

<b>Well Name:</b> POKER LAKE UNIT 19 DTD	<b>Well Location:</b> T24S / R30E / SEC 19 / NWNE /	<b>County or Parish/State:</b>
<b>Well Number:</b> 409H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM002860	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b> NMNM07016Z
<b>US Well Number:</b> 3001553984	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> XTO PERMIAN OPERATING LLC

## Notice of Intent

**Sundry ID: 2777318**

Type of Submission: Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted: 02/29/2024**

**Time Sundry Submitted: 05:58**

**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, proposed total depth, and formation (pool). FROM: TO: SHL: 196' FNL & 1656' FEL of Section 19-T24S-R30E 271' FNL & 1656' FEL of Section 19-T24S-R30E FTP: 100' FSL & 1530' FEL of Section 18-T24S-R30E 100' FNL & 1006' FEL of Section 19-T24S-R30E LTP: 2310' FSL & 1530' FEL of Section 31-T23S-R30E 330' FSL & 1019' FEL of Section 31-T25S-R30E BHL: 2440' FSL & 1530' FEL of Section 31-T23S-R30E 230' FSL & 1019' FEL of Section 31-T25S-R30E Proposed total depth will change from 27888' MD; 9331' TVD (Bone Springs) to 26783' MD; TVD 11507' (Wolfcamp). See attached Drilling Plan for updated casing and cement program. Attachments: C-102, Drilling Plan, Directional Drilling Plan, MBS, BOP Variance, Well Control Plan

## NOI Attachments

## Procedure Description

Well\_Control\_Plan\_w\_CFR\_43\_3172\_20240229055735.pdf

BOP\_Variance\_new\_Language\_BOP\_BTV\_20240229055714.pdf

3\_String\_Slimhole\_HBE0000479\_4\_20240229055656.pdf

Well\_Plan\_Report\_\_\_\_Poker\_Lake\_Unit\_19\_DTD\_South\_409H\_20240229055633.pdf

PLU\_19\_DTD\_409H\_Pad\_D\_Drilling\_Plan\_20240229055606.pdf

POKER\_LAKE\_UNIT\_19\_DTD\_409H\_C\_102\_FINAL\_20240229055535.pdf

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**County or Parish/State:**

**Well Number:** 409H

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**Allottee or Tribe Name:**

**Lease Number:** NMNM002860

**Unit or CA Name:**

**Unit or CA Number:**  
NMNM07016Z

**US Well Number:** 3001553984

**Well Status:** Approved Application for Permit to Drill

**Operator:** XTO PERMIAN OPERATING LLC

Conditions of Approval

Additional

Sec19\_24S\_30E\_NMP\_Sundry\_2777318\_Poker\_Lake\_Unit\_19\_DTD\_409H\_COAs\_20240328091918.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:** RANELL (RUSTY) KLEIN

**Signed on:** FEB 29, 2024 05:57 AM

**Name:** XTO PERMIAN OPERATING LLC

**Title:** Regulatory Analyst

**Street Address:** 6401 HOLIDAY HILL ROAD BLDG 5

**City:** MIDLAND **State:** TX

**Phone:** (432) 620-6700

**Email address:** RANELL.KLEIN@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:** 04/01/2024

**Signature:** Chris Walls

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	XTO Permian Operating LLC
<b>WELL NAME &amp; NO.:</b>	Poker Lake Unit 19 DTD 409H
<b>LOCATION:</b>	Sec 19-24S-30E-NMP
<b>COUNTY:</b>	Eddy County, New Mexico

*Changes approved through engineering via **Sundry 2777318** on 03/28/2024. Any previous COAs not addressed within the updated COAs still apply.*

### COA

<b>H<sub>2</sub>S</b>	<input checked="" type="radio"/> No	<input type="radio"/> Yes		
<b>Potash / WIPP</b>	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P	<input type="checkbox"/> WIPP
<b>Cave / Karst</b>	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High	<input type="radio"/> Critical
<b>Wellhead</b>	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both	<input type="radio"/> Diverter
<b>Cementing</b>	<input type="checkbox"/> Primary Squeeze	<input checked="" type="checkbox"/> Cont. Squeeze	<input checked="" type="checkbox"/> EchoMeter	<input type="checkbox"/> DV Tool
<b>Special Req</b>	<input checked="" type="checkbox"/> Break Testing	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
<b>Variance</b>	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Casing Clearance	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Capitan Reef
<b>Variance</b>	<input type="checkbox"/> Four-String	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Fluid-Filled	<input type="checkbox"/> Open Annulus
<input type="checkbox"/> <b>Batch APD / Sundry</b>				

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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](mailto: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 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

**A. CASING**

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80,

or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. **Wait on cement (WOC) for Potash Areas:** After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. **Wait on cement (WOC) for Water Basin:** After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

## **B. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of



API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)



- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - e. The results of the test shall be reported to the appropriate BLM office.
  - f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
  - h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.
- C. **DRILLING MUD:** Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.
- D. **WASTE MATERIAL AND FLUIDS:** All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

### 10,000 PSI Annular BOP Variance Request

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

#### 1. Component and Preventer Compatibility Tables

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

8-1/2" Production Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

## 2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per 43.CFR.3172 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

### General Procedure While Drilling

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

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

#### General Procedure While Tripping

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

#### General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

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



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

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

**Background**

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

**Supporting Documentation**

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



Figure 1: Winch System attached to BOP Stack



Figure 2: BOP Winch System

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

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API STANDARD 53

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

Component to be Pressure Tested	Pressure Test—Low Pressure <sup>ac</sup> psig (MPa)	Pressure Test—High Pressure <sup>ac</sup>	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer <sup>b</sup>	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 <sup>bd</sup>	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 <sup>a</sup>	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes <sup>a</sup>	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	

<sup>a</sup> 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.

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

<sup>c</sup> 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.

<sup>d</sup> 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.

<sup>e</sup> 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

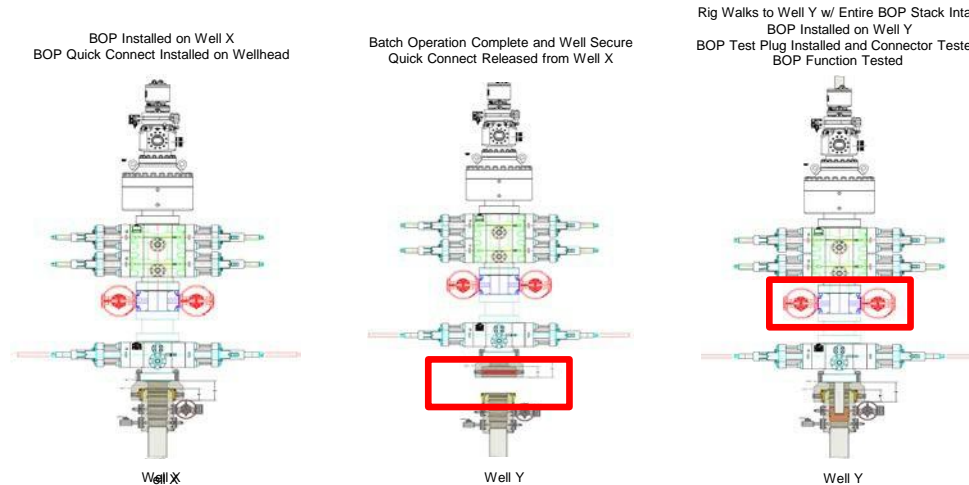
each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the CFR Title 43 Part 3170.

