

Provide Signature Page for Directional Survey

Survey Report

30-015-44390

Company: XTO Energy
Project: Eddy County, NM (NAD27) NMEZ
Site: Remuda South 25 State Pad
Well: Remuda South 25 State 124H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well Remuda South 25 State 124H - Slot S 124H
TVD Reference: 3075+30 @ 3105.00usft (Cactus118)
MD Reference: 3075+30 @ 3105.00usft (Cactus118)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: TRUEPERF_EDM

Project	Eddy County, NM (NAD27) NMEZ		
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 South 25 State Pad, Centered on 904H				
Site Position:		Northing:	464,640.20 ft	Latitude:	32° 16' 36.472 N
From:	Map	Easting:	621,538.20 ft	Longitude:	103° 56' 24.314 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.21 °

Well	Remuda South 25 State 124H - Slot S 124H					
Well Position	+N/-S	0.00 usft	Northing:	464,640.30 ft	Latitude:	32° 16' 36.470 N
	+E/-W	0.00 usft	Easting:	621,628.10 ft	Longitude:	103° 56' 23.267 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,075.00 usft	

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	05/10/18	7.03	60.04	47,841

Design	Lateral				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	177.58	

Survey Program	Date	06/15/18			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
299.00	18,622.00	Survey #1 (Lateral)	MWD	MWD v3:standard declination	
18,675.00	18,675.00	Survey #2 (Lateral)	Projection	Projection	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Remuda South 124H SL - Remuda South 704H SL									
4.14	0.02	283.00	4.14	0.00	0.00	0.00	0.40	0.40	0.00
Remuda North 904H SL									
5.93	0.02	283.00	5.93	0.00	0.00	0.00	0.40	0.40	0.00
Remuda South 904H SL									
299.00	1.20	283.00	298.98	0.70	-3.05	-0.83	0.40	0.40	0.00
380.00	1.30	268.60	379.96	0.87	-4.80	-1.07	0.41	0.12	-17.78
474.00	1.40	264.20	473.93	0.73	-7.00	-1.03	0.15	0.11	-4.68

