Well Name: JRU APACHE FEDERAL COM

Well Location: T22S / R30E / SEC 13 / NESE / 32.391514 / -103.828236

County or Parish/State: EDDY / NM

Well Number: 801H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM89051

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2831485

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 01/13/2025

Time Sundry Submitted: 01:47

Date proposed operation will begin: 01/17/2025

Procedure Description: JRU APACHE FEDERAL COM 801H APD ID# 10400085118 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 and proposed total depth. FROM: TO: SHL: 2425' FSL & 819' FEL OF SECTION 13-T22S-R30E 2546' FSL & 867' FEL OF SECTION 13-T22S-R30E KOP: 2425' FSL & 819' FEL OF SECTION 13-T22S-R30E 1072' FNL & 330' FEL OF SECTION 13-T22S-R30E FTP: 330' FNL & 330' FEL OF SECTION 13-T22S-R30E 1072' FNL & 330' FEL OF SECTION 13-T22S-R30E LTP: 330' FNL & 100' FWL OF SECTION 14-T22S-R30E 1072' FNL & 100' FWL OF SECTION 14-T22S-R30E BHL: 330' FNL & 50' FWL OF SECTION 14-T22S-R30E 1072' FNL & 50' FWL OF SECTION 14-T22S-R30E The proposed total depth is changing from 21569' MD/10394' TVD to 21164.66' MD/10888' TVD . 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___James_Ranch_Unit_Apache_801H_20250228154437.pdf

Well Name: JRU APACHE FEDERAL COM

Well Location: T22S / R30E / SEC 13 / NESE / 32.391514 / -103.828236

County or Parish/State: EDDY / NM

Well Number: 801H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM89051

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: XTO PERMIAN OPERATING LLC

Conditions of Approval

Additional

JRU_Apache_Fed_Com_108H_COA_20250402132737.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 28, 2025 03:44 PM

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: 04/03/2025

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: 330' FNL & 50' FWL OF SECTION 14-T22S-R30E 1072' FNL & 50' FWL OF SECTION 14-T22S-R30E

The proposed total depth is changing from 21569 MD/10394 TVD to 21164.66 MD/10888 TVD

.

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: NESE / 2425 FSL / 819 FEL / TWSP: 22S / RANGE: 30E / SECTION: 13 / LAT: 32.391514 / LONG: -103.828236 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 328 FNL / 2674 FWL / TWSP: 22S / RANGE: 30E / SECTION: 13 / LAT: 32.398474 / LONG: -103.834248 (TVD: 10446 feet, MD: 13900 feet)

PPP: NENE / 330 FNL / 330 FEL / TWSP: 22S / RANGE: 30E / SECTION: 13 / LAT: 32.398466 / LONG: -103.82665 (TVD: 10463 feet, MD: 11300 feet)

BHL: NWNW / 330 FNL / 50 FWL / TWSP: 22S / RANGE: 30E / SECTION: 14 / LAT: 32.398501 / LONG: -103.860083 (TVD: 10394 feet, MD: 21569 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO
LEASE NO.:	**NMNM089051**
LOCATION:	Sec. 13, T.22 S, R 30 E
COUNTY:	Eddy County, New Mexico
WELL NAME & NO.:	JRU Apache Fed Com 108H
SURFACE HOLE FOOTAGE:	2576'/S & 867'/E
BOTTOM HOLE FOOTAGE:	1072'/N & 50'/W

*Changes approved through engineering via **Sundry 2831485__** on **4-2-2025_**. 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: Engineered Weak Point			☑ 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 **720** 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, or potash.

3. The minimum required fill of cement behind the **7-5/8** inch **2nd Intermediate** casing is: Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

    a. **First stage:** Operator will cement with intent to reach the top of the **Brushy Canyon at 7785'.**

    b. **Second stage:** Operator will perform bradenhead squeeze and top-out. 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. **Excess calculates to 23%. Additional cement maybe required.**

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, or potash.

Operator has proposed to pump down Intermediate 1 X Intermediate 2 annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the Intermediate 1 casing to tieback requirements listed above after the second stage BH to verify TOC. Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

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

- ❖ **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.**

Operator has proposed to pump down **intermediate x production** annulus post completion. **Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the production casing to surface after the second stage BH to verify TOC.** Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry during second stage bradenhead when running Echo-meter if cement is required to surface. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM. Pressure monitoring device and Pressure Safety Valves must be installed at surface on both the intermediate annulus and the production annulus for the life of the well.**

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-361-2822 Eddy County).

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.

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)**

WIPP Requirements

The proposed surface well or bottom hole is located within 330 feet of the WIPP Land Withdrawal Area boundary. As a result, the operator is required to submit daily drilling reports, logs and deviation survey information to the Bureau of Land Management Engineering Department and the U.S. Department of Energy per requirements of the Joint Powers Agreement until a total vertical depth of 7,000 feet is reached. These reports will have at a minimum, the depth of any excess mud returns (brine flows), the rate of penetration and a clearly marked section showing the deviation for each 500-foot interval. Operator may be required to do more frequent deviation surveys based on the daily information submitted and may be required to take other corrective measures. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed. Upon completion of the

well, the operator shall submit a complete directional survey. Any future entry into the well for purposes of completing additional drilling will require supplemental information.

Any oil and gas well operator drilling within one mile of the WIPP Boundary must notify WIPP as soon as possible if any of the following conditions are encountered during oil and gas operations: R-111-Q Amendment - Notification to Operators (Potash)

a) Indication of any well collision event,

b) Suspected well fluid flow (oil, gas, or produced water) outside of casing,

c) Sustained annulus pressure between the 1st intermediate and next innermost casing string in excess of 500 psi above the baseline pressure of the well, or above 1500 psi total,

d) Increasing pressure buildup rates (psi/day) across multiple successive bleed-off cycles on the annulus between the 1st intermediate and next innermost casing during well production, or

e) Sustained losses in excess of 50% through the salt formation during drilling.

The operator can email the required information to OilGasReports@wipp.ws. Attached files must not be greater than 20 MB. Call WIPP Tech Support at 575-234-7422, during the hours 7:00am to 4:30pm, if there are any issues sending to this address.

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 4/2/2025
575-234-5998 / zstevens@blm.gov

C-102 Sumbit electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department 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-	40295	LOS MEDANOS, BONE SPRING

Property Code	Property Name	Well Number
	JRU Apache Federal Com	801H

OGRID No.	Operator Name	Ground Level Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,347'

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
I	13	22S	30E		2,546 FSL	867 FEL	32.391847	-103.828392	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	14	22S	30E		1,072 FNL	50 FWL	32.396464	-103.860076	EDDY

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
640.00	DEFINING		Y	U

Order Numbers. R-279-C

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
A	13	22S	30E		1,072 FNL	330 FEL	32.396427	-103.826650	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	13	22S	30E		1,072 FNL	330 FEL	32.396427	-103.826650	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	14	22S	30E		1,072 FNL	100 FWL	32.396463	-103.859914	EDDY

Unitized Area of Area of Interest	Spacing Unit Type : ☒ Horizontal ☐ Vertical	Ground Elevation
NMNM-070965X		3,347'

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 1/2/2025

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

12/9/2024 — Date of Survey

KT 618.013002.10-40

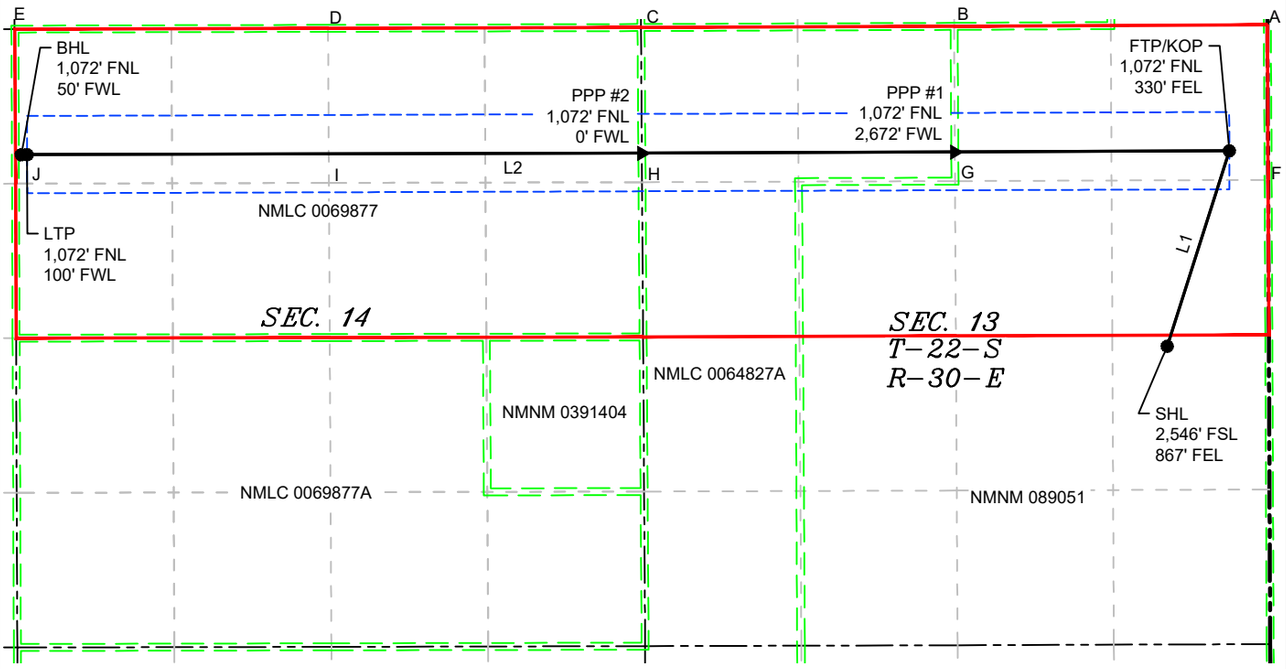
Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

P:\618.013 XTO Energy - NM\002 James Ranch Unit\.10 - APACHE DI - EDDY\Wells\-40 - 801H\DWG\APACHE 801H 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	017°36'40.59"	1,750.73
L2	269°48'41.61"	10,317.00

LEGEND

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

COORDINATE TABLE

SHL (NAD 83 NME)			FTP/KOP (NAD 83 NME)			PPP1 (NAD 83 NME)			PPP2 (NAD 83 NME)			LTP (NAD 83 NME)		
Y =	506,653.3	N	Y =	508,322.0	N	Y =	508,310.9	N	Y =	508,300.8	N	Y =	508,288.2	N
X =	697,194.9	E	X =	697,724.6	E	X =	695,379.3	E	X =	692,707.5	E	X =	687,457.7	E
LAT. =	32.391847	°N	LAT. =	32.396427	°N	LAT. =	32.396427	°N	LAT. =	32.396433	°N	LAT. =	32.396463	°N
LONG. =	103.828392	°W	LONG. =	103.826650	°W	LONG. =	103.834249	°W	LONG. =	103.842905	°W	LONG. =	103.859914	°W

BHL (NAD 83 NME)		
Y =	508,288.1	N
X =	687,407.7	E
LAT. =	32.396464	°N
LONG. =	103.860076	°W

SHL (NAD 27 NME)			FTP/KOP (NAD 27 NME)			PPP1 (NAD 83 NME)			PPP2 (NAD 83 NME)			LTP (NAD 27 NME)		
Y =	506,592.7	N	Y =	508,261.3	N	Y =	508,250.2	N	Y =	508,240.1	N	Y =	508,227.4	N
X =	656,013.4	E	X =	656,543.2	E	X =	654,197.9	E	X =	651,526.1	E	X =	646,276.3	E
LAT. =	32.391724	°N	LAT. =	32.396304	°N	LAT. =	32.396304	°N	LAT. =	32.396310	°N	LAT. =	32.396341	°N
LONG. =	103.827898	°W	LONG. =	103.826156	°W	LONG. =	103.833754	°W	LONG. =	103.842410	°W	LONG. =	103.859419	°W

BHL (NAD 27 NME)		
Y =	508,227.3	N
X =	646,226.3	E
LAT. =	32.396341	°N
LONG. =	103.859581	°W

CORNER COORDINATES (NAD 83 NME)					
A - Y =	509,395.5	N	A - X =	698,049.7	E
B - Y =	509,382.9	N	B - X =	695,374.2	E
C - Y =	509,372.8	N	C - X =	692,700.3	E
D - Y =	509,366.4	N	D - X =	690,027.8	E
E - Y =	509,359.9	N	E - X =	687,353.5	E
F - Y =	508,072.9	N	F - X =	698,055.8	E
G - Y =	508,062.1	N	G - X =	695,381.7	E
H - Y =	508,052.6	N	H - X =	692,709.2	E
I - Y =	508,046.7	N	I - X =	690,034.9	E
J - Y =	508,040.4	N	J - X =	687,358.6	E

CORNER COORDINATES (NAD 27 NME)					
A - Y =	509,334.8	N	A - X =	656,868.3	E
B - Y =	509,322.2	N	B - X =	654,192.9	E
C - Y =	509,312.1	N	C - X =	651,519.0	E
D - Y =	509,305.6	N	D - X =	648,846.5	E
E - Y =	509,299.2	N	E - X =	646,172.2	E
F - Y =	508,012.2	N	F - X =	656,874.3	E
G - Y =	508,001.4	N	G - X =	654,200.3	E
H - Y =	507,991.9	N	H - X =	651,527.8	E
I - Y =	507,986.0	N	I - X =	648,853.5	E
J - Y =	507,979.7	N	J - X =	646,177.3	E

KT 618.013002.10-40

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

XTO Energy Inc.
JRU Apache Federal Com 801H
Projected TD: 21164.66' MD / 10888' TVD
SHL: 2546' FSL & 867' FEL , Section 13, T22S, R30E
BHL: 1072' FNL & 50' FWL , Section 14, T22S, R30E
EDDY County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	455'	Water
Top of Salt	755'	Water
MB 126	1439'	Water
Base of Salt	3607'	Water
Delaware	3868'	Water
Brushy Canyon	6376'	Water/Oil/Gas
Bone Spring	7785'	Water
1st Bone Spring Ss	8632'	Water/Oil/Gas
2nd Bone Spring Ss	9240'	Water/Oil/Gas
3rd Bone Spring Sh	9856'	Water/Oil/Gas
Target/Land Curve	10888'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon
*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13.375 inch casing @ 730' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9.625 inch casing at 3707' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 7.625 inch casing at 9971.8'. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 21164.66 MD/TD and 5.5 inch production casing will be set at TD.

