

Extraction Oil & Gas

Weld County, CO (NAD83)

Sec 28-T1N-R68W Coyote Trails

Coyote Trails 33W-15-6C

Wellbore #1

Design: Wellbore #1

Standard Survey Report

10 April, 2019

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Coyote Trails 33W-15-6C
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5301.00usft (Ensign 147)
Site:	Sec 28-T1N-R68W Coyote Trails	MD Reference:	KB @ 5301.00usft (Ensign 147)
Well:	Coyote Trails 33W-15-6C	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

Project	Weld County, CO (NAD83),		
Map System:	US State Plane 1983	System Datum:	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	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-15-6C					
Well Position	+N/-S	0.00 usft	Northing:	1,249,858.83 usft	Latitude:	40.018198
	+E/-W	0.00 usft	Easting:	3,137,918.79 usft	Longitude:	-105.007569
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,273.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/22/2019	8.12	66.47	51,923.53531537

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	249.70	

Survey Program	Date	4/10/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
114.00	1,548.00	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,670.00	16,174.00	Atlas MWD Surveys (Wellbore #1)	MWD	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	
114.00	0.91	74.50	114.00	0.24	0.87	-0.90	0.80	0.80	0.00	
First Surface Survey										
205.00	0.86	97.48	204.98	0.35	2.25	-2.23	0.39	-0.05	25.25	
295.00	1.02	105.69	294.97	0.04	3.69	-3.47	0.23	0.18	9.12	
385.00	1.16	120.90	384.96	-0.64	5.24	-4.69	0.36	0.16	16.90	
474.00	0.60	206.05	473.95	-1.52	5.81	-4.92	1.42	-0.63	95.67	
564.00	0.56	207.82	563.94	-2.34	5.40	-4.25	0.05	-0.04	1.97	
654.00	1.67	169.42	653.93	-4.01	5.43	-3.70	1.42	1.23	-42.67	
743.00	4.18	162.07	742.80	-8.38	6.67	-3.35	2.85	2.82	-8.26	

