

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25_121H
Project:	Eddy County, NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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
From:	Map	Easting:	621,538.20 ft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	32° 16' 36.472 N
		Longitude:	103° 56' 24.314 W
		Grid Convergence:	0.21 °

Well	Remuda South 25 State 121H - Slot S-25_121H		
Well Position	+N/-S	0.00 usft	Northing: 464,639.60 ft
	+E/-W	0.00 usft	Easting: 620,278.40 ft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 16' 36.512 N
		Longitude:	103° 56' 38.988 W
		Ground Level:	3,062.00 usft

Wellbore	Lateral		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	03/16/18	(°)
			7.05
			Dip Angle (°)
			60.04
			Field Strength (nT)
			47,856

Design	Lateral		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°)
			181.99

Survey Program	Date 06/21/18		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
111.00	18,443.00	Survey #1 (Lateral)	MWD
18,500.00	18,500.00	Survey #2 (Lateral)	Projection
			Description
			MWD v3:standard declination
			Projection

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100ft)	(°/100ft)	(°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
S-25_121H_SL										
0.02	0.00	342.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	
S-25_101H_SL										
111.00	0.20	342.00	111.00	0.18	-0.06	-0.18	0.18	0.18	0.00	
146.00	0.20	31.00	146.00	0.29	-0.05	-0.29	0.47	0.00	140.00	
177.00	0.70	309.00	177.00	0.46	-0.17	-0.45	2.26	1.61	-264.52	
207.00	0.20	325.00	207.00	0.62	-0.34	-0.61	1.70	-1.67	53.33	
294.00	2.10	258.00	293.98	0.41	-1.99	-0.34	2.33	2.18	-77.01	

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25_121H
Project:	Eddy County, NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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)
308.00	1.70	251.80	307.97	0.29	-2.43	-0.21	3.21	-2.86	-44.29
339.00	1.30	253.73	338.96	0.05	-3.21	0.06	1.30	-1.29	6.23
368.00	0.80	252.00	367.95	-0.10	-3.72	0.23	1.73	-1.72	-5.97
426.00	1.10	72.80	425.95	-0.06	-3.57	0.19	3.28	0.52	-308.96
458.00	1.80	72.30	457.94	0.18	-2.80	-0.08	2.19	2.19	-1.56
545.00	2.10	72.20	544.89	1.08	0.02	-1.08	0.34	0.34	-0.11
575.00	2.20	69.70	574.87	1.45	1.09	-1.49	0.46	0.33	-8.33
665.00	2.20	54.50	664.80	3.05	4.11	-3.19	0.65	0.00	-16.89
759.00	2.10	52.60	758.74	5.15	6.95	-5.38	0.13	-0.11	-2.02
855.00	1.70	34.60	854.69	7.39	9.15	-7.70	0.74	-0.42	-18.75
952.00	1.30	33.80	951.65	9.49	10.58	-9.85	0.41	-0.41	-0.82
1,047.00	1.00	20.50	1,046.63	11.16	11.47	-11.55	0.42	-0.32	-14.00
1,143.00	0.80	8.40	1,142.62	12.61	11.87	-13.01	0.29	-0.21	-12.60
1,238.00	0.60	19.10	1,237.61	13.73	12.12	-14.14	0.25	-0.21	11.26
1,333.00	0.20	357.10	1,332.61	14.37	12.28	-14.78	0.44	-0.42	-23.16
