



NorAm Drilling Company

A GLOBAL RIG COMPANY ASA

Operator: XTO Energy

Well & Lease Number: CORRAL CANYON FEDERAL 2H

County: Eddy

Contractor: NorAm Drilling Rig#25

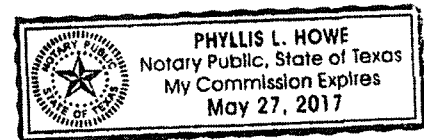
30-015-42921

State of New Mexico

Deviation Report

Footage	Degree
300	1.5
632	1.5
1068	0.5
1257	0.1
1541	0.7
1824	0.6
2879	0.9
3353	0.4
3826	0.1
4353	0.7
4732	0.4
5204	1.6
5732	0.8
6205	0.2
6719	2.9
7285	1.8
7784	1.4

Completed by: Will Luker
Will Luker, Safety Director
NorAm Drilling Company



Appeared before me on: 11/2/16

Notary Public: Phyllis L Howe

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www.noramdrilling.com



XTO Energy

**Eddy County, New Mexico (NAD 27)
Corral Canyon Federal
2H**

Wellbore #1

Design: Surveys

Standard Survey Report

04 October, 2016



Company: XTO Energy
 Site: Corral Canyon Federal
 Well: 2H
 Project: Eddy County, New Mexico (NAD 27)
 Rig: Noram 25



Azimuths to Grid North
 True North: -0.17°
 Magnetic North: 7.12°
 Magnetic Field
 Strength: 48002.3snT
 Dip Angle: 59.93°
 Date: 9/17/2016
 Model: BGGM2016

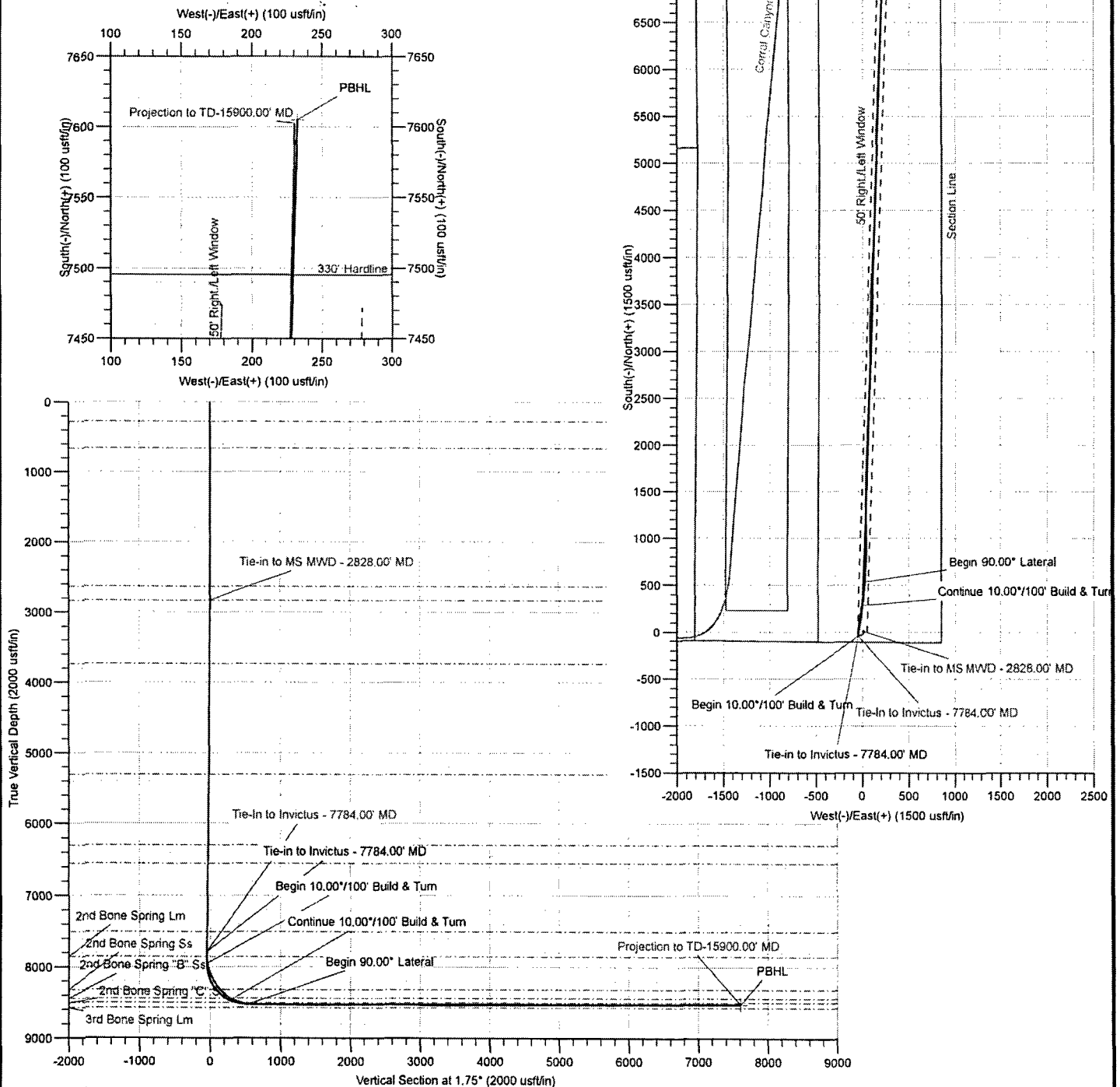
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7784.00	1.40	274.10	7782.49	-46.26	-43.82	-47.57	0.00	Tie-in to Invictus - 7784.00' MD
7954.37	1.40	274.10	7952.81	-45.96	-47.97	-47.40	4.16	Begin 10.00°/100' Build & Turn
8865.62	65.00	8.90	8473.23	282.30	-5.58	282.00	335.99	Continue 10.00°/100' Build & Turn
8865.02	90.00	1.75	8529.00	532.35	16.94	532.62	587.22	Begin 90.00° Lateral
15941.06	90.00	1.75	8529.00	7605.10	232.72	7608.66	7663.26	PBHL

