

Well Name: POKER LAKE UNIT 21 BD	Well Location: T25S / R30E / SEC 28 / NWNE / 32.108022 / -103.885954	County or Parish/State: EDDY / NM
Well Number: 508H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM05039A	Unit or CA Name: POKER LAKE UNIT	Unit or CA Number: NMNM71016X
US Well Number:	Operator: XTO PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2842647

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/20/2025

Time Sundry Submitted: 12:37

Date proposed operation will begin: 03/27/2025

Procedure Description: Poker Lake Unit 21 BD 508H XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include well design, KOP, FTP, LTP, BHL, pool, proposed total depth, and dedicated acreage. We would like to make it explicit that we are pivoting the PLU 21 BD 508H well from an oil producing well to monitoring well. There will be no FTP or LTP for the well. KOP will change. There is no dedicated acreage allotment. The well design is changing from a 3-string Slimhole to a 3-string Bighole. See updated Drilling Program attached. FROM: TO: KOP: 136' FNL & 2607' FEL OF SECTION 28-T25S-R30E 205' FNL & 277' FWL OF SECTION 27-T25S-R30E FTP: 100' FNL & 1925' FEL OF SECTION 28-T25S-R30E 100' FNL & 287' FWL OF SECTION 27-T25S-R30E LTP: 2550' FNL & 1925' FEL OF SECTION 4-T26S-R30E 2002' FNL & 487' FEL OF SECTION 4-T26S-R30E BHL: 2600' FNL & 1925' FEL OF SECTION 4-T26S-R30E 2002' FNL & 487' FEL OF SECTION 4-T26S-R30E The pool is changing from Corral Canyon; Bone Spring, South (13354) to MONITOR; BONE SPRING (98360). The proposed total depth is changing from 23607' MD; 10077' TVD to 22652' MD; 9695' TVD. The dedicated acreage is changing from 400 Acres to 0 Acres. There is no new surface disturbance.

NOI Attachments

Procedure Description

PLU_21_BD_508H_Sundry_Docs_20250320123332.pdf

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Conditions of Approval

Additional

253028_Poker_Lake_Unit_21_BD_508H_04_28_2025_COAs_20250428103412.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: SAMANTHA WEIS **Signed on:** MAR 20, 2025 12:36 PM

Name: XTO PERMIAN OPERATING LLC

Title: Permitting Advisor

Street Address: 22777 SPRINGWOODS VILLAGE PARKWAY

City: SPRING **State:** TX

Phone: (832) 625-7361

Email address: SAMANTHA.R.BARTNIK@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: Accepted **Disposition Date:** 05/09/2025

Signature: Chris Walls

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

5. Lease Serial No.	NMNM05039A
6. If Indian, Allottee or Tribe Name	

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	7. If Unit of CA/Agreement, Name and/or No. POKER LAKE UNIT/NMNM71016X
2. Name of Operator XTO PERMIAN OPERATING LLC	8. Well Name and No. POKER LAKE UNIT 21 BD/508H
3a. Address 6401 HOLIDAY HILL ROAD BLDG 5, MIDLAND,	9. API Well No.
3b. Phone No. (include area code) (432) 683-2277	10. Field and Pool or Exploratory Area CORRAL CANYON/BONE SPRING SOUTH
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SEC 28/T25S/R30E/NMP	11. Country or Parish, State EDDY/NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" 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 checked="" 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 recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed 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 determined that the site is ready for final inspection.)

Poker Lake Unit 21 BD 508H

XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include well design, KOP, FTP, LTP, BHL, pool, proposed total depth, and dedicated acreage.

We would like to make it explicit that we are pivoting the PLU 21 BD 508H well from an oil producing well to monitoring well. There will be no FTP or LTP for the well. KOP will change. There is no dedicated acreage allotment.

The well design is changing from a 3-string Slimhole to a 3-string Bighole. See updated Drilling Program attached.

FROM: TO:

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) SAMANTHA WEIS / Ph: (832) 625-7361	Title Permitting Advisor
Signature (Electronic Submission)	Date 03/20/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Accepted	Title Petroleum Engineer	Date 05/09/2025
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 CARLSBAD	

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

KOP: 136 FNL & 2607 FEL OF SECTION 28-T25S-R30E 205 FNL & 277 FWL OF SECTION 27-T25S-R30E
FTP: 100 FNL & 1925' FEL OF SECTION 28-T25S-R30E 100' FNL & 287' FWL OF SECTION 27-T25S-R30E
LTP: 2550' FNL & 1925 FEL OF SECTION 4-T26S-R30E 2002' FNL & 487' FEL OF SECTION 4-T26S-R30E
BHL: 2600' FNL & 1925' FEL OF SECTION 4-T26S-R30E 2002' FNL & 487' FEL OF SECTION 4-T26S-R30E

The pool is changing from Corral Canyon; Bone Spring, South (13354) to MONITOR; BONE SPRING (98360).

The proposed total depth is changing from 23607 MD; 10077 TVD to 22652 MD; 9695 TVD.

The dedicated acreage is changing from 400 Acres to 0 Acres.

There is no new surface disturbance.

Location of Well

0. SHL: NWNE / 136 FNL / 2607 FEL / TWSP: 25S / RANGE: 30E / SECTION: 28 / LAT: 32.108022 / LONG: -103.885954 (TVD: 0 feet, MD: 0 feet)
PPP: NWNE / 100 FNL / 1925 FEL / TWSP: 25S / RANGE: 30E / SECTION: 28 / LAT: 32.108123 / LONG: -103.883749 (TVD: 10077 feet, MD: 10500 feet)
PPP: NWSE / 2664 FNL / 1923 FEL / TWSP: 25S / RANGE: 30E / SECTION: 28 / LAT: 32.101076 / LONG: -103.883782 (TVD: 10077 feet, MD: 13100 feet)
BHL: SWNE / 2600 FNL / 1925 FEL / TWSP: 26S / RANGE: 30E / SECTION: 4 / LAT: 32.071979 / LONG: -103.883919 (TVD: 10077 feet, MD: 23607 feet)

CONFIDENTIAL

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 21 BD 508H
LOCATION:	Section 28, T.25S., R.30E.
COUNTY:	Eddy County

COA

H2S	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Wellhead Variance	<input type="radio"/> Diverter		
Other	<input type="checkbox"/> 4 String	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Open Annulus
Cementing	<input checked="" type="checkbox"/> Contingency Cement Squeeze	<input type="checkbox"/> EchoMeter	<input type="checkbox"/> Primary Cement Squeeze
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry		
Special Requirements Variance	<input checked="" type="checkbox"/> Break Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

The approval for this well to be a monitoring well is good for one year from the completion date.

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet 43 CFR part 3170 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

Possibility of water flows in the Salado

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

Abnormal pressures may be encountered within the 3rd Bone Spring and Wolfcamp Formations.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1000** 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. The surface hole shall be **17-1/2** inch in diameter.
 - 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.

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

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

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 9-5/8" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

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

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 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** i must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months.

E. SPECIAL REQUIREMENT (S)

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (**Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP**)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **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.

GENERAL REQUIREMENTS

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

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

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

Lea County
 Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
 (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - 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**.

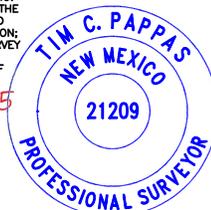
C. DRILLING MUD

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.

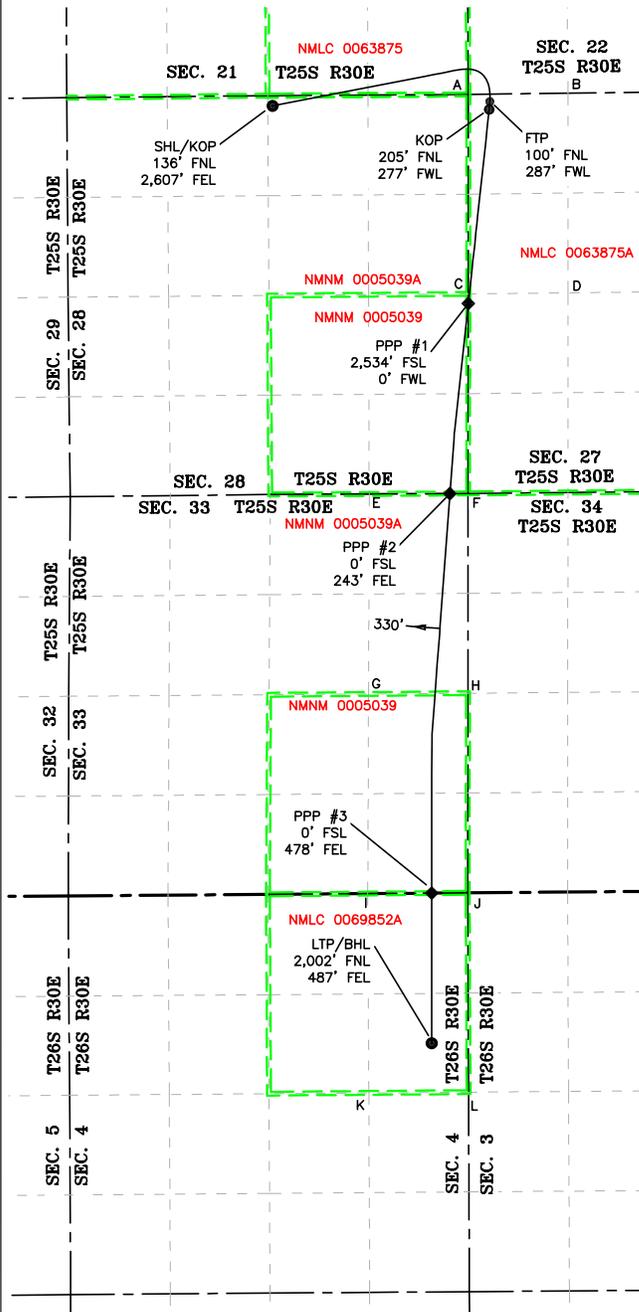
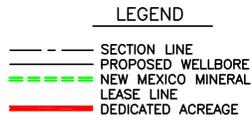
JS 4/28/2025

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 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 98360	Pool Name MONITOR; BONE SPRING							
Property Code	Property Name POKER LAKE UNIT 21 BD	Well Number 508H							
ORGID No. 373075	Operator Name XTO PERMIAN OPERATING, LLC.	Ground Level Elevation 3,232'							
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 Location									
UL B	Section 28	Township 25 S	Range 30 E	Lot	Ft. from N/S 136' FNL	Ft. from E/W 2,607' FEL	Latitude 32.108022	Longitude -103.885954	County EDDY
Bottom Hole Location									
UL H	Section 4	Township 26 S	Range 30 E	Lot	Ft. from N/S 2,002' FNL	Ft. from E/W 487' FEL	Latitude 32.073636	Longitude -103.879277	County EDDY
Dedicated Acres N/A	Infill or Defining Well N/A	Defining Well API	Overlapping Spacing Unit (Y/N) N/A	Consolidation Code U					
Order Numbers.			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Kick Off Point (KOP)									
UL D	Section 27	Township 25 S	Range 30 E	Lot	Ft. from N/S 205' FNL	Ft. from E/W 277' FWL	Latitude 32.107852	Longitude -103.876637	County EDDY
First Take Point (FTP)									
UL D	Section 27	Township 25 S	Range 30 E	Lot	Ft. from N/S 100' FNL	Ft. from E/W 287' FWL	Latitude 32.108140	Longitude -103.876605	County EDDY
Last Take Point (LTP)									
UL H	Section 4	Township 26 S	Range 30 E	Lot	Ft. from N/S 2,002' FNL	Ft. from E/W 487' FEL	Latitude 32.073636	Longitude -103.879277	County EDDY
Unitized Area or Area of Uniform Interest NMNM-071016X		Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical			Ground Floor Elevation: 3,232'				
OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>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 formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling form the division.</i> <i>Samantha Weis</i> 3/14/2025 Signature Date Samantha Weis Printed Name samantha.r.bartnik@exxonmobil.com Email Address					SURVEYOR CERTIFICATIONS <i>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.</i> I, TIM C. PAPPAS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 21209, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  13 March 2025 TIM C. PAPPAS REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF NEW MEXICO NO. 21209 				
Signature					Signature and Seal of Professional Surveyor				
Printed Name					Certificate Number		Date of Survey		
samantha.r.bartnik@exxonmobil.com					TIM C. PAPPAS 21209		3/12/2025		
Email Address									
<i>Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.</i>									
									
2821 West 7th Street., Ste 200 - Fort Worth, TX 76107 Ph: 817.349.9800 - Fax: 979.732.5271 TBPE Firm 17957 TBPLS Firm 10193887 www.fscinc.net <small>© COPYRIGHT 2024 • ALL RIGHTS RESERVED</small>									
DATE:		3-12-2025		PROJECT NO:		2023040210			
DRAWN BY:		LM		SCALE:					
CHECKED BY:		CH		SHEET:		1 OF 2			
FIELD CREW:		IR		REVISION:		NO			

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or a 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 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 than the First Take Point or Last Take Point) that is the closest to any outer boundary of the tract.

