

Extraction Oil & Gas

Weld County, CO (NAD83)

Vetting PAD (Sec 15-T5N-R65W)

VT Glenmere 3-16-18

Wellbore #1

Design: Wellbore #1

Standard Survey Report

28 June, 2018

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well VT Glenmere 3-16-18
Project:	Weld County, CO (NAD83)	TVD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Site:	Vetting PAD (Sec 15-T5N-R65W)	MD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Well:	VT Glenmere 3-16-18	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1

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	Vetting PAD (Sec 15-T5N-R65W)		
Site Position:		Northing:	1,390,162.31 usft
From:	Map	Easting:	3,234,926.48 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	40.401330
		Longitude:	-104.656460
		Grid Convergence:	0.55 °

Well	VT Glenmere 3-16-18		
Well Position	+N/-S	0.00 ft	Northing: 1,390,162.31 usft
	+E/-W	0.00 ft	Easting: 3,234,926.48 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	40.401330
		Longitude:	-104.656460
		Ground Level:	4,647.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/26/2018	8.10	66.88	52,249

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	275.61	

Survey Program	Date	6/28/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
86.00	1,517.00	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,666.00	20,560.00	MWD Surveys (Wellbore #1)	MWD	MWD - Standard	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
86.00	0.65	184.05	86.00	-0.49	-0.03	-0.01	0.76	0.76	0.00	
169.00	0.77	196.89	168.99	-1.49	-0.23	0.08	0.24	0.14	15.47	
251.00	0.81	184.41	250.98	-2.59	-0.43	0.18	0.21	0.05	-15.22	
335.00	0.53	162.63	334.98	-3.56	-0.36	0.01	0.44	-0.33	-25.93	
420.00	0.69	61.82	419.98	-3.69	0.20	-0.56	1.11	0.19	-118.60	
505.00	0.89	5.45	504.97	-2.79	0.72	-0.99	0.90	0.24	-66.32	
591.00	1.24	348.33	590.95	-1.22	0.59	-0.71	0.55	0.41	-19.91	
674.00	0.73	307.94	673.94	-0.01	-0.01	0.00	1.00	-0.61	-48.66	
759.00	1.13	286.86	758.93	0.56	-1.23	1.28	0.61	0.47	-24.80	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
843.00	1.54	293.27	842.91	1.25	-3.06	3.17	0.52	0.49	7.63
927.00	2.03	291.32	926.87	2.24	-5.49	5.68	0.59	0.58	-2.32
1,010.00	2.72	290.74	1,009.80	3.47	-8.70	9.00	0.83	0.83	-0.70
1,095.00	2.61	312.01	1,094.71	5.48	-12.02	12.50	1.16	-0.13	25.02
1,180.00	3.15	318.89	1,179.60	8.53	-15.00	15.76	0.75	0.64	8.09
1,264.00	4.70	309.94	1,263.40	12.48	-19.15	20.28	1.98	1.85	-10.65
1,351.00	7.34	302.25	1,349.91	17.74	-26.59	28.19	3.17	3.03	-8.84
