



NM OIL CONSERVATION

ARTESIA DISTRICT

SEP 19 2019

RECEIVED

XTO ENERGY, INC.

Eddy County, NM

Sec 18, T25S, R30E (Grid North)

Poker Lake Unit 18 Brushy Draw #101H

Wellbore #1

Design: Wellbore #1

QES Survey Report

10 March, 2019





Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #101H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3186:0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3186:0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #101H	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 #101H		
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' 51.499 N
		Longitude:	103° 55' 37.495 W
		Ground Level:	3,164.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	2/12/2019	6.93
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,677.09287470

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			179.79

Survey Program	Date 3/10/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
198.0	3,426.0	Surface Surveys - Unknown MWD (Wellbo	MWD
3,523.0	18,386.0	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
	198.0	1.20	280.00	198.0	0.4	-2.0	-0.4	0.61	0.61	0.00
	296.0	0.70	316.40	296.0	1.0	-3.5	-1.0	0.78	-0.51	37.14
	388.0	0.40	54.10	388.0	1.6	-3.6	-1.6	0.93	-0.33	106.20
	479.0	0.70	85.70	479.0	1.8	-2.8	-1.8	0.46	0.33	34.73
	568.0	0.90	92.10	568.0	1.8	-1.5	-1.8	0.25	0.22	7.19
	657.0	1.10	122.50	656.9	1.3	-0.1	-1.3	0.63	0.22	34.16
	753.0	1.10	76.90	752.9	1.0	1.6	-1.0	0.89	0.00	-47.50
	770.0	1.20	70.20	769.9	1.1	1.9	-1.1	0.98	0.59	-39.41
	835.0	1.20	70.20	834.9	1.6	3.2	-1.6	0.00	0.00	0.00