Surveyors 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 is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



COORDINATE TABLE					
SHL (NAD 83 NME)			LTP (NAD 83 NME)		
Y =	403,322.1	N	Y =	390,822.1	N
X =	679,857.7	E	X =	681,977.7	E
LAT. =	32.108022	°N	LAT. =	32.073636	°N
LONG. =	103.885954	°W	LONG. =	103.879277	°W
KOP (NAD 83 NME)			BHL (NAD 83 NME)		
Y =	403,272.4	N	Y =	390,822.1	N
X =	682,742.5	E	X =	681,977.7	E
LAT. =	32.107852	°N	LAT. =	32.073636	°N
LONG. =	103.876637	°W	LONG. =	103.879277	°W
FTP (NAD 83 NME)					
Y =	403,377.4	N			
X =	682,752.0	E			
LAT. =	32.108140	°N			
LONG. =	103.876605	°W			
SHL (NAD 27 NME)			LTP (NAD 27 NME)		
Y =	403,263.8	N	Y =	390,764.2	N
X =	638,672.7	E	X =	640,792.2	E
LAT. =	32.107896	°N	LAT. =	32.073511	°N
LONG. =	103.885471	°W	LONG. =	103.878796	°W
KOP (NAD 27 NME)			BHL (NAD 27 NME)		
Y =	403,214.1	N	Y =	390,764.2	N
X =	641,557.4	E	X =	640,792.2	E
LAT. =	32.107727	°N	LAT. =	32.073511	°N
LONG. =	103.876155	°W	LONG. =	103.878796	°W
FTP (NAD 27 NME)					
Y =	403,319.1	N			
X =	641,566.9	E			
LAT. =	32.108015	°N			
LONG. =	103.876123	°W			
PPP #1 (NAD 83 NME)			PPP #1 (NAD 27 NME)		
Y =	400,686.0	N	Y =	400,627.8	N
X =	682,463.6	E	X =	641,278.4	E
LAT. =	32.100745	°N	LAT. =	32.100620	°N
LONG. =	103.877574	°W	LONG. =	103.877092	°W
PPP #2 (NAD 83 NME)			PPP #2 (NAD 27 NME)		
Y =	398,151.1	N	Y =	398,093.0	N
X =	682,218.7	E	X =	641,033.5	E
LAT. =	32.093780	°N	LAT. =	32.093655	°N
LONG. =	103.878399	°W	LONG. =	103.877917	°W
PPP #3 (NAD 83 NME)			PPP #3 (NAD 27 NME)		
Y =	392,824.5	N	Y =	392,766.5	N
X =	681,977.7	E	X =	640,792.3	E
LAT. =	32.079141	°N	LAT. =	32.079015	°N
LONG. =	103.879249	°W	LONG. =	103.878769	°W

CORNER COORDINATES (NAD83 NME)					
A - Y =	403,473.8	N	A - X =	682,465.2	E
B - Y =	403,490.6	N	B - X =	683,790.6	E
C - Y =	400,813.4	N	C - X =	682,463.6	E
D - Y =	400,827.9	N	D - X =	683,790.5	E
E - Y =	398,145.7	N	E - X =	681,144.0	E
F - Y =	398,152.3	N	F - X =	682,461.9	E
G - Y =	395,479.4	N	G - X =	681,135.0	E
H - Y =	395,489.3	N	H - X =	682,459.2	E
I - Y =	392,817.9	N	I - X =	681,125.6	E
J - Y =	392,828.3	N	J - X =	682,455.8	E
K - Y =	390,159.5	N	K - X =	681,138.4	E
L - Y =	390,169.9	N	L - X =	682,467.5	E
CORNER COORDINATES (NAD27 NME)					
A - Y =	403,415.5	N	A - X =	641,280.1	E
B - Y =	403,432.5	N	B - X =	642,605.5	E
C - Y =	400,755.2	N	C - X =	641,278.4	E
D - Y =	400,769.9	N	D - X =	642,605.3	E
E - Y =	398,087.5	N	E - X =	639,958.8	E
F - Y =	398,094.2	N	F - X =	641,276.6	E
G - Y =	395,421.3	N	G - X =	639,949.7	E
H - Y =	395,431.2	N	H - X =	641,273.9	E
I - Y =	392,759.9	N	I - X =	639,940.2	E
J - Y =	392,770.3	N	J - X =	641,270.4	E
K - Y =	390,101.6	N	K - X =	639,952.9	E
L - Y =	390,112.0	N	L - X =	641,282.0	E



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DATE: 3-12-2025 PROJECT NO: 2023040210
 DRAWN BY: LM SCALE: 1" = 2,000'
 CHECKED BY: CH SHEET: 2 OF 2
 FIELD CREW: IR REVISION:

3. Primary Casing Design

Primary Design:

Hole Size	MD	Casing TVD	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' - 1369'	1364'	13-3/8"	54.5	J55	BTC	New	6.53	1.91	5.19
12.25	0' - 9840'	9154'	9-5/8"	40	L80-IC	BTC	New	2.73	1.95	2.23
8.75" / 8.5"	0' - 9640'	8755'	5-1/2"	20	P110-CY	TPN	New	1.18	2.93	2.59
8.75" / 8.5"	9640' - 22652'	9695'	5-1/2"	20	P110-IC	Tenaris Wedge 441	New	1.18	2.93	2.78

Section 3 Summary:

XTO will keep casing fluid filled to meet BLM's collapse requirement.
 The planned kick off point is located at: 10040' MD / 9337' TVD.

Wellhead:

A multi-bowl wellhead system will be utilized. The well design chosen is: 3-String Big Non-Potash
 Wellhead will be installed by manufacturer's representatives.
 Manufacturer will monitor welding process to ensure appropriate temperature of seal.

4. Cement Program

Primary Cementing								
Hole Section	Slurry Type	No. Sacks	Density (ppg)	Yield (ft ³ /sack)	TOC (ft)	Casing Setting Depth (MD)	Excess (%)	Slurry Description
Surface 1	Lead	704	12.4	2.11	0	1,369	100%	
Surface 1	Tail	313	14.8	1.33	1069	1,369	100%	
Intermediate 1	Lead							
Intermediate 1	Tail	1035	14.8	1.45	6292	9,840	35%	
Production 1	Lead							
Production 1	Tail	3036	13.2	1.44	9340	22,652	30%	
Remedial Cementing								
Casing	Slurry Type	No. Sacks	Density (ppg)	Yield (ft ³ /sack)	Cemented Interval	Excess (%)	Slurry Description	
Intermediate 1	Bradenhead Squeeze	2039	14.8	1.45	0 - 6292'	50%	Intermediate Class C Bradenhead Squeeze Cement	

Section 4 Summary:

*Bradenhead Squeeze 2nd Stage Offline

5. Pressure Control Equipment

Section 5 Summary:

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

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

Requested Variances

4A) Offline Cementing Variance

XOM 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. XOM 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. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence. The TA cap will also be installed when applicable per wellhead manufacturer's procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

5A) Break Test Variance

A break testing variance is requested to ONLY test broken pressure seals on the BOP equipment when moving from wellhead to wellhead for the intermediate hole sections which is in compliance with API Standard 53. The maximum anticipated surface pressure at the deepest intermediate casing point is less than 4800psi.

5B) Flex Hose Variance

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

5C) 10M Annular Variance

XOM requests a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables attached along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP).

8A) Open Hole Logging Variance

Open hole logging will not be done on this well.

10A) Spudder Rig Variance

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

10B) Batch Drilling Variance

XOM requests a variance to be able to batch drill this well. In doing so, XOM will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. XOM will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XOM will begin drilling the production hole on each of the wells.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW	Viscosity	Fluid Loss	Comments
			(ppg)	(sec/qt)	(cc)	
0' - 1369'	17.5"	FW/Native	8.3 - 8.7	35-40	NC	Fresh Water or Native Water
1369' - 9840'	12.25"	BDE/OBM or FW/Brine	9.5 - 10	30-32	NC	Fluid type will be based upon on well conditions. A fully saturated system will be used across the salt interval.
9840' - 9640'	8.75" / 8.5"	OBM	9 - 9.6	50-60	NC - 20	OBM or Cut Brine depending on Well Conditions
9640' - 22652'	8.75" / 8.5"	OBM	9 - 9.6	50-60	NC - 20	OBM or Cut Brine depending on Well Conditions

Section 6 Summary:

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 a fully saturated brine 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. An EDR (Electronic Drilling Recorder) 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

Section 7 Summary:

A Kelly cock will be in the drill string at all times.

A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.

H2S monitors will be on location when drilling below the 13-3/8" casing.

8. Logging, Coring and Testing Program

Section 8 Summary:

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

Section 9 Summary:

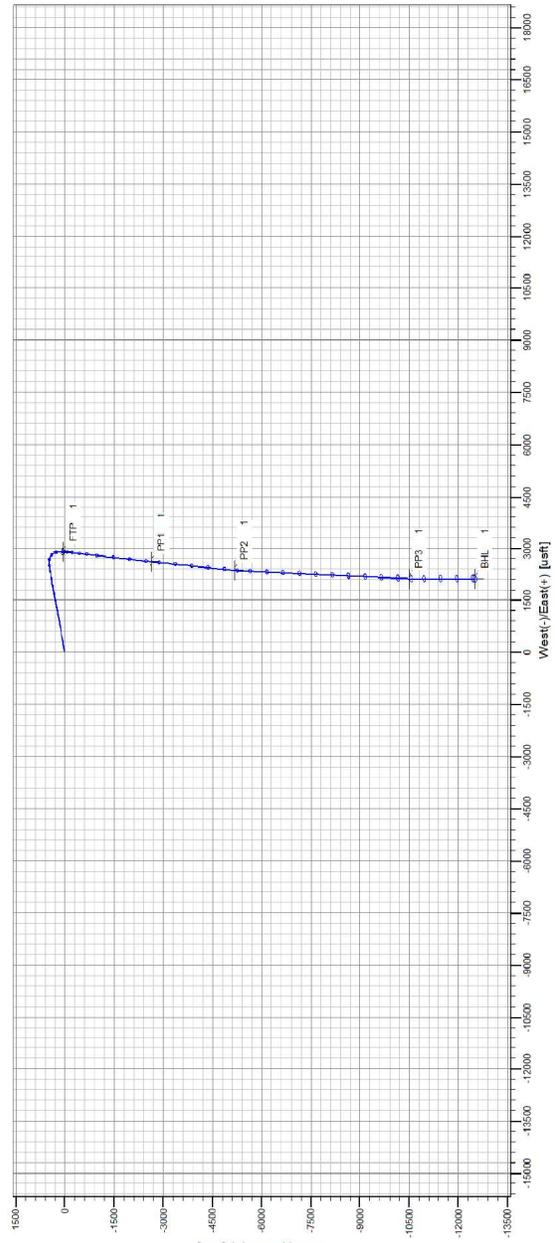
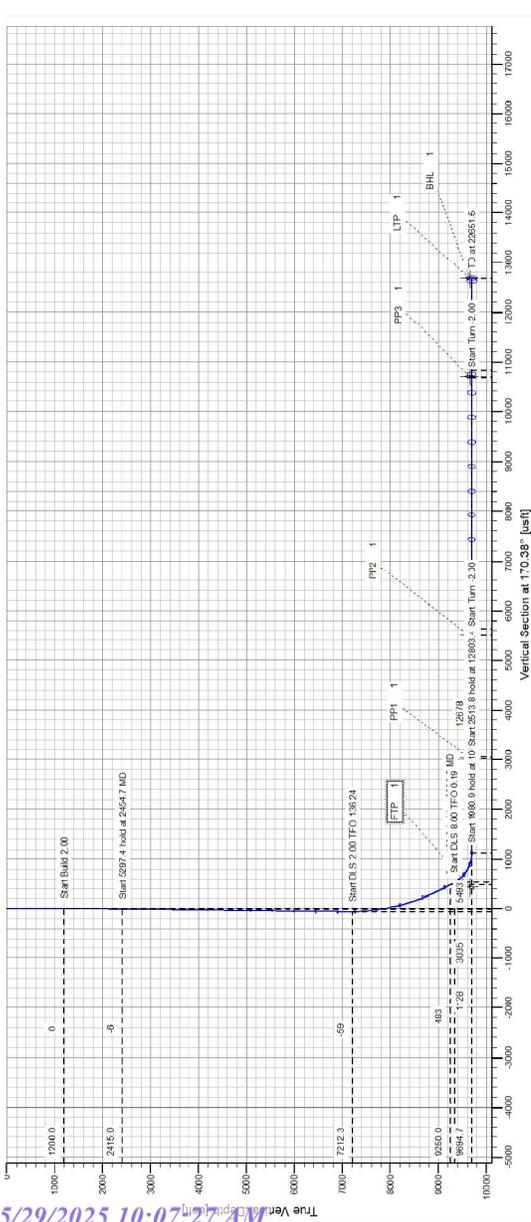
The estimated bottom hole temperature of 162F to 182F. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation is possible throughout the well.

