

Form 3160-5
(June 2019)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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. **NMNM102033**
6. If Indian, Allottee or Tribe Name***SUBMIT IN TRIPLICATE - Other instructions on page 2***

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator **XTO PERMIAN OPERATING LLC**3a. Address **6401 Holiday Hill Road, Bldg 5, Midland, TX 79703** 3b. Phone No. (include area code)
(432) 682-88734. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC 31/T25S/R30E/NMP

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

8. Well Name and No. **BRUSHY DRAW 31 FEDERAL/1241**9. API Well No. **3001545197**10. Field and Pool or Exploratory Area
PURPLE SAGE/null11. Country or Parish, State
EDDY/NM**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" 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 checked="" 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 recompleat 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 performed 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 recompleat 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 determined that the site is ready for final inspection.)

****Spacing, Casing/Cement, Drilling Variance Changes**

XTO Permian Operating, LLC requests permission to make the following changes to the original APD:

No Additional Surface Disturbance

Change formation from Wolfcamp to Bone Spring

Change Pool fr/Purple Sage; Wolfcamp (98220) to Corral Canyon; Bone Spring, South (13354)

Change BHL fr/2440FNL & 2310FWL to 2460FNL & 1870FEL

Casing/Cement design per the attached drilling program.

Batch & Spudder Rig

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
STEPHANIE RABADUE / Ph: (432) 620-6714Title **Regulatory Coordinator**

Signature

Date **04/22/2022****THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

CHRISTOPHER WALLS / Ph: (575) 234-2234 / ApprovedTitle **Petroleum Engineer**Date **04/27/2022**

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 **CARLSBAD**

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:

C102

Drilling Program

Directional Plan

Multibowl Diagram

Spudder Rig Request

Offline Cement Variance (Surface & Intermediate Only) Request

BOP Breaktest Variance

Location of Well

0. SHL: NWNW / 223 FNL / 2344 FEL / TWSP: 25S / RANGE: 30E / SECTION: 31 / LAT: 32.093001 / LONG: -103.919596 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 300 FNL / 2310 FEL / TWSP: 25S / RANGE: 30E / SECTION: 31 / LAT: 32.092704 / LONG: -103.92183 (TVD: 10879 feet, MD: 11300 feet)

BHL: SENW / 2440 FNL / 2310 FWL / TWSP: 26S / RANGE: 30E / SECTION: 7 / LAT: 32.057692 / LONG: -103.921774 (TVD: 10879 feet, MD: 24093 feet)

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: (505) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45197	² Pool Code 13354	³ Pool Name Corral Canyon; Bone Spring, South
⁴ Property Code	⁵ Property Name BRUSHY DRAW 31 FED	⁶ Well Number 124H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC	⁹ Elevation 3,099'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	31	25 S	30 E		223	NORTH	2,346	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	7	25 S	30 E		2,460	NORTH	1,870	EAST	EDDY

¹² Dedicated Acres 400	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	<p>SHL (NAD83 NME) Y = 397,816.5 X = 669,462.1 LAT. = 32.093001 °N LONG. = 103.919596 °W</p> <p>FTP (NAD83 NME) Y = 397,712.9 X = 669,937.9 LAT. = 32.092712 °N LONG. = 103.918061 °W</p> <p>CORNER COORDINATES (NAD83 NME) A - Y = 398,037.8 N , X = 669,143.7 E B - Y = 395,382.0 N , X = 669,148.4 E C - Y = 392,724.6 N , X = 669,153.0 E D - Y = 390,069.4 N , X = 669,175.5 E E - Y = 387,411.8 N , X = 669,198.0 E F - Y = 384,756.2 N , X = 669,204.1 E G - Y = 398,047.7 N , X = 670,474.6 E H - Y = 395,390.9 N , X = 670,479.4 E I - Y = 392,734.7 N , X = 670,483.5 E J - Y = 390,079.0 N , X = 670,505.2 E K - Y = 387,422.3 N , X = 670,525.6 E L - Y = 384,766.4 N , X = 670,533.7 E</p> <p>SHL (NAD27 NME) Y = 397,758.3 X = 628,277.2 LAT. = 32.092876 °N LONG. = 103.919112 °W</p> <p>FTP (NAD27 NME) Y = 397,654.8 X = 628,752.9 LAT. = 32.092587 °N LONG. = 103.917578 °W</p> <p>CORNER COORDINATES (NAD27 NME) A - Y = 397,979.6 N , X = 627,958.8 E B - Y = 395,323.9 N , X = 627,963.3 E C - Y = 392,666.5 N , X = 627,967.9 E D - Y = 390,011.4 N , X = 627,990.3 E E - Y = 387,353.9 N , X = 628,012.7 E F - Y = 384,698.4 N , X = 628,018.8 E G - Y = 397,989.5 N , X = 629,289.6 E H - Y = 395,332.7 N , X = 629,294.4 E I - Y = 392,676.7 N , X = 629,298.4 E J - Y = 390,021.1 N , X = 629,320.0 E K - Y = 387,364.4 N , X = 629,340.3 E L - Y = 384,708.6 N , X = 629,348.4 E</p>	<p>LTP (NAD83 NME) Y = 385,108.0 X = 669,992.1 LAT. = 32.058061 °N LONG. = 103.918042 °W</p> <p>BHL (NAD83 NME) Y = 384,958.0 X = 669,992.7 LAT. = 32.057649 °N LONG. = 103.918042 °W</p> <p>LTP (NAD27 NME) Y = 385,050.2 X = 628,806.7 LAT. = 32.057936 °N LONG. = 103.917561 °W</p> <p>BHL (NAD27 NME) Y = 384,900.2 X = 628,807.3 LAT. = 32.057524 °N LONG. = 103.917561 °W</p>	<p>17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><u>Stephanie Rabadue</u> 04/14/2022 Signature Date</p> <p>Stephanie Rabadue Printed Name</p> <p>stephanie.rabadue@exxonmobil.com E-mail Address</p>
	<p>18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>4-14-2022 Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>MARK DILLON HARP 23786 Certificate Number</p> <p>AW 2017060886</p>		

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

XTO Energy Inc.
Brushy Draw 31 Federal 124H
Projected TD: 22473' MD / 9340' TVD
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	764'	Water
Top of Salt	914'	Water
Base of Salt	3672'	Water
Delaware	3800'	Water
Brushy Canyon	6290'	Water/Oil/Gas
Bone Spring	7370'	Water
1st Bone Spring Ss	8265'	Water/Oil/Gas
2nd Bone Spring Ss	8920'	Water/Oil/Gas
Target/Land Curve	9330'	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 @ 864' (50' 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 8740' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 22473 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 8440 feet).

3. Casing Design

Hole Size	TVD	Measured Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	864'	0' – 864'	9.625	40	J-55	BTC	New	1.59	6.58	18.23
8.75	3984'	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	4.36	2.65	2.15
8.75	8747'	4000' – 8740'	7.625	29.7	HC L-80	Flush Joint	New	3.17	2.29	2.88
6.75	8547'	0' – 8640'	5.5	20	RY P-110	Semi-Premium	New	1.05	2.84	2.26
6.75	9340'	8640' - 22473'	5.5	20	RY P-110	Semi-Flush	New	1.05	2.63	5.78

· Production casing meets the clearance requirements as tapered string crosses over before encountering the intermediate shoe, per Onshore Order 2, 3.B.1

· 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 +/- 864'

Lead: 180 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft3/sx, 10.13 gal/sx water)

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

Top of Cement: Surface

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

2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 8740'

1st Stage

Optional Lead: 340 sxs Class C (mixed at 10.5 ppg, 2.77 ft3/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 220 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6290

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

2nd Stage

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

Tail: 710 sxs Class C (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)

Top of Cement: 0

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

XTO requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6290') 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 include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

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 +/- 22473'

Lead: 10 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 8440 feet

Tail: 980 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 8820 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 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP. MASP should not exceed 2171 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, 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 3000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M 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' - 864'		12.25	FW/Native	8.7-9.2	35-40	NC
864' - 8740'		8.75	FW / Cut Brine / Direct Emulsion	9.7-10.2	30-32	NC
8740' - 22473'		6.75	OBM	8.7-9.2	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

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

Open hole logging will not be done on this well.

