



RECEIVED

JUN 11 2019

DISTRICT II-ARTESIA O.C.D.

XTO Energy

Eddy County, NM (NAD-27)

Remuda North 25 State

#168H

OH

Plan: PERMIT

Standard Planning Report

30 May, 2019



Project: Eddy County, NM (NAD-27)
Site: Remuda North 25 State
Well: #168H
Wellbore: OH
Design: PERMIT

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

DESIGN TARGET DETAILS

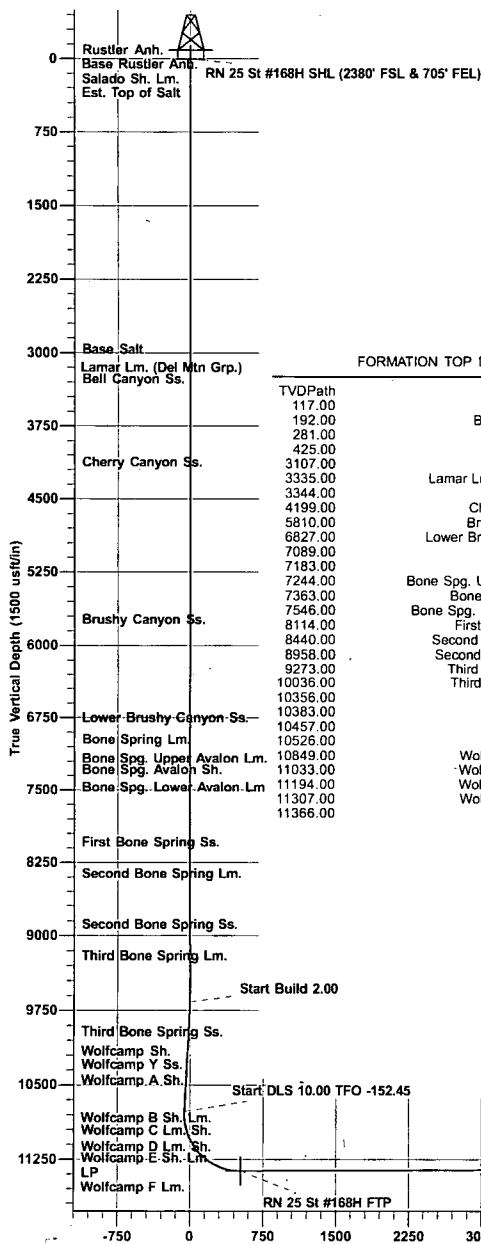
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RN 25 St #168H SHL (2380' FSL & 705' FEL)	0.00	0.00	0.00	463989.50	624232.80	32.2749842	-103.9313727	Point
RN 25 St #168H PBHL (200' FNL & 660' FEL)	11329.00	8037.50	-6.00	472027.00	624226.80	32.2970786	-103.9312946	Point
RN 25 St #168H LTP	11329.64	7907.50	-5.00	471897.00	624227.80	32.2957212	-103.9312930	Point
RN 25 St #168H FTP	11366.00	520.10	42.50	464509.60	624275.30	32.2764135	-103.9312289	Point

