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

Sundry Print Report

04/10/2024

Well Name: POKER LAKE UNIT 19 DTD	**Well Location:** T24S / R30E / SEC 19 / NWNE /	**County or Parish/State:**
Well Number: 321H	**Type of Well:** CONVENTIONAL GAS WELL	**Allottee or Tribe Name:**
Lease Number: NMNM002860	**Unit or CA Name:**	**Unit or CA Number:** NMNM07016Z
US Well Number: 3001553828	**Well Status:** Approved Application for Permit to Drill	**Operator:** XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2777489

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 02/29/2024

Time Sundry Submitted: 05:00

Date proposed operation will begin: 03/21/2024

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: 1201' FNL & 2455' FEL of Section 19-T24S-R30E 1146' FNL & 2455' FEL of Section 19-T24S-R30E FTP: 100' FSL & 2090' FEL of Section 18-T24S-R30E 100' FNL & 2536' FEL of Section 19-T24S-R30E LTP: 2450' FSL & 2090' FEL of Section 31-T23S-R30E 330' FSL & 2549' FEL of Section 31-T25S-R30E BHL: 2590' FSL & 2090' FWL of Section 31-T23S-R30E 230' FSL & 2549' FEL of Section 31-T24S-R30E Proposed total depth will change from 29340' MD; 10551' TVD (Wolfcamp) to 26810' MD; TVD 11477' (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_Plan_Report____Poker_Lake_Unit_19_DTD_South_321H_20240314153526.pdf

3_String_Slimhole_HBE0000479_4_20240314153520.pdf

POKER_LAKE_UNIT_19_DTD_321H_C_102_FINAL_20240314153519.pdf

BOP_Variance_new_Language_BOP_BTV_20240314153518.pdf

PLU_19_DTD_321H_Pad_C_Drilling_Plan_20240314153516.pdf

Well_Control_Plan_w_CFR_43_3172_20240314153516.pdf

Well Name: POKER LAKE UNIT 19 DTD

Well Location: T24S / R30E / SEC 19 / NWNE /

County or Parish/State:

Well Number: 321H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM002860

Unit or CA Name:

Unit or CA Number: NMNM07016Z

US Well Number: 3001553828

Well Status: Approved Application for Permit to Drill

Operator: XTO PERMIAN OPERATING LLC

Conditions of Approval

Additional

Sec19_24S_30E_NMP_Sundry_2777489_Poker_Lake_Unit_19_DTD_321H_COAs_20240408094620.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: APR 05, 2024 02:14 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: 04/10/2024

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.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

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

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

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

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

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

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

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

Office

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

Additional Information

Additional Remarks

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

Location of Well

0. SHL: NWNE / 1201 FNL / 2455 FEL / TWSP: 24S / RANGE: 30E / SECTION: 19 / LAT: 32.206974 / LONG: -103.920125 (TVD: 0 feet, MD: 0 feet)

PPP: SESW / 330 FSL / 2090 FWL / TWSP: 24S / RANGE: 30E / SECTION: 7 / LAT: 32.22579 / LONG: -103.9229 (TVD: 10551 feet, MD: 16300 feet)

PPP: SESW / 100 FSL / 2090 FWL / TWSP: 24S / RANGE: 30E / SECTION: 18 / LAT: 32.210522 / LONG: -103.922756 (TVD: 10551 feet, MD: 11000 feet)

PPP: NENW / 330 FSL / 2090 FWL / TWSP: 24S / RANGE: 30E / SECTION: 6 / LAT: 32.25102 / LONG: -103.92308 (TVD: 10551 feet, MD: 25600 feet)

BHL: NESW / 2590 FSL / 2090 FWL / TWSP: 23S / RANGE: 30E / SECTION: 31 / LAT: 32.261076 / LONG: -103.922807 (TVD: 10551 feet, MD: 29340 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Poker Lake Unit 19 DTD 321H
LOCATION:	Sec 19-24S-30E-NMP
COUNTY:	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2777489** on 04/08/2024. Any previous COAs not addressed within the updated COAs still apply.*

COA

H_2S	◉ 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 intergrity 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.

Well Plan Report - Poker Lake Unit 19 DTD South 321H

Measured Depth:	26810.68 ft
TVD RKB:	11477.00 ft
Location	
Cartographic Reference System:	New Mexico East - NAD 27
Northing:	439272.70 ft
Easting:	627954.70 ft
RKB:	3213.00 ft
Ground Level:	3181.00 ft
North Reference:	Grid
Convergence Angle:	0.22 Deg

Plan Sections Poker Lake Unit 19 DTD South 321H

Measured Depth (ft)	Inclination (Deg)	Azimuth (Deg)	TVD RKB (ft)	Y Offset (ft)	X Offset (ft)	Build Rate (Deg/100ft)	Turn Rate (Deg/100ft)	Dogleg Rate (Deg/100ft)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	
1691.41	11.83	355.01	1687.21	60.60	-5.29	2.00	0.00	2.00	
6212.98	11.83	355.01	6112.79	983.90	-85.91	0.00	0.00	0.00	
6804.39	0.00	0.00	6700.00	1044.50	-91.20	-2.00	0.00	2.00	
10865.19	0.00	0.00	10760.80	1044.50	-91.20	0.00	0.00	0.00	
11990.19	90.00	179.72	11477.00	328.31	-87.74	8.00	0.00	8.00	
26710.69	90.00	179.72	11477.00	-14392.02	-16.57	0.00	0.00	0.00	LTP 16
26810.68	90.00	179.72	11477.00	-14492.00	-16.09	0.00	0.00	0.00	BHL 16

Position Uncertainty Poker Lake Unit 19 DTD South 321H

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

Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	of Bias (ft)	Error (ft)	Error (ft)	Azimuth (°)	Used
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.309	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	355.010	1199.980	4.885	0.000	4.664	0.000	2.686	0.000	0.000	5.266	4.232	123.769	MWD+IFR1+MS
1300.000	4.000	355.010	1299.838	5.694	0.000	5.019	0.000	2.746	0.000	0.000	6.005	4.653	114.717	MWD+IFR1+MS
1400.000	6.000	355.010	1399.452	6.416	0.000	5.372	0.000	2.811	0.000	0.000	6.708	5.026	110.281	MWD+IFR1+MS
1500.000	8.000	355.010	1498.702	7.074	0.000	5.726	0.000	2.883	0.000	0.000	7.368	5.385	107.778	MWD+IFR1+MS
1600.000	10.000	355.010	1597.465	7.685	0.000	6.079	0.000	2.966	0.000	0.000	7.990	5.737	106.207	MWD+IFR1+MS
1691.406	11.828	355.010	1687.214	8.159	0.000	6.399	0.000	3.046	0.000	0.000	8.483	6.057	105.350	MWD+IFR1+MS
1700.000	11.828	355.010	1695.626	8.183	0.000	6.427	0.000	3.048	0.000	0.000	8.507	6.087	105.328	MWD+IFR1+MS
1800.000	11.828	355.010	1793.502	8.460	0.000	6.765	0.000	3.124	0.000	0.000	8.776	6.437	105.423	MWD+IFR1+MS
1900.000	11.828	355.010	1891.379	8.760	0.000	7.124	0.000	3.206	0.000	0.000	9.075	6.797	105.820	MWD+IFR1+MS
2000.000	11.828	355.010	1989.256	9.066	0.000	7.486	0.000	3.291	0.000	0.000	9.379	7.158	106.204	MWD+IFR1+MS
2100.000	11.828	355.010	2087.133	9.379	0.000	7.848	0.000	3.379	0.000	0.000	9.690	7.520	106.575	MWD+IFR1+MS
2200.000	11.828	355.010	2185.009	9.697	0.000	8.212	0.000	3.470	0.000	0.000	10.005	7.884	106.932	MWD+IFR1+MS
2300.000	11.828	355.010	2282.886	10.020	0.000	8.578	0.000	3.563	0.000	0.000	10.325	8.248	107.278	MWD+IFR1+MS
2400.000	11.828	355.010	2380.763	10.347	0.000	8.944	0.000	3.659	0.000	0.000	10.649	8.614	107.611	MWD+IFR1+MS
2500.000	11.828	355.010	2478.639	10.678	0.000	9.311	0.000	3.758	0.000	0.000	10.976	8.980	107.933	MWD+IFR1+MS
2600.000	11.828	355.010	2576.516	11.013	0.000	9.678	0.000	3.858	0.000	0.000	11.307	9.347	108.243	MWD+IFR1+MS
2700.000	11.828	355.010	2674.393	11.351	0.000	10.047	0.000	3.960	0.000	0.000	11.641	9.715	108.543	MWD+IFR1+MS
2800.000	11.828	355.010	2772.269	11.692	0.000	10.416	0.000	4.065	0.000	0.000	11.978	10.083	108.832	MWD+IFR1+MS
2900.000	11.828	355.010	2870.146	12.036	0.000	10.785	0.000	4.171	0.000	0.000	12.317	10.452	109.111	MWD+IFR1+MS

