

Well Name: BIG EDDY UNIT BB HUX	Well Location: T20S / R32E / SEC 22 / NWSW / 32.555087 / -103.760966	County or Parish/State: EDDY / NM
Well Number: 201H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMLC065752A	Unit or CA Name: BIG EDDY	Unit or CA Number: NMNM68294X
US Well Number: 3002550723	Operator: XTO PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2814965

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 10/02/2024

Time Sundry Submitted: 11:23

Date proposed operation will begin: 10/09/2024

Procedure Description: XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include SHL, FTP, LTP, BHL, Casing sizes, Cement, Proposed total Depth, and formation (Pool). The API number for this well is 30-025-50723. FROM: TO: SHL: 1320' FSL & 520' FWL OF SECTION 22-T20S-R32E 490' FSL & 885' FWL OF SECTION 22-T20S-R32E KOP: 1320' FSL & 520' FWL OF SECTION 22-T20S-R32E 99' FSL & 616' FWL OF SECTION 22-T20S-R32E FTP: 2630' FNL & 100' FEL OF SECTION 21-T20S-R32E 100' FSL & 100' FEL OF SECTION 21-T20S-R32E LTP: 2630' FNL & 100' FWL OF SECTION 19-T20S-R32E 100' FSL & 100' FWL OF SECTION 19-T20S-R32E BHL: 2630' FNL & 50' FWL OF SECTION 19-T20S-R32E 100' FSL & 50' FWL OF SECTION 19-T20S-R32E The proposed total depth & the formation (pool) are changing from 24339' MD; 8142' TVD, Bone Spring (Salt Lake) to 27074.75' MD; 10906' TVD, Wolfcamp (Purple Sage). A saturated salt brine will be utilized while drilling through the salt formations. XTO Permian Operating, LLC. respectfully requests permission for a primary and a contingency drilling program for this well. Primary will be a 4-string design & the contingency will be a 5-string design that will be used in case of wellbore instability. See attached drilling program for the primary & contingency design with updated casing design and cement program Attachments: C-102, Choke Manifold Diagram, BOP Diagram, Diverter Diagram, Drilling Program (Primary 4-string design), Drilling Program (Contingency 5-string design), Directional Plan, Non-API Spec documents for Production Casing, MBS Diagram (Primary 4-string design), MBS Diagram (Contingency 5-string design) Well bore diagram (Primary 4-string design), Well bore diagram (Contingency 5-string design), Flex Hose Variance, Spudder Rig Request.

Received by OCD: 11/13/2024 8:00:53 AM

Page 2 of 56

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NOI Attachments

Procedure Description

Sundry_Attachments___Nov_1_20241101122024.pdf

Conditions of Approval

Additional

BEU_BB_Hux_201H_COA_20241112154018.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: JENA AUSTIN

Signed on: NOV 01, 2024 12:21 PM

Name: XTO PERMIAN OPERATING LLC

Title: Regulatory Analyst

Street Address: 22777 SPRINGWOODS VILLAGE PARKWAY

City: SPRINGState: TX

Phone: (346) 335-5295

Email address: JENA.N.AUSTIN@EXXONMOBIL.COM

Field

Representative Name:

Street Address:

City:State:Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 11/12/2024

Signature: Chris Walls

Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021
SUNDRY NOTICES AND REPORTS ON WELLS <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No.
2. Name of Operator		9. API Well No.
3a. Address	3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

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

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

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Additional Remarks

A saturated salt brine will be utilized while drilling through the salt formations.

XTO Permian Operating, LLC. respectfully requests permission for a primary and a contingency drilling program for this well. Primary will be a 4-string design & the contingency will be a 5-string design that will be used in case of wellbore instability.

See attached drilling program for the primary & contingency design with updated casing design and cement program

Attachments: C-102, Choke Manifold Diagram, BOP Diagram, Diverter Diagram, Drilling Program (Primary 4-string design), Drilling Program (Contingency 5-string design), Directional Plan, Non-API Spec documents for Production Casing, MBS Diagram (Primary 4-string design), MBS Diagram (Contingency 5-string design) Well bore diagram (Primary 4-string design), Well bore diagram (Contingency 5-string design), Flex Hose Variance, Spudder Rig Request.

Location of Well

0. SHL: NWSW / 1325 FSL / 520 FWL / TWSP: 20S / RANGE: 32E / SECTION: 22 / LAT: 32.555087 / LONG: -103.760966 (TVD: 0 feet, MD: 0 feet)

PPP: SENE / 2640 FNL / 100 FWL / TWSP: 20S / RANGE: 32E / SECTION: 21 / LAT: 32.558722 / LONG: -103.762974 (TVD: 8142 feet, MD: 8619 feet)

BHL: LOT 2 / 2640 FNL / 100 FWL / TWSP: 20S / RANGE: 32E / SECTION: 19 / LAT: 32.55888 / LONG: -103.813996 (TVD: 8065 feet, MD: 24339 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO
LEASE NO.:	NMLC065752A
LOCATION:	Sec. 22, T.20 S, R 32 E
COUNTY:	Lea County, New Mexico ▼
WELL NAME & NO.:	Big Eddy Unit BB Hux 201H
SURFACE HOLE FOOTAGE:	490'/S & 855'/W
BOTTOM HOLE FOOTAGE:	100'/S & 50'/W

Changes approved through engineering via **Sundry 2814965** on 11-12-2024. Any previous COAs not addressed within the updated COAs still apply.

COA

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

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

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

B. CASING

- The **20** inch surface casing shall be set at approximately **1080** feet (a minimum of **25** feet **(Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

- a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **13-3/8** inch 1st Intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.
3. The minimum required fill of cement behind the **9-5/8** inch 2nd Intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.
- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)

 - Switch to freshwater mud to protect the Capitan Reef and use freshwater mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
4. The minimum required fill of cement behind the **6** inch production casing is:
 - Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office.

Operator is approved for 5 string contingency plan.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
1. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **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 must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

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

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing

Contact the BLM prior to the commencement of any offline cementing procedure.

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

Casing Clearance

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

GENERAL REQUIREMENTS

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

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

Contact Lea County Petroleum Engineering Inspection Staff:

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.

Approved by Zota Stevens on 11/12/2024
575-234-5998 / zstevens@blm.gov

C-102 Sumbit electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONVERSION DIVISION	Revised July, 09 2024	
		Submittal Type:	<input type="checkbox"/> Initial Submittal
			<input checked="" type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

WELL LOCATION INFORMATION			
API Number 30-025-50723	Pool Code 53570	Pool Name SALT LAKE;WOLFCAMP	
Property Code 333143	Property Name BIG EDDY UNIT BB HUX	Well Number 201H	
OGRID No. 373075	Operator Name XTO PERMIAN OPERATING, LLC.	Ground Level Elevation 3,529'	
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal	

Surface Hole Location									
UL M	Section 22	Township 20S	Range 32E	Lot	Ft. from N/S 490 FSL	Ft. from E/W 885 FWL	Latitude 32.552805	Longitude -103.759784	County LEA

Bottom Hole Location									
UL	Section 19	Township 20S	Range 32E	Lot 4	Ft. from N/S 100 FSL	Ft. from E/W 50 FWL	Latitude 32.551834	Longitude -103.813999	County LEA

Dedicated Acres 959.32	Infill or Defining Well INFILL	Defining Well API	Overlapping Spacing Unit (Y/N) N	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 M	Section 22	Township 20S	Range 32E	Lot	Ft. from N/S 99 FSL	Ft. from E/W 616 FWL	Latitude 32.551730	Longitude -103.760658	County LEA

First Take Point (FTP)									
UL P	Section 21	Township 20S	Range 32E	Lot	Ft. from N/S 100 FSL	Ft. from E/W 100 FEL	Latitude 32.551735	Longitude -103.762982	County LEA

Last Take Point (LTP)									
UL	Section 19	Township 20S	Range 32E	Lot 4	Ft. from N/S 100 FSL	Ft. from E/W 100 FWL	Latitude 32.551833	Longitude -103.813836	County LEA

Unitized Area of Area of Interest NMNM105467880	Spacing Unit Type : <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Elevation 3,529'
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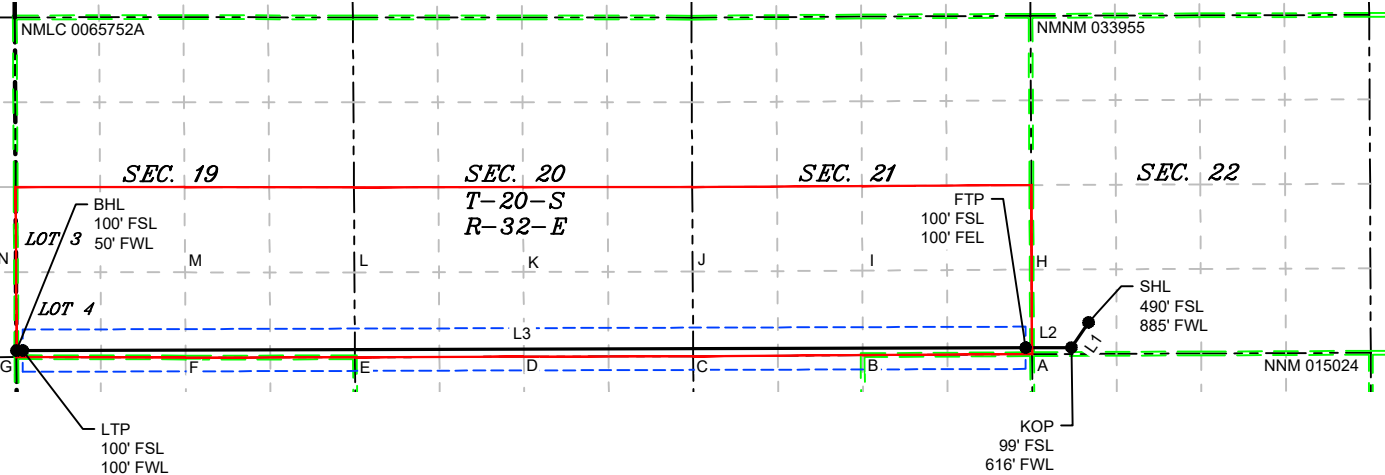
<div>OPERATOR CERTIFICATIONS</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or a voluntary pooling agreement or a compulsory pooling order of heretofore entered by the division.</div> <div>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or information) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</div> <div><div>Srinivas Naveen</div><div>Signature</div><div>3/19/2024</div><div>Date</div></div> <div>Srinivas Naveen Laghuvarapu</div> <div>Printed Name</div> <div>srinivas.n.laghuvarapu@exxonmobil.com</div> <div>Email Address</div>	<div>SURVEYOR CERTIFICATIONS</div> <div>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</div> <div><div><div>MARK DILLON HARP</div><div>NEW MEXICO</div><div>23786</div><div>PROFESSIONAL SURVEYOR</div></div><div><div></div><div>Signature and Seal of Professional Surveyor</div></div></div> <div>MARK DILLON HARP 23786</div> <div>Certificate Number</div> <div>9/18/2024</div> <div>Date of Survey</div> <div>DN</div> <div>318.013004.01-08</div>
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Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

ACREAGE DEDICATION PLATS

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

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



LINE TABLE		
LINE	AZIMUTH	LENGTH
L1	214°14'00"	474.81'
L2	269°50'20"	716.20'
L3	269°50'16"	15,719.64'

LOT ACREAGE TABLE	
SECTION 19	
T-20-S, R-32-E	
LOT 3 =	39.64 ACRES
LOT 4 =	39.68 ACRES

LEGEND

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

COORDINATE TABLE					
SHL (NAD 83 NME)			SHL (NAD 27 NME)		
Y =	565,317.1	N	Y =	565,255.5	N
X =	718,057.2	E	X =	676,877.4	E
LAT. =	32.552805	°N	LAT. =	32.552684	°N
LONG. =	103.759784	°W	LONG. =	103.759285	°W
KOP (NAD 83 NME)			KOP (NAD 27 NME)		
Y =	564,924.5	N	Y =	564,862.9	N
X =	717,790.1	E	X =	676,610.3	E
LAT. =	32.551730	°N	LAT. =	32.551609	°N
LONG. =	103.760658	°W	LONG. =	103.760159	°W
FTP (NAD 83 NME)			FTP (NAD 27 NME)		
Y =	564,922.5	N	Y =	564,860.9	N
X =	717,073.9	E	X =	675,894.1	E
LAT. =	32.551735	°N	LAT. =	32.551614	°N
LONG. =	103.762982	°W	LONG. =	103.762483	°W
LTP (NAD 83 NME)			LTP (NAD 27 NME)		
Y =	564,877.9	N	Y =	564,816.1	N
X =	701,404.3	E	X =	660,224.7	E
LAT. =	32.551833	°N	LAT. =	32.551712	°N
LONG. =	103.813836	°W	LONG. =	103.813336	°W
BHL (NAD 83 NME)			BHL (NAD 27 NME)		
Y =	564,878.0	N	Y =	564,816.2	N
X =	701,354.3	E	X =	660,174.7	E
LAT. =	32.551834	°N	LAT. =	32.551713	°N
LONG. =	103.813999	°W	LONG. =	103.813498	°W

