

# **Extraction Oil & Gas**

**Weld County, CO (NAD83)**

**Sec 17-T7N-R67W**

**WALT 16E-20-9C**

**Wellbore #1**

**Survey: MWD Surveys**

## **Standard Survey Report**

**01 December, 2017**

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well WALT 16E-20-9C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB=25' @ 5132.00ft (P346)
<b>Site:</b>	Sec 17-T7N-R67W	<b>MD Reference:</b>	KB=25' @ 5132.00ft (P346)
<b>Well:</b>	WALT 16E-20-9C	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1

<b>Project</b>	Weld County, CO (NAD83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Ground Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		Sec 17-T7N-R67W			
Site Position:		Northing:	1,453,226.0672 usft	Latitude:	40.576003
From:	Lat/Long	Easting:	3,164,157.4562 usft	Longitude:	-104.909049
Position Uncertainty:		Slot Radius:	13-3/16 "	Grid Convergence:	0.38 °

Well		WALT 16E-20-9C				
Well Position	+N/-S	0.00 ft	Northing:	1,453,226.0672 usfi	Latitude:	40.576003
	+E/-W	0.00 ft	Easting:	3,164,157.4562 usfi	Longitude:	-104.909049
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,107.00 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	10/13/2017	8.35	66.97	52,397

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	86.36	

<b>Survey Program</b>	<b>Date</b>	12/1/2017			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
148.00	16,657.00	MWD Surveys (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148.00	1.19	204.54	147.99	-1.40	-0.64	-0.73	0.80	0.80	0.00
<b>First MWD Survey @ 148'MD</b>									
239.00	1.90	196.65	238.96	-3.70	-1.46	-1.69	0.81	0.78	-8.67
331.00	2.52	198.46	330.89	-7.08	-2.54	-2.98	0.68	0.67	1.97
425.00	1.81	198.15	424.82	-10.45	-3.66	-4.31	0.76	-0.76	-0.33
520.00	1.02	308.23	519.80	-11.36	-4.79	-5.50	2.49	-0.83	115.87
614.00	1.10	313.65	613.79	-10.22	-6.10	-6.73	0.14	0.09	5.77
708.00	1.59	310.26	707.76	-8.75	-7.75	-8.29	0.53	0.52	-3.61
802.00	2.61	305.63	801.69	-6.66	-10.48	-10.88	1.10	1.09	-4.93
897.00	2.30	315.15	896.61	-4.05	-13.58	-13.81	0.54	-0.33	10.02