### **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.

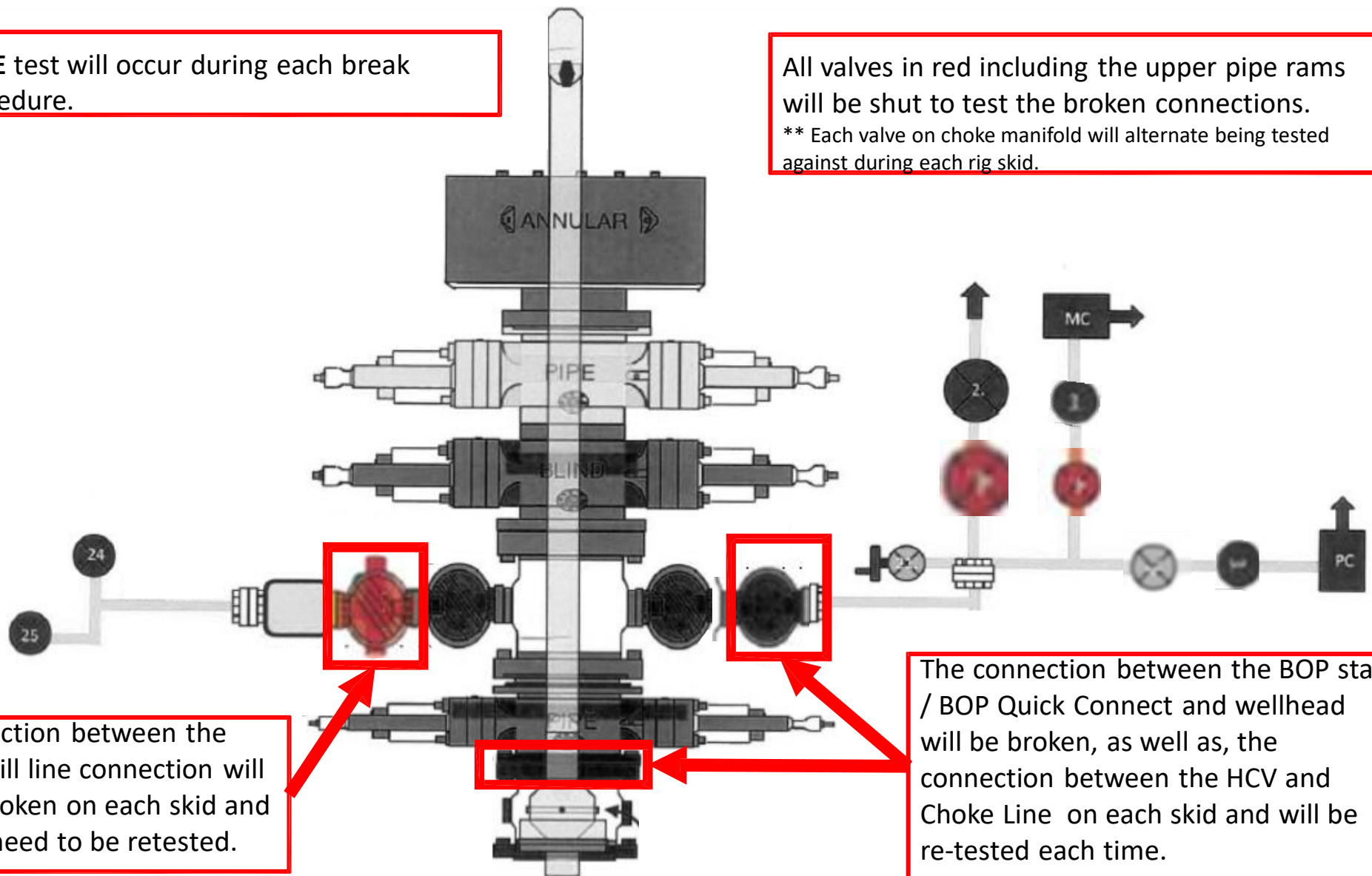
Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met:

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.

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



## Well Plan Report - Poker Lake Unit 19 DTD South 409H

Measured Depth: 26783.14 ft

TVD RKB: 11507.00 ft

### Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 440160.30 ft

Easting: 628744.80 ft

RKB: 3203.00 ft

Ground Level: 3171.00 ft

North Reference: Grid

Convergence Angle: 0.22 Deg

### Plan Sections

Poker Lake Unit 19 DTD South 409H

Measured		TVD		Build		Turn	Dogleg	
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft) Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00
1466.74	7.33	74.32	1465.73	6.33	22.57	2.00	0.00	2.00
6375.43	7.33	74.32	6334.27	175.67	625.93	0.00	0.00	0.00
6742.17	0.00	0.00	6700.00	182.00	648.50	-2.00	0.00	2.00
10832.97	0.00	0.00	10790.80	182.00	648.50	0.00	0.00	0.00
11957.97	90.00	179.72	11507.00	-534.19	651.97	8.00	0.00	8.00
26683.13	90.00	179.72	11507.00	-15259.17	723.42	0.00	0.00	0.00 LTP 25
26783.14	90.00	179.72	11507.00	-15359.19	723.91	0.00	0.00	0.00 BHL 25

### Position Uncertainty

Poker Lake Unit 19 DTD South 409H

Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool
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Depth	Inclination	Azimuth	RKB	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth	Used
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.700	0.000	0.350	0.000	2.300	0.000	0.000	0.751	0.220	112.264	MWD+IFR1+MS
200.000	0.000	0.000	200.000	1.112	0.000	0.861	0.000	2.309	0.000	0.000	1.259	0.627	122.711	MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.497	0.000	1.271	0.000	2.325	0.000	0.000	1.698	0.986	125.469	MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.871	0.000	1.658	0.000	2.346	0.000	0.000	2.108	1.344	126.713	MWD+IFR1+MS
500.000	0.000	0.000	500.000	2.240	0.000	2.034	0.000	2.373	0.000	0.000	2.503	1.701	127.419	MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.607	0.000	2.405	0.000	2.405	0.000	0.000	2.888	2.059	127.873	MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.971	0.000	2.773	0.000	2.441	0.000	0.000	3.267	2.417	128.190	MWD+IFR1+MS
800.000	0.000	0.000	800.000	3.334	0.000	3.138	0.000	2.483	0.000	0.000	3.642	2.775	128.423	MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.696	0.000	3.502	0.000	2.528	0.000	0.000	4.014	3.133	128.602	MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	4.058	0.000	3.865	0.000	2.577	0.000	0.000	4.384	3.491	128.744	MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	4.419	0.000	4.228	0.000	2.630	0.000	0.000	4.752	3.849	128.859	MWD+IFR1+MS
1200.000	2.000	74.323	1199.980	5.009	0.000	4.509	0.000	2.686	0.000	0.000	5.197	4.293	-43.753	MWD+IFR1+MS
1300.000	4.000	74.323	1299.838	5.782	0.000	4.878	0.000	2.745	0.000	0.000	5.832	4.829	-27.853	MWD+IFR1+MS
1400.000	6.000	74.323	1399.452	6.476	0.000	5.245	0.000	2.810	0.000	0.000	6.499	5.241	-18.991	MWD+IFR1+MS
1466.736	7.335	74.323	1465.735	6.764	0.000	5.479	0.000	2.852	0.000	0.000	6.796	5.478	-17.285	MWD+IFR1+MS
1500.000	7.335	74.323	1498.727	6.858	0.000	5.591	0.000	2.872	0.000	0.000	6.890	5.590	-17.239	MWD+IFR1+MS
1600.000	7.335	74.323	1597.909	7.137	0.000	5.943	0.000	2.941	0.000	0.000	7.168	5.943	-16.876	MWD+IFR1+MS
1700.000	7.335	74.323	1697.090	7.439	0.000	6.313	0.000	3.013	0.000	0.000	7.466	6.313	-15.797	MWD+IFR1+MS
1800.000	7.335	74.323	1796.272	7.746	0.000	6.682	0.000	3.088	0.000	0.000	7.770	6.682	-14.705	MWD+IFR1+MS
1900.000	7.335	74.323	1895.454	8.058	0.000	7.051	0.000	3.166	0.000	0.000	8.081	7.050	-13.605	MWD+IFR1+MS
2000.000	7.335	74.323	1994.636	8.375	0.000	7.420	0.000	3.246	0.000	0.000	8.397	7.417	-12.498	MWD+IFR1+MS
2100.000	7.335	74.323	2093.817	8.696	0.000	7.789	0.000	3.328	0.000	0.000	8.717	7.783	-11.388	MWD+IFR1+MS
2200.000	7.335	74.323	2192.999	9.021	0.000	8.157	0.000	3.412	0.000	0.000	9.042	8.149	-10.278	MWD+IFR1+MS
2300.000	7.335	74.323	2292.181	9.350	0.000	8.526	0.000	3.498	0.000	0.000	9.370	8.514	-9.172	MWD+IFR1+MS
2400.000	7.335	74.323	2391.363	9.681	0.000	8.894	0.000	3.586	0.000	0.000	9.702	8.879	-8.071	MWD+IFR1+MS
2500.000	7.335	74.323	2490.544	10.015	0.000	9.262	0.000	3.675	0.000	0.000	10.037	9.243	-6.980	MWD+IFR1+MS
2600.000	7.335	74.323	2589.726	10.351	0.000	9.630	0.000	3.767	0.000	0.000	10.374	9.607	-5.901	MWD+IFR1+MS
2700.000	7.335	74.323	2688.908	10.690	0.000	9.998	0.000	3.860	0.000	0.000	10.714	9.971	-4.837	MWD+IFR1+MS
2800.000	7.335	74.323	2788.089	11.030	0.000	10.366	0.000	3.954	0.000	0.000	11.056	10.334	-3.791	MWD+IFR1+MS
2900.000	7.335	74.323	2887.271	11.373	0.000	10.734	0.000	4.050	0.000	0.000	11.400	10.698	-2.763	MWD+IFR1+MS

