

Well Name: OUTRIDER 27 FED	Well Location: T24S / R32E / SEC 28 / SWSE /	County or Parish/State:
Well Number: 510H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM016353	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002550233	Well Status: Approved Application for Permit to Drill	Operator: XTO ENERGY INCORPORATED

Notice of Intent

Sundry ID: 2681007

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 07/08/2022	Time Sundry Submitted: 02:25
Date proposed operation will begin: 07/22/2022	

**Procedure Description:** \*\*Well number change, surface hole location change, bottom hole location change, first and last take point changes and hole, casing, cement & WH configuration changes XTO Permian Operating, LLC requests permission to make the following changes to the original APD: Change well number from 101H to 510H Change SHL from 427’FSL & 1329’FEL to 396”FSL & 1029’FEL, Section 28-T24S-R32E for drilling efficiencies and operational safety. No Additional Surface Disturbance. Change BHL from 1270’FSL & 330’FWL to 1270”FSL & 990’FWL, Section 15-T24S-R32E Change FTP fr/50’FSL & 330’FWL to 100’FSL & 990’FEL Change LTP fr/1270’FSL & 330’FWL to 1220’FSL & 990’FWL Additionally, XTO Permian Operating, LLC respectfully requests permission to upsize the surface, intermediate and production hole, casing and cement based on the attached drilling program. Due to the upsize in these strings, the wellhead configuration has also changed based on the attached drilling program. These changes are requested due to casing procurement challenges faced by industry throughout the US supply chain. Attachments: C102 Drilling Program MBS Diagram Directional Plan

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Outrider\_27\_Fed\_510H\_Attachments\_20220815074523.pdf

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Conditions of Approval

Additional

Sec\_28\_24S\_32E\_NMP\_2681007\_Outrider\_27\_Federal\_510H\_Lea\_NMNM016353\_XTO\_13\_22\_44795\_AM\_20220822145643.pdf

Sec\_28\_24S\_32E\_NMP\_2681007\_Outrider\_27\_Federal\_510H\_Lea\_NMNM016353\_XTO\_COAs\_20220822145643.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: JESSICA DOOLING

Signed on: AUG 15, 2022 07:45 AM

Name: XTO ENERGY INCORPORATED

Title: Lead Regulatory Coordinator

Street Address: 6401 HOLIDAY HILL ROAD BLDG 5

City: MIDLAND

State: TX

Phone: (970) 796-6048

Email address: JESSICA.DOOLING@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: 08/23/2022

Signature: Cody R. Layton

## District I

1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

## District II

811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

## District III

1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

## District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025- 50233	<sup>2</sup> Pool Code 98248	<sup>3</sup> Pool Name WC-025-G-08 S243217P;UPR WOLFCAMP
<sup>4</sup> Property Code 332873	<sup>5</sup> Property Name OUTRIDER 27 FED	<sup>6</sup> Well Number 510H
<sup>7</sup> OGRID No. 005380	<sup>8</sup> Operator Name XTO ENERGY, INC.	<sup>9</sup> Elevation 3,527'

<sup>10</sup> Surface Location

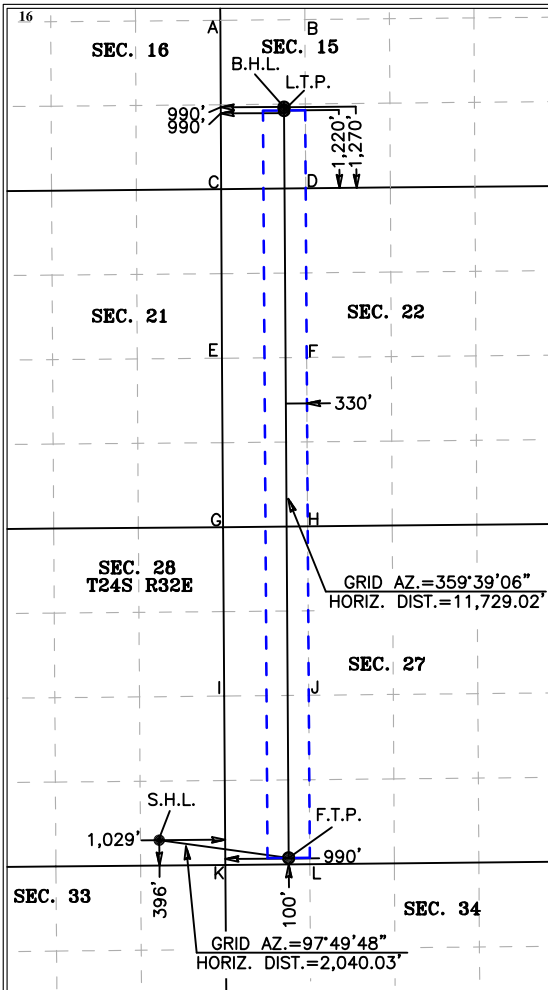
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	28	24 S	32 E		396	SOUTH	1,029	EAST	LEA

<sup>11</sup> 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
M	15	24 S	32 E		1,270	SOUTH	990	WEST	LEA

<sup>12</sup> Dedicated Acres 360	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



<b>SHL (NAD83 NME)</b>	<b>LTP (NAD83 NME)</b>
Y = 430,698.3	Y = 442,099.2
X = 745,200.2	X = 747,150.1
LAT. = 32.182351 °N	LAT. = 32.213656 °N
LONG. = 103.674385 °W	LONG. = 103.667855 °W
<b>FTP (NAD83 NME)</b>	<b>BHL (NAD83 NME)</b>
Y = 430,420.4	Y = 442,149.2
X = 747,221.2	X = 747,149.8
LAT. = 32.181553 °N	LAT. = 32.213793 °N
LONG. = 103.667859 °W	LONG. = 103.667855 °W

## CORNER COORDINATES (NAD83 NME)

A - Y = 443,507.0 N	X = 746,153.0 E
B - Y = 443,519.8 N	X = 747,473.8 E
C - Y = 440,869.0 N	X = 746,166.2 E
D - Y = 440,882.6 N	X = 747,488.3 E
E - Y = 438,228.5 N	X = 746,178.6 E
F - Y = 438,240.7 N	X = 747,501.7 E
G - Y = 435,588.7 N	X = 746,195.9 E
H - Y = 435,601.4 N	X = 747,517.5 E
I - Y = 432,949.4 N	X = 746,214.0 E
J - Y = 432,962.2 N	X = 747,534.9 E
K - Y = 430,311.0 N	X = 746,231.9 E
L - Y = 430,323.5 N	X = 747,552.2 E

