

Well Name: CORRAL CANYON 17-8 FEDERAL	Well Location: T25S / R29E / SEC 17 / SESW / 32.123542 / -104.007153	County or Parish/State: EDDY / NM
Well Number: 164H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM96848	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: XTO ENERGY INCORPORATED	

Notice of Intent

Sundry ID: 2791078

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 05/17/2024	Time Sundry Submitted: 09:02
Date proposed operation will begin: 05/31/2024	

**Procedure Description:** XTO Permian Operating, LLC. respectfully requests approval to make the following changes to the approved APD. Changes to include FTP, LTP, BHL, & Proposed total Depth. FROM: TO: FTP: 330' FSL & 2190' FEL OF SECTION 17-T25S-R29E 330' FSL & 2220' FEL OF SECTION 17-T25S-R29E LTP: 2319' FSL & 2190' FEL OF SECTION 8-T25S-R29E 2549' FSL & 2220' FEL OF SECTION 8-T25S-R29E BHL: 2449' FSL & 2190' FEL OF SECTION 8-T25S-R29E 2599' FSL & 2220' FEL OF SECTION 8-T25S-R29E The proposed total depth is changing from 18517' MD; 10726' TVD (Wolfcamp) to 18938' MD; 10854' TVD (Wolfcamp D/E). See attached Drilling Plan for updated cement and casing program. Attachments: C-102, Drilling Plan, Directional Plan, MBS, BOP Variance and Well Control Plan.

NOI Attachments

Procedure Description

Corral\_17\_8\_Fed\_164H\_Sundry\_Documents\_20240517090031.pdf

Received by OCD: 7/10/2024 2:46:21 PM

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US Well Number:	Operator: XTO ENERGY INCORPORATED	

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: MAY 17, 2024 09:00 AM
Name: XTO ENERGY INCORPORATED	
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: 07/09/2024
Signature: Chris Walls	

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

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

SUBMIT IN TRIPLICATE - Other instructions on page 2	
1. Type of Well	
<input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	
2. Name of Operator	
3a. Address	3b. Phone No. (include area code)
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)	

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

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

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

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

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

## Additional Information

## Additional Remarks

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

## Location of Well

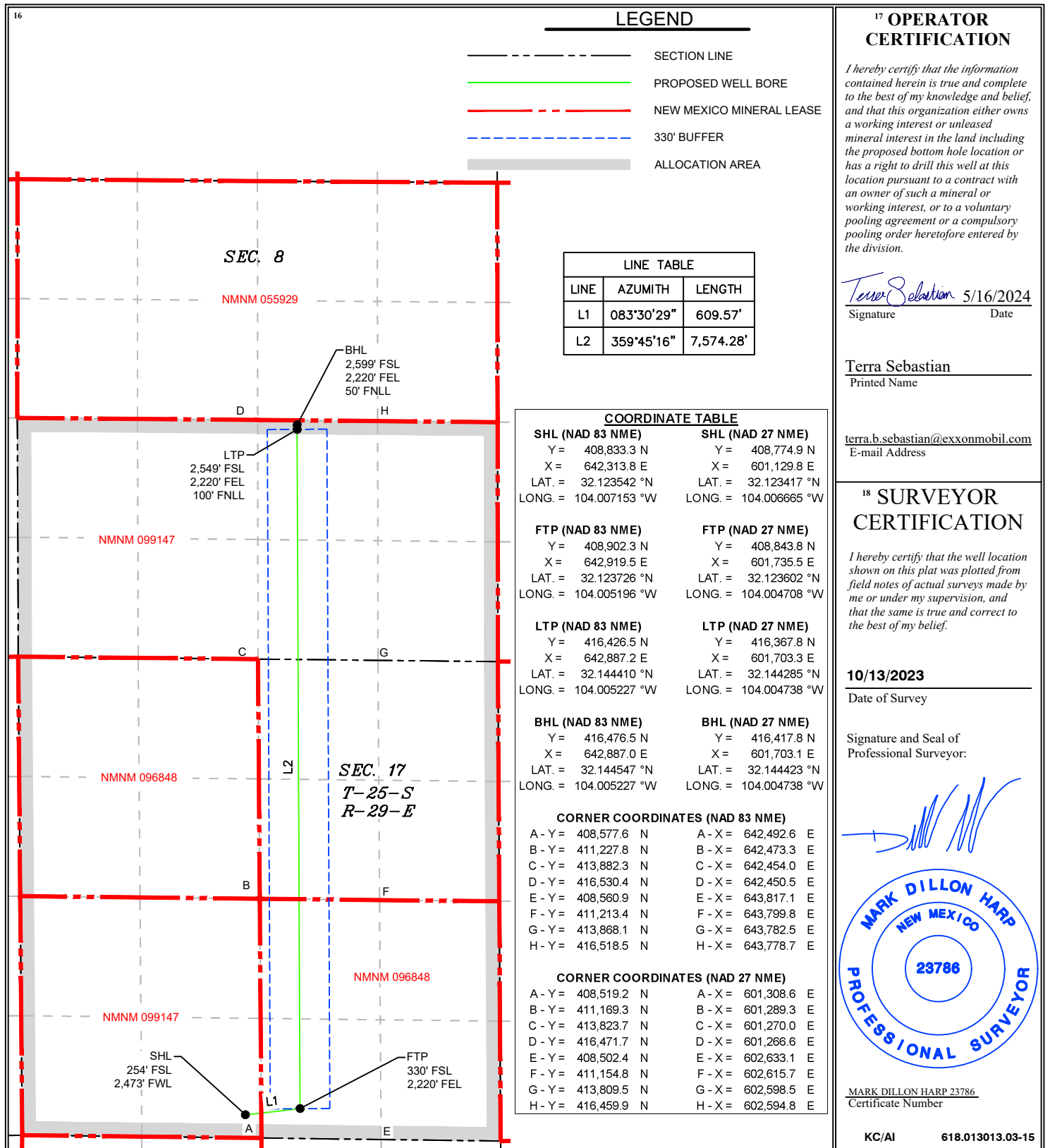
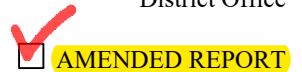
0. SHL: SESW / 254 FSL / 2473 FWL / TWSP: 25S / RANGE: 29E / SECTION: 17 / LAT: 32.123542 / LONG: -104.007153 ( TVD: 0 feet, MD: 0 feet )

PPP: SWSE / 330 FSL / 2190 FEL / TWSP: 25S / RANGE: 29E / SECTION: 17 / LAT: 32.123725 / LONG: -104.005099 ( TVD: 10726 feet, MD: 11100 feet )

BHL: NWSE / 2449 FSL / 2190 FEL / TWSP: 25S / RANGE: 29E / SECTION: 8 / LAT: 32.144134 / LONG: -104.00513 ( TVD: 10726 feet, MD: 18517 feet )

CONFIDENTIAL

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



Intent ☒ As Drilled ☐

API # <b>30015</b>		
Operator Name: <b>XTO ENERGY, INC</b>	Property Name: <b>Coral 17-8 Fed Com</b>	Well Number <b>164H</b>

## 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 <b>O</b>	Section <b>17</b>	Township <b>25S</b>	Range <b>29E</b>	Lot	Feet <b>330</b>	From N/S <b>South</b>	Feet <b>2,220</b>	From E/W <b>East</b>	County <b>Eddy</b>
Latitude <b>32.123762</b>					Longitude <b>104.005227</b>				NAD <b>83</b>

## Last Take Point (LTP)

UL <b>J</b>	Section <b>8</b>	Township <b>25S</b>	Range <b>29E</b>	Lot	Feet <b>2,549</b>	From N/S <b>South</b>	Feet <b>2,220</b>	From E/W <b>East</b>	County <b>Eddy</b>
Latitude <b>32.144410</b>					Longitude <b>104.005227</b>				NAD <b>83</b>

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

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018



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

XTO Energy Inc.

