

Well Name: JRU APACHE FEDERAL COM	Well Location: T22S / R30E / SEC 24 / NENE / 32.383554 / -103.828915	County or Parish/State: EDDY / NM
Well Number: 711H	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: 2839936

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/04/2025

Time Sundry Submitted: 02:37

Date proposed operation will begin: 03/07/2025

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: 471' FNL & 1028' FEL OF SECTION 24-T22S-R30E 318' FNL & 850' FEL OF SECTION 24-T22S-R30E KOP: 471' FNL & 1028' FEL OF SECTION 24-T22S-R30E 1040' FSL & 330' FEL OF SECTION 13-T22S-R30E FTP: 2450' FSL & 330' FEL OF SECTION 24-T22S-R30E 1040' FSL & 330' FEL OF SECTION 13-T22S-R30E LTP: 2450' FSL & 2540' FEL OF SECTION 23-T22S-R30E 1040' FSL & 100' FWL OF SECTION 14-T22S-R30E BHL: 2450' FSL & 2590' FEL OF SECTION 23-T22S-R30E 1040' FSL & 50' FWL OF SECTION 14-T22S-R30E The proposed total depth is changing from 18236' MD/9737' TVD to 21123.07' MD/10933' TVD There will be no new surface disturbance. 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_711H_20250304143632.pdf

Received by OCD: 4/4/2025 8:31:19 AM

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Conditions of Approval

Additional

JRU_Apache_Fed_Com_711H_COA_20250403091333.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: MAR 04, 2025 02:36 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 <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> 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			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

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

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

Additional Information

Additional Remarks

There will be no new surface disturbance.

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

Location of Well

0. SHL: NENE / 471 FNL / 1028 FEL / TWSP: 22S / RANGE: 30E / SECTION: 24 / LAT: 32.383554 / LONG: -103.828915 (TVD: 0 feet, MD: 0 feet)

PPP: NESE / 2450 FSL / 330 FEL / TWSP: 22S / RANGE: 30E / SECTION: 24 / LAT: 32.377069 / LONG: -103.826659 (TVD: 9814 feet, MD: 10700 feet)

BHL: NWSE / 2450 FSL / 2590 FEL / TWSP: 22S / RANGE: 30E / SECTION: 23 / LAT: 32.37711 / LONG: -103.851319 (TVD: 9737 feet, MD: 18236 feet)

CONFIDENTIAL

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.:	JRU Apache Fed Com 711H
SURFACE HOLE FOOTAGE:	318'/N & 850'/E
BOTTOM HOLE FOOTAGE:	1040'/S & 50'/W

Changes approved through engineering via **Sundry 2839936** on 4-3-2025 _____. Any previous COAs not addressed within the updated COAs still apply.

COA

H ₂ S	<input checked="" type="radio"/> No <input type="radio"/> Yes		
Potash / WIPP	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" type="radio"/> R-111-Q <input checked="" type="checkbox"/> Open Annulus 4-String Design: Engineered Weak Point <input checked="" type="checkbox"/> WIPP
Cave / Karst	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High <input type="radio"/> Critical
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both <input type="radio"/> Diverter
Cementing	<input checked="" type="checkbox"/> Primary Squeeze	<input type="checkbox"/> Cont. Squeeze	<input checked="" type="checkbox"/> EchoMeter <input type="checkbox"/> DV Tool
Special Req	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM <input type="checkbox"/> Unit
Waste Prev.	<input type="radio"/> Self-Certification	<input checked="" type="radio"/> Waste Min. Plan	<input type="radio"/> APD Submitted prior to 06/10/2024
Additional Language	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole <input checked="" type="checkbox"/> Break Testing
	<input checked="" type="checkbox"/> Four-String	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> 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 **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.

3. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

 - a. **First stage:** Operator will cement with intent to reach the top of the **Brushy Canyon at 6629'**.
 - 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.

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).

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).
2. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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 4/3/2025
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:	<input type="checkbox"/> Initial Submittal
			<input checked="" type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

WELL LOCATION INFORMATION			
API Number 30-015-	Pool Code 40295	Pool Name LOS MEDANOS, BONE SPRING	
Property Code	Property Name JRU Apache Federal Com	Well Number 711H	
OGRID No. 373075	Operator Name XTO PERMIAN OPERATING, LLC.	Ground Level Elevation 3,375'	
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	

Surface Hole Location									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	24	22S	30E		318 FNL	850 FEL	32.383974	-103.828339	EDDY

Bottom Hole Location									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
M	14	22S	30E		1,040 FSL	50 FWL	32.387760	-103.860081	EDDY


Dedicated Acres 640.00	Infill or Defining Well INFILL	Defining Well API	Overlapping Spacing Unit (Y/N) Y	Consolidation Code U
Order Numbers. R-279-C			Well Setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	13	22S	30E		1,040 FSL	330 FEL	32.387706	-103.826653	EDDY

First Take Point (FTP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	13	22S	30E		1,040 FSL	330 FEL	32.387706	-103.826653	EDDY

Last Take Point (LTP)									
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
M	14	22S	30E		1,040 FSL	100 FWL	32.387760	-103.859919	EDDY

Unitized Area of Area of Interest NMMN-070965X	Spacing Unit Type : <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Elevation 3,375'
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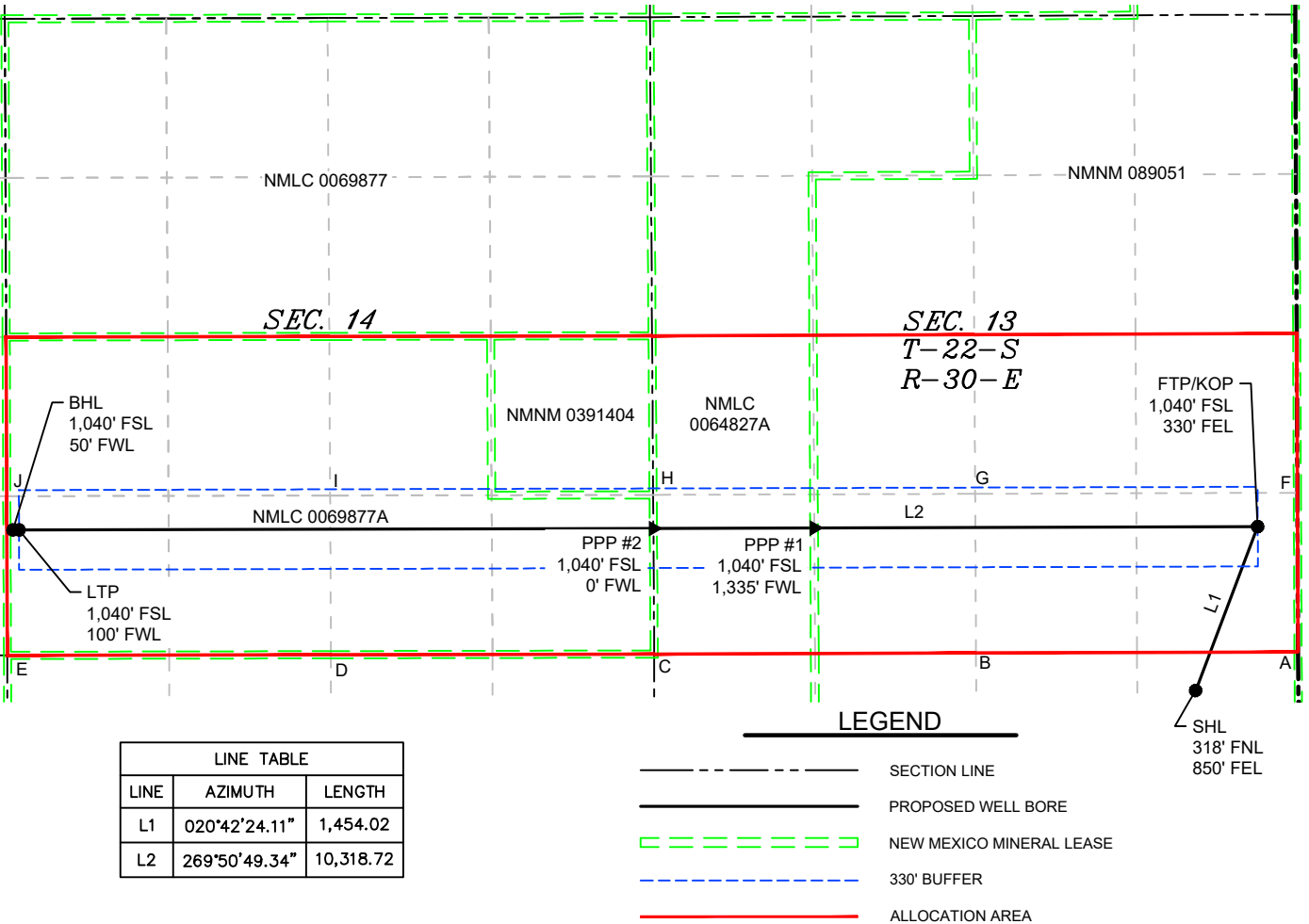
<div>OPERATOR CERTIFICATIONS</div> <div><p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land 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.</p><p>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.</p><div><div>Srinivas Naveen</div><div>1/6/25</div></div><div>SignatureDate</div><div>Srinivas Naveen Laghuvarapu</div><div>Printed Name</div><div>srinivas.n.laghuvarapu@exxonmobil.com</div><div>Email Address</div></div>	<div>SURVEYOR CERTIFICATIONS</div> <div><p>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</p><div><div></div><div>Signature and Seal of Professional Surveyor</div></div><div><div>MARK DILLON HARP 23786</div><div>12/9/2024</div></div><div>Certificate NumberDate of Survey</div><div>KT618.013002.10-39</div></div>
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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.

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.



