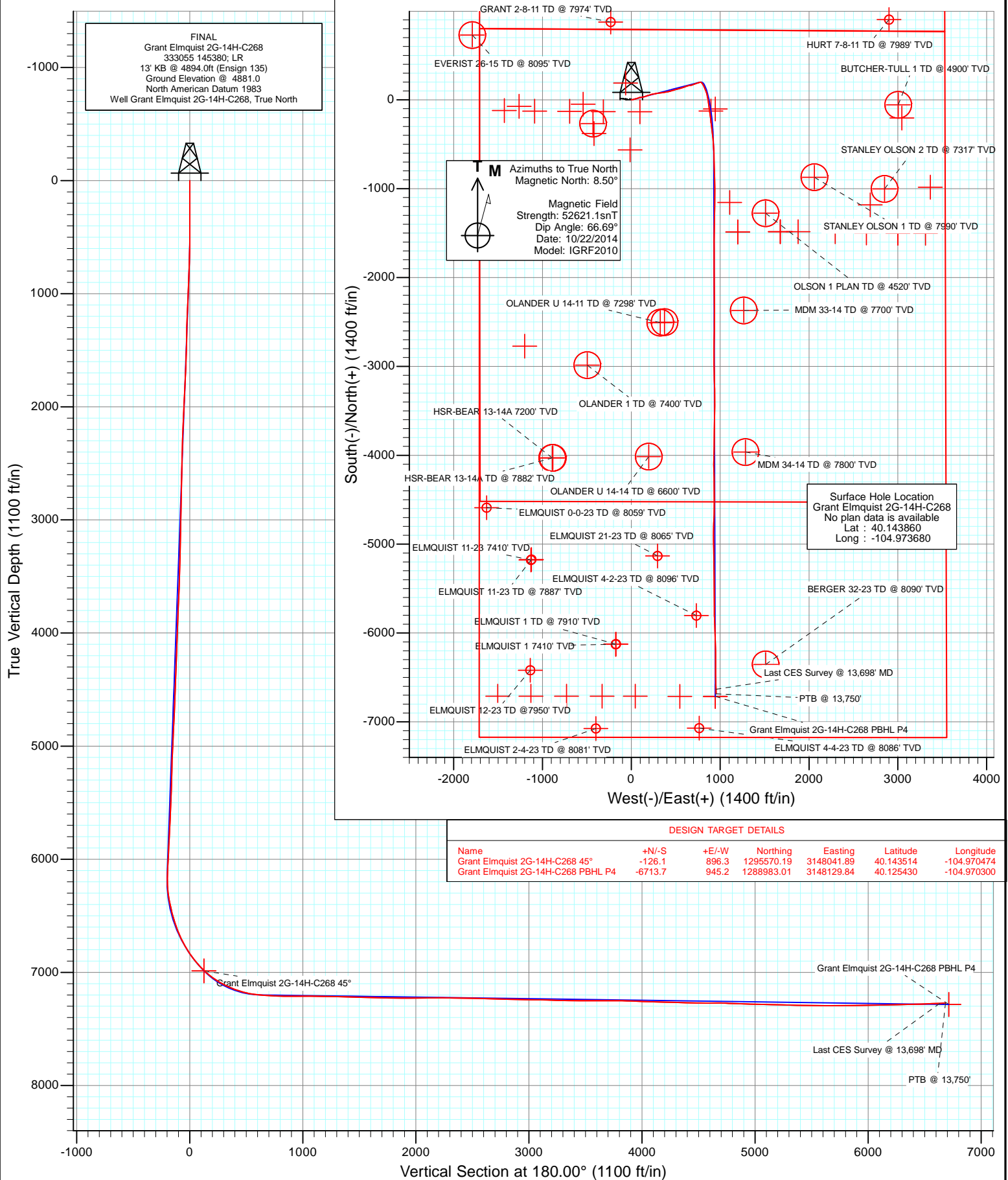




Project: DJ Wattenberg
Site: S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)
Well: Grant Elmquist 2G-14H-C268
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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

Site	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)				
Site Position:		Northing:	1,295,686.81 ft	Latitude:	40.143850
From:	Lat/Long	Easting:	3,147,060.98 ft	Longitude:	-104.973980
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.34 °

Well	Grant Elmquist 2G-14H-C268					
Well Position	+N/-S	0.0 ft	Northing:	1,295,690.93 ft	Latitude:	40.143860
	+E/-W	0.0 ft	Easting:	3,147,144.83 ft	Longitude:	-104.973680
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,881.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/22/2014	8.50	66.69	52,621

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	180.00	

Survey Program	Date	10/30/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
234.0	13,750.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