1,435.00	8.42	296.40	1,433.12	23.34	-36.63	38.74	1.60	1.29	-6.96
1,517.00	9.81	296.78	1,514.08	29.15	-48.25	50.87	1.70	1.70	0.46
Tie in to Surface Surveys @ 1517'MD									
1,666.00	9.28	291.81	1,661.02	39.34	-70.73	74.24	0.66	-0.36	-3.34
First MWD Survey @ 1666'MD									
1,762.00	12.59	299.08	1,755.27	47.30	-87.07	91.28	3.73	3.45	7.57
1,857.00	16.08	289.39	1,847.31	56.70	-108.54	113.56	4.45	3.67	-10.20
1,953.00	19.00	290.40	1,938.84	66.57	-135.73	141.59	3.06	3.04	1.05
2,049.00	21.70	293.93	2,028.84	79.22	-166.61	173.55	3.09	2.81	3.68
2,145.00	24.70	292.83	2,117.07	94.20	-201.33	209.57	3.16	3.13	-1.15
2,240.00	27.97	295.12	2,202.20	111.36	-239.80	249.54	3.60	3.44	2.41
2,335.00	26.65	294.55	2,286.61	129.67	-279.35	290.69	1.42	-1.39	-0.60
2,430.00	29.65	294.24	2,370.36	148.18	-320.17	333.12	3.16	3.16	-0.33
2,442.00	29.98	294.32	2,380.77	150.63	-325.61	338.77	2.78	2.76	0.68
30°Inclination @ 2442'MD									
2,526.00	32.30	294.85	2,452.67	168.71	-365.10	379.84	2.78	2.76	0.63
2,621.00	31.82	294.55	2,533.18	189.78	-410.92	427.50	0.53	-0.51	-0.32
2,716.00	35.04	295.65	2,612.45	212.00	-458.29	476.82	3.45	3.39	1.16
2,812.00	39.73	294.94	2,688.71	236.88	-510.99	531.69	4.91	4.89	-0.74
2,908.00	39.90	294.11	2,762.45	262.39	-566.91	589.84	0.58	0.18	-0.86
3,092.92	37.80	292.35	2,906.46	308.18	-673.47	700.36	1.28	-1.14	-0.95
Crossing Section 15/16 @ 3092'MD									
3,098.00	37.74	292.30	2,910.48	309.36	-676.35	703.34	1.28	-1.13	-1.00
3,194.00	36.94	292.21	2,986.80	331.41	-730.24	759.13	0.84	-0.83	-0.09
3,290.00	35.44	292.03	3,064.28	352.76	-782.75	813.47	1.57	-1.56	-0.19
3,385.00	37.52	290.49	3,140.66	373.22	-835.38	867.86	2.39	2.19	-1.62
3,480.00	35.57	290.27	3,216.98	392.92	-888.41	922.55	2.06	-2.05	-0.23
3,576.00	37.47	291.77	3,294.13	413.42	-941.72	977.62	2.19	1.98	1.56
3,671.00	38.44	292.08	3,369.03	435.24	-995.93	1,033.69	1.04	1.02	0.33
3,767.00	35.04	291.33	3,445.95	456.49	-1,049.27	1,088.85	3.57	-3.54	-0.78
3,862.00	37.83	292.30	3,522.38	477.47	-1,101.63	1,143.02	3.00	2.94	1.02
3,958.00	41.58	291.11	3,596.22	500.12	-1,158.61	1,201.94	3.99	3.91	-1.24
4,053.00	42.02	291.37	3,667.04	523.06	-1,217.63	1,262.92	0.50	0.46	0.27
4,149.00	42.51	290.93	3,738.09	546.36	-1,277.85	1,325.12	0.60	0.51	-0.46
4,244.00	42.69	291.15	3,808.01	569.44	-1,337.86	1,387.11	0.25	0.19	0.23
4,340.00	42.64	291.24	3,878.61	592.96	-1,398.52	1,449.78	0.08	-0.05	0.09
4,435.00	41.85	290.84	3,948.93	615.89	-1,458.13	1,511.34	0.88	-0.83	-0.42