3000.000	11.828	355.010	2968.023	12.382	0.000	11.155	0.000	4.280	0.000	0.000	12.659	10.821	109.380	MWD+IFR1+MS
3100.000	11.828	355.010	3065.899	12.731	0.000	11.526	0.000	4.390	0.000	0.000	13.002	11.190	109.639	MWD+IFR1+MS
3200.000	11.828	355.010	3163.776	13.082	0.000	11.896	0.000	4.502	0.000	0.000	13.348	11.560	109.889	MWD+IFR1+MS
3300.000	11.828	355.010	3261.653	13.435	0.000	12.268	0.000	4.615	0.000	0.000	13.696	11.931	110.130	MWD+IFR1+MS
3400.000	11.828	355.010	3359.529	13.790	0.000	12.639	0.000	4.730	0.000	0.000	14.045	12.301	110.362	MWD+IFR1+MS
3500.000	11.828	355.010	3457.406	14.146	0.000	13.011	0.000	4.847	0.000	0.000	14.396	12.672	110.586	MWD+IFR1+MS
3600.000	11.828	355.010	3555.283	14.504	0.000	13.383	0.000	4.966	0.000	0.000	14.749	13.044	110.802	MWD+IFR1+MS
3700.000	11.828	355.010	3653.160	14.864	0.000	13.755	0.000	5.086	0.000	0.000	15.102	13.415	111.010	MWD+IFR1+MS
3800.000	11.828	355.010	3751.036	15.224	0.000	14.128	0.000	5.207	0.000	0.000	15.457	13.787	111.211	MWD+IFR1+MS
3900.000	11.828	355.010	3848.913	15.586	0.000	14.501	0.000	5.330	0.000	0.000	15.814	14.159	111.404	MWD+IFR1+MS
4000.000	11.828	355.010	3946.790	15.950	0.000	14.874	0.000	5.455	0.000	0.000	16.171	14.531	111.590	MWD+IFR1+MS
4100.000	11.828	355.010	4044.666	16.314	0.000	15.247	0.000	5.581	0.000	0.000	16.529	14.903	111.769	MWD+IFR1+MS
4200.000	11.828	355.010	4142.543	16.679	0.000	15.620	0.000	5.709	0.000	0.000	16.889	15.276	111.941	MWD+IFR1+MS
4300.000	11.828	355.010	4240.420	17.045	0.000	15.994	0.000	5.839	0.000	0.000	17.249	15.649	112.107	MWD+IFR1+MS
4400.000	11.828	355.010	4338.296	17.412	0.000	16.368	0.000	5.970	0.000	0.000	17.610	16.022	112.267	MWD+IFR1+MS
4500.000	11.828	355.010	4436.173	17.780	0.000	16.741	0.000	6.103	0.000	0.000	17.972	16.395	112.421	MWD+IFR1+MS
4600.000	11.828	355.010	4534.050	18.149	0.000	17.115	0.000	6.237	0.000	0.000	18.334	16.768	112.569	MWD+IFR1+MS
4700.000	11.828	355.010	4631.926	18.519	0.000	17.489	0.000	6.373	0.000	0.000	18.698	17.141	112.711	MWD+IFR1+MS
4800.000	11.828	355.010	4729.803	18.889	0.000	17.864	0.000	6.511	0.000	0.000	19.062	17.515	112.847	MWD+IFR1+MS
4900.000	11.828	355.010	4827.680	19.260	0.000	18.238	0.000	6.650	0.000	0.000	19.426	17.888	112.979	MWD+IFR1+MS
5000.000	11.828	355.010	4925.557	19.631	0.000	18.612	0.000	6.791	0.000	0.000	19.792	18.262	113.105	MWD+IFR1+MS
5100.000	11.828	355.010	5023.433	20.003	0.000	18.987	0.000	6.934	0.000	0.000	20.157	18.636	113.226	MWD+IFR1+MS
5200.000	11.828	355.010	5121.310	20.376	0.000	19.361	0.000	7.078	0.000	0.000	20.524	19.010	113.342	MWD+IFR1+MS
5300.000	11.828	355.010	5219.187	20.749	0.000	19.736	0.000	7.224	0.000	0.000	20.890	19.384	113.453	MWD+IFR1+MS
5400.000	11.828	355.010	5317.063	21.123	0.000	20.111	0.000	7.372	0.000	0.000	21.258	19.758	113.560	MWD+IFR1+MS
5500.000	11.828	355.010	5414.940	21.497	0.000	20.485	0.000	7.522	0.000	0.000	21.625	20.133	113.662	MWD+IFR1+MS
5600.000	11.828	355.010	5512.817	21.871	0.000	20.860	0.000	7.673	0.000	0.000	21.993	20.507	113.760	MWD+IFR1+MS
5700.000	11.828	355.010	5610.693	22.246	0.000	21.235	0.000	7.827	0.000	0.000	22.362	20.881	113.853	MWD+IFR1+MS
5800.000	11.828	355.010	5708.570	22.622	0.000	21.610	0.000	7.982	0.000	0.000	22.731	21.256	113.943	MWD+IFR1+MS
5900.000	11.828	355.010	5806.447	22.997	0.000	21.985	0.000	8.139	0.000	0.000	23.100	21.631	114.028	MWD+IFR1+MS
6000.000	11.828	355.010	5904.323	23.374	0.000	22.360	0.000	8.298	0.000	0.000	23.470	22.005	114.110	MWD+IFR1+MS
6100.000	11.828	355.010	6002.200	23.750	0.000	22.736	0.000	8.459	0.000	0.000	23.840	22.380	114.187	MWD+IFR1+MS
6200.000	11.828	355.010	6100.077	24.127	0.000	23.111	0.000	8.622	0.000	0.000	24.210	22.755	114.261	MWD+IFR1+MS

6212.985	11.828	355.010	6112.786	24.175	0.000	23.159	0.000	8.643	0.000	0.000	24.257	22.803	114.250	MWD+IFR1+MS
6300.000	10.088	355.010	6198.211	24.531	0.000	23.478	0.000	8.787	0.000	0.000	24.583	23.128	114.019	MWD+IFR1+MS
6400.000	8.088	355.010	6296.951	24.984	0.000	23.845	0.000	8.956	0.000	0.000	25.027	23.500	113.023	MWD+IFR1+MS
6500.000	6.088	355.010	6396.182	25.414	0.000	24.208	0.000	9.118	0.000	0.000	25.478	23.867	112.023	MWD+IFR1+MS
6600.000	4.088	355.010	6495.783	25.805	0.000	24.565	0.000	9.275	0.000	0.000	25.921	24.227	111.147	MWD+IFR1+MS
6700.000	2.088	355.010	6595.632	26.159	0.000	24.915	0.000	9.426	0.000	0.000	26.357	24.579	110.383	MWD+IFR1+MS
6804.391	0.000	0.000	6700.000	26.604	0.000	25.161	0.000	9.581	0.000	0.000	26.813	24.938	109.805	MWD+IFR1+MS
6900.000	0.000	0.000	6795.609	26.948	0.000	25.488	0.000	9.721	0.000	0.000	27.160	25.261	109.849	MWD+IFR1+MS
7000.000	0.000	0.000	6895.609	27.274	0.000	25.830	0.000	9.871	0.000	0.000	27.488	25.602	109.997	MWD+IFR1+MS
7100.000	0.000	0.000	6995.609	27.601	0.000	26.173	0.000	10.024	0.000	0.000	27.817	25.944	110.150	MWD+IFR1+MS
7200.000	0.000	0.000	7095.609	27.929	0.000	26.517	0.000	10.179	0.000	0.000	28.146	26.286	110.301	MWD+IFR1+MS
7300.000	0.000	0.000	7195.609	28.258	0.000	26.861	0.000	10.338	0.000	0.000	28.477	26.628	110.451	MWD+IFR1+MS
7400.000	0.000	0.000	7295.609	28.587	0.000	27.205	0.000	10.499	0.000	0.000	28.808	26.971	110.598	MWD+IFR1+MS
7500.000	0.000	0.000	7395.609	28.917	0.000	27.550	0.000	10.663	0.000	0.000	29.140	27.314	110.744	MWD+IFR1+MS
7600.000	0.000	0.000	7495.609	29.248	0.000	27.895	0.000	10.830	0.000	0.000	29.472	27.657	110.889	MWD+IFR1+MS
7700.000	0.000	0.000	7595.609	29.579	0.000	28.240	0.000	11.000	0.000	0.000	29.805	28.001	111.031	MWD+IFR1+MS
7800.000	0.000	0.000	7695.609	29.911	0.000	28.586	0.000	11.173	0.000	0.000	30.139	28.345	111.173	MWD+IFR1+MS
7900.000	0.000	0.000	7795.609	30.244	0.000	28.932	0.000	11.349	0.000	0.000	30.473	28.690	111.312	MWD+IFR1+MS
8000.000	0.000	0.000	7895.609	30.577	0.000	29.278	0.000	11.528	0.000	0.000	30.808	29.035	111.450	MWD+IFR1+MS
8100.000	0.000	0.000	7995.609	30.911	0.000	29.625	0.000	11.710	0.000	0.000	31.143	29.380	111.586	MWD+IFR1+MS
8200.000	0.000	0.000	8095.609	31.245	0.000	29.971	0.000	11.895	0.000	0.000	31.479	29.725	111.720	MWD+IFR1+MS
8300.000	0.000	0.000	8195.609	31.580	0.000	30.319	0.000	12.083	0.000	0.000	31.816	30.071	111.853	MWD+IFR1+MS
8400.000	0.000	0.000	8295.609	31.915	0.000	30.666	0.000	12.274	0.000	0.000	32.153	30.417	111.985	MWD+IFR1+MS
8500.000	0.000	0.000	8395.609	32.251	0.000	31.014	0.000	12.468	0.000	0.000	32.490	30.763	112.115	MWD+IFR1+MS
8600.000	0.000	0.000	8495.609	32.587	0.000	31.361	0.000	12.665	0.000	0.000	32.828	31.109	112.243	MWD+IFR1+MS
8700.000	0.000	0.000	8595.609	32.924	0.000	31.710	0.000	12.865	0.000	0.000	33.166	31.456	112.371	MWD+IFR1+MS
8800.000	0.000	0.000	8695.609	33.261	0.000	32.058	0.000	13.068	0.000	0.000	33.505	31.803	112.496	MWD+IFR1+MS
8900.000	0.000	0.000	8795.609	33.599	0.000	32.407	0.000	13.274	0.000	0.000	33.844	32.150	112.620	MWD+IFR1+MS
9000.000	0.000	0.000	8895.609	33.937	0.000	32.755	0.000	13.484	0.000	0.000	34.184	32.498	112.743	MWD+IFR1+MS
9100.000	0.000	0.000	8995.609	34.276	0.000	33.104	0.000	13.696	0.000	0.000	34.524	32.845	112.864	MWD+IFR1+MS
9200.000	0.000	0.000	9095.609	34.615	0.000	33.453	0.000	13.912	0.000	0.000	34.864	33.193	112.984	MWD+IFR1+MS
9300.000	0.000	0.000	9195.609	34.954	0.000	33.803	0.000	14.130	0.000	0.000	35.205	33.541	113.103	MWD+IFR1+MS
9400.000	0.000	0.000	9295.609	35.294	0.000	34.152	0.000	14.352	0.000	0.000	35.546	33.890	113.220	MWD+IFR1+MS