CORNER COORDINATES (NAD 83 NME)					
A - Y =	567,464.0	N	A - X =	717,162.8	E
B - Y =	567,449.0	N	B - X =	714,516.0	E
C - Y =	567,434.0	N	C - X =	711,863.7	E
D - Y =	567,430.9	N	D - X =	709,219.7	E
E - Y =	567,427.7	N	E - X =	706,578.1	E
F - Y =	567,430.1	N	F - X =	703,931.3	E
G - Y =	567,432.4	N	G - X =	701,292.5	E
H - Y =	566,143.6	N	H - X =	717,168.5	E
I - Y =	566,128.3	N	I - X =	714,522.2	E
J - Y =	566,112.3	N	J - X =	711,871.8	E
K - Y =	566,108.2	N	K - X =	709,227.5	E
L - Y =	566,100.1	N	L - X =	706,585.9	E
M - Y =	566,101.1	N	M - X =	703,940.2	E
N - Y =	566,105.2	N	N - X =	701,298.7	E
CORNER COORDINATES (NAD 27 NME)					
A - Y =	567,402.4	N	A - X =	675,983.0	E
B - Y =	567,387.3	N	B - X =	673,336.3	E
C - Y =	567,372.2	N	C - X =	670,684.1	E
D - Y =	567,369.1	N	D - X =	668,040.1	E
E - Y =	567,366.0	N	E - X =	665,398.5	E
F - Y =	567,368.3	N	F - X =	662,751.7	E
G - Y =	567,370.6	N	G - X =	660,113.0	E
H - Y =	566,081.9	N	H - X =	675,988.8	E
I - Y =	566,066.6	N	I - X =	673,342.5	E
J - Y =	566,050.6	N	J - X =	670,692.2	E
K - Y =	566,046.5	N	K - X =	668,047.9	E
L - Y =	566,038.4	N	L - X =	665,406.3	E
M - Y =	566,039.3	N	M - X =	662,760.7	E
N - Y =	566,043.5	N	N - X =	660,119.1	E

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

XIO Energy Inc.
BIG EDDY UNIT BB HUX 201H
Projected TD: 27074.75' MD / 10906' TVD
SHL: 490' FSL & 885' FWL , Section 22, T20S, R32E
BHL: 100' FSL & 50' FWL , Section 19, T20S, R32E
Lea County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	966'	Water
Top of Salt	1337'	Water
Base of Salt	2701'	Water
Capitan	3011'	Water
Delaware	4981'	Water/Oil/Gas
Brushy Canyon	6221'	Water
Bone Spring	7731'	Water/Oil/Gas
1st Bone Spring Ss	8789'	Water/Oil/Gas
2nd Bone Spring Ss	9321'	Water/Oil/Gas
3rd Bone Spring Ss	10536'	Water/Oil/Gas
Wolfcamp	10821'	Water/Oil/Gas
Wolfcamp X	10843'	Water/Oil/Gas
Wolfcamp Y	10901'	Water/Oil/Gas
Target/Land Curve	10906'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The fresh water sands will be protected by setting surface casing above Top of Salt and circulating cement back to surface. The salt will be isolated by setting first intermediate casing below base of salt and circulating cement to surface. The second intermediate will isolate the Capitan Reef up ~ 75' inside Delaware formation and cemented to surface. A 8.5/8.75 inch curve and lateral hole will be drilled to TD and 6 inch production casing will be set at TD cemented in one stage with estimated TOC ~7700 ft (Base of Brushy Canyon)

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
24	0' – 1237'	20	94	J-55	BTC	New	2.51	0.97	9.26
17.5	0' – 2801'	13.375	54.5	J-55	BTC	New	2.57	1.33	5.95
12.25	0' – 2901'	9.625	40	HC L-80	BTC	New	1.39	3.38	4.55
12.25	2901' – 5031'	9.625	40	HC L-80	BTC	New	1.39	5.84	10.75
8.75 – 8.5	0' – 27074.75'	6	26	P-110	Semi-Flush/Tenaris Hydril Wedge	New	1.17	2.08	2.70

XTO will keep surface casing fluid filled to meet BLM's collapse requirement.

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

Wellhead:

Permanent Wellhead

Multibowl System for 4 String desing as per attachement.

4. Cement Program

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

Surface Casing: 20, 94 New BTC, J-55 casing to be set at +/- 1237'

Optional Lead: 960 sxs EconoCem-HLTRRC (mixed at 12.8 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Tail: 420 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

Top of Cement: Surface

Compressives: 12-hr = 250 psi 24 hr = 500 psi

Due to the high probability of not getting cement to surface during conventional top-out jobs in the area, ~10-20 ppb gravel will be added on the backside of the 1" to get cement to surface, if required.

1st Intermediate Casing: 13.375, 54.5 New BTC, J-55 casing to be set at +/- 2801'

Lead: 1380 sxs Class C (mixed at 12.6 ppg, 1.88 ft³/sx, 10.13 gal/sx water)

Tail: 230 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

Top of Cement: Surface

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 9.625, 40 New casing to be set at +/- 5031'

Lead: 670 sxs Class C (mixed at 12.8 ppg, 1.88 ft³/sx, 15.59 gal/sx water)

TOC: 0'

Tail: 640 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

TOC: Capitan Reef @ 3011

Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests to pump a single stage cement job on the second intermediate casing string, with slurries pumped conventionally with the first slurry top of cement at Capitan Reef (3011') and the second slurry performed with planned cement from the Capitan Reef to surface.

Production Casing: 6, 26 New Semi-Flush/Tenaris Hydril Wedge, P-110 casing to be set at +/- 27074.75'

Optional Lead: 180 sxs NeoCem (mixed at 12.8 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of 7731 feet

Tail: 2060 sxs VersaCem (mixed at 14.5 ppg, 1.61 ft³/sx, 8.38 gal/sx water) Top of Cement: 10231 feet

Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

XTO requests to pump a single stage cement job on the 6" Production casing string pumped conventionally, with calculated top of cement at 7731' (Base of Brushy Canyon).

In case the initial cement job do not reach the desired top of cement, a post completion bradenhead squeeze will be performed to tied back the 2nd intermediate x production casing annulus TOC into the 2nd intermediate shoe but below of potash interval

5. Pressure Control Equipment

Operator request a variance to utilize a temporary blowout preventer equipment "BOP" (Diverter) to drill 1st intermediate section. This temporary diverter consist of a 21 1/4" minimum 2M Hydrill. Once the casing is run and cemented, and the wellhead (MBS) is installed and tested, the full BOP system with Hydrill and rams will be installed before continue drilling the 2nd intermediate and production sections or enter in a oil and gas interval.

Once the permanent WH is installed on the casing, the blow out preventer equipment (BOP) will consist of 5M Hydril and 10M 3-Ram BOP.

All BOP testing will be done by an independent service company. Operator will test as per BLM CFR43-3172

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

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per Cactus recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all batch drilled and completed, XTO will begin drilling the production hole on each of the wells.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)	Additional Comments
0' - 1237'	24	FW/Native	8.3-8.8	35-40	NC	Fresh water or native water
1237' - 2801'	17.5	Sat salt Brine	10-11	30-32	NC	Fully saturated brine across salado / salt
2801' to 5031'	12.25	FW	8.3-8.8	30-32	NC	FW across Cap Reef
5031' to 27074.75'	8.75 – 8.5	Cut Brine / OBM	9-12	50-60	NC - 20	OBM or Brine depending well conditions.

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under surface casing. A fully saturated brine will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A EDR will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 20 casing.

8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing where necessary. Otherwise, gamma ray will be utilized while actively drilling.

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 175 to 195 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6522 psi.

10. Anticipated Starting Date and Duration of Operations

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

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

XTO Energy Inc.
BIG EDDY UNIT BB HUX 201H
Projected TD: 27075' MD / 10906' TVD
SHL: 490' FSL & 885' FWL , Section 22, T20S, R32E
BHL: 100' FSL & 50' FWL , Section 19, T20S, R32E
Lea County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	966'	Water
Top of Salt	1337'	Water
Base of Salt	2701'	Water
Capitan	3011'	Water
Delaware	4981'	Water/Oil/Gas
Brushy Canyon	6221'	Water
Bone Spring	7731'	Water/Oil/Gas
1st Bone Spring Ss	8789'	Water/Oil/Gas
2nd Bone Spring Ss	9321'	Water/Oil/Gas
3rd Bone Spring Ss	10536'	Water/Oil/Gas
Wolfcamp	10821'	Water/Oil/Gas
Wolfcamp X	10843'	Water/Oil/Gas
Wolfcamp Y	10901'	Water/Oil/Gas
Target/Land Curve	10906'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The fresh water sands will be protected by setting surface casing above Top of Salt and circulating cement back to surface. The salt will be isolated by setting first intermediate casing below base of salt and circulating cement to surface. The second intermediate will isolate the Capitan Reef up ~ 75' inside Delaware formation and cemented to surface. The 3rd intermediate csg will isolate DMG to Wolfcamp A circulating cement to ~300' inside Int 2 csg. A 6.75 inch curve and lateral hole will be drilled to TD and 5.5 inch production casing will be set at TD cemented in one stage with estimated TOC ~500ft inside previous casing string.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
24	0' – 1237'	20	94	J-55	BTC	New	2.51	0.97	9.26
17.5	0' – 2801'	13.375	54.5	J-55	BTC	New	2.57	1.33	5.95
12.25	0' – 2901'	9.625	40	HC L-80	BTC	New	1.91	3.38	4.55
12.25	2901' – 5031'	9.625	40	HC L-80	BTC	New	1.91	5.84	10.75
8.75 – 8.5	0' - 5181	7.625	29.7	RYP-110	Flush Joint	New	1.90	4.45	1.87
8.75 – 8.5	5181' – 10031'	7.625	29.7	HC L-80	Flush Joint	New	1.38	2.48	2.82
6.75	0' – 9931'	5.5	20	RY P-110	Semi-Premium/Freedom HTQ	New	1.05	1.64	1.90
6.75	9931' - 27075'	5.5	20	RY P-110	Semi-Flush/Talon HTQ	New	1.05	1.51	4.70

XTO will keep surface casing fluid filled to meet BLM's collapse requirement.

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

Wellhead:

XTO will use a Multibowl System for 5 String design as per attachment.

4. Cement Program

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

Surface Casing: 20, New casing to be set at +/- 1237'

Optional Lead: 960 sxs EconoCem-HLTRRC (mixed at 12.8 ppg, 1.87 ft³/sx, 10.13 gal/sx water)
 Tail: 420 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)
 Top of Cement: Surface
 Compressives: 12-hr = 250 psi 24 hr = 500 psi

Due to the high probability of not getting cement to surface during conventional top-out jobs in the area, ~10-20 ppb gravel will be added on the backside of the 1" to get cement to surface, if required.

1st Intermediate Casing: 13.375, New casing to be set at +/- 2801'

Lead: 1380 sxs Class C (mixed at 12.6 ppg, 1.88 ft³/sx, 10.13 gal/sx water)
 Tail: 230 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)
 Top of Cement: Surface
 Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 9.625, New casing to be set at +/- 5031'

Lead: 670 sxs Class C (mixed at 12.8 ppg, 1.88 ft³/sx, 10.13 gal/sx water)
 TOC: 0'
 Tail: 640 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
 TOC: Capitan Reef @ 3011
 Compressives: 12-hr = 900 psi 24 hr = 1500 psi

3rd Intermediate Casing: 7.625, New casing to be set at +/- 10031'

Optional Lead: 220 sxs Class C (mixed at 12.8 ppg, 1.88 ft³/sx, 15.59 gal/sx water)
 TOC @ 4731' ~ 300' inside 2nd Intermediate csg
 Tail: 90 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
 TOC @ ~ 8700'
 Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO Request to pump an optional Lead slurry if well conditions dictate in an attempt to bring cement inside the 2nd intermediate casing with primary job. If cement reaches the desired height, the BLM will be notified and the second stage bradenhead Squeeze will be negated.

XTO requests to pump the 7-5/8" intermediate casing string with the first stage being pumped conventionally with 1 or 2 slurries with the calculated TOC @ 4731' ~300 ft inside 2nd intermediate casing.

XTO Request the option to conduct the bradenhead squeeze and TOC verification offline as per standard approval of BLM, when unplanned remediation is needed and batch drilling is approved.

Production Casing: 5.5, New casing to be set at +/- 27075'

Optional Lead: 20 sxs NeoCem (mixed at 12.8 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cem 9531 feet
 Tail: 1000 sxs VersaCem (mixed at 14.5 ppg, 1.61 ft³/sx, 8.38 gal/sx water) Top of Cement: 10231 feet
 Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

XTO requests to pump a single stage cement job on the 5.5" Production casing string pumped conventionally, with calculated top of cement at ~500' feet inside Intermediate 3 casing string.

5. Pressure Control Equipment

Operator request a variance to utilize a temporary blowout preventer equipment "BOP" (Diverter) to drill 1st intermediate section. This temporary diverter consist of a 21 1/4" minimum 2M Hydrill. Once the casing is run and cemented, and the wellhead (MBS) is installed and tested, the full BOP system with Hydrill and rams will be installed before continue drilling the 2nd intermediate and production sections or enter in a oil and gas interval.

Once the permanent WH is installed on the surface casing, the blow out preventer equipment (BOP) will consist of 5M Hydril Annular and a 10M 3-Ram BOP.

All BOP testing will be done by an independent service company. Operator will test as per BLM CFR43-3172

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

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per Cactus recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all batch drilled and completed, XTO will begin drilling the production hole on each of the wells.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)	Additional Comments
0' - 1237'	24	FW/Native	8.3-8.8	35-40	NC	Fresh water or native water
1237' - 2801'	17.5	Sat salt brine	10-10.5	30-32	NC	Fully saturated brine across salado / salt
2801' to 5031'	12.25	FW	8.3-8.8	30-32	NC	FW across Cap Reef
5031' to 10031'	8.75 – 8.5	Cut Brine / OBM	10-11.5	50-60	NC - 20	OBM or cut brine depending well conditions.
10031' to 27075'	8.5 - 6.75	Cut Brine / OBM	11.5-13.5	50-60	NC - 20	OBM or cut brine depending well conditions.