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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)
4,531.00	39.55	291.33	4,021.71	638.41	-1,516.54	1,571.67	2.42	-2.40	0.51
4,626.00	37.52	291.73	4,096.02	660.12	-1,571.59	1,628.58	2.15	-2.14	0.42
4,722.00	35.71	292.34	4,173.07	681.60	-1,624.67	1,683.50	1.92	-1.89	0.64
4,818.00	37.07	292.39	4,250.35	703.27	-1,677.34	1,738.04	1.42	1.42	0.05
4,913.00	35.04	291.42	4,327.15	724.14	-1,729.21	1,791.70	2.22	-2.14	-1.02
5,009.00	38.31	294.99	4,404.14	746.78	-1,781.85	1,846.30	4.07	3.41	3.72
5,104.00	37.03	294.59	4,479.34	771.13	-1,834.55	1,901.13	1.37	-1.35	-0.42
5,200.00	34.03	294.19	4,557.45	794.17	-1,885.36	1,953.94	3.13	-3.13	-0.42
5,295.00	36.77	294.19	4,634.88	816.71	-1,935.55	2,006.10	2.88	2.88	0.00
5,390.00	38.18	292.61	4,710.28	839.66	-1,988.60	2,061.13	1.80	1.48	-1.66
5,486.00	35.13	292.39	4,787.28	861.59	-2,041.54	2,115.97	3.18	-3.18	-0.23
5,582.00	36.68	292.92	4,865.04	883.28	-2,093.49	2,169.79	1.65	1.61	0.55
5,677.00	41.58	292.61	4,938.71	906.46	-2,148.76	2,227.06	5.16	5.16	-0.33
5,773.00	39.68	291.55	5,011.56	929.97	-2,206.68	2,287.00	2.11	-1.98	-1.10
5,868.00	37.43	290.14	5,085.85	951.05	-2,262.00	2,344.11	2.54	-2.37	-1.48
5,986.00	34.51	290.36	5,181.34	975.03	-2,327.02	2,411.16	2.48	-2.47	0.19
6,082.00	34.56	294.94	5,260.44	995.98	-2,377.21	2,463.17	2.70	0.05	4.77
6,177.00	38.31	293.09	5,336.86	1,018.90	-2,428.75	2,516.70	4.11	3.95	-1.95
6,273.00	38.40	293.27	5,412.14	1,042.35	-2,483.51	2,573.49	0.15	0.09	0.19
6,369.00	38.58	293.09	5,487.28	1,065.87	-2,538.44	2,630.45	0.22	0.19	-0.19
6,464.00	37.25	290.84	5,562.23	1,087.71	-2,592.56	2,686.45	2.02	-1.40	-2.37
6,560.00	38.58	291.90	5,637.97	1,109.22	-2,647.49	2,743.22	1.54	1.39	1.10
6,655.00	38.89	290.23	5,712.07	1,130.58	-2,702.96	2,800.51	1.15	0.33	-1.76
6,750.00	37.96	292.92	5,786.50	1,152.27	-2,757.86	2,857.26	2.01	-0.98	2.83
6,846.00	38.36	291.42	5,861.99	1,174.65	-2,812.78	2,914.11	1.05	0.42	-1.56
6,941.00	37.87	291.51	5,936.73	1,196.11	-2,867.35	2,970.52	0.52	-0.52	0.09
7,037.00	38.71	289.17	6,012.08	1,216.77	-2,923.12	3,028.04	1.75	0.88	-2.44
7,132.00	38.18	289.74	6,086.49	1,236.44	-2,978.82	3,085.39	0.67	-0.56	0.60
7,227.00	37.47	292.87	6,161.53	1,257.59	-3,033.09	3,141.47	2.15	-0.75	3.29
7,323.00	37.96	294.37	6,237.48	1,281.12	-3,086.89	3,197.31	1.08	0.51	1.56
7,419.00	36.85	294.11	6,313.73	1,305.06	-3,140.06	3,252.57	1.17	-1.16	-0.27
7,514.00	38.14	294.06	6,389.11	1,328.66	-3,192.85	3,307.41	1.36	1.36	-0.05
7,609.00	39.02	292.74	6,463.37	1,352.18	-3,247.22	3,363.82	1.27	0.93	-1.39
7,705.00	38.14	292.03	6,538.42	1,374.98	-3,302.57	3,421.14	1.03	-0.92	-0.74
7,800.00	34.87	290.05	6,614.77	1,395.30	-3,355.29	3,475.59	3.66	-3.44	-2.08
7,895.00	45.34	286.83	6,687.34	1,414.45	-3,413.31	3,535.20	11.23	11.02	-3.39
7,991.00	54.18	283.44	6,749.30	1,433.42	-3,484.00	3,607.40	9.59	9.21	-3.53
8,086.00	67.92	284.06	6,795.18	1,453.16	-3,564.54	3,689.49	14.47	14.46	0.65
8,107.41	69.97	282.31	6,802.87	1,457.72	-3,584.00	3,709.30	12.26	9.60	-8.17
70°Inclination @ 8107'MD									
8,181.00	77.15	276.61	6,823.70	1,469.24	-3,653.55	3,779.65	12.26	9.75	-7.75
8,277.00	79.76	273.00	6,842.91	1,477.11	-3,747.25	3,873.67	4.58	2.72	-3.76
8,373.00	82.77	270.04	6,857.50	1,479.61	-3,842.08	3,968.29	4.37	3.14	-3.08

