



NM OIL CONSERVATION
ARTESIA DISTRICT
APR 06 2018
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XTO ENERGY, INC.

Eddy County, NM

Corral Canyon Federal 13H

Corral Canyon Federal 13H

30-015-43493

Wellbore #1

Design: Wellbore #1

QES Survey Report

12 July, 2017





Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Corral Canyon Federal 13H
Project:	Eddy County, NM	TVD Reference:	RKB @ 2939.0usft (Frontier 27)
Site:	Corral Canyon Federal 13H	MD Reference:	RKB @ 2939.0usft (Frontier 27)
Well:	Corral Canyon Federal 13H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

Project	Eddy County, NM		
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	Corral Canyon Federal 13H				
Site Position:		Northing:	419,319.10 usft	Latitude:	32° 9' 8.741 N
From:	Map	Easting:	598,085.90 usft	Longitude:	104° 0' 59.029 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well	Corral Canyon Federal 13H					
Well Position	+N/-S	0.0 usft	Northing:	419,319.10 usft	Latitude:	32° 9' 8.741 N
	+E/-W	0.0 usft	Easting:	598,085.90 usft	Longitude:	104° 0' 59.029 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	2,912.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/22/2017	7.15	59.92	47,850

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	175.00	

Survey Program	Date	7/12/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
206.0	308.0	Surface Surveys (Wellbore #1)	MWD	OWSG MWD - Standard
375.0	19,042.0	MWD Survey (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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
206.0	0.90	352.00	206.0	1.6	-0.2	-1.6	0.44	0.44	0.00
234.0	1.10	15.00	234.0	2.1	-0.2	-2.1	1.59	0.71	82.14
264.0	1.30	334.00	264.0	2.7	-0.3	-2.7	2.87	0.67	-136.67
Tie In @ 308.0 'MD / 308.0 'TVD									
308.0	1.50	317.00	308.0	3.5	-0.9	-3.6	1.04	0.45	-38.64
375.0	1.70	345.00	374.9	5.1	-1.7	-5.3	1.19	0.30	41.79
464.0	1.60	349.80	463.9	7.6	-2.3	-7.8	0.19	-0.11	5.39
553.0	1.90	350.80	552.9	10.3	-2.7	-10.5	0.34	0.34	1.12
652.0	1.20	312.90	651.8	12.6	-3.8	-12.9	1.22	-0.71	-38.28



