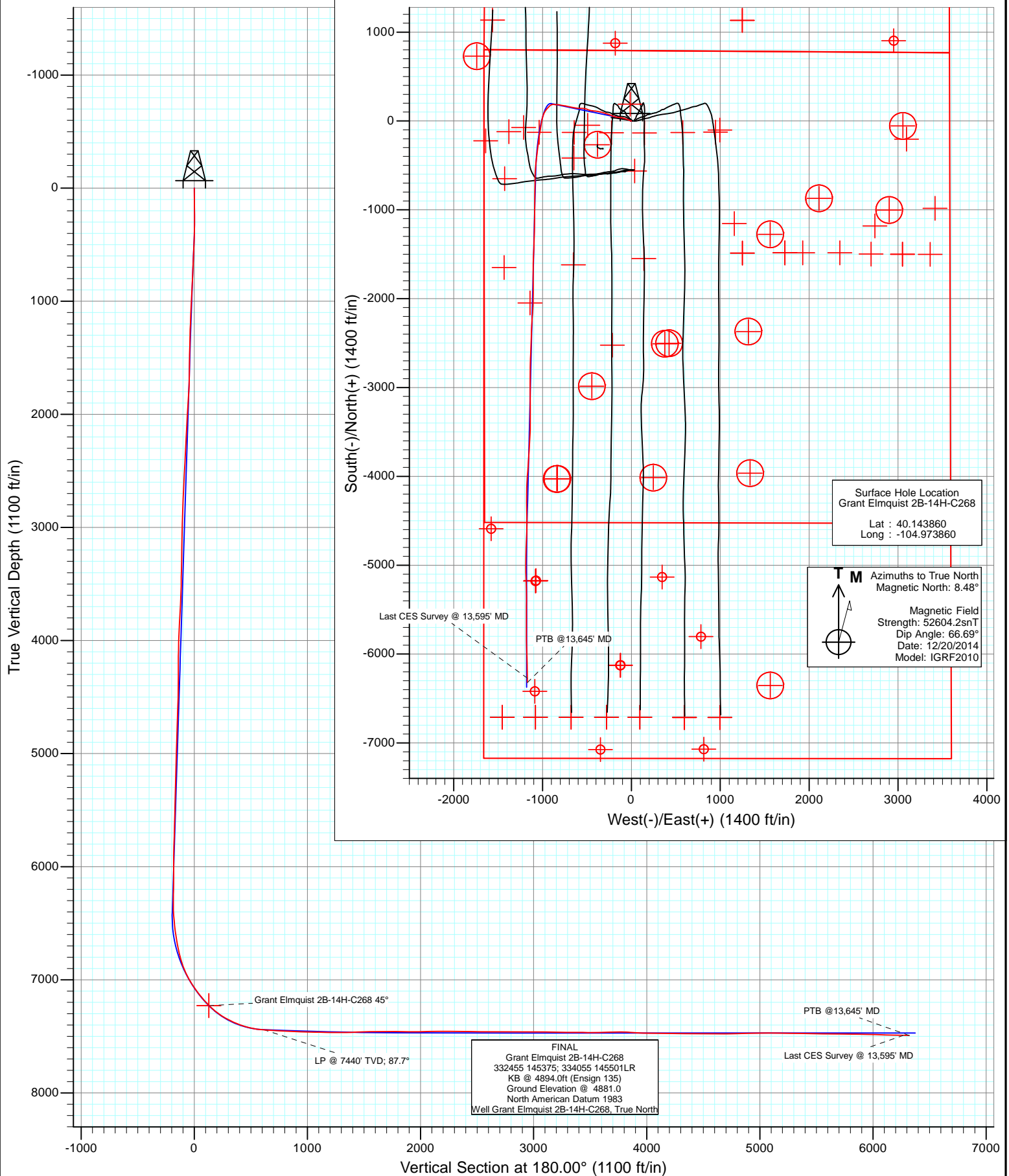




Project: DJ Wattenberg
Site: S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)
Well: Grant Elmquist 2B-14H-C268
Wellbore: Hz
Design: FINAL



HP

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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 2B-14H-C268					
Well Position	+N/-S	0.0 ft	Northing:	1,295,690.63 ft	Latitude:	40.143860
	+E/-W	0.0 ft	Easting:	3,147,094.50 ft	Longitude:	-104.973860
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	12/20/2014	8.48	66.69	52,604

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	12/29/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
143.0	13,645.0	SURVEYS (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	
143.0	0.70	216.80	143.0	-0.7	-0.5	0.7	0.49	0.49	
234.0	0.70	209.30	234.0	-1.6	-1.1	1.6	0.10	0.00	
325.0	1.90	296.20	325.0	-1.4	-2.8	1.4	2.19	1.32	
417.0	4.00	292.90	416.8	0.5	-7.1	-0.5	2.29	2.28	
509.0	6.10	296.40	508.5	3.9	-14.4	-3.9	2.31	2.28	
601.0	6.10	294.60	600.0	8.1	-23.2	-8.1	0.21	0.00	
693.0	5.80	291.70	691.5	11.9	-32.0	-11.9	0.46	-0.33	
785.0	7.60	288.40	782.8	15.5	-42.1	-15.5	2.00	1.96	
817.0	7.60	287.10	814.6	16.8	-46.1	-16.8	0.54	0.00	
927.0	7.70	294.00	923.6	21.9	-59.8	-21.9	0.84	0.09	
1,117.0	10.90	283.10	1,111.1	31.2	-88.9	-31.2	1.92	1.68	
1,211.0	11.20	279.90	1,203.3	34.8	-106.6	-34.8	0.73	0.32	

