

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda North 31 State 123H - Slot REMUDA NORTH 31 STATE_123H_SHL
Project:	Eddy County, NM (NAD27) NMEZ US	TVD Reference:	3215+30 @ 3245.00usft (Akita90)
Site:	Remuda North_South 31 State Pad	MD Reference:	3215+30 @ 3245.00usft (Akita90)
Well:	Remuda North 31 State 123H	North Reference:	Grid
Wellbore:	North 31 123H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	North 31 123H Lateral (AsDrilled)	Database:	TRUEPERF_EDM

Project	Eddy County, NM (NAD27) NMEZ US		
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_South 31 State Pad, centered on 123H				
Site Position:		Northing:	458,327.40 usft	Latitude:	32.2593878
From:	Map	Easting:	627,293.40 usft	Longitude:	-103.9215405
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.22 °

Well	Remuda North 31 State 123H - Slot REMUDA NORTH 31 STATE_123H_SHL					
Well Position	+N/-S	0.00 usft	Northing:	458,327.40 usft	Latitude:	32.2593878
	+E/-W	0.00 usft	Easting:	627,293.40 usft	Longitude:	-103.9215405
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,215.00 usft

Wellbore	North 31 123H Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	06/04/18	7.01	60.03	47,824

Design	North 31 123H Lateral (AsDrilled)				
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	357.01	

Survey Program	Date	08/09/18			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
60.00	378.00	Survey #2 (North 31 123H Lateral)	MWD	MWD v3:standard declination	
544.00	24,180.00	Survey #1 (North 31 123H Lateral)	MWD	MWD v3:standard declination	
24,269.00	24,269.00	Survey #3 (North 31 123H Lateral)	Projection	Projection	

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REMUDA NORTH 31 STATE_113H_SHL - Remuda Basin State 013(Offset) - REMUDA NORTH 31 STATE_124H_SHL - REMUDA NORTH 31 :									
60.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
295.00	0.80	337.00	294.99	1.12	-0.48	1.15	0.46	0.46	0.00
378.00	1.10	344.00	377.98	2.42	-0.92	2.47	0.39	0.36	8.43
544.00	1.30	3.10	543.95	5.84	-1.26	5.89	0.27	0.12	11.51
575.00	1.30	4.70	574.94	6.54	-1.21	6.59	0.12	0.00	5.16

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Design:	North 31 123H Lateral (AsDrilled)	Database:	Minimum Curvature
			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)
668.00	1.40	4.70	667.91	8.72	-1.03	8.76	0.11	0.11	0.00
763.00	1.10	8.90	762.89	10.78	-0.80	10.81	0.33	-0.32	4.42
858.00	1.30	10.10	857.87	12.74	-0.47	12.75	0.21	0.21	1.26
952.00	1.70	29.80	951.84	15.00	0.41	14.96	0.69	0.43	20.96
1,047.00	2.00	42.50	1,046.79	17.45	2.23	17.30	0.53	0.32	13.37
1,142.00	1.80	7.30	1,141.74	20.15	3.54	19.94	1.23	-0.21	-37.05
1,237.00	1.10	313.70	1,236.71	22.26	3.07	22.07	1.53	-0.74	-56.42
1,331.00	0.90	305.30	1,330.70	23.31	1.82	23.18	0.26	-0.21	-8.94
1,426.00	0.80	338.00	1,425.69	24.35	0.96	24.27	0.51	-0.11	34.42
1,521.00	1.10	322.80	1,520.68	25.69	0.16	25.65	0.41	0.32	-16.00
1,616.00	0.70	349.70	1,615.66	26.99	-0.49	26.98	0.60	-0.42	28.32
1,711.00	1.10	340.30	1,710.65	28.42	-0.91	28.43	0.45	0.42	-9.89
1,806.00	0.40	208.60	1,805.65	28.99	-1.37	29.02	1.47	-0.74	-138.63
1,900.00	1.50	155.90	1,899.63	27.58	-1.03	27.59	1.38	1.17	-56.06
1,996.00	1.60	150.40	1,995.60	25.27	0.15	25.22	0.19	0.10	-5.73
2,091.00	1.60	146.40	2,090.56	23.01	1.54	22.90	0.12	0.00	-4.21
2,186.00	1.80	137.20	2,185.52	20.81	3.29	20.61	0.36	0.21	-9.68
2,281.00	1.80	146.90	2,280.47	18.46	5.11	18.17	0.32	0.00	10.21
2,376.00	1.80	144.40	2,375.43	16.00	6.80	15.62	0.08	0.00	-2.63
2,471.00	2.60	162.90	2,470.36	12.73	8.30	12.28	1.12	0.84	19.47
2,566.00	2.00	189.90	2,565.28	9.04	8.65	8.57	1.29	-0.63	28.42
2,662.00	1.80	191.90	2,661.23	5.91	8.05	5.48	0.22	-0.21	2.08
2,756.00	1.70	190.10	2,755.19	3.09	7.50	2.70	0.12	-0.11	-1.91
2,851.00	1.90	175.50	2,850.14	0.13	7.38	-0.25	0.52	0.21	-15.37
2,946.00	1.90	207.40	2,945.09	-2.83	6.78	-3.18	1.10	0.00	33.58
3,041.00	1.80	208.90	3,040.04	-5.54	5.33	-5.81	0.12	-0.11	1.58
3,136.00	2.10	193.10	3,134.99	-8.54	4.21	-8.75	0.65	0.32	-16.63
3,231.00	2.20	217.40	3,229.92	-11.68	2.71	-11.81	0.96	0.11	25.58
3,326.00	1.90	261.30	3,324.87	-13.37	0.05	-13.35	1.64	-0.32	46.21
3,420.00	1.90	261.10	3,418.81	-13.85	-3.03	-13.67	0.01	0.00	-0.21
3,515.00	2.10	273.10	3,513.76	-14.00	-6.33	-13.65	0.49	0.21	12.63
3,610.00	2.00	269.10	3,608.70	-13.93	-9.72	-13.40	0.18	-0.11	-4.21
3,705.00	1.50	300.20	3,703.65	-13.33	-12.45	-12.66	1.11	-0.53	32.74
3,800.00	1.90	307.40	3,798.61	-11.75	-14.78	-10.96	0.48	0.42	7.58
3,894.00	1.50	303.20	3,892.57	-10.13	-17.05	-9.22	0.45	-0.43	-4.47
3,989.00	1.70	297.00	3,987.53	-8.81	-19.34	-7.79	0.28	0.21	-6.53
4,084.00	1.60	343.40	4,082.50	-6.90	-20.98	-5.79	1.37	-0.11	48.84
4,179.00	1.90	27.50	4,177.46	-4.23	-20.63	-3.15	1.41	0.32	46.42
4,274.00	2.30	31.90	4,272.39	-1.21	-18.89	-0.22	0.45	0.42	4.63
4,369.00	1.10	15.10	4,367.35	1.29	-17.65	2.21	1.35	-1.26	-17.68
4,464.00	1.00	16.30	4,462.33	2.96	-17.18	3.85	0.11	-0.11	1.26
Remuda Basin State 9(Offset)									
4,559.00	0.80	34.40	4,557.32	4.31	-16.57	5.16	0.36	-0.21	19.05

