.117 | 39.210 | 81.994 | XOMR2_OWSG MWD+IFR1+MS |
| 15700.000 | 90.000 | 269.782 | 9660.000 | 56.269 | 0.000 | 68.655 | 0.000 | 56.269 | 0.000 | 0.000 | 69.069 | 39.237 | 82.142 | XOMR2_OWSG MWD+IFR1+MS |
| 15800.000 | 90.000 | 269.782 | 9660.000 | 57.022 | 0.000 | 69.617 | 0.000 | 57.022 | 0.000 | 0.000 | 70.027 | 39.264 | 82.284 | XOMR2_OWSG MWD+IFR1+MS |
| 15900.000 | 90.000 | 269.782 | 9660.000 | 57.776 | 0.000 | 70.584 | 0.000 | 57.776 | 0.000 | 0.000 | 70.989 | 39.293 | 82.421 | XOMR2_OWSG MWD+IFR1+MS |
| 16000.000 | 90.000 | 269.782 | 9660.000 | 58.530 | 0.000 | 71.555 | 0.000 | 58.530 | 0.000 | 0.000 | 71.956 | 39.321 | 82.552 | XOMR2_OWSG MWD+IFR1+MS |
| 16100.000 | 90.000 | 269.782 | 9660.000 | 59.285 | 0.000 | 72.531 | 0.000 | 59.285 | 0.000 | 0.000 | 72.927 | 39.351 | 82.679 | XOMR2_OWSG MWD+IFR1+MS |
| 16200.000 | 90.000 | 269.782 | 9660.000 | 60.041 | 0.000 | 73.511 | 0.000 | 60.041 | 0.000 | 0.000 | 73.903 | 39.381 | 82.801 | XOMR2_OWSG MWD+IFR1+MS |
| 16300.000 | 90.000 | 269.782 | 9660.000 | 60.798 | 0.000 | 74.495 | 0.000 | 60.798 | 0.000 | 0.000 | 74.882 | 39.411 | 82.918 | XOMR2_OWSG MWD+IFR1+MS |
| 16400.000 | 90.000 | 269.782 | 9660.000 | 61.555 | 0.000 | 75.483 | 0.000 | 61.555 | 0.000 | 0.000 | 75.866 | 39.442 | 83.032 | XOMR2_OWSG MWD+IFR1+MS |
| 16500.000 | 90.000 | 269.782 | 9660.000 | 62.313 | 0.000 | 76.474 | 0.000 | 62.313 | 0.000 | 0.000 | 76.853 | 39.474 | 83.142 | XOMR2_OWSG MWD+IFR1+MS |
| 16600.000 | 90.000 | 269.782 | 9660.000 | 63.072 | 0.000 | 77.469 | 0.000 | 63.072 | 0.000 | 0.000 | 77.845 | 39.506 | 83.248 | XOMR2_OWSG MWD+IFR1+MS |
| 16700.000 | 90.000 | 269.782 | 9660.000 | 63.831 | 0.000 | 78.468 | 0.000 | 63.831 | 0.000 | 0.000 | 78.839 | 39.538 | 83.350 | XOMR2_OWSG MWD+IFR1+MS |
| 16800.000 | 90.000 | 269.782 | 9660.000 | 64.591 | 0.000 | 79.470 | 0.000 | 64.591 | 0.000 | 0.000 | 79.837 | 39.572 | 83.450 | XOMR2_OWSG MWD+IFR1+MS |
| 16900.000 | 90.000 | 269.782 | 9660.000 | 65.351 | 0.000 | 80.475 | 0.000 | 65.351 | 0.000 | 0.000 | 80.838 | 39.605 | 83.546 | XOMR2_OWSG MWD+IFR1+MS |
| 17000.000 | 90.000 | 269.782 | 9660.000 | 66.112 | 0.000 | 81.483 | 0.000 | 66.112 | 0.000 | 0.000 | 81.843 | 39.640 | 83.639 | XOMR2_OWSG MWD+IFR1+MS |
| 17100.000 | 90.000 | 269.782 | 9660.000 | 66.874 | 0.000 | 82.494 | 0.000 | 66.874 | 0.000 | 0.000 | 82.850 | 39.674 | 83.729 | XOMR2_OWSG MWD+IFR1+MS |
| 17200.000 | 90.000 | 269.782 | 9660.000 | 67.636 | 0.000 | 83.508 | 0.000 | 67.636 | 0.000 | 0.000 | 83.861 | 39.710 | 83.817 | XOMR2_OWSG MWD+IFR1+MS |
| 17300.000 | 90.000 | 269.782 | 9660.000 | 68.399 | 0.000 | 84.525 | 0.000 | 68.399 | 0.000 | 0.000 | 84.874 | 39.745 | 83.902 | XOMR2_OWSG MWD+IFR1+MS |
| 17400.000 | 90.000 | 269.782 | 9660.000 | 69.162 | 0.000 | 85.545 | 0.000 | 69.162 | 0.000 | 0.000 | 85.890 | 39.782 | 83.984 | XOMR2_OWSG MWD+IFR1+MS |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17500.000 | 90.000 | 269.782 | 9660.000 | 69.926 | 0.000 | 86.567 | 0.000 | 69.926 | 0.000 | 0.000 | 86.908 | 39.819 | 84.064 | XOMR2_OWSG MWD+IFR1+MS |
| 17600.000 | 90.000 | 269.782 | 9660.000 | 70.690 | 0.000 | 87.591 | 0.000 | 70.690 | 0.000 | 0.000 | 87.929 | 39.856 | 84.142 | XOMR2_OWSG MWD+IFR1+MS |
| 17700.000 | 90.000 | 269.782 | 9660.000 | 71.454 | 0.000 | 88.618 | 0.000 | 71.454 | 0.000 | 0.000 | 88.952 | 39.894 | 84.218 | XOMR2_OWSG MWD+IFR1+MS |
| 17800.000 | 90.000 | 269.782 | 9660.000 | 72.219 | 0.000 | 89.647 | 0.000 | 72.219 | 0.000 | 0.000 | 89.978 | 39.932 | 84.292 | XOMR2_OWSG MWD+IFR1+MS |
| 17900.000 | 90.000 | 269.782 | 9660.000 | 72.985 | 0.000 | 90.678 | 0.000 | 72.985 | 0.000 | 0.000 | 91.006 | 39.971 | 84.363 | XOMR2_OWSG MWD+IFR1+MS |
| 18000.000 | 90.000 | 269.782 | 9660.000 | 73.750 | 0.000 | 91.712 | 0.000 | 73.750 | 0.000 | 0.000 | 92.037 | 40.011 | 84.433 | XOMR2_OWSG MWD+IFR1+MS |
| 18100.000 | 90.000 | 269.782 | 9660.000 | 74.517 | 0.000 | 92.747 | 0.000 | 74.517 | 0.000 | 0.000 | 93.069 | 40.051 | 84.501 | XOMR2_OWSG MWD+IFR1+MS |
| 18200.000 | 90.000 | 269.782 | 9660.000 | 75.283 | 0.000 | 93.785 | 0.000 | 75.283 | 0.000 | 0.000 | 94.103 | 40.091 | 84.567 | XOMR2_OWSG MWD+IFR1+MS |
| 18300.000 | 90.000 | 269.782 | 9660.000 | 76.050 | 0.000 | 94.824 | 0.000 | 76.050 | 0.000 | 0.000 | 95.140 | 40.132 | 84.632 | XOMR2_OWSG MWD+IFR1+MS |
| 18400.000 | 90.000 | 269.782 | 9660.000 | 76.817 | 0.000 | 95.866 | 0.000 | 76.817 | 0.000 | 0.000 | 96.178 | 40.174 | 84.695 | XOMR2_OWSG MWD+IFR1+MS |
| 18500.000 | 90.000 | 269.782 | 9660.000 | 77.585 | 0.000 | 96.909 | 0.000 | 77.585 | 0.000 | 0.000 | 97.219 | 40.216 | 84.756 | XOMR2_OWSG MWD+IFR1+MS |
| 18600.000 | 90.000 | 269.782 | 9660.000 | 78.353 | 0.000 | 97.954 | 0.000 | 78.353 | 0.000 | 0.000 | 98.261 | 40.258 | 84.816 | XOMR2_OWSG MWD+IFR1+MS |
| 18700.000 | 90.000 | 269.782 | 9660.000 | 79.121 | 0.000 | 99.001 | 0.000 | 79.121 | 0.000 | 0.000 | 99.304 | 40.301 | 84.874 | XOMR2_OWSG MWD+IFR1+MS |
| 18800.000 | 90.000 | 269.782 | 9660.000 | 79.890 | 0.000 | 100.049 | 0.000 | 79.890 | 0.000 | 0.000 | 100.350 | 40.345 | 84.931 | XOMR2_OWSG MWD+IFR1+MS |
| 18900.000 | 90.000 | 269.782 | 9660.000 | 80.659 | 0.000 | 101.099 | 0.000 | 80.659 | 0.000 | 0.000 | 101.397 | 40.389 | 84.987 | XOMR2_OWSG MWD+IFR1+MS |
| 19000.000 | 90.000 | 269.782 | 9660.000 | 81.428 | 0.000 | 102.150 | 0.000 | 81.428 | 0.000 | 0.000 | 102.446 | 40.433 | 85.042 | XOMR2_OWSG MWD+IFR1+MS |
| 19100.000 | 90.000 | 269.782 | 9660.000 | 82.198 | 0.000 | 103.203 | 0.000 | 82.198 | 0.000 | 0.000 | 103.496 | 40.478 | 85.095 | XOMR2_OWSG MWD+IFR1+MS |
| 19200.000 | 90.000 | 269.782 | 9660.000 | 82.968 | 0.000 | 104.258 | 0.000 | 82.968 | 0.000 | 0.000 | 104.548 | 40.523 | 85.147 | XOMR2_OWSG MWD+IFR1+MS |
| 19300.000 | 90.000 | 269.782 | 9660.000 | 83.738 | 0.000 | 105.313 | 0.000 | 83.738 | 0.000 | 0.000 | 105.601 | 40.569 | 85.197 | XOMR2_OWSG MWD+IFR1+MS |
| 19400.000 | 90.000 | 269.782 | 9660.000 | 84.508 | 0.000 | 106.371 | 0.000 | 84.508 | 0.000 | 0.000 | 106.656 | 40.616 | 85.247 | XOMR2_OWSG MWD+IFR1+MS |