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under surface casing 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

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 20 casing.

8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing where necessary. Otherwise, gamma ray will be utilized while actively drilling.

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 175 to 195 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 7372 psi.

10. Anticipated Starting Date and Duration of Operations

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

Well Plan Report - Big Eddy Unit BB HUX 201H

Measured Depth: 27074.75 ft

TVD RKB: 10906.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 565255.50 ft

Easting: 676877.40 ft

RKB: 3561.00 ft

Ground Level: 3529.00 ft

North Reference: Grid

Convergence Angle: 0.31 Deg

Plan Sections

Big Eddy Unit BB HUX 201H

Measured	TVD				Build	Turn	Dogleg		
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate	Target
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00	
3622.08	10.44	214.23	3619.20	-39.22	-26.69	2.00	0.00	2.00	
5718.40	10.44	214.23	5680.80	-353.33	-240.42	0.00	0.00	0.00	
6240.49	0.00	0.00	6200.00	-392.55	-267.11	-2.00	0.00	2.00	
10230.29	0.00	0.00	10189.80	-392.55	-267.11	0.00	0.00	0.00	
11355.29	90.00	269.84	10906.00	-394.60	-983.30	8.00	0.00	8.00	FTP 201H
27024.75	90.00	269.84	10906.00	-439.40	-16652.70	0.00	0.00	0.00	LTP 201H
27074.75	90.00	269.84	10906.00	-439.54	-16702.69	0.00	0.00	0.00	BHL 201H

Position Uncertainty

Big Eddy Unit BB HUX 201H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.310	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.326	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.348	0.000	0.000	2.108	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.375	0.000	0.000	2.503	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.408	0.000	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.446	0.000	0.000	3.267	2.417	128.190	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.488	0.000	0.000	3.642	2.775	128.423	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.534	0.000	0.000	4.014	3.133	128.602	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.585	0.000	0.000	4.384	3.491	128.744	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.639	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	0.000	0.000	1200.000	4.779	0.000	4.589	0.000	2.696	0.000	0.000	5.119	4.207	128.954	MWD+IFR1+MS
1300.000	0.000	0.000	1300.000	5.140	0.000	4.950	0.000	2.756	0.000	0.000	5.484	4.565	129.034	MWD+IFR1+MS
1400.000	0.000	0.000	1400.000	5.500	0.000	5.311	0.000	2.819	0.000	0.000	5.849	4.924	129.102	MWD+IFR1+MS
1500.000	0.000	0.000	1500.000	5.860	0.000	5.672	0.000	2.884	0.000	0.000	6.213	5.282	129.161	MWD+IFR1+MS
1600.000	0.000	0.000	1600.000	6.219	0.000	6.032	0.000	2.952	0.000	0.000	6.577	5.640	129.212	MWD+IFR1+MS
1700.000	0.000	0.000	1700.000	6.579	0.000	6.392	0.000	3.022	0.000	0.000	6.939	5.999	129.257	MWD+IFR1+MS
1800.000	0.000	0.000	1800.000	6.938	0.000	6.752	0.000	3.094	0.000	0.000	7.302	6.357	129.297	MWD+IFR1+MS
1900.000	0.000	0.000	1900.000	7.298	0.000	7.112	0.000	3.168	0.000	0.000	7.664	6.715	129.333	MWD+IFR1+MS
2000.000	0.000	0.000	2000.000	7.657	0.000	7.471	0.000	3.243	0.000	0.000	8.026	7.074	129.365	MWD+IFR1+MS
2100.000	0.000	0.000	2100.000	8.016	0.000	7.831	0.000	3.320	0.000	0.000	8.387	7.432	129.394	MWD+IFR1+MS
2200.000	0.000	0.000	2200.000	8.375	0.000	8.190	0.000	3.399	0.000	0.000	8.748	7.791	129.420	MWD+IFR1+MS
2300.000	0.000	0.000	2300.000	8.734	0.000	8.550	0.000	3.479	0.000	0.000	9.109	8.149	129.444	MWD+IFR1+MS
2400.000	0.000	0.000	2400.000	9.093	0.000	8.909	0.000	3.561	0.000	0.000	9.470	8.507	129.466	MWD+IFR1+MS
2500.000	0.000	0.000	2500.000	9.452	0.000	9.268	0.000	3.644	0.000	0.000	9.831	8.866	129.486	MWD+IFR1+MS
2600.000	0.000	0.000	2600.000	9.811	0.000	9.627	0.000	3.728	0.000	0.000	10.191	9.224	129.505	MWD+IFR1+MS
2700.000	0.000	0.000	2700.000	10.170	0.000	9.986	0.000	3.814	0.000	0.000	10.552	9.583	129.522	MWD+IFR1+MS
2800.000	0.000	0.000	2800.000	10.529	0.000	10.345	0.000	3.901	0.000	0.000	10.912	9.941	129.538	MWD+IFR1+MS
2900.000	0.000	0.000	2900.000	10.888	0.000	10.705	0.000	3.989	0.000	0.000	11.272	10.299	129.552	MWD+IFR1+MS
3000.000	0.000	0.000	3000.000	11.247	0.000	11.063	0.000	4.078	0.000	0.000	11.632	10.658	129.566	MWD+IFR1+MS

3100.000	0.000	0.000	3100.000	11.606	0.000	11.422	0.000	4.169	0.000	0.000	11.992	11.016	129.579	MWD+IFR1+MS
3200.000	2.000	214.233	3199.980	12.316	-0.000	11.368	0.000	4.260	0.000	0.000	12.331	11.359	129.701	MWD+IFR1+MS
3300.000	4.000	214.233	3299.838	12.812	-0.000	11.708	0.000	4.353	0.000	0.000	12.855	11.689	131.341	MWD+IFR1+MS
3400.000	6.000	214.233	3399.452	13.283	-0.000	12.048	0.000	4.449	0.000	0.000	13.367	12.019	132.428	MWD+IFR1+MS
3500.000	8.000	214.233	3498.702	13.732	-0.000	12.389	0.000	4.550	0.000	0.000	13.868	12.350	133.200	MWD+IFR1+MS
3600.000	10.000	214.233	3597.465	14.157	-0.000	12.730	0.000	4.656	0.000	0.000	14.358	12.681	133.780	MWD+IFR1+MS
3622.085	10.442	214.233	3619.199	14.210	-0.000	12.803	0.000	4.674	0.000	0.000	14.426	12.754	133.759	MWD+IFR1+MS
3700.000	10.442	214.233	3695.825	14.445	-0.000	13.061	0.000	4.751	0.000	0.000	14.657	13.013	133.760	MWD+IFR1+MS
3800.000	10.442	214.233	3794.169	14.753	-0.000	13.403	0.000	4.853	0.000	0.000	14.961	13.354	133.992	MWD+IFR1+MS
3900.000	10.442	214.233	3892.513	15.067	-0.000	13.750	0.000	4.958	0.000	0.000	15.272	13.699	134.318	MWD+IFR1+MS
4000.000	10.442	214.233	3990.857	15.384	-0.000	14.099	0.000	5.064	0.000	0.000	15.586	14.046	134.648	MWD+IFR1+MS
4100.000	10.442	214.233	4089.201	15.704	-0.000	14.450	0.000	5.173	0.000	0.000	15.903	14.395	134.982	MWD+IFR1+MS
4200.000	10.442	214.233	4187.545	16.026	-0.000	14.802	0.000	5.284	0.000	0.000	16.222	14.745	-44.680	MWD+IFR1+MS
4300.000	10.442	214.233	4285.888	16.351	-0.000	15.156	0.000	5.396	0.000	0.000	16.544	15.096	-44.337	MWD+IFR1+MS
4400.000	10.442	214.233	4384.232	16.679	-0.000	15.511	0.000	5.511	0.000	0.000	16.868	15.449	-43.990	MWD+IFR1+MS
4500.000	10.442	214.233	4482.576	17.008	-0.000	15.867	0.000	5.628	0.000	0.000	17.195	15.803	-43.639	MWD+IFR1+MS
4600.000	10.442	214.233	4580.920	17.340	-0.000	16.225	0.000	5.746	0.000	0.000	17.523	16.159	-43.283	MWD+IFR1+MS
4700.000	10.442	214.233	4679.264	17.674	-0.000	16.584	0.000	5.867	0.000	0.000	17.854	16.515	-42.922	MWD+IFR1+MS
4800.000	10.442	214.233	4777.608	18.009	-0.000	16.944	0.000	5.990	0.000	0.000	18.186	16.873	-42.556	MWD+IFR1+MS
4900.000	10.442	214.233	4875.952	18.347	-0.000	17.304	0.000	6.115	0.000	0.000	18.520	17.231	-42.186	MWD+IFR1+MS
5000.000	10.442	214.233	4974.296	18.686	-0.000	17.666	0.000	6.241	0.000	0.000	18.856	17.590	-41.811	MWD+IFR1+MS
5100.000	10.442	214.233	5072.640	19.026	-0.000	18.029	0.000	6.370	0.000	0.000	19.194	17.950	-41.431	MWD+IFR1+MS
5200.000	10.442	214.233	5170.984	19.368	-0.000	18.392	0.000	6.501	0.000	0.000	19.533	18.311	-41.047	MWD+IFR1+MS
5300.000	10.442	214.233	5269.328	19.712	-0.000	18.757	0.000	6.634	0.000	0.000	19.873	18.673	-40.657	MWD+IFR1+MS
5400.000	10.442	214.233	5367.672	20.057	-0.000	19.122	0.000	6.769	0.000	0.000	20.215	19.035	-40.262	MWD+IFR1+MS
5500.000	10.442	214.233	5466.016	20.403	-0.000	19.487	0.000	6.906	0.000	0.000	20.558	19.398	-39.863	MWD+IFR1+MS
5600.000	10.442	214.233	5564.360	20.750	-0.000	19.854	0.000	7.045	0.000	0.000	20.903	19.761	-39.459	MWD+IFR1+MS
5700.000	10.442	214.233	5662.704	21.099	-0.000	20.221	0.000	7.186	0.000	0.000	21.249	20.125	-39.049	MWD+IFR1+MS
5718.401	10.442	214.233	5680.801	21.162	-0.000	20.287	0.000	7.213	0.000	0.000	21.310	20.192	-39.038	MWD+IFR1+MS
5800.000	8.810	214.233	5761.248	21.505	-0.000	20.580	0.000	7.331	0.000	0.000	21.599	20.485	-38.999	MWD+IFR1+MS
5900.000	6.810	214.233	5860.315	21.986	-0.000	20.943	0.000	7.481	0.000	0.000	22.039	20.843	-39.161	MWD+IFR1+MS
6000.000	4.810	214.233	5959.797	22.458	-0.000	21.305	0.000	7.629	0.000	0.000	22.497	21.198	-39.347	MWD+IFR1+MS
6100.000	2.810	214.233	6059.571	22.898	-0.000	21.663	0.000	7.772	0.000	0.000	22.951	21.550	-39.510	MWD+IFR1+MS