10. Anticipated Starting Date and Duration of Operations

Section 10 Summary:

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

Hoker Lake Unit 21 BD 508H



Formation	TVDSS (feet)	TVD (feet)
Rustler	2,181'	1,082'
Salado	1,870'	1,394'
Base of Salt	-359'	3,622'
Delaware	-534'	3,798'
Cherry Canyon	-1,512'	4,776'
Brushy Canyon	-3,028'	6,292'
Basal Brushy Canyon	-4,086'	7,349'
Bone Spring Lm.	-4,372'	7,635'
Avalon	-4,502'	7,765'
Lower Avalon	-4,907'	8,171'
1st Bone Spring Lime	-5,091'	8,354'
1st Bone Spring Sand	-5,314'	8,577'
2nd Bone Spring Shale	-5,560'	8,824'
2nd Bone Spring Lime	-5,796'	9,059'
2nd Bone Spring Sand	-6,153'	9,417'
2nd Bone Spring T/B Carb	-6,306'	9,570'
2nd Bone Spring Sand (Lwr)	-6,396'	9,659'
2nd BS Sand Lower Landing	-6,396'	9,659'
3rd Bone Spring Lime	-6,491'	9,754'

Well Plan Report - Poker Lake Unit BD 21 508H

Measured Depth: 22651.55 ft
TVD RKB: 9694.70 ft
Location: A
 Poker Lake Unit BD 21
 508H
Cartographic Reference System: New Mexico East - NAD 27
Northing: 403263.80 ft
Easting: 638672.70 ft
RKB: 3264.00 ft
Ground Level: 3231.50 ft
North Reference: Grid
Convergence Angle: 0.24 Deg

Plan Sections

Measured Depth (ft)	Inclination (Deg)	Azimuth (Deg)	RKB (ft)	TVD	Y Offset (ft)	X Offset (ft)	Build		Turn		Dogleg	
							Rate (Deg/100ft)					
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1200.00	0.00	0.00	1200.00	1200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2454.75	25.10	79.03	2415.02	2415.02	51.47	265.48	2.00	2.00	0.00	0.00	2.00	2.00
7752.10	25.10	79.03	7212.33	7212.33	479.07	2471.12	0.00	0.00	0.00	0.00	0.00	0.00
9939.55	30.00	186.00	9249.98	9249.98	-0.01	2889.90	0.22	0.22	4.89	4.89	2.00	2.00
10039.57	30.00	186.00	9336.60	9336.60	-49.75	2884.67	0.00	0.00	0.00	0.00	0.00	0.00
10789.57	90.00	186.17	9694.70	9694.70	-666.47	2818.63	8.00	8.00	0.02	0.02	8.00	8.00
10789.70	90.00	186.17	9694.70	9694.70	-666.59	2818.62	-0.00	-0.00	2.00	2.00	2.00	PP1 1
12770.58	90.00	186.17	9694.70	9694.70	-2636.00	2605.70	0.00	0.00	0.00	0.00	0.00	PP1 1
12803.39	90.00	185.51	9694.70	9694.70	-2668.64	2602.36	0.00	0.00	-2.00	-2.00	2.00	PP2 1
15317.18	90.00	185.51	9694.70	9694.70	-5170.80	2360.80	0.00	0.00	0.00	0.00	0.00	PP2 1
15465.32	90.00	182.55	9694.70	9694.70	-5318.55	2350.38	0.00	0.00	-2.00	-2.00	2.00	PP3 1
20649.21	90.00	182.55	9694.70	9694.70	-10497.30	2119.60	0.00	0.00	0.00	0.00	0.00	PP3 1

Position Uncertainty Poker Lake Unit BD 21 508H

Measured Depth (ft)	Inclination (°)	Azimuth (°)	TVD		Highside		Lateral		Vertical		Magnitude of Bias		Semi-major		Semi-minor		Semi-minor Azimuth (°)	Tool Used
			RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)		
20780.98	0.000	90.00	179.92	0.000	0.000	9694.70	-10629.03	2116.76	0.000	0.000	0.000	0.000	0.000	0.000	-2.00	2.00	LTP 1	
22651.55	0.000	90.00	179.92	100.000	0.700	9694.70	-12499.60	2119.50	0.000	0.000	0.000	0.751	0.220	0.000	0.00	0.00	BHL 1	
200.000	0.000	0.000	200.000	200.000	1.112	0.000	0.861	0.000	2.309	0.000	0.000	1.259	0.627	0.000	0.000	0.627	MWD+IFR1+MS	
300.000	0.000	0.000	300.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	0.000	1.698	0.986	0.000	0.000	0.986	MWD+IFR1+MS	
400.000	0.000	0.000	400.000	400.000	1.871	0.000	1.658	0.000	2.346	0.000	0.000	2.108	1.344	0.000	0.000	1.344	MWD+IFR1+MS	
500.000	0.000	0.000	500.000	500.000	2.240	0.000	2.034	0.000	2.373	0.000	0.000	2.503	1.701	0.000	0.000	1.701	MWD+IFR1+MS	
600.000	0.000	0.000	600.000	600.000	2.607	0.000	2.405	0.000	2.405	0.000	0.000	2.888	2.059	0.000	0.000	2.059	MWD+IFR1+MS	
700.000	0.000	0.000	700.000	700.000	2.971	0.000	2.773	0.000	2.442	0.000	0.000	3.267	2.417	0.000	0.000	2.417	MWD+IFR1+MS	
800.000	0.000	0.000	800.000	800.000	3.334	0.000	3.138	0.000	2.483	0.000	0.000	3.642	2.775	0.000	0.000	2.775	MWD+IFR1+MS	
900.000	0.000	0.000	900.000	900.000	3.696	0.000	3.502	0.000	2.529	0.000	0.000	4.014	3.133	0.000	0.000	3.133	MWD+IFR1+MS	
1000.000	0.000	0.000	1000.000	1000.000	4.058	0.000	3.865	0.000	2.578	0.000	0.000	4.384	3.491	0.000	0.000	3.491	MWD+IFR1+MS	
1100.000	0.000	0.000	1100.000	1100.000	4.419	0.000	4.228	0.000	2.631	0.000	0.000	4.752	3.849	0.000	0.000	3.849	MWD+IFR1+MS	
1200.000	0.000	0.000	1200.000	1200.000	4.779	0.000	4.589	0.000	2.688	0.000	0.000	5.119	4.207	0.000	0.000	4.207	MWD+IFR1+MS	
1300.000	2.000	79.028	1299.980	1299.980	5.290	0.000	4.937	0.000	2.747	0.000	0.000	5.540	4.657	0.000	0.000	4.657	MWD+IFR1+MS	
1400.000	4.000	79.028	1399.838	1399.838	6.045	0.000	5.300	0.000	2.809	0.000	0.000	6.121	5.223	0.000	0.000	5.223	MWD+IFR1+MS	
1500.000	6.000	79.028	1499.452	1499.452	6.728	0.000	5.663	0.000	2.877	0.000	0.000	6.759	5.651	0.000	0.000	5.651	MWD+IFR1+MS	
1600.000	8.000	79.028	1598.702	1598.702	7.357	0.000	6.028	0.000	2.952	0.000	0.000	7.392	6.028	0.000	0.000	6.028	MWD+IFR1+MS	
1700.000	10.000	79.028	1697.465	1697.465	7.943	0.000	6.395	0.000	3.036	0.000	0.000	8.002	6.390	0.000	0.000	6.390	MWD+IFR1+MS	
1800.000	12.000	79.028	1795.623	1795.623	8.495	0.000	6.766	0.000	3.132	0.000	0.000	8.585	6.748	0.000	0.000	6.748	MWD+IFR1+MS	
1900.000	14.000	79.028	1893.055	1893.055	9.018	0.000	7.140	0.000	3.241	0.000	0.000	9.144	7.108	0.000	0.000	7.108	MWD+IFR1+MS	
2000.000	16.000	79.028	1989.643	1989.643	9.516	0.000	7.520	0.000	3.365	0.000	0.000	9.682	7.473	0.000	0.000	7.473	MWD+IFR1+MS	
2100.000	18.000	79.028	2085.268	2085.268	9.993	0.000	7.907	0.000	3.505	0.000	0.000	10.200	7.845	0.000	0.000	7.845	MWD+IFR1+MS	
2200.000	20.000	79.028	2179.816	2179.816	10.451	0.000	8.304	0.000	3.663	0.000	0.000	10.702	8.228	0.000	0.000	8.228	MWD+IFR1+MS	
2300.000	22.000	79.028	2273.169	2273.169	10.892	0.000	8.711	0.000	3.840	0.000	0.000	11.189	8.622	0.000	0.000	8.622	MWD+IFR1+MS	
2400.000	24.000	79.028	2365.215	2365.215	11.318	0.000	9.131	0.000	4.036	0.000	0.000	11.662	9.030	0.000	0.000	9.030	MWD+IFR1+MS	
2454.750	25.095	79.028	2415.015	2415.015	11.459	0.000	9.359	0.000	4.106	0.000	0.000	11.843	9.258	0.000	0.000	9.258	MWD+IFR1+MS	

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2500.000	25.095	79.028	2455.994	11.593	0.000	9.549	0.000	4.159	0.000	0.000	11.966	9.450	-0.210	MWD+IFR1+MS
2600.000	25.095	79.028	2546.555	11.895	0.000	9.987	0.000	4.288	0.000	0.000	12.240	9.890	0.132	MWD+IFR1+MS
2700.000	25.095	79.028	2637.115	12.214	0.000	10.442	0.000	4.429	0.000	0.000	12.531	10.343	0.697	MWD+IFR1+MS
2800.000	25.095	79.028	2727.676	12.543	0.000	10.904	0.000	4.576	0.000	0.000	12.830	10.804	1.338	MWD+IFR1+MS
2900.000	25.095	79.028	2818.236	12.880	0.000	11.373	0.000	4.728	0.000	0.000	13.137	11.270	2.076	MWD+IFR1+MS
3000.000	25.095	79.028	2908.797	13.225	0.000	11.847	0.000	4.887	0.000	0.000	13.451	11.742	2.935	MWD+IFR1+MS
3100.000	25.095	79.028	2999.358	13.578	0.000	12.327	0.000	5.050	0.000	0.000	13.772	12.217	3.950	MWD+IFR1+MS
3200.000	25.095	79.028	3089.918	13.937	0.000	12.810	0.000	5.218	0.000	0.000	14.099	12.697	5.166	MWD+IFR1+MS
3300.000	25.095	79.028	3180.479	14.303	0.000	13.298	0.000	5.390	0.000	0.000	14.434	13.178	6.648	MWD+IFR1+MS
3400.000	25.095	79.028	3271.039	14.674	0.000	13.790	0.000	5.566	0.000	0.000	14.775	13.662	8.489	MWD+IFR1+MS
3500.000	25.095	79.028	3361.600	15.051	0.000	14.284	0.000	5.746	0.000	0.000	15.124	14.145	10.819	MWD+IFR1+MS
3600.000	25.095	79.028	3452.160	15.432	0.000	14.782	0.000	5.929	0.000	0.000	15.482	14.628	13.821	MWD+IFR1+MS
3700.000	25.095	79.028	3542.721	15.819	0.000	15.282	0.000	6.114	0.000	0.000	15.849	15.107	17.739	MWD+IFR1+MS
3800.000	25.095	79.028	3633.282	16.209	0.000	15.784	0.000	6.303	0.000	0.000	16.229	15.580	22.845	MWD+IFR1+MS
3900.000	25.095	79.028	3723.842	16.604	0.000	16.288	0.000	6.494	0.000	0.000	16.625	16.042	29.289	MWD+IFR1+MS
4000.000	25.095	79.028	3814.403	17.002	0.000	16.795	0.000	6.688	0.000	0.000	17.042	16.489	36.796	MWD+IFR1+MS
4100.000	25.095	79.028	3904.963	17.404	0.000	17.303	0.000	6.884	0.000	0.000	17.481	16.919	44.503	MWD+IFR1+MS
4200.000	25.095	79.028	3995.524	17.809	0.000	17.812	0.000	7.083	0.000	0.000	17.942	17.332	51.412	MWD+IFR1+MS
4300.000	25.095	79.028	4086.085	18.217	0.000	18.324	0.000	7.283	0.000	0.000	18.418	17.733	57.017	MWD+IFR1+MS
4400.000	25.095	79.028	4176.645	18.628	0.000	18.836	0.000	7.486	0.000	0.000	18.907	18.126	61.349	MWD+IFR1+MS
4500.000	25.095	79.028	4267.206	19.041	0.000	19.350	0.000	7.690	0.000	0.000	19.403	18.515	64.658	MWD+IFR1+MS
4600.000	25.095	79.028	4357.766	19.457	0.000	19.865	0.000	7.896	0.000	0.000	19.906	18.902	67.208	MWD+IFR1+MS
4700.000	25.095	79.028	4448.327	19.875	0.000	20.381	0.000	8.104	0.000	0.000	20.413	19.287	69.205	MWD+IFR1+MS
4800.000	25.095	79.028	4538.887	20.296	0.000	20.898	0.000	8.313	0.000	0.000	20.923	19.673	70.798	MWD+IFR1+MS
4900.000	25.095	79.028	4629.448	20.718	0.000	21.416	0.000	8.525	0.000	0.000	21.435	20.058	72.092	MWD+IFR1+MS
5000.000	25.095	79.028	4720.009	21.142	0.000	21.934	0.000	8.737	0.000	0.000	21.950	20.445	73.160	MWD+IFR1+MS
5100.000	25.095	79.028	4810.569	21.568	0.000	22.454	0.000	8.952	0.000	0.000	22.466	20.832	74.055	MWD+IFR1+MS
5200.000	25.095	79.028	4901.130	21.996	0.000	22.974	0.000	9.167	0.000	0.000	22.983	21.221	74.815	MWD+IFR1+MS
5300.000	25.095	79.028	4991.690	22.425	0.000	23.495	0.000	9.384	0.000	0.000	23.502	21.610	75.467	MWD+IFR1+MS
5400.000	25.095	79.028	5082.251	22.856	0.000	24.017	0.000	9.603	0.000	0.000	24.022	22.001	76.033	MWD+IFR1+MS
5500.000	25.095	79.028	5172.812	23.289	0.000	24.539	0.000	9.823	0.000	0.000	24.543	22.393	76.529	MWD+IFR1+MS
5600.000	25.095	79.028	5263.372	23.722	0.000	25.062	0.000	10.044	0.000	0.000	25.065	22.786	76.966	MWD+IFR1+MS
5700.000	25.095	79.028	5353.933	24.157	0.000	25.585	0.000	10.267	0.000	0.000	25.587	23.180	77.356	MWD+IFR1+MS

