



XTO ENERGY, INC.

Eddy County, NM
Sec 34, Town 19S, Range 31E
Big Eddy Unit DI 2 #324H

Wellbore #1

Design: Wellbore #1

QES Survey Report

02 January, 2019

HOBBS OCD
MAY 17 2019
RECEIVED
RECEIVED

MAY 21 2019

DISTRICT II-ARTESIA O.C.D.



Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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 34, Town 19S, Range 31E		
Site Position:		Northing:	590,421.20 usft
From:	Map	Easting:	647,996.50 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 37' 20.105 N
		Longitude:	103° 51' 9.522 W
		Grid Convergence:	0.26 °

Well	Big Eddy Unit DI 2 #324H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 37' 20.105 N
		Longitude:	103° 51' 9.522 W
		Ground Level:	3,468.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	11/30/2018	6.96
			Dip Angle
			(°)
			60.36
			Field Strength
			(nT)
			47,994.00904662

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
			(°)
			260.53

Survey Program	Date 1/2/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
134.0	15,147.0	QES MWD (Wellbore #1)	MWD
			Description
			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
First MWD Survey @ 134.0' MD / 134.0' TVD									
134.0	0.80	1.30	134.0	0.9	0.0	-0.2	0.60	0.60	0.00
163.0	0.70	357.30	163.0	1.3	0.0	-0.2	0.39	-0.34	-13.79
193.0	1.10	356.10	193.0	1.8	0.0	-0.3	1.33	1.33	-4.00
222.0	1.80	10.00	222.0	2.5	0.0	-0.5	2.68	2.41	47.93
252.0	1.80	8.20	252.0	3.4	0.2	-0.8	0.19	0.00	-6.00
286.0	1.90	3.50	285.9	4.5	0.3	-1.1	0.53	0.29	-13.82
313.0	1.90	352.80	312.9	5.4	0.3	-1.2	1.31	0.00	-39.63
341.0	1.80	1.10	340.9	6.3	0.2	-1.3	1.02	-0.36	29.64
371.0	2.00	354.00	370.9	7.3	0.2	-1.4	1.03	0.67	-23.67

