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

Sundry Print Report

03/07/2025

Well Name: JRU APACHE FEDERAL COM

Well Location: T22S / R30E / SEC 13 / NESE / 32.391602 / -103.828591

County or Parish/State: EDDY / NM

Well Number: 705H

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: 2836003

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 02/09/2025

Time Sundry Submitted: 03:11

Date proposed operation will begin: 02/14/2025

Procedure Description: 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: 2457' FSL & 929' FEL OF SECTION 13-T22S-R30E 2487' FSL & 968' FEL OF SECTION 13-T22S-R30E KOP: 2457' FSL & 929' FEL OF SECTION 13-T22S-R30E 1864' FNL & 330' FEL OF SECTION 13-T22S-R30E FTP: 2310' FSL & 330' FEL OF SECTION 13-T22S-R30E 1864' FNL & 330' FEL OF SECTION 13-T22S-R30E LTP: 2310' FSL & 100' FWL OF SECTION 14-T22S-R30E 1864' FNL & 100' FWL OF SECTION 14-T22S-R30E BHL: 2310' FSL & 50' FWL OF SECTION 14-T22S-R30E 1864' FNL & 50' FWL OF SECTION 14-T22S-R30E The proposed total depth is changing from 20535’ MD/9708’ TVD to 20544.43’ MD/10410’ 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_705H_20250209150913.pdf

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Operator: XTO PERMIAN OPERATING LLC

Conditions of Approval

Additional

JRU_Apache_Fed_Com_705H_COA_20250221061811.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 09, 2025 03:09 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: 02/28/2025

Signature: Chris Walls

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

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

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

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

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

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

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

Additional Information

Additional Remarks

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 / 2457 FSL / 929 FEL / TWSP: 22S / RANGE: 30E / SECTION: 13 / LAT: 32.391602 / LONG: -103.828591 (TVD: 0 feet, MD: 0 feet)

PPP: NWSW / 2313 FSL / 0 FWL / TWSP: 22S / RANGE: 30E / SECTION: 13 / LAT: 32.391224 / LONG: -103.842892 (TVD: 9745 feet, MD: 15600 feet)

PPP: NESW / 2312 FSL / 1335 FWL / TWSP: 22S / RANGE: 30E / SECTION: 13 / LAT: 32.391217 / LONG: -103.838566 (TVD: 9755 feet, MD: 14300 feet)

PPP: NESE / 2310 FSL / 330 FEL / TWSP: 22S / RANGE: 30E / SECTION: 13 / LAT: 32.391197 / LONG: -103.826651 (TVD: 9785 feet, MD: 10300 feet)

BHL: NWSW / 2310 FSL / 50 FWL / TWSP: 22S / RANGE: 30E / SECTION: 14 / LAT: 32.391251 / LONG: -103.86008 (TVD: 9708 feet, MD: 20535 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO
LEASE NO.:	**NMNM89051**
LOCATION:	Sec. 24, T.22 S, R 30 E
COUNTY:	Eddy County, New Mexico
WELL NAME & NO.:	James Ranch Unit Apache 705H
SURFACE HOLE FOOTAGE:	2487'/S & 968/E
BOTTOM HOLE FOOTAGE:	1864'/N & 50'/W

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 ☑ Four-String	☑ Casing Clearance ☑ Offline Cementing	☐ Pilot Hole ☑ Fluid-Filled	☑ Break Testing

*Changes approved through engineering via **Sundry 2836003** on 2-21-2025. Any previous COAs not addressed within the updated COAs still apply.*

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 **700** 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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 7784'.**

- **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. Operator shall provide method of verification.

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

- ❖ **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).

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

4. The minimum required fill of cement behind the **5-1/2 inch** production casing is:
   - Cement should tie-back **500 feet** into the previous casing but not higher than the Engineering Weak Point. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

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

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

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

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

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.

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GENERAL REQUIREMENTS

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

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

Contact Eddy County Petroleum Engineering Inspection Staff:
Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220;
BLM_NM_CFO_DrillingNotifications@BLM.GOV; (575) 361-2822

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
    a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
    b. When the operator proposes to set surface casing with Spudder Rig
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
        iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP,

etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke

manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
    i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
    ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation

can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and

disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Approved by Zota Stevens on 2/21/2025
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	705H

OGRID No.	Operator Name	Ground Level Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,346'

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		2,487 FSL	968 FEL	32.391687	-103.828719	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
E	14	22S	30E		1,864 FNL	50 FWL	32.394287	-103.860077	EDDY

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

Order Numbers.	Well Setbacks are under Common Ownership:
R-279-C	☒ Yes ☐ No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	13	22S	30E		1,864 FNL	330 FEL	32.394250	-103.826650	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
H	13	22S	30E		1,864 FNL	330 FEL	32.394250	-103.826650	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
E	14	22S	30E		1,864 FNL	100 FWL	32.394286	-103.859915	EDDY

Unitized Area of Area of Interest	Spacing Unit Type :	Ground Elevation
NMNM-070965X	☒ Horizontal ☐ Vertical	3,346'

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 1/3/25

Signature Date

Srinivas Naveen Laghuvarapu

Printed Name

srinivas.n.laghuvarapu@exxonmobil.com

Email Address

SURVEYOR CERTIFICATIONS

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

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

MARK DILLON HARP 23786 — Certificate Number

12/9/2024 — Date of Survey

KT 618.013002.10-33

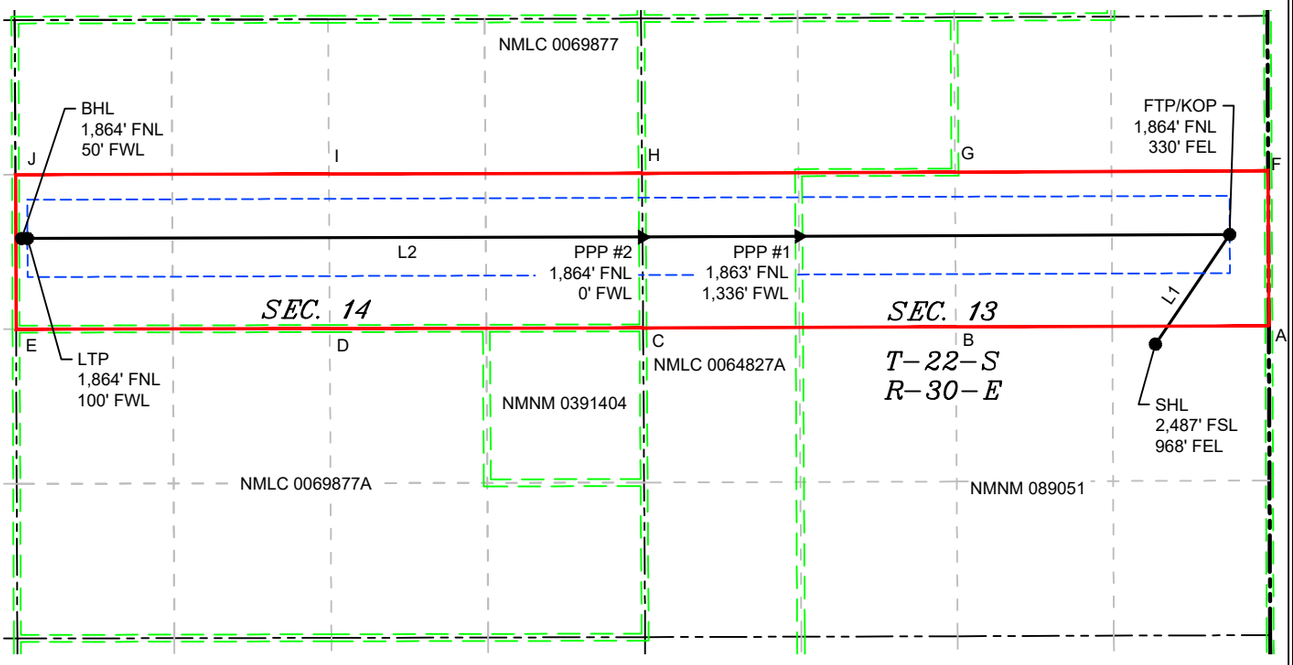
Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