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5800.000	25.095	79.028	5444.493	24.593	0.000	26.109	0.000	10.491	0.000	0.000	26.110	23.575	77.704	MWD+IFR1+MS
5900.000	25.095	79.028	5535.054	25.031	0.000	26.633	0.000	10.717	0.000	0.000	26.634	23.971	78.017	MWD+IFR1+MS
6000.000	25.095	79.028	5625.614	25.469	0.000	27.158	0.000	10.943	0.000	0.000	27.158	24.368	78.301	MWD+IFR1+MS
6100.000	25.095	79.028	5716.175	25.908	0.000	27.683	0.000	11.171	0.000	0.000	27.683	24.767	78.559	MWD+IFR1+MS
6200.000	25.095	79.028	5806.736	26.349	0.000	28.208	0.000	11.401	0.000	0.000	28.208	25.166	78.795	MWD+IFR1+MS
6300.000	25.095	79.028	5897.296	26.790	0.000	28.734	0.000	11.631	0.000	0.000	28.734	25.566	79.012	MWD+IFR1+MS
6400.000	25.095	79.028	5987.857	27.232	0.000	29.260	0.000	11.863	0.000	0.000	29.261	25.967	79.211	MWD+IFR1+MS
6500.000	25.095	79.028	6078.417	27.675	0.000	29.787	0.000	12.096	0.000	0.000	29.787	26.369	79.395	MWD+IFR1+MS
6600.000	25.095	79.028	6168.978	28.119	0.000	30.314	0.000	12.331	0.000	0.000	30.314	26.772	79.566	MWD+IFR1+MS
6700.000	25.095	79.028	6259.539	28.563	0.000	30.841	0.000	12.567	0.000	0.000	30.842	27.175	79.725	MWD+IFR1+MS
6800.000	25.095	79.028	6350.099	29.009	0.000	31.369	0.000	12.804	0.000	0.000	31.369	27.580	79.873	MWD+IFR1+MS
6900.000	25.095	79.028	6440.660	29.455	0.000	31.896	0.000	13.042	0.000	0.000	31.897	27.985	80.011	MWD+IFR1+MS
7000.000	25.095	79.028	6531.220	29.901	0.000	32.424	0.000	13.282	0.000	0.000	32.426	28.391	80.141	MWD+IFR1+MS
7100.000	25.095	79.028	6621.781	30.349	0.000	32.952	0.000	13.523	0.000	0.000	32.954	28.797	80.263	MWD+IFR1+MS
7200.000	25.095	79.028	6712.341	30.796	0.000	33.481	0.000	13.765	0.000	0.000	33.483	29.205	80.377	MWD+IFR1+MS
7300.000	25.095	79.028	6802.902	31.245	0.000	34.010	0.000	14.009	0.000	0.000	34.012	29.613	80.485	MWD+IFR1+MS
7400.000	25.095	79.028	6893.463	31.694	0.000	34.538	0.000	14.253	0.000	0.000	34.542	30.021	80.588	MWD+IFR1+MS
7500.000	25.095	79.028	6984.023	32.143	0.000	35.068	0.000	14.500	0.000	0.000	35.071	30.431	80.684	MWD+IFR1+MS
7600.000	25.095	79.028	7074.584	32.594	0.000	35.597	0.000	14.747	0.000	0.000	35.601	30.841	80.776	MWD+IFR1+MS
7700.000	25.095	79.028	7165.144	33.044	0.000	36.126	0.000	14.996	0.000	0.000	36.131	31.252	80.863	MWD+IFR1+MS
7752.103	25.095	79.028	7212.329	33.277	0.000	36.400	0.000	15.126	0.000	0.000	36.405	31.464	80.927	MWD+IFR1+MS
7800.000	24.411	80.631	7255.826	33.509	0.000	36.655	0.000	15.245	0.000	0.000	36.656	31.659	80.987	MWD+IFR1+MS
7900.000	23.044	84.259	7347.375	34.004	0.000	37.170	0.000	15.494	0.000	0.000	37.185	32.079	80.955	MWD+IFR1+MS
8000.000	21.768	88.303	7439.830	34.513	0.000	37.638	0.000	15.740	0.000	0.000	37.720	32.504	80.825	MWD+IFR1+MS
8100.000	20.602	92.802	7533.076	35.034	0.000	38.027	-0.000	15.975	0.000	0.000	38.243	32.915	80.796	MWD+IFR1+MS
8200.000	19.565	97.786	7627.001	35.584	0.000	38.322	-0.000	16.201	0.000	0.000	38.752	33.313	80.886	MWD+IFR1+MS
8300.000	18.679	103.262	7721.490	36.172	0.000	38.505	-0.000	16.417	0.000	0.000	39.240	33.699	81.172	MWD+IFR1+MS
8400.000	17.966	109.210	7816.428	36.810	0.000	38.568	-0.000	16.626	0.000	0.000	39.706	34.079	81.620	MWD+IFR1+MS
8500.000	17.448	115.564	7911.699	37.498	0.000	38.512	-0.000	16.830	0.000	0.000	40.151	34.454	82.142	MWD+IFR1+MS
8600.000	17.141	122.216	8007.187	38.213	0.000	38.353	-0.000	17.030	0.000	0.000	40.574	34.825	82.730	MWD+IFR1+MS
8700.000	17.058	129.016	8102.776	38.918	0.000	38.126	-0.000	17.227	0.000	0.000	40.971	35.194	83.363	MWD+IFR1+MS
8800.000	17.202	135.792	8198.350	39.565	0.000	37.878	-0.000	17.421	0.000	0.000	41.342	35.561	84.018	MWD+IFR1+MS
8900.000	17.567	142.377	8293.791	40.110	0.000	37.658	-0.000	17.614	0.000	0.000	41.685	35.924	84.664	MWD+IFR1+MS

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9000.000	18.140	148.631	8388.984	40.522	0.000	37.502	-0.000	17.807	0.000	0.000	42.002	36.282	85.274	MWD+IFR1+MS
9100.000	18.901	154.457	8483.813	40.787	0.000	37.434	-0.000	18.000	0.000	0.000	42.293	36.633	85.824	MWD+IFR1+MS
9200.000	19.830	159.802	8578.161	40.906	0.000	37.457	-0.000	18.194	0.000	0.000	42.563	36.976	86.300	MWD+IFR1+MS
9300.000	20.903	164.653	8671.915	40.898	0.000	37.564	-0.000	18.392	0.000	0.000	42.821	37.304	86.753	MWD+IFR1+MS
9400.000	22.101	169.027	8764.960	40.783	0.000	37.737	-0.000	18.596	0.000	0.000	43.071	37.619	87.192	MWD+IFR1+MS
9500.000	23.403	172.955	8857.183	40.573	0.000	37.960	-0.000	18.806	0.000	0.000	43.309	37.923	87.577	MWD+IFR1+MS
9600.000	24.793	176.478	8948.470	40.284	0.000	38.220	-0.000	19.023	0.000	0.000	43.534	38.217	87.902	MWD+IFR1+MS
9700.000	26.257	179.641	9038.712	39.928	0.000	38.505	-0.000	19.247	0.000	0.000	43.747	38.502	88.164	MWD+IFR1+MS
9800.000	27.784	182.487	9127.798	39.518	-0.000	38.806	0.000	19.480	0.000	0.000	43.951	38.778	88.360	MWD+IFR1+MS
9900.000	29.363	185.054	9215.619	39.062	-0.000	39.117	0.000	19.723	0.000	0.000	44.144	39.046	88.485	MWD+IFR1+MS
9939.548	30.000	186.000	9249.978	38.856	-0.000	39.232	0.000	19.814	0.000	0.000	44.211	39.138	88.417	MWD+IFR1+MS
10000.000	30.000	186.000	9302.331	38.998	-0.000	39.375	0.000	19.955	0.000	0.000	44.311	39.278	88.269	MWD+IFR1+MS
10039.570	30.000	186.000	9336.600	39.090	-0.000	39.468	0.000	20.049	0.000	0.000	44.376	39.370	88.164	MWD+IFR1+MS
10100.000	34.834	186.029	9387.598	37.676	-0.000	39.611	0.000	20.220	0.000	0.000	44.496	39.510	88.080	MWD+IFR1+MS
10200.000	42.834	186.063	9465.431	35.744	-0.000	39.841	0.000	21.041	0.000	0.000	44.988	39.752	88.786	MWD+IFR1+MS
10300.000	50.834	186.089	9533.786	34.110	-0.000	40.061	0.000	22.399	0.000	0.000	45.528	39.989	89.740	MWD+IFR1+MS
10400.000	58.834	186.109	9591.334	32.551	-0.000	40.270	0.000	23.973	0.000	0.000	45.909	40.212	90.527	MWD+IFR1+MS
10500.000	66.834	186.126	9636.953	31.282	-0.000	40.466	0.000	25.702	0.000	0.000	46.147	40.422	91.286	MWD+IFR1+MS
10600.000	74.834	186.142	9669.757	30.514	-0.000	40.648	0.000	27.520	0.000	0.000	46.269	40.619	92.128	MWD+IFR1+MS
10700.000	82.834	186.156	9689.106	30.419	-0.000	40.816	0.000	29.359	0.000	0.000	46.310	40.800	93.151	MWD+IFR1+MS
10789.572	90.000	186.168	9694.700	30.731	0.000	40.951	0.000	30.731	0.000	0.000	46.311	40.945	94.276	MWD+IFR1+MS
10789.697	90.000	186.170	9694.700	30.732	0.000	40.951	0.000	30.732	0.000	0.000	46.311	40.945	94.278	MWD+IFR1+MS
10800.000	90.000	186.170	9694.700	30.770	0.000	40.965	0.000	30.770	0.000	0.000	46.311	40.960	94.422	MWD+IFR1+MS
10900.000	90.000	186.170	9694.700	31.157	0.000	41.117	0.000	31.157	0.000	0.000	46.311	41.116	95.856	MWD+IFR1+MS
11000.000	90.000	186.170	9694.700	31.562	0.000	41.290	0.000	31.562	0.000	0.000	46.317	41.288	97.375	MWD+IFR1+MS
11100.000	90.000	186.170	9694.700	31.981	0.000	41.483	0.000	31.981	0.000	0.000	46.332	41.470	98.995	MWD+IFR1+MS
11200.000	90.000	186.170	9694.700	32.414	0.000	41.693	0.000	32.414	0.000	0.000	46.354	41.662	100.735	MWD+IFR1+MS
11300.000	90.000	186.170	9694.700	32.860	0.000	41.922	0.000	32.860	0.000	0.000	46.387	41.862	102.612	MWD+IFR1+MS
11400.000	90.000	186.170	9694.700	33.318	0.000	42.168	0.000	33.318	0.000	0.000	46.429	42.069	104.647	MWD+IFR1+MS
11500.000	90.000	186.170	9694.700	33.788	0.000	42.432	0.000	33.788	0.000	0.000	46.485	42.280	106.860	MWD+IFR1+MS
11600.000	90.000	186.170	9694.700	34.270	0.000	42.713	0.000	34.270	0.000	0.000	46.554	42.495	109.268	MWD+IFR1+MS
11700.000	90.000	186.170	9694.700	34.763	0.000	43.010	0.000	34.763	0.000	0.000	46.639	42.710	111.885	MWD+IFR1+MS
11800.000	90.000	186.170	9694.700	35.267	0.000	43.324	0.000	35.267	0.000	0.000	46.743	42.923	114.715	MWD+IFR1+MS