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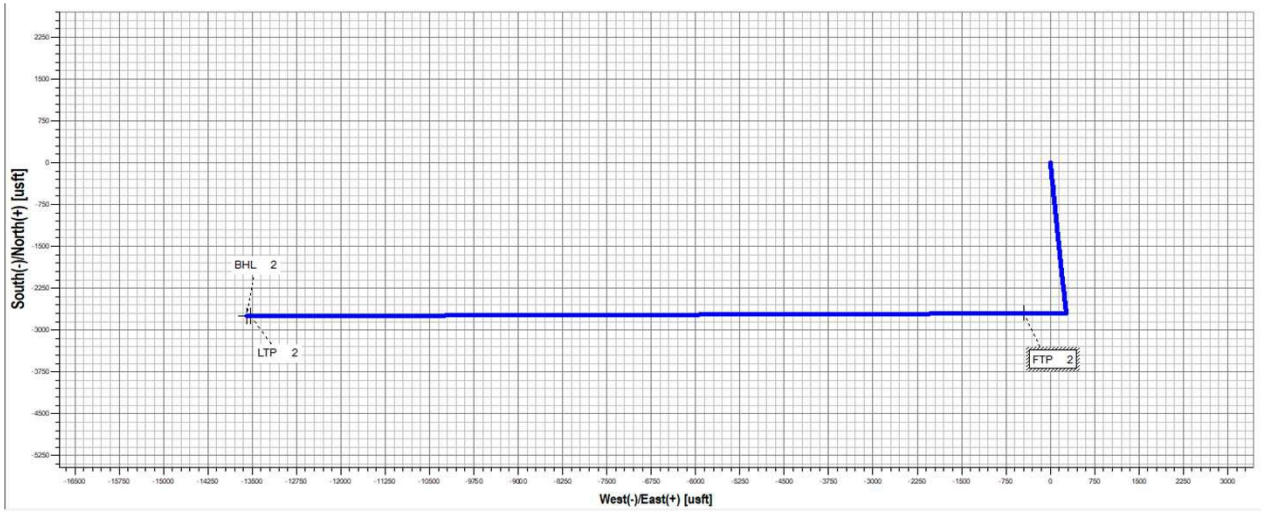
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19500.000 | 90.000 | 269.782 | 9660.000 | 85.279 | 0.000 | 107.429 | 0.000 | 85.279 | 0.000 | 0.000 | 107.712 | 40.663 | 85.296 | XOMR2_OWSG MWD+IFR1+MS |
| 19600.000 | 90.000 | 269.782 | 9660.000 | 86.050 | 0.000 | 108.489 | 0.000 | 86.050 | 0.000 | 0.000 | 108.769 | 40.710 | 85.343 | XOMR2_OWSG MWD+IFR1+MS |
| 19700.000 | 90.000 | 269.782 | 9660.000 | 86.821 | 0.000 | 109.550 | 0.000 | 86.821 | 0.000 | 0.000 | 109.828 | 40.758 | 85.390 | XOMR2_OWSG MWD+IFR1+MS |
| 19800.000 | 90.000 | 269.782 | 9660.000 | 87.592 | 0.000 | 110.612 | 0.000 | 87.592 | 0.000 | 0.000 | 110.888 | 40.806 | 85.435 | XOMR2_OWSG MWD+IFR1+MS |
| 19900.000 | 90.000 | 269.782 | 9660.000 | 88.364 | 0.000 | 111.676 | 0.000 | 88.364 | 0.000 | 0.000 | 111.949 | 40.855 | 85.480 | XOMR2_OWSG MWD+IFR1+MS |
| 20000.000 | 90.000 | 269.782 | 9660.000 | 89.136 | 0.000 | 112.740 | 0.000 | 89.136 | 0.000 | 0.000 | 113.011 | 40.904 | 85.523 | XOMR2_OWSG MWD+IFR1+MS |
| 20100.000 | 90.000 | 269.782 | 9660.000 | 89.908 | 0.000 | 113.806 | 0.000 | 89.908 | 0.000 | 0.000 | 114.075 | 40.954 | 85.566 | XOMR2_OWSG MWD+IFR1+MS |
| 20200.000 | 90.000 | 269.782 | 9660.000 | 90.680 | 0.000 | 114.873 | 0.000 | 90.680 | 0.000 | 0.000 | 115.139 | 41.004 | 85.608 | XOMR2_OWSG MWD+IFR1+MS |
| 20300.000 | 90.000 | 269.782 | 9660.000 | 91.453 | 0.000 | 115.941 | 0.000 | 91.453 | 0.000 | 0.000 | 116.205 | 41.055 | 85.649 | XOMR2_OWSG MWD+IFR1+MS |
| 20400.000 | 90.000 | 269.782 | 9660.000 | 92.226 | 0.000 | 117.010 | 0.000 | 92.226 | 0.000 | 0.000 | 117.272 | 41.106 | 85.689 | XOMR2_OWSG MWD+IFR1+MS |
| 20500.000 | 90.000 | 269.782 | 9660.000 | 92.998 | 0.000 | 118.080 | 0.000 | 92.998 | 0.000 | 0.000 | 118.340 | 41.158 | 85.729 | XOMR2_OWSG MWD+IFR1+MS |
| 20600.000 | 90.000 | 269.782 | 9660.000 | 93.772 | 0.000 | 119.150 | 0.000 | 93.772 | 0.000 | 0.000 | 119.408 | 41.210 | 85.768 | XOMR2_OWSG MWD+IFR1+MS |
| 20700.000 | 90.000 | 269.782 | 9660.000 | 94.545 | 0.000 | 120.222 | 0.000 | 94.545 | 0.000 | 0.000 | 120.478 | 41.263 | 85.806 | XOMR2_OWSG MWD+IFR1+MS |
| 20800.000 | 90.000 | 269.782 | 9660.000 | 95.318 | 0.000 | 121.295 | 0.000 | 95.318 | 0.000 | 0.000 | 121.549 | 41.316 | 85.843 | XOMR2_OWSG MWD+IFR1+MS |
| 20900.000 | 90.000 | 269.782 | 9660.000 | 96.092 | 0.000 | 122.369 | 0.000 | 96.092 | 0.000 | 0.000 | 122.621 | 41.369 | 85.879 | XOMR2_OWSG MWD+IFR1+MS |
| 21000.000 | 90.000 | 269.782 | 9660.000 | 96.866 | 0.000 | 123.443 | 0.000 | 96.866 | 0.000 | 0.000 | 123.693 | 41.423 | 85.915 | XOMR2_OWSG MWD+IFR1+MS |
| 21100.000 | 90.000 | 269.782 | 9660.000 | 97.640 | 0.000 | 124.519 | 0.000 | 97.640 | 0.000 | 0.000 | 124.767 | 41.477 | 85.950 | XOMR2_OWSG MWD+IFR1+MS |
| 21200.000 | 90.000 | 269.782 | 9660.000 | 98.414 | 0.000 | 125.595 | 0.000 | 98.414 | 0.000 | 0.000 | 125.841 | 41.532 | 85.985 | XOMR2_OWSG MWD+IFR1+MS |
| 21300.000 | 90.000 | 269.782 | 9660.000 | 99.189 | 0.000 | 126.672 | 0.000 | 99.189 | 0.000 | 0.000 | 126.916 | 41.587 | 86.019 | XOMR2_OWSG MWD+IFR1+MS |
| 21400.000 | 90.000 | 269.782 | 9660.000 | 99.963 | 0.000 | 127.749 | 0.000 | 99.963 | 0.000 | 0.000 | 127.992 | 41.643 | 86.052 | XOMR2_OWSG MWD+IFR1+MS |

