

# **Extraction Oil & Gas**

**Weld County, CO (NAD83)**

**Sec 26-T07N-R67W Lind**

**Lind 26W-30-6N**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**25 July, 2019**

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Lind 26W-30-6N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Site:</b>	Sec 26-T07N-R67W Lind	<b>MD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Well:</b>	Lind 26W-30-6N	<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 26-T07N-R67W Lind				
Site Position:		Northing:	1,444,245.22 usft	Latitude:	40.551051
From:	Map	Easting:	3,179,860.10 usft	Longitude:	-104.852759
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	Lind 26W-30-6N					
Well Position	+N/-S	0.00 usft	Northing:	1,444,332.24 usft	Latitude:	40.551296
	+E/-W	0.00 usft	Easting:	3,179,559.59 usft	Longitude:	-104.853838
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,948.00 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	6/20/2019	8.05	66.91	52,190.65893593

<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	263.07	

<b>Survey Program</b>	<b>Date</b>	7/25/2019			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
145.30	1,603.30	Surface Surveys (Wellbore #1)	MWD	MWD - Standard	
1,694.00	22,639.00	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	
145.30	1.41	135.16	145.29	-1.27	1.26	-1.10	0.97	0.97	0.00	
232.30	2.15	154.23	232.24	-3.50	2.72	-2.28	1.08	0.85	21.92	
319.30	3.56	147.11	319.13	-7.23	4.90	-3.99	1.67	1.62	-8.18	
407.30	6.37	148.61	406.79	-13.70	8.93	-7.21	3.20	3.19	1.70	
494.30	7.82	151.68	493.13	-23.03	14.25	-11.37	1.72	1.67	3.53	
581.30	8.97	153.09	579.19	-34.29	20.13	-15.85	1.34	1.32	1.62	
669.30	11.73	152.65	665.75	-48.35	27.34	-21.31	3.14	3.14	-0.50	
756.30	14.06	155.29	750.55	-65.81	35.83	-27.63	2.76	2.68	3.03	
843.30	15.42	154.41	834.69	-85.84	45.24	-34.55	1.58	1.56	-1.01	