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<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
991.00	1.59	324.53	990.55	-1.65	-15.67	-15.74	0.83	-0.76	9.98
1,085.00	0.40	94.46	1,084.54	-0.61	-16.10	-16.11	1.99	-1.27	138.22
1,180.00	2.61	42.55	1,179.51	0.96	-14.31	-14.22	2.51	2.33	-54.64
1,274.00	5.48	42.94	1,273.26	5.82	-9.80	-9.41	3.05	3.05	0.41
1,368.00	6.41	45.23	1,366.76	12.80	-3.02	-2.20	1.02	0.99	2.44
1,462.00	7.20	43.47	1,460.09	20.77	4.76	6.07	0.87	0.84	-1.87
1,509.00	7.51	42.55	1,506.71	25.17	8.86	10.44	0.71	0.66	-1.96
1,649.00	7.69	38.67	1,645.48	39.22	20.90	23.35	0.39	0.13	-2.77
1,744.00	7.20	32.23	1,739.68	49.22	28.05	31.11	1.02	-0.52	-6.78
1,838.00	8.00	48.76	1,832.86	58.52	36.11	39.75	2.47	0.85	17.59
1,932.00	9.41	53.56	1,925.78	67.40	47.21	51.39	1.69	1.50	5.11
2,026.00	11.71	48.23	2,018.18	78.32	60.51	65.35	2.66	2.45	-5.67
2,121.00	13.08	44.35	2,110.97	92.43	75.22	80.92	1.69	1.44	-4.08
2,215.00	12.81	40.87	2,202.58	107.91	89.47	96.13	0.88	-0.29	-3.70
2,310.00	13.30	43.03	2,295.12	123.87	103.82	111.46	0.73	0.52	2.27
2,498.00	13.61	45.63	2,477.97	155.14	134.39	143.95	0.36	0.16	1.38
2,592.00	12.90	42.94	2,569.46	170.56	149.44	159.95	1.00	-0.76	-2.86
2,687.00	12.11	41.36	2,662.21	185.80	163.25	174.70	0.91	-0.83	-1.66
2,780.00	12.90	43.47	2,753.00	200.66	176.84	189.21	0.98	0.85	2.27
2,874.00	13.39	47.75	2,844.54	215.59	192.11	205.40	1.16	0.52	4.55
2,968.00	12.11	45.76	2,936.22	229.79	207.24	221.39	1.44	-1.36	-2.12
3,062.00	13.08	43.96	3,027.96	244.32	221.68	236.73	1.11	1.03	-1.91
3,157.00	12.20	41.27	3,120.66	259.61	235.77	251.75	1.11	-0.93	-2.83
3,250.00	12.90	40.87	3,211.43	274.84	249.04	265.97	0.76	0.75	-0.43
3,345.00	13.39	47.57	3,303.95	290.28	264.10	281.98	1.68	0.52	7.05
3,439.00	13.30	45.85	3,395.41	305.16	279.89	298.68	0.43	-0.10	-1.83
3,533.00	13.30	44.04	3,486.89	320.46	295.17	314.89	0.44	0.00	-1.93
3,627.00	13.70	43.96	3,578.29	336.25	310.41	331.11	0.43	0.43	-0.09
3,721.00	14.01	42.77	3,669.56	352.61	325.86	347.57	0.45	0.33	-1.27
3,816.00	14.32	40.74	3,761.67	369.96	341.34	364.11	0.62	0.33	-2.14
3,911.00	12.59	38.27	3,854.06	386.99	355.42	379.24	1.92	-1.82	-2.60
4,005.00	13.08	40.43	3,945.71	403.13	368.66	393.48	0.73	0.52	2.30
4,099.00	11.89	39.15	4,037.49	418.73	381.68	407.46	1.30	-1.27	-1.36
4,192.00	12.81	44.53	4,128.34	433.51	394.96	421.65	1.58	0.99	5.78
4,287.00	12.42	43.25	4,221.04	448.46	409.34	436.95	0.51	-0.41	-1.35
4,383.00	11.18	41.44	4,315.01	462.96	422.58	451.08	1.35	-1.29	-1.89
4,477.00	12.28	45.85	4,407.05	476.76	435.78	465.13	1.51	1.17	4.69
4,572.00	14.41	44.44	4,499.48	492.23	451.31	481.61	2.27	2.24	-1.48
4,666.00	14.10	43.16	4,590.59	508.94	467.33	498.66	0.47	-0.33	-1.36
4,760.00	13.30	39.95	4,681.91	525.58	482.10	514.46	1.17	-0.85	-3.41
4,854.00	12.20	37.35	4,773.59	541.76	495.07	528.43	1.32	-1.17	-2.77
4,949.00	12.20	42.06	4,866.45	557.20	507.89	542.20	1.05	0.00	4.96
5,043.00	12.02	42.15	4,958.36	571.83	521.11	556.32	0.19	-0.19	0.10