<b>SHL (NAD27 NME)</b>	<b>LTP (NAD27 NME)</b>
Y = 430,639.9	Y = 442,040.6
X = 704,015.5	X = 705,965.8
LAT. = 32.182227 °N	LAT. = 32.213533 °N
LONG. = 103.673906 °W	LONG. = 103.667375 °W
<b>FTP (NAD27 NME)</b>	<b>BHL (NAD27 NME)</b>
Y = 430,362.0	Y = 442,090.6
X = 706,036.5	X = 705,965.6
LAT. = 32.181429 °N	LAT. = 32.213670 °N
LONG. = 103.667380 °W	LONG. = 103.667374 °W

## CORNER COORDINATES (NAD27 NME)

A - Y = 443,448.4 N	X = 704,968.8 E
B - Y = 443,461.2 N	X = 706,289.6 E
C - Y = 440,810.4 N	X = 704,982.0 E
D - Y = 440,824.1 N	X = 706,303.9 E
E - Y = 438,170.0 N	X = 704,994.2 E
F - Y = 438,182.2 N	X = 706,317.3 E
G - Y = 435,530.3 N	X = 705,011.4 E
H - Y = 435,543.0 N	X = 706,333.0 E
I - Y = 432,891.0 N	X = 705,029.4 E
J - Y = 432,903.8 N	X = 706,350.3 E
K - Y = 430,252.7 N	X = 705,047.2 E
L - Y = 430,265.2 N	X = 706,367.5 E

<sup>17</sup> OPERATOR CERTIFICATION

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

Jessica Dooling

7/5/2022

Signature

Date

Jessica Dooling

Printed Name

jessica.dooling@exxonmobil.com

E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION

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

05-10-2022

Date of Survey

Signature and Seal of  
Professional Surveyor:

MARK DILLON HARP 23786

Certificate Number

BK

2022040680



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

XTO Energy Inc.  
Outrider 27 Federal 510H  
Projected TD: 24234' MD / 12300' TVD  
SHL: 427' FSL & 4251' FWL , Section 28, T24S, R32E  
BHL: 1270' FSL & 990' FWL , Section 15, T24S, R32E  
Lea 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	906'	Water
Top of Salt	1217'	Water
Base of Salt	4528'	Water
Delaware	4732'	Water
Brushy Canyon	7242'	Water/Oil/Gas
Bone Spring	8656'	Water
1st Bone Spring Ss	9670'	Water/Oil/Gas
2nd Bone Spring Ss	10356'	Water/Oil/Gas
3rd Bone Spring Ss	11656'	Water/Oil/Gas
Wolfcamp	12056'	Water/Oil/Gas
Wolfcamp X	12081'	Water/Oil/Gas
Wolfcamp Y	12144'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>12300'</b>	<b>Water/Oil/Gas</b>

\*\*\* Hydrocarbons @ Brushy Canyon

\*\*\* Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13.375 inch casing @ 1006' (211' 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 9.625 inch casing at 11843' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 24234 MD/TD and 5.5 inch production casing will be set at TD and cemented back up in the intermediate shoe (estimated TOC 11543 feet).

**3. Casing Design**

Hole Size	MD	TVD	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 1006'	1006'	13.375	68	HC L-80	BTC	New	1.49	5.91	22.59
12.25	0' – 4000'	3873'	9.625	40	HC P-110	BTC	New	1.91	2.10	2.66
12.25	4000' – 11843'	11384'	9.625	40	HC L-80	BTC	New	1.39	1.13	2.92
8.5	0' – 11743'	11284'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.70	1.88
8.5	11743' - 24234'	12300'	5.5	20	RY P-110	Semi-Premium	New	1.05	1.62	1.88

· 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

· 9.625 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: 13-5/8" 10M top flange x 13-3/8" SOW bottom

B. Tubing Head: 13-5/8" 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 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

#### 4. Cement Program

**Surface Casing: 13.375, 68 New BTC, HC L-80 casing to be set at +/- 1006'**

Lead: 520 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft<sup>3</sup>/sx, 10.13 gal/sx water)

Tail: 300 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

Top of Cement: Surface

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

**2nd Intermediate Casing: 9.625, 40 New casing to be set at +/- 11843'**

1st Stage

Optional Lead: 1220 sxs Class C (mixed at 10.5 ppg, 2.77 ft<sup>3</sup>/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 1330 sxs Class C (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 7242

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

2nd Stage

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

Tail: 2550 sxs Class C (mixed at 14.8 ppg, 1.33 ft<sup>3</sup>/sx, 6.39 gal/sx water)

Top of Cement: 0

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

XTO requests to pump a two stage cement job on the 9-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (7242') 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-Premium, RY P-110 casing to be set at +/- 24234'**

Lead: 50 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft<sup>3</sup>/sx, 15.00 gal/sx water) Top of Cement: 11543 feet

Tail: 2400 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft<sup>3</sup>/sx, 8.38 gal/sx water) Top of Cement: 12043 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 13.375 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 4138 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 13.375, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 9.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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

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

## 6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 1006'	17.5	FW/Native	8.7-9.2	35-40	NC
1006' - 11843'	12.25	FW / Cut Brine / Direct Emulsion / OBM	9.7-10.2	30-32	NC
11843' - 24234'	8.5	OBM	10.7-11.2	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 13.375 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