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well: Poker Lake Unit 18 Brushy Draw #101H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3186.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3186.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #101H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey/Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
945.0	1.50	66.00	944.9	2.6	5.6	-2.6	0.29	0.27	-3.82
1,040.0	1.50	64.10	1,039.8	3.6	7.8	-3.6	0.05	0.00	-2.00
1,126.0	1.50	82.80	1,125.8	4.3	9.9	-4.2	0.57	0.00	21.74
1,221.0	1.50	90.60	1,220.8	4.4	12.4	-4.4	0.21	0.00	8.21
1,316.0	2.00	73.80	1,315.7	4.8	15.3	-4.8	0.75	0.53	-17.68
1,412.0	2.20	62.00	1,411.7	6.2	18.5	-6.1	0.50	0.21	-12.29
1,507.0	2.40	53.60	1,506.6	8.2	21.7	-8.1	0.41	0.21	-8.84
1,601.0	2.40	48.90	1,600.5	10.7	24.8	-10.6	0.21	0.00	-5.00
1,696.0	2.50	37.90	1,695.4	13.6	27.5	-13.5	0.51	0.11	-11.58
1,790.0	1.80	42.40	1,789.4	16.3	29.8	-16.2	0.77	-0.74	4.79
1,884.0	1.00	332.70	1,883.3	18.1	30.4	-18.0	1.84	-0.85	-74.15
1,978.0	0.70	308.00	1,977.3	19.2	29.6	-19.1	0.50	-0.32	-26.28
2,072.0	0.80	296.30	2,071.3	19.9	28.5	-19.8	0.19	0.11	-12.45
2,167.0	0.50	285.70	2,166.3	20.3	27.6	-20.2	0.34	-0.32	-11.16
2,261.0	0.60	278.30	2,260.3	20.5	26.7	-20.4	0.13	0.11	-7.87
2,355.0	0.40	289.90	2,354.3	20.6	25.9	-20.6	0.24	-0.21	12.34
2,449.0	0.60	333.80	2,448.3	21.2	25.3	-21.1	0.44	0.21	46.70
2,544.0	0.60	310.50	2,543.3	22.0	24.8	-21.9	0.26	0.00	-24.53
2,637.0	0.30	293.40	2,636.3	22.4	24.2	-22.3	0.35	-0.32	-18.39
2,736.0	0.50	311.10	2,735.3	22.8	23.6	-22.7	0.24	0.20	17.88
2,829.0	0.40	170.70	2,828.3	22.7	23.3	-22.6	0.91	-0.11	-150.97
2,924.0	0.30	104.50	2,923.3	22.3	23.6	-22.2	0.41	-0.11	-69.68
3,019.0	0.80	96.70	3,018.3	22.2	24.5	-22.1	0.53	0.53	-8.21
3,112.0	1.50	128.40	3,111.3	21.4	26.1	-21.3	0.99	0.75	34.09
3,207.0	2.50	121.50	3,206.2	19.5	28.9	-19.4	1.08	1.05	-7.26
3,302.0	2.20	107.50	3,301.1	17.9	32.4	-17.7	0.68	-0.32	-14.74
3,396.0	1.20	100.00	3,395.1	17.2	35.1	-17.0	1.09	-1.06	-7.98
MWD Tie-In @ 3426.0' MD / 3425.1' TVD									
3,426.0	0.80	108.00	3,425.1	17.0	35.6	-16.9	1.41	-1.33	26.67
3,523.0	0.50	90.00	3,522.1	16.8	36.6	-16.7	0.37	-0.31	-18.56
3,617.0	1.40	203.80	3,616.1	15.8	36.6	-15.6	1.77	0.96	121.06
3,711.0	4.30	216.30	3,709.9	11.9	34.0	-11.8	3.14	3.09	13.30
3,805.0	4.80	222.70	3,803.6	6.2	29.3	-6.0	0.76	0.53	6.81
3,898.0	4.40	225.50	3,896.3	0.8	24.1	-0.7	0.49	-0.43	3.01
3,993.0	5.60	205.40	3,991.0	-5.9	19.5	6.0	2.22	1.26	-21.16
4,087.0	6.20	195.90	4,084.5	-15.0	16.2	15.0	1.22	0.64	-10.11
4,181.0	6.50	190.90	4,177.9	-25.1	13.8	25.1	0.67	0.32	-5.32
4,274.0	6.50	193.80	4,270.3	-35.4	11.5	35.4	0.35	0.00	3.12
4,368.0	6.00	192.90	4,363.8	-45.3	9.1	45.4	0.54	-0.53	-0.96
4,461.0	5.70	193.80	4,456.3	-54.5	7.0	54.6	0.34	-0.32	0.97
4,555.0	5.40	190.20	4,549.8	-63.4	5.1	63.4	0.49	-0.32	-3.83
4,649.0	5.50	190.40	4,643.4	-72.2	3.5	72.2	0.11	0.11	0.21
4,744.0	3.40	188.70	4,738.1	-79.5	2.2	79.5	2.21	-2.21	-1.79



