



I **Larry Wright**, certify that I am employed by **Wellbenders Directional Services**. That I did on the day(s) of **11/26/18** thru **03/08/19** conduct or supervise the taking of a **MWD Survey** from a depth of **107'** to a depth of **18383'**; that the data is true, correct, complete and within the limitations of the tool as set forth by **Wellbenders Directional Services**; that I am authorized and qualified to make this report; that this survey was conducted at the request of **XTO Energy Inc** for the **Muy Wayno 18 Federal #103H** API No. **30-015-44846** in **Eddy County, New Mexico** ; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by **Wellbenders Directional Services**.

Larry Wright

Larry
Wright

Digitally signed
by Larry Wright
Date:
2019.12.11
14:23:02 -06'00'

*13901 Hwy 105W, Conroe, Texas
77304
PH 936-539-9602*



XTO Energy

Eddy County, NM (Nad-27 / East Zone)

Muy Wayno 18 Federal

#103H

OH

Design: OH

End Of Well Report

11 March, 2019



Wellbenders

End Of Well Report

Company: XTO Energy Eddy County, NM (Nad-27 / East Zone)	Local Co-ordinate Reference: Well #103H RKB = 26' @ 3191.00usft (PAT 225) RKB = 26' @ 3191.00usft (PAT 225) Grid Minimum Curvature WBDS_SQL_2
Project: Eddy County, NM (Nad-27 / East Zone)	TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:
Map System: US State Plane 1927 (Exact solution) NAD 1927 (NADCON CONUS) Map Zone: New Mexico East 3001	System Datum: Mean Sea Level
Site Muy Wayno 18 Federal	
Site Position: From: Map Position Uncertainty: 0.00 usft	Northings: 410,905.90 usft Easting: 625,541.00 usft Slot Radius: 13.200 in Latitude: 32.129047 Longitude: -103.927788 Grid Convergence: 0.216 °
Well #103H	
Well Position +N/-S 0.00 usft +E/-W 0.00 usft Wellhead Elevation: 0.00 usft	Latitude: 32.129051 Longitude: -103.925220 Ground Level: 3,165.00 usft
Wellbore OH	
Magnetics Model Name IGRF2015 Sample Date 10/30/2018 Declination (°) 6.963 Dip Angle (°) 59.902 Field Strength (nT) 47,705.55427905	
Design OH	
Audit Notes: Version: 1.0 Phase: ACTUAL Tie On Depth: 0.00	
Vertical Section: Depth From (TVD) (usft) 0.00 +N/-S (usft) 0.00 +E/-W (usft) 0.00 Direction (°) 359.72	
Survey Program From (usft) 107.00 To (usft) 18,383.00 Survey (Wellbore) Survey #1 (OH)	Description Tool Name WBDS_IGRF Description OWSG MWD + IGRF or WMM



