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

Sundry Print Report

06/27/2025

Well Name: BRUSHY DRAW 30 FEDERAL

Well Location: T25S / R30E / SEC 30 / SWSW / 32.094511 / -103.925502

County or Parish/State: EDDY / NM

Well Number: 102H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM014785, NMNM14785

Unit or CA Name:

Unit or CA Number:

US Well Number: 3001545186

Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2662750

Type of Submission: Notice of Intent

Type of Action: Other

Date Sundry Submitted: 03/18/2022

Time Sundry Submitted: 07:10

Date proposed operation will begin: 04/19/2022

Procedure Description: **Formation Change, Pool Change, 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/2440'FNL & 990'FWL to 2460'FNL & 1870'FWL Casing/Cement design per the attached drilling program. Batch & Spudder Rig Attachments: C102 Drilling Program Directional Plan Multibowl Diagram Spudder Rig Request Offline Cement Variance (Surface & Intermediate Only) Request BOP Breaktest Variance

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

BD_30_Fed_102H_Attachments_20220421133450.pdf

Well Name: BRUSHY DRAW 30 FEDERAL

Well Location: T25S / R30E / SEC 30 / SWSW / 32.094511 / -103.925502

County or Parish/State: EDDY / NM

Well Number: 102H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM014785, NMNM14785

Unit or CA Name:

Unit or CA Number:

US Well Number: 3001545186

Operator: XTO PERMIAN OPERATING LLC

Conditions of Approval

Additional

Sec_30_25S_30E_NMP_Sundry_2662750_Brushy_Draw_31_Federal_102H_Eddy_NMNM14785_XTO_13_22_44673_Allison_Morency_20220422102753.pdf

Sec_30_25S_30E_NMP_Sundry_2662750_Brushy_Draw_31_Federal_102H_Eddy_NMNM14785_XTO_COAs_20220422102752.pdf

Sec_30_25S_30E_NMP_Sundry_2662750_Brushy_Draw_31_Federal_102H_Eddy_NMNM14785_XTO_Break_Testing_COAs_20220422102752.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: STEPHANIE RABADUE

Signed on: APR 21, 2022 01:34 PM

Name: XTO PERMIAN OPERATING LLC

Title: Regulatory Coordinator

Street Address: 500 W. Illinois St, Ste 100

City: Midland **State:** TX

Phone: (432) 620-6714

Email address: STEPHANIE.RABADUE@EXXONMOBIL.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 04/22/2022

Signature: Chris Walls

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

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

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

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

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

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

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

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

Office

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

Additional Information

Additional Remarks

Attachments:

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: SWSW / 330 FSL / 1175 FWL / TWSP: 25S / RANGE: 30E / SECTION: 30 / LAT: 32.094511 / LONG: -103.925502 (TVD: 0 feet, MD: 0 feet)

PPP: NWNW / 330 FNL / 990 FWL / TWSP: 25S / RANGE: 30E / SECTION: 31 / LAT: 32.092695 / LONG: -103.926093 (TVD: 10633 feet, MD: 11064 feet)

BHL: SWNW / 2440 FNL / 990 FWL / TWSP: 26S / RANGE: 30E / SECTION: 7 / LAT: 32.05768 / LONG: -103.926035 (TVD: 10700 feet, MD: 23802 feet)

Sec 30-25S-30E-NMP Sundry 2662750 Brushy Draw 31 Federal 102H Eddy NMNM14785 XTO 13-22 44673 Allison Morency

Brushy Draw 31 Federal 102H

9 5/8	surface csg in a	12 1/4	inch hole.	Design Factors			Surface				
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00	J 55	STC	15.27	7.27	0.87	740	12	1.49	13.47	29,600
"B"			STC				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500			Tail Cmt	does not	circ to sfc.		Totals: 740				29,600

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	270	437	232	89	9.20	2647	3M	0.81

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK. Site plat (pipe racks S or E) as per O.O.1.III.D.4.i. not found

7 5/8	casing inside the	9 5/8	Design Factors				Int 1				
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70	RY P 110	Flush Joint	2.17	2.52	2.14	4,000	2	3.97	4.32	118,800
"B"	29.70	HCL 80	Flush Joint	2.93	1.28	1.56	4,670	2	2.88	2.18	138,699
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals: 8,670				257,499
The cement volume(s) are intended to achieve a top of				0	ft from surface or a		740				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 3/4	0.1005	560	1239	877	41	10.20	2386	3M	0.56

Class 'H' tail cmt yld > 1.20

Tail cmt

5 1/2	casing inside the	7 5/8	Design Factors				Prod 1				
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	RY P 110	Semi-Premiur	3.46	2.71	2.86	8,570	3	5.30	5.02	171,400
"B"	20.00	RY P 110	Semi-Flush	47.13	2.51	2.86	13,820	3	5.30	4.65	276,400
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,885							Totals: 22,390				447,800
The cement volume(s) are intended to achieve a top of				8950	ft from surface or a		-280				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
6 3/4	0.0835	990	1507	1122	34	9.20			0.23

Class 'C' tail cmt yld > 1.35

#N/A

0		5 1/2	Design Factors				<Choose Casing>				
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"			0.00				0				0
"B"			0.00				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals: 0				0
Cmt vol calc below includes this csg, TOC intended				#N/A	ft from surface or a		#N/A				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A				

#N/A Capitan Reef est top XXXX.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

Updated COAs per Sundry 2662750 *approved through engineering on 04/22/2022. 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 30 Federal 102H
LOCATION:	Sec 30-25S-30E-NMP
COUNTY:	Eddy County, New Mexico

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☑ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☐ 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 740 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 intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity 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.

Conditions of Approval
Brushy Draw 30 Federal 102H

BOP Break Testing Variance (Note: Shell testing is not approved for any portion of the hole with a MASP of 5000 psi or greater)

- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOP Break Testing operations.

A full BOP test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOP test will be required.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-45186	13354	Corral Canyon; Bone Spring, South

[4] Property Code	[5] Property Name	[6] Well Number
322241	BRUSHY DRAW 30 FEDERAL	102H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC	3,091'

[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
4	30	25 S	30 E		330	SOUTH	1,175	WEST	EDDY

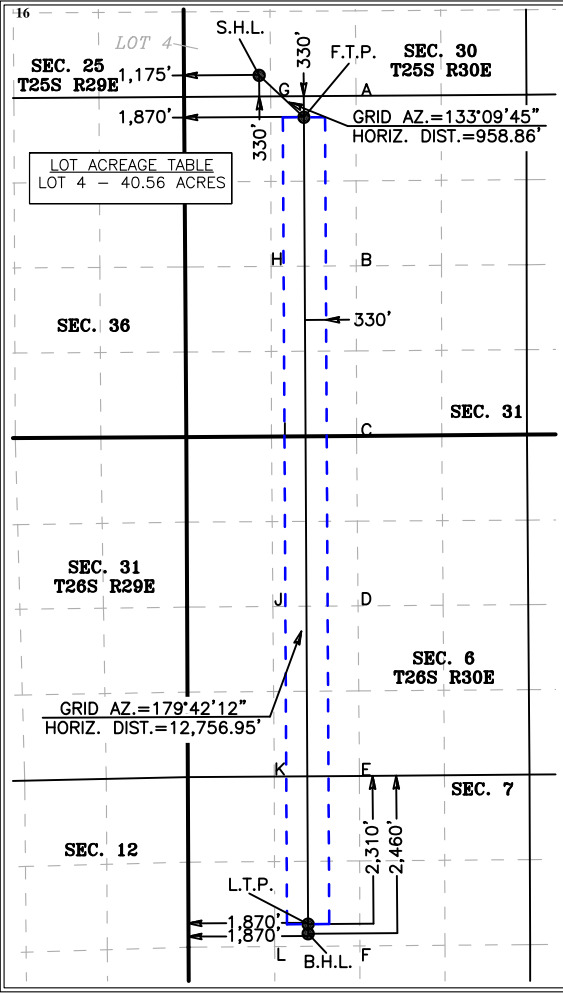
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	7	26 S	30 E		2,460	NORTH	1,870	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
400			

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.