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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)
747.0	1.90	237.50	746.8	12.5	-5.8	-12.9	2.08	0.74	-79.37
843.0	1.40	230.10	842.8	10.9	-8.1	-11.5	0.57	-0.52	-7.71
938.0	1.80	98.00	937.7	9.9	-7.5	-10.5	3.08	0.42	-139.05
1,033.0	1.80	7.90	1,032.7	11.2	-5.8	-11.6	2.68	0.00	-94.84
1,128.0	2.60	348.10	1,127.6	14.8	-6.0	-15.2	1.15	0.84	-20.84
1,223.0	0.50	315.80	1,222.6	17.2	-6.8	-17.7	2.31	-2.21	-34.00
1,319.0	0.80	244.40	1,318.6	17.2	-7.7	-17.8	0.83	0.31	-74.38
1,415.0	0.00	281.30	1,414.6	16.9	-8.3	-17.5	0.83	-0.83	0.00
1,511.0	0.30	118.30	1,510.6	16.8	-8.0	-17.4	0.31	0.31	0.00
1,607.0	0.30	99.20	1,606.6	16.6	-7.6	-17.2	0.10	0.00	-19.90
1,701.0	0.40	80.20	1,700.6	16.6	-7.0	-17.2	0.16	0.11	-20.21
1,796.0	0.50	73.10	1,795.6	16.8	-6.3	-17.3	0.12	0.11	-7.47
1,892.0	0.50	84.60	1,891.6	17.0	-5.5	-17.4	0.10	0.00	11.98
1,988.0	0.80	65.60	1,987.6	17.3	-4.4	-17.6	0.38	0.31	-19.79
2,084.0	1.70	81.10	2,083.6	17.8	-2.4	-17.9	0.99	0.94	16.15
2,180.0	1.10	75.40	2,179.5	18.2	-0.1	-18.2	0.64	-0.63	-5.94
2,275.0	0.50	47.30	2,274.5	18.7	1.1	-18.6	0.74	-0.63	-29.58
2,371.0	1.20	74.50	2,370.5	19.3	2.3	-19.0	0.82	0.73	28.33
2,464.0	1.10	106.80	2,463.5	19.3	4.1	-18.9	0.70	-0.11	34.73
2,560.0	1.20	136.30	2,559.5	18.3	5.7	-17.7	0.62	0.10	30.73
2,656.0	0.70	329.20	2,655.5	18.1	6.1	-17.5	1.97	-0.52	-174.06
2,752.0	0.80	326.10	2,751.5	19.1	5.4	-18.6	0.11	0.10	-3.23
2,855.0	0.70	304.90	2,854.5	20.1	4.5	-19.6	0.28	-0.10	-20.58
2,918.0	0.90	282.70	2,917.4	20.4	3.7	-20.0	0.58	0.32	-35.24
3,012.0	0.80	303.00	3,011.4	21.0	2.4	-20.7	0.34	-0.11	21.60
3,109.0	0.90	311.10	3,108.4	21.8	1.3	-21.6	0.16	0.10	8.35
3,201.0	0.90	313.80	3,200.4	22.8	0.2	-22.7	0.05	0.00	2.93
3,295.0	0.90	314.90	3,294.4	23.8	-0.8	-23.8	0.02	0.00	1.17
3,391.0	0.70	308.40	3,390.4	24.7	-1.8	-24.8	0.23	-0.21	-6.77
3,488.0	0.80	301.60	3,487.4	25.4	-2.9	-25.6	0.14	0.10	-7.01
3,583.0	0.80	323.00	3,582.4	26.3	-3.8	-26.6	0.31	0.00	22.53
3,679.0	0.90	305.70	3,678.4	27.3	-4.8	-27.6	0.29	0.10	-18.02
3,775.0	0.90	303.30	3,774.4	28.2	-6.1	-28.6	0.04	0.00	-2.50
3,870.0	0.90	309.50	3,869.3	29.0	-7.3	-29.6	0.10	0.00	6.53
3,966.0	0.60	339.20	3,965.3	30.0	-8.0	-30.6	0.50	-0.31	30.94
4,061.0	0.80	311.80	4,060.3	30.9	-8.7	-31.5	0.40	0.21	-28.84
4,156.0	0.70	306.10	4,155.3	31.7	-9.7	-32.4	0.13	-0.11	-6.00
4,250.0	0.80	305.10	4,249.3	32.4	-10.7	-33.2	0.11	0.11	-1.06
4,345.0	0.70	306.50	4,344.3	33.1	-11.7	-34.0	0.11	-0.11	1.47
4,440.0	0.80	298.70	4,439.3	33.8	-12.7	-34.8	0.15	0.11	-8.21
4,536.0	0.70	295.70	4,535.3	34.4	-13.8	-35.4	0.11	-0.10	-3.13
4,630.0	0.70	295.90	4,629.3	34.9	-14.9	-36.0	0.00	0.00	0.21
4,725.0	0.60	297.90	4,724.3	35.3	-15.8	-36.6	0.11	-0.11	2.11



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Design:	Wellbore #1	Database:	EDM5002