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	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
234.0	0.10	278.50	234.0	0.0	-0.2	0.0	0.04	0.04		
325.0	0.20	357.40	325.0	0.2	-0.3	-0.2	0.23	0.11		
509.0	2.20	102.40	509.0	-0.2	3.1	0.2	1.23	1.09		
601.0	4.30	73.60	600.8	0.4	8.2	-0.4	2.82	2.28		
693.0	6.50	74.50	692.4	2.7	16.5	-2.7	2.39	2.39		
785.0	7.70	76.50	783.7	5.6	27.5	-5.6	1.33	1.30		
800.0	7.70	76.70	798.6	6.0	29.5	-6.0	0.18	0.00		
925.0	7.70	73.50	922.4	10.3	45.7	-10.3	0.34	0.00		
1,019.0	7.90	72.50	1,015.6	14.1	57.9	-14.1	0.26	0.21		
1,114.0	7.80	71.50	1,109.7	18.1	70.2	-18.1	0.18	-0.11		
1,208.0	7.50	66.30	1,202.8	22.6	81.9	-22.6	0.80	-0.32		
1,300.0	7.30	80.00	1,294.1	26.0	93.1	-26.0	1.93	-0.22		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
1,392.0	9.20	88.10	1,385.1	27.2	106.2	-27.2	2.42	2.07	
1,484.0	8.80	79.80	1,476.0	28.7	120.5	-28.7	1.48	-0.43	
1,575.0	8.40	76.40	1,566.0	31.5	133.8	-31.5	0.71	-0.44	
1,667.0	8.50	72.90	1,657.0	35.1	146.8	-35.1	0.57	0.11	
1,758.0	8.10	70.10	1,747.0	39.3	159.3	-39.3	0.62	-0.44	
1,850.0	8.40	67.80	1,838.1	44.0	171.6	-44.0	0.48	0.33	
1,942.0	9.40	76.70	1,929.0	48.3	185.1	-48.3	1.85	1.09	
2,034.0	8.90	74.10	2,019.8	52.0	199.3	-52.0	0.71	-0.54	
2,126.0	8.00	70.60	2,110.8	56.0	212.2	-56.0	1.13	-0.98	
2,217.0	8.50	75.00	2,200.9	59.9	224.7	-59.9	0.88	0.55	
2,309.0	8.00	73.60	2,291.9	63.4	237.4	-63.4	0.59	-0.54	
2,400.0	8.60	81.60	2,381.9	66.2	250.2	-66.2	1.43	0.66	
2,492.0	8.30	81.10	2,473.0	68.3	263.5	-68.3	0.34	-0.33	
2,583.0	7.90	78.90	2,563.0	70.5	276.2	-70.5	0.56	-0.44	
2,675.0	8.60	83.00	2,654.1	72.5	289.2	-72.5	0.99	0.76	
2,767.0	8.10	82.30	2,745.1	74.2	302.4	-74.2	0.55	-0.54	
2,858.0	7.50	82.30	2,835.3	75.9	314.7	-75.9	0.66	-0.66	
2,950.0	7.90	84.60	2,926.4	77.3	326.9	-77.3	0.55	0.43	
3,042.0	8.70	82.30	3,017.5	78.8	340.1	-78.8	0.94	0.87	
3,136.0	7.80	80.70	3,110.5	80.8	353.5	-80.8	0.99	-0.96	
3,231.0	8.00	78.30	3,204.6	83.2	366.3	-83.2	0.41	0.21	
3,325.0	8.70	82.00	3,297.6	85.5	379.7	-85.5	0.94	0.74	
3,420.0	9.70	81.50	3,391.4	87.7	394.8	-87.7	1.06	1.05	
3,514.0	8.70	80.40	3,484.2	90.0	409.6	-90.0	1.08	-1.06	
3,609.0	8.20	73.50	3,578.1	93.2	423.2	-93.2	1.19	-0.53	
3,704.0	7.40	70.40	3,672.3	97.1	435.5	-97.1	0.95	-0.84	
3,798.0	7.60	74.70	3,765.5	100.8	447.2	-100.8	0.63	0.21	
3,893.0	8.60	74.80	3,859.5	104.3	460.1	-104.3	1.05	1.05	
3,987.0	8.40	74.30	3,952.5	108.0	473.5	-108.0	0.23	-0.21	
4,082.0	8.10	73.40	4,046.5	111.8	486.6	-111.8	0.34	-0.32	
4,176.0	7.20	74.90	4,139.7	115.3	498.6	-115.3	0.98	-0.96	
4,271.0	8.70	74.30	4,233.7	118.7	511.3	-118.7	1.58	1.58	
4,365.0	8.40	75.60	4,326.7	122.4	524.7	-122.4	0.38	-0.32	
4,460.0	8.30	75.70	4,420.7	125.8	538.1	-125.8	0.11	-0.11	
4,555.0	8.00	74.40	4,514.7	129.3	551.1	-129.3	0.37	-0.32	
4,649.0	7.30	73.60	4,607.9	132.7	563.2	-132.7	0.75	-0.74	
4,744.0	8.50	71.80	4,702.0	136.6	575.6	-136.6	1.29	1.26	
4,839.0	8.40	72.10	4,796.0	140.9	588.9	-140.9	0.12	-0.11	
4,933.0	7.80	69.90	4,889.0	145.2	601.4	-145.2	0.72	-0.64	
5,028.0	7.00	65.90	4,983.2	149.8	612.7	-149.8	1.00	-0.84	
5,122.0	8.30	74.30	5,076.4	154.0	624.5	-154.0	1.82	1.38	
5,217.0	7.20	75.00	5,170.5	157.4	636.9	-157.4	1.16	-1.16	
5,312.0	8.00	80.60	5,264.7	160.0	649.1	-160.0	1.15	0.84	
5,406.0	8.40	82.30	5,357.7	162.0	662.4	-162.0	0.50	0.43	
5,501.0	8.50	74.30	5,451.7	164.8	676.0	-164.8	1.24	0.11	
5,595.0	7.20	70.60	5,544.8	168.7	688.3	-168.7	1.48	-1.38	
5,690.0	8.90	66.90	5,638.9	173.5	700.6	-173.5	1.87	1.79	
5,784.0	7.40	71.90	5,731.9	178.3	713.1	-178.3	1.76	-1.60	