3000.000	7.335	74.323	2986.453	11.717	0.000	11.101	0.000	4.148	0.000	0.000	11.746	11.061	-1.757	MWD+IFR1+MS
3100.000	7.335	74.323	3085.635	12.063	0.000	11.469	0.000	4.247	0.000	0.000	12.093	11.424	-0.774	MWD+IFR1+MS
3200.000	7.335	74.323	3184.816	12.410	0.000	11.837	0.000	4.348	0.000	0.000	12.442	11.787	0.185	MWD+IFR1+MS
3300.000	7.335	74.323	3283.998	12.758	0.000	12.204	0.000	4.450	0.000	0.000	12.792	12.150	1.118	MWD+IFR1+MS
3400.000	7.335	74.323	3383.180	13.107	0.000	12.572	0.000	4.554	0.000	0.000	13.143	12.512	2.025	MWD+IFR1+MS
3500.000	7.335	74.323	3482.362	13.458	0.000	12.940	0.000	4.659	0.000	0.000	13.495	12.875	2.906	MWD+IFR1+MS
3600.000	7.335	74.323	3581.543	13.809	0.000	13.307	0.000	4.766	0.000	0.000	13.848	13.238	3.760	MWD+IFR1+MS
3700.000	7.335	74.323	3680.725	14.162	0.000	13.675	0.000	4.874	0.000	0.000	14.202	13.601	4.586	MWD+IFR1+MS
3800.000	7.335	74.323	3779.907	14.515	0.000	14.042	0.000	4.984	0.000	0.000	14.557	13.964	5.385	MWD+IFR1+MS
3900.000	7.335	74.323	3879.088	14.869	0.000	14.409	0.000	5.095	0.000	0.000	14.913	14.327	6.158	MWD+IFR1+MS
4000.000	7.335	74.323	3978.270	15.224	0.000	14.777	0.000	5.208	0.000	0.000	15.270	14.690	6.904	MWD+IFR1+MS
4100.000	7.335	74.323	4077.452	15.580	0.000	15.144	0.000	5.322	0.000	0.000	15.627	15.053	7.623	MWD+IFR1+MS
4200.000	7.335	74.323	4176.634	15.936	0.000	15.511	0.000	5.438	0.000	0.000	15.984	15.416	8.318	MWD+IFR1+MS
4300.000	7.335	74.323	4275.815	16.293	0.000	15.879	0.000	5.556	0.000	0.000	16.342	15.779	8.987	MWD+IFR1+MS
4400.000	7.335	74.323	4374.997	16.650	0.000	16.246	0.000	5.675	0.000	0.000	16.701	16.143	9.632	MWD+IFR1+MS
4500.000	7.335	74.323	4474.179	17.008	0.000	16.613	0.000	5.796	0.000	0.000	17.060	16.506	10.253	MWD+IFR1+MS
4600.000	7.335	74.323	4573.361	17.366	0.000	16.981	0.000	5.919	0.000	0.000	17.419	16.870	10.852	MWD+IFR1+MS
4700.000	7.335	74.323	4672.542	17.725	0.000	17.348	0.000	6.043	0.000	0.000	17.779	17.233	11.429	MWD+IFR1+MS
4800.000	7.335	74.323	4771.724	18.085	0.000	17.715	0.000	6.169	0.000	0.000	18.139	17.597	11.984	MWD+IFR1+MS
4900.000	7.335	74.323	4870.906	18.444	0.000	18.082	0.000	6.297	0.000	0.000	18.499	17.961	12.520	MWD+IFR1+MS
5000.000	7.335	74.323	4970.087	18.804	0.000	18.450	0.000	6.427	0.000	0.000	18.860	18.325	13.035	MWD+IFR1+MS
5100.000	7.335	74.323	5069.269	19.165	0.000	18.817	0.000	6.559	0.000	0.000	19.221	18.689	13.531	MWD+IFR1+MS
5200.000	7.335	74.323	5168.451	19.526	0.000	19.184	0.000	6.692	0.000	0.000	19.582	19.053	14.010	MWD+IFR1+MS
5300.000	7.335	74.323	5267.633	19.887	0.000	19.551	0.000	6.827	0.000	0.000	19.944	19.417	14.470	MWD+IFR1+MS
5400.000	7.335	74.323	5366.814	20.248	0.000	19.918	0.000	6.964	0.000	0.000	20.305	19.781	14.914	MWD+IFR1+MS
5500.000	7.335	74.323	5465.996	20.610	0.000	20.286	0.000	7.104	0.000	0.000	20.667	20.146	15.342	MWD+IFR1+MS
5600.000	7.335	74.323	5565.178	20.972	0.000	20.653	0.000	7.245	0.000	0.000	21.029	20.510	15.755	MWD+IFR1+MS
5700.000	7.335	74.323	5664.360	21.335	0.000	21.020	0.000	7.388	0.000	0.000	21.391	20.875	16.153	MWD+IFR1+MS
5800.000	7.335	74.323	5763.541	21.697	0.000	21.387	0.000	7.533	0.000	0.000	21.754	21.240	16.536	MWD+IFR1+MS
5900.000	7.335	74.323	5862.723	22.060	0.000	21.754	0.000	7.681	0.000	0.000	22.116	21.605	16.907	MWD+IFR1+MS
6000.000	7.335	74.323	5961.905	22.423	0.000	22.121	0.000	7.830	0.000	0.000	22.479	21.969	17.264	MWD+IFR1+MS
6100.000	7.335	74.323	6061.086	22.786	0.000	22.488	0.000	7.982	0.000	0.000	22.842	22.334	17.608	MWD+IFR1+MS
6200.000	7.335	74.323	6160.268	23.150	0.000	22.856	0.000	8.136	0.000	0.000	23.205	22.700	17.941	MWD+IFR1+MS