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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
568.00	1.20	274.50	567.91	0.69	-9.13	-1.08	0.33	-0.21	10.96
662.00	1.40	309.90	661.89	1.51	-10.99	-1.97	0.86	0.21	37.66
756.00	1.10	324.80	755.86	2.98	-12.39	-3.50	0.47	-0.32	15.85
849.00	1.10	2.90	848.85	4.60	-12.86	-5.14	0.77	0.00	40.97
958.00	1.10	348.70	957.83	6.67	-13.01	-7.21	0.25	0.00	-13.03
1,051.00	0.80	3.10	1,050.82	8.20	-13.15	-8.74	0.41	-0.32	15.48
1,145.00	0.70	359.00	1,144.81	9.42	-13.13	-9.97	0.12	-0.11	-4.36
1,239.00	0.70	46.00	1,238.80	10.40	-12.72	-10.93	0.59	0.00	50.00
1,333.00	0.30	39.30	1,332.80	10.99	-12.16	-11.49	0.43	-0.43	-7.13
1,427.00	0.20	26.00	1,426.80	11.32	-11.93	-11.82	0.12	-0.11	-14.15
1,521.00	0.10	59.70	1,520.80	11.51	-11.78	-12.00	0.14	-0.11	35.85
1,615.00	0.30	170.80	1,614.80	11.31	-11.67	-11.79	0.37	0.21	118.19
1,709.00	1.90	174.30	1,708.78	9.52	-11.48	-9.99	1.70	1.70	3.72
1,803.00	2.50	170.70	1,802.71	5.94	-10.99	-6.40	0.65	0.64	-3.83
1,896.00	2.10	173.00	1,895.63	2.25	-10.46	-2.69	0.44	-0.43	2.47
1,990.00	1.20	169.10	1,989.59	-0.42	-10.06	0.00	0.96	-0.96	-4.15
2,084.00	0.60	184.30	2,083.58	-1.88	-9.91	1.46	0.68	-0.64	16.17
2,178.00	1.10	182.00	2,177.57	-3.27	-9.98	2.85	0.53	0.53	-2.45
2,271.00	1.00	152.30	2,270.55	-4.88	-9.64	4.47	0.59	-0.11	-31.94
2,365.00	1.60	89.40	2,364.53	-5.60	-7.94	5.26	1.54	0.64	-66.91
2,459.00	2.60	104.30	2,458.47	-6.11	-4.56	5.91	1.20	1.06	15.85
2,553.00	3.60	114.10	2,552.33	-7.84	0.20	7.84	1.20	1.06	10.43
2,647.00	2.60	131.50	2,646.19	-10.46	4.49	10.64	1.45	-1.06	18.51
2,741.00	2.50	118.50	2,740.10	-12.85	7.89	13.17	0.62	-0.11	-13.83
2,834.00	3.20	103.10	2,832.99	-14.41	12.20	14.91	1.11	0.75	-16.56
2,928.00	2.90	98.20	2,926.85	-15.34	17.11	16.05	0.42	-0.32	-5.21
3,022.00	2.00	113.40	3,020.77	-16.33	20.96	17.20	1.17	-0.96	16.17
3,116.00	1.00	70.60	3,114.74	-16.71	23.24	17.68	1.53	-1.06	-45.53
3,210.00	1.60	15.30	3,208.72	-15.17	24.36	16.19	1.40	0.64	-58.83
3,304.00	2.00	5.40	3,302.67	-12.27	24.86	13.31	0.54	0.43	-10.53
3,397.00	1.90	7.20	3,395.62	-9.13	25.21	10.18	0.13	-0.11	1.94
3,491.00	2.30	9.20	3,489.55	-5.72	25.71	6.80	0.43	0.43	2.13
3,585.00	2.50	6.20	3,583.47	-1.82	26.23	2.93	0.25	0.21	-3.19
3,678.00	2.30	0.30	3,676.39	2.06	26.46	-0.94	0.34	-0.22	-6.34
3,772.00	1.90	358.60	3,770.33	5.51	26.43	-4.39	0.43	-0.43	-1.81
3,866.00	2.10	345.40	3,864.27	8.73	25.96	-7.63	0.53	0.21	-14.04
3,960.00	2.20	343.00	3,958.20	12.12	25.00	-11.06	0.14	0.11	-2.55
4,054.00	2.00	341.20	4,052.14	15.40	23.94	-14.38	0.22	-0.21	-1.91
4,148.00	2.00	336.10	4,146.08	18.45	22.75	-17.48	0.19	0.00	-5.43
4,241.00	2.00	347.00	4,239.03	21.52	21.73	-20.58	0.41	0.00	11.72
4,335.00	2.20	350.70	4,332.96	24.90	21.06	-23.99	0.26	0.21	3.94
4,429.00	1.90	347.60	4,426.90	28.20	20.44	-27.31	0.34	-0.32	-3.30
4,523.00	2.10	344.70	4,520.85	31.38	19.65	-30.53	0.24	0.21	-3.09
4,617.00	2.00	344.00	4,614.79	34.62	18.74	-33.80	0.11	-0.11	-0.74