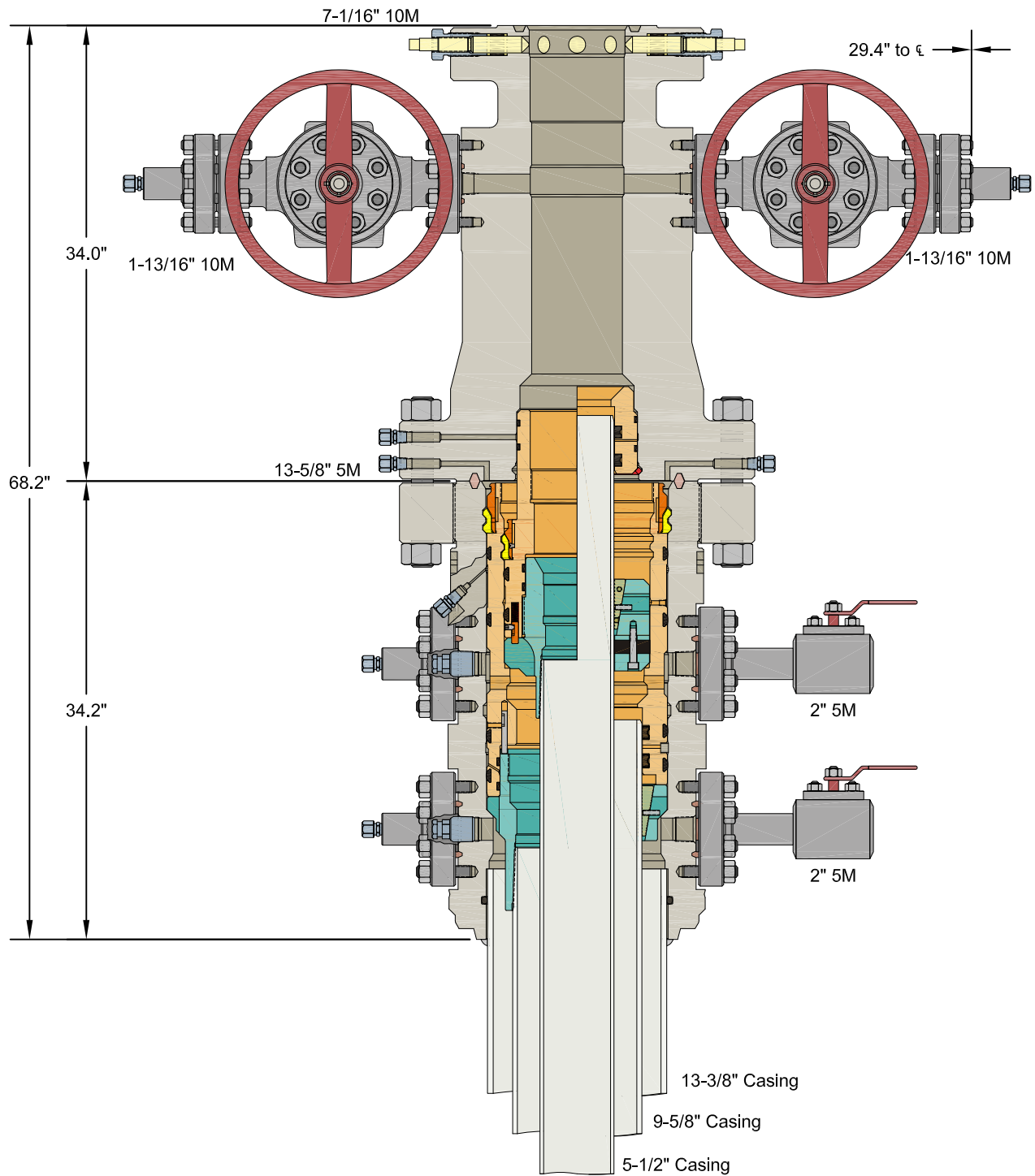
None Anticipated. BHT of 185 to 205 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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 6844 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.



GE Oil &amp; Gas



ALL DIMENSIONS ARE APPROXIMATE

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XTO ENERGY, INC.

13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead  
Assembly, With T-EBS-F Tubing Head

DRAWN

VJK

16FEB17

APPRV

KN

16FEB17

FOR REFERENCE ONLY

DRAWING NO.

10012842



## **XTO Energy**

**Lea County, NM (NAD-27)**

**OUTRIDER 27 FED**

**#510H**

**Wellbore #1**

**Plan: PLAN #2**

## **Standard Planning Report**

**18 April, 2022**



Project: Lea County, NM (NAD-27)  
Site: OUTRIDER 27 FED  
Well: #510H  
Wellbore: Wellbore #1  
Design: PLAN #2

PROJECT DETAILS: Lea County, NM (NAD-27)  
Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level

WELL DETAILS: #510H

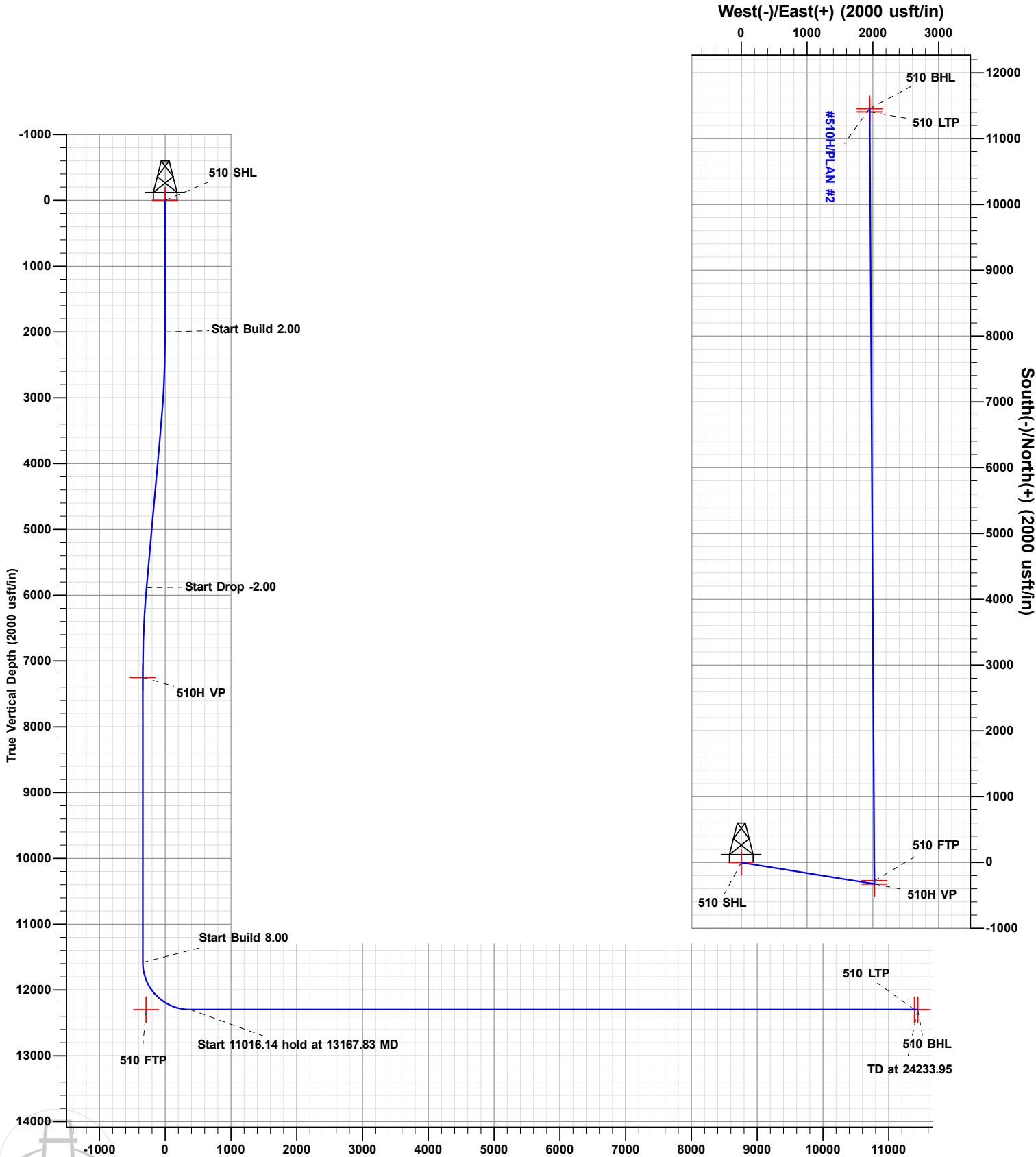
Rig Name:		RKB = 25' @ 25.00usft				
Ground Level:		0.00				
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	430618.32	704012.19	32.1821678	-103.6739175	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	3417.61	28.35	99.17	3360.46	-54.76	339.26	2.00	99.17	-56.83	
4	6291.42	28.35	99.17	5889.54	-272.21	1686.56	0.00	0.00	-282.51	
5	7709.03	0.00	0.00	7250.00	-326.97	2025.82	2.00	180.00	-339.34	510H VP
6	12042.83	0.00	0.00	11583.80	-326.97	2025.82	0.00	0.00	-339.34	
7	13167.83	90.00	359.65	12300.00	389.22	2021.39	8.00	359.65	376.86	
8	24183.97	90.00	359.65	12300.00	11405.14	1953.19	0.00	0.00	11393.00	510 LTP
9	24233.95	90.00	359.65	12300.00	11455.13	1952.88	0.00	0.00	11442.98	510 BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
510 SHL	0.00	0.00	0.00	430618.32	704012.19	32.1821678	-103.6739175	Point
510H VP	7250.00	-326.97	2025.82	430291.35	706038.01	32.1812348	-103.6673765	Point
510 BHL	12300.00	11455.13	1952.88	442073.45	705965.07	32.2136229	-103.6673764	Point
510 FTP	12300.00	-276.97	2025.51	430341.35	706037.70	32.1813722	-103.6673765	Point
510 LTP	12300.00	11405.14	1953.19	442023.46	705965.38	32.2134855	-103.6673764	Point