COORDINATE TABLE																	
SHL (NAD 83 NME)			FTP/KOP (NAD 83 NME)			PPP1 (NAD 83 NME)			PPP2 (NAD 83 NME)			LTP (NAD 83 NME)					
Y =	503,789.2	N	Y =	505,149.3	N	Y =	505,137.6	N	Y =	505,133.3	N	Y =	505,121.9	N			
X =	697,224.6	E	X =	697,738.7	E	X =	694,063.3	E	X =	692,728.7	E	X =	687,470.1	E			
LAT. =	32.383974	°N	LAT. =	32.387706	°N	LAT. =	32.387721	°N	LAT. =	32.387726	°N	LAT. =	32.387760	°N			
LONG. =	103.828339	°W	LONG. =	103.826653	°W	LONG. =	103.838560	°W	LONG. =	103.842883	°W	LONG. =	103.859919	°W			
						BHL (NAD 83 NME)											
						Y =	505,121.8	N									
						X =	687,420.1	E									
						LAT. =	32.387760	°N									
						LONG. =	103.860081	°W									
SHL (NAD 27 NME)			FTP/KOP (NAD 27 NME)			PPP1 (NAD 27 NME)			PPP2 (NAD 27 NME)			LTP (NAD 27 NME)					
Y =	503,728.6	N	Y =	505,088.7	N	Y =	505,077.0	N	Y =	505,072.7	N	Y =	505,061.2	N			
X =	656,043.1	E	X =	656,557.2	E	X =	652,881.8	E	X =	651,547.2	E	X =	646,288.6	E			
LAT. =	32.383851	°N	LAT. =	32.387583	°N	LAT. =	32.387598	°N	LAT. =	32.387603	°N	LAT. =	32.387637	°N			
LONG. =	103.827846	°W	LONG. =	103.826159	°W	LONG. =	103.838066	°W	LONG. =	103.842389	°W	LONG. =	103.859424	°W			
						BHL (NAD 27 NME)											
						Y =	505,061.1	N									
						X =	646,238.6	E									
						LAT. =	32.387637	°N									
						LONG. =	103.859586	°W									
CORNER COORDINATES (NAD 83 NME)						CORNER COORDINATES (NAD 27 NME)											
A - Y =	504,110.5	N	A - X =	698,073.3	E							A - Y =	504,049.9	N	A - X =	656,891.7	E
B - Y =	504,101.3	N	B - X =	695,403.9	E							B - Y =	504,040.7	N	B - X =	654,222.4	E
C - Y =	504,092.8	N	C - X =	692,735.3	E							C - Y =	504,032.2	N	C - X =	651,553.8	E
D - Y =	504,087.6	N	D - X =	690,056.2	E							D - Y =	504,026.9	N	D - X =	648,874.7	E
E - Y =	504,081.7	N	E - X =	687,374.1	E							E - Y =	504,021.0	N	E - X =	646,192.7	E
F - Y =	505,430.3	N	F - X =	698,067.5	E							F - Y =	505,369.7	N	F - X =	656,886.0	E
G - Y =	505,421.3	N	G - X =	695,396.5	E							G - Y =	505,360.7	N	G - X =	654,215.0	E
H - Y =	505,412.6	N	H - X =	692,726.6	E							H - Y =	505,351.9	N	H - X =	651,545.1	E
I - Y =	505,407.3	N	I - X =	690,049.1	E							I - Y =	505,346.6	N	I - X =	648,867.6	E
J - Y =	505,401.8	N	J - X =	687,369.0	E							J - Y =	505,341.1	N	J - X =	646,187.5	E

KT

618.013002.10-39

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

XTO Energy Inc.

JRU Apache Federal Com 711H

Projected TD: 21123.07' MD / 10933' TVD

SHL: 318' FNL & 850' FEL , Section 24, T22S, R30E

BHL: 1040' FSL & 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	483'	Water
Top of Salt	773'	Water
MB 126	1467'	Water
Base of Salt	3628'	Water
Delaware	3886'	Water
Brushy Canyon	6629'	Water/Oil/Gas
Bone Spring	7765'	Water
1st Bone Spring Ss	8685'	Water/Oil/Gas
2nd Bone Spring Ss	9271'	Water/Oil/Gas
3rd Bone Spring Sh	9913'	Water/Oil/Gas
Target/Land Curve	10933'	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 @ 748' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9.625 inch casing at 3728' 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 10016.8'. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 21123.07 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' – 748'	13.375	54.5	J-55	BTC	New	2.45	3.42	22.30
12.25	0' – 3728'	9.625	40	J-55	BTC	New	1.59	2.42	4.22
8.75	0' – 3828'	7.625	29.7	RY P-110	Flush Joint	New	2.79	2.99	1.88
8.75	3828' – 10016.8'	7.625	29.7	HC L-80	Flush Joint	New	2.03	3.20	2.21
6.75	0' – 9916.8'	5.5	20	RY P-110	Semi-Premium / Freedom	New	1.26	2.11	2.15
6.75	9916.8' - 21123.07'	5.5	20	RY P-110	Semi-Flush / Talon	New	1.26	1.91	6.46

· 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 attachment.

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 +/- 748'

Lead: 330 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 +/- 3728'

Lead: 1540 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 +/- 10016.8'

Tail: 200 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

TOC:@ 6629

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: 3228

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 at the top of Brushy Canyon (TOC:@ 6629') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to 3228 (~500' inside 1st Intermediate csg string but below MB126 @ 1467').

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 +/- 21123.07'

Lead: 30 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 9516.8 feet
Tail: 770 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 10395.63 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' - 748'	17.5	FW/Native	8.5-9	35-40	NC	Fresh water or native water
748' - 3728'	12.25	Sat Brine	10-10.5	30-32	NC	Fully Saturated salt across salado
3728' to 10016.8'	8.75	BDE/OBM or FW/Brine	9-9.5	30-32	NC	Depending on well conditions
10016.8' to 21123.07'	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 5799 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:	21123.07 ft	Site:	H
TVD RKB:	10933.00 ft	Slot:	
Location			
Cartographic Reference System:	New Mexico East - NAD 27		
Northing:	503728.60 ft		
Easting:	656043.10 ft		
RKB:	3407.00 ft		
Ground Level:	3375.00 ft		
North Reference:	Grid		
Convergence Angle:	0.27 Deg		

Plan Sections

Measured			TVD			Build		Turn	Dogleg	
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate	Target	
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00		
4432.31	14.65	20.71	4424.36	87.08	32.91	2.00	0.00	2.00		
9446.52	14.65	20.71	9275.64	1273.02	481.19	0.00	0.00	0.00		
10178.83	0.00	0.00	10000.00	1360.10	514.10	-2.00	0.00	2.00		
10395.63	0.00	0.00	10216.80	1360.10	514.10	0.00	0.00	0.00		
11520.63	90.00	269.85	10933.00	1358.19	-202.09	8.00	0.00	8.00		
21072.53	90.00	269.85	10933.00	1332.68	-9753.96	0.00	0.00	0.00	LTP	19
21123.07	90.00	269.85	10933.00	1332.55	-9804.49	0.00	0.00	0.00	BHL	19

Position Uncertainty

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

Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	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	2.407	0.000	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.444	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	2.486	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	2.532	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	2.635	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	2.751	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	2.814	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	2.879	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	2.946	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	3.016	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	3.088	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	3.161	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	3.237	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	3.314	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	3.393	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	3.473	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	3.555	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	3.638	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	3.722	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	3.808	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	3.896	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	4.543	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	4.641	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	20.706	3799.980	14.463	0.000	13.635	0.000	4.841	0.000	0.000	14.575	13.524	129.335	MWD+IFR1+MS
3900.000	4.000	20.706	3899.838	14.958	0.000	13.999	0.000	4.944	0.000	0.000	15.099	13.881	128.519	MWD+IFR1+MS
4000.000	6.000	20.706	3999.452	15.428	0.000	14.361	0.000	5.049	0.000	0.000	15.612	14.236	127.923	MWD+IFR1+MS
4100.000	8.000	20.706	4098.702	15.872	0.000	14.722	0.000	5.158	0.000	0.000	16.114	14.589	127.472	MWD+IFR1+MS
4200.000	10.000	20.706	4197.465	16.292	0.000	15.080	0.000	5.272	0.000	0.000	16.605	14.941	127.123	MWD+IFR1+MS
4300.000	12.000	20.706	4295.623	16.687	0.000	15.437	0.000	5.393	0.000	0.000	17.086	15.291	126.851	MWD+IFR1+MS
4400.000	14.000	20.706	4393.055	17.060	0.000	15.793	0.000	5.522	0.000	0.000	17.556	15.640	126.639	MWD+IFR1+MS
4432.309	14.646	20.706	4424.360	17.131	0.000	15.904	0.000	5.555	0.000	0.000	17.664	15.753	126.596	MWD+IFR1+MS
4500.000	14.646	20.706	4489.851	17.352	0.000	16.138	0.000	5.631	0.000	0.000	17.877	15.989	126.577	MWD+IFR1+MS
4600.000	14.646	20.706	4586.602	17.682	0.000	16.491	0.000	5.749	0.000	0.000	18.197	16.343	126.693	MWD+IFR1+MS
4700.000	14.646	20.706	4683.352	18.018	0.000	16.848	0.000	5.870	0.000	0.000	18.524	16.700	126.888	MWD+IFR1+MS
4800.000	14.646	20.706	4780.103	18.357	0.000	17.208	0.000	5.994	0.000	0.000	18.853	17.058	127.079	MWD+IFR1+MS
4900.000	14.646	20.706	4876.853	18.698	0.000	17.568	0.000	6.121	0.000	0.000	19.185	17.418	127.267	MWD+IFR1+MS
5000.000	14.646	20.706	4973.604	19.042	0.000	17.929	0.000	6.251	0.000	0.000	19.518	17.778	127.452	MWD+IFR1+MS
5100.000	14.646	20.706	5070.355	19.387	0.000	18.292	0.000	6.383	0.000	0.000	19.854	18.140	127.633	MWD+IFR1+MS
5200.000	14.646	20.706	5167.105	19.735	0.000	18.655	0.000	6.518	0.000	0.000	20.192	18.503	127.812	MWD+IFR1+MS
5300.000	14.646	20.706	5263.856	20.084	0.000	19.020	0.000	6.656	0.000	0.000	20.531	18.867	127.987	MWD+IFR1+MS
5400.000	14.646	20.706	5360.606	20.436	0.000	19.385	0.000	6.796	0.000	0.000	20.873	19.232	128.159	MWD+IFR1+MS
5500.000	14.646	20.706	5457.357	20.789	0.000	19.752	0.000	6.939	0.000	0.000	21.216	19.598	128.328	MWD+IFR1+MS
5600.000	14.646	20.706	5554.107	21.144	0.000	20.119	0.000	7.085	0.000	0.000	21.560	19.964	128.494	MWD+IFR1+MS
5700.000	14.646	20.706	5650.858	21.501	0.000	20.487	0.000	7.233	0.000	0.000	21.906	20.332	128.657	MWD+IFR1+MS
5800.000	14.646	20.706	5747.609	21.859	0.000	20.855	0.000	7.384	0.000	0.000	22.254	20.700	128.816	MWD+IFR1+MS
5900.000	14.646	20.706	5844.359	22.219	0.000	21.225	0.000	7.537	0.000	0.000	22.603	21.069	128.972	MWD+IFR1+MS
6000.000	14.646	20.706	5941.110	22.580	0.000	21.594	0.000	7.692	0.000	0.000	22.953	21.438	129.124	MWD+IFR1+MS
6100.000	14.646	20.706	6037.860	22.942	0.000	21.965	0.000	7.851	0.000	0.000	23.305	21.809	129.274	MWD+IFR1+MS
6200.000	14.646	20.706	6134.611	23.306	0.000	22.336	0.000	8.011	0.000	0.000	23.658	22.180	129.419	MWD+IFR1+MS

