

# **Extraction Oil & Gas**

**Weld County, CO (NAD83)**

**Sec 28-T1N-R68W Coyote Trails**

**Coyote Trails 33W-15-7N**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**24 July, 2019**

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Coyote Trails 33W-15-7N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5302.00usft (Ensign 147)
<b>Site:</b>	Sec 28-T1N-R68W Coyote Trails	<b>MD Reference:</b>	KB @ 5302.00usft (Ensign 147)
<b>Well:</b>	Coyote Trails 33W-15-7N	<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 5000.15 Single User Db

<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 28-T1N-R68W Coyote Trails							
Site Position:		Northing:	1,249,743.73	usft	Latitude:	40.017878			
From:	Map	Easting:	3,138,161.85	usft	Longitude:	-105.006704			
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"	Grid Convergence:	0.32	°

Well		Coyote Trails 33W-15-7N				
Well Position	+N/-S	0.00 usft	Northing:	1,249,778.72 usft	Latitude:	40.017978
	+E/-W	0.00 usft	Easting:	3,137,927.92 usft	Longitude:	-105.007538
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,274.00 usft

<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>
	IGRF2015	6/13/2019	8.09	66.46	51,897.63281734

<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	248.25	

<b>Survey Program</b>	<b>Date</b>	7/19/2019			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
146.30	1,578.30	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,675.00	16,195.00	Atlas MWD Surveys (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</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	
146.30	0.57	356.56	146.30	0.73	-0.04	-0.23	0.39	0.39	0.00	
233.30	0.83	358.50	233.29	1.79	-0.09	-0.58	0.30	0.30	2.23	
321.30	0.35	349.80	321.29	2.69	-0.15	-0.86	0.55	-0.55	-9.89	
408.30	0.22	244.15	408.29	2.88	-0.35	-0.74	0.53	-0.15	-121.44	
495.30	1.41	186.67	495.28	1.74	-0.62	-0.07	1.50	1.37	-66.07	
582.30	2.07	183.33	582.24	-0.89	-0.84	1.11	0.77	0.76	-3.84	
670.30	3.43	178.76	670.13	-5.11	-0.87	2.70	1.56	1.55	-5.19	
757.30	5.19	177.44	756.88	-11.64	-0.64	4.91	2.03	2.02	-1.52	
844.30	6.50	179.11	843.43	-20.50	-0.39	7.96	1.52	1.51	1.92	

