

Well Name: POKER LAKE UNIT 28-21 BS	Well Location: T25S / R31E / SEC 28 / NENW /	County or Parish/State:
Well Number: 103H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMLC062140A	Unit or CA Name: POKER LAKE	Unit or CA Number: NMNM071016X
US Well Number: 3001548960	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2635316

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 09/21/2021	Time Sundry Submitted: 01:54
Date proposed operation will begin: 09/22/2021	

Procedure Description: \*\*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 BHL fr/50'FNL & 1590'FWL to 2614'FSL & 1587'FWL, Section 17-T25S-R31E Casing/Cement design per the attached drilling program. Attachments: C102 Drilling Program Directional Plan Multibowl Diagram

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

PLU\_28\_21\_BS\_103H\_Attachments\_20210921135401.pdf

<b>Well Name:</b> POKER LAKE UNIT 28-21 BS	<b>Well Location:</b> T25S / R31E / SEC 28 / NENW /	<b>County or Parish/State:</b>
<b>Well Number:</b> 103H	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMLC062140A	<b>Unit or CA Name:</b> POKER LAKE	<b>Unit or CA Number:</b> NMNM071016X
<b>US Well Number:</b> 3001548960	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> XTO PERMIAN OPERATING LLC

Conditions of Approval

Specialist Review

Conditions\_of\_Approval\_20210922164748.pdf

Operator Certification

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 submission of Form 3160-5 or a Sundry Notice.

<b>Operator Electronic Signature:</b> STEPHANIE RABADUE	<b>Signed on:</b> SEP 21, 2021 01:54 PM
<b>Name:</b> XTO PERMIAN OPERATING LLC	
<b>Title:</b> Regulatory Coordinator	
<b>Street Address:</b> 500 W. Illinois St, Ste 100	
<b>City:</b> Midland	<b>State:</b> TX
<b>Phone:</b> (432) 620-6714	
<b>Email address:</b> STEPHANIE.RABADUE@EXXONMOBIL.COM	

Field Representative

<b>Representative Name:</b>		
<b>Street Address:</b>		
<b>City:</b>	<b>State:</b>	<b>Zip:</b>
<b>Phone:</b>		
<b>Email address:</b>		

BLM Point of Contact

<b>BLM POC Name:</b> JENNIFER SANCHEZ	<b>BLM POC Title:</b> Petroleum Engineer
<b>BLM POC Phone:</b> 5756270237	<b>BLM POC Email Address:</b> j1sanchez@blm.gov
<b>Disposition:</b> Approved	<b>Disposition Date:</b> 09/22/2021
<b>Signature:</b> Jennifer Sanchez	

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

Revised August 1, 2011  
 Submit one copy to appropriate  
 District Office

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT** PRE-COMPLETION

<sup>1</sup> API Number 30-015- 48960	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage; Wolfcamp (Gas)
<sup>4</sup> Property Code 331529	<sup>5</sup> Property Name POKER LAKE UNIT 28-21 BS	<sup>6</sup> Well Number 103H
<sup>7</sup> OGRID No. 373075	<sup>8</sup> Operator Name XTO PERMIAN OPERATING, LLC	<sup>9</sup> Elevation 3,351'

<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
C	28	25 S	31 E		544	NORTH	2,187	WEST	EDDY

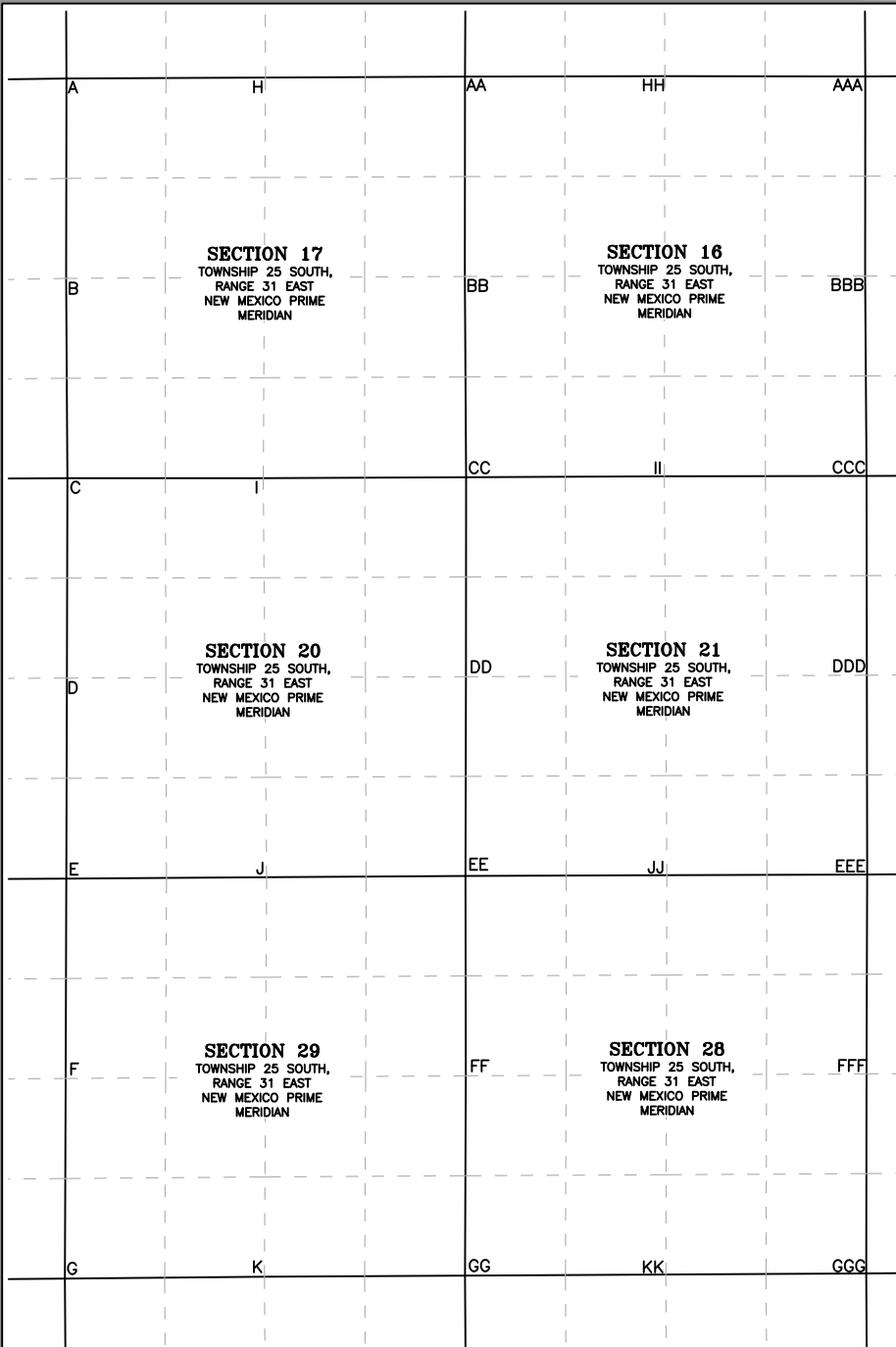
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	17	25 S	31 E		2,614	SOUTH	1,587	WEST	EDDY

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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. NOTE: DATA FURNISHED BY XTO ENERGY

<p><b>16</b></p>		<p><b>17 OPERATOR CERTIFICATION</b>          I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Stephanie Rabadue</i> 09/20/2021          Signature Date</p> <p>Stephanie Rabadue          Printed Name</p> <p>stephanie.rabadue@exxonmobil.com          E-mail Address</p>
<p>SHL (NAD83 NME) Y = 403,119.8 X = 711,228.2 LAT. = 32.107067 °N LONG. = 103.784643 °W</p> <p>LTP (NAD83 NME) Y = 411,468.0 X = 705,372.0 LAT. = 32.130095 °N LONG. = 103.803423 °W</p> <p>FTP (NAD83 NME) Y = 401,432.2 X = 711,166.7 LAT. = 32.102429 °N LONG. = 103.784869 °W</p> <p>BHL (NAD83 NME) Y = 411,553.4 X = 705,322.7 LAT. = 32.130331 °N LONG. = 103.803581 °W</p> <p>SHL (NAD27 NME) Y = 403,061.9 X = 670,042.5 LAT. = 32.106943 °N LONG. = 103.784165 °W</p> <p>LTP (NAD27 NME) Y = 411,409.8 X = 664,187.0 LAT. = 32.129971 °N LONG. = 103.802943 °W</p> <p>FTP (NAD27 NME) Y = 401,374.3 X = 669,981.0 LAT. = 32.102305 °N LONG. = 103.784392 °W</p> <p>BHL (NAD27 NME) Y = 411,495.2 X = 664,137.7 LAT. = 32.130206 °N LONG. = 103.803101 °W</p>		<p><b>18 SURVEYOR CERTIFICATION</b>          I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>9-20-2021          Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p><i>Mark Dillon Harp</i></p> <p>MARK DILLON HARP 23786          Certificate Number</p> <p>RM/AI 2019082854</p>