6300.000	14.646	20.706	6231.361	23.671	0.000	22.708	0.000	8.174	0.000	0.000	24.012	22.551	129.562	MWD+IFR1+MS
6400.000	14.646	20.706	6328.112	24.037	0.000	23.080	0.000	8.339	0.000	0.000	24.367	22.923	129.701	MWD+IFR1+MS
6500.000	14.646	20.706	6424.863	24.404	0.000	23.453	0.000	8.507	0.000	0.000	24.723	23.296	129.837	MWD+IFR1+MS
6600.000	14.646	20.706	6521.613	24.772	0.000	23.826	0.000	8.678	0.000	0.000	25.080	23.669	129.970	MWD+IFR1+MS
6700.000	14.646	20.706	6618.364	25.141	0.000	24.200	0.000	8.850	0.000	0.000	25.438	24.042	130.099	MWD+IFR1+MS
6800.000	14.646	20.706	6715.114	25.511	0.000	24.574	0.000	9.025	0.000	0.000	25.798	24.416	130.224	MWD+IFR1+MS
6900.000	14.646	20.706	6811.865	25.882	0.000	24.949	0.000	9.203	0.000	0.000	26.158	24.791	130.346	MWD+IFR1+MS
7000.000	14.646	20.706	6908.615	26.254	0.000	25.324	0.000	9.383	0.000	0.000	26.519	25.166	130.465	MWD+IFR1+MS
7100.000	14.646	20.706	7005.366	26.627	0.000	25.699	0.000	9.565	0.000	0.000	26.880	25.541	130.580	MWD+IFR1+MS
7200.000	14.646	20.706	7102.117	27.000	0.000	26.075	0.000	9.750	0.000	0.000	27.243	25.917	130.692	MWD+IFR1+MS
7300.000	14.646	20.706	7198.867	27.374	0.000	26.451	0.000	9.937	0.000	0.000	27.606	26.293	130.800	MWD+IFR1+MS
7400.000	14.646	20.706	7295.618	27.749	0.000	26.828	0.000	10.126	0.000	0.000	27.970	26.669	130.904	MWD+IFR1+MS
7500.000	14.646	20.706	7392.368	28.125	0.000	27.204	0.000	10.318	0.000	0.000	28.335	27.046	131.005	MWD+IFR1+MS
7600.000	14.646	20.706	7489.119	28.502	0.000	27.581	0.000	10.512	0.000	0.000	28.701	27.423	131.103	MWD+IFR1+MS
7700.000	14.646	20.706	7585.869	28.879	0.000	27.959	0.000	10.709	0.000	0.000	29.067	27.801	131.196	MWD+IFR1+MS
7800.000	14.646	20.706	7682.620	29.256	0.000	28.336	0.000	10.908	0.000	0.000	29.434	28.178	131.287	MWD+IFR1+MS
7900.000	14.646	20.706	7779.371	29.635	0.000	28.714	0.000	11.110	0.000	0.000	29.801	28.556	131.373	MWD+IFR1+MS
8000.000	14.646	20.706	7876.121	30.014	0.000	29.093	0.000	11.314	0.000	0.000	30.169	28.935	131.456	MWD+IFR1+MS
8100.000	14.646	20.706	7972.872	30.393	0.000	29.471	0.000	11.520	0.000	0.000	30.538	29.313	131.535	MWD+IFR1+MS
8200.000	14.646	20.706	8069.622	30.773	0.000	29.850	0.000	11.729	0.000	0.000	30.907	29.692	131.610	MWD+IFR1+MS
8300.000	14.646	20.706	8166.373	31.154	0.000	30.229	0.000	11.940	0.000	0.000	31.277	30.072	131.682	MWD+IFR1+MS
8400.000	14.646	20.706	8263.123	31.535	0.000	30.608	0.000	12.154	0.000	0.000	31.647	30.451	131.750	MWD+IFR1+MS
8500.000	14.646	20.706	8359.874	31.916	0.000	30.987	0.000	12.370	0.000	0.000	32.018	30.831	131.814	MWD+IFR1+MS
8600.000	14.646	20.706	8456.624	32.298	0.000	31.367	0.000	12.588	0.000	0.000	32.390	31.211	131.874	MWD+IFR1+MS
8700.000	14.646	20.706	8553.375	32.681	0.000	31.747	0.000	12.809	0.000	0.000	32.761	31.591	131.931	MWD+IFR1+MS
8800.000	14.646	20.706	8650.126	33.064	0.000	32.127	0.000	13.033	0.000	0.000	33.134	31.971	131.984	MWD+IFR1+MS
8900.000	14.646	20.706	8746.876	33.447	0.000	32.507	0.000	13.259	0.000	0.000	33.506	32.352	132.033	MWD+IFR1+MS
9000.000	14.646	20.706	8843.627	33.831	0.000	32.887	0.000	13.487	0.000	0.000	33.880	32.733	132.078	MWD+IFR1+MS
9100.000	14.646	20.706	8940.377	34.215	0.000	33.268	0.000	13.718	0.000	0.000	34.253	33.114	132.119	MWD+IFR1+MS
9200.000	14.646	20.706	9037.128	34.599	0.000	33.649	0.000	13.951	0.000	0.000	34.628	33.495	132.156	MWD+IFR1+MS
9300.000	14.646	20.706	9133.878	34.984	0.000	34.029	0.000	14.187	0.000	0.000	35.002	33.876	132.190	MWD+IFR1+MS
9400.000	14.646	20.706	9230.629	35.369	0.000	34.410	0.000	14.426	0.000	0.000	35.377	34.258	132.219	MWD+IFR1+MS
9446.523	14.646	20.706	9275.640	35.547	0.000	34.586	0.000	14.537	0.000	0.000	35.549	34.435	132.163	MWD+IFR1+MS

9500.000	13.577	20.706	9327.503	35.809	0.000	34.787	0.000	14.666	0.000	0.000	35.747	34.637	132.077	MWD+IFR1+MS
9600.000	11.577	20.706	9425.098	36.305	0.000	35.162	0.000	14.912	0.000	0.000	36.156	35.014	131.653	MWD+IFR1+MS
9700.000	9.577	20.706	9523.394	36.787	0.000	35.535	0.000	15.159	0.000	0.000	36.592	35.386	131.099	MWD+IFR1+MS
9800.000	7.577	20.706	9622.271	37.223	0.000	35.903	0.000	15.401	0.000	0.000	37.024	35.754	130.606	MWD+IFR1+MS
9900.000	5.577	20.706	9721.608	37.612	0.000	36.266	0.000	15.640	0.000	0.000	37.450	36.116	130.175	MWD+IFR1+MS
10000.000	3.577	20.706	9821.284	37.955	0.000	36.624	0.000	15.877	0.000	0.000	37.869	36.471	129.804	MWD+IFR1+MS
10100.000	1.577	20.706	9921.178	38.250	0.000	36.975	0.000	16.112	0.000	0.000	38.281	36.821	129.493	MWD+IFR1+MS
10178.832	0.000	0.000	10000.000	37.992	0.000	37.691	0.000	16.297	0.000	0.000	38.574	37.094	129.132	MWD+IFR1+MS
10200.000	0.000	0.000	10021.168	38.063	0.000	37.761	0.000	16.346	0.000	0.000	38.644	37.166	129.115	MWD+IFR1+MS
10300.000	0.000	0.000	10121.168	38.397	0.000	38.097	0.000	16.581	0.000	0.000	38.973	37.508	129.085	MWD+IFR1+MS
10395.632	0.000	0.000	10216.800	38.720	0.000	38.421	0.000	16.810	0.000	0.000	39.293	37.835	129.077	MWD+IFR1+MS
10400.000	0.349	269.847	10221.168	38.428	-0.000	38.731	0.000	16.820	0.000	0.000	39.307	37.850	129.076	MWD+IFR1+MS
10500.000	8.349	269.847	10320.799	38.468	-0.000	39.043	0.000	17.071	0.000	0.000	39.719	38.360	134.937	MWD+IFR1+MS
10600.000	16.349	269.847	10418.406	38.723	-0.000	39.352	0.000	17.417	0.000	0.000	40.634	39.081	-24.602	MWD+IFR1+MS
10700.000	24.349	269.847	10512.089	38.410	-0.000	39.648	0.000	17.932	0.000	0.000	41.669	39.524	-13.889	MWD+IFR1+MS
10800.000	32.349	269.847	10600.024	37.593	-0.000	39.929	0.000	18.674	0.000	0.000	42.621	39.864	-8.835	MWD+IFR1+MS
10900.000	40.349	269.847	10680.500	36.363	-0.000	40.193	0.000	19.664	0.000	0.000	43.421	40.157	-6.125	MWD+IFR1+MS
11000.000	48.349	269.847	10751.951	34.842	-0.000	40.440	0.000	20.894	0.000	0.000	44.048	40.418	-4.541	MWD+IFR1+MS
11100.000	56.349	269.847	10812.986	33.185	-0.000	40.671	0.000	22.332	0.000	0.000	44.504	40.656	-3.617	MWD+IFR1+MS
11200.000	64.349	269.847	10862.417	31.586	-0.000	40.884	0.000	23.926	0.000	0.000	44.804	40.873	-3.161	MWD+IFR1+MS
11300.000	72.349	269.847	10899.281	30.265	-0.000	41.083	0.000	25.618	0.000	0.000	44.973	41.072	-3.110	MWD+IFR1+MS
11400.000	80.349	269.847	10922.862	29.451	-0.000	41.265	0.000	27.348	0.000	0.000	45.047	41.252	-3.460	MWD+IFR1+MS
11500.000	88.349	269.847	10932.700	29.330	-0.000	41.429	0.000	29.058	0.000	0.000	45.068	41.410	-4.226	MWD+IFR1+MS
11520.632	90.000	269.847	10932.997	29.120	0.000	41.459	0.000	29.120	0.000	0.000	45.071	41.438	-4.437	MWD+IFR1+MS
11600.000	90.000	269.847	10932.997	29.296	0.000	41.584	0.000	29.296	0.000	0.000	45.081	41.554	-5.309	MWD+IFR1+MS
11700.000	90.000	269.847	10932.997	29.519	0.000	41.771	0.000	29.519	0.000	0.000	45.097	41.728	-6.534	MWD+IFR1+MS
11800.000	90.000	269.847	10932.997	29.763	0.000	41.989	0.000	29.763	0.000	0.000	45.117	41.928	-7.941	MWD+IFR1+MS
11900.000	90.000	269.847	10932.997	30.025	0.000	42.235	0.000	30.025	0.000	0.000	45.142	42.152	-9.590	MWD+IFR1+MS
12000.000	90.000	269.847	10932.997	30.306	0.000	42.509	0.000	30.306	0.000	0.000	45.174	42.397	-11.566	MWD+IFR1+MS
12100.000	90.000	269.847	10932.997	30.604	0.000	42.811	0.000	30.604	0.000	0.000	45.216	42.660	-13.986	MWD+IFR1+MS
12200.000	90.000	269.847	10932.997	30.919	0.000	43.139	0.000	30.919	0.000	0.000	45.271	42.938	-17.009	MWD+IFR1+MS
12300.000	90.000	269.847	10932.997	31.250	0.000	43.495	0.000	31.250	0.000	0.000	45.345	43.224	-20.836	MWD+IFR1+MS
12400.000	90.000	269.847	10932.997	31.598	0.000	43.876	0.000	31.598	0.000	0.000	45.446	43.509	-25.688	MWD+IFR1+MS