1,428.00	0.10	353.40	1,427.61	14.61	12.26	-15.03	0.11	-0.11	-3.89
1,524.00	0.90	78.50	1,523.61	14.85	12.99	-15.29	0.93	0.83	88.65
1,619.00	1.10	74.30	1,618.59	15.24	14.60	-15.74	0.22	0.21	-4.42
1,714.00	0.60	53.70	1,713.58	15.79	15.88	-16.33	0.61	-0.53	-21.68
1,809.00	0.30	94.70	1,808.58	16.06	16.53	-16.62	0.44	-0.32	43.16
1,903.00	0.50	142.00	1,902.58	15.72	17.02	-16.30	0.39	0.21	50.32
1,997.00	0.70	127.50	1,996.57	15.04	17.73	-15.65	0.27	0.21	-15.43
2,092.00	1.80	92.80	2,091.55	14.62	19.68	-15.29	1.36	1.16	-36.53
2,187.00	2.70	84.60	2,186.47	14.75	23.40	-15.56	1.00	0.95	-8.63
2,284.00	2.20	76.30	2,283.39	15.41	27.48	-16.36	0.63	-0.52	-8.56
2,381.00	3.00	88.60	2,380.29	15.91	31.83	-17.01	1.00	0.82	12.68
2,475.00	1.20	65.60	2,474.22	16.38	35.19	-17.59	2.08	-1.91	-24.47
2,570.00	1.60	137.00	2,569.20	15.82	37.00	-17.10	1.75	0.42	75.16
2,665.00	2.00	146.90	2,664.15	13.46	38.81	-14.80	0.53	0.42	10.42
2,760.00	1.10	187.00	2,759.12	11.17	39.60	-12.54	1.43	-0.95	42.21
2,853.00	1.20	249.00	2,852.10	9.93	38.58	-11.27	1.28	0.11	66.67
2,948.00	2.10	235.50	2,947.06	8.59	36.22	-9.84	1.03	0.95	-14.21
3,043.00	1.00	235.80	3,042.03	7.14	34.10	-8.32	1.16	-1.16	0.32
3,137.00	1.00	238.70	3,136.01	6.25	32.72	-7.38	0.05	0.00	3.09
3,231.00	0.80	281.70	3,230.00	5.96	31.38	-7.04	0.73	-0.21	45.74
3,326.90	0.90	277.80	3,325.89	6.20	29.98	-7.23	0.12	0.10	-4.07
3,421.00	0.90	284.50	3,419.98	6.48	28.53	-7.47	0.11	0.00	7.12
3,517.00	0.80	315.00	3,515.97	7.14	27.32	-8.09	0.48	-0.10	31.77
3,611.00	0.80	311.40	3,609.96	8.04	26.37	-8.95	0.05	0.00	-3.83
3,707.00	0.60	309.70	3,705.95	8.81	25.48	-9.69	0.21	-0.21	-1.77
3,803.00	0.70	316.50	3,801.95	9.55	24.69	-10.41	0.13	0.10	7.08
3,897.00	0.80	316.20	3,895.94	10.44	23.84	-11.27	0.11	0.11	-0.32
3,993.00	0.60	332.40	3,991.93	11.37	23.14	-12.17	0.29	-0.21	16.87

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25 121H
Project:	Eddy County, NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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)
4,086.00	0.60	339.90	4,084.93	12.26	22.75	-13.04	0.08	0.00	8.06
4,181.00	0.50	335.30	4,179.92	13.11	22.40	-13.88	0.11	-0.11	-4.84
4,275.00	0.60	326.00	4,273.92	13.89	21.96	-14.64	0.14	0.11	-9.89
4,371.00	0.60	339.60	4,369.91	14.77	21.50	-15.51	0.15	0.00	14.17
4,466.00	0.40	326.60	4,464.91	15.52	21.15	-16.24	0.24	-0.21	-13.68
4,561.00	0.40	309.20	4,559.91	16.00	20.71	-16.71	0.13	0.00	-18.32
4,656.00	0.30	68.90	4,654.91	16.30	20.68	-17.01	0.64	-0.11	126.00
4,751.00	0.40	129.40	4,749.90	16.18	21.17	-16.91	0.38	0.11	63.68
4,846.00	0.30	149.00	4,844.90	15.76	21.55	-16.50	0.16	-0.11	20.63
4,941.00	0.30	99.70	4,939.90	15.50	21.93	-16.25	0.26	0.00	-51.89
5,036.00	0.40	90.90	5,034.90	15.46	22.50	-16.23	0.12	0.11	-9.26
5,132.00	0.30	66.40	5,130.90	15.55	23.07	-16.34	0.19	-0.10	-25.52
