

NM OIL CONSERVATION

ARTESIA DISTRICT

Intent ☐ As Drilled ☒

SEP 09 2019

API # 30-015-44844		RECEIVED	
Operator Name: XTO ENERGY, INC.		Property Name: MUY WAYNO 18 FEDERAL	Well Number 161H

Kick Off Point (KOP)

UL 3	Section 7	Township 25S	Range 30E	Lot	Feet 2300	From N/S South	Feet 287	From E/W West	County EDDY
Latitude 32.129145					Longitude 103.928477			NAD 83	

First Take Point (FTP)

UL 2	Section 18	Township 25S	Range 30E	Lot	Feet 2300	From N/S North	Feet 294	From E/W West	County EDDY
Latitude 32.131041					Longitude 103.928457			NAD 83	

Last Take Point (LTP)

UL 1	Section 7	Township 25S	Range 30E	Lot	Feet 365	From N/S North	Feet 343	From E/W West	County EDDY
Latitude 32.151039					Longitude 103.928329			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☒

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-015-44838			
Operator Name: XTO Energy, Inc.		Property Name: MUY WAYNO 18 FEDERAL	Well Number 102H

KZ 06/29/2018

SEP 09 2019

Survey Report

RECEIVED

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 161H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Site:	Muy Wayno 18 Federal	MD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Well:	Muy Wayno 18 Federal 161H	North Reference:	Grid
Wellbore:	161H	Survey Calculation Method:	Minimum Curvature
Design:	161H (AsDrilled)	Database:	STRYKER_EDM

Project	Eddy County, NM (NAD27) NMEZ Grid		
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	Muy Wayno 18 Federal		
Site Position:		Northing:	410,906.20 usft
From:	Map	Easting:	625,601.10 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	32.12904748
		Longitude:	-103.92759374
		Grid Convergence:	0.22 °

Well	Muy Wayno 18 Federal 161H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32.12904728
		Longitude:	-103.92778789
		Ground Level:	3,161.00 usft

Wellbore	161H		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	11/09/18	6.96
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,702.45773564

Design	161H (AsDrilled)		
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
			(°)
			359.71

Survey Program	Date	02/08/19		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
59.00	813.00	Survey #2 (161H)	Gyrodata New 2-16-16	Gyrodata Stationary Tool drop on BHA
945.00	19,354.00	Survey #1 (161H)	MWD	OWSG MWD - Standard
19,399.00	19,399.00	Survey #3 (161H)	Projection	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	
MUY WAYNO 18 FED 161H_SHL										
59.00	0.15	156.89	59.00	-0.07	0.03	-0.07	0.25	0.25	0.00	
153.25	0.19	32.28	153.25	-0.05	0.16	-0.05	0.32	0.04	-132.21	
247.50	0.34	130.21	247.50	-0.10	0.46	-0.10	0.44	0.16	103.90	
341.75	0.87	154.72	341.74	-0.93	0.98	-0.93	0.61	0.56	26.01	
436.00	1.99	158.75	435.96	-3.10	1.88	-3.11	1.19	1.19	4.28	
530.25	2.77	157.13	530.13	-6.72	3.36	-6.74	0.83	0.83	-1.72	
624.50	2.93	173.28	624.27	-11.21	4.52	-11.24	0.87	0.17	17.14	

