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Directional Survey

XTO ENERGY, INC.

Eddy County, NM

Sec 5, T25S, R29E

Corral Canyon Federal 16H

Wellbore #1

30-015-42928

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 14 2018

RECEIVED

Design: Wellbore #1

QES Survey Report

20 January, 2018



Company: XTO ENERGY, INC.
Project: Eddy County, NM
Site: Sec 5, T25S, R29E
Well: Corral Canyon Federal 16H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Corral Canyon Federal 16H
TVD Reference: WELL @ 2974.0usft (Frontier 27)
MD Reference: WELL @ 2974.0usft (Frontier 27)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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		Sec 5, T25S, R29E			
Site Position:		Northing:	419,304.30 usft	Latitude:	32° 9' 8.442 N
From:	Map	Easting:	603,207.70 usft	Longitude:	103° 59' 59.452 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.18 °

Well	Corral Canyon Federal 16H					
Well Position	+N/-S	0.0 usft	Northing:	419,304.30 usft	Latitude:	32° 9' 8.442 N
	+E/-W	0.0 usft	Easting:	603,207.70 usft	Longitude:	103° 59' 59.452 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,947.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	12/19/2017	(°)	(°)	(nT)
			7.09	59.92	47,801.25781100

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	181.31	

Survey Program	Date 1/20/2018			
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.0	2,810.0	Wellbenders MWD (Wellbore #1)	MWD	OWSG MWD - Standard
2,880.0	18,958.0	QES MWD Surveys (Wellbore #1)	MWD	OWSG MWD - Standard

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.50	15.90	100.0	0.4	0.1	-0.4	0.50	0.50	0.00	
188.0	1.40	69.20	188.0	1.2	1.2	-1.2	1.33	1.02	60.57	
280.0	2.00	56.30	279.9	2.5	3.6	-2.5	0.77	0.65	-14.02	
372.0	1.60	51.80	371.9	4.1	6.0	-4.3	0.46	-0.43	-4.89	
476.0	1.40	36.90	475.9	6.1	7.9	-6.2	0.42	-0.19	-14.33	
551.0	1.40	28.20	550.8	7.6	8.8	-7.8	0.28	0.00	-11.60	
664.0	1.10	26.40	663.8	9.8	10.0	-10.0	0.27	-0.27	-1.59	
723.0	1.30	36.20	722.8	10.8	10.6	-11.1	0.48	0.34	16.61	
818.0	1.40	32.60	817.8	12.7	11.9	-13.0	0.14	0.11	-3.79	