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Survey										
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4,653.00	1.00	17.20	4,651.31	5.63	-15.96	6.46	0.36	0.21	-18.30	
4,749.00	0.80	31.90	4,747.30	7.00	-15.36	7.79	0.32	-0.21	15.31	
4,843.00	0.80	30.20	4,841.29	8.12	-14.68	8.88	0.03	0.00	-1.81	
4,938.00	0.60	359.60	4,936.28	9.19	-14.35	9.93	0.44	-0.21	-32.21	
5,033.00	0.80	20.10	5,031.28	10.32	-14.13	11.04	0.33	0.21	21.58	
5,128.00	0.90	9.10	5,126.27	11.67	-13.78	12.38	0.20	0.11	-11.58	
5,223.00	0.60	177.80	5,221.26	11.91	-13.64	12.61	1.57	-0.32	177.58	
5,318.00	0.90	187.10	5,316.25	10.68	-13.72	11.38	0.34	0.32	9.79	
5,413.00	0.80	166.20	5,411.24	9.29	-13.65	9.99	0.34	-0.11	-22.00	
5,507.00	0.60	180.80	5,505.24	8.16	-13.50	8.86	0.28	-0.21	15.53	
5,602.00	0.70	185.40	5,600.23	7.09	-13.56	7.79	0.12	0.11	4.84	
5,697.00	1.00	188.00	5,695.22	5.69	-13.73	6.40	0.32	0.32	2.74	
5,792.00	1.00	174.50	5,790.21	4.04	-13.77	4.76	0.25	0.00	-14.21	
5,887.00	0.90	168.20	5,885.19	2.49	-13.54	3.19	0.15	-0.11	-6.63	
5,981.00	0.80	186.40	5,979.18	1.11	-13.46	1.81	0.30	-0.11	19.36	
6,076.00	0.70	187.30	6,074.17	-0.12	-13.61	0.59	0.11	-0.11	0.95	
6,171.00	0.70	194.90	6,169.17	-1.26	-13.83	-0.54	0.10	0.00	8.00	
6,266.00	0.70	148.60	6,264.16	-2.31	-13.68	-1.60	0.58	0.00	-48.74	
6,361.00	0.80	145.70	6,359.15	-3.36	-13.00	-2.67	0.11	0.11	-3.05	
6,455.00	0.90	147.80	6,453.14	-4.52	-12.24	-3.88	0.11	0.11	2.23	
6,550.00	0.70	137.00	6,548.13	-5.58	-11.44	-4.98	0.26	-0.21	-11.37	
6,645.00	0.70	148.60	6,643.13	-6.50	-10.74	-5.93	0.15	0.00	12.21	
6,740.00	1.00	158.30	6,738.12	-7.77	-10.14	-7.23	0.35	0.32	10.21	
6,835.00	0.70	171.90	6,833.11	-9.11	-9.75	-8.59	0.38	-0.32	14.32	
6,930.00	0.80	169.70	6,928.10	-10.34	-9.55	-9.83	0.11	0.11	-2.32	
7,024.00	1.20	164.80	7,022.08	-11.93	-9.17	-11.44	0.43	0.43	-5.21	
7,119.00	0.70	165.70	7,117.07	-13.45	-8.77	-12.98	0.53	-0.53	0.95	
7,214.00	0.30	18.60	7,212.07	-13.78	-8.54	-13.32	1.02	-0.42	-154.84	
7,309.00	0.40	22.60	7,307.07	-13.24	-8.34	-12.79	0.11	0.11	4.21	
7,404.00	0.40	254.60	7,402.06	-13.02	-8.53	-12.56	0.76	0.00	-134.74	
7,499.00	1.70	190.30	7,497.05	-14.50	-9.10	-14.00	1.65	1.37	-67.68	
7,594.00	0.70	231.30	7,592.03	-16.25	-9.81	-15.71	1.32	-1.05	43.16	
7,689.00	0.90	291.90	7,687.02	-16.33	-10.95	-15.74	0.87	0.21	63.79	
7,783.00	0.40	328.60	7,781.01	-15.77	-11.81	-15.14	0.67	-0.53	39.04	
7,878.00	0.40	354.10	7,876.01	-15.16	-12.01	-14.51	0.19	0.00	26.84	
7,973.00	0.70	253.90	7,971.01	-14.99	-12.61	-14.31	0.91	0.32	-105.47	
8,068.00	0.70	291.60	8,066.00	-14.94	-13.70	-14.20	0.48	0.00	39.68	
8,163.00	1.30	267.50	8,160.99	-14.77	-15.32	-13.95	0.76	0.63	-25.37	
8,258.00	0.90	280.70	8,255.97	-14.68	-17.13	-13.77	0.50	-0.42	13.89	
8,353.00	1.10	308.30	8,350.96	-13.98	-18.58	-12.99	0.54	0.21	29.05	
8,447.00	1.40	355.20	8,444.94	-12.27	-19.38	-11.25	1.10	0.32	49.89	
8,542.00	1.40	2.60	8,539.91	-9.96	-19.43	-8.93	0.19	0.00	7.79	

