

# **Extraction Oil & Gas**

**Weld County, CO (NAD83)**

**Kennedy Pad (Sec.18, T4N-R68W)**

**Kennedy 1C**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**30 May, 2018**

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Kennedy 1C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB=25 @ 4992.00ft (Patterson #346)
<b>Site:</b>	Kennedy Pad (Sec.18, T4N-R68W)	<b>MD Reference:</b>	KB=25 @ 4992.00ft (Patterson #346)
<b>Well:</b>	Kennedy 1C	<b>North Reference:</b>	True
<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		Kennedy Pad (Sec.18, T4N-R68W)			
Site Position:		Northing:	1,358,962.93 usft	Latitude:	40.317833
From:	Map	Easting:	3,128,800.39 usft	Longitude:	-105.038096
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well	Kennedy 1C					
Well Position	+N/-S	0.00 ft	Northing:	1,359,150.17 usfi	Latitude:	40.318347
	+E/-W	0.00 ft	Easting:	3,128,800.53 usfi	Longitude:	-105.038092
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,967.00 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	5/2/2018	8.52	66.63	52,115

<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	273.95	

<b>Survey Program</b>	<b>Date</b>	5/30/2018			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
138.00	1,520.00	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,649.00	15,919.00	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	
138.00	1.05	256.50	137.99	-0.30	-1.23	1.21	0.76	0.76	0.00	
233.00	0.75	281.02	232.98	-0.38	-2.69	2.65	0.51	-0.32	25.81	
328.00	0.61	45.65	327.98	0.09	-2.93	2.93	1.27	-0.15	131.19	
423.00	1.19	58.75	422.97	0.96	-1.73	1.79	0.64	0.61	13.79	
519.00	0.87	98.39	518.95	1.37	-0.16	0.25	0.79	-0.33	41.29	
614.00	1.14	215.28	613.94	0.49	0.01	0.02	1.81	0.28	123.04	
709.00	0.83	243.94	708.93	-0.58	-1.15	1.11	0.60	-0.33	30.17	
804.00	1.05	359.86	803.92	-0.01	-1.77	1.77	1.68	0.23	122.02	
899.00	1.01	43.72	898.91	1.46	-1.20	1.29	0.81	-0.04	46.17	