HP

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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
1,303.0	9.30	280.60	1,293.9	37.7	-122.7	-37.7	2.07	-2.07	
1,395.0	8.80	278.30	1,384.7	40.0	-137.0	-40.0	0.67	-0.54	
1,486.0	8.40	275.00	1,474.7	41.6	-150.5	-41.6	0.70	-0.44	
1,578.0	7.80	276.50	1,565.8	42.9	-163.4	-42.9	0.69	-0.65	
1,669.0	7.40	275.90	1,656.0	44.2	-175.3	-44.2	0.45	-0.44	
1,761.0	7.70	287.60	1,747.2	46.7	-187.1	-46.7	1.70	0.33	
1,853.0	9.60	292.80	1,838.1	51.5	-200.1	-51.5	2.23	2.07	
1,945.0	9.50	292.20	1,928.9	57.4	-214.2	-57.4	0.15	-0.11	
2,036.0	9.30	291.40	2,018.6	62.9	-228.0	-62.9	0.26	-0.22	
2,128.0	9.00	288.30	2,109.5	67.9	-241.7	-67.9	0.63	-0.33	
2,220.0	8.20	286.30	2,200.4	72.0	-254.8	-72.0	0.93	-0.87	
2,312.0	9.10	287.70	2,291.4	76.0	-268.1	-76.0	1.00	0.98	
2,403.0	8.30	288.60	2,381.3	80.3	-281.2	-80.3	0.89	-0.88	
2,495.0	9.90	289.00	2,472.2	85.0	-294.9	-85.0	1.74	1.74	
2,586.0	9.40	290.80	2,561.9	90.2	-309.3	-90.2	0.64	-0.55	
2,678.0	10.30	286.50	2,652.5	95.2	-324.2	-95.2	1.26	0.98	
2,770.0	9.90	281.60	2,743.1	99.1	-339.8	-99.1	1.03	-0.43	
2,862.0	9.00	281.00	2,833.9	102.1	-354.6	-102.1	0.98	-0.98	
2,954.0	8.30	281.50	2,924.8	104.8	-368.2	-104.8	0.77	-0.76	
3,045.0	7.60	282.30	3,014.9	107.4	-380.5	-107.4	0.78	-0.77	
3,140.0	9.80	276.60	3,108.8	109.6	-394.7	-109.6	2.48	2.32	
3,234.0	9.10	275.00	3,201.6	111.2	-410.0	-111.2	0.80	-0.74	
3,328.0	8.30	272.50	3,294.5	112.1	-424.2	-112.1	0.94	-0.85	
3,423.0	9.10	281.50	3,388.4	113.9	-438.4	-113.9	1.66	0.84	
3,518.0	8.00	279.90	3,482.3	116.6	-452.3	-116.6	1.18	-1.16	
3,613.0	7.00	275.80	3,576.5	118.3	-464.6	-118.3	1.19	-1.05	
3,707.0	7.70	292.20	3,669.8	121.3	-476.1	-121.3	2.34	0.74	
3,802.0	8.80	296.50	3,763.8	126.9	-488.5	-126.9	1.33	1.16	
3,900.0	10.10	286.10	3,860.4	132.6	-503.5	-132.6	2.18	1.33	
3,994.0	10.20	282.30	3,953.0	136.7	-519.5	-136.7	0.72	0.11	
4,089.0	10.60	275.50	4,046.4	139.3	-536.4	-139.3	1.36	0.42	
4,183.0	9.20	273.50	4,139.0	140.6	-552.5	-140.6	1.53	-1.49	
4,278.0	9.40	270.10	4,232.8	141.1	-567.9	-141.1	0.62	0.21	
4,372.0	9.80	270.00	4,325.4	141.1	-583.6	-141.1	0.43	0.43	
4,467.0	10.20	276.40	4,419.0	142.0	-600.0	-142.0	1.24	0.42	
4,562.0	9.40	276.00	4,512.6	143.8	-616.1	-143.8	0.85	-0.84	
4,656.0	10.40	279.60	4,605.2	146.0	-632.1	-146.0	1.25	1.06	
4,751.0	9.90	281.60	4,698.7	149.1	-648.5	-149.1	0.64	-0.53	
4,846.0	9.50	281.80	4,792.4	152.3	-664.2	-152.3	0.42	-0.42	
4,940.0	9.10	281.50	4,885.1	155.4	-679.1	-155.4	0.43	-0.43	
5,035.0	8.40	280.20	4,979.0	158.1	-693.3	-158.1	0.77	-0.74	
5,130.0	7.20	280.00	5,073.2	160.4	-706.0	-160.4	1.26	-1.26	
5,224.0	7.20	285.20	5,166.4	162.9	-717.5	-162.9	0.69	0.00	
5,319.0	8.40	282.30	5,260.5	166.0	-730.0	-166.0	1.33	1.26	
5,413.0	7.30	279.30	5,353.7	168.4	-742.6	-168.4	1.25	-1.17	
5,508.0	8.00	278.40	5,447.8	170.4	-755.1	-170.4	0.75	0.74	
5,602.0	9.00	281.60	5,540.8	172.8	-768.8	-172.8	1.18	1.06	
5,697.0	8.80	278.20	5,634.6	175.3	-783.2	-175.3	0.59	-0.21	
5,792.0	7.30	280.30	5,728.7	177.4	-796.4	-177.4	1.61	-1.58	
5,886.0	7.70	288.00	5,821.9	180.4	-808.2	-180.4	1.15	0.43	
5,981.0	8.50	271.20	5,916.0	182.6	-821.3	-182.6	2.62	0.84	
6,076.0	8.70	270.00	6,009.9	182.7	-835.5	-182.7	0.28	0.21	
6,170.0	8.60	274.10	6,102.8	183.2	-849.6	-183.2	0.66	-0.11	