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<b>Site:</b>	Sec 28-T1N-R68W Coyote Trails	<b>MD Reference:</b>	KB @ 5302.00usft (Ensign 147)
<b>Well:</b>	Coyote Trails 33W-15-7N	<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 5000.15 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)
932.30	8.57	179.11	930.66	-32.03	-0.21	12.06	2.35	2.35	0.00
1,019.30	9.80	177.97	1,016.55	-45.92	0.15	16.87	1.43	1.41	-1.31
1,106.30	11.29	176.12	1,102.08	-61.81	0.99	21.98	1.76	1.71	-2.13
1,193.30	13.97	176.65	1,186.96	-80.80	2.18	27.91	3.08	3.08	0.61
1,281.30	14.85	174.01	1,272.19	-102.62	3.98	34.33	1.25	1.00	-3.00
1,368.30	16.61	179.64	1,355.94	-126.14	5.22	41.89	2.68	2.02	6.47
1,455.30	18.50	177.71	1,438.88	-152.37	5.85	51.02	2.27	2.17	-2.22
1,543.30	21.71	178.67	1,521.51	-182.60	6.79	61.35	3.67	3.65	1.09
1,578.30	22.10	179.11	1,553.98	-195.66	7.04	65.96	1.21	1.11	1.26
Tie into Surface Surveys									
1,675.00	23.51	179.42	1,643.12	-233.13	7.52	79.40	1.46	1.46	0.32
First MWD Survey @ 1675' MD									
1,765.00	26.43	180.53	1,724.70	-271.12	7.51	93.48	3.29	3.24	1.23
1,854.00	28.86	178.72	1,803.54	-312.41	7.81	108.50	2.89	2.73	-2.03
1,944.00	30.23	177.71	1,881.83	-356.76	9.20	123.64	1.62	1.52	-1.12
2,034.00	32.13	177.75	1,958.83	-403.32	11.05	139.18	2.11	2.11	0.04
2,124.00	31.60	177.71	2,035.26	-450.79	12.93	155.02	0.59	-0.59	-0.04
2,214.00	30.67	177.22	2,112.30	-497.28	14.98	170.34	1.07	-1.03	-0.54
2,304.00	30.14	177.31	2,189.92	-542.78	17.16	185.18	0.59	-0.59	0.10
2,393.00	29.52	176.82	2,267.13	-586.99	19.42	199.46	0.75	-0.70	-0.55
2,483.00	29.83	176.69	2,345.32	-631.48	21.94	213.60	0.35	0.34	-0.14
2,573.00	29.25	176.74	2,423.62	-675.78	24.49	227.65	0.65	-0.64	0.06
2,663.00	29.17	180.97	2,502.19	-719.66	25.37	243.10	2.29	-0.09	4.70
2,752.00	28.46	180.92	2,580.17	-762.55	24.66	259.64	0.80	-0.80	-0.06
2,842.00	30.53	179.16	2,658.50	-806.86	24.65	276.07	2.49	2.30	-1.96
2,931.00	29.83	177.97	2,735.44	-851.59	25.76	291.61	1.03	-0.79	-1.34
3,020.00	31.37	179.38	2,812.04	-896.87	26.80	307.43	1.91	1.73	1.58
3,109.00	29.92	178.94	2,888.61	-942.23	27.46	323.62	1.65	-1.63	-0.49
3,199.00	30.76	180.88	2,966.29	-987.69	27.52	340.40	1.43	0.93	2.16
3,290.00	29.30	180.75	3,045.07	-1,033.22	26.87	357.88	1.61	-1.60	-0.14
3,378.00	29.92	178.63	3,121.58	-1,076.70	27.12	373.76	1.38	0.70	-2.41
3,468.00	32.74	179.47	3,198.45	-1,123.48	27.88	390.39	3.17	3.13	0.93
3,517.39	32.21	179.49	3,240.11	-1,150.00	28.12	399.99	1.08	-1.08	0.04
Cross @ 3517.39' MD									
3,558.00	31.77	179.51	3,274.56	-1,171.51	28.31	407.79	1.08	-1.08	0.05
3,647.00	30.05	178.85	3,350.92	-1,217.22	28.95	424.12	1.97	-1.93	-0.74
3,737.00	30.14	176.82	3,428.78	-1,262.31	30.66	439.25	1.14	0.10	-2.26
3,825.00	32.79	177.62	3,503.84	-1,308.19	32.88	454.19	3.05	3.01	0.91
3,916.00	32.04	177.62	3,580.66	-1,356.93	34.90	470.36	0.82	-0.82	0.00
4,005.00	29.92	177.31	3,656.96	-1,402.69	36.92	485.44	2.39	-2.38	-0.35
4,095.00	29.47	177.49	3,735.14	-1,447.23	38.95	500.07	0.51	-0.50	0.20
4,185.00	30.00	177.66	3,813.29	-1,491.83	40.83	514.84	0.60	0.59	0.19
4,274.00	31.07	174.00	3,889.95	-1,536.91	44.14	528.47	2.41	1.20	-4.11

