

Intent ☐ As Drilled ☒

API #
30-015-45253

Operator Name: XTO ENERGY INC.	Property Name: BUBBLES 22 15 FEDERAL	Well Number 1H
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Kick Off Point (KOP)

UL L	Section 22	Township 19S	Range 30E	Lot	Feet 2872	From N/S FNL	Feet 1311	From E/W FWL	County EDDY
Latitude 32.645237					Longitude 103.964139			NAD 83	

First Take Point (FTP)

UL E	Section 22	Township 19S	Range 30E	Lot	Feet 2305	From N/S FNL	Feet 1009	From E/W FWL	County EDDY
Latitude 32.646798					Longitude 103.9655119			NAD 83	

Last Take Point (LTP)

UL D	Section 15	Township 19S	Range 30E	Lot	Feet 444	From N/S FNL	Feet 476	From E/W FWL	County EDDY
Latitude 32.666420					Longitude 103.966843			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☒

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #	Operator Name:	Property Name:	Well Number

KZ 06/29/2018

RECEIVED

JAN 24 2020



I, **Cary Rodriguez**, certify that I am employed by **Scout Downhole Inc. (SDI)**. That I did on the day(s) of **01/03/19** thru **05/06/19** conduct or supervise the taking of a **MWD Survey** from a depth of **148'** to a depth of **16880'**; that the data is true, correct, complete and within the limitations of the tool as set forth by **Scout Downhole Inc. (SDI)**; that I am authorized and qualified to make this report; that this survey was conducted at the request of **XTO Energy** for the **Bubbles 2215 Federal 1H API No. 30-015-45253** in **Eddy County, NM**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by **Scout Downhole Inc. (SDI)**.

Cary Rodriguez

Cary

Rodriguez

Digitally signed by: Cary
Rodriguez
DN: CN = Cary Rodriguez
email =
crodriquez@scoutdownhole.
com, C = US, O = Scout
Downhole
Date: 2020.01.16 08:53:21 -
08:00'

1125 Beach Airport Rd, Conroe, Texas
77301

PH 936-756-3225 FAX 936-756-3248



Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Bubbles 2215 Federal #1H
Project:	Eddy County, NM	TVD Reference:	GL 3304' + 31' KB @ 3335.00usft (Nabors F34)
Site:	Bubbles 2215 Federal	MD Reference:	GL 3304' + 31' KB @ 3335.00usft (Nabors F34)
Well:	Bubbles 2215 Federal #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 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	Bubbles 2215 Federal		
Site Position:		Northing:	598,106.00 usft
From:	Map	Easting:	616,169.60 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 38' 37.422 N
		Longitude:	103° 57' 21.337 W
		Grid Convergence:	0.20 °

Well	Bubbles 2215 Federal #1H		
Well Position	+N/-S	0.00 usft	Northing: 598,106.00 usft
	+E/-W	0.00 usft	Easting: 616,169.60 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 38' 37.422 N
		Longitude:	103° 57' 21.337 W
		Ground Level:	3,304.00 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	HDGM	12/20/2018	7.35
			Dip Angle (°)
			60.47
			Field Strength (nT)
			48,164.40000000

Design	Surveys		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°)
			355.25

Survey Program	Date 6/25/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
148.00	16,928.00	Scout MWD (Wellbore #1)	MWD
			Description
			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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148.00	0.57	271.00	148.00	0.01	-0.74	0.07	0.39	0.39	0.00
First Scout MWD Survey @ 148.00' MD									
239.00	0.31	267.22	238.99	0.01	-1.43	0.13	0.29	-0.29	-4.15
334.00	0.31	204.02	333.99	-0.24	-1.80	-0.09	0.34	0.00	-66.53
392.00	0.35	153.66	391.99	-0.54	-1.78	-0.39	0.49	0.07	-86.83
525.00	0.44	138.63	524.99	-1.29	-1.26	-1.18	0.10	0.07	-11.30
620.00	0.44	145.75	619.99	-1.86	-0.82	-1.79	0.06	0.00	7.49
715.00	0.44	148.65	714.98	-2.48	-0.42	-2.43	0.02	0.00	3.05
810.00	0.48	137.32	809.98	-3.08	0.04	-3.07	0.10	0.04	-11.93
905.00	0.62	131.60	904.98	-3.71	0.69	-3.76	0.16	0.15	-6.02