Wellbenders

End Of Well Report

Company: XTO Energy			Local Co-ordinate Reference:						
Project: Eddy County, NM (Nad-27 / East Zone)			TVD Reference:						
Site: Muy Wayno 18 Federal			MD Reference:						
Well: #103H			North Reference:						
Wellbore: OH			Survey Calculation Method:						
Design: OH			Database:						
			Well #103H						
			RKB = 26' @ 3191.00usft (PAT 225)						
			RKB = 26' @ 3191.00usft (PAT 225)						
			Grid						
			Minimum Curvature						
			WBDS_SQL_2						
Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW 18 Fed #103H: SHL									
107.00	0.50	53.10	107.00	0.28	0.37	0.28	107.00	53.10	0.47
212.00	0.60	73.60	211.99	0.71	1.27	0.70	105.00	64.29	0.21
292.00	0.90	125.60	291.99	0.46	2.18	0.45	80.00	105.17	0.89
385.00	0.70	120.20	384.98	-0.25	3.26	-0.26	93.00	123.24	0.23
475.00	0.70	115.70	474.97	-0.76	4.24	-0.78	90.00	117.95	0.06
568.00	0.90	94.60	567.96	-1.07	5.48	-1.09	93.00	103.82	0.38
631.00	0.80	81.50	630.96	-1.04	6.40	-1.07	63.00	88.44	0.35
725.00	0.90	75.60	724.95	-0.76	7.77	-0.80	94.00	78.38	0.14
820.00	1.00	71.60	819.93	-0.31	9.28	-0.36	95.00	73.49	0.13
865.00	1.10	64.00	864.93	0.00	10.04	-0.05	45.00	67.62	0.38
944.00	1.10	67.40	943.91	0.62	11.42	0.57	79.00	65.70	0.08
1,041.00	1.40	85.20	1,040.89	1.08	13.46	1.01	97.00	77.38	0.50
1,135.00	1.10	96.00	1,134.87	1.08	15.50	1.01	94.00	89.95	0.40
1,230.00	0.50	54.70	1,229.86	1.23	16.75	1.14	95.00	83.39	0.84
1,325.00	0.80	8.90	1,324.85	2.12	17.19	2.04	95.00	26.23	0.61
1,420.00	0.70	337.60	1,419.84	3.31	17.07	3.23	95.00	354.32	0.44
1,514.00	1.00	303.10	1,513.83	4.29	16.16	4.21	94.00	317.21	0.62
1,609.00	1.40	289.70	1,608.81	5.13	14.38	5.06	95.00	295.28	0.51
1,701.00	2.00	294.10	1,700.77	6.17	11.85	6.11	92.00	292.29	0.67
1,796.00	1.90	292.10	1,795.72	7.44	8.88	7.40	95.00	293.13	0.13
1,890.00	2.60	290.60	1,889.64	8.78	5.44	8.75	94.00	291.23	0.75
1,985.00	2.80	285.50	1,984.54	10.15	1.19	10.15	95.00	287.96	0.33
2,079.00	2.50	280.60	2,078.44	11.14	-3.04	11.16	94.00	283.19	0.40
2,173.00	2.20	279.90	2,172.36	11.83	-6.83	11.86	94.00	280.27	0.32
2,268.00	2.20	279.10	2,267.29	12.43	-10.43	12.48	95.00	279.50	0.03



Wellbenders

End Of Well Report

Company: XTO Energy			Local Co-ordinate Reference:						
Project: Eddy County, NM (Nad-27 / East Zone)			TVD Reference:						
Site: Muy Wayno 18 Federal			MD Reference:						
Well: #103H			North Reference:						
Wellbore: OH			Survey Calculation Method:						
Design: OH			Database:						
			Well #103H						
			RKB = 26' @ 3191.00usft (PAT 225)						
			RKB = 26' @ 3191.00usft (PAT 225)						
			Grid						
			Minimum Curvature						
			WBDS_SQL_2						
Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
2,362.00	2.40	275.90	2,361.21	12.92	-14.17	12.99	94.00	277.43	0.25
2,455.00	2.10	276.70	2,454.14	13.32	-17.80	13.41	93.00	276.27	0.32
2,547.00	2.10	269.80	2,546.08	13.51	-21.16	13.61	92.00	273.25	0.27
2,641.00	2.00	260.10	2,640.02	13.22	-24.50	13.34	94.00	265.07	0.38
2,735.00	1.70	254.00	2,733.97	12.56	-27.45	12.69	94.00	257.30	0.38
2,829.00	1.10	197.20	2,827.95	11.31	-29.06	11.45	94.00	232.21	1.52
2,923.00	1.50	159.40	2,921.92	9.30	-28.89	9.44	94.00	175.29	0.98
3,018.00	1.90	150.00	3,016.88	6.77	-27.67	6.90	95.00	154.15	0.51
3,111.00	3.20	139.60	3,109.79	3.46	-25.21	3.58	93.00	143.47	1.48
3,205.00	4.50	131.90	3,203.57	-1.00	-20.77	-0.90	94.00	135.10	1.49
3,299.00	5.60	129.70	3,297.21	-6.40	-14.50	-6.33	94.00	130.68	1.19
3,381.00	5.10	120.60	3,378.85	-10.81	-8.28	-10.77	82.00	125.36	1.20
3,514.00	4.10	129.30	3,511.42	-16.83	0.49	-16.83	133.00	124.48	0.91
3,609.00	3.90	128.20	3,606.19	-20.98	5.65	-21.01	95.00	128.76	0.23
3,703.00	3.80	127.80	3,699.98	-24.86	10.63	-24.92	94.00	128.00	0.11
3,797.00	3.60	130.20	3,793.78	-28.68	15.34	-28.75	94.00	128.97	0.27
3,892.00	3.70	130.90	3,888.59	-32.61	19.94	-32.71	95.00	130.55	0.12
3,986.00	3.80	125.10	3,982.39	-36.39	24.78	-36.51	94.00	127.96	0.42
4,081.00	3.70	99.70	4,077.19	-38.71	30.38	-38.86	95.00	112.57	1.74
4,176.00	3.80	91.70	4,171.99	-39.32	36.54	-39.50	95.00	95.65	0.56
4,271.00	3.90	90.90	4,266.78	-39.47	42.92	-39.68	95.00	91.29	0.12
4,366.00	3.60	89.50	4,361.57	-39.49	49.13	-39.73	95.00	90.23	0.33
4,460.00	3.30	91.70	4,455.40	-39.55	54.79	-39.81	94.00	90.55	0.35
4,554.00	4.40	75.50	4,549.19	-38.72	60.99	-39.02	94.00	82.44	1.63
4,648.00	5.40	69.90	4,642.85	-36.30	68.63	-36.64	94.00	72.41	1.18
4,741.00	5.40	69.60	4,735.43	-33.27	76.84	-33.65	93.00	69.75	0.03
4,835.00	5.50	70.50	4,829.01	-30.23	85.23	-30.64	94.00	70.05	0.14