HP

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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
6,265.0	9.50	274.50	6,196.6	184.3	-864.5	-184.3	0.95	0.95	
6,359.0	7.90	274.50	6,289.5	185.5	-878.7	-185.5	1.70	-1.70	
6,454.0	8.30	261.70	6,383.6	185.0	-892.0	-185.0	1.94	0.42	
6,501.0	10.10	243.70	6,430.0	182.7	-899.0	-182.7	7.18	3.83	
6,549.0	10.40	236.30	6,477.2	178.4	-906.4	-178.4	2.81	0.62	
6,596.0	10.10	237.00	6,523.5	173.8	-913.4	-173.8	0.69	-0.64	
6,643.0	11.20	233.20	6,569.7	168.8	-920.5	-168.8	2.78	2.34	
6,690.0	13.40	225.00	6,615.6	162.2	-928.0	-162.2	5.97	4.68	
6,738.0	14.00	221.70	6,662.2	154.0	-935.8	-154.0	2.05	1.25	
6,785.0	13.70	221.60	6,707.9	145.5	-943.3	-145.5	0.64	-0.64	
6,833.0	16.50	219.30	6,754.2	136.0	-951.4	-136.0	5.96	5.83	
6,880.0	18.90	217.30	6,799.0	124.8	-960.2	-124.8	5.27	5.11	
6,927.0	20.40	214.10	6,843.3	112.0	-969.4	-112.0	3.93	3.19	
6,974.0	23.30	208.30	6,886.9	97.0	-978.4	-97.0	7.69	6.17	
7,022.0	25.60	202.50	6,930.6	79.0	-986.9	-79.0	6.92	4.79	
7,069.0	28.50	196.70	6,972.4	58.9	-994.0	-58.9	8.33	6.17	
7,117.0	31.30	195.80	7,014.0	35.9	-1,000.7	-35.9	5.91	5.83	
7,164.0	34.50	191.90	7,053.5	11.2	-1,006.8	-11.2	8.16	6.81	
7,211.0	36.80	189.60	7,091.7	-15.7	-1,011.9	15.7	5.66	4.89	
7,258.0	38.40	188.60	7,128.9	-44.1	-1,016.4	44.1	3.64	3.40	
7,306.0	40.70	189.30	7,165.9	-74.2	-1,021.2	74.2	4.88	4.79	
7,353.0	43.50	190.40	7,200.8	-105.3	-1,026.6	105.3	6.16	5.96	
7,400.0	45.60	190.50	7,234.3	-137.7	-1,032.5	137.7	4.47	4.47	
7,447.0	49.60	188.90	7,266.0	-171.9	-1,038.4	171.9	8.87	8.51	
7,495.0	54.10	186.80	7,295.6	-209.3	-1,043.5	209.3	9.99	9.37	
7,542.0	58.00	187.20	7,321.9	-248.0	-1,048.3	248.0	8.33	8.30	
7,590.0	61.30	187.00	7,346.1	-289.1	-1,053.4	289.1	6.88	6.87	
7,637.0	64.70	186.00	7,367.5	-330.7	-1,058.1	330.7	7.48	7.23	
7,684.0	68.00	185.70	7,386.3	-373.5	-1,062.5	373.5	7.05	7.02	
7,731.0	70.90	186.30	7,402.8	-417.3	-1,067.1	417.3	6.28	6.17	
7,778.0	74.50	187.40	7,416.8	-461.8	-1,072.5	461.8	7.98	7.66	
7,825.0	77.80	185.60	7,428.0	-507.2	-1,077.6	507.2	7.94	7.02	
7,873.0	81.70	183.80	7,436.6	-554.2	-1,081.5	554.2	8.92	8.12	
7,895.0	84.40	182.20	7,439.2	-576.0	-1,082.6	576.0	14.24	12.27	
7,960.0	86.40	181.40	7,444.5	-640.8	-1,084.7	640.8	3.31	3.08	
8,022.0	87.30	180.30	7,447.9	-702.7	-1,085.6	702.7	2.29	1.45	
8,113.0	86.60	180.70	7,452.7	-793.5	-1,086.4	793.5	0.89	-0.77	
8,205.0	87.30	180.20	7,457.6	-885.4	-1,087.1	885.4	0.93	0.76	
8,297.0	88.40	181.40	7,461.0	-977.3	-1,088.4	977.3	1.77	1.20	
8,358.0	88.70	181.00	7,462.6	-1,038.3	-1,089.7	1,038.3	0.82	0.49	
8,388.0	88.30	180.90	7,463.4	-1,068.3	-1,090.1	1,068.3	1.37	-1.33	
8,419.0	89.90	180.80	7,463.9	-1,099.3	-1,090.6	1,099.3	5.17	5.16	
8,480.0	89.00	180.60	7,464.4	-1,160.3	-1,091.4	1,160.3	1.51	-1.48	
8,528.0	88.80	180.80	7,465.4	-1,208.3	-1,091.9	1,208.3	0.59	-0.42	
8,571.0	89.70	180.70	7,465.9	-1,251.2	-1,092.5	1,251.2	2.11	2.09	
8,616.0	90.50	181.00	7,465.9	-1,296.2	-1,093.2	1,296.2	1.90	1.78	
8,663.0	90.90	181.90	7,465.3	-1,343.2	-1,094.4	1,343.2	2.10	0.85	
8,708.0	92.00	182.30	7,464.1	-1,388.2	-1,096.0	1,388.2	2.60	2.44	
8,755.0	92.10	182.20	7,462.5	-1,435.1	-1,097.9	1,435.1	0.30	0.21	
8,847.0	92.00	182.60	7,459.2	-1,527.0	-1,101.7	1,527.0	0.45	-0.11	
8,939.0	90.10	181.20	7,457.5	-1,618.9	-1,104.8	1,618.9	2.57	-2.07	
9,031.0	89.90	180.80	7,457.5	-1,710.9	-1,106.4	1,710.9	0.49	-0.22	
9,122.0	89.20	180.00	7,458.2	-1,801.9	-1,107.0	1,801.9	1.17	-0.77	