6200.000	0.810	214.233	6159.516	23.307	-0.000	22.018	0.000	7.914	0.000	0.000	23.398	21.898	-39.649	MWD+IFR1+MS
6240.486	0.000	0.000	6200.000	22.657	0.000	22.935	0.000	7.971	0.000	0.000	23.530	22.038	-39.634	MWD+IFR1+MS
6300.000	0.000	0.000	6259.514	22.859	0.000	23.130	0.000	8.054	0.000	0.000	23.723	22.243	-39.741	MWD+IFR1+MS
6400.000	0.000	0.000	6359.514	23.200	0.000	23.462	0.000	8.197	0.000	0.000	24.052	22.587	-39.855	MWD+IFR1+MS
6500.000	0.000	0.000	6459.514	23.543	0.000	23.797	0.000	8.341	0.000	0.000	24.388	22.931	-39.987	MWD+IFR1+MS
6600.000	0.000	0.000	6559.514	23.888	0.000	24.133	0.000	8.488	0.000	0.000	24.724	23.275	-40.117	MWD+IFR1+MS
6700.000	0.000	0.000	6659.514	24.232	0.000	24.470	0.000	8.638	0.000	0.000	25.061	23.620	-40.245	MWD+IFR1+MS
6800.000	0.000	0.000	6759.514	24.577	0.000	24.808	0.000	8.790	0.000	0.000	25.399	23.965	-40.370	MWD+IFR1+MS
6900.000	0.000	0.000	6859.514	24.922	0.000	25.146	0.000	8.944	0.000	0.000	25.737	24.311	-40.493	MWD+IFR1+MS
7000.000	0.000	0.000	6959.514	25.268	0.000	25.484	0.000	9.102	0.000	0.000	26.076	24.657	-40.615	MWD+IFR1+MS
7100.000	0.000	0.000	7059.514	25.614	0.000	25.823	0.000	9.261	0.000	0.000	26.415	25.003	-40.734	MWD+IFR1+MS
7200.000	0.000	0.000	7159.514	25.960	0.000	26.163	0.000	9.424	0.000	0.000	26.755	25.350	-40.851	MWD+IFR1+MS
7300.000	0.000	0.000	7259.514	26.307	0.000	26.503	0.000	9.589	0.000	0.000	27.095	25.697	-40.966	MWD+IFR1+MS
7400.000	0.000	0.000	7359.514	26.654	0.000	26.844	0.000	9.756	0.000	0.000	27.436	26.044	-41.080	MWD+IFR1+MS
7500.000	0.000	0.000	7459.514	27.001	0.000	27.185	0.000	9.926	0.000	0.000	27.777	26.392	-41.191	MWD+IFR1+MS
7600.000	0.000	0.000	7559.514	27.349	0.000	27.526	0.000	10.099	0.000	0.000	28.119	26.739	-41.301	MWD+IFR1+MS
7700.000	0.000	0.000	7659.514	27.697	0.000	27.868	0.000	10.275	0.000	0.000	28.461	27.088	-41.409	MWD+IFR1+MS
7800.000	0.000	0.000	7759.514	28.045	0.000	28.211	0.000	10.454	0.000	0.000	28.803	27.436	-41.515	MWD+IFR1+MS
7900.000	0.000	0.000	7859.514	28.393	0.000	28.553	0.000	10.635	0.000	0.000	29.146	27.785	-41.620	MWD+IFR1+MS
8000.000	0.000	0.000	7959.514	28.742	0.000	28.897	0.000	10.819	0.000	0.000	29.489	28.133	-41.723	MWD+IFR1+MS
8100.000	0.000	0.000	8059.514	29.091	0.000	29.240	0.000	11.005	0.000	0.000	29.833	28.482	-41.824	MWD+IFR1+MS
8200.000	0.000	0.000	8159.514	29.440	0.000	29.584	0.000	11.195	0.000	0.000	30.177	28.832	-41.924	MWD+IFR1+MS
8300.000	0.000	0.000	8259.514	29.789	0.000	29.928	0.000	11.387	0.000	0.000	30.521	29.181	-42.022	MWD+IFR1+MS
8400.000	0.000	0.000	8359.514	30.139	0.000	30.273	0.000	11.582	0.000	0.000	30.866	29.531	-42.119	MWD+IFR1+MS
8500.000	0.000	0.000	8459.514	30.488	0.000	30.618	0.000	11.781	0.000	0.000	31.211	29.881	-42.214	MWD+IFR1+MS
8600.000	0.000	0.000	8559.514	30.838	0.000	30.963	0.000	11.981	0.000	0.000	31.556	30.231	-42.307	MWD+IFR1+MS
8700.000	0.000	0.000	8659.514	31.189	0.000	31.308	0.000	12.185	0.000	0.000	31.902	30.581	-42.400	MWD+IFR1+MS
8800.000	0.000	0.000	8759.514	31.539	0.000	31.654	0.000	12.392	0.000	0.000	32.247	30.932	-42.491	MWD+IFR1+MS
8900.000	0.000	0.000	8859.514	31.889	0.000	32.000	0.000	12.601	0.000	0.000	32.594	31.282	-42.580	MWD+IFR1+MS
9000.000	0.000	0.000	8959.514	32.240	0.000	32.346	0.000	12.814	0.000	0.000	32.940	31.633	-42.668	MWD+IFR1+MS
9100.000	0.000	0.000	9059.514	32.591	0.000	32.693	0.000	13.029	0.000	0.000	33.287	31.984	-42.755	MWD+IFR1+MS
9200.000	0.000	0.000	9159.514	32.942	0.000	33.040	0.000	13.247	0.000	0.000	33.633	32.335	-42.841	MWD+IFR1+MS
9300.000	0.000	0.000	9259.514	33.293	0.000	33.387	0.000	13.469	0.000	0.000	33.981	32.687	-42.925	MWD+IFR1+MS

9400.000	0.000	0.000	9359.514	33.644	0.000	33.734	0.000	13.693	0.000	0.000	34.328	33.038	-43.008	MWD+IFR1+MS
9500.000	0.000	0.000	9459.514	33.996	0.000	34.082	0.000	13.920	0.000	0.000	34.676	33.390	-43.090	MWD+IFR1+MS
9600.000	0.000	0.000	9559.514	34.347	0.000	34.429	0.000	14.150	0.000	0.000	35.023	33.741	-43.171	MWD+IFR1+MS
9700.000	0.000	0.000	9659.514	34.699	0.000	34.777	0.000	14.383	0.000	0.000	35.372	34.093	-43.251	MWD+IFR1+MS
9800.000	0.000	0.000	9759.514	35.051	0.000	35.125	0.000	14.619	0.000	0.000	35.720	34.445	-43.329	MWD+IFR1+MS
9900.000	0.000	0.000	9859.514	35.403	0.000	35.474	0.000	14.858	0.000	0.000	36.068	34.797	-43.406	MWD+IFR1+MS
10000.000	0.000	0.000	9959.514	35.755	0.000	35.822	0.000	15.100	0.000	0.000	36.417	35.150	-43.483	MWD+IFR1+MS
10100.000	0.000	0.000	10059.514	36.108	0.000	36.171	0.000	15.345	0.000	0.000	36.766	35.502	-43.558	MWD+IFR1+MS
10200.000	0.000	0.000	10159.514	36.460	0.000	36.520	0.000	15.593	0.000	0.000	37.115	35.854	-43.632	MWD+IFR1+MS
10230.288	0.000	0.000	10189.803	36.565	0.000	36.625	0.000	15.669	0.000	0.000	37.218	35.961	-43.652	MWD+IFR1+MS
10300.000	5.577	269.836	10259.404	36.881	-0.000	36.804	0.000	15.846	0.000	0.000	37.483	36.244	-42.186	MWD+IFR1+MS
10400.000	13.577	269.836	10357.931	37.488	-0.000	37.154	0.000	16.156	0.000	0.000	38.327	36.892	-25.225	MWD+IFR1+MS
10500.000	21.577	269.836	10453.184	37.826	-0.000	37.502	0.000	16.634	0.000	0.000	39.514	37.390	-13.266	MWD+IFR1+MS
10600.000	29.577	269.836	10543.312	37.602	-0.000	37.844	0.000	17.329	0.000	0.000	40.631	37.786	-8.212	MWD+IFR1+MS
10700.000	37.577	269.836	10626.559	36.874	-0.000	38.175	0.000	18.272	0.000	0.000	41.595	38.142	-5.630	MWD+IFR1+MS
10800.000	45.577	269.836	10701.304	35.725	-0.000	38.493	0.000	19.461	0.000	0.000	42.377	38.474	-4.098	MWD+IFR1+MS
10900.000	53.577	269.836	10766.094	34.265	-0.000	38.800	0.000	20.866	0.000	0.000	42.973	38.788	-3.089	MWD+IFR1+MS
11000.000	61.577	269.836	10819.667	32.642	-0.000	39.094	0.000	22.439	0.000	0.000	43.392	39.088	-2.368	MWD+IFR1+MS
11100.000	69.577	269.836	10860.981	31.035	-0.000	39.377	0.000	24.121	0.000	0.000	43.656	39.373	-1.817	MWD+IFR1+MS
11200.000	77.577	269.836	10889.231	29.659	-0.000	39.648	0.000	25.854	0.000	0.000	43.793	39.646	-1.372	MWD+IFR1+MS
11300.000	85.577	269.836	10903.867	28.741	-0.000	39.904	0.000	27.577	0.000	0.000	43.844	39.903	-0.997	MWD+IFR1+MS
11355.288	90.000	269.836	10906.000	27.942	0.000	40.035	0.000	27.942	0.000	0.000	43.852	40.035	-0.826	MWD+IFR1+MS
11400.000	90.000	269.836	10906.000	28.034	0.000	40.141	0.000	28.034	0.000	0.000	43.855	40.141	-0.681	MWD+IFR1+MS
11500.000	90.000	269.836	10906.000	28.199	0.000	40.405	0.000	28.199	0.000	0.000	43.862	40.405	-0.329	MWD+IFR1+MS
11600.000	90.000	269.836	10906.000	28.388	0.000	40.699	0.000	28.388	0.000	0.000	43.870	40.699	0.078	MWD+IFR1+MS
11700.000	90.000	269.836	10906.000	28.597	0.000	41.022	0.000	28.597	0.000	0.000	43.879	41.022	0.570	MWD+IFR1+MS
11800.000	90.000	269.836	10906.000	28.825	0.000	41.374	0.000	28.825	0.000	0.000	43.890	41.372	1.193	MWD+IFR1+MS
11900.000	90.000	269.836	10906.000	29.074	0.000	41.752	0.000	29.074	0.000	0.000	43.901	41.749	2.032	MWD+IFR1+MS
12000.000	90.000	269.836	10906.000	29.341	0.000	42.157	0.000	29.341	0.000	0.000	43.914	42.151	3.253	MWD+IFR1+MS
12100.000	90.000	269.836	10906.000	29.627	0.000	42.588	0.000	29.627	0.000	0.000	43.931	42.576	5.247	MWD+IFR1+MS
12200.000	90.000	269.836	10906.000	29.930	0.000	43.044	0.000	29.930	0.000	0.000	43.955	43.019	9.137	MWD+IFR1+MS
12300.000	90.000	269.836	10906.000	30.251	0.000	43.524	0.000	30.251	0.000	0.000	44.003	43.462	19.451	MWD+IFR1+MS
12400.000	90.000	269.836	10906.000	30.588	0.000	44.027	0.000	30.588	0.000	0.000	44.186	43.795	50.139	MWD+IFR1+MS

12500.000	90.000	269.836	10906.000	30.942	0.000	44.553	0.000	30.942	0.000	0.000	44.622	43.898	71.770	MWD+IFR1+MS
12600.000	90.000	269.836	10906.000	31.311	0.000	45.101	0.000	31.311	0.000	0.000	45.148	43.934	78.474	MWD+IFR1+MS
12700.000	90.000	269.836	10906.000	31.696	0.000	45.670	0.000	31.696	0.000	0.000	45.707	43.958	81.368	MWD+IFR1+MS
12800.000	90.000	269.836	10906.000	32.095	0.000	46.259	0.000	32.095	0.000	0.000	46.292	43.977	82.963	MWD+IFR1+MS
12900.000	90.000	269.836	10906.000	32.508	0.000	46.868	0.000	32.508	0.000	0.000	46.897	43.995	83.974	MWD+IFR1+MS
13000.000	90.000	269.836	10906.000	32.935	0.000	47.496	0.000	32.935	0.000	0.000	47.523	44.013	84.677	MWD+IFR1+MS
13100.000	90.000	269.836	10906.000	33.375	0.000	48.141	0.000	33.375	0.000	0.000	48.167	44.031	85.196	MWD+IFR1+MS
13200.000	90.000	269.836	10906.000	33.827	0.000	48.804	0.000	33.827	0.000	0.000	48.829	44.048	85.598	MWD+IFR1+MS
13300.000	90.000	269.836	10906.000	34.291	0.000	49.484	0.000	34.291	0.000	0.000	49.508	44.067	85.919	MWD+IFR1+MS
13400.000	90.000	269.836	10906.000	34.767	0.000	50.179	0.000	34.767	0.000	0.000	50.202	44.085	86.183	MWD+IFR1+MS
13500.000	90.000	269.836	10906.000	35.254	0.000	50.890	0.000	35.254	0.000	0.000	50.912	44.104	86.405	MWD+IFR1+MS
13600.000	90.000	269.836	10906.000	35.751	0.000	51.615	0.000	35.751	0.000	0.000	51.637	44.124	86.594	MWD+IFR1+MS
13700.000	90.000	269.836	10906.000	36.259	0.000	52.354	0.000	36.259	0.000	0.000	52.376	44.144	86.759	MWD+IFR1+MS
13800.000	90.000	269.836	10906.000	36.776	0.000	53.107	0.000	36.776	0.000	0.000	53.129	44.164	86.903	MWD+IFR1+MS
13900.000	90.000	269.836	10906.000	37.303	0.000	53.873	0.000	37.303	0.000	0.000	53.894	44.186	87.031	MWD+IFR1+MS
14000.000	90.000	269.836	10906.000	37.838	0.000	54.651	0.000	37.838	0.000	0.000	54.672	44.207	87.146	MWD+IFR1+MS
14100.000	90.000	269.836	10906.000	38.382	0.000	55.441	0.000	38.382	0.000	0.000	55.462	44.229	87.249	MWD+IFR1+MS
14200.000	90.000	269.836	10906.000	38.935	0.000	56.243	0.000	38.935	0.000	0.000	56.263	44.252	87.343	MWD+IFR1+MS
14300.000	90.000	269.836	10906.000	39.495	0.000	57.055	0.000	39.495	0.000	0.000	57.075	44.275	87.429	MWD+IFR1+MS
14400.000	90.000	269.836	10906.000	40.063	0.000	57.877	0.000	40.063	0.000	0.000	57.897	44.299	87.508	MWD+IFR1+MS
14500.000	90.000	269.836	10906.000	40.638	0.000	58.710	0.000	40.638	0.000	0.000	58.729	44.323	87.580	MWD+IFR1+MS
14600.000	90.000	269.836	10906.000	41.220	0.000	59.552	0.000	41.220	0.000	0.000	59.571	44.348	87.648	MWD+IFR1+MS
14700.000	90.000	269.836	10906.000	41.808	0.000	60.403	0.000	41.808	0.000	0.000	60.422	44.373	87.710	MWD+IFR1+MS
14800.000	90.000	269.836	10906.000	42.403	0.000	61.263	0.000	42.403	0.000	0.000	61.282	44.399	87.769	MWD+IFR1+MS
14900.000	90.000	269.836	10906.000	43.004	0.000	62.132	0.000	43.004	0.000	0.000	62.150	44.426	87.824	MWD+IFR1+MS
15000.000	90.000	269.836	10906.000	43.611	0.000	63.008	0.000	43.611	0.000	0.000	63.027	44.453	87.875	MWD+IFR1+MS
15100.000	90.000	269.836	10906.000	44.223	0.000	63.892	0.000	44.223	0.000	0.000	63.910	44.480	87.924	MWD+IFR1+MS
15200.000	90.000	269.836	10906.000	44.841	0.000	64.784	0.000	44.841	0.000	0.000	64.802	44.508	87.970	MWD+IFR1+MS
15300.000	90.000	269.836	10906.000	45.464	0.000	65.682	0.000	45.464	0.000	0.000	65.700	44.537	88.013	MWD+IFR1+MS
15400.000	90.000	269.836	10906.000	46.092	0.000	66.588	0.000	46.092	0.000	0.000	66.606	44.566	88.054	MWD+IFR1+MS
15500.000	90.000	269.836	10906.000	46.725	0.000	67.500	0.000	46.725	0.000	0.000	67.518	44.596	88.093	MWD+IFR1+MS
15600.000	90.000	269.836	10906.000	47.362	0.000	68.418	0.000	47.362	0.000	0.000	68.436	44.626	88.130	MWD+IFR1+MS
15700.000	90.000	269.836	10906.000	48.003	0.000	69.343	0.000	48.003	0.000	0.000	69.360	44.657	88.165	MWD+IFR1+MS