Wellbenders

End Of Well Report

Company: XTO Energy			Local Co-ordinate Reference:			Well #103H			
Project: Eddy County, NM (Nad-27 / East Zone)			TVD Reference:			RKB = 26' @ 3191.00usft (PAT 225)			
Site: Muy Wayno 18 Federal			MD Reference:			RKB = 26' @ 3191.00usft (PAT 225)			
Well: #103H			North Reference:			Grid			
Wellbore: OH			Survey Calculation Method:			Minimum Curvature			
Design: OH			Database:			WBDS_SQL_2			
Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
4,930.00	5.30	70.00	4,923.59	-27.21	93.65	-27.66	95.00	70.25	0.22
5,025.00	5.10	71.20	5,018.20	-24.34	101.77	-24.84	95.00	70.59	0.24
5,119.00	4.60	74.00	5,111.86	-21.96	109.35	-22.49	94.00	72.53	0.59
5,214.00	4.60	75.10	5,206.55	-19.93	116.69	-20.50	95.00	74.55	0.09
5,309.00	4.60	75.50	5,301.25	-18.00	124.06	-18.60	95.00	75.30	0.03
5,403.00	4.40	78.10	5,394.96	-16.31	131.24	-16.95	94.00	76.77	0.30
5,498.00	4.60	78.10	5,489.67	-14.77	138.53	-15.45	95.00	78.10	0.21
5,592.00	4.50	80.60	5,583.37	-13.39	145.86	-14.11	94.00	79.34	0.24
5,687.00	4.50	82.20	5,678.08	-12.28	153.23	-13.03	95.00	81.40	0.13
5,781.00	4.10	76.40	5,771.81	-10.99	160.15	-11.77	94.00	79.43	0.63
5,875.00	3.60	72.00	5,865.60	-9.29	166.22	-10.10	94.00	74.34	0.62
5,969.00	3.50	76.40	5,959.42	-7.70	171.81	-8.54	94.00	74.17	0.31
6,063.00	3.00	77.20	6,053.27	-6.48	177.00	-7.34	94.00	76.77	0.53
6,157.00	2.80	77.80	6,147.15	-5.45	181.64	-6.34	94.00	77.49	0.22
6,252.00	4.10	66.80	6,241.97	-3.62	187.03	-4.53	95.00	71.26	1.53
6,346.00	4.20	65.70	6,335.73	-0.88	193.26	-1.82	94.00	66.24	0.14
6,441.00	4.10	66.20	6,430.48	1.92	199.54	0.95	95.00	65.95	0.11
6,536.00	3.90	68.30	6,525.25	4.49	205.65	3.48	95.00	67.22	0.26
6,631.00	3.90	67.70	6,620.03	6.91	211.64	5.87	95.00	68.00	0.04
6,726.00	3.80	69.40	6,714.81	9.24	217.57	8.18	95.00	68.54	0.16
6,820.00	3.70	72.10	6,808.61	11.27	223.38	10.18	94.00	70.73	0.22
6,915.00	3.80	72.30	6,903.41	13.17	229.29	12.05	95.00	72.20	0.11
7,010.00	3.80	77.70	6,998.20	14.80	235.37	13.65	95.00	75.00	0.38
7,105.00	3.70	78.70	7,093.00	16.07	241.45	14.89	95.00	78.19	0.13
7,199.00	3.40	76.90	7,186.82	17.29	247.14	16.09	94.00	77.84	0.34
7,294.00	3.20	78.80	7,281.66	18.45	252.48	17.21	95.00	77.82	0.24
7,388.00	3.50	74.50	7,375.50	19.72	257.82	18.46	94.00	76.55	0.42



