

Extraction Oil & Gas

Weld County, CO (NAD83)

Sec 28-T1N-R68W Coyote Trails

Coyote Trails 33W-15-2C

Wellbore #1

Design: Wellbore #1

Standard Survey Report

02 May, 2019

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Coyote Trails 33W-15-2C
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5301.0usft (Ensign 147)
Site:	Sec 28-T1N-R68W Coyote Trails	MD Reference:	KB @ 5301.0usft (Ensign 147)
Well:	Coyote Trails 33W-15-2C	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° 1' 4.362 N
From:	Map	Easting:	3,138,161.85 usft	Longitude:	105° 0' 24.133 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well	Coyote Trails 33W-15-2C					
Well Position	+N/-S	0.0 usft	Northing:	1,249,858.63 usft	Latitude:	40° 1' 5.513 N
	+E/-W	0.0 usft	Easting:	3,137,882.94 usft	Longitude:	105° 0' 27.709 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	5,273.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/22/2019	8.12	66.47	51,923.52166676

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	257.47	

Survey Program	Date	5/2/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
114.0	1,548.0	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,672.0	15,847.0	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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
114.0	0.97	91.59	114.0	0.0	1.0	-0.9	0.85	0.85	0.00	
First Surface Survey										
205.0	1.03	105.20	205.0	-0.3	2.5	-2.4	0.27	0.07	14.96	
295.0	0.32	176.89	295.0	-0.7	3.3	-3.1	1.09	-0.79	79.66	
385.0	0.24	163.24	385.0	-1.2	3.4	-3.1	0.12	-0.09	-15.17	
474.0	0.26	203.61	474.0	-1.5	3.4	-2.9	0.19	0.02	45.36	
564.0	0.33	209.48	564.0	-1.9	3.1	-2.7	0.08	0.08	6.52	
654.0	0.32	202.37	654.0	-2.4	2.9	-2.3	0.05	-0.01	-7.90	
743.0	0.39	206.60	743.0	-2.9	2.7	-2.0	0.08	0.08	4.75	