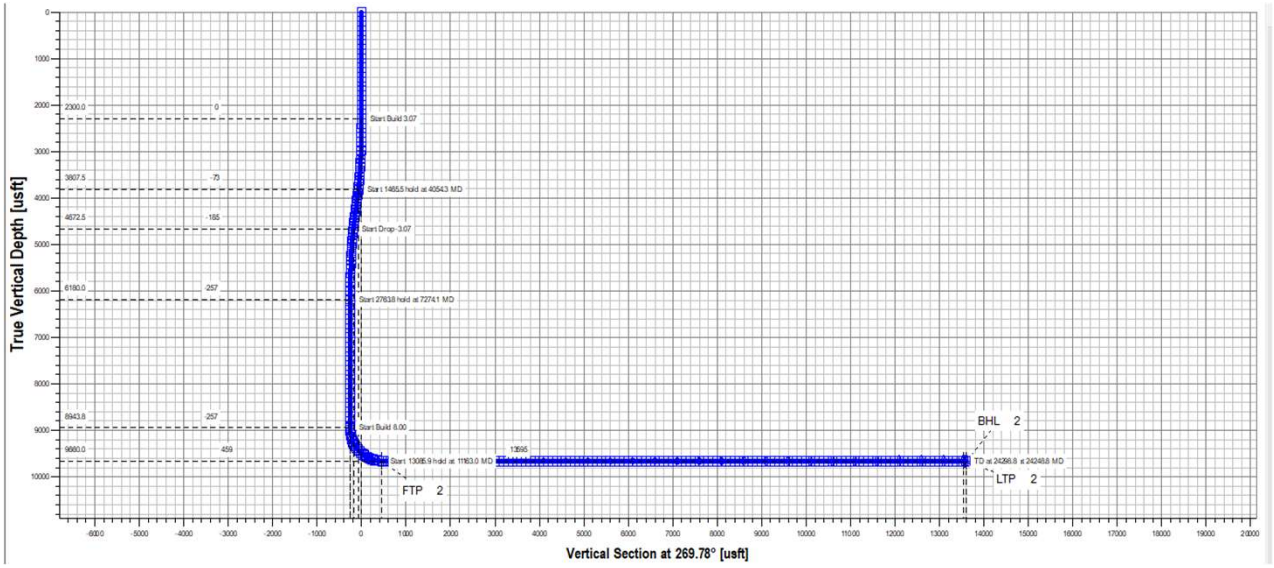
| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21500.000 | 90.000 | 269.782 | 9660.000 | 100.738 | 0.000 | 128.828 | 0.000 | 100.738 | 0.000 | 0.000 | 129.069 | 41.699 | 86.085 | XOMR2_OWSG MWD+IFR1+MS |
| 21600.000 | 90.000 | 269.782 | 9660.000 | 101.513 | 0.000 | 129.907 | 0.000 | 101.513 | 0.000 | 0.000 | 130.146 | 41.756 | 86.117 | XOMR2_OWSG MWD+IFR1+MS |
| 21700.000 | 90.000 | 269.782 | 9660.000 | 102.288 | 0.000 | 130.987 | 0.000 | 102.288 | 0.000 | 0.000 | 131.224 | 41.813 | 86.149 | XOMR2_OWSG MWD+IFR1+MS |
| 21800.000 | 90.000 | 269.782 | 9660.000 | 103.063 | 0.000 | 132.068 | 0.000 | 103.063 | 0.000 | 0.000 | 132.303 | 41.870 | 86.180 | XOMR2_OWSG MWD+IFR1+MS |
| 21900.000 | 90.000 | 269.782 | 9660.000 | 103.838 | 0.000 | 133.150 | 0.000 | 103.838 | 0.000 | 0.000 | 133.383 | 41.928 | 86.210 | XOMR2_OWSG MWD+IFR1+MS |
| 22000.000 | 90.000 | 269.782 | 9660.000 | 104.614 | 0.000 | 134.232 | 0.000 | 104.614 | 0.000 | 0.000 | 134.463 | 41.987 | 86.240 | XOMR2_OWSG MWD+IFR1+MS |
| 22100.000 | 90.000 | 269.782 | 9660.000 | 105.389 | 0.000 | 135.314 | 0.000 | 105.389 | 0.000 | 0.000 | 135.545 | 42.045 | 86.270 | XOMR2_OWSG MWD+IFR1+MS |
| 22200.000 | 90.000 | 269.782 | 9660.000 | 106.165 | 0.000 | 136.398 | 0.000 | 106.165 | 0.000 | 0.000 | 136.626 | 42.105 | 86.299 | XOMR2_OWSG MWD+IFR1+MS |
| 22300.000 | 90.000 | 269.782 | 9660.000 | 106.941 | 0.000 | 137.482 | 0.000 | 106.941 | 0.000 | 0.000 | 137.709 | 42.164 | 86.327 | XOMR2_OWSG MWD+IFR1+MS |
| 22400.000 | 90.000 | 269.782 | 9660.000 | 107.717 | 0.000 | 138.567 | 0.000 | 107.717 | 0.000 | 0.000 | 138.792 | 42.224 | 86.355 | XOMR2_OWSG MWD+IFR1+MS |
| 22500.000 | 90.000 | 269.782 | 9660.000 | 108.493 | 0.000 | 139.652 | 0.000 | 108.493 | 0.000 | 0.000 | 139.875 | 42.285 | 86.383 | XOMR2_OWSG MWD+IFR1+MS |
| 22600.000 | 90.000 | 269.782 | 9660.000 | 109.269 | 0.000 | 140.738 | 0.000 | 109.269 | 0.000 | 0.000 | 140.960 | 42.346 | 86.410 | XOMR2_OWSG MWD+IFR1+MS |
| 22700.000 | 90.000 | 269.782 | 9660.000 | 110.045 | 0.000 | 141.824 | 0.000 | 110.045 | 0.000 | 0.000 | 142.045 | 42.407 | 86.437 | XOMR2_OWSG MWD+IFR1+MS |
| 22800.000 | 90.000 | 269.782 | 9660.000 | 110.822 | 0.000 | 142.911 | 0.000 | 110.822 | 0.000 | 0.000 | 143.130 | 42.469 | 86.463 | XOMR2_OWSG MWD+IFR1+MS |
| 22900.000 | 90.000 | 269.782 | 9660.000 | 111.598 | 0.000 | 143.999 | 0.000 | 111.598 | 0.000 | 0.000 | 144.216 | 42.531 | 86.489 | XOMR2_OWSG MWD+IFR1+MS |
| 23000.000 | 90.000 | 269.782 | 9660.000 | 112.375 | 0.000 | 145.087 | 0.000 | 112.375 | 0.000 | 0.000 | 145.303 | 42.593 | 86.514 | XOMR2_OWSG MWD+IFR1+MS |
| 23100.000 | 90.000 | 269.782 | 9660.000 | 113.152 | 0.000 | 146.175 | 0.000 | 113.152 | 0.000 | 0.000 | 146.390 | 42.656 | 86.540 | XOMR2_OWSG MWD+IFR1+MS |
| 23200.000 | 90.000 | 269.782 | 9660.000 | 113.929 | 0.000 | 147.265 | 0.000 | 113.929 | 0.000 | 0.000 | 147.478 | 42.720 | 86.564 | XOMR2_OWSG MWD+IFR1+MS |
| 23300.000 | 90.000 | 269.782 | 9660.000 | 114.706 | 0.000 | 148.354 | 0.000 | 114.706 | 0.000 | 0.000 | 148.566 | 42.783 | 86.589 | XOMR2_OWSG MWD+IFR1+MS |
| 23400.000 | 90.000 | 269.782 | 9660.000 | 115.483 | 0.000 | 149.444 | 0.000 | 115.483 | 0.000 | 0.000 | 149.654 | 42.848 | 86.612 | XOMR2_OWSG MWD+IFR1+MS |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23500.000 | 90.000 | 269.782 | 9660.000 | 116.260 | 0.000 | 150.535 | 0.000 | 116.260 | 0.000 | 0.000 | 150.744 | 42.912 | 86.636 | XOMR2_OWSG MWD+IFR1+MS |
| 23600.000 | 90.000 | 269.782 | 9660.000 | 117.038 | 0.000 | 151.626 | 0.000 | 117.038 | 0.000 | 0.000 | 151.833 | 42.977 | 86.659 | XOMR2_OWSG MWD+IFR1+MS |
| 23700.000 | 90.000 | 269.782 | 9660.000 | 117.815 | 0.000 | 152.717 | 0.000 | 117.815 | 0.000 | 0.000 | 152.923 | 43.043 | 86.682 | XOMR2_OWSG MWD+IFR1+MS |
| 23800.000 | 90.000 | 269.782 | 9660.000 | 118.593 | 0.000 | 153.809 | 0.000 | 118.593 | 0.000 | 0.000 | 154.014 | 43.108 | 86.705 | XOMR2_OWSG MWD+IFR1+MS |
| 23900.000 | 90.000 | 269.782 | 9660.000 | 119.370 | 0.000 | 154.902 | 0.000 | 119.370 | 0.000 | 0.000 | 155.105 | 43.175 | 86.727 | XOMR2_OWSG MWD+IFR1+MS |
| 24000.000 | 90.000 | 269.782 | 9660.000 | 120.148 | 0.000 | 155.995 | 0.000 | 120.148 | 0.000 | 0.000 | 156.197 | 43.241 | 86.749 | XOMR2_OWSG MWD+IFR1+MS |
| 24094.623 | 90.000 | 269.782 | 9660.000 | 120.884 | 0.000 | 157.029 | 0.000 | 120.884 | 0.000 | 0.000 | 157.230 | 43.305 | 86.769 | XOMR2_OWSG MWD+IFR1+MS |
| 24100.000 | 90.000 | 269.782 | 9660.000 | 120.926 | 0.000 | 157.088 | 0.000 | 120.926 | 0.000 | 0.000 | 157.289 | 43.308 | 86.770 | XOMR2_OWSG MWD+IFR1+MS |
| 24144.626 | 90.000 | 269.782 | 9660.000 | 121.273 | 0.000 | 157.576 | 0.000 | 121.273 | 0.000 | 0.000 | 157.776 | 43.338 | 86.780 | XOMR2_OWSG MWD+IFR1+MS |

