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XTO ENERGY, INC.

DISTRICT 7 / ARTESIA O.C.D.

Eddy County, NM

Sec 18, T25S, R30E (Grid North)

Poker Lake Unit 18 Brushy Draw #121H

Wellbore #1

Design: Wellbore #1

QES Survey Report

04 February, 2019





Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #121H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3185.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3185.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #121H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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 18, T25S, R30E (Grid North)		
Site Position:		Northing:	411,610.00 usft
From:	Map	Easting:	626,551.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 51.500 N
		Longitude:	103° 55' 28.249 W
		Grid Convergence:	0.22 °

Well	Poker Lake Unit 18 Brushy Draw #121H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 7' 51.500 N
		Longitude:	103° 55' 37.844 W
		Ground Level:	3,163.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	1/18/2019	6.94
			Dip Angle
			(°)
			59.90
			Field Strength
			(nT)
			47,684.09829536

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	10,169.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			181.13

Survey Program	Date 2/4/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
125.0	10,169.0	Bloodhound MWD Surveys (Pilot Hole)	MWD
10,191.0	18,740.0	QES MWD Surveys (Wellbore #1)	MWD
			Description
			OWSG MWD - Standard
			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
	125.0	0.60	253.80	125.0	-0.2	-0.6	0.2	0.48	0.48	0.00
	185.0	0.40	239.60	185.0	-0.4	-1.1	0.4	0.39	-0.33	-23.67
	255.0	0.60	240.10	255.0	-0.7	-1.6	0.7	0.29	0.29	0.71
	311.0	0.40	168.70	311.0	-1.0	-1.9	1.1	1.08	-0.36	-127.50
	402.0	0.80	178.40	402.0	-2.0	-1.8	2.0	0.45	0.44	10.66
	493.0	1.50	172.90	493.0	-3.8	-1.6	3.8	0.78	0.77	-6.04
	582.0	1.90	175.90	581.9	-6.4	-1.4	6.4	0.46	0.45	3.37
	672.0	2.40	159.50	671.9	-9.7	-0.6	9.7	0.88	0.56	-18.22
	765.0	2.40	159.20	764.8	-13.3	0.8	13.3	0.01	0.00	-0.32