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)
4,821.0	0.70	306.30	4,820.3	35.9	-16.8	-37.3	0.14	0.10	8.75
4,914.0	0.70	315.60	4,913.3	36.7	-17.6	-38.1	0.12	0.00	10.00
5,010.0	0.60	321.90	5,009.3	37.5	-18.3	-38.9	0.13	-0.10	6.56
5,105.0	0.80	315.90	5,104.2	38.4	-19.1	-39.9	0.22	0.21	-6.32
5,200.0	0.60	308.00	5,199.2	39.1	-20.0	-40.7	0.23	-0.21	-8.32
5,295.0	0.60	301.00	5,294.2	39.7	-20.8	-41.4	0.08	0.00	-7.37
5,390.0	0.60	316.60	5,389.2	40.3	-21.5	-42.0	0.17	0.00	16.42
5,486.0	0.00	276.70	5,485.2	40.7	-21.9	-42.4	0.63	-0.63	0.00
5,582.0	0.20	175.50	5,581.2	40.5	-21.9	-42.3	0.21	0.21	0.00
5,677.0	0.50	211.90	5,676.2	40.0	-22.1	-41.8	0.38	0.32	38.32
5,772.0	0.40	168.90	5,771.2	39.3	-22.2	-41.1	0.36	-0.11	-45.26
5,868.0	0.60	162.00	5,867.2	38.5	-22.0	-40.3	0.22	0.21	-7.19
5,962.0	0.80	142.90	5,961.2	37.5	-21.5	-39.2	0.32	0.21	-20.32
6,059.0	0.70	152.00	6,058.2	36.5	-20.8	-38.1	0.16	-0.10	9.38
6,154.0	0.70	156.10	6,153.2	35.4	-20.3	-37.0	0.05	0.00	4.32
6,249.0	0.90	172.50	6,248.2	34.1	-19.9	-35.8	0.32	0.21	17.26
6,344.0	1.00	175.60	6,343.2	32.6	-19.8	-34.2	0.12	0.11	3.26
6,440.0	1.00	178.20	6,439.2	30.9	-19.7	-32.5	0.05	0.00	2.71
6,536.0	0.60	244.50	6,535.2	29.9	-20.1	-31.5	0.98	-0.42	69.06
6,631.0	1.30	238.10	6,630.1	29.1	-21.5	-30.8	0.74	0.74	-6.74
6,727.0	1.40	206.50	6,726.1	27.4	-22.9	-29.3	0.77	0.10	-32.92
6,823.0	1.40	193.10	6,822.1	25.3	-23.7	-27.2	0.34	0.00	-13.96
6,918.0	1.50	192.40	6,917.1	22.9	-24.3	-24.9	0.11	0.11	-0.74
7,014.0	1.70	188.60	7,013.0	20.3	-24.7	-22.3	0.24	0.21	-3.96
7,110.0	1.70	161.80	7,109.0	17.5	-24.5	-19.6	0.82	0.00	-27.92
7,205.0	2.10	140.30	7,203.9	14.8	-23.0	-16.8	0.85	0.42	-22.63
7,301.0	1.80	145.40	7,299.9	12.2	-21.0	-14.0	0.36	-0.31	5.31
7,396.0	2.50	160.70	7,394.8	9.1	-19.4	-10.7	0.95	0.74	16.11
7,492.0	3.30	161.70	7,490.7	4.5	-17.9	-6.0	0.83	0.83	1.04
7,578.0	4.50	143.40	7,576.5	-0.6	-15.1	-0.7	1.99	1.40	-21.28
7,626.0	9.50	121.10	7,624.1	-4.2	-10.6	3.2	11.67	10.42	-46.46
7,674.0	14.30	113.00	7,671.1	-8.5	-1.7	8.3	10.56	10.00	-16.88
7,722.0	19.70	108.40	7,717.0	-13.4	11.4	14.3	11.59	11.25	-9.58
7,769.0	22.90	108.00	7,760.7	-18.7	27.6	21.1	6.82	6.81	-0.85
7,817.0	27.60	105.10	7,804.1	-24.5	47.3	28.5	10.12	9.79	-6.04
7,865.0	32.00	104.90	7,845.8	-30.7	70.3	36.7	9.17	9.17	-0.42
7,913.0	35.30	102.90	7,885.7	-37.1	96.1	45.3	7.25	6.88	-4.17
7,961.0	38.40	101.50	7,924.1	-43.1	124.3	53.8	6.69	6.46	-2.92
8,009.0	41.60	102.30	7,960.9	-49.5	154.4	62.8	6.75	6.67	1.67
8,056.0	42.80	101.00	7,995.7	-55.9	185.4	71.8	3.16	2.55	-2.77
8,104.0	44.30	102.70	8,030.5	-62.7	217.7	81.4	3.96	3.13	3.54
8,151.0	46.50	105.40	8,063.5	-70.8	250.2	92.3	6.22	4.68	5.74
8,199.0	49.50	106.80	8,095.6	-80.7	284.4	105.2	6.61	6.25	2.92