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
913.0	1.60	30.40	912.7	14.8	13.2	-15.1	0.22	0.21	-2.32
1,008.0	1.80	23.00	1,007.7	17.3	14.4	-17.6	0.31	0.21	-7.79
1,103.0	1.50	11.20	1,102.7	19.9	15.3	-20.3	0.48	-0.32	-12.42
1,198.0	1.90	19.10	1,197.6	22.6	16.0	-23.0	0.49	0.42	8.32
1,293.0	2.00	25.40	1,292.6	25.6	17.2	-26.0	0.25	0.11	6.63
1,386.0	1.80	31.70	1,385.5	28.3	18.7	-28.7	0.31	-0.22	6.77
1,482.0	2.10	29.40	1,481.5	31.1	20.4	-31.6	0.32	0.31	-2.40
1,576.0	2.10	24.40	1,575.4	34.2	21.9	-34.7	0.19	0.00	-5.32
1,671.0	2.00	29.00	1,670.3	37.2	23.4	-37.8	0.20	-0.11	4.84
1,767.0	2.50	31.00	1,766.3	40.5	25.3	-41.1	0.53	0.52	2.08
1,862.0	2.40	24.30	1,861.2	44.1	27.2	-44.7	0.32	-0.11	-7.05
1,957.0	2.80	14.90	1,956.1	48.1	28.6	-48.8	0.61	0.42	-9.89
2,053.0	3.50	11.30	2,051.9	53.3	29.8	-53.9	0.76	0.73	-3.75
2,148.0	4.40	7.90	2,146.7	59.7	30.9	-60.4	0.98	0.95	-3.58
2,243.0	4.50	0.00	2,241.4	67.1	31.4	-67.8	0.65	0.11	-8.32
2,337.0	3.20	348.80	2,335.2	73.3	30.9	-74.0	1.59	-1.38	-11.91
2,432.0	2.70	333.90	2,430.1	77.9	29.4	-78.6	0.96	-0.53	-15.68
2,527.0	2.50	314.00	2,525.0	81.4	26.9	-82.0	0.97	-0.21	-20.95
2,622.0	1.40	289.00	2,619.9	83.2	24.3	-83.7	1.44	-1.16	-26.32
2,717.0	1.20	289.70	2,714.9	83.9	22.3	-84.4	0.21	-0.21	0.74
Tie-in @ 2810.0' MD / 2807.9' TVD									
2,810.0	1.20	292.50	2,807.9	84.6	20.5	-85.1	0.06	0.00	3.01
2,880.0	1.30	291.80	2,877.9	85.2	19.1	-85.6	0.14	0.14	-1.00
2,943.0	0.70	327.20	2,940.9	85.8	18.2	-86.2	1.32	-0.95	56.19
3,038.0	0.50	22.30	3,035.9	86.7	18.0	-87.0	0.61	-0.21	58.00
3,132.0	0.70	23.60	3,129.9	87.6	18.4	-88.0	0.21	0.21	1.38
3,227.0	0.80	40.70	3,224.8	88.6	19.1	-89.0	0.26	0.11	18.00
3,321.0	0.70	40.80	3,318.8	89.5	19.9	-90.0	0.11	-0.11	0.11
3,416.0	0.60	29.90	3,413.8	90.4	20.5	-90.8	0.17	-0.11	-11.47
3,511.0	0.60	327.90	3,508.8	91.3	20.5	-91.7	0.65	0.00	-65.26
3,605.0	0.60	21.90	3,602.8	92.1	20.4	-92.6	0.58	0.00	57.45
3,700.0	0.60	24.40	3,697.8	93.0	20.8	-93.5	0.03	0.00	2.63
3,794.0	0.40	16.80	3,791.8	93.8	21.1	-94.3	0.22	-0.21	-8.09
3,889.0	0.50	27.00	3,886.8	94.5	21.4	-95.0	0.13	0.11	10.74
3,984.0	0.40	8.90	3,981.8	95.2	21.6	-95.7	0.18	-0.11	-19.05
4,076.0	0.50	13.60	4,073.8	95.9	21.8	-96.4	0.12	0.11	5.11
4,172.0	0.50	15.10	4,169.8	96.7	22.0	-97.2	0.01	0.00	1.56
4,267.0	0.40	350.70	4,264.8	97.4	22.0	-97.9	0.23	-0.11	-25.68
4,360.0	0.40	9.10	4,357.8	98.1	22.0	-98.6	0.14	0.00	19.78
4,454.0	0.10	122.70	4,451.8	98.4	22.1	-98.8	0.48	-0.32	120.85
4,549.0	0.40	354.80	4,546.8	98.6	22.2	-99.1	0.49	0.32	-134.63
4,644.0	0.40	346.70	4,641.8	99.3	22.1	-99.8	0.06	0.00	-8.53
4,740.0	0.30	339.60	4,737.8	99.9	21.9	-100.3	0.11	-0.10	-7.40