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<b>Site:</b>	Sec 26-T07N-R67W Lind	<b>MD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Well:</b>	Lind 26W-30-6N	<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)
931.30	16.61	157.48	919.27	-108.01	55.11	-41.68	1.66	1.35	3.49
1,018.30	18.90	155.20	1,002.12	-132.29	65.79	-49.35	2.75	2.63	-2.62
1,105.30	19.86	156.61	1,084.19	-158.65	77.56	-57.86	1.23	1.10	1.62
1,192.30	20.61	155.20	1,165.83	-186.11	89.85	-66.75	1.03	0.86	-1.62
1,280.30	20.79	150.37	1,248.15	-213.75	104.07	-77.53	1.95	0.20	-5.49
1,367.30	21.97	149.93	1,329.16	-241.26	119.86	-89.88	1.37	1.36	-0.51
1,454.30	21.14	150.37	1,410.08	-268.98	135.77	-102.33	0.97	-0.95	0.51
1,541.30	21.35	150.54	1,491.16	-296.40	151.32	-114.46	0.25	0.24	0.20
1,603.30	21.05	151.07	1,548.97	-315.98	162.25	-122.95	0.57	-0.48	0.85
Tie into Surface Surveys									
1,694.00	20.86	151.67	1,633.67	-344.45	177.80	-134.95	0.32	-0.21	0.66
First MWD Survey @ 1694' MD									
1,789.00	19.31	149.77	1,722.89	-372.91	193.73	-147.33	1.77	-1.63	-2.00
1,885.00	21.83	146.77	1,812.77	-401.56	211.51	-161.52	2.84	2.63	-3.13
1,980.00	22.71	150.43	1,900.68	-432.29	230.24	-176.41	1.73	0.93	3.85
2,075.00	20.46	154.13	1,989.02	-463.18	246.53	-188.86	2.77	-2.37	3.89
2,170.00	20.72	153.08	2,077.95	-493.10	261.39	-200.00	0.48	0.27	-1.11
2,265.00	19.49	154.97	2,167.16	-522.45	275.70	-210.67	1.46	-1.29	1.99
2,361.00	21.96	156.95	2,256.94	-553.48	289.51	-220.63	2.67	2.57	2.06
2,456.00	21.83	155.81	2,345.09	-585.94	303.70	-230.80	0.47	-0.14	-1.20
2,551.00	21.56	153.82	2,433.36	-617.72	318.64	-241.80	0.82	-0.28	-2.09
2,646.00	21.21	152.99	2,521.82	-648.69	334.15	-253.46	0.49	-0.37	-0.87
2,741.00	20.81	152.06	2,610.51	-678.91	349.86	-265.41	0.55	-0.42	-0.98
2,836.00	18.82	156.16	2,699.88	-707.84	363.96	-275.92	2.55	-2.09	4.32
2,931.00	21.21	154.57	2,789.14	-737.38	377.53	-285.83	2.58	2.52	-1.67
3,026.00	21.08	154.31	2,877.74	-768.30	392.32	-296.78	0.17	-0.14	-0.27
3,121.00	20.50	152.64	2,966.56	-798.47	407.37	-308.08	0.87	-0.61	-1.76
3,216.00	20.11	152.81	3,055.65	-827.77	422.48	-319.54	0.42	-0.41	0.18
3,311.00	19.35	151.36	3,145.08	-856.11	437.49	-331.02	0.95	-0.80	-1.53
3,406.00	20.81	156.29	3,234.30	-885.38	451.82	-341.72	2.35	1.54	5.19
3,501.00	20.11	155.28	3,323.31	-915.66	465.43	-351.58	0.83	-0.74	-1.06
3,596.00	22.18	154.93	3,411.91	-946.74	479.86	-362.16	2.18	2.18	-0.37
3,691.00	21.56	154.27	3,500.07	-978.71	495.04	-373.37	0.70	-0.65	-0.69
3,786.00	20.59	153.74	3,588.72	-1,009.42	510.01	-384.52	1.04	-1.02	-0.56
3,882.00	23.51	153.65	3,677.69	-1,041.72	525.98	-396.48	3.04	3.04	-0.09
3,977.00	24.04	152.15	3,764.62	-1,075.81	543.43	-409.69	0.85	0.56	-1.58
4,072.00	24.44	152.19	3,851.25	-1,110.30	561.64	-423.60	0.42	0.42	0.04
4,167.00	24.39	159.47	3,937.77	-1,146.06	577.69	-435.23	3.17	-0.05	7.66
4,262.00	21.74	154.93	4,025.18	-1,180.38	592.03	-445.32	3.36	-2.79	-4.78
4,357.00	20.15	155.10	4,113.90	-1,211.16	606.37	-455.85	1.67	-1.67	0.18
4,453.00	18.65	153.69	4,204.45	-1,239.91	620.14	-466.04	1.64	-1.56	-1.47
4,548.00	19.93	152.24	4,294.11	-1,267.86	634.41	-476.84	1.44	1.35	-1.53
4,643.00	18.74	151.97	4,383.75	-1,295.66	649.12	-488.10	1.26	-1.25	-0.28