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8,637.00	1.60	333.90	8,634.88	-7.61	-19.96	-6.56	0.81	0.21	-30.21
8,732.00	0.60	349.40	8,729.86	-5.93	-20.63	-4.84	1.09	-1.05	16.32
8,826.00	1.00	94.70	8,823.85	-5.51	-19.91	-4.47	1.38	0.43	112.02
8,921.00	1.00	111.20	8,918.84	-5.88	-18.31	-4.92	0.30	0.00	17.37
9,016.00	0.50	107.90	9,013.83	-6.31	-17.14	-5.40	0.53	-0.53	-3.47
9,111.00	0.90	107.00	9,108.82	-6.65	-16.03	-5.81	0.42	0.42	-0.95
9,206.00	0.80	113.80	9,203.81	-7.14	-14.71	-6.36	0.15	-0.11	7.16
9,300.00	0.60	162.40	9,297.81	-7.87	-13.96	-7.13	0.64	-0.21	51.70
9,395.00	0.30	215.10	9,392.80	-8.55	-13.95	-7.81	0.51	-0.32	55.47
9,454.00	0.70	226.70	9,451.80	-8.92	-14.31	-8.16	0.70	0.68	19.66
9,515.00	0.70	227.30	9,512.80	-9.43	-14.85	-8.64	0.01	0.00	0.98
9,610.00	1.10	321.30	9,607.79	-9.11	-15.85	-8.27	1.42	0.42	98.95
9,704.00	2.40	324.30	9,701.74	-6.81	-17.56	-5.89	1.39	1.38	3.19
9,799.00	2.60	350.40	9,796.66	-3.07	-19.08	-2.07	1.21	0.21	27.47
9,894.00	2.30	357.00	9,891.57	0.96	-19.54	1.98	0.43	-0.32	6.95
9,989.00	2.10	0.60	9,986.50	4.60	-19.62	5.62	0.26	-0.21	3.79
10,052.00	1.80	1.40	10,049.46	6.74	-19.58	7.76	0.48	-0.48	1.27
10,088.00	1.70	2.00	10,085.45	7.84	-19.55	8.85	0.28	-0.28	1.67
10,119.00	2.70	329.20	10,116.42	8.93	-19.91	9.96	5.06	3.23	-105.81
10,151.00	8.30	310.00	10,148.26	11.06	-22.07	12.20	18.18	17.50	-60.00
10,182.00	14.30	308.40	10,178.65	14.88	-26.79	16.26	19.38	19.35	-5.16
10,214.00	17.90	309.00	10,209.39	20.44	-33.71	22.17	11.26	11.25	1.87
10,246.00	18.00	309.10	10,239.83	26.65	-41.37	28.77	0.33	0.31	0.31
10,277.00	17.90	302.30	10,269.33	32.22	-49.11	34.73	6.76	-0.32	-21.94
10,309.00	19.10	295.30	10,299.68	37.08	-58.00	40.06	7.88	3.75	-21.87
10,340.00	19.10	293.50	10,328.97	41.27	-67.24	44.72	1.90	0.00	-5.81
10,372.00	18.90	292.80	10,359.23	45.37	-76.82	49.31	0.95	-0.62	-2.19
10,403.00	18.70	291.30	10,388.57	49.12	-86.08	53.54	1.69	-0.65	-4.84
10,435.00	21.60	291.10	10,418.61	53.10	-96.35	58.06	9.07	9.06	-0.62
10,466.00	22.40	291.20	10,447.35	57.29	-107.18	62.81	2.58	2.58	0.32
10,498.00	25.70	294.50	10,476.57	62.38	-119.19	68.51	11.13	10.31	10.31
10,530.00	31.00	296.10	10,504.73	68.88	-132.91	75.72	16.73	16.56	5.00
10,561.00	36.60	297.20	10,530.48	76.63	-148.31	84.26	18.17	18.06	3.55
10,593.00	42.90	298.10	10,555.07	86.13	-166.42	94.69	19.77	19.69	2.81
10,625.00	47.20	297.60	10,577.67	96.70	-186.44	106.30	13.48	13.44	-1.56
10,656.00	48.20	296.90	10,598.53	107.20	-206.83	117.84	3.63	3.23	-2.26
10,688.00	50.80	297.70	10,619.31	118.36	-228.44	130.12	8.34	8.12	2.50
10,720.00	51.80	298.40	10,639.32	130.11	-250.48	142.99	3.56	3.12	2.19
10,751.00	54.10	301.20	10,658.00	142.41	-271.94	156.40	10.34	7.42	9.03
10,783.00	58.50	307.90	10,675.76	157.52	-293.82	172.63	22.18	13.75	20.94
10,814.00	60.40	310.70	10,691.52	174.43	-314.47	190.60	9.90	6.13	9.03
10,846.00	61.90	314.10	10,706.97	193.33	-335.16	210.55	10.42	4.69	10.62
10,878.00	65.80	320.20	10,721.08	214.39	-354.66	232.60	21.00	12.19	19.06