US State Plane 1927 (Exact solution)
 New Mexico East 3001

Created By: VLS
 Date: 9:04, October 04 2016
 Plan: Design #3

Landing Point X: 600431.94 Y: 419767.36
PBHL X: 600647.72 Y: 426840.1



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented.
 Any decisions made or wells drilled utilizing this or any other information supplied by MS Energy are at the sole risk and responsibility of the customer. MS Energy is not responsible for the accuracy of this schematic or the information contained herein.



MS Energy Services

Survey Report



Company: XTO Energy
Project: Eddy County, New Mexico (NAD 27)
Site: Corral Canyon Federal
Well: 2H
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well 2H
TVD Reference: Rig @ 2966.00usft (Noram 25)
MD Reference: Rig @ 2966.00usft (Noram 25)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Conroe Server

Project	Eddy County, New Mexico (NAD 27)		
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		

Well	2H		
Well Position	+N/-S	0.00 usft	Northing: 419,234.99 usft
	+E/-W	0.00 usft	Easting: 600,415.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Ground Level:	2,941.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	9/17/2016	7.29	59.93	48,002

Design	Surveys				
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	1.75	

Survey Program	Date 10/4/2016				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
690.00	2,828.00	MS MWD (690'MD - 2828' MD) (Wellbore #1)	MWD	OWSG MWD - Standard	
2,879.00	7,784.00	Invictus Survey (2879' MD - 7784' MD) (W)	MWD	OWSG MWD - Standard	
7,862.00	15,900.00	MS MWD (7784'MD - 15900'MD) (Wellbore #1)	MWD	OWSG MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
690.00	1.50	51.60	689.92	5.61	7.08	5.82	0.22	0.22	0.00
784.00	1.20	53.20	783.90	6.96	8.83	7.23	0.32	-0.32	1.70
879.00	0.90	51.50	878.88	8.02	10.21	8.33	0.32	-0.32	-1.79
974.00	0.50	60.80	973.87	8.69	11.16	9.03	0.44	-0.42	9.79
1,068.00	0.50	89.90	1,067.87	8.89	11.92	9.25	0.27	0.00	30.96
1,163.00	0.20	100.00	1,162.87	8.86	12.50	9.24	0.32	-0.32	10.63
1,257.00	0.10	250.80	1,256.87	8.81	12.59	9.19	0.31	-0.11	160.43
1,352.00	0.10	235.50	1,351.87	8.73	12.44	9.11	0.03	0.00	-16.11
1,446.00	0.40	303.60	1,445.87	8.87	12.10	9.23	0.40	0.32	72.45
1,541.00	0.70	346.50	1,540.86	9.62	11.69	9.97	0.52	0.32	45.16
1,635.00	0.10	340.80	1,634.86	10.25	11.53	10.60	0.64	-0.64	-6.06
1,729.00	0.20	315.30	1,728.86	10.45	11.38	10.79	0.13	0.11	-27.13
1,824.00	0.60	317.10	1,823.86	10.93	10.93	11.26	0.42	0.42	1.89



MS Energy Services
Survey Report



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Design: Surveys

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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Conroe Server