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### Survey

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5,137.00	12.51	42.37	5,050.21	586.61	534.54	570.66	0.52	0.52	0.23
5,231.00	12.28	44.13	5,142.02	601.30	548.36	585.38	0.47	-0.24	1.87
5,325.00	12.68	46.25	5,233.80	615.61	562.77	600.68	0.65	0.43	2.26
5,419.00	12.68	45.23	5,325.51	630.01	577.55	616.34	0.24	0.00	-1.09
5,514.00	12.68	47.83	5,418.19	644.35	592.68	632.35	0.60	0.00	2.74
5,608.00	11.18	46.56	5,510.16	657.55	606.95	647.42	1.62	-1.60	-1.35
5,725.00	9.59	43.34	5,625.24	672.44	621.87	663.26	1.45	-1.36	-2.75
5,819.00	8.09	39.33	5,718.12	683.25	631.44	673.49	1.72	-1.60	-4.27
5,914.00	6.50	31.84	5,812.35	692.99	638.51	681.17	1.95	-1.67	-7.88
6,008.00	3.49	29.55	5,905.99	700.00	642.73	685.82	3.21	-3.20	-2.44
6,102.00	1.19	61.05	5,999.90	702.96	645.00	688.27	2.72	-2.45	33.51
6,196.00	0.62	296.77	6,093.90	703.66	645.40	688.71	1.73	-0.61	-132.21
6,290.00	0.31	316.73	6,187.89	704.07	644.77	688.11	0.37	-0.33	21.23
6,384.00	0.62	327.05	6,281.89	704.69	644.32	687.70	0.34	0.33	10.98
6,478.00	0.62	284.26	6,375.89	705.24	643.55	686.97	0.48	0.00	-45.52
6,572.00	0.80	255.74	6,469.88	705.20	642.42	685.84	0.42	0.19	-30.34
6,666.00	9.59	101.46	6,563.47	703.48	649.48	692.77	10.98	9.35	-164.13
6,760.00	21.30	98.25	6,653.92	699.46	674.13	717.13	12.49	12.46	-3.41
6,854.00	26.29	96.04	6,739.90	694.82	711.75	754.38	5.39	5.31	-2.35
6,948.00	37.21	90.36	6,819.73	692.44	761.04	803.41	12.03	11.62	-6.04
7,030.00	42.53	88.56	6,882.65	692.98	813.58	855.88	6.64	6.49	-2.19
<b>Hardline Crossing @ 7030'MD (460'FWL &amp; 1326'FNL)</b>									
7,042.00	43.31	88.33	6,891.44	693.20	821.75	864.05	6.64	6.50	-1.94
7,136.00	46.62	91.77	6,957.95	693.09	888.14	930.30	4.37	3.52	3.66
7,231.00	55.99	94.06	7,017.28	689.22	962.10	1,003.86	10.04	9.86	2.41
7,324.00	67.08	90.93	7,061.54	685.79	1,043.64	1,085.02	12.28	11.92	-3.37
7,418.00	71.98	90.54	7,094.40	684.66	1,131.67	1,172.81	5.23	5.21	-0.41
7,512.00	78.70	92.96	7,118.18	681.86	1,222.51	1,263.28	7.57	7.15	2.57
7,606.00	78.22	92.74	7,136.99	677.28	1,314.49	1,354.79	0.56	-0.51	-0.23
7,700.00	86.61	91.86	7,149.39	673.55	1,407.51	1,447.39	8.97	8.93	-0.94
7,794.00	90.19	92.17	7,152.01	670.25	1,501.40	1,540.88	3.82	3.81	0.33
7,888.00	89.88	89.83	7,151.95	668.61	1,595.38	1,634.56	2.51	-0.33	-2.49
7,982.00	88.82	87.85	7,153.02	670.51	1,689.35	1,728.46	2.39	-1.13	-2.11
8,077.00	87.19	88.16	7,156.33	673.81	1,784.23	1,823.36	1.75	-1.72	0.33
8,172.00	87.89	87.76	7,160.40	677.19	1,879.08	1,918.24	0.85	0.74	-0.42
8,266.00	88.11	87.14	7,163.68	681.37	1,972.93	2,012.16	0.70	0.23	-0.66
8,359.00	88.82	87.76	7,166.18	685.51	2,065.80	2,105.11	1.01	0.76	0.67
8,453.00	90.90	89.57	7,166.40	687.70	2,159.77	2,199.03	2.93	2.21	1.93
8,546.00	92.09	89.83	7,163.98	688.19	2,252.73	2,291.84	1.31	1.28	0.28
8,641.00	89.48	89.43	7,162.68	688.80	2,347.72	2,386.67	2.78	-2.75	-0.42
8,735.00	90.10	89.17	7,163.02	689.95	2,441.71	2,480.54	0.72	0.66	-0.28
8,829.00	88.38	88.55	7,164.27	691.82	2,535.68	2,574.44	1.95	-1.83	-0.66
8,924.00	89.40	88.55	7,166.11	694.22	2,630.63	2,669.35	1.07	1.07	0.00