Wellbenders

End Of Well Report

Company: XTO Energy		Local Co-ordinate Reference:					Well #103H		
Project: Eddy County, NM (Nad-27 / East Zone)		TVD Reference:					RKB = 26' @ 3191.00usft (PAT 225)		
Site: Muy Wayno 18 Federal		MD Reference:					RKB = 26' @ 3191.00usft (PAT 225)		
Well: #103H		North Reference:					Grid		
Wellbore: OH		Survey Calculation Method:					Minimum Curvature		
Design: OH		Database:					WBDS_SQL_2		
Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
7,482.00	3.20	68.30	7,469.34	21.46	263.02	20.17	94.00	71.54	0.50
7,576.00	2.90	59.10	7,563.21	23.65	267.50	22.34	94.00	63.93	0.61
7,671.00	2.50	43.70	7,658.10	26.38	270.99	25.06	95.00	51.97	0.87
7,766.00	2.20	38.90	7,753.02	29.30	273.57	27.96	95.00	41.45	0.38
7,860.00	2.10	19.20	7,846.96	32.33	275.27	30.99	94.00	29.28	0.79
7,955.00	2.00	6.90	7,941.90	35.62	276.04	34.27	95.00	13.20	0.47
8,049.00	2.10	43.10	8,035.84	38.51	277.42	37.15	94.00	25.46	1.36
8,144.00	2.70	55.80	8,130.76	41.04	280.46	39.66	95.00	50.25	0.84
8,239.00	2.10	67.50	8,225.67	42.96	283.91	41.57	95.00	60.92	0.81
8,332.00	2.20	78.30	8,318.61	43.97	287.24	42.57	93.00	73.03	0.45
8,427.00	1.70	84.70	8,413.55	44.47	290.43	43.05	95.00	81.09	0.57
8,522.00	1.80	67.80	8,508.51	45.17	293.21	43.73	95.00	76.01	0.55
8,617.00	2.10	57.60	8,603.45	46.66	296.06	45.22	95.00	62.31	0.48
8,711.00	2.20	62.60	8,697.39	48.42	299.12	46.95	94.00	60.16	0.23
8,806.00	3.70	72.90	8,792.26	50.16	303.67	48.67	95.00	69.06	1.67
8,900.00	3.10	77.80	8,886.09	51.59	309.05	50.08	94.00	75.13	0.71
8,994.00	2.50	78.30	8,979.98	52.54	313.54	51.01	94.00	78.02	0.64
9,088.00	2.10	82.20	9,073.91	53.19	317.26	51.64	94.00	80.08	0.46
9,183.00	2.00	88.80	9,168.85	53.46	320.64	51.89	95.00	85.42	0.27
9,277.00	1.80	120.70	9,262.80	52.74	323.55	51.16	94.00	103.89	1.13
9,372.00	2.00	134.20	9,357.74	50.82	326.02	49.23	95.00	127.81	0.51
9,467.00	3.30	133.50	9,452.64	47.78	329.19	46.18	95.00	133.76	1.37
9,561.00	2.50	99.50	9,546.53	45.58	333.17	43.95	94.00	118.91	1.98
9,656.00	3.30	51.30	9,641.42	46.95	337.35	45.30	95.00	71.87	2.61
9,751.00	3.00	44.50	9,736.27	50.43	341.23	48.77	95.00	48.06	0.50
9,805.00	2.60	41.50	9,790.21	52.36	343.03	50.68	54.00	43.11	0.79
9,857.00	2.20	37.80	9,842.16	54.03	344.42	52.35	52.00	39.80	0.82



