

Well Name: POKER LAKE UNIT 19 DTD	Well Location: T24S / R30E / SEC 19 / NENE / 32.209566 / -103.915976	County or Parish/State: EDDY / NM
Well Number: 421H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM002860	Unit or CA Name:	Unit or CA Number: NMNM71016X
US Well Number: 3001553839	Operator: XTO PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2778053

Type of Submission: Notice of Intent Type of Action: APD Change

Date Sundry Submitted: 03/05/2024 Time Sundry Submitted: 04:23

Date proposed operation will begin: 04/02/2024

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, and proposed total depth. FROM: TO: SHL: 274' FNL & 1166' FEL of Section 19-T24S-R30E 274' FNL & 1166' FEL of Section 19-T24S-R30E FTP: 100' FSL & 1430' FEL of Section 18-T24S-R30E 100' FNL & 432' FEL of Section 19-T24S-R30E LTP: 2310' FSL & 1430' FEL of Section 31-T23S-R30E 330' FSL & 445' FEL of Section 31-T24S-R30E BHL: 2440' FSL & 1430' FEL of Section 31-T23S-R30E 230' FSL & 445' FEL of Section 31-T24S-R30E Proposed total depth will change from 29143' MD; 10587' TVD (Wolfcamp) to 26111' MD; TVD 10822' (Wolfcamp). See attached Drilling Plan for updated cement and casing program. Attachments: C-102, Drilling Plan, Directional Drilling Plan, MBS, BOP Variance, Well Control Plan

NOI Attachments

Procedure Description

- Well_Control_Plan_w_CFR_43_3172_20240305162206.pdf
- BOP_Variance_new_Language_BOP_BTV_20240305162206.pdf
- Well_Plan_Report___Poker_Lake_Unit_19_DTD_South_421H_20240305162207.pdf
- 3_String_Slimhole_HBE0000479_4_MBS_20240305162206.pdf
- POKER_LAKE_UNIT_19_DTD_421H_C_102_FINAL_20240305162206.pdf
- PLU_19_DTD_421H_Pad_D_Drilling_Plan_20240305162206.pdf

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Lease Number: NMNM002860

Unit or CA Name:

Unit or CA Number: NMNM71016X

US Well Number: 3001553839

Operator: XTO PERMIAN OPERATING LLC

Conditions of Approval

Additional

Sec19_24S_30E_NMP_Sundry_2778053_Poker_Lake_Unit_19_DTD_421H_COAs_20240321152233.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: TERRA SEBASTIAN

Signed on: MAR 05, 2024 04:22 PM

Name: XTO PERMIAN OPERATING LLC

Title: Regulatory Advisor

Street Address: 6401 HOLIDAY HILL ROAD SUITE 200

City: MIDLAND

State: TX

Phone: (432) 999-3107

Email address: TERRA.B.SEBASTIAN@EXXONMOBIL.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 04/24/2024

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

5. Lease Serial No.	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No.	
9. API Well No.	
10. Field and Pool or Exploratory Area	
11. Country or Parish, State	

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well	
☐ Oil Well	☐ Gas Well ☐ Other
2. Name of Operator	
3a. Address	3b. Phone No. (include area code)
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)	

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

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

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or 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

Attachments: C-102, Drilling Plan, Directional Drilling Plan, MBS, BOP Variance, Well Control Plan

Location of Well

0. SHL: NENE / 274 FNL / 1166 FEL / TWSP: 24S / RANGE: 30E / SECTION: 19 / LAT: 32.209566 / LONG: -103.915976 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 330 FSL / 1430 FEL / TWSP: 24S / RANGE: 30E / SECTION: 7 / LAT: 32.22535 / LONG: -103.91632 (TVD: 10587 feet, MD: 16300 feet)

PPP: SWSE / 100 FSL / 1430 FEL / TWSP: 24S / RANGE: 30E / SECTION: 18 / LAT: 32.210586 / LONG: -103.916385 (TVD: 10587 feet, MD: 11000 feet)

BHL: NWSE / 2440 FSL / 1430 FEL / TWSP: 23S / RANGE: 30E / SECTION: 31 / LAT: 32.260677 / LONG: -103.916812 (TVD: 10587 feet, MD: 29143 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 19 DTD 421H
LOCATION:	Sec 19-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

Changes approved through engineering via **Sundry 2778053** on 03/21/2024. Any previous COAs not addressed within the updated COAs still apply.

COA

H₂S	☒ No	☐ Yes		
Potash / WIPP	☒ None	☐ Secretary	☐ R-111-P	☐ WIPP
Cave / Karst	☐ Low	☒ Medium	☐ High	☐ Critical
Wellhead	☐ Conventional	☒ Multibowl	☐ Both	☐ Diverter
Cementing	☐ Primary Squeeze	☒ Cont. Squeeze	☒ EchoMeter	☐ DV Tool
Special Req	☒ Break Testing	☐ Water Disposal	☐ COM	☒ Unit
Variance	☒ Flex Hose	☒ Casing Clearance	☐ Pilot Hole	☐ Capitan Reef
Variance	☐ Four-String	☒ Offline Cementing	☐ Fluid-Filled	☐ Open Annulus
☐ Batch APD / Sundry				

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.

B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately 430 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. ***Set depth adjusted per BLM geologist.***
 - 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 7-5/8 inch 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.**
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the 7-5/8" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out.

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

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

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

- Cement should tie-back at least **300 feet** (due to not meeting 0.422" clearance requirement) into previous casing string. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi. 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.

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing

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

GENERAL REQUIREMENTS

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

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

Eddy County (API No. / US Well No. contains 30-015-#####)

Email **or** call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
BLM_NM_CFO_DrillingNotifications@blm.gov; (575) 361-2822

Lea County (API No. / US Well No. contains 30-025-#####)

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
 - Notify the BLM when moving in and removing the Spudder Rig.
 - 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.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 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. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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, 2) until cement has been in place at least 24 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-P 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 part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
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:
 - 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. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
 - e. 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.
 - a. 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).
 - b. 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.)

- c. 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 part 3170 Subpart 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 water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. 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.
 - e. The results of the test shall be reported to the appropriate BLM office.
 - f. 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.
 - g. 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.
 - h. 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 part 3170 Subpart 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.

10,000 PSI Annular BOP Variance Request

XTO Energy/XTO Permian Op. 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.

8-1/2" 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	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

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 XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per 43.CFR.3172 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

- a. Sound alarm (alert crew)
- b. Stab crossover and full-opening safety valve and close
- c. Space out string
- d. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
- e. Confirm shut-in
- f. Notify toolpusher/company representative
- g. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
- h. Regroup and identify forward plan
- i. 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

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

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

Background

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

Supporting Documentation

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

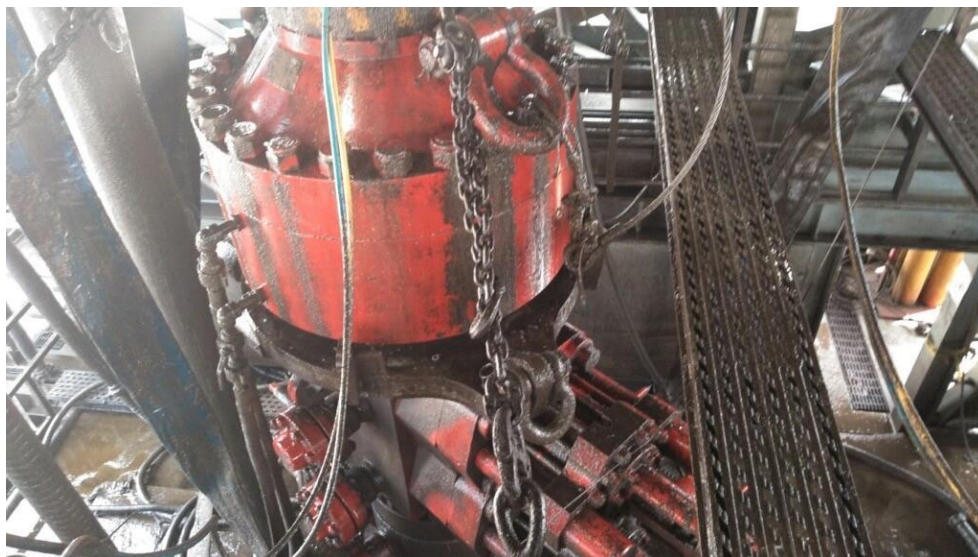


Figure 1: Winch System attached to BOP Stack

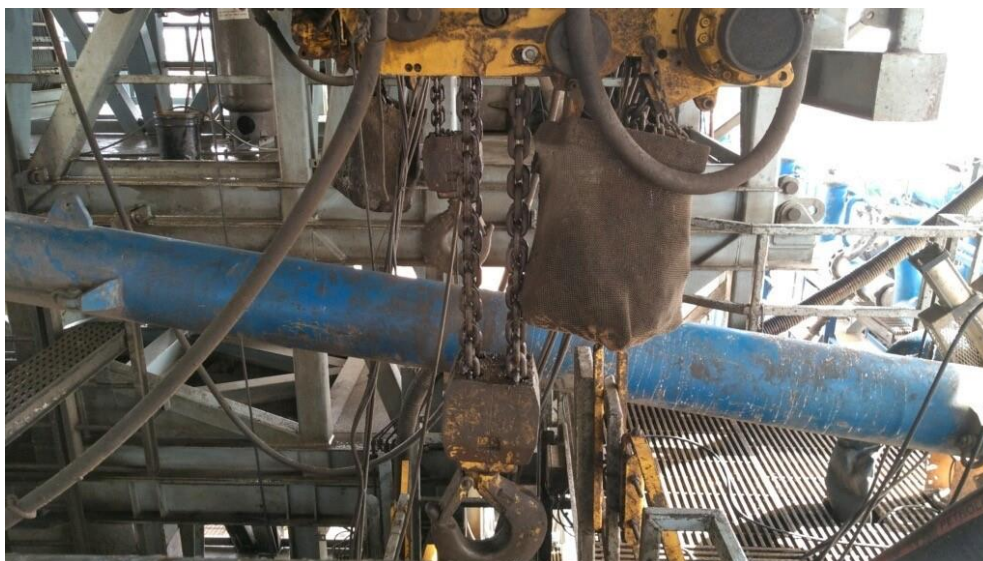


Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. CFR Title 43 Part 3170 recognizes API recommended Practices (RP) 53 in its original development. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (Fifth Edition, December 2018, Annex C, Table C.4) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 5.3.7.1 states “A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component.” See Table C.4 below for reference.