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
790.0	3.40	178.50	789.8	-14.5	1.0	14.5	5.54	4.00	77.20
855.0	3.80	179.80	854.6	-18.6	1.0	18.6	0.63	0.62	2.00
950.0	2.60	162.50	949.5	-23.8	1.7	23.8	1.61	-1.26	-18.21
1,043.0	2.40	140.20	1,042.4	-27.3	3.6	27.3	1.06	-0.22	-23.98
1,137.0	3.10	128.90	1,136.3	-30.4	6.8	30.3	0.94	0.74	-12.02
1,232.0	2.60	94.20	1,231.2	-32.2	11.0	32.0	1.86	-0.53	-36.53
1,326.0	3.10	77.50	1,325.1	-31.8	15.6	31.5	1.03	0.53	-17.77
1,421.0	2.60	80.50	1,419.9	-30.9	20.2	30.5	0.55	-0.53	3.16
1,515.0	2.00	84.60	1,513.9	-30.4	23.9	29.9	0.66	-0.64	4.36
1,611.0	2.60	92.40	1,609.8	-30.3	27.8	29.8	0.70	0.63	8.13
1,706.0	2.60	88.10	1,704.7	-30.4	32.1	29.7	0.21	0.00	-4.53
1,801.0	2.50	75.90	1,799.6	-29.8	36.3	29.1	0.58	-0.11	-12.84
1,896.0	2.40	52.10	1,894.5	-28.0	39.8	27.3	1.07	-0.11	-25.05
1,990.0	1.90	32.90	1,988.4	-25.5	42.2	24.7	0.93	-0.53	-20.43
2,083.0	1.50	45.60	2,081.4	-23.4	43.9	22.5	0.59	-0.43	13.66
2,177.0	1.40	56.80	2,175.4	-21.9	45.8	21.0	0.32	-0.11	11.91
2,271.0	0.70	66.20	2,269.4	-21.0	47.3	20.1	0.76	-0.74	10.00
2,367.0	0.40	34.50	2,365.4	-20.5	48.0	19.6	0.43	-0.31	-33.02
2,460.0	0.40	331.30	2,458.3	-20.0	48.0	19.0	0.45	0.00	-67.96
2,555.0	0.60	302.80	2,553.3	-19.4	47.4	18.5	0.33	0.21	-30.00
2,649.0	0.90	297.40	2,647.3	-18.8	46.4	17.9	0.33	0.32	-5.74
2,742.0	0.70	156.50	2,740.3	-19.0	46.0	18.1	1.62	-0.22	-151.51
2,837.0	2.90	134.70	2,835.3	-21.2	47.9	20.3	2.38	2.32	-22.95
2,931.0	2.60	132.00	2,929.2	-24.3	51.2	23.3	0.35	-0.32	-2.87
3,025.0	3.70	127.90	3,023.0	-27.6	55.1	26.5	1.19	1.17	-4.36
3,120.0	4.00	128.80	3,117.8	-31.6	60.1	30.4	0.32	0.32	0.95
3,195.0	5.30	127.60	3,192.6	-35.3	64.9	34.0	1.74	1.73	-1.60
3,304.0	5.00	120.00	3,301.1	-40.8	73.0	39.3	0.68	-0.28	-6.97
3,398.0	4.70	114.30	3,394.8	-44.4	80.1	42.8	0.60	-0.32	-6.06
3,492.0	4.00	105.00	3,488.5	-46.8	86.8	45.1	1.05	-0.74	-9.89
3,587.0	3.20	99.70	3,583.3	-48.1	92.6	46.3	0.91	-0.84	-5.58
3,681.0	2.70	84.00	3,677.2	-48.3	97.4	46.4	1.01	-0.53	-16.70
3,776.0	2.30	59.00	3,772.1	-47.1	101.2	45.1	1.21	-0.42	-26.32
3,871.0	2.00	31.60	3,867.1	-44.7	103.7	42.7	1.11	-0.32	-28.84
3,966.0	1.90	20.60	3,962.0	-41.8	105.2	39.8	0.41	-0.11	-11.58
4,061.0	2.10	23.60	4,056.9	-38.8	106.4	36.7	0.24	0.21	3.16
4,156.0	2.30	13.30	4,151.9	-35.3	107.5	33.2	0.47	0.21	-10.84
4,250.0	2.90	13.90	4,245.8	-31.2	108.5	29.0	0.64	0.64	0.64
4,344.0	2.70	10.10	4,339.7	-26.7	109.5	24.5	0.29	-0.21	-4.04
4,439.0	2.60	1.10	4,434.6	-22.3	109.9	20.2	0.45	-0.11	-9.47
4,533.0	2.90	0.20	4,528.5	-17.8	110.0	15.7	0.32	0.32	-0.96
4,628.0	2.30	344.40	4,623.4	-13.6	109.5	11.4	0.98	-0.63	-16.63
4,721.0	1.90	325.50	4,716.3	-10.5	108.1	8.4	0.85	-0.43	-20.32