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Survey

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8,247.0	50.40	111.80	8,126.5	-92.8	319.1	120.3	8.19	1.88	10.42
8,295.0	53.00	112.90	8,156.3	-107.2	353.9	137.6	5.71	5.42	2.29
8,340.0	53.70	115.60	8,183.1	-122.0	386.8	155.3	5.06	1.56	6.00
8,388.0	56.70	119.70	8,210.5	-140.3	421.7	176.5	9.39	6.25	8.54
8,435.0	59.50	122.00	8,235.4	-160.8	456.0	199.9	7.26	5.96	4.89
8,483.0	62.90	122.20	8,258.5	-183.1	491.6	225.3	7.09	7.08	0.42
8,531.0	66.40	123.60	8,279.1	-206.7	528.0	251.9	7.75	7.29	2.92
8,579.0	68.40	126.00	8,297.5	-232.0	564.4	280.3	6.22	4.17	5.00
8,627.0	69.40	128.40	8,314.8	-259.1	600.0	310.4	5.11	2.08	5.00
8,675.0	70.70	131.30	8,331.2	-288.0	634.7	342.2	6.29	2.71	6.04
8,723.0	72.00	134.80	8,346.5	-319.0	667.9	376.0	7.42	2.71	7.29
8,771.0	72.00	139.50	8,361.4	-352.5	698.9	412.0	9.31	0.00	9.79
8,819.0	71.60	142.90	8,376.4	-388.0	727.5	449.9	6.78	-0.83	7.08
8,867.0	71.30	146.50	8,391.6	-425.1	753.8	489.2	7.14	-0.63	7.50
8,913.0	71.90	149.80	8,406.2	-462.2	776.8	528.1	6.93	1.30	7.17
8,961.0	74.30	152.60	8,420.1	-502.4	798.9	570.2	7.49	5.00	5.83
9,009.0	75.90	156.10	8,432.5	-544.3	819.0	613.6	7.79	3.33	7.29
9,057.0	76.20	160.10	8,444.0	-587.5	836.4	658.1	8.11	0.63	8.33
9,105.0	76.00	164.00	8,455.6	-631.8	850.7	703.5	7.90	-0.42	8.13
9,153.0	77.80	168.30	8,466.4	-677.2	861.9	749.7	9.50	3.75	8.96
9,200.0	80.00	170.80	8,475.5	-722.5	870.3	795.6	7.01	4.68	5.32
9,248.0	82.90	173.80	8,482.6	-769.5	876.6	843.0	8.64	6.04	6.25
9,295.0	84.40	176.20	8,487.8	-816.1	880.7	889.7	6.00	3.19	5.11
9,343.0	85.60	178.70	8,492.0	-863.8	882.8	937.5	5.76	2.50	5.21
9,391.0	87.90	179.20	8,494.7	-911.7	883.7	985.3	4.90	4.79	1.04
9,486.0	88.40	179.40	8,497.8	-1,006.7	884.9	1,080.0	0.57	0.53	0.21
9,581.0	89.20	178.80	8,499.8	-1,101.7	886.4	1,174.7	1.05	0.84	-0.63
9,676.0	90.00	178.50	8,500.5	-1,196.6	888.6	1,269.5	0.90	0.84	-0.32
9,771.0	91.60	180.10	8,499.1	-1,291.6	889.8	1,364.2	2.38	1.68	1.68
9,866.0	90.50	179.10	8,497.4	-1,386.6	890.4	1,458.9	1.56	-1.16	-1.05
9,962.0	92.80	178.60	8,494.6	-1,482.5	892.3	1,554.6	2.45	2.40	-0.52
10,057.0	89.50	178.70	8,492.7	-1,577.5	894.6	1,649.4	3.48	-3.47	0.11
10,153.0	90.50	178.70	8,492.7	-1,673.4	896.8	1,745.2	1.04	1.04	0.00
10,248.0	91.80	178.40	8,490.8	-1,768.4	899.2	1,840.0	1.40	1.37	-0.32
10,344.0	90.70	179.00	8,488.7	-1,864.3	901.3	1,935.8	1.31	-1.15	0.63
10,439.0	89.50	179.00	8,488.6	-1,959.3	903.0	2,030.6	1.26	-1.26	0.00
10,533.0	90.70	178.50	8,488.4	-2,053.3	905.1	2,124.4	1.38	1.28	-0.53
10,629.0	89.80	178.70	8,488.0	-2,149.3	907.4	2,220.2	0.96	-0.94	0.21
10,724.0	89.40	178.90	8,488.6	-2,244.2	909.4	2,315.0	0.47	-0.42	0.21
10,819.0	88.50	177.80	8,490.4	-2,339.2	912.1	2,409.8	1.50	-0.95	-1.16
10,914.0	89.20	177.60	8,492.3	-2,434.1	915.9	2,504.6	0.77	0.74	-0.21
11,010.0	90.70	177.50	8,492.4	-2,530.0	920.0	2,600.5	1.57	1.56	-0.10
11,104.0	88.40	178.20	8,493.1	-2,623.9	923.6	2,694.4	2.56	-2.45	0.74
11,200.0	88.50	177.90	8,495.7	-2,719.8	926.8	2,790.3	0.33	0.10	-0.31