9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 160 to 180 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 4225 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 - Brushy Draw 30 Fed 124H

Measured Depth: 22472.00 ft

TVL RKB: 9340.00 ft

Location

Catalogic Reference System: New Mexico East - NAD 27

Northing: 397759.69 ft

Easting: 628283.79 ft

RKB: 3170.00 ft

Ground Level: 3140.00 ft

North Grid

Reference: Convergence Angle: 0.22 Deg

Site: BD 31 Pad A

Slot: Brushy Draw 30 Fed 124H

Plan Sections		Brushy Draw 30 Fed 124H									
Measured Depth	Inclination	Azimuth	TVD	Y Offset	X Offset	Build Rate	Turn Rate	Dogleg Rate			
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)	Target		
0	0	0	0	0	0	0	0	0	0	0	

2500	0	0	2500	0	0	0	0	0	0
2970.85	9.42	45.41	2968.74	27.1	27.49	2	0	2	2
6582.05	9.42	45.41	6531.26	441.9	448.28	0	0	0	0
7052.9	0	0	7000	469	475.78	-2	0	2	2
8819.9	0	0	8767	469	475.78	0	0	0	0
9719.9	90	179.7	9339.96	-103.95	478.78	10	0	10	10
2472.92	90	179.7	9340	-12856.87	530.5	0	0	0	0 BHL 3

2025 9:52:46 AM

Position
Uncertainty

Brushy Draw
30 Feb 124H

1:32:08 PM

Measured		TVD		Highside		Lateral		Vertical		Magnitude		Semi-major		Semi-minor		Semi-minor Tool	
Depth (ft)	Inclination (°)	Azimuth (°)	RKB (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	Bias (ft)	Error (ft)	of Bias (ft)	Error (ft)	Error (ft)	Error (ft)	Azimuth Used (°)		
0	0	0	0	0	0	0	0	2.297	0	0	0	0	0	0	0	OWSG 0 MWD+IFR1+ MS	
100	0	0	100	0.358	0	0.358	0	2.299	0	0	0	0.358	0.358	0.358	0	OWSG 0 MWD+IFR1+ MS	
200	0	0	200	0.717	0	0.717	0	2.307	0	0	0	0.717	0.717	0.717	0	OWSG 0 MWD+IFR1+ MS	
300	0	0	300	1.075	0	1.075	0	2.321	0	0	0	1.075	1.075	1.075	0	OWSG 0 MWD+IFR1+ MS	
400	0	0	400	1.434	0	1.434	0	2.34	0	0	0	1.434	1.434	1.434	0	OWSG 0 MWD+IFR1+ MS	
500	0	0	500	1.792	0	1.792	0	2.364	0	0	0	1.792	1.792	1.792	0	OWSG 0 MWD+IFR1+ MS	
600	0	0	600	2.151	0	2.151	0	2.393	0	0	0	2.151	2.151	2.151	0	OWSG 0 MWD+IFR1+ MS	
700	0	0	700	2.509	0	2.509	0	2.428	0	0	0	2.509	2.509	2.509	0	OWSG 0 MWD+IFR1+ MS	
800	0	0	800	2.868	0	2.868	0	2.467	0	0	0	2.868	2.868	2.868	0	OWSG 0 MWD+IFR1+ MS	
900	0	0	900	3.225	0	3.225	0	2.511	0	0	0	3.225	3.225	3.225	0	OWSG 0 MWD+IFR1+ MS	

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1000	0	0	0	1000	3.585	0	3.585	0	2.559	0	0	3.585	3.585	0 MWD+IFR1+ MS
1100	0	0	0	1100	3.942	0	3.942	0	2.613	0	0	3.942	3.942	0 MWD+IFR1+ MS
1200	0	0	0	1200	4.301	0	4.301	0	2.67	0	0	4.301	4.301	0 MWD+IFR1+ MS
1300	0	0	0	1300	4.659	0	4.659	0	2.731	0	0	4.659	4.659	0 MWD+IFR1+ MS
1400	0	0	0	1400	5.018	0	5.018	0	2.797	0	0	5.018	5.018	0 MWD+IFR1+ MS
1500	0	0	0	1500	5.377	0	5.377	0	2.866	0	0	5.377	5.377	0 MWD+IFR1+ MS
1600	0	0	0	1600	5.735	0	5.735	0	2.939	0	0	5.735	5.735	0 MWD+IFR1+ MS
1700	0	0	0	1700	6.093	0	6.093	0	3.015	0	0	6.093	6.093	0 MWD+IFR1+ MS
1800	0	0	0	1800	6.452	0	6.452	0	3.095	0	0	6.452	6.452	0 MWD+IFR1+ MS
1900	0	0	0	1900	6.81	0	6.81	0	3.178	0	0	6.81	6.81	0 MWD+IFR1+ MS
2000	0	0	0	2000	7.169	0	7.169	0	3.265	0	0	7.169	7.169	0 MWD+IFR1+ MS
2100	0	0	0	2100	7.527	0	7.527	0	3.354	0	0	7.527	7.527	0 MWD+IFR1+ MS
2200	0	0	0	2200	7.886	0	7.886	0	3.447	0	0	7.886	7.886	0 MWD+IFR1+ MS
2300	0	0	0	2300	8.244	0	8.244	0	3.544	0	0	8.244	8.244	0 MWD+IFR1+ MS
2400	0	0	0	2400	8.603	0	8.603	0	3.643	0	0	8.603	8.603	0 MWD+IFR1+ MS
2500	0	0	0	2500	8.962	0	8.962	0	3.744	0	0	8.962	8.962	0 MWD+IFR1+ MS
2600	1.999	45.41	2599.98		9.312	0	9.312	0	3.848	0	0	9.317	9.317	0 MWD+IFR1+ MS

2700	4	45.41	2699.838	9.65	0	9.67	0	3.953	0	0	9.671	9.67	OWSG MS	-22.164 MWD+IFR1+
2800	6	45.41	2799.452	9.975	0	10.02	0	4.061	0	0	10.02	10.02	OWSG MS	135 MWD+IFR1+
2900	7.999	45.41	2898.702	10.292	0	10.373	0	4.169	0	0	10.373	10.373	OWSG MS	135 MWD+IFR1+
2970.8	9.417	45.41	2968.736	10.51	0	10.623	0	4.245	0	0	10.625	10.621	OWSG MS	0.908 MWD+IFR1+
3000	9.417	45.41	2997.49	10.613	0	10.726	0	4.278	0	0	10.728	10.724	OWSG MS	2.348 MWD+IFR1+
3100	9.417	45.41	3096.142	10.967	0	11.079	0	4.397	0	0	11.082	11.072	OWSG MS	13.349 MWD+IFR1+
3200	9.417	45.41	3194.795	11.325	0	11.437	0	4.519	0	0	11.438	11.426	OWSG MS	21.896 MWD+IFR1+
3300	9.417	45.41	3293.447	11.681	0	11.791	0	4.645	0	0	11.793	11.778	OWSG MS	27.308 MWD+IFR1+
3400	9.417	45.41	3392.1	12.037	0	12.146	0	4.774	0	0	12.149	12.129	OWSG MS	25.49 MWD+IFR1+
3500	9.417	45.41	3490.752	12.397	0	12.505	0	4.906	0	0	12.507	12.485	OWSG MS	28.37 MWD+IFR1+
3600	9.417	45.41	3589.404	12.757	0	12.863	0	5.041	0	0	12.866	12.84	OWSG MS	26.811 MWD+IFR1+
3700	9.417	45.41	3688.057	13.119	0	13.223	0	5.178	0	0	13.227	13.197	OWSG MS	25.724 MWD+IFR1+
3800	9.417	45.41	3786.709	13.481	0	13.583	0	5.319	0	0	13.586	13.554	OWSG MS	27.427 MWD+IFR1+
3900	9.417	45.41	3885.361	13.842	0	13.942	0	5.463	0	0	13.946	13.911	OWSG MS	26.416 MWD+IFR1+
4000	9.417	45.41	3984.014	14.207	0	14.305	0	5.609	0	0	14.308	14.271	OWSG MS	27.719 MWD+IFR1+
4100	9.417	45.41	4082.666	14.572	0	14.667	0	5.758	0	0	14.671	14.631	OWSG MS	26.791 MWD+IFR1+
4200	9.417	45.41	4181.318	14.936	0	15.029	0	5.909	0	0	15.032	14.991	OWSG MS	27.835 MWD+IFR1+