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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)	
4,814.0	2.10	330.80	4,809.2	-7.8	106.4	5.7	0.29	0.22	5.70	
4,908.0	1.80	329.10	4,903.2	-5.0	104.8	2.9	0.32	-0.32	-1.81	
5,003.0	2.00	338.70	4,998.1	-2.2	103.4	0.1	0.39	0.21	10.11	
5,097.0	1.80	331.60	5,092.1	0.7	102.1	-2.7	0.33	-0.21	-7.55	
5,191.0	1.80	329.10	5,186.0	3.2	100.7	-5.2	0.08	0.00	-2.66	
5,284.0	1.70	327.30	5,279.0	5.6	99.2	-7.6	0.12	-0.11	-1.94	
5,378.0	2.00	326.70	5,372.9	8.2	97.5	-10.1	0.32	0.32	-0.64	
5,472.0	1.80	325.80	5,466.9	10.8	95.8	-12.7	0.22	-0.21	-0.96	
5,565.0	1.80	318.60	5,559.8	13.1	94.0	-14.9	0.24	0.00	-7.74	
5,659.0	1.40	300.80	5,653.8	14.8	92.1	-16.6	0.67	-0.43	-18.94	
5,753.0	1.80	300.20	5,747.8	16.1	89.8	-17.9	0.43	0.43	-0.64	
5,846.0	2.00	290.60	5,840.7	17.4	87.0	-19.1	0.40	0.22	-10.32	
5,941.0	1.90	291.50	5,935.7	18.6	84.0	-20.2	0.11	-0.11	0.95	
6,034.0	2.00	277.30	6,028.6	19.3	80.9	-20.9	0.53	0.11	-15.27	
6,128.0	1.90	281.20	6,122.6	19.9	77.8	-21.4	0.18	-0.11	4.15	
6,221.0	1.80	305.50	6,215.5	21.0	75.1	-22.5	0.84	-0.11	26.13	
6,315.0	1.60	310.70	6,309.5	22.7	72.9	-24.1	0.27	-0.21	5.53	
6,409.0	1.60	302.20	6,403.4	24.3	70.8	-25.7	0.25	0.00	-9.04	
6,503.0	1.70	311.60	6,497.4	25.9	68.6	-27.2	0.31	0.11	10.00	
6,598.0	1.50	311.40	6,592.4	27.7	66.6	-29.0	0.21	-0.21	-0.21	
6,692.0	1.70	310.90	6,686.3	29.4	64.7	-30.6	0.21	0.21	-0.53	
6,785.0	1.50	309.20	6,779.3	31.1	62.7	-32.3	0.22	-0.22	-1.83	
6,879.0	1.70	284.20	6,873.3	32.2	60.4	-33.4	0.77	0.21	-26.60	
6,972.0	1.70	277.00	6,966.2	32.7	57.7	-33.8	0.23	0.00	-7.74	
7,066.0	1.20	271.80	7,060.2	32.9	55.3	-34.0	0.55	-0.53	-5.53	
7,159.0	1.70	276.00	7,153.2	33.1	53.0	-34.1	0.55	0.54	4.52	
7,253.0	1.50	268.60	7,247.1	33.2	50.3	-34.2	0.31	-0.21	-7.87	
7,347.0	1.10	288.00	7,341.1	33.4	48.3	-34.4	0.63	-0.43	20.64	
7,440.0	1.00	278.00	7,434.1	33.8	46.6	-34.7	0.22	-0.11	-10.75	
7,535.0	1.20	293.20	7,529.1	34.3	44.9	-35.2	0.37	0.21	16.00	
7,629.0	1.60	280.00	7,623.0	34.9	42.7	-35.8	0.54	0.43	-14.04	
7,723.0	2.30	275.00	7,717.0	35.3	39.5	-36.1	0.77	0.74	-5.32	
7,817.0	1.70	267.40	7,810.9	35.4	36.2	-36.1	0.70	-0.64	-8.09	
7,910.0	1.50	275.00	7,903.9	35.5	33.6	-36.1	0.31	-0.22	8.17	
8,004.0	2.70	287.60	7,997.8	36.2	30.3	-36.8	1.36	1.28	13.40	
8,098.0	2.20	273.70	8,091.7	37.0	26.4	-37.5	0.82	-0.53	-14.79	
8,192.0	0.90	256.60	8,185.7	37.0	23.9	-37.4	1.45	-1.38	-18.19	
8,285.0	1.00	247.80	8,278.7	36.5	22.4	-36.9	0.19	0.11	-9.46	
8,378.0	1.40	252.80	8,371.7	35.9	20.6	-36.3	0.44	0.43	5.38	
8,472.0	1.10	272.50	8,465.6	35.6	18.6	-35.9	0.55	-0.32	20.96	
8,566.0	1.50	254.90	8,559.6	35.3	16.5	-35.6	0.60	0.43	-18.72	
8,660.0	1.70	254.60	8,653.6	34.6	14.0	-34.9	0.21	0.21	-0.32	
8,754.0	1.20	265.90	8,747.5	34.1	11.6	-34.4	0.61	-0.53	12.02	