## CORNER COORDINATES (NAD83 NME)

A - Y =	414,246.9 N	X =	703,740.4 E
B - Y =	411,592.7 N	X =	703,735.9 E
C - Y =	408,939.2 N	X =	703,752.1 E
D - Y =	406,285.0 N	X =	703,745.9 E
E - Y =	403,621.2 N	X =	703,737.8 E
F - Y =	400,966.5 N	X =	703,729.5 E
G - Y =	398,308.0 N	X =	703,719.7 E
H - Y =	414,259.6 N	X =	706,382.8 E
I - Y =	408,939.3 N	X =	706,353.5 E
J - Y =	403,638.5 N	X =	706,397.9 E
K - Y =	398,334.2 N	X =	706,368.7 E
AA - Y =	414,270.9 N	X =	709,033.0 E
BB - Y =	411,616.9 N	X =	709,031.4 E
CC - Y =	408,951.2 N	X =	709,048.2 E
DD - Y =	406,301.5 N	X =	709,045.9 E
EE - Y =	403,655.9 N	X =	709,040.0 E
FF - Y =	401,001.6 N	X =	709,043.1 E
GG - Y =	398,348.5 N	X =	709,032.9 E
HH - Y =	414,278.5 N	X =	711,686.4 E
II - Y =	408,963.3 N	X =	711,680.3 E
JJ - Y =	403,666.0 N	X =	711,714.2 E
KK - Y =	398,362.0 N	X =	711,700.3 E
AAA - Y =	414,274.6 N	X =	714,349.4 E
BBB - Y =	411,624.0 N	X =	714,347.8 E
CCC - Y =	408,967.8 N	X =	714,365.9 E
DDD - Y =	406,321.4 N	X =	714,369.6 E
EEE - Y =	403,674.7 N	X =	714,373.5 E
FFF - Y =	401,027.1 N	X =	714,365.8 E
GGG - Y =	398,377.8 N	X =	714,362.6 E

## CORNER COORDINATES (NAD27 NME)

A - Y =	414,188.6 N	X =	662,555.5 E
B - Y =	411,534.5 N	X =	662,550.9 E
C - Y =	408,881.1 N	X =	662,566.8 E
D - Y =	406,227.0 N	X =	662,560.5 E
E - Y =	403,563.2 N	X =	662,552.3 E
F - Y =	400,908.6 N	X =	662,543.9 E
G - Y =	398,250.1 N	X =	662,534.0 E
H - Y =	414,201.4 N	X =	665,197.9 E
I - Y =	408,881.2 N	X =	665,168.1 E
J - Y =	403,580.5 N	X =	665,212.3 E
K - Y =	398,276.4 N	X =	665,182.9 E
AA - Y =	414,212.7 N	X =	667,848.1 E
BB - Y =	411,558.7 N	X =	667,846.4 E
CC - Y =	408,893.2 N	X =	667,862.8 E
DD - Y =	406,243.5 N	X =	667,860.4 E
EE - Y =	403,598.0 N	X =	667,854.4 E
FF - Y =	400,943.7 N	X =	667,857.4 E
GG - Y =	398,290.7 N	X =	667,847.1 E
HH - Y =	414,220.3 N	X =	670,501.4 E
II - Y =	408,905.2 N	X =	670,494.8 E
JJ - Y =	403,608.1 N	X =	670,528.5 E
KK - Y =	398,304.2 N	X =	670,514.5 E
AAA - Y =	414,216.4 N	X =	673,164.4 E
BBB - Y =	411,565.9 N	X =	673,162.6 E
CCC - Y =	408,909.7 N	X =	673,180.4 E
DDD - Y =	406,263.4 N	X =	673,184.0 E
EEE - Y =	403,616.7 N	X =	673,187.8 E
FFF - Y =	400,969.3 N	X =	673,180.0 E
GGG - Y =	398,320.0 N	X =	673,176.7 E

## EXHIBIT OF:

POKER LAKE UNIT 28-21  
BS CORNER COORDINATES

SITUATED IN  
SECTIONS 16, 17, 20, 21, 28 AND 29,  
TOWNSHIP 25 SOUTH, RANGE 31 EAST,  
N.M.P.M. EDDY COUNTY,  
NEW MEXICO



550 Bailey Ave., 205 - Fort Worth, TX 76107  
Ph: 817.349.9800 - Fax: 979.732.5271  
TBPE Firm 17957 | TBPLS Firm 10193887  
www.fscinc.net

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DATE: 7/13/2021 PROJECT NO: 2017040532  
DRAWN BY: LM SCALE:  
CHECKED BY: AI SHEET:  
FIELD CREW: RE REVISION: NO



## **XTO Energy**

**Eddy County, NM (NAD-27)  
POKER LAKE UNIT 28-21 BS  
103H**

**Wellbore #1**

**Plan: PLAN #1**

## **Standard Planning Report**

**20 September, 2021**



Project: Eddy County, NM (NAD-27)  
Site: POKER LAKE UNIT 28-21 BS  
Well: 103H  
Wellbore: Wellbore #1  
Design: PLAN #1

FORMATION TOP DETAILS

TVDPath	Formation
878.00	Rust er
1267.00	Top Sa t
4037.00	Base Sa t
4253.00	e aware
5214.00	Cherry Canyon
6893.00	Brushy Canyon
7963.00	Basa Brushy Canyon
8151.00	Bone Spr ng Fm
8196.00	Bone Spr ng L me
8281.00	Ava on Sha e
8856.00	Lower Ava on Sha e
9021.00	1st Bone Spr ng L me
9169.00	1st Bone Spr ng Ss
9306.00	2nd Bone Spr ng Sha e
9615.00	2nd Bone Spr ng L me
9831.00	2nd Bone Spr ng Ss
10256.00	3rd Bone Spr ng Lm
10651.00	Harkey Ss
11081.00	3rd Bone Spr ng Ss
11461.00	Red H s SS
11516.00	Wo fcamp
11546.00	Wo fcamp X
11576.00	LP

WELL DETAILS: 103H

Rig Name: TBD  
RKB = 30' @ 3381.00usft (TBD)  
Ground Level: 3351.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	403061.90	670042.50	32.1069427	-103.7841651