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API STANDARD 53

Table C.4—Initial Pressure Testing, Surface BOP Stacks

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

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

No visible leaks.

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

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

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

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

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

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

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

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

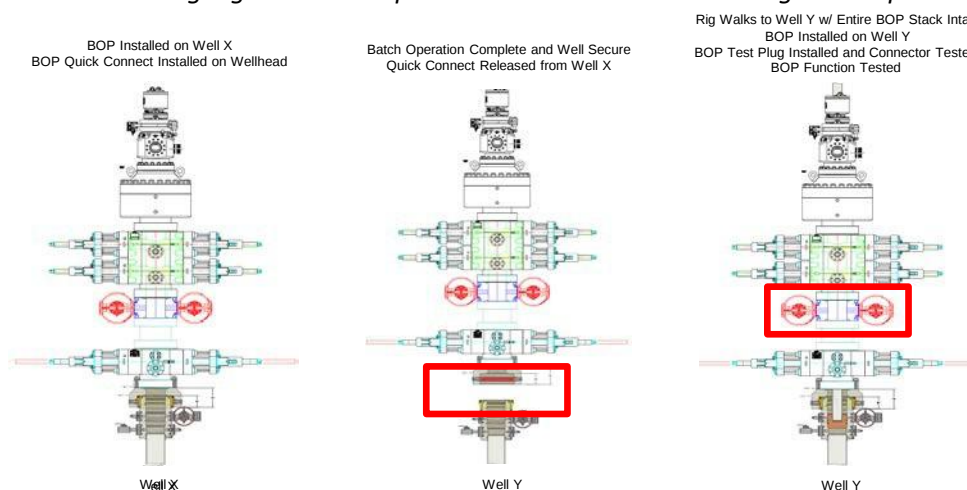
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

Procedures

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

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

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



Summary

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

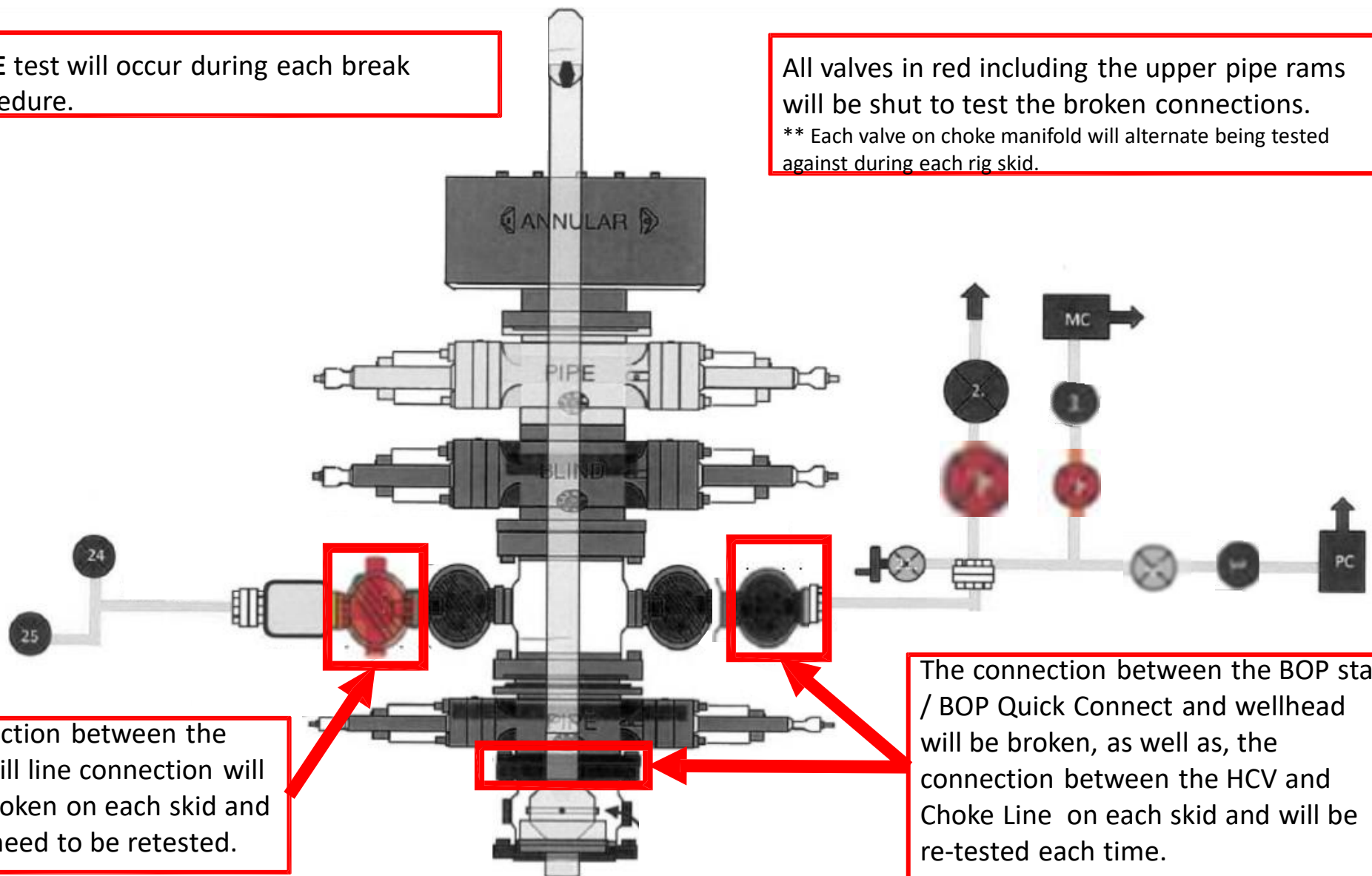
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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

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

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

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



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

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

Well Plan Report - Poker Lake Unit 19 DTD South 421H

Measured Depth: 26111.09 ft

TVD RKB: 10822.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 440165.50 ft

Easting: 629235.00 ft

RKB: 3211.00 ft

Ground Level: 3179.00 ft

North Reference: Grid

Convergence Angle: 0.22 Deg

Plan Sections

Poker Lake Unit 19 DTD South 421H

Measured		TVD		Build		Turn	Dogleg	
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft) Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00
1514.60	8.29	75.73	1513.16	7.38	29.02	2.00	0.00	2.00
6338.72	8.29	75.73	6286.84	178.92	703.28	0.00	0.00	0.00
6753.32	0.00	0.00	6700.00	186.30	732.30	-2.00	0.00	2.00
10159.12	0.00	0.00	10105.80	186.30	732.30	0.00	0.00	0.00
11284.12	90.00	179.72	10822.00	-529.89	735.77	8.00	0.00	8.00
26010.93	90.00	179.72	10822.00	-15256.52	807.23	0.00	0.00	0.00 LTP 29
26111.09	90.00	179.72	10822.00	-15356.68	807.72	0.00	0.00	0.00 BHL 29