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8,847.0	0.50	234.40	8,840.5	33.8	10.3	-34.0	0.88	-0.75	-33.87
8,941.0	0.10	287.90	8,934.5	33.6	9.9	-33.8	0.48	-0.43	56.91
9,036.0	0.40	154.90	9,029.5	33.4	10.0	-33.5	0.50	0.32	-140.00
9,130.0	1.10	159.50	9,123.5	32.2	10.4	-32.4	0.75	0.74	4.89
9,224.0	1.10	161.70	9,217.5	30.5	11.0	-30.7	0.04	0.00	2.34
9,318.0	1.30	195.60	9,311.5	28.6	11.0	-28.8	0.77	0.21	36.06
9,412.0	0.70	142.30	9,405.5	27.1	11.1	-27.4	1.11	-0.64	-56.70
9,508.0	1.60	139.50	9,501.5	25.7	12.3	-25.9	0.94	0.94	-2.92
9,611.0	1.20	148.40	9,604.4	23.6	13.8	-23.9	0.44	-0.39	8.64
9,700.0	1.50	176.80	9,693.4	21.7	14.4	-22.0	0.81	0.34	31.91
9,794.0	0.80	186.40	9,787.4	19.8	14.4	-20.1	0.77	-0.74	10.21
9,888.0	0.70	199.50	9,881.4	18.6	14.1	-18.9	0.21	-0.11	13.94
9,982.0	0.40	213.90	9,975.4	17.8	13.7	-18.1	0.35	-0.32	15.32
10,077.0	0.70	233.60	10,070.4	17.2	13.1	-17.4	0.37	0.32	20.74
MWD Tie-in @ 10169.0' MD / 10162.4' TVD									
10,169.0	0.80	263.00	10,162.4	16.8	12.0	-17.0	0.43	0.11	31.96
10,191.0	3.70	212.30	10,184.3	16.2	11.5	-16.4	14.78	13.18	-230.45
10,238.0	13.80	210.30	10,230.7	10.0	7.8	-10.2	21.50	21.49	-4.26
10,285.0	21.00	210.70	10,275.6	-2.1	0.7	2.1	15.32	15.32	0.85
10,332.0	21.20	222.50	10,319.4	-15.6	-9.4	15.8	9.03	0.43	25.11
10,378.0	23.30	209.70	10,362.0	-29.6	-19.5	30.0	11.46	4.57	-27.83
10,425.0	24.60	202.20	10,405.0	-46.8	-27.8	47.3	7.04	2.77	-15.96
10,471.0	26.30	200.10	10,446.5	-65.2	-34.9	65.9	4.18	3.70	-4.57
10,520.0	26.90	195.30	10,490.3	-86.1	-41.6	86.9	4.55	1.22	-9.80
10,567.0	28.00	190.10	10,532.1	-107.2	-46.3	108.1	5.61	2.34	-11.06
10,614.0	30.10	186.70	10,573.1	-129.8	-49.6	130.7	5.68	4.47	-7.23
10,660.0	31.00	184.90	10,612.8	-153.1	-52.0	154.0	2.79	1.96	-3.91
10,708.0	34.50	184.50	10,653.1	-178.9	-54.1	180.0	7.31	7.29	-0.83
10,739.0	39.60	184.40	10,677.8	-197.5	-55.6	198.6	16.45	16.45	-0.32
10,770.0	46.10	185.70	10,700.6	-218.5	-57.4	219.6	21.16	20.97	4.19
10,802.0	51.80	186.30	10,721.6	-242.5	-60.0	243.7	17.87	17.81	1.88
10,833.0	56.50	187.60	10,739.7	-267.5	-63.0	268.6	15.54	15.16	4.19
10,865.0	61.50	188.70	10,756.2	-294.6	-66.9	295.9	15.90	15.63	3.44
10,896.0	68.40	189.70	10,769.3	-322.3	-71.4	323.6	22.45	22.26	3.23
LL Crossed @ 10926.1' MD / 10778.8' TVD									
10,926.1	74.97	190.07	10,778.8	-350.4	-76.3	351.9	21.85	21.82	1.22
10,929.0	75.60	190.10	10,779.5	-353.2	-76.8	354.6	21.85	21.82	1.17
10,961.0	80.60	191.50	10,786.1	-383.9	-82.7	385.5	16.20	15.63	4.38
10,992.0	84.80	191.70	10,790.0	-414.1	-88.8	415.7	13.56	13.55	0.65
11,023.0	86.60	191.90	10,792.4	-444.3	-95.2	446.1	5.84	5.81	0.65
11,054.0	86.60	192.40	10,794.2	-474.6	-101.7	476.5	1.61	0.00	1.61
11,085.0	86.40	192.50	10,796.1	-504.8	-108.4	506.8	0.72	-0.65	0.32
11,117.0	86.00	192.30	10,798.2	-536.0	-115.2	538.1	1.40	-1.25	-0.63
11,148.0	86.00	191.90	10,800.4	-566.2	-121.7	568.5	1.29	0.00	-1.29