HP Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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
9,214.0	89.70	178.90	7,459.1	-1,893.9	-1,106.1	1,893.9	1.31	0.54	
9,306.0	90.60	179.90	7,458.8	-1,985.9	-1,105.1	1,985.9	1.46	0.98	
9,397.0	91.30	183.60	7,457.3	-2,076.8	-1,107.9	2,076.8	4.14	0.77	
9,488.0	90.20	183.90	7,456.1	-2,167.6	-1,113.9	2,167.6	1.25	-1.21	
9,580.0	89.90	183.30	7,456.1	-2,259.4	-1,119.7	2,259.4	0.73	-0.33	
9,671.0	89.50	182.50	7,456.5	-2,350.3	-1,124.3	2,350.3	0.98	-0.44	
9,763.0	88.90	181.70	7,457.8	-2,442.2	-1,127.6	2,442.2	1.09	-0.65	
9,855.0	89.60	182.00	7,459.0	-2,534.2	-1,130.6	2,534.2	0.83	0.76	
9,947.0	89.60	181.90	7,459.7	-2,626.1	-1,133.7	2,626.1	0.11	0.00	
10,041.0	89.40	180.70	7,460.5	-2,720.1	-1,135.9	2,720.1	1.29	-0.21	
10,135.0	91.00	182.10	7,460.2	-2,814.0	-1,138.2	2,814.0	2.26	1.70	
10,230.0	90.20	181.40	7,459.2	-2,909.0	-1,141.1	2,909.0	1.12	-0.84	
10,325.0	88.00	178.70	7,460.7	-3,004.0	-1,141.1	3,004.0	3.67	-2.32	
10,419.0	89.50	179.00	7,462.7	-3,097.9	-1,139.3	3,097.9	1.63	1.60	
10,514.0	89.20	179.40	7,463.8	-3,192.9	-1,137.9	3,192.9	0.53	-0.32	
10,608.0	89.80	180.10	7,464.6	-3,286.9	-1,137.5	3,286.9	0.98	0.64	
10,703.0	89.80	179.90	7,464.9	-3,381.9	-1,137.5	3,381.9	0.21	0.00	
10,753.0	89.90	180.50	7,465.1	-3,431.9	-1,137.7	3,431.9	1.22	0.20	
10,798.0	88.80	182.60	7,465.6	-3,476.9	-1,138.9	3,476.9	5.27	-2.44	
10,829.0	88.50	183.20	7,466.3	-3,507.8	-1,140.5	3,507.8	2.16	-0.97	
10,861.0	89.70	183.00	7,466.8	-3,539.8	-1,142.2	3,539.8	3.80	3.75	
10,893.0	92.10	183.00	7,466.3	-3,571.7	-1,143.9	3,571.7	7.50	7.50	
10,987.0	91.80	183.10	7,463.1	-3,665.5	-1,148.9	3,665.5	0.34	-0.32	
11,082.0	90.50	183.30	7,461.2	-3,760.4	-1,154.2	3,760.4	1.38	-1.37	
11,176.0	85.90	184.50	7,464.2	-3,854.1	-1,160.6	3,854.1	5.06	-4.89	
11,270.0	86.70	183.50	7,470.2	-3,947.6	-1,167.1	3,947.6	1.36	0.85	
11,365.0	89.60	184.70	7,473.3	-4,042.3	-1,173.9	4,042.3	3.30	3.05	
11,459.0	89.50	180.00	7,474.0	-4,136.2	-1,177.8	4,136.2	5.00	-0.11	
11,554.0	90.30	180.60	7,474.2	-4,231.2	-1,178.3	4,231.2	1.05	0.84	
11,649.0	89.10	179.40	7,474.7	-4,326.2	-1,178.3	4,326.2	1.79	-1.26	
11,740.0	89.20	179.50	7,476.0	-4,417.2	-1,177.4	4,417.2	0.16	0.11	
11,835.0	88.70	179.90	7,477.8	-4,512.2	-1,176.9	4,512.2	0.67	-0.53	
11,930.0	89.80	181.40	7,479.0	-4,607.2	-1,178.0	4,607.2	1.96	1.16	
12,024.0	91.80	182.20	7,477.7	-4,701.1	-1,180.9	4,701.1	2.29	2.13	
12,119.0	91.30	182.30	7,475.1	-4,796.0	-1,184.6	4,796.0	0.54	-0.53	
12,213.0	91.50	181.40	7,472.8	-4,889.9	-1,187.7	4,889.9	0.98	0.21	
12,308.0	90.80	180.90	7,470.9	-4,984.9	-1,189.6	4,984.9	0.91	-0.74	
12,402.0	89.80	177.90	7,470.4	-5,078.9	-1,188.6	5,078.9	3.36	-1.06	
12,497.0	88.80	177.80	7,471.6	-5,173.8	-1,185.0	5,173.8	1.06	-1.05	
12,592.0	89.10	178.90	7,473.3	-5,268.7	-1,182.3	5,268.7	1.20	0.32	
12,686.0	89.10	179.70	7,474.8	-5,362.7	-1,181.1	5,362.7	0.85	0.00	
12,781.0	89.50	180.70	7,476.0	-5,457.7	-1,181.5	5,457.7	1.13	0.42	
12,876.0	88.80	179.80	7,477.4	-5,552.7	-1,181.9	5,552.7	1.20	-0.74	
12,970.0	89.20	180.20	7,479.0	-5,646.7	-1,181.9	5,646.7	0.60	0.43	
13,065.0	89.80	180.00	7,479.9	-5,741.7	-1,182.1	5,741.7	0.67	0.63	
13,159.0	89.70	179.60	7,480.3	-5,835.7	-1,181.7	5,835.7	0.44	-0.11	
13,254.0	88.40	178.00	7,481.8	-5,930.6	-1,179.7	5,930.6	2.17	-1.37	
13,348.0	88.00	177.80	7,484.8	-6,024.5	-1,176.3	6,024.5	0.48	-0.43	
13,442.0	88.80	178.90	7,487.4	-6,118.5	-1,173.6	6,118.5	1.45	0.85	
13,537.0	88.70	178.90	7,489.5	-6,213.4	-1,171.8	6,213.4	0.11	-0.11	
13,595.0	88.40	179.30	7,491.0	-6,271.4	-1,170.9	6,271.4	0.86	-0.52	Last CES Survey @ 13,595' MD
13,645.0	88.40	179.30	7,492.4	-6,321.4	-1,170.2	6,321.4	0.00	0.00	PTB @13,645' MD

HP

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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 2B-14H-1	0.00	0.00	7,469.7	-2,048.7	-1,141.8	1,293,635.16	3,145,964.87	40.138236	-104.977944
- survey misses target center by 37.3ft at 9369.8ft MD (7457.9 TVD, -2049.6 N, -1106.5 E)									
- Point									
Grant Elmquist 2B-14H-4	0.00	0.00	7,469.7	-6,710.0	-1,079.4	1,288,974.34	3,146,054.93	40.125440	-104.977720
- survey misses target center by 399.8ft at 13645.0ft MD (7492.4 TVD, -6321.4 N, -1170.2 E)									
- Point									
Grant Elmquist 2B-14H-4	0.00	0.00	7,410.0	-6,710.0	-1,079.4	1,288,974.34	3,146,054.93	40.125440	-104.977720
- survey misses target center by 407.5ft at 13645.0ft MD (7492.4 TVD, -6321.4 N, -1170.2 E)									
- Point									
Grant Elmquist 2B-14H-4	0.00	0.00	7,228.3	-128.3	-1,037.6	1,295,556.21	3,146,057.72	40.143508	-104.977571
- survey misses target center by 6.8ft at 7389.8ft MD (7227.2 TVD, -130.6 N, -1031.2 E)									
- Point									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
13,595.0	7,491.0	-6,271.4	-1,170.9	Last CES Survey @ 13,595' MD
13,645.0	7,492.4	-6,321.4	-1,170.2	PTB @13,645' MD

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

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

Grant Elmquist 2B-14H-C268

Hz

Design: FINAL

Survey Report - Geographic

29 December, 2014

HP

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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 2B-14H-C268					
Well Position	+N/-S	0.0 ft	Northing:	1,295,690.63 ft	Latitude:	40.143860
	+E/-W	0.0 ft	Easting:	3,147,094.51 ft	Longitude:	-104.973860
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	12/20/2014	8.48	66.69	52,604