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Corral Canyon Federal 13H
Project:	Eddy County, NM	TVD Reference:	RKB @ 2939.0usft (Frontier 27)
Site:	Corral Canyon Federal 13H	MD Reference:	RKB @ 2939.0usft (Frontier 27)
Well:	Corral Canyon Federal 13H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
11,296.0	89.50	180.00	8,497.4	-2,815.8	928.6	2,886.0	2.42	1.04	2.19
11,390.0	90.20	179.80	8,497.6	-2,909.8	928.8	2,979.7	0.77	0.74	-0.21
11,485.0	90.70	181.50	8,496.9	-3,004.8	927.7	3,074.2	1.87	0.53	1.79
11,580.0	90.60	181.20	8,495.8	-3,099.7	925.4	3,168.6	0.33	-0.11	-0.32
11,673.0	90.30	179.70	8,495.1	-3,192.7	924.7	3,261.2	1.64	-0.32	-1.61
11,768.0	90.20	180.80	8,494.7	-3,287.7	924.3	3,355.8	1.16	-0.11	1.16
11,863.0	90.90	181.50	8,493.7	-3,382.7	922.4	3,450.2	1.04	0.74	0.74
11,957.0	91.30	180.80	8,491.9	-3,476.7	920.5	3,543.7	0.86	0.43	-0.74
12,051.0	90.50	182.10	8,490.5	-3,570.6	918.1	3,637.1	1.62	-0.85	1.38
12,146.0	91.30	182.40	8,489.0	-3,665.5	914.4	3,731.3	0.90	0.84	0.32
12,241.0	89.50	181.60	8,488.3	-3,760.5	911.1	3,825.6	2.07	-1.89	-0.84
12,336.0	90.50	182.20	8,488.3	-3,855.4	907.9	3,919.9	1.23	1.05	0.63
12,431.0	91.10	182.00	8,487.0	-3,950.3	904.4	4,014.1	0.67	0.63	-0.21
12,526.0	89.50	182.00	8,486.5	-4,045.3	901.1	4,108.4	1.68	-1.68	0.00
12,621.0	87.40	181.20	8,489.0	-4,140.2	898.5	4,202.8	2.37	-2.21	-0.84
12,715.0	87.80	180.80	8,493.0	-4,234.1	896.8	4,296.2	0.60	0.43	-0.43
12,811.0	88.80	180.40	8,495.8	-4,330.1	895.8	4,391.7	1.12	1.04	-0.42
12,904.0	89.50	180.40	8,497.2	-4,423.0	895.2	4,484.2	0.75	0.75	0.00
12,999.0	88.50	178.70	8,498.9	-4,518.0	895.9	4,578.9	2.08	-1.05	-1.79
13,095.0	89.00	178.30	8,501.0	-4,614.0	898.4	4,674.7	0.67	0.52	-0.42
13,191.0	89.60	177.70	8,502.1	-4,709.9	901.8	4,770.6	0.88	0.63	-0.63
13,286.0	90.50	177.00	8,502.1	-4,804.8	906.2	4,865.5	1.20	0.95	-0.74
13,381.0	91.30	176.90	8,500.6	-4,899.6	911.2	4,960.4	0.85	0.84	-0.11
13,475.0	91.50	177.50	8,498.3	-4,993.5	915.8	5,054.3	0.67	0.21	0.64
13,571.0	90.20	178.50	8,496.8	-5,089.4	919.2	5,150.2	1.71	-1.35	1.04
13,665.0	88.70	179.20	8,497.7	-5,183.4	921.1	5,244.0	1.76	-1.60	0.74
13,760.0	89.40	179.40	8,499.3	-5,278.4	922.2	5,338.7	0.77	0.74	0.21
13,854.0	90.50	179.00	8,499.4	-5,372.4	923.5	5,432.4	1.25	1.17	-0.43
13,949.0	91.20	178.50	8,498.0	-5,467.3	925.6	5,527.2	0.91	0.74	-0.53
14,044.0	89.80	178.80	8,497.2	-5,562.3	927.9	5,622.0	1.51	-1.47	0.32
14,138.0	90.00	178.40	8,497.3	-5,656.3	930.1	5,715.8	0.48	0.21	-0.43
14,231.0	91.30	178.70	8,496.3	-5,749.2	932.5	5,808.6	1.43	1.40	0.32
14,254.0	91.40	178.40	8,495.7	-5,772.2	933.1	5,831.6	1.37	0.43	-1.30
14,349.0	89.40	179.00	8,495.1	-5,867.2	935.2	5,926.4	2.20	-2.11	0.63
14,444.0	90.40	179.40	8,495.2	-5,962.2	936.6	6,021.1	1.13	1.05	0.42
14,538.0	92.20	179.40	8,493.1	-6,056.2	937.5	6,114.8	1.91	1.91	0.00
14,633.0	91.50	180.20	8,490.0	-6,151.1	937.9	6,209.4	1.12	-0.74	0.84
14,728.0	89.80	180.00	8,489.0	-6,246.1	937.7	6,304.1	1.80	-1.79	-0.21
14,823.0	88.70	181.00	8,490.2	-6,341.1	936.9	6,398.6	1.56	-1.16	1.05
14,918.0	89.50	181.00	8,491.7	-6,436.1	935.2	6,493.1	0.84	0.84	0.00
15,014.0	88.70	181.70	8,493.2	-6,532.0	933.0	6,588.5	1.11	-0.83	0.73
15,110.0	89.70	181.10	8,494.5	-6,628.0	930.6	6,683.9	1.21	1.04	-0.63
15,205.0	88.50	180.50	8,496.0	-6,722.9	929.3	6,778.4	1.41	-1.26	-0.63