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Well:	Bubbles 2215 Federal #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 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)
1,000.00	0.62	135.65	999.97	-4.42	1.44	-4.53	0.05	0.00	4.26
1,095.00	0.66	134.42	1,094.97	-5.17	2.19	-5.34	0.04	0.04	-1.29
1,190.00	0.70	134.86	1,189.96	-5.97	2.99	-6.19	0.04	0.04	0.46
1,285.00	0.75	129.41	1,284.95	-6.77	3.88	-7.07	0.09	0.05	-5.74
1,398.00	0.75	145.23	1,397.94	-7.85	4.87	-8.22	0.18	0.00	14.00
1,475.00	0.88	140.74	1,474.93	-8.72	5.53	-9.15	0.19	0.17	-5.83
1,529.00	0.92	144.08	1,528.93	-9.39	6.05	-9.86	0.12	0.07	6.19
1,650.00	0.75	151.64	1,649.91	-10.87	7.00	-11.42	0.17	-0.14	6.25
1,744.00	0.92	164.47	1,743.90	-12.14	7.49	-12.72	0.27	0.18	13.65
1,839.00	0.79	345.09	1,838.90	-12.24	7.53	-12.83	1.80	-0.14	-188.82
1,934.00	1.98	349.31	1,933.87	-10.00	7.05	-10.55	1.26	1.25	4.44
2,029.00	1.71	346.32	2,028.82	-7.01	6.41	-7.52	0.30	-0.28	-3.15
2,123.00	1.58	349.40	2,122.78	-4.37	5.84	-4.84	0.17	-0.14	3.28
2,218.00	1.63	357.66	2,217.75	-1.74	5.55	-2.19	0.25	0.05	8.69
2,313.00	1.89	352.03	2,312.70	1.17	5.28	0.73	0.33	0.27	-5.93
2,408.00	1.80	354.93	2,407.65	4.20	4.93	3.78	0.14	-0.09	3.05
2,503.00	1.71	1.96	2,502.61	7.11	4.84	6.68	0.25	-0.09	7.40
2,598.00	1.49	359.68	2,597.57	9.76	4.88	9.32	0.24	-0.23	-2.40
2,693.00	0.79	21.12	2,692.55	11.60	5.11	11.14	0.85	-0.74	22.57
2,788.00	0.35	156.65	2,787.55	11.95	5.46	11.46	1.12	-0.46	142.66
2,882.00	0.26	140.39	2,881.55	11.52	5.71	11.01	0.13	-0.10	-17.30
2,977.00	0.22	167.11	2,976.55	11.18	5.89	10.65	0.12	-0.04	28.13
3,072.00	0.97	232.59	3,071.54	10.51	5.29	10.04	0.95	0.79	68.93
3,167.00	2.81	248.41	3,166.49	9.17	2.49	8.93	2.00	1.94	16.65
3,262.00	4.35	251.75	3,261.30	7.18	-3.10	7.41	1.64	1.62	3.52
3,357.00	5.80	255.97	3,355.92	4.89	-11.18	5.80	1.58	1.53	4.44
3,452.00	7.82	262.47	3,450.25	2.88	-22.24	4.71	2.27	2.13	6.84
3,547.00	9.76	272.49	3,544.13	2.38	-36.70	5.41	2.59	2.04	10.55
3,642.00	11.74	277.41	3,637.46	3.98	-54.33	8.46	2.30	2.08	5.18
3,737.00	14.42	278.82	3,729.99	7.04	-75.60	13.27	2.84	2.82	1.48
3,831.00	17.54	279.70	3,820.35	11.22	-101.14	19.56	3.33	3.32	0.94
3,925.00	20.44	284.18	3,909.23	17.63	-131.02	28.42	3.45	3.09	4.77
3,989.00	21.93	286.99	3,968.90	23.86	-153.29	36.47	2.82	2.33	4.39
4,108.00	22.86	286.15	4,078.93	36.78	-196.74	52.95	0.83	0.78	-0.71
4,204.00	22.15	275.17	4,167.65	43.60	-232.69	62.72	4.43	-0.74	-11.44
4,299.00	25.49	277.19	4,254.55	47.78	-270.82	70.04	3.62	3.52	2.13
4,394.00	29.01	283.25	4,339.01	55.62	-313.55	81.39	4.71	3.71	6.38
4,488.00	30.24	283.60	4,420.72	66.41	-358.74	95.89	1.32	1.31	0.37
4,584.00	31.43	282.29	4,503.15	77.42	-406.70	110.83	1.42	1.24	-1.36
4,679.00	32.84	280.62	4,583.60	87.44	-456.22	124.92	1.75	1.48	-1.76
4,773.00	33.01	281.76	4,662.50	97.36	-506.34	138.95	0.68	0.18	1.21
4,868.00	30.51	282.29	4,743.27	107.77	-555.24	153.38	2.65	-2.63	0.56
4,963.00	28.04	284.04	4,826.13	118.32	-600.48	167.64	2.75	-2.60	1.84