15800.000	90.000	269.836	10906.000	48.649	0.000	70.273	0.000	48.649	0.000	0.000	70.290	44.688	88.199	MWD+IFR1+MS
15900.000	90.000	269.836	10906.000	49.299	0.000	71.209	0.000	49.299	0.000	0.000	71.225	44.720	88.231	MWD+IFR1+MS
16000.000	90.000	269.836	10906.000	49.953	0.000	72.150	0.000	49.953	0.000	0.000	72.166	44.753	88.262	MWD+IFR1+MS
16100.000	90.000	269.836	10906.000	50.610	0.000	73.096	0.000	50.610	0.000	0.000	73.112	44.786	88.292	MWD+IFR1+MS
16200.000	90.000	269.836	10906.000	51.271	0.000	74.047	0.000	51.271	0.000	0.000	74.063	44.819	88.320	MWD+IFR1+MS
16300.000	90.000	269.836	10906.000	51.935	0.000	75.003	0.000	51.935	0.000	0.000	75.019	44.853	88.347	MWD+IFR1+MS
16400.000	90.000	269.836	10906.000	52.603	0.000	75.963	0.000	52.603	0.000	0.000	75.980	44.888	88.373	MWD+IFR1+MS
16500.000	90.000	269.836	10906.000	53.274	0.000	76.928	0.000	53.274	0.000	0.000	76.944	44.923	88.398	MWD+IFR1+MS
16600.000	90.000	269.836	10906.000	53.948	0.000	77.897	0.000	53.948	0.000	0.000	77.913	44.959	88.423	MWD+IFR1+MS
16700.000	90.000	269.836	10906.000	54.625	0.000	78.871	0.000	54.625	0.000	0.000	78.886	44.995	88.446	MWD+IFR1+MS
16800.000	90.000	269.836	10906.000	55.305	0.000	79.848	0.000	55.305	0.000	0.000	79.863	45.031	88.469	MWD+IFR1+MS
16900.000	90.000	269.836	10906.000	55.988	0.000	80.829	0.000	55.988	0.000	0.000	80.844	45.069	88.490	MWD+IFR1+MS
17000.000	90.000	269.836	10906.000	56.673	0.000	81.813	0.000	56.673	0.000	0.000	81.829	45.106	88.511	MWD+IFR1+MS
17100.000	90.000	269.836	10906.000	57.361	0.000	82.802	0.000	57.361	0.000	0.000	82.817	45.145	88.532	MWD+IFR1+MS
17200.000	90.000	269.836	10906.000	58.051	0.000	83.793	0.000	58.051	0.000	0.000	83.808	45.184	88.551	MWD+IFR1+MS
17300.000	90.000	269.836	10906.000	58.743	0.000	84.788	0.000	58.743	0.000	0.000	84.803	45.223	88.570	MWD+IFR1+MS
17400.000	90.000	269.836	10906.000	59.438	0.000	85.786	0.000	59.438	0.000	0.000	85.801	45.263	88.589	MWD+IFR1+MS
17500.000	90.000	269.836	10906.000	60.135	0.000	86.787	0.000	60.135	0.000	0.000	86.802	45.303	88.606	MWD+IFR1+MS
17600.000	90.000	269.836	10906.000	60.835	0.000	87.791	0.000	60.835	0.000	0.000	87.806	45.344	88.624	MWD+IFR1+MS
17700.000	90.000	269.836	10906.000	61.536	0.000	88.798	0.000	61.536	0.000	0.000	88.812	45.385	88.641	MWD+IFR1+MS
17800.000	90.000	269.836	10906.000	62.239	0.000	89.808	0.000	62.239	0.000	0.000	89.822	45.427	88.657	MWD+IFR1+MS
17900.000	90.000	269.836	10906.000	62.944	0.000	90.820	0.000	62.944	0.000	0.000	90.834	45.470	88.673	MWD+IFR1+MS
18000.000	90.000	269.836	10906.000	63.652	0.000	91.835	0.000	63.652	0.000	0.000	91.849	45.513	88.688	MWD+IFR1+MS
18100.000	90.000	269.836	10906.000	64.360	0.000	92.852	0.000	64.360	0.000	0.000	92.866	45.556	88.703	MWD+IFR1+MS
18200.000	90.000	269.836	10906.000	65.071	0.000	93.872	0.000	65.071	0.000	0.000	93.886	45.600	88.718	MWD+IFR1+MS
18300.000	90.000	269.836	10906.000	65.783	0.000	94.894	0.000	65.783	0.000	0.000	94.908	45.645	88.732	MWD+IFR1+MS
18400.000	90.000	269.836	10906.000	66.497	0.000	95.919	0.000	66.497	0.000	0.000	95.932	45.690	88.746	MWD+IFR1+MS
18500.000	90.000	269.836	10906.000	67.213	0.000	96.945	0.000	67.213	0.000	0.000	96.958	45.735	88.759	MWD+IFR1+MS
18600.000	90.000	269.836	10906.000	67.930	0.000	97.974	0.000	67.930	0.000	0.000	97.987	45.781	88.772	MWD+IFR1+MS
18700.000	90.000	269.836	10906.000	68.648	0.000	99.005	0.000	68.648	0.000	0.000	99.018	45.828	88.785	MWD+IFR1+MS
18800.000	90.000	269.836	10906.000	69.368	0.000	100.037	0.000	69.368	0.000	0.000	100.050	45.875	88.797	MWD+IFR1+MS
18900.000	90.000	269.836	10906.000	70.090	0.000	101.072	0.000	70.090	0.000	0.000	101.085	45.922	88.810	MWD+IFR1+MS
19000.000	90.000	269.836	10906.000	70.812	0.000	102.108	0.000	70.812	0.000	0.000	102.121	45.970	88.821	MWD+IFR1+MS

19100.000	90.000	269.836	10906.000	71.537	0.000	103.147	0.000	71.537	0.000	0.000	103.160	46.018	88.833	MWD+IFR1+MS
19200.000	90.000	269.836	10906.000	72.262	0.000	104.187	0.000	72.262	0.000	0.000	104.200	46.067	88.844	MWD+IFR1+MS
19300.000	90.000	269.836	10906.000	72.988	0.000	105.229	0.000	72.988	0.000	0.000	105.241	46.117	88.855	MWD+IFR1+MS
19400.000	90.000	269.836	10906.000	73.716	0.000	106.272	0.000	73.716	0.000	0.000	106.285	46.167	88.866	MWD+IFR1+MS
19500.000	90.000	269.836	10906.000	74.445	0.000	107.317	0.000	74.445	0.000	0.000	107.330	46.217	88.877	MWD+IFR1+MS
19600.000	90.000	269.836	10906.000	75.175	0.000	108.364	0.000	75.175	0.000	0.000	108.376	46.268	88.887	MWD+IFR1+MS
19700.000	90.000	269.836	10906.000	75.906	0.000	109.412	0.000	75.906	0.000	0.000	109.424	46.320	88.897	MWD+IFR1+MS
19800.000	90.000	269.836	10906.000	76.638	0.000	110.462	0.000	76.638	0.000	0.000	110.474	46.372	88.907	MWD+IFR1+MS
19900.000	90.000	269.836	10906.000	77.371	0.000	111.513	0.000	77.371	0.000	0.000	111.525	46.424	88.917	MWD+IFR1+MS
20000.000	90.000	269.836	10906.000	78.106	0.000	112.565	0.000	78.106	0.000	0.000	112.577	46.477	88.926	MWD+IFR1+MS
20100.000	90.000	269.836	10906.000	78.841	0.000	113.619	0.000	78.841	0.000	0.000	113.631	46.530	88.935	MWD+IFR1+MS
20200.000	90.000	269.836	10906.000	79.577	0.000	114.674	0.000	79.577	0.000	0.000	114.686	46.584	88.944	MWD+IFR1+MS
20300.000	90.000	269.836	10906.000	80.314	0.000	115.731	0.000	80.314	0.000	0.000	115.742	46.638	88.953	MWD+IFR1+MS
20400.000	90.000	269.836	10906.000	81.052	0.000	116.788	0.000	81.052	0.000	0.000	116.800	46.693	88.962	MWD+IFR1+MS
20500.000	90.000	269.836	10906.000	81.791	0.000	117.847	0.000	81.791	0.000	0.000	117.859	46.748	88.970	MWD+IFR1+MS
20600.000	90.000	269.836	10906.000	82.530	0.000	118.907	0.000	82.530	0.000	0.000	118.919	46.804	88.979	MWD+IFR1+MS
20700.000	90.000	269.836	10906.000	83.271	0.000	119.969	0.000	83.271	0.000	0.000	119.980	46.860	88.987	MWD+IFR1+MS
20800.000	90.000	269.836	10906.000	84.012	0.000	121.031	0.000	84.012	0.000	0.000	121.042	46.917	88.995	MWD+IFR1+MS
20900.000	90.000	269.836	10906.000	84.754	0.000	122.094	0.000	84.754	0.000	0.000	122.105	46.974	89.003	MWD+IFR1+MS
21000.000	90.000	269.836	10906.000	85.497	0.000	123.159	0.000	85.497	0.000	0.000	123.170	47.032	89.010	MWD+IFR1+MS
21100.000	90.000	269.836	10906.000	86.241	0.000	124.224	0.000	86.241	0.000	0.000	124.235	47.090	89.018	MWD+IFR1+MS
21200.000	90.000	269.836	10906.000	86.985	0.000	125.291	0.000	86.985	0.000	0.000	125.302	47.148	89.025	MWD+IFR1+MS
21300.000	90.000	269.836	10906.000	87.730	0.000	126.358	0.000	87.730	0.000	0.000	126.369	47.207	89.033	MWD+IFR1+MS
21400.000	90.000	269.836	10906.000	88.476	0.000	127.427	0.000	88.476	0.000	0.000	127.438	47.267	89.040	MWD+IFR1+MS
21500.000	90.000	269.836	10906.000	89.222	0.000	128.496	0.000	89.222	0.000	0.000	128.507	47.327	89.047	MWD+IFR1+MS
21600.000	90.000	269.836	10906.000	89.969	0.000	129.567	0.000	89.969	0.000	0.000	129.577	47.387	89.054	MWD+IFR1+MS
21700.000	90.000	269.836	10906.000	90.717	0.000	130.638	0.000	90.717	0.000	0.000	130.648	47.448	89.061	MWD+IFR1+MS
21800.000	90.000	269.836	10906.000	91.465	0.000	131.710	0.000	91.465	0.000	0.000	131.720	47.509	89.067	MWD+IFR1+MS
21900.000	90.000	269.836	10906.000	92.214	0.000	132.783	0.000	92.214	0.000	0.000	132.793	47.571	89.074	MWD+IFR1+MS
22000.000	90.000	269.836	10906.000	92.963	0.000	133.857	0.000	92.963	0.000	0.000	133.867	47.633	89.080	MWD+IFR1+MS
22100.000	90.000	269.836	10906.000	93.713	0.000	134.931	0.000	93.713	0.000	0.000	134.941	47.695	89.087	MWD+IFR1+MS
22200.000	90.000	269.836	10906.000	94.464	0.000	136.006	0.000	94.464	0.000	0.000	136.016	47.758	89.093	MWD+IFR1+MS
22300.000	90.000	269.836	10906.000	95.215	0.000	137.082	0.000	95.215	0.000	0.000	137.092	47.822	89.099	MWD+IFR1+MS