4300	9.417	45.41	4279.971	15.302	0	15.391	0	6.064	0	0	15.397	15.351	OWSG MS	25.345 MWD+IFR1+
4400	9.417	45.41	4378.623	15.669	0	15.755	0	6.222	0	0	15.76	15.713	OWSG MS	26.237 MWD+IFR1+
4500	9.417	45.41	4477.275	16.035	0	16.119	0	6.381	0	0	16.124	16.075	OWSG MS	25.583 MWD+IFR1+
4600	9.417	45.41	4575.928	16.401	0	16.482	0	6.544	0	0	16.487	16.437	OWSG MS	26.33 MWD+IFR1+
4700	9.417	45.41	4674.58	16.769	0	16.846	0	6.709	0	0	16.853	16.798	OWSG MS	24.467 MWD+IFR1+
4800	9.417	45.41	4773.232	17.137	0	17.211	0	6.877	0	0	17.217	17.163	OWSG MS	25.113 MWD+IFR1+
4900	9.417	45.41	4871.885	17.505	0	17.575	0	7.048	0	0	17.582	17.526	OWSG MS	24.577 MWD+IFR1+
5000	9.417	45.41	4970.537	17.874	0	17.941	0	7.221	0	0	17.949	17.89	OWSG MS	24.078 MWD+IFR1+
5100	9.417	45.41	5069.189	18.241	0	18.304	0	7.397	0	0	18.313	18.252	OWSG MS	23.608 MWD+IFR1+
5200	9.417	45.41	5167.842	18.612	0	18.672	0	7.575	0	0	18.68	18.618	OWSG MS	23.164 MWD+IFR1+
5300	9.417	45.41	5266.494	18.981	0	19.037	0	7.756	0	0	19.046	18.983	OWSG MS	22.739 MWD+IFR1+
5400	9.417	45.41	5365.146	19.351	0	19.403	0	7.94	0	0	19.413	19.348	OWSG MS	22.327 MWD+IFR1+
5500	9.417	45.41	5463.799	19.72	0	19.769	0	8.126	0	0	19.778	19.713	OWSG MS	22.704 MWD+IFR1+
5600	9.417	45.41	5562.451	20.091	0	20.135	0	8.314	0	0	20.146	20.078	OWSG MS	21.541 MWD+IFR1+
5700	9.417	45.41	5661.104	20.462	0	20.502	0	8.506	0	0	20.513	20.445	OWSG MS	21.857 MWD+IFR1+
5800	9.417	45.41	5759.756	20.832	0	20.869	0	8.7	0	0	20.88	20.811	OWSG MS	21.447 MWD+IFR1+
5900	9.417	45.41	5858.408	21.204	0	21.236	0	8.896	0	0	21.248	21.178	OWSG MS	21.044 MWD+IFR1+

6000	9.417	45.41	5957.061	21.575	0	21.603	0	9.096	0	0	21.616	21.544	OWSG MS	20.029 MWD+IFR1+
6100	9.417	45.41	6055.713	21.946	0	21.971	0	9.297	0	0	21.984	21.912	OWSG MS	20.238 MWD+IFR1+
6200	9.417	45.41	6154.365	22.317	0	22.338	0	9.502	0	0	22.351	22.278	OWSG MS	19.853 MWD+IFR1+
6300	9.417	45.41	6253.018	22.689	0	22.705	0	9.709	0	0	22.719	22.646	OWSG MS	19.45 MWD+IFR1+
6400	9.417	45.41	6351.67	23.061	0	23.072	0	9.918	0	0	23.088	23.012	OWSG MS	18.552 MWD+IFR1+
6500	9.417	45.41	6450.322	23.434	0	23.441	0	10.129	0	0	23.457	23.381	OWSG MS	18.174 MWD+IFR1+
6582	9.417	45.41	6531.264	23.739	0	23.743	0	10.305	0	0	23.76	23.682	OWSG MS	17.776 MWD+IFR1+
6600	9.058	45.41	6548.984	23.813	0	23.809	0	10.344	0	0	23.825	23.748	OWSG MS	17.814 MWD+IFR1+
6700	7.058	45.41	6647.991	24.214	0	24.175	0	10.559	0	0	24.192	24.113	OWSG MS	17.57 MWD+IFR1+
6800	5.058	45.41	6747.428	24.585	0	24.538	0	10.78	0	0	24.555	24.476	OWSG MS	17.424 MWD+IFR1+
6900	3.058	45.41	6847.172	24.929	0	24.899	0	11	0	0	24.917	24.836	OWSG MS	17.391 MWD+IFR1+
7000	1.058	45.41	6947.103	25.241	0	25.255	0	11.216	0	0	25.272	25.191	OWSG MS	18.014 MWD+IFR1+
7052.9	0	0	7000	25.385	0	25.45	0	11.331	0	0	25.458	25.377	OWSG MS	18.418 MWD+IFR1+
7100	0	0	7047.1	25.548	0	25.614	0	11.437	0	0	25.623	25.54	OWSG MS	18.348 MWD+IFR1+
7200	0	0	7147.1	25.898	0	25.965	0	11.658	0	0	25.974	25.889	OWSG MS	18.649 MWD+IFR1+
7300	0	0	7247.1	26.247	0	26.313	0	11.883	0	0	26.323	26.238	OWSG MS	19.33 MWD+IFR1+
7400	0	0	7347.1	26.597	0	26.665	0	12.108	0	0	26.674	26.587	OWSG MS	19.58 MWD+IFR1+