[16]



SHL (NAD83 NME)		LTP (NAD83 NME)	
Y =	398,358.8	Y =	385,096.1
X =	667,631.1	X =	668,395.9
LAT. =	32.094511 °N	LAT. =	32.058045 °N
LONG. =	103.925502 °W	LONG. =	103.923195 °W
FTP (NAD83 NME)		**BHL (NAD83 NME)**	
Y =	397,702.8	Y =	384,946.1
X =	668,330.5	X =	668,396.5
LAT. =	32.092701 °N	LAT. =	32.057633 °N
LONG. =	103.923251 °W	LONG. =	103.923194 °W

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 =	398,029.7 N ,	X =	667,811.3 E
H - Y =	395,373.2 N ,	X =	667,817.2 E
I - Y =	392,715.2 N ,	X =	667,823.4 E
J - Y =	390,059.7 N ,	X =	667,845.2 E
K - Y =	387,402.4 N ,	X =	667,867.5 E
L - Y =	384,746.0 N ,	X =	667,873.9 E

SHL (NAD27 NME)		LTP (NAD27 NME)	
Y =	398,300.5	Y =	385,038.2
X =	626,446.2	X =	627,210.6
LAT. =	32.094386 °N	LAT. =	32.057920 °N
LONG. =	103.925018 °W	LONG. =	103.922713 °W
FTP (NAD27 NME)		**BHL (NAD27 NME)**	
Y =	397,644.6	Y =	384,888.2
X =	627,145.5	X =	627,211.2
LAT. =	32.092576 °N	LAT. =	32.057508 °N
LONG. =	103.922768 °W	LONG. =	103.922713 °W

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 =	397,971.5 N ,	X =	626,626.3 E
H - Y =	395,315.1 N ,	X =	626,632.2 E
I - Y =	392,657.1 N ,	X =	626,638.3 E
J - Y =	390,001.7 N ,	X =	626,660.0 E
K - Y =	387,344.5 N ,	X =	626,682.3 E
L - Y =	384,688.2 N ,	X =	626,688.6 E

[17] OPERATOR CERTIFICATION

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

Stephanie Rabadue 04/14/2022
Signature Date

Stephanie Rabadue
Printed Name

stephanie.rabadue@exxonmobil.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

4-14-2022
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number AW 2017060881

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

XTO Energy Inc.
Brushy Draw 30 Federal 102H
Projected TD: 22390' MD / 9250' 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	640'	Water
Top of Salt	1040'	Water
Base of Salt	3260'	Water
Delaware	3470'	Water
Brushy Canyon	6260'	Water/Oil/Gas
Bone Spring	7287'	Water
1st Bone Spring Ss	8190'	Water/Oil/Gas
2nd Bone Spring Ss	8790'	Water/Oil/Gas
Target/Land Curve	9280'	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 @ 740' (300' 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 8670' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 22390 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 8370 feet).

3. Casing Design

Hole Size	TVD	Measured Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	740'	0' – 740'	9.625	40	J-55	BTC	New	1.60	7.68	21.28
8.75	3982'	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	4.40	2.65	2.17
8.75	8541'	4000' – 8670'	7.625	29.7	HC L-80	Flush Joint	New	3.20	2.31	2.93
6.75	8441'	0' – 8570'	5.5	20	RY P-110	Semi-Premium	New	1.05	2.86	2.27
6.75	9250'	8570' - 22390'	5.5	20	RY P-110	Semi-Flush	New	1.05	2.65	5.80

· Production casing meets the clearance requiremenets 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 +/- 740'

Lead: 140 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 +/- 8670'
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 @ 6260
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: 700 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 (6260') 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 +/- 22390'

Lead: 10 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 8370 feet
Tail: 980 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 8736 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 2150 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nippling up on the 9.625, 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When nippling 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' - 740'		12.25	FW/Native	8.7-9.2	35-40	NC
740' - 8670'		8.75	FW / Cut Brine / Direct Emulsion	9.7-10.2	30-32	NC
8670' - 22390'		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 4185 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 102H

Measured Depth:	22389.00 ft
TVD RKB:	9250.00 ft
Location	
Cartographic Reference System:	New Mexico East - NAD 27
Northing:	398301.28 ft
Easting:	626455.19 ft
RKB:	3170.00 ft
Ground Level:	3140.00 ft
North Reference:	Grid
Convergence Angle:	0.22 Deg
Site:	BD 30 Pad B
Slot:	Brushy Draw 30 Fed 102H

Plan Sections Brushy Draw 30 Fed 102H

Measured Depth (ft)	Inclination (Deg)	Azimuth (Deg)	TVD RKB (ft)	Y Offset (ft)	X Offset (ft)	Build Rate (Deg/100ft)	Turn Rate (Deg/100ft)	Dogleg Rate (Deg/100ft)	Target
0	0	0	0	0	0	0	0	0	

2500	0	0	2500	0	0	0	0	0	
2998.76	9.98	96.73	2996.24	-5.07	43.01	2	0	2	
6560.11	9.98	96.73	6503.76	-77.33	655.66	0	0	0	
7058.87	0	0	7000	-82.41	698.67	-2	0	2	
8735.87	0	0	8677	-82.41	698.67	0	0	0	
9635.87	90	179.7	9249.96	-655.36	701.67	10	0	10	
22389.95	90	179.7	9250	-13409.3	762.07	0	0	0	BHL 1

Position Uncertainty Brushy Draw 30 Fed 102H

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

1000	0	0	1000	3.585	0	3.585	0	2.559	0	0	3.585	3.585	0	OWSG MWD+IFR1+MS
1100	0	0	1100	3.942	0	3.942	0	2.613	0	0	3.942	3.942	0	OWSG MWD+IFR1+MS
1200	0	0	1200	4.301	0	4.301	0	2.67	0	0	4.301	4.301	0	OWSG MWD+IFR1+MS
1300	0	0	1300	4.659	0	4.659	0	2.731	0	0	4.659	4.659	0	OWSG MWD+IFR1+MS
1400	0	0	1400	5.018	0	5.018	0	2.797	0	0	5.018	5.018	0	OWSG MWD+IFR1+MS
1500	0	0	1500	5.377	0	5.377	0	2.866	0	0	5.377	5.377	0	OWSG MWD+IFR1+MS
1600	0	0	1600	5.735	0	5.735	0	2.939	0	0	5.735	5.735	0	OWSG MWD+IFR1+MS
1700	0	0	1700	6.093	0	6.093	0	3.015	0	0	6.093	6.093	0	OWSG MWD+IFR1+MS
1800	0	0	1800	6.452	0	6.452	0	3.095	0	0	6.452	6.452	0	OWSG MWD+IFR1+MS
1900	0	0	1900	6.81	0	6.81	0	3.178	0	0	6.81	6.81	0	OWSG MWD+IFR1+MS
2000	0	0	2000	7.169	0	7.169	0	3.265	0	0	7.169	7.169	0	OWSG MWD+IFR1+MS
2100	0	0	2100	7.527	0	7.527	0	3.354	0	0	7.527	7.527	0	OWSG MWD+IFR1+MS
2200	0	0	2200	7.886	0	7.886	0	3.447	0	0	7.886	7.886	0	OWSG MWD+IFR1+MS
2300	0	0	2300	8.244	0	8.244	0	3.544	0	0	8.244	8.244	0	OWSG MWD+IFR1+MS
2400	0	0	2400	8.603	0	8.603	0	3.643	0	0	8.603	8.603	0	OWSG MWD+IFR1+MS
2500	0	0	2500	8.962	0	8.962	0	3.744	0	0	8.962	8.962	0	OWSG MWD+IFR1+MS
2600	1.999	96.72	2599.98	9.305	0	9.31	0	3.848	0	0	9.31	9.31	0	OWSG MWD+IFR1+MS

2700	4	96.72	2699.838	9.629	0	9.648	0	3.953	0	0	9.649	9.648	3.803	OWSG MWD+IFR1+MS
2800	6	96.72	2799.452	9.943	0	9.986	0	4.061	0	0	9.989	9.986	5.307	OWSG MWD+IFR1+MS
2900	7.999	96.72	2898.702	10.248	0	10.325	0	4.169	0	0	10.33	10.325	4.579	OWSG MWD+IFR1+MS
2998.7	9.975	96.72	2996.24	10.537	0	10.658	0	4.277	0	0	10.663	10.658	6.699	OWSG MWD+IFR1+MS
3000	9.975	96.72	2997.465	10.54	0	10.663	0	4.276	0	0	10.668	10.663	8.606	OWSG MWD+IFR1+MS
3100	9.975	96.72	3095.954	10.887	0	11.004	0	4.394	0	0	11.009	11.004	7.4	OWSG MWD+IFR1+MS
3200	9.975	96.72	3194.442	11.232	0	11.349	0	4.518	0	0	11.35	11.348	45	OWSG MWD+IFR1+MS
3300	9.975	96.72	3292.93	11.58	0	11.692	0	4.643	0	0	11.692	11.691	45	OWSG MWD+IFR1+MS
3400	9.975	96.72	3391.419	11.926	0	12.037	0	4.773	0	0	12.038	12.033	80.212	OWSG MWD+IFR1+MS
3500	9.975	96.72	3489.907	12.279	0	12.385	0	4.905	0	0	12.386	12.381	77.583	OWSG MWD+IFR1+MS
3600	9.975	96.72	3588.395	12.631	0	12.735	0	5.04	0	0	12.736	12.728	81.54	OWSG MWD+IFR1+MS
3700	9.975	96.72	3686.884	12.985	0	13.088	0	5.178	0	0	13.088	13.077	82.6	OWSG MWD+IFR1+MS
3800	9.975	96.72	3785.372	13.341	0	13.438	0	5.32	0	0	13.439	13.427	80.649	OWSG MWD+IFR1+MS
3900	9.975	96.72	3883.86	13.699	0	13.791	0	5.464	0	0	13.792	13.78	78.466	OWSG MWD+IFR1+MS
4000	9.975	96.72	3982.349	14.059	0	14.145	0	5.611	0	0	14.146	14.134	76.125	OWSG MWD+IFR1+MS
4100	9.975	96.72	4080.837	14.417	0	14.497	0	5.76	0	0	14.499	14.487	73.699	OWSG MWD+IFR1+MS
4200	9.975	96.72	4179.325	14.777	0	14.855	0	5.913	0	0	14.857	14.841	75.061	OWSG MWD+IFR1+MS