Position Uncertainty

Poker Lake Unit 19 DTD South 421H

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	2.309	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.346	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	2.373	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	2.405	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	2.441	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	2.483	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	2.528	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	2.577	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	2.630	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	75.727	1199.980	4.989	0.000	4.529	0.000	2.686	0.000	0.000	5.192	4.297	-43.675	MWD+IFR1+MS
1300.000	4.000	75.727	1299.838	5.764	0.000	4.896	0.000	2.746	0.000	0.000	5.818	4.842	-27.219	MWD+IFR1+MS
1400.000	6.000	75.727	1399.452	6.460	0.000	5.262	0.000	2.811	0.000	0.000	6.484	5.257	-17.927	MWD+IFR1+MS
1500.000	8.000	75.727	1498.702	7.098	0.000	5.629	0.000	2.883	0.000	0.000	7.132	5.628	-12.994	MWD+IFR1+MS
1514.602	8.292	75.727	1513.156	7.134	0.000	5.678	0.000	2.889	0.000	0.000	7.173	5.677	-12.989	MWD+IFR1+MS
1600.000	8.292	75.727	1597.661	7.365	0.000	5.971	0.000	2.947	0.000	0.000	7.402	5.970	-12.840	MWD+IFR1+MS
1700.000	8.292	75.727	1696.616	7.654	0.000	6.335	0.000	3.020	0.000	0.000	7.689	6.333	-12.066	MWD+IFR1+MS
1800.000	8.292	75.727	1795.571	7.952	0.000	6.704	0.000	3.096	0.000	0.000	7.986	6.700	-11.139	MWD+IFR1+MS
1900.000	8.292	75.727	1894.525	8.257	0.000	7.073	0.000	3.174	0.000	0.000	8.290	7.066	-10.211	MWD+IFR1+MS
2000.000	8.292	75.727	1993.480	8.567	0.000	7.442	0.000	3.255	0.000	0.000	8.599	7.433	-9.282	MWD+IFR1+MS
2100.000	8.292	75.727	2092.434	8.882	0.000	7.811	0.000	3.338	0.000	0.000	8.913	7.798	-8.355	MWD+IFR1+MS
2200.000	8.292	75.727	2191.389	9.201	0.000	8.180	0.000	3.423	0.000	0.000	9.232	8.164	-7.432	MWD+IFR1+MS
2300.000	8.292	75.727	2290.344	9.524	0.000	8.549	0.000	3.511	0.000	0.000	9.555	8.530	-6.514	MWD+IFR1+MS
2400.000	8.292	75.727	2389.298	9.851	0.000	8.919	0.000	3.600	0.000	0.000	9.882	8.895	-5.603	MWD+IFR1+MS
2500.000	8.292	75.727	2488.253	10.181	0.000	9.288	0.000	3.691	0.000	0.000	10.212	9.260	-4.701	MWD+IFR1+MS
2600.000	8.292	75.727	2587.207	10.513	0.000	9.657	0.000	3.784	0.000	0.000	10.545	9.625	-3.808	MWD+IFR1+MS
2700.000	8.292	75.727	2686.162	10.849	0.000	10.027	0.000	3.879	0.000	0.000	10.880	9.991	-2.926	MWD+IFR1+MS
2800.000	8.292	75.727	2785.116	11.186	0.000	10.396	0.000	3.975	0.000	0.000	11.218	10.356	-2.057	MWD+IFR1+MS
2900.000	8.292	75.727	2884.071	11.526	0.000	10.765	0.000	4.073	0.000	0.000	11.559	10.721	-1.201	MWD+IFR1+MS

3000.000	8.292	75.727	2983.026	11.868	0.000	11.135	0.000	4.172	0.000	0.000	11.901	11.086	-0.360	MWD+IFR1+MS
3100.000	8.292	75.727	3081.980	12.212	0.000	11.504	0.000	4.273	0.000	0.000	12.245	11.451	0.466	MWD+IFR1+MS
3200.000	8.292	75.727	3180.935	12.557	0.000	11.873	0.000	4.376	0.000	0.000	12.591	11.816	1.276	MWD+IFR1+MS
3300.000	8.292	75.727	3279.889	12.904	0.000	12.243	0.000	4.480	0.000	0.000	12.939	12.181	2.070	MWD+IFR1+MS
3400.000	8.292	75.727	3378.844	13.252	0.000	12.612	0.000	4.586	0.000	0.000	13.287	12.546	2.846	MWD+IFR1+MS
3500.000	8.292	75.727	3477.799	13.602	0.000	12.982	0.000	4.693	0.000	0.000	13.637	12.911	3.605	MWD+IFR1+MS
3600.000	8.292	75.727	3576.753	13.952	0.000	13.351	0.000	4.802	0.000	0.000	13.989	13.277	4.347	MWD+IFR1+MS
3700.000	8.292	75.727	3675.708	14.304	0.000	13.721	0.000	4.912	0.000	0.000	14.341	13.642	5.070	MWD+IFR1+MS
3800.000	8.292	75.727	3774.662	14.657	0.000	14.090	0.000	5.023	0.000	0.000	14.694	14.008	5.776	MWD+IFR1+MS
3900.000	8.292	75.727	3873.617	15.011	0.000	14.459	0.000	5.137	0.000	0.000	15.048	14.373	6.463	MWD+IFR1+MS
4000.000	8.292	75.727	3972.571	15.366	0.000	14.829	0.000	5.251	0.000	0.000	15.403	14.739	7.133	MWD+IFR1+MS
4100.000	8.292	75.727	4071.526	15.721	0.000	15.198	0.000	5.368	0.000	0.000	15.759	15.104	7.785	MWD+IFR1+MS
4200.000	8.292	75.727	4170.481	16.078	0.000	15.568	0.000	5.486	0.000	0.000	16.116	15.470	8.419	MWD+IFR1+MS
4300.000	8.292	75.727	4269.435	16.435	0.000	15.937	0.000	5.605	0.000	0.000	16.473	15.836	9.036	MWD+IFR1+MS
4400.000	8.292	75.727	4368.390	16.793	0.000	16.307	0.000	5.727	0.000	0.000	16.830	16.202	9.636	MWD+IFR1+MS
4500.000	8.292	75.727	4467.344	17.151	0.000	16.677	0.000	5.849	0.000	0.000	17.189	16.568	10.220	MWD+IFR1+MS
4600.000	8.292	75.727	4566.299	17.510	0.000	17.046	0.000	5.974	0.000	0.000	17.548	16.934	10.787	MWD+IFR1+MS
4700.000	8.292	75.727	4665.254	17.870	0.000	17.416	0.000	6.100	0.000	0.000	17.907	17.301	11.338	MWD+IFR1+MS
4800.000	8.292	75.727	4764.208	18.230	0.000	17.785	0.000	6.228	0.000	0.000	18.267	17.667	11.873	MWD+IFR1+MS
4900.000	8.292	75.727	4863.163	18.590	0.000	18.155	0.000	6.358	0.000	0.000	18.627	18.034	12.393	MWD+IFR1+MS
5000.000	8.292	75.727	4962.117	18.951	0.000	18.524	0.000	6.489	0.000	0.000	18.987	18.400	12.899	MWD+IFR1+MS
5100.000	8.292	75.727	5061.072	19.313	0.000	18.894	0.000	6.623	0.000	0.000	19.348	18.767	13.390	MWD+IFR1+MS
5200.000	8.292	75.727	5160.026	19.675	0.000	19.263	0.000	6.758	0.000	0.000	19.710	19.134	13.867	MWD+IFR1+MS
5300.000	8.292	75.727	5258.981	20.037	0.000	19.633	0.000	6.895	0.000	0.000	20.071	19.501	14.331	MWD+IFR1+MS
5400.000	8.292	75.727	5357.936	20.400	0.000	20.002	0.000	7.034	0.000	0.000	20.433	19.868	14.781	MWD+IFR1+MS
5500.000	8.292	75.727	5456.890	20.763	0.000	20.372	0.000	7.175	0.000	0.000	20.795	20.235	15.219	MWD+IFR1+MS
5600.000	8.292	75.727	5555.845	21.127	0.000	20.742	0.000	7.318	0.000	0.000	21.158	20.602	15.645	MWD+IFR1+MS
5700.000	8.292	75.727	5654.799	21.490	0.000	21.111	0.000	7.462	0.000	0.000	21.520	20.969	16.058	MWD+IFR1+MS
5800.000	8.292	75.727	5753.754	21.854	0.000	21.481	0.000	7.609	0.000	0.000	21.883	21.337	16.460	MWD+IFR1+MS
5900.000	8.292	75.727	5852.709	22.219	0.000	21.850	0.000	7.758	0.000	0.000	22.246	21.704	16.851	MWD+IFR1+MS
6000.000	8.292	75.727	5951.663	22.583	0.000	22.220	0.000	7.909	0.000	0.000	22.610	22.072	17.231	MWD+IFR1+MS
6100.000	8.292	75.727	6050.618	22.948	0.000	22.589	0.000	8.062	0.000	0.000	22.973	22.439	17.601	MWD+IFR1+MS
6200.000	8.292	75.727	6149.572	23.313	0.000	22.959	0.000	8.217	0.000	0.000	23.337	22.807	17.960	MWD+IFR1+MS