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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)
4,835.0	0.20	333.70	4,832.8	100.2	21.8	-100.7	0.11	-0.11	-6.21
4,930.0	0.10	227.90	4,927.8	100.3	21.6	-100.8	0.26	-0.11	-111.37
5,026.0	0.10	271.10	5,023.8	100.3	21.5	-100.7	0.08	0.00	45.00
5,122.0	0.10	211.30	5,119.8	100.2	21.3	-100.7	0.10	0.00	-62.29
5,217.0	0.20	222.50	5,214.8	100.0	21.2	-100.5	0.11	0.11	11.79
5,312.0	0.40	215.10	5,309.8	99.6	20.9	-100.1	0.21	0.21	-7.79
5,407.0	0.50	206.90	5,404.8	99.0	20.5	-99.4	0.12	0.11	-8.63
5,503.0	0.50	181.50	5,500.8	98.2	20.3	-98.6	0.23	0.00	-26.46
5,598.0	0.60	185.50	5,595.8	97.3	20.3	-97.7	0.11	0.11	4.21
5,693.0	0.60	165.40	5,690.8	96.3	20.3	-96.7	0.22	0.00	-21.16
5,787.0	0.70	162.70	5,784.8	95.3	20.6	-95.7	0.11	0.11	-2.87
5,881.0	0.70	172.80	5,878.8	94.2	20.9	-94.6	0.13	0.00	10.74
5,976.0	0.70	167.30	5,973.7	93.0	21.1	-93.5	0.07	0.00	-5.79
6,072.0	1.10	181.90	6,069.7	91.5	21.2	-92.0	0.48	0.42	15.21
6,167.0	1.10	168.60	6,164.7	89.7	21.3	-90.2	0.27	0.00	-14.00
6,263.0	1.10	177.20	6,260.7	87.9	21.5	-88.4	0.17	0.00	8.96
6,357.0	1.00	179.30	6,354.7	86.2	21.6	-86.6	0.11	-0.11	2.23
6,450.0	0.90	179.40	6,447.7	84.6	21.6	-85.1	0.11	-0.11	0.11
6,546.0	1.00	175.70	6,543.7	83.0	21.7	-83.5	0.12	0.10	-3.85
6,642.0	1.20	191.60	6,639.6	81.2	21.5	-81.7	0.38	0.21	16.56
6,737.0	1.10	263.90	6,734.6	80.1	20.4	-80.6	1.43	-0.11	76.11
6,832.0	1.80	289.30	6,829.6	80.5	18.1	-80.9	0.98	0.74	26.74
6,928.0	1.80	289.50	6,925.6	81.5	15.3	-81.9	0.01	0.00	0.21
7,023.0	1.30	290.10	7,020.5	82.4	12.9	-82.7	0.53	-0.53	0.63
7,119.0	0.70	267.70	7,116.5	82.8	11.3	-83.0	0.73	-0.63	-23.33
7,213.0	0.70	252.20	7,210.5	82.6	10.1	-82.8	0.20	0.00	-16.49
7,308.0	0.90	275.80	7,305.5	82.5	8.8	-82.6	0.40	0.21	24.84
7,403.0	1.90	297.10	7,400.5	83.3	6.7	-83.4	1.17	1.05	22.42
7,499.0	1.60	291.20	7,496.4	84.5	4.0	-84.5	0.36	-0.31	-6.15
7,593.0	0.70	301.50	7,590.4	85.2	2.3	-85.3	0.98	-0.96	10.96
7,635.0	0.40	257.60	7,632.4	85.3	2.0	-85.4	1.18	-0.71	-104.52
7,683.0	2.90	241.10	7,680.4	84.7	0.7	-84.7	5.25	5.21	-34.38
7,731.0	4.50	230.10	7,728.3	82.9	-1.8	-82.9	3.63	3.33	-22.92
7,779.0	7.40	224.60	7,776.0	79.5	-5.4	-79.4	6.15	6.04	-11.46
7,827.0	10.80	222.40	7,823.4	74.0	-10.6	-73.7	7.12	7.08	-4.58
7,875.0	14.20	219.90	7,870.2	66.2	-17.4	-65.7	7.17	7.08	-5.21
7,923.0	16.40	222.40	7,916.5	56.6	-25.8	-56.0	4.78	4.58	5.21
7,971.0	18.40	220.50	7,962.3	45.9	-35.3	-45.0	4.33	4.17	-3.96
8,019.0	20.90	216.30	8,007.5	33.2	-45.2	-32.2	5.98	5.21	-8.75
8,067.0	23.30	212.40	8,052.0	18.3	-55.4	-17.0	5.86	5.00	-8.13
8,114.0	26.00	206.20	8,094.7	1.2	-64.9	0.3	7.95	5.74	-13.19
8,162.0	28.60	205.10	8,137.4	-18.7	-74.5	20.4	5.52	5.42	-2.29
8,209.0	30.20	206.20	8,178.3	-39.5	-84.4	41.4	3.59	3.40	2.34