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda North 31 State 123H - Slot
Project:	Eddy County, NM (NAD27) NMEZ US	TVD Reference:	REMUDA NORTH 31 STATE_123H_SHL
Site:	Remuda North_South 31 State Pad	MD Reference:	3215+30 @ 3245.00usft (Akita90)
Well:	Remuda North 31 State 123H	North Reference:	3215+30 @ 3245.00usft (Akita90)
Wellbore:	North 31 123H Lateral	Survey Calculation Method:	Grid
Design:	North 31 123H Lateral (AsDrilled)	Database:	Minimum Curvature
			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)
10,909.00	68.20	325.80	10,733.20	237.17	-371.82	256.24	18.34	7.74	18.06
10,940.00	68.80	329.40	10,744.56	261.52	-387.27	281.36	10.98	1.94	11.61
10,972.00	69.80	331.10	10,755.87	287.51	-402.12	308.09	5.87	3.12	5.31
11,004.00	70.10	331.00	10,766.85	313.81	-416.67	335.12	0.98	0.94	-0.31
11,035.00	71.00	331.10	10,777.17	339.39	-430.82	361.40	2.92	2.90	0.32
11,068.00	71.60	330.90	10,787.75	366.73	-445.97	389.49	1.91	1.82	-0.61
11,099.00	73.30	333.70	10,797.10	392.90	-459.71	416.34	10.21	5.48	9.03
11,131.00	75.60	337.40	10,805.68	420.96	-472.46	445.03	13.26	7.19	11.56
11,162.00	76.30	338.20	10,813.20	448.80	-483.82	473.42	3.37	2.26	2.58
11,169.50	76.44	338.72	10,814.97	455.58	-486.50	480.34	6.95	1.85	6.89
REMUDA NORTH 31 STATE_123H_LP(179FNL504FWL)									
11,194.00	76.90	340.40	10,820.62	477.92	-494.82	503.08	6.95	1.88	6.87
11,225.00	77.70	343.10	10,827.44	506.63	-504.29	532.25	8.88	2.58	8.71
11,257.00	80.00	345.30	10,833.63	536.84	-512.83	562.86	9.86	7.19	6.87
11,289.00	82.90	346.80	10,838.38	567.55	-520.46	593.92	10.18	9.06	4.69
11,321.00	84.00	347.30	10,842.03	598.53	-527.58	625.23	3.77	3.44	1.56
11,352.00	84.50	347.20	10,845.14	628.61	-534.39	655.63	1.64	1.61	-0.32
11,356.00	84.80	347.20	10,845.51	632.50	-535.27	659.56	7.50	7.50	0.00
Wellpath Crosses Unit Line @ Heel									
11,384.00	86.90	347.20	10,847.54	659.73	-541.46	687.07	7.50	7.50	0.00
11,415.00	90.40	347.30	10,848.27	689.95	-548.30	717.61	11.29	11.29	0.32
11,447.00	92.20	346.90	10,847.54	721.13	-555.44	749.12	5.76	5.62	-1.25
11,464.00	92.70	346.70	10,846.82	737.67	-559.32	765.84	3.17	2.94	-1.18
11,550.00	95.10	346.20	10,840.97	821.08	-579.42	850.18	2.85	2.79	-0.58
11,567.03	94.46	346.43	10,839.55	837.56	-583.43	866.86	3.99	-3.75	1.36
REMUDA NORTH 31 STATE_124H_FTP(347FNL346FEL)									
11,614.30	92.69	347.07	10,836.60	883.48	-594.25	913.27	3.99	-3.75	1.35
REMUDA NORTH 31 STATE_113H_FTP(347FSL496FEL)									
11,646.00	91.50	347.50	10,835.44	914.39	-601.22	944.50	3.99	-3.75	1.35
11,711.00	90.20	347.16	10,834.48	977.79	-615.47	1,008.57	2.07	-2.00	-0.53
Wellpath Crosses FTP (347FSL)									
11,718.92	90.04	347.12	10,834.46	985.52	-617.24	1,016.37	2.07	-2.00	-0.53
REMUDA NORTH 31 STATE_123H_FTP(347FSL331FWL)									
11,741.00	89.60	347.00	10,834.53	1,007.03	-622.18	1,038.12	2.07	-2.00	-0.53
11,835.00	89.20	349.10	10,835.51	1,098.99	-641.64	1,130.96	2.27	-0.43	2.23
11,930.00	89.30	352.70	10,836.76	1,192.77	-656.66	1,225.40	3.79	0.11	3.79
12,026.00	90.00	355.10	10,837.34	1,288.21	-666.87	1,321.25	2.60	0.73	2.50
12,121.00	88.90	355.30	10,838.26	1,382.88	-674.81	1,416.19	1.18	-1.16	0.21
12,216.00	87.80	357.20	10,840.99	1,477.63	-681.02	1,511.14	2.31	-1.16	2.00
12,311.00	88.40	0.90	10,844.14	1,572.55	-682.60	1,606.01	3.94	0.63	3.89
12,406.00	87.70	1.40	10,847.37	1,667.47	-680.69	1,700.71	0.91	-0.74	0.53
12,501.00	87.70	1.80	10,851.19	1,762.36	-678.04	1,795.32	0.42	0.00	0.42
12,596.00	88.20	1.60	10,854.59	1,857.25	-675.23	1,889.95	0.57	0.53	-0.21