Wellbenders

End Of Well Report

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Project: Eddy County, NM (Nad-27 / East Zone)				TVD Reference:					
Site: Muy Wayno 18 Federal				MD Reference:					
Well: #103H				North Reference:					
Wellbore: OH				Survey Calculation Method:					
Design: OH				Database:					
Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
9,904.00	4.40	350.20	9,889.09	56.52	344.67	54.84	47.00	5.64	7.10
9,951.00	9.10	337.80	9,935.75	61.74	342.96	60.07	47.00	341.84	10.41
9,999.00	14.00	347.80	9,982.77	70.94	340.30	69.27	48.00	343.85	10.99
10,046.00	18.60	350.80	10,027.87	83.90	337.89	82.25	47.00	349.51	9.95
10,093.00	21.90	349.50	10,071.96	99.92	335.10	98.28	47.00	350.10	7.09
10,140.00	23.50	352.80	10,115.32	117.84	332.33	116.21	47.00	351.21	4.35
10,188.00	24.60	0.00	10,159.16	137.33	331.13	135.71	48.00	356.48	6.52
10,235.00	25.40	5.10	10,201.76	157.16	332.02	155.53	47.00	2.59	4.89
10,282.00	28.50	5.40	10,243.65	178.36	333.97	176.73	47.00	5.26	6.60
10,329.00	32.70	3.80	10,284.10	202.21	335.87	200.56	47.00	4.55	9.10
10,377.00	37.50	2.30	10,323.36	229.76	337.32	228.11	48.00	3.01	10.16
10,424.00	40.00	359.00	10,360.02	259.16	337.63	257.51	47.00	0.61	6.90
10,471.00	40.70	359.00	10,395.84	289.59	337.10	287.94	47.00	359.00	1.49
10,518.00	43.20	358.80	10,430.79	321.00	336.49	319.35	47.00	358.90	5.33
10,566.00	48.10	359.80	10,464.33	355.31	336.09	353.66	48.00	359.32	10.32
10,613.00	51.10	357.60	10,494.79	391.09	335.26	389.44	47.00	358.68	7.31
10,660.00	55.00	355.10	10,523.04	428.56	332.85	426.92	47.00	356.32	9.32
10,707.00	59.20	355.70	10,548.57	467.88	329.69	466.27	47.00	355.41	9.00
10,754.00	63.30	356.80	10,571.17	508.99	327.00	507.39	47.00	356.26	8.96
10,801.00	69.80	358.80	10,589.86	552.05	325.37	550.46	47.00	357.82	14.37
10,848.00	72.70	359.50	10,604.97	596.55	324.71	594.95	47.00	359.15	6.33
10,896.00	76.30	0.90	10,617.80	642.79	324.87	641.20	48.00	0.21	8.01
10,943.00	83.40	2.60	10,626.07	689.00	326.29	687.40	47.00	1.76	15.52
10,957.06	83.97	2.81	10,627.62	702.96	326.95	701.35	14.06	2.71	4.32
MW 18 Fed #103H: FTP									
11,037.00	87.21	4.02	10,633.77	782.51	331.71	780.88	79.94	3.42	4.32
11,131.00	89.19	3.31	10,636.72	876.27	337.71	874.61	94.00	3.66	2.24