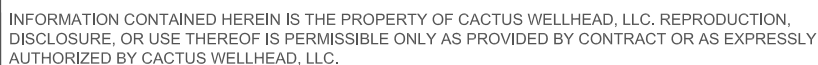
22400.000	90.000	269.836	10906.000	95.967	0.000	138.159	0.000	95.967	0.000	0.000	138.169	47.886	89.105	MWD+IFR1+MS
22500.000	90.000	269.836	10906.000	96.719	0.000	139.237	0.000	96.719	0.000	0.000	139.247	47.950	89.111	MWD+IFR1+MS
22600.000	90.000	269.836	10906.000	97.472	0.000	140.315	0.000	97.472	0.000	0.000	140.325	48.015	89.117	MWD+IFR1+MS
22700.000	90.000	269.836	10906.000	98.225	0.000	141.394	0.000	98.225	0.000	0.000	141.404	48.080	89.122	MWD+IFR1+MS
22800.000	90.000	269.836	10906.000	98.979	0.000	142.474	0.000	98.979	0.000	0.000	142.484	48.146	89.128	MWD+IFR1+MS
22900.000	90.000	269.836	10906.000	99.733	0.000	143.554	0.000	99.733	0.000	0.000	143.564	48.212	89.133	MWD+IFR1+MS
23000.000	90.000	269.836	10906.000	100.488	0.000	144.635	0.000	100.488	0.000	0.000	144.645	48.278	89.139	MWD+IFR1+MS
23100.000	90.000	269.836	10906.000	101.243	0.000	145.717	0.000	101.243	0.000	0.000	145.726	48.345	89.144	MWD+IFR1+MS
23200.000	90.000	269.836	10906.000	101.998	0.000	146.799	0.000	101.998	0.000	0.000	146.808	48.413	89.150	MWD+IFR1+MS
23300.000	90.000	269.836	10906.000	102.754	0.000	147.882	0.000	102.754	0.000	0.000	147.891	48.480	89.155	MWD+IFR1+MS
23400.000	90.000	269.836	10906.000	103.511	0.000	148.965	0.000	103.511	0.000	0.000	148.975	48.549	89.160	MWD+IFR1+MS
23500.000	90.000	269.836	10906.000	104.268	0.000	150.049	0.000	104.268	0.000	0.000	150.059	48.617	89.165	MWD+IFR1+MS
23600.000	90.000	269.836	10906.000	105.025	0.000	151.134	0.000	105.025	0.000	0.000	151.143	48.686	89.170	MWD+IFR1+MS
23700.000	90.000	269.836	10906.000	105.783	0.000	152.219	0.000	105.783	0.000	0.000	152.228	48.756	89.175	MWD+IFR1+MS
23800.000	90.000	269.836	10906.000	106.541	0.000	153.305	0.000	106.541	0.000	0.000	153.314	48.826	89.180	MWD+IFR1+MS
23900.000	90.000	269.836	10906.000	107.299	0.000	154.391	0.000	107.299	0.000	0.000	154.400	48.896	89.184	MWD+IFR1+MS
24000.000	90.000	269.836	10906.000	108.058	0.000	155.478	0.000	108.058	0.000	0.000	155.487	48.967	89.189	MWD+IFR1+MS
24100.000	90.000	269.836	10906.000	108.817	0.000	156.565	0.000	108.817	0.000	0.000	156.574	49.038	89.194	MWD+IFR1+MS
24200.000	90.000	269.836	10906.000	109.577	0.000	157.653	0.000	109.577	0.000	0.000	157.662	49.109	89.198	MWD+IFR1+MS
24300.000	90.000	269.836	10906.000	110.337	0.000	158.741	0.000	110.337	0.000	0.000	158.750	49.181	89.203	MWD+IFR1+MS
24400.000	90.000	269.836	10906.000	111.097	0.000	159.830	0.000	111.097	0.000	0.000	159.839	49.254	89.207	MWD+IFR1+MS
24500.000	90.000	269.836	10906.000	111.858	0.000	160.920	0.000	111.858	0.000	0.000	160.928	49.326	89.211	MWD+IFR1+MS
24600.000	90.000	269.836	10906.000	112.619	0.000	162.009	0.000	112.619	0.000	0.000	162.018	49.400	89.216	MWD+IFR1+MS
24700.000	90.000	269.836	10906.000	113.380	0.000	163.099	0.000	113.380	0.000	0.000	163.108	49.473	89.220	MWD+IFR1+MS
24800.000	90.000	269.836	10906.000	114.141	0.000	164.190	0.000	114.141	0.000	0.000	164.199	49.547	89.224	MWD+IFR1+MS
24900.000	90.000	269.836	10906.000	114.903	0.000	165.281	0.000	114.903	0.000	0.000	165.290	49.621	89.228	MWD+IFR1+MS
25000.000	90.000	269.836	10906.000	115.665	0.000	166.373	0.000	115.665	0.000	0.000	166.381	49.696	89.232	MWD+IFR1+MS
25100.000	90.000	269.836	10906.000	116.428	0.000	167.464	0.000	116.428	0.000	0.000	167.473	49.771	89.236	MWD+IFR1+MS
25200.000	90.000	269.836	10906.000	117.191	0.000	168.557	0.000	117.191	0.000	0.000	168.565	49.847	89.240	MWD+IFR1+MS
25300.000	90.000	269.836	10906.000	117.954	0.000	169.650	0.000	117.954	0.000	0.000	169.658	49.923	89.244	MWD+IFR1+MS
25400.000	90.000	269.836	10906.000	118.717	0.000	170.743	0.000	118.717	0.000	0.000	170.751	49.999	89.248	MWD+IFR1+MS
25500.000	90.000	269.836	10906.000	119.481	0.000	171.836	0.000	119.481	0.000	0.000	171.844	50.076	89.252	MWD+IFR1+MS
25600.000	90.000	269.836	10906.000	120.245	0.000	172.930	0.000	120.245	0.000	0.000	172.938	50.153	89.256	MWD+IFR1+MS

25700.000	90.000	269.836	10906.000	121.009	0.000	174.024	0.000	121.009	0.000	0.000	174.032	50.230	89.259	MWD+IFR1+MS
25800.000	90.000	269.836	10906.000	121.773	0.000	175.119	0.000	121.773	0.000	0.000	175.127	50.308	89.263	MWD+IFR1+MS
25900.000	90.000	269.836	10906.000	122.538	0.000	176.214	0.000	122.538	0.000	0.000	176.222	50.386	89.267	MWD+IFR1+MS
26000.000	90.000	269.836	10906.000	123.303	0.000	177.309	0.000	123.303	0.000	0.000	177.317	50.465	89.270	MWD+IFR1+MS
26100.000	90.000	269.836	10906.000	124.068	0.000	178.405	0.000	124.068	0.000	0.000	178.413	50.543	89.274	MWD+IFR1+MS
26200.000	90.000	269.836	10906.000	124.834	0.000	179.501	0.000	124.834	0.000	0.000	179.509	50.623	89.277	MWD+IFR1+MS
26300.000	90.000	269.836	10906.000	125.599	0.000	180.597	0.000	125.599	0.000	0.000	180.605	50.702	89.281	MWD+IFR1+MS
26400.000	90.000	269.836	10906.000	126.365	0.000	181.694	0.000	126.365	0.000	0.000	181.702	50.783	89.284	MWD+IFR1+MS
26500.000	90.000	269.836	10906.000	127.131	0.000	182.791	0.000	127.131	0.000	0.000	182.799	50.863	89.287	MWD+IFR1+MS
26600.000	90.000	269.836	10906.000	127.898	0.000	183.888	0.000	127.898	0.000	0.000	183.896	50.944	89.291	MWD+IFR1+MS
26700.000	90.000	269.836	10906.000	128.664	0.000	184.986	0.000	128.664	0.000	0.000	184.994	51.025	89.294	MWD+IFR1+MS
26800.000	90.000	269.836	10906.000	129.431	0.000	186.084	0.000	129.431	0.000	0.000	186.091	51.106	89.297	MWD+IFR1+MS
26900.000	90.000	269.836	10906.000	130.198	0.000	187.182	0.000	130.198	0.000	0.000	187.190	51.188	89.300	MWD+IFR1+MS
27000.000	90.000	269.836	10906.000	130.966	0.000	188.281	0.000	130.966	0.000	0.000	188.288	51.270	89.303	MWD+IFR1+MS
27024.752	90.000	269.836	10906.000	131.155	0.000	188.552	0.000	131.155	0.000	0.000	188.560	51.291	89.304	MWD+IFR1+MS
27074.746	90.000	269.836	10906.000	131.538	0.000	189.101	0.000	131.538	0.000	0.000	189.108	51.332	89.306	MWD+IFR1+MS

Plan Targets

Big Eddy Unit BB HUX 201H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 201H	11355.27	564860.90	675894.10	7345.00	CIRCLE
LTP 201H	27024.75	564816.10	660224.70	7345.00	CIRCLE
BHL 201H	27074.99	564816.20	660174.70	7345.00	CIRCLE



ALL DIMENSIONS APPROXIMATE

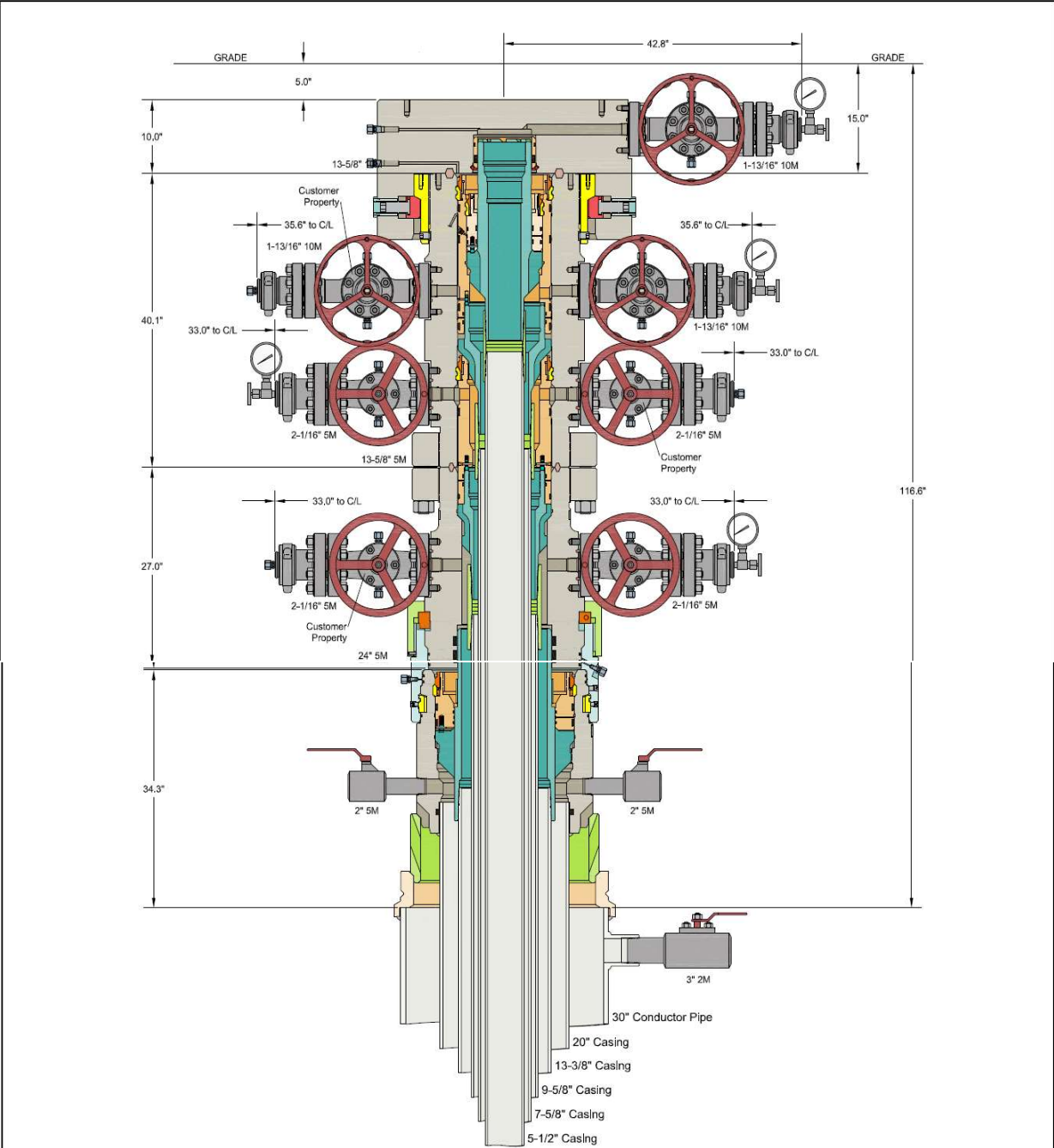
XTO ENERGY INC
DELAWARE BASIN

30" x 20" x 13-3/8" x 9-5/8" x 5-1/2" (or 6") CRC / MBU-3T-CFL
With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head
And 13-3/8", 9-5/8" & 5-1/2" (or 6") Pin Bottom Casing Hangers

25MAR24

DRAWING NO.