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Site:	Muy Wayno 18 Federal	MD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Well:	Muy Wayno 18 Federal 161H	North Reference:	Grid
Wellbore:	161H	Survey Calculation Method:	Minimum Curvature
Design:	161H (AsDrilled)	Database:	STRYKER_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)	
718.75	1.92	207.65	718.43	-15.01	4.07	-15.03	1.83	-1.07	36.47	
813.00	1.96	233.27	812.63	-17.37	2.05	-17.38	0.91	0.04	27.18	
945.00	1.80	241.70	944.56	-19.70	-1.59	-19.69	0.24	-0.12	6.39	
First Stryker Survey										
1,039.00	0.90	248.80	1,038.53	-20.67	-3.58	-20.65	0.97	-0.96	7.55	
1,133.00	0.50	252.30	1,132.53	-21.06	-4.65	-21.04	0.43	-0.43	3.72	
1,227.00	0.60	241.30	1,226.52	-21.42	-5.48	-21.39	0.15	0.11	-11.70	
1,321.00	0.70	220.60	1,320.52	-22.09	-6.28	-22.06	0.27	0.11	-22.02	
1,415.00	0.80	223.80	1,414.51	-23.00	-7.11	-22.97	0.12	0.11	3.40	
1,509.00	0.40	260.30	1,508.50	-23.53	-7.89	-23.49	0.57	-0.43	38.83	
1,603.00	0.50	318.80	1,602.50	-23.28	-8.48	-23.24	0.48	0.11	62.23	
1,697.00	0.70	263.50	1,696.50	-23.03	-9.32	-22.99	0.62	0.21	-58.83	
1,792.00	1.00	259.80	1,791.49	-23.25	-10.71	-23.19	0.32	0.32	-3.89	
1,886.00	0.80	268.30	1,885.48	-23.41	-12.18	-23.35	0.26	-0.21	9.04	
1,980.00	0.90	274.50	1,979.46	-23.37	-13.57	-23.31	0.14	0.11	6.60	
2,074.00	0.40	324.50	2,073.46	-23.05	-14.50	-22.98	0.76	-0.53	53.19	
2,169.00	1.00	39.50	2,168.45	-22.14	-14.16	-22.07	1.03	0.63	78.95	
2,263.00	1.00	29.90	2,262.44	-20.79	-13.23	-20.73	0.18	0.00	-10.21	
2,357.00	0.90	28.30	2,356.43	-19.43	-12.47	-19.37	0.11	-0.11	-1.70	
2,452.00	0.90	26.90	2,451.41	-18.11	-11.78	-18.05	0.02	0.00	-1.47	
2,546.00	0.70	27.20	2,545.40	-16.94	-11.18	-16.89	0.21	-0.21	0.32	
2,640.00	0.60	22.90	2,639.40	-15.98	-10.73	-15.92	0.12	-0.11	-4.57	
2,734.00	0.70	50.20	2,733.39	-15.16	-10.10	-15.11	0.34	0.11	29.04	
2,829.00	1.00	91.50	2,828.38	-14.81	-8.82	-14.76	0.70	0.32	43.47	
2,924.00	1.50	108.80	2,923.36	-15.23	-6.82	-15.20	0.65	0.53	18.21	
3,018.00	1.30	110.00	3,017.33	-15.99	-4.65	-15.97	0.22	-0.21	1.28	
3,112.00	1.60	123.00	3,111.30	-17.07	-2.55	-17.06	0.47	0.32	13.83	
3,206.00	1.40	117.40	3,205.27	-18.31	-0.43	-18.31	0.26	-0.21	-5.96	
3,294.00	1.00	113.60	3,293.25	-19.12	1.23	-19.12	0.46	-0.45	-4.32	
3,430.00	1.00	114.90	3,429.23	-20.09	3.39	-20.11	0.02	0.00	0.96	
3,523.00	1.90	266.50	3,522.22	-20.53	2.59	-20.54	3.03	0.97	163.01	
3,617.00	3.70	275.10	3,616.10	-20.35	-1.99	-20.34	1.96	1.91	9.15	
3,711.00	3.80	274.70	3,709.90	-19.83	-8.11	-19.79	0.11	0.11	-0.43	
3,805.00	3.80	269.60	3,803.69	-19.59	-14.33	-19.52	0.36	0.00	-5.43	
3,899.00	3.80	272.40	3,897.49	-19.49	-20.56	-19.38	0.20	0.00	2.98	
3,994.00	3.80	273.20	3,992.28	-19.18	-26.85	-19.04	0.06	0.00	0.84	
4,088.00	3.80	273.60	4,086.07	-18.81	-33.06	-18.64	0.03	0.00	0.43	
4,183.00	3.60	272.40	4,180.87	-18.49	-39.19	-18.29	0.23	-0.21	-1.26	
4,277.00	3.50	271.20	4,274.69	-18.30	-45.00	-18.08	0.13	-0.11	-1.28	
4,371.00	3.30	276.00	4,368.53	-17.96	-50.56	-17.71	0.37	-0.21	5.11	
4,466.00	3.10	275.20	4,463.38	-17.44	-55.84	-17.16	0.22	-0.21	-0.84	
4,561.00	3.20	275.60	4,558.24	-16.95	-61.04	-16.64	0.11	0.11	0.42	
4,655.00	3.10	278.20	4,652.09	-16.33	-66.16	-16.00	0.19	-0.11	2.77	

