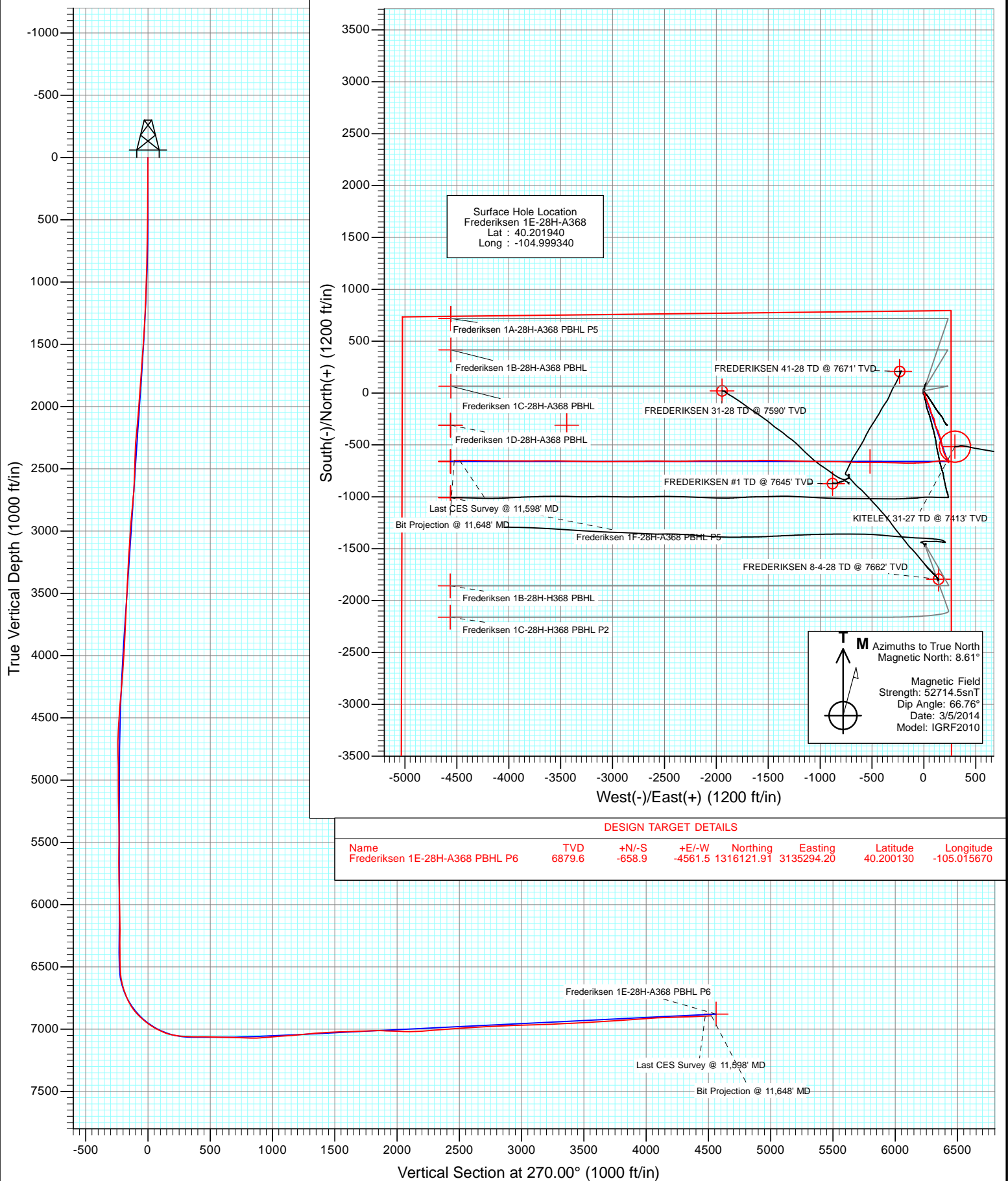


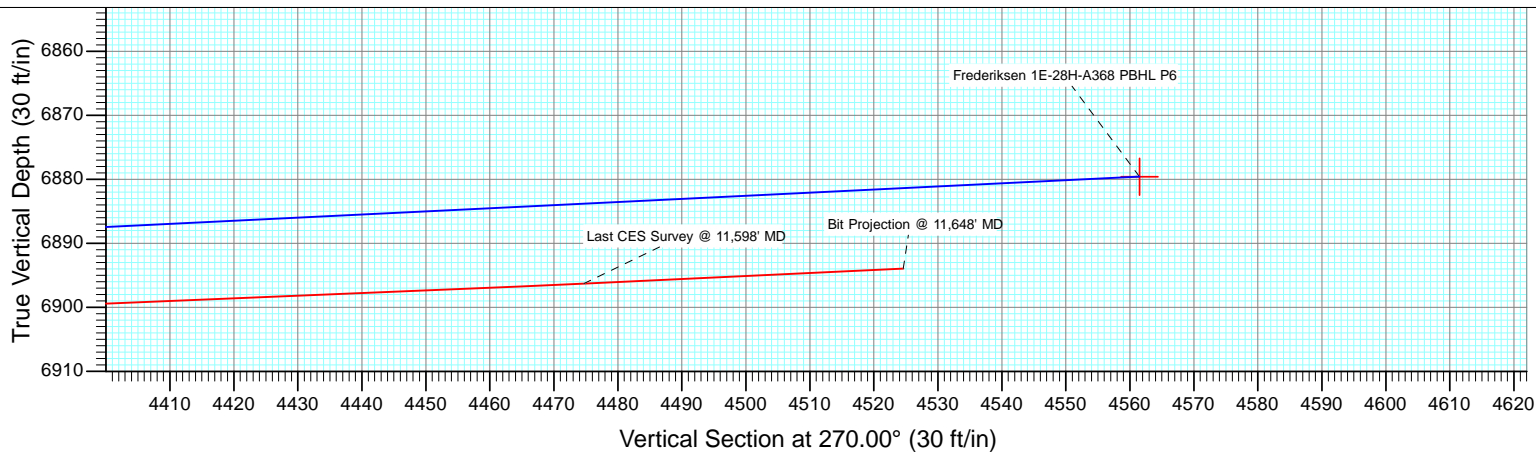
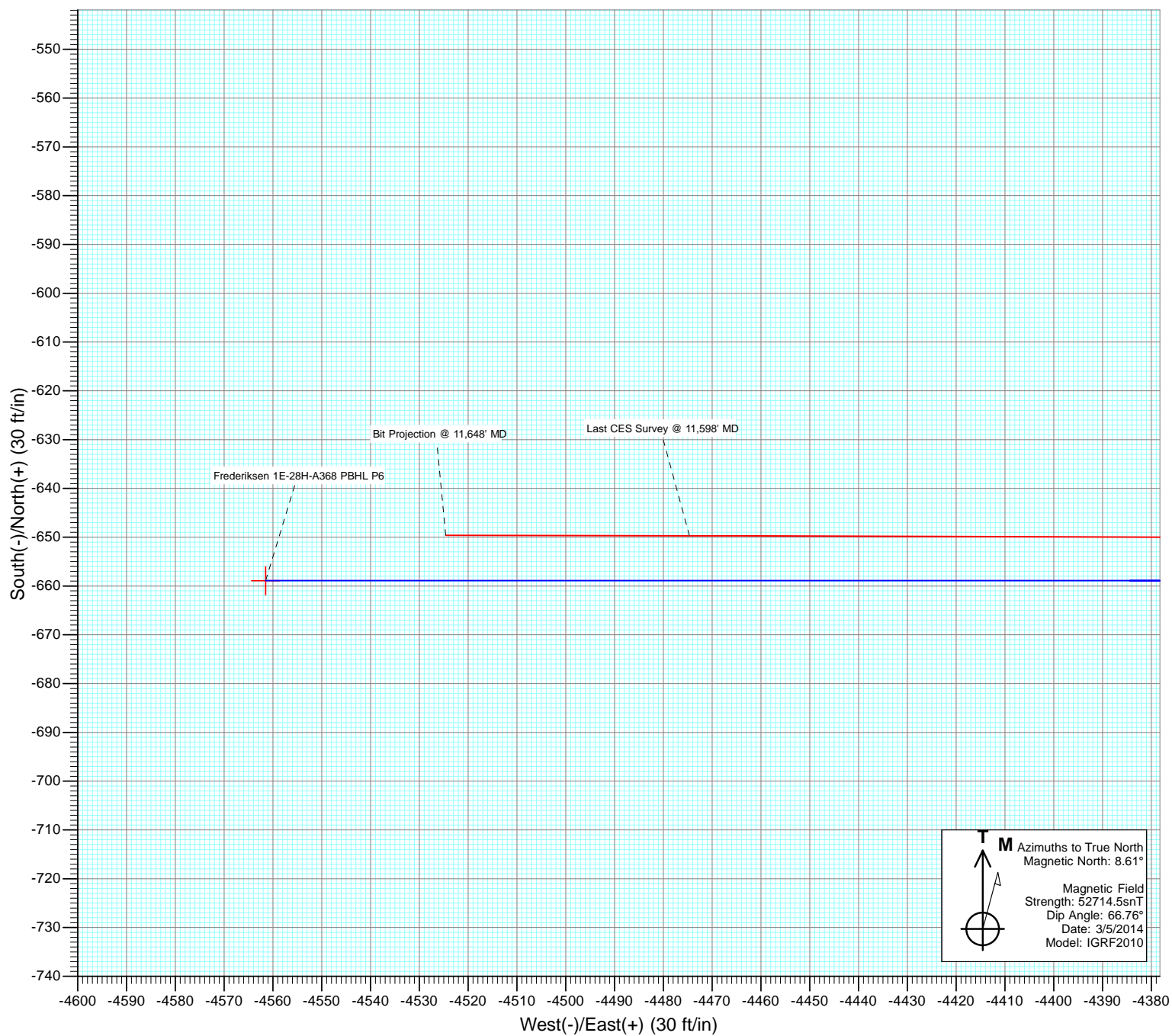


Project: DJ Wattenberg  
Site: S28-T3N-R68W (Frederiksen)  
Well: Frederiksen 1E-28H-A368  
Wellbore: Hz  
Design: FINAL





Project: DJ Wattenberg  
Site: S28-T3N-R68W (Frederiksen)  
Well: Frederiksen 1E-28H-A368  
Wellbore: Hz  
Design: FINAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	DJ Wattenberg		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	S28-T3N-R68W (Frederiksen)			
<b>Site Position:</b>		<b>Northing:</b>	1,315,349.57 ft	<b>Latitude:</b> 40.197940
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,139,876.89 ft	<b>Longitude:</b> -104.999280
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.32 °

<b>Well</b>	Frederiksen 1E-28H-A368			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,316,806.58 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,139,851.90 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	4,992.0 ft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/5/2014	8.61	66.76	52,714

<b>Design</b>	FINAL			
<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	270.00