3. Casing Design

Hole Size	TVD	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 730'	13.375	54.5	J-55	BTC	New	2.46	3.50	22.85
12.25	0' – 3707'	9.625	40	J-55	BTC	New	1.60	2.44	4.25
8.75	0' – 3807'	7.625	29.7	RY P-110	Flush Joint	New	2.80	3.00	1.88
8.75	3807' – 9971.8'	7.625	29.7	HC L-80	Flush Joint	New	2.04	3.22	2.22
6.75	0' – 9871.8'	5.5	20	RY P-110	Semi-Premium / Freedom	New	1.26	2.12	2.15
6.75	9871.8' - 21164.66'	5.5	20	RY P-110	Semi-Flush / Talon	New	1.26	1.92	6.34

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

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 +/- 730'

Lead: 310 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)
Tail: 300 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Top of Cement: Surface
Compressives: 12-hr = 250 psi 24 hr = 500 psi

1st Intermediate Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 3707'

Lead: 1530 sxs Class C (mixed at 12.9 ppg, 1.39 ft3/sx, 10.13 gal/sx water)
Tail: 130 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
Top of Cement: Surface
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 9971.8'
Tail: 200 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
TOC:@ 7785
Compressives: 12-hr = 900 psi 24 hr = 1150 psi

2nd Stage
Tail: 580 sxs Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Top of Cement: 3207
Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests to pump a two stage cement job on the intermediate casing string with the first stage being pumped conventionally with the calculated (TOC:@ 7785') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to 3207 (~500' inside 1st Intermediate csg string but below MB126 @ 1439 ').

XTO will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

XTO will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

XTO requests the option to conduct the bradenhead squeeze and TOC verification offline as per standard approval from BLM when unplanned remediation is needed and batch drilling is approved. In the event the bradenhead is conducted, we will ensure the first stage cement job is cemented properly and the well is static with floats holding and no pressure on the csg annulus as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

Production Casing: 5.5, 20 New Semi-Flush / Talon, RY P-110 casing to be set at +/- 21164.66'

Lead: 30 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 9471.8 feet
Tail: 770 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 10438.9 feet
Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

XTO requests the option to offline cement and remediate (if needed) surface and intermediate casing strings where batch drilling is approved and if unplanned remediation is needed. XTO will ensure well is static with no pressure on the csg annulus, as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed when applicable per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence.

5. Pressure Control Equipment

Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of 5M Hydril and 10M 3-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	Viscosity	Fluid Loss	Comments
			(ppg)	(sec/qt)	(cc)	
0' - 730'	17.5	FW/Native	8.5-9	35-40	NC	Fresh water or native water
730' - 3707'	12.25	Sat Brine	10-10.5	30-32	NC	Fully Saturated salt across salado
3707' to 9971.8'	8.75	BDE/OBM or FW/Brine	9-9.5	30-32	NC	Depending on well conditions
9971.8' to 21164.66'	6.75	OBM	10.2-10.7	50-60	NC - 20	N/A

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

7. Auxiliary Well Control and Monitoring Equipment

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

8. Logging, Coring and Testing Program

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 175 to 195 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 5775 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:	21164.66 ft	**Site:**	B
TVD RKB:	10888.00 ft	**Slot:**	James Ranch Unit Apache 801H
Location			
Cartographic Reference System:	New Mexico East - NAD 27		
Northing:	506592.70 ft		
Easting:	656013.40 ft		
RKB:	3379.00 ft		
Ground Level:	3347.00 ft		
North Reference:	Grid		
Convergence Angle:	0.27 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	
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00	
4618.19	18.36	17.62	4602.55	139.05	44.15	2.00	0.00	2.00	
9248.91	18.36	17.62	8997.45	1529.55	485.65	0.00	0.00	0.00	
10167.10	0.00	0.00	9900.00	1668.60	529.80	-2.00	0.00	2.00	
10438.90	0.00	0.00	10171.80	1668.60	529.80	0.00	0.00	0.00	
11563.90	90.00	269.81	10888.00	1666.24	-186.39	8.00	0.00	8.00	
21114.36	90.00	269.81	10888.00	1634.73	-9736.80	0.00	0.00	0.00	LTP 18
21164.66	90.00	269.81	10888.00	1634.57	-9787.11	0.00	0.00	0.00	BHL 18

Position Uncertainty James Ranch Unit Apache 801H

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	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.347	0.000	0.000	2.108	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.374	0.000	0.000	2.503	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.406	0.000	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.443	0.000	0.000	3.267	2.417	128.190	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.485	0.000	0.000	3.642	2.775	128.423	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.531	0.000	0.000	4.014	3.133	128.602	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.581	0.000	0.000	4.384	3.491	128.744	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.634	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	0.000	0.000	1200.000	4.779	0.000	4.589	0.000	2.691	0.000	0.000	5.119	4.207	128.954	MWD+IFR1+MS
1300.000	0.000	0.000	1300.000	5.140	0.000	4.950	0.000	2.750	0.000	0.000	5.484	4.565	129.034	MWD+IFR1+MS
1400.000	0.000	0.000	1400.000	5.500	0.000	5.311	0.000	2.813	0.000	0.000	5.849	4.924	129.102	MWD+IFR1+MS
1500.000	0.000	0.000	1500.000	5.860	0.000	5.672	0.000	2.878	0.000	0.000	6.213	5.282	129.161	MWD+IFR1+MS
1600.000	0.000	0.000	1600.000	6.219	0.000	6.032	0.000	2.945	0.000	0.000	6.577	5.640	129.212	MWD+IFR1+MS
1700.000	0.000	0.000	1700.000	6.579	0.000	6.392	0.000	3.015	0.000	0.000	6.939	5.999	129.257	MWD+IFR1+MS
1800.000	0.000	0.000	1800.000	6.938	0.000	6.752	0.000	3.086	0.000	0.000	7.302	6.357	129.297	MWD+IFR1+MS
1900.000	0.000	0.000	1900.000	7.298	0.000	7.112	0.000	3.160	0.000	0.000	7.664	6.715	129.333	MWD+IFR1+MS
2000.000	0.000	0.000	2000.000	7.657	0.000	7.471	0.000	3.236	0.000	0.000	8.026	7.074	129.365	MWD+IFR1+MS
2100.000	0.000	0.000	2100.000	8.016	0.000	7.831	0.000	3.313	0.000	0.000	8.387	7.432	129.394	MWD+IFR1+MS
2200.000	0.000	0.000	2200.000	8.375	0.000	8.190	0.000	3.391	0.000	0.000	8.748	7.791	129.420	MWD+IFR1+MS
2300.000	0.000	0.000	2300.000	8.734	0.000	8.550	0.000	3.472	0.000	0.000	9.109	8.149	129.444	MWD+IFR1+MS
2400.000	0.000	0.000	2400.000	9.093	0.000	8.909	0.000	3.554	0.000	0.000	9.470	8.507	129.466	MWD+IFR1+MS
2500.000	0.000	0.000	2500.000	9.452	0.000	9.268	0.000	3.637	0.000	0.000	9.831	8.866	129.486	MWD+IFR1+MS
2600.000	0.000	0.000	2600.000	9.811	0.000	9.627	0.000	3.721	0.000	0.000	10.191	9.224	129.505	MWD+IFR1+MS
2700.000	0.000	0.000	2700.000	10.170	0.000	9.986	0.000	3.807	0.000	0.000	10.552	9.583	129.522	MWD+IFR1+MS
2800.000	0.000	0.000	2800.000	10.529	0.000	10.345	0.000	3.895	0.000	0.000	10.912	9.941	129.538	MWD+IFR1+MS
2900.000	0.000	0.000	2900.000	10.888	0.000	10.705	0.000	3.984	0.000	0.000	11.272	10.299	129.552	MWD+IFR1+MS
3000.000	0.000	0.000	3000.000	11.247	0.000	11.063	0.000	4.074	0.000	0.000	11.632	10.658	129.566	MWD+IFR1+MS

3100.000	0.000	0.000	3100.000	11.606	0.000	11.422	0.000	4.165	0.000	0.000	11.992	11.016	129.579	MWD+IFR1+MS
3200.000	0.000	0.000	3200.000	11.965	0.000	11.781	0.000	4.258	0.000	0.000	12.352	11.375	129.591	MWD+IFR1+MS
3300.000	0.000	0.000	3300.000	12.323	0.000	12.140	0.000	4.352	0.000	0.000	12.712	11.733	129.603	MWD+IFR1+MS
3400.000	0.000	0.000	3400.000	12.682	0.000	12.499	0.000	4.447	0.000	0.000	13.071	12.092	129.613	MWD+IFR1+MS
3500.000	0.000	0.000	3500.000	13.041	0.000	12.858	0.000	4.544	0.000	0.000	13.431	12.450	129.623	MWD+IFR1+MS
3600.000	0.000	0.000	3600.000	13.400	0.000	13.217	0.000	4.642	0.000	0.000	13.790	12.809	129.633	MWD+IFR1+MS
3700.000	0.000	0.000	3700.000	13.758	0.000	13.576	0.000	4.741	0.000	0.000	14.150	13.167	129.642	MWD+IFR1+MS
3800.000	2.000	17.615	3799.980	14.430	0.000	13.671	0.000	4.842	0.000	0.000	14.574	13.525	129.133	MWD+IFR1+MS
3900.000	4.000	17.615	3899.838	14.926	0.000	14.034	0.000	4.945	0.000	0.000	15.097	13.883	127.847	MWD+IFR1+MS
4000.000	6.000	17.615	3999.452	15.397	0.000	14.395	0.000	5.050	0.000	0.000	15.609	14.239	126.914	MWD+IFR1+MS
4100.000	8.000	17.615	4098.702	15.843	0.000	14.755	0.000	5.159	0.000	0.000	16.111	14.593	126.210	MWD+IFR1+MS
4200.000	10.000	17.615	4197.465	16.264	0.000	15.112	0.000	5.274	0.000	0.000	16.602	14.945	125.667	MWD+IFR1+MS
4300.000	12.000	17.615	4295.623	16.661	0.000	15.468	0.000	5.395	0.000	0.000	17.083	15.296	125.241	MWD+IFR1+MS
4400.000	14.000	17.615	4393.055	17.035	0.000	15.823	0.000	5.524	0.000	0.000	17.553	15.645	124.906	MWD+IFR1+MS
4500.000	16.000	17.615	4489.643	17.386	0.000	16.176	0.000	5.662	0.000	0.000	18.014	15.993	124.643	MWD+IFR1+MS
4600.000	18.000	17.615	4585.268	17.714	0.000	16.528	0.000	5.810	0.000	0.000	18.464	16.340	124.440	MWD+IFR1+MS
4618.194	18.364	17.615	4602.554	17.746	0.000	16.590	0.000	5.827	0.000	0.000	18.522	16.403	124.418	MWD+IFR1+MS
4700.000	18.364	17.615	4680.194	18.011	0.000	16.872	0.000	5.926	0.000	0.000	18.773	16.687	124.431	MWD+IFR1+MS
4800.000	18.364	17.615	4775.102	18.342	0.000	17.225	0.000	6.052	0.000	0.000	19.089	17.041	124.588	MWD+IFR1+MS
4900.000	18.364	17.615	4870.009	18.679	0.000	17.582	0.000	6.182	0.000	0.000	19.410	17.397	124.784	MWD+IFR1+MS
5000.000	18.364	17.615	4964.916	19.019	0.000	17.941	0.000	6.317	0.000	0.000	19.734	17.756	124.978	MWD+IFR1+MS
5100.000	18.364	17.615	5059.824	19.362	0.000	18.302	0.000	6.454	0.000	0.000	20.062	18.117	125.172	MWD+IFR1+MS
5200.000	18.364	17.615	5154.731	19.708	0.000	18.665	0.000	6.595	0.000	0.000	20.392	18.479	125.365	MWD+IFR1+MS
5300.000	18.364	17.615	5249.639	20.058	0.000	19.030	0.000	6.740	0.000	0.000	20.725	18.844	125.556	MWD+IFR1+MS
5400.000	18.364	17.615	5344.546	20.410	0.000	19.396	0.000	6.887	0.000	0.000	21.060	19.209	125.747	MWD+IFR1+MS
5500.000	18.364	17.615	5439.454	20.764	0.000	19.764	0.000	7.038	0.000	0.000	21.398	19.577	125.936	MWD+IFR1+MS
5600.000	18.364	17.615	5534.361	21.122	0.000	20.134	0.000	7.192	0.000	0.000	21.738	19.946	126.124	MWD+IFR1+MS
5700.000	18.364	17.615	5629.269	21.481	0.000	20.504	0.000	7.349	0.000	0.000	22.080	20.316	126.311	MWD+IFR1+MS
5800.000	18.364	17.615	5724.176	21.843	0.000	20.876	0.000	7.508	0.000	0.000	22.424	20.687	126.497	MWD+IFR1+MS
5900.000	18.364	17.615	5819.084	22.207	0.000	21.249	0.000	7.671	0.000	0.000	22.770	21.060	126.682	MWD+IFR1+MS
6000.000	18.364	17.615	5913.991	22.573	0.000	21.624	0.000	7.836	0.000	0.000	23.118	21.434	126.865	MWD+IFR1+MS
6100.000	18.364	17.615	6008.899	22.941	0.000	21.999	0.000	8.004	0.000	0.000	23.469	21.809	127.047	MWD+IFR1+MS
6200.000	18.364	17.615	6103.806	23.310	0.000	22.376	0.000	8.175	0.000	0.000	23.820	22.185	127.227	MWD+IFR1+MS