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Vertical Section at 359.65° (2000 usft/in)

Plan: PLAN #2 (#510H/Wellbore #1)

Created By: MATTHEW MAY Date: 13:44, April 18 2022



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #510H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 25.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 25.00usft
<b>Site:</b>	OUTRIDER 27 FED	<b>North Reference:</b>	Grid
<b>Well:</b>	#510H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

<b>Project</b>	Lea County, NM (NAD-27)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

Site		OUTRIDER 27 FED			
Site Position:		Northing:	430,668.00 usft	Latitude:	32.1823094
From:	Map	Easting:	703,715.30 usft	Longitude:	-103.6748761
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well	#510H					
Well Position	+N/-S	-49.68 usft	Northing:	430,618.32 usft	Latitude:	32.1821679
	+E/-W	296.89 usft	Easting:	704,012.19 usft	Longitude:	-103.6739175
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	0.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2020	04/10/22	6.50	59.82	47,398

<b>Design</b>	PLAN #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	359.65

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,417.61	28.35	99.17	3,360.46	-54.76	339.26	2.00	2.00	0.00	99.17	
6,291.42	28.35	99.17	5,889.54	-272.21	1,686.56	0.00	0.00	0.00	0.00	
7,709.03	0.00	0.00	7,250.00	-326.97	2,025.82	2.00	-2.00	0.00	180.00	510H VP
12,042.83	0.00	0.00	11,583.80	-326.97	2,025.82	0.00	0.00	0.00	0.00	
13,167.83	90.00	359.65	12,300.00	389.22	2,021.39	8.00	8.00	0.00	359.65	
24,183.97	90.00	359.65	12,300.00	11,405.14	1,953.19	0.00	0.00	0.00	0.00	510 LTP
24,233.95	90.00	359.65	12,300.00	11,455.13	1,952.88	0.00	0.00	0.00	0.00	510 BHL