4300	9.975	96.72	4277.813	15.138	0	15.211	0	6.068	0	0	15.213	15.197	72.912	OWSG MWD+IFR1+MS
4400	9.975	96.72	4376.302	15.501	0	15.568	0	6.226	0	0	15.571	15.555	70.775	OWSG MWD+IFR1+MS
4500	9.975	96.72	4474.79	15.862	0	15.923	0	6.386	0	0	15.927	15.91	68.716	OWSG MWD+IFR1+MS
4600	9.975	96.72	4573.278	16.228	0	16.283	0	6.55	0	0	16.288	16.27	66.761	OWSG MWD+IFR1+MS
4700	9.975	96.72	4671.767	16.591	0	16.641	0	6.716	0	0	16.647	16.628	64.926	OWSG MWD+IFR1+MS
4800	9.975	96.72	4770.255	16.956	0	17.001	0	6.884	0	0	17.007	16.987	63.239	OWSG MWD+IFR1+MS
4900	9.975	96.72	4868.743	17.32	0	17.359	0	7.055	0	0	17.366	17.345	61.692	OWSG MWD+IFR1+MS
5000	9.975	96.72	4967.232	17.687	0	17.72	0	7.229	0	0	17.728	17.706	60.284	OWSG MWD+IFR1+MS
5100	9.975	96.72	5065.72	18.052	0	18.081	0	7.406	0	0	18.089	18.066	59.017	OWSG MWD+IFR1+MS
5200	9.975	96.72	5164.208	18.422	0	18.442	0	7.585	0	0	18.452	18.428	54.941	OWSG MWD+IFR1+MS
5300	9.975	96.72	5262.697	18.789	0	18.804	0	7.767	0	0	18.816	18.79	54.104	OWSG MWD+IFR1+MS
5400	9.975	96.72	5361.185	19.155	0	19.167	0	7.951	0	0	19.179	19.151	55.917	OWSG MWD+IFR1+MS
5500	9.975	96.72	5459.673	19.525	0	19.529	0	8.138	0	0	19.543	19.514	52.7	OWSG MWD+IFR1+MS
5600	9.975	96.72	5558.161	19.892	0	19.891	0	8.327	0	0	19.906	19.876	52.109	OWSG MWD+IFR1+MS
5700	9.975	96.72	5656.65	20.263	0	20.255	0	8.519	0	0	20.272	20.24	49.429	OWSG MWD+IFR1+MS
5800	9.975	96.72	5755.138	20.633	0	20.616	0	8.714	0	0	20.636	20.602	47.062	OWSG MWD+IFR1+MS
5900	9.975	96.72	5853.626	21.003	0	20.982	0	8.911	0	0	21.002	20.967	46.914	OWSG MWD+IFR1+MS

6000	9.975	96.72	5952.115	21.372	0	21.345	0	9.111	0	0	21.367	21.329	46.782	OWSG MWD+IFR1+MS
6100	9.975	96.72	6050.603	21.743	0	21.709	0	9.313	0	0	21.734	21.694	45	OWSG MWD+IFR1+MS
6200	9.975	96.72	6149.091	22.113	0	22.075	0	9.518	0	0	22.1	22.059	45	OWSG MWD+IFR1+MS
6300	9.975	96.72	6247.58	22.484	0	22.438	0	9.726	0	0	22.466	22.422	43.545	OWSG MWD+IFR1+MS
6400	9.975	96.72	6346.068	22.855	0	22.803	0	9.936	0	0	22.833	22.787	42.275	OWSG MWD+IFR1+MS
6500	9.975	96.72	6444.556	23.227	0	23.168	0	10.149	0	0	23.201	23.152	41.169	OWSG MWD+IFR1+MS
6560.1	9.975	96.72	6503.76	23.451	0	23.389	0	10.276	0	0	23.423	23.373	41.303	OWSG MWD+IFR1+MS
6600	9.177	96.72	6543.091	23.616	0	23.534	0	10.363	0	0	23.568	23.517	41.384	OWSG MWD+IFR1+MS
6700	7.177	96.72	6642.07	24.012	0	23.896	0	10.583	0	0	23.932	23.88	40.43	OWSG MWD+IFR1+MS
6800	5.177	96.72	6741.484	24.379	0	24.257	0	10.798	0	0	24.294	24.24	40.61	OWSG MWD+IFR1+MS
6900	3.177	96.72	6841.213	24.718	0	24.615	0	11.018	0	0	24.653	24.598	40.746	OWSG MWD+IFR1+MS
7000	1.177	96.72	6941.136	25.026	0	24.968	0	11.238	0	0	25.006	24.95	40.835	OWSG MWD+IFR1+MS
7058.8	0	0	7000	25.179	0	25.185	0	11.367	0	0	25.21	25.155	41.871	OWSG MWD+IFR1+MS
7100	0	0	7041.132	25.32	0	25.326	0	11.454	0	0	25.35	25.296	41.86	OWSG MWD+IFR1+MS
7200	0	0	7141.132	25.663	0	25.667	0	11.675	0	0	25.692	25.639	42.882	OWSG MWD+IFR1+MS
7300	0	0	7241.132	26.008	0	26.01	0	11.9	0	0	26.034	25.983	43.929	OWSG MWD+IFR1+MS
7400	0	0	7341.132	26.351	0	26.351	0	12.124	0	0	26.377	26.326	45	OWSG MWD+IFR1+MS

7500	0	0	7441.132	26.696	0	26.695	0	12.353	0	0	26.72	26.671	46.091	OWSG MWD+IFR1+MS
7600	0	0	7541.132	27.041	0	27.039	0	12.586	0	0	27.064	27.016	46.102	OWSG MWD+IFR1+MS
7700	0	0	7641.132	27.386	0	27.382	0	12.822	0	0	27.408	27.361	47.221	OWSG MWD+IFR1+MS
7800	0	0	7741.132	27.733	0	27.727	0	13.061	0	0	27.753	27.707	48.358	OWSG MWD+IFR1+MS
7900	0	0	7841.132	28.078	0	28.071	0	13.3	0	0	28.098	28.052	49.506	OWSG MWD+IFR1+MS
8000	0	0	7941.132	28.425	0	28.417	0	13.546	0	0	28.443	28.399	50.659	OWSG MWD+IFR1+MS
8100	0	0	8041.132	28.772	0	28.761	0	13.791	0	0	28.788	28.744	51.821	OWSG MWD+IFR1+MS
8200	0	0	8141.132	29.119	0	29.107	0	14.043	0	0	29.135	29.091	52.985	OWSG MWD+IFR1+MS
8300	0	0	8241.132	29.465	0	29.453	0	14.297	0	0	29.481	29.438	53.06	OWSG MWD+IFR1+MS
8400	0	0	8341.132	29.813	0	29.799	0	14.553	0	0	29.827	29.785	54.232	OWSG MWD+IFR1+MS
8500	0	0	8441.132	30.16	0	30.146	0	14.812	0	0	30.174	30.132	54.326	OWSG MWD+IFR1+MS
8600	0	0	8541.132	30.507	0	30.493	0	15.073	0	0	30.521	30.479	55.494	OWSG MWD+IFR1+MS
8700	0	0	8641.132	30.856	0	30.84	0	15.339	0	0	30.868	30.828	56.659	OWSG MWD+IFR1+MS
8735.8	0	0	8677	30.981	0	30.964	0	15.434	0	0	30.993	30.952	56.704	OWSG MWD+IFR1+MS
8800	6.413	179.7	8740.998	31.074	0	31.182	0	15.604	0	0	31.212	31.169	57.169	OWSG MWD+IFR1+MS
8900	16.41	179.7	8838.896	30.631	0	31.508	0	15.865	0	0	31.545	31.492	55.519	OWSG MWD+IFR1+MS
9000	26.41	179.7	8931.875	29.504	0	31.812	0	16.109	0	0	31.854	31.786	51.629	OWSG MWD+IFR1+MS