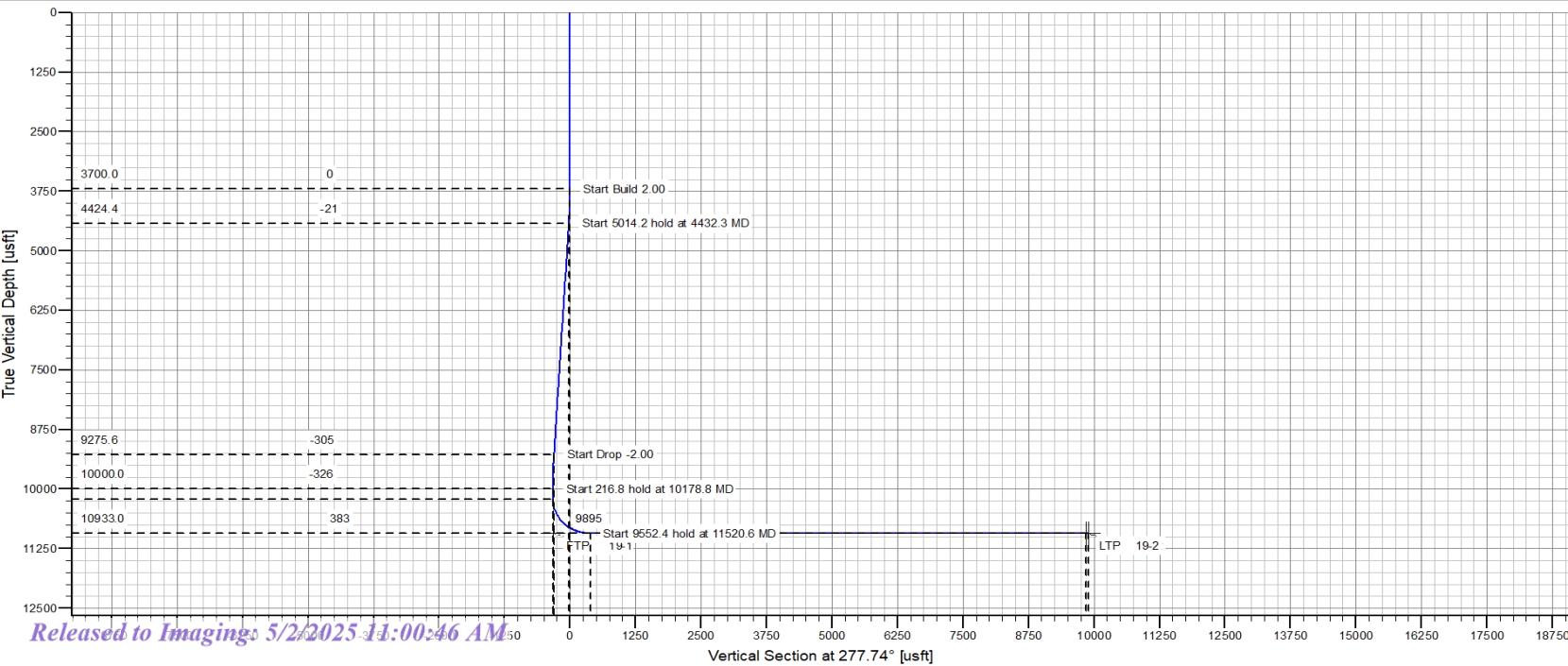
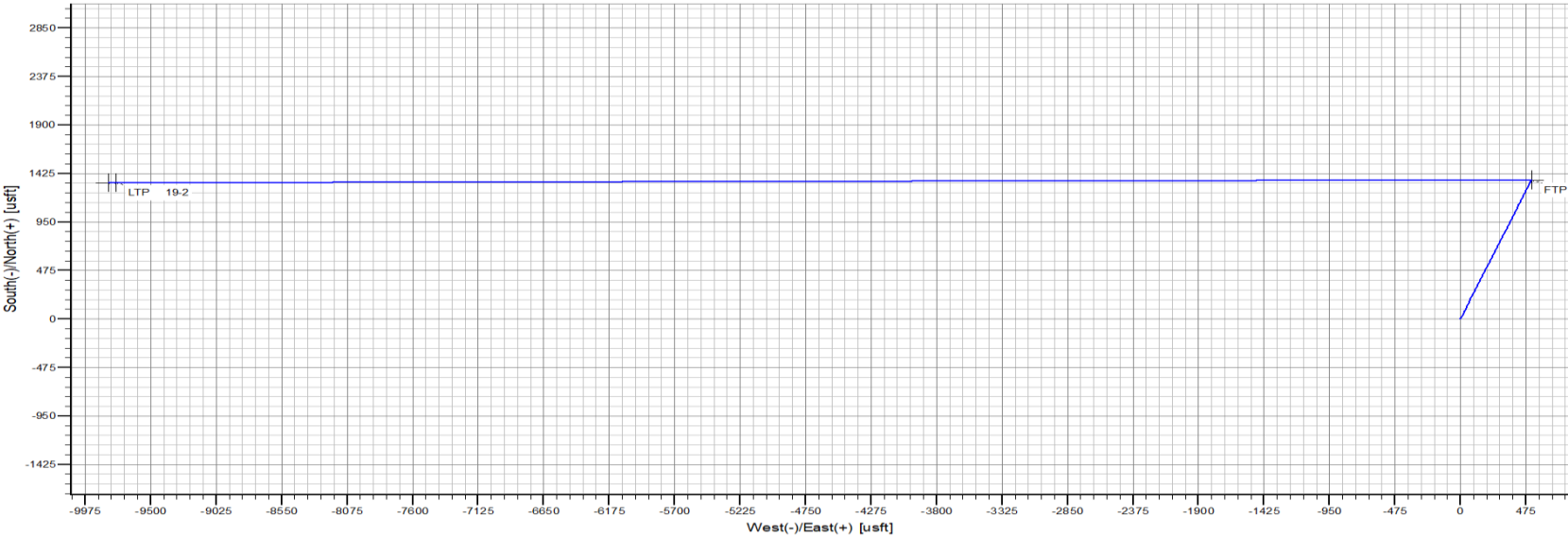
12500.000	90.000	269.847	10932.997	31.961	0.000	44.282	0.000	31.961	0.000	0.000	45.587	43.780	-31.689	MWD+IFR1+MS
12600.000	90.000	269.847	10932.997	32.339	0.000	44.712	0.000	32.339	0.000	0.000	45.781	44.023	-38.655	MWD+IFR1+MS
12700.000	90.000	269.847	10932.997	32.732	0.000	45.167	0.000	32.732	0.000	0.000	46.040	44.225	134.049	MWD+IFR1+MS
12800.000	90.000	269.847	10932.997	33.138	0.000	45.644	0.000	33.138	0.000	0.000	46.366	44.383	127.261	MWD+IFR1+MS
12900.000	90.000	269.847	10932.997	33.558	0.000	46.144	0.000	33.558	0.000	0.000	46.753	44.503	121.528	MWD+IFR1+MS
13000.000	90.000	269.847	10932.997	33.991	0.000	46.665	0.000	33.991	0.000	0.000	47.192	44.593	116.948	MWD+IFR1+MS
13100.000	90.000	269.847	10932.997	34.436	0.000	47.207	0.000	34.436	0.000	0.000	47.674	44.663	113.364	MWD+IFR1+MS
13200.000	90.000	269.847	10932.997	34.894	0.000	47.769	0.000	34.894	0.000	0.000	48.190	44.719	110.555	MWD+IFR1+MS
13300.000	90.000	269.847	10932.997	35.362	0.000	48.351	0.000	35.362	0.000	0.000	48.735	44.764	108.327	MWD+IFR1+MS
13400.000	90.000	269.847	10932.997	35.842	0.000	48.952	0.000	35.842	0.000	0.000	49.307	44.803	106.532	MWD+IFR1+MS
13500.000	90.000	269.847	10932.997	36.333	0.000	49.570	0.000	36.333	0.000	0.000	49.903	44.837	105.063	MWD+IFR1+MS
13600.000	90.000	269.847	10932.997	36.833	0.000	50.206	0.000	36.833	0.000	0.000	50.519	44.868	103.842	MWD+IFR1+MS
13700.000	90.000	269.847	10932.997	37.344	0.000	50.859	0.000	37.344	0.000	0.000	51.156	44.897	102.812	MWD+IFR1+MS
13800.000	90.000	269.847	10932.997	37.863	0.000	51.528	0.000	37.863	0.000	0.000	51.811	44.923	101.932	MWD+IFR1+MS
13900.000	90.000	269.847	10932.997	38.392	0.000	52.213	0.000	38.392	0.000	0.000	52.483	44.948	101.173	MWD+IFR1+MS
14000.000	90.000	269.847	10932.997	38.930	0.000	52.912	0.000	38.930	0.000	0.000	53.172	44.973	100.510	MWD+IFR1+MS
14100.000	90.000	269.847	10932.997	39.475	0.000	53.626	0.000	39.475	0.000	0.000	53.876	44.997	99.927	MWD+IFR1+MS
14200.000	90.000	269.847	10932.997	40.029	0.000	54.353	0.000	40.029	0.000	0.000	54.595	45.020	99.409	MWD+IFR1+MS
14300.000	90.000	269.847	10932.997	40.590	0.000	55.094	0.000	40.590	0.000	0.000	55.328	45.043	98.946	MWD+IFR1+MS
14400.000	90.000	269.847	10932.997	41.159	0.000	55.848	0.000	41.159	0.000	0.000	56.074	45.067	98.530	MWD+IFR1+MS
14500.000	90.000	269.847	10932.997	41.734	0.000	56.613	0.000	41.734	0.000	0.000	56.833	45.090	98.153	MWD+IFR1+MS
14600.000	90.000	269.847	10932.997	42.317	0.000	57.391	0.000	42.317	0.000	0.000	57.605	45.113	97.811	MWD+IFR1+MS
14700.000	90.000	269.847	10932.997	42.906	0.000	58.179	0.000	42.906	0.000	0.000	58.388	45.136	97.498	MWD+IFR1+MS
14800.000	90.000	269.847	10932.997	43.501	0.000	58.978	0.000	43.501	0.000	0.000	59.182	45.160	97.211	MWD+IFR1+MS
14900.000	90.000	269.847	10932.997	44.101	0.000	59.788	0.000	44.101	0.000	0.000	59.987	45.184	96.947	MWD+IFR1+MS
15000.000	90.000	269.847	10932.997	44.708	0.000	60.608	0.000	44.708	0.000	0.000	60.802	45.208	96.702	MWD+IFR1+MS
15100.000	90.000	269.847	10932.997	45.320	0.000	61.437	0.000	45.320	0.000	0.000	61.626	45.232	96.475	MWD+IFR1+MS
15200.000	90.000	269.847	10932.997	45.937	0.000	62.275	0.000	45.937	0.000	0.000	62.461	45.257	96.264	MWD+IFR1+MS
15300.000	90.000	269.847	10932.997	46.560	0.000	63.122	0.000	46.560	0.000	0.000	63.304	45.282	96.067	MWD+IFR1+MS
15400.000	90.000	269.847	10932.997	47.187	0.000	63.978	0.000	47.187	0.000	0.000	64.156	45.308	95.882	MWD+IFR1+MS
15500.000	90.000	269.847	10932.997	47.819	0.000	64.841	0.000	47.819	0.000	0.000	65.016	45.334	95.710	MWD+IFR1+MS
15600.000	90.000	269.847	10932.997	48.455	0.000	65.713	0.000	48.455	0.000	0.000	65.884	45.360	95.547	MWD+IFR1+MS
15700.000	90.000	269.847	10932.997	49.096	0.000	66.591	0.000	49.096	0.000	0.000	66.759	45.387	95.394	MWD+IFR1+MS