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #121H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3185.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3185.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #121H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
11,179.0	87.90	191.80	10,802.0	-596.5	-128.0	598.9	6.14	6.13	-0.32
11,273.0	88.60	192.10	10,804.9	-688.4	-147.5	691.2	0.81	0.74	0.32
FTP Crossed @ 11284.1' MD / 10805.2' TVD									
11,284.1	88.64	191.69	10,805.2	-699.3	-149.8	702.1	3.67	0.32	-3.66
11,366.0	88.90	188.70	10,806.9	-779.9	-164.3	782.9	3.67	0.32	-3.66
11,460.0	90.00	186.40	10,807.8	-873.0	-176.6	876.3	2.71	1.17	-2.45
11,554.0	89.80	184.80	10,808.0	-966.6	-185.8	970.1	1.72	-0.21	-1.70
11,648.0	90.40	185.10	10,807.8	-1,060.2	-193.9	1,063.8	0.71	0.64	0.32
11,743.0	88.60	183.70	10,808.7	-1,154.9	-201.2	1,158.7	2.40	-1.89	-1.47
11,835.0	88.70	183.10	10,810.8	-1,246.7	-206.7	1,250.6	0.66	0.11	-0.65
11,930.0	87.00	179.60	10,814.4	-1,341.6	-208.9	1,345.5	4.09	-1.79	-3.68
12,024.0	86.20	179.60	10,820.0	-1,435.5	-208.2	1,439.3	0.85	-0.85	0.00
12,118.0	88.10	179.00	10,824.6	-1,529.3	-207.1	1,533.1	2.12	2.02	-0.64
12,213.0	89.60	179.20	10,826.5	-1,624.3	-205.6	1,628.0	1.59	1.58	0.21
12,306.0	89.10	179.50	10,827.6	-1,717.3	-204.5	1,721.0	0.63	-0.54	0.32
12,400.0	89.20	179.20	10,829.0	-1,811.3	-203.5	1,814.9	0.34	0.11	-0.32
12,494.0	89.30	178.90	10,830.2	-1,905.3	-201.9	1,908.9	0.34	0.11	-0.32
12,589.0	88.70	178.70	10,831.9	-2,000.2	-199.9	2,003.8	0.67	-0.63	-0.21
12,683.0	90.50	179.30	10,832.5	-2,094.2	-198.3	2,097.7	2.02	1.91	0.64
12,778.0	90.80	178.90	10,831.5	-2,189.2	-196.8	2,192.6	0.53	0.32	-0.42
12,872.0	90.90	178.50	10,830.1	-2,283.1	-194.7	2,286.5	0.44	0.11	-0.43
12,966.0	90.50	178.10	10,828.9	-2,377.1	-191.9	2,380.4	0.60	-0.43	-0.43
13,061.0	89.50	177.80	10,828.9	-2,472.0	-188.5	2,475.3	1.10	-1.05	-0.32
13,154.0	90.70	178.30	10,828.8	-2,565.0	-185.3	2,568.1	1.40	1.29	0.54
13,249.0	90.50	177.80	10,827.8	-2,659.9	-182.1	2,663.0	0.57	-0.21	-0.53
13,345.0	91.50	178.30	10,826.1	-2,755.8	-178.8	2,758.8	1.16	1.04	0.52
13,441.0	90.30	178.90	10,824.6	-2,851.8	-176.5	2,854.7	1.40	-1.25	0.63
13,536.0	89.10	177.90	10,825.1	-2,946.8	-173.8	2,949.6	1.64	-1.26	-1.05
13,631.0	89.80	179.80	10,826.0	-3,041.7	-171.9	3,044.5	2.13	0.74	2.00
13,725.0	89.80	180.00	10,826.3	-3,135.7	-171.8	3,138.5	0.21	0.00	0.21
13,820.0	89.30	179.80	10,827.1	-3,230.7	-171.6	3,233.5	0.57	-0.53	-0.21
13,914.0	90.40	180.60	10,827.3	-3,324.7	-171.9	3,327.5	1.45	1.17	0.85
14,009.0	90.90	180.70	10,826.2	-3,419.7	-173.0	3,422.5	0.54	0.53	0.11
14,102.0	90.70	180.50	10,824.9	-3,512.7	-174.0	3,515.4	0.30	-0.22	-0.22
14,196.0	90.70	180.50	10,823.8	-3,606.7	-174.8	3,609.4	0.00	0.00	0.00
14,290.0	88.50	179.00	10,824.4	-3,700.7	-174.4	3,703.4	2.83	-2.34	-1.60
14,382.0	88.40	178.90	10,826.9	-3,792.6	-172.7	3,795.3	0.15	-0.11	-0.11
14,475.0	89.80	180.50	10,828.4	-3,885.6	-172.2	3,888.3	2.29	1.51	1.72
14,570.0	89.40	180.00	10,829.1	-3,980.6	-172.6	3,983.2	0.67	-0.42	-0.53
14,664.0	90.20	178.50	10,829.4	-4,074.6	-171.4	4,077.2	1.81	0.85	-1.60
14,759.0	89.60	178.10	10,829.6	-4,169.6	-168.6	4,172.1	0.76	-0.63	-0.42
14,853.0	90.30	180.80	10,829.6	-4,263.5	-167.7	4,266.0	2.97	0.74	2.87
14,947.0	89.40	179.80	10,829.9	-4,357.5	-168.2	4,360.0	1.43	-0.96	-1.06