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Wellbore:	161H	Survey Calculation Method:	Minimum Curvature
Design:	161H (AsDrilled)	Database:	STRYKER_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)
4,749.00	1.60	295.90	4,746.01	-15.39	-69.86	-15.05	1.75	-1.60	18.83
4,843.00	1.20	310.20	4,839.98	-14.19	-71.79	-13.83	0.56	-0.43	15.21
4,937.00	1.20	305.00	4,933.96	-12.99	-73.35	-12.62	0.12	0.00	-5.53
5,031.00	1.30	309.30	5,027.94	-11.75	-74.98	-11.37	0.15	0.11	4.57
5,126.00	1.20	299.90	5,122.92	-10.57	-76.68	-10.19	0.24	-0.11	-9.89
5,219.00	1.50	3.30	5,215.90	-8.87	-77.45	-8.48	1.55	0.32	68.17
5,314.00	1.50	1.70	5,310.87	-6.38	-77.34	-6.00	0.04	0.00	-1.68
5,408.00	1.50	7.70	5,404.83	-3.93	-77.14	-3.55	0.17	0.00	6.38
5,503.00	1.20	13.80	5,499.81	-1.74	-76.74	-1.35	0.35	-0.32	6.42
5,597.00	1.20	21.70	5,593.79	0.13	-76.14	0.51	0.18	0.00	8.40
5,691.00	0.80	26.30	5,687.77	1.64	-75.49	2.01	0.43	-0.43	4.89
5,785.00	0.60	41.60	5,781.76	2.59	-74.87	2.97	0.29	-0.21	16.28
5,879.00	0.60	51.10	5,875.76	3.27	-74.16	3.64	0.11	0.00	10.11
5,974.00	0.70	54.60	5,970.75	3.92	-73.30	4.29	0.11	0.11	3.68
6,068.00	0.90	62.60	6,064.74	4.59	-72.17	4.95	0.24	0.21	8.51
6,162.00	1.10	66.50	6,158.73	5.29	-70.69	5.64	0.22	0.21	4.15
6,256.00	1.10	74.70	6,252.71	5.89	-68.99	6.23	0.17	0.00	8.72
6,350.00	1.10	77.40	6,346.70	6.32	-67.24	6.66	0.06	0.00	2.87
6,445.00	1.20	85.80	6,441.68	6.60	-65.36	6.92	0.21	0.11	8.84
6,539.00	1.50	89.30	6,535.65	6.68	-63.15	7.00	0.33	0.32	3.72
6,633.00	1.20	179.00	6,629.63	5.71	-61.90	6.02	2.04	-0.32	95.43
6,727.00	1.50	174.40	6,723.61	3.51	-61.76	3.81	0.34	0.32	-4.89
6,821.00	1.60	185.30	6,817.57	0.97	-61.77	1.28	0.33	0.11	11.60
6,915.00	1.50	183.80	6,911.54	-1.56	-61.97	-1.25	0.11	-0.11	-1.60
7,009.00	1.70	181.90	7,005.50	-4.18	-62.10	-3.87	0.22	0.21	-2.02
7,103.00	1.30	232.70	7,099.47	-6.22	-62.99	-5.91	1.42	-0.43	54.04
7,198.00	1.20	252.10	7,194.45	-7.18	-64.79	-6.86	0.46	-0.11	20.42
7,292.00	1.50	253.80	7,288.42	-7.83	-66.91	-7.49	0.32	0.32	1.81
7,387.00	2.10	260.80	7,383.38	-8.45	-69.83	-8.10	0.67	0.63	7.37
7,481.00	1.20	346.60	7,477.35	-7.77	-71.75	-7.41	2.49	-0.96	91.28
7,575.00	1.60	350.20	7,571.32	-5.52	-72.21	-5.16	0.44	0.43	3.83
7,669.00	1.70	344.10	7,665.28	-2.88	-72.81	-2.52	0.21	0.11	-6.49
7,764.00	1.60	325.70	7,760.24	-0.43	-73.94	-0.06	0.56	-0.11	-19.37
7,858.00	1.80	307.30	7,854.20	1.55	-75.86	1.92	0.62	0.21	-19.57
7,953.00	1.10	331.80	7,949.17	3.25	-77.48	3.64	0.97	-0.74	25.79
8,047.00	1.10	287.20	8,043.16	4.32	-78.76	4.71	0.89	0.00	-47.45
8,141.00	1.00	36.00	8,137.15	5.25	-79.14	5.64	1.82	-0.11	115.74
8,235.00	1.20	20.70	8,231.13	6.83	-78.31	7.22	0.38	0.21	-16.28
8,330.00	0.80	31.00	8,326.12	8.33	-77.62	8.72	0.46	-0.42	10.84
8,425.00	0.90	56.50	8,421.11	9.31	-76.66	9.69	0.41	0.11	26.84
8,518.00	0.70	60.50	8,514.10	9.99	-75.55	10.37	0.22	-0.22	4.30
8,612.00	0.30	98.80	8,608.09	10.24	-74.81	10.61	0.53	-0.43	40.74
8,707.00	0.70	157.40	8,703.09	9.66	-74.34	10.03	0.63	0.42	61.68
8,802.00	0.70	112.00	8,798.08	8.91	-73.58	9.28	0.57	0.00	-47.79