CORRAL 17 - 8 FED COM 164H

Projected TD: 18938.01' MD / 10854' TVD

SHL: 254' FSL & 2473' FWL , Section 17, T25S, R29E

BHL: 2599' FSL & 2220' FEL , Section 8, T25S, R29E

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
Top of Salt	650'	Water
Base of Salt	2755'	Water
Delaware	2955'	Water
Brushy Canyon	5451'	Water/Oil/Gas
Bone Spring	6694'	Water
1st Bone Spring	7468'	Water/Oil/Gas
2nd Bone Spring	7905'	Water/Oil/Gas
3rd Bone Spring	8725'	Water/Oil/Gas
Wolfcamp	9883'	Water/Oil/Gas
Wolfcamp X	9907'	Water/Oil/Gas
Wolfcamp Y	9984'	Water/Oil/Gas
Wolfcamp A	10027'	Water/Oil/Gas
Wolfcamp B	10371'	Water/Oil/Gas
Wolfcamp D	10754'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>10854'</b>	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 @ 615' (35' 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 10038.94' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 18938.01 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 9738.94 feet).

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 615'	9.625	40	J-55	BTC	New	1.59	10.12	25.61
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	1.91	2.86	1.87
8.75	4000' – 10038.94'	7.625	29.7	HC L-80	Flush Joint	New	1.39	2.28	2.26
6.75	0' – 9938.94'	5.5	20	RY P-110	Semi-Premium	New	1.26	1.65	2.29
6.75	9938.94' - 18938.01'	5.5	20	RY P-110	Semi-Flush	New	1.26	1.51	2.29

· 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 +/- 615'**

Lead: 100 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 +/- 10038.94'**

###### 1st Stage

Optional Lead: 290 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 420 sxs Class C (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 5451

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: 610 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 (5451') 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 +/- 18938.01'**

Lead: 20 sxs NeoCem (mixed at 13.5 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 9738.94 feet

Tail: 620 sxs VersaCem (mixed at 14.8 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 10238.94 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 4949 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 rated working pressure. When nipping up on the 9.625, 10M bradenhead and flange, the BOP test will be limited to 10000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 10000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 10M 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' - 615'	12.25	FW/Native	8.5-9	35-40	NC
615' - 10038.94'	8.75	FW / Cut Brine / Direct Emulsion	9-9.5	30-32	NC
10038.94' - 18938.01'	6.75	OBM	13-13.5	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. 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 175 to 195 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 7337 psi.

## 10. Anticipated Starting Date and Duration of Operations

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

Well Plan Report - Corral 17-8 Fed Com 164H

Measured Depth:	18938.01 ft
TVD RKB:	10854.00 ft
Location	
Cartographic Reference System:	New Mexico East - NAD 27
Northing:	408774.90 ft
Easting:	601129.80 ft
RKB:	3043.00 ft
Ground Level:	3010.00 ft
North Reference:	Grid
Convergence Angle:	0.17 Deg

Plan Sections		Corral 17-8 Fed Com 164H							
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	
1792.49	13.85	136.76	1785.77	-60.67	57.06	2.00	0.00	2.00	
4808.65	13.85	136.76	4714.23	-586.62	551.70	0.00	0.00	0.00	
5501.14	0.00	0.00	5400.00	-647.29	608.77	-2.00	0.00	2.00	
10238.94	0.00	0.00	10137.80	-647.29	608.77	0.00	0.00	0.00	
11363.94	90.00	359.75	10854.00	68.90	605.70	8.00	0.00	8.00	164H FTP
18888.01	90.00	359.75	10854.00	7592.90	573.50	0.00	0.00	0.00	164H LTP
18938.01	90.00	359.75	10854.00	7642.90	573.29	0.00	0.00	0.00	164H BHL

Position Uncertainty		Corral 17-8 Fed Com 164H							
Measured	TVD	Highside	Lateral	Vertical	Magnitude	Semi-major	Semi-minor	Semi-minor	Tool

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	XOM_R2OWSG MWD+IFR1+MS
100.000	0.000	0.000	100.000	0.358	0.000	0.179	0.000	2.300	0.000	0.000	0.358	0.179	90.000	XOM_R2OWSG MWD+IFR1+MS
200.000	0.000	0.000	200.000	0.717	0.000	0.538	0.000	2.309	0.000	0.000	0.717	0.538	90.000	XOM_R2OWSG MWD+IFR1+MS
300.000	0.000	0.000	300.000	1.075	0.000	0.896	0.000	2.324	0.000	0.000	1.075	0.896	90.000	XOM_R2OWSG MWD+IFR1+MS
400.000	0.000	0.000	400.000	1.434	0.000	1.255	0.000	2.345	0.000	0.000	1.434	1.255	90.000	XOM_R2OWSG MWD+IFR1+MS
500.000	0.000	0.000	500.000	1.792	0.000	1.613	0.000	2.372	0.000	0.000	1.792	1.613	90.000	XOM_R2OWSG MWD+IFR1+MS
600.000	0.000	0.000	600.000	2.151	0.000	1.972	0.000	2.403	0.000	0.000	2.151	1.972	90.000	XOM_R2OWSG MWD+IFR1+MS
700.000	0.000	0.000	700.000	2.509	0.000	2.330	0.000	2.440	0.000	0.000	2.509	2.330	90.000	XOM_R2OWSG MWD+IFR1+MS
800.000	0.000	0.000	800.000	2.868	0.000	2.689	0.000	2.480	0.000	0.000	2.868	2.689	90.000	XOM_R2OWSG MWD+IFR1+MS
900.000	0.000	0.000	900.000	3.226	0.000	3.047	0.000	2.525	0.000	0.000	3.226	3.047	90.000	XOM_R2OWSG MWD+IFR1+MS
1000.000	0.000	0.000	1000.000	3.585	0.000	3.405	0.000	2.574	0.000	0.000	3.585	3.405	90.000	XOM_R2OWSG MWD+IFR1+MS
1100.000	0.000	0.000	1100.000	3.943	0.000	3.764	0.000	2.626	0.000	0.000	3.943	3.764	90.000	XOM_R2OWSG MWD+IFR1+MS
1200.000	2.000	136.756	1199.980	4.201	0.000	4.192	-0.000	2.682	0.000	0.000	4.287	4.107	90.005	XOM_R2OWSG MWD+IFR1+MS
1300.000	4.000	136.756	1299.838	4.526	0.000	4.524	-0.000	2.738	0.000	0.000	4.620	4.438	89.900	XOM_R2OWSG MWD+IFR1+MS
1400.000	6.000	136.756	1399.452	4.849	0.000	4.860	-0.000	2.796	0.000	0.000	4.957	4.773	89.883	XOM_R2OWSG MWD+IFR1+MS
1500.000	8.000	136.756	1498.702	5.171	0.000	5.201	-0.000	2.854	0.000	0.000	5.299	5.112	90.108	XOM_R2OWSG MWD+IFR1+MS
1600.000	10.000	136.756	1597.465	5.491	0.000	5.548	-0.000	2.915	0.000	0.000	5.645	5.456	90.717	XOM_R2OWSG MWD+IFR1+MS
1700.000	12.000	136.756	1695.623	5.810	0.000	5.900	-0.000	2.977	0.000	0.000	5.995	5.804	91.849	XOM_R2OWSG MWD+IFR1+MS
1792.494	13.850	136.756	1785.770	6.102	0.000	6.233	-0.000	3.037	0.000	0.000	6.323	6.130	93.432	XOM_R2OWSG MWD+IFR1+MS