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Design:	Surveys	Database:	EDM.5000.14 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)	
5,058.00	29.58	284.39	4,909.37	129.56	-644.85	182.52	1.63	1.62	0.37	
5,153.00	32.35	284.22	4,990.82	141.64	-692.21	198.47	2.92	2.92	-0.18	
5,247.00	31.47	284.57	5,070.62	153.99	-740.34	214.76	0.96	-0.94	0.37	
5,342.00	27.43	283.08	5,153.32	165.18	-785.67	229.68	4.32	-4.25	-1.57	
5,437.00	28.97	282.55	5,237.05	175.13	-829.45	243.22	1.64	1.62	-0.56	
5,532.00	28.70	281.67	5,320.27	184.75	-874.24	256.51	0.53	-0.28	-0.93	
5,626.00	29.05	281.14	5,402.58	193.72	-918.74	269.14	0.46	0.37	-0.56	
5,721.00	28.48	281.49	5,485.86	202.69	-963.57	281.79	0.63	-0.60	0.37	
5,815.00	29.63	281.93	5,568.03	211.96	-1,008.27	294.72	1.24	1.22	0.47	
5,910.00	28.97	282.37	5,650.87	221.74	-1,053.72	308.24	0.73	-0.69	0.46	
6,004.00	29.54	282.46	5,732.88	231.62	-1,098.58	321.79	0.61	0.61	0.10	
6,099.00	31.38	283.08	5,814.77	242.27	-1,145.54	336.30	1.96	1.94	0.65	
6,193.00	30.07	282.55	5,895.57	252.93	-1,192.37	350.80	1.42	-1.39	-0.56	
6,289.00	28.75	277.80	5,979.21	261.29	-1,238.73	362.97	2.79	-1.38	-4.95	
6,384.00	28.70	274.46	6,062.52	266.16	-1,284.11	371.58	1.69	-0.05	-3.52	
6,478.00	29.63	278.77	6,144.62	271.46	-1,329.58	380.63	2.44	0.99	4.59	
6,573.00	31.87	280.18	6,226.26	279.47	-1,377.48	392.58	2.48	2.36	1.48	
6,668.00	30.73	282.99	6,307.43	289.36	-1,425.82	406.44	1.95	-1.20	2.96	
6,763.00	30.81	284.04	6,389.06	300.72	-1,473.08	421.67	0.57	0.08	1.11	
6,857.00	32.18	284.04	6,469.21	312.64	-1,520.72	437.49	1.46	1.46	0.00	
6,952.00	30.02	285.89	6,550.55	325.28	-1,568.12	454.02	2.49	-2.27	1.95	
7,048.00	29.36	285.98	6,633.95	338.34	-1,613.84	470.81	0.69	-0.69	0.09	
7,141.00	30.33	285.98	6,714.61	351.08	-1,658.34	487.19	1.04	1.04	0.00	
7,237.00	30.99	285.71	6,797.19	364.44	-1,705.43	504.41	0.70	0.69	-0.28	
7,332.00	31.96	285.89	6,878.21	377.95	-1,753.16	521.83	1.03	1.02	0.19	
7,427.00	30.29	283.34	6,959.54	390.36	-1,800.66	538.13	2.24	-1.76	-2.68	
7,522.00	29.85	281.41	7,041.76	400.57	-1,847.14	552.15	1.12	-0.46	-2.03	
7,617.00	30.15	280.97	7,124.03	409.78	-1,893.74	565.19	0.39	0.32	-0.46	
7,712.00	31.16	280.53	7,205.75	418.82	-1,941.33	578.13	1.09	1.06	-0.46	
7,807.00	32.18	279.91	7,286.60	427.66	-1,990.41	591.01	1.13	1.07	-0.65	
7,902.00	28.44	278.77	7,368.60	435.47	-2,037.71	602.71	3.98	-3.94	-1.20	
7,997.00	25.89	278.07	7,453.12	441.83	-2,080.61	612.60	2.71	-2.68	-0.74	
8,092.00	25.93	278.07	7,538.57	447.66	-2,121.71	621.81	0.04	0.04	0.00	
8,187.00	27.43	278.33	7,623.45	453.74	-2,163.93	631.37	1.58	1.58	0.27	
8,281.00	27.96	279.74	7,706.68	460.61	-2,207.07	641.79	0.90	0.56	1.50	
8,375.00	30.42	281.93	7,788.74	469.26	-2,252.08	654.13	2.85	2.62	2.33	
8,470.00	30.37	281.41	7,870.68	478.98	-2,299.15	667.72	0.28	-0.05	-0.55	
8,557.00	30.77	279.82	7,945.59	487.13	-2,342.64	679.44	1.04	0.46	-1.83	
8,663.00	35.78	284.84	8,034.20	499.70	-2,399.36	696.67	5.39	4.73	4.74	
8,711.00	41.14	292.38	8,071.80	509.31	-2,427.56	708.59	14.82	11.17	15.71	
8,758.00	42.93	301.60	8,106.74	523.60	-2,455.51	725.14	13.67	3.81	19.62	
8,806.00	45.47	308.81	8,141.17	542.91	-2,482.79	746.64	11.73	5.29	15.02	
8,853.00	48.52	312.97	8,173.23	565.42	-2,508.74	771.22	9.16	6.49	8.85	