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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)	
832.0	0.55	214.42	832.0	-3.5	2.3	-1.5	0.19	0.18	8.79	
922.0	0.68	233.74	922.0	-4.2	1.6	-0.7	0.27	0.14	21.47	
1,011.0	0.66	244.77	1,011.0	-4.7	0.8	0.3	0.15	-0.02	12.39	
1,100.0	0.71	242.39	1,099.9	-5.2	-0.2	1.3	0.06	0.06	-2.67	
1,190.0	0.83	239.44	1,189.9	-5.8	-1.3	2.5	0.14	0.13	-3.28	
1,279.0	0.76	243.29	1,278.9	-6.4	-2.3	3.7	0.10	-0.08	4.33	
1,369.0	0.85	237.32	1,368.9	-7.0	-3.4	4.9	0.14	0.10	-6.63	
1,458.0	2.13	202.03	1,457.9	-8.9	-4.6	6.4	1.71	1.44	-39.65	
1,548.0	3.40	185.24	1,547.8	-13.1	-5.5	8.2	1.66	1.41	-18.66	
Last Surface Survey/Tie into Surface Surveys										
1,672.0	3.76	181.57	1,671.5	-20.8	-5.9	10.3	0.34	0.29	-2.96	
First MWD Survey @ 1672' MD										
1,762.0	6.45	180.16	1,761.2	-28.8	-6.0	12.1	2.99	2.99	-1.57	
1,851.0	8.88	178.84	1,849.4	-40.7	-5.9	14.6	2.74	2.73	-1.48	
1,940.0	12.55	179.41	1,936.8	-57.2	-5.7	17.9	4.13	4.12	0.64	
2,030.0	15.64	173.24	2,024.1	-79.1	-4.1	21.2	3.81	3.43	-6.86	
2,119.0	17.23	171.21	2,109.5	-104.0	-0.7	23.2	1.90	1.79	-2.28	
2,208.0	18.12	171.65	2,194.3	-130.7	3.3	25.1	1.01	1.00	0.49	
2,297.0	17.10	170.90	2,279.1	-157.4	7.4	26.9	1.17	-1.15	-0.84	
2,387.0	17.94	169.05	2,364.9	-184.0	12.1	28.1	1.12	0.93	-2.06	
2,476.0	19.09	171.04	2,449.3	-211.9	17.0	29.4	1.47	1.29	2.24	
2,566.0	17.50	169.49	2,534.8	-239.7	21.8	30.8	1.85	-1.77	-1.72	
2,656.0	19.09	170.38	2,620.2	-267.5	26.7	32.0	1.79	1.77	0.99	
2,746.0	17.41	169.94	2,705.7	-295.3	31.5	33.3	1.87	-1.87	-0.49	
2,835.0	17.45	171.35	2,790.6	-321.6	35.8	34.8	0.48	0.04	1.58	
2,924.0	19.18	170.99	2,875.1	-349.2	40.1	36.6	1.95	1.94	-0.40	
3,014.0	17.41	170.16	2,960.5	-377.1	44.7	38.1	1.99	-1.97	-0.92	
3,103.0	18.12	170.90	3,045.3	-403.9	49.2	39.6	0.84	0.80	0.83	
3,193.0	19.13	173.37	3,130.6	-432.4	53.1	41.9	1.42	1.12	2.74	
3,283.0	17.63	175.09	3,216.0	-460.6	56.0	45.2	1.77	-1.67	1.91	
3,373.0	18.29	176.90	3,301.6	-488.3	57.9	49.4	0.96	0.73	2.01	
3,462.0	18.65	174.96	3,386.0	-516.4	59.9	53.5	0.80	0.40	-2.18	
3,552.0	16.57	173.86	3,471.8	-543.5	62.6	56.8	2.34	-2.31	-1.22	
3,641.0	18.38	174.61	3,556.7	-570.1	65.2	60.0	2.05	2.03	0.84	
3,731.0	19.35	175.18	3,641.8	-599.1	67.8	63.7	1.10	1.08	0.63	
3,820.0	16.26	174.87	3,726.6	-626.2	70.2	67.3	3.47	-3.47	-0.35	
3,910.0	17.45	176.33	3,812.7	-652.2	72.2	71.0	1.40	1.32	1.62	
3,999.0	18.21	179.01	3,897.4	-679.4	73.3	75.9	1.26	0.85	3.01	
4,089.0	17.94	175.09	3,983.0	-707.3	74.7	80.5	1.38	-0.30	-4.36	
4,179.0	18.21	174.74	4,068.5	-735.1	77.2	84.1	0.32	0.30	-0.39	
4,268.0	18.38	168.75	4,153.0	-762.7	81.2	86.2	2.12	0.19	-6.73	
4,358.0	18.16	172.89	4,238.5	-790.5	85.7	87.8	1.46	-0.24	4.60	
4,448.0	15.73	172.01	4,324.6	-816.5	89.1	90.1	2.71	-2.70	-0.98	