SECTION DETAILS

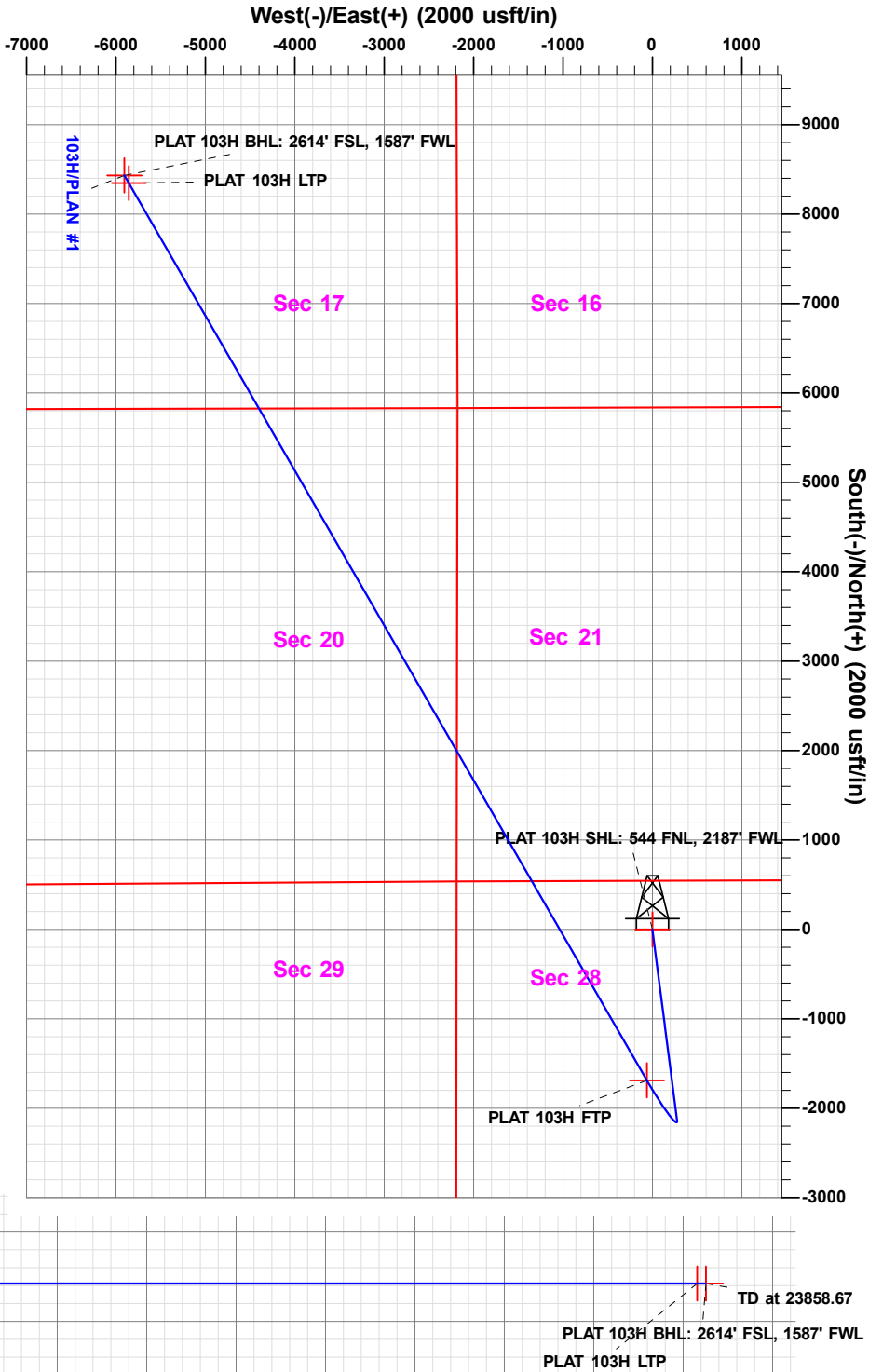
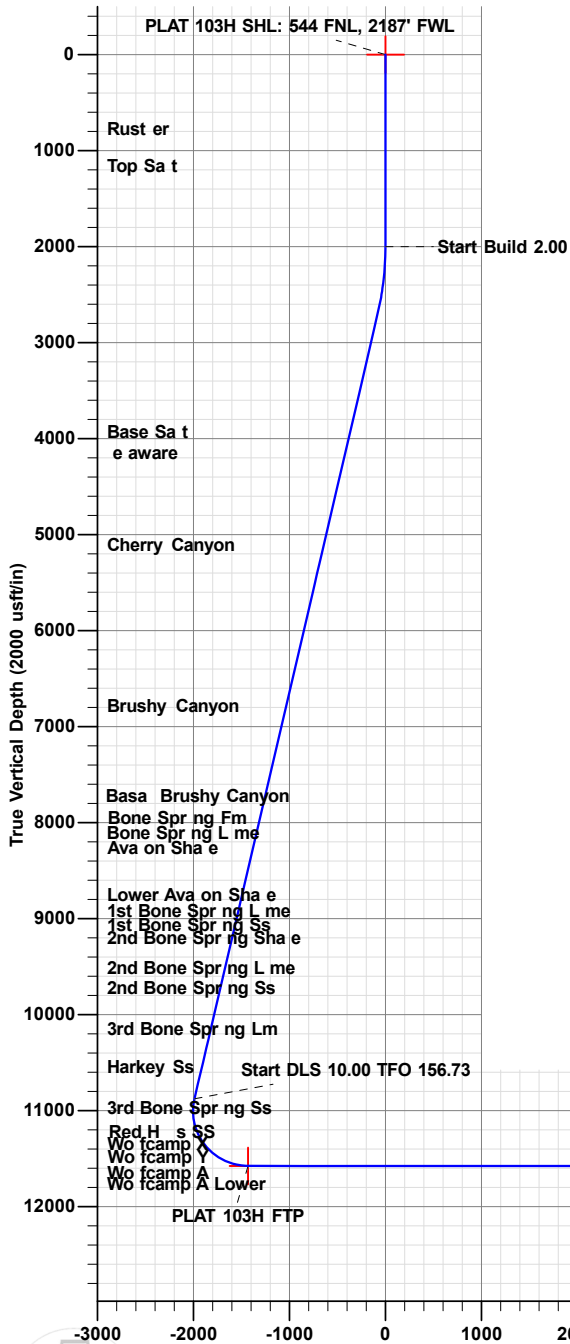
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2709.62	14.19	172.63	2702.39	-86.72	11.22	2.00	172.63	-80.71	
4	11141.27	14.19	172.63	10876.68	-2136.90	276.48	0.00	0.00	-1988.85	
5	12172.07	90.00	330.00	11576.00	-1687.60	-61.50	10.00	156.73	-1430.75	PLAT 103H FTP
6	23760.08	90.00	330.00	11576.00	8347.92	-5855.50	0.00	0.00	10157.26	PLAT 103H LTP
7	23858.67	90.00	330.00	11576.00	8433.30	-5904.80	0.00	0.00	10255.85	PLAT 103H BHL: 2614' FSL, 1587' FWL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PLAT 103H SHL: 544 FNL, 2187' FWL	0.00	0.00	0.00	403061.90	670042.50	32.1069427	-103.7841651	Point
PLAT 103H BHL: 2614' FSL, 1587' FWL	11576.00	8433.30	-5904.80	411495.20	664137.70	32.1302064	-103.8031005	Point
PLAT 103H FTP	11576.00	-1687.60	-61.50	401374.30	669981.00	32.1023044	-103.7843914	Point
PLAT 103H LTP	11576.00	8347.90	-5855.50	411409.80	664187.00	32.1299710	-103.8029426	Point

PROJECT DETAILS: Eddy 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



Vertical Section at 330.00° (2000 usft/in)

Plan: PLAN #1 (103H/Wellbore #1)

Created By: Matthew May Date: 22:17, September 20 2021

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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 PRE-COMPLETION**

<sup>1</sup> API Number 30-015-	<sup>2</sup> Pool Code	<sup>3</sup> Pool Name
<sup>4</sup> Property Code	<sup>5</sup> Property Name POKER LAKE UNIT 28-21 BS	<sup>6</sup> Well Number 103H
<sup>7</sup> OGRID No. 373075	<sup>8</sup> Operator Name XTO PERMIAN OPERATING, LLC	<sup>9</sup> Elevation 3,351'

<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
C	28	25 S	31 E		544	NORTH	2,187	WEST	EDDY

<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
K	17	25 S	31 E		2,614	SOUTH	1,587	WEST	EDDY

<sup>12</sup> Dedicated Acres	<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. NOTE: DATA FURNISHED BY XTO ENERGY

<div style="text-align: center; margin-bottom: 20px;"> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>SHL (NAD83 NME)</b> Y = 403,119.8 X = 711,228.2 LAT. = 32.107067 °N LONG. = 103.784643 °W</p> <p><b>FTP (NAD83 NME)</b> Y = 401,432.2 X = 711,166.7 LAT. = 32.102429 °N LONG. = 103.784869 °W</p> <p><b>SHL (NAD27 NME)</b> Y = 403,061.9 X = 670,042.5 LAT. = 32.106943 °N LONG. = 103.784165 °W</p> <p><b>FTP (NAD27 NME)</b> Y = 401,374.3 X = 669,981.0 LAT. = 32.102305 °N LONG. = 103.784392 °W</p> </div> <div style="width: 45%;"> <p><b>LTP (NAD83 NME)</b> Y = 411,468.0 X = 705,372.0 LAT. = 32.130095 °N LONG. = 103.803423 °W</p> <p><b>BHL (NAD83 NME)</b> Y = 411,553.4 X = 705,322.7 LAT. = 32.130331 °N LONG. = 103.803581 °W</p> <p><b>LTP (NAD27 NME)</b> Y = 411,409.8 X = 664,187.0 LAT. = 32.129971 °N LONG. = 103.802943 °W</p> <p><b>BHL (NAD27 NME)</b> Y = 411,495.2 X = 664,137.7 LAT. = 32.130206 °N LONG. = 103.803101 °W</p> </div> </div>	<div style="margin-bottom: 20px;"> <p style="text-align: center;"><b><sup>17</sup> OPERATOR CERTIFICATION</b></p> <p><i>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.</i></p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p> </div> <div> <p style="text-align: center;"><b><sup>18</sup> SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p>9-20-2021 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: </p> <div style="text-align: center;"> </div> <p>MARK DILLON HARP 23786 Certificate Number</p> <p style="text-align: right;">RM/AI 2019082854</p> </div>
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## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

<b>Project</b>	Eddy 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		

<b>Site</b>	POKER LAKE UNIT 28-21 BS		
<b>Site Position:</b>		<b>Northing:</b>	403,061.90 usft
<b>From:</b>	Map	<b>Easting:</b>	670,042.50 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32.1069427
		<b>Longitude:</b>	-103.7841651
		<b>Grid Convergence:</b>	0.29 °

<b>Well</b>	103H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 403,061.90 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 670,042.50 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Latitude:</b>	32.1069427
		<b>Longitude:</b>	-103.7841651
		<b>Ground Level:</b>	3,351.00 usft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	IGRF2020	09/20/21	6.60
			<b>Dip Angle (°)</b> 59.75
			<b>Field Strength (nT)</b> 47,375