6300.000	7.335	74.323	6259.450	23.513	0.000	23.223	0.000	8.292	0.000	0.000	23.568	23.065	18.262	MWD+IFR1+MS
6375.433	7.335	74.323	6334.265	23.785	0.000	23.497	0.000	8.411	0.000	0.000	23.837	23.340	18.391	MWD+IFR1+MS
6400.000	6.843	74.323	6358.645	23.877	0.000	23.585	0.000	8.450	0.000	0.000	23.923	23.429	18.387	MWD+IFR1+MS
6500.000	4.843	74.323	6458.120	24.273	0.000	23.945	0.000	8.610	0.000	0.000	24.311	23.796	16.755	MWD+IFR1+MS
6600.000	2.843	74.323	6557.890	24.704	0.000	24.305	0.000	8.770	0.000	0.000	24.761	24.161	13.430	MWD+IFR1+MS
6700.000	0.843	74.323	6657.833	25.100	0.000	24.660	0.000	8.927	0.000	0.000	25.207	24.519	11.035	MWD+IFR1+MS
6742.168	0.000	0.000	6700.000	24.691	0.000	25.328	0.000	8.993	0.000	0.000	25.351	24.667	10.788	MWD+IFR1+MS
6800.000	0.000	0.000	6757.832	24.891	0.000	25.516	0.000	9.084	0.000	0.000	25.539	24.867	10.805	MWD+IFR1+MS
6900.000	0.000	0.000	6857.832	25.236	0.000	25.846	0.000	9.242	0.000	0.000	25.868	25.214	10.595	MWD+IFR1+MS
7000.000	0.000	0.000	6957.832	25.585	0.000	26.179	0.000	9.403	0.000	0.000	26.199	25.565	10.156	MWD+IFR1+MS
7100.000	0.000	0.000	7057.832	25.933	0.000	26.513	0.000	9.566	0.000	0.000	26.530	25.916	9.701	MWD+IFR1+MS
7200.000	0.000	0.000	7157.832	26.282	0.000	26.848	0.000	9.732	0.000	0.000	26.863	26.267	9.230	MWD+IFR1+MS
7300.000	0.000	0.000	7257.832	26.631	0.000	27.183	0.000	9.901	0.000	0.000	27.196	26.618	8.742	MWD+IFR1+MS
7400.000	0.000	0.000	7357.832	26.981	0.000	27.519	0.000	10.073	0.000	0.000	27.530	26.969	8.236	MWD+IFR1+MS
7500.000	0.000	0.000	7457.832	27.330	0.000	27.855	0.000	10.247	0.000	0.000	27.865	27.320	7.712	MWD+IFR1+MS
7600.000	0.000	0.000	7557.832	27.680	0.000	28.192	0.000	10.424	0.000	0.000	28.200	27.672	7.169	MWD+IFR1+MS
7700.000	0.000	0.000	7657.832	28.030	0.000	28.529	0.000	10.604	0.000	0.000	28.536	28.023	6.606	MWD+IFR1+MS
7800.000	0.000	0.000	7757.832	28.381	0.000	28.867	0.000	10.787	0.000	0.000	28.873	28.375	6.023	MWD+IFR1+MS
7900.000	0.000	0.000	7857.832	28.731	0.000	29.206	0.000	10.973	0.000	0.000	29.210	28.727	5.419	MWD+IFR1+MS
8000.000	0.000	0.000	7957.832	29.082	0.000	29.545	0.000	11.161	0.000	0.000	29.548	29.079	4.794	MWD+IFR1+MS
8100.000	0.000	0.000	8057.832	29.433	0.000	29.884	0.000	11.353	0.000	0.000	29.886	29.430	4.147	MWD+IFR1+MS
8200.000	0.000	0.000	8157.832	29.784	0.000	30.224	0.000	11.547	0.000	0.000	30.225	29.782	3.478	MWD+IFR1+MS
8300.000	0.000	0.000	8257.832	30.135	0.000	30.564	0.000	11.744	0.000	0.000	30.565	30.134	2.786	MWD+IFR1+MS
8400.000	0.000	0.000	8357.832	30.486	0.000	30.904	0.000	11.944	0.000	0.000	30.905	30.486	2.070	MWD+IFR1+MS
8500.000	0.000	0.000	8457.832	30.838	0.000	31.245	0.000	12.147	0.000	0.000	31.246	30.838	1.331	MWD+IFR1+MS
8600.000	0.000	0.000	8557.832	31.190	0.000	31.587	0.000	12.352	0.000	0.000	31.587	31.190	0.569	MWD+IFR1+MS
8700.000	0.000	0.000	8657.832	31.542	0.000	31.929	0.000	12.561	0.000	0.000	31.929	31.542	-0.217	MWD+IFR1+MS
8800.000	0.000	0.000	8757.832	31.894	0.000	32.271	0.000	12.773	0.000	0.000	32.271	31.894	-1.026	MWD+IFR1+MS
8900.000	0.000	0.000	8857.832	32.246	0.000	32.613	0.000	12.987	0.000	0.000	32.614	32.245	-1.858	MWD+IFR1+MS
9000.000	0.000	0.000	8957.832	32.598	0.000	32.956	0.000	13.205	0.000	0.000	32.957	32.597	-2.714	MWD+IFR1+MS
9100.000	0.000	0.000	9057.832	32.951	0.000	33.299	0.000	13.425	0.000	0.000	33.301	32.949	-3.591	MWD+IFR1+MS
9200.000	0.000	0.000	9157.832	33.303	0.000	33.643	0.000	13.649	0.000	0.000	33.645	33.301	-4.489	MWD+IFR1+MS
9300.000	0.000	0.000	9257.832	33.656	0.000	33.987	0.000	13.875	0.000	0.000	33.990	33.653	-5.407	MWD+IFR1+MS

9400.000	0.000	0.000	9357.832	34.009	0.000	34.331	0.000	14.105	0.000	0.000	34.335	34.005	-6.344	MWD+IFR1+MS
9500.000	0.000	0.000	9457.832	34.362	0.000	34.675	0.000	14.337	0.000	0.000	34.680	34.356	-7.299	MWD+IFR1+MS
9600.000	0.000	0.000	9557.832	34.715	0.000	35.020	0.000	14.572	0.000	0.000	35.026	34.708	-8.269	MWD+IFR1+MS
9700.000	0.000	0.000	9657.832	35.068	0.000	35.365	0.000	14.811	0.000	0.000	35.373	35.060	-9.253	MWD+IFR1+MS
9800.000	0.000	0.000	9757.832	35.421	0.000	35.710	0.000	15.052	0.000	0.000	35.720	35.411	-10.249	MWD+IFR1+MS
9900.000	0.000	0.000	9857.832	35.774	0.000	36.055	0.000	15.297	0.000	0.000	36.067	35.763	-11.254	MWD+IFR1+MS
10000.000	0.000	0.000	9957.832	36.128	0.000	36.401	0.000	15.544	0.000	0.000	36.414	36.114	-12.267	MWD+IFR1+MS
10100.000	0.000	0.000	10057.832	36.481	0.000	36.747	0.000	15.795	0.000	0.000	36.763	36.466	-13.284	MWD+IFR1+MS
10200.000	0.000	0.000	10157.832	36.835	0.000	37.093	0.000	16.048	0.000	0.000	37.111	36.817	-14.303	MWD+IFR1+MS
10300.000	0.000	0.000	10257.832	37.189	0.000	37.440	0.000	16.305	0.000	0.000	37.460	37.168	-15.322	MWD+IFR1+MS
10400.000	0.000	0.000	10357.832	37.543	0.000	37.786	0.000	16.564	0.000	0.000	37.809	37.520	-16.338	MWD+IFR1+MS
10500.000	0.000	0.000	10457.832	37.897	0.000	38.133	0.000	16.827	0.000	0.000	38.159	37.871	-17.348	MWD+IFR1+MS
10600.000	0.000	0.000	10557.832	38.251	0.000	38.480	0.000	17.093	0.000	0.000	38.508	38.222	-18.350	MWD+IFR1+MS
10700.000	0.000	0.000	10657.832	38.605	0.000	38.827	0.000	17.361	0.000	0.000	38.859	38.573	-19.342	MWD+IFR1+MS
10800.000	0.000	0.000	10757.832	38.959	0.000	39.175	0.000	17.633	0.000	0.000	39.209	38.924	-20.321	MWD+IFR1+MS
10832.968	0.000	0.000	10790.800	39.074	0.000	39.288	0.000	17.723	0.000	0.000	39.323	39.040	-20.443	MWD+IFR1+MS
10900.000	5.363	179.722	10857.734	39.161	0.000	39.510	-0.000	17.908	0.000	0.000	39.552	39.307	-24.723	MWD+IFR1+MS
11000.000	13.363	179.722	10956.322	39.462	0.000	39.824	-0.000	18.227	0.000	0.000	40.422	39.793	102.574	MWD+IFR1+MS
11100.000	21.363	179.722	11051.688	39.501	0.000	40.127	-0.000	18.688	0.000	0.000	41.661	40.101	97.021	MWD+IFR1+MS
11200.000	29.363	179.722	11141.976	38.990	0.000	40.412	-0.000	19.337	0.000	0.000	42.752	40.384	95.862	MWD+IFR1+MS
11300.000	37.363	179.722	11225.429	38.002	0.000	40.678	-0.000	20.207	0.000	0.000	43.669	40.646	95.498	MWD+IFR1+MS
11400.000	45.363	179.722	11300.422	36.635	0.000	40.921	-0.000	21.301	0.000	0.000	44.404	40.884	95.460	MWD+IFR1+MS
11500.000	53.363	179.722	11365.496	35.020	0.000	41.140	-0.000	22.599	0.000	0.000	44.959	41.097	95.623	MWD+IFR1+MS
11600.000	61.363	179.722	11419.385	33.326	0.000	41.333	-0.000	24.062	0.000	0.000	45.347	41.283	95.941	MWD+IFR1+MS
11700.000	69.363	179.722	11461.038	31.755	0.000	41.499	-0.000	25.638	0.000	0.000	45.590	41.440	96.394	MWD+IFR1+MS
11800.000	77.363	179.722	11489.647	30.534	0.000	41.636	-0.000	27.274	0.000	0.000	45.718	41.567	96.957	MWD+IFR1+MS
11900.000	85.363	179.722	11504.653	29.886	0.000	41.744	-0.000	28.912	0.000	0.000	45.769	41.663	97.584	MWD+IFR1+MS
11957.968	90.000	179.722	11506.997	29.302	0.000	41.789	-0.000	29.302	0.000	0.000	45.782	41.702	97.931	MWD+IFR1+MS
12000.000	90.000	179.722	11506.997	29.385	0.000	41.819	-0.000	29.385	0.000	0.000	45.789	41.727	98.186	MWD+IFR1+MS
12100.000	90.000	179.722	11506.997	29.542	0.000	41.904	-0.000	29.542	0.000	0.000	45.807	41.799	98.831	MWD+IFR1+MS
12200.000	90.000	179.722	11506.997	29.723	0.000	42.005	-0.000	29.723	0.000	0.000	45.826	41.885	99.527	MWD+IFR1+MS
12300.000	90.000	179.722	11506.997	29.923	0.000	42.119	-0.000	29.923	0.000	0.000	45.848	41.984	100.278	MWD+IFR1+MS
12400.000	90.000	179.722	11506.997	30.142	0.000	42.247	-0.000	30.142	0.000	0.000	45.873	42.094	101.095	MWD+IFR1+MS