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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
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Survey									
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4,364.00	29.43	173.87	3,967.69	-1,581.99	48.93	540.72	1.82	-1.82	-0.14
4,453.00	30.27	173.47	4,044.89	-1,626.02	53.82	552.50	0.97	0.94	-0.45
4,542.00	32.44	174.05	4,120.88	-1,672.05	58.84	564.89	2.46	2.44	0.65
4,632.00	30.18	174.49	4,197.77	-1,718.58	63.52	577.79	2.52	-2.51	0.49
4,721.00	27.44	174.40	4,275.75	-1,761.27	67.67	589.75	3.08	-3.08	-0.10
4,810.00	28.72	177.88	4,354.28	-1,803.05	70.46	602.63	2.34	1.44	3.91
4,900.00	30.31	180.70	4,432.60	-1,847.37	70.98	618.57	2.35	1.77	3.13
4,989.00	30.67	180.39	4,509.29	-1,892.53	70.56	635.70	0.44	0.40	-0.35
5,079.00	31.07	178.94	4,586.54	-1,938.70	70.83	652.56	0.94	0.44	-1.61
5,168.00	28.99	178.50	4,663.59	-1,983.23	71.82	668.14	2.35	-2.34	-0.49
5,258.00	30.18	180.70	4,741.86	-2,027.65	72.11	684.32	1.79	1.32	2.44
5,347.00	28.15	181.10	4,819.57	-2,071.02	71.44	701.02	2.29	-2.28	0.45
5,460.00	30.05	182.33	4,918.30	-2,125.94	69.77	722.91	1.76	1.68	1.09
5,549.00	31.90	181.98	4,994.61	-2,171.71	68.06	741.47	2.09	2.08	-0.39
5,639.00	30.40	181.19	5,071.63	-2,218.25	66.76	759.92	1.73	-1.67	-0.88
5,728.00	32.35	183.08	5,147.61	-2,264.55	65.01	778.69	2.45	2.19	2.12
5,818.00	30.84	182.11	5,224.27	-2,311.65	62.87	798.13	1.77	-1.68	-1.08
5,908.00	29.30	181.58	5,302.16	-2,356.72	61.41	816.19	1.74	-1.71	-0.59
5,997.00	29.83	176.78	5,379.58	-2,400.59	62.06	831.85	2.73	0.60	-5.39
6,086.00	31.60	173.92	5,456.10	-2,445.89	65.77	845.18	2.58	1.99	-3.21
6,176.00	30.36	173.47	5,533.26	-2,491.93	70.86	857.52	1.40	-1.38	-0.50
6,265.00	31.99	174.14	5,609.40	-2,537.73	75.82	869.88	1.87	1.83	0.75
6,355.00	30.31	173.83	5,686.42	-2,584.03	80.70	882.50	1.88	-1.87	-0.34
6,444.00	30.71	175.19	5,763.10	-2,629.00	85.02	895.16	0.90	0.45	1.53
6,534.00	32.17	173.96	5,839.88	-2,675.73	89.46	908.34	1.77	1.62	-1.37
6,624.00	30.45	173.12	5,916.78	-2,722.21	94.72	920.68	1.97	-1.91	-0.93
6,713.00	30.89	174.05	5,993.33	-2,767.32	99.79	932.69	0.73	0.49	1.04
6,803.00	28.37	173.83	6,071.55	-2,811.56	104.48	944.72	2.80	-2.80	-0.24
6,892.00	25.81	172.15	6,150.78	-2,851.78	109.40	955.05	3.00	-2.88	-1.89
6,982.00	25.94	176.52	6,231.77	-2,890.85	113.27	965.93	2.12	0.14	4.86
7,072.00	23.91	177.04	6,313.38	-2,928.71	115.41	977.98	2.27	-2.26	0.58
7,162.00	20.42	175.02	6,396.72	-2,962.58	117.71	988.38	3.97	-3.88	-2.24
7,251.00	17.59	172.55	6,480.86	-2,991.39	120.81	996.19	3.31	-3.18	-2.78
7,341.00	16.97	178.45	6,566.80	-3,018.00	122.92	1,004.08	2.06	-0.69	6.56
7,431.00	14.58	178.76	6,653.41	-3,042.46	123.53	1,012.59	2.66	-2.66	0.34
7,521.00	12.33	177.35	6,740.93	-3,063.39	124.21	1,019.70	2.53	-2.50	-1.57
7,610.00	10.25	174.09	6,828.20	-3,080.76	125.47	1,024.97	2.44	-2.34	-3.66
7,700.00	8.31	169.60	6,917.02	-3,095.12	127.47	1,028.44	2.30	-2.16	-4.99
7,789.00	6.05	182.51	7,005.33	-3,106.14	128.42	1,031.63	3.10	-2.54	14.51
7,879.00	3.71	194.14	7,095.00	-3,113.70	127.50	1,035.29	2.81	-2.60	12.92
7,968.00	1.99	250.59	7,183.90	-3,117.01	125.34	1,038.52	3.47	-1.93	63.43
8,058.00	4.55	264.96	7,273.74	-3,117.84	120.31	1,043.50	2.96	2.84	15.97
8,148.00	15.73	270.42	7,362.20	-3,118.06	104.51	1,058.26	12.45	12.42	6.07
8,237.00	23.51	280.07	7,445.99	-3,114.87	74.91	1,084.57	9.44	8.74	10.84