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8,468.00	87.63	271.19	6,865.44	1,480.63	-3,936.72	4,062.57	5.26	5.12	1.21
8,564.00	90.50	269.69	6,867.01	1,481.37	-4,032.69	4,158.15	3.37	2.99	-1.56
8,659.00	91.38	268.06	6,865.45	1,479.50	-4,127.65	4,252.48	1.95	0.93	-1.72
8,755.00	92.40	268.33	6,862.28	1,476.48	-4,223.55	4,347.63	1.10	1.06	0.28
8,850.00	88.86	269.96	6,861.24	1,475.06	-4,318.52	4,442.00	4.10	-3.73	1.72
8,965.00	89.57	269.38	6,862.82	1,474.40	-4,433.50	4,556.37	0.80	0.62	-0.50
9,061.00	89.57	269.56	6,863.54	1,473.51	-4,529.50	4,651.82	0.19	0.00	0.19
9,156.00	89.53	269.21	6,864.28	1,472.49	-4,624.49	4,746.25	0.37	-0.04	-0.37
9,252.00	89.62	269.65	6,864.99	1,471.54	-4,720.48	4,841.69	0.47	0.09	0.46
9,443.00	89.88	269.38	6,865.83	1,469.92	-4,911.47	5,031.61	0.20	0.14	-0.14
9,538.00	90.23	269.87	6,865.74	1,469.30	-5,006.47	5,126.09	0.63	0.37	0.52
9,634.00	90.01	269.60	6,865.53	1,468.86	-5,102.47	5,221.59	0.36	-0.23	-0.28
9,729.00	90.06	269.78	6,865.48	1,468.34	-5,197.46	5,316.08	0.20	0.05	0.19
9,825.00	89.93	269.16	6,865.49	1,467.46	-5,293.46	5,411.53	0.66	-0.14	-0.65
9,921.00	90.15	269.91	6,865.42	1,466.68	-5,389.46	5,506.99	0.81	0.23	0.78
10,017.00	90.10	269.38	6,865.21	1,466.08	-5,485.45	5,602.47	0.55	-0.05	-0.55
10,112.00	89.97	269.12	6,865.15	1,464.84	-5,580.45	5,696.89	0.31	-0.14	-0.27
10,207.00	90.19	269.78	6,865.02	1,463.93	-5,675.44	5,791.34	0.73	0.23	0.69
10,303.00	89.97	271.32	6,864.88	1,464.85	-5,771.43	5,886.96	1.62	-0.23	1.60
10,398.00	90.19	270.97	6,864.75	1,466.75	-5,866.41	5,981.67	0.44	0.23	-0.37
10,518.98	90.16	271.61	6,864.38	1,469.47	-5,987.36	6,102.31	0.53	-0.02	0.53
Crossing Section 16/17 @ 10518'MD									
10,588.00	90.15	271.98	6,864.19	1,471.64	-6,056.35	6,171.18	0.53	-0.02	0.53
10,684.00	90.01	270.84	6,864.05	1,474.00	-6,152.32	6,266.92	1.20	-0.15	-1.19
10,780.00	90.23	271.23	6,863.85	1,475.73	-6,248.30	6,362.61	0.47	0.23	0.41
10,874.00	90.01	271.54	6,863.66	1,478.00	-6,342.27	6,456.36	0.40	-0.23	0.33
10,970.00	90.19	272.16	6,863.49	1,481.10	-6,438.22	6,552.15	0.67	0.19	0.65
11,065.00	90.28	272.12	6,863.10	1,484.65	-6,533.16	6,646.97	0.10	0.09	-0.04
11,161.00	89.88	271.28	6,862.96	1,487.50	-6,629.11	6,742.75	0.97	-0.42	-0.88
11,256.00	89.88	270.62	6,863.16	1,489.07	-6,724.10	6,837.43	0.69	0.00	-0.69
11,352.00	90.01	271.98	6,863.26	1,491.25	-6,820.07	6,933.16	1.42	0.14	1.42
11,542.00	90.23	271.81	6,862.86	1,497.54	-7,009.97	7,122.76	0.15	0.12	-0.09
11,638.00	90.15	271.37	6,862.54	1,500.20	-7,105.93	7,218.52	0.47	-0.08	-0.46
11,733.00	90.28	272.03	6,862.18	1,503.02	-7,200.89	7,313.30	0.71	0.14	0.69
11,829.00	90.23	272.20	6,861.76	1,506.56	-7,296.82	7,409.12	0.18	-0.05	0.18
11,924.00	90.10	270.75	6,861.48	1,509.01	-7,391.78	7,503.87	1.53	-0.14	-1.53
12,019.00	90.32	272.29	6,861.13	1,511.53	-7,486.75	7,598.63	1.64	0.23	1.62
12,115.00	90.01	270.71	6,860.86	1,514.04	-7,582.71	7,694.38	1.68	-0.32	-1.65
12,210.00	90.10	271.85	6,860.77	1,516.16	-7,677.69	7,789.11	1.20	0.09	1.20
12,306.00	90.32	272.34	6,860.41	1,519.67	-7,773.62	7,884.92	0.56	0.23	0.51
12,401.00	89.97	270.71	6,860.17	1,522.20	-7,868.58	7,979.68	1.75	-0.37	-1.72
12,496.00	90.23	272.20	6,860.01	1,524.61	-7,963.55	8,074.43	1.59	0.27	1.57
12,592.00	90.23	271.72	6,859.62	1,527.89	-8,059.49	8,170.23	0.50	0.00	-0.50
12,687.00	90.23	271.59	6,859.24	1,530.64	-8,154.45	8,265.00	0.14	0.00	-0.14