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<b>Site:</b>	Kennedy Pad (Sec.18, T4N-R68W)	<b>MD Reference:</b>	KB=25 @ 4992.00ft (Patterson #346)
<b>Well:</b>	Kennedy 1C	<b>North Reference:</b>	True
<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)
994.00	1.45	124.67	993.89	1.38	0.37	-0.27	1.72	0.46	85.21
1,089.00	0.09	192.08	1,088.88	0.63	1.34	-1.30	1.49	-1.43	70.96
1,183.00	0.40	284.89	1,182.88	0.64	1.01	-0.96	0.44	0.33	98.73
1,278.00	0.62	308.98	1,277.88	1.05	0.29	-0.22	0.32	0.23	25.36
1,373.00	1.01	16.04	1,372.87	2.18	0.12	0.03	1.01	0.41	70.59
1,468.00	0.57	50.40	1,467.86	3.28	0.72	-0.49	0.66	-0.46	36.17
1,520.00	0.79	117.73	1,519.86	3.28	1.23	-1.01	1.49	0.42	129.48
<b>Tie in to Surface Surveys @ 1520'MD</b>									
1,649.00	0.35	141.03	1,648.85	2.56	2.27	-2.09	0.38	-0.34	18.06
<b>First MWD Survey @ 1649'MD</b>									
1,743.00	2.56	80.09	1,742.82	2.70	4.52	-4.32	2.56	2.35	-64.83
1,837.00	5.30	61.58	1,836.59	5.13	10.41	-10.03	3.18	2.91	-19.69
1,931.00	7.73	63.52	1,929.98	10.01	19.88	-19.15	2.60	2.59	2.06
2,024.00	9.81	55.50	2,021.89	17.29	32.01	-30.75	2.59	2.24	-8.62
2,118.00	11.80	50.96	2,114.22	27.88	46.08	-44.05	2.30	2.12	-4.83
2,212.00	14.23	48.18	2,205.80	41.64	62.16	-59.14	2.67	2.59	-2.96
2,400.00	18.03	45.18	2,386.37	77.57	100.03	-94.45	2.07	2.02	-1.60
2,494.00	20.99	46.64	2,474.96	99.39	122.59	-115.45	3.19	3.15	1.55
2,589.00	22.71	47.48	2,563.13	123.46	148.48	-139.62	1.84	1.81	0.88
2,683.00	23.38	48.05	2,649.63	148.20	175.73	-165.10	0.75	0.71	0.61
2,777.00	24.70	50.69	2,735.48	173.11	204.80	-192.38	1.81	1.40	2.81
2,870.00	27.13	50.38	2,819.12	198.94	236.17	-221.90	2.62	2.61	-0.33
2,965.00	29.52	48.31	2,902.74	228.33	270.34	-253.96	2.72	2.52	-2.18
3,059.00	30.09	48.80	2,984.31	259.25	305.36	-286.77	0.66	0.61	0.52
3,153.00	30.31	49.50	3,065.55	290.18	341.13	-320.32	0.44	0.23	0.74
3,248.00	29.61	53.20	3,147.86	319.81	378.15	-355.22	2.08	-0.74	3.89
3,342.00	29.52	53.65	3,229.62	347.44	415.40	-390.47	0.25	-0.10	0.48
3,436.00	29.47	53.12	3,311.44	375.05	452.55	-425.63	0.28	-0.05	-0.56
3,530.00	29.78	51.05	3,393.15	403.60	489.20	-460.22	1.14	0.33	-2.20
3,624.00	29.17	51.35	3,474.99	432.58	525.24	-494.19	0.67	-0.65	0.32
3,717.00	27.44	52.41	3,556.87	459.81	559.93	-526.91	1.94	-1.86	1.14
3,812.00	25.06	47.87	3,642.07	486.67	592.20	-557.26	3.28	-2.51	-4.78
3,905.00	23.29	50.43	3,726.91	511.59	620.98	-584.25	2.21	-1.90	2.75
4,000.00	22.27	50.25	3,814.50	535.07	649.30	-610.89	1.08	-1.07	-0.19
4,094.00	21.03	51.40	3,901.87	556.98	676.18	-636.19	1.39	-1.32	1.22
4,188.00	20.06	51.75	3,989.89	577.48	702.02	-660.56	1.04	-1.03	0.37
4,282.00	17.19	55.14	4,078.96	595.41	726.08	-683.33	3.26	-3.05	3.61
4,376.00	16.17	52.63	4,169.01	611.29	747.88	-703.98	1.33	-1.09	-2.67
4,471.00	15.69	49.72	4,260.36	627.63	768.20	-723.12	0.98	-0.51	-3.06
4,565.00	13.21	51.79	4,351.38	642.49	786.34	-740.19	2.69	-2.64	2.20
4,659.00	10.69	45.85	4,443.34	655.21	801.03	-753.98	2.98	-2.68	-6.32
4,754.00	9.32	49.24	4,536.89	666.37	813.18	-765.33	1.57	-1.44	3.57
4,943.00	4.42	47.87	4,724.48	681.26	830.19	-781.27	2.59	-2.59	-0.72