5,228.00	0.20	1.50	5,226.90	15.82	23.30	-16.62	0.29	-0.10	-67.60
5,323.00	0.00	324.20	5,321.90	15.98	23.31	-16.78	0.21	-0.21	0.00
5,418.00	0.00	194.00	5,416.90	15.98	23.31	-16.78	0.00	0.00	0.00
5,513.00	0.10	6.80	5,511.90	16.07	23.32	-16.87	0.11	0.11	0.00
5,608.00	0.10	115.40	5,606.90	16.11	23.40	-16.92	0.17	0.00	114.32
5,703.00	0.30	107.10	5,701.90	16.01	23.72	-16.82	0.21	0.21	-8.74
5,798.00	0.40	271.60	5,796.90	15.94	23.62	-16.75	0.73	0.11	173.16
5,894.00	0.60	258.81	5,892.89	15.85	22.79	-16.64	0.24	0.21	-13.32
5,988.00	0.60	231.10	5,986.89	15.45	21.93	-16.20	0.31	0.00	-29.48
6,084.00	0.70	218.30	6,082.88	14.67	21.17	-15.40	0.18	0.10	-13.33
6,180.00	0.70	233.30	6,178.87	13.86	20.34	-14.56	0.19	0.00	15.62
6,276.00	0.80	234.70	6,274.87	13.12	19.32	-13.79	0.11	0.10	1.46
6,370.00	0.80	230.30	6,368.86	12.33	18.28	-12.95	0.07	0.00	-4.68
6,465.00	0.60	230.80	6,463.85	11.59	17.39	-12.18	0.21	-0.21	0.53
6,561.00	0.30	218.70	6,559.85	11.07	16.84	-11.65	0.33	-0.31	-12.60
6,656.00	0.40	232.90	6,654.84	10.68	16.42	-11.24	0.14	0.11	14.95
6,751.00	0.40	241.90	6,749.84	10.32	15.86	-10.87	0.07	0.00	9.47
6,847.00	0.10	210.50	6,845.84	10.09	15.52	-10.63	0.33	-0.31	-32.71
6,942.00	0.20	264.90	6,940.84	10.01	15.32	-10.53	0.17	0.11	57.26
7,038.00	0.50	249.40	7,036.84	9.85	14.76	-10.35	0.32	0.31	-16.15
7,133.00	0.60	277.40	7,131.83	9.76	13.88	-10.24	0.30	0.11	29.47
7,230.00	1.00	326.40	7,228.83	10.53	12.90	-10.98	0.78	0.41	50.52
7,325.00	1.20	90.90	7,323.82	11.21	13.44	-11.67	2.05	0.21	131.05
7,421.00	0.50	267.40	7,419.81	11.17	14.03	-11.65	1.77	-0.73	183.85
7,517.00	0.90	222.60	7,515.81	10.60	13.10	-11.05	0.68	0.42	-46.67
7,613.00	0.30	238.90	7,611.80	9.92	12.37	-10.34	0.64	-0.62	16.98
7,707.00	0.90	151.40	7,705.80	9.14	12.52	-9.57	1.00	0.64	-93.08
7,802.00	1.70	11.70	7,800.78	9.87	13.16	-10.32	2.59	0.84	-147.05
7,898.00	1.70	17.90	7,896.74	12.61	13.89	-13.09	0.19	0.00	6.46
7,991.00	1.70	175.00	7,989.73	12.55	14.43	-13.05	3.58	0.00	168.92

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25 121H
Project:	Eddy County NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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)
8,085.00	1.70	110.90	8,083.69	10.67	15.85	-11.21	1.92	0.00	-68.19
8,180.00	1.70	18.90	8,178.67	11.50	17.63	-12.10	2.57	0.00	-96.84
8,275.00	1.50	189.00	8,273.65	11.60	17.89	-12.22	3.36	-0.21	179.05
8,370.00	1.60	205.90	8,368.62	9.18	17.12	-9.77	0.49	0.11	17.79
8,466.00	1.50	2.30	8,464.61	9.23	16.58	-9.80	3.16	-0.10	162.92
8,561.00	1.70	4.70	8,559.57	11.88	16.75	-12.45	0.22	0.21	2.53
8,657.00	2.60	359.80	8,655.50	15.47	16.85	-16.05	0.96	0.94	-5.10
8,753.00	2.40	353.30	8,751.41	19.65	16.61	-20.21	0.36	-0.21	-6.77
8,848.00	2.00	348.50	8,846.34	23.25	16.05	-23.79	0.46	-0.42	-5.05
8,880.70	1.96	345.57	8,879.02	24.35	15.80	-24.88	0.33	-0.12	-8.96