WELL DETAILS: #168H

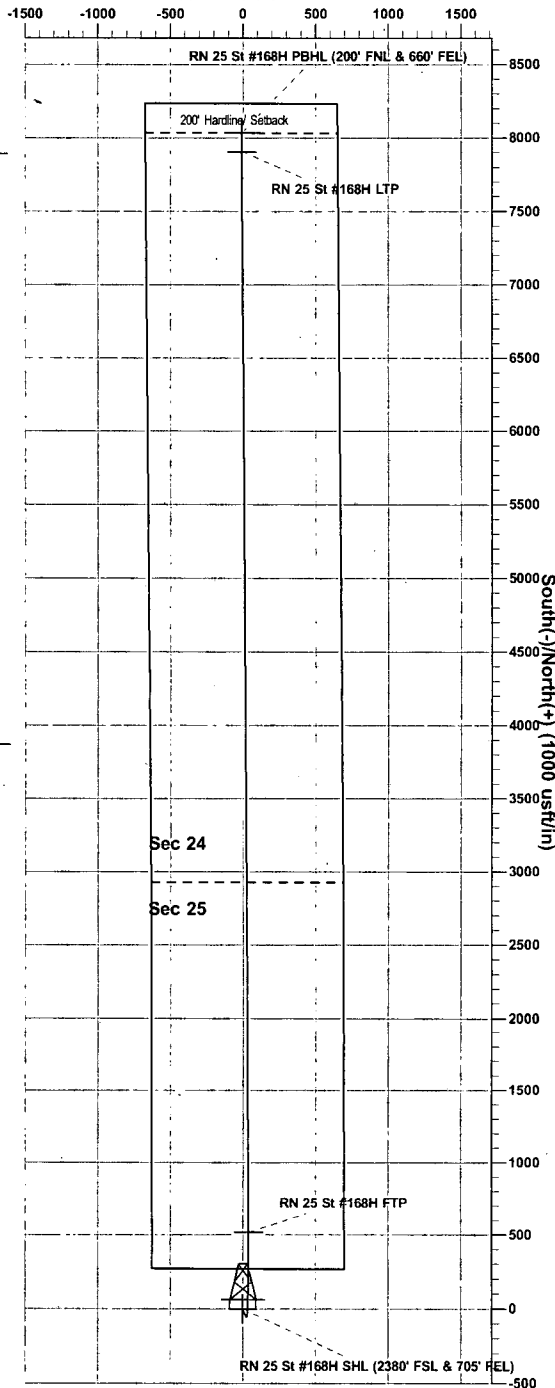
Rig Name: RKB = 25' @ 3097.00usft			
Ground Level: 3072.00			
+N/-S	+E/-W	Northing	Latitude
0.00	0.00	463989.50	32.2749842
		Easting	Longitude
		624232.80	-103.9313727

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	9660.00	0.00	0.00	9660.00	0.00	0.00	0.00	0.00	0.00
3	9835.24	3.50	152.13	9835.13	-4.74	2.50	2.00	152.13	-4.75
4	10764.07	3.50	152.13	10762.22	-54.93	29.05	0.00	0.00	-55.12
5	11697.97	90.28	359.63	11366.00	520.10	42.50	10.00	-152.45	519.81
6	18085.62	90.28	359.63	11329.64	7907.50	-5.16	0.00	0.00	7907.37
7	19215.62	90.28	359.63	11329.00	8037.50	-6.00	0.00	0.00	8037.37



West(-)/East(+) (1000 usft/in)



Vertical Section at 359.63° (1500 usft/in)

The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Protype are at the sole risk and responsibility of the user.

Plan: PERMIT (#168H/OH)

Created By: Matthew May Date: 8:36, May 30 2019



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

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

Site	Remuda North 25 State		
Site Position:		Northing:	463,916.50 usft
From:	Map	Easting:	620,263.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.2748238
		Longitude:	-103.9442164
		Grid Convergence:	0.21 °

Well	#168H		
Well Position	+N/-S	73.00 usft	Northing:
	+E/-W	3,969.40 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32.2749843
		Longitude:	-103.9313727
		Ground Level:	3,072.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	05/30/19	6.91
			Dip Angle (°)
			60.03
			Field Strength (nT)
			47,732

Design	PERMIT		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			359.63

Plan Sections										
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	
9,660.00	0.00	0.00	9,660.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,835.24	3.50	152.13	9,835.13	-4.74	2.50	2.00	2.00	0.00	152.13	
10,764.07	3.50	152.13	10,762.22	-54.93	29.05	0.00	0.00	0.00	0.00	
11,697.97	90.28	359.63	11,366.00	520.10	42.50	10.00	9.29	-16.33	-152.45	RN 25 St #168H FT
19,085.62	90.28	359.63	11,329.64	7,907.50	-5.16	0.00	0.00	0.00	0.00	RN 25 St #168H LT
19,215.62	90.28	359.63	11,329.00	8,037.50	-6.00	0.00	0.00	0.00	0.00	RN 25 St #168H PE