12500.000	90.000	179.722	11506.997	30.379	0.000	42.389	-0.000	30.379	0.000	0.000	45.900	42.216	101.986	MWD+IFR1+MS
12600.000	90.000	179.722	11506.997	30.635	0.000	42.544	-0.000	30.635	0.000	0.000	45.930	42.348	102.965	MWD+IFR1+MS
12700.000	90.000	179.722	11506.997	30.909	0.000	42.712	-0.000	30.909	0.000	0.000	45.964	42.491	104.047	MWD+IFR1+MS
12800.000	90.000	179.722	11506.997	31.200	0.000	42.893	-0.000	31.200	0.000	0.000	46.001	42.643	105.247	MWD+IFR1+MS
12900.000	90.000	179.722	11506.997	31.508	0.000	43.086	-0.000	31.508	0.000	0.000	46.044	42.804	106.585	MWD+IFR1+MS
13000.000	90.000	179.722	11506.997	31.833	0.000	43.293	-0.000	31.833	0.000	0.000	46.091	42.973	108.083	MWD+IFR1+MS
13100.000	90.000	179.722	11506.997	32.173	0.000	43.512	-0.000	32.173	0.000	0.000	46.145	43.149	109.767	MWD+IFR1+MS
13200.000	90.000	179.722	11506.997	32.529	0.000	43.743	-0.000	32.529	0.000	0.000	46.207	43.330	111.662	MWD+IFR1+MS
13300.000	90.000	179.722	11506.997	32.899	0.000	43.986	-0.000	32.899	0.000	0.000	46.278	43.515	113.795	MWD+IFR1+MS
13400.000	90.000	179.722	11506.997	33.284	0.000	44.242	-0.000	33.284	0.000	0.000	46.359	43.701	116.191	MWD+IFR1+MS
13500.000	90.000	179.722	11506.997	33.683	0.000	44.509	-0.000	33.683	0.000	0.000	46.454	43.886	118.863	MWD+IFR1+MS
13600.000	90.000	179.722	11506.997	34.095	0.000	44.787	-0.000	34.095	0.000	0.000	46.564	44.069	121.814	MWD+IFR1+MS
13700.000	90.000	179.722	11506.997	34.520	0.000	45.077	-0.000	34.520	0.000	0.000	46.692	44.245	125.022	MWD+IFR1+MS
13800.000	90.000	179.722	11506.997	34.958	0.000	45.378	-0.000	34.958	0.000	0.000	46.839	44.413	128.436	MWD+IFR1+MS
13900.000	90.000	179.722	11506.997	35.407	0.000	45.689	-0.000	35.407	0.000	0.000	47.009	44.570	131.976	MWD+IFR1+MS
14000.000	90.000	179.722	11506.997	35.868	0.000	46.012	-0.000	35.868	0.000	0.000	47.203	44.715	-44.457	MWD+IFR1+MS
14100.000	90.000	179.722	11506.997	36.340	0.000	46.344	-0.000	36.340	0.000	0.000	47.421	44.847	-40.968	MWD+IFR1+MS
14200.000	90.000	179.722	11506.997	36.823	0.000	46.687	-0.000	36.823	0.000	0.000	47.663	44.965	-37.650	MWD+IFR1+MS
14300.000	90.000	179.722	11506.997	37.316	0.000	47.040	-0.000	37.316	0.000	0.000	47.928	45.071	-34.568	MWD+IFR1+MS
14400.000	90.000	179.722	11506.997	37.819	0.000	47.403	-0.000	37.819	0.000	0.000	48.215	45.166	-31.760	MWD+IFR1+MS
14500.000	90.000	179.722	11506.997	38.332	0.000	47.775	-0.000	38.332	0.000	0.000	48.521	45.250	-29.234	MWD+IFR1+MS
14600.000	90.000	179.722	11506.997	38.853	0.000	48.156	-0.000	38.853	0.000	0.000	48.846	45.327	-26.984	MWD+IFR1+MS
14700.000	90.000	179.722	11506.997	39.384	0.000	48.546	-0.000	39.384	0.000	0.000	49.188	45.396	-24.988	MWD+IFR1+MS
14800.000	90.000	179.722	11506.997	39.922	0.000	48.946	-0.000	39.922	0.000	0.000	49.545	45.460	-23.221	MWD+IFR1+MS
14900.000	90.000	179.722	11506.997	40.469	0.000	49.354	-0.000	40.469	0.000	0.000	49.915	45.518	-21.657	MWD+IFR1+MS
15000.000	90.000	179.722	11506.997	41.023	0.000	49.770	-0.000	41.023	0.000	0.000	50.299	45.573	-20.269	MWD+IFR1+MS
15100.000	90.000	179.722	11506.997	41.585	0.000	50.195	-0.000	41.585	0.000	0.000	50.695	45.625	-19.035	MWD+IFR1+MS
15200.000	90.000	179.722	11506.997	42.154	0.000	50.627	-0.000	42.154	0.000	0.000	51.102	45.674	-17.933	MWD+IFR1+MS
15300.000	90.000	179.722	11506.997	42.730	0.000	51.068	-0.000	42.730	0.000	0.000	51.520	45.721	-16.947	MWD+IFR1+MS
15400.000	90.000	179.722	11506.997	43.312	0.000	51.516	-0.000	43.312	0.000	0.000	51.948	45.766	-16.060	MWD+IFR1+MS
15500.000	90.000	179.722	11506.997	43.901	0.000	51.971	-0.000	43.901	0.000	0.000	52.385	45.810	-15.259	MWD+IFR1+MS
15600.000	90.000	179.722	11506.997	44.496	0.000	52.434	-0.000	44.496	0.000	0.000	52.831	45.853	-14.533	MWD+IFR1+MS
15700.000	90.000	179.722	11506.997	45.096	0.000	52.904	-0.000	45.096	0.000	0.000	53.285	45.895	-13.873	MWD+IFR1+MS