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,918.00	0.50	293.90	1,917.85	11.46	10.22	11.76	0.26	-0.11	-24.68
2,013.00	0.60	295.80	2,012.85	11.84	9.39	12.12	0.11	0.11	2.00
2,107.00	0.30	324.70	2,106.84	12.26	8.81	12.52	0.39	-0.32	30.74
2,202.00	0.30	81.10	2,201.84	12.50	8.91	12.76	0.54	0.00	122.53
2,297.00	0.50	98.40	2,296.84	12.47	9.56	12.76	0.24	0.21	18.21
2,391.00	0.90	96.70	2,390.83	12.33	10.70	12.65	0.43	0.43	-1.81
2,486.00	1.40	106.60	2,485.81	11.91	12.56	12.29	0.56	0.53	10.42
2,580.00	1.90	113.10	2,579.78	10.97	15.09	11.43	0.57	0.53	6.91
2,674.00	1.00	163.30	2,673.75	9.57	16.76	10.08	1.57	-0.96	53.40
2,769.00	1.10	191.20	2,768.73	7.88	16.82	8.39	0.54	0.11	29.37
2,828.00	1.10	191.20	2,827.72	6.77	16.60	7.28	0.00	0.00	0.00
Tie-in to MS MWD - 2828.00' MD									
2,879.00	0.90	179.10	2,878.71	5.89	16.51	6.39	0.57	-0.39	-23.73
2,973.00	1.00	194.10	2,972.70	4.36	16.32	4.86	0.28	0.11	15.96
3,069.00	0.90	188.10	3,068.69	2.80	16.01	3.29	0.15	-0.10	-6.25
3,164.00	0.70	214.10	3,163.68	1.58	15.58	2.06	0.43	-0.21	27.37
3,257.00	0.80	190.10	3,256.67	0.47	15.15	0.93	0.35	0.11	-25.81
3,353.00	0.40	231.10	3,352.67	-0.40	14.77	0.05	0.59	-0.42	42.71
3,448.00	0.50	219.10	3,447.66	-0.93	14.25	-0.49	0.14	0.11	-12.63
3,542.00	0.40	236.10	3,541.66	-1.43	13.72	-1.01	0.18	-0.11	18.09
3,637.00	0.20	160.10	3,636.66	-1.77	13.50	-1.36	0.42	-0.21	-80.00
3,732.00	0.10	301.10	3,731.66	-1.88	13.49	-1.47	0.30	-0.11	148.42
3,826.00	0.10	320.10	3,825.66	-1.78	13.37	-1.37	0.04	0.00	20.21
3,881.00	0.60	239.10	3,880.66	-1.89	13.09	-1.49	1.08	0.91	-147.27
3,976.00	0.20	331.10	3,975.66	-2.00	12.58	-1.61	0.67	-0.42	96.84
4,068.00	0.80	250.10	4,067.65	-2.08	11.90	-1.71	0.86	0.65	-88.04
4,164.00	0.70	213.10	4,163.64	-2.80	10.95	-2.46	0.51	-0.10	-38.54
4,258.00	0.30	312.10	4,257.64	-3.11	10.45	-2.79	0.85	-0.43	105.32
4,353.00	0.70	238.10	4,352.64	-3.25	9.78	-2.95	0.72	0.42	-77.89
4,449.00	0.20	259.10	4,448.64	-3.59	9.11	-3.31	0.54	-0.52	21.88
4,543.00	0.80	199.10	4,542.63	-4.25	8.74	-3.98	0.77	0.64	-63.83
4,637.00	0.30	163.10	4,636.63	-5.10	8.59	-4.84	0.62	-0.53	-38.30
4,732.00	0.40	236.10	4,731.63	-5.52	8.39	-5.27	0.45	0.11	76.84
4,921.00	1.30	196.10	4,920.60	-7.95	7.25	-7.73	0.54	0.48	-21.16
5,016.00	0.70	152.10	5,015.59	-9.50	7.22	-9.28	0.98	-0.63	-46.32
5,110.00	0.80	168.10	5,109.58	-10.65	7.63	-10.41	0.25	0.11	17.02
5,204.00	1.60	201.10	5,203.56	-12.52	7.29	-12.29	1.09	0.85	35.11
5,299.00	0.90	227.10	5,298.54	-14.26	6.26	-14.06	0.93	-0.74	27.37
5,394.00	1.10	201.10	5,393.53	-15.62	5.39	-15.45	0.52	0.21	-27.37
5,489.00	1.50	208.10	5,488.50	-17.57	4.48	-17.42	0.45	0.42	7.37
5,583.00	1.40	200.10	5,582.47	-19.73	3.50	-19.62	0.24	-0.11	-8.51
5,678.00	1.10	199.10	5,677.45	-21.68	2.80	-21.59	0.32	-0.32	-1.05
5,732.00	0.80	217.10	5,731.44	-22.47	2.41	-22.39	0.78	-0.56	33.33