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8,314.85	30.00	277.53	7,515.47	-3,109.59	40.29	1,114.77	8.46	8.33	-3.26
<b>30° Inclination @ 8314.85' MD</b>									
8,326.00	30.93	277.25	7,525.08	-3,108.87	34.69	1,119.71	8.46	8.36	-2.53
8,415.00	39.20	270.20	7,597.89	-3,105.88	-16.24	1,165.90	10.33	9.29	-7.92
8,504.00	43.22	269.72	7,664.84	-3,105.93	-74.86	1,220.37	4.53	4.52	-0.54
8,593.00	47.68	269.81	7,727.26	-3,106.18	-138.27	1,279.36	5.01	5.01	0.10
8,683.00	58.11	273.99	7,781.49	-3,103.63	-209.87	1,344.92	12.16	11.59	4.64
8,772.00	62.70	274.48	7,825.43	-3,097.91	-287.03	1,414.46	5.18	5.16	0.55
8,862.00	68.10	273.60	7,862.89	-3,092.16	-368.63	1,488.12	6.07	6.00	-0.98
8,892.82	70.00	273.19	7,873.91	-3,090.45	-397.36	1,514.18	6.29	6.16	-1.34
<b>70° Inclination @ 8892.82' MD</b>									
8,953.00	73.71	272.41	7,892.64	-3,087.67	-454.47	1,566.19	6.29	6.17	-1.29
9,043.00	82.02	269.63	7,911.55	-3,086.14	-542.36	1,647.25	9.71	9.23	-3.09
9,133.00	88.64	268.13	7,918.87	-3,087.89	-631.99	1,731.16	7.54	7.36	-1.67
9,222.00	89.26	269.45	7,920.51	-3,089.77	-720.95	1,814.48	1.64	0.70	1.48
9,311.00	89.57	271.97	7,921.41	-3,088.67	-809.93	1,896.72	2.85	0.35	2.83
9,401.00	89.57	273.42	7,922.09	-3,084.44	-899.83	1,978.65	1.61	0.00	1.61
9,491.00	90.90	270.82	7,921.72	-3,081.11	-989.76	2,060.94	3.24	1.48	-2.89
9,581.00	90.94	271.00	7,920.28	-3,079.68	-1,079.73	2,143.99	0.20	0.04	0.20
9,670.00	90.77	271.26	7,918.95	-3,077.92	-1,168.71	2,225.98	0.35	-0.19	0.29
9,759.00	91.78	271.17	7,916.97	-3,076.04	-1,257.66	2,307.90	1.14	1.13	-0.10
9,849.00	92.09	269.23	7,913.93	-3,075.72	-1,347.61	2,391.33	2.18	0.34	-2.16
9,938.00	90.63	270.56	7,911.82	-3,075.89	-1,436.58	2,474.03	2.22	-1.64	1.49
10,028.00	90.77	270.51	7,910.72	-3,075.05	-1,526.57	2,557.30	0.17	0.16	-0.06
10,117.00	89.48	271.26	7,910.52	-3,073.67	-1,615.55	2,639.44	1.68	-1.45	0.84
10,206.00	89.88	271.17	7,911.02	-3,071.78	-1,704.53	2,721.39	0.46	0.45	-0.10
10,295.00	90.46	270.91	7,910.75	-3,070.17	-1,793.52	2,803.44	0.71	0.65	-0.29
10,385.00	89.66	271.13	7,910.66	-3,068.57	-1,883.50	2,886.43	0.92	-0.89	0.24
10,475.00	90.37	271.88	7,910.64	-3,066.20	-1,973.47	2,969.11	1.15	0.79	0.83
10,564.00	91.07	271.75	7,909.52	-3,063.38	-2,062.42	3,050.69	0.80	0.79	-0.15
10,653.00	90.85	269.94	7,908.03	-3,062.07	-2,151.39	3,132.84	2.05	-0.25	-2.03
10,742.00	89.66	271.57	7,907.63	-3,060.90	-2,240.38	3,215.06	2.27	-1.34	1.83
10,831.00	90.23	270.25	7,907.72	-3,059.49	-2,329.36	3,297.19	1.62	0.64	-1.48
10,920.00	89.97	270.86	7,907.56	-3,058.62	-2,418.36	3,379.53	0.75	-0.29	0.69
11,010.00	90.23	270.11	7,907.40	-3,057.86	-2,508.35	3,462.84	0.88	0.29	-0.83
11,099.00	90.06	269.50	7,907.18	-3,058.17	-2,597.35	3,545.61	0.71	-0.19	-0.69
11,189.00	89.70	269.37	7,907.37	-3,059.05	-2,687.35	3,629.53	0.43	-0.40	-0.14
11,279.00	90.41	270.82	7,907.28	-3,058.90	-2,777.34	3,713.07	1.79	0.79	1.61
11,367.00	90.01	270.29	7,906.96	-3,058.05	-2,865.34	3,794.48	0.75	-0.45	-0.60
11,443.66	90.20	270.32	7,906.82	-3,057.64	-2,942.00	3,865.53	0.25	0.24	0.04
<b>Cross @ 11443.66' MD</b>									
11,457.00	90.23	270.33	7,906.77	-3,057.56	-2,955.34	3,877.89	0.25	0.24	0.04
11,546.00	89.97	268.53	7,906.61	-3,058.45	-3,044.33	3,960.88	2.04	-0.29	-2.02
11,636.00	90.41	269.41	7,906.32	-3,060.07	-3,134.31	4,045.06	1.09	0.49	0.98

# Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Coyote Trails 33W-15-7N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5302.00usft (Ensign 147)
<b>Site:</b>	Sec 28-T1N-R68W Coyote Trails	<b>MD Reference:</b>	KB @ 5302.00usft (Ensign 147)
<b>Well:</b>	Coyote Trails 33W-15-7N	<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 5000.15 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)
11,725.00	90.77	268.75	7,905.40	-3,061.50	-3,223.30	4,128.24	0.84	0.40	-0.74
11,815.00	90.63	270.91	7,904.30	-3,061.76	-3,313.28	4,211.92	2.40	-0.16	2.40
11,905.00	88.73	272.01	7,904.80	-3,059.47	-3,403.25	4,294.63	2.44	-2.11	1.22
11,995.00	88.95	271.30	7,906.63	-3,056.87	-3,493.19	4,377.21	0.83	0.24	-0.79
12,085.00	89.40	272.49	7,907.92	-3,053.90	-3,583.13	4,459.64	1.41	0.50	1.32
12,174.00	89.97	271.00	7,908.41	-3,051.19	-3,672.09	4,541.26	1.79	0.64	-1.67
12,264.00	90.15	271.44	7,908.32	-3,049.27	-3,762.07	4,624.13	0.53	0.20	0.49
12,354.00	90.99	271.88	7,907.42	-3,046.66	-3,852.02	4,706.71	1.05	0.93	0.49
12,443.00	91.38	271.97	7,905.58	-3,043.67	-3,940.95	4,788.21	0.45	0.44	0.10
12,533.00	89.70	270.25	7,904.73	-3,041.93	-4,030.92	4,871.13	2.67	-1.87	-1.91
12,622.00	89.40	270.86	7,905.43	-3,041.07	-4,119.92	4,953.47	0.76	-0.34	0.69
12,712.00	89.26	270.42	7,906.48	-3,040.06	-4,209.91	5,036.68	0.51	-0.16	-0.49
12,801.00	90.19	269.19	7,906.91	-3,040.37	-4,298.90	5,119.45	1.73	1.04	-1.38
12,890.00	90.72	268.57	7,906.20	-3,042.11	-4,387.88	5,202.74	0.92	0.60	-0.70
12,980.00	91.16	267.87	7,904.73	-3,044.90	-4,477.82	5,287.32	0.92	0.49	-0.78
13,069.00	88.95	269.41	7,904.64	-3,047.01	-4,566.79	5,370.74	3.03	-2.48	1.73
13,159.00	89.04	270.78	7,906.22	-3,046.86	-4,656.77	5,454.26	1.53	0.10	1.52
13,248.00	88.91	269.19	7,907.81	-3,046.89	-4,745.76	5,536.92	1.79	-0.15	-1.79
13,338.00	89.35	270.11	7,909.18	-3,047.44	-4,835.74	5,620.70	1.13	0.49	1.02