6300.000	8.292	75.727	6248.527	23.679	0.000	23.329	0.000	8.375	0.000	0.000	23.701	23.175	18.309	MWD+IFR1+MS
6338.722	8.292	75.727	6286.844	23.818	0.000	23.469	0.000	8.436	0.000	0.000	23.837	23.317	18.329	MWD+IFR1+MS
6400.000	7.066	75.727	6347.571	24.050	0.000	23.691	0.000	8.534	0.000	0.000	24.056	23.541	18.186	MWD+IFR1+MS
6500.000	5.066	75.727	6447.006	24.468	0.000	24.053	0.000	8.695	0.000	0.000	24.472	23.909	15.879	MWD+IFR1+MS
6600.000	3.066	75.727	6546.749	24.889	0.000	24.412	0.000	8.855	0.000	0.000	24.922	24.273	13.160	MWD+IFR1+MS
6700.000	1.066	75.727	6646.679	25.275	0.000	24.766	0.000	9.011	0.000	0.000	25.367	24.628	11.169	MWD+IFR1+MS
6753.324	0.000	0.000	6700.000	24.841	0.000	25.524	0.000	9.093	0.000	0.000	25.549	24.815	10.737	MWD+IFR1+MS
6800.000	0.000	0.000	6746.676	25.002	0.000	25.674	0.000	9.165	0.000	0.000	25.699	24.976	10.767	MWD+IFR1+MS
6900.000	0.000	0.000	6846.676	25.344	0.000	26.000	0.000	9.321	0.000	0.000	26.024	25.320	10.636	MWD+IFR1+MS
7000.000	0.000	0.000	6946.676	25.691	0.000	26.330	0.000	9.480	0.000	0.000	26.352	25.669	10.250	MWD+IFR1+MS
7100.000	0.000	0.000	7046.676	26.037	0.000	26.661	0.000	9.641	0.000	0.000	26.680	26.018	9.850	MWD+IFR1+MS
7200.000	0.000	0.000	7146.676	26.384	0.000	26.993	0.000	9.805	0.000	0.000	27.010	26.367	9.436	MWD+IFR1+MS
7300.000	0.000	0.000	7246.676	26.732	0.000	27.325	0.000	9.972	0.000	0.000	27.340	26.716	9.006	MWD+IFR1+MS
7400.000	0.000	0.000	7346.676	27.079	0.000	27.657	0.000	10.142	0.000	0.000	27.671	27.066	8.562	MWD+IFR1+MS
7500.000	0.000	0.000	7446.676	27.427	0.000	27.991	0.000	10.314	0.000	0.000	28.002	27.415	8.101	MWD+IFR1+MS
7600.000	0.000	0.000	7546.676	27.775	0.000	28.325	0.000	10.490	0.000	0.000	28.335	27.765	7.624	MWD+IFR1+MS
7700.000	0.000	0.000	7646.676	28.124	0.000	28.659	0.000	10.668	0.000	0.000	28.668	28.115	7.129	MWD+IFR1+MS
7800.000	0.000	0.000	7746.676	28.473	0.000	28.995	0.000	10.849	0.000	0.000	29.002	28.465	6.616	MWD+IFR1+MS
7900.000	0.000	0.000	7846.676	28.821	0.000	29.330	0.000	11.033	0.000	0.000	29.336	28.816	6.084	MWD+IFR1+MS
8000.000	0.000	0.000	7946.676	29.171	0.000	29.667	0.000	11.219	0.000	0.000	29.671	29.166	5.533	MWD+IFR1+MS
8100.000	0.000	0.000	8046.676	29.520	0.000	30.003	0.000	11.409	0.000	0.000	30.007	29.516	4.962	MWD+IFR1+MS
8200.000	0.000	0.000	8146.676	29.870	0.000	30.341	0.000	11.601	0.000	0.000	30.343	29.867	4.370	MWD+IFR1+MS
8300.000	0.000	0.000	8246.676	30.219	0.000	30.678	0.000	11.796	0.000	0.000	30.680	30.217	3.757	MWD+IFR1+MS
8400.000	0.000	0.000	8346.676	30.569	0.000	31.017	0.000	11.995	0.000	0.000	31.018	30.568	3.122	MWD+IFR1+MS
8500.000	0.000	0.000	8446.676	30.919	0.000	31.355	0.000	12.196	0.000	0.000	31.356	30.919	2.465	MWD+IFR1+MS
8600.000	0.000	0.000	8546.676	31.270	0.000	31.694	0.000	12.400	0.000	0.000	31.695	31.269	1.784	MWD+IFR1+MS
8700.000	0.000	0.000	8646.676	31.620	0.000	32.034	0.000	12.607	0.000	0.000	32.034	31.620	1.081	MWD+IFR1+MS
8800.000	0.000	0.000	8746.676	31.971	0.000	32.374	0.000	12.817	0.000	0.000	32.374	31.971	0.354	MWD+IFR1+MS
8900.000	0.000	0.000	8846.676	32.322	0.000	32.714	0.000	13.030	0.000	0.000	32.714	32.322	-0.397	MWD+IFR1+MS
9000.000	0.000	0.000	8946.676	32.673	0.000	33.055	0.000	13.246	0.000	0.000	33.055	32.673	-1.172	MWD+IFR1+MS
9100.000	0.000	0.000	9046.676	33.024	0.000	33.396	0.000	13.465	0.000	0.000	33.396	33.024	-1.971	MWD+IFR1+MS
9200.000	0.000	0.000	9146.676	33.376	0.000	33.737	0.000	13.687	0.000	0.000	33.738	33.375	-2.794	MWD+IFR1+MS
9300.000	0.000	0.000	9246.676	33.727	0.000	34.079	0.000	13.912	0.000	0.000	34.080	33.726	-3.640	MWD+IFR1+MS

9400.000	0.000	0.000	9346.676	34.079	0.000	34.421	0.000	14.140	0.000	0.000	34.423	34.077	-4.509	MWD+IFR1+MS
9500.000	0.000	0.000	9446.676	34.431	0.000	34.764	0.000	14.371	0.000	0.000	34.767	34.428	-5.400	MWD+IFR1+MS
9600.000	0.000	0.000	9546.676	34.783	0.000	35.106	0.000	14.605	0.000	0.000	35.110	34.779	-6.313	MWD+IFR1+MS
9700.000	0.000	0.000	9646.676	35.135	0.000	35.450	0.000	14.842	0.000	0.000	35.455	35.130	-7.245	MWD+IFR1+MS
9800.000	0.000	0.000	9746.676	35.487	0.000	35.793	0.000	15.082	0.000	0.000	35.799	35.480	-8.196	MWD+IFR1+MS
9900.000	0.000	0.000	9846.676	35.839	0.000	36.137	0.000	15.325	0.000	0.000	36.144	35.831	-9.165	MWD+IFR1+MS
10000.000	0.000	0.000	9946.676	36.192	0.000	36.481	0.000	15.571	0.000	0.000	36.490	36.182	-10.148	MWD+IFR1+MS
10100.000	0.000	0.000	10046.676	36.544	0.000	36.825	0.000	15.820	0.000	0.000	36.836	36.533	-11.145	MWD+IFR1+MS
10159.124	0.000	0.000	10105.800	36.751	0.000	37.027	0.000	15.969	0.000	0.000	37.038	36.739	-11.421	MWD+IFR1+MS
10200.000	3.270	179.722	10146.654	36.812	0.000	37.161	-0.000	16.072	0.000	0.000	37.172	36.882	-11.624	MWD+IFR1+MS
10300.000	11.270	179.722	10245.770	37.101	0.000	37.476	-0.000	16.352	0.000	0.000	37.792	37.450	105.495	MWD+IFR1+MS
10400.000	19.270	179.722	10342.161	37.399	0.000	37.781	-0.000	16.770	0.000	0.000	39.121	37.762	96.290	MWD+IFR1+MS
10500.000	27.270	179.722	10433.951	37.148	0.000	38.070	-0.000	17.383	0.000	0.000	40.302	38.049	95.192	MWD+IFR1+MS
10600.000	35.270	179.722	10519.355	36.411	0.000	38.340	-0.000	18.235	0.000	0.000	41.302	38.315	94.896	MWD+IFR1+MS
10700.000	43.270	179.722	10596.709	35.276	0.000	38.590	-0.000	19.335	0.000	0.000	42.114	38.559	94.893	MWD+IFR1+MS
10800.000	51.270	179.722	10664.508	33.857	0.000	38.816	-0.000	20.662	0.000	0.000	42.735	38.780	95.069	MWD+IFR1+MS
10900.000	59.270	179.722	10721.433	32.306	0.000	39.017	-0.000	22.173	0.000	0.000	43.179	38.974	95.390	MWD+IFR1+MS
11000.000	67.270	179.722	10766.375	30.805	0.000	39.193	-0.000	23.815	0.000	0.000	43.465	39.141	95.842	MWD+IFR1+MS
11100.000	75.270	179.722	10798.460	29.565	0.000	39.341	-0.000	25.527	0.000	0.000	43.624	39.279	96.413	MWD+IFR1+MS
11200.000	83.270	179.722	10817.062	28.804	0.000	39.462	-0.000	27.250	0.000	0.000	43.694	39.387	97.070	MWD+IFR1+MS
11284.124	90.000	179.722	10821.997	28.303	0.000	39.538	-0.000	28.303	0.000	0.000	43.715	39.453	97.633	MWD+IFR1+MS
11300.000	90.000	179.722	10821.997	28.333	0.000	39.550	-0.000	28.333	0.000	0.000	43.718	39.463	97.737	MWD+IFR1+MS
11400.000	90.000	179.722	10821.997	28.495	0.000	39.637	-0.000	28.495	0.000	0.000	43.737	39.536	98.431	MWD+IFR1+MS
11500.000	90.000	179.722	10821.997	28.681	0.000	39.742	-0.000	28.681	0.000	0.000	43.757	39.624	99.178	MWD+IFR1+MS
11600.000	90.000	179.722	10821.997	28.887	0.000	39.861	-0.000	28.887	0.000	0.000	43.780	39.726	99.981	MWD+IFR1+MS
11700.000	90.000	179.722	10821.997	29.113	0.000	39.994	-0.000	29.113	0.000	0.000	43.806	39.839	100.848	MWD+IFR1+MS
11800.000	90.000	179.722	10821.997	29.358	0.000	40.141	-0.000	29.358	0.000	0.000	43.834	39.964	101.791	MWD+IFR1+MS
11900.000	90.000	179.722	10821.997	29.622	0.000	40.303	-0.000	29.622	0.000	0.000	43.866	40.101	102.822	MWD+IFR1+MS
12000.000	90.000	179.722	10821.997	29.904	0.000	40.478	-0.000	29.904	0.000	0.000	43.901	40.248	103.956	MWD+IFR1+MS
12100.000	90.000	179.722	10821.997	30.204	0.000	40.667	-0.000	30.204	0.000	0.000	43.941	40.405	105.209	MWD+IFR1+MS
12200.000	90.000	179.722	10821.997	30.521	0.000	40.869	-0.000	30.521	0.000	0.000	43.986	40.570	106.600	MWD+IFR1+MS
12300.000	90.000	179.722	10821.997	30.855	0.000	41.085	-0.000	30.855	0.000	0.000	44.037	40.744	108.151	MWD+IFR1+MS
12400.000	90.000	179.722	10821.997	31.206	0.000	41.314	-0.000	31.206	0.000	0.000	44.095	40.924	109.883	MWD+IFR1+MS