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well VT Glenmere 3-16-18
Project:	Weld County, CO (NAD83)	TVD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Site:	Vetting PAD (Sec 15-T5N-R65W)	MD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Well:	VT Glenmere 3-16-18	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
12,783.00	90.37	272.82	6,858.74	1,534.33	-8,250.38	8,360.83	1.29	0.15	1.28
12,879.00	90.10	269.74	6,858.34	1,536.47	-8,346.34	8,456.55	3.22	-0.28	-3.21
12,974.00	90.10	270.00	6,858.18	1,536.26	-8,441.34	8,551.07	0.27	0.00	0.27
13,070.00	90.28	270.40	6,857.86	1,536.59	-8,537.34	8,646.64	0.46	0.19	0.42
13,166.00	90.01	269.43	6,857.62	1,536.45	-8,633.34	8,742.17	1.05	-0.28	-1.01
13,261.00	90.01	269.12	6,857.60	1,535.25	-8,728.33	8,836.59	0.33	0.00	-0.33
13,356.00	90.19	269.43	6,857.44	1,534.05	-8,823.32	8,931.01	0.38	0.19	0.33
13,452.00	90.23	269.82	6,857.08	1,533.42	-8,919.32	9,026.48	0.41	0.04	0.41
13,548.00	90.28	270.22	6,856.66	1,533.45	-9,015.32	9,122.02	0.42	0.05	0.42
13,644.00	90.06	268.90	6,856.37	1,532.72	-9,111.31	9,217.49	1.39	-0.23	-1.38
13,739.00	90.32	270.18	6,856.06	1,531.95	-9,206.31	9,311.95	1.37	0.27	1.35
13,835.00	90.06	269.78	6,855.74	1,531.92	-9,302.31	9,407.49	0.50	-0.27	-0.42
13,930.00	90.06	269.30	6,855.64	1,531.16	-9,397.30	9,501.96	0.51	0.00	-0.51
14,026.00	90.06	269.30	6,855.54	1,529.98	-9,493.30	9,597.38	0.00	0.00	0.00
14,121.00	89.97	268.72	6,855.51	1,528.34	-9,588.28	9,691.75	0.62	-0.09	-0.61
14,217.00	90.23	269.43	6,855.35	1,526.79	-9,684.27	9,787.12	0.79	0.27	0.74
14,312.00	90.23	270.71	6,854.96	1,526.91	-9,779.27	9,881.68	1.35	0.00	1.35
14,503.00	90.10	269.25	6,854.41	1,526.84	-9,970.26	10,071.75	0.77	-0.07	-0.76
14,599.00	89.97	268.81	6,854.36	1,525.22	-10,066.25	10,167.12	0.48	-0.14	-0.46