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit, DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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)
402.0	2.10	342.70	401.9	8.4	0.0	-1.3	1.34	0.32	-36.45
432.0	2.40	349.00	431.9	9.5	-0.3	-1.2	1.29	1.00	21.00
459.0	2.20	345.00	458.8	10.6	-0.6	-1.2	0.95	-0.74	-14.81
490.0	2.10	345.60	489.8	11.7	-0.9	-1.1	0.33	-0.32	1.94
519.0	2.10	337.60	518.8	12.7	-1.2	-0.9	1.01	0.00	-27.59
548.0	2.40	334.90	547.8	13.8	-1.7	-0.6	1.10	1.03	-9.31
578.0	2.30	336.30	577.7	14.9	-2.2	-0.3	0.38	-0.33	4.67
608.0	2.30	335.10	607.7	16.0	-2.7	0.0	0.16	0.00	-4.00
639.0	2.40	331.50	638.7	17.1	-3.2	0.4	0.57	0.32	-11.61
671.0	2.30	326.00	670.7	18.2	-3.9	0.9	0.77	-0.31	-17.19
702.0	2.50	329.30	701.6	19.3	-4.6	1.4	0.78	0.65	10.65
765.0	2.60	317.40	764.6	21.6	-6.3	2.6	0.85	0.16	-18.89
828.0	2.90	316.80	827.5	23.8	-8.3	4.3	0.48	0.48	-0.95
891.0	3.20	330.80	890.4	26.5	-10.3	5.8	1.27	0.48	22.22
954.0	3.30	339.60	953.3	29.7	-11.8	6.7	0.81	0.16	13.97
1,018.0	3.50	337.70	1,017.2	33.2	-13.2	7.5	0.36	0.31	-2.97
1,080.0	4.30	338.70	1,079.1	37.2	-14.7	8.4	1.29	1.29	1.61
1,114.0	4.60	340.40	1,113.0	39.6	-15.6	8.9	0.96	0.88	5.00
1,182.0	4.50	334.80	1,180.7	44.6	-17.7	10.1	0.67	-0.15	-8.24
1,246.0	3.90	336.90	1,244.6	48.9	-19.6	11.3	0.97	-0.94	3.28
1,309.0	3.40	332.10	1,307.4	52.5	-21.3	12.4	0.93	-0.79	-7.62
1,372.0	3.20	329.60	1,370.3	55.7	-23.1	13.6	0.39	-0.32	-3.97
1,436.0	2.80	330.00	1,434.3	58.6	-24.8	14.8	0.63	-0.63	0.63
1,499.0	2.40	326.80	1,497.2	61.0	-26.3	15.9	0.68	-0.63	-5.08
1,562.0	2.50	325.60	1,560.1	63.2	-27.8	17.0	0.18	0.16	-1.90
1,625.0	2.30	319.00	1,623.1	65.3	-29.4	18.2	0.54	-0.32	-10.48
1,688.0	1.80	307.70	1,686.0	66.9	-31.0	19.6	1.02	-0.79	-17.94
1,752.0	1.20	323.50	1,750.0	68.0	-32.2	20.5	1.13	-0.94	24.69
1,815.0	0.80	351.40	1,813.0	69.0	-32.6	20.8	0.98	-0.63	44.29
1,878.0	1.00	6.30	1,876.0	70.0	-32.6	20.7	0.49	0.32	23.65
1,941.0	0.70	27.40	1,939.0	70.9	-32.4	20.3	0.68	-0.48	33.49
2,004.0	0.40	57.60	2,002.0	71.3	-32.0	19.9	0.65	-0.48	47.94
2,068.0	0.80	93.30	2,066.0	71.4	-31.4	19.2	0.83	0.63	55.78
2,100.0	1.40	96.40	2,098.0	71.4	-30.8	18.6	1.88	1.88	9.69
2,200.0	1.90	105.70	2,197.9	70.8	-28.0	16.0	0.57	0.50	9.30
2,263.0	2.00	103.70	2,260.9	70.3	-25.9	14.0	0.19	0.16	-3.17
2,326.0	2.30	122.70	2,323.9	69.3	-23.8	12.0	1.22	0.48	30.16
2,389.0	2.70	128.80	2,386.8	67.7	-21.6	10.1	0.76	0.63	9.68
2,453.0	3.00	128.00	2,450.7	65.7	-19.1	8.0	0.47	0.47	-1.25
2,516.0	2.80	125.20	2,513.6	63.8	-16.5	5.8	0.39	-0.32	-4.44
2,579.0	2.80	119.60	2,576.6	62.2	-13.9	3.5	0.43	0.00	-8.89
2,642.0	2.60	119.50	2,639.5	60.7	-11.3	1.2	0.32	-0.32	-0.16
2,705.0	2.70	118.30	2,702.4	59.3	-8.8	-1.1	0.18	0.16	-1.90