<b>Survey Program</b>	<b>Date</b>	3/24/2014		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
143.0	11,648.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
143.0	0.60	93.50	143.0	0.0	0.7	-0.7	0.42	0.42	
235.0	0.50	74.20	235.0	0.0	1.6	-1.6	0.23	-0.11	
326.0	0.40	76.80	326.0	0.2	2.3	-2.3	0.11	-0.11	
418.0	0.20	131.00	418.0	0.2	2.7	-2.7	0.35	-0.22	
510.0	1.10	153.30	510.0	-0.7	3.3	-3.3	1.00	0.98	
602.0	2.40	164.00	601.9	-3.4	4.2	-4.2	1.45	1.41	
694.0	3.90	154.40	693.8	-8.0	6.1	-6.1	1.72	1.63	
786.0	4.00	157.20	785.6	-13.8	8.7	-8.7	0.24	0.11	
809.0	4.20	159.80	808.5	-15.3	9.3	-9.3	1.19	0.87	
960.0	4.00	162.60	959.1	-25.6	12.7	-12.7	0.19	-0.13	
1,004.0	4.20	165.60	1,003.0	-28.6	13.6	-13.6	0.67	0.45	
1,096.0	7.30	169.80	1,094.5	-37.6	15.5	-15.5	3.40	3.37	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,188.0	7.80	154.50	1,185.8	-49.0	19.2	-19.2	2.24	0.54	
1,279.0	8.40	157.30	1,275.9	-60.7	24.4	-24.4	0.79	0.66	
1,371.0	9.50	161.80	1,366.7	-74.1	29.4	-29.4	1.42	1.20	
1,463.0	10.10	157.80	1,457.4	-88.8	34.8	-34.8	0.99	0.65	
1,555.0	11.50	157.40	1,547.8	-104.7	41.4	-41.4	1.52	1.52	
1,647.0	9.50	157.70	1,638.2	-120.2	47.8	-47.8	2.17	-2.17	
1,739.0	13.00	159.70	1,728.4	-136.9	54.3	-54.3	3.83	3.80	
1,831.0	13.10	164.30	1,818.1	-156.7	60.7	-60.7	1.13	0.11	
1,923.0	12.50	163.90	1,907.8	-176.3	66.3	-66.3	0.66	-0.65	
2,018.0	13.00	162.30	2,000.4	-196.3	72.4	-72.4	0.64	0.53	
2,112.0	13.10	154.70	2,092.0	-216.1	80.1	-80.1	1.83	0.11	
2,207.0	12.20	154.40	2,184.7	-234.8	89.1	-89.1	0.95	-0.95	
2,302.0	12.00	156.40	2,277.6	-252.9	97.4	-97.4	0.49	-0.21	
2,396.0	10.50	170.20	2,369.8	-270.3	102.7	-102.7	3.27	-1.60	
2,491.0	9.80	169.60	2,463.3	-286.8	105.7	-105.7	0.75	-0.74	
2,585.0	9.50	170.80	2,556.0	-302.3	108.3	-108.3	0.38	-0.32	
2,680.0	10.00	162.60	2,649.6	-318.0	112.1	-112.1	1.55	0.53	
2,775.0	11.80	151.60	2,742.9	-334.4	119.2	-119.2	2.89	1.89	
2,870.0	12.90	155.20	2,835.7	-352.5	128.2	-128.2	1.41	1.16	
2,965.0	12.00	157.10	2,928.5	-371.3	136.5	-136.5	1.04	-0.95	
3,059.0	12.40	163.80	3,020.4	-390.0	143.1	-143.1	1.56	0.43	
3,154.0	11.30	162.00	3,113.3	-408.6	148.9	-148.9	1.22	-1.16	
3,248.0	10.20	159.00	3,205.7	-425.1	154.7	-154.7	1.31	-1.17	
3,343.0	11.40	166.30	3,299.0	-442.1	159.9	-159.9	1.91	1.26	
3,438.0	10.20	162.50	3,392.3	-459.3	164.7	-164.7	1.47	-1.26	
3,532.0	11.90	169.60	3,484.6	-476.7	168.9	-168.9	2.31	1.81	
3,626.0	11.00	168.50	3,576.7	-495.1	172.5	-172.5	0.99	-0.96	
3,721.0	10.50	168.10	3,670.0	-512.4	176.1	-176.1	0.53	-0.53	
3,815.0	12.60	165.00	3,762.1	-530.7	180.5	-180.5	2.33	2.23	
3,910.0	11.60	163.80	3,855.0	-549.9	185.8	-185.8	1.09	-1.05	
4,005.0	10.50	161.60	3,948.3	-567.3	191.2	-191.2	1.24	-1.16	
4,099.0	9.30	161.10	4,040.8	-582.6	196.4	-196.4	1.28	-1.28	
4,194.0	9.80	150.70	4,134.5	-596.9	202.8	-202.8	1.89	0.53	
4,289.0	9.60	149.00	4,228.2	-610.7	210.9	-210.9	0.37	-0.21	
4,383.0	8.70	147.60	4,321.0	-623.5	218.7	-218.7	0.99	-0.96	
4,478.0	7.50	145.40	4,415.0	-634.6	226.1	-226.1	1.30	-1.26	
4,572.0	6.80	143.70	4,508.3	-644.2	232.9	-232.9	0.78	-0.74	
4,667.0	5.70	150.30	4,602.7	-652.8	238.5	-238.5	1.38	-1.16	
4,762.0	4.80	172.60	4,697.3	-660.8	241.4	-241.4	2.33	-0.95	
4,857.0	3.60	210.40	4,792.1	-667.3	240.4	-240.4	3.10	-1.26	
4,951.0	0.20	146.10	4,886.0	-670.0	239.0	-239.0	3.74	-3.62	
5,046.0	0.30	288.90	4,981.0	-670.1	238.8	-238.8	0.50	0.11	
5,141.0	0.60	300.90	5,076.0	-669.7	238.2	-238.2	0.33	0.32	
5,235.0	0.90	288.60	5,170.0	-669.3	237.0	-237.0	0.36	0.32	
5,330.0	1.20	279.70	5,265.0	-668.9	235.4	-235.4	0.36	0.32	
5,424.0	1.20	329.00	5,359.0	-667.8	233.9	-233.9	1.06	0.00	
5,519.0	1.50	319.60	5,454.0	-666.0	232.6	-232.6	0.39	0.32	
5,613.0	2.70	29.00	5,547.9	-663.2	232.8	-232.8	2.75	1.28	
5,708.0	2.10	5.10	5,642.9	-659.5	234.1	-234.1	1.21	-0.63	
5,802.0	1.70	339.50	5,736.8	-656.5	233.7	-233.7	0.99	-0.43	
5,897.0	1.70	313.90	5,831.8	-654.2	232.2	-232.2	0.79	0.00	
5,992.0	1.80	290.60	5,926.7	-652.7	229.8	-229.8	0.75	0.11	
6,086.0	2.20	280.60	6,020.7	-651.8	226.7	-226.7	0.56	0.43	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,181.0	0.70	186.90	6,115.6	-652.1	224.8	-224.8	2.48	-1.58	
6,276.0	0.40	111.10	6,210.6	-652.7	225.0	-225.0	0.75	-0.32	
6,370.0	2.10	184.90	6,304.6	-654.6	225.2	-225.2	2.15	1.81	
6,465.0	1.70	197.50	6,399.6	-657.7	224.6	-224.6	0.61	-0.42	
6,512.0	1.50	200.50	6,446.5	-658.9	224.2	-224.2	0.46	-0.43	