MS Energy Services Survey Report



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Site: Corral Canyon Federal
Well: 2H
Wellbore: Wellbore #1
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Local Co-ordinate Reference: Well 2H
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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,827.00	0.60	222.10	5,826.43	-23.37	1.67	-23.31	0.22	-0.21	5.26
5,922.00	0.50	204.10	5,921.43	-24.12	1.17	-24.07	0.21	-0.11	-18.95
6,016.00	0.40	252.10	6,015.43	-24.59	0.69	-24.56	0.40	-0.11	51.06
6,111.00	0.80	193.10	6,110.42	-25.34	0.23	-25.32	0.72	0.42	-62.11
6,205.00	0.20	266.10	6,204.42	-25.99	-0.09	-25.98	0.81	-0.64	77.66
6,300.00	1.10	221.10	6,299.41	-26.69	-0.85	-26.70	1.02	0.95	-47.37
6,395.00	1.00	254.10	6,394.40	-27.61	-2.25	-27.66	0.64	-0.11	34.74
6,489.00	0.70	203.10	6,488.39	-28.36	-3.26	-28.44	0.83	-0.32	-54.26
6,583.00	1.30	257.10	6,582.38	-29.12	-4.53	-29.25	1.12	0.64	57.45
6,719.00	2.90	258.10	6,718.28	-30.18	-9.40	-30.45	1.18	1.18	0.74
6,813.00	2.80	258.10	6,812.16	-31.14	-13.97	-31.55	0.11	-0.11	0.00
6,907.00	2.50	259.10	6,906.06	-32.00	-18.23	-32.55	0.32	-0.32	1.06
7,002.00	2.40	254.10	7,000.98	-32.94	-22.18	-33.60	0.25	-0.11	-5.26
7,097.00	1.40	234.10	7,095.92	-34.17	-25.03	-34.91	1.25	-1.05	-21.05
7,191.00	2.10	194.10	7,189.88	-36.51	-26.38	-37.30	1.45	0.74	-42.55
7,285.00	1.80	217.10	7,283.83	-39.36	-27.69	-40.18	0.88	-0.32	24.47
7,340.00	1.70	241.10	7,338.80	-40.44	-28.93	-41.31	1.33	-0.18	43.64
7,434.00	2.50	234.10	7,432.74	-42.32	-31.81	-43.27	0.89	0.85	-7.45
7,528.00	3.00	247.10	7,526.63	-44.48	-35.74	-45.55	0.85	0.53	13.83
7,623.00	1.70	260.10	7,621.55	-45.69	-39.41	-46.87	1.47	-1.37	13.68
7,718.00	1.60	260.10	7,716.51	-46.16	-42.11	-47.42	0.11	-0.11	0.00
7,784.00	1.40	274.10	7,782.49	-46.26	-43.82	-47.57	0.63	-0.30	21.21
Final Invictus - 7784.00' MD - Tie-In to Invictus - 7784.00' MD									
7,862.00	1.90	299.00	7,860.46	-45.56	-45.90	-46.94	1.11	0.64	31.92
7,894.00	4.50	347.20	7,892.41	-44.08	-46.64	-45.48	11.03	8.13	150.63
7,926.00	5.80	352.60	7,924.28	-41.25	-47.13	-42.67	4.33	4.06	16.88
7,957.00	8.50	1.00	7,955.04	-37.41	-47.29	-38.83	9.32	8.71	27.10
7,989.00	12.10	6.30	7,986.52	-31.71	-46.88	-33.12	11.62	11.25	16.56
8,020.00	15.60	8.40	8,016.61	-24.35	-45.92	-25.74	11.40	11.29	6.77
8,052.00	18.80	9.10	8,047.18	-15.00	-44.47	-16.35	10.02	10.00	2.19
8,083.00	21.50	10.20	8,076.28	-4.48	-42.68	-5.78	8.79	8.71	3.55
8,115.00	23.70	11.70	8,105.82	7.59	-40.33	6.36	7.11	6.88	4.69
8,146.00	25.70	11.80	8,133.98	20.28	-37.69	19.12	6.45	6.45	0.32
8,178.00	28.10	11.30	8,162.52	34.46	-34.80	33.38	7.53	7.50	-1.56
8,210.00	30.50	11.50	8,190.42	49.81	-31.70	48.82	7.51	7.50	0.63
8,241.00	32.40	12.00	8,216.86	65.64	-28.41	64.75	6.19	6.13	1.61
8,273.00	34.10	10.80	8,243.62	82.84	-24.94	82.04	5.70	5.31	-3.75
8,304.00	36.20	9.20	8,268.97	100.42	-21.85	99.70	7.40	6.77	-5.16
8,335.00	38.00	6.60	8,293.70	118.94	-19.29	118.29	7.70	5.81	-8.39
8,367.00	40.30	6.40	8,318.51	139.01	-17.00	138.42	7.20	7.19	-0.63
8,399.00	44.00	6.60	8,342.23	160.34	-14.57	159.82	11.57	11.56	0.63
8,430.00	47.50	7.30	8,363.86	182.38	-11.88	181.93	11.41	11.29	2.26
8,462.00	50.00	7.80	8,384.96	206.23	-8.72	205.86	7.90	7.81	1.56
8,493.00	53.10	7.60	8,404.23	230.28	-5.47	230.01	10.01	10.00	-0.65