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8,901.00	48.74	315.89	8,204.96	590.63	-2,534.46	798.48	4.59	0.46	6.08	
8,949.00	48.49	319.73	8,236.70	617.30	-2,558.64	827.06	6.02	-0.52	8.00	
8,997.00	46.35	325.46	8,269.19	645.34	-2,580.11	856.77	9.85	-4.46	11.94	
9,044.00	45.30	330.68	8,301.95	673.92	-2,597.94	886.73	8.27	-2.23	11.11	
9,092.00	47.25	334.62	8,335.13	704.72	-2,613.85	918.75	7.19	4.06	8.21	
9,139.00	51.02	338.87	8,365.89	737.38	-2,627.84	952.45	10.54	8.02	9.04	
9,187.00	54.29	343.91	8,395.01	773.53	-2,639.98	989.48	10.77	6.81	10.50	
9,234.00	57.00	348.47	8,421.54	811.19	-2,649.21	1,027.78	9.87	5.77	9.70	
9,281.00	61.17	351.00	8,445.69	850.86	-2,656.37	1,067.91	10.00	8.87	5.38	
9,328.00	66.17	353.02	8,466.53	892.56	-2,662.21	1,109.95	11.31	10.64	4.30	
9,375.00	72.07	354.43	8,483.27	936.19	-2,667.00	1,153.82	12.86	12.55	3.00	
9,421.00	78.53	354.50	8,494.94	980.45	-2,671.29	1,198.29	14.04	14.04	0.15	
9,469.00	85.26	353.68	8,501.70	1,027.69	-2,676.18	1,245.77	14.12	14.02	-1.71	
9,500.72	88.32	353.38	8,503.48	1,059.16	-2,679.75	1,277.43	9.71	9.66	-0.96	
Bubbles 2215 Federal 1H FTP										
9,516.00	89.80	353.23	8,503.73	1,074.33	-2,681.53	1,292.70	9.71	9.66	-0.96	
9,610.00	93.36	352.83	8,501.14	1,167.59	-2,692.93	1,386.57	3.81	3.79	-0.43	
9,702.00	96.28	352.38	8,493.41	1,258.49	-2,704.73	1,478.14	3.21	3.17	-0.49	
9,795.00	95.61	353.85	8,483.77	1,350.32	-2,715.82	1,570.57	1.73	-0.72	1.58	
9,891.00	95.04	354.97	8,474.87	1,445.45	-2,725.13	1,666.15	1.30	-0.59	1.17	
9,986.00	94.15	356.01	8,467.25	1,539.85	-2,732.57	1,760.84	1.44	-0.94	1.09	
10,080.00	92.74	356.50	8,461.61	1,633.47	-2,738.70	1,854.65	1.59	-1.50	0.52	
10,175.00	90.34	355.80	8,459.05	1,728.22	-2,745.08	1,949.60	2.63	-2.53	-0.74	
10,269.00	92.07	356.00	8,457.08	1,821.95	-2,751.80	2,043.57	1.85	1.84	0.21	
10,362.00	92.02	353.99	8,453.76	1,914.54	-2,759.90	2,136.50	2.16	-0.05	-2.16	
10,458.00	90.36	353.92	8,451.76	2,009.98	-2,770.01	2,232.45	1.73	-1.73	-0.07	
10,553.00	92.35	353.97	8,449.52	2,104.42	-2,780.03	2,327.40	2.10	2.09	0.05	
10,647.00	93.56	353.10	8,444.67	2,197.69	-2,790.60	2,421.23	1.58	1.29	-0.93	
10,743.00	92.69	351.83	8,439.44	2,292.72	-2,803.17	2,516.97	1.60	-0.91	-1.32	
10,838.00	89.24	351.71	8,437.84	2,386.71	-2,816.76	2,611.77	3.63	-3.63	-0.13	
10,934.00	89.33	353.77	8,439.04	2,481.93	-2,828.89	2,707.66	2.15	0.09	2.15	
11,028.00	91.43	354.65	8,438.41	2,575.44	-2,838.37	2,801.64	2.42	2.23	0.94	
11,122.00	89.52	356.16	8,437.63	2,669.13	-2,845.90	2,895.63	2.59	-2.03	1.61	
11,218.00	90.78	356.67	8,437.38	2,764.94	-2,851.91	2,991.60	1.42	1.31	0.53	
11,312.00	88.52	357.17	8,437.96	2,858.80	-2,856.96	3,085.56	2.46	-2.40	0.53	
11,407.00	89.24	356.63	8,439.81	2,953.64	-2,862.09	3,180.50	0.95	0.76	-0.57	
11,502.00	89.64	355.47	8,440.74	3,048.41	-2,868.64	3,275.48	1.29	0.42	-1.22	
11,597.00	90.59	354.03	8,440.55	3,143.00	-2,877.33	3,370.48	1.82	1.00	-1.52	
11,692.00	87.67	355.39	8,441.99	3,237.58	-2,886.09	3,465.45	3.39	-3.07	1.43	
11,787.00	88.99	355.43	8,444.76	3,332.23	-2,893.69	3,560.40	1.39	1.39	0.04	
11,882.00	91.57	355.79	8,444.30	3,426.94	-2,900.96	3,655.39	2.74	2.72	0.38	
11,976.00	88.99	355.65	8,443.84	3,520.67	-2,907.97	3,749.38	2.75	-2.74	-0.15	
12,070.00	90.53	355.22	8,444.23	3,614.37	-2,915.45	3,843.38	1.70	1.64	-0.46	
12,164.00	89.97	356.44	8,443.82	3,708.12	-2,922.29	3,937.37	1.43	-0.60	1.30	



Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Bubbles 2215 Federal #1H
Project:	Eddy County, NM	TVD Reference:	GL 3304' + 31' KB @ 3335.00usft (Nabors F34)
Site:	Bubbles 2215 Federal	MD Reference:	GL 3304' + 31' KB @ 3335.00usft (Nabors F34)
Well:	Bubbles 2215 Federal #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 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)	
12,258.00	91.57	356.68	8,442.56	3,801.93	-2,927.93	4,031.33	1.72	1.70	0.26	
12,353.00	90.36	357.46	8,440.96	3,896.79	-2,932.78	4,126.27	1.52	-1.27	0.82	
12,447.00	90.70	358.12	8,440.09	3,990.72	-2,936.41	4,220.17	0.79	0.36	0.70	
12,542.00	90.70	0.08	8,438.93	4,085.70	-2,937.90	4,314.95	2.06	0.00	2.06	
12,636.00	89.86	359.21	8,438.47	4,179.69	-2,938.48	4,408.67	1.29	-0.89	-0.93	
12,731.00	90.81	357.56	8,437.91	4,274.65	-2,941.16	4,503.52	2.00	1.00	-1.74	
12,826.00	89.38	357.36	8,437.76	4,369.55	-2,945.37	4,598.45	1.52	-1.51	-0.21	
12,921.00	90.56	357.42	8,437.81	4,464.45	-2,949.69	4,693.38	1.24	1.24	0.06	
13,014.00	88.24	356.27	8,438.78	4,557.30	-2,954.81	4,786.33	2.78	-2.49	-1.24	
13,109.00	89.44	355.23	8,440.70	4,652.01	-2,961.85	4,881.30	1.67	1.26	-1.09	
13,203.00	92.21	354.81	8,439.35	4,745.64	-2,970.01	4,975.28	2.98	2.95	-0.45	
13,298.00	90.84	353.68	8,436.82	4,840.12	-2,979.53	5,070.23	1.87	-1.44	-1.19	
13,392.00	88.74	353.89	8,437.17	4,933.57	-2,989.71	5,164.19	2.25	-2.23	0.22	
13,485.00	89.89	352.92	8,438.28	5,025.94	-3,000.39	5,257.14	1.62	1.24	-1.04	
13,580.00	91.93	352.13	8,436.77	5,120.12	-3,012.74	5,352.01	2.30	2.15	-0.83	
13,674.00	90.17	353.55	8,435.05	5,213.36	-3,024.46	5,445.91	2.41	-1.87	1.51	
13,769.00	91.43	354.65	8,433.72	5,307.85	-3,034.22	5,540.87	1.76	1.33	1.16	
13,863.00	91.43	354.98	8,431.37	5,401.43	-3,042.71	5,634.84	0.35	0.00	0.35	
13,958.00	89.27	354.86	8,430.79	5,496.05	-3,051.12	5,729.83	2.28	-2.27	-0.13	