Wellbenders

End Of Well Report

Company: XTO Energy			Local Co-ordinate Reference:					Well #103H		
Project: Eddy County, NM (Nad-27 / East Zone)			TVD Reference:					RKB = 26' @ 3191.00usft (PAT 225)		
Site: Muy Wayno 18 Federal			MD Reference:					RKB = 26' @ 3191.00usft (PAT 225)		
Well: #103H			North Reference:					Grid		
Wellbore: OH			Survey Calculation Method:					Minimum Curvature		
Design: OH			Database:					WBDS_SQL_2		
Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)	
11,226.00	89.54	3.05	10,637.77	971.12	342.98	969.43	95.00	3.18	0.46	
11,320.00	91.43	3.75	10,636.98	1,064.94	348.55	1,063.23	94.00	3.40	2.14	
11,415.00	92.48	4.19	10,633.74	1,159.66	355.13	1,157.91	95.00	3.97	1.20	
11,509.00	89.45	2.26	10,632.15	1,253.48	360.41	1,251.70	94.00	3.22	3.82	
11,603.00	89.19	1.99	10,633.27	1,347.41	363.90	1,345.61	94.00	2.13	0.40	
11,697.00	88.44	2.08	10,635.21	1,441.33	367.24	1,439.52	94.00	2.03	0.80	
11,791.00	90.95	1.38	10,635.71	1,535.28	370.07	1,533.45	94.00	1.73	2.77	
11,885.00	90.73	0.76	10,634.33	1,629.25	371.83	1,627.41	94.00	1.07	0.70	
11,979.00	89.27	359.97	10,634.33	1,723.24	372.43	1,721.40	94.00	0.37	1.77	
12,073.00	90.73	358.74	10,634.33	1,817.23	371.37	1,815.40	94.00	359.36	2.03	
12,167.00	89.76	358.21	10,633.93	1,911.20	368.87	1,909.37	94.00	358.47	1.18	
12,262.00	88.70	357.07	10,635.21	2,006.11	364.96	2,004.30	95.00	357.64	1.64	
12,356.00	90.90	357.16	10,635.54	2,099.98	360.23	2,098.20	94.00	357.12	2.34	
12,450.00	89.71	356.90	10,635.04	2,193.85	355.35	2,192.09	94.00	357.03	1.30	
12,544.00	90.46	359.18	10,634.90	2,287.79	352.14	2,286.04	94.00	358.04	2.55	
12,638.00	91.60	359.80	10,633.21	2,381.77	351.30	2,380.02	94.00	359.49	1.38	
12,733.00	88.57	358.21	10,633.07	2,476.74	349.65	2,475.00	95.00	359.00	3.60	
12,827.00	91.30	0.85	10,633.17	2,570.72	348.88	2,568.98	94.00	359.53	4.04	
12,922.00	90.37	359.45	10,631.79	2,665.71	349.13	2,663.97	95.00	0.15	1.77	
13,016.00	89.80	358.04	10,631.65	2,759.68	347.07	2,757.95	94.00	358.74	1.62	
13,111.00	86.24	355.93	10,634.93	2,854.47	342.08	2,852.77	95.00	356.99	4.36	
13,205.00	88.31	356.46	10,639.40	2,948.15	335.85	2,946.48	94.00	356.20	2.27	
13,299.00	89.14	356.46	10,641.49	3,041.95	330.05	3,040.30	94.00	356.46	0.88	
13,393.00	90.51	356.37	10,641.78	3,135.76	324.17	3,134.14	94.00	356.41	1.46	
13,487.00	92.13	358.74	10,639.61	3,229.64	320.16	3,228.04	94.00	357.55	3.05	
13,581.00	94.24	0.68	10,634.39	3,323.49	319.69	3,321.89	94.00	359.71	3.05	
13,675.00	94.24	2.87	10,627.44	3,417.18	322.59	3,415.56	94.00	1.77	2.32	