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9,018.00	90.59	88.24	7,166.12	696.85	2,724.59	2,763.29	1.31	1.27	-0.33
9,111.00	88.82	90.14	7,166.60	698.17	2,817.57	2,856.17	2.79	-1.90	2.04
9,205.00	89.62	90.27	7,167.88	697.83	2,911.56	2,949.95	0.86	0.85	0.14
9,300.00	90.41	90.27	7,167.85	697.38	3,006.56	3,044.73	0.83	0.83	0.00
9,394.00	89.40	91.77	7,168.01	695.71	3,100.54	3,138.41	1.92	-1.07	1.60
9,489.00	89.70	92.25	7,168.75	692.38	3,195.48	3,232.95	0.60	0.32	0.51
9,582.00	90.01	92.03	7,168.99	688.91	3,288.41	3,325.48	0.41	0.33	-0.24
9,676.00	89.70	92.25	7,169.23	685.40	3,382.35	3,419.00	0.40	-0.33	0.23
9,770.00	89.62	90.76	7,169.78	682.93	3,476.31	3,512.62	1.59	-0.09	-1.59
9,864.00	89.62	90.84	7,170.41	681.61	3,570.30	3,606.33	0.09	0.00	0.09
9,959.00	88.82	89.26	7,171.70	681.53	3,665.29	3,701.12	1.86	-0.84	-1.66
10,053.00	88.69	88.24	7,173.74	683.58	3,759.24	3,795.02	1.09	-0.14	-1.09
10,148.00	89.79	88.07	7,175.00	686.64	3,854.18	3,889.96	1.17	1.16	-0.18
10,242.00	90.81	87.23	7,174.51	690.49	3,948.10	3,983.94	1.41	1.09	-0.89
10,337.00	90.81	89.57	7,173.17	693.15	4,043.04	4,078.86	2.46	0.00	2.46
10,431.00	90.19	90.45	7,172.35	693.13	4,137.04	4,172.66	1.15	-0.66	0.94
10,525.00	90.90	89.43	7,171.45	693.23	4,231.03	4,266.48	1.32	0.76	-1.09
10,620.00	88.82	89.83	7,171.69	693.84	4,326.03	4,361.32	2.23	-2.19	0.42
10,714.00	88.69	89.83	7,173.73	694.12	4,420.00	4,455.12	0.14	-0.14	0.00
10,808.00	89.00	89.17	7,175.62	694.94	4,513.98	4,548.96	0.78	0.33	-0.70
10,902.00	89.48	88.46	7,176.87	696.88	4,607.95	4,642.87	0.91	0.51	-0.76
10,997.00	89.09	90.54	7,178.05	697.71	4,702.93	4,737.71	2.23	-0.41	2.19
11,092.00	89.09	92.03	7,179.56	695.58	4,797.90	4,832.35	1.57	0.00	1.57
11,186.00	89.79	92.17	7,180.48	692.14	4,891.83	4,925.87	0.76	0.74	0.15
11,280.00	90.41	92.96	7,180.32	687.93	4,985.73	5,019.32	1.07	0.66	0.84
11,374.00	89.09	91.64	7,180.73	684.16	5,079.65	5,112.81	1.99	-1.40	-1.40
11,469.00	89.70	91.33	7,181.73	681.70	5,174.61	5,207.43	0.72	0.64	-0.33
11,563.00	88.20	91.86	7,183.45	679.08	5,268.56	5,301.02	1.69	-1.60	0.56
11,658.00	88.69	91.86	7,186.03	676.00	5,363.47	5,395.54	0.52	0.52	0.00
11,752.00	89.70	92.17	7,187.35	672.70	5,457.40	5,489.08	1.12	1.07	0.33
11,847.00	90.41	91.95	7,187.26	669.28	5,552.34	5,583.61	0.78	0.75	-0.23
11,938.69	87.79	89.71	7,188.70	667.96	5,644.00	5,674.99	3.76	-2.86	-2.45
<b>Sec 15/ 16 Crossing Point @ 11938.69'MD</b>									
11,941.00	87.72	89.65	7,188.80	667.97	5,646.31	5,677.30	3.76	-2.86	-2.45
12,035.00	88.38	89.26	7,191.99	668.86	5,740.25	5,771.11	0.82	0.70	-0.41
12,130.00	89.31	89.04	7,193.91	670.27	5,835.22	5,865.97	1.01	0.98	-0.23
12,224.00	88.29	89.57	7,195.88	671.41	5,929.19	5,959.83	1.22	-1.09	0.56
12,318.00	89.31	89.96	7,197.85	671.80	6,023.16	6,053.64	1.16	1.09	0.41
12,413.00	90.50	90.14	7,198.00	671.71	6,118.16	6,148.44	1.27	1.25	0.19
12,507.00	89.79	89.83	7,197.77	671.74	6,212.16	6,242.25	0.82	-0.76	-0.33
12,601.00	88.51	91.06	7,199.16	671.01	6,306.14	6,336.00	1.89	-1.36	1.31
12,695.00	89.40	91.77	7,200.87	668.69	6,400.10	6,429.62	1.21	0.95	0.76
12,789.00	87.98	90.67	7,203.02	666.69	6,494.05	6,523.25	1.91	-1.51	-1.17
12,884.00	89.40	89.83	7,205.20	666.27	6,589.02	6,618.01	1.74	1.49	-0.88