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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)	
4,538.0	17.94	174.92	4,410.7	-842.4	92.0	92.9	2.63	2.46	3.23	
4,627.0	17.50	171.79	4,495.5	-869.3	95.2	95.7	1.18	-0.49	-3.52	
4,717.0	18.65	174.56	4,581.1	-897.1	98.5	98.5	1.59	1.28	3.08	
4,806.0	19.44	175.05	4,665.2	-926.0	101.1	102.2	0.91	0.89	0.55	
4,895.0	16.57	173.86	4,749.8	-953.4	103.7	105.5	3.25	-3.22	-1.34	
4,985.0	16.53	172.27	4,836.1	-978.8	106.8	108.0	0.51	-0.04	-1.77	
5,075.0	17.19	171.13	4,922.2	-1,004.6	110.6	110.0	0.82	0.73	-1.27	
5,164.0	19.40	173.50	5,006.7	-1,032.3	114.3	112.3	2.62	2.48	2.66	
5,253.0	17.85	173.81	5,091.1	-1,060.6	117.4	115.4	1.75	-1.74	0.35	
5,343.0	18.96	175.49	5,176.5	-1,088.8	120.1	119.0	1.37	1.23	1.87	
5,432.0	17.19	174.47	5,261.1	-1,116.4	122.5	122.6	2.02	-1.99	-1.15	
5,522.0	17.90	177.96	5,346.9	-1,143.4	124.3	126.7	1.41	0.79	3.88	
5,611.0	19.84	181.22	5,431.1	-1,172.2	124.4	132.8	2.48	2.18	3.66	
5,700.0	19.13	181.48	5,515.0	-1,201.9	123.7	139.9	0.80	-0.80	0.29	
5,790.0	18.29	181.13	5,600.2	-1,230.7	123.1	146.8	0.94	-0.93	-0.39	
5,879.0	16.53	180.56	5,685.2	-1,257.4	122.7	153.0	1.99	-1.98	-0.64	
5,969.0	17.37	174.78	5,771.3	-1,283.5	123.8	157.6	2.09	0.93	-6.42	
6,058.0	17.72	173.81	5,856.1	-1,310.2	126.4	160.8	0.51	0.39	-1.09	
6,147.0	18.03	170.68	5,940.8	-1,337.3	130.1	163.1	1.13	0.35	-3.52	
6,236.0	18.56	172.98	6,025.3	-1,364.9	134.1	165.2	1.01	0.60	2.58	
6,325.0	18.91	171.92	6,109.6	-1,393.3	137.8	167.7	0.55	0.39	-1.19	
6,415.0	17.19	169.80	6,195.2	-1,420.8	142.3	169.3	2.05	-1.91	-2.36	
6,505.0	17.68	171.30	6,281.0	-1,447.4	146.7	170.8	0.74	0.54	1.67	
6,594.0	17.72	174.92	6,365.8	-1,474.3	149.9	173.4	1.24	0.04	4.07	
6,684.0	16.92	178.44	6,451.8	-1,501.0	151.5	177.7	1.46	-0.89	3.91	
6,774.0	14.36	178.53	6,538.4	-1,525.2	152.1	182.3	2.84	-2.84	0.10	
6,863.0	14.18	184.43	6,624.7	-1,547.1	151.6	187.6	1.65	-0.20	6.63	
6,975.0	14.23	181.88	6,733.3	-1,574.6	150.1	195.1	0.56	0.04	-2.28	
7,065.0	14.32	178.18	6,820.5	-1,596.8	150.1	199.9	1.02	0.10	-4.11	
7,154.0	12.06	176.28	6,907.1	-1,617.0	151.0	203.4	2.59	-2.54	-2.13	
7,244.0	10.03	175.40	6,995.5	-1,634.2	152.2	205.9	2.26	-2.26	-0.98	
7,334.0	8.53	173.33	7,084.3	-1,648.7	153.6	207.6	1.71	-1.67	-2.30	
7,423.0	5.08	177.78	7,172.6	-1,659.2	154.6	209.0	3.92	-3.88	5.00	
7,513.0	2.56	172.67	7,262.4	-1,665.2	155.0	209.9	2.82	-2.80	-5.68	
7,603.0	0.35	340.56	7,352.4	-1,666.9	155.1	210.1	3.23	-2.46	186.54	
7,693.0	4.07	275.43	7,442.3	-1,666.3	151.9	213.2	4.37	4.13	-72.37	
7,782.0	12.90	270.85	7,530.3	-1,665.9	138.8	225.9	9.94	9.92	-5.15	
7,872.0	20.99	271.03	7,616.3	-1,665.4	112.6	251.4	8.99	8.99	0.20	
7,961.0	27.71	264.90	7,697.3	-1,667.0	76.0	287.4	8.06	7.55	-6.89	
7,984.5	30.00	264.84	7,717.9	-1,668.0	64.7	298.7	9.73	9.73	-0.24	
30° Inclination @ 7984.5' MD										
8,050.0	36.37	264.72	7,772.7	-1,671.3	29.0	334.2	9.73	9.73	-0.19	
8,140.0	46.93	266.27	7,839.9	-1,675.9	-30.6	393.4	11.79	11.73	1.72	
8,230.0	51.97	266.80	7,898.4	-1,680.0	-98.8	460.9	5.62	5.60	0.59	