5,879.0	7.80	70.30	5,826.1	182.3	725.0	-182.3	0.48	0.42	
5,973.0	9.80	74.20	5,919.0	186.7	738.7	-186.7	2.22	2.13	
6,068.0	8.70	71.20	6,012.8	191.2	753.3	-191.2	1.26	-1.16	
6,163.0	7.40	65.80	6,106.8	196.0	765.6	-196.0	1.58	-1.37	
6,210.0	7.20	70.70	6,153.4	198.2	771.2	-198.2	1.39	-0.43	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
6,258.0	8.60	101.40	6,201.0	198.5	777.5	-198.5	9.13	2.92	
6,305.0	10.40	117.80	6,247.4	195.8	784.7	-195.8	6.88	3.83	
6,352.0	10.00	128.70	6,293.6	191.3	791.7	-191.3	4.19	-0.85	
6,399.0	11.10	144.70	6,339.8	185.1	797.5	-185.1	6.63	2.34	
6,447.0	13.60	149.10	6,386.7	176.4	803.1	-176.4	5.56	5.21	
6,494.0	14.90	150.60	6,432.3	166.4	808.9	-166.4	2.88	2.77	
6,541.0	15.80	151.70	6,477.6	155.5	814.9	-155.5	2.01	1.91	
6,588.0	18.20	154.40	6,522.6	143.3	821.1	-143.3	5.37	5.11	
6,636.0	20.20	158.60	6,567.9	128.8	827.3	-128.8	5.06	4.17	
6,683.0	22.00	159.10	6,611.7	113.0	833.4	-113.0	3.85	3.83	
6,731.0	24.20	160.60	6,655.9	95.3	839.9	-95.3	4.74	4.58	
6,778.0	26.50	162.80	6,698.3	76.2	846.2	-76.2	5.29	4.89	
6,825.0	28.10	166.00	6,740.1	55.5	852.0	-55.5	4.62	3.40	
6,872.0	29.30	167.90	6,781.3	33.5	857.1	-33.5	3.21	2.55	
6,919.0	32.50	170.70	6,821.7	9.8	861.5	-9.8	7.46	6.81	
6,966.0	37.80	171.60	6,860.1	-17.0	865.7	17.0	11.33	11.28	
7,014.0	40.70	173.10	6,897.3	-47.1	869.7	47.1	6.36	6.04	
7,061.0	41.80	172.80	6,932.6	-77.8	873.5	77.8	2.38	2.34	
7,109.0	44.30	171.80	6,967.7	-110.3	877.9	110.3	5.40	5.21	
7,156.0	48.40	172.10	7,000.1	-143.9	882.7	143.9	8.74	8.72	
7,203.0	52.60	172.30	7,030.0	-179.9	887.6	179.9	8.94	8.94	
7,250.0	55.80	172.40	7,057.5	-217.6	892.7	217.6	6.81	6.81	
7,298.0	58.80	172.00	7,083.4	-257.7	898.1	257.7	6.29	6.25	
7,345.0	62.60	172.00	7,106.4	-298.2	903.8	298.2	8.09	8.09	
7,393.0	66.00	173.20	7,127.2	-341.1	909.4	341.1	7.43	7.08	
7,440.0	68.60	174.00	7,145.4	-384.2	914.2	384.2	5.75	5.53	
7,487.0	71.60	175.00	7,161.3	-428.2	918.5	428.2	6.69	6.38	
7,534.0	74.40	176.30	7,175.1	-473.0	921.9	473.0	6.52	5.96	
7,582.0	78.40	177.20	7,186.4	-519.6	924.5	519.6	8.53	8.33	
7,633.0	83.60	177.90	7,194.3	-569.9	926.7	569.9	10.29	10.20	
7,740.0	85.70	178.10	7,204.3	-676.3	930.4	676.3	1.97	1.96	
7,832.0	87.60	177.90	7,209.7	-768.1	933.6	768.1	2.08	2.07	
7,924.0	89.90	178.20	7,211.7	-860.0	936.7	860.0	2.52	2.50	
8,016.0	90.40	179.50	7,211.5	-952.0	938.6	952.0	1.51	0.54	
8,107.0	89.50	180.10	7,211.5	-1,043.0	938.9	1,043.0	1.19	-0.99	
8,199.0	89.70	179.50	7,212.2	-1,135.0	939.2	1,135.0	0.69	0.22	
8,291.0	89.00	181.50	7,213.2	-1,227.0	938.4	1,227.0	2.30	-0.76	
8,382.0	89.50	181.00	7,214.4	-1,318.0	936.4	1,318.0	0.78	0.55	
8,474.0	88.00	181.60	7,216.4	-1,409.9	934.3	1,409.9	1.76	-1.63	
8,565.0	88.00	180.80	7,219.6	-1,500.8	932.4	1,500.8	0.88	0.00	
8,657.0	87.90	180.30	7,222.9	-1,592.8	931.5	1,592.8	0.55	-0.11	
8,748.0	88.50	179.70	7,225.8	-1,683.7	931.5	1,683.7	0.93	0.66	
8,840.0	89.90	180.10	7,227.0	-1,775.7	931.7	1,775.7	1.58	1.52	
8,932.0	89.40	180.20	7,227.6	-1,867.7	931.5	1,867.7	0.55	-0.54	
9,024.0	89.80	179.40	7,228.2	-1,959.7	931.8	1,959.7	0.97	0.43	
9,115.0	91.30	179.40	7,227.4	-2,050.7	932.7	2,050.7	1.65	1.65	
9,207.0	90.90	179.00	7,225.6	-2,142.7	934.0	2,142.7	0.61	-0.43	
9,298.0	89.80	179.30	7,225.0	-2,233.7	935.4	2,233.7	1.25	-1.21	
9,390.0	88.30	180.40	7,226.6	-2,325.7	935.6	2,325.7	2.02	-1.63	
9,482.0	89.50	179.90	7,228.3	-2,417.6	935.4	2,417.6	1.41	1.30	
9,574.0	88.80	180.90	7,229.7	-2,509.6	934.7	2,509.6	1.33	-0.76	
9,665.0	88.90	181.00	7,231.5	-2,600.6	933.2	2,600.6	0.16	0.11	
9,757.0	87.90	180.80	7,234.1	-2,692.5	931.8	2,692.5	1.11	-1.09	