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11900.000	90.000	186.170	9694.700	35.780	0.000	43.655	0.000	35.780	0.000	46.868	43.130	117.749	MWD+IFR1+MS
12000.000	90.000	186.170	9694.700	36.304	0.000	44.001	0.000	36.304	0.000	47.016	43.330	120.963	MWD+IFR1+MS
12100.000	90.000	186.170	9694.700	36.836	0.000	44.362	0.000	36.836	0.000	47.191	43.519	124.310	MWD+IFR1+MS
12200.000	90.000	186.170	9694.700	37.378	0.000	44.738	0.000	37.378	0.000	47.394	43.694	127.728	MWD+IFR1+MS
12300.000	90.000	186.170	9694.700	37.928	0.000	45.129	0.000	37.928	0.000	47.626	43.855	131.145	MWD+IFR1+MS
12400.000	90.000	186.170	9694.700	38.486	0.000	45.534	0.000	38.486	0.000	47.888	44.000	134.485	MWD+IFR1+MS
12500.000	90.000	186.170	9694.700	39.052	0.000	45.953	0.000	39.052	0.000	48.179	44.130	-42.318	MWD+IFR1+MS
12600.000	90.000	186.170	9694.700	39.625	0.000	46.385	0.000	39.625	0.000	48.499	44.244	-39.312	MWD+IFR1+MS
12700.000	90.000	186.170	9694.700	40.206	0.000	46.830	0.000	40.206	0.000	48.846	44.345	-36.527	MWD+IFR1+MS
12770.580	90.000	186.170	9694.700	40.618	0.000	47.150	0.000	40.618	0.000	49.105	44.408	-34.716	MWD+IFR1+MS
12803.390	90.000	185.514	9694.700	40.811	0.000	47.353	0.000	40.811	0.000	49.229	44.435	-33.924	MWD+IFR1+MS
12900.000	90.000	185.514	9694.700	41.382	0.000	47.809	0.000	41.382	0.000	49.615	44.508	-31.718	MWD+IFR1+MS
13000.000	90.000	185.514	9694.700	41.982	0.000	48.291	0.000	41.982	0.000	50.035	44.574	-29.657	MWD+IFR1+MS
13100.000	90.000	185.514	9694.700	42.588	0.000	48.786	0.000	42.588	0.000	50.474	44.633	-27.798	MWD+IFR1+MS
13200.000	90.000	185.514	9694.700	43.201	0.000	49.292	0.000	43.201	0.000	50.931	44.685	-26.122	MWD+IFR1+MS
13300.000	90.000	185.514	9694.700	43.818	0.000	49.808	0.000	43.818	0.000	51.404	44.733	-24.608	MWD+IFR1+MS
13400.000	90.000	185.514	9694.700	44.441	0.000	50.335	0.000	44.441	0.000	51.892	44.776	-23.238	MWD+IFR1+MS
13500.000	90.000	185.514	9694.700	45.069	0.000	50.872	0.000	45.069	0.000	52.394	44.816	-21.994	MWD+IFR1+MS
13600.000	90.000	185.514	9694.700	45.701	0.000	51.419	0.000	45.701	0.000	52.909	44.853	-20.862	MWD+IFR1+MS
13700.000	90.000	185.514	9694.700	46.339	0.000	51.976	0.000	46.339	0.000	53.437	44.888	-19.828	MWD+IFR1+MS
13800.000	90.000	185.514	9694.700	46.981	0.000	52.542	0.000	46.981	0.000	53.976	44.920	-18.881	MWD+IFR1+MS
13900.000	90.000	185.514	9694.700	47.627	0.000	53.117	0.000	47.627	0.000	54.526	44.951	-18.010	MWD+IFR1+MS
14000.000	90.000	185.514	9694.700	48.277	0.000	53.700	0.000	48.277	0.000	55.087	44.981	-17.206	MWD+IFR1+MS
14100.000	90.000	185.514	9694.700	48.931	0.000	54.292	0.000	48.931	0.000	55.657	45.009	-16.462	MWD+IFR1+MS
14200.000	90.000	185.514	9694.700	49.589	0.000	54.892	0.000	49.589	0.000	56.237	45.037	-15.772	MWD+IFR1+MS
14300.000	90.000	185.514	9694.700	50.251	0.000	55.500	0.000	50.251	0.000	56.826	45.064	-15.130	MWD+IFR1+MS
14400.000	90.000	185.514	9694.700	50.916	0.000	56.116	0.000	50.916	0.000	57.424	45.091	-14.530	MWD+IFR1+MS
14500.000	90.000	185.514	9694.700	51.584	0.000	56.738	0.000	51.584	0.000	58.029	45.117	-13.970	MWD+IFR1+MS
14600.000	90.000	185.514	9694.700	52.256	0.000	57.368	0.000	52.256	0.000	58.643	45.143	-13.444	MWD+IFR1+MS
14700.000	90.000	185.514	9694.700	52.931	0.000	58.005	0.000	52.931	0.000	59.264	45.169	-12.949	MWD+IFR1+MS
14800.000	90.000	185.514	9694.700	53.609	0.000	58.649	0.000	53.609	0.000	59.893	45.195	-12.484	MWD+IFR1+MS
14900.000	90.000	185.514	9694.700	54.289	0.000	59.299	0.000	54.289	0.000	60.528	45.220	-12.044	MWD+IFR1+MS
15000.000	90.000	185.514	9694.700	54.973	0.000	59.955	0.000	54.973	0.000	61.170	45.246	-11.628	MWD+IFR1+MS

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15100.000	90.000	185.514	9694.700	55.659	0.000	60.617	0.000	55.659	0.000	61.819	45.272	-11.235	MWD+IFR1+MS
15200.000	90.000	185.514	9694.700	56.348	0.000	61.285	0.000	56.348	0.000	62.474	45.298	-10.861	MWD+IFR1+MS
15300.000	90.000	185.514	9694.700	57.039	0.000	61.959	0.000	57.039	0.000	63.135	45.324	-10.506	MWD+IFR1+MS
15317.184	90.000	185.514	9694.700	57.158	0.000	62.074	0.000	57.158	0.000	63.248	45.328	-10.447	MWD+IFR1+MS
15400.000	90.000	183.858	9694.700	57.730	0.000	62.868	0.000	57.730	0.000	63.804	45.350	-10.186	MWD+IFR1+MS
15465.317	90.000	182.552	9694.700	58.183	0.000	63.484	0.000	58.183	0.000	64.250	45.366	-10.010	MWD+IFR1+MS
15500.000	90.000	182.552	9694.700	58.424	0.000	63.719	0.000	58.424	0.000	64.484	45.374	-9.930	MWD+IFR1+MS
15600.000	90.000	182.552	9694.700	59.120	0.000	64.402	0.000	59.120	0.000	65.162	45.397	-9.708	MWD+IFR1+MS
15700.000	90.000	182.552	9694.700	59.821	0.000	65.091	0.000	59.821	0.000	65.847	45.421	-9.495	MWD+IFR1+MS
15800.000	90.000	182.552	9694.700	60.523	0.000	65.785	0.000	60.523	0.000	66.536	45.445	-9.290	MWD+IFR1+MS
15900.000	90.000	182.552	9694.700	61.227	0.000	66.483	0.000	61.227	0.000	67.230	45.469	-9.093	MWD+IFR1+MS
16000.000	90.000	182.552	9694.700	61.934	0.000	67.186	0.000	61.934	0.000	67.929	45.495	-8.903	MWD+IFR1+MS
16100.000	90.000	182.552	9694.700	62.642	0.000	67.893	0.000	62.642	0.000	68.632	45.520	-8.720	MWD+IFR1+MS
16200.000	90.000	182.552	9694.700	63.352	0.000	68.604	0.000	63.352	0.000	69.338	45.546	-8.544	MWD+IFR1+MS
16300.000	90.000	182.552	9694.700	64.064	0.000	69.320	0.000	64.064	0.000	70.049	45.573	-8.373	MWD+IFR1+MS
16400.000	90.000	182.552	9694.700	64.777	0.000	70.039	0.000	64.777	0.000	70.764	45.601	-8.209	MWD+IFR1+MS
16500.000	90.000	182.552	9694.700	65.492	0.000	70.762	0.000	65.492	0.000	71.482	45.628	-8.050	MWD+IFR1+MS
16600.000	90.000	182.552	9694.700	66.209	0.000	71.488	0.000	66.209	0.000	72.204	45.657	-7.896	MWD+IFR1+MS
16700.000	90.000	182.552	9694.700	66.927	0.000	72.218	0.000	66.927	0.000	72.930	45.686	-7.747	MWD+IFR1+MS
16800.000	90.000	182.552	9694.700	67.647	0.000	72.951	0.000	67.647	0.000	73.659	45.715	-7.603	MWD+IFR1+MS
16900.000	90.000	182.552	9694.700	68.368	0.000	73.688	0.000	68.368	0.000	74.391	45.745	-7.463	MWD+IFR1+MS
17000.000	90.000	182.552	9694.700	69.091	0.000	74.428	0.000	69.091	0.000	75.126	45.776	-7.328	MWD+IFR1+MS
17100.000	90.000	182.552	9694.700	69.814	0.000	75.171	0.000	69.814	0.000	75.865	45.807	-7.196	MWD+IFR1+MS
17200.000	90.000	182.552	9694.700	70.540	0.000	75.917	0.000	70.540	0.000	76.607	45.839	-7.068	MWD+IFR1+MS
17300.000	90.000	182.552	9694.700	71.266	0.000	76.666	0.000	71.266	0.000	77.351	45.871	-6.944	MWD+IFR1+MS
17400.000	90.000	182.552	9694.700	71.994	0.000	77.418	0.000	71.994	0.000	78.099	45.903	-6.823	MWD+IFR1+MS
17500.000	90.000	182.552	9694.700	72.722	0.000	78.173	0.000	72.722	0.000	78.849	45.937	-6.705	MWD+IFR1+MS
17600.000	90.000	182.552	9694.700	73.452	0.000	78.930	0.000	73.452	0.000	79.602	45.970	-6.591	MWD+IFR1+MS
17700.000	90.000	182.552	9694.700	74.183	0.000	79.690	0.000	74.183	0.000	80.358	46.004	-6.480	MWD+IFR1+MS
17800.000	90.000	182.552	9694.700	74.916	0.000	80.452	0.000	74.916	0.000	81.116	46.039	-6.371	MWD+IFR1+MS
17900.000	90.000	182.552	9694.700	75.649	0.000	81.217	0.000	75.649	0.000	81.877	46.074	-6.265	MWD+IFR1+MS
18000.000	90.000	182.552	9694.700	76.383	0.000	81.985	0.000	76.383	0.000	82.640	46.110	-6.162	MWD+IFR1+MS
18100.000	90.000	182.552	9694.700	77.118	0.000	82.754	0.000	77.118	0.000	83.406	46.146	-6.062	MWD+IFR1+MS