9500.000	0.000	0.000	9395.609	35.634	0.000	34.502	0.000	14.577	0.000	0.000	35.887	34.238	113.336	MWD+IFR1+MS
9600.000	0.000	0.000	9495.609	35.974	0.000	34.852	0.000	14.805	0.000	0.000	36.229	34.587	113.451	MWD+IFR1+MS
9700.000	0.000	0.000	9595.609	36.315	0.000	35.202	0.000	15.036	0.000	0.000	36.571	34.936	113.565	MWD+IFR1+MS
9800.000	0.000	0.000	9695.609	36.656	0.000	35.553	0.000	15.270	0.000	0.000	36.914	35.285	113.677	MWD+IFR1+MS
9900.000	0.000	0.000	9795.609	36.997	0.000	35.903	0.000	15.508	0.000	0.000	37.256	35.634	113.788	MWD+IFR1+MS
10000.000	0.000	0.000	9895.609	37.339	0.000	36.254	0.000	15.748	0.000	0.000	37.600	35.983	113.897	MWD+IFR1+MS
10100.000	0.000	0.000	9995.609	37.681	0.000	36.604	0.000	15.992	0.000	0.000	37.943	36.333	114.006	MWD+IFR1+MS
10200.000	0.000	0.000	10095.609	38.024	0.000	36.955	0.000	16.239	0.000	0.000	38.287	36.683	114.113	MWD+IFR1+MS
10300.000	0.000	0.000	10195.609	38.366	0.000	37.306	0.000	16.489	0.000	0.000	38.630	37.033	114.219	MWD+IFR1+MS
10400.000	0.000	0.000	10295.609	38.709	0.000	37.657	0.000	16.742	0.000	0.000	38.975	37.383	114.324	MWD+IFR1+MS
10500.000	0.000	0.000	10395.609	39.052	0.000	38.009	0.000	16.998	0.000	0.000	39.319	37.733	114.428	MWD+IFR1+MS
10600.000	0.000	0.000	10495.609	39.396	0.000	38.360	0.000	17.257	0.000	0.000	39.664	38.083	114.531	MWD+IFR1+MS
10700.000	0.000	0.000	10595.609	39.740	0.000	38.712	0.000	17.520	0.000	0.000	40.009	38.434	114.632	MWD+IFR1+MS
10800.000	0.000	0.000	10695.609	40.084	0.000	39.063	0.000	17.785	0.000	0.000	40.354	38.784	114.733	MWD+IFR1+MS
10865.191	0.000	0.000	10760.800	40.306	0.000	39.291	0.000	17.960	0.000	0.000	40.576	39.012	114.759	MWD+IFR1+MS
10900.000	2.785	179.723	10795.596	40.208	0.000	39.412	-0.000	18.053	0.000	0.000	40.689	39.128	114.727	MWD+IFR1+MS
11000.000	10.785	179.723	10894.815	39.970	0.000	39.714	-0.000	18.338	0.000	0.000	41.391	39.479	110.008	MWD+IFR1+MS
11100.000	18.785	179.723	10991.425	39.715	0.000	39.996	-0.000	18.733	0.000	0.000	42.553	39.811	104.528	MWD+IFR1+MS
11200.000	26.785	179.723	11083.547	38.911	0.000	40.252	-0.000	19.297	0.000	0.000	43.592	40.086	102.023	MWD+IFR1+MS
11300.000	34.785	179.723	11169.387	37.646	0.000	40.479	-0.000	20.073	0.000	0.000	44.471	40.320	100.734	MWD+IFR1+MS
11400.000	42.785	179.723	11247.274	36.039	0.000	40.675	-0.000	21.078	0.000	0.000	45.177	40.517	100.057	MWD+IFR1+MS
11500.000	50.785	179.723	11315.693	34.248	0.000	40.840	-0.000	22.301	0.000	0.000	45.709	40.679	99.736	MWD+IFR1+MS
11600.000	58.785	179.723	11373.311	32.469	0.000	40.973	-0.000	23.708	0.000	0.000	46.079	40.807	99.639	MWD+IFR1+MS
11700.000	66.785	179.723	11419.007	30.935	0.000	41.074	-0.000	25.254	0.000	0.000	46.306	40.903	99.679	MWD+IFR1+MS
11800.000	74.785	179.723	11451.892	29.897	0.000	41.144	-0.000	26.881	0.000	0.000	46.420	40.967	99.786	MWD+IFR1+MS
11900.000	82.785	179.723	11471.326	29.573	0.000	41.182	-0.000	28.536	0.000	0.000	46.458	41.001	99.886	MWD+IFR1+MS
11990.191	90.000	179.723	11476.997	29.765	0.000	41.189	-0.000	29.765	0.000	0.000	46.461	41.008	99.894	MWD+IFR1+MS
12000.000	90.000	179.723	11476.997	29.784	0.000	41.187	-0.000	29.784	0.000	0.000	46.461	41.007	99.887	MWD+IFR1+MS
12100.000	90.000	179.723	11476.997	29.956	0.000	41.187	-0.000	29.956	0.000	0.000	46.462	41.007	99.847	MWD+IFR1+MS
12200.000	90.000	179.723	11476.997	30.153	0.000	41.203	-0.000	30.153	0.000	0.000	46.463	41.025	99.835	MWD+IFR1+MS
12300.000	90.000	179.723	11476.997	30.368	0.000	41.234	-0.000	30.368	0.000	0.000	46.466	41.057	99.846	MWD+IFR1+MS
12400.000	90.000	179.723	11476.997	30.602	0.000	41.279	-0.000	30.602	0.000	0.000	46.469	41.102	99.882	MWD+IFR1+MS
12500.000	90.000	179.723	11476.997	30.854	0.000	41.339	-0.000	30.854	0.000	0.000	46.473	41.161	99.941	MWD+IFR1+MS