S-25_702H_FTP									
8,945.00	1.90	339.50	8,943.28	26.41	15.15	-26.92	0.33	-0.09	-9.44
9,039.00	1.90	337.70	9,037.23	29.31	14.01	-29.78	0.06	0.00	-1.91
9,069.74	1.87	337.70	9,067.96	30.25	13.63	-30.70	0.10	-0.10	0.00
S-25_701H_FTP									
9,135.00	1.80	337.70	9,133.18	32.18	12.84	-32.61	0.10	-0.10	0.00
9,221.00	1.60	329.40	9,219.14	34.46	11.71	-34.85	0.37	-0.23	-9.65
9,300.00	1.30	324.60	9,298.12	36.14	10.63	-36.49	0.41	-0.38	-6.08
9,347.00	1.20	317.30	9,345.11	36.94	9.99	-37.27	0.40	-0.21	-15.53
9,441.00	1.30	21.70	9,439.09	38.65	9.72	-38.97	1.42	0.11	68.51
9,537.00	1.30	332.60	9,535.07	40.63	9.62	-40.94	1.13	0.00	-51.15
9,632.00	0.70	301.70	9,630.05	41.90	8.63	-42.17	0.83	-0.63	-32.53
9,727.00	0.40	251.70	9,725.05	42.10	7.82	-42.34	0.57	-0.32	-52.63
9,822.00	0.60	284.40	9,820.05	42.12	7.02	-42.33	0.36	0.21	34.42
9,910.00	1.00	272.80	9,908.04	42.27	5.81	-42.44	0.49	0.45	-13.18
9,941.00	1.30	221.40	9,939.03	42.02	5.31	-42.18	3.33	0.97	-165.81
9,972.00	3.00	196.20	9,970.01	40.97	4.85	-41.12	6.15	5.48	-81.29
10,004.00	5.00	190.60	10,001.93	38.80	4.36	-38.93	6.36	6.25	-17.50
10,035.00	7.00	188.70	10,032.76	35.60	3.82	-35.72	6.48	6.45	-6.13
10,067.00	9.00	192.40	10,064.45	31.23	2.99	-31.32	6.45	6.25	11.56
10,098.00	11.10	194.50	10,094.97	25.97	1.72	-26.02	6.88	6.77	6.77
10,131.00	13.60	197.40	10,127.20	19.19	-0.23	-19.18	7.80	7.58	8.79
10,163.00	16.30	198.60	10,158.12	11.35	-2.79	-11.24	8.49	8.44	3.75
10,195.00	18.60	198.60	10,188.64	2.25	-5.85	-2.05	7.19	7.19	0.00
10,228.00	21.40	196.80	10,219.65	-8.50	-9.27	8.82	8.69	8.48	-5.45
10,259.00	25.80	194.50	10,248.05	-20.45	-12.60	20.88	14.50	14.19	-7.42
10,291.00	30.80	193.70	10,276.22	-35.16	-16.28	35.71	15.67	15.62	-2.50
10,322.00	35.80	194.10	10,302.12	-51.68	-20.37	52.35	16.14	16.13	1.29
10,354.00	39.40	194.90	10,327.47	-70.58	-25.27	71.41	11.35	11.25	2.50
10,386.00	42.00	195.90	10,351.73	-90.69	-30.81	91.71	8.38	8.12	3.12
10,418.00	44.90	196.30	10,374.95	-111.83	-36.92	113.05	9.10	9.06	1.25
10,449.00	48.00	195.90	10,396.31	-133.42	-43.14	134.83	10.04	10.00	-1.29
10,481.00	51.70	196.00	10,416.94	-156.93	-49.87	158.57	11.56	11.56	0.31

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25_121H
Project:	Eddy County, NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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)
10,513.00	55.00	196.00	10,436.04	-181.61	-56.94	183.47	10.31	10.31	0.00
10,545.00	58.60	195.80	10,453.56	-207.35	-64.27	209.46	11.26	11.25	-0.62
10,577.00	61.80	195.60	10,469.46	-234.08	-71.79	236.43	10.01	10.00	-0.62
10,609.00	65.50	195.10	10,483.66	-261.73	-79.37	264.33	11.65	11.56	-1.56
10,640.00	68.80	194.30	10,495.70	-289.36	-86.62	292.19	10.91	10.65	-2.58
10,672.00	72.00	194.20	10,506.43	-318.57	-94.04	321.65	10.00	10.00	-0.31