7500	0	0	0	7447.1	26.946	0	27.015	0	12.337	0	27.025	26.936	OWSG MS	19.814 MWD+IFR1+
7600	0	0	0	7547.1	27.297	0	27.364	0	12.57	0	27.375	27.286	OWSG MS	20.419 MWD+IFR1+
7700	0	0	0	7647.1	27.648	0	27.716	0	12.806	0	27.728	27.636	OWSG MS	20.614 MWD+IFR1+
7800	0	0	0	7747.1	27.998	0	28.066	0	13.046	0	28.078	27.986	OWSG MS	21.168 MWD+IFR1+
7900	0	0	0	7847.1	28.35	0	28.417	0	13.289	0	28.429	28.337	OWSG MS	21.71 MWD+IFR1+
8000	0	0	0	7947.1	28.7	0	28.768	0	13.531	0	28.781	28.687	OWSG MS	21.854 MWD+IFR1+
8100	0	0	0	8047.1	29.052	0	29.12	0	13.78	0	29.134	29.038	OWSG MS	21.997 MWD+IFR1+
8200	0	0	0	8147.1	29.402	0	29.472	0	14.032	0	29.486	29.389	OWSG MS	22.125 MWD+IFR1+
8300	0	0	0	8247.1	29.754	0	29.823	0	14.286	0	29.837	29.74	OWSG MS	22.591 MWD+IFR1+
8400	0	0	0	8347.1	30.106	0	30.174	0	14.543	0	30.19	30.091	OWSG MS	23.048 MWD+IFR1+
8500	0	0	0	8447.1	30.458	0	30.527	0	14.802	0	30.542	30.443	OWSG MS	23.14 MWD+IFR1+
8600	0	0	0	8547.1	30.809	0	30.879	0	15.063	0	30.895	30.793	OWSG MS	23.227 MWD+IFR1+
8700	0	0	0	8647.1	31.162	0	31.231	0	15.33	0	31.248	31.146	OWSG MS	23.644 MWD+IFR1+
8800	0	0	0	8747.1	31.513	0	31.583	0	15.598	0	31.6	31.497	OWSG MS	23.715 MWD+IFR1+
8819.9	0	0	0	8767	31.585	0	31.654	0	15.652	0	31.671	31.568	OWSG MS	23.792 MWD+IFR1+
8900	8.009	179.7	8846.839	31.425	0	31.906	0	15.865	0	31.925	31.824	25.886 MWD+IFR1+	OWSG MS	
9000	18	179.7	8944.148	30.553	0	32.218	0	16.118	0	32.236	32.107	22 MWD+IFR1+	OWSG MS	

9100	28	179.7	9036.075	29.027	0	32.496	0	16.346	0	0	32.517	32.367	22.085 MWD+IFR1+ MS
9200	38	179.7	9119.826	26.922	0	32.741	0	16.55	0	0	32.762	32.568	OWSG
9300	48	179.7	9192.857	24.43	0	32.969	0	16.733	0	0	32.987	32.724	19.07 MWD+IFR1+ MS
9400	58	179.7	9252.949	21.808	0	33.15	0	16.9	0	0	33.166	32.834	OWSG
9500	68	179.7	9298.274	19.431	0	33.301	0	17.065	0	0	33.312	32.899	15.008 MWD+IFR1+ MS
9600	78	179.7	9327.458	17.792	0	33.391	0	17.237	0	0	33.398	32.933	OWSG
9700	88	179.7	9339.612	17.373	0	33.466	0	17.421	0	0	33.469	32.952	6.589 MWD+IFR1+ MS
9719.9	90	179.7	9339.958	17.461	0	33.466	0	17.461	0	0	33.468	32.953	OWSG
9800	90	179.7	9339.958	17.63	0	33.496	0	17.63	0	0	33.496	32.954	3.325 MWD+IFR1+ MS
9900	90	179.7	9339.958	17.866	0	33.541	0	17.866	0	0	33.541	32.969	OWSG
10000	90	179.7	9339.958	18.136	0	33.616	0	18.136	0	0	33.618	32.968	-1.303 MWD+IFR1+ MS
10100	90	179.7	9339.958	18.434	0	33.69	0	18.434	0	0	33.695	32.965	OWSG
10200	90	179.7	9339.958	18.759	0	33.78	0	18.759	0	0	33.787	32.976	-3.253 MWD+IFR1+ MS
10300	90	179.7	9339.958	19.113	0	33.883	0	19.113	0	0	33.895	32.972	OWSG
10400	90	179.7	9339.958	19.491	0	33.987	0	19.491	0	0	34.002	32.982	-6.005 MWD+IFR1+ MS
10500	90	179.7	9339.958	19.892	0	34.119	0	19.892	0	0	34.139	32.993	OWSG
10600	90	179.7	9339.958	20.317	0	34.265	0	20.317	0	0	34.288	32.989	-7.501 MWD+IFR1+ MS
													-7.886 MWD+IFR1+ MS
													OWSG
													-8.011 MWD+IFR1+ MS

10700	90	179.7	9339.958	20.763	0	34.411	0	20.763	0	0	34.438	33	-8.197 MWD+IFR1+ MS
10800	90	179.7	9339.958	21.227	0	34.571	0	21.227	0	0	34.601	33.012	-8.273 MWD+IFR1+ MS
10900	90	179.7	9339.958	21.712	0	34.759	0	21.712	0	0	34.791	33.024	-8.199 MWD+IFR1+ MS
11000	90	179.7	9339.958	22.213	0	34.946	0	22.213	0	0	34.981	33.036	-8.142 MWD+IFR1+ MS
11100	90	179.7	9339.958	22.729	0	35.146	0	22.729	0	0	35.183	33.048	-8.045 MWD+IFR1+ MS
11200	90	179.7	9339.958	23.259	0	35.359	0	23.259	0	0	35.398	33.06	-7.914 MWD+IFR1+ MS
11300	90	179.7	9339.958	23.805	0	35.57	0	23.805	0	0	35.612	33.072	-7.805 MWD+IFR1+ MS
11400	90	179.7	9339.958	24.364	0	35.809	0	24.364	0	0	35.852	33.1	-7.676 MWD+IFR1+ MS
11500	90	179.7	9339.958	24.936	0	36.059	0	24.936	0	0	36.104	33.113	-7.493 MWD+IFR1+ MS
11600	90	179.7	9339.958	25.519	0	36.308	0	25.519	0	0	36.355	33.126	-7.341 MWD+IFR1+ MS
11700	90	179.7	9339.958	26.111	0	36.569	0	26.111	0	0	36.617	33.154	-7.211 MWD+IFR1+ MS
11800	90	179.7	9339.958	26.713	0	36.855	0	26.713	0	0	36.904	33.168	-7.018 MWD+IFR1+ MS
11900	90	179.7	9339.958	27.326	0	37.14	0	27.326	0	0	37.189	33.196	-6.879 MWD+IFR1+ MS
12000	90	179.7	9339.958	27.946	0	37.435	0	27.946	0	0	37.485	33.224	-6.735 MWD+IFR1+ MS
12100	90	179.7	9339.958	28.576	0	37.741	0	28.576	0	0	37.792	33.238	-6.57 MWD+IFR1+ MS
12200	90	179.7	9339.958	29.211	0	38.045	0	29.211	0	0	38.097	33.266	-6.446 MWD+IFR1+ MS
12300	90	179.7	9339.958	29.855	0	38.372	0	29.855	0	0	38.424	33.295	-6.303 MWD+IFR1+ MS

12400	90	179.7	9339.958	30.506	0	38.71	0	30.506	0	0	38.762	33.324	OWSG MS -6.161 MWD+IFR1+
12500	90	179.7	9339.958	31.161	0	39.044	0	31.161	0	0	39.097	33.353	OWSG MS -6.036 MWD+IFR1+
12600	90	179.7	9339.958	31.812	0	39.389	0	31.812	0	0	39.442	33.381	OWSG MS -5.912 MWD+IFR1+
12700	90	179.7	9339.958	32.481	0	39.755	0	32.481	0	0	39.809	33.41	OWSG MS -5.778 MWD+IFR1+
12800	90	179.7	9339.958	33.151	0	40.119	0	33.151	0	0	40.172	33.439	OWSG MS -5.658 MWD+IFR1+
12900	90	179.7	9339.958	33.838	0	40.491	0	33.838	0	0	40.545	33.483	OWSG MS -5.553 MWD+IFR1+
13000	90	179.7	9339.958	34.511	0	40.872	0	34.511	0	0	40.926	33.512	OWSG MS -5.437 MWD+IFR1+
13100	90	179.7	9339.958	35.199	0	41.25	0	35.199	0	0	41.304	33.541	OWSG MS -5.334 MWD+IFR1+
13200	90	179.7	9339.958	35.889	0	41.648	0	35.889	0	0	41.702	33.584	OWSG MS -5.233 MWD+IFR1+
13300	90	179.7	9339.958	36.592	0	42.055	0	36.592	0	0	42.109	33.613	OWSG MS -5.126 MWD+IFR1+
13400	90	179.7	9339.958	37.283	0	42.457	0	37.283	0	0	42.511	33.657	OWSG MS -5.036 MWD+IFR1+
13500	90	179.7	9339.958	37.987	0	42.867	0	37.987	0	0	42.921	33.686	OWSG MS -4.941 MWD+IFR1+
13600	90	179.7	9339.958	38.691	0	43.297	0	38.691	0	0	43.351	33.73	OWSG MS -4.848 MWD+IFR1+
13700	90	179.7	9339.958	39.395	0	43.722	0	39.395	0	0	43.776	33.774	OWSG MS -4.764 MWD+IFR1+
13800	90	179.7	9339.958	40.112	0	44.155	0	40.112	0	0	44.209	33.817	OWSG MS -4.681 MWD+IFR1+
13900	90	179.7	9339.958	40.817	0	44.595	0	40.817	0	0	44.648	33.861	OWSG MS -4.6 MWD+IFR1+
14000	90	179.7	9339.958	41.533	0	45.03	0	41.533	0	0	45.083	33.904	OWSG MS -4.526 MWD+IFR1+