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8,257.0	32.90	207.10	8,219.2	-61.9	-95.7	64.1	5.71	5.63	1.88
8,305.0	36.00	204.30	8,258.8	-86.4	-107.5	88.8	7.25	6.46	-5.83
8,353.0	37.30	202.30	8,297.3	-112.7	-118.8	115.4	3.68	2.71	-4.17
8,401.0	40.00	203.10	8,334.8	-140.3	-130.4	143.3	5.72	5.63	1.67
8,449.0	43.10	205.70	8,370.7	-169.3	-143.5	172.5	7.39	6.46	5.42
8,497.0	47.30	203.10	8,404.6	-200.3	-157.6	203.9	9.56	8.75	-5.42
8,544.0	51.60	201.50	8,435.1	-233.4	-171.1	237.2	9.51	9.15	-3.40
8,591.0	56.00	198.90	8,462.9	-269.0	-184.2	273.1	10.37	9.36	-5.53
8,639.0	61.80	194.40	8,487.6	-308.3	-195.9	312.7	14.50	12.08	-9.38
8,686.0	66.20	191.40	8,508.2	-349.5	-205.3	354.1	10.98	9.36	-6.38
8,734.0	69.90	189.50	8,526.2	-393.3	-213.4	398.0	8.54	7.71	-3.96
8,781.0	74.60	187.70	8,540.5	-437.5	-220.0	442.4	10.64	10.00	-3.83
8,829.0	77.00	186.60	8,552.3	-483.7	-225.8	488.7	5.47	5.00	-2.29
8,876.0	80.20	185.20	8,561.6	-529.5	-230.6	534.6	7.41	6.81	-2.98
8,925.0	82.60	184.40	8,568.9	-577.8	-234.6	583.0	5.16	4.90	-1.63
8,973.0	83.30	182.90	8,574.8	-625.3	-237.6	630.6	3.43	1.46	-3.13
9,021.0	84.00	181.50	8,580.1	-673.0	-239.5	678.3	3.24	1.46	-2.92
9,068.0	85.10	181.10	8,584.6	-719.7	-240.5	725.1	2.49	2.34	-0.85
9,116.0	86.10	180.90	8,588.3	-767.6	-241.4	772.9	2.12	2.08	-0.42
9,164.0	86.30	181.10	8,591.4	-815.5	-242.2	820.8	0.59	0.42	0.42
9,258.0	87.60	181.00	8,596.4	-909.3	-243.9	914.7	1.39	1.38	-0.11
9,354.0	88.80	180.10	8,599.4	-1,005.3	-244.8	1,010.6	1.56	1.25	-0.94
9,449.0	89.20	179.80	8,601.1	-1,100.3	-244.8	1,105.6	0.53	0.42	-0.32
9,545.0	89.90	180.10	8,601.9	-1,196.3	-244.7	1,201.5	0.79	0.73	0.31
9,640.0	90.20	180.50	8,601.8	-1,291.3	-245.2	1,296.5	0.53	0.32	0.42
9,733.0	91.20	181.60	8,600.6	-1,384.2	-246.9	1,389.5	1.60	1.08	1.18
9,829.0	91.50	181.40	8,598.4	-1,480.2	-249.4	1,485.5	0.38	0.31	-0.21
9,925.0	90.80	180.80	8,596.5	-1,576.1	-251.2	1,581.5	0.96	-0.73	-0.63
10,019.0	89.20	179.70	8,596.5	-1,670.1	-251.6	1,675.4	2.07	-1.70	-1.17
10,116.0	86.70	178.60	8,599.9	-1,767.0	-250.2	1,772.3	2.82	-2.58	-1.13
10,210.0	87.60	178.90	8,604.6	-1,860.9	-248.2	1,866.1	1.01	0.96	0.32
10,305.0	88.60	179.60	8,607.7	-1,955.8	-246.9	1,961.0	1.28	1.05	0.74
10,400.0	90.20	179.40	8,608.7	-2,050.8	-246.1	2,055.9	1.70	1.68	-0.21
10,496.0	90.90	179.00	8,607.8	-2,146.8	-244.8	2,151.9	0.84	0.73	-0.42
10,591.0	91.10	178.90	8,606.2	-2,241.8	-243.0	2,246.8	0.24	0.21	-0.11
10,687.0	90.80	178.90	8,604.6	-2,337.8	-241.2	2,342.7	0.31	-0.31	0.00
10,783.0	90.30	178.40	8,603.6	-2,433.7	-238.9	2,438.5	0.74	-0.52	-0.52
10,878.0	90.50	178.50	8,603.0	-2,528.7	-236.3	2,533.4	0.24	0.21	0.11
10,973.0	91.60	180.10	8,601.2	-2,623.7	-235.2	2,628.4	2.04	1.16	1.68
11,069.0	89.70	180.10	8,600.2	-2,719.6	-235.3	2,724.3	1.98	-1.98	0.00
11,164.0	89.50	180.40	8,600.8	-2,814.6	-235.8	2,819.3	0.38	-0.21	0.32
11,258.0	89.90	180.40	8,601.3	-2,908.6	-236.4	2,913.3	0.43	0.43	0.00
11,354.0	89.70	180.10	8,601.6	-3,004.6	-236.8	3,009.3	0.38	-0.21	-0.31
11,450.0	91.60	181.00	8,600.6	-3,100.6	-237.8	3,105.2	2.19	1.98	0.94