9100	36.41	179.7	9017.11	27.778	0	32.109	0	16.334	0	0	32.145	32.058	39.824	OWSG MWD+IFR1+MS
9200	46.41	179.7	9092.011	25.589	0	32.388	0	16.538	0	0	32.416	32.299	29.009	OWSG MWD+IFR1+MS
9300	56.41	179.7	9154.302	23.118	0	32.634	0	16.727	0	0	32.651	32.479	18.16	OWSG MWD+IFR1+MS
9400	66.41	179.7	9202.09	20.663	0	32.848	0	16.912	0	0	32.856	32.611	10.443	OWSG MWD+IFR1+MS
9500	76.41	179.7	9233.924	18.623	0	33.015	0	17.097	0	0	33.017	32.693	4.667	OWSG MWD+IFR1+MS
9600	86.41	179.7	9248.835	17.474	0	33.136	0	17.289	0	0	33.136	32.726	-0.343	OWSG MWD+IFR1+MS
9635.8	90	179.7	9249.958	17.361	0	33.181	0	17.361	0	0	33.182	32.741	-2.014	OWSG MWD+IFR1+MS
9700	90	179.7	9249.958	17.496	0	33.242	0	17.496	0	0	33.245	32.738	-4.554	OWSG MWD+IFR1+MS
9800	90	179.7	9249.958	17.734	0	33.347	0	17.734	0	0	33.357	32.746	-7.438	OWSG MWD+IFR1+MS
9900	90	179.7	9249.958	18.003	0	33.468	0	18.003	0	0	33.485	32.738	-9.093	OWSG MWD+IFR1+MS
10000	90	179.7	9249.958	18.303	0	33.602	0	18.303	0	0	33.628	32.744	-10.23	OWSG MWD+IFR1+MS
10100	90	179.7	9249.958	18.631	0	33.751	0	18.631	0	0	33.786	32.75	-10.908	OWSG MWD+IFR1+MS
10200	90	179.7	9249.958	18.984	0	33.914	0	18.984	0	0	33.957	32.756	-11.273	OWSG MWD+IFR1+MS
10300	90	179.7	9249.958	19.362	0	34.076	0	19.362	0	0	34.127	32.762	-11.553	OWSG MWD+IFR1+MS
10400	90	179.7	9249.958	19.766	0	34.267	0	19.766	0	0	34.325	32.769	-11.553	OWSG MWD+IFR1+MS
10500	90	179.7	9249.958	20.192	0	34.456	0	20.192	0	0	34.521	32.776	-11.553	OWSG MWD+IFR1+MS
10600	90	179.7	9249.958	20.64	0	34.674	0	20.64	0	0	34.744	32.785	-11.387	OWSG MWD+IFR1+MS

10700	90	179.7	9249.958	21.105	0	34.89	0	21.105	0	0	34.966	32.793	-11.258	OWSG MWD+IFR1+MS
10800	90	179.7	9249.958	21.592	0	35.119	0	21.592	0	0	35.2	32.817	-11.153	OWSG MWD+IFR1+MS
10900	90	179.7	9249.958	22.093	0	35.36	0	22.093	0	0	35.446	32.826	-10.945	OWSG MWD+IFR1+MS
11000	90	179.7	9249.958	22.612	0	35.614	0	22.612	0	0	35.704	32.836	-10.722	OWSG MWD+IFR1+MS
11100	90	179.7	9249.958	23.145	0	35.88	0	23.145	0	0	35.975	32.861	-10.536	OWSG MWD+IFR1+MS
11200	90	179.7	9249.958	23.692	0	36.144	0	23.692	0	0	36.242	32.871	-10.334	OWSG MWD+IFR1+MS
11300	90	179.7	9249.958	24.253	0	36.434	0	24.253	0	0	36.535	32.897	-10.128	OWSG MWD+IFR1+MS
11400	90	179.7	9249.958	24.825	0	36.722	0	24.825	0	0	36.826	32.922	-9.949	OWSG MWD+IFR1+MS
11500	90	179.7	9249.958	25.409	0	37.034	0	25.409	0	0	37.14	32.949	-9.731	OWSG MWD+IFR1+MS
11600	90	179.7	9249.958	26.004	0	37.343	0	26.004	0	0	37.452	32.96	-9.513	OWSG MWD+IFR1+MS
11700	90	179.7	9249.958	26.608	0	37.664	0	26.608	0	0	37.774	32.986	-9.325	OWSG MWD+IFR1+MS
11800	90	179.7	9249.958	27.221	0	37.995	0	27.221	0	0	38.107	33.013	-9.136	OWSG MWD+IFR1+MS
11900	90	179.7	9249.958	27.842	0	38.336	0	27.842	0	0	38.449	33.04	-8.949	OWSG MWD+IFR1+MS
12000	90	179.7	9249.958	28.473	0	38.686	0	28.473	0	0	38.802	33.067	-8.762	OWSG MWD+IFR1+MS
12100	90	179.7	9249.958	29.11	0	39.034	0	29.11	0	0	39.151	33.094	-8.598	OWSG MWD+IFR1+MS
12200	90	179.7	9249.958	29.756	0	39.404	0	29.756	0	0	39.522	33.136	-8.435	OWSG MWD+IFR1+MS
12300	90	179.7	9249.958	30.407	0	39.771	0	30.407	0	0	39.889	33.164	-8.273	OWSG MWD+IFR1+MS

12400	90	179.7	9249.958	31.064	0	40.159	0	31.064	0	0	40.278	33.191	-8.098	OWSG MWD+IFR1+MS
12500	90	179.7	9249.958	31.718	0	40.543	0	31.718	0	0	40.663	33.219	-7.942	OWSG MWD+IFR1+MS
12600	90	179.7	9249.958	32.388	0	40.937	0	32.388	0	0	41.057	33.261	-7.802	OWSG MWD+IFR1+MS
12700	90	179.7	9249.958	33.061	0	41.338	0	33.061	0	0	41.459	33.289	-7.651	OWSG MWD+IFR1+MS
12800	90	179.7	9249.958	33.749	0	41.748	0	33.749	0	0	41.869	33.332	-7.516	OWSG MWD+IFR1+MS
12900	90	179.7	9249.958	34.424	0	42.153	0	34.424	0	0	42.275	33.374	-7.393	OWSG MWD+IFR1+MS
13000	90	179.7	9249.958	35.114	0	42.578	0	35.114	0	0	42.7	33.403	-7.251	OWSG MWD+IFR1+MS
13100	90	179.7	9249.958	35.805	0	43.011	0	35.805	0	0	43.132	33.445	-7.123	OWSG MWD+IFR1+MS
13200	90	179.7	9249.958	36.497	0	43.439	0	36.497	0	0	43.561	33.488	-7.006	OWSG MWD+IFR1+MS
13300	90	179.7	9249.958	37.202	0	43.875	0	37.202	0	0	43.996	33.531	-6.891	OWSG MWD+IFR1+MS
13400	90	179.7	9249.958	37.895	0	44.329	0	37.895	0	0	44.45	33.574	-6.77	OWSG MWD+IFR1+MS
13500	90	179.7	9249.958	38.601	0	44.778	0	38.601	0	0	44.899	33.617	-6.657	OWSG MWD+IFR1+MS
13600	90	179.7	9249.958	39.319	0	45.234	0	39.319	0	0	45.354	33.66	-6.549	OWSG MWD+IFR1+MS
13700	90	179.7	9249.958	40.025	0	45.696	0	40.025	0	0	45.816	33.703	-6.442	OWSG MWD+IFR1+MS
13800	90	179.7	9249.958	40.743	0	46.153	0	40.743	0	0	46.274	33.745	-6.344	OWSG MWD+IFR1+MS
13900	90	179.7	9249.958	41.461	0	46.628	0	41.461	0	0	46.748	33.803	-6.248	OWSG MWD+IFR1+MS
14000	90	179.7	9249.958	42.178	0	47.108	0	42.178	0	0	47.228	33.846	-6.147	OWSG MWD+IFR1+MS