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### 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)
5,037.00	3.14	13.10	4,818.28	686.19	833.46	-784.19	2.73	-1.36	-36.99
5,155.00	1.68	319.90	4,936.19	690.67	833.08	-783.50	2.14	-1.24	-45.08
5,249.00	12.51	277.68	5,029.36	693.09	822.06	-772.35	12.04	11.52	-44.91
5,343.00	25.28	279.89	5,118.11	697.92	792.08	-742.10	13.60	13.59	2.35
5,437.00	35.09	275.61	5,199.27	704.02	745.29	-695.01	10.68	10.44	-4.55
5,530.00	40.74	272.40	5,272.62	707.91	688.32	-637.90	6.43	6.08	-3.45
5,624.00	45.69	270.32	5,341.11	709.38	624.00	-573.63	5.48	5.27	-2.21
5,717.00	50.24	267.94	5,403.37	708.28	554.96	-504.83	5.25	4.89	-2.56
5,811.00	53.60	268.17	5,461.33	705.77	481.02	-431.24	3.58	3.57	0.24
5,905.00	64.47	269.31	5,509.63	704.05	400.56	-351.09	11.61	11.56	1.21
5,962.63	70.00	270.41	5,531.92	703.93	347.44	-298.11	9.75	9.59	1.92
<b>70°Inclination @ 5962'MD</b>									
5,971.12	70.81	270.57	5,534.77	704.00	339.44	-290.12	9.75	9.60	1.83
<b>Enter Lease Section 7 @ 5971'MD</b>									
5,999.00	73.49	271.07	5,543.31	704.38	312.91	-263.63	9.75	9.60	1.80
6,094.00	78.35	269.05	5,566.42	704.46	220.80	-171.73	5.52	5.12	-2.13
6,187.00	83.87	268.47	5,580.79	702.47	128.97	-80.26	5.97	5.94	-0.62
6,282.00	88.29	269.13	5,587.28	700.49	34.24	14.11	4.70	4.65	0.69
6,376.00	89.00	269.05	5,589.50	698.99	-59.72	107.75	0.76	0.76	-0.09
6,436.82	91.05	269.30	5,589.47	698.12	-120.53	168.35	3.40	3.38	0.42
<b>Crossing 460'Hardline @ 6436'MD</b>									
6,469.00	92.14	269.44	5,588.58	697.77	-152.70	200.42	3.40	3.38	0.42
6,563.00	95.27	270.54	5,582.50	697.75	-246.49	293.98	3.53	3.33	1.17
6,657.00	95.89	269.93	5,573.36	698.14	-340.04	387.34	0.92	0.66	-0.65
6,751.00	96.55	269.80	5,563.18	697.92	-433.49	480.55	0.72	0.70	-0.14
6,845.00	97.08	269.62	5,552.02	697.44	-526.82	573.63	0.60	0.56	-0.19
6,939.00	97.61	268.39	5,540.01	695.82	-620.03	666.51	1.41	0.56	-1.31
7,033.00	95.10	267.33	5,529.60	692.33	-713.38	759.40	2.90	-2.67	-1.13
7,128.00	94.04	268.91	5,522.03	689.23	-808.03	853.60	2.00	-1.12	1.66
7,222.00	95.32	270.94	5,514.36	689.10	-901.70	947.05	2.55	1.36	2.16
7,317.00	95.54	269.40	5,505.37	689.39	-996.28	1,041.41	1.63	0.23	-1.62
7,411.00	96.33	269.93	5,495.65	688.84	-1,089.77	1,134.65	1.01	0.84	0.56
7,505.00	96.91	268.52	5,484.81	687.58	-1,183.13	1,227.70	1.61	0.62	-1.50
7,598.00	96.60	270.50	5,473.87	686.79	-1,275.48	1,319.77	2.14	-0.33	2.13
7,787.00	94.08	269.75	5,456.29	687.19	-1,463.64	1,507.51	1.39	-1.33	-0.40
7,880.00	93.06	270.06	5,450.50	687.04	-1,556.46	1,600.10	1.15	-1.10	0.33
7,974.00	92.75	268.25	5,445.73	685.66	-1,650.32	1,693.65	1.95	-0.33	-1.93
8,068.00	92.09	270.32	5,441.76	684.48	-1,744.23	1,787.25	2.31	-0.70	2.20
8,162.00	93.06	271.21	5,437.54	685.74	-1,838.12	1,881.00	1.40	1.03	0.95
8,256.00	93.95	270.94	5,431.79	687.50	-1,931.93	1,974.71	0.99	0.95	-0.29
8,350.00	94.70	270.72	5,424.70	688.86	-2,025.65	2,068.30	0.83	0.80	-0.23
8,444.00	93.28	269.75	5,418.16	689.24	-2,119.42	2,161.87	1.83	-1.51	-1.03
8,537.00	93.42	269.05	5,412.73	688.27	-2,212.25	2,254.42	0.77	0.15	-0.75
8,632.00	93.95	268.96	5,406.62	686.62	-2,307.04	2,348.87	0.57	0.56	-0.09