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Site:	Sec 28-T1N-R68W Coyote Trails	MD Reference:	KB @ 5301.00usft (Ensign 147)
Well:	Coyote Trails 33W-15-6C	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)	
832.00	6.34	163.95	831.42	-16.19	9.03	-2.85	2.43	2.43	2.11	
922.00	6.85	178.14	920.83	-26.33	10.57	-0.78	1.89	0.57	15.77	
1,011.00	7.58	184.77	1,009.13	-37.48	10.26	3.39	1.24	0.82	7.45	
1,100.00	8.14	185.40	1,097.29	-49.60	9.18	8.61	0.64	0.63	0.71	
1,190.00	10.10	187.02	1,186.15	-63.78	7.61	14.99	2.20	2.18	1.80	
1,279.00	11.59	188.24	1,273.56	-80.38	5.38	22.85	1.69	1.67	1.37	
1,369.00	13.15	184.98	1,361.47	-99.52	3.19	31.54	1.90	1.73	-3.62	
1,458.00	14.61	180.51	1,447.87	-120.83	2.21	39.85	2.03	1.64	-5.02	
1,548.00	16.33	178.85	1,534.61	-144.84	2.37	48.04	1.97	1.91	-1.84	
Last Surface Survey										
1,670.00	16.79	178.70	1,651.55	-179.60	3.11	59.40	0.38	0.38	-0.12	
First MWD Survey @ 1670' MD										
1,760.00	19.22	182.14	1,737.13	-207.41	2.85	69.29	2.95	2.70	3.82	
1,849.00	20.46	181.39	1,820.85	-237.60	1.93	80.64	1.42	1.39	-0.84	
1,938.00	21.30	181.22	1,904.00	-269.31	1.21	92.32	0.95	0.94	-0.19	
2,027.00	23.38	181.44	1,986.32	-303.13	0.42	104.79	2.34	2.34	0.25	
2,117.00	24.70	179.67	2,068.51	-339.78	0.08	117.83	1.67	1.47	-1.97	
2,205.00	26.07	178.97	2,148.01	-377.50	0.53	130.49	1.59	1.56	-0.80	
2,294.00	28.41	181.13	2,227.14	-418.23	0.47	144.69	2.85	2.63	2.43	
2,384.00	29.52	180.69	2,305.88	-461.81	-0.22	160.45	1.26	1.23	-0.49	
2,474.00	30.36	179.98	2,383.87	-506.73	-0.48	176.28	1.01	0.93	-0.79	
2,564.00	30.62	179.59	2,461.43	-552.39	-0.31	191.97	0.36	0.29	-0.43	
2,654.00	30.98	180.51	2,538.73	-598.47	-0.35	208.00	0.66	0.40	1.02	
2,743.00	29.52	179.06	2,615.61	-643.31	-0.20	223.41	1.83	-1.64	-1.63	
2,832.00	30.36	179.72	2,692.74	-687.72	0.27	238.38	1.01	0.94	0.74	
2,921.00	30.58	180.25	2,769.44	-732.85	0.28	254.03	0.39	0.25	0.60	
3,011.00	28.24	179.10	2,847.84	-777.04	0.52	269.14	2.67	-2.60	-1.28	
3,100.00	29.34	179.23	2,925.84	-819.90	1.14	283.43	1.24	1.24	0.15	