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	12/29/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
143.0	13,645.0	SURVEYS (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	1,295,690.63	3,147,094.51	40.143860	-104.973860
143.0	0.70	216.80	143.0	-0.7	-0.5	1,295,689.93	3,147,093.99	40.143858	-104.973862
234.0	0.70	209.30	234.0	-1.6	-1.1	1,295,688.99	3,147,093.39	40.143856	-104.973864
325.0	1.90	296.20	325.0	-1.4	-2.8	1,295,689.17	3,147,091.76	40.143856	-104.973870
417.0	4.00	292.90	416.8	0.5	-7.1	1,295,691.06	3,147,087.42	40.143861	-104.973886
509.0	6.10	296.40	508.5	3.9	-14.4	1,295,694.44	3,147,080.07	40.143871	-104.973912
601.0	6.10	294.60	600.0	8.1	-23.2	1,295,698.60	3,147,071.22	40.143882	-104.973943
693.0	5.80	291.70	691.5	11.9	-32.0	1,295,702.30	3,147,062.43	40.143893	-104.973975
785.0	7.60	288.40	782.8	15.5	-42.1	1,295,705.88	3,147,052.32	40.143903	-104.974011
817.0	7.60	287.10	814.6	16.8	-46.1	1,295,707.14	3,147,048.28	40.143906	-104.974025
927.0	7.70	294.00	923.6	21.9	-59.8	1,295,712.20	3,147,034.57	40.143920	-104.974074
1,117.0	10.90	283.10	1,111.1	31.2	-88.9	1,295,721.28	3,147,005.38	40.143946	-104.974178

HP

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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
1,211.0	11.20	279.90	1,203.3	34.8	-106.6	1,295,724.76	3,146,987.71	40.143955	-104.974242
1,303.0	9.30	280.60	1,293.9	37.7	-122.7	1,295,727.57	3,146,971.58	40.143963	-104.974299
1,395.0	8.80	278.30	1,384.7	40.0	-137.0	1,295,729.86	3,146,957.30	40.143970	-104.974350
1,486.0	8.40	275.00	1,474.7	41.6	-150.5	1,295,731.37	3,146,943.78	40.143974	-104.974399
1,578.0	7.80	276.50	1,565.8	42.9	-163.4	1,295,732.58	3,146,930.87	40.143978	-104.974445
1,669.0	7.40	275.90	1,656.0	44.2	-175.3	1,295,733.81	3,146,918.90	40.143981	-104.974487
1,761.0	7.70	287.60	1,747.2	46.7	-187.1	1,295,736.22	3,146,907.12	40.143988	-104.974530
1,853.0	9.60	292.80	1,838.1	51.5	-200.1	1,295,740.98	3,146,894.14	40.144002	-104.974576
1,945.0	9.50	292.20	1,928.9	57.4	-214.2	1,295,746.74	3,146,880.01	40.144018	-104.974626
2,036.0	9.30	291.40	2,018.6	62.9	-228.0	1,295,752.17	3,146,866.17	40.144033	-104.974676
2,128.0	9.00	288.30	2,109.5	67.9	-241.7	1,295,757.06	3,146,852.39	40.144046	-104.974725
2,220.0	8.20	286.30	2,200.4	72.0	-254.8	1,295,761.09	3,146,839.24	40.144058	-104.974772
2,312.0	9.10	287.70	2,291.4	76.0	-268.1	1,295,765.06	3,146,825.99	40.144069	-104.974819
2,403.0	8.30	288.60	2,381.3	80.3	-281.2	1,295,769.27	3,146,812.88	40.144080	-104.974866
2,495.0	9.90	289.00	2,472.2	85.0	-294.9	1,295,773.88	3,146,799.08	40.144093	-104.974915
2,586.0	9.40	290.80	2,561.9	90.2	-309.3	1,295,778.98	3,146,784.71	40.144108	-104.974967
2,678.0	10.30	286.50	2,652.5	95.2	-324.2	1,295,783.89	3,146,769.77	40.144121	-104.975020
2,770.0	9.90	281.60	2,743.1	99.1	-339.8	1,295,787.73	3,146,754.11	40.144132	-104.975076
2,862.0	9.00	281.00	2,833.9	102.1	-354.6	1,295,790.60	3,146,739.28	40.144140	-104.975129
2,954.0	8.30	281.50	2,924.8	104.8	-368.2	1,295,793.22	3,146,725.69	40.144148	-104.975177
3,045.0	7.60	282.30	3,014.9	107.4	-380.5	1,295,795.74	3,146,713.36	40.144155	-104.975221