1800.000	13.850	136.756	1793.058	6.129	0.000	6.260	-0.000	3.037	0.000	0.000	6.350	6.158	93.173	XOM_R2OWSG MWD+IFR1+MS
1900.000	13.850	136.756	1890.150	6.485	0.000	6.626	-0.000	3.120	0.000	0.000	6.707	6.512	96.413	XOM_R2OWSG MWD+IFR1+MS
2000.000	13.850	136.756	1987.243	6.845	0.000	6.998	-0.000	3.208	0.000	0.000	7.070	6.870	99.696	XOM_R2OWSG MWD+IFR1+MS
2100.000	13.850	136.756	2084.336	7.209	0.000	7.375	-0.000	3.299	0.000	0.000	7.438	7.232	102.945	XOM_R2OWSG MWD+IFR1+MS
2200.000	13.850	136.756	2181.428	7.577	0.000	7.755	-0.000	3.393	0.000	0.000	7.810	7.596	106.088	XOM_R2OWSG MWD+IFR1+MS
2300.000	13.850	136.756	2278.521	7.947	0.000	8.138	-0.000	3.491	0.000	0.000	8.187	7.961	109.063	XOM_R2OWSG MWD+IFR1+MS
2400.000	13.850	136.756	2375.614	8.319	0.000	8.525	-0.000	3.592	0.000	0.000	8.567	8.329	111.828	XOM_R2OWSG MWD+IFR1+MS
2500.000	13.850	136.756	2472.706	8.694	0.000	8.914	-0.000	3.695	0.000	0.000	8.950	8.698	114.361	XOM_R2OWSG MWD+IFR1+MS
2600.000	13.850	136.756	2569.799	9.071	0.000	9.305	-0.000	3.802	0.000	0.000	9.336	9.068	116.656	XOM_R2OWSG MWD+IFR1+MS
2700.000	13.850	136.756	2666.892	9.449	0.000	9.698	-0.000	3.911	0.000	0.000	9.725	9.439	118.722	XOM_R2OWSG MWD+IFR1+MS
2800.000	13.850	136.756	2763.984	9.829	0.000	10.093	-0.000	4.022	0.000	0.000	10.116	9.811	120.574	XOM_R2OWSG MWD+IFR1+MS
2900.000	13.850	136.756	2861.077	10.210	0.000	10.489	-0.000	4.136	0.000	0.000	10.510	10.184	122.231	XOM_R2OWSG MWD+IFR1+MS
3000.000	13.850	136.756	2958.170	10.592	0.000	10.887	-0.000	4.251	0.000	0.000	10.904	10.558	123.712	XOM_R2OWSG MWD+IFR1+MS
3100.000	13.850	136.756	3055.262	10.975	0.000	11.286	-0.000	4.369	0.000	0.000	11.301	10.932	125.038	XOM_R2OWSG MWD+IFR1+MS
3200.000	13.850	136.756	3152.355	11.359	0.000	11.686	-0.000	4.489	0.000	0.000	11.699	11.307	126.228	XOM_R2OWSG MWD+IFR1+MS
3300.000	13.850	136.756	3249.448	11.744	0.000	12.087	-0.000	4.611	0.000	0.000	12.098	11.683	127.298	XOM_R2OWSG MWD+IFR1+MS
3400.000	13.850	136.756	3346.540	12.130	0.000	12.489	-0.000	4.734	0.000	0.000	12.498	12.059	128.263	XOM_R2OWSG MWD+IFR1+MS
3500.000	13.850	136.756	3443.633	12.517	0.000	12.891	-0.000	4.860	0.000	0.000	12.899	12.436	129.136	XOM_R2OWSG MWD+IFR1+MS
3600.000	13.850	136.756	3540.726	12.904	0.000	13.294	-0.000	4.987	0.000	0.000	13.301	12.813	129.929	XOM_R2OWSG MWD+IFR1+MS
3700.000	13.850	136.756	3637.818	13.291	0.000	13.698	-0.000	5.116	0.000	0.000	13.704	13.190	130.650	XOM_R2OWSG MWD+IFR1+MS