3,190.00	29.08	179.19	3,004.39	-863.82	1.75	298.10	0.29	-0.29	-0.04	
3,280.00	30.18	180.95	3,082.63	-908.31	1.68	313.60	1.56	1.22	1.96	
3,370.00	30.36	180.60	3,160.35	-953.67	1.07	329.91	0.28	0.20	-0.39	
3,460.00	30.62	180.20	3,237.91	-999.33	0.75	346.06	0.37	0.29	-0.44	
3,549.00	28.02	178.93	3,315.50	-1,042.91	1.06	360.88	3.00	-2.92	-1.43	
3,638.00	30.23	180.51	3,393.25	-1,086.22	1.25	375.73	2.63	2.48	1.78	
3,728.00	30.31	181.26	3,470.97	-1,131.58	0.55	392.13	0.43	0.09	0.83	
3,818.00	30.53	179.59	3,548.59	-1,177.14	0.22	408.26	0.97	0.24	-1.86	
3,907.00	28.86	179.23	3,625.90	-1,221.23	0.67	423.13	1.89	-1.88	-0.40	
3,925.14	28.99	179.59	3,641.77	-1,230.00	0.76	426.09	1.21	0.72	2.00	
Cross @ 3925.14' MD										
3,997.00	29.52	181.00	3,704.47	-1,265.12	0.57	438.45	1.21	0.74	1.96	
4,086.00	28.77	179.59	3,782.20	-1,308.46	0.34	453.70	1.14	-0.84	-1.58	
4,176.00	29.21	179.89	3,860.92	-1,352.08	0.54	468.65	0.51	0.49	0.33	
4,265.00	30.05	181.35	3,938.29	-1,396.07	0.06	484.37	1.24	0.94	1.64	
4,355.00	29.78	181.39	4,016.29	-1,440.94	-1.02	500.95	0.30	-0.30	0.04	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
4,446.00	30.09	180.51	4,095.15	-1,486.35	-1.77	517.41	0.59	0.34	-0.97
4,535.00	29.43	177.69	4,172.42	-1,530.51	-1.09	532.09	1.74	-0.74	-3.17
4,625.00	28.86	178.04	4,251.02	-1,574.31	0.55	545.76	0.66	-0.63	0.39
4,714.00	29.56	181.88	4,328.71	-1,617.72	0.56	560.81	2.25	0.79	4.31
4,803.00	29.96	180.38	4,405.98	-1,661.89	-0.31	576.95	0.95	0.45	-1.69
4,893.00	29.56	179.94	4,484.11	-1,706.56	-0.43	592.56	0.51	-0.44	-0.49
4,982.00	31.11	181.26	4,560.92	-1,751.50	-0.91	608.61	1.90	1.74	1.48
5,072.00	30.45	180.91	4,638.24	-1,797.55	-1.79	625.41	0.76	-0.73	-0.39
5,161.00	30.18	180.60	4,715.07	-1,842.47	-2.38	641.55	0.35	-0.30	-0.35
5,251.00	30.93	177.25	4,792.58	-1,888.20	-1.51	656.60	2.07	0.83	-3.72
5,340.00	29.12	175.36	4,869.64	-1,932.63	1.34	669.35	2.29	-2.03	-2.12
5,429.00	29.74	175.53	4,947.15	-1,976.23	4.82	681.22	0.70	0.70	0.19
5,519.00	30.36	176.28	5,025.05	-2,021.18	8.03	693.80	0.81	0.69	0.83
5,609.00	32.04	175.36	5,102.03	-2,067.67	11.44	706.74	1.94	1.87	-1.02