6,560.0	1.50	231.60	6,494.5	-659.9	223.5	-223.5	1.68	0.00	
6,607.0	4.00	299.40	6,541.5	-659.5	221.6	-221.6	7.88	5.32	
6,655.0	9.10	289.40	6,589.1	-657.4	216.5	-216.5	10.85	10.62	
6,702.0	13.90	282.00	6,635.2	-655.0	207.5	-207.5	10.66	10.21	
6,750.0	17.80	274.60	6,681.4	-653.2	194.6	-194.6	9.14	8.12	
6,797.0	21.90	272.60	6,725.6	-652.2	178.6	-178.6	8.84	8.72	
6,844.0	24.50	265.10	6,768.8	-652.6	160.2	-160.2	8.36	5.53	
6,891.0	30.80	262.10	6,810.4	-655.1	138.5	-138.5	13.72	13.40	
6,939.0	38.50	260.70	6,849.8	-659.2	111.5	-111.5	16.13	16.04	
6,986.0	44.90	261.60	6,884.9	-664.0	80.7	-80.7	13.68	13.62	
7,034.0	48.50	266.40	6,917.8	-667.6	45.9	-45.9	10.45	7.50	
7,081.0	51.60	265.80	6,948.0	-670.1	10.0	-10.0	6.67	6.60	
7,129.0	57.90	268.20	6,975.7	-672.1	-29.1	29.1	13.74	13.12	
7,176.0	62.30	267.90	6,999.1	-673.5	-69.8	69.8	9.38	9.36	
7,223.0	65.50	268.80	7,019.8	-674.7	-112.0	112.0	7.02	6.81	
7,270.0	71.50	269.80	7,037.0	-675.2	-155.7	155.7	12.92	12.77	
7,318.0	79.80	271.00	7,048.9	-674.9	-202.2	202.2	17.46	17.29	
7,350.0	83.80	272.80	7,053.5	-673.8	-233.8	233.8	13.68	12.50	
7,393.0	84.90	272.40	7,057.7	-671.9	-276.6	276.6	2.72	2.56	
7,516.0	90.70	270.30	7,062.4	-669.0	-399.4	399.4	5.01	4.72	
7,610.0	88.60	270.00	7,063.0	-668.8	-493.4	493.4	2.26	-2.23	
7,705.0	88.60	270.80	7,065.3	-668.1	-588.4	588.4	0.84	0.00	
7,800.0	88.40	271.40	7,067.8	-666.3	-683.3	683.3	0.67	-0.21	
7,895.0	88.40	272.30	7,070.5	-663.2	-778.2	778.2	0.95	0.00	
7,942.0	87.80	271.70	7,072.0	-661.6	-825.2	825.2	1.80	-1.28	
7,990.0	90.70	270.70	7,072.6	-660.6	-873.1	873.1	6.39	6.04	
8,085.0	98.20	269.50	7,065.3	-660.4	-967.8	967.8	8.00	7.90	
8,179.0	91.90	271.60	7,057.0	-659.5	-1,061.3	1,061.3	7.06	-6.70	
8,274.0	94.40	271.80	7,051.8	-656.7	-1,156.2	1,156.2	2.64	2.63	
8,369.0	96.70	271.30	7,042.6	-654.1	-1,250.7	1,250.7	2.48	2.42	
8,463.0	94.40	271.10	7,033.5	-652.2	-1,344.2	1,344.2	2.46	-2.45	
8,558.0	93.20	271.40	7,027.2	-650.1	-1,439.0	1,439.0	1.30	-1.26	
8,653.0	92.20	269.50	7,022.7	-649.3	-1,533.9	1,533.9	2.26	-1.05	
8,748.0	91.40	269.10	7,019.8	-650.5	-1,628.8	1,628.8	0.94	-0.84	
8,842.0	92.90	269.60	7,016.2	-651.6	-1,722.7	1,722.7	1.68	1.60	
8,937.0	90.90	270.20	7,013.1	-651.7	-1,817.7	1,817.7	2.20	-2.11	
9,032.0	87.80	269.60	7,014.2	-651.9	-1,912.6	1,912.6	3.32	-3.26	
9,126.0	88.00	269.60	7,017.6	-652.6	-2,006.6	2,006.6	0.21	0.21	
9,221.0	89.10	270.00	7,020.0	-652.9	-2,101.5	2,101.5	1.23	1.16	
9,316.0	94.10	268.40	7,017.4	-654.2	-2,196.5	2,196.5	5.53	5.26	
9,410.0	96.00	268.80	7,009.1	-656.5	-2,290.1	2,290.1	2.07	2.02	
9,505.0	93.60	270.10	7,001.1	-657.4	-2,384.7	2,384.7	2.87	-2.53	
9,600.0	93.00	270.80	6,995.7	-656.7	-2,479.6	2,479.6	0.97	-0.63	
9,694.0	94.40	270.30	6,989.6	-655.8	-2,573.4	2,573.4	1.58	1.49	
9,789.0	94.30	269.60	6,982.4	-655.8	-2,668.1	2,668.1	0.74	-0.11	
9,884.0	91.60	269.10	6,977.5	-656.9	-2,762.9	2,762.9	2.89	-2.84	
9,979.0	92.30	269.70	6,974.3	-657.9	-2,857.9	2,857.9	0.97	0.74	
10,073.0	92.00	269.50	6,970.7	-658.6	-2,951.8	2,951.8	0.38	-0.32	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
10,168.0	91.40	269.50	6,967.9	-659.4	-3,046.8	3,046.8	0.63	-0.63	
10,263.0	92.20	269.40	6,964.9	-660.3	-3,141.7	3,141.7	0.85	0.84	
10,357.0	92.50	271.10	6,961.1	-659.9	-3,235.6	3,235.6	1.83	0.32	
10,452.0	92.70	272.10	6,956.8	-657.3	-3,330.5	3,330.5	1.07	0.21	
10,547.0	92.30	271.60	6,952.6	-654.2	-3,425.4	3,425.4	0.67	-0.42	
10,642.0	93.60	270.30	6,947.7	-652.6	-3,520.2	3,520.2	1.93	1.37	
10,736.0	93.60	269.80	6,941.8	-652.5	-3,614.0	3,614.0	0.53	0.00	
10,831.0	93.50	269.50	6,936.0	-653.1	-3,708.9	3,708.9	0.33	-0.11	
10,925.0	94.20	269.20	6,929.6	-654.2	-3,802.6	3,802.6	0.81	0.74	
11,020.0	93.80	270.30	6,923.0	-654.6	-3,897.4	3,897.4	1.23	-0.42	
11,115.0	94.30	270.20	6,916.3	-654.2	-3,992.2	3,992.2	0.54	0.53	
11,210.0	93.50	271.30	6,909.9	-652.9	-4,086.9	4,086.9	1.43	-0.84	
11,304.0	91.10	270.90	6,906.1	-651.1	-4,180.8	4,180.8	2.59	-2.55	
11,399.0	91.70	270.20	6,903.8	-650.2	-4,275.8	4,275.8	0.97	0.63	
11,494.0	92.10	270.10	6,900.6	-650.0	-4,370.8	4,370.8	0.43	0.42	
11,588.0	92.60	270.20	6,896.8	-649.7	-4,464.7	4,464.7	0.54	0.53	
11,598.0	92.70	270.10	6,896.3	-649.7	-4,474.6	4,474.6	1.41	1.00	Last CES Survey @ 11,598' MD
11,648.0	92.70	270.10	6,893.9	-649.6	-4,524.6	4,524.6	0.00	0.00	Bit Projection @ 11,648' MD

### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Frederiksen 1E-28H-A368 - actual wellpath misses target center by 42.1ft at 11648.0ft MD (6893.9 TVD, -649.6 N, -4524.6 E) - Point	0.00	0.00	6,875.9	-658.9	-4,561.5	1,316,121.91	3,135,294.20	40.200130	-105.015670
Frederiksen 1E-28H-A368 - actual wellpath misses target center by 145.1ft at 11648.0ft MD (6893.9 TVD, -649.6 N, -4524.6 E) - Point	0.00	0.00	7,034.0	-658.9	-4,561.5	1,316,121.91	3,135,294.20	40.200130	-105.015670
Frederiksen 1E-28H-A368 - actual wellpath misses target center by 40.7ft at 11648.0ft MD (6893.9 TVD, -649.6 N, -4524.6 E) - Point	0.00	0.00	6,879.6	-658.9	-4,561.5	1,316,121.91	3,135,294.20	40.200130	-105.015670
Frederiksen 1E-28H-A368 - actual wellpath misses target center by 9.9ft at 7636.5ft MD (7063.6 TVD, -668.7 N, -519.8 E) - Point	0.00	0.00	7,065.0	-658.9	-519.7	1,316,144.75	3,139,335.92	40.200131	-105.001201

### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
11,598.0	6,896.3	-649.7	-4,474.6	Last CES Survey @ 11,598' MD
11,648.0	6,893.9	-649.6	-4,524.6	Bit Projection @ 11,648' MD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

# **EnCana Oil & Gas (USA) Inc**

**DJ Wattenberg**

**S28-T3N-R68W (Frederiksen)**

**Frederiksen 1E-28H-A368**

**Hz**

**Design: FINAL**

## **Survey Report - Geographic**

**24 March, 2014**

# Cathedral Energy Services

## Survey Report - Geographic

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	DJ Wattenberg		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site	S28-T3N-R68W (Frederiksen)				
Site Position:		Northing:	1,315,349.57 ft	Latitude:	40.197940
From:	Lat/Long	Easting:	3,139,876.89 ft	Longitude:	-104.999280
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.32 °

Well	Frederiksen 1E-28H-A368					
Well Position	+N/-S	0.0 ft	Northing:	1,316,806.58 ft	Latitude:	40.201940
	+E/-W	0.0 ft	Easting:	3,139,851.90 ft	Longitude:	-104.999340
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,992.0 ft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/5/2014	8.61	66.76	52,714

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	270.00	

<b>Survey Program</b>	<b>Date</b>	3/24/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
143.0	11,648.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Map Northing (ft)</b>	<b>Map Easting (ft)</b>	<b>Latitude</b>	<b>Longitude</b>	
0.0	0.00	0.00	0.0	0.0	0.0	1,316,806.58	3,139,851.90	40.201940	-104.999340	
143.0	0.60	93.50	143.0	0.0	0.7	1,316,806.54	3,139,852.65	40.201940	-104.999338	
235.0	0.50	74.20	235.0	0.0	1.6	1,316,806.62	3,139,853.51	40.201940	-104.999334	
326.0	0.40	76.80	326.0	0.2	2.3	1,316,806.81	3,139,854.20	40.201941	-104.999332	
418.0	0.20	131.00	418.0	0.2	2.7	1,316,806.78	3,139,854.64	40.201941	-104.999330	
510.0	1.10	153.30	510.0	-0.7	3.3	1,316,805.88	3,139,855.16	40.201938	-104.999329	
602.0	2.40	164.00	601.9	-3.4	4.2	1,316,803.25	3,139,856.10	40.201931	-104.999325	
694.0	3.90	154.40	693.8	-8.0	6.1	1,316,798.59	3,139,858.01	40.201918	-104.999319	
786.0	4.00	157.20	785.6	-13.8	8.7	1,316,792.82	3,139,860.64	40.201902	-104.999309	
809.0	4.20	159.80	808.5	-15.3	9.3	1,316,791.29	3,139,861.25	40.201898	-104.999307	
960.0	4.00	162.60	959.1	-25.6	12.7	1,316,781.10	3,139,864.79	40.201870	-104.999295	
1,004.0	4.20	165.60	1,003.0	-28.6	13.6	1,316,778.08	3,139,865.67	40.201862	-104.999292	