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #510H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 25.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 25.00usft
<b>Site:</b>	OUTRIDER 27 FED	<b>North Reference:</b>	Grid
<b>Well:</b>	#510H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	2.00	99.17	2,099.98	-0.28	1.72	-0.29	2.00	2.00	0.00
2,200.00	4.00	99.17	2,199.84	-1.11	6.89	-1.15	2.00	2.00	0.00
2,300.00	6.00	99.17	2,299.45	-2.50	15.49	-2.60	2.00	2.00	0.00
2,400.00	8.00	99.17	2,398.70	-4.44	27.52	-4.61	2.00	2.00	0.00
2,500.00	10.00	99.17	2,497.47	-6.93	42.97	-7.20	2.00	2.00	0.00
2,600.00	12.00	99.17	2,595.62	-9.97	61.80	-10.35	2.00	2.00	0.00
2,700.00	14.00	99.17	2,693.06	-13.56	84.01	-14.07	2.00	2.00	0.00
2,800.00	16.00	99.17	2,789.64	-17.68	109.56	-18.35	2.00	2.00	0.00
2,900.00	18.00	99.17	2,885.27	-22.34	138.42	-23.19	2.00	2.00	0.00
3,000.00	20.00	99.17	2,979.82	-27.53	170.56	-28.57	2.00	2.00	0.00
3,100.00	22.00	99.17	3,073.17	-33.24	205.94	-34.50	2.00	2.00	0.00
3,200.00	24.00	99.17	3,165.21	-39.46	244.51	-40.96	2.00	2.00	0.00
3,300.00	26.00	99.17	3,255.84	-46.20	286.23	-47.95	2.00	2.00	0.00
3,400.00	28.00	99.17	3,344.94	-53.43	331.05	-55.45	2.00	2.00	0.00
3,417.61	28.35	99.17	3,360.46	-54.76	339.26	-56.83	2.00	2.00	0.00
3,500.00	28.35	99.17	3,432.97	-60.99	377.88	-63.30	0.00	0.00	0.00
3,600.00	28.35	99.17	3,520.97	-68.56	424.76	-71.15	0.00	0.00	0.00
3,700.00	28.35	99.17	3,608.98	-76.12	471.65	-79.00	0.00	0.00	0.00
3,800.00	28.35	99.17	3,696.98	-83.69	518.53	-86.86	0.00	0.00	0.00
3,900.00	28.35	99.17	3,784.99	-91.26	565.41	-94.71	0.00	0.00	0.00
4,000.00	28.35	99.17	3,872.99	-98.82	612.29	-102.56	0.00	0.00	0.00
4,100.00	28.35	99.17	3,960.99	-106.39	659.18	-110.42	0.00	0.00	0.00
4,200.00	28.35	99.17	4,049.00	-113.96	706.06	-118.27	0.00	0.00	0.00
4,300.00	28.35	99.17	4,137.00	-121.52	752.94	-126.12	0.00	0.00	0.00
4,400.00	28.35	99.17	4,225.01	-129.09	799.82	-133.97	0.00	0.00	0.00
4,500.00	28.35	99.17	4,313.01	-136.66	846.71	-141.83	0.00	0.00	0.00
4,600.00	28.35	99.17	4,401.02	-144.23	893.59	-149.68	0.00	0.00	0.00
4,700.00	28.35	99.17	4,489.02	-151.79	940.47	-157.53	0.00	0.00	0.00
4,800.00	28.35	99.17	4,577.03	-159.36	987.35	-165.39	0.00	0.00	0.00
4,900.00	28.35	99.17	4,665.03	-166.93	1,034.23	-173.24	0.00	0.00	0.00
5,000.00	28.35	99.17	4,753.03	-174.49	1,081.12	-181.09	0.00	0.00	0.00
5,100.00	28.35	99.17	4,841.04	-182.06	1,128.00	-188.95	0.00	0.00	0.00
5,200.00	28.35	99.17	4,929.04	-189.63	1,174.88	-196.80	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #510H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 25.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 25.00usft
<b>Site:</b>	OUTRIDER 27 FED	<b>North Reference:</b>	Grid
<b>Well:</b>	#510H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,300.00	28.35	99.17	5,017.05	-197.19	1,221.76	-204.65	0.00	0.00	0.00	
5,400.00	28.35	99.17	5,105.05	-204.76	1,268.65	-212.51	0.00	0.00	0.00	
5,500.00	28.35	99.17	5,193.06	-212.33	1,315.53	-220.36	0.00	0.00	0.00	
5,600.00	28.35	99.17	5,281.06	-219.89	1,362.41	-228.21	0.00	0.00	0.00	
5,700.00	28.35	99.17	5,369.07	-227.46	1,409.29	-236.06	0.00	0.00	0.00	
5,800.00	28.35	99.17	5,457.07	-235.03	1,456.18	-243.92	0.00	0.00	0.00	
5,900.00	28.35	99.17	5,545.07	-242.59	1,503.06	-251.77	0.00	0.00	0.00	
6,000.00	28.35	99.17	5,633.08	-250.16	1,549.94	-259.62	0.00	0.00	0.00	
6,100.00	28.35	99.17	5,721.08	-257.73	1,596.82	-267.48	0.00	0.00	0.00	
6,200.00	28.35	99.17	5,809.09	-265.29	1,643.71	-275.33	0.00	0.00	0.00	
6,291.42	28.35	99.17	5,889.54	-272.21	1,686.56	-282.51	0.00	0.00	0.00	
6,300.00	28.18	99.17	5,897.10	-272.86	1,690.58	-283.18	2.00	-2.00	0.00	
6,400.00	26.18	99.17	5,986.05	-280.14	1,735.67	-290.73	2.00	-2.00	0.00	
6,500.00	24.18	99.17	6,076.54	-286.92	1,777.67	-297.77	2.00	-2.00	0.00	
6,600.00	22.18	99.17	6,168.47	-293.19	1,816.53	-304.28	2.00	-2.00	0.00	
6,700.00	20.18	99.17	6,261.71	-298.94	1,852.20	-310.25	2.00	-2.00	0.00	
6,800.00	18.18	99.17	6,356.15	-304.18	1,884.63	-315.69	2.00	-2.00	0.00	
6,900.00	16.18	99.17	6,451.68	-308.89	1,913.79	-320.57	2.00	-2.00	0.00	
7,000.00	14.18	99.17	6,548.19	-313.06	1,939.64	-324.90	2.00	-2.00	0.00	
7,100.00	12.18	99.17	6,645.55	-316.69	1,962.15	-328.67	2.00	-2.00	0.00	
7,200.00	10.18	99.17	6,743.65	-319.78	1,981.29	-331.88	2.00	-2.00	0.00	
7,300.00	8.18	99.17	6,842.36	-322.32	1,997.04	-334.52	2.00	-2.00	0.00	
7,400.00	6.18	99.17	6,941.57	-324.31	2,009.38	-336.58	2.00	-2.00	0.00	
7,500.00	4.18	99.17	7,041.16	-325.75	2,018.29	-338.08	2.00	-2.00	0.00	
7,600.00	2.18	99.17	7,141.00	-326.64	2,023.77	-338.99	2.00	-2.00	0.00	
7,709.03	0.00	0.00	7,250.00	-326.97	2,025.82	-339.34	2.00	-2.00	0.00	
7,800.00	0.00	0.00	7,340.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,440.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,540.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,640.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,200.00	0.00	0.00	7,740.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,300.00	0.00	0.00	7,840.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,400.00	0.00	0.00	7,940.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,040.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,140.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,240.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,340.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,440.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,540.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,640.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,740.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,300.00	0.00	0.00	8,840.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,400.00	0.00	0.00	8,940.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,040.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,140.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,240.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,340.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,440.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,540.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
10,100.00	0.00	0.00	9,640.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
10,200.00	0.00	0.00	9,740.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
10,300.00	0.00	0.00	9,840.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
10,400.00	0.00	0.00	9,940.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,040.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00	