Company: XTO ENERGY, INC.
Project: Eddy County, NM
Site: Sec 5, T25S, R29E
Well: Corral Canyon Federal 16H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Corral Canyon Federal 16H
TVD Reference: WELL @ 2974.0usft (Frontier 27)
MD Reference: WELL @ 2974.0usft (Frontier 27)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
11,546.0	90.50	180.60	8,598.8	-3,196.6	-239.1	3,201.2	1.22	-1.15	-0.42
11,641.0	88.20	179.40	8,599.9	-3,291.6	-239.1	3,296.2	2.73	-2.42	-1.26
11,736.0	88.80	179.50	8,602.4	-3,386.5	-238.2	3,391.1	0.64	0.63	0.11
11,831.0	90.40	180.50	8,603.0	-3,481.5	-238.2	3,486.1	1.99	1.68	1.05
11,926.0	90.30	180.40	8,602.4	-3,576.5	-238.9	3,581.1	0.15	-0.11	-0.11
12,021.0	91.00	180.30	8,601.4	-3,671.5	-239.5	3,676.0	0.74	0.74	-0.11
12,114.0	90.80	180.00	8,599.9	-3,764.5	-239.8	3,769.0	0.39	-0.22	-0.32
12,209.0	91.40	180.20	8,598.1	-3,859.5	-239.9	3,864.0	0.67	0.63	0.21
12,304.0	91.80	180.40	8,595.4	-3,954.5	-240.4	3,958.9	0.47	0.42	0.21
12,400.0	89.50	179.60	8,594.3	-4,050.4	-240.4	4,054.9	2.54	-2.40	-0.83
12,495.0	89.70	179.80	8,595.0	-4,145.4	-239.9	4,149.8	0.30	0.21	0.21
12,591.0	90.60	180.50	8,594.8	-4,241.4	-240.2	4,245.8	1.19	0.94	0.73
12,686.0	90.50	180.10	8,593.8	-4,336.4	-240.7	4,340.8	0.43	-0.11	-0.42
12,782.0	91.30	181.40	8,592.3	-4,432.4	-241.9	4,436.8	1.59	0.83	1.35
12,878.0	89.40	180.40	8,591.7	-4,528.4	-243.4	4,532.8	2.24	-1.98	-1.04
12,973.0	90.90	181.30	8,591.5	-4,623.4	-244.8	4,627.8	1.84	1.58	0.95
13,069.0	90.30	180.80	8,590.5	-4,719.4	-246.6	4,723.8	0.81	-0.63	-0.52
13,165.0	90.60	180.60	8,589.7	-4,815.3	-247.8	4,819.7	0.38	0.31	-0.21
13,259.0	89.40	178.70	8,589.7	-4,909.3	-247.2	4,913.7	2.39	-1.28	-2.02