13,428.00	89.35	269.50	7,910.20	-3,047.74	-4,925.74	5,704.40	0.68	0.00	-0.68
13,517.00	89.31	267.74	7,911.24	-3,049.89	-5,014.70	5,787.83	1.98	-0.04	-1.98
13,607.00	90.15	268.92	7,911.67	-3,052.51	-5,104.66	5,872.36	1.61	0.93	1.31
13,696.00	90.23	269.23	7,911.37	-3,053.95	-5,193.65	5,955.54	0.36	0.09	0.35
13,786.00	91.25	269.59	7,910.21	-3,054.87	-5,283.63	6,039.47	1.20	1.13	0.40
13,875.00	91.47	270.29	7,908.10	-3,054.97	-5,372.61	6,122.14	0.82	0.25	0.79
13,965.00	88.73	269.98	7,907.94	-3,054.75	-5,462.60	6,205.65	3.06	-3.04	-0.34
14,055.00	88.16	272.14	7,910.38	-3,053.09	-5,552.55	6,288.58	2.48	-0.63	2.40
14,144.00	88.95	270.73	7,912.63	-3,050.86	-5,641.49	6,370.36	1.82	0.89	-1.58
14,233.00	88.69	272.10	7,914.46	-3,048.66	-5,730.44	6,452.17	1.57	-0.29	1.54
14,323.00	86.92	271.39	7,917.91	-3,045.93	-5,820.33	6,534.64	2.12	-1.97	-0.79
14,412.00	87.05	271.57	7,922.59	-3,043.63	-5,909.17	6,616.32	0.25	0.15	0.20
14,502.00	88.73	273.20	7,925.90	-3,039.89	-5,999.03	6,698.39	2.60	1.87	1.81
14,591.00	89.40	271.79	7,927.35	-3,036.01	-6,087.93	6,779.53	1.75	0.75	-1.58
14,681.00	89.35	272.01	7,928.33	-3,033.03	-6,177.87	6,861.96	0.25	-0.06	0.24
14,771.00	88.38	269.98	7,930.12	-3,031.47	-6,267.84	6,944.94	2.50	-1.08	-2.26
14,860.00	89.26	269.81	7,931.95	-3,031.63	-6,356.82	7,027.65	1.01	0.99	-0.19
14,950.00	90.28	269.81	7,932.31	-3,031.93	-6,446.82	7,111.35	1.13	1.13	0.00
15,039.00	88.20	267.78	7,933.49	-3,033.80	-6,535.78	7,194.68	3.27	-2.34	-2.28
15,129.00	88.03	270.38	7,936.45	-3,035.24	-6,625.71	7,278.74	2.89	-0.19	2.89
15,218.00	88.86	270.56	7,938.87	-3,034.51	-6,714.67	7,361.10	0.95	0.93	0.20
15,308.00	89.57	268.22	7,940.10	-3,035.47	-6,804.65	7,445.03	2.72	0.79	-2.60
15,398.00	90.01	266.94	7,940.43	-3,039.27	-6,894.57	7,529.96	1.50	0.49	-1.42
15,488.00	90.59	266.55	7,939.96	-3,044.38	-6,984.42	7,615.31	0.78	0.64	-0.43