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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)	
2,768.0	2.90	123.90	2,765.3	57.7	-6.1	-3.4	0.54	0.32	8.89	
2,832.0	3.40	134.70	2,829.3	55.5	-3.5	-5.7	1.21	0.78	16.88	
2,895.0	4.00	141.50	2,892.1	52.4	-0.8	-7.9	1.18	0.95	10.79	
2,958.0	4.00	144.10	2,955.0	48.9	1.9	-9.9	0.29	0.00	4.13	
3,021.0	4.30	144.20	3,017.8	45.2	4.6	-11.9	0.48	0.48	0.16	
3,084.0	4.30	146.40	3,080.6	41.4	7.3	-14.0	0.26	0.00	3.49	
3,148.0	4.30	147.80	3,144.4	37.3	9.9	-15.9	0.16	0.00	2.19	
3,211.0	4.50	146.90	3,207.3	33.3	12.5	-17.8	0.34	0.32	-1.43	
3,337.0	4.50	148.60	3,332.9	24.9	17.7	-21.6	0.11	0.00	1.35	
3,463.0	4.70	149.00	3,458.5	16.3	23.0	-25.3	0.16	0.16	0.32	
3,589.0	4.80	153.00	3,584.0	7.1	28.0	-28.8	0.27	0.08	3.17	
3,716.0	4.90	150.80	3,710.6	-2.3	33.1	-32.3	0.17	0.08	-1.73	
3,842.0	5.20	152.10	3,836.1	-12.1	38.4	-35.9	0.25	0.24	1.03	
3,968.0	5.10	152.10	3,961.6	-22.1	43.7	-39.5	0.08	-0.08	0.00	
4,094.0	5.40	155.60	4,087.1	-32.4	48.7	-42.7	0.35	0.24	2.78	
4,220.0	5.50	155.90	4,212.5	-43.3	53.7	-45.8	0.08	0.08	0.24	
4,347.0	5.50	153.50	4,338.9	-54.3	58.9	-49.1	0.18	0.00	-1.89	
4,368.0	5.60	153.00	4,359.8	-56.1	59.8	-49.7	0.53	0.48	-2.38	
4,470.0	5.70	151.20	4,461.3	-65.0	64.5	-52.9	0.20	0.10	-1.76	
4,533.0	5.40	149.30	4,524.0	-70.3	67.5	-55.0	0.56	-0.48	-3.02	
4,596.0	5.40	149.60	4,586.7	-75.4	70.5	-57.1	0.04	0.00	0.48	
4,659.0	5.40	149.80	4,649.4	-80.5	73.5	-59.3	0.03	0.00	0.32	
4,722.0	5.00	148.60	4,712.2	-85.4	76.4	-61.3	0.66	-0.63	-1.90	
4,786.0	5.10	148.30	4,775.9	-90.2	79.4	-63.4	0.16	0.16	-0.47	
4,849.0	5.00	147.90	4,838.7	-95.0	82.3	-65.6	0.17	-0.16	-0.63	
4,912.0	4.80	146.70	4,901.5	-99.5	85.2	-67.7	0.36	-0.32	-1.90	
4,976.0	5.70	159.30	4,965.2	-104.7	87.8	-69.4	2.28	1.41	19.69	
5,039.0	6.20	162.80	5,027.9	-110.9	89.9	-70.4	0.98	0.79	5.56	
5,165.0	6.00	160.40	5,153.1	-123.6	94.1	-72.5	0.26	-0.16	-1.90	
5,229.0	6.00	160.70	5,216.8	-129.9	96.4	-73.7	0.05	0.00	0.47	
5,355.0	5.70	160.30	5,342.1	-142.0	100.6	-75.9	0.24	-0.24	-0.32	
5,418.0	5.50	160.80	5,404.8	-147.8	102.7	-77.0	0.33	-0.32	0.79	
5,481.0	5.50	161.20	5,467.5	-153.5	104.7	-78.0	0.06	0.00	0.63	
5,544.0	5.40	161.50	5,530.3	-159.2	106.6	-78.9	0.17	-0.16	0.48	
5,607.0	5.20	160.90	5,593.0	-164.7	108.5	-79.9	0.33	-0.32	-0.95	
5,670.0	5.10	159.50	5,655.7	-170.0	110.4	-80.9	0.25	-0.16	-2.22	
5,733.0	5.00	159.00	5,718.5	-175.2	112.3	-82.0	0.17	-0.16	-0.79	
5,796.0	4.80	158.50	5,781.3	-180.2	114.3	-83.1	0.32	-0.32	-0.79	
5,860.0	6.10	155.90	5,845.0	-185.8	116.6	-84.5	2.07	2.03	-4.06	
5,923.0	6.80	155.60	5,907.6	-192.2	119.6	-86.3	1.11	1.11	-0.48	
5,986.0	6.80	156.40	5,970.1	-199.1	122.6	-88.2	0.15	0.00	1.27	
6,049.0	6.80	155.90	6,032.7	-205.9	125.6	-90.0	0.09	0.00	-0.79	
6,112.0	6.80	156.60	6,095.2	-212.7	128.6	-91.9	0.13	0.00	1.11	