6300.000	18.364	17.615	6198.714	23.682	0.000	22.753	0.000	8.348	0.000	0.000	24.174	22.562	127.407	MWD+IFR1+MS
6400.000	18.364	17.615	6293.621	24.055	0.000	23.131	0.000	8.524	0.000	0.000	24.529	22.940	127.584	MWD+IFR1+MS
6500.000	18.364	17.615	6388.529	24.430	0.000	23.511	0.000	8.703	0.000	0.000	24.885	23.319	127.761	MWD+IFR1+MS
6600.000	18.364	17.615	6483.436	24.806	0.000	23.891	0.000	8.884	0.000	0.000	25.244	23.699	127.935	MWD+IFR1+MS
6700.000	18.364	17.615	6578.344	25.184	0.000	24.272	0.000	9.068	0.000	0.000	25.603	24.080	128.108	MWD+IFR1+MS
6800.000	18.364	17.615	6673.251	25.563	0.000	24.654	0.000	9.254	0.000	0.000	25.964	24.461	128.280	MWD+IFR1+MS
6900.000	18.364	17.615	6768.159	25.944	0.000	25.036	0.000	9.443	0.000	0.000	26.326	24.844	128.449	MWD+IFR1+MS
7000.000	18.364	17.615	6863.066	26.326	0.000	25.419	0.000	9.634	0.000	0.000	26.690	25.227	128.617	MWD+IFR1+MS
7100.000	18.364	17.615	6957.974	26.709	0.000	25.803	0.000	9.827	0.000	0.000	27.055	25.610	128.783	MWD+IFR1+MS
7200.000	18.364	17.615	7052.881	27.093	0.000	26.188	0.000	10.023	0.000	0.000	27.421	25.995	128.947	MWD+IFR1+MS
7300.000	18.364	17.615	7147.789	27.478	0.000	26.573	0.000	10.221	0.000	0.000	27.788	26.379	129.109	MWD+IFR1+MS
7400.000	18.364	17.615	7242.696	27.865	0.000	26.959	0.000	10.422	0.000	0.000	28.156	26.765	129.268	MWD+IFR1+MS
7500.000	18.364	17.615	7337.603	28.252	0.000	27.345	0.000	10.625	0.000	0.000	28.525	27.151	129.426	MWD+IFR1+MS
7600.000	18.364	17.615	7432.511	28.640	0.000	27.732	0.000	10.830	0.000	0.000	28.895	27.538	129.582	MWD+IFR1+MS
7700.000	18.364	17.615	7527.418	29.030	0.000	28.119	0.000	11.038	0.000	0.000	29.266	27.925	129.735	MWD+IFR1+MS
7800.000	18.364	17.615	7622.326	29.420	0.000	28.507	0.000	11.248	0.000	0.000	29.639	28.313	129.886	MWD+IFR1+MS
7900.000	18.364	17.615	7717.233	29.811	0.000	28.895	0.000	11.460	0.000	0.000	30.012	28.701	130.034	MWD+IFR1+MS
8000.000	18.364	17.615	7812.141	30.203	0.000	29.284	0.000	11.675	0.000	0.000	30.386	29.090	130.180	MWD+IFR1+MS
8100.000	18.364	17.615	7907.048	30.596	0.000	29.673	0.000	11.891	0.000	0.000	30.760	29.479	130.323	MWD+IFR1+MS
8200.000	18.364	17.615	8001.956	30.990	0.000	30.063	0.000	12.111	0.000	0.000	31.136	29.869	130.464	MWD+IFR1+MS
8300.000	18.364	17.615	8096.863	31.384	0.000	30.453	0.000	12.332	0.000	0.000	31.512	30.259	130.601	MWD+IFR1+MS
8400.000	18.364	17.615	8191.771	31.779	0.000	30.844	0.000	12.556	0.000	0.000	31.890	30.649	130.736	MWD+IFR1+MS
8500.000	18.364	17.615	8286.678	32.175	0.000	31.235	0.000	12.782	0.000	0.000	32.268	31.040	130.868	MWD+IFR1+MS
8600.000	18.364	17.615	8381.586	32.571	0.000	31.626	0.000	13.010	0.000	0.000	32.646	31.431	130.997	MWD+IFR1+MS
8700.000	18.364	17.615	8476.493	32.968	0.000	32.017	0.000	13.241	0.000	0.000	33.026	31.823	131.122	MWD+IFR1+MS
8800.000	18.364	17.615	8571.401	33.366	0.000	32.409	0.000	13.474	0.000	0.000	33.406	32.215	131.245	MWD+IFR1+MS
8900.000	18.364	17.615	8666.308	33.764	0.000	32.801	0.000	13.709	0.000	0.000	33.787	32.607	131.364	MWD+IFR1+MS
9000.000	18.364	17.615	8761.216	34.163	0.000	33.194	0.000	13.947	0.000	0.000	34.168	33.000	131.480	MWD+IFR1+MS
9100.000	18.364	17.615	8856.123	34.563	0.000	33.587	0.000	14.186	0.000	0.000	34.550	33.393	131.592	MWD+IFR1+MS
9200.000	18.364	17.615	8951.031	34.962	0.000	33.980	0.000	14.429	0.000	0.000	34.933	33.786	131.700	MWD+IFR1+MS
9248.906	18.364	17.615	8997.446	35.156	0.000	34.170	0.000	14.547	0.000	0.000	35.117	33.978	131.687	MWD+IFR1+MS
9300.000	17.342	17.615	9046.079	35.429	0.000	34.369	0.000	14.673	0.000	0.000	35.311	34.178	131.649	MWD+IFR1+MS
9400.000	15.342	17.615	9142.034	35.969	0.000	34.755	0.000	14.923	0.000	0.000	35.725	34.567	131.227	MWD+IFR1+MS

9500.000	13.342	17.615	9238.913	36.496	0.000	35.140	0.000	15.174	0.000	0.000	36.168	34.952	130.581	MWD+IFR1+MS
9600.000	11.342	17.615	9336.597	36.975	0.000	35.518	0.000	15.419	0.000	0.000	36.606	35.331	129.978	MWD+IFR1+MS
9700.000	9.342	17.615	9434.967	37.407	0.000	35.891	0.000	15.658	0.000	0.000	37.040	35.704	129.425	MWD+IFR1+MS
9800.000	7.342	17.615	9533.904	37.790	0.000	36.258	0.000	15.892	0.000	0.000	37.467	36.070	128.927	MWD+IFR1+MS
9900.000	5.342	17.615	9633.287	38.125	0.000	36.618	0.000	16.122	0.000	0.000	37.887	36.429	128.486	MWD+IFR1+MS
10000.000	3.342	17.615	9732.995	38.411	0.000	36.970	0.000	16.349	0.000	0.000	38.298	36.781	128.102	MWD+IFR1+MS
10100.000	1.342	17.615	9832.906	38.649	0.000	37.316	0.000	16.573	0.000	0.000	38.701	37.125	127.775	MWD+IFR1+MS
10167.100	0.000	0.000	9900.000	38.355	0.000	37.949	0.000	16.722	0.000	0.000	38.937	37.352	127.580	MWD+IFR1+MS
10200.000	0.000	0.000	9932.900	38.463	0.000	38.057	0.000	16.795	0.000	0.000	39.043	37.462	127.561	MWD+IFR1+MS
10300.000	0.000	0.000	10032.900	38.789	0.000	38.387	0.000	17.020	0.000	0.000	39.364	37.797	127.563	MWD+IFR1+MS
10400.000	0.000	0.000	10132.900	39.119	0.000	38.720	0.000	17.248	0.000	0.000	39.691	38.133	127.590	MWD+IFR1+MS
10438.900	0.000	0.000	10171.800	39.246	0.000	38.848	0.000	17.338	0.000	0.000	39.816	38.263	127.587	MWD+IFR1+MS
10500.000	4.888	269.811	10232.826	38.799	-0.000	39.433	0.000	17.479	0.000	0.000	40.012	38.490	128.148	MWD+IFR1+MS
10600.000	12.888	269.811	10331.545	38.879	-0.000	39.736	0.000	17.753	0.000	0.000	40.586	39.203	-38.330	MWD+IFR1+MS
10700.000	20.888	269.811	10427.155	38.773	-0.000	40.031	0.000	18.178	0.000	0.000	41.520	39.803	-21.321	MWD+IFR1+MS
10800.000	28.888	269.811	10517.794	38.143	-0.000	40.312	0.000	18.809	0.000	0.000	42.485	40.199	-12.821	MWD+IFR1+MS
10900.000	36.888	269.811	10601.699	37.072	-0.000	40.577	0.000	19.684	0.000	0.000	43.337	40.515	-8.566	MWD+IFR1+MS
11000.000	44.888	269.811	10677.237	35.671	-0.000	40.825	0.000	20.808	0.000	0.000	44.029	40.788	-6.209	MWD+IFR1+MS
11100.000	52.888	269.811	10742.937	34.080	-0.000	41.057	0.000	22.159	0.000	0.000	44.552	41.033	-4.853	MWD+IFR1+MS
11200.000	60.888	269.811	10797.520	32.480	-0.000	41.274	0.000	23.693	0.000	0.000	44.913	41.255	-4.145	MWD+IFR1+MS
11300.000	68.888	269.811	10839.925	31.077	-0.000	41.474	0.000	25.353	0.000	0.000	45.133	41.458	-3.953	MWD+IFR1+MS
11400.000	76.888	269.811	10869.325	30.096	-0.000	41.660	0.000	27.078	0.000	0.000	45.244	41.641	-4.251	MWD+IFR1+MS
11500.000	84.888	269.811	10885.149	29.735	-0.000	41.829	0.000	28.810	0.000	0.000	45.285	41.803	-5.054	MWD+IFR1+MS
11563.900	90.000	269.811	10887.997	29.362	0.000	41.925	0.000	29.362	0.000	0.000	45.296	41.891	-5.846	MWD+IFR1+MS
11600.000	90.000	269.811	10887.997	29.466	0.000	41.978	0.000	29.466	0.000	0.000	45.302	41.938	-6.349	MWD+IFR1+MS
11700.000	90.000	269.811	10887.997	29.713	0.000	42.148	0.000	29.713	0.000	0.000	45.323	42.089	-7.856	MWD+IFR1+MS
11800.000	90.000	269.811	10887.997	29.981	0.000	42.350	0.000	29.981	0.000	0.000	45.350	42.265	-9.569	MWD+IFR1+MS
11900.000	90.000	269.811	10887.997	30.267	0.000	42.580	0.000	30.267	0.000	0.000	45.384	42.463	-11.544	MWD+IFR1+MS
12000.000	90.000	269.811	10887.997	30.570	0.000	42.838	0.000	30.570	0.000	0.000	45.427	42.680	-13.864	MWD+IFR1+MS
12100.000	90.000	269.811	10887.997	30.891	0.000	43.124	0.000	30.891	0.000	0.000	45.484	42.913	-16.627	MWD+IFR1+MS
12200.000	90.000	269.811	10887.997	31.228	0.000	43.437	0.000	31.228	0.000	0.000	45.556	43.156	-19.951	MWD+IFR1+MS
12300.000	90.000	269.811	10887.997	31.581	0.000	43.777	0.000	31.581	0.000	0.000	45.652	43.404	-23.953	MWD+IFR1+MS
12400.000	90.000	269.811	10887.997	31.949	0.000	44.142	0.000	31.949	0.000	0.000	45.777	43.648	-28.709	MWD+IFR1+MS