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #101H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3186.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3186.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #101H	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)
4,837.0	1.70	169.50	4,831.0	-83.6	2.1	83.6	2.02	-1.83	-20.65
4,931.0	1.50	175.00	4,925.0	-86.2	2.4	86.2	0.27	-0.21	5.85
5,025.0	0.60	169.10	5,019.0	-87.9	2.6	87.9	0.96	-0.96	-6.28
5,118.0	0.20	187.10	5,112.0	-88.5	2.7	88.5	0.45	-0.43	19.35
5,212.0	0.20	168.60	5,206.0	-88.8	2.7	88.8	0.07	0.00	-19.68
5,306.0	0.20	162.80	5,300.0	-89.1	2.8	89.2	0.02	0.00	-6.17
5,400.0	0.50	176.80	5,394.0	-89.7	2.9	89.7	0.33	0.32	14.89
5,493.0	0.50	167.10	5,487.0	-90.5	3.0	90.5	0.09	0.00	-10.43
5,587.0	0.60	202.20	5,581.0	-91.4	2.9	91.4	0.37	0.11	37.34
5,681.0	0.70	194.40	5,675.0	-92.4	2.5	92.4	0.14	0.11	-8.30
5,775.0	1.00	218.10	5,768.9	-93.6	1.9	93.6	0.49	0.32	25.21
5,870.0	1.00	200.60	5,863.9	-95.0	1.1	95.0	0.32	0.00	-18.42
5,963.0	1.10	212.20	5,956.9	-96.5	0.3	96.5	0.25	0.11	12.47
6,057.0	0.50	210.40	6,050.9	-97.6	-0.4	97.6	0.64	-0.64	-1.91
6,151.0	0.50	230.60	6,144.9	-98.3	-0.9	98.3	0.19	0.00	21.49
6,245.0	0.60	216.90	6,238.9	-98.9	-1.5	98.9	0.18	0.11	-14.57
6,338.0	0.30	352.80	6,331.9	-99.1	-1.8	99.0	0.91	-0.32	146.13
6,433.0	0.00	192.30	6,426.9	-98.8	-1.9	98.8	0.32	-0.32	0.00
6,526.0	0.20	277.30	6,519.9	-98.8	-2.0	98.8	0.22	0.22	0.00
6,619.0	0.20	189.00	6,612.9	-98.9	-2.2	98.9	0.30	0.00	-94.95
6,713.0	0.10	277.50	6,706.9	-99.1	-2.3	99.1	0.24	-0.11	94.15
6,807.0	0.10	243.10	6,800.9	-99.1	-2.5	99.1	0.06	0.00	-36.60
6,901.0	0.50	240.80	6,894.9	-99.3	-2.9	99.3	0.43	0.43	-2.45
6,995.0	0.80	241.10	6,988.9	-99.9	-3.8	99.8	0.32	0.32	0.32
7,088.0	1.00	241.60	7,081.9	-100.6	-5.1	100.5	0.22	0.22	0.54
7,183.0	1.40	241.40	7,176.9	-101.5	-6.9	101.5	0.42	0.42	-0.21
7,276.0	0.70	331.90	7,269.8	-101.6	-8.1	101.5	1.69	-0.75	97.31
7,370.0	0.60	331.50	7,363.8	-100.6	-8.6	100.6	0.11	-0.11	-0.43
7,465.0	0.70	302.90	7,458.8	-99.9	-9.4	99.8	0.35	0.11	-30.11
7,558.0	1.10	283.00	7,551.8	-99.4	-10.7	99.3	0.54	0.43	-21.40
7,653.0	0.50	316.00	7,646.8	-98.8	-11.9	98.8	0.77	-0.63	34.74
7,747.0	1.50	310.10	7,740.8	-97.8	-13.1	97.7	1.07	1.06	-6.28
7,842.0	2.30	332.50	7,835.7	-95.3	-14.9	95.2	1.13	0.84	23.58
7,935.0	1.00	356.20	7,928.7	-92.8	-15.8	92.7	1.55	-1.40	25.48
8,031.0	0.70	344.10	8,024.7	-91.4	-16.1	91.3	0.36	-0.31	-12.60
8,125.0	1.10	314.70	8,118.7	-90.2	-16.9	90.2	0.64	0.43	-31.28
8,219.0	0.60	57.10	8,212.7	-89.3	-17.1	89.3	1.45	-0.53	108.94
8,314.0	0.70	93.70	8,307.7	-89.1	-16.1	89.0	0.44	0.11	38.53
8,410.0	0.20	92.90	8,403.7	-89.1	-15.3	89.1	0.52	-0.52	-0.83
8,504.0	0.30	330.20	8,497.7	-88.9	-15.3	88.9	0.47	0.11	-130.53
8,600.0	1.00	336.20	8,593.7	-87.9	-15.8	87.9	0.73	0.73	6.25
8,694.0	0.70	13.00	8,687.7	-86.6	-16.0	86.6	0.65	-0.32	39.15
8,788.0	1.00	150.90	8,781.6	-86.8	-15.4	86.7	1.69	0.32	146.70