Cathedral Energy Services

Survey Report

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Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
9,849.0	88.10	180.50	7,237.3	-2,784.5	930.7	2,784.5	0.39	0.22	
9,941.0	88.70	180.20	7,239.9	-2,876.4	930.2	2,876.4	0.73	0.65	
10,035.0	89.20	178.80	7,241.6	-2,970.4	931.0	2,970.4	1.58	0.53	
10,130.0	89.70	178.70	7,242.5	-3,065.4	933.1	3,065.4	0.54	0.53	
10,224.0	88.40	179.00	7,244.1	-3,159.4	934.9	3,159.4	1.42	-1.38	
10,319.0	87.60	178.60	7,247.4	-3,254.3	936.9	3,254.3	0.94	-0.84	
10,413.0	88.80	178.70	7,250.3	-3,348.2	939.1	3,348.2	1.28	1.28	
10,508.0	90.70	180.60	7,250.8	-3,443.2	939.7	3,443.2	2.83	2.00	
10,603.0	89.50	182.00	7,250.6	-3,538.2	937.6	3,538.2	1.94	-1.26	
10,697.0	89.90	180.70	7,251.1	-3,632.1	935.4	3,632.1	1.45	0.43	
10,792.0	90.20	180.20	7,251.0	-3,727.1	934.6	3,727.1	0.61	0.32	
10,887.0	89.40	181.00	7,251.3	-3,822.1	933.6	3,822.1	1.19	-0.84	
10,981.0	87.80	181.50	7,253.6	-3,916.1	931.6	3,916.1	1.78	-1.70	
11,076.0	87.80	181.00	7,257.3	-4,011.0	929.5	4,011.0	0.53	0.00	
11,170.0	88.00	180.10	7,260.7	-4,104.9	928.6	4,104.9	0.98	0.21	
11,265.0	88.50	179.00	7,263.6	-4,199.9	929.3	4,199.9	1.27	0.53	
11,359.0	88.80	178.20	7,265.8	-4,293.8	931.6	4,293.8	0.91	0.32	
11,454.0	88.40	180.20	7,268.2	-4,388.8	933.0	4,388.8	2.15	-0.42	
11,548.0	88.50	179.30	7,270.7	-4,482.7	933.4	4,482.7	0.96	0.11	
11,643.0	90.50	180.20	7,271.5	-4,577.7	933.8	4,577.7	2.31	2.11	
11,737.0	89.90	181.80	7,271.2	-4,671.7	932.1	4,671.7	1.82	-0.64	
11,832.0	87.10	182.90	7,273.7	-4,766.6	928.3	4,766.6	3.17	-2.95	
11,927.0	88.20	180.30	7,277.6	-4,861.5	925.6	4,861.5	2.97	1.16	
12,021.0	88.60	179.50	7,280.2	-4,955.4	925.8	4,955.4	0.95	0.43	
12,115.0	88.60	178.50	7,282.5	-5,049.4	927.4	5,049.4	1.06	0.00	
12,210.0	88.30	179.80	7,285.1	-5,144.3	928.8	5,144.3	1.40	-0.32	
12,305.0	88.40	179.40	7,287.8	-5,239.3	929.5	5,239.3	0.43	0.11	
12,399.0	88.50	179.40	7,290.3	-5,333.2	930.5	5,333.2	0.11	0.11	
12,494.0	88.80	178.70	7,292.6	-5,428.2	932.0	5,428.2	0.80	0.32	
12,589.0	89.90	179.90	7,293.7	-5,523.2	933.2	5,523.2	1.71	1.16	
12,683.0	89.70	179.60	7,294.0	-5,617.2	933.6	5,617.2	0.38	-0.21	
12,778.0	89.90	179.50	7,294.3	-5,712.2	934.4	5,712.2	0.24	0.21	
12,872.0	89.50	179.20	7,294.8	-5,806.2	935.4	5,806.2	0.53	-0.43	
12,967.0	91.50	177.70	7,294.0	-5,901.1	938.0	5,901.1	2.63	2.11	
13,062.0	91.70	177.20	7,291.3	-5,996.0	942.2	5,996.0	0.57	0.21	
13,156.0	91.20	178.50	7,289.0	-6,089.9	945.7	6,089.9	1.48	-0.53	
13,251.0	91.20	179.80	7,287.0	-6,184.9	947.1	6,184.9	1.37	0.00	
13,345.0	91.60	179.00	7,284.7	-6,278.8	948.1	6,278.8	0.95	0.43	
13,439.0	90.90	180.10	7,282.6	-6,372.8	948.9	6,372.8	1.39	-0.74	
13,534.0	91.90	179.50	7,280.3	-6,467.8	949.2	6,467.8	1.23	1.05	
13,629.0	92.30	178.80	7,276.8	-6,562.7	950.6	6,562.7	0.85	0.42	
13,698.0	92.70	178.10	7,273.8	-6,631.6	952.5	6,631.6	1.17	0.58	Last CES Survey @ 13,698' MD
13,750.0	93.00	178.00	7,271.2	-6,683.5	954.2	6,683.5	0.61	0.58	PTB @ 13,750'

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Grant Elmquist 2G-14H-	0.00	0.00	7,284.5	-6,713.7	945.2	1,288,983.01	3,148,129.84	40.125430	-104.970300
- actual wellpath misses target center by 34.2ft at 13750.0ft MD (7271.2 TVD, -6683.5 N, 954.2 E)									
- Point									
Grant Elmquist 2G-14H-	0.00	0.00	7,184.0	-102.6	945.2	1,295,593.99	3,148,090.58	40.143578	-104.970299
- actual wellpath misses target center by 178.2ft at 7237.2ft MD (7050.2 TVD, -207.2 N, 891.3 E)									
- Point									
Grant Elmquist 2G-14H-	0.00	0.00	7,189.0	-6,713.7	945.2	1,288,983.01	3,148,129.84	40.125430	-104.970300
- actual wellpath misses target center by 88.1ft at 13750.0ft MD (7271.2 TVD, -6683.5 N, 954.2 E)									
- Point									
Grant Elmquist 2G-14H-	0.00	0.00	6,987.0	-126.1	896.3	1,295,570.19	3,148,041.89	40.143514	-104.970474
- actual wellpath misses target center by 16.0ft at 7135.5ft MD (6986.3 TVD, -129.0 N, 880.6 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
13,698.0	7,273.8	-6,631.6	952.5	Last CES Survey @ 13,698' MD	
13,750.0	7,271.2	-6,683.5	954.2	PTB @ 13,750'	

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)

Grant Elmquist 2G-14H-C268

Hz

Design: FINAL

Survey Report - Geographic

30 October, 2014

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

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

Site	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)				
Site Position:		Northing:	1,295,686.81 ft	Latitude:	40.143850
From:	Lat/Long	Easting:	3,147,060.98 ft	Longitude:	-104.973980
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.34 °