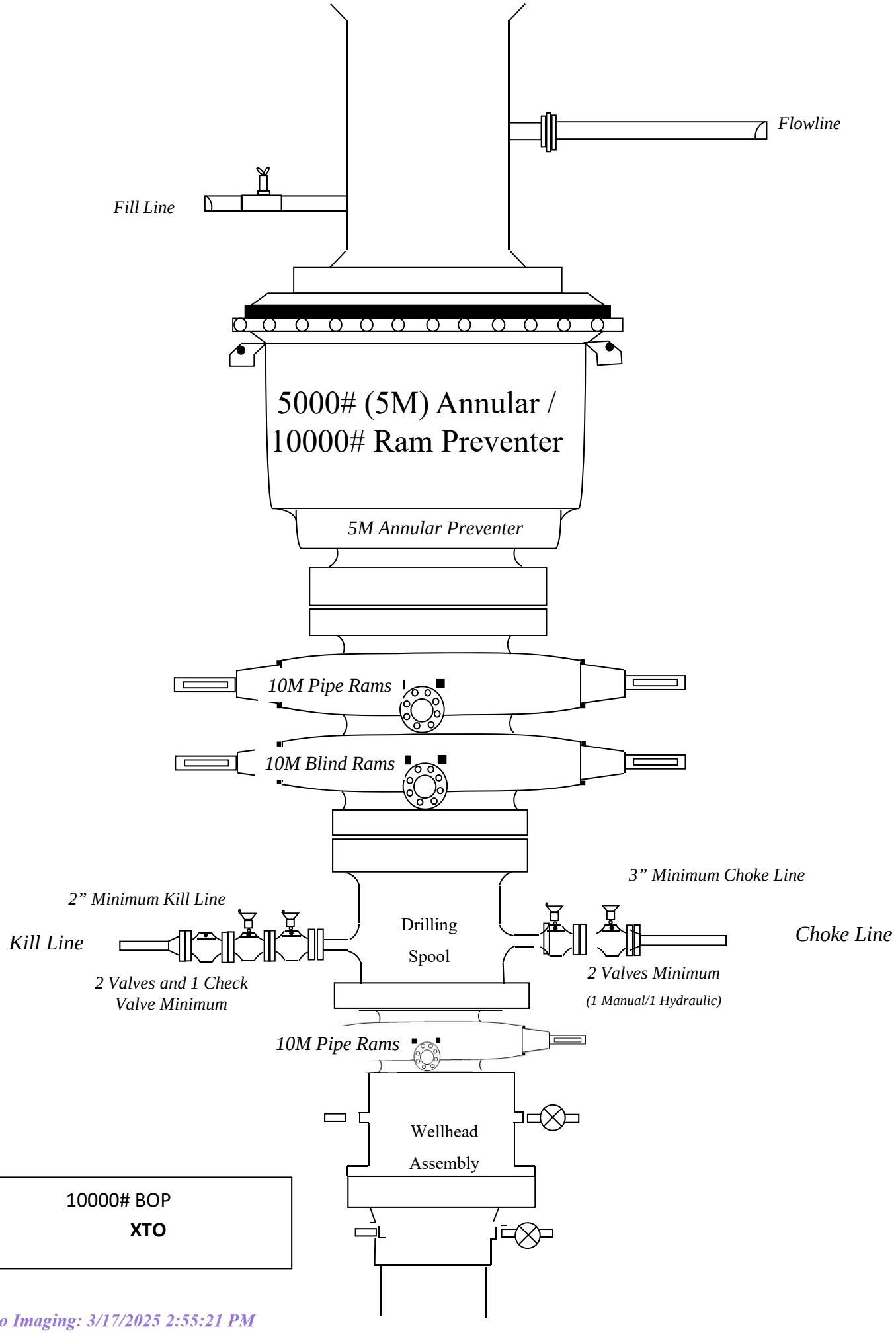
**Plan Targets**

| Target Name | Measured Depth (ft) | Grid Northing (ft) | Grid Easting (ft) | TVD MSL (ft) | Target Shape |
|---|---|---|---|---|---|
| FTP 2 | 11008.62 | 559800.40 | 646893.40 | 6103.00 | CIRCLE |
| LTP 2 | 24094.62 | 559750.60 | 633807.60 | 6103.00 | CIRCLE |
| BHL 2 | 24144.62 | 559750.40 | 633757.60 | 6103.00 | CIRCLE |



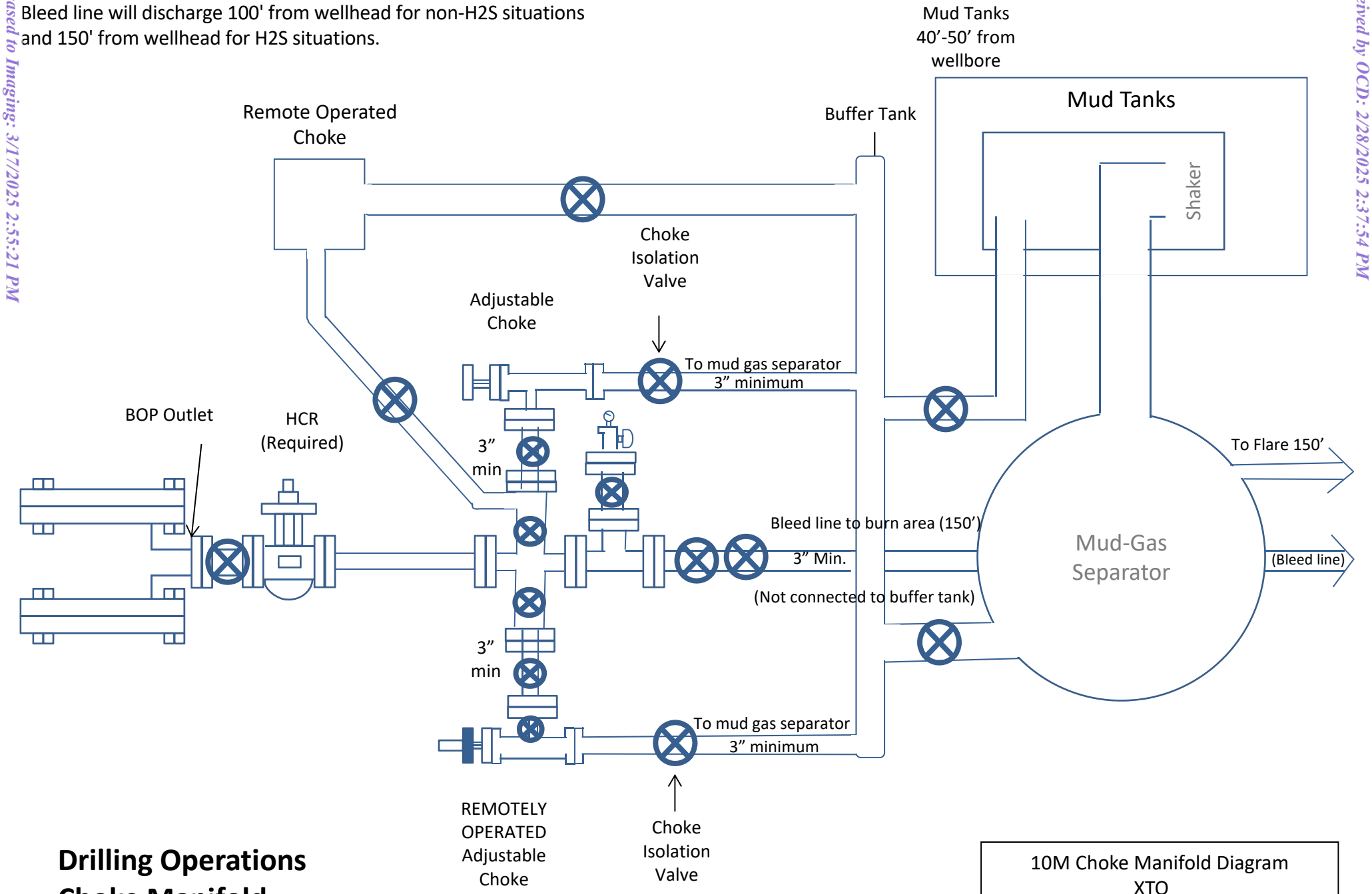

| Formation | TVDSS (feet) | TVD (feet) |
|---|---|---|
| Rustler | 2,882' | 675' |
| Salado | 2,606' | 951' |
| Base Salt | 1,354' | 2,203' |
| Capitan Reef | 694' | 2,863' |
| Delaware Ss. | -381' | 3,938' |
| Brushy Canyon Ss. | -2,338' | 5,895' |
| Basal Brushy Canyon Ss. | -3,727' | 7,284' |
| Bone Spring Lime | -3,914' | 7,471' |
| Avalon Shale Upper SH | -4,109' | 7,666' |
| Avalon Mid Carb | -4,453' | 8,010' |
| Avalon Shale Lower SH | -4,612' | 8,169' |
| 1st Bone Spring Lime | -4,847' | 8,404' |
| 1st Bone Spring Sand | -5,188' | 8,745' |
| 2nd Bone Spring Lime | -5,549' | 9,106' |
| 2nd Bone Spring Sand | -5,649' | 9,206' |
| 2nd Bone Spring B Sand | -5,833' | 9,390' |
| 2nd Bone Spring C Sand | -6,044' | 9,601' |
| Landing Point | -6,103' | 9,660' |
| 3rd Bone Spring Lime | -6,259' | 9,816' |




10000# BOP

**XTO**

Bleed line will discharge 100' from wellhead for non-H2S situations and 150' from wellhead for H2S situations.




**Drilling Operations**
**Choke Manifold**
**10M Service**

10M Choke Manifold Diagram
XTO

# U. S. Steel Tubular Products

11/8/2023 1:08:50 PM

## 5.500" 20.00lb/ft (0.361" Wall) P110 RY USS-FREEDOM HTQ®

| MECHANICAL PROPERTIES | Pipe | USS-FREEDOM HTQ® | | -- |
|---|---|---|---|---|
| Minimum Yield Strength | 110,000 | -- | psi | -- |
| Maximum Yield Strength | 125,000 | -- | psi | -- |
| Minimum Tensile Strength | 125,000 | -- | psi | -- |
| **DIMENSIONS** | **Pipe** | **USS-FREEDOM HTQ®** | | **--** |
| Outside Diameter | 5.500 | 6.300 | in. | -- |
| Wall Thickness | 0.361 | -- | in. | -- |
| Inside Diameter | 4.778 | 4.778 | in. | -- |
| Standard Drift | 4.653 | 4.653 | in. | -- |
| Alternate Drift | -- | -- | in. | -- |
| Nominal Linear Weight, T&C | 20.00 | -- | lb/ft | -- |
| Plain End Weight | 19.83 | -- | lb/ft | -- |
| **SECTION AREA** | **Pipe** | **USS-FREEDOM HTQ®** | | **--** |
| Critical Area | 5.828 | 5.828 | sq. in. | -- |
| Joint Efficiency | -- | 100.0 | % | -- |
| **PERFORMANCE** | **Pipe** | **USS-FREEDOM HTQ®** | | **--** |
| Minimum Collapse Pressure | 11,100 | 11,100 | psi | -- |
| Minimum Internal Yield Pressure | 12,640 | 12,640 | psi | -- |
| Minimum Pipe Body Yield Strength | 641,000 | -- | lb | -- |
| Joint Strength | -- | 641,000 | lb | -- |
| Compression Rating | -- | 641,000 | lb | -- |
| Reference Length [4] | -- | 21,370 | ft | -- |
| Maximum Uniaxial Bend Rating [2] | -- | 91.7 | deg/100 ft | -- |
| **MAKE-UP DATA** | **Pipe** | **USS-FREEDOM HTQ®** | | **--** |
| Make-Up Loss | -- | 4.13 | in. | -- |
| Minimum Make-Up Torque [3] | -- | 15,000 | ft-lb | -- |
| Maximum Make-Up Torque [3] | -- | 21,000 | ft-lb | -- |
| Maximum Operating Torque[3] | -- | 29,500 | ft-lb | -- |



## 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. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. 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.).
4. Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.