5,698.00	33.27	178.26	5,176.97	-2,115.61	14.09	720.88	2.24	1.38	3.26
5,787.00	30.93	178.13	5,252.36	-2,162.88	15.58	735.89	2.63	-2.63	-0.15
5,876.00	29.87	178.66	5,329.12	-2,207.89	16.84	750.32	1.23	-1.19	0.60
5,966.00	28.94	176.85	5,407.53	-2,252.04	18.56	764.03	1.43	-1.03	-2.01
6,055.00	30.49	177.47	5,484.82	-2,296.10	20.74	777.27	1.78	1.74	0.70
6,145.00	32.30	177.29	5,561.64	-2,342.94	22.89	791.51	2.01	2.01	-0.20
6,234.00	29.87	175.75	5,637.86	-2,388.80	25.65	804.83	2.87	-2.73	-1.73
6,323.00	26.20	172.58	5,716.40	-2,430.40	29.84	815.34	4.45	-4.12	-3.56
6,435.00	25.36	169.01	5,817.26	-2,478.47	37.60	824.74	1.58	-0.75	-3.19
6,525.00	23.95	171.35	5,899.06	-2,515.45	44.02	831.55	1.91	-1.57	2.60
6,615.00	24.61	172.62	5,981.10	-2,552.09	49.18	839.43	0.94	0.73	1.41
6,705.00	23.77	176.68	6,063.20	-2,588.79	52.64	848.92	2.07	-0.93	4.51
6,794.00	21.48	174.43	6,145.35	-2,622.92	55.26	858.30	2.75	-2.57	-2.53
6,884.00	18.65	174.92	6,229.88	-2,653.66	58.13	866.27	3.15	-3.14	0.54
6,973.00	16.97	178.40	6,314.61	-2,680.82	59.75	874.18	2.23	-1.89	3.91
7,063.00	14.41	175.80	6,401.25	-2,705.12	60.94	881.50	2.95	-2.84	-2.89
7,153.00	11.67	173.95	6,488.92	-2,725.34	62.72	886.84	3.08	-3.04	-2.06
7,242.00	10.52	178.84	6,576.26	-2,742.42	63.83	891.73	1.67	-1.29	5.49
7,332.00	10.30	179.41	6,664.78	-2,758.68	64.08	897.13	0.27	-0.24	0.63
7,422.00	9.63	178.31	6,753.42	-2,774.25	64.39	902.25	0.77	-0.74	-1.22
7,512.00	7.60	176.85	6,842.40	-2,787.72	64.94	906.41	2.27	-2.26	-1.62
7,601.00	6.98	181.13	6,930.68	-2,799.00	65.15	910.12	0.93	-0.70	4.81
7,691.00	5.61	180.47	7,020.13	-2,808.87	65.01	913.68	1.52	-1.52	-0.73
7,781.00	4.02	178.04	7,109.81	-2,816.42	65.08	916.23	1.78	-1.77	-2.70
7,870.00	3.09	175.88	7,198.64	-2,821.93	65.36	917.88	1.06	-1.04	-2.43
7,959.00	1.46	178.62	7,287.57	-2,825.46	65.56	918.92	1.84	-1.83	3.08
8,049.00	0.13	118.20	7,377.56	-2,826.65	65.68	919.22	1.56	-1.48	-67.13
8,138.00	9.50	267.02	7,466.16	-2,827.08	58.42	926.19	10.80	10.53	167.21
8,228.00	19.44	271.25	7,553.19	-2,827.14	35.97	947.26	11.10	11.04	4.70