Well	Grant Elmquist 2G-14H-C268					
Well Position	+N/-S	0.0 ft	Northing:	1,295,690.93 ft	Latitude:	40.143860
	+E/-W	0.0 ft	Easting:	3,147,144.83 ft	Longitude:	-104.973680
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,881.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/22/2014	8.50	66.69	52,621

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	180.00	

Survey Program	Date	10/30/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
234.0	13,750.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,295,690.93	3,147,144.83	40.143860	-104.973680
234.0	0.10	278.50	234.0	0.0	-0.2	1,295,690.96	3,147,144.62	40.143860	-104.973681
325.0	0.20	357.40	325.0	0.2	-0.3	1,295,691.13	3,147,144.54	40.143861	-104.973681
509.0	2.20	102.40	509.0	-0.2	3.1	1,295,690.71	3,147,147.97	40.143859	-104.973669
601.0	4.30	73.60	600.8	0.4	8.2	1,295,691.34	3,147,153.01	40.143861	-104.973651
693.0	6.50	74.50	692.4	2.7	16.5	1,295,693.75	3,147,161.32	40.143868	-104.973621
785.0	7.70	76.50	783.7	5.6	27.5	1,295,696.65	3,147,172.31	40.143875	-104.973582
800.0	7.70	76.70	798.6	6.0	29.5	1,295,697.13	3,147,174.27	40.143877	-104.973575
925.0	7.70	73.50	922.4	10.3	45.7	1,295,701.53	3,147,190.42	40.143888	-104.973517
1,019.0	7.90	72.50	1,015.6	14.1	57.9	1,295,705.33	3,147,202.60	40.143899	-104.973473
1,114.0	7.80	71.50	1,109.7	18.1	70.2	1,295,709.41	3,147,214.91	40.143910	-104.973429
1,208.0	7.50	66.30	1,202.8	22.6	81.9	1,295,713.97	3,147,226.55	40.143922	-104.973387

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
1,300.0	7.30	80.00	1,294.1	26.0	93.1	1,295,717.47	3,147,237.78	40.143931	-104.973347
1,392.0	9.20	88.10	1,385.1	27.2	106.2	1,295,718.80	3,147,250.89	40.143935	-104.973300
1,484.0	8.80	79.80	1,476.0	28.7	120.5	1,295,720.38	3,147,265.15	40.143939	-104.973249
1,575.0	8.40	76.40	1,566.0	31.5	133.8	1,295,723.25	3,147,278.45	40.143947	-104.973202
1,667.0	8.50	72.90	1,657.0	35.1	146.8	1,295,726.91	3,147,291.46	40.143956	-104.973155
1,758.0	8.10	70.10	1,747.0	39.3	159.3	1,295,731.14	3,147,303.89	40.143968	-104.973110
1,850.0	8.40	67.80	1,838.1	44.0	171.6	1,295,735.96	3,147,316.18	40.143981	-104.973066
1,942.0	9.40	76.70	1,929.0	48.3	185.1	1,295,740.31	3,147,329.69	40.143993	-104.973018
2,034.0	8.90	74.10	2,019.8	52.0	199.3	1,295,744.07	3,147,343.82	40.144003	-104.972967
2,126.0	8.00	70.60	2,110.8	56.0	212.2	1,295,748.23	3,147,356.68	40.144014	-104.972921
2,217.0	8.50	75.00	2,200.9	59.9	224.7	1,295,752.14	3,147,369.12	40.144024	-104.972877
2,309.0	8.00	73.60	2,291.9	63.4	237.4	1,295,755.79	3,147,381.81	40.144034	-104.972831
2,400.0	8.60	81.60	2,381.9	66.2	250.2	1,295,758.64	3,147,394.60	40.144042	-104.972785
2,492.0	8.30	81.10	2,473.0	68.3	263.5	1,295,760.76	3,147,407.95	40.144047	-104.972738
2,583.0	7.90	78.90	2,563.0	70.5	276.2	1,295,763.05	3,147,420.57	40.144054	-104.972692
2,675.0	8.60	83.00	2,654.1	72.5	289.2	1,295,765.18	3,147,433.59	40.144059	-104.972646
2,767.0	8.10	82.30	2,745.1	74.2	302.4	1,295,766.97	3,147,446.83	40.144064	-104.972598
2,858.0	7.50	82.30	2,835.3	75.9	314.7	1,295,768.70	3,147,459.06	40.144068	-104.972555
2,950.0	7.90	84.60	2,926.4	77.3	326.9	1,295,770.17	3,147,471.29	40.144072	-104.972511