15800.000	90.000	269.847	10932.997	49.741	0.000	67.477	0.000	49.741	0.000	0.000	67.642	45.414	95.250	MWD+IFR1+MS
15900.000	90.000	269.847	10932.997	50.389	0.000	68.370	0.000	50.389	0.000	0.000	68.532	45.442	95.113	MWD+IFR1+MS
16000.000	90.000	269.847	10932.997	51.042	0.000	69.270	0.000	51.042	0.000	0.000	69.429	45.470	94.983	MWD+IFR1+MS
16100.000	90.000	269.847	10932.997	51.698	0.000	70.176	0.000	51.698	0.000	0.000	70.332	45.499	94.861	MWD+IFR1+MS
16200.000	90.000	269.847	10932.997	52.358	0.000	71.088	0.000	52.358	0.000	0.000	71.242	45.528	94.744	MWD+IFR1+MS
16300.000	90.000	269.847	10932.997	53.021	0.000	72.006	0.000	53.021	0.000	0.000	72.157	45.558	94.633	MWD+IFR1+MS
16400.000	90.000	269.847	10932.997	53.688	0.000	72.930	0.000	53.688	0.000	0.000	73.079	45.588	94.527	MWD+IFR1+MS
16500.000	90.000	269.847	10932.997	54.357	0.000	73.859	0.000	54.357	0.000	0.000	74.005	45.619	94.426	MWD+IFR1+MS
16600.000	90.000	269.847	10932.997	55.030	0.000	74.794	0.000	55.030	0.000	0.000	74.938	45.650	94.330	MWD+IFR1+MS
16700.000	90.000	269.847	10932.997	55.706	0.000	75.733	0.000	55.706	0.000	0.000	75.875	45.681	94.238	MWD+IFR1+MS
16800.000	90.000	269.847	10932.997	56.384	0.000	76.678	0.000	56.384	0.000	0.000	76.817	45.714	94.150	MWD+IFR1+MS
16900.000	90.000	269.847	10932.997	57.065	0.000	77.627	0.000	57.065	0.000	0.000	77.764	45.746	94.065	MWD+IFR1+MS
17000.000	90.000	269.847	10932.997	57.749	0.000	78.580	0.000	57.749	0.000	0.000	78.716	45.779	93.984	MWD+IFR1+MS
17100.000	90.000	269.847	10932.997	58.435	0.000	79.538	0.000	58.435	0.000	0.000	79.672	45.813	93.906	MWD+IFR1+MS
17200.000	90.000	269.847	10932.997	59.124	0.000	80.501	0.000	59.124	0.000	0.000	80.632	45.847	93.831	MWD+IFR1+MS
17300.000	90.000	269.847	10932.997	59.815	0.000	81.467	0.000	59.815	0.000	0.000	81.597	45.882	93.759	MWD+IFR1+MS
17400.000	90.000	269.847	10932.997	60.509	0.000	82.437	0.000	60.509	0.000	0.000	82.565	45.917	93.690	MWD+IFR1+MS
17500.000	90.000	269.847	10932.997	61.204	0.000	83.411	0.000	61.204	0.000	0.000	83.538	45.952	93.623	MWD+IFR1+MS
17600.000	90.000	269.847	10932.997	61.902	0.000	84.389	0.000	61.902	0.000	0.000	84.514	45.989	93.559	MWD+IFR1+MS
17700.000	90.000	269.847	10932.997	62.602	0.000	85.370	0.000	62.602	0.000	0.000	85.493	46.025	93.497	MWD+IFR1+MS
17800.000	90.000	269.847	10932.997	63.304	0.000	86.355	0.000	63.304	0.000	0.000	86.476	46.062	93.437	MWD+IFR1+MS
17900.000	90.000	269.847	10932.997	64.007	0.000	87.343	0.000	64.007	0.000	0.000	87.463	46.100	93.379	MWD+IFR1+MS
18000.000	90.000	269.847	10932.997	64.713	0.000	88.334	0.000	64.713	0.000	0.000	88.452	46.138	93.323	MWD+IFR1+MS
18100.000	90.000	269.847	10932.997	65.420	0.000	89.328	0.000	65.420	0.000	0.000	89.445	46.177	93.268	MWD+IFR1+MS
18200.000	90.000	269.847	10932.997	66.130	0.000	90.325	0.000	66.130	0.000	0.000	90.441	46.216	93.216	MWD+IFR1+MS
18300.000	90.000	269.847	10932.997	66.840	0.000	91.325	0.000	66.840	0.000	0.000	91.439	46.256	93.165	MWD+IFR1+MS
18400.000	90.000	269.847	10932.997	67.553	0.000	92.328	0.000	67.553	0.000	0.000	92.441	46.296	93.116	MWD+IFR1+MS
18500.000	90.000	269.847	10932.997	68.267	0.000	93.334	0.000	68.267	0.000	0.000	93.445	46.337	93.068	MWD+IFR1+MS
18600.000	90.000	269.847	10932.997	68.983	0.000	94.342	0.000	68.983	0.000	0.000	94.452	46.378	93.022	MWD+IFR1+MS
18700.000	90.000	269.847	10932.997	69.700	0.000	95.353	0.000	69.700	0.000	0.000	95.461	46.420	92.977	MWD+IFR1+MS
18800.000	90.000	269.847	10932.997	70.418	0.000	96.366	0.000	70.418	0.000	0.000	96.473	46.462	92.933	MWD+IFR1+MS
18900.000	90.000	269.847	10932.997	71.138	0.000	97.381	0.000	71.138	0.000	0.000	97.487	46.505	92.891	MWD+IFR1+MS
19000.000	90.000	269.847	10932.997	71.859	0.000	98.399	0.000	71.859	0.000	0.000	98.504	46.548	92.849	MWD+IFR1+MS

19100.000	90.000	269.847	10932.997	72.582	0.000	99.419	0.000	72.582	0.000	0.000	99.523	46.592	92.809	MWD+IFR1+MS
19200.000	90.000	269.847	10932.997	73.306	0.000	100.441	0.000	73.306	0.000	0.000	100.544	46.636	92.770	MWD+IFR1+MS
19300.000	90.000	269.847	10932.997	74.031	0.000	101.466	0.000	74.031	0.000	0.000	101.567	46.681	92.732	MWD+IFR1+MS
19400.000	90.000	269.847	10932.997	74.757	0.000	102.492	0.000	74.757	0.000	0.000	102.592	46.726	92.695	MWD+IFR1+MS
19500.000	90.000	269.847	10932.997	75.485	0.000	103.520	0.000	75.485	0.000	0.000	103.620	46.772	92.659	MWD+IFR1+MS
19600.000	90.000	269.847	10932.997	76.214	0.000	104.550	0.000	76.214	0.000	0.000	104.649	46.818	92.624	MWD+IFR1+MS
19700.000	90.000	269.847	10932.997	76.943	0.000	105.582	0.000	76.943	0.000	0.000	105.680	46.865	92.590	MWD+IFR1+MS
19800.000	90.000	269.847	10932.997	77.674	0.000	106.616	0.000	77.674	0.000	0.000	106.713	46.912	92.557	MWD+IFR1+MS
19900.000	90.000	269.847	10932.997	78.406	0.000	107.652	0.000	78.406	0.000	0.000	107.747	46.960	92.524	MWD+IFR1+MS
20000.000	90.000	269.847	10932.997	79.139	0.000	108.689	0.000	79.139	0.000	0.000	108.783	47.008	92.493	MWD+IFR1+MS
20100.000	90.000	269.847	10932.997	79.873	0.000	109.728	0.000	79.873	0.000	0.000	109.821	47.057	92.462	MWD+IFR1+MS
20200.000	90.000	269.847	10932.997	80.608	0.000	110.769	0.000	80.608	0.000	0.000	110.861	47.106	92.432	MWD+IFR1+MS
20300.000	90.000	269.847	10932.997	81.343	0.000	111.811	0.000	81.343	0.000	0.000	111.902	47.156	92.402	MWD+IFR1+MS
20400.000	90.000	269.847	10932.997	82.080	0.000	112.855	0.000	82.080	0.000	0.000	112.945	47.206	92.373	MWD+IFR1+MS
20500.000	90.000	269.847	10932.997	82.818	0.000	113.900	0.000	82.818	0.000	0.000	113.989	47.257	92.345	MWD+IFR1+MS
20600.000	90.000	269.847	10932.997	83.556	0.000	114.946	0.000	83.556	0.000	0.000	115.035	47.308	92.318	MWD+IFR1+MS
20700.000	90.000	269.847	10932.997	84.295	0.000	115.994	0.000	84.295	0.000	0.000	116.082	47.360	92.291	MWD+IFR1+MS
20800.000	90.000	269.847	10932.997	85.035	0.000	117.044	0.000	85.035	0.000	0.000	117.131	47.412	92.264	MWD+IFR1+MS
20900.000	90.000	269.847	10932.997	85.776	0.000	118.094	0.000	85.776	0.000	0.000	118.180	47.465	92.239	MWD+IFR1+MS
21000.000	90.000	269.847	10932.997	86.518	0.000	119.146	0.000	86.518	0.000	0.000	119.232	47.518	92.213	MWD+IFR1+MS
21072.530	90.000	269.847	10932.997	87.056	0.000	119.909	0.000	87.056	0.000	0.000	119.994	47.557	92.196	MWD+IFR1+MS
21100.000	90.000	269.847	10932.997	87.259	0.000	120.198	0.000	87.259	0.000	0.000	120.283	47.571	92.189	MWD+IFR1+MS
21123.065	90.000	269.847	10932.997	87.430	0.000	120.440	0.000	87.430	0.000	0.000	120.525	47.584	92.183	MWD+IFR1+MS