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8,726.00	94.12	267.11	5,400.01	683.41	-2,400.75	2,442.14	1.97	0.18	-1.97
8,820.00	93.24	269.88	5,393.97	680.94	-2,494.51	2,535.51	3.09	-0.94	2.95
8,914.00	94.12	269.35	5,387.94	680.31	-2,588.32	2,629.04	1.09	0.94	-0.56
9,009.00	95.01	268.83	5,380.38	678.81	-2,683.00	2,723.40	1.08	0.94	-0.55
9,102.00	93.11	269.84	5,373.79	677.74	-2,775.76	2,815.86	2.31	-2.04	1.09
9,196.00	93.37	268.83	5,368.48	676.65	-2,869.60	2,909.40	1.11	0.28	-1.07
9,290.00	92.44	269.97	5,363.72	675.66	-2,963.47	3,002.98	1.56	-0.99	1.21
9,384.00	91.21	271.47	5,360.72	676.84	-3,057.41	3,096.78	2.06	-1.31	1.60
9,479.00	91.56	270.81	5,358.43	678.73	-3,152.36	3,191.64	0.79	0.37	-0.69
9,572.00	92.67	271.03	5,354.99	680.23	-3,245.29	3,284.45	1.22	1.19	0.24
9,666.00	93.81	269.44	5,349.68	680.61	-3,339.13	3,378.09	2.08	1.21	-1.69
9,760.00	91.83	269.49	5,345.06	679.74	-3,433.01	3,471.69	2.11	-2.11	0.05
9,855.00	92.93	270.15	5,341.11	679.44	-3,527.92	3,566.36	1.35	1.16	0.69
9,948.00	93.11	269.44	5,336.21	679.10	-3,620.79	3,658.98	0.79	0.19	-0.76
10,042.00	94.08	269.93	5,330.32	678.59	-3,714.60	3,752.54	1.16	1.03	0.52
10,137.00	94.17	268.30	5,323.48	677.13	-3,809.34	3,846.95	1.71	0.09	-1.72
10,231.00	95.05	268.34	5,315.93	674.38	-3,903.00	3,940.19	0.94	0.94	0.04
10,325.00	93.59	269.09	5,308.85	672.28	-3,996.70	4,033.53	1.75	-1.55	0.80
10,419.00	94.30	269.13	5,302.38	670.82	-4,090.47	4,126.97	0.76	0.76	0.04
10,513.00	93.77	270.41	5,295.77	670.44	-4,184.23	4,220.49	1.47	-0.56	1.36
10,607.00	94.96	269.75	5,288.61	670.58	-4,277.96	4,314.00	1.45	1.27	-0.70
10,702.00	93.99	271.12	5,281.20	671.30	-4,372.66	4,408.53	1.76	-1.02	1.44
10,793.00	94.30	270.37	5,274.62	672.48	-4,463.42	4,499.15	0.89	0.34	-0.82
10,883.00	92.31	269.71	5,269.43	672.54	-4,553.26	4,588.78	2.33	-2.21	-0.73
10,975.00	92.44	269.35	5,265.62	671.78	-4,645.18	4,680.43	0.42	0.14	-0.39
11,067.00	92.89	269.13	5,261.34	670.56	-4,737.07	4,772.02	0.54	0.49	-0.24
11,108.57	92.63	269.37	5,259.34	670.02	-4,778.59	4,813.40	0.86	-0.64	0.58
<b>Crossing Section 7 &amp; 12 @ 11108'MD</b>									
11,158.00	92.31	269.66	5,257.22	669.61	-4,827.97	4,862.64	0.86	-0.64	0.58
11,252.00	92.67	269.97	5,253.13	669.30	-4,921.88	4,956.30	0.51	0.38	0.33
11,346.00	92.93	270.02	5,248.54	669.29	-5,015.77	5,049.97	0.28	0.28	0.05
11,440.00	91.03	269.66	5,245.29	669.03	-5,109.71	5,143.67	2.06	-2.02	-0.38
11,534.00	91.07	268.34	5,243.57	667.39	-5,203.68	5,237.30	1.40	0.04	-1.40
11,628.00	90.41	270.37	5,242.36	666.33	-5,297.66	5,330.98	2.27	-0.70	2.16
11,721.00	91.25	270.81	5,241.01	667.29	-5,390.64	5,423.81	1.02	0.90	0.47
11,815.00	91.96	269.53	5,238.38	667.57	-5,484.60	5,517.57	1.56	0.76	-1.36
11,909.00	93.11	270.15	5,234.22	667.31	-5,578.51	5,611.23	1.39	1.22	0.66
12,003.00	91.65	270.46	5,230.31	667.81	-5,672.42	5,704.96	1.59	-1.55	0.33
12,097.00	92.36	270.24	5,227.03	668.38	-5,766.36	5,798.71	0.79	0.76	-0.23
12,191.00	93.06	269.80	5,222.58	668.41	-5,860.26	5,892.39	0.88	0.74	-0.47
12,285.00	91.87	269.80	5,218.54	668.09	-5,954.17	5,986.05	1.27	-1.27	0.00
12,379.00	92.67	270.19	5,214.82	668.08	-6,048.09	6,079.75	0.95	0.85	0.41
12,473.00	91.07	269.44	5,211.75	667.77	-6,142.04	6,173.46	1.88	-1.70	-0.80
12,567.00	91.69	269.31	5,209.48	666.75	-6,236.01	6,267.13	0.67	0.66	-0.14