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18200.000	90.000	182.552	9694.700	77.855	0.000	83.526	0.000	77.855	0.000	84.174	46.183	-5.964	MWD+IFR1+MS
18300.000	90.000	182.552	9694.700	78.592	0.000	84.301	0.000	78.592	0.000	84.944	46.221	-5.868	MWD+IFR1+MS
18400.000	90.000	182.552	9694.700	79.330	0.000	85.077	0.000	79.330	0.000	85.716	46.258	-5.775	MWD+IFR1+MS
18500.000	90.000	182.552	9694.700	80.069	0.000	85.855	0.000	80.069	0.000	86.491	46.297	-5.683	MWD+IFR1+MS
18600.000	90.000	182.552	9694.700	80.809	0.000	86.636	0.000	80.809	0.000	87.267	46.335	-5.594	MWD+IFR1+MS
18700.000	90.000	182.552	9694.700	81.549	0.000	87.418	0.000	81.549	0.000	88.046	46.375	-5.507	MWD+IFR1+MS
18800.000	90.000	182.552	9694.700	82.291	0.000	88.203	0.000	82.291	0.000	88.826	46.414	-5.422	MWD+IFR1+MS
18900.000	90.000	182.552	9694.700	83.033	0.000	88.989	0.000	83.033	0.000	89.609	46.455	-5.339	MWD+IFR1+MS
19000.000	90.000	182.552	9694.700	83.776	0.000	89.777	0.000	83.776	0.000	90.393	46.495	-5.257	MWD+IFR1+MS
19100.000	90.000	182.552	9694.700	84.520	0.000	90.567	0.000	84.520	0.000	91.179	46.537	-5.178	MWD+IFR1+MS
19200.000	90.000	182.552	9694.700	85.265	0.000	91.359	0.000	85.265	0.000	91.967	46.578	-5.099	MWD+IFR1+MS
19300.000	90.000	182.552	9694.700	86.010	0.000	92.152	0.000	86.010	0.000	92.756	46.621	-5.023	MWD+IFR1+MS
19400.000	90.000	182.552	9694.700	86.756	0.000	92.947	0.000	86.756	0.000	93.547	46.663	-4.948	MWD+IFR1+MS
19500.000	90.000	182.552	9694.700	87.502	0.000	93.743	0.000	87.502	0.000	94.340	46.706	-4.875	MWD+IFR1+MS
19600.000	90.000	182.552	9694.700	88.250	0.000	94.541	0.000	88.250	0.000	95.135	46.750	-4.803	MWD+IFR1+MS
19700.000	90.000	182.552	9694.700	88.998	0.000	95.341	0.000	88.998	0.000	95.931	46.794	-4.733	MWD+IFR1+MS
19800.000	90.000	182.552	9694.700	89.746	0.000	96.142	0.000	89.746	0.000	96.728	46.839	-4.664	MWD+IFR1+MS
19900.000	90.000	182.552	9694.700	90.495	0.000	96.945	0.000	90.495	0.000	97.527	46.884	-4.596	MWD+IFR1+MS
20000.000	90.000	182.552	9694.700	91.245	0.000	97.749	0.000	91.245	0.000	98.327	46.929	-4.530	MWD+IFR1+MS
20100.000	90.000	182.552	9694.700	91.996	0.000	98.554	0.000	91.996	0.000	99.129	46.975	-4.465	MWD+IFR1+MS
20200.000	90.000	182.552	9694.700	92.747	0.000	99.361	0.000	92.747	0.000	99.932	47.022	-4.401	MWD+IFR1+MS
20300.000	90.000	182.552	9694.700	93.498	0.000	100.169	0.000	93.498	0.000	100.737	47.069	-4.339	MWD+IFR1+MS
20400.000	90.000	182.552	9694.700	94.250	0.000	100.978	0.000	94.250	0.000	101.543	47.116	-4.277	MWD+IFR1+MS
20500.000	90.000	182.552	9694.700	95.003	0.000	101.789	0.000	95.003	0.000	102.350	47.164	-4.217	MWD+IFR1+MS
20600.000	90.000	182.552	9694.700	95.756	0.000	102.600	0.000	95.756	0.000	103.158	47.212	-4.158	MWD+IFR1+MS
20649.207	90.000	182.552	9694.700	96.126	0.000	102.999	0.000	96.126	0.000	103.555	47.236	-4.129	MWD+IFR1+MS
20700.000	90.000	181.536	9694.700	96.508	0.000	103.567	0.000	96.508	0.000	103.966	47.261	-4.103	MWD+IFR1+MS
20780.979	90.000	179.916	9694.700	97.117	0.000	104.424	-0.000	97.117	0.000	104.626	47.301	-4.072	MWD+IFR1+MS
20800.000	90.000	179.916	9694.700	97.261	0.000	104.577	-0.000	97.261	0.000	104.779	47.310	-4.067	MWD+IFR1+MS
20900.000	90.000	179.916	9694.700	98.014	0.000	105.385	-0.000	98.014	0.000	105.586	47.360	-4.042	MWD+IFR1+MS
21000.000	90.000	179.916	9694.700	98.769	0.000	106.195	-0.000	98.769	0.000	106.396	47.410	-4.016	MWD+IFR1+MS
21100.000	90.000	179.916	9694.700	99.525	0.000	107.006	-0.000	99.525	0.000	107.206	47.461	-3.991	MWD+IFR1+MS
21200.000	90.000	179.916	9694.700	100.281	0.000	107.818	-0.000	100.281	0.000	108.018	47.512	-3.967	MWD+IFR1+MS

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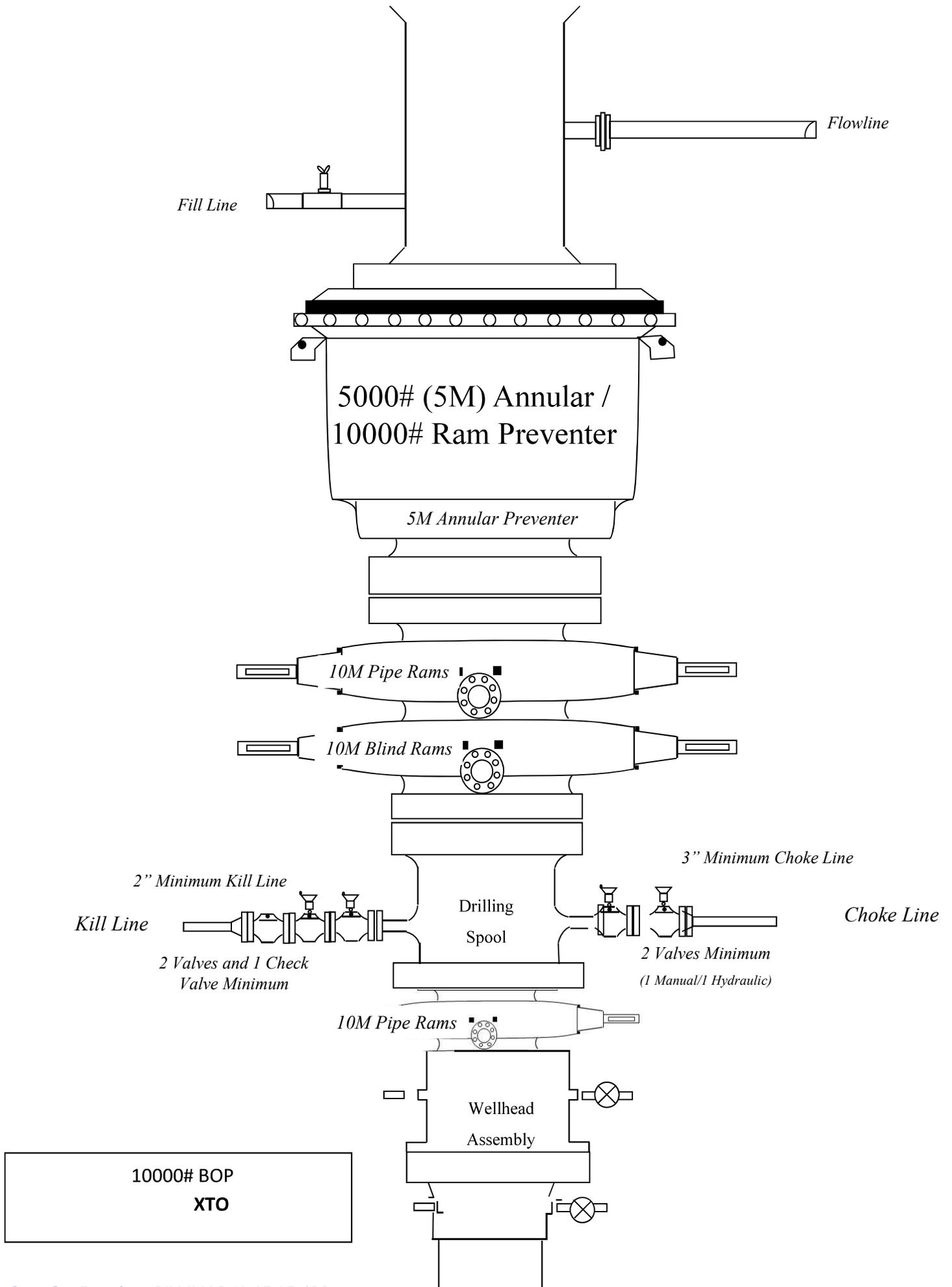
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21300.000	90.000	179.916	9694.700	101.037	0.000	108.631	-0.000	101.037	0.000	108.831	47.563	-3.942	MWD+IFR1+MS
21400.000	90.000	179.916	9694.700	101.794	0.000	109.445	-0.000	101.794	0.000	109.645	47.615	-3.918	MWD+IFR1+MS
21500.000	90.000	179.916	9694.700	102.551	0.000	110.261	-0.000	102.551	0.000	110.459	47.667	-3.894	MWD+IFR1+MS
21600.000	90.000	179.916	9694.700	103.309	0.000	111.077	-0.000	103.309	0.000	111.275	47.720	-3.871	MWD+IFR1+MS
21700.000	90.000	179.916	9694.700	104.067	0.000	111.894	-0.000	104.067	0.000	112.092	47.774	-3.847	MWD+IFR1+MS
21800.000	90.000	179.916	9694.700	104.825	0.000	112.712	-0.000	104.825	0.000	112.910	47.827	-3.824	MWD+IFR1+MS
21900.000	90.000	179.916	9694.700	105.584	0.000	113.531	-0.000	105.584	0.000	113.728	47.881	-3.801	MWD+IFR1+MS
22000.000	90.000	179.916	9694.700	106.343	0.000	114.352	-0.000	106.343	0.000	114.548	47.936	-3.779	MWD+IFR1+MS
22100.000	90.000	179.916	9694.700	107.103	0.000	115.172	-0.000	107.103	0.000	115.368	47.991	-3.756	MWD+IFR1+MS
22200.000	90.000	179.916	9694.700	107.863	0.000	115.994	-0.000	107.863	0.000	116.190	48.046	-3.734	MWD+IFR1+MS
22300.000	90.000	179.916	9694.700	108.623	0.000	116.817	-0.000	108.623	0.000	117.012	48.102	-3.712	MWD+IFR1+MS
22400.000	90.000	179.916	9694.700	109.384	0.000	117.640	-0.000	109.384	0.000	117.835	48.158	-3.691	MWD+IFR1+MS
22500.000	90.000	179.916	9694.700	110.145	0.000	118.465	-0.000	110.145	0.000	118.659	48.215	-3.669	MWD+IFR1+MS
22600.000	90.000	179.916	9694.700	110.906	0.000	119.290	-0.000	110.906	0.000	119.483	48.272	-3.648	MWD+IFR1+MS
22651.551	90.000	179.916	9694.700	111.298	0.000	119.715	-0.000	111.298	0.000	119.908	48.302	-3.637	MWD+IFR1+MS

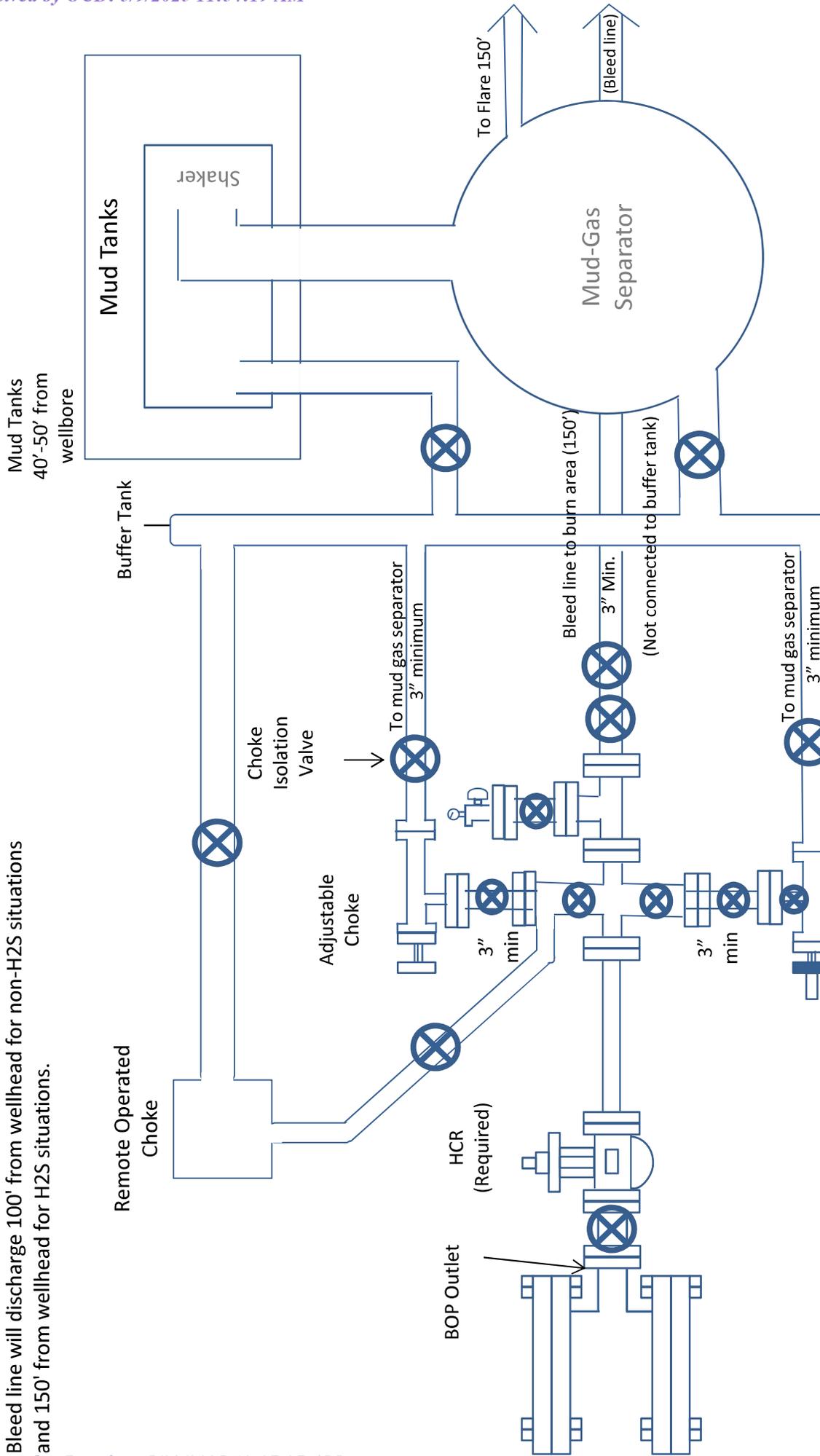
Poker Lake Unit BD 21 508H

Plan Targets

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 1	10479.40	403319.10	641566.90	6396.00	CIRCLE
PP1 1	12805.28	400627.80	641278.40	6396.00	CIRCLE
PP2 1	15351.88	398093.00	641033.50	6396.00	CIRCLE
PP3 1	20683.91	392766.50	640792.30	6396.00	CIRCLE
LTP 1	22686.25	390764.20	640792.20	6396.00	CIRCLE
BHL 1	22686.25	390764.20	640792.20	6396.00	CIRCLE