14,694.00	90.23	269.30	6,854.19	1,523.65	-10,161.23	10,261.49	0.58	0.27	0.52
14,789.00	90.23	269.56	6,853.81	1,522.70	-10,256.23	10,355.94	0.27	0.00	0.27
14,885.00	90.28	269.47	6,853.38	1,521.89	-10,352.22	10,451.40	0.11	0.05	-0.09
14,980.00	90.10	268.15	6,853.07	1,519.92	-10,447.20	10,545.73	1.40	-0.19	-1.39
15,076.00	90.06	268.94	6,852.93	1,517.48	-10,543.17	10,641.00	0.82	-0.04	0.82
15,172.00	90.28	269.56	6,852.65	1,516.23	-10,639.16	10,736.41	0.69	0.23	0.65
15,267.00	90.15	269.12	6,852.29	1,515.13	-10,734.15	10,830.84	0.48	-0.14	-0.46
15,363.00	90.28	270.18	6,851.93	1,514.54	-10,830.15	10,926.32	1.11	0.14	1.10
15,458.00	90.23	269.65	6,851.51	1,514.40	-10,925.15	11,020.85	0.56	-0.05	-0.56
15,554.00	90.06	269.60	6,851.26	1,513.78	-11,021.14	11,116.32	0.18	-0.18	-0.05
15,648.00	90.10	270.40	6,851.13	1,513.78	-11,115.14	11,209.87	0.85	0.04	0.85
15,744.00	90.19	269.43	6,850.89	1,513.63	-11,211.14	11,305.40	1.01	0.09	-1.01
15,810.53	90.22	269.83	6,850.65	1,513.20	-11,277.67	11,371.57	0.60	0.04	0.60
Crossing Section 17/18 @ 15810'MD									
15,839.00	90.23	270.00	6,850.54	1,513.16	-11,306.14	11,399.90	0.60	0.04	0.60
15,935.00	90.10	268.85	6,850.27	1,512.20	-11,402.13	11,495.34	1.21	-0.14	-1.20
16,030.00	90.01	268.81	6,850.17	1,510.26	-11,497.11	11,589.67	0.10	-0.09	-0.04
16,125.00	90.28	271.98	6,849.93	1,510.91	-11,592.10	11,684.27	3.35	0.28	3.34
16,221.00	90.32	270.44	6,849.43	1,512.94	-11,688.07	11,779.98	1.60	0.04	-1.60
16,316.00	90.06	270.66	6,849.12	1,513.85	-11,783.07	11,874.61	0.36	-0.27	0.23
16,412.00	90.32	271.94	6,848.80	1,516.03	-11,879.04	11,970.33	1.36	0.27	1.33
16,507.00	89.57	270.48	6,848.89	1,518.03	-11,974.01	12,065.05	1.73	-0.79	-1.54
16,603.00	89.62	271.10	6,849.57	1,519.36	-12,070.00	12,160.71	0.65	0.05	0.65
16,698.00	89.44	270.53	6,850.35	1,520.71	-12,164.99	12,255.37	0.63	-0.19	-0.60