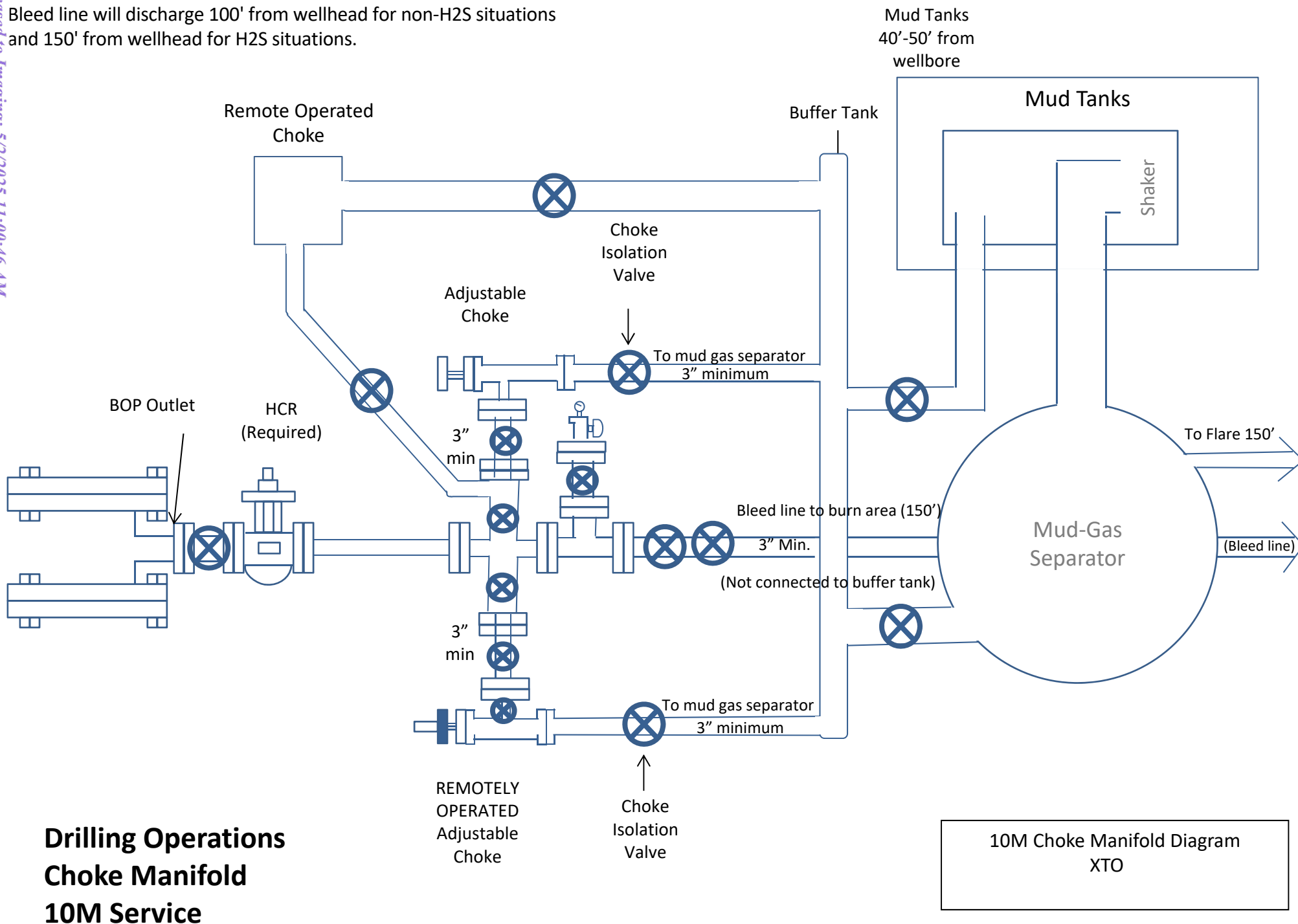
Plan Targets

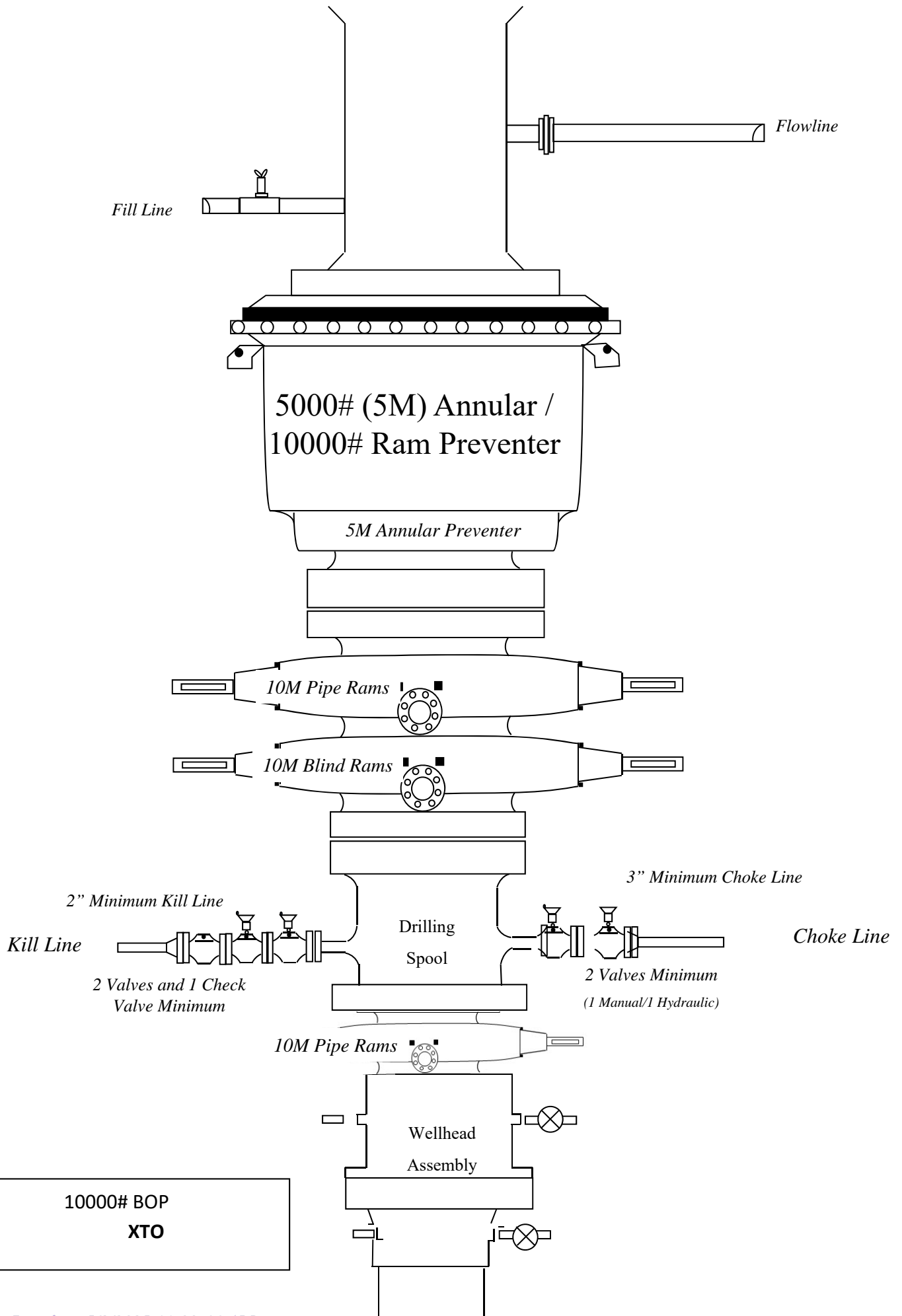
Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 19	11300.81	505088.70	656557.20	7526.00	CIRCLE
LTP 19	21073.08	505061.20	646288.60	7526.00	CIRCLE
BHL 19	21123.11	505061.10	646238.60	7526.00	CIRCLE



Formation	TVDSS (feet)	MD TVD (feet)
Alluvium	surface	surface
Rustler	2,924'	483'
Salado/Top of Salt	2,634'	773'
MB 126	1,940'	1,467'
Castile Anhydrite 1 Top	880'	2,527'
Castile Anhydrite 1 Base	455'	2,952'
Castile Anhydrite 2 Top	219'	3,188'
Castile Anhydrite 2 Base	124'	3,283'
Base Salt	-221'	3,628'
Delaware/Lamar	-479'	3,886'
Bell Canyon	-530'	3,937'
Cherry Canyon	-1,722'	5,129'
Brushy Canyon Ss.	-3,222'	6,629'
Bone Spring Lm.	-4,358'	7,765'
Avalon Ss.	-4,434'	7,841'
Upper Avalon Carb.	-4,654'	8,061'
Upper Avalon Sh.	-4,737'	8,144'
Middle Avalon Carb.	-4,783'	8,190'
Lw. Avalon Sh.	-4,849'	8,256'
First Bone Spring Carb.	-5,278'	8,685'
First Bone Spring Ss.	-5,415'	8,822'
Second Bone Spring Carb.	-5,864'	9,271'
Second Bone Spring A Ss.	-6,158'	9,565'
Second Bone Spring A/B Carb.	-6,321'	9,728'
Second Bone Spring B Ss.	-6,372'	9,779'
Third Bone Spring Carb.	-6,506'	9,913'
Harkey Ss.	-6,707'	10,114'
Third Bone Spring Shale	-6,789'	10,196'
Third Bone Spring Ss.	-7,177'	10,584'
Third Bone Spring Ss.- Red Hills	-7,496'	10,903'
Landing Point	-7,526'	10,933'
Horizontal TD	-7,476'	10,883'
Wolfcamp Shale	-7,621'	11,028'
Wolfcamp X Ss.	-7,526'	10,933'
Wolfcamp Y Ss.	-7,698'	11,105'
Wolfcamp A	-7,763'	11,170'

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







U. S. Steel Tubular Products

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

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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	--

UNCONTROLLED

Notes

1.

Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
2.

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.

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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]

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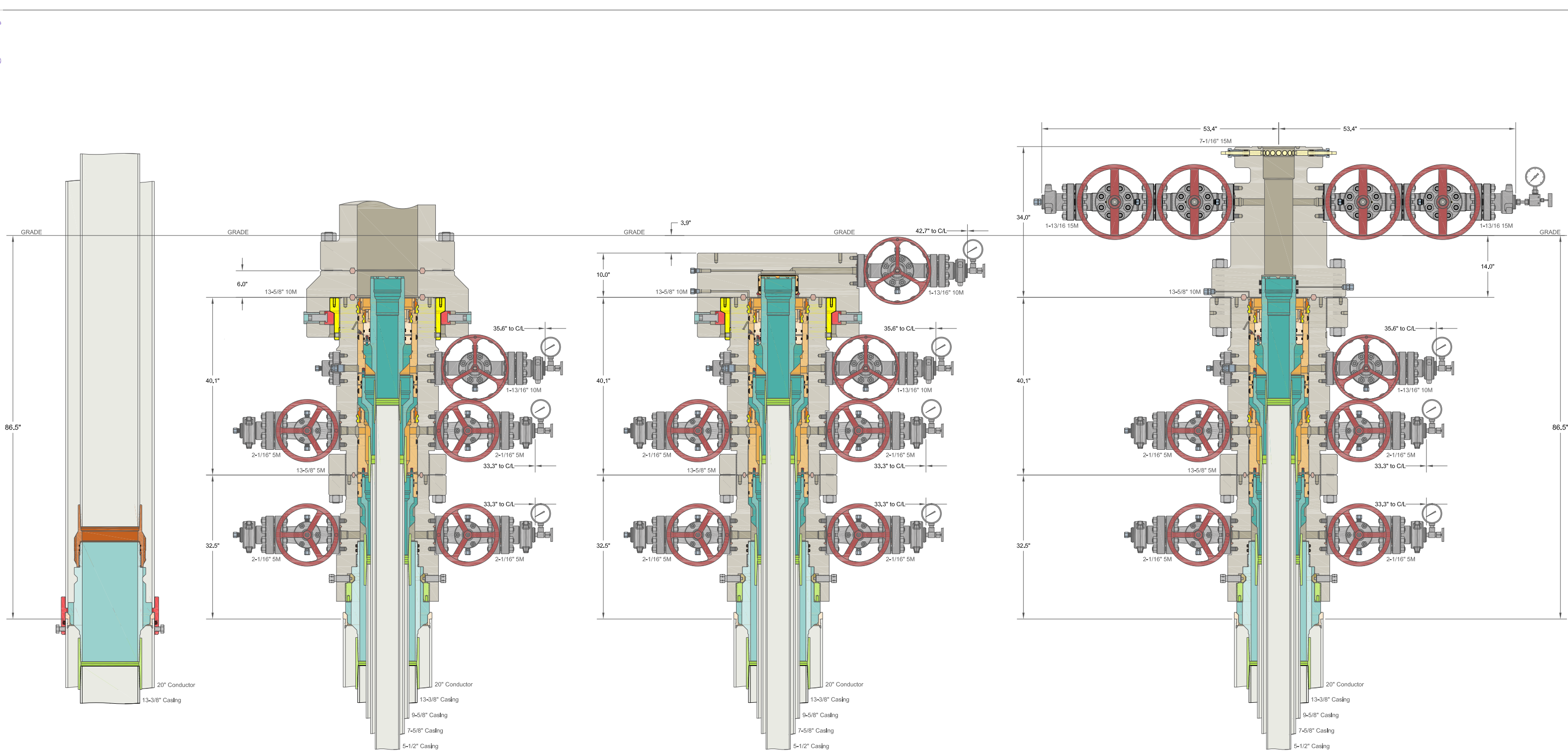
Notes

- 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).
- Joint efficiencies are calculated by dividing the connection critical area by the pipe body area.
- Uniaxial bend rating shown is structural only.
- 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.).
- Reference length is calculated by Joint Strength divided by Nominal Linear Weight, T&C with a 1.5 Safety factor.
- Coupling must meet minimum mechanical properties of the pipe.