U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

# U. S. Steel Tubular Products

11/29/2021 4:16:04 PM

## 5.500" 20.00lb/ft (0.361" Wall) P110 RY USS-TALON HTQ™ RD

| MECHANICAL PROPERTIES | Pipe | USS-TALON HTQ™ RD | | [6] |
|---|---|---|---|---|
| Minimum Yield Strength | 110,000 | -- | psi | -- |
| Maximum Yield Strength | 125,000 | -- | psi | -- |
| Minimum Tensile Strength | 125,000 | -- | psi | -- |
| **DIMENSIONS** | **Pipe** | **USS-TALON HTQ™ RD** | | **--** |
| Outside Diameter | 5.500 | 5.900 | in. | -- |
| Wall Thickness | 0.361 | -- | in. | -- |
| Inside Diameter | 4.778 | 4.778 | in. | -- |
| Standard Drift | 4.653 | 4.653 | in. | -- |
| Alternate Drift | -- | -- | in. | -- |
| Nominal Linear Weight, T&C | 20.00 | -- | lb/ft | -- |
| Plain End Weight | 19.83 | -- | lb/ft | -- |
| **SECTION AREA** | **Pipe** | **USS-TALON HTQ™ RD** | | **--** |
| Critical Area | 5.828 | 5.828 | sq. in. | -- |
| Joint Efficiency | -- | 100.0 | % | [2] |
| **PERFORMANCE** | **Pipe** | **USS-TALON HTQ™ RD** | | **--** |
| Minimum Collapse Pressure | 11,100 | 11,100 | psi | -- |
| Minimum Internal Yield Pressure | 12,640 | 12,640 | psi | -- |
| Minimum Pipe Body Yield Strength | 641,000 | -- | lb | -- |
| Joint Strength | -- | 641,000 | lb | -- |
| Compression Rating | -- | 641,000 | lb | -- |
| Reference Length | -- | 21,370 | ft | [5] |
| Maximum Uniaxial Bend Rating | -- | 91.7 | deg/100 ft | [3] |
| **MAKE-UP DATA** | **Pipe** | **USS-TALON HTQ™ RD** | | **--** |
| Make-Up Loss | -- | 5.58 | in. | -- |
| Minimum Make-Up Torque | -- | 17,000 | ft-lb | [4] |
| Maximum Make-Up Torque | -- | 20,000 | ft-lb | [4] |
| Maximum Operating Torque | -- | 39,500 | ft-lb | [4] |



## 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.



U. S. Steel Tubular Products
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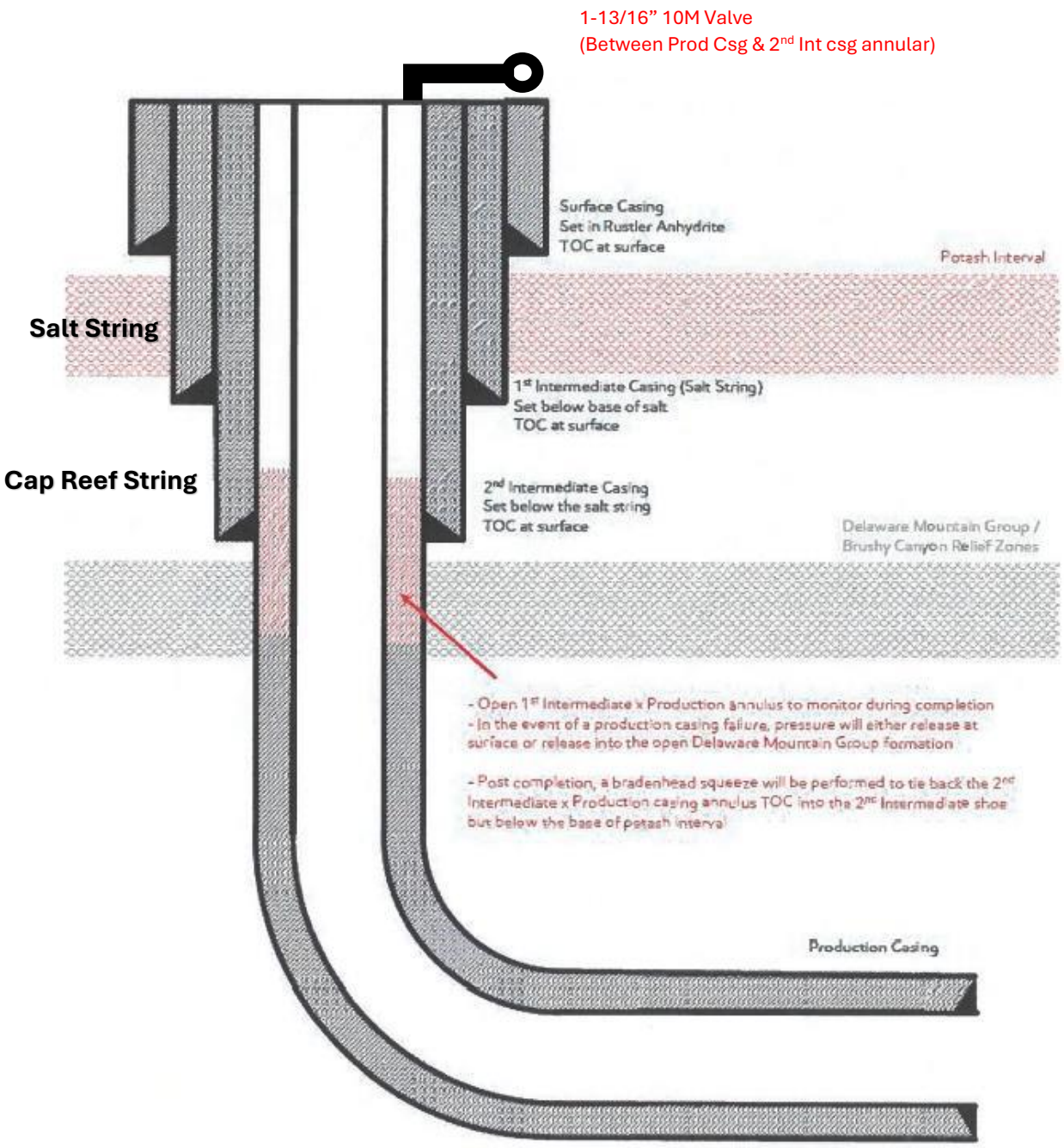
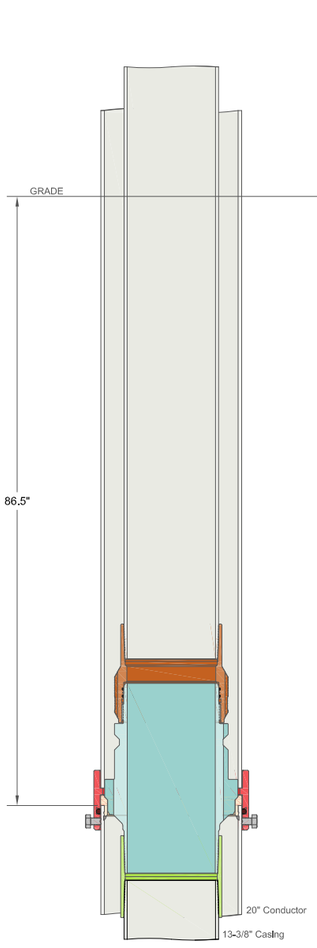


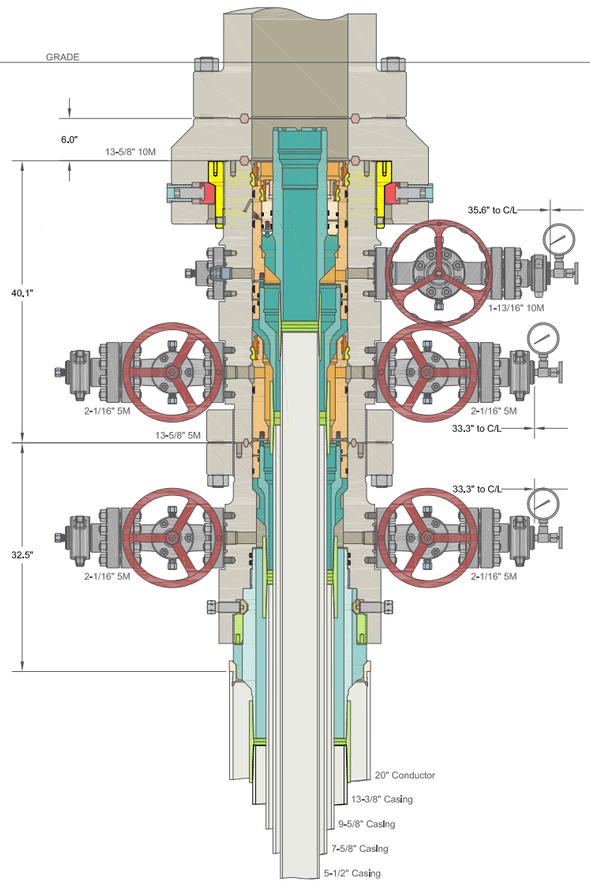

## Figure E

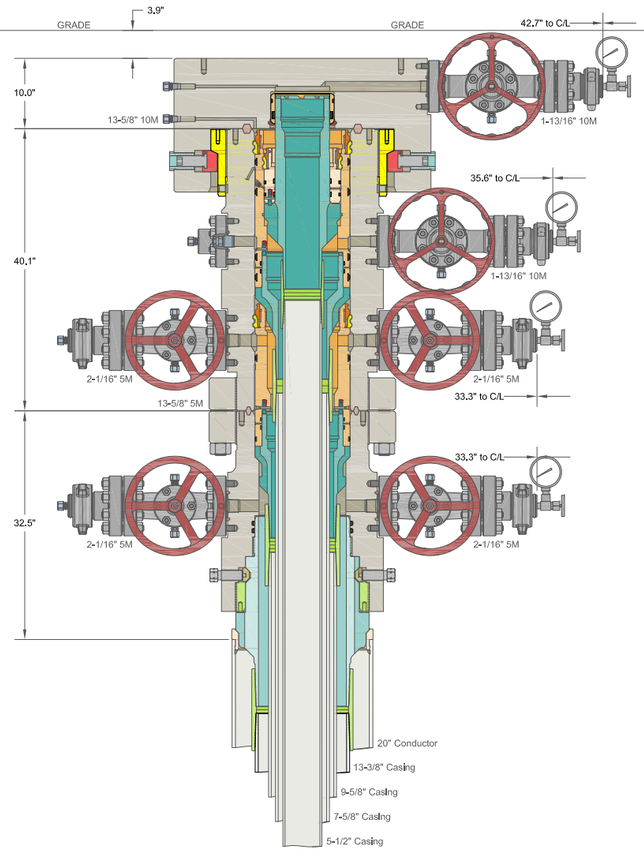
Updated May 2024:

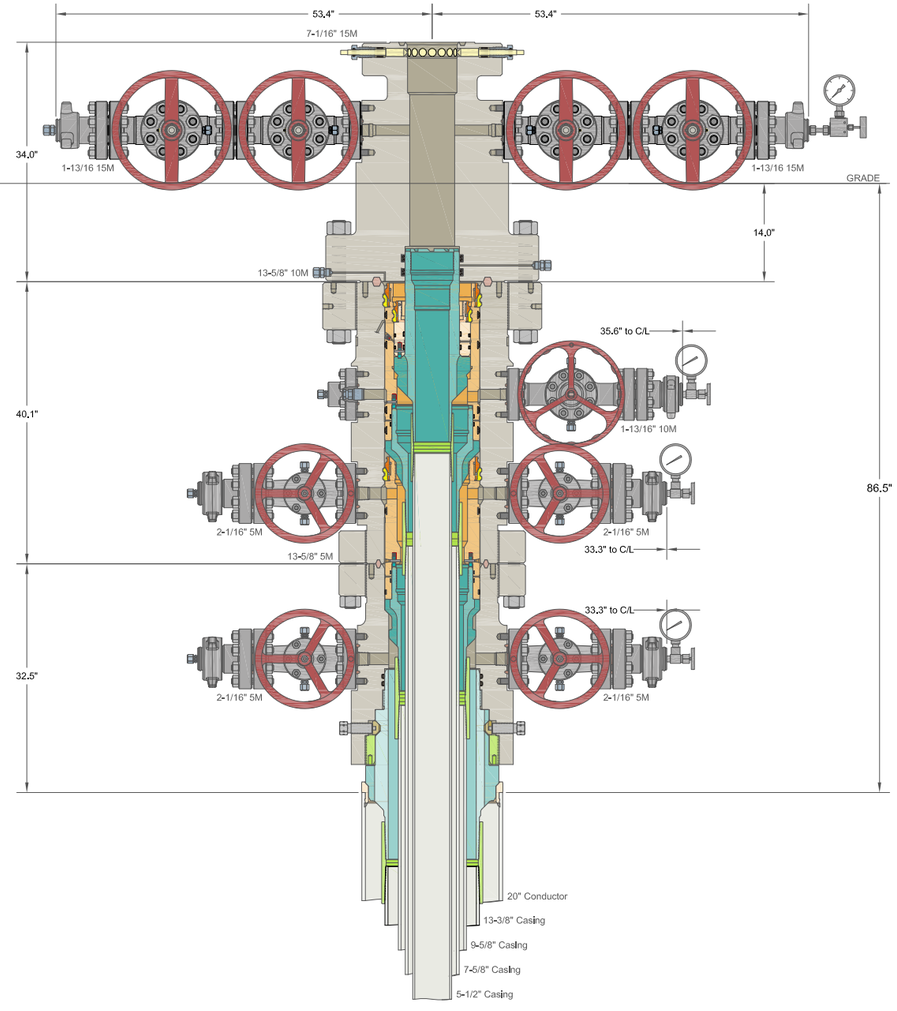
XTO is aware of the R-111-Q update and will comply with these requirements including (but not limited to):

1. Alignment with KPLA requirements per schematic above, leaving open annulus for pressure mnoitoring during frac and utilizing new casing that meets API standards.
2. Contingency plans in place to divert formation fluids away fromm salt interval in even of production casin failure.
3. Bradenhead squeeze to be completed within 180 days to tie back TOC to salt string at least 500ft but with top below Marker Bed 126.
4. Productin Cement to be tied back no less than 500ft inside previous casing shoe




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

| | | |
|---|---|---|
| DRAWN | VJK | 31MAR22 |
| APPRV | | |

DRAWING NO. SDT-3301

**BLACK GOLD®**

**GATES ENGINEERING & SERVICES NORTH AMERICA**
**7603 Prairie Oak Dr.**
**Houston, TX. 77086**

**PHONE: +1 (281) 602-4100**
**FAX: +1 (281) 602-4147**
**EMAIL: gesna.quality@gates.com**
**WEB: www.gates.com/oilandgas**

NEW CHOKE HOSE
INSTALLED 02-10-2024

# CERTIFICATE OF CONFORMANCE

This is to verify that the items detailed below meet the requirements of the Customer's Purchase Order referenced herein, and are in Conformance with applicable specifications, and that Records of Required Tests are on file and subject to examination. The following items were inspected and hydrostatically tested at **Gates Engineering & Services North America** facilities in Houston, TX, USA.

| | |
|---|---|
| **CUSTOMER:** | NABORS DRILLING TECHNOLOGIES USA DBA NABORS DRILLING USA |
| **CUSTOMER P.O.#:** | 15582803 (TAG NABORS PO #15582803 SN 74621 ASSET 66-1531) |
| **CUSTOMER P/N:** | IMR RETEST SN 74621 ASSET #66-1531 |
| **PART DESCRIPTION:** | RETEST OF CUSTOMER 3" X 45 FT 16C CHOKE & KILL HOSE ASSEMBLY C/W 4 1/16" 10K FLANGES |
| **SALES ORDER #:** | 529480 |
| **QUANTITY:** | 1 |
| **SERIAL #:** | 74621 H3-012524-1 |

**SIGNATURE:** F. OSPINOS

**TITLE:** QUALITY ASSURANCE

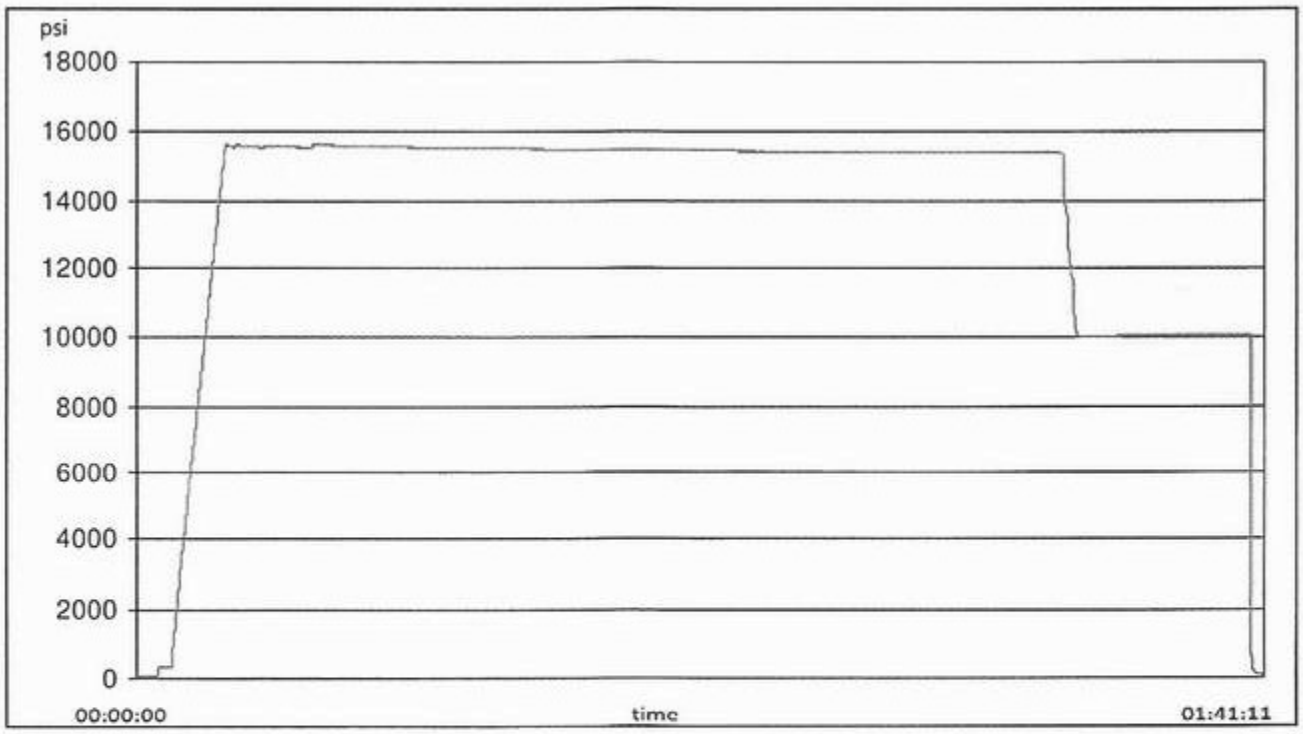
**DATE:** 1/25/2024

H3-15716

1/25/2024 11:48:06 AM

# TEST REPORT

| CUSTOMER | | | TEST OBJECT | | |
|---|---|---|---|---|---|
| Company: | Nabors Industries Inc. | | Serial number: | H3-012524-1 | |
| | | | Lot number: | | |
| Production description: | 74621/66-1531 | | Description: | 74621/66-1531 | |
| Sales order #: | 529480 | | | | |
| Customer reference: | FG1213 | | Hose ID: | 3" 16C CK | |
| | | | Part number: | | |
| **TEST INFORMATION** | | | | | |
| Test procedure: | GTS-04-053 | | Fitting 1: | 3.0 x 4-1/16 10K | |
| Test pressure: | 15000.00 | psi | Part number: | | |
| Test pressure hold: | 3600.00 | sec | Description: | | |
| Work pressure: | 10000.00 | psi | | | |
| Work pressure hold: | 900.00 | sec | Fitting 2: | 3.0 x 4-1/16 10K | |
| Length difference: | 0.00 | % | Part number: | | |
| Length difference: | 0.00 | inch | Description: | | |
| Visual check: | | | Length: | 45 | feet |
| Pressure test result: | PASS | | | | |
| Length measurement result: | | | | | |
| Test operator: | Travis | | | | |