12500.000	90.000	179.722	10821.997	31.571	0.000	41.555	-0.000	31.571	0.000	0.000	44.161	41.110	111.822	MWD+IFR1+MS
12600.000	90.000	179.722	10821.997	31.952	0.000	41.809	-0.000	31.952	0.000	0.000	44.237	41.298	113.991	MWD+IFR1+MS
12700.000	90.000	179.722	10821.997	32.347	0.000	42.076	-0.000	32.347	0.000	0.000	44.325	41.488	116.409	MWD+IFR1+MS
12800.000	90.000	179.722	10821.997	32.757	0.000	42.355	-0.000	32.757	0.000	0.000	44.427	41.677	119.087	MWD+IFR1+MS
12900.000	90.000	179.722	10821.997	33.180	0.000	42.645	-0.000	33.180	0.000	0.000	44.544	41.863	122.019	MWD+IFR1+MS
13000.000	90.000	179.722	10821.997	33.616	0.000	42.948	-0.000	33.616	0.000	0.000	44.681	42.042	125.180	MWD+IFR1+MS
13100.000	90.000	179.722	10821.997	34.064	0.000	43.262	-0.000	34.064	0.000	0.000	44.838	42.212	128.517	MWD+IFR1+MS
13200.000	90.000	179.722	10821.997	34.525	0.000	43.587	-0.000	34.525	0.000	0.000	45.018	42.371	131.956	MWD+IFR1+MS
13300.000	90.000	179.722	10821.997	34.997	0.000	43.922	-0.000	34.997	0.000	0.000	45.222	42.517	-44.597	MWD+IFR1+MS
13400.000	90.000	179.722	10821.997	35.480	0.000	44.269	-0.000	35.480	0.000	0.000	45.450	42.651	-41.233	MWD+IFR1+MS
13500.000	90.000	179.722	10821.997	35.973	0.000	44.626	-0.000	35.973	0.000	0.000	45.703	42.771	-38.034	MWD+IFR1+MS
13600.000	90.000	179.722	10821.997	36.477	0.000	44.993	-0.000	36.477	0.000	0.000	45.979	42.879	-35.058	MWD+IFR1+MS
13700.000	90.000	179.722	10821.997	36.991	0.000	45.371	-0.000	36.991	0.000	0.000	46.276	42.975	-32.337	MWD+IFR1+MS
13800.000	90.000	179.722	10821.997	37.514	0.000	45.757	-0.000	37.514	0.000	0.000	46.594	43.061	-29.879	MWD+IFR1+MS
13900.000	90.000	179.722	10821.997	38.046	0.000	46.154	-0.000	38.046	0.000	0.000	46.931	43.139	-27.678	MWD+IFR1+MS
14000.000	90.000	179.722	10821.997	38.587	0.000	46.559	-0.000	38.587	0.000	0.000	47.284	43.210	-25.717	MWD+IFR1+MS
14100.000	90.000	179.722	10821.997	39.136	0.000	46.974	-0.000	39.136	0.000	0.000	47.653	43.275	-23.972	MWD+IFR1+MS
14200.000	90.000	179.722	10821.997	39.693	0.000	47.397	-0.000	39.693	0.000	0.000	48.037	43.335	-22.420	MWD+IFR1+MS
14300.000	90.000	179.722	10821.997	40.257	0.000	47.829	-0.000	40.257	0.000	0.000	48.433	43.390	-21.037	MWD+IFR1+MS
14400.000	90.000	179.722	10821.997	40.829	0.000	48.269	-0.000	40.829	0.000	0.000	48.842	43.443	-19.802	MWD+IFR1+MS
14500.000	90.000	179.722	10821.997	41.408	0.000	48.717	-0.000	41.408	0.000	0.000	49.262	43.492	-18.696	MWD+IFR1+MS
14600.000	90.000	179.722	10821.997	41.993	0.000	49.173	-0.000	41.993	0.000	0.000	49.693	43.539	-17.702	MWD+IFR1+MS
14700.000	90.000	179.722	10821.997	42.585	0.000	49.636	-0.000	42.585	0.000	0.000	50.134	43.585	-16.806	MWD+IFR1+MS
14800.000	90.000	179.722	10821.997	43.183	0.000	50.107	-0.000	43.183	0.000	0.000	50.585	43.629	-15.994	MWD+IFR1+MS
14900.000	90.000	179.722	10821.997	43.787	0.000	50.586	-0.000	43.787	0.000	0.000	51.045	43.671	-15.257	MWD+IFR1+MS
15000.000	90.000	179.722	10821.997	44.397	0.000	51.071	-0.000	44.397	0.000	0.000	51.513	43.713	-14.585	MWD+IFR1+MS
15100.000	90.000	179.722	10821.997	45.012	0.000	51.563	-0.000	45.012	0.000	0.000	51.989	43.753	-13.971	MWD+IFR1+MS
15200.000	90.000	179.722	10821.997	45.632	0.000	52.061	-0.000	45.632	0.000	0.000	52.474	43.793	-13.407	MWD+IFR1+MS
15300.000	90.000	179.722	10821.997	46.257	0.000	52.566	-0.000	46.257	0.000	0.000	52.965	43.833	-12.887	MWD+IFR1+MS
15400.000	90.000	179.722	10821.997	46.887	0.000	53.077	-0.000	46.887	0.000	0.000	53.464	43.872	-12.408	MWD+IFR1+MS
15500.000	90.000	179.722	10821.997	47.522	0.000	53.595	-0.000	47.522	0.000	0.000	53.970	43.911	-11.964	MWD+IFR1+MS
15600.000	90.000	179.722	10821.997	48.161	0.000	54.118	-0.000	48.161	0.000	0.000	54.483	43.950	-11.553	MWD+IFR1+MS
15700.000	90.000	179.722	10821.997	48.804	0.000	54.647	-0.000	48.804	0.000	0.000	55.002	43.989	-11.169	MWD+IFR1+MS

15800.000	90.000	179.722	10821.997	49.451	0.000	55.181	-0.000	49.451	0.000	0.000	55.527	44.028	-10.812	MWD+IFR1+MS
15900.000	90.000	179.722	10821.997	50.103	0.000	55.721	-0.000	50.103	0.000	0.000	56.058	44.066	-10.478	MWD+IFR1+MS
16000.000	90.000	179.722	10821.997	50.758	0.000	56.266	-0.000	50.758	0.000	0.000	56.595	44.105	-10.164	MWD+IFR1+MS
16100.000	90.000	179.722	10821.997	51.416	0.000	56.816	-0.000	51.416	0.000	0.000	57.137	44.144	-9.870	MWD+IFR1+MS
16200.000	90.000	179.722	10821.997	52.079	0.000	57.371	-0.000	52.079	0.000	0.000	57.685	44.183	-9.594	MWD+IFR1+MS
16300.000	90.000	179.722	10821.997	52.744	0.000	57.931	-0.000	52.744	0.000	0.000	58.237	44.223	-9.334	MWD+IFR1+MS
16400.000	90.000	179.722	10821.997	53.413	0.000	58.496	-0.000	53.413	0.000	0.000	58.795	44.262	-9.088	MWD+IFR1+MS
16500.000	90.000	179.722	10821.997	54.085	0.000	59.065	-0.000	54.085	0.000	0.000	59.358	44.302	-8.855	MWD+IFR1+MS
16600.000	90.000	179.722	10821.997	54.760	0.000	59.638	-0.000	54.760	0.000	0.000	59.925	44.342	-8.635	MWD+IFR1+MS
16700.000	90.000	179.722	10821.997	55.438	0.000	60.216	-0.000	55.438	0.000	0.000	60.497	44.383	-8.427	MWD+IFR1+MS
16800.000	90.000	179.722	10821.997	56.118	0.000	60.798	-0.000	56.118	0.000	0.000	61.074	44.424	-8.228	MWD+IFR1+MS
16900.000	90.000	179.722	10821.997	56.802	0.000	61.384	-0.000	56.802	0.000	0.000	61.654	44.465	-8.040	MWD+IFR1+MS
17000.000	90.000	179.722	10821.997	57.488	0.000	61.974	-0.000	57.488	0.000	0.000	62.239	44.506	-7.861	MWD+IFR1+MS
17100.000	90.000	179.722	10821.997	58.176	0.000	62.567	-0.000	58.176	0.000	0.000	62.828	44.548	-7.690	MWD+IFR1+MS
17200.000	90.000	179.722	10821.997	58.867	0.000	63.165	-0.000	58.867	0.000	0.000	63.420	44.590	-7.526	MWD+IFR1+MS
17300.000	90.000	179.722	10821.997	59.560	0.000	63.766	-0.000	59.560	0.000	0.000	64.017	44.633	-7.371	MWD+IFR1+MS
17400.000	90.000	179.722	10821.997	60.255	0.000	64.370	-0.000	60.255	0.000	0.000	64.617	44.676	-7.221	MWD+IFR1+MS
17500.000	90.000	179.722	10821.997	60.953	0.000	64.978	-0.000	60.953	0.000	0.000	65.221	44.719	-7.079	MWD+IFR1+MS
17600.000	90.000	179.722	10821.997	61.652	0.000	65.589	-0.000	61.652	0.000	0.000	65.828	44.763	-6.942	MWD+IFR1+MS
17700.000	90.000	179.722	10821.997	62.354	0.000	66.203	-0.000	62.354	0.000	0.000	66.438	44.807	-6.811	MWD+IFR1+MS
17800.000	90.000	179.722	10821.997	63.058	0.000	66.821	-0.000	63.058	0.000	0.000	67.052	44.852	-6.685	MWD+IFR1+MS
17900.000	90.000	179.722	10821.997	63.763	0.000	67.441	-0.000	63.763	0.000	0.000	67.669	44.897	-6.564	MWD+IFR1+MS
18000.000	90.000	179.722	10821.997	64.471	0.000	68.065	-0.000	64.471	0.000	0.000	68.289	44.942	-6.448	MWD+IFR1+MS
18100.000	90.000	179.722	10821.997	65.180	0.000	68.691	-0.000	65.180	0.000	0.000	68.912	44.988	-6.336	MWD+IFR1+MS
18200.000	90.000	179.722	10821.997	65.891	0.000	69.320	-0.000	65.891	0.000	0.000	69.537	45.035	-6.228	MWD+IFR1+MS
18300.000	90.000	179.722	10821.997	66.603	0.000	69.952	-0.000	66.603	0.000	0.000	70.166	45.082	-6.124	MWD+IFR1+MS
18400.000	90.000	179.722	10821.997	67.317	0.000	70.586	-0.000	67.317	0.000	0.000	70.797	45.129	-6.024	MWD+IFR1+MS
18500.000	90.000	179.722	10821.997	68.033	0.000	71.223	-0.000	68.033	0.000	0.000	71.431	45.177	-5.927	MWD+IFR1+MS
18600.000	90.000	179.722	10821.997	68.750	0.000	71.863	-0.000	68.750	0.000	0.000	72.068	45.225	-5.834	MWD+IFR1+MS
18700.000	90.000	179.722	10821.997	69.469	0.000	72.505	-0.000	69.469	0.000	0.000	72.707	45.274	-5.743	MWD+IFR1+MS
18800.000	90.000	179.722	10821.997	70.189	0.000	73.149	-0.000	70.189	0.000	0.000	73.349	45.323	-5.656	MWD+IFR1+MS
18900.000	90.000	179.722	10821.997	70.910	0.000	73.796	-0.000	70.910	0.000	0.000	73.993	45.373	-5.571	MWD+IFR1+MS
19000.000	90.000	179.722	10821.997	71.633	0.000	74.445	-0.000	71.633	0.000	0.000	74.639	45.423	-5.490	MWD+IFR1+MS

