



Extraction Oil & Gas

**Larimer County, Co. (NAD 83)
NE SE SEC. 26 T5N R68W 6th P.M.
MCGIRR 6C**

Wellbore #1

Design: Wellbore #1

Standard Survey Report

18 July, 2017





Integrity Directional Services, LLC

Survey Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well MCGIRR 6C
Project:	Larimer County, Co. (NAD 83)	TVD Reference:	KB=25' @ 4970.00ft (P 346)
Site:	NE SE SEC. 26 T5N R68W 6th P.M.	MD Reference:	KB=25' @ 4970.00ft (P 346)
Well:	MCGIRR 6C	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi User Db

Project	Larimer County, Co. (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	NE SE SEC. 26 T5N R68W 6th P.M.			
Site Position:		Northing:	1,377,753.6200 usft	Latitude: 40.3691050
From: Map		Easting:	3,148,814.2600 usft	Longitude: -104.9659180
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.35 °

Well	MCGIRR 6C			
Well Position	+N/-S	0.00 ft	Northing:	1,377,767.4000 usft
	+E/-W	0.00 ft	Easting:	3,148,746.4600 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	4,945.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/8/2017	8.60	66.75	52,343

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	267.05

Survey Program	Date 7/18/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
109.00	1,554.00	Surface Surveys (Wellbore #1)	MWD	MWD - Standard
1,653.00	17,010.00	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
109.00	0.26	74.52	109.00	0.07	0.24	-0.24	0.24	0.24	0.00
140.00	0.22	35.67	140.00	0.13	0.34	-0.35	0.53	-0.13	-125.32
172.00	0.40	48.51	172.00	0.26	0.46	-0.47	0.60	0.56	40.13
204.00	0.66	21.79	204.00	0.50	0.61	-0.64	1.10	0.81	-83.50
236.00	0.57	29.70	236.00	0.81	0.76	-0.80	0.39	-0.28	24.72
331.00	1.63	14.76	330.98	2.53	1.34	-1.47	1.15	1.12	-15.73
362.00	1.41	15.81	361.97	3.32	1.55	-1.72	0.72	-0.71	3.39
394.00	0.79	45.25	393.96	3.86	1.82	-2.01	2.56	-1.94	92.00
426.00	0.79	62.74	425.96	4.11	2.17	-2.38	0.75	0.00	54.66