Survey Report

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8,318.00	27.80	268.29	7,635.58	-2,827.44	-0.05	981.14	9.38	9.29	-3.29
8,340.53	30.00	268.45	7,655.31	-2,827.75	-10.93	991.46	9.77	9.77	0.70
30° Inclination @ 8340.53' MD									
8,408.00	36.59	268.82	7,711.67	-2,828.62	-47.94	1,026.47	9.77	9.77	0.55
8,498.00	41.10	269.57	7,781.75	-2,829.40	-104.37	1,079.66	5.04	5.01	0.83
8,587.00	45.47	267.99	7,846.52	-2,830.73	-165.35	1,137.32	5.06	4.91	-1.78
8,677.00	52.23	269.13	7,905.71	-2,832.40	-233.06	1,201.40	7.57	7.51	1.27
8,767.00	57.27	269.44	7,957.64	-2,833.31	-306.53	1,270.62	5.61	5.60	0.34
8,857.00	62.09	268.34	8,003.06	-2,834.83	-384.18	1,343.97	5.46	5.36	-1.22
8,946.00	67.96	267.72	8,040.62	-2,837.61	-464.77	1,420.52	6.63	6.60	-0.70
8,990.13	70.00	267.55	8,056.45	-2,839.32	-505.93	1,459.71	4.64	4.62	-0.39
70° Inclination @ 8990.13' MD									
9,036.00	72.12	267.37	8,071.34	-2,841.24	-549.27	1,501.03	4.64	4.62	-0.38
9,125.00	78.22	269.79	8,094.11	-2,843.35	-635.23	1,582.38	7.34	6.85	2.72
9,216.00	84.71	270.81	8,107.61	-2,842.87	-725.17	1,666.57	7.22	7.13	1.12
9,305.00	88.47	269.88	8,112.90	-2,842.33	-814.00	1,749.69	4.35	4.22	-1.04
9,395.00	89.13	269.22	8,114.79	-2,843.04	-903.97	1,834.32	1.04	0.73	-0.73
9,484.00	89.00	270.32	8,116.24	-2,843.40	-992.96	1,917.90	1.24	-0.15	1.24
9,574.00	87.14	270.06	8,119.27	-2,843.10	-1,082.91	2,002.15	2.09	-2.07	-0.29
9,663.00	87.23	269.88	8,123.64	-2,843.15	-1,171.80	2,085.54	0.23	0.10	-0.20
9,753.00	88.11	269.26	8,127.30	-2,843.82	-1,261.72	2,170.11	1.20	0.98	-0.69
9,843.00	89.62	268.47	8,129.08	-2,845.60	-1,351.68	2,255.10	1.89	1.68	-0.88
9,932.00	89.57	266.97	8,129.71	-2,849.14	-1,440.61	2,339.73	1.69	-0.06	-1.69
10,022.00	89.70	268.51	8,130.29	-2,852.69	-1,530.53	2,425.30	1.72	0.14	1.71
10,112.00	89.62	266.88	8,130.82	-2,856.31	-1,620.45	2,510.89	1.81	-0.09	-1.81
10,202.00	90.01	266.84	8,131.11	-2,861.24	-1,710.32	2,596.88	0.44	0.43	-0.04
10,291.00	89.66	269.09	8,131.37	-2,864.40	-1,799.26	2,681.39	2.56	-0.39	2.53
10,381.00	89.70	270.45	8,131.87	-2,864.76	-1,889.25	2,765.92	1.51	0.04	1.51
10,470.00	90.10	270.94	8,132.03	-2,863.68	-1,978.24	2,849.01	0.71	0.45	0.55
10,560.00	89.79	269.35	8,132.11	-2,863.46	-2,068.24	2,933.33	1.80	-0.34	-1.77
10,649.00	88.42	270.23	8,133.50	-2,863.78	-2,157.23	3,016.90	1.83	-1.54	0.99
10,738.00	89.00	270.10	8,135.51	-2,863.53	-2,246.20	3,100.26	0.67	0.65	-0.15
10,828.00	89.44	269.92	8,136.73	-2,863.51	-2,336.19	3,184.66	0.53	0.49	-0.20
10,918.00	90.41	271.16	8,136.85	-2,862.66	-2,426.19	3,268.76	1.75	1.08	1.38
11,008.00	90.19	270.67	8,136.38	-2,861.23	-2,516.17	3,352.66	0.60	-0.24	-0.54
11,096.00	90.15	271.11	8,136.12	-2,859.86	-2,604.16	3,434.71	0.50	-0.05	0.50
11,185.00	90.59	270.32	8,135.54	-2,858.75	-2,693.15	3,517.78	1.02	0.49	-0.89
11,275.00	90.37	271.07	8,134.79	-2,857.66	-2,783.14	3,601.80	0.87	-0.24	0.83
11,364.00	90.06	270.36	8,134.45	-2,856.55	-2,872.14	3,684.88	0.87	-0.35	-0.80
11,428.87	90.54	269.83	8,134.12	-2,856.44	-2,937.00	3,745.68	1.10	0.73	-0.82
Cross @ 11428.87' MD									
11,454.00	90.72	269.62	8,133.84	-2,856.56	-2,962.13	3,769.29	1.10	0.73	-0.82
11,543.00	89.79	271.51	8,133.44	-2,855.68	-3,051.12	3,852.45	2.37	-1.04	2.12
11,633.00	90.28	270.67	8,133.39	-2,853.97	-3,141.10	3,936.24	1.08	0.54	-0.93