15800.000	90.000	179.722	11506.997	45.702	0.000	53.380	-0.000	45.702	0.000	0.000	53.748	45.936	-13.271	MWD+IFR1+MS
15900.000	90.000	179.722	11506.997	46.314	0.000	53.864	-0.000	46.314	0.000	0.000	54.218	45.977	-12.719	MWD+IFR1+MS
16000.000	90.000	179.722	11506.997	46.931	0.000	54.353	-0.000	46.931	0.000	0.000	54.696	46.017	-12.213	MWD+IFR1+MS
16100.000	90.000	179.722	11506.997	47.552	0.000	54.849	-0.000	47.552	0.000	0.000	55.181	46.057	-11.746	MWD+IFR1+MS
16200.000	90.000	179.722	11506.997	48.179	0.000	55.351	-0.000	48.179	0.000	0.000	55.673	46.097	-11.314	MWD+IFR1+MS
16300.000	90.000	179.722	11506.997	48.810	0.000	55.860	-0.000	48.810	0.000	0.000	56.172	46.137	-10.914	MWD+IFR1+MS
16400.000	90.000	179.722	11506.997	49.445	0.000	56.374	-0.000	49.445	0.000	0.000	56.677	46.177	-10.542	MWD+IFR1+MS
16500.000	90.000	179.722	11506.997	50.084	0.000	56.893	-0.000	50.084	0.000	0.000	57.188	46.217	-10.196	MWD+IFR1+MS
16600.000	90.000	179.722	11506.997	50.728	0.000	57.418	-0.000	50.728	0.000	0.000	57.705	46.257	-9.873	MWD+IFR1+MS
16700.000	90.000	179.722	11506.997	51.376	0.000	57.949	-0.000	51.376	0.000	0.000	58.229	46.297	-9.570	MWD+IFR1+MS
16800.000	90.000	179.722	11506.997	52.027	0.000	58.484	-0.000	52.027	0.000	0.000	58.757	46.337	-9.287	MWD+IFR1+MS
16900.000	90.000	179.722	11506.997	52.682	0.000	59.025	-0.000	52.682	0.000	0.000	59.292	46.378	-9.020	MWD+IFR1+MS
17000.000	90.000	179.722	11506.997	53.341	0.000	59.571	-0.000	53.341	0.000	0.000	59.831	46.419	-8.769	MWD+IFR1+MS
17100.000	90.000	179.722	11506.997	54.003	0.000	60.121	-0.000	54.003	0.000	0.000	60.376	46.460	-8.533	MWD+IFR1+MS
17200.000	90.000	179.722	11506.997	54.668	0.000	60.676	-0.000	54.668	0.000	0.000	60.925	46.501	-8.310	MWD+IFR1+MS
17300.000	90.000	179.722	11506.997	55.336	0.000	61.236	-0.000	55.336	0.000	0.000	61.480	46.543	-8.098	MWD+IFR1+MS
17400.000	90.000	179.722	11506.997	56.007	0.000	61.800	-0.000	56.007	0.000	0.000	62.039	46.585	-7.898	MWD+IFR1+MS
17500.000	90.000	179.722	11506.997	56.681	0.000	62.369	-0.000	56.681	0.000	0.000	62.602	46.627	-7.708	MWD+IFR1+MS
17600.000	90.000	179.722	11506.997	57.358	0.000	62.941	-0.000	57.358	0.000	0.000	63.170	46.670	-7.528	MWD+IFR1+MS
17700.000	90.000	179.722	11506.997	58.038	0.000	63.518	-0.000	58.038	0.000	0.000	63.742	46.714	-7.356	MWD+IFR1+MS
17800.000	90.000	179.722	11506.997	58.721	0.000	64.098	-0.000	58.721	0.000	0.000	64.318	46.757	-7.193	MWD+IFR1+MS
17900.000	90.000	179.722	11506.997	59.405	0.000	64.683	-0.000	59.405	0.000	0.000	64.899	46.801	-7.037	MWD+IFR1+MS
18000.000	90.000	179.722	11506.997	60.093	0.000	65.271	-0.000	60.093	0.000	0.000	65.483	46.846	-6.888	MWD+IFR1+MS
18100.000	90.000	179.722	11506.997	60.782	0.000	65.863	-0.000	60.782	0.000	0.000	66.071	46.891	-6.746	MWD+IFR1+MS
18200.000	90.000	179.722	11506.997	61.474	0.000	66.458	-0.000	61.474	0.000	0.000	66.663	46.936	-6.610	MWD+IFR1+MS
18300.000	90.000	179.722	11506.997	62.169	0.000	67.057	-0.000	62.169	0.000	0.000	67.258	46.982	-6.480	MWD+IFR1+MS
18400.000	90.000	179.722	11506.997	62.865	0.000	67.659	-0.000	62.865	0.000	0.000	67.857	47.028	-6.355	MWD+IFR1+MS
18500.000	90.000	179.722	11506.997	63.563	0.000	68.265	-0.000	63.563	0.000	0.000	68.459	47.075	-6.235	MWD+IFR1+MS
18600.000	90.000	179.722	11506.997	64.264	0.000	68.873	-0.000	64.264	0.000	0.000	69.065	47.122	-6.120	MWD+IFR1+MS
18700.000	90.000	179.722	11506.997	64.966	0.000	69.485	-0.000	64.966	0.000	0.000	69.673	47.170	-6.010	MWD+IFR1+MS
18800.000	90.000	179.722	11506.997	65.670	0.000	70.100	-0.000	65.670	0.000	0.000	70.285	47.218	-5.903	MWD+IFR1+MS
18900.000	90.000	179.722	11506.997	66.376	0.000	70.717	-0.000	66.376	0.000	0.000	70.900	47.267	-5.801	MWD+IFR1+MS
19000.000	90.000	179.722	11506.997	67.084	0.000	71.338	-0.000	67.084	0.000	0.000	71.518	47.316	-5.703	MWD+IFR1+MS

19100.000	90.000	179.722	11506.997	67.793	0.000	71.961	-0.000	67.793	0.000	0.000	72.139	47.365	-5.608	MWD+IFR1+MS
19200.000	90.000	179.722	11506.997	68.504	0.000	72.587	-0.000	68.504	0.000	0.000	72.762	47.415	-5.516	MWD+IFR1+MS
19300.000	90.000	179.722	11506.997	69.217	0.000	73.216	-0.000	69.217	0.000	0.000	73.388	47.466	-5.427	MWD+IFR1+MS
19400.000	90.000	179.722	11506.997	69.931	0.000	73.847	-0.000	69.931	0.000	0.000	74.017	47.517	-5.342	MWD+IFR1+MS
19500.000	90.000	179.722	11506.997	70.647	0.000	74.481	-0.000	70.647	0.000	0.000	74.649	47.569	-5.259	MWD+IFR1+MS
19600.000	90.000	179.722	11506.997	71.364	0.000	75.118	-0.000	71.364	0.000	0.000	75.283	47.621	-5.180	MWD+IFR1+MS
19700.000	90.000	179.722	11506.997	72.083	0.000	75.756	-0.000	72.083	0.000	0.000	75.919	47.673	-5.102	MWD+IFR1+MS
19800.000	90.000	179.722	11506.997	72.803	0.000	76.397	-0.000	72.803	0.000	0.000	76.558	47.726	-5.028	MWD+IFR1+MS
19900.000	90.000	179.722	11506.997	73.524	0.000	77.041	-0.000	73.524	0.000	0.000	77.199	47.780	-4.955	MWD+IFR1+MS
20000.000	90.000	179.722	11506.997	74.246	0.000	77.686	-0.000	74.246	0.000	0.000	77.843	47.834	-4.885	MWD+IFR1+MS
20100.000	90.000	179.722	11506.997	74.970	0.000	78.334	-0.000	74.970	0.000	0.000	78.488	47.888	-4.817	MWD+IFR1+MS
20200.000	90.000	179.722	11506.997	75.695	0.000	78.984	-0.000	75.695	0.000	0.000	79.136	47.943	-4.751	MWD+IFR1+MS
20300.000	90.000	179.722	11506.997	76.421	0.000	79.635	-0.000	76.421	0.000	0.000	79.786	47.999	-4.687	MWD+IFR1+MS
20400.000	90.000	179.722	11506.997	77.149	0.000	80.289	-0.000	77.149	0.000	0.000	80.438	48.055	-4.625	MWD+IFR1+MS
20500.000	90.000	179.722	11506.997	77.877	0.000	80.945	-0.000	77.877	0.000	0.000	81.092	48.112	-4.564	MWD+IFR1+MS
20600.000	90.000	179.722	11506.997	78.607	0.000	81.603	-0.000	78.607	0.000	0.000	81.748	48.169	-4.505	MWD+IFR1+MS
20700.000	90.000	179.722	11506.997	79.337	0.000	82.262	-0.000	79.337	0.000	0.000	82.406	48.226	-4.448	MWD+IFR1+MS
20800.000	90.000	179.722	11506.997	80.069	0.000	82.924	-0.000	80.069	0.000	0.000	83.065	48.284	-4.393	MWD+IFR1+MS
20900.000	90.000	179.722	11506.997	80.802	0.000	83.587	-0.000	80.802	0.000	0.000	83.727	48.343	-4.339	MWD+IFR1+MS
21000.000	90.000	179.722	11506.997	81.535	0.000	84.252	-0.000	81.535	0.000	0.000	84.390	48.402	-4.286	MWD+IFR1+MS
21100.000	90.000	179.722	11506.997	82.270	0.000	84.918	-0.000	82.270	0.000	0.000	85.055	48.461	-4.235	MWD+IFR1+MS
21200.000	90.000	179.722	11506.997	83.005	0.000	85.587	-0.000	83.005	0.000	0.000	85.722	48.521	-4.185	MWD+IFR1+MS
21300.000	90.000	179.722	11506.997	83.741	0.000	86.256	-0.000	83.741	0.000	0.000	86.390	48.581	-4.136	MWD+IFR1+MS
21400.000	90.000	179.722	11506.997	84.479	0.000	86.928	-0.000	84.479	0.000	0.000	87.060	48.642	-4.089	MWD+IFR1+MS
21500.000	90.000	179.722	11506.997	85.217	0.000	87.601	-0.000	85.217	0.000	0.000	87.732	48.704	-4.043	MWD+IFR1+MS
21600.000	90.000	179.722	11506.997	85.956	0.000	88.275	-0.000	85.956	0.000	0.000	88.405	48.766	-3.997	MWD+IFR1+MS
21700.000	90.000	179.722	11506.997	86.695	0.000	88.951	-0.000	86.695	0.000	0.000	89.079	48.828	-3.953	MWD+IFR1+MS
21800.000	90.000	179.722	11506.997	87.436	0.000	89.629	-0.000	87.436	0.000	0.000	89.756	48.891	-3.910	MWD+IFR1+MS
21900.000	90.000	179.722	11506.997	88.177	0.000	90.308	-0.000	88.177	0.000	0.000	90.433	48.954	-3.868	MWD+IFR1+MS
22000.000	90.000	179.722	11506.997	88.919	0.000	90.988	-0.000	88.919	0.000	0.000	91.112	49.018	-3.828	MWD+IFR1+MS
22100.000	90.000	179.722	11506.997	89.662	0.000	91.669	-0.000	89.662	0.000	0.000	91.792	49.083	-3.787	MWD+IFR1+MS
22200.000	90.000	179.722	11506.997	90.405	0.000	92.352	-0.000	90.405	0.000	0.000	92.474	49.148	-3.748	MWD+IFR1+MS
22300.000	90.000	179.722	11506.997	91.149	0.000	93.036	-0.000	91.149	0.000	0.000	93.157	49.213	-3.710	MWD+IFR1+MS