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457.00	0.75	112.75	456.95	4.13	2.55	-2.76	2.10	-0.13	161.32
489.00	1.54	137.80	488.95	3.73	3.03	-3.22	2.87	2.47	78.28
521.00	2.33	151.34	520.93	2.84	3.63	-3.77	2.84	2.47	42.31
552.00	3.03	148.35	551.90	1.59	4.36	-4.44	2.30	2.26	-9.65
583.00	4.04	147.03	582.84	-0.02	5.39	-5.38	3.27	3.26	-4.26
615.00	4.61	146.06	614.75	-2.03	6.72	-6.61	1.80	1.78	-3.03
646.00	5.32	147.12	645.63	-4.27	8.19	-7.96	2.31	2.29	3.42
678.00	6.15	142.81	677.47	-6.89	10.04	-9.67	2.92	2.59	-13.47
710.00	6.46	136.57	709.28	-9.56	12.31	-11.80	2.35	0.97	-19.50
741.00	6.81	132.00	740.07	-12.05	14.87	-14.23	2.04	1.13	-14.74
773.00	7.82	130.95	771.81	-14.75	17.93	-17.14	3.18	3.16	-3.28
805.00	8.26	133.67	803.49	-17.77	21.24	-20.29	1.82	1.38	8.50
836.00	8.75	136.66	834.15	-21.02	24.46	-23.35	2.13	1.58	9.65
868.00	9.32	138.07	865.75	-24.72	27.87	-26.56	1.91	1.78	4.41
899.00	10.28	139.21	896.30	-28.68	31.35	-29.83	3.16	3.10	3.68
931.00	10.81	139.30	927.76	-33.11	35.17	-33.42	1.66	1.66	0.28
963.00	11.65	138.51	959.15	-37.81	39.27	-37.27	2.67	2.63	-2.47
995.00	12.57	139.12	990.44	-42.86	43.69	-41.42	2.90	2.88	1.91
1,026.00	13.49	135.69	1,020.64	-48.00	48.42	-45.89	3.88	2.97	-11.06
1,058.00	13.01	137.19	1,051.79	-53.31	53.48	-50.66	1.84	-1.50	4.69
1,090.00	13.23	140.18	1,082.95	-58.77	58.27	-55.17	2.23	0.69	9.34
1,121.00	12.52	135.08	1,113.17	-63.87	62.92	-59.54	4.32	-2.29	-16.45
1,153.00	12.00	129.54	1,144.44	-68.45	67.93	-64.31	4.02	-1.63	-17.31
1,185.00	12.57	132.71	1,175.71	-72.93	73.06	-69.20	2.76	1.78	9.91
1,217.00	13.23	130.32	1,206.90	-77.66	78.41	-74.30	2.65	2.06	-7.47
1,248.00	14.33	131.04	1,237.01	-82.47	84.00	-79.64	3.59	3.55	2.32
1,280.00	14.23	134.20	1,268.02	-87.81	89.81	-85.17	2.46	-0.31	9.88
1,312.00	13.76	137.80	1,299.07	-93.38	95.19	-90.25	3.09	-1.47	11.25
1,343.00	12.26	135.78	1,329.28	-98.47	99.96	-94.75	5.06	-4.84	-6.52
1,375.00	11.56	133.15	1,360.59	-103.09	104.67	-99.22	2.77	-2.19	-8.22
1,407.00	12.30	135.25	1,391.90	-107.71	109.41	-103.71	2.68	2.31	6.56
1,439.00	12.79	133.94	1,423.13	-112.59	114.36	-108.40	1.77	1.53	-4.09
1,471.00	12.70	134.73	1,454.34	-117.52	119.41	-113.19	0.61	-0.28	2.47
1,504.00	12.39	133.15	1,486.56	-122.49	124.57	-118.09	1.40	-0.94	-4.79
1,554.00	12.39	133.15	1,535.39	-129.83	132.39	-125.53	0.00	0.00	0.00
1,653.00	12.51	134.55	1,632.06	-144.62	147.78	-140.14	0.33	0.12	1.41
First MWD Survey									
1,747.00	11.80	128.95	1,723.96	-157.80	162.51	-154.17	1.46	-0.76	-5.96
1,841.00	12.20	133.36	1,815.91	-170.66	177.21	-168.18	1.06	0.43	4.69
1,935.00	11.49	130.85	1,907.91	-183.61	191.51	-181.80	0.93	-0.76	-2.67
2,029.00	11.00	136.27	2,000.10	-196.21	204.80	-194.41	1.24	-0.52	5.77
2,123.00	11.40	138.95	2,092.31	-209.70	217.10	-206.00	0.70	0.43	2.85
2,217.00	11.00	138.03	2,184.52	-223.37	229.19	-217.38	0.47	-0.43	-0.98