10,703.00	74.20	193.70	10,515.44	-347.36	-101.19	350.66	7.26	7.10	-1.61
10,735.00	77.00	193.70	10,523.40	-377.47	-108.53	381.01	8.75	8.75	0.00
10,737.00	77.18	193.69	10,523.84	-379.36	-108.99	382.92	8.83	8.82	-0.30
Wellpath Crosses Unit Line @ Heel									
10,769.00	80.00	193.60	10,530.18	-409.84	-116.39	413.64	8.83	8.82	-0.29
10,802.00	82.50	194.20	10,535.20	-441.50	-124.23	445.55	7.79	7.58	1.82
10,833.00	84.20	194.70	10,538.79	-471.32	-131.91	475.61	5.71	5.48	1.61
10,914.27	88.94	196.39	10,543.65	-549.44	-153.65	554.45	6.19	5.83	2.08
S-25_121H_LP p2									
10,917.09	89.11	196.45	10,543.69	-552.15	-154.45	557.18	6.19	5.83	2.08
S-25_121H_LP									
10,920.33	89.29	196.52	10,543.74	-555.26	-155.37	560.32	6.19	5.83	2.08
S-25_902H_FTP									
10,929.00	89.80	196.70	10,543.81	-563.56	-157.84	568.71	6.19	5.83	2.08
S-25_122H_FTP									
10,977.00	89.20	196.20	10,544.23	-609.60	-171.44	615.18	1.63	-1.25	-1.04
11,025.00	89.30	194.80	10,544.86	-655.85	-184.26	661.85	2.92	0.21	-2.92
11,072.00	89.20	194.90	10,545.47	-701.27	-196.31	707.67	0.30	-0.21	0.21
11,080.00	89.18	194.62	10,545.58	-709.01	-198.34	715.47	3.55	-0.21	-3.54
Wellpath Crosses FTP (330FNL,459FWL									
11,102.68	89.14	193.81	10,545.92	-730.99	-203.91	737.63	3.55	-0.21	-3.54
S-25_101H_FTP									
11,106.15	89.13	193.69	10,545.97	-734.36	-204.74	741.02	3.55	-0.21	-3.54
S-25_121H_FTP p2									
11,106.21	89.13	193.69	10,545.97	-734.42	-204.75	741.08	3.55	-0.21	-3.54
S-25_121H_FTP									
11,120.00	89.10	193.20	10,546.18	-747.83	-207.96	754.60	3.55	-0.21	-3.54
11,167.00	89.20	192.60	10,546.88	-793.64	-218.45	800.75	1.29	0.21	-1.28
11,216.00	89.40	191.50	10,547.48	-841.55	-228.68	848.99	2.28	0.41	-2.24
11,263.00	89.80	190.00	10,547.81	-887.73	-237.44	895.44	3.30	0.85	-3.19
11,311.00	90.50	188.20	10,547.68	-935.12	-245.03	943.07	4.02	1.46	-3.75
11,406.00	89.20	186.90	10,547.93	-1,029.29	-257.52	1,037.61	1.94	-1.37	-1.37
11,501.00	89.90	185.50	10,548.68	-1,123.73	-267.78	1,132.35	1.65	0.74	-1.47
11,597.00	90.30	182.40	10,548.51	-1,219.49	-274.39	1,228.28	3.26	0.42	-3.23
11,693.00	90.70	181.90	10,547.67	-1,315.42	-277.99	1,324.28	0.67	0.42	-0.52
11,788.00	89.40	181.40	10,547.59	-1,410.38	-280.72	1,419.28	1.47	-1.37	-0.53
11,883.00	89.50	181.00	10,548.50	-1,505.35	-282.71	1,514.26	0.43	0.11	-0.42
11,979.00	89.40	180.90	10,549.42	-1,601.33	-284.31	1,610.24	0.15	-0.10	-0.10

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25_121H
Project:	Eddy County, NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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)
12,075.00	89.90	180.90	10,550.01	-1,697.32	-285.81	1,706.22	0.52	0.52	0.00
12,170.00	90.00	180.80	10,550.09	-1,792.31	-287.22	1,801.20	0.15	0.11	-0.11
12,267.00	90.60	181.00	10,549.58	-1,889.30	-288.75	1,898.18	0.65	0.62	0.21