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda North 31 State 123H - Slot REMUDA NORTH 31 STATE_123H_SHL
Project:	Eddy County, NM (NAD27) NMEZ US	TVD Reference:	3215+30 @ 3245.00usft (Akita90)
Site:	Remuda North_South 31 State Pad	MD Reference:	3215+30 @ 3245.00usft (Akita90)
Well:	Remuda North 31 State 123H	North Reference:	Grid
Wellbore:	North 31 123H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	North 31 123H Lateral (AsDrilled)	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)
12,691.00	87.50	1.60	10,858.15	1,952.15	-672.58	1,984.57	0.74	-0.74	0.00
12,786.00	89.70	2.50	10,860.47	2,047.05	-669.18	2,079.17	2.50	2.32	0.95
12,881.00	91.70	3.00	10,859.31	2,141.93	-664.62	2,173.68	2.17	2.11	0.53
12,976.00	90.40	2.30	10,857.57	2,236.81	-660.23	2,268.20	1.55	-1.37	-0.74
13,071.00	90.20	1.90	10,857.07	2,331.75	-656.75	2,362.83	0.47	-0.21	-0.42
13,166.00	88.80	1.30	10,857.90	2,426.70	-654.10	2,457.52	1.60	-1.47	-0.63
13,260.00	91.00	0.50	10,858.06	2,520.68	-652.62	2,551.29	2.49	2.34	-0.85
13,355.00	91.40	359.90	10,856.08	2,615.66	-652.29	2,646.13	0.76	0.42	-0.63
13,450.00	90.90	359.60	10,854.17	2,710.64	-652.70	2,741.00	0.61	-0.53	-0.32
13,545.00	91.40	359.20	10,852.26	2,805.62	-653.70	2,835.90	0.67	0.53	-0.42
13,640.00	92.10	358.90	10,849.36	2,900.56	-655.27	2,930.79	0.80	0.74	-0.32
13,734.00	92.70	358.80	10,845.42	2,994.46	-657.16	3,024.66	0.65	0.64	-0.11
13,829.00	91.50	358.30	10,841.94	3,089.36	-659.56	3,119.56	1.37	-1.26	-0.53
13,924.00	92.20	357.50	10,838.88	3,184.25	-663.04	3,214.50	1.12	0.74	-0.84
14,019.00	92.90	358.40	10,834.65	3,279.09	-666.43	3,309.39	1.20	0.74	0.95
14,114.00	89.70	359.70	10,832.49	3,374.04	-668.01	3,404.29	3.64	-3.37	1.37
14,209.00	91.40	359.60	10,831.58	3,469.03	-668.59	3,499.18	1.79	1.79	-0.11
14,304.00	90.90	0.80	10,829.68	3,564.01	-668.26	3,594.01	1.37	-0.53	1.26
14,398.00	88.60	0.30	10,830.09	3,657.99	-667.35	3,687.83	2.50	-2.45	-0.53
14,493.00	90.00	0.40	10,831.25	3,752.98	-666.77	3,782.65	1.48	1.47	0.11
14,588.00	87.40	0.40	10,833.40	3,847.95	-666.11	3,877.46	2.74	-2.74	0.00
14,683.00	87.50	0.60	10,837.63	3,942.85	-665.28	3,972.19	0.24	0.11	0.21
14,778.00	88.20	0.40	10,841.19	4,037.78	-664.45	4,066.94	0.77	0.74	-0.21
14,873.00	88.90	1.30	10,843.60	4,132.74	-663.04	4,161.70	1.20	0.74	0.95
14,968.00	88.70	0.20	10,845.59	4,227.71	-661.80	4,256.47	1.18	-0.21	-1.16
15,063.00	89.30	0.60	10,847.24	4,322.69	-661.14	4,351.29	0.76	0.63	0.42
15,158.00	87.40	0.40	10,849.98	4,417.64	-660.31	4,446.07	2.01	-2.00	-0.21
15,253.00	90.80	2.40	10,851.47	4,512.58	-657.99	4,540.76	4.15	3.58	2.11
15,347.00	92.20	3.20	10,849.01	4,606.44	-653.40	4,634.25	1.72	1.49	0.85
15,442.00	90.20	2.80	10,847.02	4,701.28	-648.43	4,728.70	2.15	-2.11	-0.42
15,537.00	90.30	0.10	10,846.61	4,796.24	-646.02	4,823.41	2.84	0.11	-2.84
15,632.00	90.40	358.40	10,846.03	4,891.23	-647.27	4,918.33	1.79	0.11	-1.79
15,727.00	91.00	358.40	10,844.87	4,986.18	-649.92	5,013.29	0.63	0.63	0.00
15,821.00	90.50	357.70	10,843.64	5,080.12	-653.12	5,107.27	0.92	-0.53	-0.74
15,916.00	90.90	358.20	10,842.47	5,175.05	-656.52	5,202.25	0.67	0.42	0.53
16,011.00	90.80	357.50	10,841.07	5,269.97	-660.08	5,297.23	0.74	-0.11	-0.74
16,106.00	90.80	357.00	10,839.74	5,364.85	-664.64	5,392.22	0.53	0.00	-0.53
16,219.00	92.10	356.80	10,836.88	5,477.65	-670.75	5,505.18	1.16	1.15	-0.18
16,314.00	89.80	358.40	10,835.30	5,572.54	-674.72	5,600.15	2.95	-2.42	1.68
16,408.00	89.50	357.60	10,835.88	5,666.48	-678.00	5,694.13	0.91	-0.32	-0.85
16,503.00	89.00	359.60	10,837.12	5,761.44	-680.32	5,789.09	2.17	-0.53	2.11
16,598.00	89.10	359.60	10,838.70	5,856.43	-680.99	5,883.97	0.11	0.11	0.00
16,693.00	90.40	358.40	10,839.11	5,951.41	-682.64	5,978.91	1.86	1.37	-1.26