<b>Design</b>	PLAN #1		
<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>
	0.00	0.00	0.00
			<b>Direction (°)</b> 330.00

<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	
2,709.62	14.19	172.63	2,702.39	-86.72	11.22	2.00	2.00	0.00	172.63	
11,141.27	14.19	172.63	10,876.68	-2,136.90	276.48	0.00	0.00	0.00	0.00	
12,172.07	90.00	330.00	11,576.00	-1,687.60	-61.50	10.00	7.35	15.27	156.73	PLAT 103H FTP
23,760.08	90.00	330.00	11,576.00	8,347.92	-5,855.50	0.00	0.00	0.00	0.00	PLAT 103H LTP
23,858.67	90.00	330.00	11,576.00	8,433.30	-5,904.80	0.00	0.00	0.00	0.00	PLAT 103H BHL: 26





## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

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
878.00	0.00	0.00	878.00	0.00	0.00	0.00	0.00	0.00	0.00
Ruster									
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
1,267.00	0.00	0.00	1,267.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Seat									
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	172.63	2,099.98	-1.73	0.22	-1.61	2.00	2.00	0.00
2,200.00	4.00	172.63	2,199.84	-6.92	0.90	-6.44	2.00	2.00	0.00
2,300.00	6.00	172.63	2,299.45	-15.56	2.01	-14.49	2.00	2.00	0.00
2,400.00	8.00	172.63	2,398.70	-27.65	3.58	-25.73	2.00	2.00	0.00
2,500.00	10.00	172.63	2,497.47	-43.16	5.58	-40.17	2.00	2.00	0.00
2,600.00	12.00	172.63	2,595.62	-62.09	8.03	-57.78	2.00	2.00	0.00
2,709.62	14.19	172.63	2,702.39	-86.72	11.22	-80.71	2.00	2.00	0.00
2,800.00	14.19	172.63	2,790.01	-108.69	14.06	-101.16	0.00	0.00	0.00
2,900.00	14.19	172.63	2,886.95	-133.01	17.21	-123.79	0.00	0.00	0.00
3,000.00	14.19	172.63	2,983.90	-157.32	20.35	-146.42	0.00	0.00	0.00
3,100.00	14.19	172.63	3,080.85	-181.64	23.50	-169.05	0.00	0.00	0.00
3,200.00	14.19	172.63	3,177.80	-205.95	26.65	-191.68	0.00	0.00	0.00
3,300.00	14.19	172.63	3,274.75	-230.27	29.79	-214.32	0.00	0.00	0.00
3,400.00	14.19	172.63	3,371.69	-254.58	32.94	-236.95	0.00	0.00	0.00
3,500.00	14.19	172.63	3,468.64	-278.90	36.08	-259.58	0.00	0.00	0.00
3,600.00	14.19	172.63	3,565.59	-303.22	39.23	-282.21	0.00	0.00	0.00
3,700.00	14.19	172.63	3,662.54	-327.53	42.38	-304.84	0.00	0.00	0.00
3,800.00	14.19	172.63	3,759.48	-351.85	45.52	-327.47	0.00	0.00	0.00
3,900.00	14.19	172.63	3,856.43	-376.16	48.67	-350.10	0.00	0.00	0.00
4,000.00	14.19	172.63	3,953.38	-400.48	51.81	-372.73	0.00	0.00	0.00
4,086.25	14.19	172.63	4,037.00	-421.45	54.53	-392.25	0.00	0.00	0.00
Base Seat									
4,100.00	14.19	172.63	4,050.33	-424.79	54.96	-395.36	0.00	0.00	0.00
4,200.00	14.19	172.63	4,147.28	-449.11	58.11	-417.99	0.00	0.00	0.00
4,300.00	14.19	172.63	4,244.22	-473.42	61.25	-440.62	0.00	0.00	0.00
4,309.05	14.19	172.63	4,253.00	-475.62	61.54	-442.67	0.00	0.00	0.00
Aware									
4,400.00	14.19	172.63	4,341.17	-497.74	64.40	-463.25	0.00	0.00	0.00
4,500.00	14.19	172.63	4,438.12	-522.05	67.54	-485.88	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 103H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

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)
4,600.00	14.19	172.63	4,535.07	-546.37	70.69	-508.51	0.00	0.00	0.00
4,700.00	14.19	172.63	4,632.01	-570.68	73.84	-531.14	0.00	0.00	0.00
4,800.00	14.19	172.63	4,728.96	-595.00	76.98	-553.78	0.00	0.00	0.00
4,900.00	14.19	172.63	4,825.91	-619.31	80.13	-576.41	0.00	0.00	0.00
5,000.00	14.19	172.63	4,922.86	-643.63	83.27	-599.04	0.00	0.00	0.00
5,100.00	14.19	172.63	5,019.81	-667.95	86.42	-621.67	0.00	0.00	0.00
5,200.00	14.19	172.63	5,116.75	-692.26	89.57	-644.30	0.00	0.00	0.00
5,300.00	14.19	172.63	5,213.70	-716.58	92.71	-666.93	0.00	0.00	0.00
5,300.31	14.19	172.63	5,214.00	-716.65	92.72	-667.00	0.00	0.00	0.00
<b>Cherry Canyon</b>									
5,400.00	14.19	172.63	5,310.65	-740.89	95.86	-689.56	0.00	0.00	0.00
5,500.00	14.19	172.63	5,407.60	-765.21	99.00	-712.19	0.00	0.00	0.00
5,600.00	14.19	172.63	5,504.54	-789.52	102.15	-734.82	0.00	0.00	0.00
5,700.00	14.19	172.63	5,601.49	-813.84	105.30	-757.45	0.00	0.00	0.00
5,800.00	14.19	172.63	5,698.44	-838.15	108.44	-780.08	0.00	0.00	0.00
5,900.00	14.19	172.63	5,795.39	-862.47	111.59	-802.71	0.00	0.00	0.00
6,000.00	14.19	172.63	5,892.34	-886.78	114.73	-825.34	0.00	0.00	0.00
6,100.00	14.19	172.63	5,989.28	-911.10	117.88	-847.97	0.00	0.00	0.00
6,200.00	14.19	172.63	6,086.23	-935.41	121.03	-870.61	0.00	0.00	0.00
6,300.00	14.19	172.63	6,183.18	-959.73	124.17	-893.24	0.00	0.00	0.00
6,400.00	14.19	172.63	6,280.13	-984.04	127.32	-915.87	0.00	0.00	0.00
6,500.00	14.19	172.63	6,377.07	-1,008.36	130.46	-938.50	0.00	0.00	0.00
6,600.00	14.19	172.63	6,474.02	-1,032.68	133.61	-961.13	0.00	0.00	0.00
6,700.00	14.19	172.63	6,570.97	-1,056.99	136.75	-983.76	0.00	0.00	0.00
6,800.00	14.19	172.63	6,667.92	-1,081.31	139.90	-1,006.39	0.00	0.00	0.00
6,900.00	14.19	172.63	6,764.87	-1,105.62	143.05	-1,029.02	0.00	0.00	0.00
7,000.00	14.19	172.63	6,861.81	-1,129.94	146.19	-1,051.65	0.00	0.00	0.00
7,032.17	14.19	172.63	6,893.00	-1,137.76	147.20	-1,058.93	0.00	0.00	0.00
<b>Brushy Canyon</b>									
7,100.00	14.19	172.63	6,958.76	-1,154.25	149.34	-1,074.28	0.00	0.00	0.00
7,200.00	14.19	172.63	7,055.71	-1,178.57	152.48	-1,096.91	0.00	0.00	0.00
7,300.00	14.19	172.63	7,152.66	-1,202.88	155.63	-1,119.54	0.00	0.00	0.00
7,400.00	14.19	172.63	7,249.60	-1,227.20	158.78	-1,142.17	0.00	0.00	0.00
7,500.00	14.19	172.63	7,346.55	-1,251.51	161.92	-1,164.80	0.00	0.00	0.00
7,600.00	14.19	172.63	7,443.50	-1,275.83	165.07	-1,187.43	0.00	0.00	0.00
7,700.00	14.19	172.63	7,540.45	-1,300.14	168.21	-1,210.07	0.00	0.00	0.00
7,800.00	14.19	172.63	7,637.39	-1,324.46	171.36	-1,232.70	0.00	0.00	0.00
7,900.00	14.19	172.63	7,734.34	-1,348.77	174.51	-1,255.33	0.00	0.00	0.00
8,000.00	14.19	172.63	7,831.29	-1,373.09	177.65	-1,277.96	0.00	0.00	0.00
8,100.00	14.19	172.63	7,928.24	-1,397.41	180.80	-1,300.59	0.00	0.00	0.00
8,135.86	14.19	172.63	7,963.00	-1,406.12	181.93	-1,308.70	0.00	0.00	0.00
<b>Basa Brushy Canyon</b>									
8,200.00	14.19	172.63	8,025.19	-1,421.72	183.94	-1,323.22	0.00	0.00	0.00
8,300.00	14.19	172.63	8,122.13	-1,446.04	187.09	-1,345.85	0.00	0.00	0.00
8,329.78	14.19	172.63	8,151.00	-1,453.28	188.03	-1,352.59	0.00	0.00	0.00
<b>Bone Spr ng Fm</b>									
8,376.19	14.19	172.63	8,196.00	-1,464.56	189.49	-1,363.09	0.00	0.00	0.00
<b>Bone Spr ng L me</b>									
8,400.00	14.19	172.63	8,219.08	-1,470.35	190.24	-1,368.48	0.00	0.00	0.00
8,463.87	14.19	172.63	8,281.00	-1,485.88	192.25	-1,382.93	0.00	0.00	0.00
<b>Ava on Sha e</b>									
8,500.00	14.19	172.63	8,316.03	-1,494.67	193.38	-1,391.11	0.00	0.00	0.00
8,600.00	14.19	172.63	8,412.98	-1,518.98	196.53	-1,413.74	0.00	0.00	0.00