HBE0000801

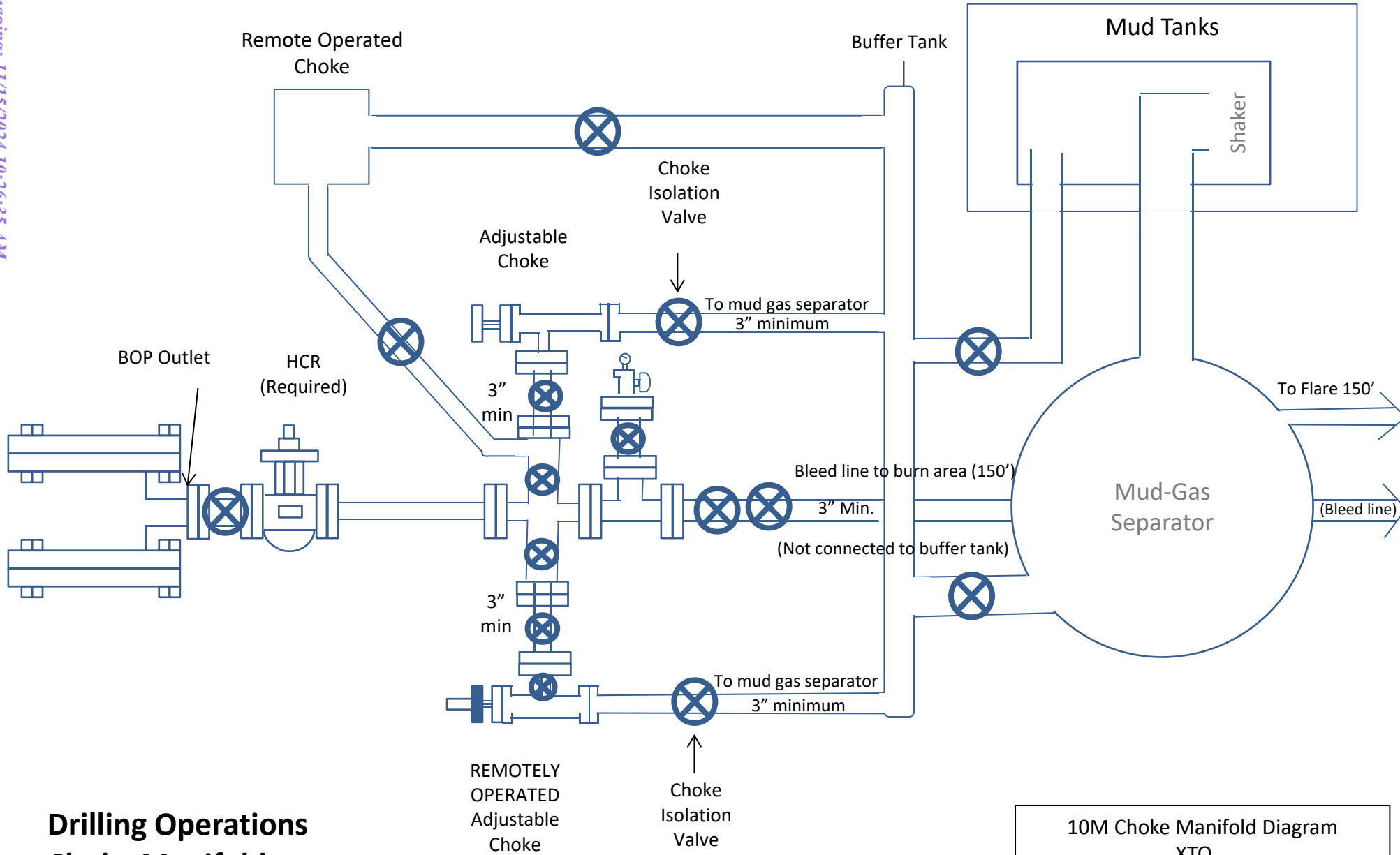


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ALL DIMENSIONS APPROXIMATE

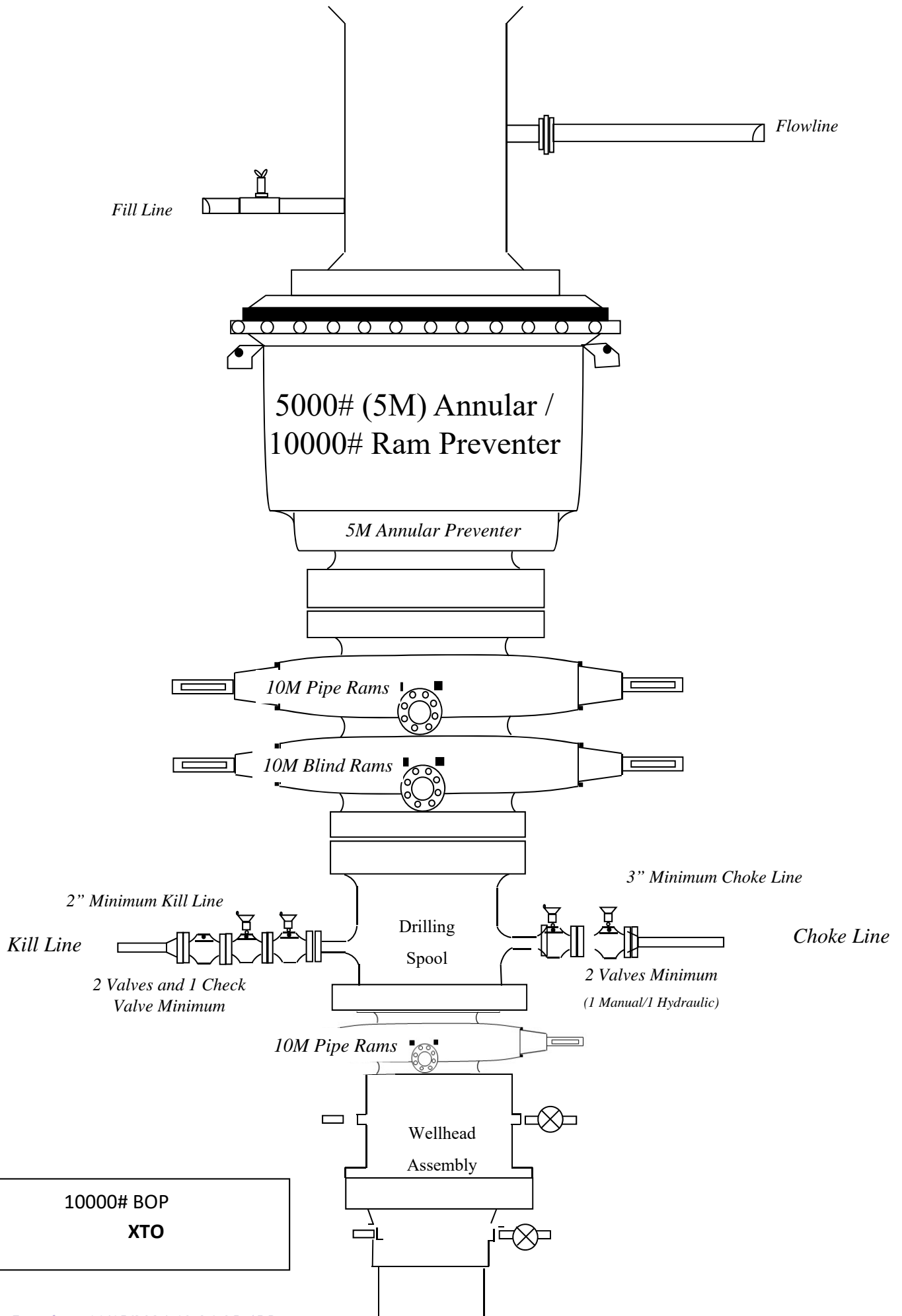
CACTUS WELLHEAD LLC			
30" x 20" x 13-3/8" x 9-5/8" x 7-5/8" x 5-1/2" CRC/MBU-4T-CFL With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And 13-3/8", 9-5/8", 7-5/8" & 5-1/2" Mandrel Casing Hangers	DRAWN	DLE	20FEB24
	APPRV		
	DRAWING NO. HBE0001163		

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



Drilling Operations Choke Manifold 10M Service

10M Choke Manifold Diagram
XTO





TenarisHydril Wedge

461®



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	6.000 in.	Wall Thickness	0.438 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	6.000 in.	Wall Thickness	0.438 in.	Body Yield Strength	842 x1000 lb
Nominal Weight	26.00 lb/ft	Plain End Weight	26.04 lb/ft	Min. Internal Yield Pressure	14,050 psi
Drift	4.999 in.	OD Tolerance	API	SMYS	110,000 psi
Nominal ID	5.124 in.			Collapse Pressure	13,680 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.800 in.	Tension Efficiency	100 %	Minimum	20,000 ft-lb
Coupling Length	8.914 in.	Joint Yield Strength	842 x1000 lb	Optimum	21,000 ft-lb
Connection ID	5.170 in.	Internal Pressure Capacity	14,050 psi	Maximum	25,200 ft-lb
Make-up Loss	4.375 in.	Compression Efficiency	100 %	Operation Limit Torques	
Threads per inch	3.40	Compression Strength	842 x1000 lb	Operating Torque	52,000 ft-lb
Connection OD Option	Regular	Max. Allowable Bending	84.03 °/100 ft	Yield Torque	61,000 ft-lb
		External Pressure Capacity	13,680 psi	Buck-On	
		Coupling Face Load	306,000 lb	Minimum	25,200 ft-lb
				Maximum	26,700 ft-lb

Notes

In October 2019, TenarisHydril Wedge XP® 2.0 was renamed TenarisHydril Wedge 461™. Product dimensions and properties remain identical and both connections are fully interchangeable

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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PIII/CI



U. S. Steel Tubular Products

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

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

UNCONTROLLED

Notes

1.

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

Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3.

Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4.

Reference length is calculated by joint strength divided by plain end weight with 1.5 safety factor.

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U. S. Steel Tubular Products

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

11/29/2021 4:16:04 PM

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

UNCONTROLLED

Notes

1.

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

Joint efficiencies are calculated by dividing the connection critical area by the pipe body area.
3.

Uniaxial bend rating shown is structural only.
4.

Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
5.

Reference length is calculated by Joint Strength divided by Nominal Linear Weight, T&C with a 1.5 Safety factor.
6.

Coupling must meet minimum mechanical properties of the pipe.

Legal Notice

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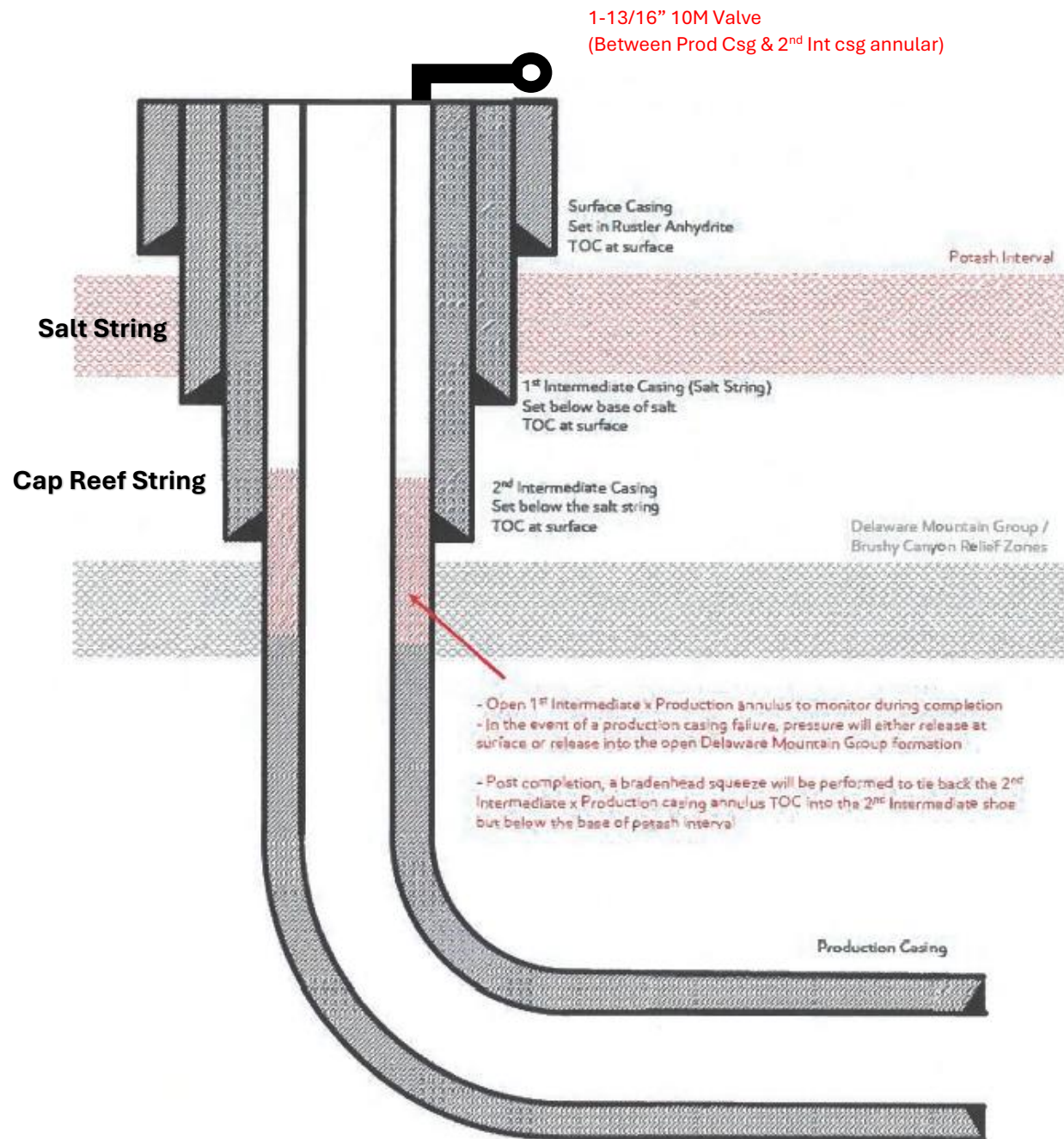
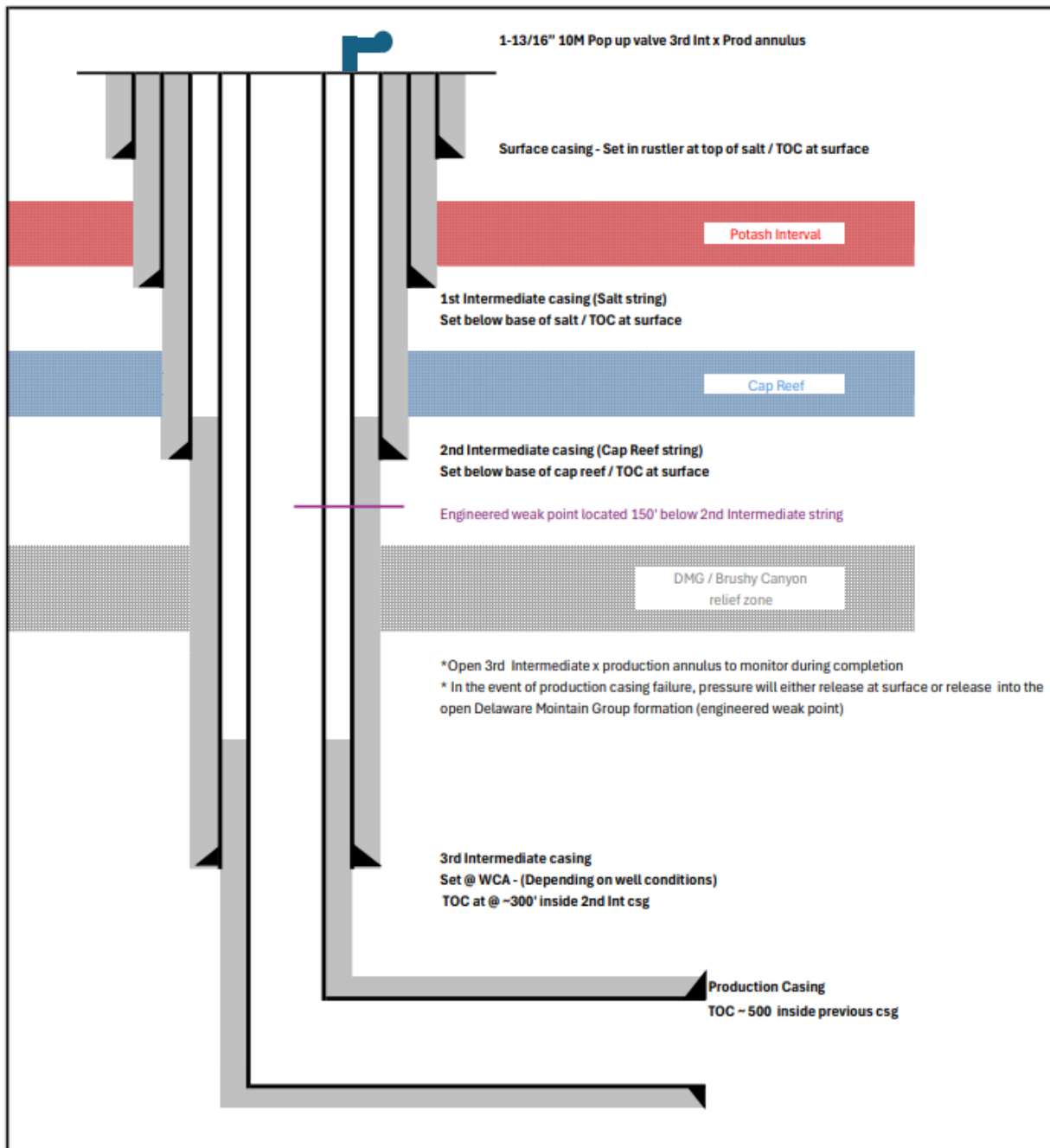