19100.000	90.000	179.722	10821.997	72.357	0.000	75.096	-0.000	72.357	0.000	0.000	75.288	45.473	-5.411	MWD+IFR1+MS
19200.000	90.000	179.722	10821.997	73.082	0.000	75.749	-0.000	73.082	0.000	0.000	75.939	45.524	-5.334	MWD+IFR1+MS
19300.000	90.000	179.722	10821.997	73.809	0.000	76.405	-0.000	73.809	0.000	0.000	76.592	45.576	-5.259	MWD+IFR1+MS
19400.000	90.000	179.722	10821.997	74.537	0.000	77.062	-0.000	74.537	0.000	0.000	77.247	45.628	-5.187	MWD+IFR1+MS
19500.000	90.000	179.722	10821.997	75.265	0.000	77.722	-0.000	75.265	0.000	0.000	77.904	45.680	-5.117	MWD+IFR1+MS
19600.000	90.000	179.722	10821.997	75.995	0.000	78.383	-0.000	75.995	0.000	0.000	78.563	45.733	-5.049	MWD+IFR1+MS
19700.000	90.000	179.722	10821.997	76.726	0.000	79.046	-0.000	76.726	0.000	0.000	79.224	45.786	-4.983	MWD+IFR1+MS
19800.000	90.000	179.722	10821.997	77.459	0.000	79.711	-0.000	77.459	0.000	0.000	79.887	45.840	-4.919	MWD+IFR1+MS
19900.000	90.000	179.722	10821.997	78.192	0.000	80.378	-0.000	78.192	0.000	0.000	80.551	45.894	-4.857	MWD+IFR1+MS
20000.000	90.000	179.722	10821.997	78.926	0.000	81.046	-0.000	78.926	0.000	0.000	81.218	45.949	-4.796	MWD+IFR1+MS
20100.000	90.000	179.722	10821.997	79.661	0.000	81.717	-0.000	79.661	0.000	0.000	81.886	46.005	-4.737	MWD+IFR1+MS
20200.000	90.000	179.722	10821.997	80.397	0.000	82.389	-0.000	80.397	0.000	0.000	82.556	46.060	-4.679	MWD+IFR1+MS
20300.000	90.000	179.722	10821.997	81.134	0.000	83.062	-0.000	81.134	0.000	0.000	83.228	46.116	-4.623	MWD+IFR1+MS
20400.000	90.000	179.722	10821.997	81.872	0.000	83.737	-0.000	81.872	0.000	0.000	83.901	46.173	-4.569	MWD+IFR1+MS
20500.000	90.000	179.722	10821.997	82.610	0.000	84.414	-0.000	82.610	0.000	0.000	84.576	46.230	-4.515	MWD+IFR1+MS
20600.000	90.000	179.722	10821.997	83.350	0.000	85.092	-0.000	83.350	0.000	0.000	85.252	46.288	-4.464	MWD+IFR1+MS
20700.000	90.000	179.722	10821.997	84.090	0.000	85.772	-0.000	84.090	0.000	0.000	85.930	46.346	-4.413	MWD+IFR1+MS
20800.000	90.000	179.722	10821.997	84.831	0.000	86.453	-0.000	84.831	0.000	0.000	86.610	46.404	-4.364	MWD+IFR1+MS
20900.000	90.000	179.722	10821.997	85.573	0.000	87.135	-0.000	85.573	0.000	0.000	87.291	46.463	-4.316	MWD+IFR1+MS
21000.000	90.000	179.722	10821.997	86.316	0.000	87.819	-0.000	86.316	0.000	0.000	87.973	46.523	-4.269	MWD+IFR1+MS
21100.000	90.000	179.722	10821.997	87.060	0.000	88.504	-0.000	87.060	0.000	0.000	88.656	46.583	-4.223	MWD+IFR1+MS
21200.000	90.000	179.722	10821.997	87.804	0.000	89.191	-0.000	87.804	0.000	0.000	89.341	46.643	-4.178	MWD+IFR1+MS
21300.000	90.000	179.722	10821.997	88.549	0.000	89.879	-0.000	88.549	0.000	0.000	90.028	46.704	-4.134	MWD+IFR1+MS
21400.000	90.000	179.722	10821.997	89.294	0.000	90.568	-0.000	89.294	0.000	0.000	90.715	46.765	-4.092	MWD+IFR1+MS
21500.000	90.000	179.722	10821.997	90.040	0.000	91.258	-0.000	90.040	0.000	0.000	91.404	46.827	-4.050	MWD+IFR1+MS
21600.000	90.000	179.722	10821.997	90.787	0.000	91.949	-0.000	90.787	0.000	0.000	92.094	46.889	-4.009	MWD+IFR1+MS
21700.000	90.000	179.722	10821.997	91.535	0.000	92.642	-0.000	91.535	0.000	0.000	92.785	46.952	-3.969	MWD+IFR1+MS
21800.000	90.000	179.722	10821.997	92.283	0.000	93.336	-0.000	92.283	0.000	0.000	93.477	47.015	-3.930	MWD+IFR1+MS
21900.000	90.000	179.722	10821.997	93.031	0.000	94.030	-0.000	93.031	0.000	0.000	94.171	47.078	-3.892	MWD+IFR1+MS
22000.000	90.000	179.722	10821.997	93.781	0.000	94.726	-0.000	93.781	0.000	0.000	94.865	47.142	-3.854	MWD+IFR1+MS
22100.000	90.000	179.722	10821.997	94.531	0.000	95.423	-0.000	94.531	0.000	0.000	95.561	47.207	-3.818	MWD+IFR1+MS
22200.000	90.000	179.722	10821.997	95.281	0.000	96.121	-0.000	95.281	0.000	0.000	96.258	47.272	-3.782	MWD+IFR1+MS
22300.000	90.000	179.722	10821.997	96.032	0.000	96.820	-0.000	96.032	0.000	0.000	96.956	47.337	-3.747	MWD+IFR1+MS