# Cathedral Energy Services

## Survey Report - Geographic

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
1,096.0	7.30	169.80	1,094.5	-37.6	15.5	1,316,769.07	3,139,867.59	40.201837	-104.999285
1,188.0	7.80	154.50	1,185.8	-49.0	19.2	1,316,757.70	3,139,871.38	40.201806	-104.999272
1,279.0	8.40	157.30	1,275.9	-60.7	24.4	1,316,746.03	3,139,876.67	40.201773	-104.999253
1,371.0	9.50	161.80	1,366.7	-74.1	29.4	1,316,732.64	3,139,881.71	40.201737	-104.999235
1,463.0	10.10	157.80	1,457.4	-88.8	34.8	1,316,717.99	3,139,887.21	40.201696	-104.999216
1,555.0	11.50	157.40	1,547.8	-104.7	41.4	1,316,702.10	3,139,893.88	40.201653	-104.999192
1,647.0	9.50	157.70	1,638.2	-120.2	47.8	1,316,686.64	3,139,900.37	40.201610	-104.999169
1,739.0	13.00	159.70	1,728.4	-136.9	54.3	1,316,669.94	3,139,906.94	40.201564	-104.999146
1,831.0	13.10	164.30	1,818.1	-156.7	60.7	1,316,650.23	3,139,913.46	40.201510	-104.999123
1,923.0	12.50	163.90	1,907.8	-176.3	66.3	1,316,630.66	3,139,919.15	40.201456	-104.999103
2,018.0	13.00	162.30	2,000.4	-196.3	72.4	1,316,610.64	3,139,925.37	40.201401	-104.999081
2,112.0	13.10	154.70	2,092.0	-216.1	80.1	1,316,590.98	3,139,933.24	40.201347	-104.999053
2,207.0	12.20	154.40	2,184.7	-234.8	89.1	1,316,572.25	3,139,942.29	40.201295	-104.999021
2,302.0	12.00	156.40	2,277.6	-252.9	97.4	1,316,554.19	3,139,950.68	40.201246	-104.998992
2,396.0	10.50	170.20	2,369.8	-270.3	102.7	1,316,536.82	3,139,956.15	40.201198	-104.998973
2,491.0	9.80	169.60	2,463.3	-286.8	105.7	1,316,520.36	3,139,959.18	40.201153	-104.998962
2,585.0	9.50	170.80	2,556.0	-302.3	108.3	1,316,504.85	3,139,961.95	40.201110	-104.998952
2,680.0	10.00	162.60	2,649.6	-318.0	112.1	1,316,489.26	3,139,965.76	40.201067	-104.998939
2,775.0	11.80	151.60	2,742.9	-334.4	119.2	1,316,472.88	3,139,972.94	40.201022	-104.998914
2,870.0	12.90	155.20	2,835.7	-352.5	128.2	1,316,454.76	3,139,982.11	40.200972	-104.998881
2,965.0	12.00	157.10	2,928.5	-371.3	136.5	1,316,436.08	3,139,990.51	40.200921	-104.998852
3,059.0	12.40	163.80	3,020.4	-390.0	143.1	1,316,417.42	3,139,997.23	40.200870	-104.998828
3,154.0	11.30	162.00	3,113.3	-408.6	148.9	1,316,398.81	3,140,003.06	40.200818	-104.998807
3,248.0	10.20	159.00	3,205.7	-425.1	154.7	1,316,382.31	3,140,008.98	40.200773	-104.998787
3,343.0	11.40	166.30	3,299.0	-442.1	159.9	1,316,365.37	3,140,014.31	40.200726	-104.998768
3,438.0	10.20	162.50	3,392.3	-459.3	164.7	1,316,348.25	3,140,019.16	40.200679	-104.998751
3,532.0	11.90	169.60	3,484.6	-476.7	168.9	1,316,330.80	3,140,023.51	40.200631	-104.998736
3,626.0	11.00	168.50	3,576.7	-495.1	172.5	1,316,312.50	3,140,027.15	40.200581	-104.998723
3,721.0	10.50	168.10	3,670.0	-512.4	176.1	1,316,295.17	3,140,030.84	40.200533	-104.998710
3,815.0	12.60	165.00	3,762.1	-530.7	180.5	1,316,276.91	3,140,035.37	40.200483	-104.998694
3,910.0	11.60	163.80	3,855.0	-549.9	185.8	1,316,257.76	3,140,040.82	40.200431	-104.998675
4,005.0	10.50	161.60	3,948.3	-567.3	191.2	1,316,240.40	3,140,046.32	40.200383	-104.998656
4,099.0	9.30	161.10	4,040.8	-582.6	196.4	1,316,225.12	3,140,051.57	40.200341	-104.998637
4,194.0	9.80	150.70	4,134.5	-596.9	202.8	1,316,210.84	3,140,058.09	40.200302	-104.998614
4,289.0	9.60	149.00	4,228.2	-610.7	210.9	1,316,197.05	3,140,066.21	40.200264	-104.998585
4,383.0	8.70	147.60	4,321.0	-623.5	218.7	1,316,184.37	3,140,074.13	40.200229	-104.998557
4,478.0	7.50	145.40	4,415.0	-634.6	226.1	1,316,173.24	3,140,081.56	40.200198	-104.998531
4,572.0	6.80	143.70	4,508.3	-644.2	232.9	1,316,163.74	3,140,088.39	40.200172	-104.998507
4,667.0	5.70	150.30	4,602.7	-652.8	238.5	1,316,155.14	3,140,094.11	40.200148	-104.998486
4,762.0	4.80	172.60	4,697.3	-660.8	241.4	1,316,147.12	3,140,097.00	40.200126	-104.998476
4,857.0	3.60	210.40	4,792.1	-667.3	240.4	1,316,140.60	3,140,096.04	40.200108	-104.998480
4,951.0	0.20	146.10	4,886.0	-670.0	239.0	1,316,137.91	3,140,094.65	40.200101	-104.998485
5,046.0	0.30	288.90	4,981.0	-670.1	238.8	1,316,137.85	3,140,094.51	40.200101	-104.998485
5,141.0	0.60	300.90	5,076.0	-669.7	238.2	1,316,138.18	3,140,093.85	40.200102	-104.998488
5,235.0	0.90	288.60	5,170.0	-669.3	237.0	1,316,138.67	3,140,092.72	40.200103	-104.998492
5,330.0	1.20	279.70	5,265.0	-668.9	235.4	1,316,139.06	3,140,091.03	40.200104	-104.998498
5,424.0	1.20	329.00	5,359.0	-667.8	233.9	1,316,140.06	3,140,089.55	40.200107	-104.998503
5,519.0	1.50	319.60	5,454.0	-666.0	232.6	1,316,141.85	3,140,088.22	40.200112	-104.998508
5,613.0	2.70	29.00	5,547.9	-663.2	232.8	1,316,144.73	3,140,088.48	40.200120	-104.998507
5,708.0	2.10	5.10	5,642.9	-659.5	234.1	1,316,148.43	3,140,089.70	40.200130	-104.998502
5,802.0	1.70	339.50	5,736.8	-656.5	233.7	1,316,151.45	3,140,089.35	40.200138	-104.998503
5,897.0	1.70	313.90	5,831.8	-654.2	232.2	1,316,153.74	3,140,087.83	40.200144	-104.998509
5,992.0	1.80	290.60	5,926.7	-652.7	229.8	1,316,155.22	3,140,085.41	40.200148	-104.998517
6,086.0	2.20	280.60	6,020.7	-651.8	226.7	1,316,156.06	3,140,082.25	40.200151	-104.998529
6,181.0	0.70	186.90	6,115.6	-652.1	224.8	1,316,155.81	3,140,080.39	40.200150	-104.998535