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

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
117.00	0.00	0.00	117.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler Anh.									
192.00	0.00	0.00	192.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Rustler Anh.									
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
281.00	0.00	0.00	281.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado Sh. Lm.									
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
425.00	0.00	0.00	425.00	0.00	0.00	0.00	0.00	0.00	0.00
Est. Top of Salt									
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	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,107.00	0.00	0.00	3,107.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,335.00	0.00	0.00	3,335.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar Lm. (Del Mtn Grp.)									
3,344.00	0.00	0.00	3,344.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon Ss.									
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

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)
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,199.00	0.00	0.00	4,199.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon Ss.									
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,810.00	0.00	0.00	5,810.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon Ss.									
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,827.00	0.00	0.00	6,827.00	0.00	0.00	0.00	0.00	0.00	0.00
Lower Brushy Canyon Ss.									
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,089.00	0.00	0.00	7,089.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring Lm.									
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,183.00	0.00	0.00	7,183.00	0.00	0.00	0.00	0.00	0.00	0.00
Avalon Ss.									
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,244.00	0.00	0.00	7,244.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spg. Upper Avalon Lm.									
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,363.00	0.00	0.00	7,363.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spg. Avalon Sh.									
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,546.00	0.00	0.00	7,546.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spg. Lower Avalon Lm									



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

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)
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,114.00	0.00	0.00	8,114.00	0.00	0.00	0.00	0.00	0.00	0.00
First Bone Spring Ss.									
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,440.00	0.00	0.00	8,440.00	0.00	0.00	0.00	0.00	0.00	0.00
Second Bone Spring Lm.									
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,958.00	0.00	0.00	8,958.00	0.00	0.00	0.00	0.00	0.00	0.00
Second Bone Spring Ss.									
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,273.00	0.00	0.00	9,273.00	0.00	0.00	0.00	0.00	0.00	0.00
Third Bone Spring Lm.									
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,660.00	0.00	0.00	9,660.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.80	152.13	9,700.00	-0.25	0.13	-0.25	2.00	2.00	0.00
9,800.00	2.80	152.13	9,799.94	-3.02	1.60	-3.03	2.00	2.00	0.00
9,835.24	3.50	152.13	9,835.13	-4.74	2.50	-4.75	2.00	2.00	0.00
9,900.00	3.50	152.13	9,899.77	-8.24	4.36	-8.26	0.00	0.00	0.00
10,000.00	3.50	152.13	9,999.58	-13.64	7.21	-13.69	0.00	0.00	0.00
10,036.49	3.50	152.13	10,036.00	-15.61	8.26	-15.67	0.00	0.00	0.00
Third Bone Spring Ss.									
10,100.00	3.50	152.13	10,099.40	-19.04	10.07	-19.11	0.00	0.00	0.00
10,200.00	3.50	152.13	10,199.21	-24.45	12.93	-24.53	0.00	0.00	0.00
10,300.00	3.50	152.13	10,299.02	-29.85	15.79	-29.95	0.00	0.00	0.00
10,357.09	3.50	152.13	10,356.00	-32.94	17.42	-33.05	0.00	0.00	0.00
Wolfcamp Sh.									
10,384.14	3.50	152.13	10,383.00	-34.40	18.19	-34.52	0.00	0.00	0.00
Wolfcamp X Ss.									
10,400.00	3.50	152.13	10,398.83	-35.26	18.64	-35.38	0.00	0.00	0.00
10,458.27	3.50	152.13	10,457.00	-38.41	20.31	-38.54	0.00	0.00	0.00
Wolfcamp Y Ss.									
10,500.00	3.50	152.13	10,498.65	-40.66	21.50	-40.80	0.00	0.00	0.00
10,527.40	3.50	152.13	10,526.00	-42.14	22.29	-42.29	0.00	0.00	0.00
Wolfcamp A Sh.									
10,600.00	3.50	152.13	10,598.46	-46.07	24.36	-46.22	0.00	0.00	0.00
10,700.00	3.50	152.13	10,698.27	-51.47	27.22	-51.64	0.00	0.00	0.00
10,764.07	3.50	152.13	10,762.22	-54.93	29.05	-55.12	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