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2,310.00	13.08	143.54	2,275.48	-238.43	241.38	-228.78	2.55	2.24	5.92
2,404.00	12.90	142.44	2,367.07	-255.31	254.10	-240.61	0.33	-0.19	-1.17
2,498.00	12.28	142.83	2,458.81	-271.59	266.54	-252.19	0.67	-0.66	0.41
2,592.00	11.62	142.35	2,550.77	-287.05	278.36	-263.20	0.71	-0.70	-0.51
2,686.00	11.89	143.85	2,642.80	-302.37	289.85	-273.89	0.43	0.29	1.60
2,780.00	11.40	136.27	2,734.87	-316.90	301.99	-285.26	1.71	-0.52	-8.06
2,874.00	10.30	136.53	2,827.19	-329.71	314.19	-296.79	1.17	-1.17	0.28
2,968.00	11.09	131.55	2,919.56	-341.81	326.74	-308.69	1.29	0.84	-5.30
3,062.00	12.51	135.34	3,011.57	-355.04	340.66	-321.91	1.72	1.51	4.03
3,156.00	11.09	134.24	3,103.58	-368.59	354.30	-334.83	1.53	-1.51	-1.17
3,250.00	12.68	131.55	3,195.56	-381.75	368.49	-348.33	1.79	1.69	-2.86
3,344.00	11.62	132.56	3,287.46	-394.99	383.19	-362.33	1.15	-1.13	1.07
3,438.00	10.12	133.45	3,379.77	-407.07	396.16	-374.66	1.61	-1.60	0.95
3,533.00	12.59	135.87	3,472.90	-420.25	409.43	-387.23	2.65	2.60	2.55
3,626.00	12.81	135.87	3,563.63	-434.92	423.66	-400.69	0.24	0.24	0.00
3,721.00	12.59	134.77	3,656.30	-449.77	438.35	-414.59	0.34	-0.23	-1.16
3,814.00	11.71	136.05	3,747.22	-463.71	452.09	-427.60	0.99	-0.95	1.38
3,908.00	10.52	135.03	3,839.45	-476.65	464.78	-439.60	1.28	-1.27	-1.09
4,002.00	9.10	133.45	3,932.08	-487.83	476.24	-450.47	1.54	-1.51	-1.68
4,095.00	8.22	129.57	4,024.02	-497.12	486.71	-460.44	1.14	-0.95	-4.17
4,190.00	6.89	129.96	4,118.19	-505.11	496.31	-469.62	1.40	-1.40	0.41
4,285.00	6.10	129.35	4,212.58	-511.97	504.58	-477.53	0.83	-0.83	-0.64
4,379.00	5.30	136.35	4,306.11	-518.28	511.44	-484.05	1.13	-0.85	7.45
4,473.00	3.71	142.44	4,399.82	-523.83	516.29	-488.61	1.76	-1.69	6.48
4,567.00	2.21	134.86	4,493.69	-527.52	519.43	-491.56	1.65	-1.60	-8.06
4,662.00	1.81	142.83	4,588.64	-530.01	521.63	-493.63	0.51	-0.42	8.39
4,755.00	0.31	329.24	4,681.62	-530.96	522.39	-494.34	2.28	-1.61	-186.66
4,849.00	0.49	331.26	4,775.62	-530.39	522.07	-494.04	0.19	0.19	2.15
4,943.00	0.40	329.55	4,869.62	-529.76	521.71	-493.72	0.10	-0.10	-1.82
5,038.00	0.49	320.07	4,964.61	-529.16	521.28	-493.32	0.12	0.09	-9.98
5,133.00	0.62	330.34	5,059.61	-528.40	520.76	-492.85	0.17	0.14	10.81
5,227.00	0.88	295.57	5,153.60	-527.65	519.86	-491.98	0.54	0.28	-36.99
5,321.00	1.10	285.83	5,247.59	-527.09	518.34	-490.49	0.29	0.23	-10.36
5,416.00	1.19	275.74	5,342.57	-526.74	516.48	-488.66	0.23	0.09	-10.62
5,510.00	1.02	285.35	5,436.55	-526.42	514.71	-486.90	0.27	-0.18	10.22
5,699.00	0.88	48.13	5,625.54	-525.01	514.16	-486.43	0.88	-0.07	64.96
5,793.00	0.88	181.74	5,719.53	-525.25	514.68	-486.93	1.72	0.00	142.14
5,887.00	1.59	186.94	5,813.51	-527.26	514.50	-486.65	0.76	0.76	5.53
5,982.00	1.28	187.16	5,908.48	-529.63	514.21	-486.24	0.33	-0.33	0.23
6,076.00	1.02	184.96	6,002.46	-531.50	514.01	-485.94	0.28	-0.28	-2.34
6,170.00	0.62	181.57	6,096.45	-532.84	513.92	-485.78	0.43	-0.43	-3.61
6,265.00	0.40	211.93	6,191.45	-533.64	513.73	-485.55	0.36	-0.23	31.96
6,359.00	0.22	320.95	6,285.45	-533.78	513.44	-485.26	0.55	-0.19	115.98