Survey Report

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Survey										
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8,896.00	1.40	133.80	8,892.07	7.90	-72.22	8.26	0.84	0.74	23.19	
8,990.00	1.40	137.40	8,986.04	6.26	-70.61	6.61	0.09	0.00	3.83	
9,084.00	2.00	146.30	9,080.00	4.05	-68.93	4.39	0.70	0.64	9.47	
9,179.00	1.20	168.80	9,174.96	1.70	-67.81	2.03	1.06	-0.84	23.68	
9,273.00	1.50	179.30	9,268.93	-0.50	-67.61	-0.16	0.41	0.32	11.17	
9,367.00	1.70	177.00	9,362.90	-3.12	-67.52	-2.79	0.22	0.21	-2.45	
9,461.00	1.80	160.20	9,456.85	-5.90	-66.95	-5.57	0.55	0.11	-17.87	
9,556.00	2.10	139.60	9,551.80	-8.63	-65.31	-8.31	0.80	0.32	-21.68	
9,650.00	0.20	106.00	9,645.78	-9.99	-64.04	-9.67	2.06	-2.02	-35.74	
9,745.00	0.30	356.50	9,740.78	-9.79	-63.89	-9.47	0.43	0.11	-115.26	
9,839.00	0.30	329.80	9,834.78	-9.33	-64.03	-9.01	0.15	0.00	-28.40	
9,934.00	0.50	303.70	9,929.77	-8.88	-64.50	-8.56	0.28	0.21	-27.47	
10,033.00	0.40	343.50	10,028.77	-8.31	-64.96	-7.99	0.32	-0.10	40.20	
10,128.00	0.10	359.80	10,123.77	-7.91	-65.05	-7.59	0.32	-0.32	17.16	
10,222.00	0.20	121.30	10,217.77	-7.92	-64.91	-7.59	0.28	0.11	129.26	
10,316.00	0.30	87.40	10,311.77	-7.99	-64.53	-7.67	0.19	0.11	-36.06	
10,410.00	0.30	132.60	10,405.77	-8.15	-64.10	-7.83	0.25	0.00	48.09	
10,504.00	0.60	151.90	10,499.76	-8.75	-63.69	-8.43	0.35	0.32	20.53	
10,598.00	0.70	144.40	10,593.76	-9.65	-63.12	-9.33	0.14	0.11	-7.98	
10,692.00	0.40	126.40	10,687.75	-10.31	-62.52	-10.00	0.36	-0.32	-19.15	
10,787.00	0.20	314.00	10,782.75	-10.39	-62.38	-10.08	0.63	-0.21	-181.47	
10,881.00	0.70	271.30	10,876.75	-10.26	-63.07	-9.95	0.61	0.53	-45.43	
10,913.00	1.80	325.30	10,908.74	-9.85	-63.55	-9.53	4.69	3.44	168.75	
10,945.00	4.60	337.80	10,940.69	-8.24	-64.32	-7.92	8.97	8.75	39.06	
10,968.11	6.46	342.47	10,963.70	-6.15	-65.06	-5.82	8.27	8.04	20.19	
MUY WAYNO 18 FED 161H_KOP										
10,976.00	7.10	343.50	10,971.53	-5.26	-65.34	-4.93	8.27	8.12	13.09	
11,007.00	11.00	351.00	11,002.14	-0.50	-66.34	-0.16	13.12	12.58	24.19	
11,038.00	13.90	351.50	11,032.40	6.11	-67.36	6.45	9.36	9.35	1.61	
11,069.00	16.70	348.80	11,062.30	14.16	-68.77	14.51	9.32	9.03	-8.71	
11,101.00	18.30	347.50	11,092.82	23.58	-70.75	23.93	5.15	5.00	-4.06	
11,132.00	20.00	347.90	11,122.10	33.51	-72.92	33.88	5.50	5.48	1.29	
11,164.00	21.60	349.60	11,152.02	44.66	-75.13	45.03	5.34	5.00	5.31	
11,195.00	24.70	359.80	11,180.53	56.76	-76.18	57.14	16.32	10.00	32.90	
11,226.00	29.10	4.40	11,208.17	70.76	-75.62	71.13	15.69	14.19	14.84	
11,258.00	34.40	4.20	11,235.37	87.54	-74.36	87.91	16.57	16.56	-0.62	
11,289.00	39.20	2.40	11,260.19	106.08	-73.31	106.44	15.87	15.48	-5.81	
11,321.00	40.60	2.40	11,284.74	126.58	-72.45	126.94	4.37	4.37	0.00	
11,352.00	41.80	1.70	11,308.06	146.99	-71.72	147.35	4.15	3.87	-2.26	
11,384.00	45.50	0.90	11,331.21	169.07	-71.23	169.42	11.69	11.56	-2.50	
11,416.00	49.20	0.20	11,352.89	192.60	-71.01	192.95	11.67	11.56	-2.19	
11,447.00	51.80	0.20	11,372.61	216.52	-70.92	216.87	8.39	8.39	0.00	
11,479.00	54.20	0.50	11,391.86	242.07	-70.77	242.42	7.54	7.50	0.94	