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Coyote Trails 33W-15-6C
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5301.00usft (Ensign 147)
Site:	Sec 28-T1N-R68W Coyote Trails	MD Reference:	KB @ 5301.00usft (Ensign 147)
Well:	Coyote Trails 33W-15-6C	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
11,721.00	90.06	269.22	8,133.13	-2,854.06	-3,229.10	4,018.80	1.67	-0.25	-1.65
11,811.00	89.44	266.80	8,133.52	-2,857.18	-3,319.04	4,104.24	2.78	-0.69	-2.69
11,900.00	89.40	268.91	8,134.42	-2,860.51	-3,407.97	4,188.80	2.37	-0.04	2.37
11,990.00	90.54	269.79	8,134.47	-2,861.53	-3,497.96	4,273.55	1.60	1.27	0.98
12,079.00	91.60	269.79	8,132.81	-2,861.86	-3,586.94	4,357.12	1.19	1.19	0.00
12,169.00	90.15	270.19	8,131.43	-2,861.88	-3,676.93	4,441.52	1.67	-1.61	0.44
12,258.00	90.41	270.45	8,131.00	-2,861.38	-3,765.93	4,524.82	0.41	0.29	0.29
12,348.00	91.07	270.50	8,129.84	-2,860.63	-3,855.91	4,608.95	0.74	0.73	0.06
12,437.00	90.10	270.54	8,128.93	-2,859.82	-3,944.91	4,692.14	1.09	-1.09	0.04
12,526.00	87.45	270.63	8,130.83	-2,858.92	-4,033.87	4,775.26	2.98	-2.98	0.10
12,616.00	88.73	269.88	8,133.83	-2,858.52	-4,123.82	4,859.48	1.65	1.42	-0.83
12,706.00	89.75	270.45	8,135.02	-2,858.26	-4,213.81	4,943.79	1.30	1.13	0.63
12,795.00	89.35	270.06	8,135.72	-2,857.86	-4,302.81	5,027.12	0.63	-0.45	-0.44
12,884.00	91.03	270.67	8,135.43	-2,857.29	-4,391.80	5,110.39	2.01	1.89	0.69
12,973.00	89.93	269.09	8,134.68	-2,857.48	-4,480.79	5,193.91	2.16	-1.24	-1.78
13,063.00	87.45	268.87	8,136.74	-2,859.08	-4,570.75	5,278.83	2.77	-2.76	-0.24
13,152.00	86.66	270.41	8,141.31	-2,859.64	-4,659.62	5,362.38	1.94	-0.89	1.73
13,242.00	90.15	271.11	8,143.82	-2,858.45	-4,749.57	5,446.32	3.95	3.88	0.78
13,331.00	90.28	270.72	8,143.48	-2,857.03	-4,838.55	5,529.29	0.46	0.15	-0.44
13,421.00	90.37	269.75	8,142.97	-2,856.66	-4,928.55	5,613.57	1.08	0.10	-1.08
13,510.00	90.94	269.88	8,141.95	-2,856.94	-5,017.55	5,697.13	0.66	0.64	0.15
13,600.00	89.93	270.41	8,141.27	-2,856.72	-5,107.54	5,781.46	1.27	-1.12	0.59
13,689.00	90.15	269.70	8,141.21	-2,856.63	-5,196.54	5,864.90	0.84	0.25	-0.80
13,779.00	90.32	269.00	8,140.84	-2,857.65	-5,286.53	5,949.65	0.80	0.19	-0.78
13,869.00	90.54	268.56	8,140.16	-2,859.57	-5,376.51	6,034.70	0.55	0.24	-0.49
13,958.00	89.35	267.32	8,140.25	-2,862.77	-5,465.45	6,119.23	1.93	-1.34	-1.39
14,048.00	89.00	267.90	8,141.55	-2,866.52	-5,555.36	6,204.85	0.75	-0.39	0.64
14,137.00	89.62	268.03	8,142.62	-2,869.68	-5,644.30	6,289.36	0.71	0.70	0.15
14,227.00	89.22	267.10	8,143.53	-2,873.50	-5,734.21	6,375.01	1.12	-0.44	-1.03
14,316.00	90.28	268.12	8,143.92	-2,877.21	-5,823.13	6,459.70	1.65	1.19	1.15
14,406.00	90.41	269.44	8,143.38	-2,879.13	-5,913.11	6,544.75	1.47	0.14	1.47
14,496.00	89.35	270.63	8,143.56	-2,879.08	-6,003.10	6,629.13	1.77	-1.18	1.32
14,586.00	88.20	270.19	8,145.49	-2,878.43	-6,093.08	6,713.30	1.37	-1.28	-0.49
14,676.00	87.76	269.62	8,148.66	-2,878.58	-6,183.02	6,797.70	0.80	-0.49	-0.63
14,765.00	88.38	269.40	8,151.66	-2,879.34	-6,271.97	6,881.39	0.74	0.70	-0.25
14,855.00	89.00	269.88	8,153.72	-2,879.91	-6,361.94	6,965.97	0.87	0.69	0.53
14,945.00	87.67	268.87	8,156.33	-2,880.89	-6,451.89	7,050.67	1.86	-1.48	-1.12
15,034.00	88.51	269.35	8,159.30	-2,882.27	-6,540.83	7,134.56	1.09	0.94	0.54
15,124.00	89.35	269.97	8,160.98	-2,882.80	-6,630.81	7,219.14	1.16	0.93	0.69
15,213.00	89.26	269.53	8,162.06	-2,883.19	-6,719.81	7,302.74	0.50	-0.10	-0.49
15,303.00	90.59	270.63	8,162.17	-2,883.07	-6,809.80	7,387.10	1.92	1.48	1.22
15,392.00	91.03	271.69	8,160.92	-2,881.26	-6,898.78	7,469.92	1.29	0.49	1.19
15,481.00	91.21	271.07	8,159.18	-2,879.12	-6,987.73	7,552.60	0.73	0.20	-0.70