3800.000	13.850	136.756	3734.911	13.679	0.000	14.103	-0.000	5.247	0.000	0.000	14.108	13.568	131.308	XOM_R2OWSG MWD+IFR1+MS
3900.000	13.850	136.756	3832.004	14.068	0.000	14.508	-0.000	5.379	0.000	0.000	14.512	13.947	131.912	XOM_R2OWSG MWD+IFR1+MS
4000.000	13.850	136.756	3929.096	14.457	0.000	14.914	-0.000	5.513	0.000	0.000	14.917	14.326	132.466	XOM_R2OWSG MWD+IFR1+MS
4100.000	13.850	136.756	4026.189	14.846	0.000	15.320	-0.000	5.649	0.000	0.000	15.322	14.705	132.977	XOM_R2OWSG MWD+IFR1+MS
4200.000	13.850	136.756	4123.282	15.236	0.000	15.726	-0.000	5.786	0.000	0.000	15.728	15.084	133.448	XOM_R2OWSG MWD+IFR1+MS
4300.000	13.850	136.756	4220.374	15.626	0.000	16.133	-0.000	5.925	0.000	0.000	16.135	15.464	133.885	XOM_R2OWSG MWD+IFR1+MS
4400.000	13.850	136.756	4317.467	16.017	0.000	16.541	-0.000	6.065	0.000	0.000	16.542	15.844	134.291	XOM_R2OWSG MWD+IFR1+MS
4500.000	13.850	136.756	4414.560	16.408	0.000	16.948	-0.000	6.208	0.000	0.000	16.949	16.225	134.669	XOM_R2OWSG MWD+IFR1+MS
4600.000	13.850	136.756	4511.652	16.799	0.000	17.356	-0.000	6.351	0.000	0.000	17.357	16.605	-44.979	XOM_R2OWSG MWD+IFR1+MS
4700.000	13.850	136.756	4608.745	17.190	0.000	17.764	-0.000	6.497	0.000	0.000	17.765	16.986	-44.650	XOM_R2OWSG MWD+IFR1+MS
4808.645	13.850	136.756	4714.230	17.616	0.000	18.208	-0.000	6.657	0.000	0.000	18.209	17.400	-44.316	XOM_R2OWSG MWD+IFR1+MS
4900.000	12.023	136.756	4803.263	17.994	0.000	18.577	-0.000	6.793	0.000	0.000	18.577	17.746	-44.064	XOM_R2OWSG MWD+IFR1+MS
5000.000	10.023	136.756	4901.413	18.383	0.000	18.971	-0.000	6.939	0.000	0.000	18.971	18.119	-43.831	XOM_R2OWSG MWD+IFR1+MS
5100.000	8.023	136.756	5000.170	18.743	0.000	19.353	-0.000	7.080	0.000	0.000	19.353	18.487	-43.636	XOM_R2OWSG MWD+IFR1+MS
5200.000	6.023	136.756	5099.415	19.074	0.000	19.724	-0.000	7.216	0.000	0.000	19.724	18.849	-43.473	XOM_R2OWSG MWD+IFR1+MS
5300.000	4.023	136.756	5199.026	19.376	0.000	20.084	-0.000	7.346	0.000	0.000	20.084	19.204	-43.338	XOM_R2OWSG MWD+IFR1+MS
5400.000	2.023	136.756	5298.882	19.649	0.000	20.433	-0.000	7.472	0.000	0.000	20.433	19.551	-43.229	XOM_R2OWSG MWD+IFR1+MS
5501.139	0.000	0.000	5400.000	20.303	0.000	20.353	0.000	7.595	0.000	0.000	20.762	19.884	-43.366	XOM_R2OWSG MWD+IFR1+MS
5600.000	0.000	0.000	5498.861	20.619	0.000	20.657	0.000	7.715	0.000	0.000	21.068	20.199	-43.726	XOM_R2OWSG MWD+IFR1+MS
5700.000	0.000	0.000	5598.861	20.939	0.000	20.967	0.000	7.838	0.000	0.000	21.379	20.518	-44.086	XOM_R2OWSG MWD+IFR1+MS

5800.000	0.000	0.000	5698.861	21.261	0.000	21.278	0.000	7.964	0.000	0.000	21.692	20.838	-44.442	XOM_R2OWSG MWD+IFR1+MS
5900.000	0.000	0.000	5798.861	21.584	0.000	21.590	0.000	8.092	0.000	0.000	22.006	21.160	-44.794	XOM_R2OWSG MWD+IFR1+MS
6000.000	0.000	0.000	5898.861	21.908	0.000	21.904	0.000	8.223	0.000	0.000	22.321	21.483	134.858	XOM_R2OWSG MWD+IFR1+MS
6100.000	0.000	0.000	5998.861	22.233	0.000	22.219	0.000	8.356	0.000	0.000	22.638	21.807	134.514	XOM_R2OWSG MWD+IFR1+MS
6200.000	0.000	0.000	6098.861	22.559	0.000	22.535	0.000	8.492	0.000	0.000	22.956	22.131	134.175	XOM_R2OWSG MWD+IFR1+MS
6300.000	0.000	0.000	6198.861	22.886	0.000	22.853	0.000	8.630	0.000	0.000	23.275	22.457	133.839	XOM_R2OWSG MWD+IFR1+MS
6400.000	0.000	0.000	6298.861	23.214	0.000	23.172	0.000	8.771	0.000	0.000	23.595	22.784	133.508	XOM_R2OWSG MWD+IFR1+MS
6500.000	0.000	0.000	6398.861	23.543	0.000	23.492	0.000	8.915	0.000	0.000	23.917	23.111	133.181	XOM_R2OWSG MWD+IFR1+MS
6600.000	0.000	0.000	6498.861	23.873	0.000	23.813	0.000	9.062	0.000	0.000	24.239	23.440	132.858	XOM_R2OWSG MWD+IFR1+MS
6700.000	0.000	0.000	6598.861	24.203	0.000	24.135	0.000	9.211	0.000	0.000	24.563	23.769	132.540	XOM_R2OWSG MWD+IFR1+MS
6800.000	0.000	0.000	6698.861	24.534	0.000	24.458	0.000	9.363	0.000	0.000	24.887	24.099	132.225	XOM_R2OWSG MWD+IFR1+MS
6900.000	0.000	0.000	6798.861	24.867	0.000	24.782	0.000	9.518	0.000	0.000	25.213	24.430	131.915	XOM_R2OWSG MWD+IFR1+MS
7000.000	0.000	0.000	6898.861	25.199	0.000	25.107	0.000	9.675	0.000	0.000	25.540	24.761	131.609	XOM_R2OWSG MWD+IFR1+MS
7100.000	0.000	0.000	6998.861	25.533	0.000	25.433	0.000	9.835	0.000	0.000	25.867	25.093	131.307	XOM_R2OWSG MWD+IFR1+MS
7200.000	0.000	0.000	7098.861	25.867	0.000	25.760	0.000	9.998	0.000	0.000	26.195	25.426	131.009	XOM_R2OWSG MWD+IFR1+MS
7300.000	0.000	0.000	7198.861	26.202	0.000	26.088	0.000	10.164	0.000	0.000	26.524	25.760	130.715	XOM_R2OWSG MWD+IFR1+MS
7400.000	0.000	0.000	7298.861	26.537	0.000	26.416	0.000	10.333	0.000	0.000	26.854	26.094	130.426	XOM_R2OWSG MWD+IFR1+MS
7500.000	0.000	0.000	7398.861	26.873	0.000	26.746	0.000	10.505	0.000	0.000	27.185	26.429	130.140	XOM_R2OWSG MWD+IFR1+MS
7600.000	0.000	0.000	7498.861	27.210	0.000	27.075	0.000	10.679	0.000	0.000	27.516	26.764	129.859	XOM_R2OWSG MWD+IFR1+MS
7700.000	0.000	0.000	7598.861	27.547	0.000	27.406	0.000	10.857	0.000	0.000	27.848	27.100	129.581	XOM_R2OWSG MWD+IFR1+MS