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4,711.00	1.90	341.70	4,708.73	37.68	17.80	-36.89	0.14	-0.11	-2.45
4,805.00	1.70	342.30	4,802.68	40.48	16.89	-39.74	0.21	-0.21	0.64
4,898.00	1.80	359.10	4,895.64	43.26	16.45	-42.53	0.56	0.11	18.06
4,992.00	1.80	355.90	4,989.60	46.21	16.32	-45.48	0.11	0.00	-3.40
5,086.00	2.40	7.20	5,083.53	49.63	16.46	-48.89	0.77	0.64	12.02
5,180.00	2.50	12.80	5,177.45	53.58	17.16	-52.81	0.28	0.11	5.96
5,273.00	2.50	9.10	5,270.36	57.57	17.93	-56.76	0.17	0.00	-3.98
5,367.00	2.50	5.80	5,364.27	61.63	18.46	-60.80	0.15	0.00	-3.51
5,461.00	2.10	22.20	5,458.19	65.26	19.32	-64.39	0.82	-0.43	17.45
5,555.00	1.40	17.50	5,552.15	67.95	20.31	-67.04	0.76	-0.74	-5.00
5,649.00	1.10	3.70	5,646.13	69.95	20.72	-69.01	0.45	-0.32	-14.68
5,742.00	0.90	345.40	5,739.11	71.55	20.59	-70.61	0.40	-0.22	-19.68
5,836.00	1.00	335.90	5,833.10	73.01	20.07	-72.10	0.20	0.11	-10.11
5,930.00	0.80	342.30	5,927.09	74.38	19.54	-73.49	0.24	-0.21	6.81
6,024.00	0.70	336.20	6,021.08	75.53	19.10	-74.66	0.14	-0.11	-6.49
6,118.00	0.80	26.50	6,115.07	76.65	19.17	-75.77	0.68	0.11	53.51
6,212.00	0.80	39.00	6,209.06	77.74	19.87	-76.84	0.19	0.00	13.30
6,305.00	0.60	33.80	6,302.06	78.65	20.55	-77.72	0.23	-0.22	-5.59
6,399.00	0.50	26.20	6,396.05	79.43	21.01	-78.47	0.13	-0.11	-8.09
6,493.00	0.60	11.60	6,490.05	80.28	21.29	-79.31	0.18	0.11	-15.53
6,587.00	0.60	18.90	6,584.04	81.23	21.54	-80.25	0.08	0.00	7.77
6,681.00	0.50	12.10	6,678.04	82.10	21.79	-81.10	0.13	-0.11	-7.23
6,774.00	0.80	24.80	6,771.03	83.08	22.15	-82.07	0.36	0.32	13.66
6,868.00	0.80	24.30	6,865.02	84.27	22.69	-83.24	0.01	0.00	-0.53
6,962.00	0.40	11.50	6,959.02	85.19	23.03	-84.15	0.45	-0.43	-13.62
7,056.00	1.40	5.80	7,053.01	86.66	23.21	-85.60	1.07	1.06	-6.06
7,150.00	2.20	7.00	7,146.96	89.59	23.55	-88.52	0.85	0.85	1.28
7,244.00	1.90	7.80	7,240.90	92.93	23.98	-91.83	0.32	-0.32	0.85
7,338.00	1.50	354.20	7,334.86	95.69	24.06	-94.59	0.60	-0.43	-14.47
7,432.00	1.00	335.80	7,428.83	97.67	23.60	-96.58	0.68	-0.53	-19.57
7,526.00	1.20	0.00	7,522.82	99.40	23.27	-98.33	0.53	0.21	25.74
7,620.00	1.50	27.90	7,616.79	101.47	23.84	-100.37	0.76	0.32	29.68
7,713.00	1.60	44.90	7,709.76	103.47	25.33	-102.30	0.50	0.11	18.28
7,808.00	1.50	73.90	7,804.73	104.75	27.46	-103.50	0.82	-0.11	30.53
7,902.00	1.70	58.70	7,898.69	105.82	29.83	-104.46	0.50	0.21	-16.17
7,995.00	2.10	60.00	7,991.64	107.38	32.49	-105.92	0.43	0.43	1.40
8,089.00	2.10	66.50	8,085.58	108.93	35.56	-107.33	0.25	0.00	6.91
8,183.00	2.40	49.40	8,179.50	110.90	38.63	-109.17	0.78	0.32	-18.19
8,277.00	2.80	42.00	8,273.41	113.89	41.66	-112.03	0.55	0.43	-7.87
8,371.00	2.50	39.60	8,367.31	117.17	44.51	-115.19	0.34	-0.32	-2.55
8,464.00	2.40	36.30	8,460.22	120.31	46.95	-118.22	0.19	-0.11	-3.55
8,558.00	2.00	33.10	8,554.15	123.27	49.01	-121.09	0.44	-0.43	-3.40
8,652.00	1.60	21.90	8,648.11	125.86	50.40	-123.62	0.56	-0.43	-11.91