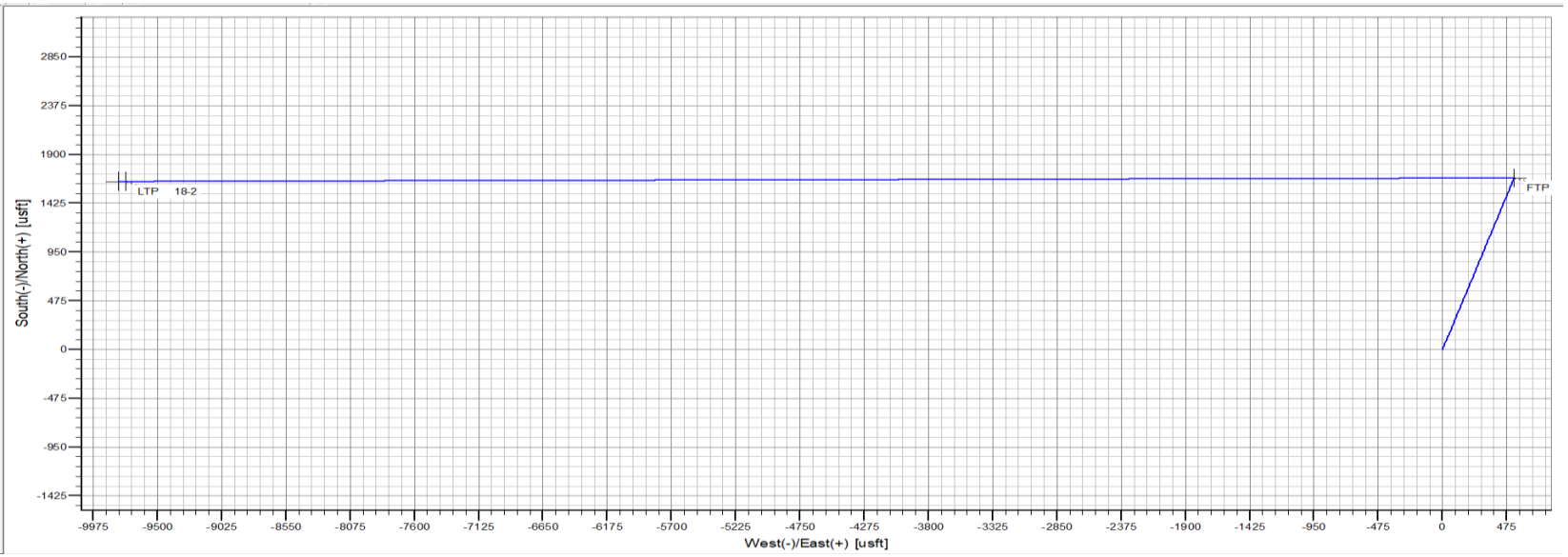
12500.000	90.000	269.811	10887.997	32.332	0.000	44.533	0.000	32.332	0.000	0.000	45.943	43.878	-34.169	MWD+IFR1+MS
12600.000	90.000	269.811	10887.997	32.730	0.000	44.948	0.000	32.730	0.000	0.000	46.156	44.084	-40.087	MWD+IFR1+MS
12700.000	90.000	269.811	10887.997	33.141	0.000	45.387	0.000	33.141	0.000	0.000	46.425	44.260	133.965	MWD+IFR1+MS
12800.000	90.000	269.811	10887.997	33.566	0.000	45.850	0.000	33.566	0.000	0.000	46.748	44.405	128.430	MWD+IFR1+MS
12900.000	90.000	269.811	10887.997	34.003	0.000	46.334	0.000	34.003	0.000	0.000	47.124	44.520	123.592	MWD+IFR1+MS
13000.000	90.000	269.811	10887.997	34.453	0.000	46.841	0.000	34.453	0.000	0.000	47.545	44.613	119.530	MWD+IFR1+MS
13100.000	90.000	269.811	10887.997	34.915	0.000	47.369	0.000	34.915	0.000	0.000	48.005	44.687	116.184	MWD+IFR1+MS
13200.000	90.000	269.811	10887.997	35.388	0.000	47.917	0.000	35.388	0.000	0.000	48.500	44.749	113.442	MWD+IFR1+MS
13300.000	90.000	269.811	10887.997	35.872	0.000	48.485	0.000	35.872	0.000	0.000	49.025	44.800	111.184	MWD+IFR1+MS
13400.000	90.000	269.811	10887.997	36.366	0.000	49.072	0.000	36.366	0.000	0.000	49.577	44.844	109.310	MWD+IFR1+MS
13500.000	90.000	269.811	10887.997	36.870	0.000	49.678	0.000	36.870	0.000	0.000	50.153	44.883	107.738	MWD+IFR1+MS
13600.000	90.000	269.811	10887.997	37.385	0.000	50.301	0.000	37.385	0.000	0.000	50.751	44.918	106.406	MWD+IFR1+MS
13700.000	90.000	269.811	10887.997	37.908	0.000	50.941	0.000	37.908	0.000	0.000	51.370	44.950	105.265	MWD+IFR1+MS
13800.000	90.000	269.811	10887.997	38.440	0.000	51.598	0.000	38.440	0.000	0.000	52.008	44.979	104.277	MWD+IFR1+MS
13900.000	90.000	269.811	10887.997	38.981	0.000	52.270	0.000	38.981	0.000	0.000	52.664	45.007	103.415	MWD+IFR1+MS
14000.000	90.000	269.811	10887.997	39.530	0.000	52.958	0.000	39.530	0.000	0.000	53.337	45.034	102.656	MWD+IFR1+MS
14100.000	90.000	269.811	10887.997	40.087	0.000	53.660	0.000	40.087	0.000	0.000	54.027	45.060	101.982	MWD+IFR1+MS
14200.000	90.000	269.811	10887.997	40.652	0.000	54.376	0.000	40.652	0.000	0.000	54.731	45.085	101.381	MWD+IFR1+MS
14300.000	90.000	269.811	10887.997	41.223	0.000	55.106	0.000	41.223	0.000	0.000	55.450	45.110	100.840	MWD+IFR1+MS
14400.000	90.000	269.811	10887.997	41.802	0.000	55.849	0.000	41.802	0.000	0.000	56.183	45.134	100.352	MWD+IFR1+MS
14500.000	90.000	269.811	10887.997	42.387	0.000	56.604	0.000	42.387	0.000	0.000	56.929	45.158	99.908	MWD+IFR1+MS
14600.000	90.000	269.811	10887.997	42.978	0.000	57.371	0.000	42.978	0.000	0.000	57.688	45.183	99.502	MWD+IFR1+MS
14700.000	90.000	269.811	10887.997	43.576	0.000	58.150	0.000	43.576	0.000	0.000	58.459	45.207	99.131	MWD+IFR1+MS
14800.000	90.000	269.811	10887.997	44.180	0.000	58.940	0.000	44.180	0.000	0.000	59.241	45.231	98.789	MWD+IFR1+MS
14900.000	90.000	269.811	10887.997	44.789	0.000	59.740	0.000	44.789	0.000	0.000	60.035	45.256	98.473	MWD+IFR1+MS
15000.000	90.000	269.811	10887.997	45.403	0.000	60.551	0.000	45.403	0.000	0.000	60.839	45.280	98.180	MWD+IFR1+MS
15100.000	90.000	269.811	10887.997	46.023	0.000	61.371	0.000	46.023	0.000	0.000	61.653	45.305	97.908	MWD+IFR1+MS
15200.000	90.000	269.811	10887.997	46.648	0.000	62.201	0.000	46.648	0.000	0.000	62.477	45.330	97.654	MWD+IFR1+MS
15300.000	90.000	269.811	10887.997	47.277	0.000	63.039	0.000	47.277	0.000	0.000	63.310	45.356	97.417	MWD+IFR1+MS
15400.000	90.000	269.811	10887.997	47.911	0.000	63.887	0.000	47.911	0.000	0.000	64.152	45.382	97.195	MWD+IFR1+MS
15500.000	90.000	269.811	10887.997	48.549	0.000	64.743	0.000	48.549	0.000	0.000	65.003	45.408	96.986	MWD+IFR1+MS
15600.000	90.000	269.811	10887.997	49.192	0.000	65.606	0.000	49.192	0.000	0.000	65.862	45.434	96.790	MWD+IFR1+MS
15700.000	90.000	269.811	10887.997	49.839	0.000	66.478	0.000	49.839	0.000	0.000	66.729	45.461	96.605	MWD+IFR1+MS