12,363.00	90.78	180.90	10,548.43	-1,985.28	-290.34	1,994.16	0.21	0.19	-0.10
12,458.00	90.60	179.10	10,547.28	-2,080.27	-290.34	2,089.09	1.90	-0.19	-1.89
12,553.00	88.90	178.10	10,547.70	-2,175.23	-288.02	2,183.92	2.08	-1.79	-1.05
12,649.00	89.00	179.40	10,549.46	-2,271.19	-285.92	2,279.75	1.36	0.10	1.35
12,744.00	89.80	179.60	10,550.45	-2,366.18	-285.09	2,374.65	0.87	0.84	0.21
12,840.00	90.10	178.80	10,550.53	-2,462.17	-283.75	2,470.54	0.89	0.31	-0.83
12,935.00	89.70	178.40	10,550.70	-2,557.14	-281.43	2,565.37	0.60	-0.42	-0.42
13,031.00	88.80	179.90	10,551.96	-2,653.12	-280.01	2,661.24	1.82	-0.94	1.56
13,127.00	88.50	180.10	10,554.22	-2,749.09	-280.01	2,757.16	0.38	-0.31	0.21
13,222.00	89.80	179.70	10,555.63	-2,844.08	-279.84	2,852.08	1.43	1.37	-0.42
13,317.00	89.40	179.60	10,556.29	-2,939.08	-279.26	2,947.00	0.43	-0.42	-0.11
13,412.00	90.70	180.30	10,556.21	-3,034.07	-279.18	3,041.94	1.55	1.37	0.74
13,507.00	90.00	180.20	10,555.63	-3,129.07	-279.59	3,136.89	0.74	-0.74	-0.11
13,602.00	90.10	179.80	10,555.55	-3,224.07	-279.59	3,231.83	0.43	0.11	-0.42
13,698.00	90.00	179.60	10,555.46	-3,320.07	-279.09	3,327.76	0.23	-0.10	-0.21
13,793.00	90.10	179.20	10,555.38	-3,415.06	-278.10	3,422.66	0.43	0.11	-0.42
13,889.00	90.50	178.90	10,554.88	-3,511.05	-276.50	3,518.53	0.52	0.42	-0.31
13,985.00	90.60	179.80	10,553.95	-3,607.04	-275.42	3,614.42	0.94	0.10	0.94
14,080.00	89.40	179.70	10,553.95	-3,702.03	-275.00	3,709.35	1.27	-1.26	-0.11
14,175.00	89.00	179.20	10,555.28	-3,797.02	-274.09	3,804.25	0.67	-0.42	-0.53
14,271.00	89.10	179.00	10,556.87	-3,892.99	-272.58	3,900.11	0.23	0.10	-0.21
14,366.00	90.60	179.60	10,557.12	-3,987.98	-271.42	3,995.00	1.70	1.58	0.63
14,460.00	91.80	180.00	10,555.15	-4,081.96	-271.09	4,088.91	1.35	1.28	0.43
14,556.00	90.60	179.70	10,553.14	-4,177.94	-270.84	4,184.82	1.29	-1.25	-0.31
14,650.00	89.80	179.50	10,552.81	-4,271.93	-270.19	4,278.74	0.88	-0.85	-0.21
14,745.00	89.30	178.70	10,553.56	-4,366.92	-268.69	4,373.61	0.99	-0.53	-0.84
14,840.00	88.70	178.60	10,555.22	-4,461.88	-266.46	4,468.44	0.64	-0.63	-0.11
14,935.00	89.80	178.70	10,556.46	-4,556.84	-264.22	4,563.27	1.16	1.16	0.11
15,030.00	89.20	180.30	10,557.29	-4,651.83	-263.39	4,658.17	1.80	-0.63	1.68
15,125.00	89.30	180.30	10,558.53	-4,746.82	-263.89	4,753.12	0.11	0.11	0.00
15,220.00	89.50	181.20	10,559.53	-4,841.81	-265.13	4,848.09	0.97	0.21	0.95
15,316.00	89.70	180.60	10,560.20	-4,937.79	-266.64	4,944.07	0.66	0.21	-0.62
15,412.00	90.00	180.80	10,560.45	-5,033.78	-267.81	5,040.05	0.38	0.31	0.21
15,509.00	90.40	180.00	10,560.11	-5,130.78	-268.49	5,137.01	0.92	0.41	-0.82
15,605.00	89.47	180.23	10,560.22	-5,226.78	-268.68	5,232.96	1.00	-0.97	0.24
15,700.00	89.50	179.90	10,561.07	-5,321.77	-268.79	5,327.90	0.35	0.03	-0.35