22400.000	90.000	179.722	11506.997	91.894	0.000	93.722	-0.000	91.894	0.000	0.000	93.841	49.279	-3.673	MWD+IFR1+MS
22500.000	90.000	179.722	11506.997	92.640	0.000	94.408	-0.000	92.640	0.000	0.000	94.526	49.345	-3.636	MWD+IFR1+MS
22600.000	90.000	179.722	11506.997	93.386	0.000	95.096	-0.000	93.386	0.000	0.000	95.213	49.412	-3.600	MWD+IFR1+MS
22700.000	90.000	179.722	11506.997	94.133	0.000	95.785	-0.000	94.133	0.000	0.000	95.901	49.479	-3.565	MWD+IFR1+MS
22800.000	90.000	179.722	11506.997	94.880	0.000	96.475	-0.000	94.880	0.000	0.000	96.590	49.547	-3.531	MWD+IFR1+MS
22900.000	90.000	179.722	11506.997	95.628	0.000	97.167	-0.000	95.628	0.000	0.000	97.280	49.615	-3.498	MWD+IFR1+MS
23000.000	90.000	179.722	11506.997	96.376	0.000	97.859	-0.000	96.376	0.000	0.000	97.972	49.683	-3.465	MWD+IFR1+MS
23100.000	90.000	179.722	11506.997	97.126	0.000	98.553	-0.000	97.126	0.000	0.000	98.664	49.753	-3.433	MWD+IFR1+MS
23200.000	90.000	179.722	11506.997	97.875	0.000	99.247	-0.000	97.875	0.000	0.000	99.358	49.822	-3.401	MWD+IFR1+MS
23300.000	90.000	179.722	11506.997	98.625	0.000	99.943	-0.000	98.625	0.000	0.000	100.052	49.892	-3.370	MWD+IFR1+MS
23400.000	90.000	179.722	11506.997	99.376	0.000	100.639	-0.000	99.376	0.000	0.000	100.748	49.963	-3.340	MWD+IFR1+MS
23500.000	90.000	179.722	11506.997	100.128	0.000	101.337	-0.000	100.128	0.000	0.000	101.444	50.034	-3.310	MWD+IFR1+MS
23600.000	90.000	179.722	11506.997	100.879	0.000	102.035	-0.000	100.879	0.000	0.000	102.142	50.105	-3.281	MWD+IFR1+MS
23700.000	90.000	179.722	11506.997	101.632	0.000	102.735	-0.000	101.632	0.000	0.000	102.841	50.177	-3.253	MWD+IFR1+MS
23800.000	90.000	179.722	11506.997	102.384	0.000	103.435	-0.000	102.384	0.000	0.000	103.540	50.249	-3.225	MWD+IFR1+MS
23900.000	90.000	179.722	11506.997	103.138	0.000	104.137	-0.000	103.138	0.000	0.000	104.241	50.322	-3.197	MWD+IFR1+MS
24000.000	90.000	179.722	11506.997	103.891	0.000	104.839	-0.000	103.891	0.000	0.000	104.942	50.395	-3.171	MWD+IFR1+MS
24100.000	90.000	179.722	11506.997	104.646	0.000	105.542	-0.000	104.646	0.000	0.000	105.644	50.469	-3.144	MWD+IFR1+MS
24200.000	90.000	179.722	11506.997	105.400	0.000	106.246	-0.000	105.400	0.000	0.000	106.347	50.543	-3.118	MWD+IFR1+MS
24300.000	90.000	179.722	11506.997	106.155	0.000	106.951	-0.000	106.155	0.000	0.000	107.051	50.618	-3.093	MWD+IFR1+MS
24400.000	90.000	179.722	11506.997	106.911	0.000	107.657	-0.000	106.911	0.000	0.000	107.756	50.693	-3.068	MWD+IFR1+MS
24500.000	90.000	179.722	11506.997	107.667	0.000	108.363	-0.000	107.667	0.000	0.000	108.462	50.768	-3.043	MWD+IFR1+MS
24600.000	90.000	179.722	11506.997	108.423	0.000	109.071	-0.000	108.423	0.000	0.000	109.168	50.844	-3.019	MWD+IFR1+MS
24700.000	90.000	179.722	11506.997	109.180	0.000	109.779	-0.000	109.180	0.000	0.000	109.876	50.920	-2.995	MWD+IFR1+MS
24800.000	90.000	179.722	11506.997	109.937	0.000	110.487	-0.000	109.937	0.000	0.000	110.584	50.997	-2.972	MWD+IFR1+MS
24900.000	90.000	179.722	11506.997	110.694	0.000	111.197	-0.000	110.694	0.000	0.000	111.293	51.074	-2.949	MWD+IFR1+MS
25000.000	90.000	179.722	11506.997	111.452	0.000	111.907	-0.000	111.452	0.000	0.000	112.002	51.152	-2.927	MWD+IFR1+MS
25100.000	90.000	179.722	11506.997	112.210	0.000	112.618	-0.000	112.210	0.000	0.000	112.712	51.230	-2.905	MWD+IFR1+MS
25200.000	90.000	179.722	11506.997	112.969	0.000	113.330	-0.000	112.969	0.000	0.000	113.423	51.309	-2.883	MWD+IFR1+MS
25300.000	90.000	179.722	11506.997	113.728	0.000	114.043	-0.000	113.728	0.000	0.000	114.135	51.388	-2.862	MWD+IFR1+MS
25400.000	90.000	179.722	11506.997	114.487	0.000	114.756	-0.000	114.487	0.000	0.000	114.848	51.467	-2.841	MWD+IFR1+MS
25500.000	90.000	179.722	11506.997	115.247	0.000	115.470	-0.000	115.247	0.000	0.000	115.561	51.547	-2.820	MWD+IFR1+MS
25600.000	90.000	179.722	11506.997	116.007	0.000	116.184	-0.000	116.007	0.000	0.000	116.274	51.627	-2.800	MWD+IFR1+MS

25700.000	90.000	179.722	11506.997	116.767	0.000	116.899	-0.000	116.767	0.000	0.000	116.989	51.708	-2.780	MWD+IFR1+MS
25800.000	90.000	179.722	11506.997	117.528	0.000	117.615	-0.000	117.528	0.000	0.000	117.704	51.789	-2.760	MWD+IFR1+MS
25900.000	90.000	179.722	11506.997	118.289	0.000	118.331	-0.000	118.289	0.000	0.000	118.420	51.870	-2.740	MWD+IFR1+MS
26000.000	90.000	179.722	11506.997	119.050	0.000	119.048	-0.000	119.050	0.000	0.000	119.136	51.952	-2.721	MWD+IFR1+MS
26100.000	90.000	179.722	11506.997	119.812	0.000	119.766	-0.000	119.812	0.000	0.000	119.853	52.035	-2.703	MWD+IFR1+MS
26200.000	90.000	179.722	11506.997	120.574	0.000	120.484	-0.000	120.574	0.000	0.000	120.571	52.118	-2.684	MWD+IFR1+MS
26300.000	90.000	179.722	11506.997	121.336	0.000	121.203	-0.000	121.336	0.000	0.000	121.289	52.201	-2.666	MWD+IFR1+MS
26400.000	90.000	179.722	11506.997	122.098	0.000	121.922	-0.000	122.098	0.000	0.000	122.007	52.284	-2.648	MWD+IFR1+MS
26500.000	90.000	179.722	11506.997	122.861	0.000	122.642	-0.000	122.861	0.000	0.000	122.727	52.368	-2.630	MWD+IFR1+MS
26600.000	90.000	179.722	11506.997	123.624	0.000	123.362	-0.000	123.624	0.000	0.000	123.446	52.453	-2.613	MWD+IFR1+MS
26683.127	90.000	179.722	11506.997	124.258	0.000	123.961	-0.000	124.258	0.000	0.000	124.045	52.523	-2.599	MWD+IFR1+MS
26700.000	90.000	179.722	11506.997	124.387	0.000	124.083	-0.000	124.387	0.000	0.000	124.166	52.537	-2.596	MWD+IFR1+MS
26783.139	90.000	179.722	11506.997	125.020	0.000	124.681	-0.000	125.020	0.000	0.000	124.764	52.608	-2.582	MWD+IFR1+MS