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Survey										
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4,738.00	22.40	155.41	4,472.68	-1,325.60	663.83	-499.09	4.06	3.85	3.62	
4,833.00	21.26	155.72	4,560.87	-1,357.76	678.45	-509.71	1.21	-1.20	0.33	
4,952.00	18.78	154.22	4,672.67	-1,394.68	695.65	-522.34	2.13	-2.08	-1.26	
5,047.00	20.24	152.64	4,762.21	-1,423.05	709.86	-533.02	1.63	1.54	-1.66	
5,142.00	21.92	153.96	4,850.85	-1,453.58	725.20	-544.56	1.84	1.77	1.39	
5,237.00	21.30	153.78	4,939.18	-1,484.99	740.60	-556.07	0.66	-0.65	-0.19	
5,332.00	19.80	153.34	5,028.13	-1,514.85	755.45	-567.20	1.59	-1.58	-0.46	
5,427.00	19.89	148.49	5,117.49	-1,543.01	771.11	-579.36	1.74	0.09	-5.11	
5,522.00	19.97	146.64	5,206.80	-1,570.34	788.48	-593.30	0.67	0.08	-1.95	
5,617.00	19.53	150.26	5,296.22	-1,597.67	805.28	-606.68	1.37	-0.46	3.81	
5,712.00	20.59	148.36	5,385.46	-1,625.68	821.92	-619.82	1.31	1.12	-2.00	
5,806.00	20.02	151.71	5,473.62	-1,653.93	838.22	-632.59	1.38	-0.61	3.56	
5,902.00	17.45	150.70	5,564.52	-1,680.95	853.05	-644.06	2.70	-2.68	-1.05	
5,996.00	18.65	152.90	5,653.90	-1,706.63	866.80	-654.61	1.47	1.28	2.34	
6,091.00	16.39	151.84	5,744.48	-1,731.97	880.04	-664.70	2.40	-2.38	-1.12	
6,186.00	13.88	149.42	5,836.18	-1,753.60	892.17	-674.13	2.72	-2.64	-2.55	
6,281.00	12.46	145.94	5,928.68	-1,771.90	903.71	-683.37	1.71	-1.49	-3.66	
6,376.00	9.15	141.97	6,021.99	-1,786.34	914.10	-691.95	3.57	-3.48	-4.18	
6,471.00	6.58	150.04	6,116.09	-1,797.01	921.48	-697.98	2.94	-2.71	8.49	
6,566.00	4.07	165.77	6,210.67	-1,805.00	925.02	-700.54	3.03	-2.64	16.56	
6,661.00	1.28	135.67	6,305.57	-1,809.02	926.59	-701.61	3.19	-2.94	-31.68	
6,756.00	0.62	136.81	6,400.55	-1,810.16	927.69	-702.56	0.69	-0.69	1.20	
6,851.00	0.18	284.18	6,495.55	-1,810.50	927.89	-702.73	0.82	-0.46	155.13	
6,946.00	10.83	273.38	6,589.98	-1,809.93	918.81	-693.78	11.21	11.21	-11.37	
7,041.00	19.93	287.48	6,681.51	-1,804.53	894.40	-670.20	10.29	9.58	14.84	
7,136.00	27.84	279.33	6,768.33	-1,796.05	857.00	-634.09	9.00	8.33	-8.58	
7,156.28	29.98	277.99	6,786.08	-1,794.58	847.31	-624.65	11.03	10.56	-6.60	
30° Inclination @ 7156.28' MD										
7,231.00	37.96	274.26	6,848.00	-1,790.27	805.83	-583.99	11.03	10.68	-5.00	
7,326.00	47.33	272.85	6,917.80	-1,786.36	741.67	-520.77	9.91	9.86	-1.48	
7,421.00	51.04	266.77	6,979.92	-1,786.70	669.84	-449.43	6.22	3.91	-6.40	
7,516.00	62.44	268.62	7,031.94	-1,789.81	590.60	-370.39	12.11	12.00	1.95	
7,579.73	70.00	269.50	7,057.62	-1,790.75	532.33	-312.44	11.93	11.86	1.38	
70° Inclination @ 7579.73' MD										
7,611.00	73.71	269.90	7,067.36	-1,790.90	502.63	-282.93	11.93	11.87	1.28	
7,706.00	77.99	267.78	7,090.58	-1,792.78	410.55	-191.30	5.00	4.51	-2.23	
7,801.00	82.24	269.59	7,106.88	-1,794.92	317.01	-98.19	4.85	4.47	1.91	
7,896.00	90.41	271.40	7,112.97	-1,794.10	222.30	-4.26	8.81	8.60	1.91	
8,039.00	91.47	270.25	7,110.62	-1,792.04	79.34	137.41	1.09	0.74	-0.80	
8,134.00	92.40	271.44	7,107.41	-1,790.64	-15.60	231.48	1.59	0.98	1.25	
8,229.00	92.18	270.34	7,103.62	-1,789.16	-110.51	325.52	1.18	-0.23	-1.16	
8,323.00	92.00	270.74	7,100.19	-1,788.28	-204.44	418.66	0.47	-0.19	0.43	
8,418.00	91.56	270.91	7,097.24	-1,786.91	-299.38	512.75	0.50	-0.46	0.18	
8,513.00	91.30	272.32	7,094.87	-1,784.23	-394.32	606.66	1.51	-0.27	1.48	