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town, 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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)
6,175.0	6.60	156.70	6,157.8	-219.5	131.5	-93.6	0.32	-0.32	0.16
6,238.0	6.60	156.50	6,220.4	-226.1	134.4	-95.4	0.04	0.00	-0.32
6,302.0	6.60	157.30	6,284.0	-232.9	137.3	-97.1	0.14	0.00	1.25
6,365.0	5.80	158.20	6,346.6	-239.2	139.9	-98.6	1.28	-1.27	1.43
6,428.0	5.60	158.80	6,409.3	-245.0	142.2	-99.9	0.33	-0.32	0.95
6,491.0	5.50	160.60	6,472.0	-250.7	144.3	-101.1	0.32	-0.16	2.86
6,554.0	5.50	160.30	6,534.7	-256.4	146.3	-102.1	0.05	0.00	-0.48
6,618.0	4.40	156.70	6,598.5	-261.5	148.3	-103.2	1.79	-1.72	-5.63
6,681.0	3.60	154.90	6,661.3	-265.5	150.1	-104.4	1.29	-1.27	-2.86
6,744.0	3.60	153.70	6,724.2	-269.1	151.8	-105.5	0.12	0.00	-1.90
6,807.0	3.40	154.90	6,787.1	-272.6	153.5	-106.5	0.34	-0.32	1.90
6,870.0	3.30	154.10	6,850.0	-275.9	155.1	-107.6	0.18	-0.16	-1.27
6,933.0	4.30	151.00	6,912.8	-279.6	157.0	-108.9	1.62	1.59	-4.92
6,996.0	4.60	150.90	6,975.6	-283.9	159.4	-110.5	0.48	0.48	-0.16
7,059.0	4.20	150.00	7,038.5	-288.1	161.8	-112.2	0.64	-0.63	-1.43
7,122.0	3.90	150.50	7,101.3	-291.9	164.0	-113.7	0.48	-0.48	0.79
7,186.0	4.70	148.10	7,165.1	-296.0	166.4	-115.4	1.28	1.25	-3.75
7,249.0	4.90	146.70	7,227.9	-300.5	169.3	-117.5	0.37	0.32	-2.22
7,312.0	4.00	145.70	7,290.7	-304.6	172.0	-119.5	1.43	-1.43	-1.59
7,375.0	3.00	140.40	7,353.6	-307.6	174.3	-121.3	1.67	-1.59	-8.41
7,438.0	4.10	144.40	7,416.5	-310.7	176.6	-123.1	1.79	1.75	6.35
7,501.0	4.70	146.50	7,479.3	-314.7	179.4	-125.1	0.99	0.95	3.33
7,564.0	4.40	144.10	7,542.1	-318.8	182.2	-127.3	0.56	-0.48	-3.81
7,627.0	4.20	142.10	7,604.9	-322.6	185.0	-129.4	0.40	-0.32	-3.17
7,687.0	4.00	145.00	7,664.7	-326.1	187.6	-131.4	0.48	-0.33	4.83
7,750.0	3.80	142.10	7,727.6	-329.5	190.1	-133.3	0.45	-0.32	-4.60
7,813.0	3.90	146.80	7,790.5	-332.9	192.6	-135.2	0.53	0.16	7.46
7,845.0	5.20	167.50	7,822.4	-335.3	193.5	-135.7	6.48	4.06	64.69
7,876.0	7.30	171.20	7,853.2	-338.6	194.1	-135.8	6.89	6.77	11.94
7,908.0	9.60	178.80	7,884.8	-343.3	194.5	-135.3	7.97	7.19	23.75
7,939.0	11.30	187.30	7,915.3	-348.9	194.1	-134.1	7.39	5.48	27.42
7,971.0	13.60	195.30	7,946.6	-355.6	192.7	-131.6	8.97	7.19	25.00
8,002.0	16.20	199.40	7,976.5	-363.2	190.4	-128.0	9.05	8.39	13.23
8,034.0	18.90	201.70	8,007.0	-372.2	187.0	-123.2	8.71	8.44	7.19
8,066.0	21.90	204.20	8,037.0	-382.5	182.6	-117.2	9.76	9.38	7.81
8,097.0	25.50	206.70	8,065.4	-393.7	177.2	-110.0	12.05	11.61	8.06
8,129.0	28.70	208.40	8,093.9	-406.6	170.5	-101.2	10.29	10.00	5.31
8,160.0	32.30	210.30	8,120.6	-420.3	162.7	-91.4	12.02	11.61	6.13
8,192.0	35.70	210.50	8,147.1	-435.8	153.7	-79.9	10.63	10.63	0.63
8,223.0	39.20	210.90	8,171.7	-452.0	144.1	-67.7	11.32	11.29	1.29
8,255.0	42.50	211.40	8,195.9	-469.9	133.2	-54.1	10.36	10.31	1.56
8,286.0	46.50	211.30	8,218.0	-488.4	121.9	-39.9	12.91	12.90	-0.32
8,318.0	49.90	211.90	8,239.4	-508.8	109.4	-24.2	10.72	10.63	1.88
8,349.0	53.70	212.30	8,258.5	-529.4	96.5	-8.1	12.30	12.26	1.29