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8,746.00	1.40	16.70	8,742.07	128.17	51.22	-125.90	0.26	-0.21	-5.53
8,798.98	1.40	11.23	8,795.04	129.43	51.53	-127.14	0.25	-0.01	-10.33
Remuda North 704H FTP									
8,839.00	1.40	7.10	8,835.05	130.39	51.68	-128.09	0.25	0.01	-10.32
8,933.00	1.80	3.30	8,929.01	133.00	51.91	-130.69	0.44	0.43	-4.04
9,010.26	1.88	3.38	9,006.22	135.48	52.06	-133.16	0.11	0.11	0.11
Remuda South 704H FTP									
9,027.00	1.90	3.40	9,022.96	136.03	52.09	-133.71	0.11	0.11	0.10
9,121.00	2.00	359.00	9,116.91	139.23	52.15	-136.90	0.19	0.11	-4.68
9,215.00	1.90	354.00	9,210.85	142.42	51.96	-140.10	0.21	-0.11	-5.32
9,322.00	1.40	354.40	9,317.81	145.48	51.65	-143.17	0.47	-0.47	0.37
9,416.00	1.30	339.40	9,411.78	147.62	51.16	-145.33	0.39	-0.11	-15.96
9,509.00	1.90	355.60	9,504.74	150.15	50.67	-147.88	0.80	0.65	17.42
9,603.00	1.40	359.40	9,598.71	152.85	50.54	-150.58	0.54	-0.53	4.04
9,697.00	0.80	341.20	9,692.69	154.62	50.32	-152.36	0.73	-0.64	-19.36
9,791.00	0.80	36.60	9,786.68	155.77	50.50	-153.50	0.79	0.00	58.94
9,852.00	0.40	36.80	9,847.68	156.28	50.88	-153.99	0.66	-0.66	0.33
9,891.00	0.40	47.70	9,886.68	156.48	51.06	-154.19	0.19	0.00	27.95
9,922.00	1.30	126.60	9,917.67	156.34	51.42	-154.03	4.14	2.90	254.52
9,954.00	3.10	136.40	9,949.65	155.50	52.31	-153.15	5.73	5.62	30.62
Remuda North 904H PBHL (copy) - Remuda North 904H PBHL									
9,985.00	4.50	138.30	9,980.58	153.99	53.70	-151.58	4.53	4.52	6.13
10,016.00	6.00	138.20	10,011.45	151.87	55.59	-149.39	4.84	4.84	-0.32
10,047.00	7.40	138.80	10,042.24	149.16	57.98	-146.58	4.52	4.52	1.94
10,079.00	8.70	139.00	10,073.92	145.78	60.93	-143.08	4.06	4.06	0.62
10,110.00	9.70	140.40	10,104.52	142.00	64.13	-139.17	3.31	3.23	4.52
10,141.00	10.60	140.50	10,135.04	137.79	67.61	-134.81	2.90	2.90	0.32
10,175.00	11.50	140.90	10,168.40	132.75	71.73	-129.60	2.66	2.65	1.18
10,206.00	13.20	143.70	10,198.69	127.49	75.78	-124.18	5.81	5.48	9.03
10,238.00	16.30	146.00	10,229.63	120.83	80.45	-117.32	9.86	9.69	7.19
10,269.00	19.50	147.40	10,259.12	112.86	85.68	-109.14	10.41	10.32	4.52
10,300.00	23.20	148.80	10,287.99	103.27	91.63	-99.31	12.05	11.94	4.52
10,331.00	26.80	150.10	10,316.08	91.99	98.28	-87.76	11.75	11.61	4.19
10,363.00	30.10	151.60	10,344.21	78.67	105.69	-74.14	10.55	10.31	4.69
10,394.00	33.90	153.30	10,370.50	64.10	113.28	-59.26	12.60	12.26	5.48
10,425.00	37.30	155.10	10,395.70	47.86	121.12	-42.70	11.48	10.97	5.81
10,456.00	40.80	156.10	10,419.77	30.07	129.18	-24.59	11.47	11.29	3.23
10,488.00	44.60	157.50	10,443.29	10.13	137.72	-4.30	12.24	11.87	4.37
10,519.00	47.90	158.30	10,464.72	-10.62	146.14	16.78	10.81	10.65	2.58
10,550.00	50.90	160.30	10,484.89	-32.64	154.45	39.13	10.85	9.68	6.45
10,581.00	54.30	161.70	10,503.72	-55.92	162.46	62.73	11.54	10.97	4.52
10,613.00	57.50	163.40	10,521.66	-81.20	170.39	88.32	10.92	10.00	5.31
10,644.00	60.80	164.50	10,537.55	-106.77	177.75	114.18	11.07	10.65	3.55
10,675.00	64.50	165.50	10,551.79	-133.36	184.87	141.05	12.27	11.94	3.23