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8,320.0	55.86	267.19	7,951.3	-1,683.8	-171.4	532.6	4.34	4.32	0.43	
8,409.0	60.94	267.02	7,998.0	-1,687.6	-247.1	607.3	5.71	5.71	-0.19	
8,499.0	64.69	267.50	8,039.1	-1,691.5	-327.0	686.2	4.19	4.17	0.53	
8,589.0	67.48	266.93	8,075.6	-1,695.5	-409.2	767.3	3.15	3.10	-0.63	
8,632.5	69.99	268.06	8,091.3	-1,697.2	-449.7	807.2	6.26	5.78	2.59	
70° Inclination @ 8632.5' MD										
8,679.0	72.69	269.22	8,106.2	-1,698.3	-493.8	850.4	6.26	5.80	2.50	
8,769.0	83.12	271.73	8,125.0	-1,697.5	-581.6	936.0	11.90	11.59	2.79	
8,858.0	89.00	270.89	8,131.2	-1,695.5	-670.3	1,022.2	6.67	6.61	-0.94	
8,948.0	89.31	269.62	8,132.5	-1,695.1	-760.3	1,109.9	1.45	0.34	-1.41	
9,037.0	89.75	269.48	8,133.2	-1,695.8	-849.3	1,197.0	0.52	0.49	-0.16	
9,127.0	90.15	268.73	8,133.3	-1,697.2	-939.3	1,285.1	0.94	0.44	-0.83	
9,217.0	89.84	269.97	8,133.3	-1,698.2	-1,029.3	1,373.2	1.42	-0.34	1.38	
9,307.0	88.11	270.28	8,134.9	-1,698.0	-1,119.3	1,461.0	1.95	-1.92	0.34	
9,397.0	88.16	270.14	8,137.8	-1,697.7	-1,209.2	1,548.7	0.17	0.06	-0.16	
9,486.0	88.64	270.67	8,140.3	-1,697.1	-1,298.2	1,635.4	0.80	0.54	0.60	
9,575.0	89.26	270.28	8,142.0	-1,696.3	-1,387.2	1,722.1	0.82	0.70	-0.44	
9,665.0	89.84	269.62	8,142.7	-1,696.4	-1,477.2	1,810.0	0.98	0.64	-0.73	
9,755.0	90.59	270.28	8,142.3	-1,696.5	-1,567.2	1,897.9	1.11	0.83	0.73	
9,844.0	90.81	268.87	8,141.2	-1,697.1	-1,656.2	1,984.9	1.60	0.25	-1.58	
9,934.0	91.38	268.73	8,139.5	-1,699.0	-1,746.1	2,073.1	0.65	0.63	-0.16	
10,023.0	89.70	269.92	8,138.7	-1,700.1	-1,835.1	2,160.2	2.31	-1.89	1.34	
10,114.0	88.51	268.07	8,140.1	-1,701.7	-1,926.1	2,249.4	2.42	-1.31	-2.03	
10,204.0	89.04	267.77	8,142.0	-1,704.9	-2,016.0	2,337.8	0.68	0.59	-0.33	
10,293.0	89.93	267.68	8,142.8	-1,708.5	-2,104.9	2,425.4	1.01	1.00	-0.10	
10,382.0	90.32	269.57	8,142.6	-1,710.6	-2,193.9	2,512.7	2.17	0.44	2.12	
10,471.0	89.04	270.67	8,143.1	-1,710.4	-2,282.9	2,599.6	1.90	-1.44	1.24	
10,561.0	89.26	270.98	8,144.5	-1,709.1	-2,372.9	2,687.1	0.42	0.24	0.34	
10,651.0	90.10	271.07	8,145.0	-1,707.5	-2,462.9	2,774.6	0.94	0.93	0.10	
10,740.0	88.82	271.38	8,145.8	-1,705.6	-2,551.8	2,861.1	1.48	-1.44	0.35	
10,829.0	89.62	271.47	8,147.0	-1,703.4	-2,640.8	2,947.4	0.90	0.90	0.10	
10,919.0	90.15	271.69	8,147.2	-1,700.9	-2,730.8	3,034.7	0.64	0.59	0.24	
11,009.0	90.59	271.33	8,146.6	-1,698.5	-2,820.7	3,122.0	0.63	0.49	-0.40	
11,098.0	86.96	270.72	8,148.5	-1,696.9	-2,909.7	3,208.5	4.14	-4.08	-0.69	
11,102.3	87.01	270.68	8,148.7	-1,696.9	-2,914.0	3,212.7	1.47	1.20	-0.84	
Cross @ 11102.3' MD										
11,187.0	88.03	269.97	8,152.4	-1,696.4	-2,998.6	3,295.2	1.47	1.20	-0.84	
11,276.0	88.69	268.34	8,155.0	-1,697.7	-3,087.5	3,382.3	1.98	0.74	-1.83	
11,365.0	88.20	269.04	8,157.4	-1,699.8	-3,176.5	3,469.6	0.96	-0.55	0.79	
11,455.0	88.69	269.26	8,159.8	-1,701.1	-3,266.4	3,557.7	0.60	0.54	0.24	
11,544.0	88.38	268.38	8,162.1	-1,702.9	-3,355.4	3,644.9	1.05	-0.35	-0.99	
11,634.0	88.42	267.68	8,164.6	-1,706.0	-3,445.3	3,733.3	0.78	0.04	-0.78	
11,722.0	89.31	269.53	8,166.3	-1,708.2	-3,533.3	3,819.7	2.33	1.01	2.10	
11,812.0	89.13	268.60	8,167.6	-1,709.6	-3,623.2	3,907.8	1.05	-0.20	-1.03	