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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)
8,381.0	57.80	212.70	8,276.5	-551.7	82.3	9.6	12.85	12.81	1.25
8,413.0	62.60	213.50	8,292.4	-574.9	67.1	28.4	15.16	15.00	2.50
8,444.0	66.50	214.00	8,305.7	-598.2	51.6	47.6	12.66	12.58	1.61
8,476.0	69.40	214.60	8,317.8	-622.7	34.9	68.1	9.23	9.06	1.88
8,507.0	70.90	215.00	8,328.3	-646.7	18.2	88.4	4.99	4.84	1.29
Cross LL@ 8523.8' MD / 8333.7' TVD									
8,523.8	71.11	214.95	8,333.7	-659.7	9.1	99.6	1.28	1.25	-0.31
8,539.0	71.30	214.90	8,338.6	-671.5	0.9	109.6	1.28	1.25	-0.31
8,570.0	71.40	214.80	8,348.6	-695.6	-15.9	130.1	0.44	0.32	-0.32
8,601.0	71.20	215.10	8,358.5	-719.6	-32.7	150.7	1.12	-0.65	0.97
8,633.0	70.60	217.10	8,369.0	-744.1	-50.6	172.3	6.20	-1.88	6.25
8,664.0	69.60	219.70	8,379.5	-766.9	-68.7	193.9	8.52	-3.23	8.39
8,696.0	69.50	221.80	8,390.7	-789.6	-88.2	216.9	6.16	-0.31	6.56
8,727.0	70.70	224.00	8,401.3	-811.0	-108.1	240.0	7.71	3.87	7.10
8,759.0	71.40	225.60	8,411.7	-832.5	-129.4	264.6	5.21	2.19	5.00
8,791.0	71.10	229.00	8,421.9	-853.0	-151.7	289.9	10.10	-0.94	10.63
8,822.0	72.60	231.70	8,431.6	-871.8	-174.3	315.4	9.59	4.84	8.71
8,854.0	74.90	235.10	8,440.6	-890.1	-199.0	342.7	12.48	7.19	10.63
Cross 330' FEL@ 8860.7' MD / 8442.3' TVD									
8,860.7	75.17	235.84	8,442.3	-893.8	-204.3	348.6	11.34	4.00	10.99
8,886.0	76.20	238.60	8,448.5	-907.0	-224.9	371.1	11.34	4.08	10.92
8,917.0	78.90	241.50	8,455.2	-922.1	-251.2	399.5	12.62	8.71	9.35
8,948.0	81.10	244.40	8,460.6	-936.0	-278.4	428.6	11.63	7.10	9.35
8,980.0	83.50	247.30	8,464.9	-949.0	-307.3	459.2	11.70	7.50	9.06
9,012.0	85.80	250.40	8,467.9	-960.5	-337.0	490.4	12.03	7.19	9.69
9,043.0	87.80	253.50	8,469.6	-970.1	-366.4	521.0	11.89	6.45	10.00
9,075.0	87.20	254.40	8,471.0	-978.9	-397.1	552.8	3.38	-1.88	2.81
9,106.0	86.90	255.60	8,472.6	-986.9	-427.0	583.6	3.99	-0.97	3.87
9,138.0	88.40	257.30	8,473.9	-994.4	-458.1	615.5	7.08	4.69	5.31
9,201.0	90.80	261.30	8,474.4	-1,006.1	-520.0	678.5	7.40	3.81	6.35
9,264.0	90.40	262.50	8,473.7	-1,015.0	-582.4	741.4	2.01	-0.63	1.90
9,327.0	91.00	265.40	8,472.9	-1,021.6	-645.0	804.3	4.70	0.95	4.60
9,390.0	91.90	267.70	8,471.3	-1,025.4	-707.9	866.9	3.92	1.43	3.65
9,453.0	91.80	268.40	8,469.3	-1,027.6	-770.8	929.4	1.12	-0.16	1.11
9,516.0	91.60	268.70	8,467.4	-1,029.1	-833.8	991.7	0.57	-0.32	0.48
9,579.0	91.30	269.20	8,465.8	-1,030.3	-896.7	1,054.0	0.93	-0.48	0.79
9,642.0	91.90	270.00	8,464.1	-1,030.7	-959.7	1,116.2	1.59	0.95	1.27
9,705.0	93.70	269.90	8,461.0	-1,030.8	-1,022.6	1,178.3	2.86	2.86	-0.16
9,769.0	94.20	269.80	8,456.6	-1,031.0	-1,086.5	1,241.3	0.80	0.78	-0.16
9,832.0	94.80	269.60	8,451.6	-1,031.3	-1,149.3	1,303.3	1.00	0.95	-0.32
9,895.0	93.80	268.80	8,446.9	-1,032.2	-1,212.1	1,365.4	2.03	-1.59	-1.27
9,959.0	89.00	268.20	8,445.4	-1,033.8	-1,276.0	1,428.7	7.56	-7.50	-0.94
10,022.0	87.00	268.40	8,447.6	-1,035.7	-1,339.0	1,491.1	3.19	-3.17	0.32