# Cathedral Energy Services

## Survey Report - Geographic

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
6,276.0	0.40	111.10	6,210.6	-652.7	225.0	1,316,155.11	3,140,080.63	40.200148	-104.998535
6,370.0	2.10	184.90	6,304.6	-654.6	225.2	1,316,153.28	3,140,080.80	40.200143	-104.998534
6,465.0	1.70	197.50	6,399.6	-657.7	224.6	1,316,150.20	3,140,080.24	40.200135	-104.998536
6,512.0	1.50	200.50	6,446.5	-658.9	224.2	1,316,148.95	3,140,079.82	40.200131	-104.998538
6,560.0	1.50	231.60	6,494.5	-659.9	223.5	1,316,147.97	3,140,079.12	40.200129	-104.998540
6,607.0	4.00	299.40	6,541.5	-659.5	221.6	1,316,148.38	3,140,077.20	40.200130	-104.998547
6,655.0	9.10	289.40	6,589.1	-657.4	216.5	1,316,150.44	3,140,072.15	40.200135	-104.998565
6,702.0	13.90	282.00	6,635.2	-655.0	207.5	1,316,152.80	3,140,063.10	40.200142	-104.998597
6,750.0	17.80	274.60	6,681.4	-653.2	194.6	1,316,154.51	3,140,050.14	40.200147	-104.998644
6,797.0	21.90	272.60	6,725.6	-652.2	178.6	1,316,155.40	3,140,034.21	40.200150	-104.998701
6,844.0	24.50	265.10	6,768.8	-652.6	160.2	1,316,154.86	3,140,015.74	40.200149	-104.998767
6,891.0	30.80	262.10	6,810.4	-655.1	138.5	1,316,152.25	3,139,994.10	40.200142	-104.998844
6,939.0	38.50	260.70	6,849.8	-659.2	111.5	1,316,147.99	3,139,967.16	40.200130	-104.998941
6,986.0	44.90	261.60	6,884.9	-664.0	80.7	1,316,143.02	3,139,936.31	40.200117	-104.999051
7,034.0	48.50	266.40	6,917.8	-667.6	45.9	1,316,139.22	3,139,901.61	40.200107	-104.999176
7,081.0	51.60	265.80	6,948.0	-670.1	10.0	1,316,136.56	3,139,865.69	40.200101	-104.999304
7,129.0	57.90	268.20	6,975.7	-672.1	-29.1	1,316,134.32	3,139,826.58	40.200095	-104.999445
7,176.0	62.30	267.90	6,999.1	-673.5	-69.8	1,316,132.70	3,139,785.87	40.200091	-104.999590
7,223.0	65.50	268.80	7,019.8	-674.7	-112.0	1,316,131.25	3,139,743.70	40.200088	-104.999741
7,270.0	71.50	269.80	7,037.0	-675.2	-155.7	1,316,130.48	3,139,699.99	40.200086	-104.999898
7,318.0	79.80	271.00	7,048.9	-674.9	-202.2	1,316,130.55	3,139,653.53	40.200087	-105.000064
7,350.0	83.80	272.80	7,053.5	-673.8	-233.8	1,316,131.42	3,139,621.88	40.200090	-105.000177
7,393.0	84.90	272.40	7,057.7	-671.9	-276.6	1,316,133.12	3,139,579.12	40.200096	-105.000330
7,516.0	90.70	270.30	7,062.4	-669.0	-399.4	1,316,135.32	3,139,456.29	40.200104	-105.000770
7,610.0	88.60	270.00	7,063.0	-668.8	-493.4	1,316,135.04	3,139,362.30	40.200104	-105.001107
7,705.0	88.60	270.80	7,065.3	-668.1	-588.4	1,316,135.16	3,139,267.33	40.200106	-105.001447
7,800.0	88.40	271.40	7,067.8	-666.3	-683.3	1,316,136.45	3,139,172.37	40.200111	-105.001786
7,895.0	88.40	272.30	7,070.5	-663.2	-778.2	1,316,138.98	3,139,077.44	40.200119	-105.002126
7,942.0	87.80	271.70	7,072.0	-661.6	-825.2	1,316,140.35	3,139,030.49	40.200124	-105.002294
7,990.0	90.70	270.70	7,072.6	-660.6	-873.1	1,316,141.09	3,138,982.50	40.200127	-105.002466
8,085.0	98.20	269.50	7,065.3	-660.4	-967.8	1,316,140.72	3,138,887.88	40.200127	-105.002805
8,179.0	91.90	271.60	7,057.0	-659.5	-1,061.3	1,316,141.10	3,138,794.29	40.200130	-105.003140
8,274.0	94.40	271.80	7,051.8	-656.7	-1,156.2	1,316,143.38	3,138,699.47	40.200137	-105.003479
8,369.0	96.70	271.30	7,042.6	-654.1	-1,250.7	1,316,145.41	3,138,604.95	40.200144	-105.003818
8,463.0	94.40	271.10	7,033.5	-652.2	-1,344.2	1,316,146.84	3,138,511.41	40.200150	-105.004152
8,558.0	93.20	271.40	7,027.2	-650.1	-1,439.0	1,316,148.37	3,138,416.63	40.200155	-105.004492
8,653.0	92.20	269.50	7,022.7	-649.3	-1,533.9	1,316,148.58	3,138,321.74	40.200157	-105.004831
8,748.0	91.40	269.10	7,019.8	-650.5	-1,628.8	1,316,146.88	3,138,226.80	40.200154	-105.005171
8,842.0	92.90	269.60	7,016.2	-651.6	-1,722.7	1,316,145.29	3,138,132.89	40.200151	-105.005508
8,937.0	90.90	270.20	7,013.1	-651.7	-1,817.7	1,316,144.58	3,138,037.95	40.200151	-105.005847
9,032.0	87.80	269.60	7,014.2	-651.9	-1,912.6	1,316,143.88	3,137,942.97	40.200150	-105.006187
9,126.0	88.00	269.60	7,017.6	-652.6	-2,006.6	1,316,142.70	3,137,849.04	40.200148	-105.006524
9,221.0	89.10	270.00	7,020.0	-652.9	-2,101.5	1,316,141.83	3,137,754.07	40.200148	-105.006864
9,316.0	94.10	268.40	7,017.4	-654.2	-2,196.5	1,316,139.97	3,137,659.16	40.200144	-105.007204
9,410.0	96.00	268.80	7,009.1	-656.5	-2,290.1	1,316,137.15	3,137,565.57	40.200138	-105.007539
9,505.0	93.60	270.10	7,001.1	-657.4	-2,384.7	1,316,135.71	3,137,470.93	40.200135	-105.007878
9,600.0	93.00	270.80	6,995.7	-656.7	-2,479.6	1,316,135.92	3,137,376.08	40.200137	-105.008217
9,694.0	94.40	270.30	6,989.6	-655.8	-2,573.4	1,316,136.29	3,137,282.28	40.200140	-105.008553
9,789.0	94.30	269.60	6,982.4	-655.8	-2,668.1	1,316,135.67	3,137,187.56	40.200139	-105.008892
9,884.0	91.60	269.10	6,977.5	-656.9	-2,762.9	1,316,134.06	3,137,092.71	40.200136	-105.009232
9,979.0	92.30	269.70	6,974.3	-657.9	-2,857.9	1,316,132.53	3,136,997.78	40.200134	-105.009571
10,073.0	92.00	269.50	6,970.7	-658.6	-2,951.8	1,316,131.35	3,136,903.85	40.200132	-105.009908
10,168.0	91.40	269.50	6,967.9	-659.4	-3,046.8	1,316,129.98	3,136,808.90	40.200129	-105.010248
10,263.0	92.20	269.40	6,964.9	-660.3	-3,141.7	1,316,128.53	3,136,713.96	40.200127	-105.010588
10,357.0	92.50	271.10	6,961.1	-659.9	-3,235.6	1,316,128.41	3,136,620.04	40.200128	-105.010924