14100	90	179.7	9249.958	42.895	0	47.584	0	42.895	0	0	47.703	33.904	-6.059	OWSG MWD+IFR1+MS
14200	90	179.7	9249.958	43.623	0	48.065	0	43.623	0	0	48.184	33.946	-5.972	OWSG MWD+IFR1+MS
14300	90	179.7	9249.958	44.351	0	48.562	0	44.351	0	0	48.68	34.004	-5.882	OWSG MWD+IFR1+MS
14400	90	179.7	9249.958	45.078	0	49.054	0	45.078	0	0	49.171	34.047	-5.793	OWSG MWD+IFR1+MS
14500	90	179.7	9249.958	45.804	0	49.551	0	45.804	0	0	49.668	34.104	-5.715	OWSG MWD+IFR1+MS
14600	90	179.7	9249.958	46.53	0	50.053	0	46.53	0	0	50.17	34.161	-5.634	OWSG MWD+IFR1+MS
14700	90	179.7	9249.958	47.265	0	50.561	0	47.265	0	0	50.676	34.204	-5.555	OWSG MWD+IFR1+MS
14800	90	179.7	9249.958	48	0	51.063	0	48	0	0	51.178	34.261	-5.48	OWSG MWD+IFR1+MS
14900	90	179.7	9249.958	48.734	0	51.579	0	48.734	0	0	51.694	34.318	-5.407	OWSG MWD+IFR1+MS
15000	90	179.7	9249.958	49.477	0	52.091	0	49.477	0	0	52.205	34.375	-5.335	OWSG MWD+IFR1+MS
15100	90	179.7	9249.958	50.21	0	52.616	0	50.21	0	0	52.73	34.432	-5.264	OWSG MWD+IFR1+MS
15200	90	179.7	9249.958	50.951	0	53.137	0	50.951	0	0	53.249	34.489	-5.198	OWSG MWD+IFR1+MS
15300	90	179.7	9249.958	51.691	0	53.661	0	51.691	0	0	53.773	34.56	-5.132	OWSG MWD+IFR1+MS
15400	90	179.7	9249.958	52.44	0	54.19	0	52.44	0	0	54.302	34.617	-5.068	OWSG MWD+IFR1+MS
15500	90	179.7	9249.958	53.179	0	54.723	0	53.179	0	0	54.834	34.674	-5.004	OWSG MWD+IFR1+MS
15600	90	179.7	9249.958	53.926	0	55.26	0	53.926	0	0	55.37	34.745	-4.945	OWSG MWD+IFR1+MS
15700	90	179.7	9249.958	54.672	0	55.791	0	54.672	0	0	55.901	34.801	-4.886	OWSG MWD+IFR1+MS

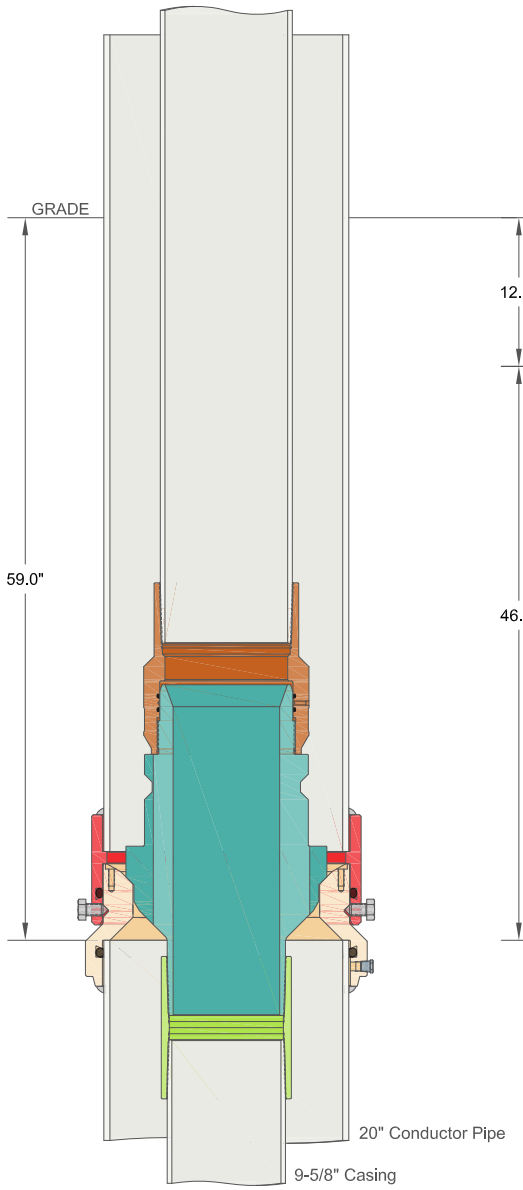
15800	90	179.7	9249.958	55.426	0	56.335	0	55.426	0	0	56.444	34.872	-4.828	OWSG MWD+IFR1+MS
15900	90	179.7	9249.958	56.169	0	56.874	0	56.169	0	0	56.983	34.928	-4.771	OWSG MWD+IFR1+MS
16000	90	179.7	9249.958	56.921	0	57.426	0	56.921	0	0	57.533	34.999	-4.714	OWSG MWD+IFR1+MS
16100	90	179.7	9249.958	57.671	0	57.972	0	57.671	0	0	58.079	35.069	-4.661	OWSG MWD+IFR1+MS
16200	90	179.7	9249.958	58.421	0	58.522	0	58.421	0	0	58.628	35.125	-4.607	OWSG MWD+IFR1+MS
16300	90	179.7	9249.958	59.178	0	59.075	0	59.178	0	0	59.18	35.195	-4.555	OWSG MWD+IFR1+MS
16400	90	179.7	9249.958	59.925	0	59.631	0	59.925	0	0	59.736	35.266	-4.504	OWSG MWD+IFR1+MS
16500	90	179.7	9249.958	60.679	0	60.19	0	60.679	0	0	60.294	35.336	-4.454	OWSG MWD+IFR1+MS
16600	90	179.7	9249.958	61.433	0	60.745	0	61.433	0	0	60.848	35.405	-4.409	OWSG MWD+IFR1+MS
16700	90	179.7	9249.958	62.193	0	61.31	0	62.193	0	0	61.413	35.475	-4.36	OWSG MWD+IFR1+MS
16800	90	179.7	9249.958	62.944	0	61.87	0	62.944	0	0	61.972	35.559	-4.315	OWSG MWD+IFR1+MS
16900	90	179.7	9249.958	63.702	0	62.442	0	63.702	0	0	62.543	35.628	-4.27	OWSG MWD+IFR1+MS
17000	90	179.7	9249.958	64.459	0	63.008	0	64.459	0	0	63.109	35.697	-4.225	OWSG MWD+IFR1+MS
17100	90	179.7	9249.958	65.223	0	63.577	0	65.223	0	0	63.677	35.766	-4.183	OWSG MWD+IFR1+MS
17200	90	179.7	9249.958	65.977	0	64.149	0	65.977	0	0	64.248	35.849	-4.14	OWSG MWD+IFR1+MS
17300	90	179.7	9249.958	66.738	0	64.723	0	66.738	0	0	64.822	35.918	-4.099	OWSG MWD+IFR1+MS
17400	90	179.7	9249.958	67.498	0	65.3	0	67.498	0	0	65.398	36.001	-4.06	OWSG MWD+IFR1+MS