3,042.0	8.70	82.30	3,017.5	78.8	340.1	1,295,771.77	3,147,484.47	40.144076	-104.972464
3,136.0	7.80	80.70	3,110.5	80.8	353.5	1,295,773.84	3,147,497.80	40.144082	-104.972416
3,231.0	8.00	78.30	3,204.6	83.2	366.3	1,295,776.29	3,147,510.62	40.144088	-104.972370
3,325.0	8.70	82.00	3,297.6	85.5	379.7	1,295,778.69	3,147,524.05	40.144095	-104.972322
3,420.0	9.70	81.50	3,391.4	87.7	394.8	1,295,780.96	3,147,539.07	40.144101	-104.972268
3,514.0	8.70	80.40	3,484.2	90.0	409.6	1,295,783.41	3,147,553.90	40.144107	-104.972215
3,609.0	8.20	73.50	3,578.1	93.2	423.2	1,295,786.61	3,147,567.46	40.144116	-104.972166
3,704.0	7.40	70.40	3,672.3	97.1	435.5	1,295,790.66	3,147,579.70	40.144127	-104.972123
3,798.0	7.60	74.70	3,765.5	100.8	447.2	1,295,794.40	3,147,591.37	40.144137	-104.972081
3,893.0	8.60	74.80	3,859.5	104.3	460.1	1,295,798.00	3,147,604.27	40.144146	-104.972035
3,987.0	8.40	74.30	3,952.5	108.0	473.5	1,295,801.78	3,147,617.63	40.144157	-104.971987
4,082.0	8.10	73.40	4,046.5	111.8	486.6	1,295,805.64	3,147,630.71	40.144167	-104.971940
4,176.0	7.20	74.90	4,139.7	115.3	498.6	1,295,809.14	3,147,642.72	40.144176	-104.971897
4,271.0	8.70	74.30	4,233.7	118.7	511.3	1,295,812.71	3,147,655.36	40.144186	-104.971852
4,365.0	8.40	75.60	4,326.7	122.4	524.7	1,295,816.42	3,147,668.84	40.144196	-104.971803
4,460.0	8.30	75.70	4,420.7	125.8	538.1	1,295,819.92	3,147,682.18	40.144205	-104.971755
4,555.0	8.00	74.40	4,514.7	129.3	551.1	1,295,823.47	3,147,695.17	40.144215	-104.971709
4,649.0	7.30	73.60	4,607.9	132.7	563.2	1,295,826.99	3,147,707.18	40.144224	-104.971666
4,744.0	8.50	71.80	4,702.0	136.6	575.6	1,295,830.96	3,147,719.62	40.144235	-104.971621
4,839.0	8.40	72.10	4,796.0	140.9	588.9	1,295,835.36	3,147,732.86	40.144247	-104.971574
4,933.0	7.80	69.90	4,889.0	145.2	601.4	1,295,839.74	3,147,745.36	40.144259	-104.971529
5,028.0	7.00	65.90	4,983.2	149.8	612.7	1,295,844.39	3,147,756.67	40.144271	-104.971488
5,122.0	8.30	74.30	5,076.4	154.0	624.5	1,295,848.63	3,147,768.41	40.144283	-104.971446
5,217.0	7.20	75.00	5,170.5	157.4	636.9	1,295,852.10	3,147,780.74	40.144292	-104.971402
5,312.0	8.00	80.60	5,264.7	160.0	649.1	1,295,854.79	3,147,793.00	40.144299	-104.971358
5,406.0	8.40	82.30	5,357.7	162.0	662.4	1,295,856.86	3,147,806.24	40.144305	-104.971311
5,501.0	8.50	74.30	5,451.7	164.8	676.0	1,295,859.77	3,147,819.86	40.144313	-104.971262
5,595.0	7.20	70.60	5,544.8	168.7	688.3	1,295,863.68	3,147,832.08	40.144323	-104.971218
5,690.0	8.90	66.90	5,638.9	173.5	700.6	1,295,868.61	3,147,844.43	40.144336	-104.971174
5,784.0	7.40	71.90	5,731.9	178.3	713.1	1,295,873.42	3,147,856.85	40.144349	-104.971130
5,879.0	7.80	70.30	5,826.1	182.3	725.0	1,295,877.57	3,147,868.71	40.144361	-104.971087
5,973.0	9.80	74.20	5,919.0	186.7	738.7	1,295,881.98	3,147,882.38	40.144372	-104.971038
6,068.0	8.70	71.20	6,012.8	191.2	753.3	1,295,886.58	3,147,896.94	40.144385	-104.970986
6,163.0	7.40	65.80	6,106.8	196.0	765.6	1,295,891.48	3,147,909.29	40.144398	-104.970942
6,210.0	7.20	70.70	6,153.4	198.2	771.2	1,295,893.72	3,147,914.82	40.144404	-104.970922
6,258.0	8.60	101.40	6,201.0	198.5	777.5	1,295,894.05	3,147,921.18	40.144405	-104.970899