Wellbenders

End Of Well Report

Company: XTO Energy				Local Co-ordinate Reference:					
Project: Eddy County, NM (Nad-27 / East Zone)				TVD Reference:					
Site: Muy Wayno 18 Federal				MD Reference:					
Well: #103H				North Reference:					
Wellbore: OH				Survey Calculation Method:					
Design: OH				Database:					
				Well #103H					
				RKB = 26' @ 3191.00usft (PAT 225)					
				RKB = 26' @ 3191.00usft (PAT 225)					
				Grid					
				Minimum Curvature					
				WBDS_SQL_2					
Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
13,769.00	94.29	4.02	10,620.45	3,510.75	328.22	3,509.10	94.00	3.44	1.22
13,862.00	91.69	4.10	10,615.60	3,603.38	334.80	3,601.70	93.00	4.06	2.80
13,956.00	88.31	4.63	10,615.60	3,697.09	341.95	3,695.38	94.00	4.37	3.64
14,050.00	90.29	4.63	10,616.75	3,790.78	349.54	3,789.02	94.00	4.63	2.11
14,144.00	91.03	4.37	10,615.66	3,884.48	356.91	3,882.69	94.00	4.50	0.83
14,238.00	88.53	3.49	10,616.02	3,978.25	363.35	3,976.43	94.00	3.93	2.82
14,332.00	90.37	4.89	10,616.93	4,071.99	370.22	4,070.13	94.00	4.19	2.46
14,426.00	86.55	2.70	10,619.45	4,165.72	376.44	4,163.83	94.00	3.80	4.68
14,521.00	87.34	0.41	10,624.52	4,260.55	379.01	4,258.64	95.00	1.55	2.55
14,615.00	89.80	359.88	10,626.86	4,354.51	379.25	4,352.60	94.00	0.14	2.68
14,709.00	88.66	359.18	10,628.13	4,448.50	378.48	4,446.59	94.00	359.53	1.42
14,824.00	88.75	358.92	10,630.72	4,563.45	376.57	4,561.56	115.00	359.05	0.24
14,918.00	90.20	357.07	10,631.59	4,657.38	373.29	4,655.50	94.00	357.99	2.50
15,011.00	89.10	356.90	10,632.15	4,750.25	368.39	4,748.39	93.00	356.99	1.20
15,105.00	92.13	357.16	10,631.14	4,844.11	363.53	4,842.27	94.00	357.03	3.24
15,199.00	92.31	357.42	10,627.50	4,937.93	359.08	4,936.12	94.00	357.29	0.34
15,293.00	91.82	357.07	10,624.12	5,031.76	354.57	5,029.97	94.00	357.24	0.64
15,386.00	92.35	358.21	10,620.73	5,124.62	350.74	5,122.84	93.00	357.64	1.35
15,480.00	91.25	357.69	10,617.78	5,218.51	347.38	5,216.75	94.00	357.95	1.29
15,573.00	92.97	359.62	10,614.36	5,311.41	345.20	5,309.66	93.00	358.65	2.78
15,668.00	92.26	359.71	10,610.02	5,406.31	344.64	5,404.56	95.00	359.67	0.75
15,763.00	92.31	0.06	10,606.23	5,501.24	344.45	5,499.49	95.00	359.88	0.37
15,857.00	89.27	0.59	10,604.94	5,595.22	344.99	5,593.46	94.00	0.33	3.28
15,951.00	89.63	0.94	10,605.84	5,689.20	346.24	5,687.44	94.00	0.77	0.53
16,045.00	88.88	1.29	10,607.06	5,783.18	348.07	5,781.41	94.00	1.11	0.88
16,139.00	86.99	0.24	10,610.45	5,877.10	349.33	5,875.32	94.00	0.77	2.30
16,234.00	89.98	0.06	10,612.96	5,972.06	349.57	5,970.28	95.00	0.15	3.15