12600.000	90.000	179.723	11476.997	31.124	0.000	41.412	-0.000	31.124	0.000	0.000	46.479	41.234	100.026	MWD+IFR1+MS
12700.000	90.000	179.723	11476.997	31.412	0.000	41.499	-0.000	31.412	0.000	0.000	46.485	41.320	100.138	MWD+IFR1+MS
12800.000	90.000	179.723	11476.997	31.716	0.000	41.600	-0.000	31.716	0.000	0.000	46.493	41.420	100.280	MWD+IFR1+MS
12900.000	90.000	179.723	11476.997	32.036	0.000	41.715	-0.000	32.036	0.000	0.000	46.501	41.533	100.452	MWD+IFR1+MS
13000.000	90.000	179.723	11476.997	32.373	0.000	41.844	-0.000	32.373	0.000	0.000	46.511	41.660	100.660	MWD+IFR1+MS
13100.000	90.000	179.723	11476.997	32.724	0.000	41.986	-0.000	32.724	0.000	0.000	46.522	41.799	100.906	MWD+IFR1+MS
13200.000	90.000	179.723	11476.997	33.091	0.000	42.142	-0.000	33.091	0.000	0.000	46.534	41.951	101.195	MWD+IFR1+MS
13300.000	90.000	179.723	11476.997	33.472	0.000	42.311	-0.000	33.472	0.000	0.000	46.547	42.116	101.534	MWD+IFR1+MS
13400.000	90.000	179.723	11476.997	33.866	0.000	42.493	-0.000	33.866	0.000	0.000	46.562	42.293	101.930	MWD+IFR1+MS
13500.000	90.000	179.723	11476.997	34.275	0.000	42.688	-0.000	34.275	0.000	0.000	46.578	42.482	102.393	MWD+IFR1+MS
13600.000	90.000	179.723	11476.997	34.696	0.000	42.896	-0.000	34.696	0.000	0.000	46.597	42.683	102.935	MWD+IFR1+MS
13700.000	90.000	179.723	11476.997	35.130	0.000	43.116	-0.000	35.130	0.000	0.000	46.617	42.894	103.570	MWD+IFR1+MS
13800.000	90.000	179.723	11476.997	35.575	0.000	43.349	-0.000	35.575	0.000	0.000	46.640	43.117	104.320	MWD+IFR1+MS
13900.000	90.000	179.723	11476.997	36.033	0.000	43.594	-0.000	36.033	0.000	0.000	46.665	43.349	105.209	MWD+IFR1+MS
14000.000	90.000	179.723	11476.997	36.501	0.000	43.851	-0.000	36.501	0.000	0.000	46.694	43.591	106.271	MWD+IFR1+MS
14100.000	90.000	179.723	11476.997	36.980	0.000	44.120	-0.000	36.980	0.000	0.000	46.726	43.841	107.551	MWD+IFR1+MS
14200.000	90.000	179.723	11476.997	37.470	0.000	44.400	-0.000	37.470	0.000	0.000	46.764	44.099	109.109	MWD+IFR1+MS
14300.000	90.000	179.723	11476.997	37.969	0.000	44.692	-0.000	37.969	0.000	0.000	46.808	44.361	111.024	MWD+IFR1+MS
14400.000	90.000	179.723	11476.997	38.478	0.000	44.995	-0.000	38.478	0.000	0.000	46.862	44.627	113.399	MWD+IFR1+MS
14500.000	90.000	179.723	11476.997	38.996	0.000	45.309	-0.000	38.996	0.000	0.000	46.927	44.892	116.363	MWD+IFR1+MS
14600.000	90.000	179.723	11476.997	39.523	0.000	45.633	-0.000	39.523	0.000	0.000	47.008	45.152	120.061	MWD+IFR1+MS
14700.000	90.000	179.723	11476.997	40.058	0.000	45.968	-0.000	40.058	0.000	0.000	47.112	45.401	124.609	MWD+IFR1+MS
14800.000	90.000	179.723	11476.997	40.602	0.000	46.313	-0.000	40.602	0.000	0.000	47.245	45.632	130.011	MWD+IFR1+MS
14900.000	90.000	179.723	11476.997	41.153	0.000	46.668	-0.000	41.153	0.000	0.000	47.415	45.835	-43.965	MWD+IFR1+MS
15000.000	90.000	179.723	11476.997	41.712	0.000	47.033	-0.000	41.712	0.000	0.000	47.627	46.008	-37.799	MWD+IFR1+MS
15100.000	90.000	179.723	11476.997	42.278	0.000	47.408	-0.000	42.278	0.000	0.000	47.882	46.148	-32.041	MWD+IFR1+MS
15200.000	90.000	179.723	11476.997	42.850	0.000	47.791	-0.000	42.850	0.000	0.000	48.173	46.261	-27.053	MWD+IFR1+MS
15300.000	90.000	179.723	11476.997	43.430	0.000	48.184	-0.000	43.430	0.000	0.000	48.496	46.352	-22.935	MWD+IFR1+MS
15400.000	90.000	179.723	11476.997	44.016	0.000	48.586	-0.000	44.016	0.000	0.000	48.845	46.427	-19.614	MWD+IFR1+MS
15500.000	90.000	179.723	11476.997	44.607	0.000	48.996	-0.000	44.607	0.000	0.000	49.215	46.490	-16.948	MWD+IFR1+MS
15600.000	90.000	179.723	11476.997	45.205	0.000	49.415	-0.000	45.205	0.000	0.000	49.602	46.545	-14.800	MWD+IFR1+MS
15700.000	90.000	179.723	11476.997	45.809	0.000	49.843	-0.000	45.809	0.000	0.000	50.004	46.594	-13.052	MWD+IFR1+MS
15800.000	90.000	179.723	11476.997	46.417	0.000	50.278	-0.000	46.417	0.000	0.000	50.419	46.639	-11.615	MWD+IFR1+MS

15900.000	90.000	179.723	11476.997	47.031	0.000	50.721	-0.000	47.031	0.000	0.000	50.845	46.681	-10.419	MWD+IFR1+MS
16000.000	90.000	179.723	11476.997	47.651	0.000	51.171	-0.000	47.651	0.000	0.000	51.281	46.720	-9.412	MWD+IFR1+MS
16100.000	90.000	179.723	11476.997	48.274	0.000	51.629	-0.000	48.274	0.000	0.000	51.728	46.758	-8.557	MWD+IFR1+MS
16200.000	90.000	179.723	11476.997	48.903	0.000	52.095	-0.000	48.903	0.000	0.000	52.183	46.795	-7.823	MWD+IFR1+MS
16300.000	90.000	179.723	11476.997	49.536	0.000	52.567	-0.000	49.536	0.000	0.000	52.646	46.831	-7.188	MWD+IFR1+MS
16400.000	90.000	179.723	11476.997	50.173	0.000	53.046	-0.000	50.173	0.000	0.000	53.118	46.866	-6.634	MWD+IFR1+MS
16500.000	90.000	179.723	11476.997	50.815	0.000	53.532	-0.000	50.815	0.000	0.000	53.597	46.901	-6.147	MWD+IFR1+MS
16600.000	90.000	179.723	11476.997	51.460	0.000	54.024	-0.000	51.460	0.000	0.000	54.084	46.935	-5.716	MWD+IFR1+MS
16700.000	90.000	179.723	11476.997	52.109	0.000	54.523	-0.000	52.109	0.000	0.000	54.578	46.970	-5.334	MWD+IFR1+MS
16800.000	90.000	179.723	11476.997	52.762	0.000	55.027	-0.000	52.762	0.000	0.000	55.078	47.005	-4.991	MWD+IFR1+MS
16900.000	90.000	179.723	11476.997	53.418	0.000	55.538	-0.000	53.418	0.000	0.000	55.585	47.039	-4.684	MWD+IFR1+MS
17000.000	90.000	179.723	11476.997	54.078	0.000	56.054	-0.000	54.078	0.000	0.000	56.097	47.074	-4.407	MWD+IFR1+MS
17100.000	90.000	179.723	11476.997	54.741	0.000	56.577	-0.000	54.741	0.000	0.000	56.616	47.109	-4.155	MWD+IFR1+MS
17200.000	90.000	179.723	11476.997	55.408	0.000	57.104	-0.000	55.408	0.000	0.000	57.141	47.145	-3.927	MWD+IFR1+MS
17300.000	90.000	179.723	11476.997	56.077	0.000	57.637	-0.000	56.077	0.000	0.000	57.671	47.180	-3.718	MWD+IFR1+MS
17400.000	90.000	179.723	11476.997	56.749	0.000	58.175	-0.000	56.749	0.000	0.000	58.207	47.216	-3.527	MWD+IFR1+MS
17500.000	90.000	179.723	11476.997	57.425	0.000	58.718	-0.000	57.425	0.000	0.000	58.748	47.253	-3.352	MWD+IFR1+MS
17600.000	90.000	179.723	11476.997	58.103	0.000	59.266	-0.000	58.103	0.000	0.000	59.294	47.289	-3.190	MWD+IFR1+MS
17700.000	90.000	179.723	11476.997	58.783	0.000	59.819	-0.000	58.783	0.000	0.000	59.845	47.327	-3.041	MWD+IFR1+MS
17800.000	90.000	179.723	11476.997	59.466	0.000	60.377	-0.000	59.466	0.000	0.000	60.401	47.364	-2.903	MWD+IFR1+MS
17900.000	90.000	179.723	11476.997	60.152	0.000	60.939	-0.000	60.152	0.000	0.000	60.962	47.402	-2.775	MWD+IFR1+MS
18000.000	90.000	179.723	11476.997	60.840	0.000	61.505	-0.000	60.840	0.000	0.000	61.527	47.441	-2.656	MWD+IFR1+MS
18100.000	90.000	179.723	11476.997	61.531	0.000	62.076	-0.000	61.531	0.000	0.000	62.096	47.479	-2.545	MWD+IFR1+MS
18200.000	90.000	179.723	11476.997	62.223	0.000	62.651	-0.000	62.223	0.000	0.000	62.670	47.519	-2.442	MWD+IFR1+MS
18300.000	90.000	179.723	11476.997	62.918	0.000	63.230	-0.000	62.918	0.000	0.000	63.248	47.559	-2.345	MWD+IFR1+MS
18400.000	90.000	179.723	11476.997	63.615	0.000	63.813	-0.000	63.615	0.000	0.000	63.829	47.599	-2.255	MWD+IFR1+MS
18500.000	90.000	179.723	11476.997	64.314	0.000	64.399	-0.000	64.314	0.000	0.000	64.415	47.640	-2.170	MWD+IFR1+MS
18600.000	90.000	179.723	11476.997	65.015	0.000	64.990	-0.000	65.015	0.000	0.000	65.005	47.681	-2.090	MWD+IFR1+MS
18700.000	90.000	179.723	11476.997	65.717	0.000	65.584	-0.000	65.717	0.000	0.000	65.598	47.723	-2.015	MWD+IFR1+MS
18800.000	90.000	179.723	11476.997	66.422	0.000	66.181	-0.000	66.422	0.000	0.000	66.194	47.765	-1.945	MWD+IFR1+MS
18900.000	90.000	179.723	11476.997	67.128	0.000	66.782	-0.000	67.128	0.000	0.000	66.795	47.808	-1.878	MWD+IFR1+MS
19000.000	90.000	179.723	11476.997	67.836	0.000	67.386	-0.000	67.836	0.000	0.000	67.398	47.851	-1.815	MWD+IFR1+MS
19100.000	90.000	179.723	11476.997	68.546	0.000	67.994	-0.000	68.546	0.000	0.000	68.005	47.895	-1.756	MWD+IFR1+MS