13,354.0	89.50	178.50	8,590.7	-5,004.3	-244.9	5,008.6	0.24	0.11	-0.21
13,450.0	90.80	179.20	8,590.4	-5,100.3	-243.0	5,104.5	1.54	1.35	0.73
13,544.0	89.50	178.20	8,590.2	-5,194.3	-240.8	5,198.4	1.74	-1.38	-1.06
13,640.0	89.40	177.40	8,591.1	-5,290.2	-237.1	5,294.2	0.84	-0.10	-0.83
13,736.0	89.90	177.80	8,591.7	-5,386.1	-233.1	5,390.0	0.67	0.52	0.42
13,832.0	90.00	177.80	8,591.7	-5,482.0	-229.4	5,485.8	0.10	0.10	0.00
13,926.0	90.50	177.90	8,591.3	-5,576.0	-225.9	5,579.7	0.54	0.53	0.11
14,022.0	90.80	178.00	8,590.2	-5,671.9	-222.5	5,675.5	0.33	0.31	0.10
14,118.0	91.30	178.20	8,588.5	-5,767.8	-219.3	5,771.3	0.56	0.52	0.21
14,212.0	88.70	178.60	8,588.5	-5,861.8	-216.7	5,865.2	2.80	-2.77	0.43
14,308.0	87.40	179.40	8,591.8	-5,957.7	-215.0	5,961.1	1.59	-1.35	0.83
14,402.0	89.00	181.00	8,594.7	-6,051.6	-215.3	6,055.0	2.41	1.70	1.70
14,498.0	90.30	181.20	8,595.3	-6,147.6	-217.2	6,151.0	1.37	1.35	0.21
14,520.0	90.30	181.30	8,595.2	-6,169.6	-217.6	6,173.0	0.45	0.00	0.45
14,617.0	89.50	180.60	8,595.3	-6,266.6	-219.2	6,270.0	1.10	-0.82	-0.72
14,712.0	89.70	180.70	8,596.0	-6,361.6	-220.3	6,365.0	0.24	0.21	0.11
14,807.0	89.80	180.30	8,596.4	-6,456.6	-221.2	6,460.0	0.43	0.11	-0.42
14,902.0	90.30	180.30	8,596.3	-6,551.6	-221.7	6,554.9	0.53	0.53	0.00
14,997.0	90.30	180.20	8,595.8	-6,646.6	-222.1	6,649.9	0.11	0.00	-0.11
15,092.0	90.80	180.40	8,594.9	-6,741.6	-222.6	6,744.9	0.57	0.53	0.21
15,186.0	91.00	179.20	8,593.5	-6,835.6	-222.2	6,838.9	1.29	0.21	-1.28
15,282.0	90.90	178.70	8,591.9	-6,931.5	-220.5	6,934.8	0.53	-0.10	-0.52
15,378.0	89.80	180.10	8,591.3	-7,027.5	-219.5	7,030.7	1.85	-1.15	1.46
15,473.0	90.00	180.10	8,591.4	-7,122.5	-219.6	7,125.7	0.21	0.21	0.00