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8,608.00	91.16	274.17	7,092.83	-1,778.86	-489.14	700.14	1.95	-0.15	1.95
8,703.00	90.99	275.10	7,091.05	-1,771.18	-583.81	793.20	0.99	-0.18	0.98
8,798.00	90.85	272.63	7,089.52	-1,764.78	-678.57	886.50	2.60	-0.15	-2.60
8,893.00	90.54	269.85	7,088.37	-1,762.72	-773.53	980.52	2.94	-0.33	-2.93
8,988.00	90.59	269.81	7,087.43	-1,763.01	-868.53	1,074.85	0.07	0.05	-0.04
9,083.00	90.54	269.28	7,086.49	-1,763.76	-963.52	1,169.24	0.56	-0.05	-0.56
9,178.00	90.59	269.90	7,085.56	-1,764.44	-1,058.51	1,263.62	0.65	0.05	0.65
9,273.00	90.90	270.25	7,084.32	-1,764.32	-1,153.51	1,357.90	0.49	0.33	0.37
9,368.00	90.59	268.44	7,083.09	-1,765.40	-1,248.49	1,452.32	1.93	-0.33	-1.91
9,463.00	90.68	269.50	7,082.03	-1,767.11	-1,343.46	1,546.81	1.12	0.09	1.12
9,558.00	91.16	270.21	7,080.51	-1,767.35	-1,438.45	1,641.14	0.90	0.51	0.75
9,653.00	90.94	269.41	7,078.77	-1,767.67	-1,533.43	1,735.46	0.87	-0.23	-0.84
9,748.00	90.63	268.88	7,077.47	-1,769.08	-1,628.41	1,829.92	0.65	-0.33	-0.56
9,843.00	90.46	268.40	7,076.56	-1,771.34	-1,723.38	1,924.47	0.54	-0.18	-0.51
9,938.00	90.63	269.85	7,075.66	-1,772.79	-1,818.36	2,018.93	1.54	0.18	1.53
10,034.00	90.28	268.09	7,074.90	-1,774.51	-1,914.34	2,114.42	1.87	-0.36	-1.83
10,129.00	90.54	268.80	7,074.22	-1,777.09	-2,009.30	2,208.99	0.80	0.27	0.75
10,224.00	91.43	270.34	7,072.58	-1,777.80	-2,104.28	2,303.37	1.87	0.94	1.62
10,319.00	90.99	268.84	7,070.58	-1,778.48	-2,199.26	2,397.73	1.65	-0.46	-1.58
10,413.00	90.94	269.33	7,068.99	-1,779.99	-2,293.23	2,491.20	0.52	-0.05	0.52
10,508.00	91.12	268.22	7,067.29	-1,782.02	-2,388.19	2,585.71	1.18	0.19	-1.17
10,603.00	91.74	268.80	7,064.92	-1,784.49	-2,483.13	2,680.25	0.89	0.65	0.61
10,698.00	91.60	269.85	7,062.15	-1,785.60	-2,578.08	2,774.65	1.11	-0.15	1.11
10,793.00	91.47	267.96	7,059.60	-1,787.42	-2,673.03	2,869.12	1.99	-0.14	-1.99
10,888.00	91.60	269.81	7,057.06	-1,789.27	-2,767.97	2,963.59	1.95	0.14	1.95
10,984.00	91.74	269.72	7,054.26	-1,789.66	-2,863.93	3,058.89	0.17	0.15	-0.09
11,079.00	91.69	269.50	7,051.42	-1,790.31	-2,958.88	3,153.23	0.24	-0.05	-0.23
11,174.00	91.47	268.31	7,048.80	-1,792.12	-3,053.83	3,247.70	1.27	-0.23	-1.25
11,268.00	91.91	270.16	7,046.02	-1,793.38	-3,147.77	3,341.12	2.02	0.47	1.97
11,363.00	91.87	270.07	7,042.89	-1,793.19	-3,242.72	3,435.35	0.10	-0.04	-0.09
11,458.00	91.56	269.90	7,040.05	-1,793.21	-3,337.68	3,529.62	0.37	-0.33	-0.18
11,553.00	91.65	268.40	7,037.39	-1,794.62	-3,432.63	3,624.04	1.58	0.09	-1.58
11,648.00	91.91	269.72	7,034.44	-1,796.18	-3,527.57	3,718.48	1.42	0.27	1.39
11,743.00	91.56	269.77	7,031.56	-1,796.60	-3,622.52	3,812.79	0.37	-0.37	0.05
11,838.00	90.28	269.15	7,030.03	-1,797.49	-3,717.51	3,907.18	1.50	-1.35	-0.65
11,933.00	89.66	269.55	7,030.08	-1,798.57	-3,812.50	4,001.61	0.78	-0.65	0.42
12,028.00	90.06	270.69	7,030.32	-1,798.37	-3,907.50	4,095.89	1.27	0.42	1.20
12,122.00	89.53	269.15	7,030.65	-1,798.50	-4,001.49	4,189.22	1.73	-0.56	-1.64
12,217.00	89.75	269.85	7,031.25	-1,799.33	-4,096.49	4,283.62	0.77	0.23	0.74
12,313.00	89.93	270.87	7,031.52	-1,798.73	-4,192.48	4,378.84	1.08	0.19	1.06
12,408.00	89.57	269.68	7,031.93	-1,798.27	-4,287.48	4,473.09	1.31	-0.38	-1.25
12,503.00	89.53	269.55	7,032.68	-1,798.91	-4,382.47	4,567.47	0.14	-0.04	-0.14
12,598.00	90.06	270.82	7,033.02	-1,798.61	-4,477.47	4,661.73	1.45	0.56	1.34

# Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Lind 26W-30-6N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Site:</b>	Sec 26-T07N-R67W Lind	<b>MD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Well:</b>	Lind 26W-30-6N	<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)
12,599.53	90.06	270.82	7,033.02	-1,798.58	-4,479.00	4,663.25	0.00	0.00	0.00
<b>Cross @ 12599.53' MD</b>									
12,693.00	90.23	270.87	7,032.78	-1,797.21	-4,572.46	4,755.86	0.19	0.18	0.05
12,789.00	90.28	269.99	7,032.35	-1,796.48	-4,668.45	4,851.07	0.92	0.05	-0.92
12,884.00	90.10	270.38	7,032.03	-1,796.18	-4,763.45	4,945.34	0.45	-0.19	0.41
12,979.00	90.54	271.13	7,031.50	-1,794.93	-4,858.44	5,039.48	0.92	0.46	0.79
13,073.00	90.19	270.38	7,030.91	-1,793.69	-4,952.43	5,132.63	0.88	-0.37	-0.80
13,168.00	90.81	272.28	7,030.08	-1,791.48	-5,047.40	5,226.64	2.10	0.65	2.00
13,263.00	90.85	271.97	7,028.70	-1,787.96	-5,142.32	5,320.45	0.33	0.04	-0.33
13,358.00	90.10	270.87	7,027.91	-1,785.61	-5,237.29	5,414.44	1.40	-0.79	-1.16
13,453.00	90.77	271.09	7,027.19	-1,783.98	-5,332.27	5,508.53	0.74	0.71	0.23
13,548.00	90.46	271.09	7,026.17	-1,782.17	-5,427.25	5,602.59	0.33	-0.33	0.00
13,643.00	90.37	271.00	7,025.48	-1,780.44	-5,522.23	5,696.67	0.13	-0.09	-0.09
13,738.00	90.77	272.01	7,024.54	-1,777.95	-5,617.19	5,790.64	1.14	0.42	1.06
13,833.00	89.88	271.48	7,024.00	-1,775.05	-5,712.14	5,884.55	1.09	-0.94	-0.56
13,928.00	89.70	269.50	7,024.35	-1,774.24	-5,807.14	5,978.75	2.09	-0.19	-2.08
14,023.00	89.70	269.68	7,024.85	-1,774.92	-5,902.13	6,073.14	0.19	0.00	0.19
14,118.00	90.15	271.66	7,024.97	-1,773.81	-5,997.12	6,167.30	2.14	0.47	2.08
14,213.00	90.06	270.29	7,024.80	-1,772.19	-6,092.10	6,261.39	1.45	-0.09	-1.44
14,308.00	90.19	271.26	7,024.59	-1,770.91	-6,187.09	6,355.53	1.03	0.14	1.02