P:\618.013 XTO Energy - NM\002 James Ranch Unit\.10 - APACHE DI - EDDY\Wells\-33 - 705H\DWG\APACHE 705H 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	034°07'54.64"	1,130.04
L2	269°48'41.59"	10,317.51

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 =	506,594.6	N	Y =	507,530.0	N	Y =	507,514.5	N	Y =	507,508.8	N	Y =	507,496.2	N
X =	697,094.2	E	X =	697,728.2	E	X =	694,048.7	E	X =	692,712.8	E	X =	687,460.8	E
LAT. =	32.391687	°N	LAT. =	32.394250	°N	LAT. =	32.394255	°N	LAT. =	32.394256	°N	LAT. =	32.394286	°N
LONG. =	103.828719	°W	LONG. =	103.826650	°W	LONG. =	103.838571	°W	LONG. =	103.842899	°W	LONG. =	103.859915	°W

BHL (NAD 83 NME)		
Y =	507,496.1	N
X =	687,410.8	E
LAT. =	32.394287	°N
LONG. =	103.860077	°W

SHL (NAD 27 NME)			FTP/KOP (NAD 27 NME)			PPP1 (NAD 83 NME)			PPP2 (NAD 83 NME)			LTP (NAD 27 NME)		
Y =	506,534.0	N	Y =	507,469.3	N	Y =	507,453.8	N	Y =	507,448.1	N	Y =	507,435.5	N
X =	655,912.7	E	X =	656,546.8	E	X =	652,867.3	E	X =	651,531.4	E	X =	646,279.4	E
LAT. =	32.391564	°N	LAT. =	32.394127	°N	LAT. =	32.394132	°N	LAT. =	32.394133	°N	LAT. =	32.394164	°N
LONG. =	103.828225	°W	LONG. =	103.826157	°W	LONG. =	103.838077	°W	LONG. =	103.842405	°W	LONG. =	103.859420	°W

BHL (NAD 27 NME)		
Y =	507,435.3	N
X =	646,229.4	E
LAT. =	32.394164	°N
LONG. =	103.859582	°W

CORNER COORDINATES (NAD 83 NME)					
A - Y =	506,750.2	N	A - X =	698,061.8	E
B - Y =	506,741.3	N	B - X =	695,389.1	E
C - Y =	506,732.3	N	C - X =	692,717.9	E
D - Y =	506,727.2	N	D - X =	690,042.0	E
E - Y =	506,721.9	N	E - X =	687,363.8	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 =	506,689.5	N	A - X =	656,880.3	E
B - Y =	506,680.6	N	B - X =	654,207.6	E
C - Y =	506,671.6	N	C - X =	651,536.5	E
D - Y =	506,666.5	N	D - X =	648,860.6	E
E - Y =	506,661.2	N	E - X =	646,182.4	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 618.013002.10-33

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

XTO Energy Inc.
JRU Apache Federal Com 705H
Projected TD: 20544.43' MD / 10410' TVD
SHL: 2487' FSL & 968' FEL , Section 13, T22S, R30E
BHL: 1864' 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	454'	Water
Top of Salt	754'	Water
MB 126	1438'	Water
Base of Salt	3606'	Water
Delaware	3867'	Water
Brushy Canyon	6375'	Water/Oil/Gas
Bone Spring	7784'	Water
1st Bone Spring Ss	8631'	Water/Oil/Gas
2nd Bone Spring Ss	9239'	Water/Oil/Gas
3rd Bone Spring Sh	9855'	Water/Oil/Gas
Target/Land Curve	10410'	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 @ 729' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9.625 inch casing at 3706' 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 9493.8'. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 20544.43 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' – 729'	13.375	54.5	J-55	BTC	New	2.46	3.51	22.88
12.25	0' – 3706'	9.625	40	J-55	BTC	New	1.68	2.44	4.25
8.75	0' – 3806'	7.625	29.7	RY P-110	Flush Joint	New	2.93	3.00	1.98
8.75	3806' – 9493.8'	7.625	29.7	HC L-80	Flush Joint	New	2.13	3.38	2.40
6.75	0' – 9393.8'	5.5	20	RY P-110	Semi-Premium / Freedom	New	1.26	2.23	2.24
6.75	9393.8' - 20544.43'	5.5	20	RY P-110	Semi-Flush / Talon	New	1.26	2.01	6.53

· 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 +/- 729'

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 +/- 3706'

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 +/- 9493.8'
Tail: 150 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
TOC:@ 7784
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: 3206
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:@ 7784') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to 3206 (~500' inside 1st Intermediate csg string but below MB126 @ 1438 ').

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 +/- 20544.43'

Lead: 30 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 8993.8 feet
Tail: 770 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 9818.17 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 CFR43-3172

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' - 729'	17.5	FW/Native	8.5-9	35-40	NC	Fresh water or native water
729' - 3706'	12.25	Sat Brine	10-10.5	30-32	NC	Fully Saturated salt across salado
3706' to 9493.8'	8.75	BDE/OBM or FW/Brine	9-9.5	30-32	NC	Depending on well conditions
9493.8' to 20544.43'	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 170 to 190 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 5521 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:	20544.43 ft	**Site:**	A
TVD RKB:	10410.00 ft	**Slot:**	James Ranch Unit Apache 705H
Location			
Cartographic Reference System:	New Mexico East - NAD 27		
Northing:	506534.00 ft		
Easting:	655912.70 ft		
RKB:	3378.00 ft		
Ground Level:	3346.00 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	
4357.06	13.14	34.14	4351.32	62.10	42.10	2.00	0.00	2.00	
8667.30	13.14	34.14	8548.68	873.20	592.00	0.00	0.00	0.00	
9324.37	0.00	0.00	9200.00	935.30	634.10	-2.00	0.00	2.00	
9818.17	0.00	0.00	9693.80	935.30	634.10	0.00	0.00	0.00	
10943.17	90.00	269.81	10410.00	932.94	-82.09	8.00	0.00	8.00	
20495.24	90.00	269.81	10410.00	901.43	-9634.11	0.00	0.00	0.00	LTP 4
20544.43	90.00	269.81	10410.00	901.27	-9683.30	0.00	0.00	0.00	BHL 4