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<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

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)
8,700.00	14.19	172.63	8,509.92	-1,543.30	199.67	-1,436.37	0.00	0.00	0.00
8,800.00	14.19	172.63	8,606.87	-1,567.61	202.82	-1,459.00	0.00	0.00	0.00
8,900.00	14.19	172.63	8,703.82	-1,591.93	205.97	-1,481.63	0.00	0.00	0.00
9,000.00	14.19	172.63	8,800.77	-1,616.24	209.11	-1,504.26	0.00	0.00	0.00
9,056.97	14.19	172.63	8,856.00	-1,630.10	210.90	-1,517.16	0.00	0.00	0.00
<b>Lower Ave on Sha e</b>									
9,100.00	14.19	172.63	8,897.72	-1,640.56	212.26	-1,526.89	0.00	0.00	0.00
9,200.00	14.19	172.63	8,994.66	-1,664.87	215.40	-1,549.53	0.00	0.00	0.00
9,227.17	14.19	172.63	9,021.00	-1,671.48	216.26	-1,555.67	0.00	0.00	0.00
<b>1st Bone Spr ng L me</b>									
9,300.00	14.19	172.63	9,091.61	-1,689.19	218.55	-1,572.16	0.00	0.00	0.00
9,379.83	14.19	172.63	9,169.00	-1,708.60	221.06	-1,590.22	0.00	0.00	0.00
<b>1st Bone Spr ng Ss</b>									
9,400.00	14.19	172.63	9,188.56	-1,713.50	221.70	-1,594.79	0.00	0.00	0.00
9,500.00	14.19	172.63	9,285.51	-1,737.82	224.84	-1,617.42	0.00	0.00	0.00
9,521.14	14.19	172.63	9,306.00	-1,742.96	225.51	-1,622.20	0.00	0.00	0.00
<b>2nd Bone Spr ng Sha e</b>									
9,600.00	14.19	172.63	9,382.45	-1,762.14	227.99	-1,640.05	0.00	0.00	0.00
9,700.00	14.19	172.63	9,479.40	-1,786.45	231.13	-1,662.68	0.00	0.00	0.00
9,800.00	14.19	172.63	9,576.35	-1,810.77	234.28	-1,685.31	0.00	0.00	0.00
9,839.87	14.19	172.63	9,615.00	-1,820.46	235.53	-1,694.33	0.00	0.00	0.00
<b>2nd Bone Spr ng L me</b>									
9,900.00	14.19	172.63	9,673.30	-1,835.08	237.43	-1,707.94	0.00	0.00	0.00
10,000.00	14.19	172.63	9,770.25	-1,859.40	240.57	-1,730.57	0.00	0.00	0.00
10,062.67	14.19	172.63	9,831.00	-1,874.63	242.54	-1,744.75	0.00	0.00	0.00
<b>2nd Bone Spr ng Ss</b>									
10,100.00	14.19	172.63	9,867.19	-1,883.71	243.72	-1,753.20	0.00	0.00	0.00
10,200.00	14.19	172.63	9,964.14	-1,908.03	246.86	-1,775.83	0.00	0.00	0.00
10,300.00	14.19	172.63	10,061.09	-1,932.34	250.01	-1,798.46	0.00	0.00	0.00
10,400.00	14.19	172.63	10,158.04	-1,956.66	253.16	-1,821.09	0.00	0.00	0.00
10,500.00	14.19	172.63	10,254.98	-1,980.97	256.30	-1,843.72	0.00	0.00	0.00
10,501.05	14.19	172.63	10,256.00	-1,981.23	256.33	-1,843.96	0.00	0.00	0.00
<b>3rd Bone Spr ng Lm</b>									
10,600.00	14.19	172.63	10,351.93	-2,005.29	259.45	-1,866.35	0.00	0.00	0.00
10,700.00	14.19	172.63	10,448.88	-2,029.60	262.59	-1,888.99	0.00	0.00	0.00
10,800.00	14.19	172.63	10,545.83	-2,053.92	265.74	-1,911.62	0.00	0.00	0.00
10,900.00	14.19	172.63	10,642.78	-2,078.23	268.88	-1,934.25	0.00	0.00	0.00
10,908.48	14.19	172.63	10,651.00	-2,080.30	269.15	-1,936.17	0.00	0.00	0.00
<b>Harkey Ss</b>									
11,000.00	14.19	172.63	10,739.72	-2,102.55	272.03	-1,956.88	0.00	0.00	0.00
11,100.00	14.19	172.63	10,836.67	-2,126.87	275.18	-1,979.51	0.00	0.00	0.00
11,141.27	14.19	172.63	10,876.68	-2,136.90	276.48	-1,988.85	0.00	0.00	0.00
11,150.00	13.39	174.12	10,885.16	-2,138.97	276.72	-1,990.76	10.00	-9.14	17.05
11,200.00	9.09	187.45	10,934.20	-2,148.65	276.80	-1,999.19	10.00	-8.61	26.66
11,250.00	5.98	218.30	10,983.78	-2,154.62	274.67	-2,003.29	10.00	-6.23	61.71
11,300.00	6.22	266.74	11,033.53	-2,156.81	270.35	-2,003.03	10.00	0.48	96.87
11,347.91	9.39	293.97	11,081.00	-2,155.37	264.18	-1,998.70	10.00	6.63	56.84
<b>3rd Bone Spr ng Ss</b>									
11,350.00	9.56	294.72	11,083.06	-2,155.23	263.87	-1,998.42	10.00	8.09	35.72
11,400.00	13.93	306.90	11,132.01	-2,149.88	255.28	-1,989.49	10.00	8.74	24.37
11,450.00	18.61	313.21	11,180.00	-2,140.79	244.64	-1,976.30	10.00	9.37	12.61
11,500.00	23.43	317.02	11,226.66	-2,128.05	232.04	-1,958.97	10.00	9.62	7.63
11,550.00	28.30	319.59	11,271.64	-2,111.75	217.58	-1,937.61	10.00	9.75	5.13



## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

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)
11,600.00	33.21	321.45	11,314.60	-2,092.00	201.35	-1,912.40	10.00	9.82	3.73
11,650.00	38.14	322.88	11,355.20	-2,068.97	183.49	-1,883.52	10.00	9.86	2.86
11,700.00	43.08	324.03	11,393.15	-2,042.82	164.13	-1,851.20	10.00	9.89	2.29
11,750.00	48.04	324.98	11,428.15	-2,013.75	143.42	-1,815.67	10.00	9.91	1.90
11,800.00	53.00	325.79	11,459.93	-1,982.00	121.51	-1,777.22	10.00	9.92	1.63
11,801.79	53.17	325.82	11,461.00	-1,980.82	120.71	-1,775.79	10.00	9.93	1.51
<b>Red H s SS</b>									
11,850.00	57.96	326.51	11,488.25	-1,947.79	98.58	-1,736.13	10.00	9.93	1.43
11,900.00	62.93	327.15	11,512.91	-1,911.39	74.80	-1,692.71	10.00	9.94	1.28
11,906.88	63.62	327.23	11,516.00	-1,906.23	71.47	-1,686.58	10.00	9.94	1.21
<b>Wo fcamp</b>									
11,950.00	67.90	327.74	11,533.70	-1,873.08	50.34	-1,647.30	10.00	9.94	1.17
11,985.39	71.42	328.13	11,546.00	-1,844.96	32.72	-1,614.14	10.00	9.95	1.10
<b>Wo fcamp X</b>									
12,000.00	72.88	328.28	11,550.48	-1,833.14	25.40	-1,600.25	10.00	9.95	1.07
12,050.00	77.85	328.80	11,563.11	-1,791.89	0.16	-1,551.90	10.00	9.95	1.04
12,100.00	82.83	329.30	11,571.50	-1,749.63	-25.18	-1,502.63	10.00	9.95	1.00
12,150.00	87.80	329.79	11,575.58	-1,706.69	-50.43	-1,452.82	10.00	9.95	0.98
12,172.07	90.00	330.00	11,576.00	-1,687.60	-61.50	-1,430.75	10.00	9.95	0.97
<b>LP</b>									
12,200.00	90.00	330.00	11,576.00	-1,663.41	-75.47	-1,402.82	0.00	0.00	0.00
12,300.00	90.00	330.00	11,576.00	-1,576.81	-125.47	-1,302.82	0.00	0.00	0.00
12,400.00	90.00	330.00	11,576.00	-1,490.20	-175.47	-1,202.82	0.00	0.00	0.00
12,500.00	90.00	330.00	11,576.00	-1,403.60	-225.47	-1,102.82	0.00	0.00	0.00
12,600.00	90.00	330.00	11,576.00	-1,317.00	-275.47	-1,002.82	0.00	0.00	0.00
12,700.00	90.00	330.00	11,576.00	-1,230.40	-325.47	-902.82	0.00	0.00	0.00
12,800.00	90.00	330.00	11,576.00	-1,143.79	-375.47	-802.82	0.00	0.00	0.00
12,900.00	90.00	330.00	11,576.00	-1,057.19	-425.47	-702.82	0.00	0.00	0.00
13,000.00	90.00	330.00	11,576.00	-970.59	-475.47	-602.82	0.00	0.00	0.00
13,100.00	90.00	330.00	11,576.00	-883.99	-525.47	-502.82	0.00	0.00	0.00
13,200.00	90.00	330.00	11,576.00	-797.38	-575.47	-402.82	0.00	0.00	0.00
13,300.00	90.00	330.00	11,576.00	-710.78	-625.47	-302.82	0.00	0.00	0.00
13,400.00	90.00	330.00	11,576.00	-624.18	-675.47	-202.82	0.00	0.00	0.00
13,500.00	90.00	330.00	11,576.00	-537.58	-725.47	-102.82	0.00	0.00	0.00
13,600.00	90.00	330.00	11,576.00	-450.97	-775.47	-2.82	0.00	0.00	0.00
13,700.00	90.00	330.00	11,576.00	-364.37	-825.47	97.18	0.00	0.00	0.00
13,800.00	90.00	330.00	11,576.00	-277.77	-875.47	197.18	0.00	0.00	0.00
13,900.00	90.00	330.00	11,576.00	-191.17	-925.47	297.18	0.00	0.00	0.00
14,000.00	90.00	330.00	11,576.00	-104.56	-975.47	397.18	0.00	0.00	0.00
14,100.00	90.00	330.00	11,576.00	-17.96	-1,025.47	497.18	0.00	0.00	0.00
14,200.00	90.00	330.00	11,576.00	68.64	-1,075.47	597.18	0.00	0.00	0.00
14,300.00	90.00	330.00	11,576.00	155.24	-1,125.47	697.18	0.00	0.00	0.00
14,400.00	90.00	330.00	11,576.00	241.85	-1,175.47	797.18	0.00	0.00	0.00
14,500.00	90.00	330.00	11,576.00	328.45	-1,225.47	897.18	0.00	0.00	0.00
14,600.00	90.00	330.00	11,576.00	415.05	-1,275.47	997.18	0.00	0.00	0.00
14,700.00	90.00	330.00	11,576.00	501.65	-1,325.47	1,097.18	0.00	0.00	0.00
14,800.00	90.00	330.00	11,576.00	588.26	-1,375.47	1,197.18	0.00	0.00	0.00
14,900.00	90.00	330.00	11,576.00	674.86	-1,425.47	1,297.18	0.00	0.00	0.00
15,000.00	90.00	330.00	11,576.00	761.46	-1,475.47	1,397.18	0.00	0.00	0.00
15,100.00	90.00	330.00	11,576.00	848.06	-1,525.47	1,497.18	0.00	0.00	0.00
15,200.00	90.00	330.00	11,576.00	934.67	-1,575.47	1,597.18	0.00	0.00	0.00
15,300.00	90.00	330.00	11,576.00	1,021.27	-1,625.47	1,697.18	0.00	0.00	0.00
15,400.00	90.00	330.00	11,576.00	1,107.87	-1,675.47	1,797.18	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 103H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

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)	
15,500.00	90.00	330.00	11,576.00	1,194.48	-1,725.47	1,897.18	0.00	0.00	0.00	
15,600.00	90.00	330.00	11,576.00	1,281.08	-1,775.47	1,997.18	0.00	0.00	0.00	
15,700.00	90.00	330.00	11,576.00	1,367.68	-1,825.47	2,097.18	0.00	0.00	0.00	
15,800.00	90.00	330.00	11,576.00	1,454.28	-1,875.47	2,197.18	0.00	0.00	0.00	
15,900.00	90.00	330.00	11,576.00	1,540.89	-1,925.47	2,297.18	0.00	0.00	0.00	
16,000.00	90.00	330.00	11,576.00	1,627.49	-1,975.47	2,397.18	0.00	0.00	0.00	
16,100.00	90.00	330.00	11,576.00	1,714.09	-2,025.47	2,497.18	0.00	0.00	0.00	
16,200.00	90.00	330.00	11,576.00	1,800.69	-2,075.47	2,597.18	0.00	0.00	0.00	
16,300.00	90.00	330.00	11,576.00	1,887.30	-2,125.47	2,697.18	0.00	0.00	0.00	
16,400.00	90.00	330.00	11,576.00	1,973.90	-2,175.47	2,797.18	0.00	0.00	0.00	
16,500.00	90.00	330.00	11,576.00	2,060.50	-2,225.47	2,897.18	0.00	0.00	0.00	
16,600.00	90.00	330.00	11,576.00	2,147.10	-2,275.47	2,997.18	0.00	0.00	0.00	
16,700.00	90.00	330.00	11,576.00	2,233.71	-2,325.47	3,097.18	0.00	0.00	0.00	
16,800.00	90.00	330.00	11,576.00	2,320.31	-2,375.47	3,197.18	0.00	0.00	0.00	
16,900.00	90.00	330.00	11,576.00	2,406.91	-2,425.47	3,297.18	0.00	0.00	0.00	
17,000.00	90.00	330.00	11,576.00	2,493.51	-2,475.47	3,397.18	0.00	0.00	0.00	
17,100.00	90.00	330.00	11,576.00	2,580.12	-2,525.47	3,497.18	0.00	0.00	0.00	
17,200.00	90.00	330.00	11,576.00	2,666.72	-2,575.47	3,597.18	0.00	0.00	0.00	
17,300.00	90.00	330.00	11,576.00	2,753.32	-2,625.47	3,697.18	0.00	0.00	0.00	
17,400.00	90.00	330.00	11,576.00	2,839.92	-2,675.47	3,797.18	0.00	0.00	0.00	
17,500.00	90.00	330.00	11,576.00	2,926.53	-2,725.47	3,897.18	0.00	0.00	0.00	
17,600.00	90.00	330.00	11,576.00	3,013.13	-2,775.47	3,997.18	0.00	0.00	0.00	
17,700.00	90.00	330.00	11,576.00	3,099.73	-2,825.47	4,097.18	0.00	0.00	0.00	
17,800.00	90.00	330.00	11,576.00	3,186.33	-2,875.47	4,197.18	0.00	0.00	0.00	
17,900.00	90.00	330.00	11,576.00	3,272.94	-2,925.47	4,297.18	0.00	0.00	0.00	
18,000.00	90.00	330.00	11,576.00	3,359.54	-2,975.46	4,397.18	0.00	0.00	0.00	
18,100.00	90.00	330.00	11,576.00	3,446.14	-3,025.46	4,497.18	0.00	0.00	0.00	
18,200.00	90.00	330.00	11,576.00	3,532.74	-3,075.46	4,597.18	0.00	0.00	0.00	
18,300.00	90.00	330.00	11,576.00	3,619.35	-3,125.46	4,697.18	0.00	0.00	0.00	
18,400.00	90.00	330.00	11,576.00	3,705.95	-3,175.46	4,797.18	0.00	0.00	0.00	
18,500.00	90.00	330.00	11,576.00	3,792.55	-3,225.46	4,897.18	0.00	0.00	0.00	
18,600.00	90.00	330.00	11,576.00	3,879.15	-3,275.46	4,997.18	0.00	0.00	0.00	
18,700.00	90.00	330.00	11,576.00	3,965.76	-3,325.46	5,097.18	0.00	0.00	0.00	
18,800.00	90.00	330.00	11,576.00	4,052.36	-3,375.46	5,197.18	0.00	0.00	0.00	
18,900.00	90.00	330.00	11,576.00	4,138.96	-3,425.46	5,297.18	0.00	0.00	0.00	
19,000.00	90.00	330.00	11,576.00	4,225.56	-3,475.46	5,397.18	0.00	0.00	0.00	
19,100.00	90.00	330.00	11,576.00	4,312.17	-3,525.46	5,497.18	0.00	0.00	0.00	
19,200.00	90.00	330.00	11,576.00	4,398.77	-3,575.46	5,597.18	0.00	0.00	0.00	
19,300.00	90.00	330.00	11,576.00	4,485.37	-3,625.46	5,697.18	0.00	0.00	0.00	
19,400.00	90.00	330.00	11,576.00	4,571.97	-3,675.46	5,797.18	0.00	0.00	0.00	
19,500.00	90.00	330.00	11,576.00	4,658.58	-3,725.46	5,897.18	0.00	0.00	0.00	
19,600.00	90.00	330.00	11,576.00	4,745.18	-3,775.46	5,997.18	0.00	0.00	0.00	
19,700.00	90.00	330.00	11,576.00	4,831.78	-3,825.46	6,097.18	0.00	0.00	0.00	
19,800.00	90.00	330.00	11,576.00	4,918.39	-3,875.46	6,197.18	0.00	0.00	0.00	
19,900.00	90.00	330.00	11,576.00	5,004.99	-3,925.46	6,297.18	0.00	0.00	0.00	
20,000.00	90.00	330.00	11,576.00	5,091.59	-3,975.46	6,397.18	0.00	0.00	0.00	
20,100.00	90.00	330.00	11,576.00	5,178.19	-4,025.46	6,497.18	0.00	0.00	0.00	
20,200.00	90.00	330.00	11,576.00	5,264.80	-4,075.46	6,597.18	0.00	0.00	0.00	
20,300.00	90.00	330.00	11,576.00	5,351.40	-4,125.46	6,697.18	0.00	0.00	0.00	
20,400.00	90.00	330.00	11,576.00	5,438.00	-4,175.46	6,797.18	0.00	0.00	0.00	
20,500.00	90.00	330.00	11,576.00	5,524.60	-4,225.46	6,897.18	0.00	0.00	0.00	
20,600.00	90.00	330.00	11,576.00	5,611.21	-4,275.46	6,997.18	0.00	0.00	0.00	
20,700.00	90.00	330.00	11,576.00	5,697.81	-4,325.46	7,097.18	0.00	0.00	0.00	
20,800.00	90.00	330.00	11,576.00	5,784.41	-4,375.46	7,197.18	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 103H
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<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