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #101H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3186.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3186.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #101H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
8,883.0	1.70	178.50	8,876.6	-88.9	-15.0	88.9	0.99	0.74	29.05
8,978.0	2.20	167.30	8,971.6	-92.1	-14.6	92.1	0.66	0.53	-11.79
9,073.0	0.70	96.80	9,066.5	-94.0	-13.6	93.9	2.18	-1.58	-74.21
9,168.0	0.10	121.90	9,161.5	-94.1	-12.9	94.0	0.64	-0.63	26.42
9,262.0	0.50	162.60	9,255.5	-94.5	-12.7	94.5	0.46	0.43	43.30
9,357.0	0.00	159.00	9,350.5	-94.9	-12.6	94.9	0.53	-0.53	0.00
9,452.0	0.90	127.80	9,445.5	-95.4	-12.0	95.3	0.95	0.95	0.00
9,546.0	1.50	143.90	9,539.5	-96.8	-10.7	96.8	0.73	0.64	17.13
9,640.0	0.60	56.60	9,633.5	-97.5	-9.6	97.5	1.69	-0.96	-92.87
9,734.0	0.60	70.60	9,727.5	-97.1	-8.7	97.1	0.16	0.00	14.89
9,830.0	0.30	92.10	9,823.5	-96.9	-8.0	96.9	0.35	-0.31	22.40
9,938.0	0.20	109.20	9,931.5	-97.0	-7.5	97.0	0.11	-0.09	15.83
9,985.0	2.00	185.90	9,978.5	-97.8	-7.5	97.8	4.18	3.83	163.19
10,030.0	5.40	179.80	10,023.4	-100.7	-7.6	100.7	7.60	7.56	-13.56
10,076.0	9.80	175.90	10,069.0	-106.8	-7.3	106.8	9.63	9.57	-8.48
10,123.0	13.80	175.10	10,115.0	-116.4	-6.6	116.4	8.52	8.51	-1.70
10,170.0	18.50	177.00	10,160.1	-129.4	-5.7	129.4	10.06	10.00	4.04
10,217.0	22.30	179.00	10,204.1	-145.8	-5.1	145.8	8.22	8.09	4.26
10,264.0	26.10	182.10	10,247.0	-165.1	-5.4	165.0	8.52	8.09	6.60
10,311.0	30.50	181.90	10,288.4	-187.3	-6.1	187.3	9.36	9.36	-0.43
10,358.0	35.30	180.60	10,327.8	-212.8	-6.7	212.8	10.32	10.21	-2.77
10,405.0	40.20	179.00	10,365.0	-241.6	-6.5	241.6	10.63	10.43	-3.40
10,452.0	45.40	178.60	10,399.4	-273.5	-5.9	273.5	11.08	11.06	-0.85
10,499.0	48.70	178.70	10,431.5	-307.9	-5.1	307.9	7.02	7.02	0.21
10,546.0	52.10	181.90	10,461.4	-344.1	-5.3	344.1	8.93	7.23	6.81
Cross LL@ 10553.4' MD / 10465.9' TVD									
10,553.4	52.82	182.31	10,465.9	-350.0	-5.5	349.9	10.70	9.74	5.59
10,593.0	56.70	184.40	10,488.8	-382.2	-7.4	382.2	10.70	9.80	5.27
10,640.0	60.10	188.20	10,513.4	-422.0	-11.8	422.0	9.99	7.23	8.09
10,687.0	62.90	190.60	10,535.8	-462.8	-18.6	462.7	7.46	5.96	5.11
10,734.0	65.60	189.10	10,556.3	-504.5	-25.8	504.4	6.42	5.74	-3.19
10,780.0	70.20	188.60	10,573.6	-546.6	-32.4	546.4	10.05	10.00	-1.09
10,828.0	75.00	188.20	10,587.9	-591.9	-39.0	591.7	10.03	10.00	-0.83
10,875.0	79.20	186.10	10,598.4	-637.3	-44.7	637.1	9.94	8.94	-4.47
10,922.0	83.10	182.00	10,605.6	-683.6	-48.0	683.4	11.96	8.30	-8.72
Cross 350' FNL@ 10938.7' MD / 10607.4' TVD									
10,938.7	84.62	181.35	10,607.4	-700.2	-48.5	700.0	9.93	9.13	-3.92
10,945.0	85.20	181.10	10,608.0	-706.5	-48.6	706.3	9.93	9.13	-3.90
10,988.0	86.50	179.20	10,611.1	-749.4	-48.7	749.2	5.34	3.02	-4.42
11,083.0	90.10	178.70	10,613.9	-844.3	-47.0	844.1	3.83	3.79	-0.53
11,177.0	88.90	177.50	10,614.7	-938.2	-43.9	938.1	1.81	-1.28	-1.28
11,271.0	89.50	177.90	10,616.0	-1,032.1	-40.1	1,032.0	0.77	0.64	0.43
11,365.0	90.00	178.80	10,616.4	-1,126.1	-37.4	1,126.0	1.10	0.53	0.96
11,459.0	90.30	179.90	10,616.2	-1,220.1	-36.3	1,220.0	1.21	0.32	1.17