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda North 31 State 123H - Slot REMUDA NORTH 31 STATE_123H_SHL
Project:	Eddy County, NM (NAD27) NMEZ US	TVD Reference:	3215+30 @ 3245.00usft (Akita90)
Site:	Remuda North_South 31 State Pad	MD Reference:	3215+30 @ 3245.00usft (Akita90)
Well:	Remuda North 31 State 123H	North Reference:	Grid
Wellbore:	North 31 123H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	North 31 123H Lateral (AsDrilled)	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)
16,788.00	90.30	358.40	10,838.53	6,046.37	-685.30	6,073.88	0.11	-0.11	0.00
16,883.00	89.90	357.40	10,838.37	6,141.30	-688.78	6,168.87	1.13	-0.42	-1.05
16,978.00	89.50	358.50	10,838.86	6,236.24	-692.18	6,263.85	1.23	-0.42	1.16
17,073.00	89.10	359.10	10,840.02	6,331.21	-694.17	6,358.80	0.76	-0.42	0.63
17,168.00	88.20	0.90	10,842.26	6,426.18	-694.17	6,453.64	2.12	-0.95	1.89
17,263.00	88.30	359.90	10,845.16	6,521.13	-693.50	6,548.43	1.06	0.11	-1.05
17,314.36	88.95	0.39	10,846.40	6,572.47	-693.38	6,599.69	1.58	1.26	0.95
Remuda Basin 30 State 3(Offset)									
17,358.00	89.50	0.80	10,846.99	6,616.11	-692.92	6,643.25	1.58	1.26	0.95
17,453.00	90.80	1.30	10,846.74	6,711.09	-691.18	6,738.01	1.47	1.37	0.53
17,548.00	92.90	0.90	10,843.67	6,806.02	-689.36	6,832.71	2.25	2.21	-0.42
17,642.00	93.30	0.40	10,838.59	6,899.87	-688.29	6,926.38	0.68	0.43	-0.53
17,737.00	93.10	0.00	10,833.29	6,994.73	-687.96	7,021.09	0.47	-0.21	-0.42
17,832.00	93.50	359.60	10,827.82	7,089.57	-688.29	7,115.82	0.59	0.42	-0.42
17,897.67	93.64	359.18	10,823.73	7,155.11	-688.99	7,181.31	0.67	0.21	-0.64
GR 30 State 2 (Offset)									
17,926.00	93.70	359.00	10,821.91	7,183.37	-689.44	7,209.56	0.67	0.21	-0.64
18,021.00	90.60	359.60	10,818.35	7,278.29	-690.60	7,304.40	3.32	-3.26	0.63
18,116.00	89.70	359.30	10,818.10	7,373.28	-691.51	7,399.31	1.00	-0.95	-0.32
18,211.00	88.90	357.90	10,819.26	7,468.24	-693.83	7,494.27	1.70	-0.84	-1.47
18,306.00	90.00	359.10	10,820.17	7,563.20	-696.32	7,589.23	1.71	1.16	1.26
18,401.00	90.30	358.10	10,819.93	7,658.17	-698.64	7,684.19	1.10	0.32	-1.05
18,495.00	90.20	359.70	10,819.52	7,752.15	-700.44	7,778.14	1.71	-0.11	1.70
18,590.00	89.30	359.10	10,819.93	7,847.14	-701.44	7,873.05	1.14	-0.95	-0.63
18,685.00	88.80	358.30	10,821.51	7,942.11	-703.59	7,967.99	0.99	-0.53	-0.84
18,780.00	88.10	358.40	10,824.08	8,037.03	-706.33	8,062.93	0.74	-0.74	0.11
18,874.00	89.30	359.10	10,826.21	8,130.98	-708.38	8,156.86	1.48	1.28	0.74
18,969.00	88.30	358.90	10,828.20	8,225.95	-710.04	8,251.78	1.07	-1.05	-0.21
19,064.00	93.50	3.20	10,826.70	8,320.86	-708.30	8,346.48	7.10	5.47	4.53
19,159.00	92.60	2.40	10,821.65	8,415.61	-703.67	8,440.86	1.27	-0.95	-0.84
GR 30 State 1 (Offset)									
19,254.00	92.50	0.60	10,817.42	8,510.48	-701.18	8,535.47	1.90	-0.11	-1.89
19,349.00	92.60	359.80	10,813.20	8,605.39	-700.85	8,630.23	0.85	0.11	-0.84
19,443.00	92.70	359.30	10,808.85	8,699.28	-701.59	8,724.04	0.54	0.11	-0.53
19,538.00	91.40	359.40	10,805.45	8,794.22	-702.66	8,818.90	1.37	-1.37	0.11
19,633.00	91.40	358.40	10,803.13	8,889.17	-704.49	8,913.81	1.05	0.00	-1.05
19,728.00	93.10	359.00	10,799.40	8,984.07	-706.64	9,008.70	1.90	1.79	0.63
19,823.00	89.40	0.70	10,797.33	9,079.02	-706.89	9,103.54	4.29	-3.89	1.79
19,918.00	87.60	0.60	10,799.82	9,173.98	-705.81	9,198.31	1.90	-1.89	-0.11
20,013.00	86.90	359.40	10,804.37	9,268.87	-705.81	9,293.07	1.46	-0.74	-1.26
20,108.00	85.50	358.90	10,810.67	9,363.65	-707.22	9,387.79	1.56	-1.47	-0.53
20,207.00	84.90	359.20	10,818.95	9,462.29	-708.85	9,486.38	0.68	-0.61	0.30
20,289.00	88.00	1.10	10,824.03	9,544.11	-708.64	9,568.09	4.43	3.78	2.32