Position Uncertainty

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

Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	of Bias (ft)	Error (ft)	Error (ft)	Azimuth (°)	Used
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	3.235	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	34.136	3799.980	14.554	0.000	13.537	0.000	4.842	0.000	0.000	14.573	13.525	130.218	MWD+IFR1+MS
3900.000	4.000	34.136	3899.838	15.043	0.000	13.903	0.000	4.945	0.000	0.000	15.092	13.883	131.446	MWD+IFR1+MS
4000.000	6.000	34.136	3999.452	15.507	0.000	14.268	0.000	5.050	0.000	0.000	15.602	14.239	132.315	MWD+IFR1+MS
4100.000	8.000	34.136	4098.702	15.946	0.000	14.631	0.000	5.159	0.000	0.000	16.101	14.594	132.958	MWD+IFR1+MS
4200.000	10.000	34.136	4197.465	16.360	0.000	14.992	0.000	5.274	0.000	0.000	16.590	14.947	133.453	MWD+IFR1+MS
4300.000	12.000	34.136	4295.623	16.751	0.000	15.352	0.000	5.395	0.000	0.000	17.068	15.299	133.848	MWD+IFR1+MS
4357.062	13.141	34.136	4351.316	16.905	0.000	15.553	0.000	5.458	0.000	0.000	17.278	15.499	133.865	MWD+IFR1+MS
4400.000	13.141	34.136	4393.130	17.045	0.000	15.702	0.000	5.504	0.000	0.000	17.414	15.649	133.833	MWD+IFR1+MS
4500.000	13.141	34.136	4490.511	17.370	0.000	16.056	0.000	5.619	0.000	0.000	17.732	16.004	133.877	MWD+IFR1+MS
4600.000	13.141	34.136	4587.892	17.703	0.000	16.417	0.000	5.737	0.000	0.000	18.058	16.364	134.080	MWD+IFR1+MS
4700.000	13.141	34.136	4685.274	18.039	0.000	16.779	0.000	5.857	0.000	0.000	18.386	16.725	134.280	MWD+IFR1+MS
4800.000	13.141	34.136	4782.655	18.377	0.000	17.142	0.000	5.981	0.000	0.000	18.716	17.087	134.477	MWD+IFR1+MS
4900.000	13.141	34.136	4880.036	18.717	0.000	17.506	0.000	6.107	0.000	0.000	19.049	17.450	134.670	MWD+IFR1+MS
5000.000	13.141	34.136	4977.417	19.059	0.000	17.871	0.000	6.235	0.000	0.000	19.383	17.814	134.861	MWD+IFR1+MS
5100.000	13.141	34.136	5074.799	19.403	0.000	18.236	0.000	6.366	0.000	0.000	19.719	18.178	-44.951	MWD+IFR1+MS
5200.000	13.141	34.136	5172.180	19.749	0.000	18.602	0.000	6.499	0.000	0.000	20.057	18.543	-44.767	MWD+IFR1+MS
5300.000	13.141	34.136	5269.561	20.097	0.000	18.968	0.000	6.635	0.000	0.000	20.397	18.909	-44.585	MWD+IFR1+MS
5400.000	13.141	34.136	5366.942	20.446	0.000	19.336	0.000	6.774	0.000	0.000	20.738	19.276	-44.407	MWD+IFR1+MS
5500.000	13.141	34.136	5464.324	20.797	0.000	19.704	0.000	6.915	0.000	0.000	21.081	19.643	-44.232	MWD+IFR1+MS
5600.000	13.141	34.136	5561.705	21.149	0.000	20.072	0.000	7.058	0.000	0.000	21.425	20.011	-44.061	MWD+IFR1+MS
5700.000	13.141	34.136	5659.086	21.503	0.000	20.441	0.000	7.204	0.000	0.000	21.771	20.379	-43.892	MWD+IFR1+MS
5800.000	13.141	34.136	5756.468	21.858	0.000	20.811	0.000	7.352	0.000	0.000	22.117	20.748	-43.727	MWD+IFR1+MS
5900.000	13.141	34.136	5853.849	22.214	0.000	21.180	0.000	7.502	0.000	0.000	22.465	21.117	-43.565	MWD+IFR1+MS
6000.000	13.141	34.136	5951.230	22.572	0.000	21.551	0.000	7.655	0.000	0.000	22.815	21.487	-43.407	MWD+IFR1+MS
6100.000	13.141	34.136	6048.611	22.931	0.000	21.922	0.000	7.811	0.000	0.000	23.165	21.858	-43.252	MWD+IFR1+MS
6200.000	13.141	34.136	6145.993	23.291	0.000	22.293	0.000	7.968	0.000	0.000	23.516	22.228	-43.100	MWD+IFR1+MS

6300.000	13.141	34.136	6243.374	23.652	0.000	22.665	0.000	8.129	0.000	0.000	23.869	22.600	-42.952	MWD+IFR1+MS
6400.000	13.141	34.136	6340.755	24.014	0.000	23.037	0.000	8.291	0.000	0.000	24.222	22.971	-42.808	MWD+IFR1+MS
6500.000	13.141	34.136	6438.136	24.376	0.000	23.409	0.000	8.456	0.000	0.000	24.577	23.343	-42.667	MWD+IFR1+MS
6600.000	13.141	34.136	6535.518	24.740	0.000	23.782	0.000	8.623	0.000	0.000	24.932	23.715	-42.529	MWD+IFR1+MS
6700.000	13.141	34.136	6632.899	25.105	0.000	24.155	0.000	8.793	0.000	0.000	25.288	24.088	-42.395	MWD+IFR1+MS
6800.000	13.141	34.136	6730.280	25.471	0.000	24.528	0.000	8.965	0.000	0.000	25.645	24.461	-42.265	MWD+IFR1+MS
6900.000	13.141	34.136	6827.661	25.837	0.000	24.902	0.000	9.140	0.000	0.000	26.003	24.834	-42.138	MWD+IFR1+MS
7000.000	13.141	34.136	6925.043	26.204	0.000	25.276	0.000	9.317	0.000	0.000	26.362	25.208	-42.015	MWD+IFR1+MS
7100.000	13.141	34.136	7022.424	26.572	0.000	25.650	0.000	9.496	0.000	0.000	26.721	25.582	-41.896	MWD+IFR1+MS
7200.000	13.141	34.136	7119.805	26.940	0.000	26.024	0.000	9.678	0.000	0.000	27.081	25.956	-41.780	MWD+IFR1+MS
7300.000	13.141	34.136	7217.186	27.310	0.000	26.399	0.000	9.862	0.000	0.000	27.442	26.331	-41.669	MWD+IFR1+MS
7400.000	13.141	34.136	7314.568	27.680	0.000	26.774	0.000	10.049	0.000	0.000	27.803	26.705	-41.561	MWD+IFR1+MS
7500.000	13.141	34.136	7411.949	28.050	0.000	27.149	0.000	10.238	0.000	0.000	28.166	27.080	-41.456	MWD+IFR1+MS
7600.000	13.141	34.136	7509.330	28.421	0.000	27.524	0.000	10.429	0.000	0.000	28.528	27.456	-41.356	MWD+IFR1+MS
7700.000	13.141	34.136	7606.711	28.793	0.000	27.900	0.000	10.623	0.000	0.000	28.892	27.831	-41.260	MWD+IFR1+MS
7800.000	13.141	34.136	7704.093	29.166	0.000	28.275	0.000	10.820	0.000	0.000	29.255	28.207	-41.167	MWD+IFR1+MS
7900.000	13.141	34.136	7801.474	29.538	0.000	28.651	0.000	11.019	0.000	0.000	29.620	28.583	-41.079	MWD+IFR1+MS
8000.000	13.141	34.136	7898.855	29.912	0.000	29.027	0.000	11.220	0.000	0.000	29.985	28.959	-40.995	MWD+IFR1+MS
8100.000	13.141	34.136	7996.236	30.286	0.000	29.404	0.000	11.424	0.000	0.000	30.350	29.335	-40.914	MWD+IFR1+MS
8200.000	13.141	34.136	8093.618	30.660	0.000	29.780	0.000	11.630	0.000	0.000	30.716	29.712	-40.838	MWD+IFR1+MS
8300.000	13.141	34.136	8190.999	31.035	0.000	30.157	0.000	11.839	0.000	0.000	31.083	30.088	-40.766	MWD+IFR1+MS
8400.000	13.141	34.136	8288.380	31.410	0.000	30.534	0.000	12.050	0.000	0.000	31.450	30.465	-40.697	MWD+IFR1+MS
8500.000	13.141	34.136	8385.761	31.786	0.000	30.910	0.000	12.264	0.000	0.000	31.817	30.842	-40.633	MWD+IFR1+MS
8600.000	13.141	34.136	8483.143	32.162	0.000	31.288	0.000	12.480	0.000	0.000	32.185	31.219	-40.574	MWD+IFR1+MS
8667.303	13.141	34.136	8548.684	32.413	0.000	31.539	0.000	12.627	0.000	0.000	32.430	31.472	-40.639	MWD+IFR1+MS
8700.000	12.487	34.136	8580.566	32.567	0.000	31.661	0.000	12.699	0.000	0.000	32.548	31.595	-40.705	MWD+IFR1+MS
8800.000	10.487	34.136	8678.558	33.048	0.000	32.032	0.000	12.922	0.000	0.000	32.944	31.966	-40.939	MWD+IFR1+MS
8900.000	8.487	34.136	8777.185	33.533	0.000	32.403	0.000	13.148	0.000	0.000	33.384	32.334	-41.156	MWD+IFR1+MS
9000.000	6.487	34.136	8876.327	33.975	0.000	32.770	0.000	13.370	0.000	0.000	33.820	32.698	-41.337	MWD+IFR1+MS
9100.000	4.487	34.136	8975.864	34.375	0.000	33.132	0.000	13.590	0.000	0.000	34.251	33.057	-41.481	MWD+IFR1+MS
9200.000	2.487	34.136	9075.674	34.731	0.000	33.489	0.000	13.807	0.000	0.000	34.675	33.410	-41.588	MWD+IFR1+MS
9300.000	0.487	34.136	9175.635	35.043	0.000	33.840	0.000	14.023	0.000	0.000	35.092	33.759	-41.658	MWD+IFR1+MS
9324.366	0.000	0.000	9200.000	34.438	0.000	34.592	0.000	14.075	0.000	0.000	35.174	33.843	-41.683	MWD+IFR1+MS