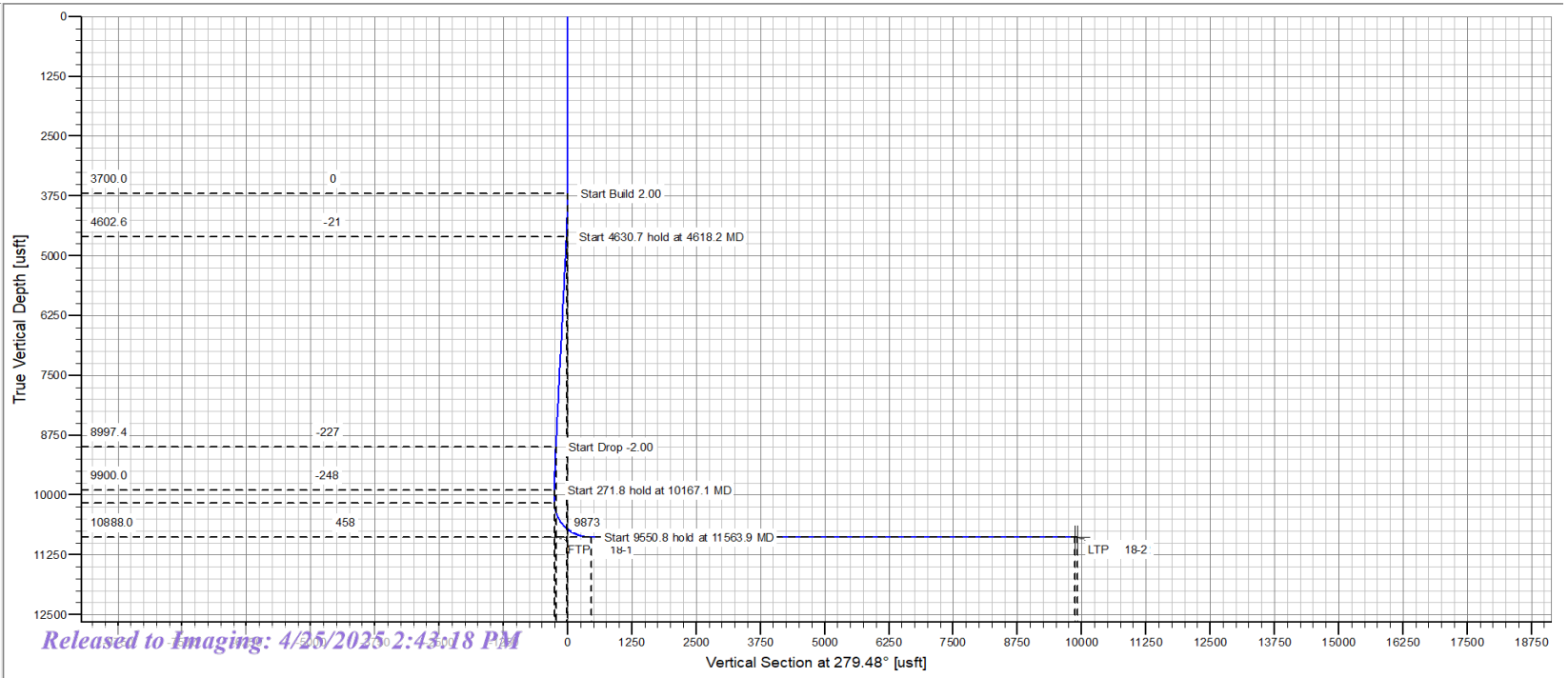
15800.000	90.000	269.811	10887.997	50.489	0.000	67.357	0.000	50.489	0.000	0.000	67.603	45.489	96.430	MWD+IFR1+MS
15900.000	90.000	269.811	10887.997	51.144	0.000	68.243	0.000	51.144	0.000	0.000	68.485	45.516	96.264	MWD+IFR1+MS
16000.000	90.000	269.811	10887.997	51.802	0.000	69.136	0.000	51.802	0.000	0.000	69.373	45.545	96.107	MWD+IFR1+MS
16100.000	90.000	269.811	10887.997	52.463	0.000	70.035	0.000	52.463	0.000	0.000	70.269	45.573	95.958	MWD+IFR1+MS
16200.000	90.000	269.811	10887.997	53.128	0.000	70.941	0.000	53.128	0.000	0.000	71.170	45.602	95.816	MWD+IFR1+MS
16300.000	90.000	269.811	10887.997	53.796	0.000	71.852	0.000	53.796	0.000	0.000	72.079	45.632	95.681	MWD+IFR1+MS
16400.000	90.000	269.811	10887.997	54.468	0.000	72.770	0.000	54.468	0.000	0.000	72.993	45.662	95.552	MWD+IFR1+MS
16500.000	90.000	269.811	10887.997	55.142	0.000	73.693	0.000	55.142	0.000	0.000	73.912	45.692	95.429	MWD+IFR1+MS
16600.000	90.000	269.811	10887.997	55.819	0.000	74.622	0.000	55.819	0.000	0.000	74.838	45.723	95.312	MWD+IFR1+MS
16700.000	90.000	269.811	10887.997	56.499	0.000	75.556	0.000	56.499	0.000	0.000	75.768	45.755	95.199	MWD+IFR1+MS
16800.000	90.000	269.811	10887.997	57.181	0.000	76.495	0.000	57.181	0.000	0.000	76.704	45.787	95.092	MWD+IFR1+MS
16900.000	90.000	269.811	10887.997	57.867	0.000	77.439	0.000	57.867	0.000	0.000	77.645	45.819	94.988	MWD+IFR1+MS
17000.000	90.000	269.811	10887.997	58.554	0.000	78.387	0.000	58.554	0.000	0.000	78.590	45.852	94.889	MWD+IFR1+MS
17100.000	90.000	269.811	10887.997	59.244	0.000	79.340	0.000	59.244	0.000	0.000	79.540	45.886	94.794	MWD+IFR1+MS
17200.000	90.000	269.811	10887.997	59.937	0.000	80.297	0.000	59.937	0.000	0.000	80.495	45.919	94.703	MWD+IFR1+MS
17300.000	90.000	269.811	10887.997	60.631	0.000	81.259	0.000	60.631	0.000	0.000	81.454	45.954	94.614	MWD+IFR1+MS
17400.000	90.000	269.811	10887.997	61.328	0.000	82.224	0.000	61.328	0.000	0.000	82.417	45.989	94.530	MWD+IFR1+MS
17500.000	90.000	269.811	10887.997	62.027	0.000	83.194	0.000	62.027	0.000	0.000	83.384	46.024	94.448	MWD+IFR1+MS
17600.000	90.000	269.811	10887.997	62.728	0.000	84.167	0.000	62.728	0.000	0.000	84.354	46.060	94.369	MWD+IFR1+MS
17700.000	90.000	269.811	10887.997	63.431	0.000	85.144	0.000	63.431	0.000	0.000	85.329	46.096	94.293	MWD+IFR1+MS
17800.000	90.000	269.811	10887.997	64.136	0.000	86.124	0.000	64.136	0.000	0.000	86.307	46.133	94.220	MWD+IFR1+MS
17900.000	90.000	269.811	10887.997	64.843	0.000	87.108	0.000	64.843	0.000	0.000	87.288	46.171	94.149	MWD+IFR1+MS
18000.000	90.000	269.811	10887.997	65.551	0.000	88.095	0.000	65.551	0.000	0.000	88.273	46.208	94.080	MWD+IFR1+MS
18100.000	90.000	269.811	10887.997	66.261	0.000	89.086	0.000	66.261	0.000	0.000	89.261	46.247	94.013	MWD+IFR1+MS
18200.000	90.000	269.811	10887.997	66.973	0.000	90.079	0.000	66.973	0.000	0.000	90.252	46.286	93.949	MWD+IFR1+MS
18300.000	90.000	269.811	10887.997	67.687	0.000	91.075	0.000	67.687	0.000	0.000	91.246	46.325	93.887	MWD+IFR1+MS
18400.000	90.000	269.811	10887.997	68.402	0.000	92.074	0.000	68.402	0.000	0.000	92.244	46.365	93.826	MWD+IFR1+MS
18500.000	90.000	269.811	10887.997	69.118	0.000	93.076	0.000	69.118	0.000	0.000	93.244	46.405	93.768	MWD+IFR1+MS
18600.000	90.000	269.811	10887.997	69.836	0.000	94.081	0.000	69.836	0.000	0.000	94.246	46.446	93.711	MWD+IFR1+MS
18700.000	90.000	269.811	10887.997	70.556	0.000	95.088	0.000	70.556	0.000	0.000	95.252	46.488	93.656	MWD+IFR1+MS
18800.000	90.000	269.811	10887.997	71.276	0.000	96.098	0.000	71.276	0.000	0.000	96.260	46.530	93.602	MWD+IFR1+MS
18900.000	90.000	269.811	10887.997	71.998	0.000	97.110	0.000	71.998	0.000	0.000	97.270	46.572	93.550	MWD+IFR1+MS
19000.000	90.000	269.811	10887.997	72.722	0.000	98.125	0.000	72.722	0.000	0.000	98.283	46.615	93.500	MWD+IFR1+MS

19100.000	90.000	269.811	10887.997	73.447	0.000	99.142	0.000	73.447	0.000	0.000	99.298	46.658	93.450	MWD+IFR1+MS
19200.000	90.000	269.811	10887.997	74.172	0.000	100.161	0.000	74.172	0.000	0.000	100.315	46.702	93.402	MWD+IFR1+MS
19300.000	90.000	269.811	10887.997	74.900	0.000	101.182	0.000	74.900	0.000	0.000	101.335	46.746	93.356	MWD+IFR1+MS
19400.000	90.000	269.811	10887.997	75.628	0.000	102.206	0.000	75.628	0.000	0.000	102.357	46.791	93.311	MWD+IFR1+MS
19500.000	90.000	269.811	10887.997	76.357	0.000	103.231	0.000	76.357	0.000	0.000	103.380	46.837	93.266	MWD+IFR1+MS
19600.000	90.000	269.811	10887.997	77.088	0.000	104.259	0.000	77.088	0.000	0.000	104.406	46.882	93.223	MWD+IFR1+MS
19700.000	90.000	269.811	10887.997	77.819	0.000	105.288	0.000	77.819	0.000	0.000	105.434	46.929	93.181	MWD+IFR1+MS
19800.000	90.000	269.811	10887.997	78.552	0.000	106.319	0.000	78.552	0.000	0.000	106.464	46.976	93.140	MWD+IFR1+MS
19900.000	90.000	269.811	10887.997	79.285	0.000	107.352	0.000	79.285	0.000	0.000	107.495	47.023	93.100	MWD+IFR1+MS
20000.000	90.000	269.811	10887.997	80.020	0.000	108.387	0.000	80.020	0.000	0.000	108.529	47.071	93.062	MWD+IFR1+MS
20100.000	90.000	269.811	10887.997	80.755	0.000	109.423	0.000	80.755	0.000	0.000	109.564	47.119	93.024	MWD+IFR1+MS
20200.000	90.000	269.811	10887.997	81.492	0.000	110.461	0.000	81.492	0.000	0.000	110.600	47.168	92.986	MWD+IFR1+MS
20300.000	90.000	269.811	10887.997	82.229	0.000	111.501	0.000	82.229	0.000	0.000	111.639	47.217	92.950	MWD+IFR1+MS
20400.000	90.000	269.811	10887.997	82.967	0.000	112.542	0.000	82.967	0.000	0.000	112.679	47.267	92.915	MWD+IFR1+MS
20500.000	90.000	269.811	10887.997	83.706	0.000	113.585	0.000	83.706	0.000	0.000	113.720	47.317	92.880	MWD+IFR1+MS
20600.000	90.000	269.811	10887.997	84.446	0.000	114.629	0.000	84.446	0.000	0.000	114.763	47.368	92.846	MWD+IFR1+MS
20700.000	90.000	269.811	10887.997	85.187	0.000	115.675	0.000	85.187	0.000	0.000	115.807	47.419	92.813	MWD+IFR1+MS
20800.000	90.000	269.811	10887.997	85.928	0.000	116.722	0.000	85.928	0.000	0.000	116.853	47.471	92.781	MWD+IFR1+MS
20900.000	90.000	269.811	10887.997	86.670	0.000	117.771	0.000	86.670	0.000	0.000	117.901	47.523	92.749	MWD+IFR1+MS
21000.000	90.000	269.811	10887.997	87.413	0.000	118.821	0.000	87.413	0.000	0.000	118.949	47.576	92.718	MWD+IFR1+MS
21100.000	90.000	269.811	10887.997	88.157	0.000	119.872	0.000	88.157	0.000	0.000	119.999	47.629	92.688	MWD+IFR1+MS
21114.357	90.000	269.811	10887.997	88.263	0.000	120.022	0.000	88.263	0.000	0.000	120.150	47.636	92.684	MWD+IFR1+MS
21164.664	90.000	269.811	10887.997	88.637	0.000	120.551	0.000	88.637	0.000	0.000	120.677	47.663	92.669	MWD+IFR1+MS

Plan Targets

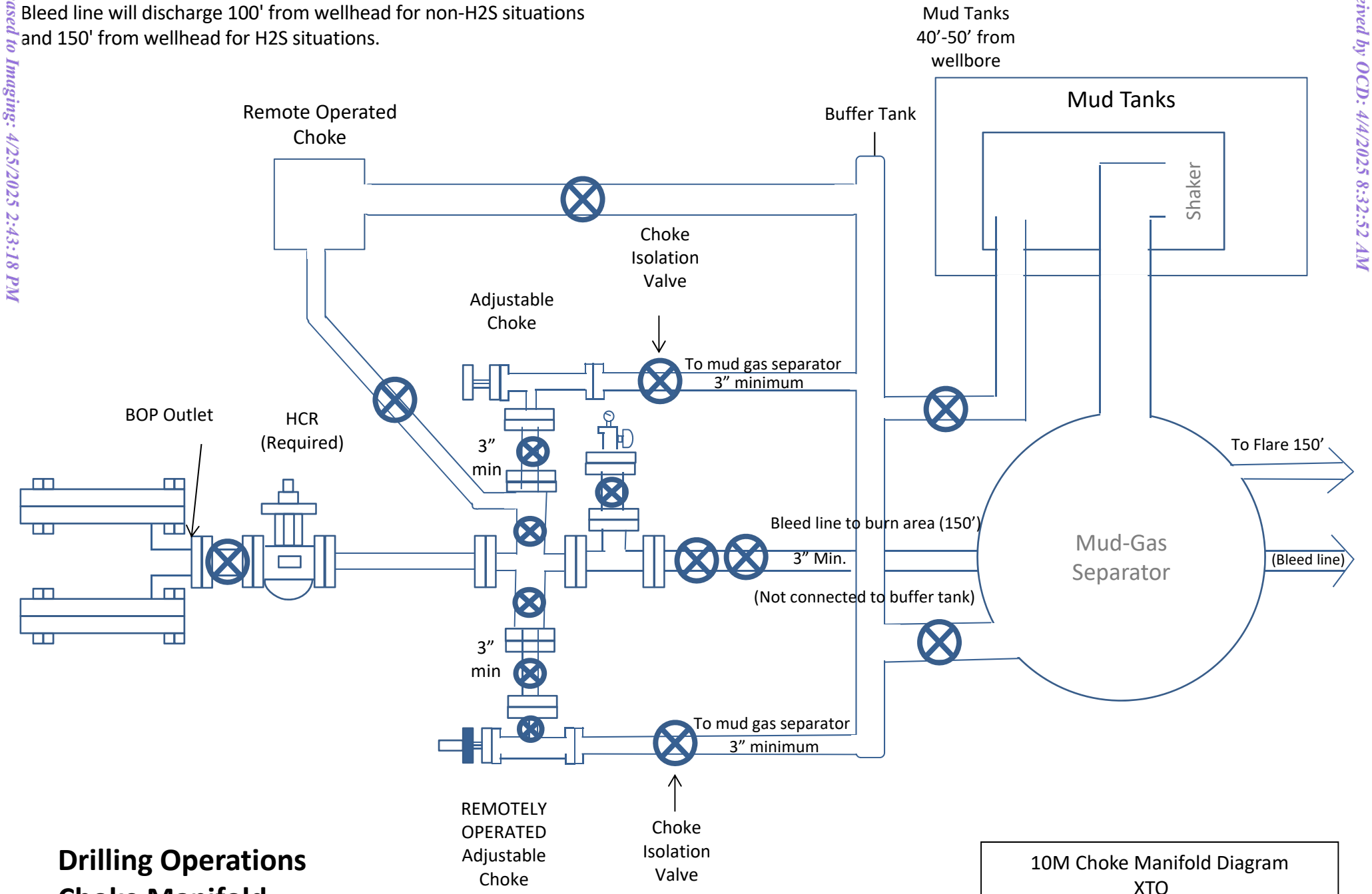
Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 18	11296.67	508261.30	656543.20	7509.00	CIRCLE
LTP 18	21114.66	508227.40	646276.30	7509.00	CIRCLE
BHL 18	21164.66	508227.30	646226.30	7509.00	CIRCLE