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda North 31 State 123H - Slot
Project:	Eddy County, NM (NAD27) NMEZ US	TVD Reference:	REMUDA NORTH 31 STATE_123H_SHL
Site:	Remuda North_South 31 State Pad	MD Reference:	3215+30 @ 3245.00usft (Akita90)
Well:	Remuda North 31 State 123H	North Reference:	3215+30 @ 3245.00usft (Akita90)
Wellbore:	North 31 123H Lateral	Survey Calculation Method:	Grid
Design:	North 31 123H Lateral (AsDrilled)	Database:	Minimum Curvature
			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)	
20,384.00	90.10	1.60	10,825.61	9,639.07	-706.40	9,662.79	2.27	2.21	0.53	
20,479.00	90.60	1.70	10,825.03	9,734.03	-703.66	9,757.48	0.54	0.53	0.11	
20,574.00	91.10	1.40	10,823.62	9,828.98	-701.09	9,852.17	0.61	0.53	-0.32	
20,669.00	92.00	1.90	10,821.05	9,923.91	-698.36	9,946.82	1.08	0.95	0.53	
20,764.00	92.60	2.00	10,817.23	10,018.78	-695.13	10,041.40	0.64	0.63	0.11	
20,859.00	92.90	1.80	10,812.68	10,113.61	-691.98	10,135.94	0.38	0.32	-0.21	
20,953.00	93.00	0.90	10,807.84	10,207.46	-689.77	10,229.55	0.96	0.11	-0.96	
21,048.00	91.30	1.30	10,804.27	10,302.37	-687.95	10,324.23	1.84	-1.79	0.42	
21,143.00	89.20	358.80	10,803.86	10,397.36	-687.87	10,419.09	3.44	-2.21	-2.63	
21,238.00	89.20	359.00	10,805.19	10,492.33	-689.69	10,514.02	0.21	0.00	0.21	
21,272.85	89.24	358.63	10,805.66	10,527.17	-690.41	10,548.85	1.06	0.11	-1.05	
Remuda Basin State 2(Offset)										
21,333.00	89.30	358.00	10,806.43	10,587.29	-692.18	10,608.98	1.06	0.11	-1.05	
21,428.00	88.40	357.40	10,808.34	10,682.19	-695.99	10,703.96	1.14	-0.95	-0.63	
21,522.00	88.60	356.90	10,810.80	10,776.05	-700.66	10,797.92	0.57	0.21	-0.53	
21,617.00	88.60	359.00	10,813.12	10,870.95	-704.06	10,892.88	2.21	0.00	2.21	
21,712.00	88.00	358.10	10,815.94	10,965.88	-706.46	10,987.80	1.14	-0.63	-0.95	
21,806.00	90.40	359.50	10,817.25	11,059.84	-708.43	11,081.73	2.96	2.55	1.49	
21,901.00	89.80	358.70	10,817.08	11,154.83	-709.92	11,176.67	1.05	-0.63	-0.84	
21,996.00	88.80	357.40	10,818.24	11,249.76	-713.15	11,271.64	1.73	-1.05	-1.37	
22,091.00	90.00	358.70	10,819.24	11,344.70	-716.38	11,366.62	1.86	1.26	1.37	
22,185.00	90.20	358.40	10,819.08	11,438.67	-718.76	11,460.59	0.38	0.21	-0.32	
22,280.00	91.30	358.90	10,817.83	11,533.63	-721.00	11,555.54	1.27	1.16	0.53	
22,375.00	91.80	358.50	10,815.26	11,628.57	-723.16	11,650.46	0.67	0.53	-0.42	
22,470.00	90.80	358.00	10,813.11	11,723.50	-726.06	11,745.41	1.18	-1.05	-0.53	
22,565.00	89.40	356.30	10,812.94	11,818.38	-730.78	11,840.41	2.32	-1.47	-1.79	
22,632.45	89.68	356.73	10,813.48	11,885.70	-734.88	11,907.85	0.76	0.42	0.63	
Remuda Basin State 1Q(Offset)										
22,660.00	89.80	356.90	10,813.60	11,913.21	-736.41	11,935.40	0.76	0.42	0.63	
22,754.00	88.90	358.30	10,814.67	12,007.11	-740.35	12,029.39	1.77	-0.96	1.49	
22,849.00	89.30	0.90	10,816.16	12,102.09	-741.01	12,124.27	2.77	0.42	2.74	
22,944.00	90.80	2.90	10,816.08	12,197.03	-737.86	12,218.92	2.63	1.58	2.11	
23,039.00	91.40	2.60	10,814.26	12,291.90	-733.31	12,313.42	0.71	0.63	-0.32	
23,134.00	91.50	2.20	10,811.85	12,386.79	-729.33	12,407.97	0.43	0.11	-0.42	
23,229.00	91.80	2.30	10,809.12	12,481.68	-725.60	12,502.53	0.33	0.32	0.11	
23,324.00	92.50	2.30	10,805.55	12,576.53	-721.79	12,597.06	0.74	0.74	0.00	
23,419.00	91.80	2.50	10,801.99	12,671.38	-717.82	12,691.58	0.77	-0.74	0.21	
23,514.00	90.80	2.90	10,799.83	12,766.25	-713.34	12,786.08	1.13	-1.05	0.42	
23,609.00	90.00	1.30	10,799.17	12,861.18	-709.86	12,880.70	1.88	-0.84	-1.68	
23,704.00	90.20	1.10	10,799.00	12,956.16	-707.87	12,975.45	0.30	0.21	-0.21	
23,799.00	90.10	0.70	10,798.76	13,051.15	-706.38	13,070.23	0.43	-0.11	-0.42	
23,894.00	89.60	0.20	10,799.00	13,146.14	-705.63	13,165.06	0.74	-0.53	-0.53	
23,989.00	89.30	0.20	10,799.92	13,241.14	-705.30	13,259.90	0.32	-0.32	0.00	