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6,452.00	0.22	257.54	6,378.45	-533.68	513.16	-484.98	0.25	0.00	-68.18
6,569.00	0.49	251.46	6,495.45	-533.88	512.46	-484.27	0.23	0.23	-5.20
6,648.17	11.95	276.68	6,574.03	-533.04	503.97	-475.84	14.53	14.47	31.85
KOP - MCGIRR 6C									
6,663.00	14.10	276.84	6,588.47	-532.64	500.66	-472.55	14.53	14.53	1.09
6,757.00	22.71	285.17	6,677.59	-526.52	471.72	-443.96	9.56	9.16	8.86
6,851.00	30.18	281.34	6,761.70	-517.11	430.98	-403.76	8.15	7.95	-4.07
6,945.00	36.41	274.24	6,840.26	-510.39	379.92	-353.11	7.81	6.63	-7.55
7,038.00	44.41	271.07	6,911.03	-507.74	319.76	-293.17	8.88	8.60	-3.41
7,133.00	50.82	269.44	6,975.04	-507.48	249.63	-223.15	6.86	6.75	-1.72
7,227.00	60.01	269.83	7,028.34	-507.96	172.32	-145.92	9.78	9.78	0.41
7,321.00	66.28	271.33	7,070.78	-507.08	88.51	-62.26	6.82	6.67	1.60
7,415.00	75.92	272.04	7,101.19	-504.45	-0.28	26.27	10.28	10.26	0.76
7,469.66	82.65	271.16	7,111.35	-502.96	-53.93	79.78	12.42	12.32	-1.61
460' Hardline Crossing 7469.66'MD / 79.77' VS (1498.5' FSL & 460' FEL)									
7,470.75	82.79	271.14	7,111.49	-502.93	-55.01	80.85	12.42	12.32	-1.58
HZ LP - MCGIRR 6C									
7,509.00	87.50	270.54	7,114.72	-502.38	-93.11	118.87	12.42	12.32	-1.57
7,603.00	87.58	269.35	7,118.76	-502.47	-187.02	212.67	1.27	0.09	-1.27
7,696.00	89.22	269.75	7,121.35	-503.20	-279.98	305.54	1.82	1.76	0.43
7,790.00	89.70	269.44	7,122.24	-503.86	-373.97	399.44	0.61	0.51	-0.33
7,884.00	90.50	269.35	7,122.08	-504.85	-467.97	493.36	0.86	0.85	-0.10
7,978.00	90.41	269.57	7,121.33	-505.74	-561.96	587.27	0.25	-0.10	0.23
8,072.00	90.10	268.73	7,120.91	-507.13	-655.95	681.21	0.95	-0.33	-0.89
8,166.00	89.79	270.94	7,121.00	-507.40	-749.94	775.09	2.37	-0.33	2.35
8,261.00	90.01	270.67	7,121.17	-506.07	-844.93	869.89	0.37	0.23	-0.28
8,355.00	90.28	270.45	7,120.93	-505.15	-938.93	963.71	0.37	0.29	-0.23
8,449.00	90.01	270.67	7,120.69	-504.23	-1,032.92	1,057.53	0.37	-0.29	0.23
8,543.00	89.62	270.45	7,121.00	-503.31	-1,126.92	1,151.35	0.48	-0.41	-0.23
8,637.00	89.40	269.97	7,121.80	-502.97	-1,220.91	1,245.21	0.56	-0.23	-0.51
8,732.00	89.70	270.36	7,122.55	-502.70	-1,315.91	1,340.06	0.52	0.32	0.41
8,826.00	90.19	270.23	7,122.64	-502.21	-1,409.91	1,433.91	0.54	0.52	-0.14
8,920.00	90.50	269.57	7,122.07	-502.38	-1,503.90	1,527.79	0.78	0.33	-0.70
9,015.00	90.41	269.35	7,121.32	-503.27	-1,598.90	1,622.71	0.25	-0.09	-0.23
9,108.00	88.91	269.26	7,121.87	-504.40	-1,691.89	1,715.63	1.62	-1.61	-0.10
9,202.00	89.09	268.73	7,123.51	-506.05	-1,785.86	1,809.56	0.60	0.19	-0.56
9,296.00	88.91	267.76	7,125.15	-508.93	-1,879.80	1,903.52	1.05	-0.19	-1.03
9,390.00	88.60	269.97	7,127.19	-510.79	-1,973.75	1,997.45	2.37	-0.33	2.35
9,483.00	88.82	269.97	7,129.28	-510.84	-2,066.73	2,090.30	0.24	0.24	0.00
9,578.00	91.30	269.83	7,129.19	-511.00	-2,161.72	2,185.18	2.61	2.61	-0.15
9,671.00	90.19	269.97	7,127.98	-511.16	-2,254.71	2,278.05	1.20	-1.19	0.15
9,765.00	89.79	268.25	7,127.99	-512.62	-2,348.69	2,371.99	1.88	-0.43	-1.83
9,860.00	90.10	269.35	7,128.08	-514.61	-2,443.67	2,466.94	1.20	0.33	1.16
9,955.00	89.88	268.73	7,128.10	-516.20	-2,538.66	2,561.89	0.69	-0.23	-0.65