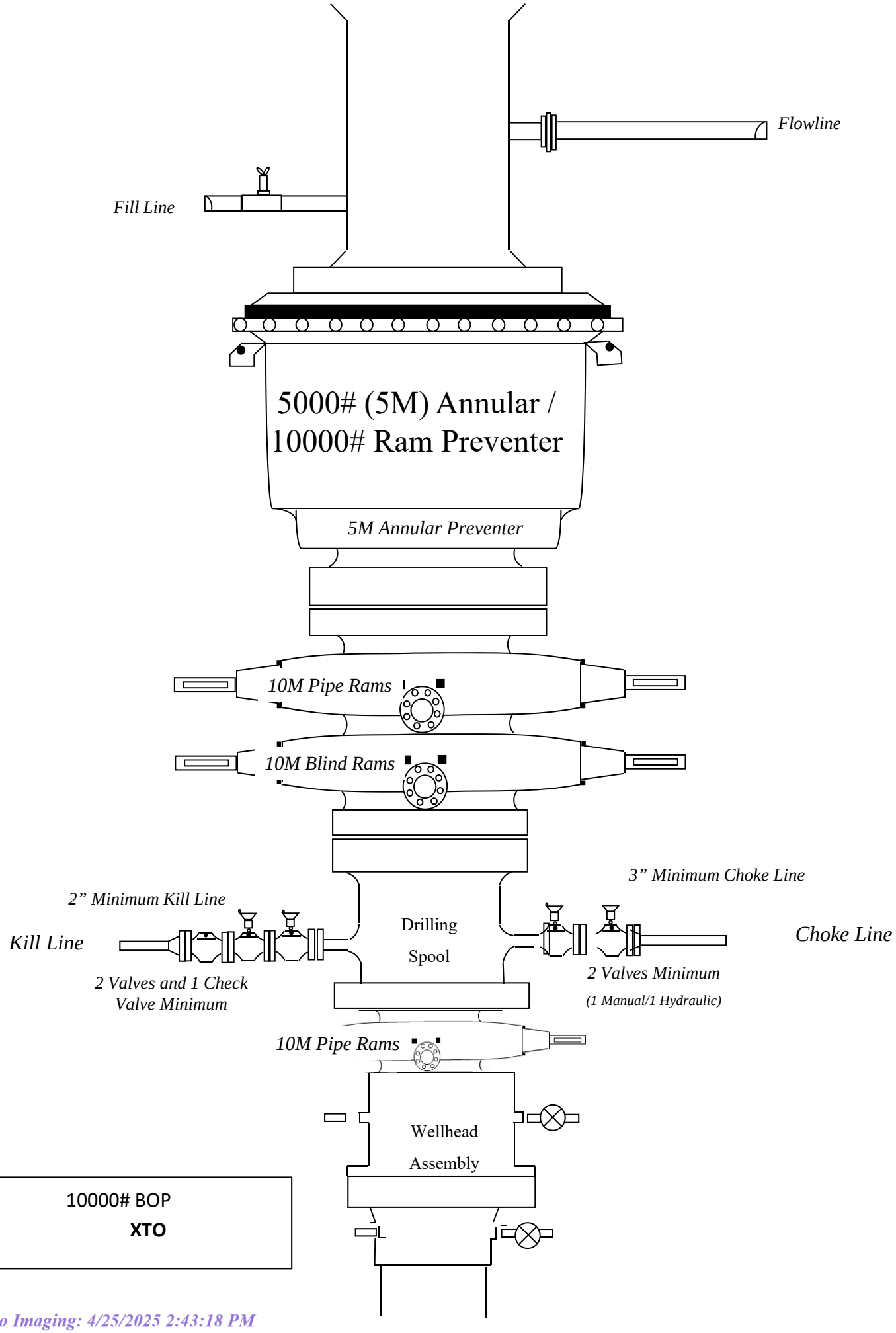
Formation	TVDSS (feet)	MD TVD (feet)
Alluvium	surface	surface
Rustler	2,924'	455'
Salado/Top of Salt	2,624'	755'
MB 126	1,940'	1,439'
Castile Anhydrite 1 Top	880'	2,499'
Castile Anhydrite 1 Base	455'	2,924'
Castile Anhydrite 2 Top	219'	3,160'
Castile Anhydrite 2 Base	124'	3,255'
Base Salt	-228'	3,607'
Delaware/Lamar	-489'	3,868'
Bell Canyon	-530'	3,909'
Cherry Canyon	-1,635'	5,014'
Brushy Canyon Ss.	-2,997'	6,376'
Bone Spring Lm.	-4,406'	7,785'
Avalon Ss.	-4,471'	7,850'
Upper Avalon Carb.	-4,694'	8,073'
Upper Avalon Sh.	-4,779'	8,158'
Middle Avalon Carb.	-4,923'	8,302'
Lw. Avalon Sh.	-4,997'	8,376'
First Bone Spring Carb.	-5,253'	8,632'
First Bone Spring Ss.	-5,424'	8,803'
Second Bone Spring Carb.	-5,861'	9,240'
Second Bone Spring A Ss.	-6,130'	9,509'
Second Bone Spring A/B Carb.	-6,294'	9,673'
Second Bone Spring B Ss.	-6,343'	9,722'
Third Bone Spring Carb.	-6,477'	9,856'
Harkey Ss.	-6,687'	10,066'
Third Bone Spring Shale	-6,782'	10,161'
Third Bone Spring Ss.	-7,163'	10,542'
Third Bone Spring Ss.- Red Hills	-7,479'	10,858'
Landing Point	-7,509'	10,888'
Horizontal TD	-7,400'	10,779'
Wolfcamp Shale	-7,621'	11,000'
Wolfcamp X Ss.	-7,526'	10,905'

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



10000# BOP

XTO

U. S. Steel Tubular Products

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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

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connections@uss.com
www.usstubular.com

U. S. Steel Tubular Products

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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.

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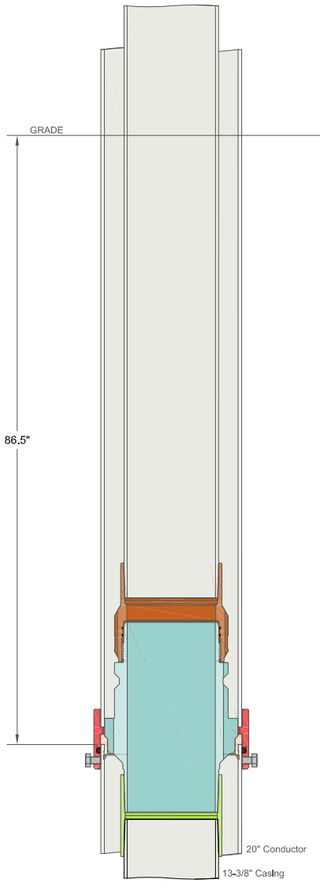
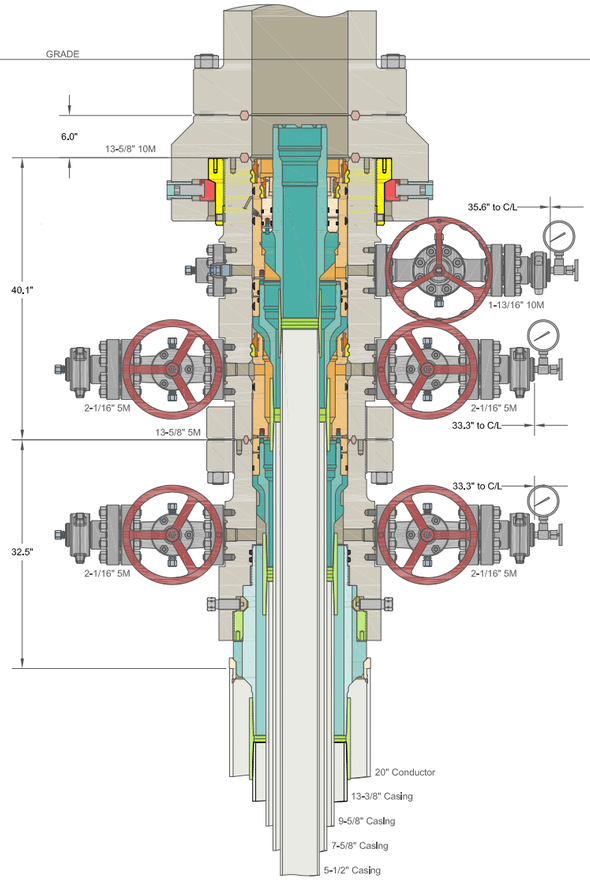
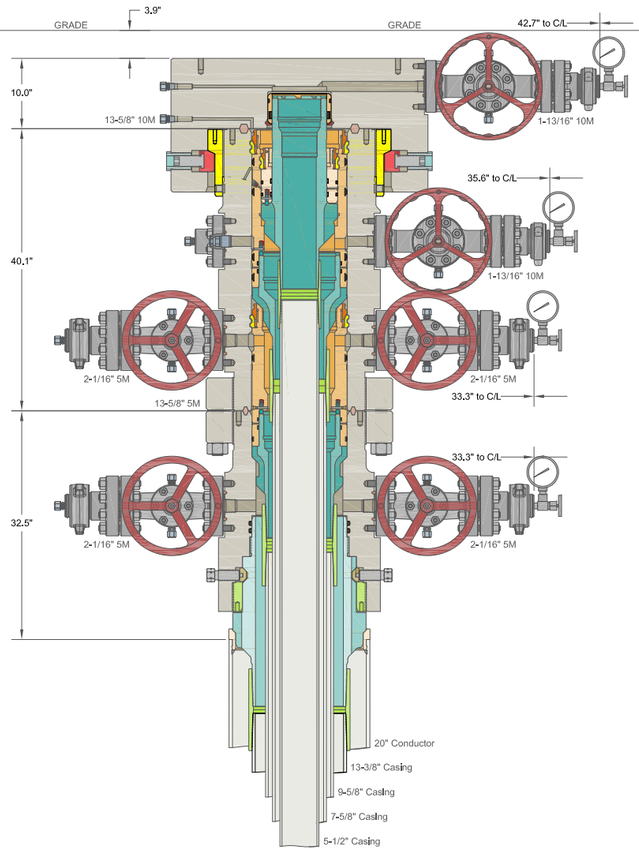
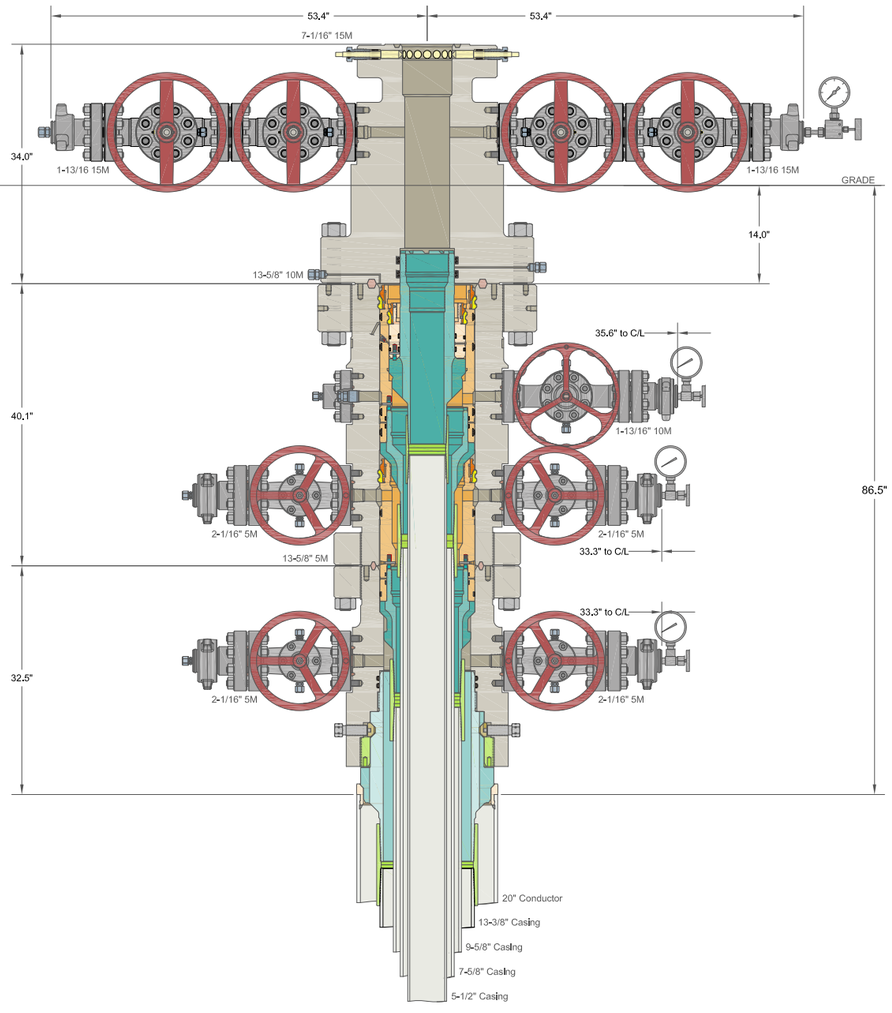