14,053.00	89.94	354.40	8,431.45	5,590.63	-3,060.02	5,824.82	0.86	0.71	-0.48	
14,149.00	88.32	356.04	8,432.91	5,686.28	-3,068.01	5,920.81	2.40	-1.69	1.71	
14,244.00	91.06	356.41	8,433.42	5,781.06	-3,074.27	6,015.78	2.91	2.88	0.39	
14,338.00	93.11	357.53	8,430.00	5,874.86	-3,079.23	6,109.67	2.48	2.18	1.19	
14,433.00	93.53	357.54	8,424.50	5,969.62	-3,083.31	6,204.44	0.44	0.44	0.01	
14,487.00	90.25	357.74	8,422.72	6,023.53	-3,085.53	6,258.35	6.09	-6.07	0.37	
14,582.00	86.89	356.45	8,425.09	6,118.37	-3,090.35	6,353.26	3.79	-3.54	-1.36	
14,678.00	86.61	356.92	8,430.53	6,214.05	-3,095.89	6,449.07	0.57	-0.29	0.49	
14,773.00	87.59	358.11	8,435.34	6,308.84	-3,100.00	6,543.87	1.62	1.03	1.25	
14,867.00	89.41	357.08	8,437.80	6,402.72	-3,103.94	6,637.76	2.22	1.94	-1.10	
14,962.00	88.04	349.71	8,439.92	6,497.00	-3,114.86	6,732.62	7.89	-1.44	-7.76	
15,056.00	87.03	348.22	8,443.96	6,589.17	-3,132.83	6,825.96	1.91	-1.07	-1.59	
15,150.00	91.29	349.47	8,445.34	6,681.36	-3,151.01	6,919.34	4.72	4.53	1.33	
15,244.00	91.43	352.79	8,443.10	6,774.20	-3,165.50	7,013.06	3.53	0.15	3.53	
15,338.00	90.20	354.84	8,441.77	6,867.63	-3,175.63	7,107.01	2.54	-1.31	2.18	
15,432.00	90.25	355.16	8,441.40	6,961.27	-3,183.82	7,201.01	0.34	0.05	0.34	
15,525.00	90.25	355.31	8,440.99	7,053.95	-3,191.54	7,294.01	0.16	0.00	0.16	
15,619.00	90.25	355.47	8,440.58	7,147.65	-3,199.10	7,388.01	0.17	0.00	0.17	
15,714.00	88.94	356.26	8,441.25	7,242.39	-3,205.95	7,483.00	1.61	-1.38	0.83	
15,808.00	89.61	357.51	8,442.44	7,336.25	-3,211.06	7,576.95	1.51	0.71	1.33	
15,902.00	90.56	359.41	8,442.30	7,430.21	-3,213.58	7,670.80	2.26	1.01	2.02	
15,996.00	90.48	359.02	8,441.45	7,524.19	-3,214.87	7,764.57	0.42	-0.09	-0.41	
16,089.00	91.09	358.73	8,440.18	7,617.17	-3,216.70	7,857.37	0.73	0.66	-0.31	
16,184.00	91.68	358.08	8,437.88	7,712.10	-3,219.34	7,952.20	0.92	0.62	-0.68	