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well: Poker Lake Unit 18 Brushy Draw #101H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3186.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3186.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #101H	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)	
11,553.0	90.40	180.20	10,615.6	-1,314.1	-36.4	1,314.0	0.34	0.11	0.32	
11,647.0	90.30	180.80	10,615.1	-1,408.1	-37.2	1,407.9	0.65	-0.11	0.64	
11,741.0	93.00	179.40	10,612.3	-1,502.0	-37.4	1,501.9	3.24	2.87	-1.49	
11,835.0	90.60	179.20	10,609.4	-1,596.0	-36.3	1,595.8	2.56	-2.55	-0.21	
11,929.0	89.40	178.80	10,609.4	-1,690.0	-34.6	1,689.8	1.35	-1.28	-0.43	
12,023.0	89.10	178.70	10,610.6	-1,783.9	-32.6	1,783.8	0.34	-0.32	-0.11	
12,118.0	88.90	178.60	10,612.3	-1,878.9	-30.3	1,878.8	0.24	-0.21	-0.11	
12,211.0	88.50	178.10	10,614.4	-1,971.8	-27.7	1,971.7	0.69	-0.43	-0.54	
12,305.0	89.20	177.80	10,616.3	-2,065.8	-24.3	2,065.6	0.81	0.74	-0.32	
12,399.0	89.10	177.40	10,617.7	-2,159.7	-20.4	2,159.6	0.44	-0.11	-0.43	
12,493.0	89.70	177.80	10,618.7	-2,253.6	-16.4	2,253.5	0.77	0.64	0.43	
12,587.0	89.20	177.80	10,619.6	-2,347.5	-12.8	2,347.4	0.53	-0.53	0.00	
12,682.0	91.80	177.70	10,618.7	-2,442.4	-9.1	2,442.4	2.74	2.74	-0.11	
12,776.0	89.80	177.30	10,617.4	-2,536.3	-5.0	2,536.3	2.17	-2.13	-0.43	
12,870.0	88.70	177.30	10,618.6	-2,630.2	-0.6	2,630.2	1.17	-1.17	0.00	
12,964.0	90.30	179.20	10,619.5	-2,724.1	2.3	2,724.1	2.64	1.70	2.02	
13,057.0	88.40	178.10	10,620.5	-2,817.1	4.5	2,817.1	2.36	-2.04	-1.18	
13,152.0	92.30	180.00	10,619.9	-2,912.1	6.1	2,912.1	4.57	4.11	2.00	
13,246.0	91.70	179.70	10,616.7	-3,006.0	6.3	3,006.0	0.71	-0.64	-0.32	