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Corral Canyon Federal 13H
Project:	Eddy County, NM	TVD Reference:	RKB @ 2939.0usft (Frontier 27)
Site:	Corral Canyon Federal 13H	MD Reference:	RKB @ 2939.0usft (Frontier 27)
Well:	Corral Canyon Federal 13H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
15,300.0	89.10	180.10	8,498.0	-6,817.9	928.8	6,872.9	0.76	0.63	-0.42
15,396.0	91.30	179.90	8,497.7	-6,913.9	928.8	6,968.6	2.30	2.29	-0.21
15,492.0	92.00	179.30	8,494.9	-7,009.9	929.5	7,064.2	0.96	0.73	-0.63
15,587.0	90.00	179.30	8,493.3	-7,104.9	930.6	7,158.9	2.11	-2.11	0.00
15,682.0	90.40	179.60	8,492.9	-7,199.8	931.5	7,253.6	0.53	0.42	0.32
15,777.0	89.70	179.70	8,492.9	-7,294.8	932.1	7,348.3	0.74	-0.74	0.11
15,873.0	89.30	180.30	8,493.7	-7,390.8	932.1	7,444.0	0.75	-0.42	0.63
15,967.0	87.70	180.40	8,496.1	-7,484.8	931.5	7,537.5	1.71	-1.70	0.11
16,063.0	88.40	180.00	8,499.4	-7,580.7	931.2	7,633.1	0.84	0.73	-0.42
16,158.0	89.80	179.90	8,500.9	-7,675.7	931.3	7,727.7	1.48	1.47	-0.11
16,253.0	89.00	179.10	8,501.9	-7,770.7	932.1	7,822.4	1.19	-0.84	-0.84
16,348.0	90.80	178.40	8,502.1	-7,865.7	934.2	7,917.2	2.03	1.89	-0.74
16,442.0	90.50	178.80	8,501.0	-7,959.7	936.5	8,011.0	0.53	-0.32	0.43
16,536.0	88.70	179.40	8,501.7	-8,053.6	938.0	8,104.7	2.02	-1.91	0.64
16,633.0	89.70	179.20	8,503.0	-8,150.6	939.2	8,201.5	1.05	1.03	-0.21
16,728.0	91.40	178.40	8,502.1	-8,245.6	941.1	8,296.2	1.98	1.79	-0.84
16,821.0	90.60	179.20	8,500.5	-8,338.6	943.1	8,389.0	1.22	-0.86	0.86
16,914.0	89.90	180.20	8,500.1	-8,431.6	943.6	8,481.7	1.31	-0.75	1.08
17,008.0	89.60	182.50	8,500.5	-8,525.5	941.4	8,575.1	2.47	-0.32	2.45
17,103.0	91.30	183.50	8,499.7	-8,620.4	936.4	8,669.2	2.08	1.79	1.05
17,199.0	90.50	182.10	8,498.2	-8,716.3	931.7	8,764.3	1.68	-0.83	-1.46
17,294.0	92.00	182.10	8,496.2	-8,811.2	928.2	8,858.5	1.58	1.58	0.00