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #510H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 25.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 25.00usft
<b>Site:</b>	OUTRIDER 27 FED	<b>North Reference:</b>	Grid
<b>Well:</b>	#510H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,600.00	0.00	0.00	10,140.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
10,700.00	0.00	0.00	10,240.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
10,800.00	0.00	0.00	10,340.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
10,900.00	0.00	0.00	10,440.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,000.00	0.00	0.00	10,540.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,100.00	0.00	0.00	10,640.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,200.00	0.00	0.00	10,740.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,300.00	0.00	0.00	10,840.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,400.00	0.00	0.00	10,940.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,500.00	0.00	0.00	11,040.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,600.00	0.00	0.00	11,140.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,700.00	0.00	0.00	11,240.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,800.00	0.00	0.00	11,340.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
11,900.00	0.00	0.00	11,440.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
12,000.00	0.00	0.00	11,540.97	-326.97	2,025.82	-339.34	0.00	0.00	0.00
12,042.83	0.00	0.00	11,583.80	-326.97	2,025.82	-339.34	0.00	0.00	0.00
12,050.00	0.57	359.65	11,590.97	-326.93	2,025.82	-339.30	8.00	8.00	0.00
12,100.00	4.57	359.65	11,640.91	-324.69	2,025.81	-337.06	8.00	8.00	0.00
12,150.00	8.57	359.65	11,690.57	-318.96	2,025.77	-331.33	8.00	8.00	0.00
12,200.00	12.57	359.65	11,739.71	-309.79	2,025.71	-322.16	8.00	8.00	0.00
12,250.00	16.57	359.65	11,788.10	-297.21	2,025.64	-309.58	8.00	8.00	0.00
12,300.00	20.57	359.65	11,835.48	-281.29	2,025.54	-293.66	8.00	8.00	0.00
12,350.00	24.57	359.65	11,881.64	-262.10	2,025.42	-274.47	8.00	8.00	0.00
12,400.00	28.57	359.65	11,926.35	-239.74	2,025.28	-252.11	8.00	8.00	0.00
12,450.00	32.57	359.65	11,969.39	-214.31	2,025.12	-226.68	8.00	8.00	0.00
12,500.00	36.57	359.65	12,010.55	-185.95	2,024.95	-198.31	8.00	8.00	0.00
12,550.00	40.57	359.65	12,049.63	-154.78	2,024.75	-167.14	8.00	8.00	0.00
12,600.00	44.57	359.65	12,086.45	-120.96	2,024.54	-133.32	8.00	8.00	0.00
12,650.00	48.57	359.65	12,120.81	-84.65	2,024.32	-97.02	8.00	8.00	0.00
12,700.00	52.57	359.65	12,152.56	-46.04	2,024.08	-58.40	8.00	8.00	0.00
12,750.00	56.57	359.65	12,181.54	-5.31	2,023.83	-17.67	8.00	8.00	0.00
12,800.00	60.57	359.65	12,207.60	37.35	2,023.56	24.99	8.00	8.00	0.00
12,850.00	64.57	359.65	12,230.63	81.72	2,023.29	69.36	8.00	8.00	0.00
12,900.00	68.57	359.65	12,250.50	127.59	2,023.01	115.23	8.00	8.00	0.00
12,950.00	72.57	359.65	12,267.13	174.73	2,022.71	162.37	8.00	8.00	0.00
13,000.00	76.57	359.65	12,280.43	222.92	2,022.42	210.56	8.00	8.00	0.00
13,050.00	80.57	359.65	12,290.33	271.92	2,022.11	259.56	8.00	8.00	0.00
13,100.00	84.57	359.65	12,296.79	321.49	2,021.81	309.13	8.00	8.00	0.00
13,150.00	88.57	359.65	12,299.78	371.39	2,021.50	359.03	8.00	8.00	0.00
13,167.83	90.00	359.65	12,300.00	389.22	2,021.39	376.86	8.00	8.00	0.00
13,200.00	90.00	359.65	12,300.00	421.38	2,021.19	409.03	0.00	0.00	0.00
13,300.00	90.00	359.65	12,300.00	521.38	2,020.57	509.03	0.00	0.00	0.00
13,400.00	90.00	359.65	12,300.00	621.38	2,019.95	609.03	0.00	0.00	0.00
13,500.00	90.00	359.65	12,300.00	721.38	2,019.33	709.03	0.00	0.00	0.00
13,600.00	90.00	359.65	12,300.00	821.38	2,018.71	809.03	0.00	0.00	0.00
13,700.00	90.00	359.65	12,300.00	921.37	2,018.09	909.03	0.00	0.00	0.00
13,800.00	90.00	359.65	12,300.00	1,021.37	2,017.47	1,009.03	0.00	0.00	0.00
13,900.00	90.00	359.65	12,300.00	1,121.37	2,016.85	1,109.03	0.00	0.00	0.00
14,000.00	90.00	359.65	12,300.00	1,221.37	2,016.23	1,209.03	0.00	0.00	0.00
14,100.00	90.00	359.65	12,300.00	1,321.37	2,015.61	1,309.03	0.00	0.00	0.00
14,200.00	90.00	359.65	12,300.00	1,421.37	2,015.00	1,409.03	0.00	0.00	0.00
14,300.00	90.00	359.65	12,300.00	1,521.36	2,014.38	1,509.03	0.00	0.00	0.00
14,400.00	90.00	359.65	12,300.00	1,621.36	2,013.76	1,609.03	0.00	0.00	0.00
14,500.00	90.00	359.65	12,300.00	1,721.36	2,013.14	1,709.03	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #510H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 25.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 25.00usft
<b>Site:</b>	OUTRIDER 27 FED	<b>North Reference:</b>	Grid
<b>Well:</b>	#510H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,600.00	90.00	359.65	12,300.00	1,821.36	2,012.52	1,809.03	0.00	0.00	0.00	
14,700.00	90.00	359.65	12,300.00	1,921.36	2,011.90	1,909.03	0.00	0.00	0.00	
14,800.00	90.00	359.65	12,300.00	2,021.35	2,011.28	2,009.03	0.00	0.00	0.00	
14,900.00	90.00	359.65	12,300.00	2,121.35	2,010.66	2,109.03	0.00	0.00	0.00	
15,000.00	90.00	359.65	12,300.00	2,221.35	2,010.04	2,209.03	0.00	0.00	0.00	
15,100.00	90.00	359.65	12,300.00	2,321.35	2,009.42	2,309.03	0.00	0.00	0.00	
15,200.00	90.00	359.65	12,300.00	2,421.35	2,008.81	2,409.03	0.00	0.00	0.00	
15,300.00	90.00	359.65	12,300.00	2,521.34	2,008.19	2,509.03	0.00	0.00	0.00	
15,400.00	90.00	359.65	12,300.00	2,621.34	2,007.57	2,609.03	0.00	0.00	0.00	
15,500.00	90.00	359.65	12,300.00	2,721.34	2,006.95	2,709.03	0.00	0.00	0.00	
15,600.00	90.00	359.65	12,300.00	2,821.34	2,006.33	2,809.03	0.00	0.00	0.00	
15,700.00	90.00	359.65	12,300.00	2,921.34	2,005.71	2,909.03	0.00	0.00	0.00	
15,800.00	90.00	359.65	12,300.00	3,021.33	2,005.09	3,009.03	0.00	0.00	0.00	
15,900.00	90.00	359.65	12,300.00	3,121.33	2,004.47	3,109.03	0.00	0.00	0.00	
16,000.00	90.00	359.65	12,300.00	3,221.33	2,003.85	3,209.03	0.00	0.00	0.00	
16,100.00	90.00	359.65	12,300.00	3,321.33	2,003.23	3,309.03	0.00	0.00	0.00	
16,200.00	90.00	359.65	12,300.00	3,421.33	2,002.61	3,409.03	0.00	0.00	0.00	
16,300.00	90.00	359.65	12,300.00	3,521.33	2,002.00	3,509.03	0.00	0.00	0.00	
16,400.00	90.00	359.65	12,300.00	3,621.32	2,001.38	3,609.03	0.00	0.00	0.00	
16,500.00	90.00	359.65	12,300.00	3,721.32	2,000.76	3,709.03	0.00	0.00	0.00	
16,600.00	90.00	359.65	12,300.00	3,821.32	2,000.14	3,809.03	0.00	0.00	0.00	
16,700.00	90.00	359.65	12,300.00	3,921.32	1,999.52	3,909.03	0.00	0.00	0.00	
16,800.00	90.00	359.65	12,300.00	4,021.32	1,998.90	4,009.03	0.00	0.00	0.00	
16,900.00	90.00	359.65	12,300.00	4,121.31	1,998.28	4,109.03	0.00	0.00	0.00	
17,000.00	90.00	359.65	12,300.00	4,221.31	1,997.66	4,209.03	0.00	0.00	0.00	
17,100.00	90.00	359.65	12,300.00	4,321.31	1,997.04	4,309.03	0.00	0.00	0.00	
17,200.00	90.00	359.65	12,300.00	4,421.31	1,996.42	4,409.03	0.00	0.00	0.00	
17,300.00	90.00	359.65	12,300.00	4,521.31	1,995.80	4,509.03	0.00	0.00	0.00	
17,400.00	90.00	359.65	12,300.00	4,621.30	1,995.19	4,609.03	0.00	0.00	0.00	
17,500.00	90.00	359.65	12,300.00	4,721.30	1,994.57	4,709.03	0.00	0.00	0.00	
17,600.00	90.00	359.65	12,300.00	4,821.30	1,993.95	4,809.03	0.00	0.00	0.00	
17,700.00	90.00	359.65	12,300.00	4,921.30	1,993.33	4,909.03	0.00	0.00	0.00	
17,800.00	90.00	359.65	12,300.00	5,021.30	1,992.71	5,009.03	0.00	0.00	0.00	
17,900.00	90.00	359.65	12,300.00	5,121.29	1,992.09	5,109.03	0.00	0.00	0.00	
18,000.00	90.00	359.65	12,300.00	5,221.29	1,991.47	5,209.03	0.00	0.00	0.00	
18,100.00	90.00	359.65	12,300.00	5,321.29	1,990.85	5,309.03	0.00	0.00	0.00	
18,200.00	90.00	359.65	12,300.00	5,421.29	1,990.23	5,409.03	0.00	0.00	0.00	
18,300.00	90.00	359.65	12,300.00	5,521.29	1,989.61	5,509.03	0.00	0.00	0.00	
18,400.00	90.00	359.65	12,300.00	5,621.29	1,988.99	5,609.03	0.00	0.00	0.00	
18,500.00	90.00	359.65	12,300.00	5,721.28	1,988.38	5,709.03	0.00	0.00	0.00	
18,600.00	90.00	359.65	12,300.00	5,821.28	1,987.76	5,809.03	0.00	0.00	0.00	
18,700.00	90.00	359.65	12,300.00	5,921.28	1,987.14	5,909.03	0.00	0.00	0.00	
18,800.00	90.00	359.65	12,300.00	6,021.28	1,986.52	6,009.03	0.00	0.00	0.00	
18,900.00	90.00	359.65	12,300.00	6,121.28	1,985.90	6,109.03	0.00	0.00	0.00	
19,000.00	90.00	359.65	12,300.00	6,221.27	1,985.28	6,209.03	0.00	0.00	0.00	
19,100.00	90.00	359.65	12,300.00	6,321.27	1,984.66	6,309.03	0.00	0.00	0.00	
19,200.00	90.00	359.65	12,300.00	6,421.27	1,984.04	6,409.03	0.00	0.00	0.00	
19,300.00	90.00	359.65	12,300.00	6,521.27	1,983.42	6,509.03	0.00	0.00	0.00	
19,400.00	90.00	359.65	12,300.00	6,621.27	1,982.80	6,609.03	0.00	0.00	0.00	
19,500.00	90.00	359.65	12,300.00	6,721.26	1,982.18	6,709.03	0.00	0.00	0.00	
19,600.00	90.00	359.65	12,300.00	6,821.26	1,981.57	6,809.03	0.00	0.00	0.00	
19,700.00	90.00	359.65	12,300.00	6,921.26	1,980.95	6,909.03	0.00	0.00	0.00	
19,800.00	90.00	359.65	12,300.00	7,021.26	1,980.33	7,009.03	0.00	0.00	0.00	
19,900.00	90.00	359.65	12,300.00	7,121.26	1,979.71	7,109.03	0.00	0.00	0.00	