7800.000	0.000	0.000	7698.861	27.885	0.000	27.738	0.000	11.037	0.000	0.000	28.181	27.436	129.308	XOM_R2OWSG MWD+IFR1+MS
7900.000	0.000	0.000	7798.861	28.223	0.000	28.070	0.000	11.220	0.000	0.000	28.515	27.773	129.038	XOM_R2OWSG MWD+IFR1+MS
8000.000	0.000	0.000	7898.861	28.561	0.000	28.402	0.000	11.406	0.000	0.000	28.849	28.111	128.773	XOM_R2OWSG MWD+IFR1+MS
8100.000	0.000	0.000	7998.861	28.901	0.000	28.736	0.000	11.596	0.000	0.000	29.183	28.448	128.511	XOM_R2OWSG MWD+IFR1+MS
8200.000	0.000	0.000	8098.861	29.240	0.000	29.069	0.000	11.788	0.000	0.000	29.519	28.787	128.253	XOM_R2OWSG MWD+IFR1+MS
8300.000	0.000	0.000	8198.861	29.580	0.000	29.404	0.000	11.983	0.000	0.000	29.854	29.126	127.999	XOM_R2OWSG MWD+IFR1+MS
8400.000	0.000	0.000	8298.861	29.921	0.000	29.739	0.000	12.181	0.000	0.000	30.191	29.465	127.748	XOM_R2OWSG MWD+IFR1+MS
8500.000	0.000	0.000	8398.861	30.262	0.000	30.075	0.000	12.382	0.000	0.000	30.528	29.805	127.502	XOM_R2OWSG MWD+IFR1+MS
8600.000	0.000	0.000	8498.861	30.603	0.000	30.411	0.000	12.586	0.000	0.000	30.865	30.145	127.258	XOM_R2OWSG MWD+IFR1+MS
8700.000	0.000	0.000	8598.861	30.945	0.000	30.747	0.000	12.793	0.000	0.000	31.203	30.485	127.019	XOM_R2OWSG MWD+IFR1+MS
8800.000	0.000	0.000	8698.861	31.287	0.000	31.084	0.000	13.003	0.000	0.000	31.541	30.826	126.783	XOM_R2OWSG MWD+IFR1+MS
8900.000	0.000	0.000	8798.861	31.629	0.000	31.422	0.000	13.216	0.000	0.000	31.880	31.167	126.550	XOM_R2OWSG MWD+IFR1+MS
9000.000	0.000	0.000	8898.861	31.972	0.000	31.760	0.000	13.432	0.000	0.000	32.219	31.509	126.321	XOM_R2OWSG MWD+IFR1+MS
9100.000	0.000	0.000	8998.861	32.315	0.000	32.098	0.000	13.651	0.000	0.000	32.559	31.851	126.096	XOM_R2OWSG MWD+IFR1+MS
9200.000	0.000	0.000	9098.861	32.659	0.000	32.437	0.000	13.873	0.000	0.000	32.899	32.193	125.873	XOM_R2OWSG MWD+IFR1+MS
9300.000	0.000	0.000	9198.861	33.002	0.000	32.777	0.000	14.098	0.000	0.000	33.240	32.536	125.655	XOM_R2OWSG MWD+IFR1+MS
9400.000	0.000	0.000	9298.861	33.346	0.000	33.116	0.000	14.327	0.000	0.000	33.581	32.879	125.439	XOM_R2OWSG MWD+IFR1+MS
9500.000	0.000	0.000	9398.861	33.691	0.000	33.456	0.000	14.558	0.000	0.000	33.922	33.222	125.226	XOM_R2OWSG MWD+IFR1+MS
9600.000	0.000	0.000	9498.861	34.035	0.000	33.797	0.000	14.792	0.000	0.000	34.264	33.565	125.017	XOM_R2OWSG MWD+IFR1+MS
9700.000	0.000	0.000	9598.861	34.380	0.000	34.138	0.000	15.030	0.000	0.000	34.606	33.909	124.811	XOM_R2OWSG MWD+IFR1+MS

9800.000	0.000	0.000	9698.861	34.726	0.000	34.479	0.000	15.270	0.000	0.000	34.948	34.253	124.608	XOM_R2OWSG MWD+IFR1+MS
9900.000	0.000	0.000	9798.861	35.071	0.000	34.821	0.000	15.514	0.000	0.000	35.291	34.598	124.408	XOM_R2OWSG MWD+IFR1+MS
10000.000	0.000	0.000	9898.861	35.417	0.000	35.163	0.000	15.761	0.000	0.000	35.634	34.942	124.211	XOM_R2OWSG MWD+IFR1+MS
10100.000	0.000	0.000	9998.861	35.763	0.000	35.505	0.000	16.010	0.000	0.000	35.977	35.287	124.016	XOM_R2OWSG MWD+IFR1+MS
10200.000	0.000	0.000	10098.861	36.109	0.000	35.847	0.000	16.263	0.000	0.000	36.321	35.633	123.825	XOM_R2OWSG MWD+IFR1+MS
10238.940	0.000	0.000	10137.803	36.244	0.000	35.981	0.000	16.363	0.000	0.000	36.455	35.767	123.751	XOM_R2OWSG MWD+IFR1+MS
10300.000	4.885	359.754	10198.789	36.178	0.000	36.191	0.000	16.517	0.000	0.000	36.663	35.974	123.707	XOM_R2OWSG MWD+IFR1+MS
10400.000	12.885	359.754	10297.509	35.610	0.000	36.518	0.000	16.763	0.000	0.000	36.990	36.297	123.987	XOM_R2OWSG MWD+IFR1+MS
10500.000	20.885	359.754	10393.120	34.488	0.000	36.826	0.000	16.996	0.000	0.000	37.295	36.593	124.803	XOM_R2OWSG MWD+IFR1+MS
10600.000	28.885	359.754	10483.762	32.857	0.000	37.113	0.000	17.213	0.000	0.000	37.571	36.860	126.266	XOM_R2OWSG MWD+IFR1+MS
10700.000	36.885	359.754	10567.670	30.788	0.000	37.375	0.000	17.417	0.000	0.000	37.814	37.092	128.394	XOM_R2OWSG MWD+IFR1+MS
10800.000	44.885	359.754	10643.212	28.384	0.000	37.612	0.000	17.610	0.000	0.000	38.023	37.290	131.144	XOM_R2OWSG MWD+IFR1+MS
10900.000	52.885	359.754	10708.916	25.788	0.000	37.822	0.000	17.797	0.000	0.000	38.198	37.451	134.416	XOM_R2OWSG MWD+IFR1+MS
11000.000	60.885	359.754	10763.504	23.204	0.000	38.006	0.000	17.986	0.000	0.000	38.343	37.578	-41.951	XOM_R2OWSG MWD+IFR1+MS
11100.000	68.885	359.754	10805.913	20.908	0.000	38.164	0.000	18.183	0.000	0.000	38.460	37.672	-38.177	XOM_R2OWSG MWD+IFR1+MS
11200.000	76.885	359.754	10835.319	19.250	0.000	38.297	0.000	18.395	0.000	0.000	38.553	37.739	-34.514	XOM_R2OWSG MWD+IFR1+MS
11300.000	84.885	359.754	10851.148	18.585	0.000	38.403	0.000	18.625	0.000	0.000	38.623	37.787	-31.213	XOM_R2OWSG MWD+IFR1+MS
11363.940	90.000	359.754	10854.000	18.781	0.000	38.456	0.000	18.781	0.000	0.000	38.655	37.811	-29.437	XOM_R2OWSG MWD+IFR1+MS
11400.000	90.000	359.754	10854.000	18.873	0.000	38.484	0.000	18.873	0.000	0.000	38.672	37.824	-28.480	XOM_R2OWSG MWD+IFR1+MS
11500.000	90.000	359.754	10854.000	19.148	0.000	38.577	0.000	19.148	0.000	0.000	38.734	37.860	-25.421	XOM_R2OWSG MWD+IFR1+MS