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)
20,900.00	90.00	330.00	11,576.00	5,871.01	-4,425.46	7,297.18	0.00	0.00	0.00
21,000.00	90.00	330.00	11,576.00	5,957.62	-4,475.46	7,397.18	0.00	0.00	0.00
21,100.00	90.00	330.00	11,576.00	6,044.22	-4,525.46	7,497.18	0.00	0.00	0.00
21,200.00	90.00	330.00	11,576.00	6,130.82	-4,575.46	7,597.18	0.00	0.00	0.00
21,300.00	90.00	330.00	11,576.00	6,217.42	-4,625.46	7,697.18	0.00	0.00	0.00
21,400.00	90.00	330.00	11,576.00	6,304.03	-4,675.46	7,797.18	0.00	0.00	0.00
21,500.00	90.00	330.00	11,576.00	6,390.63	-4,725.46	7,897.18	0.00	0.00	0.00
21,600.00	90.00	330.00	11,576.00	6,477.23	-4,775.46	7,997.18	0.00	0.00	0.00
21,700.00	90.00	330.00	11,576.00	6,563.83	-4,825.46	8,097.18	0.00	0.00	0.00
21,800.00	90.00	330.00	11,576.00	6,650.44	-4,875.46	8,197.18	0.00	0.00	0.00
21,900.00	90.00	330.00	11,576.00	6,737.04	-4,925.46	8,297.18	0.00	0.00	0.00
22,000.00	90.00	330.00	11,576.00	6,823.64	-4,975.46	8,397.18	0.00	0.00	0.00
22,100.00	90.00	330.00	11,576.00	6,910.24	-5,025.46	8,497.18	0.00	0.00	0.00
22,200.00	90.00	330.00	11,576.00	6,996.85	-5,075.46	8,597.18	0.00	0.00	0.00
22,300.00	90.00	330.00	11,576.00	7,083.45	-5,125.46	8,697.18	0.00	0.00	0.00
22,400.00	90.00	330.00	11,576.00	7,170.05	-5,175.46	8,797.18	0.00	0.00	0.00
22,500.00	90.00	330.00	11,576.00	7,256.65	-5,225.46	8,897.18	0.00	0.00	0.00
22,600.00	90.00	330.00	11,576.00	7,343.26	-5,275.46	8,997.18	0.00	0.00	0.00
22,700.00	90.00	330.00	11,576.00	7,429.86	-5,325.46	9,097.18	0.00	0.00	0.00
22,800.00	90.00	330.00	11,576.00	7,516.46	-5,375.46	9,197.18	0.00	0.00	0.00
22,900.00	90.00	330.00	11,576.00	7,603.06	-5,425.46	9,297.18	0.00	0.00	0.00
23,000.00	90.00	330.00	11,576.00	7,689.67	-5,475.46	9,397.18	0.00	0.00	0.00
23,100.00	90.00	330.00	11,576.00	7,776.27	-5,525.46	9,497.18	0.00	0.00	0.00
23,200.00	90.00	330.00	11,576.00	7,862.87	-5,575.46	9,597.18	0.00	0.00	0.00
23,300.00	90.00	330.00	11,576.00	7,949.47	-5,625.46	9,697.18	0.00	0.00	0.00
23,400.00	90.00	330.00	11,576.00	8,036.08	-5,675.46	9,797.18	0.00	0.00	0.00
23,500.00	90.00	330.00	11,576.00	8,122.68	-5,725.46	9,897.18	0.00	0.00	0.00
23,600.00	90.00	330.00	11,576.00	8,209.28	-5,775.46	9,997.18	0.00	0.00	0.00
23,700.00	90.00	330.00	11,576.00	8,295.88	-5,825.46	10,097.18	0.00	0.00	0.00
23,760.08	90.00	330.00	11,576.00	8,347.92	-5,855.50	10,157.26	0.00	0.00	0.00
23,800.00	90.00	330.00	11,576.00	8,382.49	-5,875.46	10,197.18	0.00	0.00	0.00
23,858.67	90.00	330.00	11,576.00	8,433.30	-5,904.80	10,255.85	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PLAT 103H SHL: 544 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	403,061.90	670,042.50	32.1069427	-103.7841651
PLAT 103H BHL: 261 - plan hits target center - Point	0.00	0.00	11,576.00	8,433.30	-5,904.80	411,495.20	664,137.70	32.1302064	-103.8031004
PLAT 103H FTP - plan hits target center - Point	0.00	0.00	11,576.00	-1,687.60	-61.50	401,374.30	669,981.00	32.1023045	-103.7843914
PLAT 103H LTP - plan hits target center - Point	0.00	0.00	11,576.00	8,347.90	-5,855.50	411,409.80	664,187.00	32.1299710	-103.8029425





## Planning Report

<b>Database:</b>	EDM 5000.1.13 Single User Db	<b>Local Co-ordinate Reference:</b>	Well 103H
<b>Company:</b>	XTO Energy	<b>TVD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Project:</b>	Eddy County, NM (NAD-27)	<b>MD Reference:</b>	RKB = 30' @ 3381.00usft (TBD)
<b>Site:</b>	POKER LAKE UNIT 28-21 BS	<b>North Reference:</b>	Grid
<b>Well:</b>	103H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
878.00	878.00	Rust er				
1,267.00	1,267.00	Top Sa t				
4,086.25	4,037.00	Base Sa t				
4,309.05	4,253.00	e aware				
5,300.31	5,214.00	Cherry Canyon				
7,032.17	6,893.00	Brushy Canyon				
8,135.86	7,963.00	Basa Brushy Canyon				
8,329.78	8,151.00	Bone Spr ng Fm				
8,376.19	8,196.00	Bone Spr ng L me				
8,463.87	8,281.00	Ava on Sha e				
9,056.97	8,856.00	Lower Ava on Sha e				
9,227.17	9,021.00	1st Bone Spr ng L me				
9,379.83	9,169.00	1st Bone Spr ng Ss				
9,521.14	9,306.00	2nd Bone Spr ng Sha e				
9,839.87	9,615.00	2nd Bone Spr ng L me				
10,062.67	9,831.00	2nd Bone Spr ng Ss				
10,501.05	10,256.00	3rd Bone Spr ng Lm				
10,908.48	10,651.00	Harkey Ss				
11,347.91	11,081.00	3rd Bone Spr ng Ss				
11,801.79	11,461.00	Red H s SS				
11,906.88	11,516.00	Wo fcamp				
11,985.39	11,546.00	Wo fcamp X				
12,172.07	11,576.00	LP				

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

XTO Energy Inc.  
PLU 28-21 BS 103H  
Projected TD: 23859' MD / 11576' TVD  
SHL: 544' FNL & 2158' FWL , Section 28, T25S, R31E  
BHL: 2611' FSL & 833' FWL , Section 17, T25S, R31E  
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	878'	Water
Top of Salt	1267'	Water
Base of Salt	4253'	Water
Delaware	4253'	Water
Brushy Canyon	6893'	Water/Oil/Gas
Bone Spring	8151'	Water
1st Bone Spring Ss	9169'	Water/Oil/Gas
2nd Bone Spring Ss	9831'	Water/Oil/Gas
3rd Bone Spring Ss	11081'	Water/Oil/Gas
Wolfcamp	11516'	Water/Oil/Gas
Wolfcamp X	11546'	Water/Oil/Gas
<b>Target/Land Curve</b>	<b>11576'</b>	<b>Water/Oil/Gas</b>

\*\*\* Hydrocarbons @ Brushy Canyon

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

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 9.625 inch casing @ 978' (289' 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 10101' and cemented to surface. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 23859 MD/TD and 5.5 x 5.5 inch production casing will be set at TD and cemented back up to 2nd intermediate (estimated TOC 9801 feet ).