ALL DIMENSIONS APPROXIMA

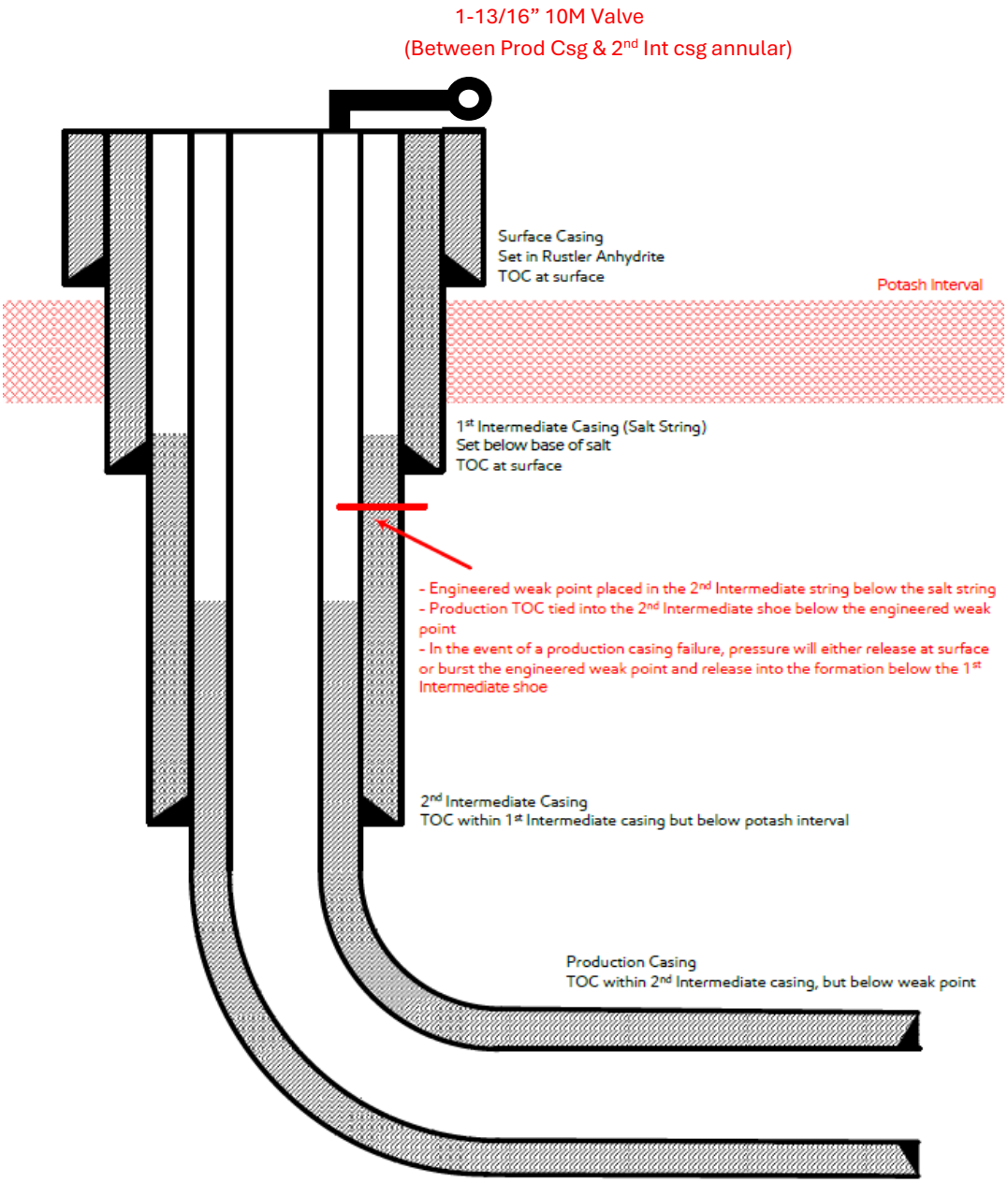
CACTUS WELLHEAD LLC

(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



[Figure F] 4 String – 2nd Intermediate casing engineered weak point

Update May 2024:
XTO is aware of R-111-Q update and will comply with these requirements including (but not limited to):

1) Alignment with KPLA requirements per schematic below, with engineering weak point casing design and utilizing new casing that meets API standards.
2) Contingency plans in place to divert fluids away from salt interval in event of production casing failure.
3) Intermediate 2 casing will consist of a primary cement job with TOC at the top of the Brushy Canyon formation within the Delaware Mountain Group.
    a. Bradenhead squeeze to be completed after primary cement job to tie back TOC to intermediate 1 "Salt string" & below Marker Bed 126 "Potash Interval".
4) Production cement to be tied back no less than 500' inside previous casing shoe (intermediate 2 casing) and below the engineered weak point.

BLACK GOLD®

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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

Company:	Nabors Industries Inc.
Production description:	74621/66-1531
Sales order #:	529480
Customer reference:	FG1213

TEST OBJECT

Serial number:	H3-012524-1
Lot number:	
Description:	74621/66-1531
Hose ID:	3" 16C CK
Part number:	

TEST INFORMATION

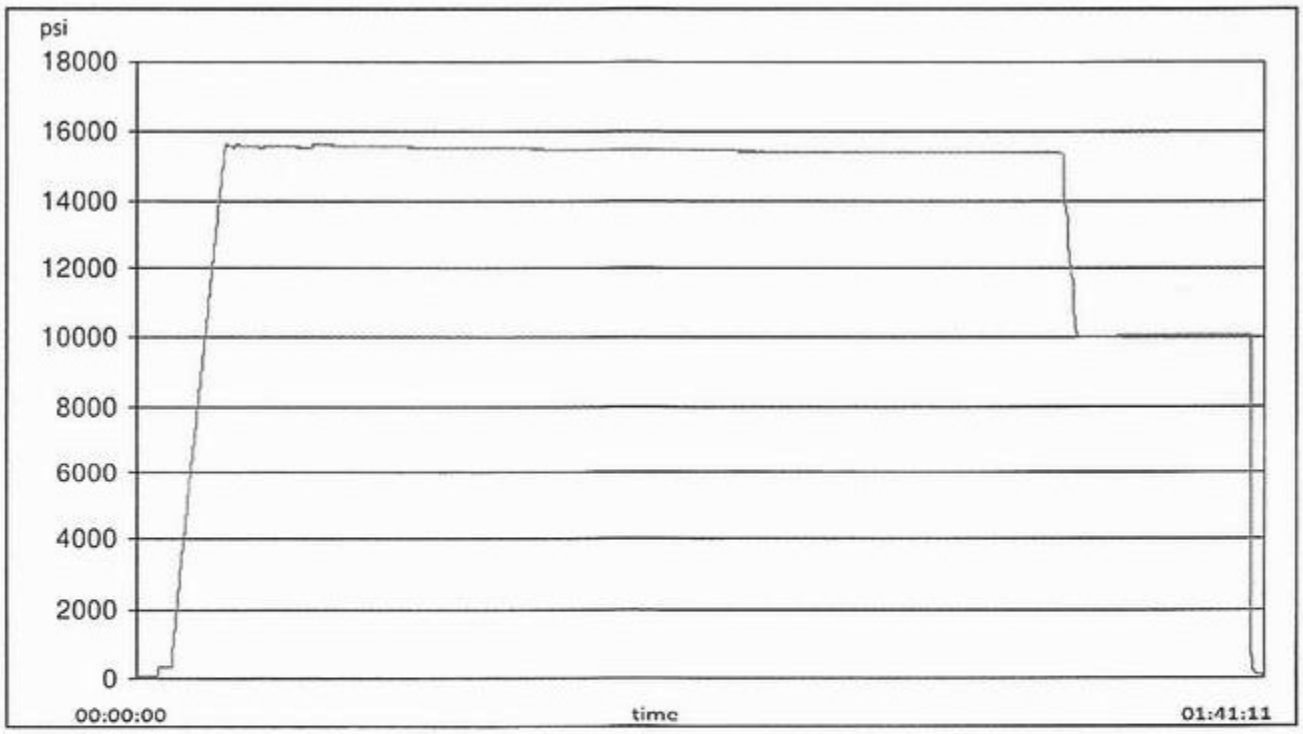
Test procedure:	GTS-04-053	
Test pressure:	15000.00	psi
Test pressure hold:	3600.00	sec
Work pressure:	10000.00	psi
Work pressure hold:	900.00	sec
Length difference:	0.00	%
Length difference:	0.00	inch

Fitting 1:	3.0 x 4-1/16 10K
Part number:	
Description:	
Fitting 2:	3.0 x 4-1/16 10K
Part number:	
Description:	

Length:	45	feet

Visual check:	
Pressure test result:	PASS
Length measurement result:	

Test operator: Travis



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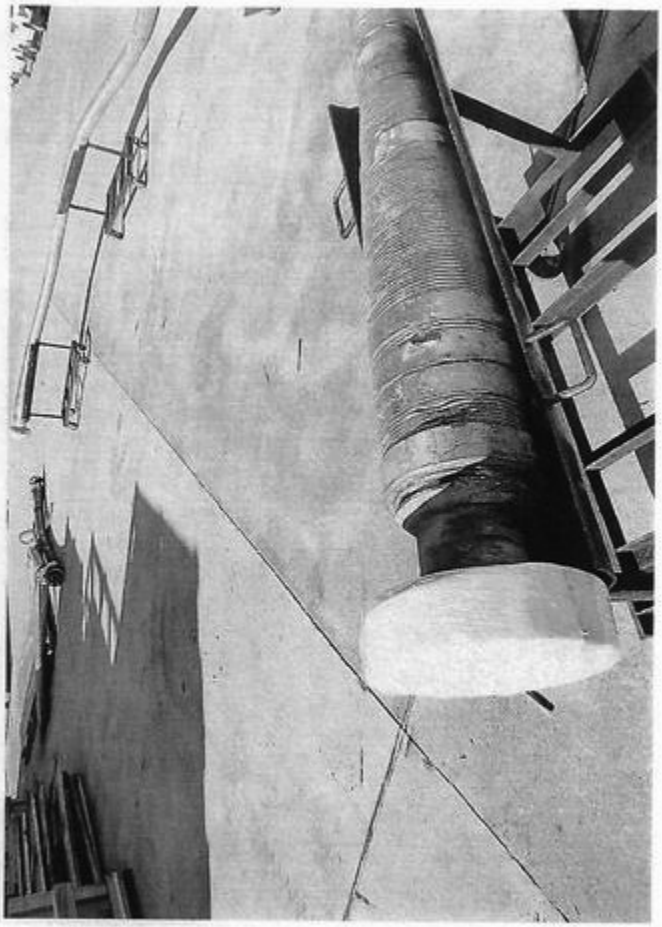
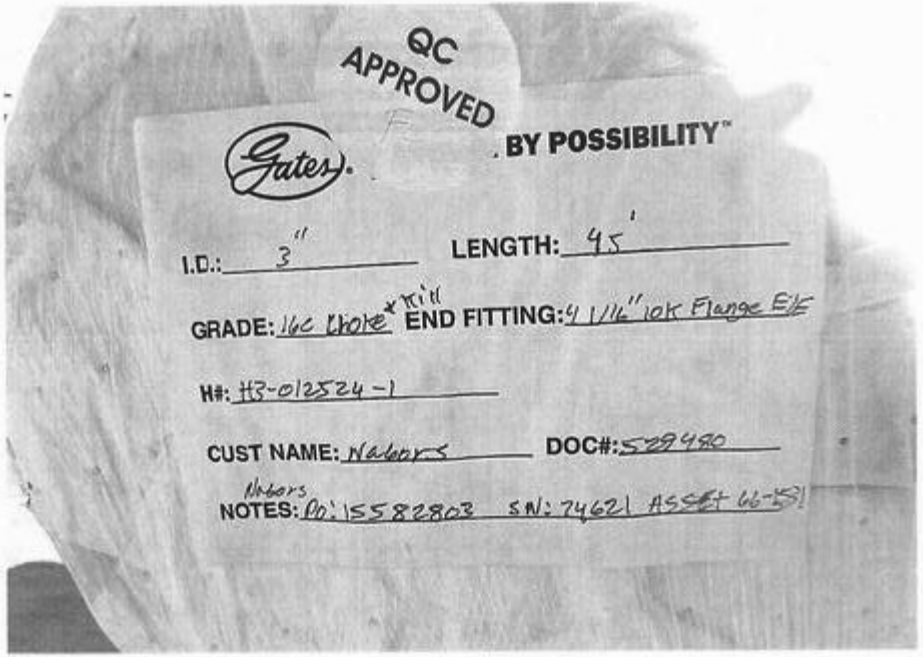
TEST REPORT

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.