11600.000	90.000	359.754	10854.000	19.450	0.000	38.691	0.000	19.450	0.000	0.000	38.818	37.895	-22.151	XOM_R2OWSG MWD+IFR1+MS
11700.000	90.000	359.754	10854.000	19.780	0.000	38.824	0.000	19.780	0.000	0.000	38.925	37.927	-18.911	XOM_R2OWSG MWD+IFR1+MS
11800.000	90.000	359.754	10854.000	20.134	0.000	38.977	0.000	20.134	0.000	0.000	39.056	37.955	-15.896	XOM_R2OWSG MWD+IFR1+MS
11900.000	90.000	359.754	10854.000	20.512	0.000	39.148	0.000	20.512	0.000	0.000	39.209	37.981	-13.223	XOM_R2OWSG MWD+IFR1+MS
12000.000	90.000	359.754	10854.000	20.913	0.000	39.339	0.000	20.913	0.000	0.000	39.386	38.003	-10.932	XOM_R2OWSG MWD+IFR1+MS
12100.000	90.000	359.754	10854.000	21.335	0.000	39.549	0.000	21.335	0.000	0.000	39.584	38.023	-9.010	XOM_R2OWSG MWD+IFR1+MS
12200.000	90.000	359.754	10854.000	21.778	0.000	39.777	0.000	21.778	0.000	0.000	39.803	38.041	-7.417	XOM_R2OWSG MWD+IFR1+MS
12300.000	90.000	359.754	10854.000	22.239	0.000	40.023	0.000	22.239	0.000	0.000	40.043	38.057	-6.104	XOM_R2OWSG MWD+IFR1+MS
12400.000	90.000	359.754	10854.000	22.718	0.000	40.286	0.000	22.718	0.000	0.000	40.301	38.073	-5.022	XOM_R2OWSG MWD+IFR1+MS
12500.000	90.000	359.754	10854.000	23.214	0.000	40.567	0.000	23.214	0.000	0.000	40.578	38.089	-4.130	XOM_R2OWSG MWD+IFR1+MS
12600.000	90.000	359.754	10854.000	23.725	0.000	40.866	0.000	23.725	0.000	0.000	40.874	38.104	-3.391	XOM_R2OWSG MWD+IFR1+MS
12700.000	90.000	359.754	10854.000	24.251	0.000	41.180	0.000	24.251	0.000	0.000	41.186	38.119	-2.776	XOM_R2OWSG MWD+IFR1+MS
12800.000	90.000	359.754	10854.000	24.791	0.000	41.512	0.000	24.791	0.000	0.000	41.516	38.134	-2.263	XOM_R2OWSG MWD+IFR1+MS
12900.000	90.000	359.754	10854.000	25.343	0.000	41.859	0.000	25.343	0.000	0.000	41.861	38.149	-1.833	XOM_R2OWSG MWD+IFR1+MS
13000.000	90.000	359.754	10854.000	25.907	0.000	42.221	0.000	25.907	0.000	0.000	42.223	38.165	-1.471	XOM_R2OWSG MWD+IFR1+MS
13100.000	90.000	359.754	10854.000	26.483	0.000	42.599	0.000	26.483	0.000	0.000	42.600	38.181	-1.164	XOM_R2OWSG MWD+IFR1+MS
13200.000	90.000	359.754	10854.000	27.069	0.000	42.991	0.000	27.069	0.000	0.000	42.992	38.198	-0.903	XOM_R2OWSG MWD+IFR1+MS
13300.000	90.000	359.754	10854.000	27.665	0.000	43.398	0.000	27.665	0.000	0.000	43.398	38.215	-0.681	XOM_R2OWSG MWD+IFR1+MS
13400.000	90.000	359.754	10854.000	28.270	0.000	43.819	0.000	28.270	0.000	0.000	43.819	38.233	-0.491	XOM_R2OWSG MWD+IFR1+MS
13500.000	90.000	359.754	10854.000	28.884	0.000	44.253	0.000	28.884	0.000	0.000	44.253	38.251	-0.327	XOM_R2OWSG MWD+IFR1+MS



13600.000	90.000	359.754	10854.000	29.506	0.000	44.700	0.000	29.506	0.000	0.000	44.700	38.270	-0.187	XOM_R2OWSG MWD+IFR1+MS
13700.000	90.000	359.754	10854.000	30.136	0.000	45.161	0.000	30.136	0.000	0.000	45.161	38.289	-0.066	XOM_R2OWSG MWD+IFR1+MS
13800.000	90.000	359.754	10854.000	30.772	0.000	45.633	0.000	30.772	0.000	0.000	45.633	38.309	0.039	XOM_R2OWSG MWD+IFR1+MS
13900.000	90.000	359.754	10854.000	31.416	0.000	46.117	0.000	31.416	0.000	0.000	46.118	38.330	0.129	XOM_R2OWSG MWD+IFR1+MS
14000.000	90.000	359.754	10854.000	32.066	0.000	46.613	0.000	32.066	0.000	0.000	46.614	38.351	0.208	XOM_R2OWSG MWD+IFR1+MS
14100.000	90.000	359.754	10854.000	32.721	0.000	47.121	0.000	32.721	0.000	0.000	47.121	38.373	0.276	XOM_R2OWSG MWD+IFR1+MS
14200.000	90.000	359.754	10854.000	33.382	0.000	47.639	0.000	33.382	0.000	0.000	47.640	38.396	0.335	XOM_R2OWSG MWD+IFR1+MS
14300.000	90.000	359.754	10854.000	34.049	0.000	48.168	0.000	34.049	0.000	0.000	48.169	38.420	0.387	XOM_R2OWSG MWD+IFR1+MS
14400.000	90.000	359.754	10854.000	34.720	0.000	48.706	0.000	34.720	0.000	0.000	48.708	38.444	0.431	XOM_R2OWSG MWD+IFR1+MS
14500.000	90.000	359.754	10854.000	35.396	0.000	49.255	0.000	35.396	0.000	0.000	49.257	38.468	0.470	XOM_R2OWSG MWD+IFR1+MS
14600.000	90.000	359.754	10854.000	36.077	0.000	49.813	0.000	36.077	0.000	0.000	49.815	38.494	0.504	XOM_R2OWSG MWD+IFR1+MS
14700.000	90.000	359.754	10854.000	36.761	0.000	50.381	0.000	36.761	0.000	0.000	50.383	38.520	0.533	XOM_R2OWSG MWD+IFR1+MS
14800.000	90.000	359.754	10854.000	37.450	0.000	50.957	0.000	37.450	0.000	0.000	50.959	38.546	0.558	XOM_R2OWSG MWD+IFR1+MS
14900.000	90.000	359.754	10854.000	38.142	0.000	51.542	0.000	38.142	0.000	0.000	51.544	38.574	0.580	XOM_R2OWSG MWD+IFR1+MS
15000.000	90.000	359.754	10854.000	38.838	0.000	52.135	0.000	38.838	0.000	0.000	52.138	38.602	0.598	XOM_R2OWSG MWD+IFR1+MS
15100.000	90.000	359.754	10854.000	39.537	0.000	52.737	0.000	39.537	0.000	0.000	52.739	38.631	0.614	XOM_R2OWSG MWD+IFR1+MS
15200.000	90.000	359.754	10854.000	40.239	0.000	53.346	0.000	40.239	0.000	0.000	53.349	38.660	0.628	XOM_R2OWSG MWD+IFR1+MS
15300.000	90.000	359.754	10854.000	40.945	0.000	53.962	0.000	40.945	0.000	0.000	53.965	38.690	0.639	XOM_R2OWSG MWD+IFR1+MS
15400.000	90.000	359.754	10854.000	41.653	0.000	54.586	0.000	41.653	0.000	0.000	54.589	38.721	0.648	XOM_R2OWSG MWD+IFR1+MS
15500.000	90.000	359.754	10854.000	42.364	0.000	55.217	0.000	42.364	0.000	0.000	55.220	38.752	0.656	XOM_R2OWSG MWD+IFR1+MS