13,340.0	91.50	179.20	10,614.0	-3,100.0	7.2	3,100.0	0.57	-0.21	-0.53	
13,435.0	91.10	179.10	10,611.9	-3,194.9	8.6	3,194.9	0.43	-0.42	-0.11	
13,530.0	90.30	178.40	10,610.7	-3,289.9	10.7	3,289.9	1.12	-0.84	-0.74	
13,624.0	89.20	177.90	10,611.1	-3,383.8	13.7	3,383.9	1.29	-1.17	-0.53	
13,718.0	91.30	177.50	10,610.7	-3,477.8	17.5	3,477.8	2.27	2.23	-0.43	
13,812.0	90.40	177.00	10,609.3	-3,571.6	22.0	3,571.7	1.10	-0.96	-0.53	
13,907.0	92.40	177.80	10,607.0	-3,666.5	26.3	3,666.6	2.27	2.11	0.84	
14,001.0	92.50	177.70	10,603.0	-3,760.4	30.0	3,760.4	0.15	0.11	-0.11	
14,095.0	93.30	180.20	10,598.2	-3,854.2	31.7	3,854.3	2.79	0.85	2.66	
14,189.0	93.90	180.60	10,592.3	-3,948.0	31.1	3,948.1	0.77	0.64	0.43	
14,283.0	93.40	180.00	10,586.3	-4,041.8	30.6	4,041.9	0.83	-0.53	-0.64	
14,377.0	92.60	179.80	10,581.4	-4,135.7	30.8	4,135.8	0.88	-0.85	-0.21	
14,471.0	91.60	180.50	10,578.0	-4,229.6	30.5	4,229.7	1.30	-1.06	0.74	
14,566.0	90.30	179.60	10,576.4	-4,324.6	30.4	4,324.7	1.66	-1.37	-0.95	
14,660.0	90.00	179.60	10,576.2	-4,418.6	31.1	4,418.7	0.32	-0.32	0.00	
14,754.0	88.10	176.70	10,577.7	-4,512.5	34.1	4,512.6	3.69	-2.02	-3.09	
14,848.0	90.50	181.00	10,578.9	-4,606.5	36.0	4,606.6	5.24	2.55	4.57	
14,942.0	88.50	180.00	10,579.7	-4,700.5	35.2	4,700.6	2.38	-2.13	-1.06	
15,036.0	90.70	181.40	10,580.3	-4,794.5	34.0	4,794.5	2.77	2.34	1.49	
15,131.0	89.60	182.40	10,580.1	-4,889.4	30.9	4,889.5	1.56	-1.16	1.05	
15,225.0	90.10	184.40	10,580.3	-4,983.2	25.3	4,983.3	2.19	0.53	2.13	
15,319.0	88.80	185.40	10,581.2	-5,076.9	17.3	5,076.9	1.74	-1.38	1.06	
15,413.0	87.90	182.90	10,584.0	-5,170.6	10.5	5,170.6	2.83	-0.96	-2.66	
15,507.0	88.30	183.90	10,587.1	-5,264.4	4.9	5,264.3	1.15	0.43	1.06	