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
6,305.0	10.40	117.80	6,247.4	195.8	784.7	1,295,891.42	3,147,928.39	40.144398	-104.970873
6,352.0	10.00	128.70	6,293.6	191.3	791.7	1,295,886.93	3,147,935.36	40.144385	-104.970848
6,399.0	11.10	144.70	6,339.8	185.1	797.5	1,295,880.72	3,147,941.20	40.144368	-104.970828
6,447.0	13.60	149.10	6,386.7	176.4	803.1	1,295,872.13	3,147,946.82	40.144344	-104.970808
6,494.0	14.90	150.60	6,432.3	166.4	808.9	1,295,862.16	3,147,952.68	40.144317	-104.970787
6,541.0	15.80	151.70	6,477.6	155.5	814.9	1,295,851.30	3,147,958.74	40.144287	-104.970766
6,588.0	18.20	154.40	6,522.6	143.3	821.1	1,295,839.08	3,147,965.02	40.144253	-104.970743
6,636.0	20.20	158.60	6,567.9	128.8	827.3	1,295,824.64	3,147,971.37	40.144214	-104.970721
6,683.0	22.00	159.10	6,611.7	113.0	833.4	1,295,808.90	3,147,977.57	40.144170	-104.970699
6,731.0	24.20	160.60	6,655.9	95.3	839.9	1,295,791.25	3,147,984.15	40.144122	-104.970676
6,778.0	26.50	162.80	6,698.3	76.2	846.2	1,295,772.19	3,147,990.56	40.144069	-104.970653
6,825.0	28.10	166.00	6,740.1	55.5	852.0	1,295,751.46	3,147,996.47	40.144012	-104.970633
6,872.0	29.30	167.90	6,781.3	33.5	857.1	1,295,729.51	3,148,001.68	40.143952	-104.970615
6,919.0	32.50	170.70	6,821.7	9.8	861.5	1,295,705.82	3,148,006.28	40.143887	-104.970599
6,966.0	37.80	171.60	6,860.1	-17.0	865.7	1,295,679.12	3,148,010.58	40.143813	-104.970584
7,014.0	40.70	173.10	6,897.3	-47.1	869.7	1,295,649.04	3,148,014.79	40.143731	-104.970569
7,061.0	41.80	172.80	6,932.6	-77.8	873.5	1,295,618.31	3,148,018.78	40.143646	-104.970556
7,109.0	44.30	171.80	6,967.7	-110.3	877.9	1,295,585.87	3,148,023.37	40.143557	-104.970540
7,156.0	48.40	172.10	7,000.1	-143.9	882.7	1,295,552.24	3,148,028.33	40.143465	-104.970523
7,203.0	52.60	172.30	7,030.0	-179.9	887.6	1,295,516.34	3,148,033.46	40.143366	-104.970505
7,250.0	55.80	172.40	7,057.5	-217.6	892.7	1,295,478.60	3,148,038.76	40.143263	-104.970487
7,298.0	58.80	172.00	7,083.4	-257.7	898.1	1,295,438.62	3,148,044.48	40.143153	-104.970468
7,345.0	62.60	172.00	7,106.4	-298.2	903.8	1,295,398.07	3,148,050.42	40.143041	-104.970447
7,393.0	66.00	173.20	7,127.2	-341.1	909.4	1,295,355.22	3,148,056.24	40.142924	-104.970427
7,440.0	68.60	174.00	7,145.4	-384.2	914.2	1,295,312.16	3,148,061.32	40.142805	-104.970410
7,487.0	71.60	175.00	7,161.3	-428.2	918.5	1,295,268.20	3,148,065.82	40.142685	-104.970395
7,534.0	74.40	176.30	7,175.1	-473.0	921.9	1,295,223.41	3,148,069.49	40.142562	-104.970383
7,582.0	78.40	177.20	7,186.4	-519.6	924.5	1,295,176.86	3,148,072.41	40.142434	-104.970373
7,633.0	83.60	177.90	7,194.3	-569.9	926.7	1,295,126.57	3,148,074.85	40.142296	-104.970366
7,740.0	85.70	178.10	7,204.3	-676.3	930.4	1,295,020.13	3,148,079.20	40.142003	-104.970352
7,832.0	87.60	177.90	7,209.7	-768.1	933.6	1,294,928.36	3,148,082.95	40.141751	-104.970341
7,924.0	89.90	178.20	7,211.7	-860.0	936.7	1,294,836.47	3,148,086.63	40.141499	-104.970330
8,016.0	90.40	179.50	7,211.5	-952.0	938.6	1,294,744.50	3,148,089.02	40.141247	-104.970323
8,107.0	89.50	180.10	7,211.5	-1,043.0	938.9	1,294,653.50	3,148,089.88	40.140997	-104.970322
8,199.0	89.70	179.50	7,212.2	-1,135.0	939.2	1,294,561.51	3,148,090.75	40.140744	-104.970321
8,291.0	89.00	181.50	7,213.2	-1,227.0	938.4	1,294,469.52	3,148,090.49	40.140492	-104.970324
8,382.0	89.50	181.00	7,214.4	-1,318.0	936.4	1,294,378.54	3,148,089.04	40.140242	-104.970331
8,474.0	88.00	181.60	7,216.4	-1,409.9	934.3	1,294,286.58	3,148,087.50	40.139990	-104.970338
8,565.0	88.00	180.80	7,219.6	-1,500.8	932.4	1,294,195.65	3,148,086.14	40.139740	-104.970345
8,657.0	87.90	180.30	7,222.9	-1,592.8	931.5	1,294,103.71	3,148,085.80	40.139488	-104.970348
8,748.0	88.50	179.70	7,225.8	-1,683.7	931.5	1,294,012.75	3,148,086.34	40.139238	-104.970348
8,840.0	89.90	180.10	7,227.0	-1,775.7	931.7	1,293,920.77	3,148,087.05	40.138985	-104.970348
8,932.0	89.40	180.20	7,227.6	-1,867.7	931.5	1,293,828.77	3,148,087.35	40.138733	-104.970349
9,024.0	89.80	179.40	7,228.2	-1,959.7	931.8	1,293,736.78	3,148,088.22	40.138480	-104.970348
9,115.0	91.30	179.40	7,227.4	-2,050.7	932.7	1,293,645.80	3,148,089.71	40.138231	-104.970344
9,207.0	90.90	179.00	7,225.6	-2,142.7	934.0	1,293,553.83	3,148,091.54	40.137978	-104.970340
9,298.0	89.80	179.30	7,225.0	-2,233.7	935.4	1,293,462.85	3,148,093.43	40.137728	-104.970335
9,390.0	88.30	180.40	7,226.6	-2,325.7	935.6	1,293,370.87	3,148,094.22	40.137476	-104.970334
9,482.0	89.50	179.90	7,228.3	-2,417.6	935.4	1,293,278.89	3,148,094.53	40.137223	-104.970335
9,574.0	88.80	180.90	7,229.7	-2,509.6	934.7	1,293,186.90	3,148,094.43	40.136971	-104.970337
9,665.0	88.90	181.00	7,231.5	-2,600.6	933.2	1,293,095.93	3,148,093.46	40.136721	-104.970342
9,757.0	87.90	180.80	7,234.1	-2,692.5	931.8	1,293,003.97	3,148,092.56	40.136469	-104.970348
9,849.0	88.10	180.50	7,237.3	-2,784.5	930.7	1,292,912.03	3,148,092.06	40.136216	-104.970351
9,941.0	88.70	180.20	7,239.9	-2,876.4	930.2	1,292,820.06	3,148,092.05	40.135964	-104.970353
10,035.0	89.20	178.80	7,241.6	-2,970.4	931.0	1,292,726.09	3,148,093.43	40.135706	-104.970351