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well MCGIRR 6C
Project:	Larimer County, Co. (NAD 83)	TVD Reference:	KB=25' @ 4970.00ft (P 346)
Site:	NE SE SEC. 26 T5N R68W 6th P.M.	MD Reference:	KB=25' @ 4970.00ft (P 346)
Well:	MCGIRR 6C	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi User Db

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)
10,050.00	89.48	268.47	7,128.63	-518.53	-2,633.63	2,656.85	0.50	-0.42	-0.27
10,144.00	89.62	268.16	7,129.37	-521.29	-2,727.58	2,750.82	0.36	0.15	-0.33
10,239.00	89.79	269.75	7,129.86	-523.02	-2,822.56	2,845.77	1.68	0.18	1.67
10,333.00	90.01	270.45	7,130.02	-522.86	-2,916.56	2,939.63	0.78	0.23	0.74
10,428.00	90.19	270.05	7,129.86	-522.44	-3,011.56	3,034.48	0.46	0.19	-0.42
10,522.00	90.19	268.56	7,129.54	-523.58	-3,105.55	3,128.41	1.59	0.00	-1.59
10,617.00	90.41	270.85	7,129.05	-524.07	-3,200.54	3,223.30	2.42	0.23	2.41
10,711.00	90.10	270.76	7,128.63	-522.75	-3,294.53	3,317.09	0.34	-0.33	-0.10
10,805.00	92.49	270.14	7,126.50	-522.01	-3,388.50	3,410.90	2.63	2.54	-0.66
10,899.00	90.99	269.44	7,123.65	-522.36	-3,482.45	3,504.74	1.76	-1.60	-0.74
10,994.00	90.59	268.34	7,122.34	-524.20	-3,577.42	3,599.68	1.23	-0.42	-1.16
11,089.00	89.31	270.76	7,122.42	-524.94	-3,672.41	3,694.58	2.88	-1.35	2.55
11,183.00	89.70	271.46	7,123.24	-523.12	-3,766.39	3,788.34	0.85	0.41	0.74
11,278.00	90.01	271.07	7,123.48	-521.03	-3,861.37	3,883.08	0.52	0.33	-0.41
11,372.00	89.79	271.16	7,123.64	-519.20	-3,955.35	3,976.85	0.25	-0.23	0.10
11,467.00	91.12	272.57	7,122.89	-516.11	-4,050.29	4,071.50	2.04	1.40	1.48
11,562.00	91.60	271.55	7,120.63	-512.69	-4,145.20	4,166.11	1.19	0.51	-1.07
11,656.00	91.52	271.24	7,118.07	-510.40	-4,239.14	4,259.81	0.34	-0.09	-0.33
11,751.00	91.91	271.86	7,115.23	-507.84	-4,334.06	4,354.47	0.77	0.41	0.65
11,846.00	90.01	271.24	7,113.64	-505.27	-4,429.01	4,449.16	2.10	-2.00	-0.65
11,941.00	90.01	270.94	7,113.62	-503.46	-4,523.99	4,543.92	0.32	0.00	-0.32
12,035.00	90.28	270.94	7,113.38	-501.92	-4,617.98	4,637.70	0.29	0.29	0.00