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)
10,800.00	1.69	72.98	10,798.12	-55.75	30.07	-55.94	10.00	-5.05	-220.29
10,850.00	5.72	16.05	10,848.02	-53.14	31.46	-53.34	10.00	8.05	-113.87
10,850.99	5.81	15.77	10,849.00	-53.04	31.49	-53.24	10.00	9.60	-28.02
Wolfcamp B Sh. Lm.									
10,900.00	10.61	8.33	10,897.50	-46.18	32.82	-46.40	10.00	9.78	-15.19
10,950.00	15.57	5.47	10,946.19	-34.95	34.13	-35.16	10.00	9.92	-5.72
11,000.00	20.55	3.97	10,993.71	-19.50	35.37	-19.73	10.00	9.96	-3.00
11,042.59	24.79	3.15	11,033.00	-3.12	36.38	-3.36	10.00	9.97	-1.92
Wolfcamp C Lm. Sh.									
11,050.00	25.53	3.03	11,039.71	0.02	36.55	-0.21	10.00	9.98	-1.56
11,100.00	30.52	2.39	11,083.83	23.48	37.65	23.24	10.00	9.98	-1.29
11,150.00	35.52	1.91	11,125.74	50.70	38.67	50.45	10.00	9.99	-0.96
11,200.00	40.51	1.54	11,165.12	81.47	39.59	81.21	10.00	9.99	-0.75
11,239.16	44.42	1.29	11,194.00	107.90	40.24	107.64	10.00	9.99	-0.62
Wolfcamp D Lm. Sh.									
11,250.00	45.51	1.23	11,201.67	115.56	40.40	115.29	10.00	9.99	-0.57
11,300.00	50.50	0.97	11,235.11	152.70	41.12	152.43	10.00	9.99	-0.51
11,350.00	55.50	0.75	11,265.19	192.61	41.72	192.34	10.00	9.99	-0.44
11,400.00	60.50	0.56	11,291.68	235.00	42.20	234.72	10.00	9.99	-0.39
11,432.78	63.77	0.44	11,307.00	263.98	42.45	263.70	10.00	9.99	-0.36
Wolfcamp E Sh. Lm.									
11,450.00	65.50	0.38	11,314.38	279.53	42.56	279.25	10.00	10.00	-0.35
11,500.00	70.49	0.21	11,333.11	325.88	42.80	325.59	10.00	10.00	-0.33
11,550.00	75.49	0.06	11,347.73	373.67	42.91	373.39	10.00	10.00	-0.31
11,600.00	80.49	359.91	11,358.13	422.56	42.89	422.28	10.00	10.00	-0.30
11,650.00	85.49	359.77	11,364.23	472.17	42.75	471.89	10.00	10.00	-0.29
11,697.97	90.28	359.63	11,366.00	520.10	42.50	519.81	10.00	10.00	-0.28
LP									
11,700.00	90.28	359.63	11,365.99	522.13	42.49	521.84	0.00	0.00	0.00
11,800.00	90.28	359.63	11,365.50	622.12	41.84	621.84	0.00	0.00	0.00
11,900.00	90.28	359.63	11,365.01	722.12	41.20	721.84	0.00	0.00	0.00
12,000.00	90.28	359.63	11,364.51	822.12	40.55	821.84	0.00	0.00	0.00
12,100.00	90.28	359.63	11,364.02	922.11	39.91	921.84	0.00	0.00	0.00
12,200.00	90.28	359.63	11,363.53	1,022.11	39.26	1,021.84	0.00	0.00	0.00
12,300.00	90.28	359.63	11,363.04	1,122.11	38.62	1,121.83	0.00	0.00	0.00
12,400.00	90.28	359.63	11,362.55	1,222.10	37.97	1,221.83	0.00	0.00	0.00
12,500.00	90.28	359.63	11,362.05	1,322.10	37.33	1,321.83	0.00	0.00	0.00
12,600.00	90.28	359.63	11,361.56	1,422.10	36.68	1,421.83	0.00	0.00	0.00
12,700.00	90.28	359.63	11,361.07	1,522.09	36.04	1,521.83	0.00	0.00	0.00
12,800.00	90.28	359.63	11,360.58	1,622.09	35.39	1,621.83	0.00	0.00	0.00
12,900.00	90.28	359.63	11,360.08	1,722.09	34.75	1,721.83	0.00	0.00	0.00
13,000.00	90.28	359.63	11,359.59	1,822.08	34.10	1,821.83	0.00	0.00	0.00
13,100.00	90.28	359.63	11,359.10	1,922.08	33.45	1,921.82	0.00	0.00	0.00
13,200.00	90.28	359.63	11,358.61	2,022.08	32.81	2,021.82	0.00	0.00	0.00
13,300.00	90.28	359.63	11,358.12	2,122.07	32.16	2,121.82	0.00	0.00	0.00
13,400.00	90.28	359.63	11,357.62	2,222.07	31.52	2,221.82	0.00	0.00	0.00
13,500.00	90.28	359.63	11,357.13	2,322.07	30.87	2,321.82	0.00	0.00	0.00
13,600.00	90.28	359.63	11,356.64	2,422.06	30.23	2,421.82	0.00	0.00	0.00
13,700.00	90.28	359.63	11,356.15	2,522.06	29.58	2,521.82	0.00	0.00	0.00
13,800.00	90.28	359.63	11,355.65	2,622.06	28.94	2,621.82	0.00	0.00	0.00
13,900.00	90.28	359.63	11,355.16	2,722.05	28.29	2,721.81	0.00	0.00	0.00
14,000.00	90.28	359.63	11,354.67	2,822.05	27.65	2,821.81	0.00	0.00	0.00
14,100.00	90.28	359.63	11,354.18	2,922.05	27.00	2,921.81	0.00	0.00	0.00
14,200.00	90.28	359.63	11,353.69	3,022.04	26.36	3,021.81	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