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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)
10,086.0	89.50	269.10	8,449.5	-1,037.1	-1,402.9	1,554.4	4.06	3.91	1.09
10,149.0	89.40	269.50	8,450.1	-1,037.9	-1,465.9	1,616.7	0.65	-0.16	0.63
10,212.0	89.90	270.20	8,450.5	-1,038.0	-1,528.9	1,678.9	1.37	0.79	1.11
10,275.0	90.10	269.70	8,450.5	-1,038.1	-1,591.9	1,741.0	0.85	0.32	-0.79
10,304.0	90.30	270.00	8,450.4	-1,038.2	-1,620.9	1,769.6	1.24	0.69	1.03
10,367.0	92.00	270.50	8,449.1	-1,037.9	-1,683.9	1,831.7	2.81	2.70	0.79
10,430.0	91.50	270.90	8,447.2	-1,037.1	-1,746.8	1,893.7	1.02	-0.79	0.63
10,493.0	90.90	270.90	8,445.9	-1,036.1	-1,809.8	1,955.6	0.95	-0.95	0.00
10,557.0	90.80	271.30	8,444.9	-1,034.9	-1,873.8	2,018.5	0.64	-0.16	0.63
10,620.0	90.50	271.40	8,444.2	-1,033.4	-1,936.8	2,080.4	0.50	-0.48	0.16
10,683.0	89.60	271.80	8,444.2	-1,031.7	-1,999.8	2,142.2	1.56	-1.43	0.63
10,746.0	88.50	271.90	8,445.2	-1,029.6	-2,062.7	2,204.0	1.75	-1.75	0.16
10,808.0	89.00	270.60	8,446.6	-1,028.3	-2,124.7	2,264.9	2.25	0.81	-2.10
10,873.0	90.90	269.70	8,446.6	-1,028.1	-2,189.7	2,329.0	3.23	2.92	-1.38
10,937.0	90.90	269.80	8,445.6	-1,028.4	-2,253.7	2,392.2	0.16	0.00	0.16
11,000.0	90.20	270.00	8,445.0	-1,028.5	-2,316.7	2,454.3	1.16	-1.11	0.32
11,063.0	91.30	269.80	8,444.2	-1,028.6	-2,379.7	2,516.5	1.77	1.75	-0.32
11,126.0	92.10	269.60	8,442.3	-1,028.9	-2,442.6	2,578.6	1.31	1.27	-0.32
11,190.0	92.70	269.40	8,439.6	-1,029.5	-2,506.6	2,641.8	0.99	0.94	-0.31
11,253.0	93.00	269.30	8,436.5	-1,030.2	-2,569.5	2,704.0	0.50	0.48	-0.16
11,316.0	92.20	269.20	8,433.7	-1,031.0	-2,632.4	2,766.2	1.28	-1.27	-0.16
11,380.0	92.10	269.10	8,431.3	-1,032.0	-2,696.4	2,829.4	0.22	-0.16	-0.16
11,443.0	93.10	269.00	8,428.4	-1,033.0	-2,759.3	2,891.7	1.60	1.59	-0.16
11,506.0	92.50	269.10	8,425.3	-1,034.1	-2,822.2	2,953.9	0.97	-0.95	0.16
11,569.0	90.70	269.00	8,423.6	-1,035.1	-2,885.2	3,016.2	2.86	-2.86	-0.16
11,632.0	91.60	269.10	8,422.3	-1,036.2	-2,948.2	3,078.5	1.44	1.43	0.16
11,696.0	92.40	269.20	8,420.1	-1,037.1	-3,012.1	3,141.7	1.26	1.25	0.16
11,759.0	92.30	269.10	8,417.5	-1,038.0	-3,075.0	3,203.9	0.22	-0.16	-0.16
11,822.0	92.50	269.60	8,414.8	-1,038.8	-3,138.0	3,266.1	0.85	0.32	0.79
11,885.0	92.40	269.40	8,412.1	-1,039.3	-3,200.9	3,328.3	0.35	-0.16	-0.32
11,948.0	92.40	269.10	8,409.5	-1,040.1	-3,263.9	3,390.5	0.48	0.00	-0.48
12,012.0	92.40	269.10	8,406.8	-1,041.1	-3,327.8	3,453.8	0.00	0.00	0.00
12,075.0	91.80	269.50	8,404.5	-1,041.9	-3,390.8	3,516.0	1.14	-0.95	0.63
12,138.0	89.80	269.60	8,403.6	-1,042.4	-3,453.7	3,578.2	3.18	-3.17	0.16
12,201.0	90.10	269.40	8,403.7	-1,042.9	-3,516.7	3,640.4	0.57	0.48	-0.32
12,264.0	90.30	269.50	8,403.5	-1,043.6	-3,579.7	3,702.7	0.35	0.32	0.16
12,327.0	90.40	269.00	8,403.1	-1,044.4	-3,642.7	3,764.9	0.81	0.16	-0.79
12,390.0	88.70	269.20	8,403.6	-1,045.4	-3,705.7	3,827.2	2.72	-2.70	0.32
12,454.0	89.20	270.90	8,404.8	-1,045.3	-3,769.7	3,890.3	2.77	0.78	2.66
12,517.0	90.10	271.60	8,405.1	-1,043.9	-3,832.7	3,952.2	1.81	1.43	1.11
12,580.0	89.60	270.90	8,405.3	-1,042.6	-3,895.7	4,014.1	1.37	-0.79	-1.11
12,643.0	89.70	270.80	8,405.7	-1,041.6	-3,958.7	4,076.1	0.22	0.16	-0.16
12,707.0	89.90	270.90	8,405.9	-1,040.7	-4,022.7	4,139.1	0.35	0.31	0.16
12,770.0	89.60	270.80	8,406.2	-1,039.7	-4,085.7	4,201.0	0.50	-0.48	-0.16