14100	90	179.7	9339.958	42.261	0	45.483	0	42.261	0	0	45.536	33.948	OWSG MWD+IFR1+ MS
14200	90	179.7	9339.958	42.977	0	45.943	0	42.977	0	0	45.995	33.991	OWSG MWD+IFR1+ MS
14300	90	179.7	9339.958	43.704	0	46.398	0	43.704	0	0	46.45	34.035	OWSG MWD+IFR1+ MS
14400	90	179.7	9339.958	44.43	0	46.859	0	44.43	0	0	46.911	34.078	OWSG MWD+IFR1+ MS
14500	90	179.7	9339.958	45.155	0	47.337	0	45.155	0	0	47.389	34.122	OWSG MWD+IFR1+ MS
14600	90	179.7	9339.958	45.88	0	47.81	0	45.88	0	0	47.862	34.18	OWSG MWD+IFR1+ MS
14700	90	179.7	9339.958	46.615	0	48.289	0	46.615	0	0	48.34	34.223	OWSG MWD+IFR1+ MS
14800	90	179.7	9339.958	47.339	0	48.773	0	47.339	0	0	48.824	34.281	OWSG MWD+IFR1+ MS
14900	90	179.7	9339.958	48.073	0	49.253	0	48.073	0	0	49.304	34.324	OWSG MWD+IFR1+ MS
15000	90	179.7	9339.958	48.816	0	49.748	0	48.816	0	0	49.799	34.382	OWSG MWD+IFR1+ MS
15100	90	179.7	9339.958	49.548	0	50.248	0	49.548	0	0	50.298	34.439	OWSG MWD+IFR1+ MS
15200	90	179.7	9339.958	50.289	0	50.744	0	50.289	0	0	50.793	34.482	OWSG MWD+IFR1+ MS
15300	90	179.7	9339.958	51.029	0	51.254	0	51.029	0	0	51.303	34.54	OWSG MWD+IFR1+ MS
15400	90	179.7	9339.958	51.769	0	51.759	0	51.769	0	0	51.808	34.597	OWSG MWD+IFR1+ MS
15500	90	179.7	9339.958	52.507	0	52.268	0	52.507	0	0	52.317	34.654	OWSG MWD+IFR1+ MS
15600	90	179.7	9339.958	53.254	0	52.782	0	53.254	0	0	52.831	34.712	OWSG MWD+IFR1+ MS
15700	90	179.7	9339.958	54	0	53.301	0	54	0	0	53.349	34.769	OWSG MWD+IFR1+ MS

15800	90	179.7	9339.958	54.745	0	53.824	0	54.745	0	0	53.872	34.826	OWSG MS -3.461 MWD+IFR1+
15900	90	179.7	9339.958	55.489	0	54.342	0	55.489	0	0	54.389	34.897	OWSG MS -3.422 MWD+IFR1+
16000	90	179.7	9339.958	56.241	0	54.873	0	56.241	0	0	54.92	34.954	OWSG MS -3.376 MWD+IFR1+
16100	90	179.7	9339.958	56.991	0	55.399	0	56.991	0	0	55.446	35.011	OWSG MS -3.336 MWD+IFR1+
16200	90	179.7	9339.958	57.741	0	55.938	0	57.741	0	0	55.985	35.082	OWSG MS -3.294 MWD+IFR1+
16300	90	179.7	9339.958	58.489	0	56.472	0	58.489	0	0	56.518	35.138	OWSG MS -3.255 MWD+IFR1+
16400	90	179.7	9339.958	59.245	0	57.01	0	59.245	0	0	57.056	35.209	OWSG MS -3.216 MWD+IFR1+
16500	90	179.7	9339.958	59.992	0	57.551	0	59.992	0	0	57.597	35.265	OWSG MS -3.178 MWD+IFR1+
16600	90	179.7	9339.958	60.745	0	58.096	0	60.745	0	0	58.141	35.335	OWSG MS -3.143 MWD+IFR1+
16700	90	179.7	9339.958	61.506	0	58.645	0	61.506	0	0	58.689	35.406	OWSG MS -3.108 MWD+IFR1+
16800	90	179.7	9339.958	62.258	0	59.188	0	62.258	0	0	59.232	35.462	OWSG MS -3.071 MWD+IFR1+
16900	90	179.7	9339.958	63.016	0	59.743	0	63.016	0	0	59.787	35.532	OWSG MS -3.037 MWD+IFR1+
17000	90	179.7	9339.958	63.773	0	60.301	0	63.773	0	0	60.345	35.602	OWSG MS -3.003 MWD+IFR1+
17100	90	179.7	9339.958	64.529	0	60.854	0	64.529	0	0	60.898	35.671	OWSG MS -2.971 MWD+IFR1+
17200	90	179.7	9339.958	65.284	0	61.411	0	65.284	0	0	61.454	35.741	OWSG MS -2.94 MWD+IFR1+
17300	90	179.7	9339.958	66.045	0	61.97	0	66.045	0	0	62.013	35.825	OWSG MS -2.91 MWD+IFR1+
17400	90	179.7	9339.958	66.798	0	62.532	0	66.798	0	0	62.575	35.894	OWSG MS -2.879 MWD+IFR1+

17500	90	179.7	9339.958	67.565	0	63.098	0	67.565	0	0	63.14	35.963	OWSG MS -2.849 MWD+IFR1+
17600	90	179.7	9339.958	68.323	0	63.666	0	68.323	0	0	63.708	36.032	OWSG MS -2.819 MWD+IFR1+
17700	90	179.7	9339.958	69.08	0	64.237	0	69.08	0	0	64.278	36.115	OWSG MS -2.793 MWD+IFR1+
17800	90	179.7	9339.958	69.843	0	64.803	0	69.843	0	0	64.844	36.184	OWSG MS -2.765 MWD+IFR1+
17900	90	179.7	9339.958	70.605	0	65.379	0	70.605	0	0	65.42	36.266	OWSG MS -2.737 MWD+IFR1+
18000	90	179.7	9339.958	71.365	0	65.95	0	71.365	0	0	65.991	36.335	OWSG MS -2.71 MWD+IFR1+
18100	90	179.7	9339.958	72.132	0	66.524	0	72.132	0	0	66.564	36.417	OWSG MS -2.685 MWD+IFR1+
18200	90	179.7	9339.958	72.89	0	67.108	0	72.89	0	0	67.148	36.499	OWSG MS -2.659 MWD+IFR1+
18300	90	179.7	9339.958	73.655	0	67.687	0	73.655	0	0	67.726	36.581	OWSG MS -2.635 MWD+IFR1+
18400	90	179.7	9339.958	74.418	0	68.268	0	74.418	0	0	68.307	36.649	OWSG MS -2.609 MWD+IFR1+
18500	90	179.7	9339.958	75.186	0	68.844	0	75.186	0	0	68.883	36.73	OWSG MS -2.587 MWD+IFR1+
18600	90	179.7	9339.958	75.947	0	69.43	0	75.947	0	0	69.469	36.811	OWSG MS -2.562 MWD+IFR1+
18700	90	179.7	9339.958	76.714	0	70.018	0	76.714	0	0	70.057	36.892	OWSG MS -2.539 MWD+IFR1+
18800	90	179.7	9339.958	77.479	0	70.601	0	77.479	0	0	70.64	36.973	OWSG MS -2.516 MWD+IFR1+
18900	90	179.7	9339.958	78.25	0	71.187	0	78.25	0	0	71.225	37.067	OWSG MS -2.495 MWD+IFR1+
19000	90	179.7	9339.958	79.013	0	71.782	0	79.013	0	0	71.819	37.148	OWSG MS -2.474 MWD+IFR1+
19100	90	179.7	9339.958	79.781	0	72.371	0	79.781	0	0	72.409	37.228	OWSG MS -2.453 MWD+IFR1+