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)
14,300.00	90.28	359.63	11,353.19	3,122.04	25.71	3,121.81	0.00	0.00	0.00
14,400.00	90.28	359.63	11,352.70	3,222.04	25.07	3,221.81	0.00	0.00	0.00
14,500.00	90.28	359.63	11,352.21	3,322.03	24.42	3,321.81	0.00	0.00	0.00
14,600.00	90.28	359.63	11,351.72	3,422.03	23.78	3,421.81	0.00	0.00	0.00
14,700.00	90.28	359.63	11,351.23	3,522.03	23.13	3,521.80	0.00	0.00	0.00
14,800.00	90.28	359.63	11,350.73	3,622.02	22.49	3,621.80	0.00	0.00	0.00
14,900.00	90.28	359.63	11,350.24	3,722.02	21.84	3,721.80	0.00	0.00	0.00
15,000.00	90.28	359.63	11,349.75	3,822.02	21.20	3,821.80	0.00	0.00	0.00
15,100.00	90.28	359.63	11,349.26	3,922.01	20.55	3,921.80	0.00	0.00	0.00
15,200.00	90.28	359.63	11,348.76	4,022.01	19.91	4,021.80	0.00	0.00	0.00
15,300.00	90.28	359.63	11,348.27	4,122.01	19.26	4,121.80	0.00	0.00	0.00
15,400.00	90.28	359.63	11,347.78	4,222.00	18.62	4,221.80	0.00	0.00	0.00
15,500.00	90.28	359.63	11,347.29	4,322.00	17.97	4,321.80	0.00	0.00	0.00
15,600.00	90.28	359.63	11,346.80	4,422.00	17.33	4,421.79	0.00	0.00	0.00
15,700.00	90.28	359.63	11,346.30	4,521.99	16.68	4,521.79	0.00	0.00	0.00
15,800.00	90.28	359.63	11,345.81	4,621.99	16.04	4,621.79	0.00	0.00	0.00
15,900.00	90.28	359.63	11,345.32	4,721.99	15.39	4,721.79	0.00	0.00	0.00
16,000.00	90.28	359.63	11,344.83	4,821.98	14.75	4,821.79	0.00	0.00	0.00
16,100.00	90.28	359.63	11,344.33	4,921.98	14.10	4,921.79	0.00	0.00	0.00
16,200.00	90.28	359.63	11,343.84	5,021.98	13.46	5,021.79	0.00	0.00	0.00
16,300.00	90.28	359.63	11,343.35	5,121.97	12.81	5,121.79	0.00	0.00	0.00
16,400.00	90.28	359.63	11,342.86	5,221.97	12.16	5,221.78	0.00	0.00	0.00
16,500.00	90.28	359.63	11,342.37	5,321.97	11.52	5,321.78	0.00	0.00	0.00
16,600.00	90.28	359.63	11,341.87	5,421.97	10.87	5,421.78	0.00	0.00	0.00
16,700.00	90.28	359.63	11,341.38	5,521.96	10.23	5,521.78	0.00	0.00	0.00
16,800.00	90.28	359.63	11,340.89	5,621.96	9.58	5,621.78	0.00	0.00	0.00
16,900.00	90.28	359.63	11,340.40	5,721.96	8.94	5,721.78	0.00	0.00	0.00
17,000.00	90.28	359.63	11,339.90	5,821.95	8.29	5,821.78	0.00	0.00	0.00
17,100.00	90.28	359.63	11,339.41	5,921.95	7.65	5,921.78	0.00	0.00	0.00
17,200.00	90.28	359.63	11,338.92	6,021.95	7.00	6,021.77	0.00	0.00	0.00