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Kennedy 1C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB=25 @ 4992.00ft (Patterson #346)
<b>Site:</b>	Kennedy Pad (Sec.18, T4N-R68W)	<b>MD Reference:</b>	KB=25 @ 4992.00ft (Patterson #346)
<b>Well:</b>	Kennedy 1C	<b>North Reference:</b>	True
<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)
12,661.00	92.40	268.52	5,206.13	664.97	-6,329.93	6,360.70	1.13	0.76	-0.84
12,755.00	91.52	270.63	5,202.92	664.27	-6,423.86	6,454.37	2.43	-0.94	2.24
12,849.00	92.27	270.76	5,199.81	665.41	-6,517.81	6,548.17	0.81	0.80	0.14
12,943.00	90.54	271.29	5,197.50	667.09	-6,611.76	6,642.01	1.92	-1.84	0.56
13,037.00	91.12	270.02	5,196.14	668.17	-6,705.74	6,735.84	1.49	0.62	-1.35
13,131.00	91.78	269.62	5,193.76	667.87	-6,799.71	6,829.57	0.82	0.70	-0.43
13,226.00	92.40	269.09	5,190.30	666.81	-6,894.64	6,924.20	0.86	0.65	-0.56
13,320.00	91.83	270.02	5,186.83	666.08	-6,988.57	7,017.86	1.16	-0.61	0.99
13,414.00	92.71	270.24	5,183.10	666.29	-7,082.50	7,111.57	0.96	0.94	0.23
13,508.00	90.63	270.59	5,180.37	666.97	-7,176.45	7,205.35	2.24	-2.21	0.37
13,602.00	91.25	270.76	5,178.82	668.08	-7,270.43	7,299.18	0.68	0.66	0.18
13,695.00	92.00	270.06	5,176.19	668.74	-7,363.39	7,391.97	1.10	0.81	-0.75
13,789.00	89.57	271.29	5,174.90	669.85	-7,457.36	7,485.79	2.90	-2.59	1.31
13,883.00	90.15	270.28	5,175.13	671.14	-7,551.35	7,579.65	1.24	0.62	-1.07
13,977.00	90.81	269.49	5,174.34	670.95	-7,645.35	7,673.41	1.10	0.70	-0.84
14,070.00	90.99	268.83	5,172.88	669.59	-7,738.32	7,766.07	0.74	0.19	-0.71
14,165.00	89.75	268.78	5,172.27	667.60	-7,833.30	7,860.68	1.31	-1.31	-0.05
14,259.00	88.51	271.82	5,173.69	668.10	-7,927.28	7,954.47	3.49	-1.32	3.23
14,353.00	88.56	270.59	5,176.10	670.07	-8,021.22	8,048.33	1.31	0.05	-1.31
14,447.00	89.57	270.59	5,177.63	671.04	-8,115.20	8,142.15	1.07	1.07	0.00
14,541.00	90.37	270.37	5,177.68	671.83	-8,209.20	8,235.98	0.88	0.85	-0.23
14,636.00	90.77	268.78	5,176.73	671.12	-8,304.19	8,330.70	1.73	0.42	-1.67