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well VT Glenmere 3-16-18
Project:	Weld County, CO (NAD83)	TVD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Site:	Vetting PAD (Sec 15-T5N-R65W)	MD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Well:	VT Glenmere 3-16-18	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
16,794.00	89.48	270.44	6,851.25	1,521.52	-12,260.98	12,350.99	0.10	0.04	-0.09
16,890.00	89.53	270.71	6,852.08	1,522.49	-12,356.97	12,446.61	0.29	0.05	0.28
16,985.00	89.75	271.37	6,852.68	1,524.21	-12,451.95	12,541.31	0.73	0.23	0.69
17,081.00	89.53	270.88	6,853.28	1,526.09	-12,547.93	12,637.01	0.56	-0.23	-0.51
17,176.00	89.79	272.07	6,853.84	1,528.54	-12,642.90	12,731.76	1.28	0.27	1.25
17,272.00	89.53	270.57	6,854.41	1,530.75	-12,738.87	12,827.49	1.59	-0.27	-1.56
17,367.00	89.53	270.48	6,855.19	1,531.62	-12,833.86	12,922.11	0.09	0.00	-0.09
17,463.00	89.79	272.12	6,855.76	1,533.80	-12,929.83	13,017.83	1.73	0.27	1.71
17,558.00	89.84	272.29	6,856.07	1,537.45	-13,024.76	13,112.67	0.19	0.05	0.18
17,654.00	89.62	271.76	6,856.52	1,540.85	-13,120.70	13,208.48	0.60	-0.23	-0.55
17,749.00	89.57	270.53	6,857.19	1,542.75	-13,215.68	13,303.18	1.30	-0.05	-1.29
17,845.00	89.57	271.50	6,857.91	1,544.45	-13,311.66	13,398.87	1.01	0.00	1.01
17,941.00	89.53	270.35	6,858.67	1,546.00	-13,407.64	13,494.55	1.20	-0.04	-1.20
18,036.00	89.75	272.38	6,859.27	1,548.26	-13,502.61	13,589.28	2.15	0.23	2.14
18,132.00	89.66	271.45	6,859.76	1,551.47	-13,598.55	13,685.08	0.97	-0.09	-0.97
18,227.00	89.57	271.15	6,860.40	1,553.62	-13,693.52	13,779.81	0.33	-0.09	-0.32
18,323.00	90.28	272.25	6,860.52	1,556.47	-13,789.48	13,875.58	1.36	0.74	1.15
18,419.00	90.28	272.25	6,860.05	1,560.24	-13,885.40	13,971.42	0.00	0.00	0.00
18,514.00	90.23	270.57	6,859.63	1,562.58	-13,980.37	14,066.16	1.77	-0.05	-1.77
18,610.00	90.10	271.85	6,859.36	1,564.60	-14,076.35	14,161.87	1.34	-0.14	1.33
18,705.00	90.32	272.29	6,859.01	1,568.03	-14,171.28	14,256.69	0.52	0.23	0.46
18,801.00	90.19	271.98	6,858.58	1,571.61	-14,267.22	14,352.51	0.35	-0.14	-0.32
18,896.00	90.32	272.16	6,858.16	1,575.04	-14,362.15	14,447.33	0.23	0.14	0.19
18,992.00	90.28	271.19	6,857.65	1,577.85	-14,458.11	14,543.10	1.01	-0.04	-1.01
19,087.00	89.97	270.53	6,857.45	1,579.27	-14,553.10	14,637.78	0.77	-0.33	-0.69
19,182.00	90.32	272.29	6,857.21	1,581.61	-14,648.07	14,732.52	1.89	0.37	1.85
19,278.00	90.01	271.19	6,856.93	1,584.53	-14,744.02	14,828.30	1.19	-0.32	-1.15
19,373.00	90.23	271.85	6,856.73	1,587.05	-14,838.99	14,923.05	0.73	0.23	0.69
19,469.00	90.19	271.28	6,856.38	1,589.67	-14,934.95	15,018.81	0.60	-0.04	-0.59
19,564.00	90.23	271.76	6,856.03	1,592.19	-15,029.91	15,113.57	0.51	0.04	0.51
19,660.00	90.32	271.76	6,855.57	1,595.14	-15,125.87	15,209.35	0.09	0.09	0.00
19,755.00	90.28	270.93	6,855.07	1,597.37	-15,220.84	15,304.09	0.87	-0.04	-0.87
19,850.00	90.19	270.09	6,854.68	1,598.21	-15,315.83	15,398.71	0.89	-0.09	-0.88
19,946.00	90.23	271.01	6,854.33	1,599.13	-15,411.83	15,494.33	0.96	0.04	0.96
20,041.00	90.23	270.93	6,853.95	1,600.74	-15,506.81	15,589.02	0.08	0.00	-0.08
20,136.00	90.37	270.35	6,853.45	1,601.80	-15,601.81	15,683.66	0.63	0.15	-0.61
20,232.00	90.28	270.31	6,852.91	1,602.36	-15,697.80	15,779.26	0.10	-0.09	-0.04
20,327.00	90.01	268.55	6,852.67	1,601.41	-15,792.79	15,873.70	1.87	-0.28	-1.85
20,423.00	90.28	269.74	6,852.43	1,599.98	-15,888.78	15,969.09	1.27	0.28	1.24
20,518.00	90.06	269.91	6,852.14	1,599.69	-15,983.78	16,063.60	0.29	-0.23	0.18
Last MWD Survey @ 20518'MD									
20,560.00	90.06	269.91	6,852.10	1,599.62	-16,025.78	16,105.40	0.00	0.00	0.00
PTB @ TD @ 20560'MD (515'FWL & 310'FNL)									