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
12.25	0' – 978'	9.625	40	J-55	BTC	New	1.38	5.81	16.10
8.75	0' – 4000'	7.625	29.7	RY P-110	Flush Joint	New	2.16	2.65	1.86
8.75	4000' – 10101'	7.625	29.7	HC L-80	Flush Joint	New	1.57	1.98	2.24
6.75	0' – 10001'	5.5	23	RY P-110	Semi-Premium	New	1.21	2.43	1.95
6.75	10001' - 11550'	5.5	23	RY P-110	Semi-Flush	New	1.21	2.11	4.21
6.75	11550' - 23859'	5.5	23	RY P-110	Semi-Flush	New	1.21	2.10	5.59

- 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" SOW 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 +/- 978'**

Lead: 220 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 +/- 10101'**

###### 1st Stage

Optional Lead: 370 sxs Class C (mixed at 10.5 ppg, 2.77 ft3/sx, 15.59 gal/sx water)

TOC: Surface

Tail: 290 sxs Class C (mixed at 14.8 ppg, 1.35 ft3/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6893

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: 780 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 (6893') 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, 23 New Semi-Flush, RY P-110 casing to be set at +/- 23859'**

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft3/sx, 15.00 gal/sx water) Top of Cement: 9801 feet

Tail: 960 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft3/sx, 8.38 gal/sx water) Top of Cement: 10501 feet

Compressives: 12-hr = 800 psi 24 hr = 1500 psi

XTO requests the option to offline cement and remediate (if needed) surface and intermediate casing strings where batch drilling is approved and if unplanned remediation is needed. XTO will ensure well is static with no pressure on the csg annulus, as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed when applicable per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence.

## 5. Pressure Control Equipment

Once the permanent WH is installed on the 9.625 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 4376 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

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

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

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

hole on each of the wells.

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

## 6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 978'	12.25	FW/Native	8.7-9.2	35-40	NC
978' - 10101'	8.75	FW / Cut Brine / Direct Emulsion	9.7-10.2	30-32	NC
10101' - 23859'	6.75	OBM	11.5-12	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.

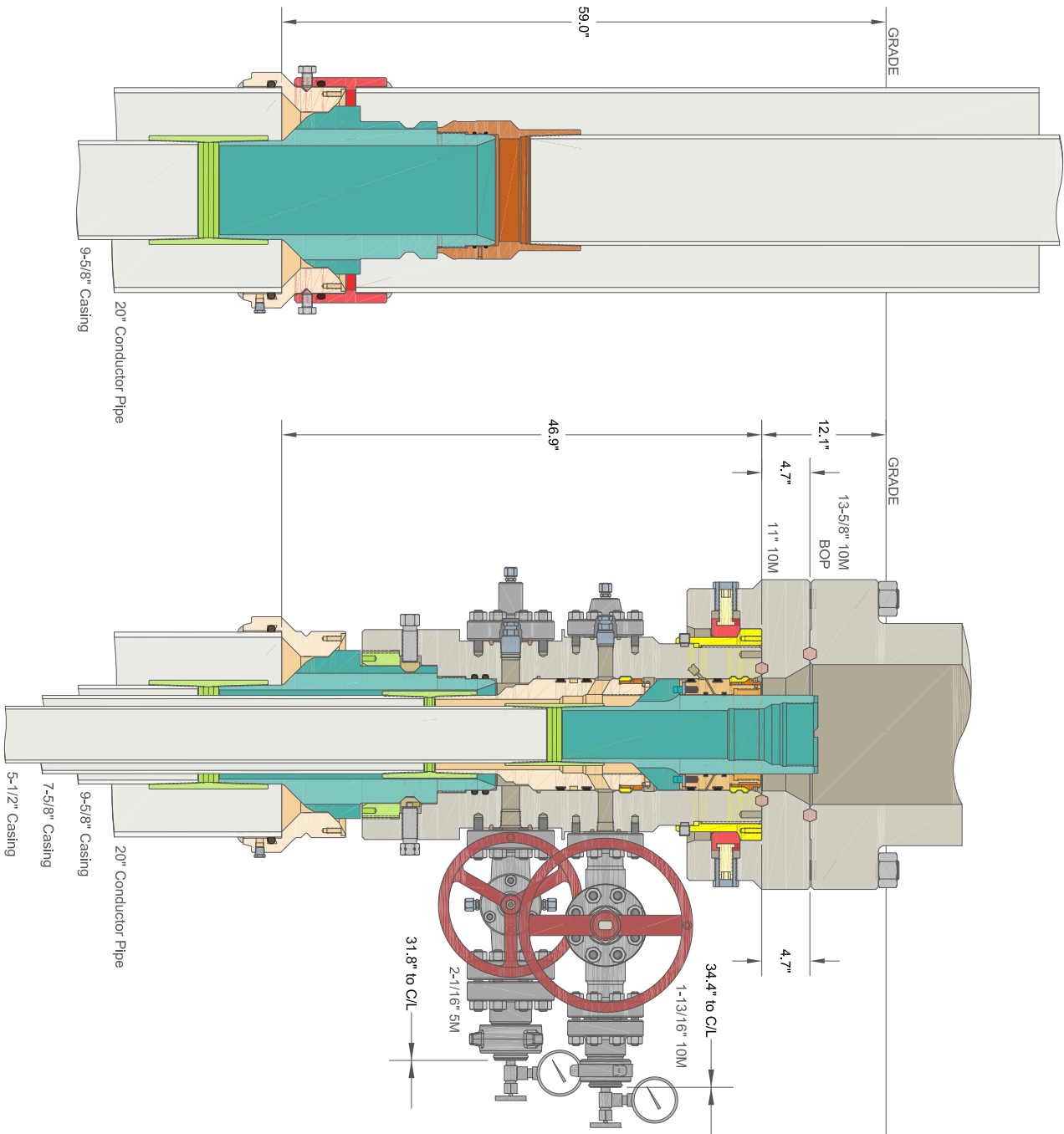
## 9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 180 to 200 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 6922 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.





<b>CACTUS WELLHEAD LLC</b>  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	<b>XTO ENERGY INC</b> <b>ICARUS PAD</b>		
	DRAWN	DLE	18JAN21
	APPRV		
	DRAWING NO.      HBE0000479		

*Released to Imaging:*

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>XTO Permian Operating, LLC</b>
<b>LEASE NO.:</b>	<b>NMLC-062140A</b>
<b>WELL NAME &amp; NO.:</b>	<b>Poker Lake Unit 28-21 BS 103H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0544' FNL &amp; 2187' FWL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>2614' FSL &amp; 1587' FWL Sec. 17, T.25 S., R.31 E.</b>
<b>LOCATION:</b>	<b>Section 28, T.25 S., R.31 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" 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 checked="" 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 checked="" type="checkbox"/> Unit

### Medium Cave/Karst

**Possibility of water flows in the Salado and Castile.**

**Possibility of lost circulation in the Red Beds, Rustler, and Delaware.**

**Abnormal pressure may be encountered in the 3rd Bone Spring and all subsequent formations.**

### 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 **1180** 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.

**Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
  - Cement as proposed. Report Echo meter results on subsequent sundry. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**
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. 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.

#### **BOP Break Testing Variance**

- 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.

#### **D. SPECIAL REQUIREMENT (S)**

##### **Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

##### **Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months.

## 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

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 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.
3. 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.
4. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
5. 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.
6. 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.

## 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.
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. 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).

- c. 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.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. 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.
- f. 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.
- g. 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.

**JAM 09222021**

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

CONDITIONS  
  
Action 120892

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 120892
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	• NSP Will require administrative order for non-standard spacing unit	7/5/2022
kpickford	Adhere to previous NMOCD Conditions of Approval	7/5/2022