17,389.0	90.00	180.60	8,494.5	-8,906.1	926.0	8,952.9	2.63	-2.11	-1.58
17,483.0	88.40	180.40	8,495.8	-9,000.1	925.2	9,046.5	1.72	-1.70	-0.21
17,579.0	90.10	180.30	8,497.1	-9,096.1	924.6	9,142.1	1.77	1.77	-0.10
17,674.0	90.30	179.60	8,496.7	-9,191.1	924.7	9,236.7	0.77	0.21	-0.74
17,769.0	87.70	178.40	8,498.4	-9,286.0	926.3	9,331.4	3.01	-2.74	-1.26
17,865.0	88.40	177.70	8,501.7	-9,381.9	929.6	9,427.3	1.03	0.73	-0.73
17,960.0	89.90	178.20	8,503.1	-9,476.9	933.0	9,522.1	1.66	1.58	0.53
18,056.0	91.00	178.30	8,502.3	-9,572.8	935.9	9,618.0	1.15	1.15	0.10
18,152.0	91.00	177.40	8,500.6	-9,668.7	939.5	9,713.8	0.94	0.00	-0.94
18,247.0	87.30	176.00	8,502.0	-9,763.5	945.0	9,808.7	4.16	-3.89	-1.47
18,342.0	89.70	178.00	8,504.5	-9,858.4	949.9	9,903.6	3.29	2.53	2.11
18,438.0	90.10	177.50	8,504.7	-9,954.3	953.7	9,999.5	0.67	0.42	-0.52
18,534.0	87.80	177.00	8,506.5	-10,050.2	958.3	10,095.4	2.45	-2.40	-0.52
18,628.0	89.00	179.40	8,509.1	-10,144.1	961.3	10,189.2	2.85	1.28	2.55
18,724.0	89.80	181.30	8,510.1	-10,240.1	960.7	10,284.8	2.15	0.83	1.98
18,819.0	90.90	182.20	8,509.5	-10,335.0	957.8	10,379.2	1.50	1.16	0.95
18,914.0	90.90	181.70	8,508.0	-10,429.9	954.6	10,473.4	0.53	0.00	-0.53
18,988.0	92.20	181.90	8,506.0	-10,503.9	952.2	10,546.9	1.78	1.76	0.27
TD @ 19042.0' MD / 8503.9' TVD									
19,042.0	92.20	181.90	8,503.9	-10,557.8	950.4	10,600.5	0.00	0.00	0.00



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Corral Canyon Federal 13H
Project:	Eddy County, NM	TVD Reference:	RKB @ 2939.0usft (Frontier 27)
Site:	Corral Canyon Federal 13H	MD Reference:	RKB @ 2939.0usft (Frontier 27)
Well:	Corral Canyon Federal 13H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
308.0	308.0	3.5	-0.9	Tie In @ 308.0' MD / 308.0' TVD
19,042.0	8,503.9	-10,557.8	950.4	TD @ 19042.0' MD / 8503.9' TVD