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Coyote Trails 33W-15-2C
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5301.0usft (Ensign 147)
Site:	Sec 28-T1N-R68W Coyote Trails	MD Reference:	KB @ 5301.0usft (Ensign 147)
Well:	Coyote Trails 33W-15-2C	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)
11,901.0	89.44	267.63	8,168.7	-1,712.5	-3,712.2	3,995.3	1.14	0.35	-1.09
11,991.0	89.93	266.75	8,169.2	-1,717.0	-3,802.1	4,084.0	1.12	0.54	-0.98
12,080.0	90.77	269.18	8,168.6	-1,720.1	-3,891.0	4,171.5	2.89	0.94	2.73
12,170.0	91.52	269.70	8,166.8	-1,721.0	-3,981.0	4,259.5	1.01	0.83	0.58
12,259.0	88.47	271.16	8,166.8	-1,720.3	-4,070.0	4,346.2	3.80	-3.43	1.64
12,349.0	89.31	272.79	8,168.6	-1,717.2	-4,159.9	4,433.3	2.04	0.93	1.81
12,438.0	89.48	273.10	8,169.5	-1,712.7	-4,248.8	4,519.1	0.40	0.19	0.35
12,527.0	88.78	273.05	8,170.9	-1,707.9	-4,337.6	4,604.8	0.79	-0.79	-0.06
12,617.0	89.84	272.70	8,172.0	-1,703.4	-4,427.5	4,691.6	1.24	1.18	-0.39
12,707.0	89.53	273.05	8,172.5	-1,698.9	-4,517.4	4,778.3	0.52	-0.34	0.39
12,796.0	91.03	272.26	8,172.0	-1,694.7	-4,606.3	4,864.2	1.90	1.69	-0.89
12,885.0	90.72	272.61	8,170.7	-1,691.0	-4,695.2	4,950.2	0.53	-0.35	0.39
12,974.0	92.36	270.76	8,168.3	-1,688.3	-4,784.1	5,036.4	2.78	1.84	-2.08
13,064.0	91.74	269.75	8,165.0	-1,687.9	-4,874.1	5,124.2	1.32	-0.69	-1.12
13,153.0	91.16	269.40	8,162.8	-1,688.6	-4,963.0	5,211.2	0.76	-0.65	-0.39
13,243.0	90.68	269.22	8,161.4	-1,689.7	-5,053.0	5,299.2	0.57	-0.53	-0.20
13,332.0	90.01	269.57	8,160.8	-1,690.6	-5,142.0	5,386.3	0.85	-0.75	0.39
13,422.0	88.56	266.35	8,161.9	-1,693.8	-5,231.9	5,474.8	3.92	-1.61	-3.58
13,511.0	89.53	264.77	8,163.4	-1,700.7	-5,320.6	5,562.9	2.08	1.09	-1.78
13,601.0	90.59	266.84	8,163.3	-1,707.3	-5,410.4	5,651.9	2.58	1.18	2.30
13,690.0	90.72	269.31	8,162.3	-1,710.3	-5,499.3	5,739.4	2.78	0.15	2.78
13,780.0	90.63	268.87	8,161.2	-1,711.7	-5,589.3	5,827.5	0.50	-0.10	-0.49
13,870.0	91.12	269.48	8,159.9	-1,713.0	-5,679.3	5,915.7	0.87	0.54	0.68
13,959.0	92.05	269.40	8,157.4	-1,713.9	-5,768.3	6,002.7	1.05	1.04	-0.09
14,049.0	90.46	269.04	8,155.4	-1,715.1	-5,858.2	6,090.8	1.81	-1.77	-0.40
14,138.0	88.86	268.25	8,156.0	-1,717.2	-5,947.2	6,178.1	2.00	-1.80	-0.89
14,228.0	88.07	267.59	8,158.4	-1,720.5	-6,037.1	6,266.6	1.14	-0.88	-0.73
14,317.0	88.20	269.09	8,161.3	-1,723.1	-6,126.0	6,353.9	1.69	0.15	1.69
14,407.0	88.86	268.16	8,163.6	-1,725.2	-6,216.0	6,442.2	1.27	0.73	-1.03
14,497.0	89.17	269.31	8,165.1	-1,727.2	-6,305.9	6,530.4	1.32	0.34	1.28
14,587.0	91.34	270.59	8,164.7	-1,727.3	-6,395.9	6,618.3	2.80	2.41	1.42
14,676.0	90.59	269.84	8,163.2	-1,726.9	-6,484.9	6,705.1	1.19	-0.84	-0.84
14,766.0	89.66	270.85	8,163.0	-1,726.4	-6,574.9	6,792.8	1.53	-1.03	1.12
14,856.0	89.09	270.85	8,164.0	-1,725.1	-6,664.9	6,880.4	0.63	-0.63	0.00
14,946.0	88.91	270.19	8,165.6	-1,724.2	-6,754.9	6,968.0	0.76	-0.20	-0.73
15,035.0	89.00	269.70	8,167.2	-1,724.3	-6,843.8	7,054.9	0.56	0.10	-0.55
15,125.0	88.60	268.78	8,169.1	-1,725.5	-6,933.8	7,143.0	1.11	-0.44	-1.02
15,214.0	88.91	270.41	8,171.0	-1,726.2	-7,022.8	7,230.0	1.86	0.35	1.83
15,304.0	90.99	271.60	8,171.1	-1,724.6	-7,112.8	7,317.5	2.66	2.31	1.32
15,393.0	92.31	271.07	8,168.5	-1,722.5	-7,201.7	7,403.9	1.60	1.48	-0.60
15,482.0	90.59	271.55	8,166.3	-1,720.5	-7,290.7	7,490.3	2.01	-1.93	0.54
15,572.0	90.59	271.07	8,165.4	-1,718.4	-7,380.6	7,577.6	0.53	0.00	-0.53
15,661.0	90.90	271.47	8,164.2	-1,716.4	-7,469.6	7,664.1	0.57	0.35	0.45