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 Database: TRUEPERF_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,707.00	67.00	165.80	10,564.94	-161.63	192.10	169.59	7.86	7.81	0.94
10,715.14	67.60	165.85	10,568.08	-168.90	193.94	176.94	7.44	7.42	0.65
Remuda North 904H LP									
10,738.00	69.30	166.00	10,576.47	-189.53	199.11	197.77	7.44	7.42	0.64
10,769.00	72.20	166.10	10,586.69	-217.93	206.16	226.44	9.36	9.35	0.32
10,800.00	74.00	166.80	10,595.70	-246.76	213.11	255.54	6.20	5.81	2.26
10,831.00	74.90	167.90	10,604.01	-275.90	219.65	284.93	4.48	2.90	3.55
10,863.00	76.50	169.60	10,611.92	-306.32	225.70	315.57	7.18	5.00	5.31
10,894.00	79.00	171.20	10,618.50	-336.18	230.75	345.63	9.51	8.06	5.16
10,925.00	82.80	171.70	10,623.40	-366.45	235.30	376.05	12.36	12.26	1.61
10,930.23	83.55	171.53	10,624.02	-371.58	236.05	381.22	14.77	14.41	-3.26
Remuda South 124H LP									
10,931.65	83.76	171.48	10,624.18	-372.97	236.26	382.62	14.77	14.41	-3.25
Remuda South 124H LP p2									
10,932.68	83.91	171.45	10,624.29	-373.99	236.41	383.64	14.77	14.41	-3.25
Remuda South 124H LP p3									
10,938.00	84.67	171.28	10,624.82	-379.23	237.21	388.90	14.77	14.41	-3.24
Wellpath Crosses Section Line @ Heel									
10,959.00	87.70	170.60	10,626.21	-399.92	240.51	409.71	14.77	14.41	-3.23
10,990.00	89.60	170.10	10,626.94	-430.47	245.70	440.46	6.34	6.13	-1.61
11,053.00	89.30	169.50	10,627.55	-492.47	256.86	502.87	1.06	-0.48	-0.95
11,059.10	89.37	169.58	10,627.62	-498.47	257.97	508.92	1.73	1.17	1.28
Remuda South 904H LP									
11,147.00	90.40	170.70	10,627.79	-585.06	273.02	596.07	1.73	1.17	1.28
11,241.00	90.00	173.30	10,627.47	-678.14	286.10	689.62	2.80	-0.43	2.77
11,273.00	90.28	174.50	10,627.39	-709.96	289.50	721.55	3.86	0.86	3.76
Wellpath Crosses 330°FNL, 369°FEL									
11,275.72	90.30	174.61	10,627.38	-712.67	289.76	724.27	3.86	0.86	3.76
Remuda South 124H FTP									
11,278.50	90.32	174.71	10,627.36	-715.44	290.02	727.04	3.86	0.86	3.76
Remuda South 904H FTP									
11,334.00	90.80	176.80	10,626.82	-770.78	294.12	782.51	3.86	0.86	3.76
11,428.00	90.20	180.10	10,626.00	-864.73	296.67	876.48	3.57	-0.64	3.51
11,522.00	90.50	180.30	10,625.42	-958.72	296.34	970.38	0.38	0.32	0.21
11,616.00	92.20	182.00	10,623.21	-1,052.67	294.45	1,064.17	2.56	1.81	1.81
11,710.00	91.00	181.70	10,620.58	-1,146.58	291.42	1,157.87	1.32	-1.28	-0.32
11,804.00	89.40	180.40	10,620.25	-1,240.56	289.70	1,251.69	2.19	-1.70	-1.38
11,897.00	88.10	178.60	10,622.28	-1,333.53	290.51	1,344.61	2.39	-1.40	-1.94
11,991.00	88.10	178.30	10,625.40	-1,427.44	293.05	1,438.55	0.32	0.00	-0.32
12,085.00	88.50	177.80	10,628.19	-1,521.35	296.25	1,532.50	0.68	0.43	-0.53
12,179.00	89.20	178.30	10,630.08	-1,615.27	299.44	1,626.48	0.92	0.74	0.53
12,273.00	88.10	177.90	10,632.29	-1,709.19	302.56	1,720.45	1.25	-1.17	-0.43
12,367.00	90.00	179.80	10,633.85	-1,803.15	304.44	1,814.40	2.86	2.02	2.02
12,460.00	90.80	181.10	10,633.20	-1,896.15	303.71	1,907.28	1.64	0.86	1.40
12,554.00	90.70	180.10	10,631.97	-1,990.13	302.73	2,001.14	1.07	-0.11	-1.06