Survey Report

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well VT Glenmere 3-16-18
Project:	Weld County, CO (NAD83)	TVD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Site:	Vetting PAD (Sec 15-T5N-R65W)	MD Reference:	KB=29 @ 4676.00ft (Patterson #901)
Well:	VT Glenmere 3-16-18	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,517.00	1,514.08	29.15	-48.25	Tie in to Surface Surveys @ 1517'MD
1,666.00	1,661.02	39.34	-70.73	First MWD Survey @ 1666'MD
2,442.00	2,380.77	150.63	-325.61	30°Inclination @ 2442'MD
3,092.92	2,906.46	308.18	-673.47	Crossing Section 15/16 @ 3092'MD
8,107.41	6,802.87	1,457.72	-3,584.00	70°Inclination @ 8107'MD
10,518.98	6,864.38	1,469.47	-5,987.36	Crossing Section 16/17 @ 10518'MD
15,810.53	6,850.65	1,513.20	-11,277.67	Crossing Section 17/18 @ 15810'MD
20,518.00	6,852.14	1,599.69	-15,983.78	Last MWD Survey @ 20518'MD
20,560.00	6,852.10	1,599.62	-16,025.78	PTB @ TD @ 20560'MD (515'FWL & 310'FNL)

Checked By: _____ Approved By: _____ Date: _____