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Coyote Trails 33W-15-2C
Project:	Weld County, CO (NAD83)	TVD Reference:	KB @ 5301.0usft (Ensign 147)
Site:	Sec 28-T1N-R68W Coyote Trails	MD Reference:	KB @ 5301.0usft (Ensign 147)
Well:	Coyote Trails 33W-15-2C	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)
15,751.0	91.21	269.44	8,162.6	-1,715.7	-7,559.6	7,751.7	2.28	0.34	-2.26
15,778.0	91.52	269.88	8,161.9	-1,715.9	-7,586.6	7,778.1	1.99	1.15	1.63
Last MWD Survey @ 15778' MD									
15,847.0	91.52	269.88	8,160.1	-1,716.0	-7,655.5	7,845.5	0.00	0.00	0.00
Projection to TD @ 15847' MD 468' FNL/ 505.5' 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
30° Inclination @ 7984.5 - actual wellpath hits target center - Point	0.00	0.00	7,717.9	-1,668.0	64.7	1,248,191.00	3,137,956.85	40° 0' 49.028 N	105° 0' 26.878 W
70° Inclination @ 8632.5 - actual wellpath hits target center - Point	0.00	0.00	8,091.3	-1,697.2	-449.7	1,248,158.92	3,137,442.63	40° 0' 48.739 N	105° 0' 33.490 W
Cross @ 11102.3' MD - actual wellpath hits target center - Point	0.00	0.00	8,148.7	-1,696.9	-2,914.0	1,248,145.59	3,134,978.41	40° 0' 48.741 N	105° 1' 5.162 W

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
114.0	114.0	0.0	1.0	First Surface Survey
1,548.0	1,547.8	-13.1	-5.5	Last Surface Survey/Tie into Surface Surveys
1,672.0	1,671.5	-20.8	-5.9	First MWD Survey @ 1672' MD
7,984.5	7,717.9	-1,668.0	64.7	30° Inclination @ 7984.5' MD
8,632.5	8,091.3	-1,697.2	-449.7	70° Inclination @ 8632.5' MD
11,102.3	8,148.7	-1,696.9	-2,914.0	Cross @ 11102.3' MD
15,778.0	8,161.9	-1,715.9	-7,586.6	Last MWD Survey @ 15778' MD
15,847.0	8,160.1	-1,716.0	-7,655.5	Projection to TD @ 15847' MD 468' FNL/ 505.5' FWL

Checked By: _____	Approved By: _____	Date: _____
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