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #121H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3185.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3185.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #121H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
15,041.0	91.10	181.40	10,829.5	-4,451.5	-169.1	4,454.0	2.48	1.81	1.70
15,137.0	90.90	182.10	10,827.8	-4,547.5	-172.1	4,550.0	0.76	-0.21	0.73
15,230.0	90.70	182.10	10,826.5	-4,640.4	-175.5	4,643.0	0.22	-0.22	0.00
15,323.0	90.80	182.80	10,825.3	-4,733.3	-179.5	4,735.9	0.76	0.11	0.75
15,416.0	90.90	182.90	10,823.9	-4,826.2	-184.1	4,828.9	0.15	0.11	0.11
15,510.0	89.50	181.70	10,823.6	-4,920.1	-187.9	4,922.8	1.96	-1.49	-1.28
15,604.0	91.20	182.30	10,823.0	-5,014.0	-191.1	5,016.8	1.92	1.81	0.64
15,697.0	91.40	182.60	10,820.9	-5,106.9	-195.1	5,109.8	0.39	0.22	0.32
15,791.0	91.20	182.20	10,818.8	-5,200.8	-199.0	5,203.7	0.48	-0.21	-0.43
15,884.0	89.80	181.00	10,817.9	-5,293.8	-201.6	5,296.7	1.98	-1.51	-1.29
15,979.0	89.30	181.50	10,818.7	-5,388.7	-203.7	5,391.7	0.74	-0.53	0.53
16,072.0	90.90	180.00	10,818.5	-5,481.7	-204.9	5,484.7	2.36	1.72	-1.61
16,165.0	90.10	179.90	10,817.7	-5,574.7	-204.8	5,577.7	0.87	-0.86	-0.11
16,258.0	90.50	181.10	10,817.2	-5,667.7	-205.7	5,670.7	1.36	0.43	1.29
16,351.0	91.50	178.90	10,815.6	-5,760.7	-205.7	5,763.6	2.60	1.08	-2.37
16,446.0	91.30	178.60	10,813.3	-5,855.6	-203.6	5,858.5	0.38	-0.21	-0.32
16,540.0	89.10	178.00	10,813.0	-5,949.6	-200.8	5,952.4	2.43	-2.34	-0.64
16,634.0	88.70	177.80	10,814.8	-6,043.5	-197.4	6,046.2	0.48	-0.43	-0.21
16,729.0	88.80	178.20	10,816.8	-6,138.4	-194.0	6,141.1	0.43	0.11	0.42
16,823.0	89.30	179.10	10,818.4	-6,232.4	-191.8	6,235.0	1.10	0.53	0.96
16,917.0	89.40	180.00	10,819.5	-6,326.4	-191.1	6,328.9	0.96	0.11	0.96
17,011.0	91.60	179.90	10,818.6	-6,420.4	-191.0	6,422.9	2.34	2.34	-0.11
17,106.0	91.20	179.60	10,816.3	-6,515.3	-190.6	6,517.8	0.53	-0.42	-0.32
17,200.0	91.00	179.70	10,814.5	-6,609.3	-190.0	6,611.8	0.24	-0.21	0.11
17,294.0	90.50	180.10	10,813.3	-6,703.3	-189.9	6,705.8	0.68	-0.53	0.43