Survey Report

Company: XTO Energy
Project: Eddy County, NM (NAD27) NMEZ
Site: Remuda South 25 State Pad
Well: Remuda South 25 State 124H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well Remuda South 25 State 124H - Slot S 124H
TVD Reference: 3075+30 @ 3105.00usft (Cactus118)
MD Reference: 3075+30 @ 3105.00usft (Cactus118)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: TRUEPERF_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,648.00	90.00	179.40	10,631.39	-2,084.13	303.14	2,095.07	1.05	-0.74	-0.74
12,741.00	90.00	179.90	10,631.39	-2,177.13	303.71	2,188.01	0.54	0.00	0.54
12,835.00	89.30	181.00	10,631.97	-2,271.12	302.97	2,281.89	1.39	-0.74	1.17
12,929.00	90.40	180.90	10,632.21	-2,365.10	301.41	2,375.72	1.18	1.17	-0.11
13,022.00	91.40	180.70	10,630.75	-2,458.08	300.11	2,468.56	1.10	1.08	-0.22
13,116.00	92.80	181.70	10,627.31	-2,552.00	298.15	2,562.31	1.83	1.49	1.06
13,210.00	90.70	181.40	10,624.44	-2,645.91	295.61	2,656.03	2.26	-2.23	-0.32
13,304.00	89.00	180.80	10,624.69	-2,739.89	293.80	2,749.85	1.92	-1.81	-0.64
13,398.00	87.90	180.80	10,627.23	-2,833.85	292.49	2,843.67	1.17	-1.17	0.00
13,492.00	88.90	180.50	10,629.85	-2,927.80	291.42	2,937.50	1.11	1.06	-0.32
13,586.00	88.60	179.80	10,631.90	-3,021.78	291.18	3,031.38	0.81	-0.32	-0.74
13,680.00	89.20	179.70	10,633.71	-3,115.76	291.59	3,125.29	0.65	0.64	-0.11
13,773.00	89.40	179.60	10,634.84	-3,208.75	292.16	3,218.23	0.24	0.22	-0.11
13,867.00	88.10	179.30	10,636.89	-3,302.72	293.06	3,312.15	1.42	-1.38	-0.32
13,961.00	89.50	179.20	10,638.86	-3,396.69	294.29	3,406.09	1.49	1.49	-0.11
14,055.00	89.10	179.30	10,640.01	-3,490.68	295.52	3,500.04	0.44	-0.43	0.11
14,148.00	89.40	178.10	10,641.23	-3,583.64	297.63	3,593.01	1.33	0.32	-1.29
14,242.00	90.50	178.60	10,641.31	-3,677.60	300.33	3,687.00	1.29	1.17	0.53
14,336.00	90.10	177.30	10,640.82	-3,771.54	303.70	3,781.00	1.45	-0.43	-1.38
14,430.00	90.80	178.60	10,640.08	-3,865.47	307.06	3,874.99	1.57	0.74	1.38
14,524.00	91.10	180.00	10,638.52	-3,959.45	308.21	3,968.93	1.52	0.32	1.49
14,617.00	88.30	180.10	10,639.01	-4,052.44	308.13	4,061.84	3.01	-3.01	0.11
14,711.00	88.60	179.70	10,641.55	-4,146.40	308.29	4,155.72	0.53	0.32	-0.43
14,805.00	88.70	180.30	10,643.77	-4,240.38	308.29	4,249.61	0.65	0.11	0.64
14,899.00	88.90	180.60	10,645.73	-4,334.35	307.55	4,343.47	0.38	0.21	0.32
14,993.00	89.30	179.50	10,647.21	-4,428.34	307.47	4,437.37	1.25	0.43	-1.17
15,087.00	90.00	179.00	10,647.79	-4,522.33	308.70	4,531.33	0.92	0.74	-0.53
15,181.00	90.50	179.40	10,647.37	-4,616.32	310.01	4,625.29	0.68	0.53	0.43
15,275.00	91.10	178.80	10,646.06	-4,710.30	311.49	4,719.25	0.90	0.64	-0.64
15,368.00	90.50	179.70	10,644.76	-4,803.28	312.71	4,812.20	1.16	-0.65	0.97
15,462.00	89.20	179.90	10,645.01	-4,897.28	313.03	4,906.13	1.40	-1.38	0.21
15,556.00	89.30	180.00	10,646.24	-4,991.27	313.12	5,000.04	0.15	0.11	0.11
15,649.00	90.20	180.90	10,646.65	-5,084.26	312.39	5,092.92	1.37	0.97	0.97
15,743.00	90.90	179.40	10,645.74	-5,178.25	312.14	5,186.82	1.76	0.74	-1.60
15,837.00	89.60	180.10	10,645.33	-5,272.25	312.55	5,280.75	1.57	-1.38	0.74
15,931.00	88.50	179.00	10,646.89	-5,366.23	313.29	5,374.67	1.65	-1.17	-1.17
16,025.00	90.40	179.30	10,647.79	-5,460.21	314.68	5,468.63	2.05	2.02	0.32
16,119.00	91.70	180.30	10,646.07	-5,554.19	315.01	5,562.54	1.74	1.38	1.06
16,213.00	89.50	180.40	10,645.09	-5,648.18	314.44	5,656.42	2.34	-2.34	0.11
16,306.00	88.70	181.00	10,646.55	-5,741.16	313.30	5,749.27	1.08	-0.86	0.65
16,400.00	88.70	180.70	10,648.68	-5,835.13	311.91	5,843.09	0.32	0.00	-0.32
16,494.00	88.40	180.60	10,651.06	-5,929.09	310.84	5,936.93	0.34	-0.32	-0.11
16,588.00	89.40	180.30	10,652.86	-6,023.07	310.10	6,030.79	1.11	1.06	-0.32