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #510H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 25.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 25.00usft
<b>Site:</b>	OUTRIDER 27 FED	<b>North Reference:</b>	Grid
<b>Well:</b>	#510H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,000.00	90.00	359.65	12,300.00	7,221.25	1,979.09	7,209.03	0.00	0.00	0.00
20,100.00	90.00	359.65	12,300.00	7,321.25	1,978.47	7,309.03	0.00	0.00	0.00
20,200.00	90.00	359.65	12,300.00	7,421.25	1,977.85	7,409.03	0.00	0.00	0.00
20,300.00	90.00	359.65	12,300.00	7,521.25	1,977.23	7,509.03	0.00	0.00	0.00
20,400.00	90.00	359.65	12,300.00	7,621.25	1,976.61	7,609.03	0.00	0.00	0.00
20,500.00	90.00	359.65	12,300.00	7,721.24	1,975.99	7,709.03	0.00	0.00	0.00
20,600.00	90.00	359.65	12,300.00	7,821.24	1,975.37	7,809.03	0.00	0.00	0.00
20,700.00	90.00	359.65	12,300.00	7,921.24	1,974.76	7,909.03	0.00	0.00	0.00
20,800.00	90.00	359.65	12,300.00	8,021.24	1,974.14	8,009.03	0.00	0.00	0.00
20,900.00	90.00	359.65	12,300.00	8,121.24	1,973.52	8,109.03	0.00	0.00	0.00
21,000.00	90.00	359.65	12,300.00	8,221.24	1,972.90	8,209.03	0.00	0.00	0.00
21,100.00	90.00	359.65	12,300.00	8,321.23	1,972.28	8,309.03	0.00	0.00	0.00
21,200.00	90.00	359.65	12,300.00	8,421.23	1,971.66	8,409.03	0.00	0.00	0.00
21,300.00	90.00	359.65	12,300.00	8,521.23	1,971.04	8,509.03	0.00	0.00	0.00
21,400.00	90.00	359.65	12,300.00	8,621.23	1,970.42	8,609.03	0.00	0.00	0.00
21,500.00	90.00	359.65	12,300.00	8,721.23	1,969.80	8,709.03	0.00	0.00	0.00
21,600.00	90.00	359.65	12,300.00	8,821.22	1,969.18	8,809.03	0.00	0.00	0.00
21,700.00	90.00	359.65	12,300.00	8,921.22	1,968.57	8,909.03	0.00	0.00	0.00
21,800.00	90.00	359.65	12,300.00	9,021.22	1,967.95	9,009.03	0.00	0.00	0.00
21,900.00	90.00	359.65	12,300.00	9,121.22	1,967.33	9,109.03	0.00	0.00	0.00
22,000.00	90.00	359.65	12,300.00	9,221.22	1,966.71	9,209.03	0.00	0.00	0.00
22,100.00	90.00	359.65	12,300.00	9,321.21	1,966.09	9,309.03	0.00	0.00	0.00
22,200.00	90.00	359.65	12,300.00	9,421.21	1,965.47	9,409.03	0.00	0.00	0.00
22,300.00	90.00	359.65	12,300.00	9,521.21	1,964.85	9,509.03	0.00	0.00	0.00
22,400.00	90.00	359.65	12,300.00	9,621.21	1,964.23	9,609.03	0.00	0.00	0.00
22,500.00	90.00	359.65	12,300.00	9,721.21	1,963.61	9,709.03	0.00	0.00	0.00
22,600.00	90.00	359.65	12,300.00	9,821.20	1,962.99	9,809.03	0.00	0.00	0.00
22,700.00	90.00	359.65	12,300.00	9,921.20	1,962.37	9,909.03	0.00	0.00	0.00
22,800.00	90.00	359.65	12,300.00	10,021.20	1,961.76	10,009.03	0.00	0.00	0.00
22,900.00	90.00	359.65	12,300.00	10,121.20	1,961.14	10,109.03	0.00	0.00	0.00
23,000.00	90.00	359.65	12,300.00	10,221.20	1,960.52	10,209.03	0.00	0.00	0.00
23,100.00	90.00	359.65	12,300.00	10,321.20	1,959.90	10,309.03	0.00	0.00	0.00
23,200.00	90.00	359.65	12,300.00	10,421.19	1,959.28	10,409.03	0.00	0.00	0.00
23,300.00	90.00	359.65	12,300.00	10,521.19	1,958.66	10,509.03	0.00	0.00	0.00
23,400.00	90.00	359.65	12,300.00	10,621.19	1,958.04	10,609.03	0.00	0.00	0.00
23,500.00	90.00	359.65	12,300.00	10,721.19	1,957.42	10,709.03	0.00	0.00	0.00
23,600.00	90.00	359.65	12,300.00	10,821.19	1,956.80	10,809.03	0.00	0.00	0.00
23,700.00	90.00	359.65	12,300.00	10,921.18	1,956.18	10,909.03	0.00	0.00	0.00
23,800.00	90.00	359.65	12,300.00	11,021.18	1,955.56	11,009.03	0.00	0.00	0.00
23,900.00	90.00	359.65	12,300.00	11,121.18	1,954.95	11,109.03	0.00	0.00	0.00
24,000.00	90.00	359.65	12,300.00	11,221.18	1,954.33	11,209.03	0.00	0.00	0.00
24,100.00	90.00	359.65	12,300.00	11,321.18	1,953.71	11,309.03	0.00	0.00	0.00
24,183.97	90.00	359.65	12,300.00	11,405.14	1,953.19	11,393.00	0.00	0.00	0.00
24,200.00	90.00	359.65	12,300.00	11,421.17	1,953.09	11,409.03	0.00	0.00	0.00
24,233.95	90.00	359.65	12,300.00	11,455.13	1,952.88	11,442.98	0.00	0.00	0.00