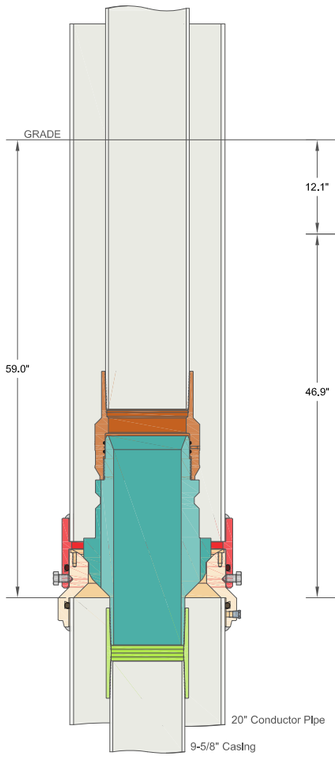
19200.000	90.000	179.723	11476.997	69.257	0.000	68.604	-0.000	69.257	0.000	0.000	68.615	47.939	-1.700	MWD+IFR1+MS
19300.000	90.000	179.723	11476.997	69.970	0.000	69.218	-0.000	69.970	0.000	0.000	69.228	47.984	-1.647	MWD+IFR1+MS
19400.000	90.000	179.723	11476.997	70.685	0.000	69.835	-0.000	70.685	0.000	0.000	69.845	48.030	-1.596	MWD+IFR1+MS
19500.000	90.000	179.723	11476.997	71.401	0.000	70.455	-0.000	71.401	0.000	0.000	70.464	48.076	-1.548	MWD+IFR1+MS
19600.000	90.000	179.723	11476.997	72.118	0.000	71.077	-0.000	72.118	0.000	0.000	71.086	48.122	-1.503	MWD+IFR1+MS
19700.000	90.000	179.723	11476.997	72.837	0.000	71.702	-0.000	72.837	0.000	0.000	71.711	48.169	-1.459	MWD+IFR1+MS
19800.000	90.000	179.723	11476.997	73.557	0.000	72.330	-0.000	73.557	0.000	0.000	72.338	48.216	-1.418	MWD+IFR1+MS
19900.000	90.000	179.723	11476.997	74.279	0.000	72.961	-0.000	74.279	0.000	0.000	72.969	48.264	-1.379	MWD+IFR1+MS
20000.000	90.000	179.723	11476.997	75.001	0.000	73.594	-0.000	75.001	0.000	0.000	73.601	48.313	-1.341	MWD+IFR1+MS
20100.000	90.000	179.723	11476.997	75.725	0.000	74.230	-0.000	75.725	0.000	0.000	74.237	48.362	-1.306	MWD+IFR1+MS
20200.000	90.000	179.723	11476.997	76.450	0.000	74.868	-0.000	76.450	0.000	0.000	74.875	48.411	-1.272	MWD+IFR1+MS
20300.000	90.000	179.723	11476.997	77.177	0.000	75.508	-0.000	77.177	0.000	0.000	75.515	48.461	-1.239	MWD+IFR1+MS
20400.000	90.000	179.723	11476.997	77.904	0.000	76.151	-0.000	77.904	0.000	0.000	76.157	48.512	-1.208	MWD+IFR1+MS
20500.000	90.000	179.723	11476.997	78.633	0.000	76.796	-0.000	78.633	0.000	0.000	76.802	48.563	-1.178	MWD+IFR1+MS
20600.000	90.000	179.723	11476.997	79.362	0.000	77.443	-0.000	79.362	0.000	0.000	77.449	48.614	-1.149	MWD+IFR1+MS
20700.000	90.000	179.723	11476.997	80.093	0.000	78.093	-0.000	80.093	0.000	0.000	78.098	48.666	-1.122	MWD+IFR1+MS
20800.000	90.000	179.723	11476.997	80.825	0.000	78.744	-0.000	80.825	0.000	0.000	78.749	48.719	-1.096	MWD+IFR1+MS
20900.000	90.000	179.723	11476.997	81.557	0.000	79.398	-0.000	81.557	0.000	0.000	79.403	48.772	-1.071	MWD+IFR1+MS
21000.000	90.000	179.723	11476.997	82.291	0.000	80.053	-0.000	82.291	0.000	0.000	80.058	48.826	-1.047	MWD+IFR1+MS
21100.000	90.000	179.723	11476.997	83.025	0.000	80.711	-0.000	83.025	0.000	0.000	80.715	48.880	-1.023	MWD+IFR1+MS
21200.000	90.000	179.723	11476.997	83.761	0.000	81.370	-0.000	83.761	0.000	0.000	81.374	48.934	-1.001	MWD+IFR1+MS
21300.000	90.000	179.723	11476.997	84.497	0.000	82.031	-0.000	84.497	0.000	0.000	82.035	48.989	-0.980	MWD+IFR1+MS
21400.000	90.000	179.723	11476.997	85.234	0.000	82.694	-0.000	85.234	0.000	0.000	82.698	49.045	-0.959	MWD+IFR1+MS
21500.000	90.000	179.723	11476.997	85.973	0.000	83.359	-0.000	85.973	0.000	0.000	83.362	49.101	-0.939	MWD+IFR1+MS
21600.000	90.000	179.723	11476.997	86.711	0.000	84.025	-0.000	86.711	0.000	0.000	84.029	49.158	-0.920	MWD+IFR1+MS
21700.000	90.000	179.723	11476.997	87.451	0.000	84.693	-0.000	87.451	0.000	0.000	84.697	49.215	-0.902	MWD+IFR1+MS
21800.000	90.000	179.723	11476.997	88.192	0.000	85.363	-0.000	88.192	0.000	0.000	85.366	49.273	-0.884	MWD+IFR1+MS
21900.000	90.000	179.723	11476.997	88.933	0.000	86.034	-0.000	88.933	0.000	0.000	86.037	49.331	-0.867	MWD+IFR1+MS
22000.000	90.000	179.723	11476.997	89.675	0.000	86.707	-0.000	89.675	0.000	0.000	86.710	49.389	-0.851	MWD+IFR1+MS
22100.000	90.000	179.723	11476.997	90.417	0.000	87.382	-0.000	90.417	0.000	0.000	87.384	49.449	-0.835	MWD+IFR1+MS
22200.000	90.000	179.723	11476.997	91.161	0.000	88.057	-0.000	91.161	0.000	0.000	88.060	49.508	-0.820	MWD+IFR1+MS
22300.000	90.000	179.723	11476.997	91.905	0.000	88.735	-0.000	91.905	0.000	0.000	88.737	49.568	-0.805	MWD+IFR1+MS
22400.000	90.000	179.723	11476.997	92.650	0.000	89.414	-0.000	92.650	0.000	0.000	89.416	49.629	-0.790	MWD+IFR1+MS