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



10M Choke Manifold Diagram XTO

Drilling Operations Choke Manifold 10M Service



API BTC

Coupling	Pipe Body
Grade: L80-IC	Grade: L80-IC
Body: Red	1st Band: Red
1st Band: Brown	2nd Band: Brown
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -

Outside Diameter	9.625 in.	Wall Thickness	0.395 in.	Grade	L80-IC
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	Regular				

Pipe Body Data

Geometry		Performance	
Nominal OD	9.625 in.	Drift	8.679 in.
Wall Thickness	0.395 in.	Plain End Weight	38.97 lb/ft
Nominal Weight	40 lb/ft	OD Tolerance	API
Nominal ID	8.835 in.		
		SMYS	80,000 psi
		Min UTS	95,000 psi
		Body Yield Strength	916 x1000 lb
		Min. Internal Yield Pressure	5750 psi
		Collapse Pressure	3870 psi
		Max. Allowed Bending	38 °/100 ft

Connection Data

Geometry		Performance	
Thread per In	5	Joint Strength	947 x1000 lb
Connection OD	10.625 in.	Coupling Face Load	837 x1000 lb
Hand Tight Stand Off	1 in.	Internal Pressure Capacity	5750 psi

Notes

For products according to API Standards 5CT & 5B; Performance calculated considering API Technical Report 5C3 (Sections 9 & 10) equations, For geometrical and steel grades combinations not considered in the API Standards 5CT and/or 5B; Performance calculations indirectly derived from API Technical Report 5C3 (Sections 9 & 10) equations.
Couplings OD are shown according to current API 5CT 10th Edition.

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TPN™



Coupling	Pipe Body
Grade: P110-CY	Grade: P110-CY
Body: White	1st Band: White
1st Band: Grey	2nd Band: Grey
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5,500 in.	Wall Thickness	0,361 in.	Grade	P110-CY
Min. Wall Thickness	87,50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry		Performance	
Nominal OD	5,500 in.	Wall Thickness	0,361 in.
Nominal Weight	20,00 lb/ft	Plain End Weight	19,83 lb/ft
Drift	4,653 in.	OD Tolerance	API
Nominal ID	4,778 in.		
		Body Yield Strength	641 x1000 lb
		Min. Internal Yield Pressure	12,640 psi
		SMYS	110,000 psi
		Collapse Pressure	11,100 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6,300 in.	Tension Efficiency	100 %	Minimum	13,860 ft-lb
Coupling Length	8,408 in.	Joint Yield Strength	641 x1000 lb	Optimum	15,400 ft-lb
Connection ID	4,778 in.	Internal Pressure Capacity	12,640 psi	Maximum	16,940 ft-lb
Make-up Loss	4,204 in.	Compression Efficiency	100 %		
Threads per inch	5	Compression Strength	641 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	92 °/100 ft	Operating Torque	26,350 ft-lb
		External Pressure Capacity	11,100 psi	Yield Torque	29,300 ft-lb

Notes

For the latest performance data, always visit our website: www.tenaris.com
 For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

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PI/CIII



TenarisHydril Wedge 441®



Coupling	Pipe Body
Grade: P110-IC	Grade: P110-IC
Body: White	1st Band: White
1st Band: -	2nd Band: Pale Green
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-IC
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Wall Thickness	0.361 in.
Nominal Weight	20.00 lb/ft	Plain End Weight	19.83 lb/ft
Drift	4.653 in.	OD Tolerance	API
Nominal ID	4.778 in.		
		Body Yield Strength	641 x1000 lb
		Min. Internal Yield Pressure	12,640 psi
		SMYS	110,000 psi
		Collapse Pressure	12,300 psi

Connection Data

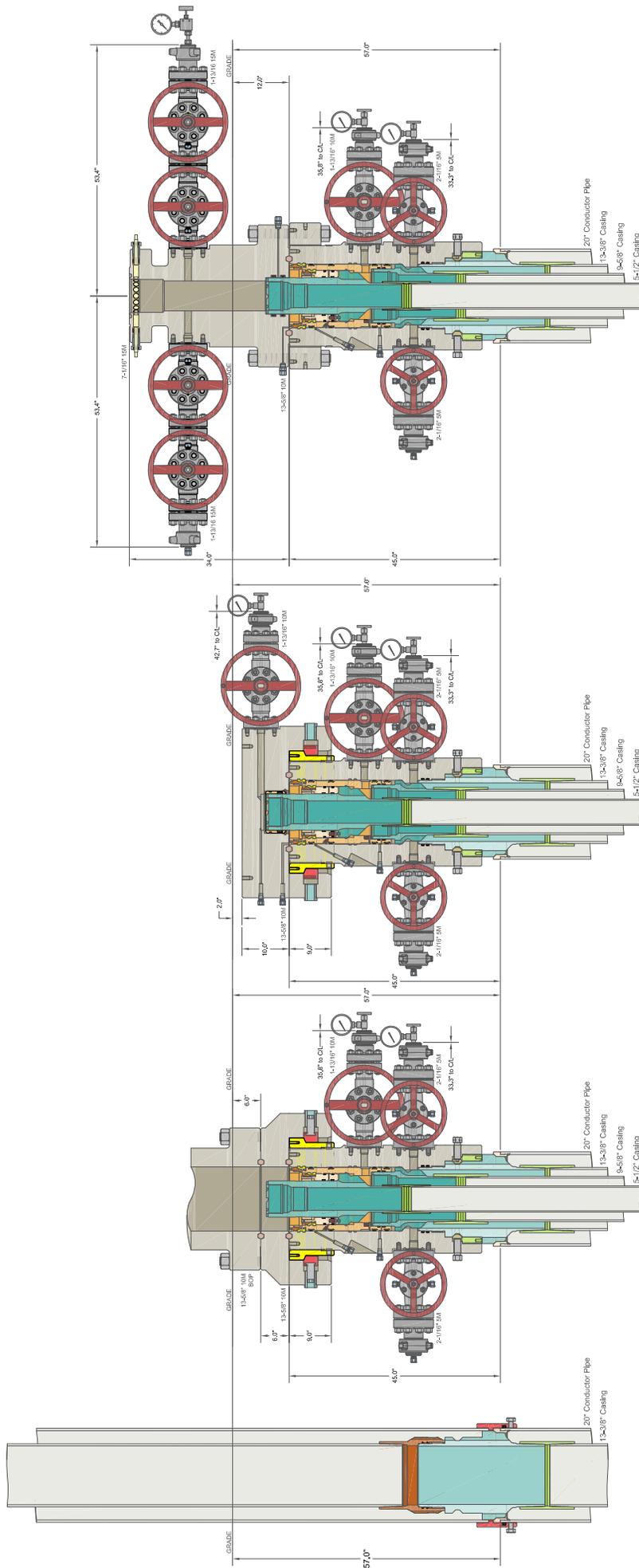
Geometry		Performance		Make-Up Torques	
Connection OD	5.852 in.	Tension Efficiency	81.50 %	Minimum	15,000 ft-lb
Coupling Length	8.714 in.	Joint Yield Strength	522 x1000 lb	Optimum	16,000 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	12,640 psi	Maximum	19,200 ft-lb
Make-up Loss	3.780 in.	Compression Efficiency	81.50 %		
Threads per inch	3.40	Compression Strength	522 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	74,98 °/100 ft	Operating Torque	32,000 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	38,000 ft-lb
				Buck-On	
				Minimum	19,200 ft-lb
				Maximum	20,700 ft-lb

Notes

This connection is fully interchangeable with:
 Wedge 441® - 5.5 in. - 0.304 (17.00) in. (lb/ft)
 Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) / 0.415 (23.00) in. (lb/ft)
 Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
 Connection performance values are related to structural capabilities. For sealability-related performance information, request the Connection Service Envelope from your local Tenaris Representative.

For the latest performance data, always visit our website: www.tenaris.com
 For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

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CACTUS WELLHEAD LLC
 (20") x 13-3/8" x 9-5/8" x 5-1/2" MBU-3T-CFL-R-DBLO-SF Wellhead
 With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head
 And Drilling & Skid Configurations

ALL DIMENSIONS APPROXIMATE

XTO ENERGY INC
DELAWARE BASIN

DRAWN	VJK	31MAR25
APPRV		
DRAWING NO.	SDT-2856	

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.

API STANDARD 53			
Table C.4—Initial Pressure Testing, Surface BOP Stacks			
Component to be Pressure Tested	Pressure Test—Low Pressure ^{ac} psig (MPa)	Pressure Test—High Pressure ^{ac}	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer ^b	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers ^{bd}	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes ^e	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes ^e	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

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

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

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

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

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

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

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

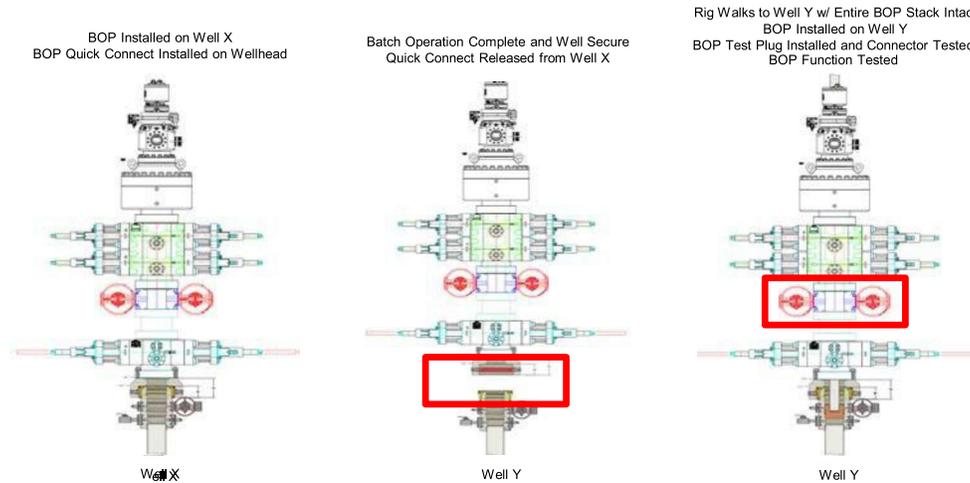
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often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

Procedures

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

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

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



Summary

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

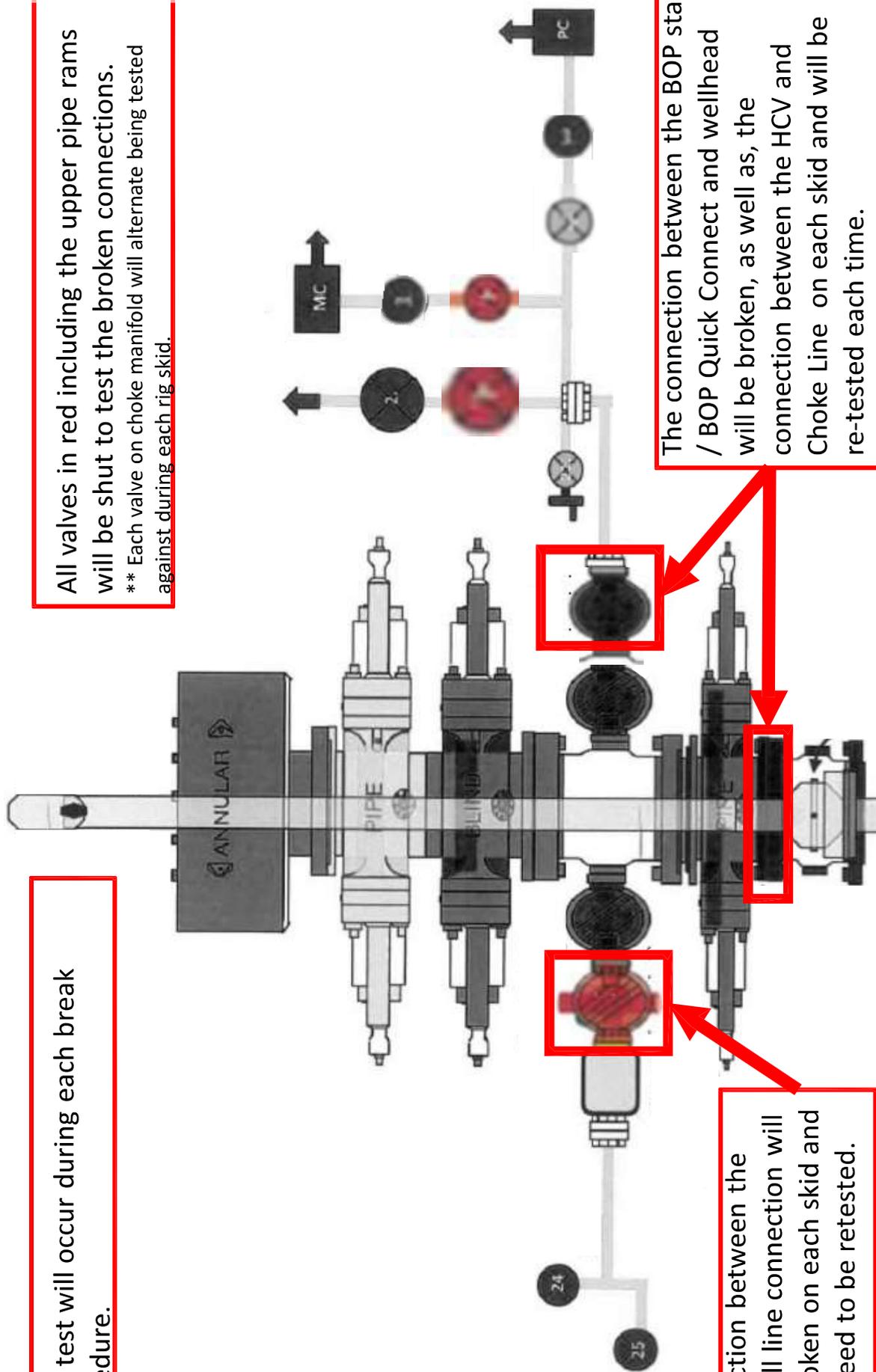
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

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

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

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



The connection between the 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.