3,140.0	9.80	276.60	3,108.8	109.6	-394.7	1,295,797.92	3,146,699.18	40.144161	-104.975272
3,234.0	9.10	275.00	3,201.6	111.2	-410.0	1,295,799.40	3,146,683.82	40.144165	-104.975327
3,328.0	8.30	272.50	3,294.5	112.1	-424.2	1,295,800.26	3,146,669.63	40.144168	-104.975378
3,423.0	9.10	281.50	3,388.4	113.9	-438.4	1,295,801.97	3,146,655.40	40.144173	-104.975429
3,518.0	8.00	279.90	3,482.3	116.6	-452.3	1,295,804.52	3,146,641.51	40.144180	-104.975478
3,613.0	7.00	275.80	3,576.5	118.3	-464.6	1,295,806.17	3,146,629.23	40.144185	-104.975522
3,707.0	7.70	292.20	3,669.8	121.3	-476.1	1,295,809.06	3,146,617.68	40.144193	-104.975563
3,802.0	8.80	296.50	3,763.8	126.9	-488.5	1,295,814.64	3,146,605.25	40.144208	-104.975608
3,900.0	10.10	286.10	3,860.4	132.6	-503.5	1,295,820.27	3,146,590.25	40.144224	-104.975661
3,994.0	10.20	282.30	3,953.0	136.7	-519.5	1,295,824.24	3,146,574.18	40.144235	-104.975719
4,089.0	10.60	275.50	4,046.4	139.3	-536.4	1,295,826.77	3,146,557.25	40.144242	-104.975779
4,183.0	9.20	273.50	4,139.0	140.6	-552.5	1,295,827.96	3,146,541.13	40.144246	-104.975837
4,278.0	9.40	270.10	4,232.8	141.1	-567.9	1,295,828.35	3,146,525.79	40.144247	-104.975892
4,372.0	9.80	270.00	4,325.4	141.1	-583.6	1,295,828.27	3,146,510.12	40.144247	-104.975948
4,467.0	10.20	276.40	4,419.0	142.0	-600.0	1,295,829.11	3,146,493.67	40.144250	-104.976007
4,562.0	9.40	276.00	4,512.6	143.8	-616.1	1,295,830.76	3,146,477.58	40.144255	-104.976064
4,656.0	10.40	279.60	4,605.2	146.0	-632.1	1,295,832.88	3,146,461.57	40.144261	-104.976121
4,751.0	9.90	281.60	4,698.7	149.1	-648.5	1,295,835.86	3,146,445.10	40.144269	-104.976180
4,846.0	9.50	281.80	4,792.4	152.3	-664.2	1,295,839.01	3,146,429.40	40.144278	-104.976236
4,940.0	9.10	281.50	4,885.1	155.4	-679.1	1,295,841.99	3,146,414.51	40.144287	-104.976289
5,035.0	8.40	280.20	4,979.0	158.1	-693.3	1,295,844.63	3,146,400.30	40.144294	-104.976340
5,130.0	7.20	280.00	5,073.2	160.4	-706.0	1,295,846.82	3,146,387.59	40.144300	-104.976386
5,224.0	7.20	285.20	5,166.4	162.9	-717.5	1,295,849.32	3,146,376.09	40.144307	-104.976427
5,319.0	8.40	282.30	5,260.5	166.0	-730.0	1,295,852.28	3,146,363.55	40.144316	-104.976471
5,413.0	7.30	279.30	5,353.7	168.4	-742.6	1,295,854.63	3,146,350.93	40.144322	-104.976517
5,508.0	8.00	278.40	5,447.8	170.4	-755.1	1,295,856.50	3,146,338.43	40.144328	-104.976561
5,602.0	9.00	281.60	5,540.8	172.8	-768.8	1,295,858.85	3,146,324.74	40.144334	-104.976610
5,697.0	8.80	278.20	5,634.6	175.3	-783.2	1,295,861.30	3,146,310.25	40.144341	-104.976662
5,792.0	7.30	280.30	5,728.7	177.4	-796.4	1,295,863.34	3,146,297.11	40.144347	-104.976709
5,886.0	7.70	288.00	5,821.9	180.4	-808.2	1,295,866.28	3,146,285.23	40.144355	-104.976751
5,981.0	8.50	271.20	5,916.0	182.6	-821.3	1,295,868.32	3,146,272.14	40.144361	-104.976798
6,076.0	8.70	270.00	6,009.9	182.7	-835.5	1,295,868.38	3,146,257.93	40.144362	-104.976849
6,170.0	8.60	274.10	6,102.8	183.2	-849.6	1,295,868.80	3,146,243.81	40.144363	-104.976899
6,265.0	9.50	274.50	6,196.6	184.3	-864.5	1,295,869.83	3,146,228.90	40.144366	-104.976953