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 161H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Site:	Muy Wayno 18 Federal	MD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Well:	Muy Wayno 18 Federal 161H	North Reference:	Grid
Wellbore:	161H	Survey Calculation Method:	Minimum Curvature
Design:	161H (AsDrilled)	Database:	STRYKER_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)	
11,510.00	57.00	0.80	11,409.38	267.65	-70.47	267.99	9.07	9.03	0.97	
11,542.00	59.60	0.50	11,426.19	294.87	-70.17	295.21	8.16	8.12	-0.94	
11,573.00	61.30	0.40	11,441.48	321.83	-69.96	322.18	5.49	5.48	-0.32	
11,604.00	62.70	0.90	11,456.03	349.20	-69.64	349.54	4.74	4.52	1.61	
Wellpath Crosses Unit Line @ Heel										
11,636.00	65.70	1.70	11,469.96	378.00	-68.99	378.34	9.64	9.37	2.50	
11,667.00	68.50	1.80	11,482.02	406.54	-68.12	406.88	9.04	9.03	0.32	
11,698.00	72.90	0.90	11,492.26	435.78	-67.43	436.11	14.46	14.19	-2.90	
11,717.00	76.40	0.60	11,497.29	454.10	-67.19	454.43	18.48	18.42	-1.58	
11,748.00	81.10	0.00	11,503.34	484.50	-67.03	484.82	15.28	15.16	-1.94	
11,779.00	83.30	0.50	11,507.54	515.21	-66.90	515.53	7.27	7.10	1.61	
11,810.00	85.60	1.30	11,510.54	546.06	-66.41	546.38	7.85	7.42	2.58	
11,841.00	87.20	2.40	11,512.49	576.98	-65.41	577.30	6.26	5.16	3.55	
11,878.85	88.12	2.96	11,514.04	614.76	-63.65	615.07	2.83	2.42	1.47	
MUY WAYNO 18 FED 161H_LP p4										
11,936.00	89.50	3.80	11,515.22	671.79	-60.28	672.08	2.83	2.42	1.47	
11,965.00	89.31	3.80	11,515.52	700.72	-58.36	701.01	0.64	-0.64	0.00	
Wellpath Crosses FTP										
11,966.73	89.30	3.80	11,515.54	702.45	-58.24	702.73	0.64	-0.64	0.00	
MUY WAYNO 18 FED 161H_FTP										
12,030.00	88.90	3.80	11,516.54	765.57	-54.05	765.83	0.64	-0.64	0.00	
12,124.00	88.20	1.00	11,518.92	859.45	-50.11	859.69	3.07	-0.74	-2.98	
12,218.00	88.80	1.70	11,521.38	953.39	-47.90	953.62	0.98	0.64	0.74	
12,312.00	88.30	1.20	11,523.75	1,047.33	-45.52	1,047.55	0.75	-0.53	-0.53	
12,406.00	91.00	3.80	11,524.33	1,141.22	-41.42	1,141.42	3.99	2.87	2.77	
12,500.00	93.10	5.30	11,520.97	1,234.86	-33.97	1,235.01	2.74	2.23	1.60	
12,595.00	90.70	5.30	11,517.82	1,329.39	-25.20	1,329.50	2.53	-2.53	0.00	
12,690.00	89.80	3.70	11,517.40	1,424.10	-17.75	1,424.17	1.93	-0.95	-1.68	
12,783.00	90.20	1.20	11,517.40	1,517.00	-13.77	1,517.05	2.72	0.43	-2.69	
12,877.00	88.40	359.90	11,518.55	1,610.99	-12.87	1,611.03	2.36	-1.91	-1.38	
12,971.00	89.00	0.70	11,520.68	1,704.96	-12.38	1,705.00	1.06	0.64	0.85	
13,065.00	88.00	1.20	11,523.14	1,798.91	-10.82	1,798.94	1.19	-1.06	0.53	
13,158.00	93.50	2.80	11,521.93	1,891.81	-7.58	1,891.82	6.16	5.91	1.72	
13,252.00	92.50	1.80	11,517.01	1,985.60	-3.81	1,985.60	1.50	-1.06	-1.06	
13,347.00	86.90	357.00	11,517.50	2,080.53	-4.80	2,080.53	7.76	-5.89	-5.05	
13,441.00	89.50	0.20	11,520.46	2,174.44	-7.10	2,174.44	4.38	2.77	3.40	
13,535.00	92.70	0.00	11,518.65	2,268.41	-6.93	2,268.41	3.41	3.40	-0.21	
13,629.00	89.80	357.60	11,516.60	2,362.35	-8.90	2,362.36	4.00	-3.09	-2.55	
13,723.00	92.50	358.40	11,514.72	2,456.26	-12.18	2,456.29	3.00	2.87	0.85	
13,818.00	89.80	358.90	11,512.81	2,551.21	-14.42	2,551.25	2.89	-2.84	0.53	
13,912.00	92.00	0.10	11,511.33	2,645.18	-15.24	2,645.23	2.67	2.34	1.28	
14,006.00	91.80	358.50	11,508.22	2,739.12	-16.39	2,739.17	1.71	-0.21	-1.70	
14,101.00	89.20	357.20	11,507.39	2,834.04	-19.95	2,834.11	3.06	-2.74	-1.37	
14,194.00	86.30	356.30	11,511.04	2,926.81	-25.22	2,926.90	3.26	-3.12	-0.97	