Wellbenders

End Of Well Report

Company: XTO Energy			Local Co-ordinate Reference:				Well #103H		
Project: Eddy County, NM (Nad-27 / East Zone)			TVD Reference:				RKB = 26' @ 3191.00usft (PAT 225)		
Site: Muy Wayno 18 Federal			MD Reference:				RKB = 26' @ 3191.00usft (PAT 225)		
Well: #103H			North Reference:				Grid		
Wellbore: OH			Survey Calculation Method:				Minimum Curvature		
Design: OH			Database:				WBDS_SQL_2		
Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	CL (usft)	CL Azi (°)	DLeg (°/100ft)
16,328.00	90.42	0.41	10,612.63	6,066.05	349.96	6,064.27	94.00	0.23	0.60
16,423.00	91.25	1.55	10,611.25	6,161.03	351.58	6,159.24	95.00	0.98	1.48
16,517.00	88.97	1.73	10,611.07	6,254.98	354.27	6,253.18	94.00	1.64	2.43
16,611.00	89.01	1.73	10,612.72	6,348.93	357.11	6,347.11	94.00	1.73	0.04
16,705.00	87.43	1.03	10,615.64	6,442.85	359.37	6,441.02	94.00	1.38	1.84
16,799.00	88.57	0.06	10,618.93	6,536.79	360.27	6,534.95	94.00	0.54	1.59
16,893.00	89.76	358.83	10,620.30	6,630.77	359.36	6,628.93	94.00	359.44	1.82
16,988.00	89.49	359.09	10,620.92	6,725.75	357.63	6,723.92	95.00	358.96	0.39
17,082.00	89.63	358.21	10,621.64	6,819.72	355.42	6,817.90	94.00	358.65	0.95
17,176.00	89.45	357.51	10,622.39	6,913.65	351.91	6,911.85	94.00	357.86	0.77
17,270.00	93.05	358.21	10,620.34	7,007.55	348.40	7,005.76	94.00	357.86	3.90
17,364.00	91.25	0.24	10,616.82	7,101.46	347.13	7,099.68	94.00	359.23	2.89
17,459.00	90.59	359.71	10,615.29	7,196.45	347.09	7,194.67	95.00	359.97	0.89
17,553.00	91.38	359.53	10,613.68	7,290.43	346.46	7,288.65	94.00	359.62	0.86
17,647.00	93.32	359.71	10,609.82	7,384.35	345.84	7,382.57	94.00	359.62	2.07
17,741.00	91.65	359.80	10,605.75	7,478.26	345.44	7,476.48	94.00	359.76	1.78
17,835.00	88.48	1.12	10,605.64	7,572.24	346.19	7,570.46	94.00	0.46	3.65
17,928.00	88.53	359.71	10,608.07	7,665.20	346.87	7,663.42	93.00	0.41	1.52
18,023.00	87.60	359.71	10,611.27	7,760.15	346.39	7,758.36	95.00	359.71	0.98
18,116.00	86.90	358.83	10,615.74	7,853.03	345.20	7,851.25	93.00	359.27	1.21
18,210.00	87.30	358.83	10,620.49	7,946.89	343.29	7,945.12	94.00	358.83	0.43
18,254.30	87.01	358.50	10,622.69	7,991.12	342.26	7,989.35	44.30	358.67	0.99
MW 18 Fed #103H: LTP									
18,304.00	86.68	358.13	10,625.43	8,040.73	340.80	8,038.96	49.70	358.32	0.99
18,328.00	86.99	357.78	10,626.75	8,064.67	339.94	8,062.92	24.00	357.95	1.95
18,383.00	86.99	357.78	10,629.64	8,119.56	337.81	8,117.81	55.00	357.78	0.00
Final Station Closure Distance= 8126.58 /Direction= 2.38 - Projection to Bit: 18383.00' MD/ 10629.64' TVD - TD: Latitude = 32.151367 / Longitude = -103.924029 - TD: Y= 419029.66 / X= 626673.71 - Final Bit Pr									



Company: Project: Site: Well: Wellbore: Design:	XTO Energy Eddy County, NM (Nad-27 / East Zone) Muy Wayno 18 Federal #103H OH OH	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:	Well #103H RKB = 26' @ 3191.00usft (PAT 225) RKB = 26' @ 3191.00usft (PAT 225) Grid Minimum Curvature WBDS_SQL_2
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Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		
		+N/-S (usft)	+E/-W (usft)	Comment
18,383.00	10,629.64	8,119.56	337.81	Final Station Closure Distance= 8126.58 / Direction= 2.38
18,383.00	10,629.64	8,119.56	337.81	Projection to Bit: 18383.00' MD/ 10629.64' TVD
18,383.00	10,629.64	8,119.56	337.81	TD: Latitude = 32.151367 / Longitude = -103.924029
18,383.00	10,629.64	8,119.56	337.81	TD: Y= 419029.66 / X= 626673.71

Checked By: _____	Approved By: _____	Date: _____
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