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8,525.00	56.20	6.90	8,422.74	256.17	-2.18	255.99	9.85	9.69	-2.19
8,557.00	59.30	6.90	8,439.82	283.04	1.07	282.94	9.69	9.69	0.00
8,588.00	61.90	7.40	8,455.03	309.83	4.44	309.82	8.50	8.39	1.61
8,620.00	64.90	6.90	8,469.36	338.22	8.00	338.30	9.48	9.38	-1.56
8,651.00	67.80	6.80	8,481.80	366.41	11.38	366.59	9.36	9.35	-0.32
8,683.00	70.60	6.90	8,493.16	396.11	14.95	396.38	8.75	8.75	0.31
8,714.00	73.20	7.60	8,502.79	425.33	18.67	425.71	8.66	8.39	2.26
8,745.00	76.30	6.50	8,510.94	455.01	22.34	455.48	10.57	10.00	-3.55
8,777.00	79.80	5.50	8,517.57	486.14	25.61	486.70	11.36	10.94	-3.13
8,808.00	82.50	4.70	8,522.33	516.65	28.33	517.27	9.08	8.71	-2.58
8,840.00	85.10	4.00	8,525.79	548.37	30.74	549.05	8.41	8.13	-2.19
8,862.00	86.60	3.40	8,527.38	570.26	32.16	570.98	7.34	6.82	-2.73
8,893.00	88.10	2.20	8,528.82	601.19	33.67	601.94	6.19	4.84	-3.87
8,956.00	88.70	2.00	8,530.57	664.12	35.98	664.91	1.00	0.95	-0.32
9,051.00	89.80	4.10	8,531.82	758.98	41.03	759.87	2.50	1.16	2.21
9,145.00	89.50	1.80	8,532.39	852.84	45.87	853.85	2.47	-0.32	-2.45
9,240.00	89.20	359.10	8,533.47	947.82	46.62	948.81	2.86	-0.32	-2.84
9,334.00	89.20	358.20	8,534.78	1,041.79	44.40	1,042.66	0.96	0.00	-0.96
9,429.00	89.50	357.90	8,535.86	1,136.73	41.17	1,137.45	0.45	0.32	-0.32
9,524.00	89.90	357.80	8,536.36	1,231.66	37.60	1,232.23	0.43	0.42	-0.11
9,618.00	88.90	359.10	8,537.34	1,325.62	35.06	1,326.07	1.74	-1.06	1.38
9,713.00	89.70	359.30	8,538.50	1,420.60	33.74	1,420.97	0.87	0.84	0.21
9,807.00	89.80	1.00	8,538.91	1,514.59	33.98	1,514.93	1.81	0.11	1.81
9,902.00	90.30	0.60	8,538.83	1,609.58	35.31	1,609.91	0.67	0.53	-0.42
9,996.00	91.40	2.10	8,537.44	1,703.54	37.52	1,703.89	1.98	1.17	1.60
10,091.00	89.90	2.20	8,536.36	1,798.47	41.09	1,798.88	1.58	-1.58	0.11
10,186.00	90.50	2.50	8,536.03	1,893.39	44.98	1,893.88	0.71	0.63	0.32
10,280.00	91.20	2.50	8,534.63	1,987.29	49.08	1,987.86	0.74	0.74	0.00
10,375.00	89.20	1.00	8,534.30	2,082.23	51.98	2,082.85	2.63	-2.11	-1.58
10,469.00	89.90	2.10	8,535.04	2,176.19	54.52	2,176.84	1.39	0.74	1.17
10,564.00	90.70	3.30	8,534.54	2,271.09	59.00	2,271.83	1.52	0.84	1.26
10,658.00	91.00	2.90	8,533.15	2,364.94	64.08	2,365.79	0.53	0.32	-0.43
10,753.00	90.20	2.80	8,532.15	2,459.81	68.81	2,460.77	0.85	-0.84	-0.11
10,848.00	89.90	1.80	8,532.07	2,554.74	72.62	2,555.76	1.10	-0.32	-1.05
10,943.00	90.40	1.70	8,531.82	2,649.69	75.52	2,650.76	0.54	0.53	-0.11
11,037.00	88.80	1.80	8,532.48	2,743.64	78.39	2,744.76	1.71	-1.70	0.11
11,132.00	89.30	1.80	8,534.05	2,838.58	81.37	2,839.74	0.53	0.53	0.00
11,226.00	89.20	359.70	8,535.28	2,932.56	82.60	2,933.72	2.24	-0.11	-2.23
11,321.00	89.40	357.60	8,536.44	3,027.52	80.37	3,028.56	2.22	0.21	-2.21
11,415.00	88.50	358.20	8,538.17	3,121.44	76.92	3,122.33	1.15	-0.96	0.64
11,510.00	88.10	359.50	8,540.98	3,216.38	75.02	3,217.17	1.43	-0.42	1.37
11,604.00	89.00	1.80	8,543.36	3,310.33	76.08	3,311.11	2.63	0.96	2.45
11,699.00	89.90	2.70	8,544.28	3,405.25	79.81	3,406.10	1.34	0.95	0.95