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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)
12,833.0	89.30	270.50	8,406.8	-1,039.0	-4,148.6	4,263.1	0.67	-0.48	-0.48
12,897.0	90.00	271.00	8,407.2	-1,038.2	-4,212.6	4,326.0	1.34	1.09	0.78
12,960.0	90.10	271.10	8,407.1	-1,037.0	-4,275.6	4,388.0	0.22	0.16	0.16
13,023.0	90.00	271.30	8,407.1	-1,035.7	-4,338.6	4,449.9	0.35	-0.16	0.32
13,086.0	89.50	270.50	8,407.4	-1,034.7	-4,401.6	4,511.9	1.50	-0.79	-1.27
13,149.0	90.30	270.90	8,407.5	-1,034.0	-4,464.6	4,573.9	1.42	1.27	0.63
13,212.0	91.20	271.00	8,406.6	-1,032.9	-4,527.6	4,635.8	1.44	1.43	0.16
13,275.0	91.00	270.60	8,405.4	-1,032.0	-4,590.6	4,697.8	0.71	-0.32	-0.63
13,339.0	90.50	270.40	8,404.6	-1,031.5	-4,654.6	4,760.8	0.84	-0.78	-0.31
13,402.0	90.90	270.10	8,403.8	-1,031.2	-4,717.6	4,822.9	0.79	0.63	-0.48
13,465.0	92.50	269.60	8,402.0	-1,031.4	-4,780.5	4,885.1	2.66	2.54	-0.79
13,528.0	92.50	269.30	8,399.2	-1,032.0	-4,843.5	4,947.2	0.48	0.00	-0.48
13,592.0	91.60	268.70	8,396.9	-1,033.1	-4,907.4	5,010.5	1.69	-1.41	-0.94
13,655.0	91.60	268.50	8,395.2	-1,034.6	-4,970.4	5,072.9	0.32	0.00	-0.32
13,718.0	91.50	268.20	8,393.4	-1,036.4	-5,033.3	5,135.2	0.50	-0.16	-0.48
13,781.0	91.30	268.30	8,391.9	-1,038.4	-5,096.3	5,197.7	0.35	-0.32	0.16
13,844.0	91.10	267.80	8,390.6	-1,040.5	-5,159.2	5,260.1	0.85	-0.32	-0.79
13,908.0	92.00	268.50	8,388.9	-1,042.6	-5,223.2	5,323.5	1.78	1.41	1.09
13,971.0	92.10	270.60	8,386.6	-1,043.1	-5,286.1	5,385.7	3.33	0.16	3.33
14,034.0	92.00	270.30	8,384.4	-1,042.6	-5,349.1	5,447.7	0.50	-0.16	-0.48
14,097.0	91.70	269.90	8,382.3	-1,042.5	-5,412.0	5,509.8	0.79	-0.48	-0.63
14,160.0	91.30	269.50	8,380.7	-1,042.8	-5,475.0	5,572.0	0.90	-0.63	-0.63
14,223.0	91.80	269.40	8,379.0	-1,043.4	-5,538.0	5,634.2	0.81	0.79	-0.16
14,286.0	91.80	269.10	8,377.0	-1,044.2	-5,601.0	5,696.4	0.48	0.00	-0.48