Survey Report

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Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well Remuda South 25 State 124H - Slot S 124H
TVD Reference: 3075+30 @ 3105.00usft (Cactus118)
MD Reference: 3075+30 @ 3105.00usft (Cactus118)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: TRUEPERF_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,682.00	89.60	179.70	10,653.68	-6,117.06	310.10	6,124.70	0.67	0.21	-0.64
16,776.00	89.20	179.60	10,654.67	-6,211.06	310.68	6,218.64	0.44	-0.43	-0.11
16,869.00	90.00	179.40	10,655.32	-6,304.05	311.49	6,311.58	0.89	0.86	-0.22
16,963.00	91.40	179.50	10,654.17	-6,398.04	312.39	6,405.52	1.49	1.49	0.11
17,057.00	91.10	180.10	10,652.12	-6,492.01	312.72	6,499.43	0.71	-0.32	0.64
17,151.00	89.10	180.80	10,651.96	-6,586.00	311.98	6,593.30	2.25	-2.13	0.74
17,245.00	88.90	180.40	10,653.60	-6,679.99	311.00	6,687.16	0.48	-0.21	-0.43
17,339.00	90.00	180.10	10,654.50	-6,773.98	310.59	6,781.05	1.21	1.17	-0.32
17,433.00	91.20	180.30	10,653.51	-6,867.97	310.26	6,874.95	1.29	1.28	0.21
17,526.00	89.00	179.70	10,653.35	-6,960.96	310.26	6,967.86	2.45	-2.37	-0.65
17,620.00	89.40	179.40	10,654.66	-7,054.95	311.00	7,061.79	0.53	0.43	-0.32
17,714.00	90.20	179.00	10,654.99	-7,148.94	312.31	7,155.75	0.95	0.85	-0.43
17,808.00	91.70	179.20	10,653.43	-7,242.91	313.78	7,249.70	1.61	1.60	0.21
17,902.00	92.50	179.50	10,649.99	-7,336.84	314.85	7,343.60	0.91	0.85	0.32
17,996.00	90.20	181.10	10,647.77	-7,430.81	314.36	7,437.45	2.98	-2.45	1.70
18,090.00	89.90	180.80	10,647.69	-7,524.79	312.80	7,531.29	0.45	-0.32	-0.32
18,184.00	89.70	180.70	10,648.02	-7,618.79	311.57	7,625.15	0.24	-0.21	-0.11
18,278.00	90.20	180.40	10,648.10	-7,712.78	310.67	7,719.02	0.62	0.53	-0.32
18,372.00	91.10	180.50	10,647.04	-7,806.77	309.93	7,812.90	0.96	0.96	0.11
18,466.00	91.90	180.50	10,644.58	-7,900.73	309.11	7,906.74	0.85	0.85	0.00
18,559.00	90.80	180.70	10,642.38	-7,993.70	308.13	7,999.58	1.20	-1.18	0.22
18,587.83	91.17	180.56	10,641.89	-8,022.53	307.82	8,028.37	1.36	1.27	-0.48
Remuda South 124H LTP									
18,588.00	91.17	180.56	10,641.89	-8,022.70	307.81	8,028.54	1.36	1.27	-0.48
Wellpath Crosses 330°FSL,375°FEL									
18,596.80	91.28	180.52	10,641.70	-8,031.50	307.73	8,037.33	1.36	1.27	-0.48
Remuda South 904H LTP									
18,622.00	91.60	180.40	10,641.07	-8,056.68	307.53	8,062.48	1.36	1.27	-0.48
Remuda South 704H LTP									
18,675.00	91.60	180.40	10,639.59	-8,109.66	307.16	8,115.40	0.00	0.00	0.00
TD @ 243FSL, 381FEL - Remuda South 904H PBHL - Remuda South 103H PBHL - Remuda South 123H PBHL - Remuda South 124H PBHL									