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Coyote Trails 33W-15-6C
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5301.00usft (Ensign 147)
Site:	Sec 28-T1N-R68W Coyote Trails	MD Reference:	KB @ 5301.00usft (Ensign 147)
Well:	Coyote Trails 33W-15-6C	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
15,571.00	91.56	270.59	8,157.00	-2,877.82	-7,077.70	7,636.52	0.66	0.39	-0.53
15,660.00	92.09	271.42	8,154.17	-2,876.26	-7,166.64	7,719.40	1.11	0.60	0.93
15,750.00	90.28	271.64	8,152.31	-2,873.86	-7,256.58	7,802.92	2.03	-2.01	0.24
15,839.00	90.01	272.44	8,152.08	-2,870.69	-7,345.52	7,885.24	0.95	-0.30	0.90
15,929.00	89.09	271.47	8,152.79	-2,867.62	-7,435.47	7,968.53	1.49	-1.02	-1.08
16,019.00	89.57	270.98	8,153.84	-2,865.69	-7,525.44	8,052.24	0.76	0.53	-0.54
16,109.00	89.97	270.72	8,154.20	-2,864.36	-7,615.43	8,136.18	0.53	0.44	-0.29
Last MWD Survey @ 16109' MD									
16,174.00	89.97	270.72	8,154.23	-2,863.54	-7,680.42	8,196.85	0.00	0.00	0.00
Projection to TD @ 16174' MD 1614.5' FNL/ 513.5' FWL									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Cross @ 3925.14' MD - actual wellpath hits target center - Point	0.00	0.00	3,641.77	-1,230.00	0.76	1,248,628.85	3,137,926.38	40.014821	-105.007567
30° Inclination @ 8340.5 - actual wellpath hits target center - Point	0.00	0.00	7,655.30	-2,827.75	-10.93	1,247,031.06	3,137,923.56	40.010435	-105.007608
70° Inclination @ 8990.1 - actual wellpath hits target center - Point	0.00	0.00	8,056.45	-2,839.32	-505.93	1,247,016.75	3,137,428.63	40.010404	-105.009375
Cross @ 11428.87' MD - actual wellpath hits target center - Point	0.00	0.00	8,134.12	-2,856.44	-2,937.00	1,246,986.12	3,134,997.70	40.010356	-105.018054

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
114.00	114.00	0.24	0.87	First Surface Survey
1,548.00	1,534.61	-144.84	2.37	Last Surface Survey
1,670.00	1,651.55	-179.60	3.11	First MWD Survey @ 1670' MD
3,925.14	3,641.77	-1,230.00	0.76	Cross @ 3925.14' MD
8,340.53	7,655.31	-2,827.75	-10.93	30° Inclination @ 8340.53' MD
8,990.13	8,056.45	-2,839.32	-505.93	70° Inclination @ 8990.13' MD
11,428.87	8,134.12	-2,856.44	-2,937.00	Cross @ 11428.87' MD
16,109.00	8,154.20	-2,864.36	-7,615.43	Last MWD Survey @ 16109' MD
16,174.00	8,154.23	-2,863.54	-7,680.42	Projection to TD @ 16174' MD 1614.5' FNL/ 513.5' FWL

Checked By: _____	Approved By: _____	Date: _____
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