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda North 31 State 123H - Slot REMUDA NORTH 31 STATE_123H_SHL
Project:	Eddy County, NM (NAD27) NMEZ US	TVD Reference:	3215+30 @ 3245.00usft (Akita90)
Site:	Remuda North_South 31 State Pad	MD Reference:	3215+30 @ 3245.00usft (Akita90)
Well:	Remuda North 31 State 123H	North Reference:	Grid
Wellbore:	North 31 123H Lateral	Survey Calculation Method:	Minimum Curvature
Design:	North 31 123H Lateral (AsDrilled)	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)
24,084.00	88.60	0.90	10,801.66	13,336.12	-704.39	13,354.70	1.04	-0.74	0.74
24,094.79	88.71	0.81	10,801.91	13,346.90	-704.23	13,365.46	1.33	1.04	-0.83
Remuda Basin Fee 1(Offset)									
24,180.00	89.60	0.10	10,803.17	13,432.10	-703.55	13,450.51	1.33	1.04	-0.83
24,269.00	89.60	0.10	10,803.79	13,521.10	-703.40	13,539.38	0.00	0.00	0.00
TD @ 381FNL,356FWL - REMUDA NORTH 31 STATE_123H_BHL (381FNL,356FWL) - REMUDA NORTH 31 STATE_113H_PBHL(200FNL485F									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,356.00	10,845.51	632.50	-535.27	Wellpath Crosses Unit Line @ Heel
11,711.00	10,834.48	977.79	-615.47	Wellpath Crosses FTP (347'FSL)
24,269.00	10,803.79	13,521.10	-703.40	TD @ 381FNL,356FWL

Checked By: _____ Approved By: _____ Date: _____