HP

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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
6,359.0	7.90	274.50	6,289.5	185.5	-878.7	1,295,870.86	3,146,214.72	40.144369	-104.977003
6,454.0	8.30	261.70	6,383.6	185.0	-892.0	1,295,870.31	3,146,201.43	40.144368	-104.977051
6,501.0	10.10	243.70	6,430.0	182.7	-899.0	1,295,867.95	3,146,194.39	40.144361	-104.977076
6,549.0	10.40	236.30	6,477.2	178.4	-906.4	1,295,863.64	3,146,187.04	40.144350	-104.977103
6,596.0	10.10	237.00	6,523.5	173.8	-913.4	1,295,859.00	3,146,180.08	40.144337	-104.977128
6,643.0	11.20	233.20	6,569.7	168.8	-920.5	1,295,853.98	3,146,173.00	40.144323	-104.977153
6,690.0	13.40	225.00	6,615.6	162.2	-928.0	1,295,847.35	3,146,165.53	40.144305	-104.977180
6,738.0	14.00	221.70	6,662.2	154.0	-935.8	1,295,839.03	3,146,157.79	40.144283	-104.977208
6,785.0	13.70	221.60	6,707.9	145.5	-943.3	1,295,830.58	3,146,150.36	40.144260	-104.977234
6,833.0	16.50	219.30	6,754.2	136.0	-951.4	1,295,821.00	3,146,142.32	40.144233	-104.977263
6,880.0	18.90	217.30	6,799.0	124.8	-960.2	1,295,809.73	3,146,133.55	40.144203	-104.977295
6,927.0	20.40	214.10	6,843.3	112.0	-969.4	1,295,796.84	3,146,124.42	40.144167	-104.977328
6,974.0	23.30	208.30	6,886.9	97.0	-978.4	1,295,781.81	3,146,115.50	40.144126	-104.977360
7,022.0	25.60	202.50	6,930.6	79.0	-986.9	1,295,763.82	3,146,107.14	40.144077	-104.977390
7,069.0	28.50	196.70	6,972.4	58.9	-994.0	1,295,743.65	3,146,100.15	40.144022	-104.977416
7,117.0	31.30	195.80	7,014.0	35.9	-1,000.7	1,295,720.64	3,146,093.60	40.143959	-104.977440
7,164.0	34.50	191.90	7,053.5	11.2	-1,006.8	1,295,695.82	3,146,087.67	40.143891	-104.977462
7,211.0	36.80	189.60	7,091.7	-15.7	-1,011.9	1,295,668.88	3,146,082.74	40.143817	-104.977480
7,258.0	38.40	188.60	7,128.9	-44.1	-1,016.4	1,295,640.54	3,146,078.38	40.143739	-104.977496
7,306.0	40.70	189.30	7,165.9	-74.2	-1,021.2	1,295,610.32	3,146,073.80	40.143656	-104.977513
7,353.0	43.50	190.40	7,200.8	-105.3	-1,026.6	1,295,579.25	3,146,068.58	40.143571	-104.977532
7,400.0	45.60	190.50	7,234.3	-137.7	-1,032.5	1,295,546.79	3,146,062.80	40.143482	-104.977554
7,447.0	49.60	188.90	7,266.0	-171.9	-1,038.4	1,295,512.55	3,146,057.17	40.143388	-104.977575
7,495.0	54.10	186.80	7,295.6	-209.3	-1,043.5	1,295,475.14	3,146,052.26	40.143285	-104.977593
7,542.0	58.00	187.20	7,321.9	-248.0	-1,048.3	1,295,436.43	3,146,047.73	40.143179	-104.977610
7,590.0	61.30	187.00	7,346.1	-289.1	-1,053.4	1,295,395.30	3,146,042.86	40.143066	-104.977628
7,637.0	64.70	186.00	7,367.5	-330.7	-1,058.1	1,295,353.67	3,146,038.37	40.142952	-104.977645
7,684.0	68.00	185.70	7,386.3	-373.5	-1,062.5	1,295,310.82	3,146,034.24	40.142835	-104.977661
7,731.0	70.90	186.30	7,402.8	-417.3	-1,067.1	1,295,267.03	3,146,029.90	40.142715	-104.977677
7,778.0	74.50	187.40	7,416.8	-461.8	-1,072.5	1,295,222.45	3,146,024.81	40.142592	-104.977696
7,825.0	77.80	185.60	7,428.0	-507.2	-1,077.6	1,295,177.09	3,146,019.92	40.142468	-104.977715
7,873.0	81.70	183.80	7,436.6	-554.2	-1,081.5	1,295,130.01	3,146,016.33	40.142339	-104.977729
7,895.0	84.40	182.20	7,439.2	-576.0	-1,082.6	1,295,108.19	3,146,015.32	40.142279	-104.977733
7,960.0	86.40	181.40	7,444.5	-640.8	-1,084.7	1,295,043.43	3,146,013.67	40.142101	-104.977740
8,022.0	87.30	180.30	7,447.9	-702.7	-1,085.6	1,294,981.53	3,146,013.12	40.141931	-104.977743
8,113.0	86.60	180.70	7,452.7	-793.5	-1,086.4	1,294,890.66	3,146,012.86	40.141682	-104.977746
8,205.0	87.30	180.20	7,457.6	-885.4	-1,087.1	1,294,798.79	3,146,012.69	40.141429	-104.977749
8,297.0	88.40	181.40	7,461.0	-977.3	-1,088.4	1,294,706.86	3,146,011.95	40.141177	-104.977753
8,358.0	88.70	181.00	7,462.6	-1,038.3	-1,089.7	1,294,645.88	3,146,011.03	40.141010	-104.977758
8,388.0	88.30	180.90	7,463.4	-1,068.3	-1,090.1	1,294,615.90	3,146,010.71	40.140927	-104.977760
8,419.0	89.90	180.80	7,463.9	-1,099.3	-1,090.6	1,294,584.90	3,146,010.44	40.140842	-104.977761
8,480.0	89.00	180.60	7,464.4	-1,160.3	-1,091.4	1,294,523.91	3,146,010.06	40.140675	-104.977764
8,528.0	88.80	180.80	7,465.4	-1,208.3	-1,091.9	1,294,475.92	3,146,009.75	40.140543	-104.977766
8,571.0	89.70	180.70	7,465.9	-1,251.2	-1,092.5	1,294,432.92	3,146,009.45	40.140425	-104.977768
8,616.0	90.50	181.00	7,465.9	-1,296.2	-1,093.2	1,294,387.92	3,146,009.05	40.140302	-104.977770
8,663.0	90.90	181.90	7,465.3	-1,343.2	-1,094.4	1,294,340.94	3,146,008.14	40.140173	-104.977775
8,708.0	92.00	182.30	7,464.1	-1,388.2	-1,096.0	1,294,295.97	3,146,006.75	40.140049	-104.977780
8,755.0	92.10	182.20	7,462.5	-1,435.1	-1,097.9	1,294,249.03	3,146,005.19	40.139920	-104.977787
8,847.0	92.00	182.60	7,459.2	-1,527.0	-1,101.7	1,294,157.15	3,146,001.88	40.139668	-104.977801
8,939.0	90.10	181.20	7,457.5	-1,618.9	-1,104.8	1,294,065.20	3,145,999.38	40.139416	-104.977812
9,031.0	89.90	180.80	7,457.5	-1,710.9	-1,106.4	1,293,973.21	3,145,998.32	40.139163	-104.977817
9,122.0	89.20	180.00	7,458.2	-1,801.9	-1,107.0	1,293,882.22	3,145,998.22	40.138914	-104.977820
9,214.0	89.70	178.90	7,459.1	-1,893.9	-1,106.1	1,293,790.23	3,145,999.65	40.138661	-104.977817
9,306.0	90.60	179.90	7,458.8	-1,985.9	-1,105.1	1,293,698.25	3,146,001.16	40.138409	-104.977813
9,397.0	91.30	183.60	7,457.3	-2,076.8	-1,107.9	1,293,607.30	3,145,998.92	40.138159	-104.977823