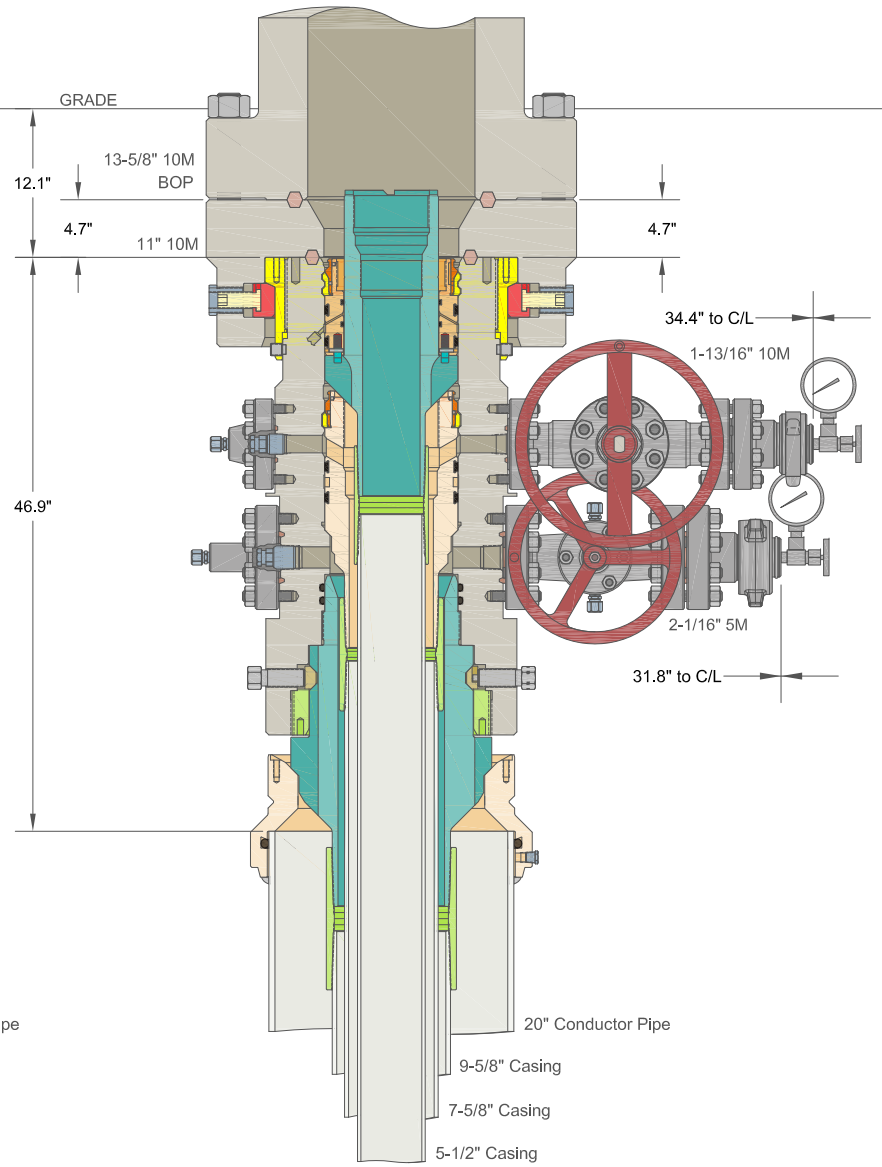
17500	90	179.7	9249.958	68.257	0	65.88	0	68.257	0	0	65.977	36.083	-4.019	OWSG MWD+IFR1+MS
17600	90	179.7	9249.958	69.022	0	66.454	0	69.022	0	0	66.551	36.152	-3.98	OWSG MWD+IFR1+MS
17700	90	179.7	9249.958	69.778	0	67.039	0	69.778	0	0	67.135	36.234	-3.943	OWSG MWD+IFR1+MS
17800	90	179.7	9249.958	70.541	0	67.618	0	70.541	0	0	67.714	36.316	-3.906	OWSG MWD+IFR1+MS
17900	90	179.7	9249.958	71.302	0	68.2	0	71.302	0	0	68.295	36.398	-3.869	OWSG MWD+IFR1+MS
18000	90	179.7	9249.958	72.069	0	68.784	0	72.069	0	0	68.879	36.479	-3.833	OWSG MWD+IFR1+MS
18100	90	179.7	9249.958	72.829	0	69.371	0	72.829	0	0	69.464	36.561	-3.798	OWSG MWD+IFR1+MS
18200	90	179.7	9249.958	73.593	0	69.96	0	73.593	0	0	70.053	36.642	-3.764	OWSG MWD+IFR1+MS
18300	90	179.7	9249.958	74.357	0	70.551	0	74.357	0	0	70.643	36.723	-3.73	OWSG MWD+IFR1+MS
18400	90	179.7	9249.958	75.127	0	71.144	0	75.127	0	0	71.235	36.804	-3.696	OWSG MWD+IFR1+MS
18500	90	179.7	9249.958	75.888	0	71.732	0	75.888	0	0	71.823	36.885	-3.664	OWSG MWD+IFR1+MS
18600	90	179.7	9249.958	76.655	0	72.329	0	76.655	0	0	72.419	36.979	-3.633	OWSG MWD+IFR1+MS
18700	90	179.7	9249.958	77.421	0	72.921	0	77.421	0	0	73.011	37.059	-3.602	OWSG MWD+IFR1+MS
18800	90	179.7	9249.958	78.186	0	73.515	0	78.186	0	0	73.605	37.153	-3.571	OWSG MWD+IFR1+MS
18900	90	179.7	9249.958	78.956	0	74.118	0	78.956	0	0	74.207	37.233	-3.54	OWSG MWD+IFR1+MS
19000	90	179.7	9249.958	79.725	0	74.717	0	79.725	0	0	74.805	37.326	-3.511	OWSG MWD+IFR1+MS
19100	90	179.7	9249.958	80.486	0	75.31	0	80.486	0	0	75.398	37.419	-3.483	OWSG MWD+IFR1+MS

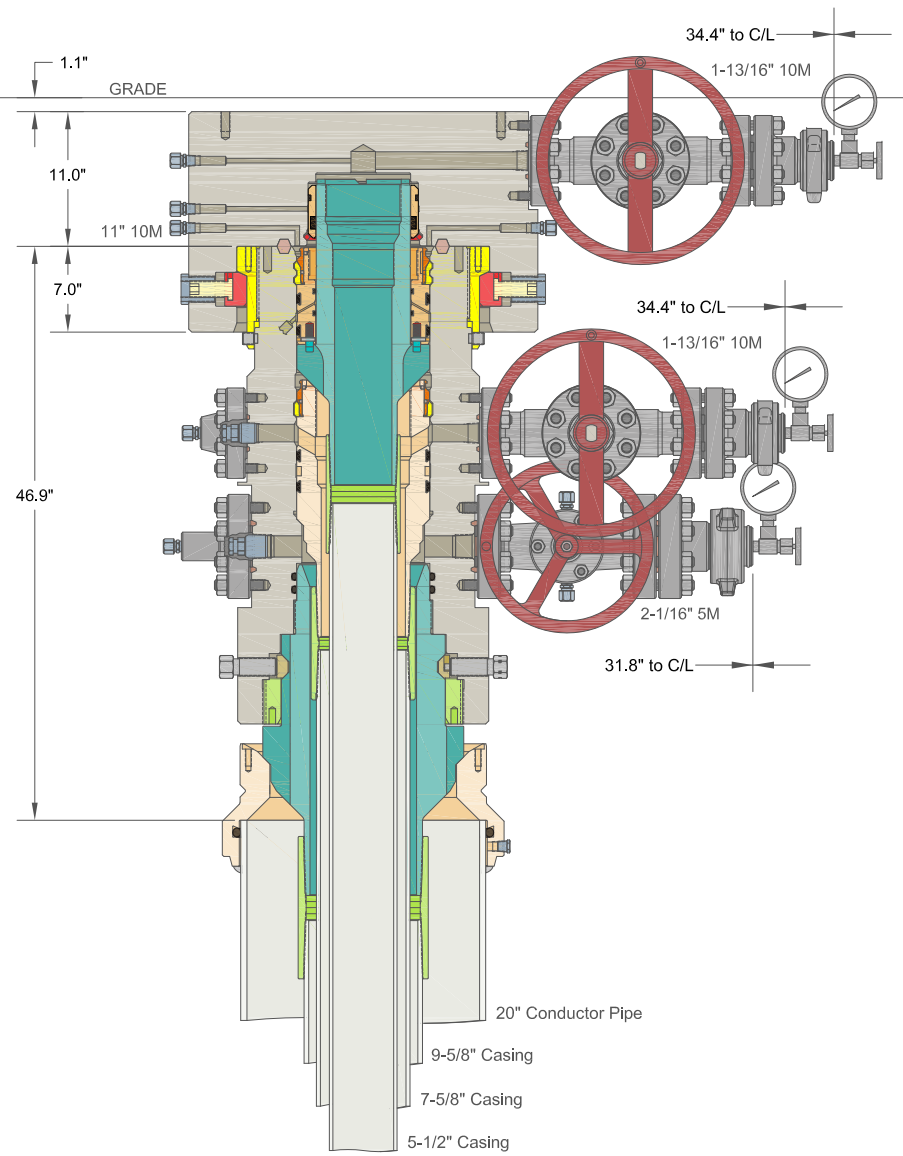
19200	90	179.7	9249.958	81.259	0	75.912	0	81.259	0	0	75.999	37.499	-3.453	OWSG MWD+IFR1+MS
19300	90	179.7	9249.958	82.024	0	76.516	0	82.024	0	0	76.602	37.591	-3.425	OWSG MWD+IFR1+MS
19400	90	179.7	9249.958	82.795	0	77.121	0	82.795	0	0	77.207	37.684	-3.397	OWSG MWD+IFR1+MS
19500	90	179.7	9249.958	83.564	0	77.722	0	83.564	0	0	77.807	37.776	-3.371	OWSG MWD+IFR1+MS
19600	90	179.7	9249.958	84.333	0	78.325	0	84.333	0	0	78.409	37.868	-3.344	OWSG MWD+IFR1+MS
19700	90	179.7	9249.958	85.1	0	78.935	0	85.1	0	0	79.02	37.959	-3.318	OWSG MWD+IFR1+MS
19800	90	179.7	9249.958	85.872	0	79.541	0	85.872	0	0	79.625	38.051	-3.292	OWSG MWD+IFR1+MS
19900	90	179.7	9249.958	86.637	0	80.149	0	86.637	0	0	80.232	38.142	-3.266	OWSG MWD+IFR1+MS
20000	90	179.7	9249.958	87.407	0	80.758	0	87.407	0	0	80.841	38.233	-3.241	OWSG MWD+IFR1+MS
20100	90	179.7	9249.958	88.182	0	81.369	0	88.182	0	0	81.451	38.337	-3.217	OWSG MWD+IFR1+MS
20200	90	179.7	9249.958	88.949	0	81.975	0	88.949	0	0	82.057	38.428	-3.194	OWSG MWD+IFR1+MS
20300	90	179.7	9249.958	89.722	0	82.589	0	89.722	0	0	82.67	38.531	-3.17	OWSG MWD+IFR1+MS
20400	90	179.7	9249.958	90.493	0	83.198	0	90.493	0	0	83.279	38.621	-3.147	OWSG MWD+IFR1+MS
20500	90	179.7	9249.958	91.263	0	83.815	0	91.263	0	0	83.895	38.724	-3.124	OWSG MWD+IFR1+MS
20600	90	179.7	9249.958	92.033	0	84.428	0	92.033	0	0	84.507	38.814	-3.101	OWSG MWD+IFR1+MS
20700	90	179.7	9249.958	92.806	0	85.042	0	92.806	0	0	85.121	38.916	-3.079	OWSG MWD+IFR1+MS
20800	90	179.7	9249.958	93.579	0	85.657	0	93.579	0	0	85.736	39.018	-3.057	OWSG MWD+IFR1+MS