17,388.0	90.60	179.10	10,812.4	-6,797.3	-189.2	6,799.7	1.07	0.11	-1.06
17,482.0	89.20	178.10	10,812.5	-6,891.3	-186.9	6,893.6	1.83	-1.49	-1.06
17,577.0	88.10	177.80	10,814.8	-6,986.2	-183.5	6,988.5	1.20	-1.16	-0.32
17,672.0	87.90	177.90	10,818.1	-7,081.1	-179.9	7,083.2	0.24	-0.21	0.11
17,767.0	88.20	179.00	10,821.3	-7,176.0	-177.4	7,178.1	1.20	0.32	1.16
17,861.0	91.00	178.90	10,822.0	-7,269.9	-175.7	7,272.0	2.98	2.98	-0.11
17,954.0	90.40	178.80	10,820.8	-7,362.9	-173.8	7,364.9	0.65	-0.65	-0.11
18,048.0	89.70	178.70	10,820.8	-7,456.9	-171.7	7,458.8	0.75	-0.74	-0.11
18,141.0	91.30	180.50	10,820.0	-7,549.9	-171.1	7,551.8	2.59	1.72	1.94
18,235.0	91.30	180.40	10,817.8	-7,643.9	-171.8	7,645.8	0.11	0.00	-0.11
18,329.0	90.50	178.20	10,816.3	-7,737.8	-170.7	7,739.7	2.49	-0.85	-2.34
18,423.0	89.90	178.00	10,816.0	-7,831.8	-167.6	7,833.6	0.67	-0.64	-0.21
18,517.0	89.20	176.40	10,816.8	-7,925.7	-163.0	7,927.3	1.86	-0.74	-1.70
LTP Crossed @ 18589.7' MD / 10818.2' TVD									
18,589.7	88.58	176.40	10,818.2	-7,998.2	-158.4	7,999.8	0.85	-0.85	0.00
18,611.0	88.40	176.40	10,818.7	-8,019.5	-157.1	8,021.0	0.85	-0.85	0.00
18,690.0	88.80	177.00	10,820.7	-8,098.3	-152.5	8,099.7	0.91	0.51	0.76
TD @ 18740.0' MD / 10821.7' TVD									
18,740.0	88.80	177.00	10,821.7	-8,148.2	-149.9	8,149.6	0.00	0.00	0.00



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #121H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3185.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3185.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #121H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
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Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,169.0	10,162.4	16.8	12.0	MWD Tie-in @ 10169.0' MD / 10162.4' TVD
10,926.1	10,778.8	-350.4	-76.3	LL Crossed @ 10926.1' MD / 10778.8' TVD
11,284.1	10,805.2	-699.3	-149.8	FTP Crossed @ 11284.1' MD / 10805.2' TVD
18,589.7	10,818.2	-7,998.2	-158.4	LTP Crossed @ 18589.7' MD / 10818.2' TVD
18,740.0	10,821.7	-8,148.2	-149.9	TD @ 18740.0' MD / 10821.7' TVD

Checked By: _____ Approved By: _____ Date: _____