19200	90	179.7	9339.958	80.548	0	72.963	0	80.548	0	0	73.001	37.322	-2.432 MWD+IFR1+ MS
19300	90	179.7	9339.958	81.314	0	73.557	0	81.314	0	0	73.594	37.402	-2.41 MWD+IFR1+ MS
19400	90	179.7	9339.958	82.085	0	74.153	0	82.085	0	0	74.19	37.495	-2.391 MWD+IFR1+ MS
19500	90	179.7	9339.958	82.849	0	74.744	0	82.849	0	0	74.781	37.575	-2.371 MWD+IFR1+ MS
19600	90	179.7	9339.958	83.618	0	75.344	0	83.618	0	0	75.38	37.667	-2.352 MWD+IFR1+ MS
19700	90	179.7	9339.958	84.386	0	75.939	0	84.386	0	0	75.975	37.76	-2.333 MWD+IFR1+ MS
19800	90	179.7	9339.958	85.159	0	76.542	0	85.159	0	0	76.578	37.839	-2.315 MWD+IFR1+ MS
19900	90	179.7	9339.958	85.924	0	77.141	0	85.924	0	0	77.177	37.931	-2.297 MWD+IFR1+ MS
20000	90	179.7	9339.958	86.695	0	77.742	0	86.695	0	0	77.777	38.023	-2.279 MWD+IFR1+ MS
20100	90	179.7	9339.958	87.464	0	78.344	0	87.464	0	0	78.379	38.114	-2.261 MWD+IFR1+ MS
20200	90	179.7	9339.958	88.238	0	78.948	0	88.238	0	0	78.983	38.206	-2.243 MWD+IFR1+ MS
20300	90	179.7	9339.958	89.006	0	79.554	0	89.006	0	0	79.589	38.297	-2.227 MWD+IFR1+ MS
20400	90	179.7	9339.958	89.778	0	80.161	0	89.778	0	0	80.196	38.388	-2.21 MWD+IFR1+ MS
20500	90	179.7	9339.958	90.548	0	80.764	0	90.548	0	0	80.798	38.492	-2.193 MWD+IFR1+ MS
20600	90	179.7	9339.958	91.318	0	81.375	0	91.318	0	0	81.409	38.582	-2.177 MWD+IFR1+ MS
20700	90	179.7	9339.958	92.092	0	81.981	0	92.092	0	0	82.015	38.673	-2.161 MWD+IFR1+ MS
20800	90	179.7	9339.958	92.86	0	82.589	0	92.86	0	0	82.622	38.775	-2.146 MWD+IFR1+ MS

20900	90	179.7	9339.958	93.632	0	83.204	0	93.632	0	83.238	38.865	-2.13 MWD+IFR1+ MS
21000	90	179.7	9339.958	94.409	0	83.815	0	94.409	0	83.848	38.968	-2.115 MWD+IFR1+ MS
21100	90	179.7	9339.958	95.179	0	84.427	0	95.179	0	84.46	39.057	-2.1 MWD+IFR1+ MS
21200	90	179.7	9339.958	95.953	0	85.035	0	95.953	0	85.068	39.159	-2.085 MWD+IFR1+ MS
21300	90	179.7	9339.958	96.721	0	85.651	0	96.721	0	85.683	39.261	-2.071 MWD+IFR1+ MS
21400	90	179.7	9339.958	97.499	0	86.267	0	97.499	0	86.299	39.362	-2.057 MWD+IFR1+ MS
21500	90	179.7	9339.958	98.27	0	86.88	0	98.27	0	86.912	39.464	-2.044 MWD+IFR1+ MS
21600	90	179.7	9339.958	99.04	0	87.499	0	99.04	0	87.531	39.565	-2.03 MWD+IFR1+ MS
21700	90	179.7	9339.958	99.815	0	88.114	0	99.815	0	88.146	39.665	-2.017 MWD+IFR1+ MS
21800	90	179.7	9339.958	100.548	0	88.731	0	100.548	0	88.762	39.766	-2.003 MWD+IFR1+ MS
21900	90	179.7	9339.958	101.341	0	89.348	0	101.341	0	89.38	39.866	-1.99 MWD+IFR1+ MS
22000	90	179.7	9339.958	102.127	0	89.968	0	102.127	0	89.999	39.966	-1.977 MWD+IFR1+ MS
22100	90	179.7	9339.958	102.908	0	90.588	0	102.908	0	90.619	40.065	-1.964 MWD+IFR1+ MS
22200	90	179.7	9339.958	103.682	0	91.21	0	103.682	0	91.24	40.177	-1.952 MWD+IFR1+ MS
22300	90	179.7	9339.958	104.451	0	91.827	0	104.451	0	91.858	40.276	-1.939 MWD+IFR1+ MS
22400	90	179.7	9339.958	105.214	0	92.451	0	105.214	0	92.481	40.388	-1.927 MWD+IFR1+ MS
22472	90	179.7	9340	105.783	0	92.905	0	105.783	0	92.935	40.462	-1.918 MWD+IFR1+ MS

Plat Targets		Brushy Draw 30 Fed 124H	
Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)
FT 8	9722.91	397655.66	628759.56
LT 3	22327.25	385052.69	628814.02
BH 3	22474.45	384902.82	628814.29
		TVD MSL	Target Shape
		(ft)	
		6170	CIRCLE
		6170	CIRCLE
		6170	CIRCLE



ALL DIMENSIONS APPROXIMATE

XTO ENERGY INC
ICARUS PAD

18 JAN

HB E0000479

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 (OOGO) No. 2, 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. OOGO No. 2, Section I.D.2 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 OOGO No. 2, Section IV., XTO Energy submits this request for the variance.

Supporting Documentation

OOGO No. 2 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 OOGO No. 2 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.