Survey Report

Company: XTO Energy
Project: Eddy County, NM (NAD27) NMEZ
Site: Remuda South 25 State Pad
Well: Remuda South 25 State 124H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well Remuda South 25 State 124H - Slot S 124H
TVD Reference: 3075+30 @ 3105.00usft (Cactus118)
MD Reference: 3075+30 @ 3105.00usft (Cactus118)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: TRUEPERF_EDM

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Remuda South 124H SL - actual wellpath hits target center - Point	0.00	0.01	0.00	0.00	0.00	464,640.30	621,628.10	32° 16' 36.470 N	103° 56' 23.267 W
Remuda South 124H FT - actual wellpath misses target center by 25.28usft at 11275.72usft MD (10627.38 TVD, -712.67 N, 289.76 E) - Point	0.00	0.00	10,624.0 0	-710.30	314.70	463,930.00	621,942.80	32° 16' 29.429 N	103° 56' 19.632 W
Remuda South 124H B+ - actual wellpath hits target center - Point	0.00	0.00	10,639.5 9	-8,109.66	307.16	456,530.62	621,935.26	32° 15' 16.205 N	103° 56' 20.037 W
Remuda South 124H PE - actual wellpath misses target center by 58.50usft at 18675.00usft MD (10639.59 TVD, -8109.66 N, 307.16 E) - Rectangle (sides W50.00 H7,440.00 D0.00)	0.00	0.00	10,651.1 8	-8,153.08	344.60	456,487.20	621,972.70	32° 15' 15.774 N	103° 56' 19.602 W
Remuda South 124H LT - actual wellpath misses target center by 37.17usft at 18587.85usft MD (10641.89 TVD, -8022.54 N, 307.82 E) - Point	0.00	0.00	10,651.1 8	-8,023.08	343.80	456,617.20	621,971.90	32° 15' 17.060 N	103° 56' 19.606 W

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,938.00	10,624.82	-379.23	237.21	Wellpath Crosses Section Line @ Heel
11,273.00	10,627.39	-709.96	289.50	Wellpath Crosses 330'FNL, 369'FEL
18,588.00	10,641.89	-8,022.70	307.81	Wellpath Crosses 330'FSL, 375'FEL
18,675.00	10,639.59	-8,109.66	307.16	TD @ 243FSL, 381FEL

Checked By: _____ Approved By: _____ Date: _____