Survey Report



Company: XTO ENERGY, INC.
Project: Eddy County, NM
Site: Sec 5, T25S, R29E
Well: Corral Canyon Federal 16H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Corral Canyon Federal 16H
TVD Reference: WELL @ 2974.0usft (Frontier 27)
MD Reference: WELL @ 2974.0usft (Frontier 27)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
15,569.0	88.80	181.10	8,592.4	-7,218.5	-220.6	7,221.7	1.63	-1.25	1.04
15,663.0	89.20	181.30	8,594.1	-7,312.5	-222.6	7,315.7	0.48	0.43	0.21
15,759.0	89.80	181.10	8,594.9	-7,408.4	-224.6	7,411.6	0.66	0.63	-0.21
15,854.0	90.60	181.30	8,594.6	-7,503.4	-226.6	7,506.6	0.87	0.84	0.21
15,949.0	89.10	179.20	8,594.8	-7,598.4	-227.0	7,601.6	2.72	-1.58	-2.21
16,044.0	89.20	179.40	8,596.3	-7,693.4	-225.9	7,696.6	0.24	0.11	0.21
16,139.0	89.30	179.80	8,597.5	-7,788.4	-225.2	7,791.5	0.43	0.11	0.42
16,233.0	89.70	180.00	8,598.3	-7,882.4	-225.0	7,885.5	0.48	0.43	0.21
16,328.0	89.60	179.70	8,598.9	-7,977.4	-224.8	7,980.4	0.33	-0.11	-0.32
16,423.0	89.70	179.90	8,599.5	-8,072.4	-224.5	8,075.4	0.24	0.11	0.21
16,518.0	89.80	179.90	8,599.9	-8,167.4	-224.3	8,170.4	0.11	0.11	0.00
16,612.0	89.90	180.40	8,600.1	-8,261.4	-224.5	8,264.4	0.54	0.11	0.53
16,708.0	90.20	180.60	8,600.1	-8,357.4	-225.4	8,360.3	0.38	0.31	0.21
16,804.0	90.40	180.60	8,599.6	-8,453.4	-226.4	8,456.3	0.21	0.21	0.00
16,899.0	90.70	180.80	8,598.6	-8,548.4	-227.5	8,551.3	0.38	0.32	0.21
16,995.0	91.40	181.20	8,596.9	-8,644.3	-229.2	8,647.3	0.84	0.73	0.42
17,090.0	91.40	180.60	8,594.6	-8,739.3	-230.7	8,742.3	0.63	0.00	-0.63
17,185.0	89.20	178.40	8,594.1	-8,834.3	-229.9	8,837.2	3.27	-2.32	-2.32
17,281.0	89.90	178.60	8,594.8	-8,930.2	-227.4	8,933.1	0.76	0.73	0.21
17,376.0	89.60	178.50	8,595.2	-9,025.2	-225.0	9,028.0	0.33	-0.32	-0.11
17,472.0	89.40	178.30	8,596.1	-9,121.2	-222.3	9,123.9	0.29	-0.21	-0.21
17,568.0	90.70	177.90	8,596.0	-9,217.1	-219.1	9,219.7	1.42	1.35	-0.42
17,663.0	90.70	178.30	8,594.8	-9,312.0	-215.9	9,314.5	0.42	0.00	0.42
17,758.0	89.80	177.70	8,594.4	-9,407.0	-212.6	9,409.4	1.14	-0.95	-0.63
17,853.0	89.10	177.40	8,595.3	-9,501.9	-208.6	9,504.2	0.80	-0.74	-0.32
17,949.0	91.90	180.10	8,594.5	-9,597.8	-206.5	9,600.1	4.05	2.92	2.81
18,044.0	92.60	180.90	8,590.8	-9,692.8	-207.3	9,695.0	1.12	0.74	0.84
18,140.0	90.20	180.60	8,588.4	-9,788.7	-208.6	9,790.9	2.52	-2.50	-0.31
18,235.0	90.00	180.50	8,588.2	-9,883.7	-209.5	9,885.9	0.24	-0.21	-0.11
18,331.0	87.90	179.80	8,590.0	-9,979.7	-209.7	9,981.9	2.31	-2.19	-0.73
18,427.0	86.60	179.00	8,594.6	-10,075.6	-208.7	10,077.7	1.59	-1.35	-0.83
18,522.0	87.10	179.20	8,599.8	-10,170.4	-207.2	10,172.5	0.57	0.53	0.21
18,616.0	89.50	180.10	8,602.6	-10,264.4	-206.7	10,266.4	2.73	2.55	0.96
18,712.0	90.90	181.30	8,602.3	-10,360.4	-207.8	10,362.4	1.92	1.46	1.25
18,806.0	89.40	180.60	8,602.0	-10,454.3	-209.4	10,456.4	1.76	-1.60	-0.74
18,903.0	92.40	180.50	8,600.5	-10,551.3	-210.3	10,553.4	3.09	3.09	-0.10
TD @ 18958.0' MD / 8598.2' TVD									
18,958.0	92.40	180.50	8,598.2	-10,606.3	-210.8	10,608.3	0.00	0.00	0.00



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Corral Canyon Federal 16H
Project:	Eddy County, NM	TVD Reference:	WELL @ 2974.0usft (Frontier 27)
Site:	Sec 5, T25S, R29E	MD Reference:	WELL @ 2974.0usft (Frontier 27)
Well:	Corral Canyon Federal 16H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,810.0	2,807.9	84.6	20.5	Tie-in @ 2810.0' MD / 2807.9' TVD
18,958.0	8,598.2	-10,606.3	-210.8	TD @ 18958.0' MD / 8598.2' TVD

Checked By: _____	Approved By: _____	Date: _____
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