Figure E – Potash + Cap Reef (2 Int Csg at top of DMG)

Updated May 2024:

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

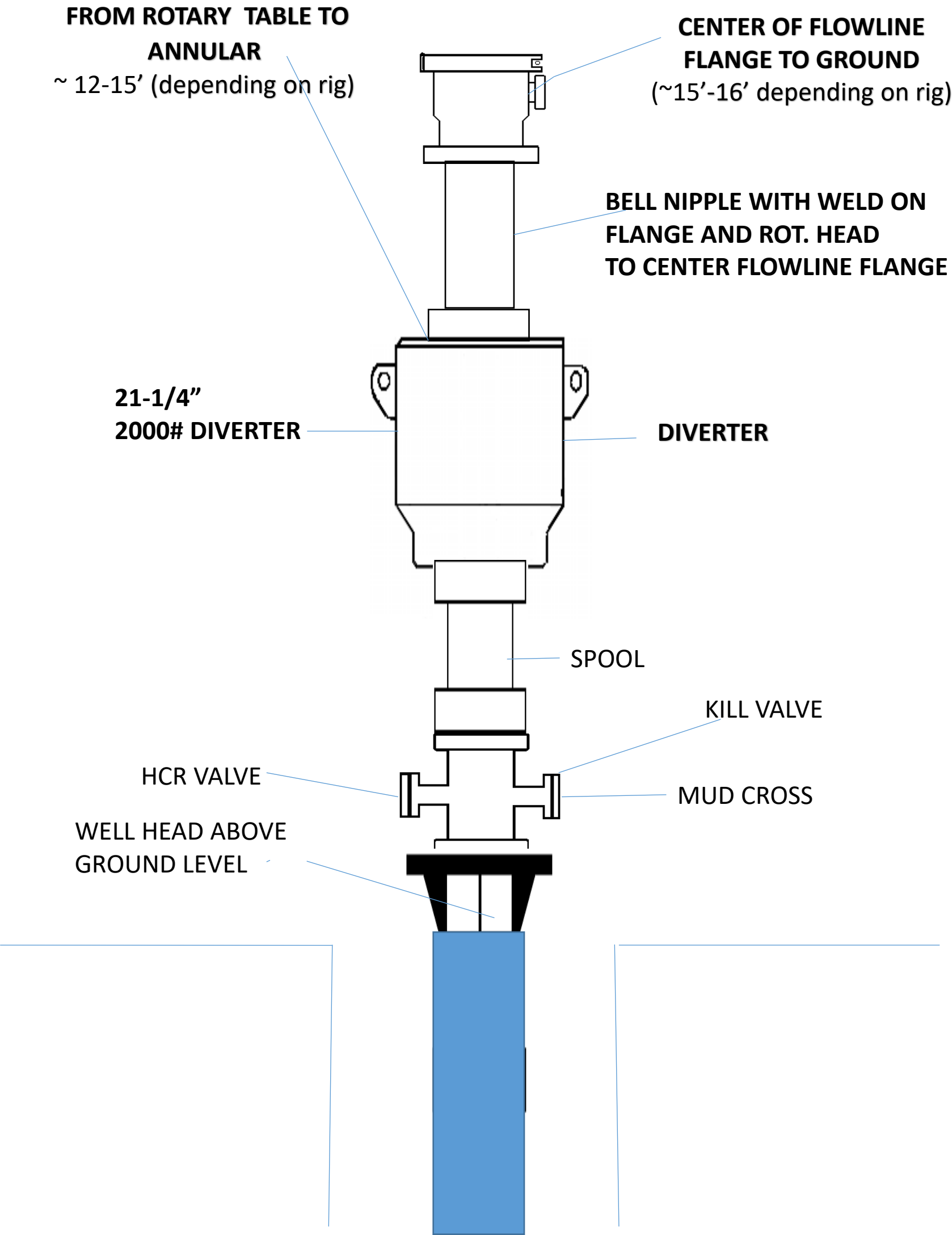
1. Alignment with KPLA requirements per schematic above, leaving open annulus for pressure monitoring during frac and utilizing new casing that meets API standards.
2. Contingency plans in place to divert formation fluids away from salt interval in even of production casing failure.
3. Bradenhead squeeze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



5 String design (Capitan Reef + Potash)

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

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



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.

**BLACK GOLD®**

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

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

*NEW CHOKE HOSE
INSTALLED 02-10-2024*

CERTIFICATE OF CONFORMANCE

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

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

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

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

SIGNATURE:*F. Cismos***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:

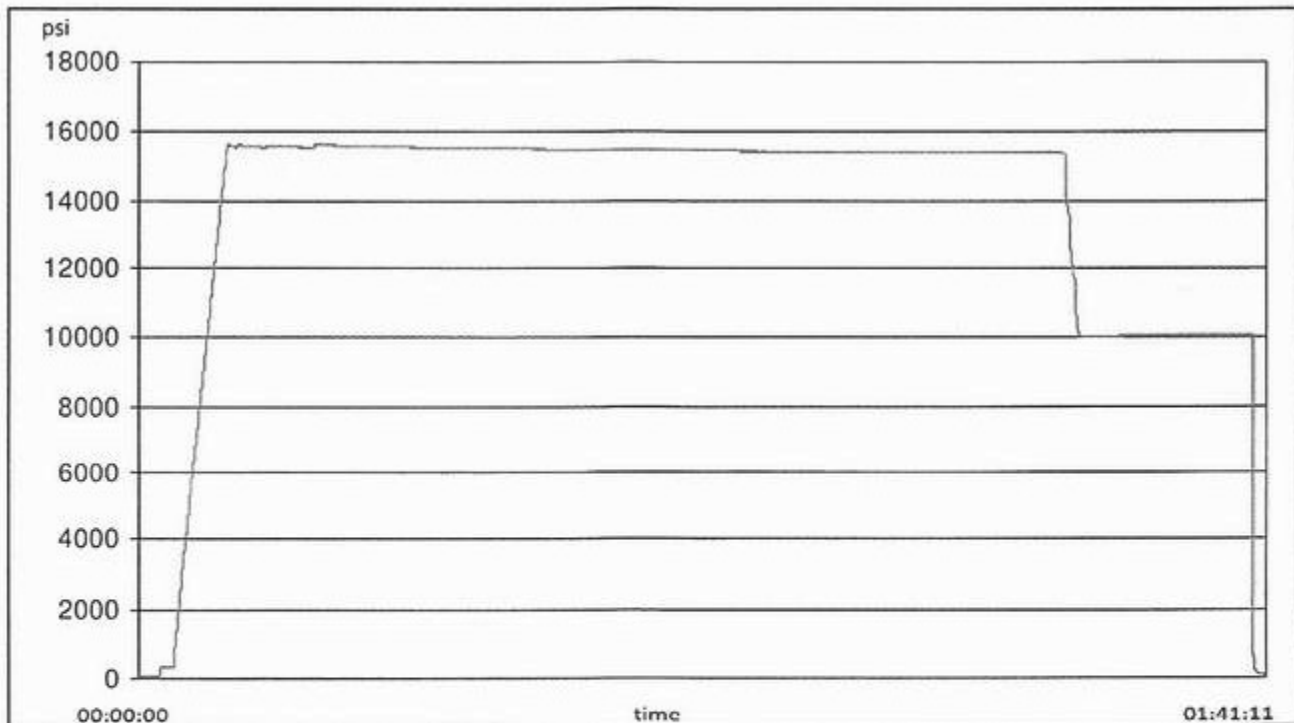
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 45 feet

Test operator: Travis





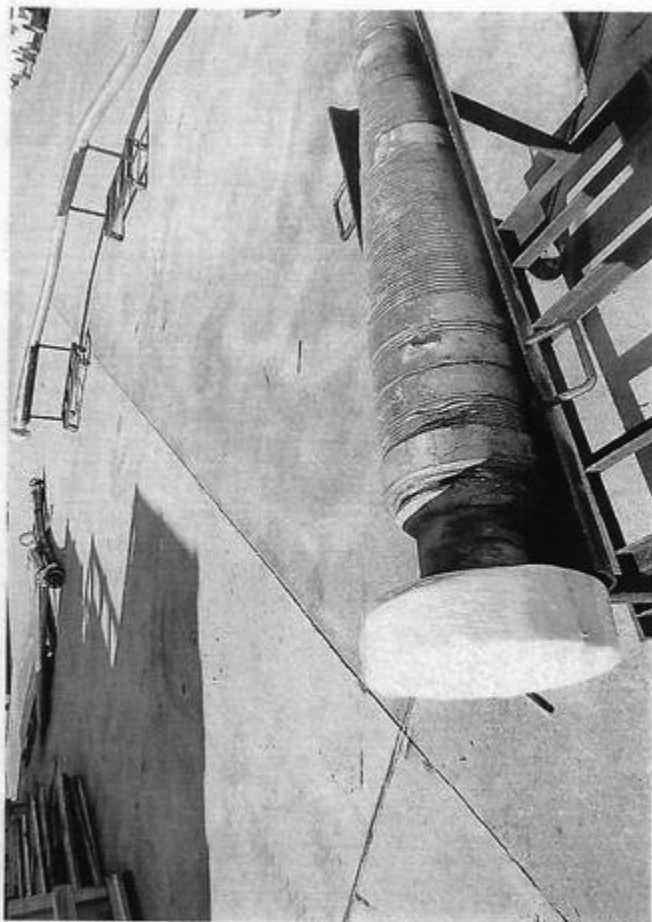
1/25/2024 11:48:06 AM

TEST REPORT

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

Comment

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10,000 PSI Annular BOP Variance Request

Mewbourne Oil Company request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables 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 BOPL).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

12-1/4" Intermediate Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	8.000"-9.625"	Annular	5M	-	-
Intermediate Casing	9.625"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

8-3/4" Production Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	7"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

6-1/8" Lateral Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
DCs and MWD tools	4.750"-5.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Mud Motor	4.750"-5.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Production Casing	4.500"	Annular	5M	Upper 3.5"-5.5" VBR Upper 3.5"-5.5" VBR	10M 10M
Open-Hole	-	Blind Rams	10M	-	-

VBR = Variable Bore Ram

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the Mewbourne Oil Company drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:
 - a. Perform flow check. If flowing, continue to (b).
 - b. Sound alarm (alert crew)
 - c. Stab full-opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams
 - e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full-opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams
 - d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP & SICP

- ii. Pit gain
 - iii. Time
 - h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
 - c. If impossible to pull string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram
 - f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan

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

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

CONDITIONS

Action 402761

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 402761
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	11/15/2024
pkautz	PLEASE NOTE CORRECTION OF POOL TO SALT LAKE;WOLFCAMP [53570]	11/15/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing.	11/15/2024
pkautz	Administrative order required for non-standard location prior to production.	11/15/2024