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



BLACK GOLD®

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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:

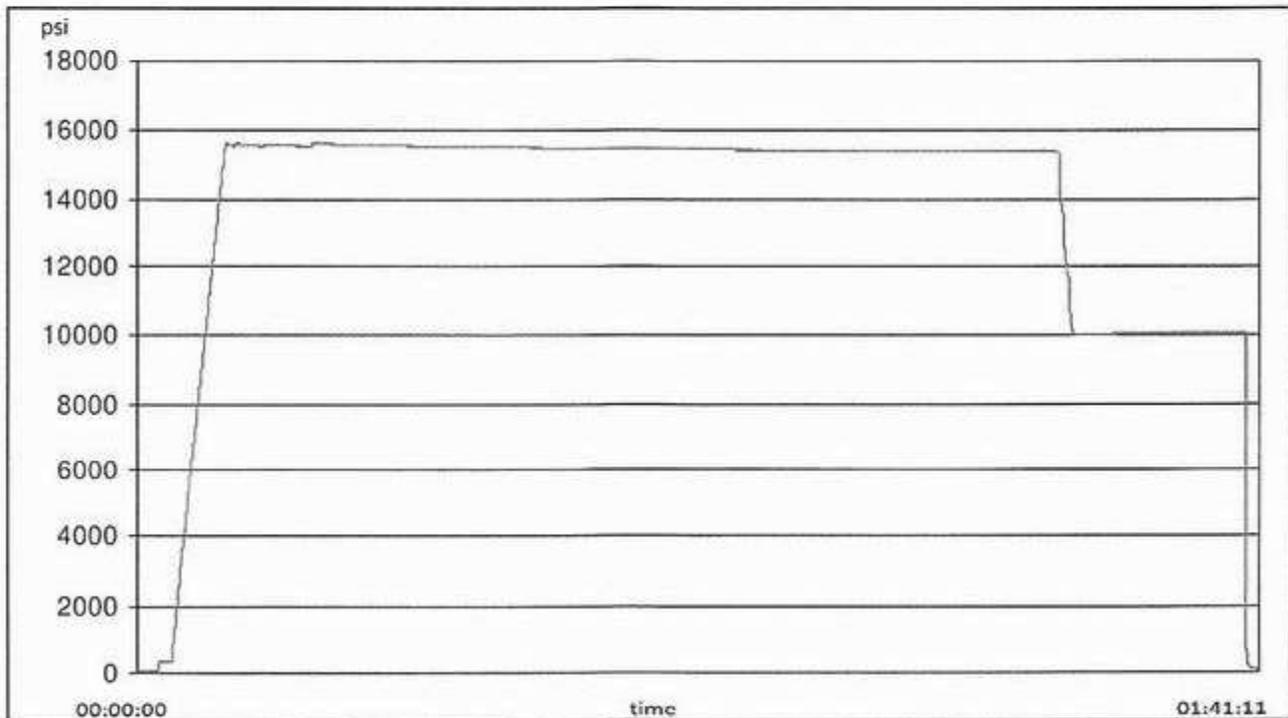
TEST INFORMATION

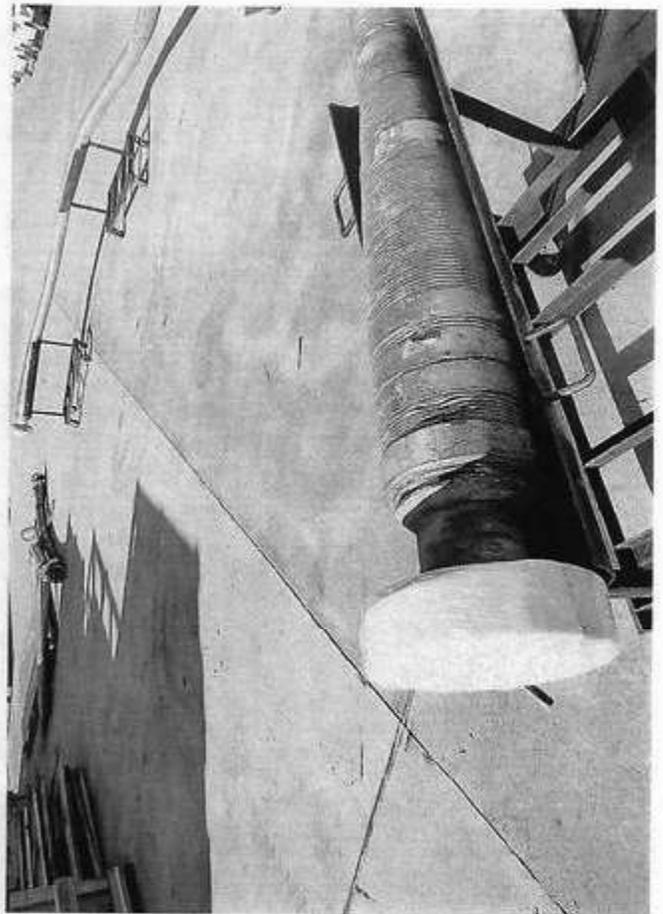
Test procedure: GTS-04-053
 Test pressure: 15000.00 psi
 Test pressure hold: 3600.00 sec
 Work pressure: 10000.00 psi
 Work pressure hold: 900.00 sec
 Length difference: 0.00 %
 Length difference: 0.00 inch

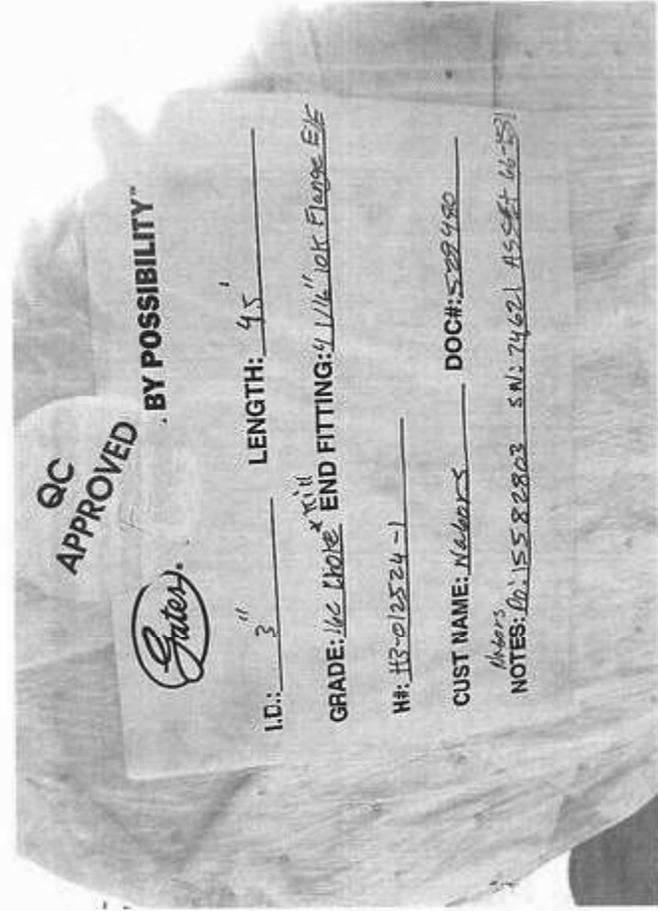
Fitting 1: 3.0 x 4-1/16 10K
 Part number:
 Description:
 Fitting 2: 3.0 x 4-1/16 10K
 Part number:
 Description:

Visual check:
 Pressure test result: PASS
 Length measurement result: Length: 45 feet

Test operator: Travis







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

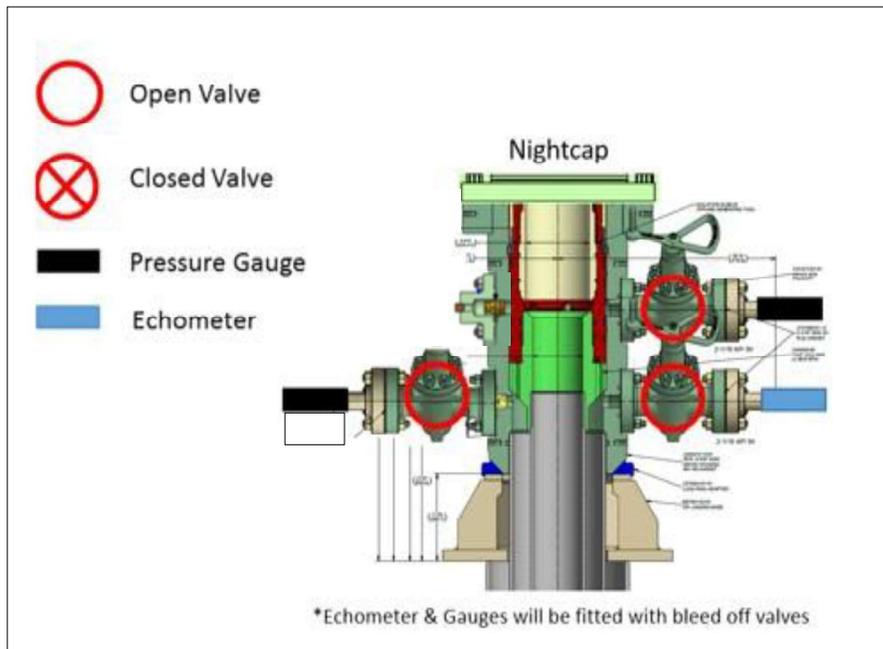
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

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 nipped 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

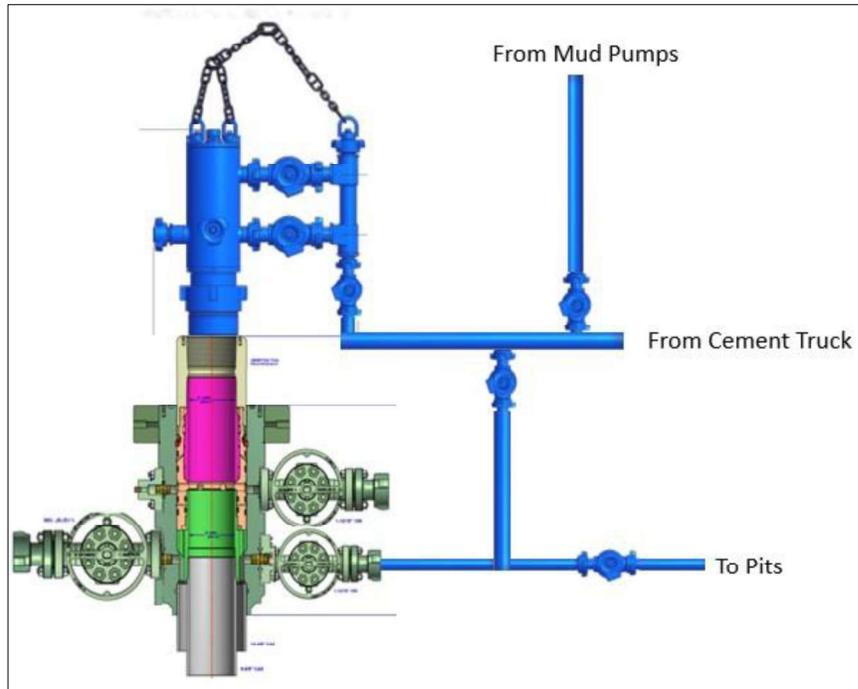
XTO Permian Operating, LLC Offline Cementing Variance Request



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.

Sante Fe Main Office
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General Information
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Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 460583

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 460583
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	This well is a monitoring well with approval good for one year from completion date.	5/29/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	5/29/2025