## Plan Targets

Poker Lake Unit 19 DTD South 409H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP 25	11696.71	440342.30	629393.30	8304.00	RECTANGLE
SHL 28	3352.55	440157.33	628845.63	0.00	RECTANGLE
LTP 25	26683.16	424901.10	629468.20	8304.00	RECTANGLE
BHL 25	26783.45	424801.10	629468.40	8304.00	RECTANGLE

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

XTO Energy Inc.  
PLU 19 Dog Town Draw 409H  
Projected TD: 26783.14' MD / 11507' TVD  
SHL: 271' FNL & 1656' FEL , Section 19, T24S, R30E  
BHL: 230' FSL & 1019' 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	680'	Water
Top of Salt	1083'	Water
Base of Salt	3276'	Water
Delaware	3470'	Water
Brushy Canyon	5968'	Water/Oil/Gas
Bone Spring	7264'	Water
Avalon	7434'	Water/Oil/Gas
1st Bone Spring	8250'	Water/Oil/Gas
2nd Bone Spring	9068'	Water/Oil/Gas
3rd Bone Spring	10162'	Water/Oil/Gas
Wolfcamp	10553'	Water/Oil/Gas
Wolfcamp X	10574'	Water/Oil/Gas
Wolfcamp Y	10652'	Water/Oil/Gas
Wolfcamp A	10694'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>11507'</b>	<b>Water/Oil/Gas</b>

\*\*\* 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 @ 780' (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 10632.97' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 26783.14 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 10332.97 feet).

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 780'	9.625	40	J-55	BTC	New	1.56	8.07	20.19
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	1.94	2.92	1.77
8.75	4000' – 10632.97'	7.625	29.7	HC L-80	Flush Joint	New	1.41	2.25	2.06
6.75	0' – 10532.97'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.63	1.87
6.75	10532.97' - 26783.14'	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 +/- 780'**

Lead: 160 sxs EconoCem-HLTRRC (mixed at 10.5 ppg, 1.87 ft<sup>3</sup>/sx, 10.13 gal/sx water)

Tail: 130 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/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 +/- 10632.97'**

###### 1st Stage

Optional Lead: 320 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 430 sxs Class C (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 5968

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

###### 2nd Stage

Lead: 0 sxs Class C (mixed at 12.9 ppg, 2.16 ft<sup>3</sup>/sx, 9.61 gal/sx water)

Tail: 670 sxs Class C (mixed at 14.8 ppg, 1.33 ft<sup>3</sup>/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 (5968') 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 +/- 26783.14'**

Lead: 20 sxs NeoCem (mixed at 13.5 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 10332.97 feet

Tail: 1140 sxs VersaCem (mixed at 14.8 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 10832.97 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 4888 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

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

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

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



on each of the wells.

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

## 6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 780'	12.25	FW/Native	8.4-8.9	35-40	NC
780' - 10632.97'	8.75	FW / Cut Brine / Direct Emulsion	8.8-9.3	30-32	NC
10632.97' - 26783.14'	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 7420 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.

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

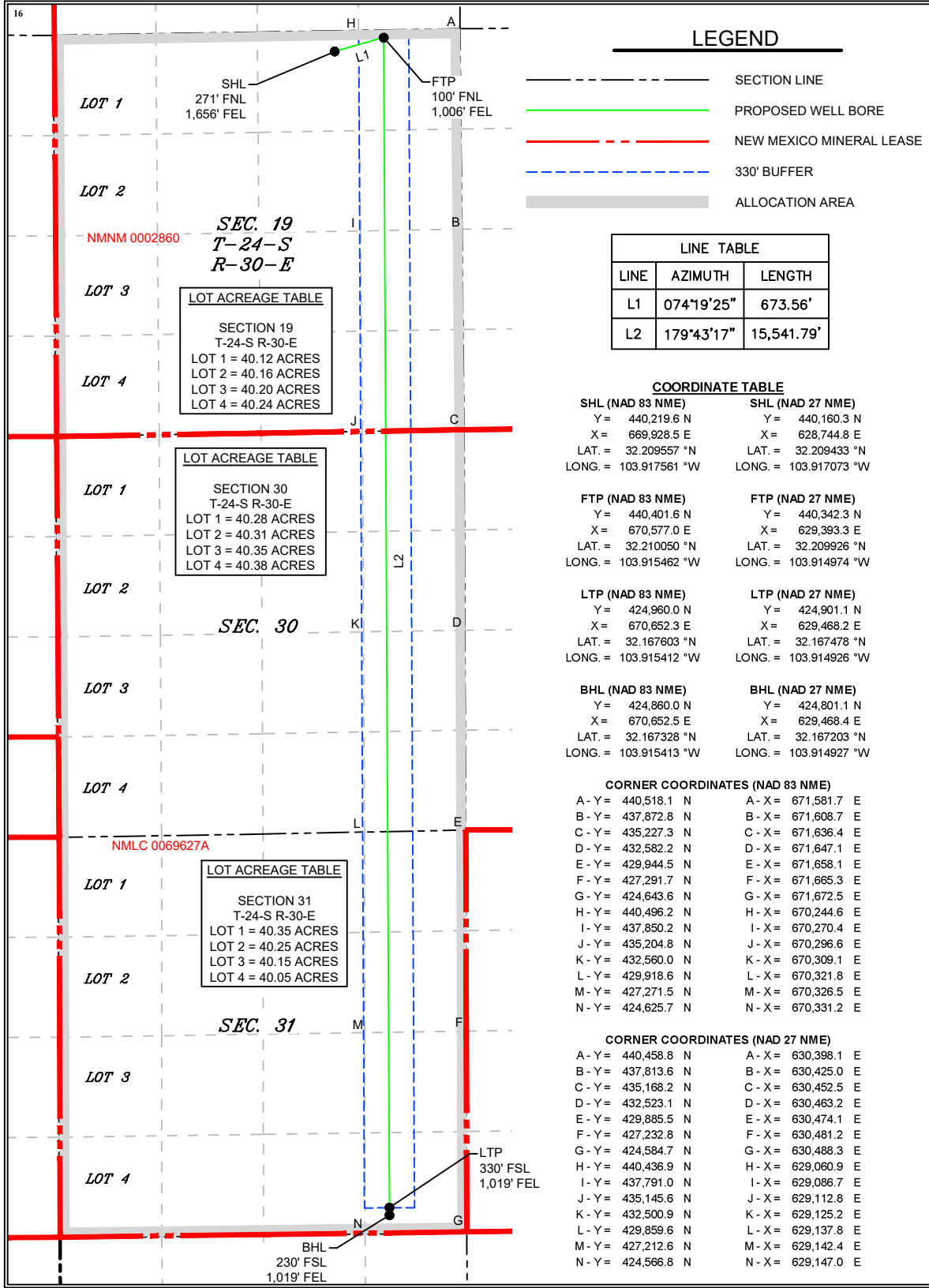
<sup>1</sup> API Number 30-015-53984	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage; Wolf Camp
<sup>4</sup> Property Code 333976	<sup>5</sup> Property Name POKER LAKE UNIT 19 DTD	<sup>6</sup> Well Number 409H
<sup>7</sup> OGRID No. 373075	<sup>8</sup> Operator Name XTO PERMIAN OPERATING, LLC	<sup>9</sup> Elevation 3,171'

<sup>10</sup> Surface Location									
UL or lot no. B	Section 19	Township 24S	Range 30E	Lot Idn	Feet from the 271	North/South line NORTH	Feet from the 1,656	East/West line EAST	County EDDY

<sup>11</sup> Bottom Hole Location If Different From Surface									
UL or lot no. P	Section 31	Township 24S	Range 30E	Lot Idn	Feet from the 230	North/South line SOUTH	Feet from the 1,019	East/West line EAST	County EDDY

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



<sup>17</sup> 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

<sup>18</sup> 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 23786  
Certificate Number

RP 618.013003.05-57

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

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

CONDITIONS  
  
Action 328666

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 328666
	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.	4/10/2024