Survey Report

Company:	XTO Energy	Local Co-ordinate Reference:	Well Bubbles 2215 Federal #1H
Project:	Eddy County, NM	TVD Reference:	GL 3304' + 31' KB @ 3335.00usft (Nabors F34)
Site:	Bubbles 2215 Federal	MD Reference:	GL 3304' + 31' KB @ 3335.00usft (Nabors F34)
Well:	Bubbles 2215 Federal #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 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)
16,278.00	90.62	356.81	8,435.99	7,805.98	-3,223.53	8,046.11	1.76	-1.13	-1.35
16,372.00	90.33	355.85	8,435.21	7,899.79	-3,229.55	8,140.09	1.07	-0.31	-1.02
16,466.00	89.47	355.11	8,435.38	7,993.49	-3,236.95	8,234.09	1.21	-0.91	-0.79
16,560.00	89.05	355.71	8,436.59	8,087.18	-3,244.48	8,328.08	0.78	-0.45	0.64
16,654.00	89.16	357.38	8,438.06	8,181.00	-3,250.14	8,422.04	1.78	0.12	1.78
16,748.00	90.48	356.15	8,438.36	8,274.84	-3,255.44	8,516.00	1.92	1.40	-1.31
16,791.14	90.49	355.61	8,437.99	8,317.87	-3,258.54	8,559.13	1.26	0.02	-1.26
Bubbles 2215 Federal 1H LTP									
16,842.00	90.50	354.97	8,437.55	8,368.56	-3,262.72	8,610.00	1.26	0.02	-1.26
16,880.00	90.34	354.68	8,437.27	8,406.40	-3,266.15	8,647.99	0.87	-0.42	-0.76
Last Scout MWD Survey @ 16880.00' MD									
16,922.08	90.34	354.68	8,437.02	8,448.30	-3,270.05	8,690.07	0.00	0.00	0.00
Bubbles 2215 Federal 1H PBHL									
16,928.00	90.34	354.68	8,436.99	8,454.19	-3,270.60	8,695.99	0.00	0.00	0.00
Projection to Bit @ 16928.00' MD									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
148.00	148.00	0.01	-0.74	First Scout MWD Survey @ 148.00' MD	
16,880.00	8,437.27	8,406.40	-3,266.15	Last Scout MWD Survey @ 16880.00' MD	
16,928.00	8,436.99	8,454.19	-3,270.60	Projection to Bit @ 16928.00' MD	

Checked By: _____ Approved By: _____ Date: _____