H3-15/16

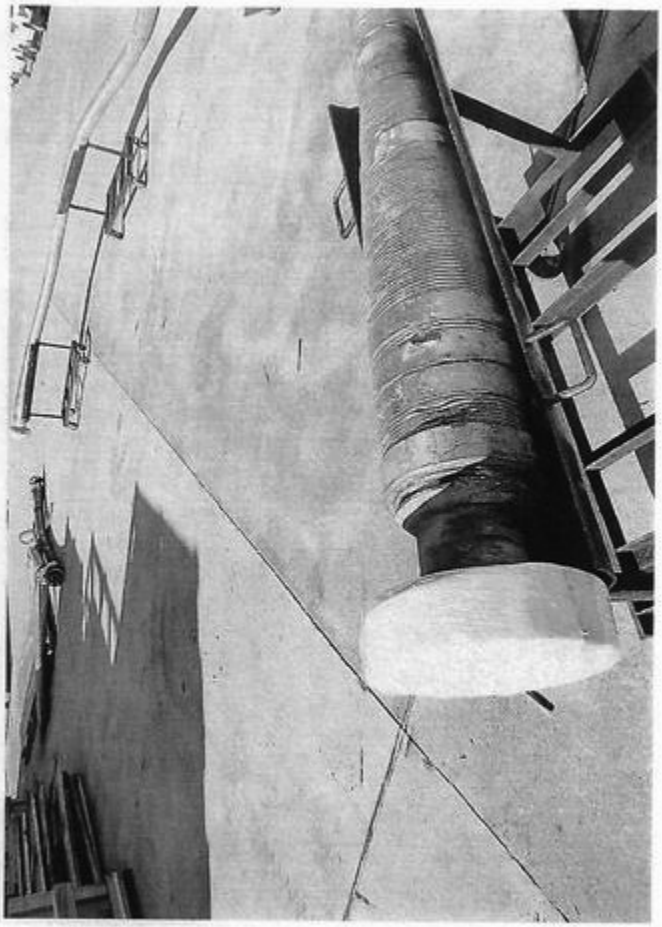
1/25/2024 11:48:06 AM

# TEST REPORT

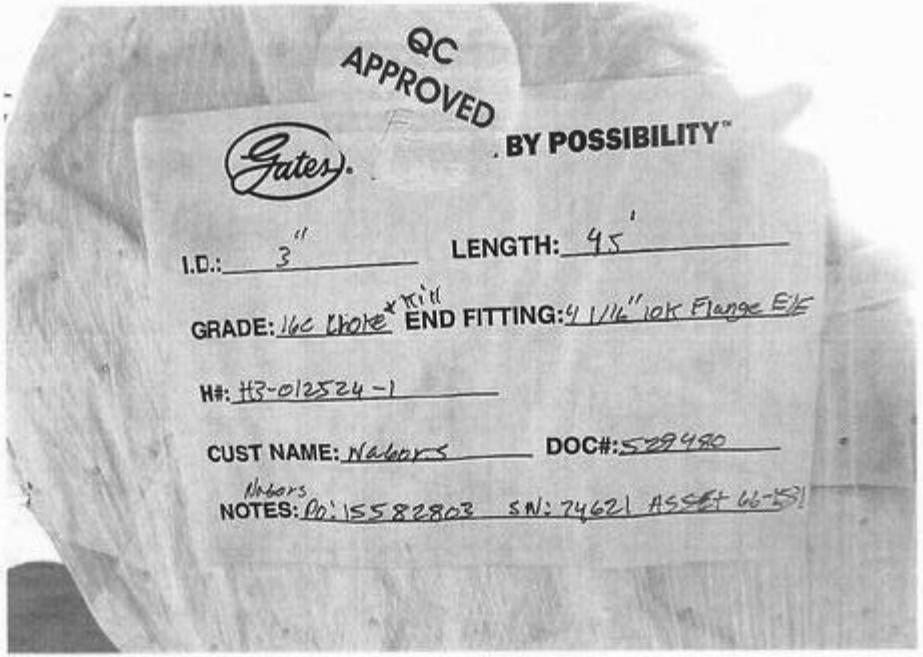
## GAUGE TRACEABILITY

| Description | Serial number | Calibration date | Calibration due date |
|---|---|---|---|
| S-25-A-W | 110D3PHO | 2023-06-06 | 2024-06-06 |
| S-25-A-W | 110IQWDG | 2023-05-16 | 2024-05-16 |

Comment








XTO respectfully requests approval to utilize a spudder rig to pre-set surface casing.

Description of Operations:

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
    a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
    b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wing valves.
    a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling Operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nippled up and tested on the wellhead before drilling operations resume on each well.
    a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
    b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations
7. XTO will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, XTO will secure the wellhead area by placing a guard rail around the cellar area.

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

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

**Background**

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

**Supporting Documentation**

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

Figure 1: Winch System attached to BOP Stack

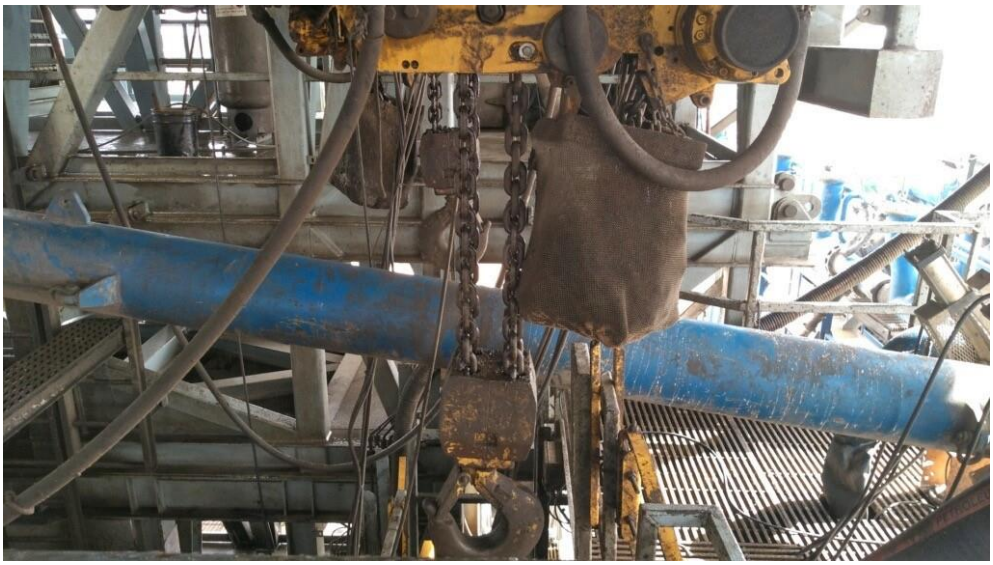


Figure 2: BOP Winch System

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

62 API STANDARD 53

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

| Component to be Pressure Tested | Pressure Test—Low Pressure[ac] psig (MPa) | Pressure Test—High Pressure[ac] | |
|---|---|---|---|
| | | Change Out of Component, Elastomer, or Ring Gasket | No Change Out of Component, Elastomer, or Ring Gasket |
| Annular preventer[b] | 250 to 350 (1.72 to 2.41) | RWP of annular preventer | MASP or 70% annular RWP, whichever is lower. |
| Fixed pipe, variable bore, blind, and BSR preventers[bd] | 250 to 350 (1.72 to 2.41) | RWP of ram preventer or wellhead system, whichever is lower | ITP |
| Choke and kill line and BOP side outlet valves below ram preventers (both sides) | 250 to 350 (1.72 to 2.41) | RWP of side outlet valve or wellhead system, whichever is lower | ITP |
| Choke manifold—upstream of chokes[e] | 250 to 350 (1.72 to 2.41) | RWP of ram preventers or wellhead system, whichever is lower | ITP |
| Choke manifold—downstream of chokes[e] | 250 to 350 (1.72 to 2.41) | RWP of valve(s), line(s), or MASP for the well program, whichever is lower | |
| Kelly, kelly valves, drill pipe safety valves, IBOPs | 250 to 350 (1.72 to 2.41) | MASP for the well program | |

[a] Pressure test evaluation periods shall be a minimum of five minutes.
No visible leaks.
The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

[b] Annular(s) and VBR(s) shall be pressure tested on the largest and smallest OD drill pipe to be used in well program.

[c] For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

[d] For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

[e] Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specification and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations.

Break testing has been approved by the BLM in the past with other operators based on the detailed information provided in this document.

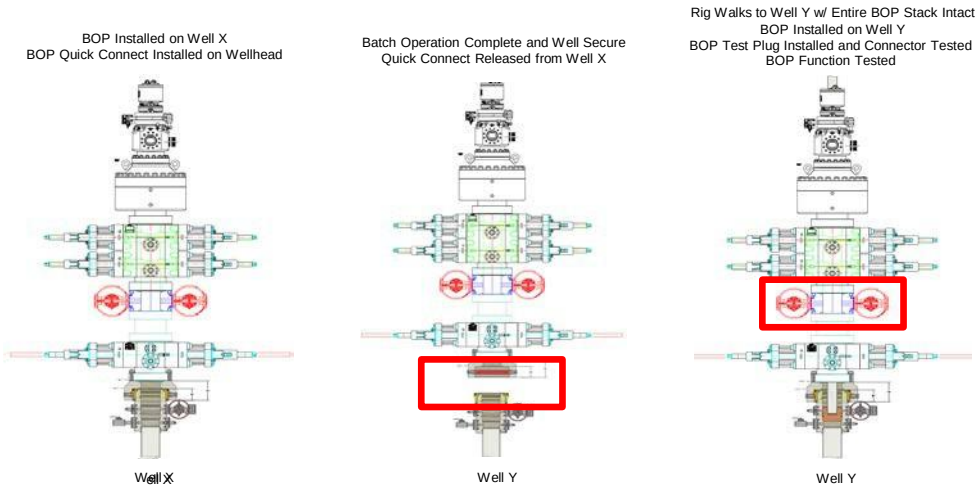
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of CFR Title 43 Part 3170 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

**Procedures**

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

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

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




**Summary**

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

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

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

1. After a full BOP test is conducted on the first well on the pad.

2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.