# Cathedral Energy Services

## Survey Report - Geographic

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1E-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	WELL @ 5005.0ft (Ensign 135)
<b>Well:</b>	Frederiksen 1E-28H-A368	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
10,452.0	92.70	272.10	6,956.8	-657.3	-3,330.5	1,316,130.53	3,136,525.17	40.200135	-105.011263
10,547.0	92.30	271.60	6,952.6	-654.2	-3,425.4	1,316,133.06	3,136,430.27	40.200144	-105.011603
10,642.0	93.60	270.30	6,947.7	-652.6	-3,520.2	1,316,134.09	3,136,335.41	40.200148	-105.011943
10,736.0	93.60	269.80	6,941.8	-652.5	-3,614.0	1,316,133.65	3,136,241.59	40.200148	-105.012278
10,831.0	93.50	269.50	6,936.0	-653.1	-3,708.9	1,316,132.53	3,136,146.78	40.200146	-105.012618
10,925.0	94.20	269.20	6,929.6	-654.2	-3,802.6	1,316,130.94	3,136,053.01	40.200143	-105.012954
11,020.0	93.80	270.30	6,923.0	-654.6	-3,897.4	1,316,129.99	3,135,958.25	40.200142	-105.013293
11,115.0	94.30	270.20	6,916.3	-654.2	-3,992.2	1,316,129.87	3,135,863.48	40.200143	-105.013632
11,210.0	93.50	271.30	6,909.9	-652.9	-4,086.9	1,316,130.57	3,135,768.71	40.200147	-105.013971
11,304.0	91.10	270.90	6,906.1	-651.1	-4,180.8	1,316,131.85	3,135,674.80	40.200152	-105.014308
11,399.0	91.70	270.20	6,903.8	-650.2	-4,275.8	1,316,132.22	3,135,579.83	40.200154	-105.014648
11,494.0	92.10	270.10	6,900.6	-650.0	-4,370.8	1,316,131.93	3,135,484.88	40.200155	-105.014987
11,588.0	92.60	270.20	6,896.8	-649.7	-4,464.7	1,316,131.65	3,135,390.96	40.200155	-105.015324
11,598.0	92.70	270.10	6,896.3	-649.7	-4,474.6	1,316,131.62	3,135,380.99	40.200155	-105.015359
Last CES Survey @ 11,598' MD									
11,648.0	92.70	270.10	6,893.9	-649.6	-4,524.6	1,316,131.43	3,135,331.05	40.200156	-105.015538
Bit Projection @ 11,648' MD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Frederiksen 1E-28H-A368	0.00	0.00	6,879.6	-658.9	-4,561.5	1,316,121.91	3,135,294.20	40.200130	-105.015670
- actual wellpath misses target center by 40.7ft at 11648.0ft MD (6893.9 TVD, -649.6 N, -4524.6 E)									
- Point									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
11,598.0	6,896.3	-649.7	-4,474.6	Last CES Survey @ 11,598' MD	
11,648.0	6,893.9	-649.6	-4,524.6	Bit Projection @ 11,648' MD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_