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.

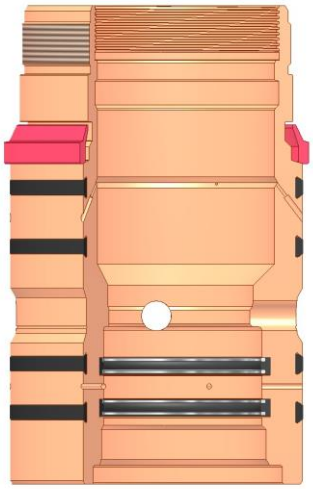
1. Cement Program

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

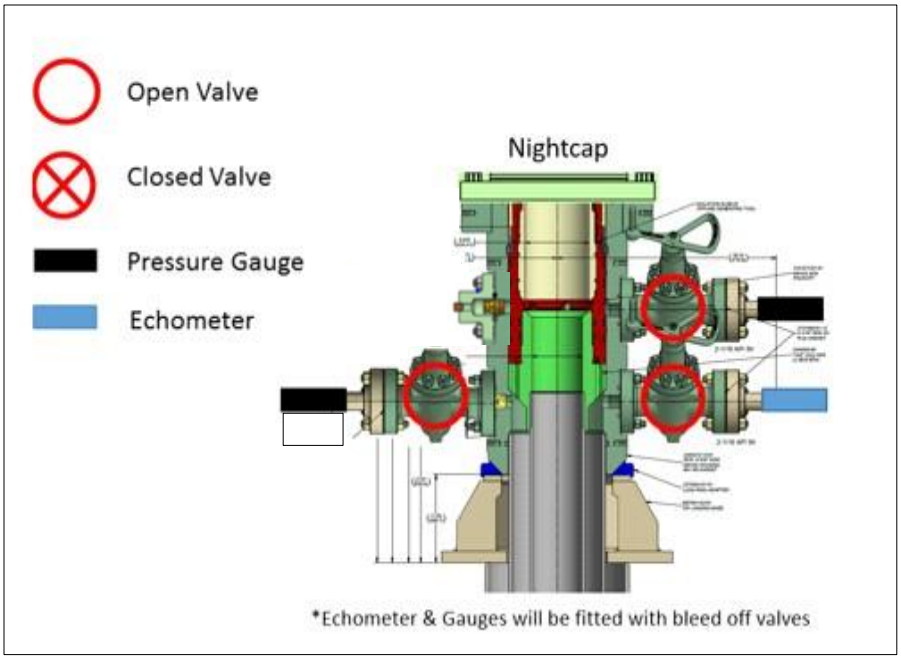
2. Offline Cementing Procedure

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.



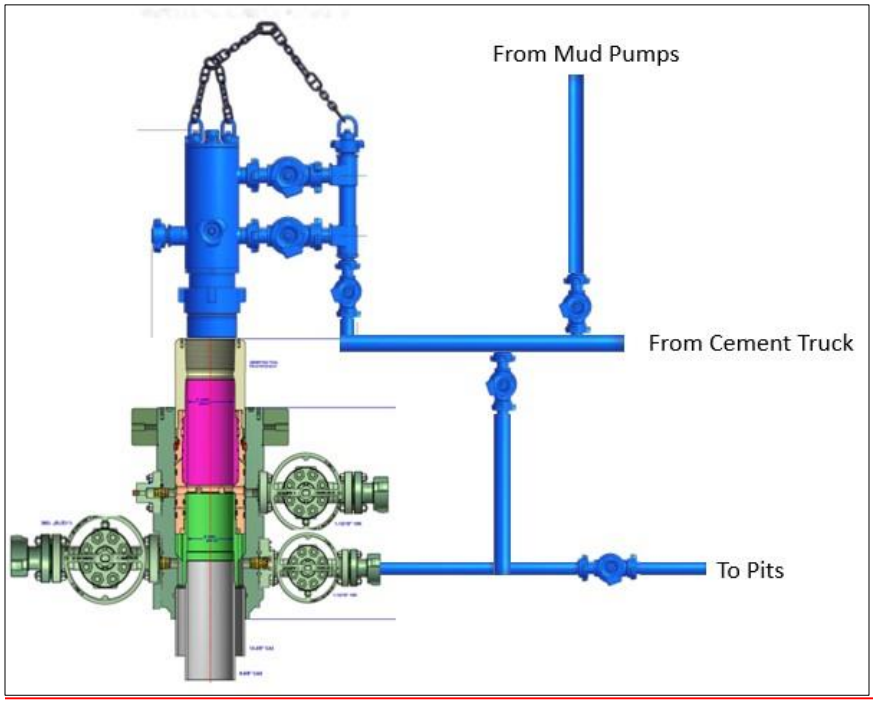
Annular packoff with both external and internal seals



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.

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

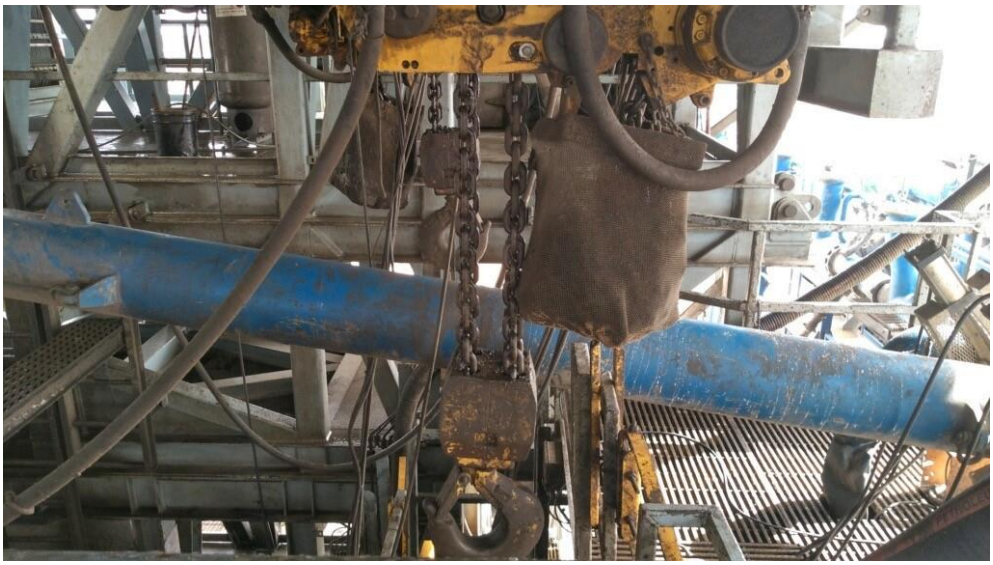


Figure 2: BOP Winch System

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.

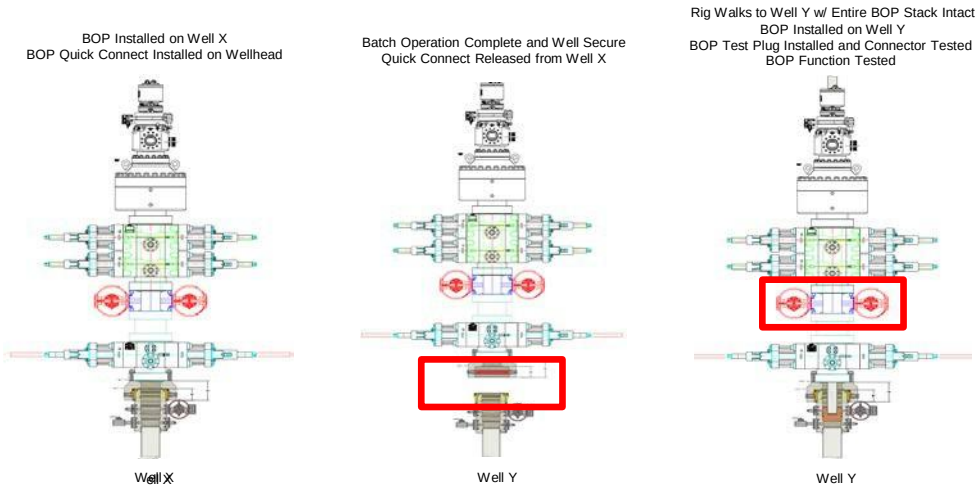
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often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

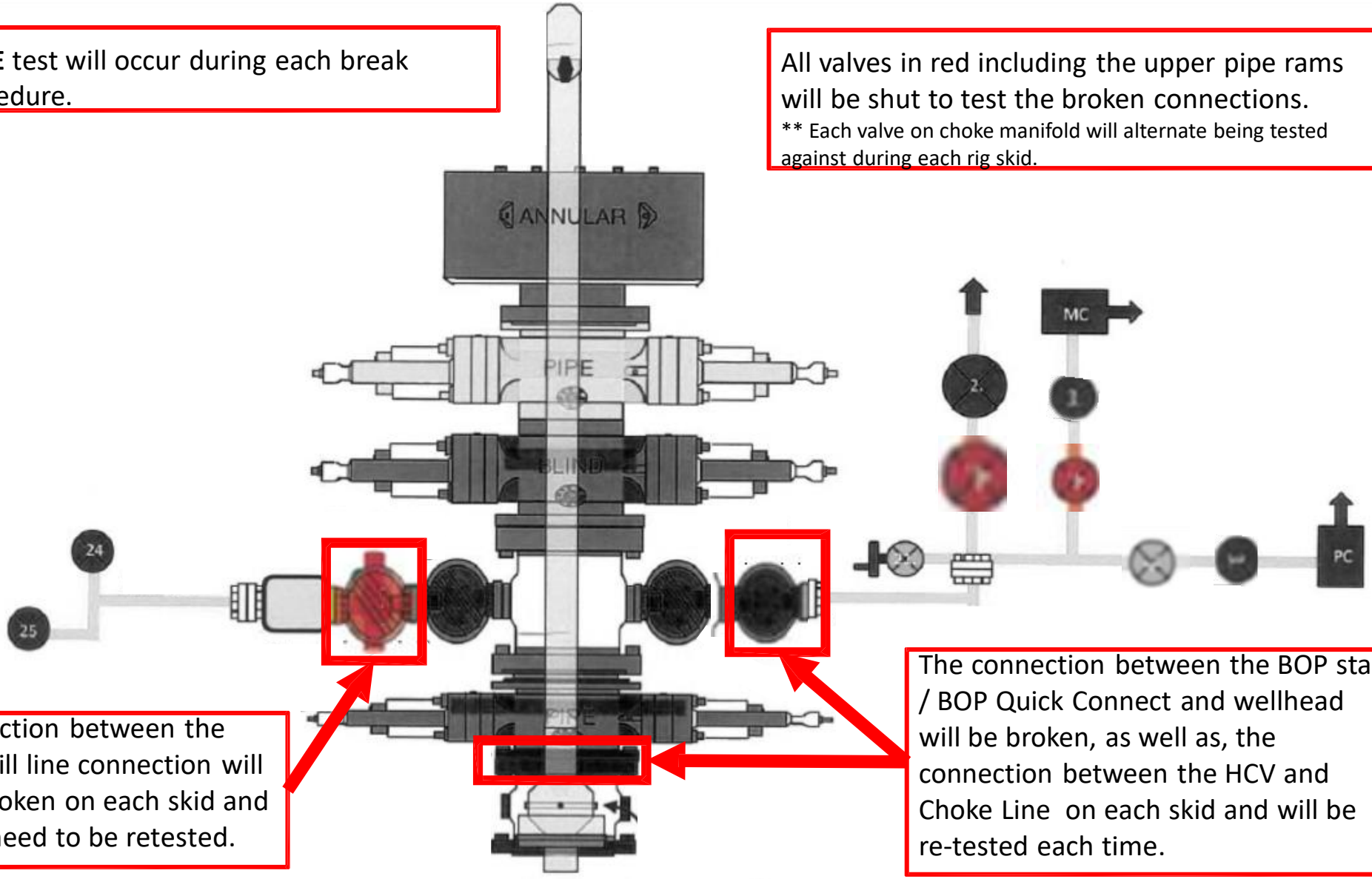
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.

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.

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Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 448769
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Operator must comply with all of the R-111-Q requirements.	4/25/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	4/25/2025