22400.000	90.000	179.722	10821.997	96.784	0.000	97.521	-0.000	96.784	0.000	0.000	97.655	47.403	-3.712	MWD+IFR1+MS
22500.000	90.000	179.722	10821.997	97.536	0.000	98.222	-0.000	97.536	0.000	0.000	98.354	47.469	-3.678	MWD+IFR1+MS
22600.000	90.000	179.722	10821.997	98.288	0.000	98.924	-0.000	98.288	0.000	0.000	99.055	47.536	-3.645	MWD+IFR1+MS
22700.000	90.000	179.722	10821.997	99.041	0.000	99.626	-0.000	99.041	0.000	0.000	99.757	47.603	-3.613	MWD+IFR1+MS
22800.000	90.000	179.722	10821.997	99.795	0.000	100.330	-0.000	99.795	0.000	0.000	100.460	47.670	-3.581	MWD+IFR1+MS
22900.000	90.000	179.722	10821.997	100.549	0.000	101.035	-0.000	100.549	0.000	0.000	101.163	47.738	-3.550	MWD+IFR1+MS
23000.000	90.000	179.722	10821.997	101.303	0.000	101.741	-0.000	101.303	0.000	0.000	101.868	47.807	-3.519	MWD+IFR1+MS
23100.000	90.000	179.722	10821.997	102.058	0.000	102.447	-0.000	102.058	0.000	0.000	102.573	47.876	-3.489	MWD+IFR1+MS
23200.000	90.000	179.722	10821.997	102.814	0.000	103.154	-0.000	102.814	0.000	0.000	103.279	47.945	-3.460	MWD+IFR1+MS
23300.000	90.000	179.722	10821.997	103.569	0.000	103.863	-0.000	103.569	0.000	0.000	103.986	48.015	-3.431	MWD+IFR1+MS
23400.000	90.000	179.722	10821.997	104.326	0.000	104.572	-0.000	104.326	0.000	0.000	104.694	48.085	-3.403	MWD+IFR1+MS
23500.000	90.000	179.722	10821.997	105.082	0.000	105.281	-0.000	105.082	0.000	0.000	105.403	48.156	-3.375	MWD+IFR1+MS
23600.000	90.000	179.722	10821.997	105.840	0.000	105.992	-0.000	105.840	0.000	0.000	106.113	48.227	-3.347	MWD+IFR1+MS
23700.000	90.000	179.722	10821.997	106.597	0.000	106.703	-0.000	106.597	0.000	0.000	106.823	48.298	-3.321	MWD+IFR1+MS
23800.000	90.000	179.722	10821.997	107.355	0.000	107.415	-0.000	107.355	0.000	0.000	107.534	48.370	-3.294	MWD+IFR1+MS
23900.000	90.000	179.722	10821.997	108.113	0.000	108.128	-0.000	108.113	0.000	0.000	108.246	48.442	-3.268	MWD+IFR1+MS
24000.000	90.000	179.722	10821.997	108.872	0.000	108.841	-0.000	108.872	0.000	0.000	108.958	48.515	-3.243	MWD+IFR1+MS
24100.000	90.000	179.722	10821.997	109.631	0.000	109.556	-0.000	109.631	0.000	0.000	109.672	48.588	-3.218	MWD+IFR1+MS
24200.000	90.000	179.722	10821.997	110.390	0.000	110.270	-0.000	110.390	0.000	0.000	110.385	48.662	-3.193	MWD+IFR1+MS
24300.000	90.000	179.722	10821.997	111.150	0.000	110.986	-0.000	111.150	0.000	0.000	111.100	48.736	-3.169	MWD+IFR1+MS
24400.000	90.000	179.722	10821.997	111.910	0.000	111.702	-0.000	111.910	0.000	0.000	111.815	48.810	-3.145	MWD+IFR1+MS
24500.000	90.000	179.722	10821.997	112.670	0.000	112.419	-0.000	112.670	0.000	0.000	112.531	48.885	-3.122	MWD+IFR1+MS
24600.000	90.000	179.722	10821.997	113.431	0.000	113.137	-0.000	113.431	0.000	0.000	113.248	48.960	-3.099	MWD+IFR1+MS
24700.000	90.000	179.722	10821.997	114.192	0.000	113.855	-0.000	114.192	0.000	0.000	113.965	49.036	-3.076	MWD+IFR1+MS
24800.000	90.000	179.722	10821.997	114.954	0.000	114.573	-0.000	114.954	0.000	0.000	114.683	49.112	-3.054	MWD+IFR1+MS
24900.000	90.000	179.722	10821.997	115.715	0.000	115.293	-0.000	115.715	0.000	0.000	115.402	49.188	-3.032	MWD+IFR1+MS
25000.000	90.000	179.722	10821.997	116.477	0.000	116.013	-0.000	116.477	0.000	0.000	116.121	49.265	-3.010	MWD+IFR1+MS
25100.000	90.000	179.722	10821.997	117.240	0.000	116.733	-0.000	117.240	0.000	0.000	116.841	49.342	-2.989	MWD+IFR1+MS
25200.000	90.000	179.722	10821.997	118.002	0.000	117.454	-0.000	118.002	0.000	0.000	117.561	49.420	-2.968	MWD+IFR1+MS
25300.000	90.000	179.722	10821.997	118.765	0.000	118.176	-0.000	118.765	0.000	0.000	118.282	49.498	-2.948	MWD+IFR1+MS
25400.000	90.000	179.722	10821.997	119.528	0.000	118.898	-0.000	119.528	0.000	0.000	119.003	49.576	-2.927	MWD+IFR1+MS
25500.000	90.000	179.722	10821.997	120.292	0.000	119.621	-0.000	120.292	0.000	0.000	119.725	49.655	-2.908	MWD+IFR1+MS
25600.000	90.000	179.722	10821.997	121.055	0.000	120.344	-0.000	121.055	0.000	0.000	120.448	49.734	-2.888	MWD+IFR1+MS

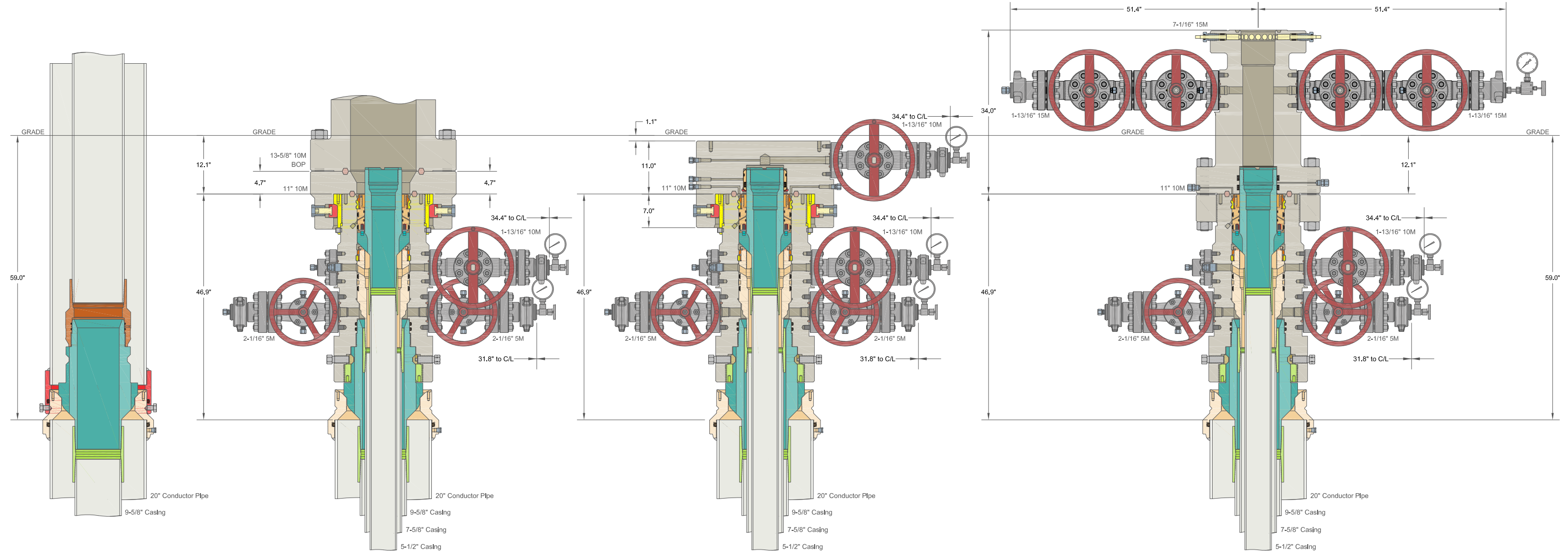
25700.000	90.000	179.722	10821.997	121.819	0.000	121.068	-0.000	121.819	0.000	0.000	121.171	49.814	-2.869	MWD+IFR1+MS
25800.000	90.000	179.722	10821.997	122.584	0.000	121.792	-0.000	122.584	0.000	0.000	121.894	49.894	-2.850	MWD+IFR1+MS
25900.000	90.000	179.722	10821.997	123.348	0.000	122.517	-0.000	123.348	0.000	0.000	122.618	49.974	-2.831	MWD+IFR1+MS
26000.000	90.000	179.722	10821.997	124.113	0.000	123.242	-0.000	124.113	0.000	0.000	123.343	50.055	-2.812	MWD+IFR1+MS
26010.929	90.000	179.722	10821.997	124.196	0.000	123.321	-0.000	124.196	0.000	0.000	123.422	50.064	-2.810	MWD+IFR1+MS
26100.000	90.000	179.722	10821.997	124.877	0.000	123.966	-0.000	124.877	0.000	0.000	124.067	50.136	-2.794	MWD+IFR1+MS
26111.093	90.000	179.722	10821.997	124.962	0.000	124.047	-0.000	124.962	0.000	0.000	124.147	50.145	-2.792	MWD+IFR1+MS

Plan Targets

Poker Lake Unit 19 DTD South 421H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 29	10997.77	440351.80	629967.30	7611.00	RECTANGLE
SHL 30	3436.70	440162.55	629275.56	0.00	RECTANGLE
LTP 29	26011.15	424908.80	630042.10	7611.00	RECTANGLE
BHL 29	26111.41	424808.80	630042.40	7611.00	RECTANGLE

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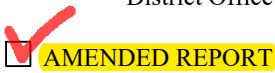