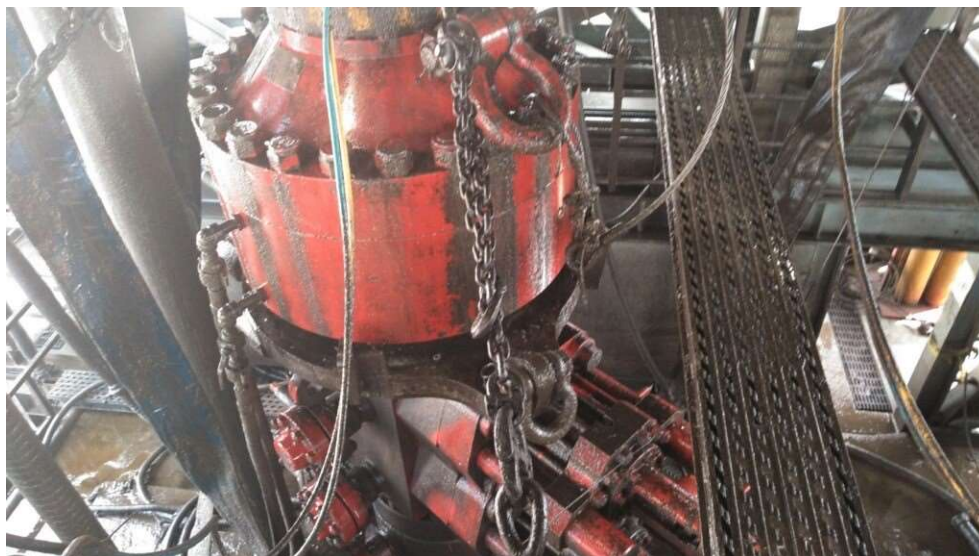


Figure 1: Winch System attached to BOP Stack

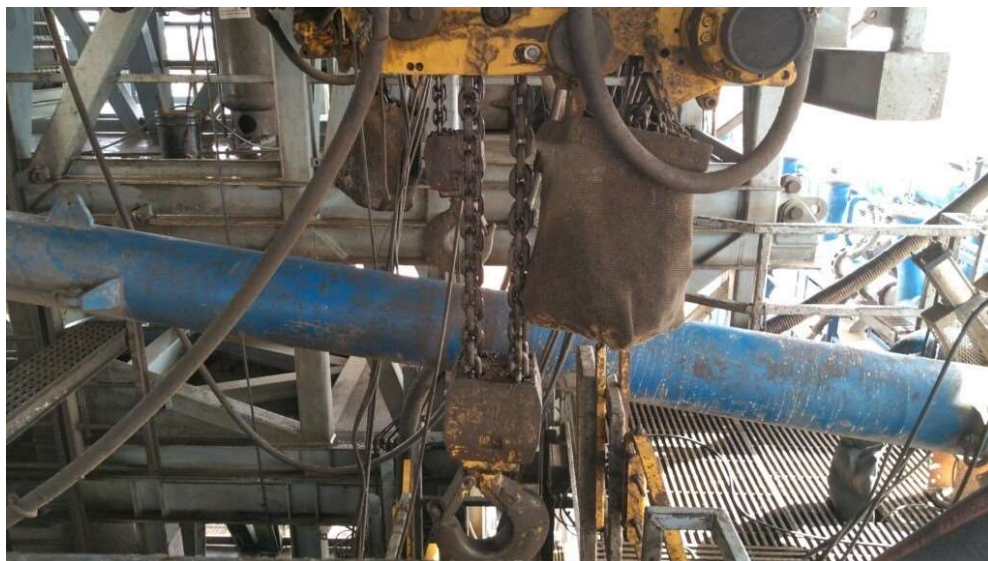


Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. OOGO No. 2 recognizes API recommended Practices (RP) 53 in its original development. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (Fifth Edition, December 2018, Annex C, Table C.4) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 5.3.7.1 states “A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component.” See Table C.4 below for reference.

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API STANDARD 53

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

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

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

No visible leaks.

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

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

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

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

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

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

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

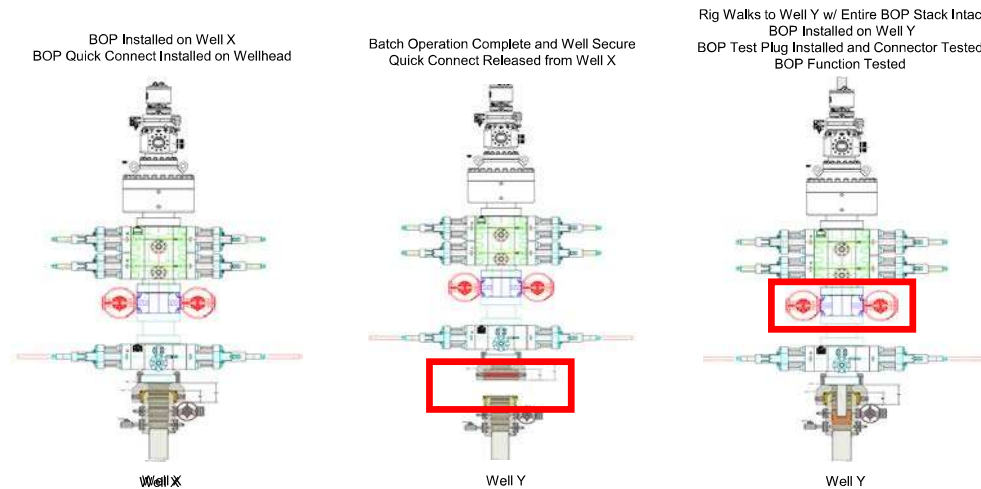
XTO Energy feels break testing and our current procedures meet the intent of OOGO No. 2 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of OOGO No. 2 (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 OOGO No.2.

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.

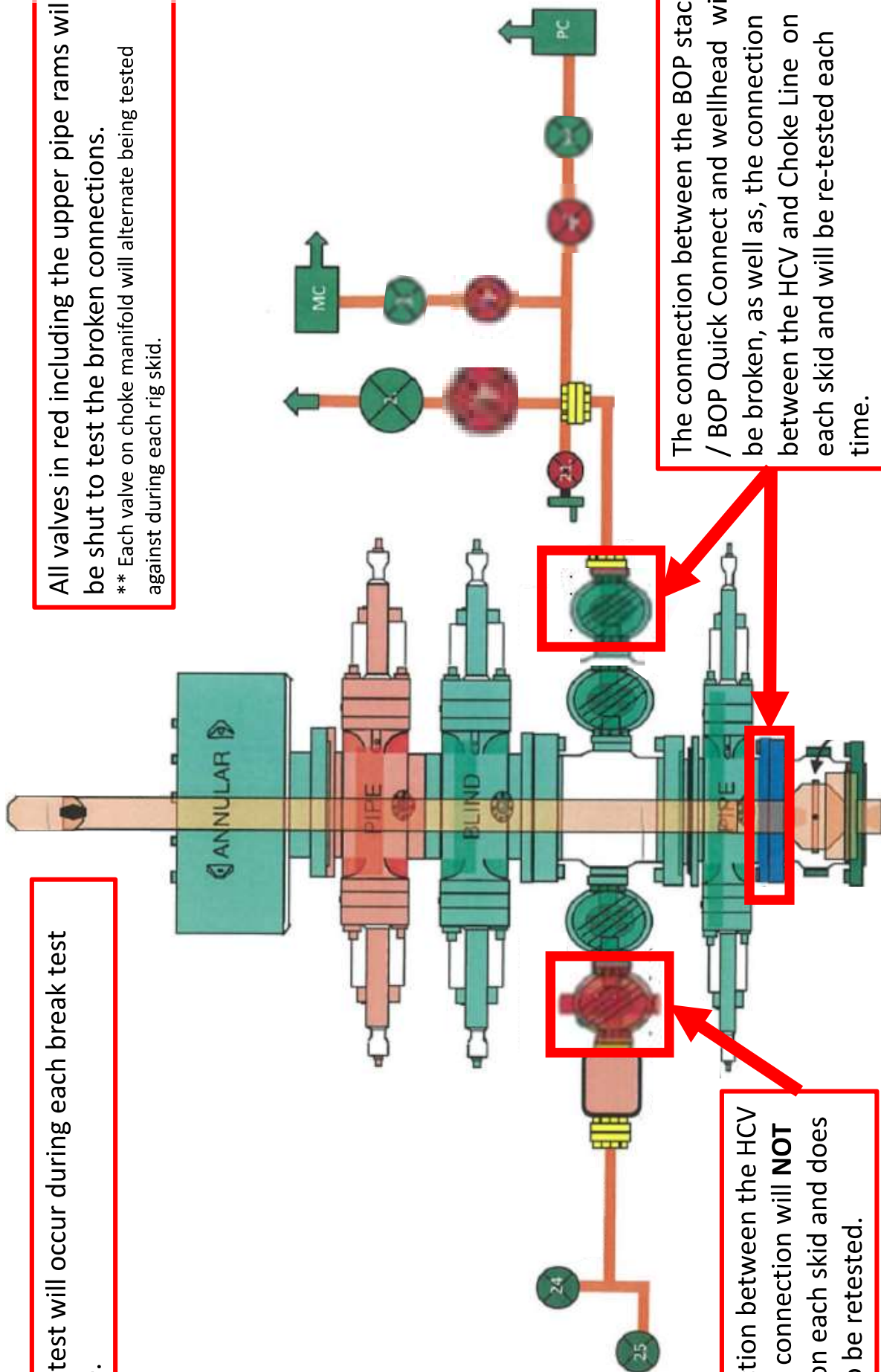
The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

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 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.