14,349.0	93.80	270.30	8,373.9	-1,044.5	-5,663.9	5,758.5	3.70	3.17	1.90
14,413.0	93.20	270.10	8,370.0	-1,044.3	-5,727.7	5,821.5	0.99	-0.94	-0.31
14,475.0	89.80	268.60	8,368.4	-1,045.0	-5,789.7	5,882.8	5.99	-5.48	-2.42
14,538.0	90.20	268.40	8,368.4	-1,046.7	-5,852.7	5,945.1	0.71	0.63	-0.32
14,601.0	90.20	268.60	8,368.2	-1,048.3	-5,915.7	6,007.5	0.32	0.00	0.32
14,665.0	90.00	268.20	8,368.0	-1,050.1	-5,979.6	6,070.9	0.70	-0.31	-0.63
14,728.0	89.80	268.00	8,368.2	-1,052.2	-6,042.6	6,133.4	0.45	-0.32	-0.32
14,791.0	90.20	267.90	8,368.2	-1,054.5	-6,105.6	6,195.9	0.65	0.63	-0.16
Cross 330' FWL @ 14828.1' MD / 8368.0' TVD									
14,828.1	90.38	268.25	8,368.0	-1,055.7	-6,142.6	6,232.6	1.06	0.48	0.95
14,854.0	90.50	268.50	8,367.8	-1,056.4	-6,168.5	6,258.3	1.06	0.48	0.95
14,918.0	91.20	268.50	8,366.8	-1,058.1	-6,232.5	6,321.7	1.09	1.09	0.00
14,980.0	91.00	268.10	8,365.6	-1,060.0	-6,294.5	6,383.1	0.72	-0.32	-0.65
15,044.0	91.30	268.30	8,364.3	-1,062.0	-6,358.4	6,446.5	0.56	0.47	0.31
15,082.0	90.90	268.10	8,363.6	-1,063.2	-6,396.4	6,484.1	1.18	1.05	-0.53
TD @ 15147.0' MD / 8362.6' TVD									
15,147.0	90.90	268.10	8,362.6	-1,065.3	-6,461.4	6,548.6	0.00	0.00	0.00

Company:	XTO ENERGY, INC.	Local Co-ordinate Reference:	Well Big Eddy Unit DI 2 #324H
Project:	Eddy County, NM	TVD Reference:	RKB @ 3484.5usft (Trinidad #445)
Site:	Sec 34, Town 19S, Range 31E	MD Reference:	RKB @ 3484.5usft (Trinidad #445)
Well:	Big Eddy Unit DI 2 #324H	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)	
134.0	134.0	0.9	0.0	First MWD Survey @ 134.0' MD / 134.0' TVD
8,523.8	8,333.7	-659.7	9.1	Cross LL@ 8523.8' MD / 8333.7' TVD
8,860.7	8,442.3	-893.8	-204.3	Cross 330' FEL@ 8860.7' MD / 8442.3' TVD
14,828.1	8,368.0	-1,055.7	-6,142.6	Cross 330' FWL@ 14828.1' MD / 8368.0' TVD
15,147.0	8,362.6	-1,065.3	-6,461.4	TD @ 15147.0' MD / 8362.6' TVD