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well WALT 16E-20-9C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB=25' @ 5132.00ft (P346)
<b>Site:</b>	Sec 17-T7N-R67W	<b>MD Reference:</b>	KB=25' @ 5132.00ft (P346)
<b>Well:</b>	WALT 16E-20-9C	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,978.00	90.50	91.24	7,205.28	665.39	6,683.01	6,711.75	1.90	1.17	1.50
13,072.00	91.60	91.64	7,203.55	663.03	6,776.96	6,805.37	1.25	1.17	0.43
13,167.00	90.01	90.54	7,202.22	661.23	6,871.93	6,900.03	2.04	-1.67	-1.16
13,261.00	90.81	90.76	7,201.55	660.16	6,965.92	6,993.77	0.88	0.85	0.23
13,355.00	89.09	89.35	7,201.63	660.07	7,059.92	7,087.56	2.37	-1.83	-1.50
13,448.00	89.79	89.35	7,202.54	661.12	7,152.91	7,180.43	0.75	0.75	0.00
13,543.00	90.23	89.65	7,202.52	661.95	7,247.90	7,275.29	0.56	0.46	0.32
13,637.00	90.01	88.95	7,202.33	663.10	7,341.89	7,369.17	0.78	-0.23	-0.74
13,731.00	90.59	88.46	7,201.83	665.23	7,435.87	7,463.09	0.81	0.62	-0.52
13,826.00	92.09	89.74	7,199.61	666.72	7,530.83	7,557.95	2.08	1.58	1.35
13,920.00	89.88	90.05	7,198.00	666.89	7,624.81	7,651.75	2.37	-2.35	0.33
14,015.00	88.20	89.26	7,199.59	667.46	7,719.79	7,746.57	1.95	-1.77	-0.83
14,204.00	89.09	88.24	7,204.06	671.58	7,908.69	7,935.35	0.72	0.47	-0.54
14,298.00	88.60	87.54	7,205.95	675.04	8,002.60	8,029.30	0.91	-0.52	-0.74
14,393.00	88.51	86.97	7,208.35	679.59	8,097.46	8,124.26	0.61	-0.09	-0.60
14,487.00	88.69	88.95	7,210.64	682.94	8,191.37	8,218.19	2.11	0.19	2.11
14,582.00	88.38	89.17	7,213.07	684.50	8,286.33	8,313.05	0.40	-0.33	0.23
14,676.00	89.00	89.35	7,215.22	685.71	8,380.29	8,406.91	0.69	0.66	0.19
14,770.00	90.72	87.14	7,215.45	688.59	8,474.24	8,500.85	2.98	1.83	-2.35
14,864.00	89.31	89.26	7,215.43	691.54	8,568.18	8,594.79	2.71	-1.50	2.26
14,958.00	87.19	89.65	7,218.30	692.43	8,662.13	8,688.61	2.29	-2.26	0.41
15,052.00	87.58	89.17	7,222.59	693.40	8,756.03	8,782.37	0.66	0.41	-0.51
15,146.00	87.10	90.54	7,226.95	693.64	8,849.92	8,876.10	1.54	-0.51	1.46