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 161H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Site:	Muy Wayno 18 Federal	MD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Well:	Muy Wayno 18 Federal 161H	North Reference:	Grid
Wellbore:	161H	Survey Calculation Method:	Minimum Curvature
Design:	161H (AsDrilled)	Database:	STRYKER_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)	
14,288.00	85.60	356.40	11,517.68	3,020.38	-31.19	3,020.50	0.75	-0.74	0.11	
14,382.00	89.60	355.00	11,521.61	3,114.02	-38.23	3,114.17	4.51	4.26	-1.49	
14,477.00	91.70	355.30	11,520.54	3,208.66	-46.26	3,208.85	2.23	2.21	0.32	
14,571.00	91.30	355.10	11,518.07	3,302.30	-54.12	3,302.53	0.48	-0.43	-0.21	
14,664.00	89.90	358.90	11,517.10	3,395.15	-58.99	3,395.40	4.35	-1.51	4.09	
14,759.00	92.20	359.90	11,515.36	3,490.12	-59.98	3,490.38	2.64	2.42	1.05	
14,853.00	89.40	359.40	11,514.05	3,584.10	-60.56	3,584.36	3.03	-2.98	-0.53	
14,947.00	92.00	4.60	11,512.90	3,678.00	-57.28	3,678.24	6.18	2.77	5.53	
15,042.00	85.10	3.80	11,515.30	3,772.65	-50.33	3,772.86	7.31	-7.26	-0.84	
15,137.00	85.20	3.40	11,523.33	3,867.13	-44.39	3,867.30	0.43	0.11	-0.42	
15,231.00	88.00	0.30	11,528.91	3,960.89	-41.36	3,961.05	4.44	2.98	-3.30	
15,325.00	90.50	359.50	11,530.14	4,054.87	-41.52	4,055.03	2.79	2.66	-0.85	
15,419.00	90.90	358.30	11,528.99	4,148.85	-43.33	4,149.01	1.35	0.43	-1.28	
15,514.00	91.60	358.80	11,526.92	4,243.79	-45.73	4,243.97	0.91	0.74	0.53	
15,608.00	91.60	358.10	11,524.29	4,337.72	-48.27	4,337.91	0.74	0.00	-0.74	
15,702.00	91.40	358.10	11,521.83	4,431.64	-51.39	4,431.84	0.21	-0.21	0.00	
15,796.00	89.80	357.80	11,520.85	4,525.57	-54.75	4,525.79	1.73	-1.70	-0.32	
15,890.00	88.50	359.10	11,522.24	4,619.52	-57.29	4,619.75	1.96	-1.38	1.38	
15,985.00	89.30	2.10	11,524.07	4,714.49	-56.30	4,714.71	3.27	0.84	3.16	