9400.000	0.000	0.000	9275.634	34.697	0.000	34.845	0.000	14.239	0.000	0.000	35.425	34.104	-41.774	MWD+IFR1+MS
9500.000	0.000	0.000	9375.634	35.041	0.000	35.184	0.000	14.457	0.000	0.000	35.762	34.450	-41.866	MWD+IFR1+MS
9600.000	0.000	0.000	9475.634	35.386	0.000	35.524	0.000	14.679	0.000	0.000	36.102	34.796	-41.962	MWD+IFR1+MS
9700.000	0.000	0.000	9575.634	35.731	0.000	35.864	0.000	14.904	0.000	0.000	36.442	35.143	-42.058	MWD+IFR1+MS
9800.000	0.000	0.000	9675.634	36.077	0.000	36.205	0.000	15.132	0.000	0.000	36.782	35.489	-42.152	MWD+IFR1+MS
9818.166	0.000	0.000	9693.800	36.139	0.000	36.266	0.000	15.174	0.000	0.000	36.842	35.552	-42.166	MWD+IFR1+MS
9900.000	6.547	269.811	9775.457	36.226	-0.000	36.404	0.000	15.364	0.000	0.000	37.161	35.892	-39.368	MWD+IFR1+MS
10000.000	14.547	269.811	9873.687	36.455	-0.000	36.716	0.000	15.666	0.000	0.000	38.080	36.500	-21.715	MWD+IFR1+MS
10100.000	22.547	269.811	9968.417	36.332	-0.000	37.017	0.000	16.146	0.000	0.000	39.220	36.924	-11.655	MWD+IFR1+MS
10200.000	30.547	269.811	10057.801	35.708	-0.000	37.302	0.000	16.860	0.000	0.000	40.259	37.256	-7.170	MWD+IFR1+MS
10300.000	38.547	269.811	10140.101	34.666	-0.000	37.569	0.000	17.837	0.000	0.000	41.130	37.545	-4.781	MWD+IFR1+MS
10400.000	46.547	269.811	10213.713	33.319	-0.000	37.819	0.000	19.073	0.000	0.000	41.818	37.806	-3.354	MWD+IFR1+MS
10500.000	54.547	269.811	10277.207	31.811	-0.000	38.051	0.000	20.533	0.000	0.000	42.323	38.044	-2.466	MWD+IFR1+MS
10600.000	62.547	269.811	10329.344	30.321	-0.000	38.267	0.000	22.164	0.000	0.000	42.661	38.262	-1.939	MWD+IFR1+MS
10700.000	70.547	269.811	10369.112	29.059	-0.000	38.468	0.000	23.904	0.000	0.000	42.857	38.465	-1.705	MWD+IFR1+MS
10800.000	78.547	269.811	10395.736	28.243	-0.000	38.654	0.000	25.691	0.000	0.000	42.945	38.651	-1.750	MWD+IFR1+MS
10900.000	86.547	269.811	10408.697	28.062	-0.000	38.824	0.000	27.463	0.000	0.000	42.968	38.819	-2.085	MWD+IFR1+MS
10943.166	90.000	269.811	10409.997	27.690	0.000	38.888	0.000	27.690	0.000	0.000	42.971	38.882	-2.330	MWD+IFR1+MS
11000.000	90.000	269.811	10409.997	27.823	0.000	38.977	0.000	27.823	0.000	0.000	42.974	38.969	-2.688	MWD+IFR1+MS
11100.000	90.000	269.811	10409.997	28.029	0.000	39.160	0.000	28.029	0.000	0.000	42.980	39.148	-3.376	MWD+IFR1+MS
11200.000	90.000	269.811	10409.997	28.257	0.000	39.377	0.000	28.257	0.000	0.000	42.987	39.359	-4.159	MWD+IFR1+MS
11300.000	90.000	269.811	10409.997	28.506	0.000	39.624	0.000	28.506	0.000	0.000	42.997	39.598	-5.071	MWD+IFR1+MS
11400.000	90.000	269.811	10409.997	28.773	0.000	39.901	0.000	28.773	0.000	0.000	43.010	39.866	-6.164	MWD+IFR1+MS
11500.000	90.000	269.811	10409.997	29.060	0.000	40.208	0.000	29.060	0.000	0.000	43.026	40.159	-7.511	MWD+IFR1+MS
11600.000	90.000	269.811	10409.997	29.364	0.000	40.543	0.000	29.364	0.000	0.000	43.048	40.477	-9.231	MWD+IFR1+MS
11700.000	90.000	269.811	10409.997	29.686	0.000	40.906	0.000	29.686	0.000	0.000	43.076	40.817	-11.511	MWD+IFR1+MS
11800.000	90.000	269.811	10409.997	30.026	0.000	41.296	0.000	30.026	0.000	0.000	43.116	41.172	-14.668	MWD+IFR1+MS
11900.000	90.000	269.811	10409.997	30.381	0.000	41.713	0.000	30.381	0.000	0.000	43.175	41.536	-19.236	MWD+IFR1+MS
12000.000	90.000	269.811	10409.997	30.753	0.000	42.156	0.000	30.753	0.000	0.000	43.268	41.891	-26.024	MWD+IFR1+MS
12100.000	90.000	269.811	10409.997	31.140	0.000	42.624	0.000	31.140	0.000	0.000	43.424	42.210	-35.722	MWD+IFR1+MS
12200.000	90.000	269.811	10409.997	31.542	0.000	43.115	0.000	31.542	0.000	0.000	43.675	42.457	132.698	MWD+IFR1+MS
12300.000	90.000	269.811	10409.997	31.958	0.000	43.630	0.000	31.958	0.000	0.000	44.034	42.621	122.332	MWD+IFR1+MS
12400.000	90.000	269.811	10409.997	32.388	0.000	44.168	0.000	32.388	0.000	0.000	44.477	42.723	114.869	MWD+IFR1+MS