ALL DIMENSIONS APPROXIMATE			
CACTUS WELLHEAD LLC		XTO ENERGY INC DELAWARE BASIN	
20" x 9-5/8" x 7-5/8" x 5-1/2" MBU-T-CFL-R-DBLO Wellhead With 11" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head And 9-5/8", 7-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers		DRAWN	VJK
		APPRV	31MAR22
		DRAWING NO.	HBE0000479

District I
1625 N. French Dr., Hobbs, NM 88240
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District IV
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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office



WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-53839	² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp
⁴ Property Code 333976	⁵ Property Name POKER LAKE UNIT 19 DTD	⁶ Well Number 421H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC	⁹ Elevation 3,179'

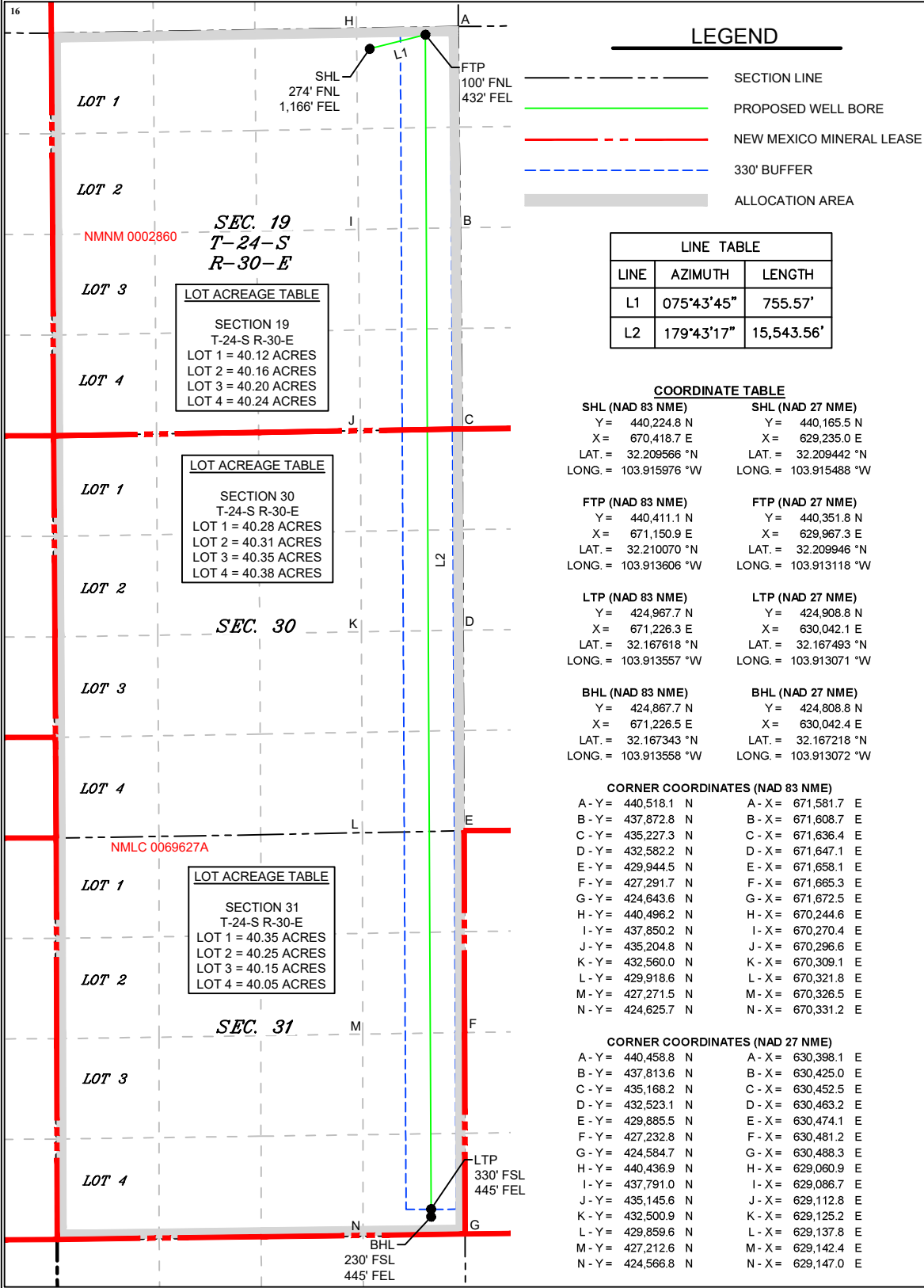
¹⁰ Surface Location									
UL or lot no. A	Section 19	Township 24S	Range 30E	Lot Idn	Feet from the 274	North/South line NORTH	Feet from the 1,166	East/West line EAST	County EDDY

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. P	Section 31	Township 24S	Range 30E	Lot Idn	Feet from the 230	North/South line SOUTH	Feet from the 445	East/West line EAST	County EDDY

¹² Dedicated Acres 1,922.84	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

P:\618.013 XTO Energy - NM\003 Poker Lake Unit\05 - PLU 19 DTD - EDDY\Wells\61 - 421H\DWG\SOUTH 421H C-102.dwg



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Terra Sebastian 03/05/2024
Signature Date

Terra Sebastian
Printed Name

terra.b.sebastian@exxonmobil.com
E-mail Address

18 SURVEYOR CERTIFICATION

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.

02/09/2024
Date of Survey

Signature and Seal of Professional Surveyor:

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number

DB 618.013003.05-61

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

XTO Energy Inc.
PLU 19 Dog Town Draw 421H
Projected TD: 26111.09' MD / 10822' TVD
SHL: 274' FNL & 1166' FEL , Section 19, T24S, R30E
BHL: 230' FSL & 445' FEL , Section 31, T24S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	688'	Water
Top of Salt	1091'	Water
Base of Salt	3284'	Water
Delaware	3478'	Water
Brushy Canyon	5976'	Water/Oil/Gas
Bone Spring	7272'	Water
Avalon	7442'	Water/Oil/Gas
1st Bone Spring	8258'	Water/Oil/Gas
2nd Bone Spring	9076'	Water/Oil/Gas
3rd Bone Spring	10170'	Water/Oil/Gas
Wolfcamp	10561'	Water/Oil/Gas
Wolfcamp X	10582'	Water/Oil/Gas
Wolfcamp Y	10660'	Water/Oil/Gas
Wolfcamp A	10702'	Water/Oil/Gas
Target/Land Curve	10822'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

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

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 9.625 inch casing @ 788' (303' above the salt) and circulating cement back to surface. The intermediate will isolate from the top of salt down to the next casing seat by setting 7.625 inch casing at 9959.12' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 26111.09 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 9659.12 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 788'	9.625	40	J-55	BTC	New	1.67	7.99	19.99
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	2.31	2.92	1.89
8.75	4000' – 9959.12'	7.625	29.7	HC L-80	Flush Joint	New	1.68	2.40	2.29
6.75	0' – 9859.12'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.88	1.95
6.75	9859.12' - 26111.09'	5.5	20	RY P-110	Semi-Flush	New	1.05	1.72	1.95

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

· XTO requests to not utilize centralizers in the curve and lateral

· 7.625 Collapse analyzed using 50% evacuation based on regional experience.

· 5.5 Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

· Test on Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

· XTO requests the option to use 5" BTC Float equipment for the the production casing

Wellhead:

Permanent Wellhead – Multibowl System

A. Starting Head: 11" 10M top flange x 9-5/8" bottom

B. Tubing Head: 11" 10M bottom flange x 7-1/16" 15M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 7-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 9.625, 40 New BTC, J-55 casing to be set at +/- 788'

Lead: 160 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Tail: 130 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

Top of Cement: Surface

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

2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 9959.12'

1st Stage

Optional Lead: 320 sxs Class C (mixed at 10.5 ppg, 2.77 ft³/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 370 sxs Class C (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 5976

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

2nd Stage

Lead: 0 sxs Class C (mixed at 12.9 ppg, 2.16 ft³/sx, 9.61 gal/sx water)

Tail: 670 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Top of Cement: 0

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

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (5976') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

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

XTO requests to pump an Optional Lead if well conditions dictate in an attempt to bring cement inside the first intermediate casing. If cement reaches the desired height, the BLM will be notified and the second stage bradenhead squeeze and subsequent TOC verification will be negated.

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

Production Casing: 5.5, 20 New Semi-Flush, RY P-110 casing to be set at +/- 26111.09'

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 9659.12 feet

Tail: 1140 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 10159.12 feet

Compressives: 12-hr = 800 psi 24 hr = 1500 psi

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

5. Pressure Control Equipment

Once the permanent WH is installed on the 9.625 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 10M Double Ram BOP. MASP should not exceed 4091 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 9.625, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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

on each of the wells.

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. Based on discussions with the BLM on February 27th 2020, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met: 1. After a full BOP test is conducted on the first well on the pad 2. When skidding to drill an intermediate section that does not penetrate into the Wolfcamp.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 788'	12.25	FW/Native	8.4-8.9	35-40	NC
788' - 9959.12'	8.75	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
9959.12' - 26111.09'	6.75	OBM	11.5-12	50-60	NC - 20

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 9-5/8" surface casing with brine solution. A 9.7 ppg - 10.2 ppg cut brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- H2S monitors will be on location when drilling below the 9.625 casing.

8. Logging, Coring and Testing Program

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 170 to 190 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6472 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.

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

CONDITIONS

Action 337520

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 337520
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	4/26/2024