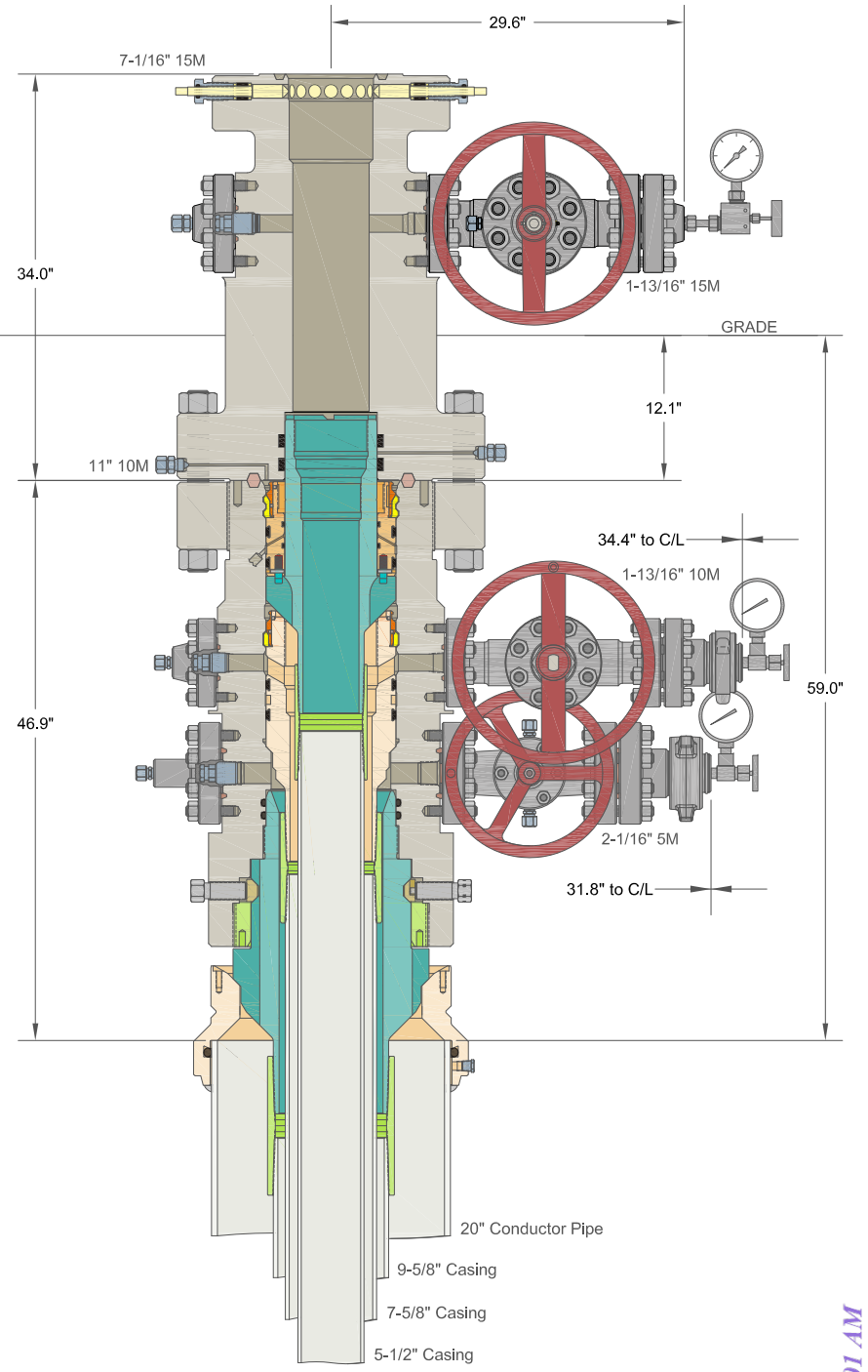
20900	90	179.7	9249.958	94.35	0	86.274	0	94.35	0	0	86.352	39.12	-3.036	OWSG MWD+IFR1+MS
21000	90	179.7	9249.958	95.121	0	86.892	0	95.121	0	0	86.969	39.222	-3.014	OWSG MWD+IFR1+MS
21100	90	179.7	9249.958	95.896	0	87.511	0	95.896	0	0	87.588	39.323	-2.993	OWSG MWD+IFR1+MS
21200	90	179.7	9249.958	96.67	0	88.126	0	96.67	0	0	88.203	39.424	-2.973	OWSG MWD+IFR1+MS
21300	90	179.7	9249.958	97.442	0	88.748	0	97.442	0	0	88.824	39.525	-2.953	OWSG MWD+IFR1+MS
21400	90	179.7	9249.958	98.214	0	89.366	0	98.214	0	0	89.442	39.625	-2.932	OWSG MWD+IFR1+MS
21500	90	179.7	9249.958	98.99	0	89.985	0	98.99	0	0	90.06	39.726	-2.913	OWSG MWD+IFR1+MS
21600	90	179.7	9249.958	99.76	0	90.605	0	99.76	0	0	90.68	39.826	-2.894	OWSG MWD+IFR1+MS
21700	90	179.7	9249.958	100.499	0	91.227	0	100.499	0	0	91.301	39.938	-2.875	OWSG MWD+IFR1+MS
21800	90	179.7	9249.958	101.292	0	91.85	0	101.292	0	0	91.924	40.038	-2.856	OWSG MWD+IFR1+MS
21900	90	179.7	9249.958	102.078	0	92.474	0	102.078	0	0	92.548	40.149	-2.838	OWSG MWD+IFR1+MS
22000	90	179.7	9249.958	102.859	0	93.099	0	102.859	0	0	93.172	40.248	-2.819	OWSG MWD+IFR1+MS
22100	90	179.7	9249.958	103.634	0	93.725	0	103.634	0	0	93.798	40.359	-2.801	OWSG MWD+IFR1+MS
22200	90	179.7	9249.958	104.403	0	94.348	0	104.403	0	0	94.42	40.458	-2.783	OWSG MWD+IFR1+MS
22300	90	179.7	9249.958	105.167	0	94.971	0	105.167	0	0	95.043	40.568	-2.766	OWSG MWD+IFR1+MS
22389	90	179.7	9250	105.877	0	95.538	0	105.877	0	0	95.61	40.667	-2.75	OWSG MWD+IFR1+MS

Plan Targets	Brushy Draw 30 Fed 102H				
Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape
FTP_1	9638.8	397645.87	627153.86	6080	CIRCLE
LTP_1	22240.55	385041.85	627216.69	6080	CIRCLE
BHL_1	22390.17	384891.98	627217.26	6080	CIRCLE









ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

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

XTO ENERGY INC
ICARUS PAD

DRAWN	DLE	18JAN21
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 (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.

62 API STANDARD 53

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

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

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

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

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

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

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

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

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

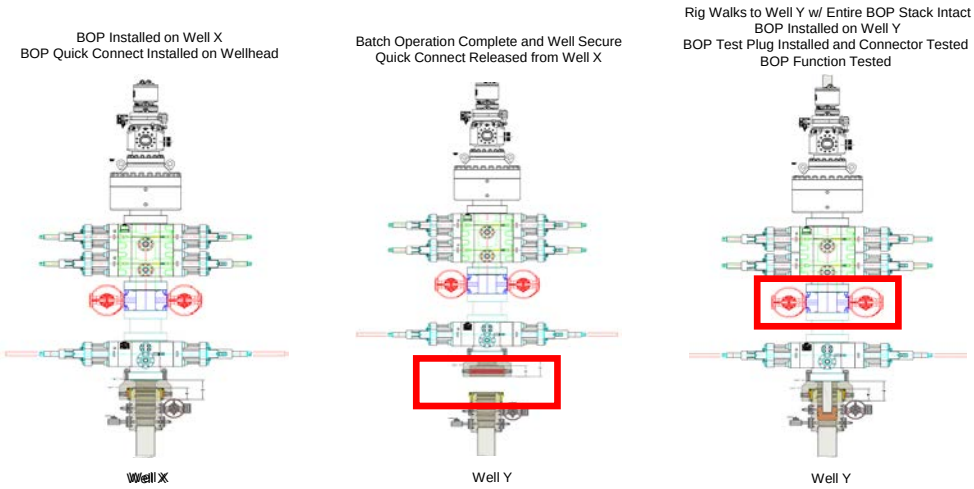
XTO Energy feels break testing and our current procedures meet the intent of OOGO No. 2 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that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