14,403.00	89.09	268.80	7,025.19	-1,770.86	-6,282.08	6,449.82	2.84	-1.16	-2.59
14,498.00	89.17	270.52	7,026.63	-1,771.42	-6,377.07	6,544.18	1.81	0.08	1.81
14,593.00	89.09	269.68	7,028.07	-1,771.26	-6,472.05	6,638.46	0.89	-0.08	-0.88
14,688.00	89.13	269.63	7,029.55	-1,771.83	-6,567.04	6,732.82	0.07	0.04	-0.05
14,783.00	89.35	270.60	7,030.81	-1,771.64	-6,662.03	6,827.09	1.05	0.23	1.02
14,878.00	89.70	271.71	7,031.59	-1,769.72	-6,757.01	6,921.14	1.23	0.37	1.17
14,973.00	89.48	271.31	7,032.27	-1,767.22	-6,851.97	7,015.11	0.48	-0.23	-0.42
15,069.00	89.40	270.96	7,033.21	-1,765.32	-6,947.95	7,110.16	0.37	-0.08	-0.36
15,164.00	89.35	271.09	7,034.25	-1,763.62	-7,042.93	7,204.24	0.15	-0.05	0.14
15,258.00	89.66	271.04	7,035.06	-1,761.87	-7,136.91	7,297.32	0.33	0.33	-0.05
15,354.00	89.26	269.77	7,035.96	-1,761.19	-7,232.90	7,392.53	1.39	-0.42	-1.32
15,449.00	89.44	270.96	7,037.04	-1,760.59	-7,327.89	7,486.75	1.27	0.19	1.25
15,544.00	89.48	271.18	7,037.94	-1,758.82	-7,422.87	7,580.83	0.24	0.04	0.23
15,639.00	89.66	271.57	7,038.65	-1,756.54	-7,517.84	7,674.83	0.45	0.19	0.41
15,733.00	89.22	269.68	7,039.57	-1,755.51	-7,611.82	7,768.00	2.06	-0.47	-2.01
15,828.00	89.44	270.03	7,040.68	-1,755.75	-7,706.82	7,862.33	0.44	0.23	0.37
15,964.00	89.35	270.03	7,042.12	-1,755.68	-7,842.81	7,997.32	0.07	-0.07	0.00
16,059.00	89.17	269.06	7,043.34	-1,756.43	-7,937.80	8,091.71	1.04	-0.19	-1.02
16,154.00	90.19	271.26	7,043.87	-1,756.17	-8,032.79	8,185.97	2.55	1.07	2.32
16,249.00	90.15	270.52	7,043.59	-1,754.69	-8,127.78	8,280.09	0.78	-0.04	-0.78
16,344.00	89.88	269.99	7,043.57	-1,754.27	-8,222.77	8,374.34	0.63	-0.28	-0.56
16,439.00	89.75	270.82	7,043.87	-1,753.60	-8,317.77	8,468.56	0.88	-0.14	0.87
16,533.00	89.26	268.88	7,044.69	-1,753.84	-8,411.76	8,561.90	2.13	-0.52	-2.06
16,628.00	90.15	271.93	7,045.18	-1,753.17	-8,506.75	8,656.11	3.34	0.94	3.21

# Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Lind 26W-30-6N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Site:</b>	Sec 26-T07N-R67W Lind	<b>MD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Well:</b>	Lind 26W-30-6N	<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)
16,723.00	89.79	269.99	7,045.23	-1,751.58	-8,601.73	8,750.20	2.08	-0.38	-2.04
16,818.00	89.70	269.99	7,045.65	-1,751.60	-8,696.73	8,844.51	0.09	-0.09	0.00
16,913.00	90.15	269.99	7,045.77	-1,751.61	-8,791.73	8,938.82	0.47	0.47	0.00
17,008.00	89.57	269.50	7,046.00	-1,752.04	-8,886.72	9,033.17	0.80	-0.61	-0.52
17,104.00	89.75	270.74	7,046.57	-1,751.84	-8,982.72	9,128.45	1.31	0.19	1.29
17,199.00	89.88	270.96	7,046.88	-1,750.43	-9,077.71	9,222.57	0.27	0.14	0.23
17,293.00	90.23	271.84	7,046.79	-1,748.13	-9,171.68	9,315.58	1.01	0.37	0.94
17,388.00	90.06	271.00	7,046.55	-1,745.78	-9,266.65	9,409.57	0.90	-0.18	-0.88
17,483.00	89.88	269.81	7,046.60	-1,745.10	-9,361.65	9,503.79	1.27	-0.19	-1.25
17,579.00	89.66	269.06	7,046.99	-1,746.05	-9,457.64	9,599.20	0.81	-0.23	-0.78
17,674.00	88.91	269.72	7,048.17	-1,747.06	-9,552.63	9,693.61	1.05	-0.79	0.69
17,769.00	89.57	269.99	7,049.43	-1,747.30	-9,647.62	9,787.94	0.75	0.69	0.28
17,864.00	89.44	270.47	7,050.25	-1,746.92	-9,742.61	9,882.20	0.52	-0.14	0.51
17,867.39	89.45	270.47	7,050.28	-1,746.89	-9,746.00	9,885.56	0.23	0.19	-0.14
<b>Cross @ 17867.39' MD</b>									
17,959.00	89.62	270.34	7,051.03	-1,746.25	-9,837.61	9,976.42	0.23	0.19	-0.14
18,054.00	89.48	270.38	7,051.78	-1,745.65	-9,932.60	10,070.64	0.15	-0.15	0.04
18,149.00	89.40	269.94	7,052.71	-1,745.39	-10,027.60	10,164.91	0.47	-0.08	-0.46
18,244.00	89.66	270.56	7,053.48	-1,744.97	-10,122.59	10,259.17	0.71	0.27	0.65
18,339.00	89.17	269.59	7,054.45	-1,744.85	-10,217.59	10,353.45	1.14	-0.52	-1.02
18,434.00	89.40	270.25	7,055.64	-1,744.98	-10,312.58	10,447.77	0.74	0.24	0.69
18,529.00	89.44	270.65	7,056.60	-1,744.24	-10,407.57	10,541.97	0.42	0.04	0.42
18,623.00	89.22	268.88	7,057.70	-1,744.62	-10,501.56	10,635.32	1.90	-0.23	-1.88
18,718.00	89.26	270.38	7,058.96	-1,745.23	-10,596.55	10,729.69	1.58	0.04	1.58
18,813.00	89.00	268.58	7,060.40	-1,746.10	-10,691.53	10,824.08	1.91	-0.27	-1.89
18,909.00	89.00	269.46	7,062.08	-1,747.74	-10,787.50	10,919.55	0.92	0.00	0.92
19,004.00	89.57	270.78	7,063.27	-1,747.54	-10,882.49	11,013.82	1.51	0.60	1.39
19,099.00	89.09	269.24	7,064.38	-1,747.52	-10,977.48	11,108.12	1.70	-0.51	-1.62
19,194.00	89.57	270.16	7,065.49	-1,748.02	-11,072.47	11,202.47	1.09	0.51	0.97
19,289.00	89.93	270.52	7,065.90	-1,747.46	-11,167.46	11,296.71	0.54	0.38	0.38
19,385.00	89.35	269.06	7,066.50	-1,747.81	-11,263.46	11,392.04	1.64	-0.60	-1.52
19,480.00	89.48	268.36	7,067.47	-1,749.95	-11,358.43	11,486.58	0.75	0.14	-0.74
19,575.00	90.23	270.03	7,067.72	-1,751.28	-11,453.42	11,581.03	1.93	0.79	1.76
19,670.00	89.88	268.44	7,067.62	-1,752.55	-11,548.40	11,675.48	1.71	-0.37	-1.67
19,765.00	89.88	268.80	7,067.82	-1,754.84	-11,643.38	11,770.04	0.38	0.00	0.38
19,860.00	90.46	270.25	7,067.54	-1,755.63	-11,738.37	11,864.43	1.64	0.61	1.53
19,956.00	90.19	269.15	7,067.00	-1,756.13	-11,834.37	11,959.79	1.18	-0.28	-1.15
20,051.00	90.59	270.43	7,066.35	-1,756.48	-11,929.36	12,054.13	1.41	0.42	1.35
20,146.00	90.54	270.21	7,065.41	-1,755.95	-12,024.35	12,148.37	0.24	-0.05	-0.23
20,241.00	90.41	270.52	7,064.63	-1,755.34	-12,119.35	12,242.59	0.35	-0.14	0.33
20,336.00	90.46	270.34	7,063.90	-1,754.63	-12,214.34	12,336.81	0.20	0.05	-0.19
20,431.00	90.28	269.90	7,063.29	-1,754.43	-12,309.34	12,431.09	0.50	-0.19	-0.46
20,526.00	90.06	269.24	7,063.01	-1,755.14	-12,404.34	12,525.48	0.73	-0.23	-0.69

## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Lind 26W-30-6N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Site:</b>	Sec 26-T07N-R67W Lind	<b>MD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Well:</b>	Lind 26W-30-6N	<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)	
20,621.00	89.97	268.40	7,062.98	-1,757.10	-12,499.32	12,620.00	0.89	-0.09	-0.88	
20,716.00	90.10	270.12	7,062.93	-1,758.32	-12,594.30	12,714.44	1.82	0.14	1.81	
20,811.00	89.97	268.62	7,062.87	-1,759.37	-12,689.30	12,808.86	1.58	-0.14	-1.58	
20,906.00	89.79	268.44	7,063.07	-1,761.81	-12,784.26	12,903.43	0.27	-0.19	-0.19	
21,001.00	90.15	269.02	7,063.12	-1,763.91	-12,879.24	12,997.97	0.72	0.38	0.61	
21,096.00	89.70	269.19	7,063.24	-1,765.40	-12,974.23	13,092.44	0.51	-0.47	0.18	
21,191.00	90.19	269.55	7,063.33	-1,766.44	-13,069.22	13,186.87	0.64	0.52	0.38	
21,286.00	90.01	269.15	7,063.17	-1,767.52	-13,164.22	13,281.30	0.46	-0.19	-0.42	
21,381.00	90.10	268.97	7,063.08	-1,769.08	-13,259.20	13,375.78	0.21	0.09	-0.19	
21,476.00	90.59	269.99	7,062.50	-1,769.94	-13,354.20	13,470.18	1.19	0.52	1.07	
21,572.00	90.54	269.81	7,061.56	-1,770.11	-13,450.19	13,565.50	0.19	-0.05	-0.19	
21,667.00	90.50	270.69	7,060.69	-1,769.69	-13,545.19	13,659.75	0.93	-0.04	0.93	
21,762.00	91.03	270.87	7,059.43	-1,768.40	-13,640.17	13,753.88	0.59	0.56	0.19	
21,857.00	90.54	269.55	7,058.12	-1,768.05	-13,735.16	13,848.13	1.48	-0.52	-1.39	
21,953.00	90.41	269.46	7,057.33	-1,768.88	-13,831.15	13,943.53	0.16	-0.14	-0.09	
22,047.00	90.99	270.65	7,056.18	-1,768.79	-13,925.14	14,036.82	1.41	0.62	1.27	
22,142.00	91.25	271.44	7,054.32	-1,767.06	-14,020.11	14,130.88	0.88	0.27	0.83	
22,237.00	90.90	270.82	7,052.54	-1,765.18	-14,115.07	14,224.93	0.75	-0.37	-0.65	
22,332.00	91.16	271.04	7,050.83	-1,763.64	-14,210.04	14,319.02	0.36	0.27	0.23	
22,427.00	90.54	270.21	7,049.42	-1,762.61	-14,305.02	14,413.19	1.09	-0.65	-0.87	
22,521.00	90.50	269.72	7,048.57	-1,762.66	-14,399.02	14,506.50	0.52	-0.04	-0.52	
22,592.00	90.72	269.19	7,047.81	-1,763.34	-14,470.01	14,577.06	0.81	0.31	-0.75	
Last MWD Survey @ 22592' MD										
22,639.00	90.72	269.19	7,047.22	-1,764.00	-14,517.00	14,623.79	0.00	0.00	0.00	
Projection to TD @ 22639' MD 2222' FNL/ 512' FWL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		
30° Inclination @ 7156.2	0.00	0.00	6,786.07	-1,794.56	847.31	1,442,543.91	3,180,419.95	40.546370		
- actual wellpath misses target center by 0.02usft at 7156.28usft MD (6786.07 TVD, -1794.58 N, 847.31 E)										
- Point										
Cross @ 12599.53' MD	0.00	0.00	7,033.02	-1,798.58	-4,479.00	1,442,501.07	3,175,093.82	40.546358		
- actual wellpath hits target center										
- Point										
Cross @ 17867.39' MD	0.00	0.00	7,050.28	-1,746.89	-9,746.00	1,442,514.38	3,169,826.58	40.546496		
- actual wellpath hits target center										
- Point										
70° Inclination @ 7579.7	0.00	0.00	7,057.62	-1,790.76	532.34	1,442,545.41	3,180,104.96	40.546381		
- actual wellpath misses target center by 0.01usft at 7579.73usft MD (7057.62 TVD, -1790.75 N, 532.34 E)										
- Point										



## Survey Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Lind 26W-30-6N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Site:</b>	Sec 26-T07N-R67W Lind	<b>MD Reference:</b>	KB @ 4973.00usft (Patterson 340)
<b>Well:</b>	Lind 26W-30-6N	<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

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,603.30	1,548.97	-315.98	162.25	Tie into Surface Surveys
1,694.00	1,633.67	-344.45	177.80	First MWD Survey @ 1694' MD
7,156.28	6,786.08	-1,794.58	847.31	30° Inclination @ 7156.28' MD
7,579.73	7,057.62	-1,790.75	532.33	70° Inclination @ 7579.73' MD
12,599.53	7,033.02	-1,798.58	-4,479.00	Cross @ 12599.53' MD
17,867.39	7,050.28	-1,746.89	-9,746.00	Cross @ 17867.39' MD
22,592.00	7,047.81	-1,763.34	-14,470.01	Last MWD Survey @ 22592' MD
22,639.00	7,047.22	-1,764.00	-14,517.00	Projection to TD @ 22639' MD 2222' FNL/ 512' FWL

Checked By: _____	Approved By: _____	Date: _____
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