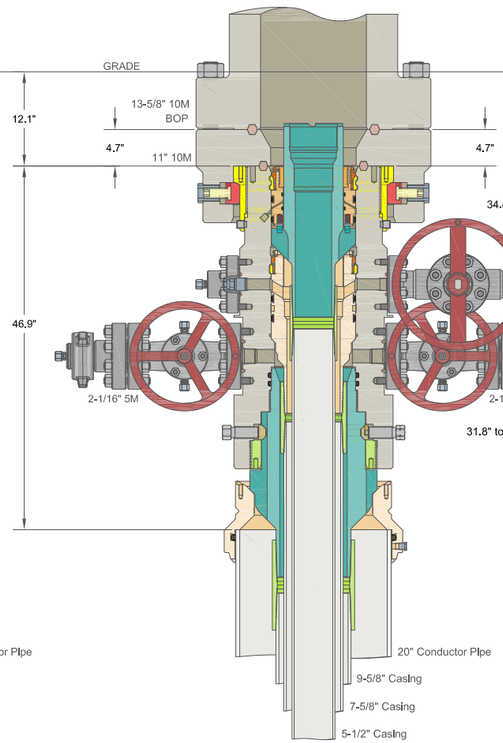
22500.000	90.000	179.723	11476.997	93.395	0.000	90.094	-0.000	93.395	0.000	0.000	90.096	49.690	-0.777	MWD+IFR1+MS
22600.000	90.000	179.723	11476.997	94.141	0.000	90.775	-0.000	94.141	0.000	0.000	90.778	49.752	-0.763	MWD+IFR1+MS
22700.000	90.000	179.723	11476.997	94.888	0.000	91.458	-0.000	94.888	0.000	0.000	91.460	49.814	-0.750	MWD+IFR1+MS
22800.000	90.000	179.723	11476.997	95.635	0.000	92.142	-0.000	95.635	0.000	0.000	92.144	49.876	-0.738	MWD+IFR1+MS
22900.000	90.000	179.723	11476.997	96.383	0.000	92.828	-0.000	96.383	0.000	0.000	92.830	49.940	-0.726	MWD+IFR1+MS
23000.000	90.000	179.723	11476.997	97.131	0.000	93.514	-0.000	97.131	0.000	0.000	93.516	50.003	-0.714	MWD+IFR1+MS
23100.000	90.000	179.723	11476.997	97.880	0.000	94.202	-0.000	97.880	0.000	0.000	94.204	50.067	-0.703	MWD+IFR1+MS
23200.000	90.000	179.723	11476.997	98.630	0.000	94.891	-0.000	98.630	0.000	0.000	94.893	50.132	-0.692	MWD+IFR1+MS
23300.000	90.000	179.723	11476.997	99.380	0.000	95.582	-0.000	99.380	0.000	0.000	95.583	50.197	-0.681	MWD+IFR1+MS
23400.000	90.000	179.723	11476.997	100.131	0.000	96.273	-0.000	100.131	0.000	0.000	96.275	50.262	-0.671	MWD+IFR1+MS
23500.000	90.000	179.723	11476.997	100.882	0.000	96.965	-0.000	100.882	0.000	0.000	96.967	50.328	-0.661	MWD+IFR1+MS
23600.000	90.000	179.723	11476.997	101.634	0.000	97.659	-0.000	101.634	0.000	0.000	97.661	50.395	-0.651	MWD+IFR1+MS
23700.000	90.000	179.723	11476.997	102.386	0.000	98.354	-0.000	102.386	0.000	0.000	98.355	50.461	-0.642	MWD+IFR1+MS
23800.000	90.000	179.723	11476.997	103.139	0.000	99.049	-0.000	103.139	0.000	0.000	99.051	50.529	-0.633	MWD+IFR1+MS
23900.000	90.000	179.723	11476.997	103.892	0.000	99.746	-0.000	103.892	0.000	0.000	99.747	50.597	-0.624	MWD+IFR1+MS
24000.000	90.000	179.723	11476.997	104.645	0.000	100.444	-0.000	104.645	0.000	0.000	100.445	50.665	-0.616	MWD+IFR1+MS
24100.000	90.000	179.723	11476.997	105.399	0.000	101.143	-0.000	105.399	0.000	0.000	101.144	50.734	-0.607	MWD+IFR1+MS
24200.000	90.000	179.723	11476.997	106.154	0.000	101.842	-0.000	106.154	0.000	0.000	101.843	50.803	-0.599	MWD+IFR1+MS
24300.000	90.000	179.723	11476.997	106.909	0.000	102.543	-0.000	106.909	0.000	0.000	102.544	50.873	-0.591	MWD+IFR1+MS
24400.000	90.000	179.723	11476.997	107.664	0.000	103.244	-0.000	107.664	0.000	0.000	103.245	50.943	-0.584	MWD+IFR1+MS
24500.000	90.000	179.723	11476.997	108.420	0.000	103.947	-0.000	108.420	0.000	0.000	103.948	51.013	-0.576	MWD+IFR1+MS
24600.000	90.000	179.723	11476.997	109.176	0.000	104.650	-0.000	109.176	0.000	0.000	104.651	51.085	-0.569	MWD+IFR1+MS
24700.000	90.000	179.723	11476.997	109.933	0.000	105.354	-0.000	109.933	0.000	0.000	105.355	51.156	-0.562	MWD+IFR1+MS
24800.000	90.000	179.723	11476.997	110.690	0.000	106.059	-0.000	110.690	0.000	0.000	106.060	51.228	-0.555	MWD+IFR1+MS
24900.000	90.000	179.723	11476.997	111.447	0.000	106.765	-0.000	111.447	0.000	0.000	106.766	51.300	-0.549	MWD+IFR1+MS
25000.000	90.000	179.723	11476.997	112.205	0.000	107.472	-0.000	112.205	0.000	0.000	107.473	51.373	-0.542	MWD+IFR1+MS
25100.000	90.000	179.723	11476.997	112.963	0.000	108.179	-0.000	112.963	0.000	0.000	108.180	51.447	-0.536	MWD+IFR1+MS
25200.000	90.000	179.723	11476.997	113.722	0.000	108.887	-0.000	113.722	0.000	0.000	108.888	51.520	-0.530	MWD+IFR1+MS
25300.000	90.000	179.723	11476.997	114.480	0.000	109.597	-0.000	114.480	0.000	0.000	109.597	51.595	-0.524	MWD+IFR1+MS
25400.000	90.000	179.723	11476.997	115.240	0.000	110.306	-0.000	115.240	0.000	0.000	110.307	51.669	-0.518	MWD+IFR1+MS
25500.000	90.000	179.723	11476.997	115.999	0.000	111.017	-0.000	115.999	0.000	0.000	111.018	51.744	-0.512	MWD+IFR1+MS
25600.000	90.000	179.723	11476.997	116.759	0.000	111.728	-0.000	116.759	0.000	0.000	111.729	51.820	-0.507	MWD+IFR1+MS
25700.000	90.000	179.723	11476.997	117.519	0.000	112.440	-0.000	117.519	0.000	0.000	112.441	51.896	-0.502	MWD+IFR1+MS

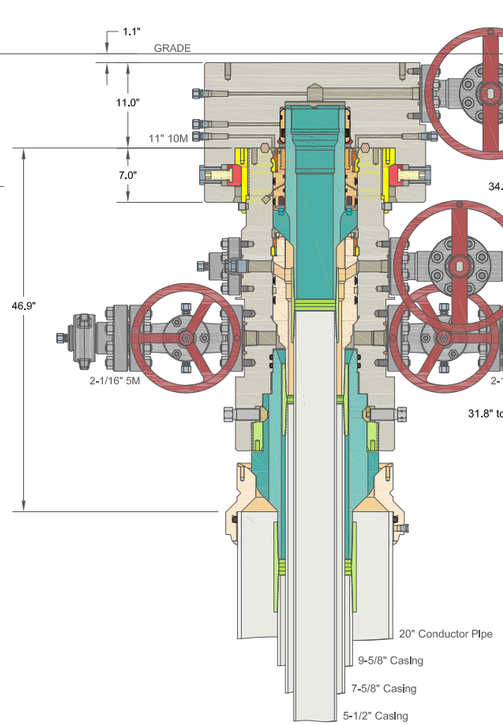
25800.000	90.000	179.723	11476.997	118.280	0.000	113.153	-0.000	118.280	0.000	0.000	113.153	51.972	-0.496	MWD+IFR1+MS
25900.000	90.000	179.723	11476.997	119.041	0.000	113.866	-0.000	119.041	0.000	0.000	113.867	52.049	-0.491	MWD+IFR1+MS
26000.000	90.000	179.723	11476.997	119.802	0.000	114.580	-0.000	119.802	0.000	0.000	114.581	52.126	-0.486	MWD+IFR1+MS
26100.000	90.000	179.723	11476.997	120.563	0.000	115.295	-0.000	120.563	0.000	0.000	115.295	52.204	-0.482	MWD+IFR1+MS
26200.000	90.000	179.723	11476.997	121.325	0.000	116.010	-0.000	121.325	0.000	0.000	116.011	52.282	-0.477	MWD+IFR1+MS
26300.000	90.000	179.723	11476.997	122.087	0.000	116.726	-0.000	122.087	0.000	0.000	116.727	52.361	-0.472	MWD+IFR1+MS
26400.000	90.000	179.723	11476.997	122.849	0.000	117.443	-0.000	122.849	0.000	0.000	117.443	52.440	-0.468	MWD+IFR1+MS
26500.000	90.000	179.723	11476.997	123.612	0.000	118.160	-0.000	123.612	0.000	0.000	118.160	52.519	-0.463	MWD+IFR1+MS
26600.000	90.000	179.723	11476.997	124.375	0.000	118.878	-0.000	124.375	0.000	0.000	118.878	52.599	-0.459	MWD+IFR1+MS
26700.000	90.000	179.723	11476.997	125.138	0.000	119.596	-0.000	125.138	0.000	0.000	119.597	52.679	-0.455	MWD+IFR1+MS
26710.693	90.000	179.723	11476.997	125.219	0.000	119.673	-0.000	125.219	0.000	0.000	119.673	52.688	-0.455	MWD+IFR1+MS
26800.000	90.000	179.723	11476.997	125.900	0.000	120.314	-0.000	125.900	0.000	0.000	120.314	52.760	-0.451	MWD+IFR1+MS
26810.675	90.000	179.723	11476.997	125.981	0.000	120.390	-0.000	125.981	0.000	0.000	120.391	52.768	-0.450	MWD+IFR1+MS

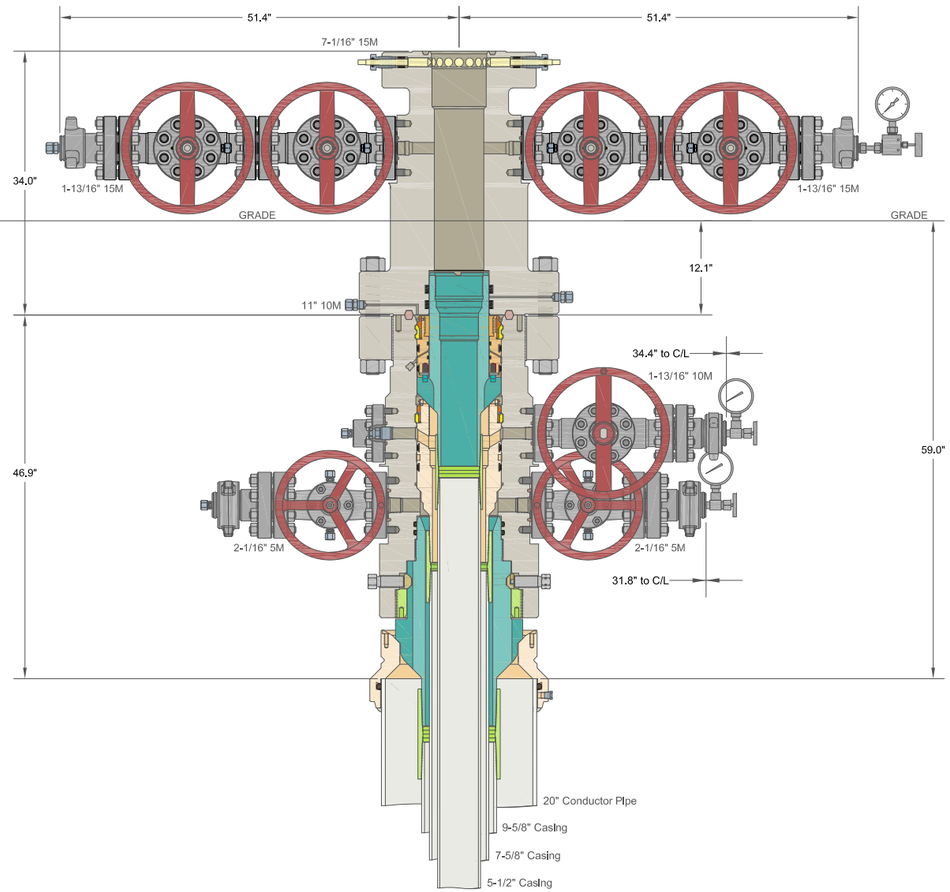
Plan Targets Poker Lake Unit 19 DTD South 321H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 16	11698.48	440317.20	627863.50	8264.00	RECTANGLE
SHL 19	3499.04	439364.67	628024.74	0.00	RECTANGLE
LTP 16	26710.67	424880.70	627938.20	8264.00	RECTANGLE
BHL 16	26810.68	424780.70	627938.50	8264.00	RECTANGLE