15600.000	90.000	359.754	10854.000	43.077	0.000	55.854	0.000	43.077	0.000	0.000	55.858	38.784	0.662	XOM_R2OWSG MWD+IFR1+MS
15700.000	90.000	359.754	10854.000	43.793	0.000	56.499	0.000	43.793	0.000	0.000	56.502	38.817	0.667	XOM_R2OWSG MWD+IFR1+MS
15800.000	90.000	359.754	10854.000	44.511	0.000	57.149	0.000	44.511	0.000	0.000	57.153	38.851	0.671	XOM_R2OWSG MWD+IFR1+MS
15900.000	90.000	359.754	10854.000	45.231	0.000	57.806	0.000	45.231	0.000	0.000	57.810	38.885	0.674	XOM_R2OWSG MWD+IFR1+MS
16000.000	90.000	359.754	10854.000	45.954	0.000	58.468	0.000	45.954	0.000	0.000	58.472	38.920	0.676	XOM_R2OWSG MWD+IFR1+MS
16100.000	90.000	359.754	10854.000	46.678	0.000	59.136	0.000	46.678	0.000	0.000	59.140	38.955	0.677	XOM_R2OWSG MWD+IFR1+MS
16200.000	90.000	359.754	10854.000	47.405	0.000	59.810	0.000	47.405	0.000	0.000	59.814	38.991	0.677	XOM_R2OWSG MWD+IFR1+MS
16300.000	90.000	359.754	10854.000	48.133	0.000	60.489	0.000	48.133	0.000	0.000	60.493	39.028	0.676	XOM_R2OWSG MWD+IFR1+MS
16400.000	90.000	359.754	10854.000	48.863	0.000	61.173	0.000	48.863	0.000	0.000	61.177	39.065	0.675	XOM_R2OWSG MWD+IFR1+MS
16500.000	90.000	359.754	10854.000	49.595	0.000	61.862	0.000	49.595	0.000	0.000	61.866	39.103	0.674	XOM_R2OWSG MWD+IFR1+MS
16600.000	90.000	359.754	10854.000	50.328	0.000	62.555	0.000	50.328	0.000	0.000	62.560	39.142	0.672	XOM_R2OWSG MWD+IFR1+MS
16700.000	90.000	359.754	10854.000	51.063	0.000	63.254	0.000	51.063	0.000	0.000	63.259	39.181	0.669	XOM_R2OWSG MWD+IFR1+MS
16800.000	90.000	359.754	10854.000	51.799	0.000	63.957	0.000	51.799	0.000	0.000	63.962	39.221	0.667	XOM_R2OWSG MWD+IFR1+MS
16900.000	90.000	359.754	10854.000	52.537	0.000	64.664	0.000	52.537	0.000	0.000	64.669	39.262	0.663	XOM_R2OWSG MWD+IFR1+MS
17000.000	90.000	359.754	10854.000	53.276	0.000	65.376	0.000	53.276	0.000	0.000	65.381	39.303	0.660	XOM_R2OWSG MWD+IFR1+MS
17100.000	90.000	359.754	10854.000	54.016	0.000	66.092	0.000	54.016	0.000	0.000	66.097	39.345	0.656	XOM_R2OWSG MWD+IFR1+MS
17200.000	90.000	359.754	10854.000	54.757	0.000	66.811	0.000	54.757	0.000	0.000	66.816	39.387	0.652	XOM_R2OWSG MWD+IFR1+MS
17300.000	90.000	359.754	10854.000	55.500	0.000	67.534	0.000	55.500	0.000	0.000	67.540	39.431	0.648	XOM_R2OWSG MWD+IFR1+MS
17400.000	90.000	359.754	10854.000	56.244	0.000	68.262	0.000	56.244	0.000	0.000	68.267	39.474	0.644	XOM_R2OWSG MWD+IFR1+MS
17500.000	90.000	359.754	10854.000	56.989	0.000	68.992	0.000	56.989	0.000	0.000	68.998	39.519	0.639	XOM_R2OWSG MWD+IFR1+MS

17600.000	90.000	359.754	10854.000	57.735	0.000	69.726	0.000	57.735	0.000	0.000	69.732	39.564	0.635	XOM_R2OWSG MWD+IFR1+MS
17700.000	90.000	359.754	10854.000	58.482	0.000	70.464	0.000	58.482	0.000	0.000	70.469	39.610	0.630	XOM_R2OWSG MWD+IFR1+MS
17800.000	90.000	359.754	10854.000	59.230	0.000	71.205	0.000	59.230	0.000	0.000	71.210	39.656	0.625	XOM_R2OWSG MWD+IFR1+MS
17900.000	90.000	359.754	10854.000	59.979	0.000	71.948	0.000	59.979	0.000	0.000	71.954	39.703	0.620	XOM_R2OWSG MWD+IFR1+MS
18000.000	90.000	359.754	10854.000	60.729	0.000	72.695	0.000	60.729	0.000	0.000	72.701	39.751	0.615	XOM_R2OWSG MWD+IFR1+MS
18100.000	90.000	359.754	10854.000	61.480	0.000	73.445	0.000	61.480	0.000	0.000	73.451	39.799	0.610	XOM_R2OWSG MWD+IFR1+MS
18200.000	90.000	359.754	10854.000	62.231	0.000	74.198	0.000	62.231	0.000	0.000	74.204	39.847	0.605	XOM_R2OWSG MWD+IFR1+MS
18300.000	90.000	359.754	10854.000	62.984	0.000	74.954	0.000	62.984	0.000	0.000	74.960	39.897	0.600	XOM_R2OWSG MWD+IFR1+MS
18400.000	90.000	359.754	10854.000	63.737	0.000	75.712	0.000	63.737	0.000	0.000	75.718	39.947	0.595	XOM_R2OWSG MWD+IFR1+MS
18500.000	90.000	359.754	10854.000	64.491	0.000	76.473	0.000	64.491	0.000	0.000	76.479	39.998	0.590	XOM_R2OWSG MWD+IFR1+MS
18600.000	90.000	359.754	10854.000	65.245	0.000	77.236	0.000	65.245	0.000	0.000	77.242	40.049	0.584	XOM_R2OWSG MWD+IFR1+MS
18700.000	90.000	359.754	10854.000	66.001	0.000	78.002	0.000	66.001	0.000	0.000	78.008	40.101	0.579	XOM_R2OWSG MWD+IFR1+MS
18800.000	90.000	359.754	10854.000	66.757	0.000	78.771	0.000	66.757	0.000	0.000	78.777	40.153	0.574	XOM_R2OWSG MWD+IFR1+MS
18888.010	90.000	359.754	10854.000	67.423	0.000	79.448	0.000	67.423	0.000	0.000	79.454	40.200	0.569	XOM_R2OWSG MWD+IFR1+MS
18900.000	90.000	359.754	10854.000	67.514	0.000	79.541	0.000	67.514	0.000	0.000	79.547	40.206	0.569	XOM_R2OWSG MWD+IFR1+MS
18938.010	90.000	359.754	10854.000	67.801	0.000	79.833	0.000	67.801	0.000	0.000	79.839	40.226	0.567	XOM_R2OWSG MWD+IFR1+MS