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
10,130.0	89.70	178.70	7,242.5	-3,065.4	933.1	1,292,631.13	3,148,096.06	40.135445	-104.970343
10,224.0	88.40	179.00	7,244.1	-3,159.4	934.9	1,292,537.18	3,148,098.51	40.135187	-104.970336
10,319.0	87.60	178.60	7,247.4	-3,254.3	936.9	1,292,442.27	3,148,101.06	40.134927	-104.970329
10,413.0	88.80	178.70	7,250.3	-3,348.2	939.1	1,292,348.36	3,148,103.83	40.134669	-104.970321
10,508.0	90.70	180.60	7,250.8	-3,443.2	939.7	1,292,253.38	3,148,104.97	40.134408	-104.970319
10,603.0	89.50	182.00	7,250.6	-3,538.2	937.6	1,292,158.39	3,148,103.38	40.134147	-104.970327
10,697.0	89.90	180.70	7,251.1	-3,632.1	935.4	1,292,064.41	3,148,101.72	40.133889	-104.970335
10,792.0	90.20	180.20	7,251.0	-3,727.1	934.6	1,291,969.41	3,148,101.54	40.133629	-104.970338
10,887.0	89.40	181.00	7,251.3	-3,822.1	933.6	1,291,874.42	3,148,101.11	40.133368	-104.970341
10,981.0	87.80	181.50	7,253.6	-3,916.1	931.6	1,291,780.46	3,148,099.62	40.133110	-104.970349
11,076.0	87.80	181.00	7,257.3	-4,011.0	929.5	1,291,685.54	3,148,098.11	40.132849	-104.970356
11,170.0	88.00	180.10	7,260.7	-4,104.9	928.6	1,291,591.60	3,148,097.77	40.132591	-104.970359
11,265.0	88.50	179.00	7,263.6	-4,199.9	929.3	1,291,496.66	3,148,099.08	40.132331	-104.970357
11,359.0	88.80	178.20	7,265.8	-4,293.8	931.6	1,291,402.73	3,148,101.93	40.132073	-104.970348
11,454.0	88.40	180.20	7,268.2	-4,388.8	933.0	1,291,307.78	3,148,103.82	40.131812	-104.970344
11,548.0	88.50	179.30	7,270.7	-4,482.7	933.4	1,291,213.82	3,148,104.79	40.131554	-104.970342
11,643.0	90.50	180.20	7,271.5	-4,577.7	933.8	1,291,118.84	3,148,105.77	40.131294	-104.970341
11,737.0	89.90	181.80	7,271.2	-4,671.7	932.1	1,291,024.85	3,148,104.68	40.131036	-104.970347
11,832.0	87.10	182.90	7,273.7	-4,766.6	928.3	1,290,929.95	3,148,101.35	40.130775	-104.970361
11,927.0	88.20	180.30	7,277.6	-4,861.5	925.6	1,290,835.06	3,148,099.27	40.130515	-104.970370
12,021.0	88.60	179.50	7,280.2	-4,955.4	925.8	1,290,741.10	3,148,099.99	40.130257	-104.970369
12,115.0	88.60	178.50	7,282.5	-5,049.4	927.4	1,290,647.16	3,148,102.19	40.129999	-104.970364
12,210.0	88.30	179.80	7,285.1	-5,144.3	928.8	1,290,552.21	3,148,104.16	40.129738	-104.970359
12,305.0	88.40	179.40	7,287.8	-5,239.3	929.5	1,290,457.26	3,148,105.39	40.129477	-104.970356
12,399.0	88.50	179.40	7,290.3	-5,333.2	930.5	1,290,363.31	3,148,106.93	40.129220	-104.970353
12,494.0	88.80	178.70	7,292.6	-5,428.2	932.0	1,290,268.36	3,148,109.07	40.128959	-104.970347
12,589.0	89.90	179.90	7,293.7	-5,523.2	933.2	1,290,173.38	3,148,110.79	40.128698	-104.970343
12,683.0	89.70	179.60	7,294.0	-5,617.2	933.6	1,290,079.39	3,148,111.76	40.128440	-104.970341
12,778.0	89.90	179.50	7,294.3	-5,712.2	934.4	1,289,984.40	3,148,113.07	40.128179	-104.970339
12,872.0	89.50	179.20	7,294.8	-5,806.2	935.4	1,289,890.41	3,148,114.69	40.127921	-104.970335
12,967.0	91.50	177.70	7,294.0	-5,901.1	938.0	1,289,795.48	3,148,117.83	40.127661	-104.970326
13,062.0	91.70	177.20	7,291.3	-5,996.0	942.2	1,289,700.63	3,148,122.61	40.127400	-104.970311
13,156.0	91.20	178.50	7,289.0	-6,089.9	945.7	1,289,606.75	3,148,126.70	40.127142	-104.970298
13,251.0	91.20	179.80	7,287.0	-6,184.9	947.1	1,289,511.80	3,148,128.67	40.126882	-104.970293
13,345.0	91.60	179.00	7,284.7	-6,278.8	948.1	1,289,417.84	3,148,130.21	40.126624	-104.970290
13,439.0	90.90	180.10	7,282.6	-6,372.8	948.9	1,289,323.87	3,148,131.51	40.126366	-104.970287
13,534.0	91.90	179.50	7,280.3	-6,467.8	949.2	1,289,228.91	3,148,132.40	40.126105	-104.970286
13,629.0	92.30	178.80	7,276.8	-6,562.7	950.6	1,289,133.99	3,148,134.37	40.125844	-104.970281
13,698.0	92.70	178.10	7,273.8	-6,631.6	952.5	1,289,065.12	3,148,136.64	40.125655	-104.970274
Last CES Survey @ 13,698' MD									
13,750.0	93.00	178.00	7,271.2	-6,683.5	954.2	1,289,013.23	3,148,138.72	40.125513	-104.970268
PTB @ 13,750'									

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2G-14H-C268
Project:	DJ Wattenberg	TVD Reference:	13' KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	13' KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2G-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Design 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
Grant Elmquist 2G-14H- - actual wellpath misses target center by 16.0ft at 7135.5ft MD (6986.3 TVD, -129.0 N, 880.6 E) - Point	0.00	0.00	6,987.0	-126.1	896.3	1,295,570.19	3,148,041.89	40.143514	-104.970474
Grant Elmquist 2G-14H- - actual wellpath misses target center by 34.2ft at 13750.0ft MD (7271.2 TVD, -6683.5 N, 954.2 E) - Point	0.00	0.00	7,284.5	-6,713.7	945.2	1,288,983.00	3,148,129.84	40.125430	-104.970300

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
13,698.0	7,273.8	-6,631.6	952.5	Last CES Survey @ 13,698' MD
13,750.0	7,271.2	-6,683.5	954.2	PTB @ 13,750'

Checked By: _____ Approved By: _____ Date: _____