15,796.00	90.30	180.10	10,561.24	-5,417.77	-268.79	5,423.84	0.86	0.83	0.21
15,892.00	90.90	180.20	10,560.24	-5,513.77	-269.04	5,519.78	0.63	0.62	0.10
15,986.00	90.70	179.40	10,558.92	-5,607.76	-268.71	5,613.71	0.88	-0.21	-0.85

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25_121H
Project:	Eddy County, NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Grid
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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)
16,081.00	90.40	178.60	10,558.01	-5,702.74	-267.05	5,708.57	0.90	-0.32	-0.84
16,175.00	90.10	179.10	10,557.60	-5,796.72	-265.17	5,802.43	0.62	-0.32	0.53
16,270.00	89.20	179.10	10,558.18	-5,891.70	-263.67	5,897.30	0.95	-0.95	0.00
16,365.00	89.30	178.60	10,559.43	-5,986.67	-261.77	5,992.15	0.54	0.11	-0.53
16,460.00	89.60	178.30	10,560.34	-6,081.63	-259.20	6,086.97	0.45	0.32	-0.32
16,556.00	89.00	178.60	10,561.51	-6,177.59	-256.60	6,182.78	0.70	-0.62	0.31
16,652.00	88.40	179.30	10,563.69	-6,273.55	-254.84	6,278.62	0.96	-0.62	0.73
16,747.00	88.12	179.41	10,566.57	-6,368.50	-253.77	6,373.47	0.32	-0.29	0.12
16,842.00	88.90	179.60	10,569.04	-6,463.46	-252.95	6,468.35	0.85	0.82	0.20
16,937.00	89.10	179.20	10,570.70	-6,558.44	-251.96	6,563.24	0.47	0.21	-0.42
17,034.00	90.30	179.40	10,571.21	-6,655.43	-250.77	6,660.13	1.25	1.24	0.21
17,128.00	91.10	180.30	10,570.06	-6,749.42	-250.53	6,754.05	1.28	0.85	0.96
17,223.00	90.70	180.50	10,568.57	-6,844.41	-251.19	6,849.01	0.47	-0.42	0.21
17,318.00	89.70	179.80	10,568.24	-6,939.41	-251.44	6,943.95	1.28	-1.05	-0.74
17,412.00	91.60	180.60	10,567.17	-7,033.40	-251.77	7,037.90	2.19	2.02	0.85
17,508.00	90.70	180.70	10,565.24	-7,129.37	-252.86	7,133.85	0.94	-0.94	0.10
17,603.00	90.30	181.30	10,564.42	-7,224.35	-254.51	7,228.83	0.76	-0.42	0.63
17,699.00	89.80	179.80	10,564.33	-7,320.34	-255.44	7,324.80	1.65	-0.52	-1.56
17,793.00	89.30	179.10	10,565.07	-7,414.34	-254.53	7,418.70	0.92	-0.53	-0.74
17,889.00	90.70	178.70	10,565.07	-7,510.31	-252.69	7,514.56	1.52	1.46	-0.42
17,985.00	90.80	180.10	10,563.81	-7,606.30	-251.69	7,610.45	1.46	0.10	1.46
18,081.00	91.00	180.00	10,562.31	-7,702.29	-251.77	7,706.38	0.23	0.21	-0.10
18,178.00	87.90	180.50	10,563.24	-7,799.27	-252.19	7,803.32	3.24	-3.20	0.52
18,274.00	86.50	179.50	10,567.93	-7,895.15	-252.19	7,899.15	1.79	-1.46	-1.04
18,318.96	86.87	179.45	10,570.52	-7,940.04	-251.78	7,943.99	0.84	0.83	-0.10
S-25_702H_LTP									
18,328.52	86.95	179.44	10,571.04	-7,949.58	-251.69	7,953.52	0.84	0.83	-0.10
S-25_701H_LTP									
18,370.00	87.30	179.40	10,573.12	-7,991.01	-251.27	7,994.91	0.84	0.83	-0.10
18,392.63	87.58	179.49	10,574.13	-8,013.61	-251.05	8,017.50	1.30	1.23	0.41
S-25_101H_LTP									
18,394.63	87.60	179.50	10,574.21	-8,015.61	-251.04	8,019.49	1.30	1.23	0.41
S-25_902H_LTP									