14,730.00	91.96	269.97	5,174.50	670.10	-8,398.15	8,424.37	1.79	1.27	1.27
14,824.00	90.01	270.06	5,172.88	670.12	-8,492.13	8,518.13	2.08	-2.07	0.10
14,918.00	90.81	269.53	5,172.21	669.79	-8,586.13	8,611.88	1.02	0.85	-0.56
15,012.00	91.74	269.35	5,170.12	668.87	-8,680.10	8,705.56	1.01	0.99	-0.19
15,106.00	89.40	269.00	5,169.18	667.51	-8,774.08	8,799.22	2.52	-2.49	-0.37
15,200.00	86.88	269.22	5,172.23	666.05	-8,868.01	8,892.83	2.69	-2.68	0.23
15,293.00	87.63	268.61	5,176.69	664.30	-8,960.89	8,985.36	1.04	0.81	-0.66
15,387.00	85.73	268.78	5,182.13	662.16	-9,054.70	9,078.81	2.03	-2.02	0.18
15,481.00	86.61	268.39	5,188.41	659.84	-9,148.46	9,172.18	1.02	0.94	-0.41
15,574.00	87.41	267.64	5,193.26	656.63	-9,241.28	9,264.56	1.18	0.86	-0.81
15,668.00	87.89	267.50	5,197.11	652.64	-9,335.11	9,357.90	0.53	0.51	-0.15
15,762.00	86.39	266.58	5,201.80	647.80	-9,428.87	9,451.09	1.87	-1.60	-0.98
<b>Last MWD Survey @ 15762'MD</b>									
15,919.00	86.39	266.58	5,211.69	638.45	-9,585.28	9,606.49	0.00	0.00	0.00
<b>PTB @ TD @ 15919'MD (511'FWL &amp; 79'FSL)</b>									

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Kennedy 1C
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB=25 @ 4992.00ft (Patterson #346)
<b>Site:</b>	Kennedy Pad (Sec.18, T4N-R68W)	<b>MD Reference:</b>	KB=25 @ 4992.00ft (Patterson #346)
<b>Well:</b>	Kennedy 1C	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,520.00	1,519.86	3.28	1.23	Tie in to Surface Surveys @ 1520'MD
1,649.00	1,648.85	2.56	2.27	First MWD Survey @ 1649'MD
5,962.63	5,531.92	703.93	347.44	70°Inclination @ 5962'MD
5,971.12	5,534.77	704.00	339.44	Enter Lease Section 7 @ 5971'MD
6,436.82	5,589.47	698.12	-120.53	Crossing 460'Hardline @ 6436'MD
11,108.57	5,259.34	670.02	-4,778.59	Crossing Section 7 & 12 @ 11108'MD
15,762.00	5,201.80	647.80	-9,428.87	Last MWD Survey @ 15762'MD
15,919.00	5,211.69	638.45	-9,585.28	PTB @ TD @ 15919'MD (511'FWL & 79'FSL)

Checked By: _____	Approved By: _____	Date: _____
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