## Plan Targets

Corral 17-8 Fed Com 164H

Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
164H FTP	11363.92	408843.80	601735.50	7811.00	CIRCLE
164H LTP	18888.01	416367.80	601703.30	7811.00	CIRCLE

164H BHL	18938.01	416417.80	601703.10	7811.00 CIRCLE
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ALL DIMENSIONS APPROXIMATE

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

**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>a</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.

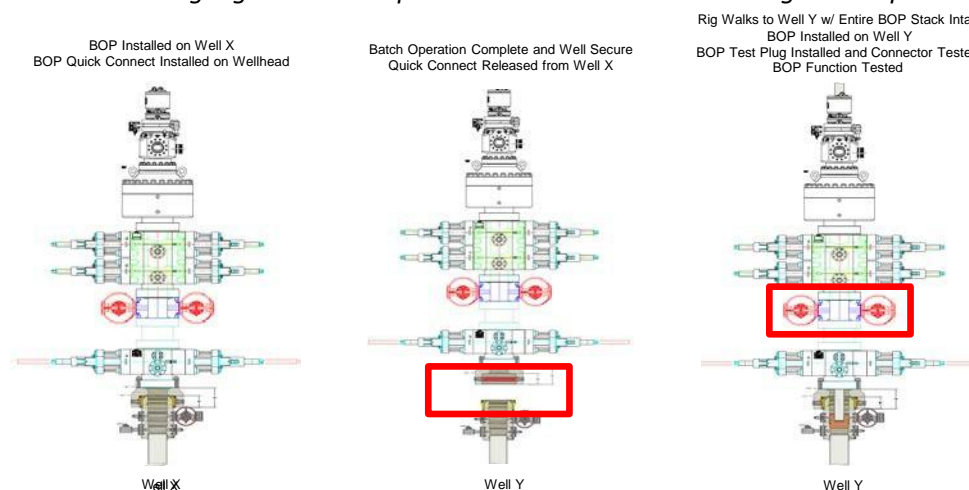
### **Procedures**

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.

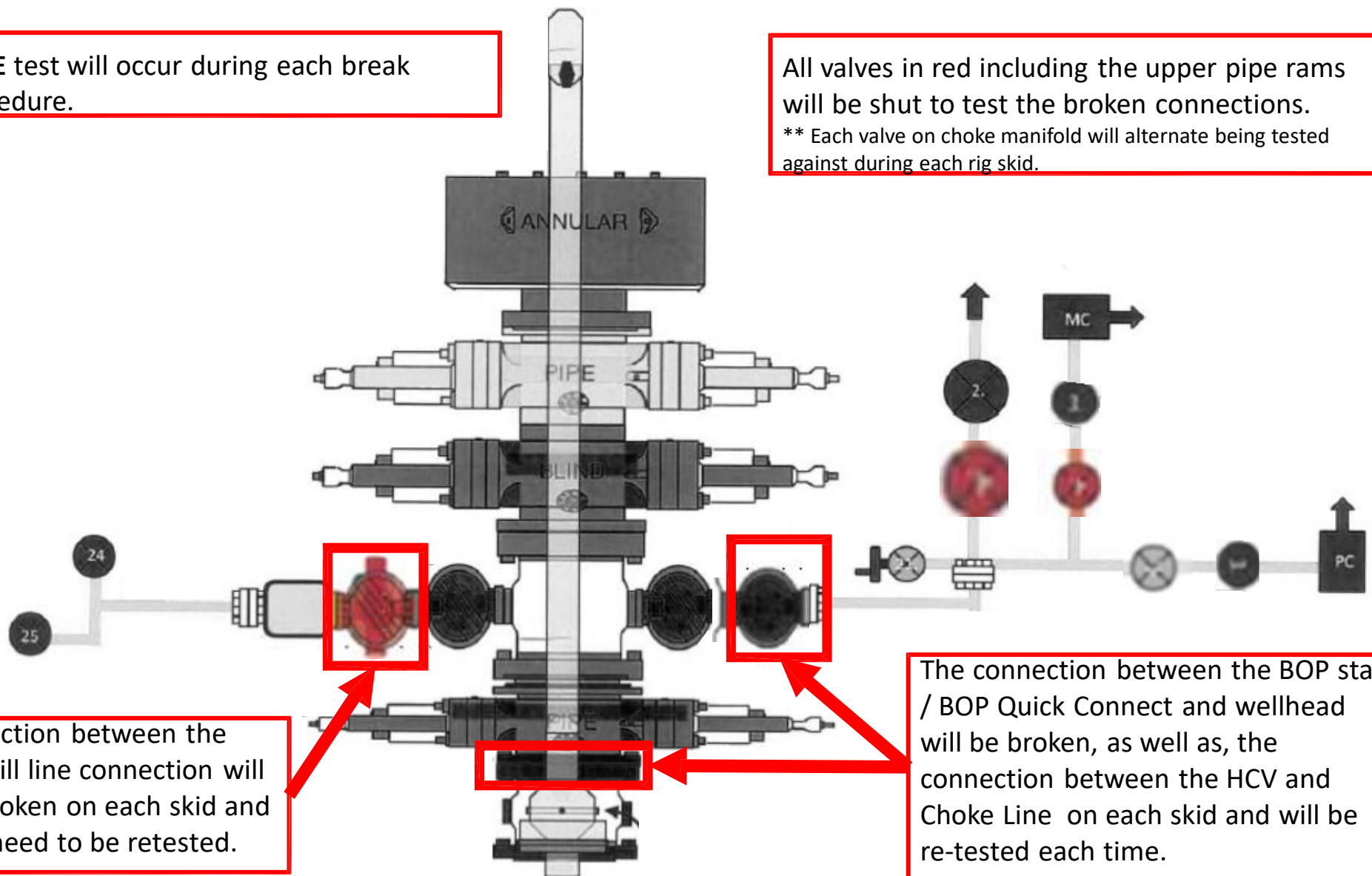
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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.

## 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 Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

### General Procedure While Drilling

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

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

#### General Procedure While Tripping

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

#### General Procedure While Running Production Casing

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

General Procedure With No Pipe In Hole (Open Hole)

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

General Procedures While Pulling BHA Through Stack

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

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



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**District III**  
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Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
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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 362906

CONDITIONS

Operator:  XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID:  5380
	Action Number:  362906
	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.	7/19/2024