17,300.00	90.28	359.63	11,338.43	6,121.94	6.36	6,121.77	0.00	0.00	0.00
17,400.00	90.28	359.63	11,337.94	6,221.94	5.71	6,221.77	0.00	0.00	0.00
17,500.00	90.28	359.63	11,337.44	6,321.94	5.07	6,321.77	0.00	0.00	0.00
17,600.00	90.28	359.63	11,336.95	6,421.93	4.42	6,421.77	0.00	0.00	0.00
17,700.00	90.28	359.63	11,336.46	6,521.93	3.78	6,521.77	0.00	0.00	0.00
17,800.00	90.28	359.63	11,335.97	6,621.93	3.13	6,621.77	0.00	0.00	0.00
17,900.00	90.28	359.63	11,335.48	6,721.92	2.49	6,721.77	0.00	0.00	0.00
18,000.00	90.28	359.63	11,334.98	6,821.92	1.84	6,821.76	0.00	0.00	0.00
18,100.00	90.28	359.63	11,334.49	6,921.92	1.20	6,921.76	0.00	0.00	0.00
18,200.00	90.28	359.63	11,334.00	7,021.91	0.55	7,021.76	0.00	0.00	0.00
18,300.00	90.28	359.63	11,333.51	7,121.91	-0.09	7,121.76	0.00	0.00	0.00
18,400.00	90.28	359.63	11,333.01	7,221.91	-0.74	7,221.76	0.00	0.00	0.00
18,500.00	90.28	359.63	11,332.52	7,321.90	-1.38	7,321.76	0.00	0.00	0.00
18,600.00	90.28	359.63	11,332.03	7,421.90	-2.03	7,421.76	0.00	0.00	0.00
18,700.00	90.28	359.63	11,331.54	7,521.90	-2.67	7,521.76	0.00	0.00	0.00
18,800.00	90.28	359.63	11,331.05	7,621.89	-3.32	7,621.76	0.00	0.00	0.00
18,900.00	90.28	359.63	11,330.55	7,721.89	-3.96	7,721.75	0.00	0.00	0.00
19,000.00	90.28	359.63	11,330.06	7,821.89	-4.61	7,821.75	0.00	0.00	0.00
19,085.62	90.28	359.63	11,329.64	7,907.50	-5.16	7,907.37	0.00	0.00	0.00
19,100.00	90.28	359.63	11,329.57	7,921.88	-5.25	7,921.75	0.00	0.00	0.00
19,200.00	90.28	359.63	11,329.08	8,021.88	-5.90	8,021.75	0.00	0.00	0.00
19,215.62	90.28	359.63	11,329.00	8,037.50	-6.00	8,037.37	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RN 25 St #168H SHL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	463,989.50	624,232.80	32.2749843	-103.9313727
RN 25 St #168H PBH - plan hits target center - Point	0.00	0.00	11,329.00	8,037.50	-6.00	472,027.00	624,226.80	32.2970786	-103.9312946
RN 25 St #168H LTP - plan misses target center by 0.16usft at 19085.62usft MD (11329.64 TVD, 7907.50 N, -5.16 E) - Point	0.00	0.00	11,329.64	7,907.50	-5.00	471,897.00	624,227.80	32.2967212	-103.9312930
RN 25 St #168H FTP - plan hits target center - Point	0.00	0.00	11,366.00	520.10	42.50	464,509.60	624,275.30	32.2764135	-103.9312289