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well.Poker Lake Unit 18 Brushy Draw #101H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3186.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3186.0usft (Akita #22)
Well:	Poker Lake Unit 18/Brushy Draw #101H	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)
15,602.0	87.40	181.70	10,590.6	-5,359.2	0.3	5,359.1	2.50	-0.95	-2.32
15,696.0	87.60	182.50	10,594.7	-5,453.0	-3.2	5,453.0	0.88	0.21	0.85
15,790.0	88.00	179.90	10,598.3	-5,546.9	-5.1	5,546.9	2.80	0.43	-2.77
15,884.0	87.40	182.70	10,602.1	-5,640.8	-7.3	5,640.8	3.04	-0.64	2.98
15,978.0	89.60	177.20	10,604.6	-5,734.7	-7.2	5,734.7	6.30	2.34	-5.85
16,088.0	90.10	177.30	10,604.9	-5,844.6	-1.9	5,844.6	0.46	0.45	0.09
16,167.0	89.90	177.40	10,604.9	-5,923.5	1.8	5,923.5	0.28	-0.25	0.13
16,261.0	88.00	176.30	10,606.6	-6,017.4	6.9	6,017.4	2.34	-2.02	-1.17
16,355.0	89.60	178.40	10,608.6	-6,111.2	11.3	6,111.2	2.81	1.70	2.23
16,449.0	89.80	178.60	10,609.1	-6,205.2	13.7	6,205.2	0.30	0.21	0.21
16,544.0	91.10	180.10	10,608.3	-6,300.2	14.8	6,300.2	2.09	1.37	1.58
16,637.0	90.00	179.90	10,607.4	-6,393.2	14.8	6,393.2	1.20	-1.18	-0.22
16,732.0	88.10	178.60	10,609.0	-6,488.2	16.0	6,488.2	2.42	-2.00	-1.37
16,826.0	91.20	180.00	10,609.6	-6,582.1	17.2	6,582.2	3.62	3.30	1.49
16,920.0	92.70	179.20	10,606.4	-6,676.1	17.8	6,676.1	1.81	1.60	-0.85
17,014.0	90.20	181.30	10,604.0	-6,770.0	17.4	6,770.0	3.47	-2.66	2.23
17,108.0	89.50	180.50	10,604.2	-6,864.0	16.0	6,864.0	1.13	-0.74	-0.85
17,202.0	89.30	180.20	10,605.2	-6,958.0	15.4	6,958.0	0.38	-0.21	-0.32
17,296.0	91.10	182.00	10,604.9	-7,052.0	13.6	7,052.0	2.71	1.91	1.91
17,391.0	90.30	181.20	10,603.7	-7,146.9	10.9	7,146.9	1.19	-0.84	-0.84
17,485.0	91.30	182.10	10,602.4	-7,240.9	8.2	7,240.9	1.43	1.06	0.96
17,579.0	90.40	181.80	10,601.0	-7,334.8	5.0	7,334.8	1.01	-0.96	-0.32
17,674.0	89.50	181.30	10,601.1	-7,429.8	2.5	7,429.7	1.08	-0.95	-0.53
17,768.0	90.40	179.80	10,601.2	-7,523.8	1.6	7,523.7	1.86	0.96	-1.60
17,862.0	89.80	179.60	10,601.0	-7,617.8	2.0	7,617.7	0.67	-0.64	-0.21
17,957.0	90.50	180.00	10,600.8	-7,712.8	2.4	7,712.7	0.85	0.74	0.42
18,051.0	91.00	178.70	10,599.5	-7,806.8	3.4	7,806.7	1.48	0.53	-1.38
18,145.0	91.00	177.40	10,597.9	-7,900.7	6.6	7,900.7	1.38	0.00	-1.38
18,239.0	89.10	174.20	10,597.8	-7,994.4	13.5	7,994.4	3.96	-2.02	-3.40
Cross 330' FSL @ 18241.6' MD / 10597.9' TVD									
18,241.6	89.09	174.18	10,597.9	-7,997.0	13.8	7,997.0	0.84	-0.54	-0.65
18,332.0	88.60	173.60	10,599.7	-8,086.9	23.4	8,086.9	0.84	-0.54	-0.65
TD @ 18386.0' MD / 10601.0' TVD									
18,386.0	88.60	173.60	10,601.0	-8,140.5	29.4	8,140.6	0.00	0.00	0.00



Survey Report



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Poker Lake Unit 18 Brushy Draw #101H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3186.0usft (Akita #22)
Site:	Sec 18, T25S, R30E (Grid North)	MD Reference:	RKB @ 3186.0usft (Akita #22)
Well:	Poker Lake Unit 18 Brushy Draw #101H	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 +N/-S (usft)	+E/-W (usft)	Comment
3,426.0	3,425.1	17.0	35.6	MWD Tie-in @ 3426.0' MD / 3425.1' TVD
10,553.4	10,465.9	-350.0	-5.5	Cross LL@ 10553.4' MD / 10465.9' TVD
10,938.7	10,607.4	-700.2	-48.5	Cross 350' FNL@ 10938.7' MD / 10607.4' TVD
18,241.6	10,597.9	-7,997.0	13.8	Cross 330' FSL@ 18241.6' MD / 10597.9' TVD
18,386.0	10,601.0	-8,140.5	29.4	TD @ 18386.0' MD / 10601.0' TVD