Legal Notice

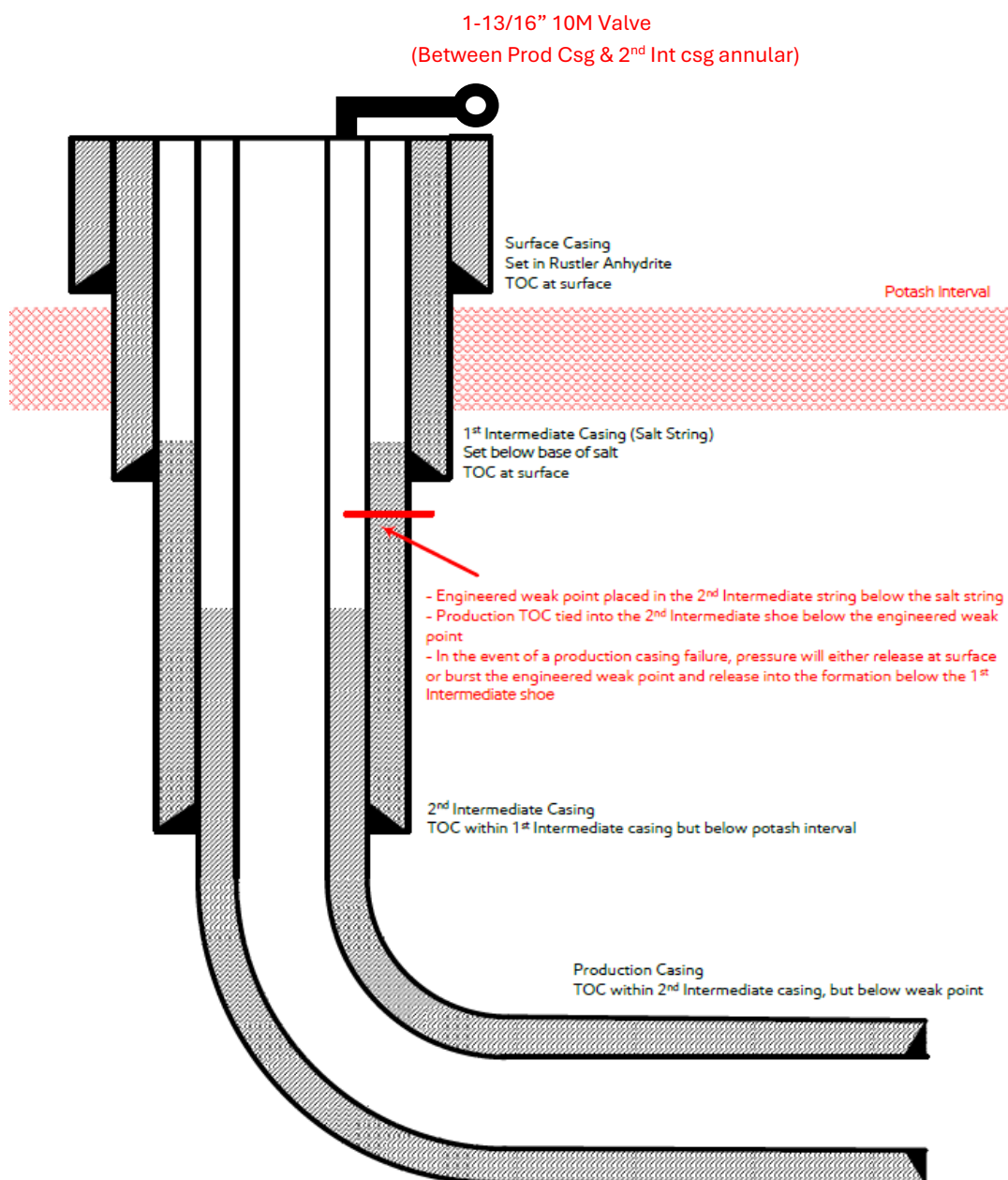
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ALL DIMENSIONS APPROXIMATE			
CACTUS WELLHEAD LLC			
(20") x 13-3/8" x 9-5/8" x 7-5/8" x 5-1/2" MBU-4T-CFL-R-DBLO With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And Drilling & Skid Configurations			
XTO ENERGY INC DELAWARE BASIN			
DRAWN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



[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®**

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

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

*NEW CHOKE HOSE
INSTALLED 02-10-2024*

CERTIFICATE OF CONFORMANCE

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

CUSTOMER: NABORS DRILLING TECHNOLOGIES USA DBA NABORS DRILLING USA
CUSTOMER P.O.#: 15582803 (TAG NABORS PO #15582803 SN 74621 ASSET 66-1531)
CUSTOMER P/N: IMR RETEST SN 74621 ASSET #66-1531

PART DESCRIPTION: RETEST OF CUSTOMER 3" X 45 FT 16C CHOKE & KILL HOSE ASSEMBLY C/W 4 1/16" 10K FLANGES

SALES ORDER #: 529480
QUANTITY: 1
SERIAL #: 74621 H3-012524-1

SIGNATURE:*F. OSMOS***TITLE:****QUALITY ASSURANCE****DATE:****1/25/2024**



H3-15/16

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:

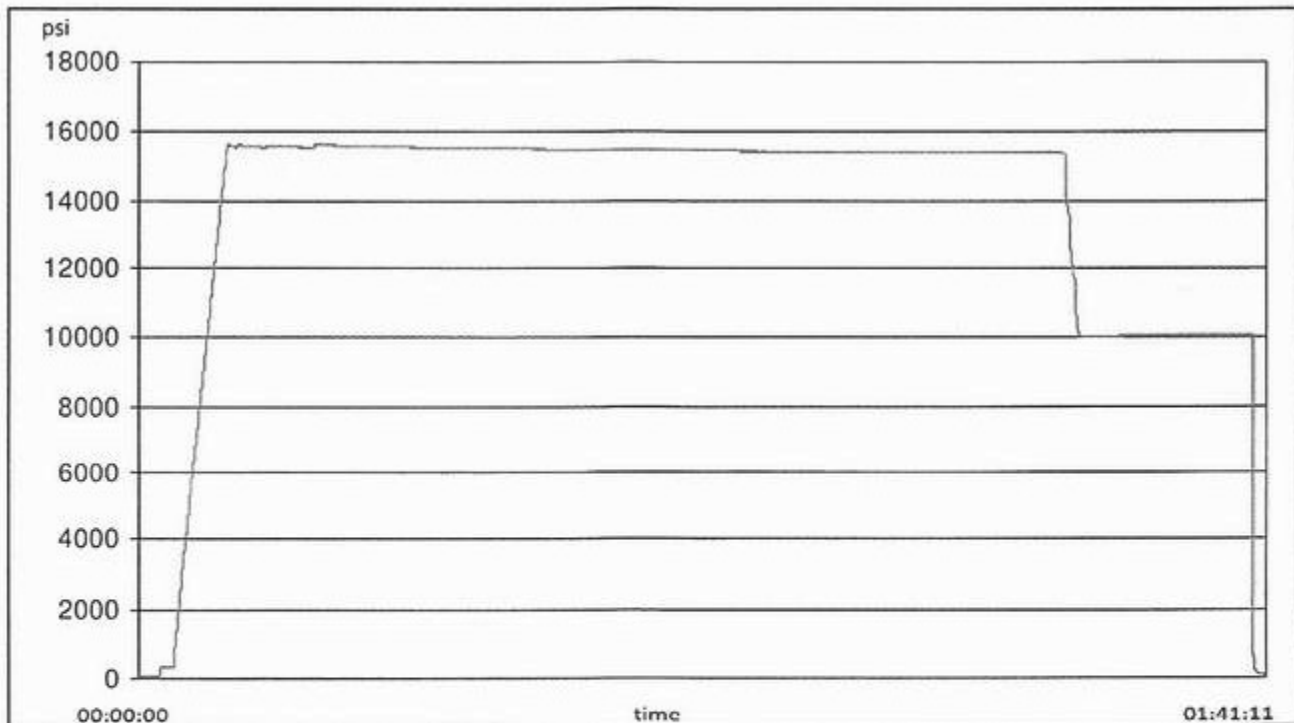
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