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

XTO Permian Operating, LLC Offline Cementing Variance Request

XTO requests the option to cement the surface and intermediate casing strings offline as a prudent batch drilling efficiency of acreage development.

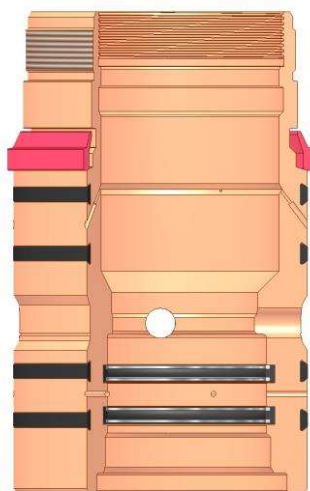
1. Cement Program

No changes to the cement program will take place for offline cementing.

2. Offline Cementing Procedure

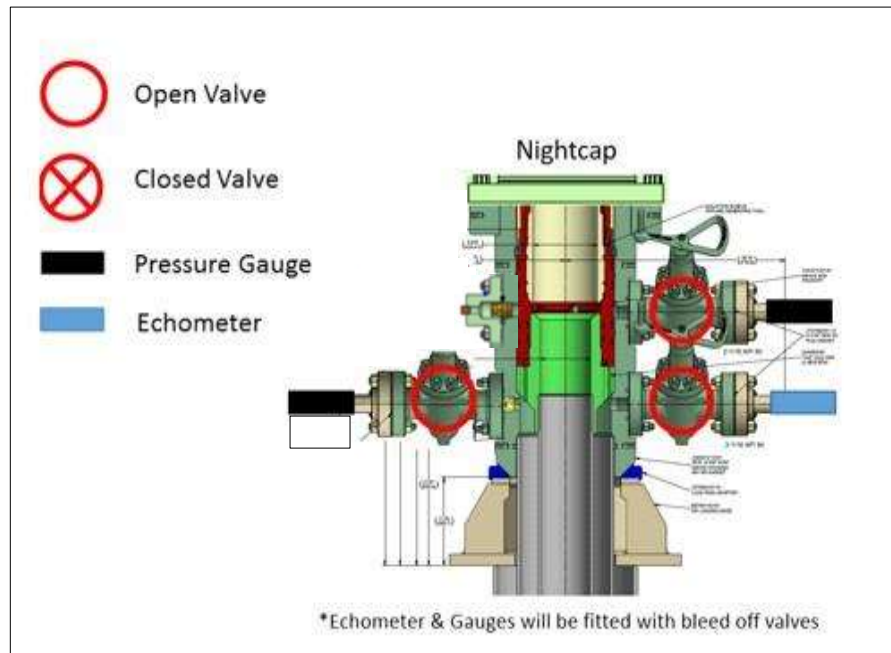
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal. Pressure ratings of wellhead components and valves is 5,000 psi.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
 - a. If any barrier fails to test, the BOP stack will not be nipped down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



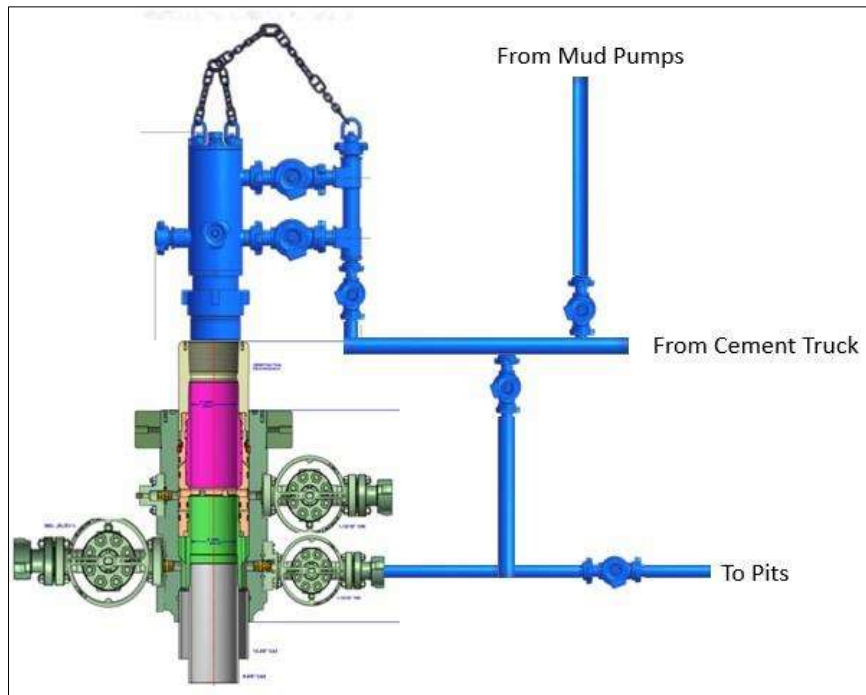
Annular packoff with both external and internal seals

XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nipping up for further remediation.
 - a. Well Control Plan
 - i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
 - ii. Rig pumps or a 3rd party pump will be tied into the upper casing valve to pump down the casing ID
 - iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
 - iv. Once influx is circulated out of the hole, kill weight mud will be circulated
 - v. Well will be confirmed static
 - vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment

XTO Permian Operating, LLC Offline Cementing Variance Request

Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
 - a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
 - b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

XTO respectfully requests approval to utilize a spudder rig to pre-set surface casing.

Description of Operations:

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
 - a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
 - b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wing valves.
 - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling Operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nipped up and tested on the wellhead before drilling operations resume on each well.
 - a. The larger rig will move back onto the location within 180 days from the point at which the wells are secured and the spudder rig is moved off location.
 - b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations
7. XTO will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, XTO will secure the wellhead area by placing a guard rail around the cellar area.

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

Updated COAs per Sundry 2667164 approved through engineering on 04/26/2022. Includes approval for an updated casing plan, to use a bradenhead squeeze to get the second stage cement to surface, to utilize a spudder rig, offline cementing for the surface and intermediate casing, and additional COAs for break / shell testing the BOP.

OPERATOR'S NAME:	XTO Permian Operating
WELL NAME & NO.:	Brushy Draw 31 Federal 124H
LOCATION:	Sec 30-25S-30E-NMP
COUNTY:	Eddy County, New Mexico

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input checked="" type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input type="checkbox"/> Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 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 860 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must run a CBL from TD of the 7-5/8" casing to surface. Submit results to BLM.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Casing does not meet 0.422" clearance requirement so cement should tie-back at least **300 feet** into previous casing string. Operator shall provide method of verification.

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. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** 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 OOGO2.III.A.2.i must be followed.

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

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
689-5981

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
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 OOGO2.III.A.2.i 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 when specified), 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 Onshore Order No. 2.

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.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

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

CONDITIONS

Action 255002

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 255002
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Work was performed without OCD approval	9/23/2025