12500.000	90.000	269.811	10409.997	32.830	0.000	44.727	0.000	32.830	0.000	0.000	44.978	42.790	109.857	MWD+IFR1+MS
12600.000	90.000	269.811	10409.997	33.286	0.000	45.307	0.000	33.286	0.000	0.000	45.520	42.837	106.441	MWD+IFR1+MS
12700.000	90.000	269.811	10409.997	33.753	0.000	45.907	0.000	33.753	0.000	0.000	46.094	42.873	104.019	MWD+IFR1+MS
12800.000	90.000	269.811	10409.997	34.232	0.000	46.526	0.000	34.232	0.000	0.000	46.694	42.902	102.230	MWD+IFR1+MS
12900.000	90.000	269.811	10409.997	34.723	0.000	47.164	0.000	34.723	0.000	0.000	47.318	42.928	100.862	MWD+IFR1+MS
13000.000	90.000	269.811	10409.997	35.224	0.000	47.819	0.000	35.224	0.000	0.000	47.962	42.950	99.783	MWD+IFR1+MS
13100.000	90.000	269.811	10409.997	35.735	0.000	48.492	0.000	35.735	0.000	0.000	48.625	42.972	98.911	MWD+IFR1+MS
13200.000	90.000	269.811	10409.997	36.256	0.000	49.181	0.000	36.256	0.000	0.000	49.307	42.992	98.192	MWD+IFR1+MS
13300.000	90.000	269.811	10409.997	36.786	0.000	49.886	0.000	36.786	0.000	0.000	50.005	43.011	97.588	MWD+IFR1+MS
13400.000	90.000	269.811	10409.997	37.325	0.000	50.605	0.000	37.325	0.000	0.000	50.719	43.031	97.073	MWD+IFR1+MS
13500.000	90.000	269.811	10409.997	37.873	0.000	51.340	0.000	37.873	0.000	0.000	51.448	43.050	96.629	MWD+IFR1+MS
13600.000	90.000	269.811	10409.997	38.429	0.000	52.088	0.000	38.429	0.000	0.000	52.192	43.069	96.242	MWD+IFR1+MS
13700.000	90.000	269.811	10409.997	38.993	0.000	52.849	0.000	38.993	0.000	0.000	52.949	43.088	95.900	MWD+IFR1+MS
13800.000	90.000	269.811	10409.997	39.565	0.000	53.623	0.000	39.565	0.000	0.000	53.720	43.107	95.597	MWD+IFR1+MS
13900.000	90.000	269.811	10409.997	40.143	0.000	54.408	0.000	40.143	0.000	0.000	54.503	43.127	95.326	MWD+IFR1+MS
14000.000	90.000	269.811	10409.997	40.729	0.000	55.206	0.000	40.729	0.000	0.000	55.297	43.147	95.081	MWD+IFR1+MS
14100.000	90.000	269.811	10409.997	41.321	0.000	56.015	0.000	41.321	0.000	0.000	56.103	43.167	94.860	MWD+IFR1+MS
14200.000	90.000	269.811	10409.997	41.920	0.000	56.834	0.000	41.920	0.000	0.000	56.920	43.188	94.658	MWD+IFR1+MS
14300.000	90.000	269.811	10409.997	42.524	0.000	57.663	0.000	42.524	0.000	0.000	57.747	43.209	94.474	MWD+IFR1+MS
14400.000	90.000	269.811	10409.997	43.134	0.000	58.502	0.000	43.134	0.000	0.000	58.584	43.230	94.304	MWD+IFR1+MS
14500.000	90.000	269.811	10409.997	43.750	0.000	59.351	0.000	43.750	0.000	0.000	59.431	43.252	94.148	MWD+IFR1+MS
14600.000	90.000	269.811	10409.997	44.372	0.000	60.208	0.000	44.372	0.000	0.000	60.286	43.274	94.003	MWD+IFR1+MS
14700.000	90.000	269.811	10409.997	44.998	0.000	61.074	0.000	44.998	0.000	0.000	61.150	43.297	93.868	MWD+IFR1+MS
14800.000	90.000	269.811	10409.997	45.629	0.000	61.948	0.000	45.629	0.000	0.000	62.023	43.320	93.743	MWD+IFR1+MS
14900.000	90.000	269.811	10409.997	46.265	0.000	62.830	0.000	46.265	0.000	0.000	62.903	43.344	93.625	MWD+IFR1+MS
15000.000	90.000	269.811	10409.997	46.906	0.000	63.720	0.000	46.906	0.000	0.000	63.791	43.368	93.516	MWD+IFR1+MS
15100.000	90.000	269.811	10409.997	47.551	0.000	64.616	0.000	47.551	0.000	0.000	64.686	43.392	93.412	MWD+IFR1+MS
15200.000	90.000	269.811	10409.997	48.199	0.000	65.520	0.000	48.199	0.000	0.000	65.589	43.417	93.315	MWD+IFR1+MS
15300.000	90.000	269.811	10409.997	48.852	0.000	66.430	0.000	48.852	0.000	0.000	66.498	43.443	93.224	MWD+IFR1+MS
15400.000	90.000	269.811	10409.997	49.509	0.000	67.347	0.000	49.509	0.000	0.000	67.413	43.469	93.137	MWD+IFR1+MS
15500.000	90.000	269.811	10409.997	50.170	0.000	68.269	0.000	50.170	0.000	0.000	68.335	43.496	93.056	MWD+IFR1+MS
15600.000	90.000	269.811	10409.997	50.834	0.000	69.198	0.000	50.834	0.000	0.000	69.262	43.523	92.978	MWD+IFR1+MS
15700.000	90.000	269.811	10409.997	51.501	0.000	70.132	0.000	51.501	0.000	0.000	70.195	43.550	92.904	MWD+IFR1+MS