ALL DIMENSIONS APPROXIMA

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	31MAR22
APPRV		
DRAWING NO.	HBE0000479	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
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

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-53828	98220	Purple Sage; Wolfcamp

[4] Property Code	[5] Property Name	[6] Well Number
333976	POKER LAKE UNIT 19 DTD	321H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC	3,181'

[10] Surface Location

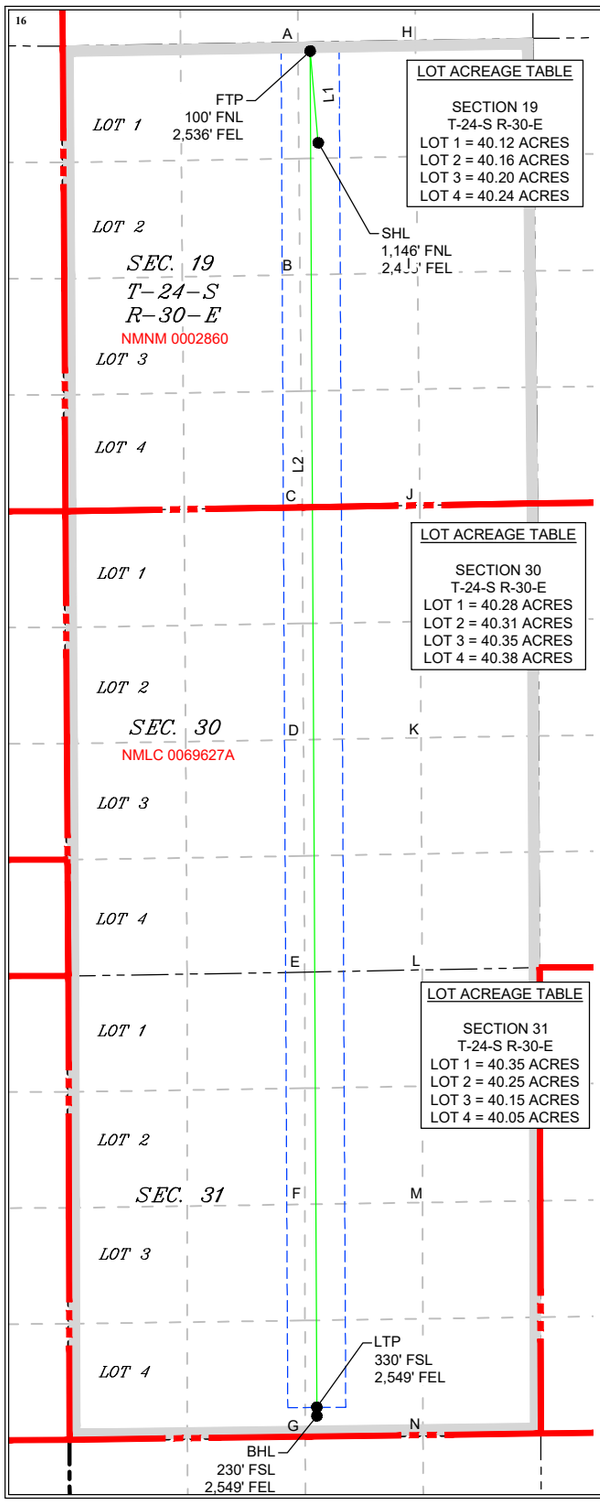
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	19	24S	30E		1,146	NORTH	2,455	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	31	24S	30E		230	SOUTH	2,549	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
1,922.84			

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.



LEGEND

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

LINE TABLE		
LINE	AZIMUTH	LENGTH
L1	355°00'19"	1,048.48'
L2	179°43'18"	15,537.07'

COORDINATE TABLE

SHL (NAD 83 NME)	SHL (NAD 27 NME)
Y= 439,332.0 N	Y= 439,272.7 N
X= 669,138.4 E	X= 627,954.7 E
LAT. = 32.207125 °N	LAT. = 32.207001 °N
LONG. = 103.920127 °W	LONG. = 103.919639 °W

FTP (NAD 83 NME)	FTP (NAD 27 NME)
Y= 440,376.5 N	Y= 440,317.2 N
X= 669,047.1 E	X= 627,863.5 E
LAT. = 32.209998 °N	LAT. = 32.209873 °N
LONG. = 103.920409 °W	LONG. = 103.919921 °W

LTP (NAD 83 NME)	LTP (NAD 27 NME)
Y= 424,939.6 N	Y= 424,880.7 N
X= 669,122.4 E	X= 627,938.2 E
LAT. = 32.167563 °N	LAT. = 32.167438 °N
LONG. = 103.920357 °W	LONG. = 103.919871 °W

BHL (NAD 83 NME)	BHL (NAD 27 NME)
Y= 424,839.6 N	Y= 424,780.7 N
X= 669,122.6 E	X= 627,938.5 E
LAT. = 32.167288 °N	LAT. = 32.167163 °N
LONG. = 103.920357 °W	LONG. = 103.919871 °W

CORNER COORDINATES (NAD 83 NME)

A - Y= 440,474.2 N		A - X= 668,907.4 E	
B - Y= 437,827.7 N		B - X= 668,932.1 E	
C - Y= 435,182.2 N		C - X= 668,956.9 E	
D - Y= 432,537.8 N		D - X= 668,971.2 E	
E - Y= 429,892.6 N		E - X= 668,985.5 E	
F - Y= 427,251.3 N		F - X= 668,987.7 E	
G - Y= 424,607.8 N		G - X= 668,989.9 E	
H - Y= 440,496.2 N		H - X= 670,244.6 E	
I - Y= 437,850.2 N		I - X= 670,270.4 E	
J - Y= 435,204.8 N		J - X= 670,296.6 E	
K - Y= 432,560.0 N		K - X= 670,309.1 E	
L - Y= 429,918.6 N		L - X= 670,321.8 E	
M - Y= 427,271.5 N		M - X= 670,326.5 E	
N - Y= 424,625.7 N		N - X= 670,331.2 E	

CORNER COORDINATES (NAD 27 NME)

A - Y= 440,414.9 N		A - X= 627,723.8 E	
B - Y= 437,768.5 N		B - X= 627,748.4 E	
C - Y= 435,123.0 N		C - X= 627,773.1 E	
D - Y= 432,478.7 N		D - X= 627,787.3 E	
E - Y= 429,833.6 N		E - X= 627,801.5 E	
F - Y= 427,192.4 N		F - X= 627,803.6 E	
G - Y= 424,548.9 N		G - X= 627,805.8 E	
H - Y= 440,436.9 N		H - X= 629,060.9 E	
I - Y= 437,791.0 N		I - X= 629,086.7 E	
J - Y= 435,145.6 N		J - X= 629,112.8 E	
K - Y= 432,500.9 N		K - X= 629,125.2 E	
L - Y= 429,859.6 N		L - X= 629,137.8 E	
M - Y= 427,212.6 N		M - X= 629,142.4 E	
N - Y= 424,566.8 N		N - X= 629,147.0 E	

[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 2/28/2024
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 618.013003.05-53

J:\618.013 XTO Energy – NM\003 Poker Lake Unit\05 – PLU 19 DTD – EDDY\Wells\53 – 321H\DWG\SOUTH 321H C-102.dwg

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

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

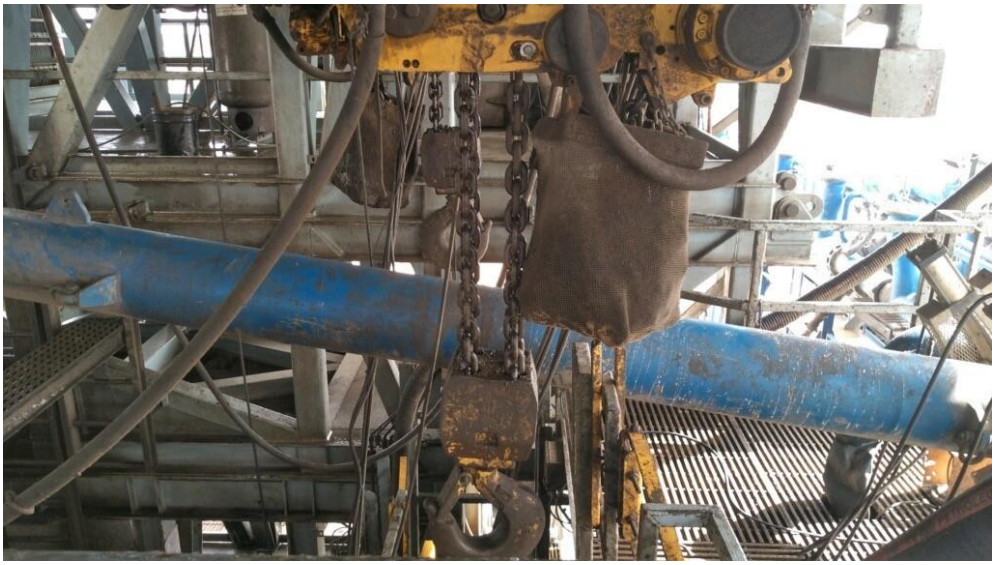


Figure 2: BOP Winch System

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 3170recognizes 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.