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1/25/2024 11:48:06 AM

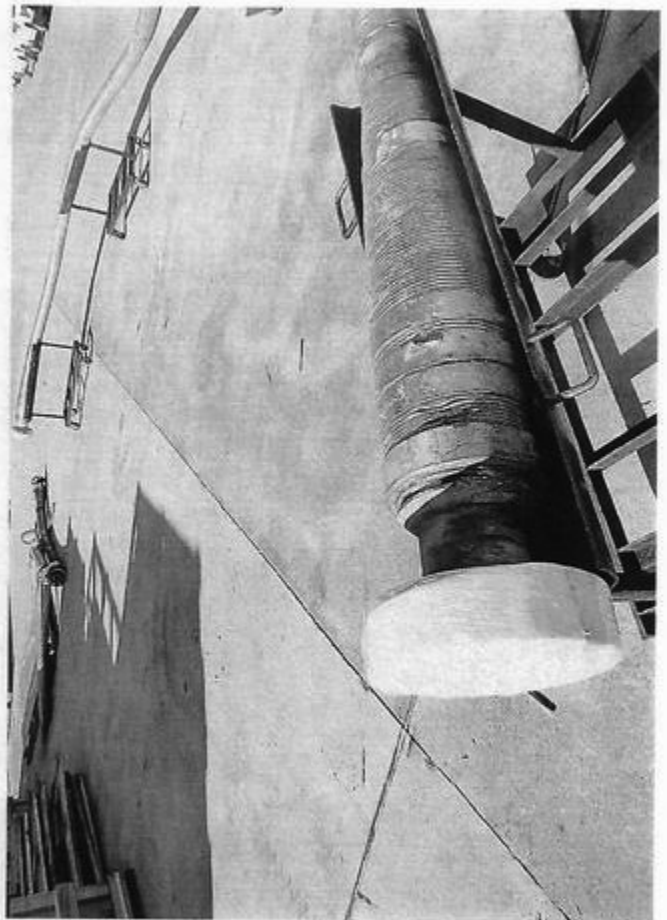
TEST REPORT

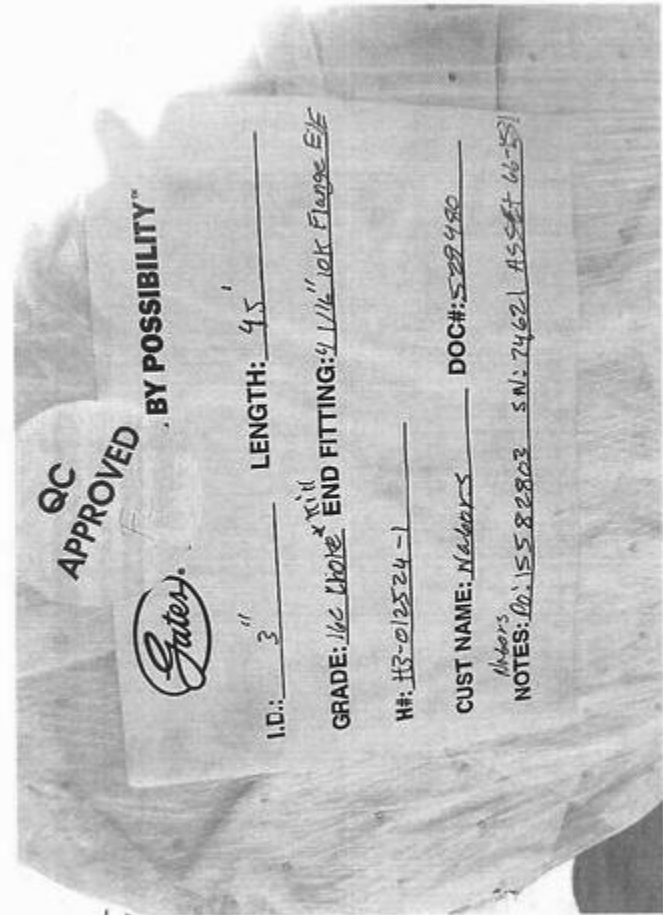
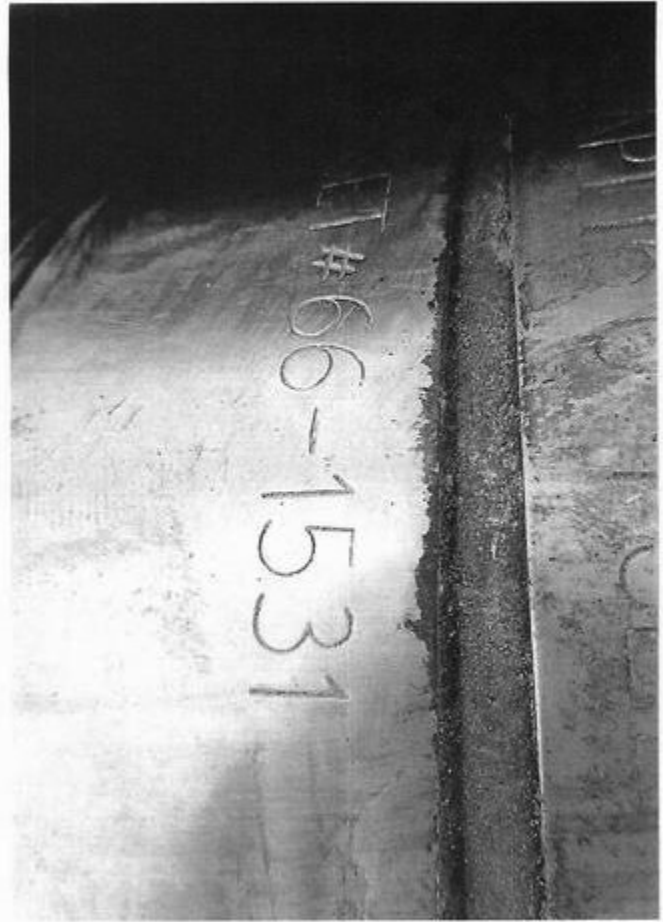
GAUGE TRACEABILITY

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

Comment

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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 nipped up and tested on the wellhead before drilling operations resume on each well.
 - a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
 - b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations
7. XTO will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, XTO will secure the wellhead area by placing a guard rail around the cellar area.

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

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

Background

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

Supporting Documentation

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



Figure 1: Winch System attached to BOP Stack



Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. CFR Title 43 Part 3170 recognizes 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.

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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 ^a	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers ^{bd}	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes ^e	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes ^e	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

^a Pressure test evaluation periods shall be a minimum of five minutes.

No visible leaks.

The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

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

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

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

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

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

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

XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of CFR Title 43 Part 3170 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after

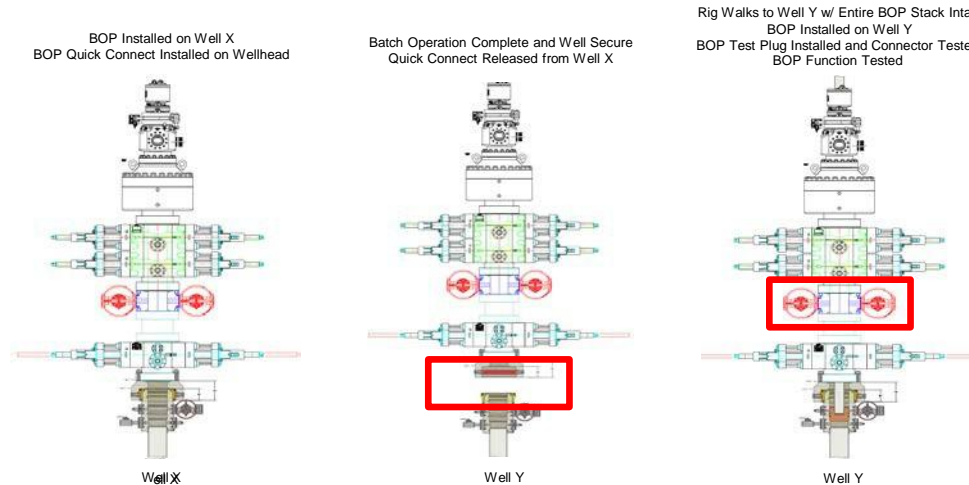
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

Procedures

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

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

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



Summary

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

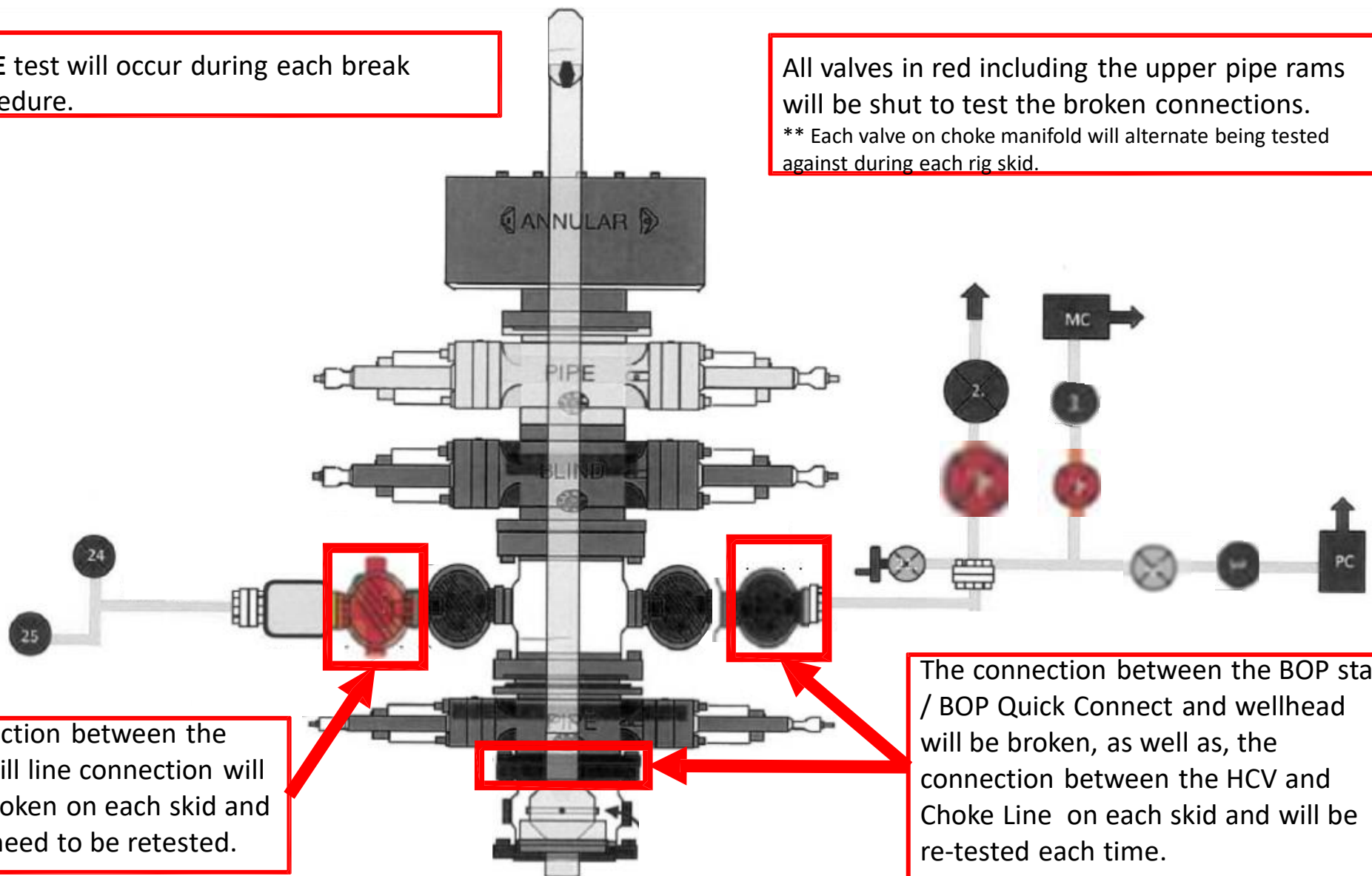
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

1. After a full BOP test is conducted on the first well on the pad.
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
4. Full BOP test will be required prior to drilling the production hole.

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

All valves in red including the upper pipe rams will be shut to test the broken connections.
** Each valve on choke manifold will alternate being tested against during each rig skid.



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

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

XTO Permian Operating, LLC Offline Cementing Variance Request

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

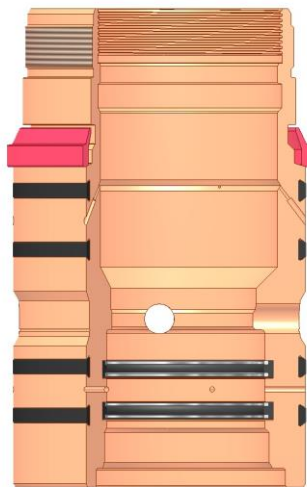
1. Cement Program

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

2. Offline Cementing Procedure

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

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



Annular packoff with both external and internal seals

XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

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

XTO Permian Operating, LLC Offline Cementing Variance Request

Wellhead diagram during offline cementing operations

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

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<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

Action 448767

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 448767
	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.	5/2/2025
ward.rikala	Administrative order required for non-standard spacing unit prior to production.	5/2/2025
ward.rikala	Administrative order required for non-standard location prior to production.	5/2/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	5/2/2025