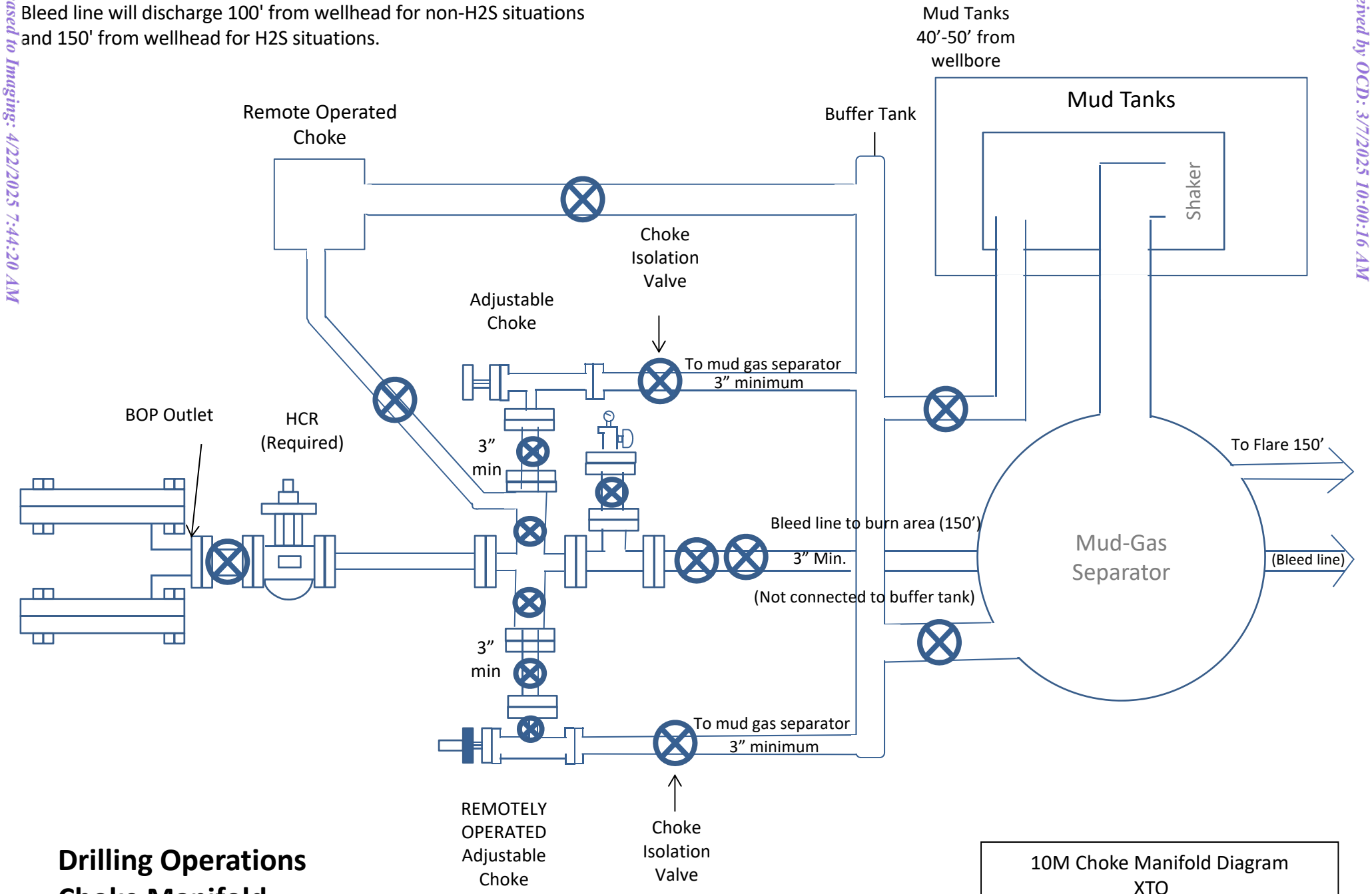
15800.000	90.000	269.811	10409.997	52.172	0.000	71.072	0.000	52.172	0.000	0.000	71.134	43.578	92.834	MWD+IFR1+MS
15900.000	90.000	269.811	10409.997	52.845	0.000	72.017	0.000	52.845	0.000	0.000	72.078	43.607	92.767	MWD+IFR1+MS
16000.000	90.000	269.811	10409.997	53.522	0.000	72.967	0.000	53.522	0.000	0.000	73.026	43.636	92.704	MWD+IFR1+MS
16100.000	90.000	269.811	10409.997	54.202	0.000	73.921	0.000	54.202	0.000	0.000	73.980	43.666	92.643	MWD+IFR1+MS
16200.000	90.000	269.811	10409.997	54.885	0.000	74.880	0.000	54.885	0.000	0.000	74.938	43.696	92.585	MWD+IFR1+MS
16300.000	90.000	269.811	10409.997	55.570	0.000	75.844	0.000	55.570	0.000	0.000	75.901	43.727	92.529	MWD+IFR1+MS
16400.000	90.000	269.811	10409.997	56.258	0.000	76.812	0.000	56.258	0.000	0.000	76.868	43.758	92.476	MWD+IFR1+MS
16500.000	90.000	269.811	10409.997	56.948	0.000	77.784	0.000	56.948	0.000	0.000	77.840	43.789	92.425	MWD+IFR1+MS
16600.000	90.000	269.811	10409.997	57.641	0.000	78.760	0.000	57.641	0.000	0.000	78.815	43.822	92.376	MWD+IFR1+MS
16700.000	90.000	269.811	10409.997	58.336	0.000	79.740	0.000	58.336	0.000	0.000	79.794	43.854	92.328	MWD+IFR1+MS
16800.000	90.000	269.811	10409.997	59.033	0.000	80.724	0.000	59.033	0.000	0.000	80.777	43.887	92.283	MWD+IFR1+MS
16900.000	90.000	269.811	10409.997	59.733	0.000	81.711	0.000	59.733	0.000	0.000	81.763	43.921	92.239	MWD+IFR1+MS
17000.000	90.000	269.811	10409.997	60.434	0.000	82.701	0.000	60.434	0.000	0.000	82.753	43.955	92.197	MWD+IFR1+MS
17100.000	90.000	269.811	10409.997	61.138	0.000	83.695	0.000	61.138	0.000	0.000	83.746	43.990	92.157	MWD+IFR1+MS
17200.000	90.000	269.811	10409.997	61.843	0.000	84.692	0.000	61.843	0.000	0.000	84.742	44.025	92.118	MWD+IFR1+MS
17300.000	90.000	269.811	10409.997	62.551	0.000	85.692	0.000	62.551	0.000	0.000	85.742	44.061	92.080	MWD+IFR1+MS
17400.000	90.000	269.811	10409.997	63.260	0.000	86.695	0.000	63.260	0.000	0.000	86.744	44.097	92.043	MWD+IFR1+MS
17500.000	90.000	269.811	10409.997	63.971	0.000	87.701	0.000	63.971	0.000	0.000	87.750	44.134	92.008	MWD+IFR1+MS
17600.000	90.000	269.811	10409.997	64.684	0.000	88.710	0.000	64.684	0.000	0.000	88.758	44.171	91.974	MWD+IFR1+MS
17700.000	90.000	269.811	10409.997	65.398	0.000	89.721	0.000	65.398	0.000	0.000	89.768	44.209	91.941	MWD+IFR1+MS
17800.000	90.000	269.811	10409.997	66.114	0.000	90.735	0.000	66.114	0.000	0.000	90.782	44.248	91.909	MWD+IFR1+MS
17900.000	90.000	269.811	10409.997	66.832	0.000	91.752	0.000	66.832	0.000	0.000	91.798	44.286	91.878	MWD+IFR1+MS
18000.000	90.000	269.811	10409.997	67.551	0.000	92.771	0.000	67.551	0.000	0.000	92.816	44.326	91.848	MWD+IFR1+MS
18100.000	90.000	269.811	10409.997	68.272	0.000	93.792	0.000	68.272	0.000	0.000	93.837	44.365	91.819	MWD+IFR1+MS
18200.000	90.000	269.811	10409.997	68.993	0.000	94.815	0.000	68.993	0.000	0.000	94.860	44.406	91.790	MWD+IFR1+MS
18300.000	90.000	269.811	10409.997	69.717	0.000	95.841	0.000	69.717	0.000	0.000	95.885	44.447	91.763	MWD+IFR1+MS
18400.000	90.000	269.811	10409.997	70.441	0.000	96.869	0.000	70.441	0.000	0.000	96.912	44.488	91.736	MWD+IFR1+MS
18500.000	90.000	269.811	10409.997	71.167	0.000	97.899	0.000	71.167	0.000	0.000	97.941	44.530	91.710	MWD+IFR1+MS
18600.000	90.000	269.811	10409.997	71.894	0.000	98.930	0.000	71.894	0.000	0.000	98.973	44.572	91.685	MWD+IFR1+MS
18700.000	90.000	269.811	10409.997	72.623	0.000	99.964	0.000	72.623	0.000	0.000	100.006	44.615	91.661	MWD+IFR1+MS
18800.000	90.000	269.811	10409.997	73.352	0.000	101.000	0.000	73.352	0.000	0.000	101.041	44.658	91.637	MWD+IFR1+MS
18900.000	90.000	269.811	10409.997	74.083	0.000	102.037	0.000	74.083	0.000	0.000	102.078	44.702	91.613	MWD+IFR1+MS
19000.000	90.000	269.811	10409.997	74.814	0.000	103.076	0.000	74.814	0.000	0.000	103.117	44.746	91.591	MWD+IFR1+MS

19100.000	90.000	269.811	10409.997	75.547	0.000	104.117	0.000	75.547	0.000	0.000	104.157	44.791	91.569	MWD+IFR1+MS
19200.000	90.000	269.811	10409.997	76.281	0.000	105.160	0.000	76.281	0.000	0.000	105.199	44.836	91.547	MWD+IFR1+MS
19300.000	90.000	269.811	10409.997	77.016	0.000	106.204	0.000	77.016	0.000	0.000	106.243	44.882	91.526	MWD+IFR1+MS
19400.000	90.000	269.811	10409.997	77.751	0.000	107.250	0.000	77.751	0.000	0.000	107.288	44.928	91.506	MWD+IFR1+MS
19500.000	90.000	269.811	10409.997	78.488	0.000	108.297	0.000	78.488	0.000	0.000	108.335	44.975	91.486	MWD+IFR1+MS
19600.000	90.000	269.811	10409.997	79.226	0.000	109.345	0.000	79.226	0.000	0.000	109.383	45.022	91.466	MWD+IFR1+MS
19700.000	90.000	269.811	10409.997	79.964	0.000	110.396	0.000	79.964	0.000	0.000	110.433	45.070	91.447	MWD+IFR1+MS
19800.000	90.000	269.811	10409.997	80.704	0.000	111.447	0.000	80.704	0.000	0.000	111.484	45.118	91.429	MWD+IFR1+MS
19900.000	90.000	269.811	10409.997	81.444	0.000	112.500	0.000	81.444	0.000	0.000	112.537	45.166	91.411	MWD+IFR1+MS
20000.000	90.000	269.811	10409.997	82.185	0.000	113.554	0.000	82.185	0.000	0.000	113.590	45.215	91.393	MWD+IFR1+MS
20100.000	90.000	269.811	10409.997	82.927	0.000	114.609	0.000	82.927	0.000	0.000	114.646	45.265	91.376	MWD+IFR1+MS
20200.000	90.000	269.811	10409.997	83.670	0.000	115.666	0.000	83.670	0.000	0.000	115.702	45.315	91.359	MWD+IFR1+MS
20300.000	90.000	269.811	10409.997	84.413	0.000	116.724	0.000	84.413	0.000	0.000	116.759	45.366	91.342	MWD+IFR1+MS
20400.000	90.000	269.811	10409.997	85.157	0.000	117.783	0.000	85.157	0.000	0.000	117.818	45.417	91.326	MWD+IFR1+MS
20495.238	90.000	269.811	10409.997	85.866	0.000	118.793	0.000	85.866	0.000	0.000	118.827	45.466	91.311	MWD+IFR1+MS
20500.000	90.000	269.811	10409.997	85.902	0.000	118.843	0.000	85.902	0.000	0.000	118.878	45.468	91.310	MWD+IFR1+MS
20544.428	90.000	269.811	10409.997	86.232	0.000	119.313	0.000	86.232	0.000	0.000	119.348	45.491	91.303	MWD+IFR1+MS