12,130.00	91.21	269.57	7,112.15	-501.49	-4,712.96	4,732.54	1.74	0.98	-1.44
12,225.00	90.59	268.25	7,110.66	-503.30	-4,807.93	4,827.48	1.53	-0.65	-1.39
12,317.00	90.19	268.73	7,110.03	-505.73	-4,899.90	4,919.45	0.68	-0.43	0.52
12,412.00	89.48	267.76	7,110.30	-508.64	-4,994.85	5,014.42	1.27	-0.75	-1.02
12,506.00	88.82	269.35	7,111.70	-511.01	-5,088.81	5,108.38	1.83	-0.70	1.69
12,600.00	91.21	270.23	7,111.67	-511.35	-5,182.80	5,202.26	2.71	2.54	0.94
12,694.00	92.09	269.35	7,108.97	-511.69	-5,276.76	5,296.11	1.32	0.94	-0.94
12,788.00	91.91	270.14	7,105.69	-512.11	-5,370.70	5,389.95	0.86	-0.19	0.84
12,882.00	92.00	269.57	7,102.48	-512.35	-5,464.64	5,483.78	0.61	0.10	-0.61
12,977.00	93.20	269.44	7,098.17	-513.17	-5,559.54	5,578.60	1.27	1.26	-0.14
13,071.00	91.38	270.94	7,094.41	-512.86	-5,653.46	5,672.37	2.51	-1.94	1.60
13,165.00	91.52	271.07	7,092.03	-511.21	-5,747.41	5,766.12	0.20	0.15	0.14
13,259.00	89.79	270.76	7,090.96	-509.71	-5,841.39	5,859.90	1.87	-1.84	-0.33
13,353.00	91.30	270.23	7,090.07	-508.90	-5,935.38	5,953.72	1.70	1.61	-0.56
13,447.00	90.59	269.44	7,088.52	-509.17	-6,029.37	6,047.59	1.13	-0.76	-0.84
13,542.00	90.19	266.66	7,087.87	-512.40	-6,124.30	6,142.57	2.96	-0.42	-2.93
13,636.00	88.91	266.97	7,088.61	-517.62	-6,218.15	6,236.56	1.40	-1.36	0.33
13,730.00	90.50	269.35	7,089.09	-520.64	-6,312.09	6,330.53	3.04	1.69	2.53
13,824.00	91.30	270.05	7,087.61	-521.13	-6,406.08	6,424.42	1.13	0.85	0.74
13,919.00	90.41	270.54	7,086.20	-520.64	-6,501.06	6,519.25	1.07	-0.94	0.52
14,013.00	88.91	271.33	7,086.75	-519.11	-6,595.04	6,613.03	1.80	-1.60	0.84
14,108.00	89.70	271.95	7,087.91	-516.39	-6,690.00	6,707.72	1.06	0.83	0.65



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well MCGIRR 6C
Project:	Larimer County, Co. (NAD 83)	TVD Reference:	KB=25' @ 4970.00ft (P 346)
Site:	NE SE SEC. 26 T5N R68W 6th P.M.	MD Reference:	KB=25' @ 4970.00ft (P 346)
Well:	MCGIRR 6C	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi User Db