15,240.00	87.58	89.65	7,231.31	693.48	8,943.82	8,969.80	1.07	0.51	-0.95
15,334.00	87.32	91.24	7,235.49	692.75	9,037.72	9,063.46	1.71	-0.28	1.69
15,429.00	88.69	91.64	7,238.80	690.37	9,132.63	9,158.03	1.50	1.44	0.42
15,522.00	89.70	91.46	7,240.11	687.85	9,225.59	9,250.64	1.10	1.09	-0.19
15,617.00	87.72	92.03	7,242.25	684.96	9,320.51	9,345.19	2.17	-2.08	0.60
15,711.00	88.82	91.33	7,245.08	682.21	9,414.43	9,438.74	1.39	1.17	-0.74
15,805.00	90.10	91.95	7,245.97	679.52	9,508.38	9,532.34	1.51	1.36	0.66
15,899.00	87.72	91.46	7,247.76	676.72	9,602.32	9,625.90	2.58	-2.53	-0.52
15,993.00	88.69	91.33	7,250.70	674.43	9,696.24	9,719.50	1.04	1.03	-0.14
16,087.00	89.79	91.64	7,251.95	672.00	9,790.20	9,813.11	1.22	1.17	0.33
16,182.00	87.80	91.64	7,253.95	669.28	9,885.14	9,907.68	2.09	-2.09	0.00
16,276.00	88.69	91.77	7,256.83	666.48	9,979.05	10,001.23	0.96	0.95	0.14
16,371.00	90.19	91.55	7,257.75	663.73	10,074.00	10,095.82	1.60	1.58	-0.23
16,465.00	91.12	91.64	7,256.68	661.12	10,167.96	10,189.42	0.99	0.99	0.10
16,559.00	89.48	88.95	7,256.19	660.63	10,261.95	10,283.18	3.35	-1.74	-2.86
<b>Final MWD Survey @ 16559'MD</b>									
16,657.00	89.48	88.95	7,257.08	662.43	10,359.92	10,381.08	0.00	0.00	0.00
<b>PTD @ 16657'MD (1390'FNL &amp; 533'FEL)</b>									

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well WALT 16E-20-9C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB=25' @ 5132.00ft (P346)
<b>Site:</b>	Sec 17-T7N-R67W	<b>MD Reference:</b>	KB=25' @ 5132.00ft (P346)
<b>Well:</b>	WALT 16E-20-9C	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1

### Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
148.00	147.99	-1.40	-0.64	First MWD Survey @ 148'MD
7,030.00	6,882.65	692.98	813.58	Hardline Crossing @ 7030'MD (460'FWL & 1326'FNL)
11,938.69	7,188.70	667.96	5,644.00	Sec 15/ 16 Crossing Point @ 11938.69'MD
16,559.00	7,256.19	660.63	10,261.95	Final MWD Survey @ 16559'MD
16,657.00	7,257.08	662.43	10,359.92	PTD @ 16657'MD (1390'FNL & 533'FEL)

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_