MS Energy Services Survey Report



Company: XTO Energy
Project: Eddy County, New Mexico (NAD 27)
Site: Corral Canyon Federal
Well: 2H
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well 2H
TVD Reference: Rig @ 2966.00usft (Noram 25)
MD Reference: Rig @ 2966.00usft (Noram 25)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Conroe Server

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,794.00	90.70	3.00	8,543.78	3,500.14	84.53	3,501.08	0.90	0.84	0.32
11,889.00	91.20	2.80	8,542.20	3,595.00	89.34	3,596.05	0.57	0.53	-0.21
11,983.00	91.60	2.70	8,539.91	3,688.86	93.85	3,690.01	0.44	0.43	-0.11
12,078.00	90.50	3.60	8,538.17	3,783.70	99.07	3,784.96	1.50	-1.16	0.95
12,172.00	91.20	4.70	8,536.77	3,877.44	105.87	3,878.87	1.39	0.74	1.17
12,266.00	89.10	2.90	8,536.52	3,971.23	112.10	3,972.80	2.94	-2.23	-1.91
12,361.00	89.40	3.00	8,537.77	4,066.09	116.99	4,067.77	0.33	0.32	0.11
12,455.00	89.50	2.50	8,538.67	4,159.98	121.50	4,161.75	0.54	0.11	-0.53
12,550.00	89.80	2.00	8,539.25	4,254.90	125.23	4,256.74	0.61	0.32	-0.53
12,644.00	90.20	1.50	8,539.25	4,348.86	128.10	4,350.74	0.68	0.43	-0.53
12,739.00	90.80	1.70	8,538.42	4,443.82	130.75	4,445.74	0.67	0.63	0.21
12,833.00	90.70	359.90	8,537.19	4,537.80	132.06	4,539.71	1.92	-0.11	-1.91
12,927.00	90.00	1.00	8,536.62	4,631.79	132.80	4,633.69	1.39	-0.74	1.17
13,022.00	90.30	2.70	8,536.37	4,726.74	135.87	4,728.68	1.82	0.32	1.79
13,117.00	91.00	3.40	8,535.29	4,821.60	140.92	4,823.65	1.04	0.74	0.74
13,212.00	89.90	1.10	8,534.54	4,916.51	144.65	4,918.64	2.68	-1.16	-2.42
13,307.00	90.70	1.10	8,534.05	5,011.49	146.47	5,013.63	0.84	0.84	0.00
13,402.00	91.30	0.80	8,532.39	5,106.46	148.05	5,108.60	0.71	0.63	-0.32
13,496.00	89.70	0.50	8,531.57	5,200.45	149.12	5,202.58	1.73	-1.70	-0.32
13,591.00	88.80	1.80	8,532.81	5,295.42	151.02	5,297.56	1.66	-0.95	1.37
13,686.00	88.90	2.10	8,534.72	5,390.35	154.25	5,392.54	0.33	0.11	0.32
13,780.00	90.40	2.80	8,535.29	5,484.26	158.27	5,486.53	1.76	1.60	0.74
13,874.00	90.00	2.00	8,534.96	5,578.17	162.21	5,580.52	0.95	-0.43	-0.85
13,968.00	89.50	1.40	8,535.37	5,672.13	165.00	5,674.52	0.83	-0.53	-0.64
14,063.00	90.30	1.50	8,535.54	5,767.10	167.40	5,769.52	0.85	0.84	0.11