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)
14,201.00	88.82	270.36	7,089.11	-514.52	-6,782.97	6,800.47	1.95	-0.95	-1.71
14,295.00	89.79	270.14	7,090.25	-514.11	-6,876.96	6,894.31	1.06	1.03	-0.23
14,389.00	88.38	271.07	7,091.75	-513.11	-6,970.94	6,988.12	1.80	-1.50	0.99
14,484.00	88.82	270.05	7,094.07	-512.19	-7,065.90	7,082.91	1.17	0.46	-1.07
14,577.00	86.70	270.45	7,097.71	-511.78	-7,158.83	7,175.69	2.32	-2.28	0.43
14,672.00	87.58	270.67	7,102.45	-510.85	-7,253.70	7,270.39	0.95	0.93	0.23
14,766.00	88.60	270.85	7,105.58	-509.61	-7,347.64	7,364.14	1.10	1.09	0.19
14,860.00	89.62	270.76	7,107.04	-508.29	-7,441.62	7,457.92	1.09	1.09	-0.10
14,955.00	90.19	270.76	7,107.20	-507.03	-7,536.61	7,552.72	0.60	0.60	0.00
15,049.00	92.00	270.54	7,105.40	-505.96	-7,630.58	7,646.52	1.94	1.93	-0.23
15,143.00	91.38	270.67	7,102.63	-504.97	-7,724.54	7,740.29	0.67	-0.66	0.14
15,237.00	92.31	269.97	7,099.60	-504.44	-7,818.48	7,834.09	1.24	0.99	-0.74
15,332.00	90.41	269.44	7,097.35	-504.93	-7,913.45	7,928.96	2.08	-2.00	-0.56
15,427.00	91.78	269.97	7,095.53	-505.42	-8,008.43	8,023.83	1.55	1.44	0.56
15,521.00	90.99	270.67	7,093.26	-504.90	-8,102.40	8,117.65	1.12	-0.84	0.74
15,614.00	89.79	271.55	7,092.63	-503.09	-8,195.38	8,210.41	1.60	-1.29	0.95
15,709.00	91.38	273.05	7,091.66	-499.28	-8,290.29	8,305.00	2.30	1.67	1.58
15,803.00	92.40	273.27	7,088.56	-494.10	-8,384.09	8,398.42	1.11	1.09	0.23
15,898.00	91.52	270.85	7,085.31	-490.69	-8,478.97	8,492.99	2.71	-0.93	-2.55
15,992.00	89.70	270.23	7,084.31	-489.81	-8,572.96	8,586.81	2.05	-1.94	-0.66
16,086.00	89.88	269.66	7,084.65	-489.90	-8,666.95	8,680.68	0.64	0.19	-0.61
16,181.00	90.41	268.34	7,084.41	-491.55	-8,761.94	8,775.63	1.50	0.56	-1.39
16,275.00	89.79	267.23	7,084.25	-495.19	-8,855.87	8,869.62	1.35	-0.66	-1.18
16,369.00	90.28	267.94	7,084.19	-499.15	-8,949.78	8,963.61	0.92	0.52	0.76
16,464.00	91.12	267.15	7,083.03	-503.22	-9,044.69	9,058.60	1.21	0.88	-0.83
16,558.00	91.69	266.84	7,080.72	-508.14	-9,138.53	9,152.57	0.69	0.61	-0.33
16,746.00	91.30	267.37	7,075.82	-517.63	-9,326.22	9,340.51	0.35	-0.21	0.28
16,840.00	90.59	269.66	7,074.27	-520.07	-9,420.17	9,434.45	2.55	-0.76	2.44
16,934.00	91.38	268.56	7,072.65	-521.53	-9,514.14	9,528.38	1.44	0.84	-1.17
Final MWD Survey									
17,010.00	91.38	268.56	7,070.82	-523.44	-9,590.10	9,604.33	0.00	0.00	0.00
Projection to TD - 1459.2' FSL & 533.3' FWL - BHL - MCGIRR 6C									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,653.00	1,632.06	-144.62	147.78	First MWD Survey
7,469.66	7,111.35	-502.96	-53.93	460' Hardline Crossing 7469.66'MD / 79.77' VS (1498.5' FSL & 460' FE
16,934.00	7,072.65	-521.53	-9,514.14	Final MWD Survey
17,010.00	7,070.82	-523.44	-9,590.10	Projection to TD - 1459.2' FSL & 533.3' FWL



Integrity Directional Services, LLC
Survey Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well MCGIRR 6C
Project:	Larimer County, Co. (NAD 83)	TVD Reference:	KB=25' @ 4970.00ft (P 346)
Site:	NE SE SEC. 26 T5N R68W 6th P.M.	MD Reference:	KB=25' @ 4970.00ft (P 346)
Well:	MCGIRR 6C	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi User Db

Checked By: _____	Approved By: _____	Date: _____
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