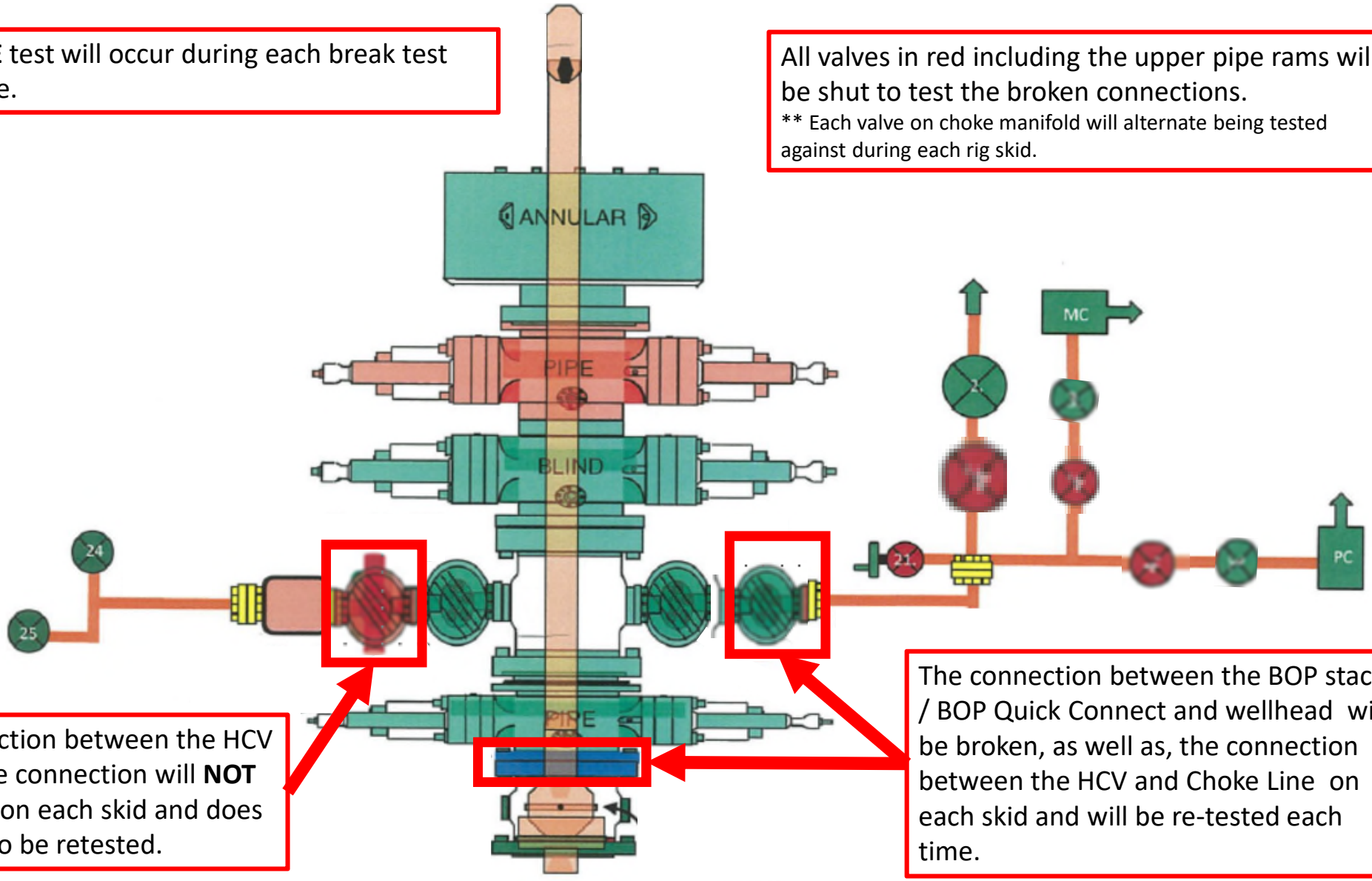
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.

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 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.

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.

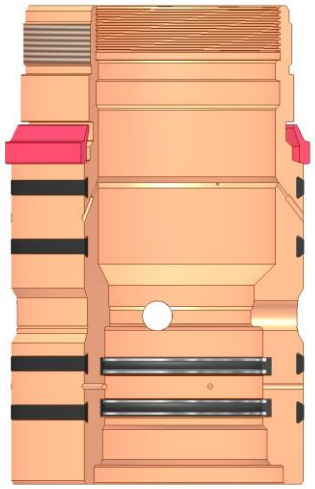
1. Cement Program

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

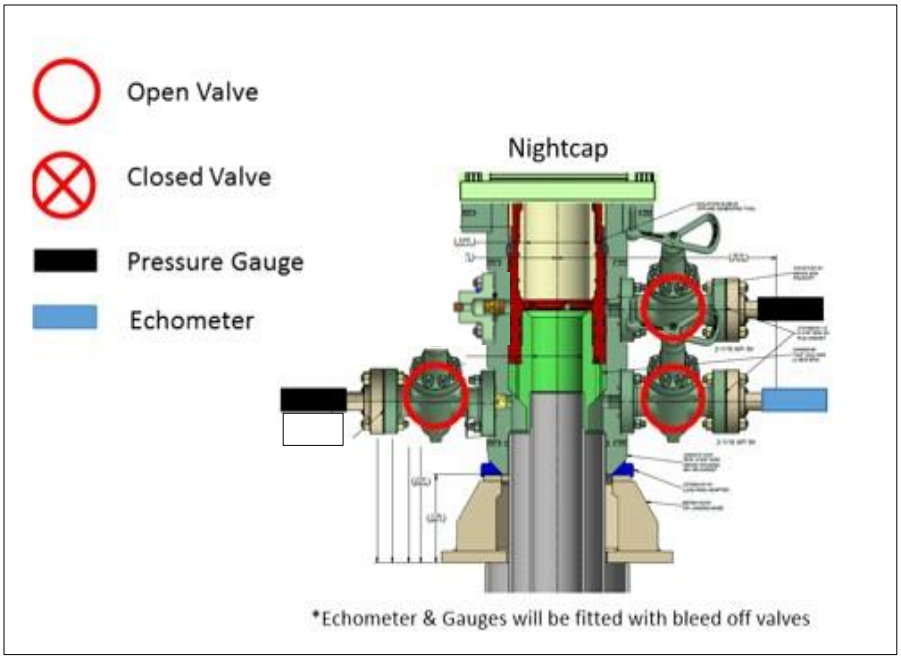
2. Offline Cementing Procedure

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 nippled 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.



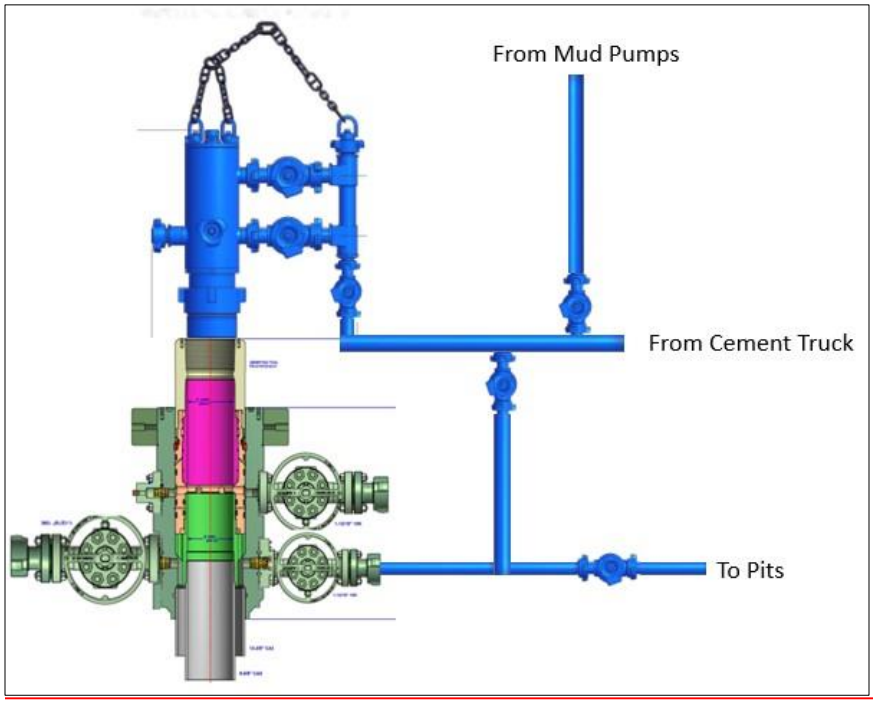
Annular packoff with both external and internal seals



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 nippling 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 nippled 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.

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/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 479782

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 479782
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Work was performed without OCD approval.	10/23/2025