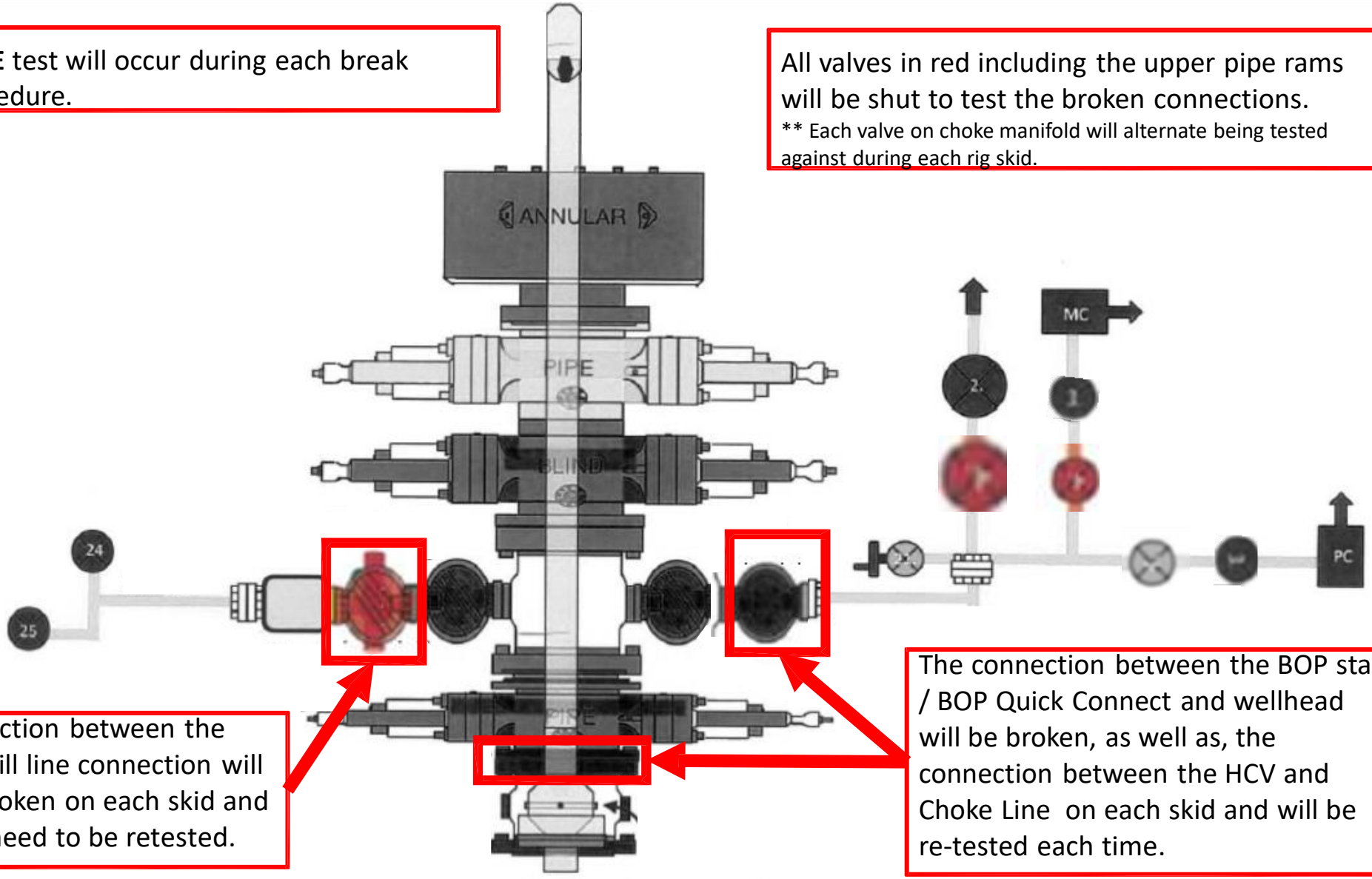
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.

4. Full BOP test will be required prior to drilling the production hole.

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

All valves in red including the upper pipe rams will be shut to test the broken connections.

** Each valve on choke manifold will alternate being tested against during each rig skid.




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

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

**XTO Permian Operating, LLC Offline Cementing Variance Request**

XTO requests the option to cement the surface and intermediate casing strings offline as a prudent batch drilling efficiency of acreage development.

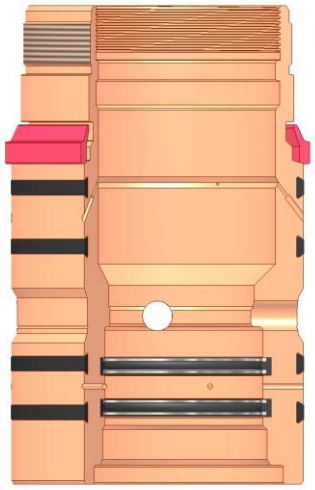
## 1. Cement Program

No changes to the cement program will take place for offline cementing.

## 2. Offline Cementing Procedure

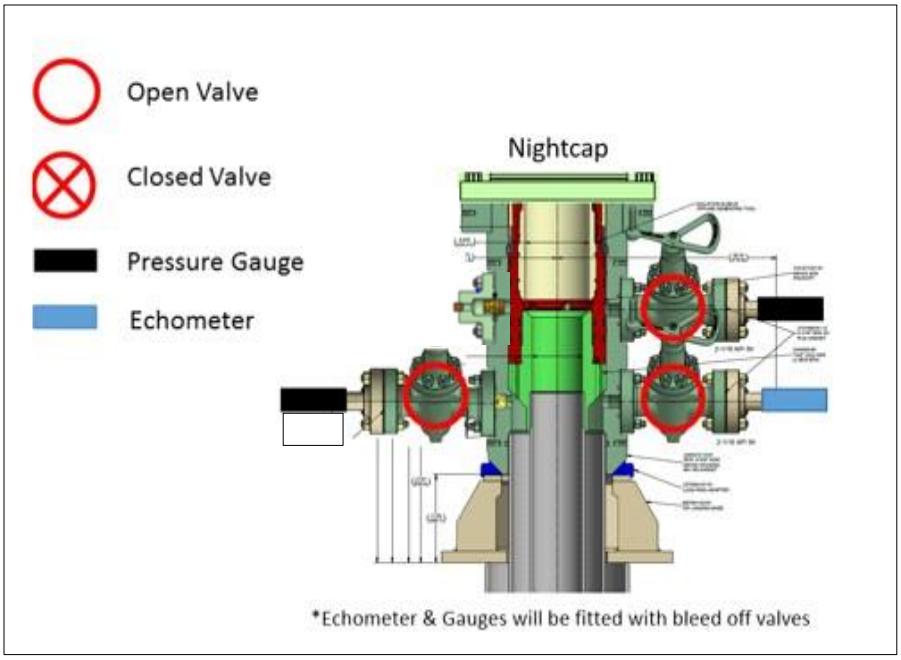
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal. Pressure ratings of wellhead components and valves is 5,000 psi.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
    a. If any barrier fails to test, the BOP stack will not be nippled down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



Annular packoff with both external and internal seals

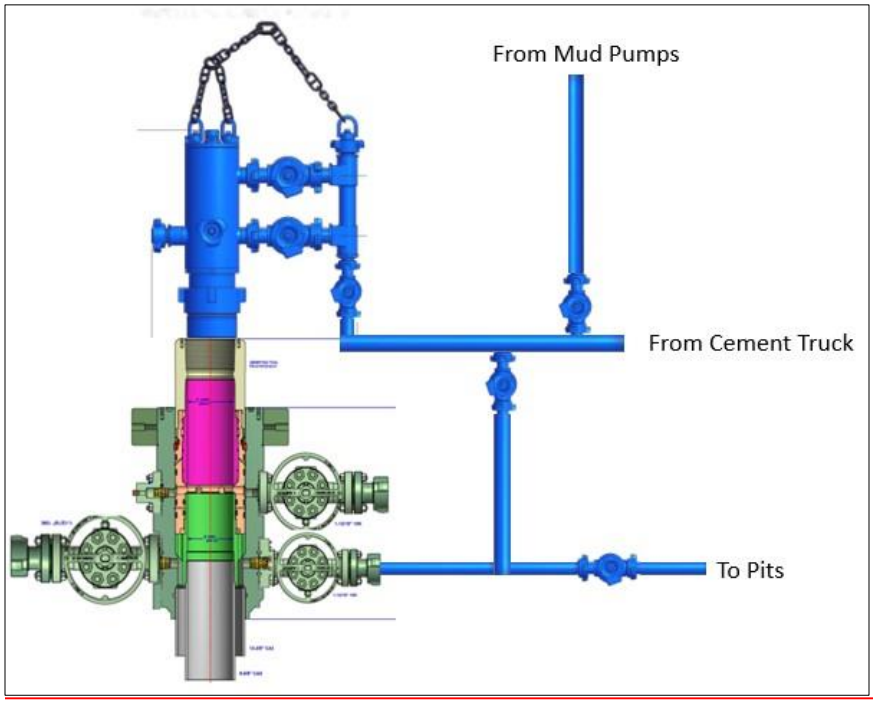
**XTO Permian Operating, LLC Offline Cementing Variance Request**




Wellhead diagram during skidding operations

6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nippling up for further remediation.
    a. Well Control Plan
        i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
        ii. Rig pumps or a 3rd party pump will be tied into the upper casing valve to pump down the casing ID
        iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
        iv. Once influx is circulated out of the hole, kill weight mud will be circulated
        v. Well will be confirmed static
        vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment

**XTO Permian Operating, LLC Offline Cementing Variance Request**




Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
    a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
    b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

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

CONDITIONS

Action 437885

## CONDITIONS

| | |
|---|---|
| Operator:<br>XTO PERMIAN OPERATING LLC.<br>6401 HOLIDAY HILL ROAD<br>MIDLAND, TX 79707 | OGRID:<br>373075 |
| | Action Number:<br>437885 |
| | Action Type:<br>[C-103] NOI Change of Plans (C-103A) |

**CONDITIONS**

| Created By | Condition | Condition Date |
|---|---|---|
| ward.rikala | Any previous COA's not addressed within the updated COA's still apply. | 3/17/2025 |