16,079.00	89.30	1.80	11,525.22	4,808.43	-53.10	4,808.63	0.32	0.00	-0.32	
16,173.00	90.90	2.20	11,525.05	4,902.36	-49.82	4,902.55	1.75	1.70	0.43	
16,268.00	92.40	2.30	11,522.32	4,997.25	-46.09	4,997.42	1.58	1.58	0.11	
16,360.00	92.50	1.80	11,518.38	5,089.11	-42.80	5,089.26	0.55	0.11	-0.54	
16,454.00	91.20	2.40	11,515.35	5,182.99	-39.36	5,183.12	1.52	-1.38	0.64	
16,548.00	89.10	0.60	11,515.10	5,276.95	-36.90	5,277.07	2.94	-2.23	-1.91	
16,642.00	88.10	358.30	11,517.40	5,370.91	-37.80	5,371.03	2.67	-1.06	-2.45	
16,736.00	87.30	358.10	11,521.17	5,464.79	-40.75	5,464.92	0.88	-0.85	-0.21	
16,830.00	90.10	358.90	11,523.30	5,558.72	-43.21	5,558.87	3.10	2.98	0.85	
16,924.00	89.30	357.10	11,523.80	5,652.66	-46.49	5,652.82	2.10	-0.85	-1.91	
17,018.00	89.00	357.10	11,525.19	5,746.53	-51.25	5,746.71	0.32	-0.32	0.00	
17,113.00	91.80	0.70	11,524.53	5,841.48	-53.07	5,841.67	4.80	2.95	3.79	
17,207.00	91.10	0.60	11,522.15	5,935.45	-52.01	5,935.63	0.75	-0.74	-0.11	
17,301.00	88.70	359.10	11,522.31	6,029.43	-52.25	6,029.62	3.01	-2.55	-1.60	
17,395.00	91.20	359.90	11,522.40	6,123.42	-53.07	6,123.61	2.79	2.66	0.85	
17,489.00	91.20	359.30	11,520.43	6,217.40	-53.73	6,217.59	0.64	0.00	-0.64	
17,582.00	91.50	359.10	11,518.24	6,310.36	-55.03	6,310.56	0.39	0.32	-0.22	
17,676.00	91.60	358.80	11,515.69	6,404.31	-56.75	6,404.52	0.34	0.11	-0.32	
17,770.00	90.70	358.50	11,513.81	6,498.27	-58.96	6,498.48	1.01	-0.96	-0.32	
17,865.00	90.50	359.60	11,512.81	6,593.25	-60.54	6,593.47	1.18	-0.21	1.16	
17,958.00	89.90	0.20	11,512.49	6,686.25	-60.70	6,686.47	0.91	-0.65	0.65	
18,052.00	89.20	358.40	11,513.23	6,780.23	-61.85	6,780.46	2.05	-0.74	-1.91	
18,146.00	90.40	359.00	11,513.55	6,874.21	-63.98	6,874.44	1.43	1.28	0.64	
18,239.00	90.10	359.90	11,513.15	6,967.20	-64.87	6,967.44	1.02	-0.32	0.97	
18,331.00	90.40	359.80	11,512.75	7,059.20	-65.11	7,059.44	0.34	0.33	-0.11	