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
117.00	117.00	Rustler Anh.			
192.00	192.00	Base Rustler Anh.			
281.00	281.00	Salado Sh. Lm.			
425.00	425.00	Est. Top of Salt			
3,107.00	3,107.00	Base Salt			
3,335.00	3,335.00	Lamar Lm. (Del Mtn Grp.)			
3,344.00	3,344.00	Bell Canyon Ss.			
4,199.00	4,199.00	Cherry Canyon Ss.			
5,810.00	5,810.00	Brushy Canyon Ss.			
6,827.00	6,827.00	Lower Brushy Canyon Ss.			
7,089.00	7,089.00	Bone Spring Lm.			
7,183.00	7,183.00	Avalon Ss.			
7,244.00	7,244.00	Bone Spg. Upper Avalon Lm.			
7,363.00	7,363.00	Bone Spg. Avalon Sh.			
7,546.00	7,546.00	Bone Spg. Lower Avalon Lm			
8,114.00	8,114.00	First Bone Spring Ss.			
8,440.00	8,440.00	Second Bone Spring Lm.			
8,958.00	8,958.00	Second Bone Spring Ss.			
9,273.00	9,273.00	Third Bone Spring Lm.			
10,036.49	10,036.00	Third Bone Spring Ss.			
10,357.09	10,356.00	Wolfcamp Sh.			
10,384.14	10,383.00	Wolfcamp X Ss.			
10,458.27	10,457.00	Wolfcamp Y Ss.			
10,527.40	10,526.00	Wolfcamp A Sh.			
10,850.99	10,849.00	Wolfcamp B Sh. Lm.			
11,042.59	11,033.00	Wolfcamp C Lm. Sh.			
11,239.16	11,194.00	Wolfcamp D Lm. Sh.			
11,432.78	11,307.00	Wolfcamp E Sh. Lm.			
11,697.97	11,366.00	LP			



Planning Report

Database:	EDM 5000.1.13 Single User Db	Local Co-ordinate Reference:	Well #168H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3097.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3097.00usft
Site:	Remuda North 25 State	North Reference:	Grid
Well:	#168H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PERMIT		