Plan Targets

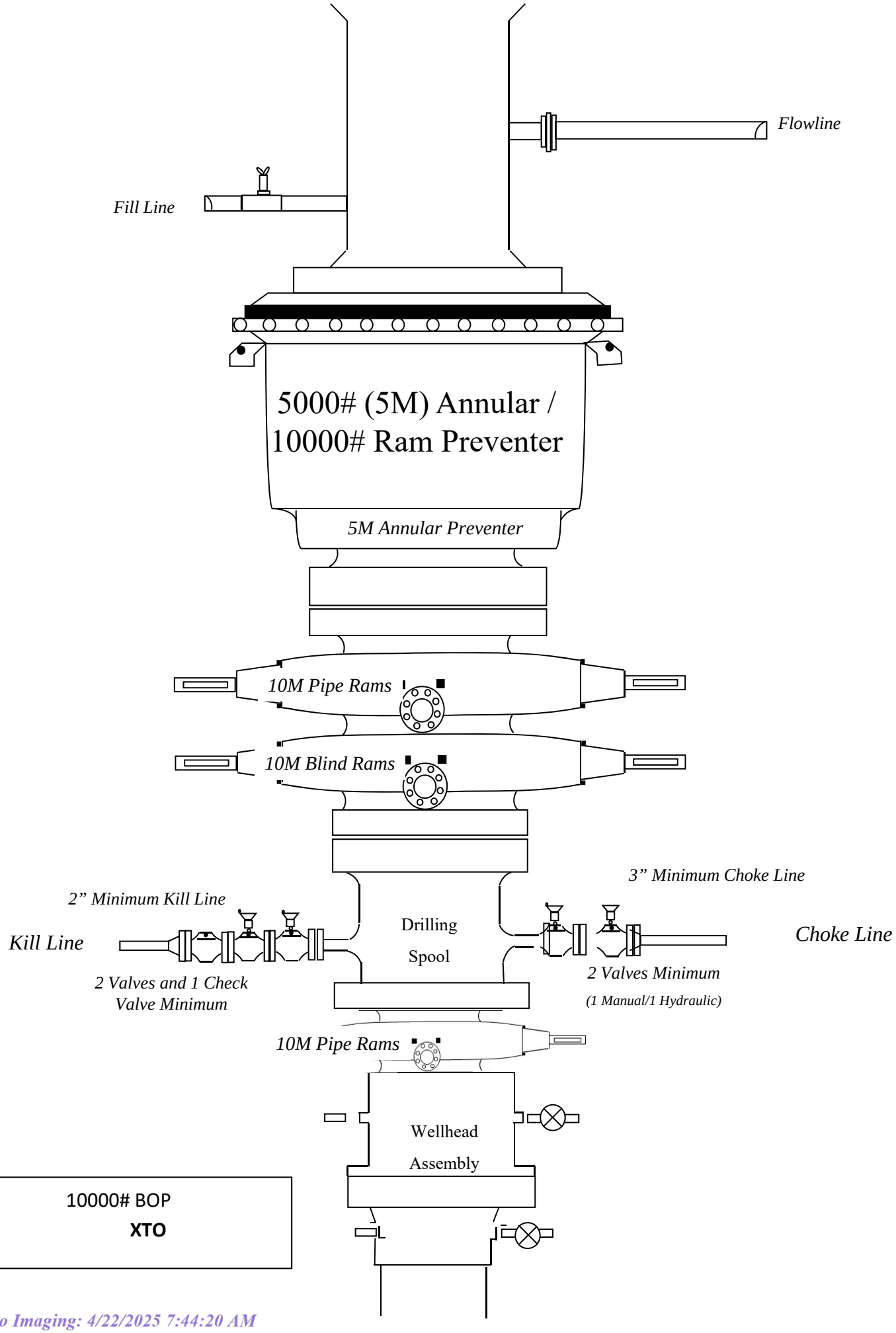
Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 4	10697.55	507469.30	656546.80	7032.00	CIRCLE
LTP 4	20494.42	507435.50	646279.40	7032.00	CIRCLE
BHL 4	20544.42	507435.30	646229.40	7032.00	CIRCLE

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

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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.

U. S. Steel Tubular Products
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Spring, Texas 77380

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www.usstubular.com

U. S. Steel Tubular Products

11/8/2023 1:08:50 PM

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

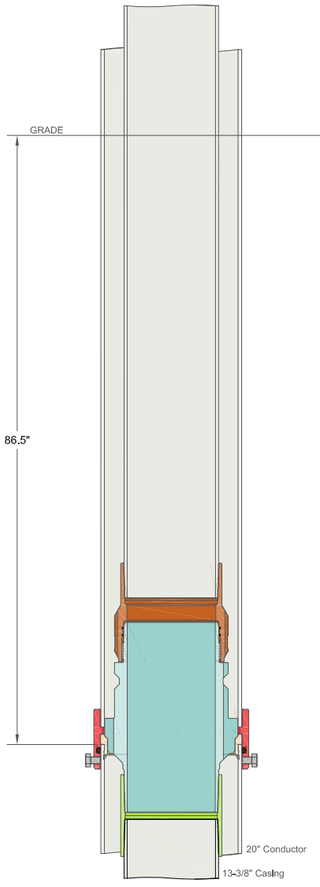
MECHANICAL PROPERTIES	Pipe	USS-FREEDOM HTQ®		--
Minimum Yield Strength	110,000	--	psi	--
Maximum Yield Strength	125,000	--	psi	--
Minimum Tensile Strength	125,000	--	psi	--
DIMENSIONS	**Pipe**	**USS-FREEDOM HTQ®**		**--**
Outside Diameter	5.500	6.300	in.	--
Wall Thickness	0.361	--	in.	--
Inside Diameter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

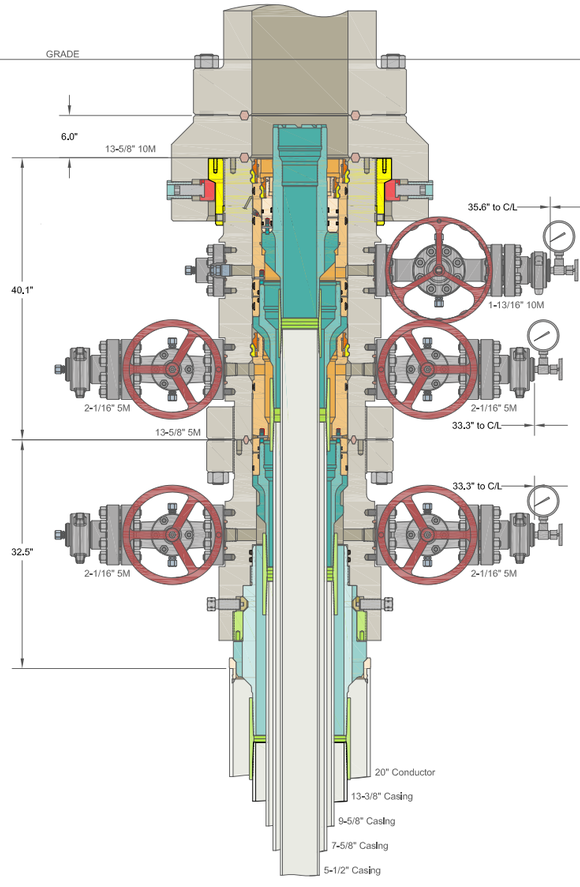
Notes

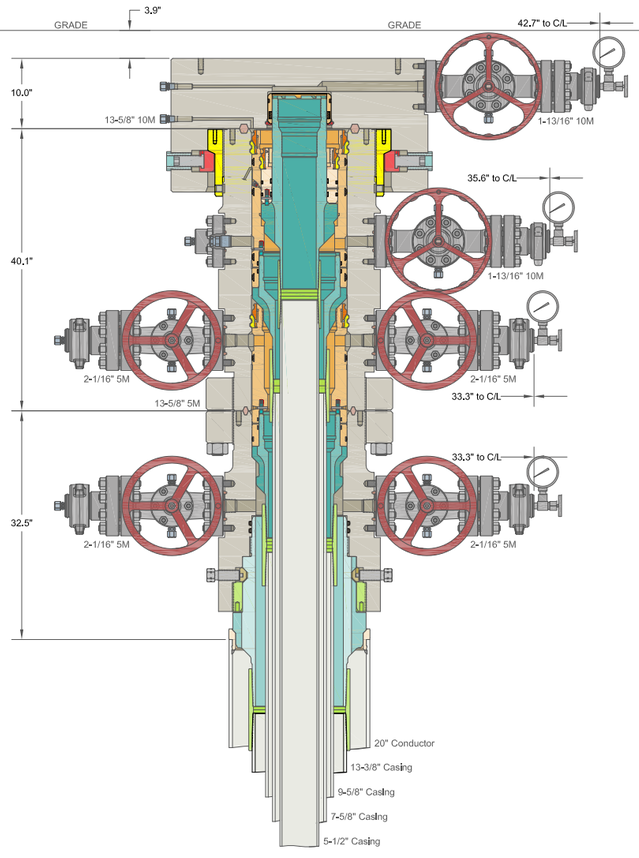
1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength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