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well #510H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 25' @ 25.00usft
<b>Project:</b>	Lea County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 25' @ 25.00usft
<b>Site:</b>	OUTRIDER 27 FED	<b>North Reference:</b>	Grid
<b>Well:</b>	#510H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #2		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
510 SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	430,618.32	704,012.19	32.1821679	-103.6739175
510H VP - plan hits target center - Point	0.00	0.00	7,250.00	-326.97	2,025.82	430,291.35	706,038.01	32.1812348	-103.6673765
510 FTP - plan misses target center by 261.96usft at 12633.50usft MD (12109.75 TVD, -96.90 N, 2024.40 E) - Point	0.00	0.00	12,300.00	-276.97	2,025.51	430,341.35	706,037.70	32.1813722	-103.6673765
510 LTP - plan hits target center - Point	0.00	0.00	12,300.00	11,405.14	1,953.19	442,023.46	705,965.37	32.2134855	-103.6673764
510 BHL - plan hits target center - Point	0.00	0.00	12,300.00	11,455.13	1,952.88	442,073.45	705,965.06	32.2136229	-103.6673764

Sec 28-24S-32E-NMP 2681007 Outrider 27 Federal 510H Lea NMNM016353 XTO 13-22 44795 AM

## Outrider 27 Federal 510H

13 3/8	surface csg in a	17 1/2	inch hole.	Design Factors					Surface		
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	68.00	HCL 80	BTC	22.75	6.05	2.45	1,006	11	4.18	11.22	68,408
"B"			BTC				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500				Tail Cmt	does not	circ to sfc.	Totals:	1,006			68,408
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
17 1/2	0.6946	820	1377	699	97	9.20	1200	2M			8.75
Site plat (pipe racks S or E) as per O.O.I.III D.4.1. not found.											

9 5/8	casing inside the	13 3/8	Design Factors					Int 1			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00	HCP 110	BTC	8.13	2.06	1.2	4,000	4	1.93	3.52	160,000
"B"	40.00	HCL 80	BTC	∞	2.06	0.88	7,843	3	1.41	3.52	313,720
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	11,843	473,720		
The cement volume(s) are intended to achieve a top of				0	ft from surface or a		1006	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
12 1/4	0.3132	2560	5188	3731	39	10.20	4083	5M			0.81
Burst Frac Gradient(s) for Segment(s): A, B, C, D = a, 1.48, c, d All > 0.70, OK.											

Tail cmt				Design Factors					Prod 1		
5 1/2	casing inside the	9 5/8									
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	RY P 110	Semi-Premiur	2.84	1.69	1.93	11,743	2	3.10	2.72	234,860
"B"	20.00	RY P 110	Semi-Premiur	∞	1.69	1.93	12,491	2	3.10	2.72	249,820
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,482							Totals:	24,234	484,680		
The cement volume(s) are intended to achieve a top of				12000	ft from surface or a		-157	overlap.			
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist		
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg		
8 1/2	0.2291	2450	3759	2802	34	11.20			1.10		
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

<b>OPERATOR'S NAME:</b>	XTO Energy Incorporated
<b>WELL NAME &amp; NO.:</b>	Outrider 27 Federal 510H
<b>LOCATION:</b>	Sec 28-24S-32E-NMP
<b>COUNTY:</b>	Lea County, New Mexico

*Updated COAs for Outrider 27 Federal 510H (Previously 101H) per Sundry 2681007 approved through engineering on 08/22/2022.*

### COA

H2S	<input checked="" type="radio"/> Yes	<input 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 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

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware Mountain Group** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

### B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately 1005 feet (a minimum of 25 feet (Lea 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 **9-5/8** 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.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
- Cement should tie-back at least **200 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 **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.

- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in 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 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per 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.

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

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

CONDITIONS  
  
Action 152999

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 152999
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	10/24/2022