18,401.00	87.68	179.53	10,574.47	-8,021.97	-250.98	8,025.85	1.30	1.23	0.41
Wellpath Crosses LTP (330FSL, 385FWL)									
18,404.07	87.72	179.54	10,574.60	-8,025.04	-250.96	8,028.91	1.30	1.23	0.41
S-25_121H_LTP p2									
18,404.43	87.72	179.54	10,574.61	-8,025.40	-250.95	8,029.28	1.30	1.23	0.41
S-25_121H_LTP									
18,406.18	87.75	179.55	10,574.68	-8,027.15	-250.94	8,031.02	1.30	1.23	0.41
S-25_122H_LTP									
18,443.00	88.20	179.70	10,575.98	-8,063.95	-250.70	8,067.79	1.30	1.23	0.41
18,483.90	88.20	179.70	10,577.27	-8,104.83	-250.49	8,108.64	0.00	0.00	0.00
S-25_702H_PBHL - S-25_701H_PBHL									

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Remuda South 25 State 121H - Slot S-25_121H
Project:	Eddy County, NM (NAD27) NMEZ	TVD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Site:	Remuda South 25 State Pad	MD Reference:	3062+22 @ 3084.00usft (Orion Perseus)
Well:	Remuda South 25 State 121H	North Reference:	Gnd
Wellbore:	Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Lateral	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)
18,500.00	88.20	179.70	10,577.77	-8,120.92	-250.40	8,124.71	0.00	0.00	0.00
TD @ 231°FSL,385°FWL - S-25_902H_PBHL - S-25_122H_PBHL - S-25_121H_PBHL - S-25_121H_PBHL p2 - S-25_121H_BHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
S-25_121H_SL	0.00	0.00	0.00	0.00	0.00	464,639.60	620,278.40	32° 16' 36.512 N	103° 56' 38.988 W
- actual wellpath hits target center									
- Point									
S-25_121H_FTP p2	0.00	0.00	10,544.00	-707.72	-313.71	463,931.88	619,964.69	32° 16' 29.519 N	103° 56' 42.672 W
- actual wellpath misses target center by 112.20usft at 11106.15usft MD (10545.97 TVD, -734.36 N, -204.74 E)									
- Point									
S-25_121H_PBHL p2	0.00	0.00	10,570.65	-8,155.47	-283.96	456,484.11	619,994.44	32° 15' 15.815 N	103° 56' 42.640 W
- actual wellpath misses target center by 48.69usft at 18500.00usft MD (10577.77 TVD, -8120.92 N, -250.40 E)									
- Rectangle (sides W50.00 H7,442.00 D0.00)									
S-25_121H_LTP p2	0.00	0.00	10,570.65	-8,025.47	-284.76	456,614.11	619,993.64	32° 15' 17.101 N	103° 56' 42.643 W
- actual wellpath misses target center by 34.03usft at 18404.07usft MD (10574.60 TVD, -8025.04 N, -250.96 E)									
- Point									
S-25_121H_BHL	0.00	0.00	10,577.77	-8,120.92	-250.40	456,518.66	620,028.00	32° 15' 16.155 N	103° 56' 42.247 W
- actual wellpath hits target center									
- Point									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
10,737.00	10,523.84	-379.36	-108.99	Wellpath Crosses Unit Line @ Heel
11,080.00	10,545.58	-709.01	-198.34	Wellpath Crosses FTP (330FNL,459FWL)
18,401.00	10,574.47	-8,021.97	-250.98	Wellpath Crosses LTP (330FSL, 385°FWL)
18,500.00	10,577.77	-8,120.92	-250.40	TD @ 231°FSL,385°FWL

Checked By: _____ Approved By: _____ Date: _____