62 API STANDARD 53

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

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

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

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

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

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

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

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

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

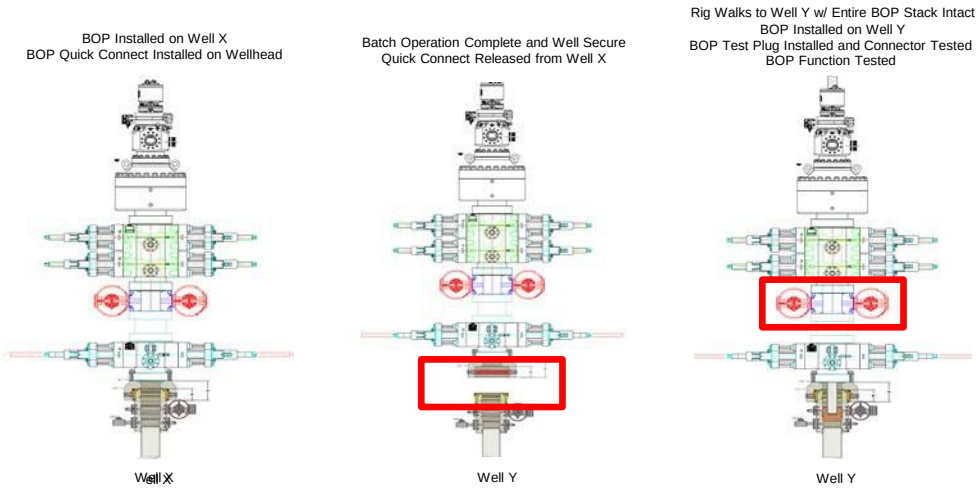
XTO Energy feels break testing and our current procedures meet the intent of CFR Title 43 Part 317 0and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often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

Procedures

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

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

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



Summary

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

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

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

1. After a full BOP test is conducted on the first well on the pad.

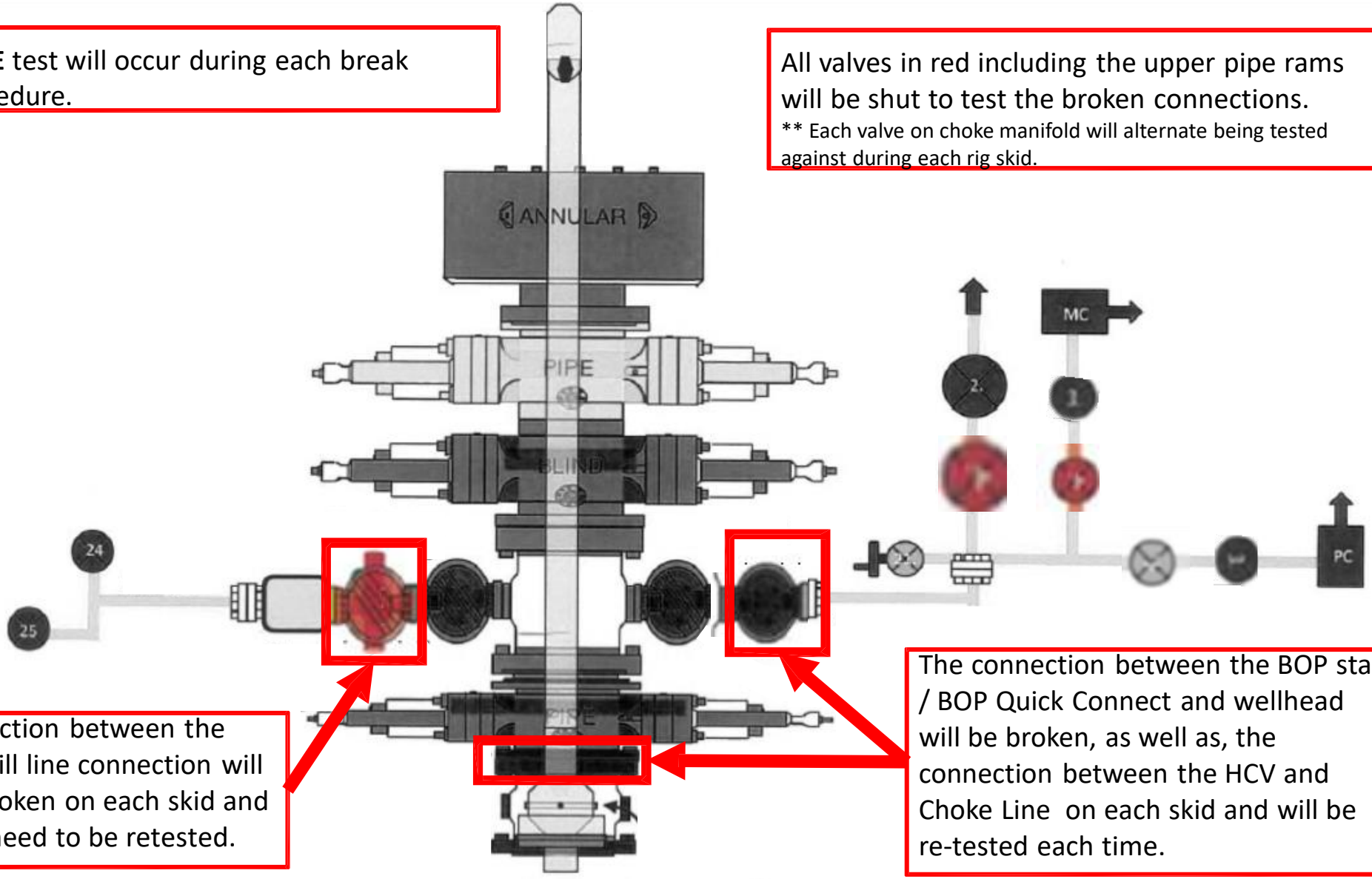
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.

3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.

4. Full BOP test will be required prior to drilling the production hole.

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

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



The connection between the 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.

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

XTO Energy Inc.
PLU 19 Dog Town Draw 321H
Projected TD: 26810.68' MD / 11477' TVD
SHL: 1146' FNL & 2455' FEL , Section 19, T24S, R30E
BHL: 230' FSL & 2549' 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	650'	Water
Top of Salt	1053'	Water
Base of Salt	3246'	Water
Delaware	3440'	Water
Brushy Canyon	5938'	Water/Oil/Gas
Bone Spring	7234'	Water
Avalon	7404'	Water/Oil/Gas
1st Bone Spring	8220'	Water/Oil/Gas
2nd Bone Spring	9038'	Water/Oil/Gas
3rd Bone Spring	10132'	Water/Oil/Gas
Wolfcamp	10523'	Water/Oil/Gas
Wolfcamp X	10544'	Water/Oil/Gas
Wolfcamp Y	10622'	Water/Oil/Gas
Wolfcamp A	10664'	Water/Oil/Gas
Wolfcamp B	10998'	Water/Oil/Gas
Wolfcamp D	11447'	Water/Oil/Gas
Target/Land Curve	11477'	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 @ 750' (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 10665.19' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 26810.68 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 10365.19 feet).

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 750'	9.625	40	J-55	BTC	New	1.56	8.39	21.00
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	1.94	2.92	1.76
8.75	4000' – 10665.19'	7.625	29.7	HC L-80	Flush Joint	New	1.41	2.24	2.05
6.75	0' – 10565.19'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.63	1.87
6.75	10565.19' - 26810.68'	5.5	20	RY P-110	Semi-Flush	New	1.05	1.50	1.87

· 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 +/- 750'

Lead: 150 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 +/- 10665.19'
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: 430 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)
TOC: Brushy Canyon @ 5938
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 (5938') 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 +/- 26810.68'

Lead: 20 sxs NeoCem (mixed at 13.2 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 10365.19 feet
Tail: 1140 sxs VersaCem (mixed at 14.5 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 10865.19 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 4875 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 nippling up on the 9.625, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nippling 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' - 750'	12.25	FW/Native	8.4-8.9	35-40	NC
750' - 10665.19'	8.75	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
10665.19' - 26810.68'	6.75	OBM	12.4-12.9	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. A Kelly cock will be in the drill string at all times.
B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
C. H2S monitors will be on location when drilling below the 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 180 to 200 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 7400 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.

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.

<u>General Procedure While Drilling</u>

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 332205
	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.	4/17/2024