HP

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 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
9,488.0	90.20	183.90	7,456.1	-2,167.6	-1,113.9	1,293,516.47	3,145,993.51	40.137910	-104.977844
9,580.0	89.90	183.30	7,456.1	-2,259.4	-1,119.7	1,293,424.62	3,145,988.28	40.137658	-104.977865
9,671.0	89.50	182.50	7,456.5	-2,350.3	-1,124.3	1,293,333.72	3,145,984.22	40.137408	-104.977881
9,763.0	88.90	181.70	7,457.8	-2,442.2	-1,127.6	1,293,241.77	3,145,981.39	40.137156	-104.977893
9,855.0	89.60	182.00	7,459.0	-2,534.2	-1,130.6	1,293,149.81	3,145,978.97	40.136903	-104.977904
9,947.0	89.60	181.90	7,459.7	-2,626.1	-1,133.7	1,293,057.85	3,145,976.38	40.136651	-104.977915
10,041.0	89.40	180.70	7,460.5	-2,720.1	-1,135.9	1,292,963.87	3,145,974.81	40.136393	-104.977923
10,135.0	91.00	182.10	7,460.2	-2,814.0	-1,138.2	1,292,869.89	3,145,973.07	40.136135	-104.977931
10,230.0	90.20	181.40	7,459.2	-2,909.0	-1,141.1	1,292,774.92	3,145,970.73	40.135874	-104.977941
10,325.0	88.00	178.70	7,460.7	-3,004.0	-1,141.1	1,292,679.95	3,145,971.21	40.135614	-104.977942
10,419.0	89.50	179.00	7,462.7	-3,097.9	-1,139.3	1,292,586.01	3,145,973.65	40.135356	-104.977935
10,514.0	89.20	179.40	7,463.8	-3,192.9	-1,137.9	1,292,491.03	3,145,975.54	40.135095	-104.977930
10,608.0	89.80	180.10	7,464.6	-3,286.9	-1,137.5	1,292,397.04	3,145,976.51	40.134837	-104.977929
10,703.0	89.80	179.90	7,464.9	-3,381.9	-1,137.5	1,292,302.05	3,145,977.07	40.134576	-104.977929
10,753.0	89.90	180.50	7,465.1	-3,431.9	-1,137.7	1,292,252.05	3,145,977.20	40.134439	-104.977929
10,798.0	88.80	182.60	7,465.6	-3,476.9	-1,138.9	1,292,207.06	3,145,976.25	40.134315	-104.977934
10,829.0	88.50	183.20	7,466.3	-3,507.8	-1,140.5	1,292,176.10	3,145,974.86	40.134231	-104.977939
10,861.0	89.70	183.00	7,466.8	-3,539.8	-1,142.2	1,292,144.14	3,145,973.32	40.134143	-104.977945
10,893.0	92.10	183.00	7,466.3	-3,571.7	-1,143.9	1,292,112.19	3,145,971.84	40.134055	-104.977951
10,987.0	91.80	183.10	7,463.1	-3,665.5	-1,148.9	1,292,018.34	3,145,967.39	40.133798	-104.977969
11,082.0	90.50	183.30	7,461.2	-3,760.4	-1,154.2	1,291,923.48	3,145,962.66	40.133537	-104.977988
11,176.0	85.90	184.50	7,464.2	-3,854.1	-1,160.6	1,291,829.74	3,145,956.82	40.133280	-104.978011
11,270.0	86.70	183.50	7,470.2	-3,947.6	-1,167.1	1,291,736.13	3,145,950.84	40.133023	-104.978034
11,365.0	89.60	184.70	7,473.3	-4,042.3	-1,173.9	1,291,641.39	3,145,944.61	40.132763	-104.978059
11,459.0	89.50	180.00	7,474.0	-4,136.2	-1,177.8	1,291,547.48	3,145,941.31	40.132505	-104.978072
11,554.0	90.30	180.60	7,474.2	-4,231.2	-1,178.3	1,291,452.48	3,145,941.38	40.132245	-104.978074
11,649.0	89.10	179.40	7,474.7	-4,326.2	-1,178.3	1,291,357.49	3,145,941.94	40.131984	-104.978074
11,740.0	89.20	179.50	7,476.0	-4,417.2	-1,177.4	1,291,266.51	3,145,943.36	40.131734	-104.978071
11,835.0	88.70	179.90	7,477.8	-4,512.2	-1,176.9	1,291,171.53	3,145,944.42	40.131473	-104.978069
11,930.0	89.80	181.40	7,479.0	-4,607.2	-1,178.0	1,291,076.55	3,145,943.90	40.131213	-104.978073
12,024.0	91.80	182.20	7,477.7	-4,701.1	-1,180.9	1,290,982.59	3,145,941.51	40.130955	-104.978084
12,119.0	91.30	182.30	7,475.1	-4,796.0	-1,184.6	1,290,887.68	3,145,938.34	40.130694	-104.978097
12,213.0	91.50	181.40	7,472.8	-4,889.9	-1,187.7	1,290,793.74	3,145,935.87	40.130436	-104.978108
12,308.0	90.80	180.90	7,470.9	-4,984.9	-1,189.6	1,290,698.77	3,145,934.53	40.130176	-104.978115
12,402.0	89.80	177.90	7,470.4	-5,078.9	-1,188.6	1,290,604.80	3,145,936.07	40.129918	-104.978111
12,497.0	88.80	177.80	7,471.6	-5,173.8	-1,185.0	1,290,509.89	3,145,940.19	40.129657	-104.978098
12,592.0	89.10	178.90	7,473.3	-5,268.7	-1,182.3	1,290,414.97	3,145,943.49	40.129397	-104.978088
12,686.0	89.10	179.70	7,474.8	-5,362.7	-1,181.1	1,290,321.00	3,145,945.20	40.129139	-104.978084
12,781.0	89.50	180.70	7,476.0	-5,457.7	-1,181.5	1,290,226.01	3,145,945.43	40.128878	-104.978085
12,876.0	88.80	179.80	7,477.4	-5,552.7	-1,181.9	1,290,131.02	3,145,945.58	40.128617	-104.978087
12,970.0	89.20	180.20	7,479.0	-5,646.7	-1,181.9	1,290,037.03	3,145,946.14	40.128359	-104.978087
13,065.0	89.80	180.00	7,479.9	-5,741.7	-1,182.1	1,289,942.04	3,145,946.53	40.128098	-104.978088
13,159.0	89.70	179.60	7,480.3	-5,835.7	-1,181.7	1,289,848.04	3,145,947.42	40.127840	-104.978086
13,254.0	88.40	178.00	7,481.8	-5,930.6	-1,179.7	1,289,753.10	3,145,949.97	40.127580	-104.978079
13,348.0	88.00	177.80	7,484.8	-6,024.5	-1,176.3	1,289,659.23	3,145,953.97	40.127322	-104.978067
13,442.0	88.80	178.90	7,487.4	-6,118.5	-1,173.6	1,289,565.32	3,145,957.24	40.127064	-104.978057
13,537.0	88.70	178.90	7,489.5	-6,213.4	-1,171.8	1,289,470.38	3,145,959.62	40.126803	-104.978051
13,595.0	88.40	179.30	7,491.0	-6,271.4	-1,170.9	1,289,412.41	3,145,960.88	40.126644	-104.978047
Last CES Survey @ 13,595' MD									
13,645.0	88.40	179.30	7,492.4	-6,321.4	-1,170.2	1,289,362.44	3,145,961.78	40.126507	-104.978045
PTB @13,645' MD									

HP

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Grant Elmquist 2B-14H-C268
Project:	DJ Wattenberg	TVD Reference:	KB @ 4894.0ft (Ensign 135)
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury/Hurt)	MD Reference:	KB @ 4894.0ft (Ensign 135)
Well:	Grant Elmquist 2B-14H-C268	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM R5000 Multi Users DB

Design 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 2B-14H-I	0.00	0.00	7,228.3	-128.3	-1,037.6	1,295,556.21	3,146,057.72	40.143508	-104.977572
- actual wellpath misses target center by 6.8ft at 7389.8ft MD (7227.2 TVD, -130.6 N, -1031.2 E)									
- Point									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
13,595.0	7,491.0	-6,271.4	-1,170.9	Last CES Survey @ 13,595' MD
13,645.0	7,492.4	-6,321.4	-1,170.2	PTB @13,645' MD

Checked By: _____	Approved By: _____	Date: _____
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