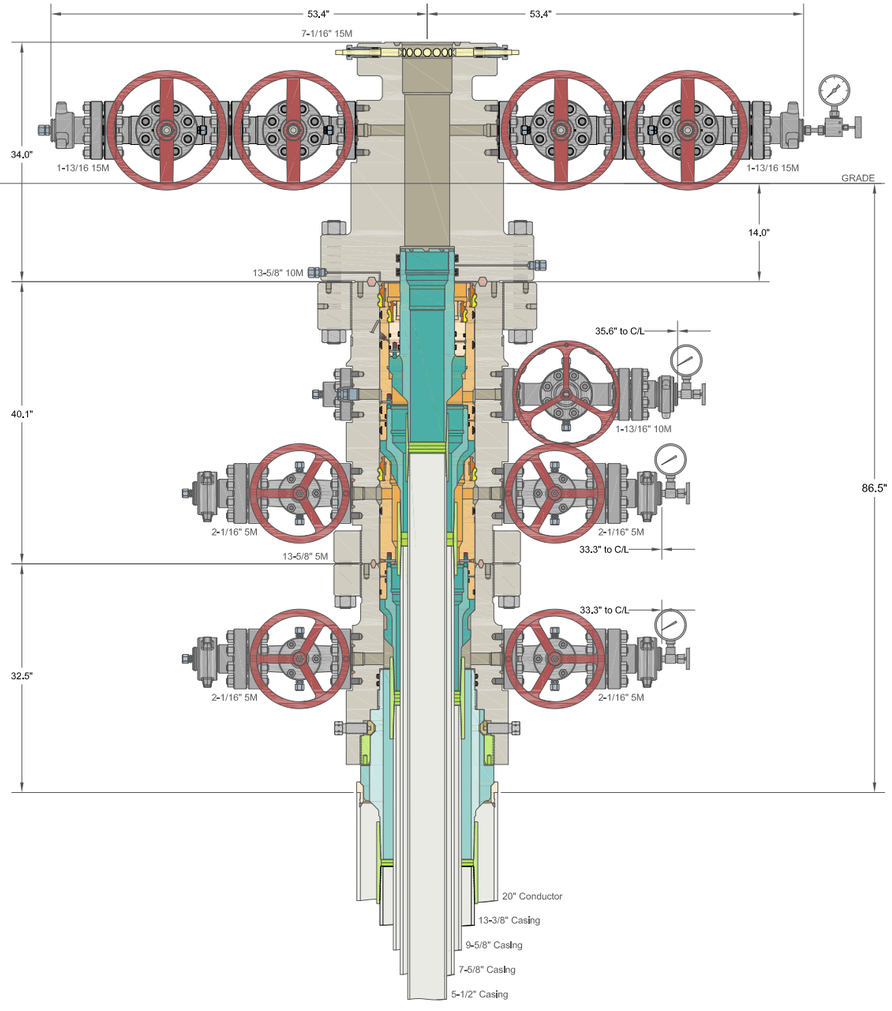
U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

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









ALL DIMENSIONS APPROXIMA

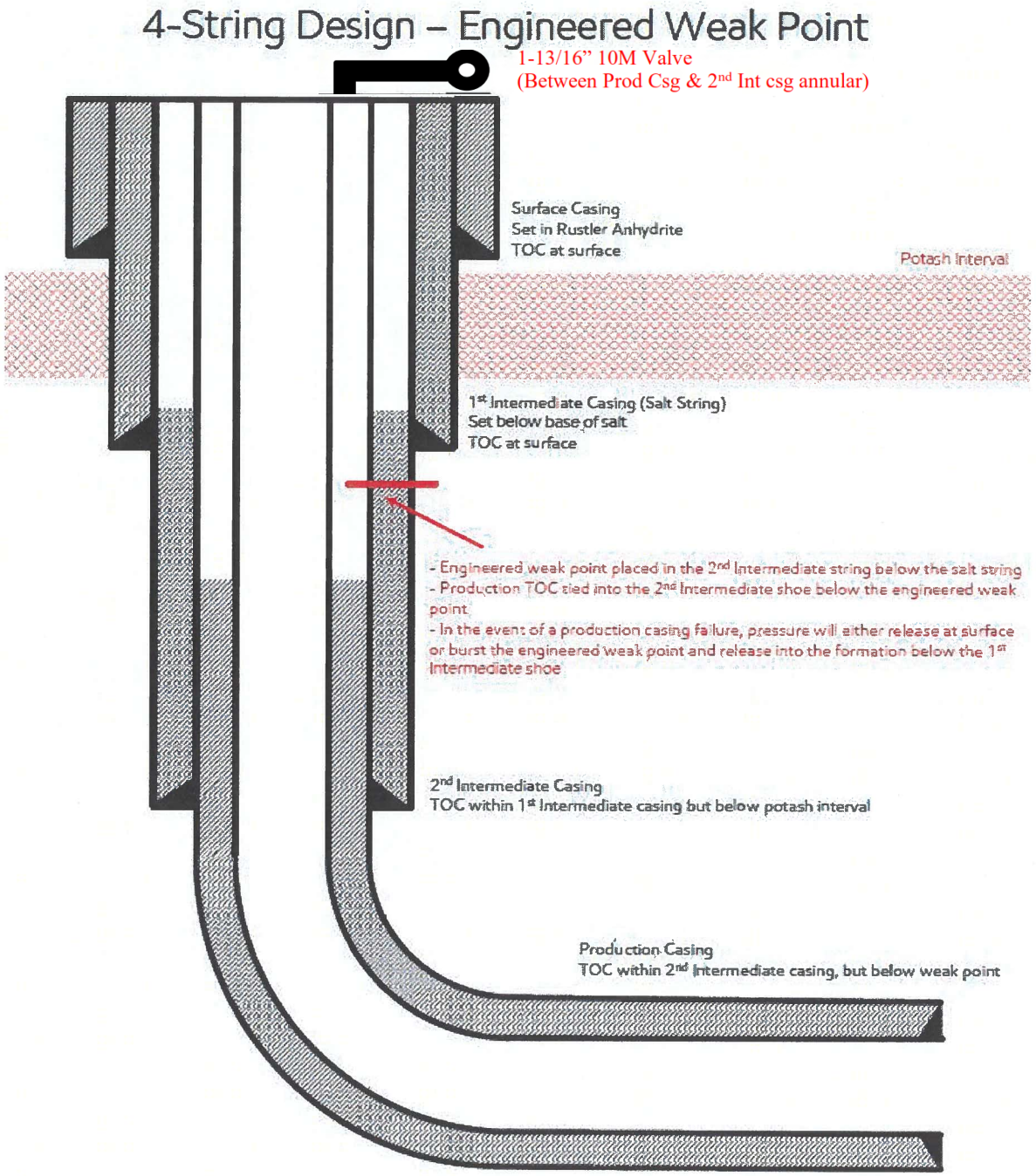
CACTUS WELLHEAD LLC

(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

31592723_v1

Update May 2024:
XTO is aware of the R111-Q update and will comply with these requirements including (but not limited to):
1) Alignment with KPLA requirements per schematic above, leaving open annulus for pressure monitoring during frac and utilizing new casing that meets API standards
2) Contingency plans in place to divert formation fluids away from salt interval in event of production casing failure
3) Bradenhead squeeze to be completed within 180days to tie back TOC to salt string at least 500ft but with top below Marker Bed 126
4) Production cement to be tied back no less than 500ft inside previous casing shoe

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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:	OGRID:
XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	373075
	Action Number: 440294
	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.	4/22/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	4/22/2025