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 161H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Site:	Muy Wayno 18 Federal	MD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Well:	Muy Wayno 18 Federal 161H	North Reference:	Grid
Wellbore:	161H	Survey Calculation Method:	Minimum Curvature
Design:	161H (AsDrilled)	Database:	STRYKER_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)
18,424.00	89.50	359.60	11,512.83	7,152.20	-65.60	7,152.43	0.99	-0.97	-0.22
18,517.00	89.50	0.50	11,513.64	7,245.19	-65.52	7,245.43	0.97	0.00	0.97
18,614.00	89.80	0.30	11,514.23	7,342.19	-64.84	7,342.42	0.37	0.31	-0.21
18,709.00	90.00	0.20	11,514.40	7,437.19	-64.43	7,437.41	0.24	0.21	-0.11
18,803.00	91.00	0.40	11,513.58	7,531.18	-63.94	7,531.41	1.08	1.06	0.21
18,896.00	90.50	1.70	11,512.36	7,624.15	-62.23	7,624.37	1.50	-0.54	1.40
18,990.00	91.40	2.80	11,510.80	7,718.07	-58.54	7,718.26	1.51	0.96	1.17
19,084.00	90.50	3.10	11,509.24	7,811.93	-53.70	7,812.10	1.01	-0.96	0.32
19,177.00	91.20	2.80	11,507.86	7,904.79	-48.92	7,904.94	0.82	0.75	-0.32
19,260.67	90.84	1.64	11,506.37	7,988.38	-45.68	7,988.51	1.45	-0.43	-1.38
MUY WAYNO 18 FED 161H_LTP									
19,261.00	90.84	1.64	11,506.37	7,988.72	-45.67	7,988.84	1.45	-0.43	-1.38
Wellpath Crosses LTP									
19,271.00	90.80	1.50	11,506.22	7,998.71	-45.39	7,998.84	1.45	-0.43	-1.38
19,354.00	92.80	1.90	11,503.62	8,081.63	-42.93	8,081.74	2.46	2.41	0.48
19,390.07	92.80	1.90	11,501.85	8,117.63	-41.74	8,117.74	0.00	0.00	0.00
MUY WAYNO 18 FED 161H_PBHL p4									
19,399.00	92.80	1.90	11,501.42	8,126.55	-41.44	8,126.66	0.00	0.00	0.00
TD @ 192'FNL,350'FWL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
MUY WAYNO 18 FED 1i	0.00	0.00	0.00	0.00	0.00	410,905.90	625,541.00	32.12904728	-103.92778789
- actual wellpath hits target center									
- Point									
MUY WAYNO 18 FED 1i	0.00	0.00	11,501.42	8,126.55	-41.44	419,032.45	625,499.56	32.15138729	-103.92782291
- actual wellpath hits target center									
- Point									
MUY WAYNO 18 FED 1i	0.00	0.00	11,521.00	700.10	-24.10	411,606.00	625,516.90	32.13097208	-103.92785723
- actual wellpath misses target center by 34.65usft at 11966.71usft MD (11515.54 TVD, 702.43 N, -58.24 E)									
- Point									
MUY WAYNO 18 FED 1i	0.00	0.00	11,521.00	8,119.20	-60.70	419,025.10	625,480.30	32.15136729	-103.92788523
- actual wellpath misses target center by 26.99usft at 19390.07usft MD (11501.85 TVD, 8117.63 N, -41.74 E)									
- Rectangle (sides W100.00 H7,342.00 D0.00)									
MUY WAYNO 18 FED 1i	0.00	0.00	11,521.00	7,989.20	-60.00	418,895.10	625,481.00	32.15100991	-103.92788455
- actual wellpath misses target center by 20.49usft at 19260.86usft MD (11506.37 TVD, 7988.57 N, -45.67 E)									
- Point									

Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Muy Wayno 18 Federal 161H
Project:	Eddy County, NM (NAD27) NMEZ Grid	TVD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Site:	Muy Wayno 18 Federal	MD Reference:	3161+32 @ 3193.00usft (Patterson 793)
Well:	Muy Wayno 18 Federal 161H	North Reference:	Grid
Wellbore:	161H	Survey Calculation Method:	Minimum Curvature
Design:	161H (AsDrilled)	Database:	STRYKER_EDM

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
945.00	944.56	-19.70	-1.59	First Stryker Survey
11,604.00	11,456.03	349.20	-69.64	Wellpath Crosses Unit Line @ Heel
11,965.00	11,515.52	700.72	-58.36	Wellpath Crosses FTP
19,261.00	11,506.37	7,988.72	-45.67	Wellpath Crosses LTP
19,399.00	11,501.42	8,126.55	-41.44	TD @ 192°FNL,350°FWL

Checked By: _____	Approved By: _____	Date: _____
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