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Coyote Trails 33W-15-7N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5302.00usft (Ensign 147)
<b>Site:</b>	Sec 28-T1N-R68W Coyote Trails	<b>MD Reference:</b>	KB @ 5302.00usft (Ensign 147)
<b>Well:</b>	Coyote Trails 33W-15-7N	<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 5000.15 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)
15,576.00	89.22	268.79	7,940.11	-3,047.96	-7,072.34	7,698.30	2.98	-1.56	2.55
15,666.00	89.40	267.87	7,941.19	-3,050.58	-7,162.30	7,782.82	1.04	0.20	-1.02
15,755.00	89.62	266.41	7,941.95	-3,055.02	-7,251.18	7,867.02	1.66	0.25	-1.64
15,844.00	89.22	268.75	7,942.85	-3,058.78	-7,340.09	7,951.00	2.67	-0.45	2.63
15,933.00	88.56	268.09	7,944.58	-3,061.23	-7,429.04	8,034.52	1.05	-0.74	-0.74
16,022.00	88.82	269.06	7,946.61	-3,063.45	-7,517.99	8,117.96	1.13	0.29	1.09
16,111.00	88.95	268.26	7,948.34	-3,065.53	-7,606.94	8,201.36	0.91	0.15	-0.90
Last MWD Survey @ 16111' MD									
16,195.00	88.95	268.26	7,949.88	-3,068.08	-7,690.89	8,280.27	0.00	0.00	0.00
Projection to TD @ 16195' MD 1900' FNL/ 511' FWL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Cross @ 3517.39' MD - hit/miss target - Shape - Point	0.00	0.00	3,240.12	-1,150.00	28.12	1,248,628.89	3,137,962.42	40.014821	-105.007438
30° Inclination @ 8314.8 - actual wellpath misses target center by 0.02usft at 8314.85usft MD (7515.47 TVD, -3109.59 N, 40.29 E) - Point	0.00	0.00	7,515.47	-3,109.57	40.30	1,246,669.42	3,137,985.48	40.009442	-105.007394
70° Inclination @ 8892.8 - actual wellpath hits target center - Point	0.00	0.00	7,873.91	-3,090.45	-397.36	1,246,686.10	3,137,547.73	40.009494	-105.008957
Cross @ 11443.66' MD - actual wellpath hits target center - Point	0.00	0.00	7,906.82	-3,057.64	-2,942.00	1,246,704.78	3,135,002.95	40.009584	-105.018041

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,578.30	1,553.98	-195.66	7.04	Tie into Surface Surveys	
1,675.00	1,643.12	-233.13	7.52	First MWD Survey @ 1675' MD	
3,517.39	3,240.11	-1,150.00	28.12	Cross @ 3517.39' MD	
8,314.85	7,515.47	-3,109.59	40.29	30° Inclination @ 8314.85' MD	
8,892.82	7,873.91	-3,090.45	-397.36	70° Inclination @ 8892.82' MD	
11,443.66	7,906.82	-3,057.64	-2,942.00	Cross @ 11443.66' MD	
16,111.00	7,948.34	-3,065.53	-7,606.94	Last MWD Survey @ 16111' MD	
16,195.00	7,949.88	-3,068.08	-7,690.89	Projection to TD @ 16195' MD 1900' FNL/ 511' FWL	

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