14,157.00	91.60	2.10	8,533.98	5,861.04	170.35	5,863.50	1.52	1.38	0.64
14,252.00	90.50	2.50	8,532.24	5,955.94	174.16	5,958.48	1.23	-1.16	0.42
14,346.00	90.80	2.10	8,531.18	6,049.86	177.94	6,052.47	0.53	0.32	-0.43
14,441.00	89.80	2.20	8,530.68	6,144.79	181.50	6,147.47	1.06	-1.05	0.11
14,536.00	89.90	2.50	8,530.93	6,239.71	185.40	6,242.46	0.33	0.11	0.32
14,630.00	90.10	2.60	8,530.93	6,333.62	189.58	6,336.45	0.24	0.21	0.11
14,725.00	90.80	2.90	8,530.18	6,428.50	194.14	6,431.43	0.80	0.74	0.32
14,820.00	89.80	2.60	8,529.68	6,523.39	198.69	6,526.42	1.10	-1.05	-0.32
14,914.00	90.20	2.80	8,529.68	6,617.29	203.12	6,620.40	0.48	0.43	0.21
15,009.00	90.10	1.90	8,529.43	6,712.21	207.02	6,715.40	0.95	-0.11	-0.95
15,103.00	90.30	1.80	8,529.11	6,806.16	210.05	6,809.40	0.24	0.21	-0.11
15,198.00	91.10	1.80	8,527.95	6,901.10	213.04	6,904.39	0.84	0.84	0.00
15,292.00	89.20	1.70	8,527.70	6,995.05	215.91	6,998.38	2.02	-2.02	-0.11
15,387.00	89.60	1.80	8,528.69	7,090.00	218.81	7,093.38	0.43	0.42	0.11
15,481.00	89.80	1.20	8,529.19	7,183.97	221.27	7,187.38	0.67	0.21	-0.64
15,576.00	89.40	1.30	8,529.85	7,278.94	223.34	7,282.37	0.43	-0.42	0.11
15,670.00	90.70	1.20	8,529.77	7,372.92	225.39	7,376.36	1.39	1.38	-0.11
15,765.00	91.30	1.40	8,528.11	7,467.88	227.55	7,471.35	0.67	0.63	0.21



MS Energy Services
Survey Report



Company: XTO Energy
Project: Eddy County, New Mexico (NAD 27)
Site: Corral Canyon Federal
Well: 2H
Wellbore: Wellbore #1
Design: Surveys

Local Co-ordinate Reference: Well 2H
TVD Reference: Rig @ 2966.00usft (Noram 25)
MD Reference: Rig @ 2966.00usft (Noram 25)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Conroe Server

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,844.00	92.10	1.20	8,525.77	7,546.82	229.34	7,550.31	1.04	1.01	-0.25
15,900.00	92.10	1.20	8,523.71	7,602.78	230.51	7,606.27	0.00	0.00	0.00
Projection to TD-15900.00' MD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,828.00	2,827.72	6.77	16.60	Tie-in to MS MWD - 2828.00' MD
7,784.00	7,782.49	-46.26	-43.82	Final Invictus - 7784.00' MD
7,784.00	7,782.49	-46.26	-43.82	Tie-In to Invictus - 7784.00' MD
15,900.00	8,523.71	7,602.78	230.51	Projection to TD-15900.00' MD