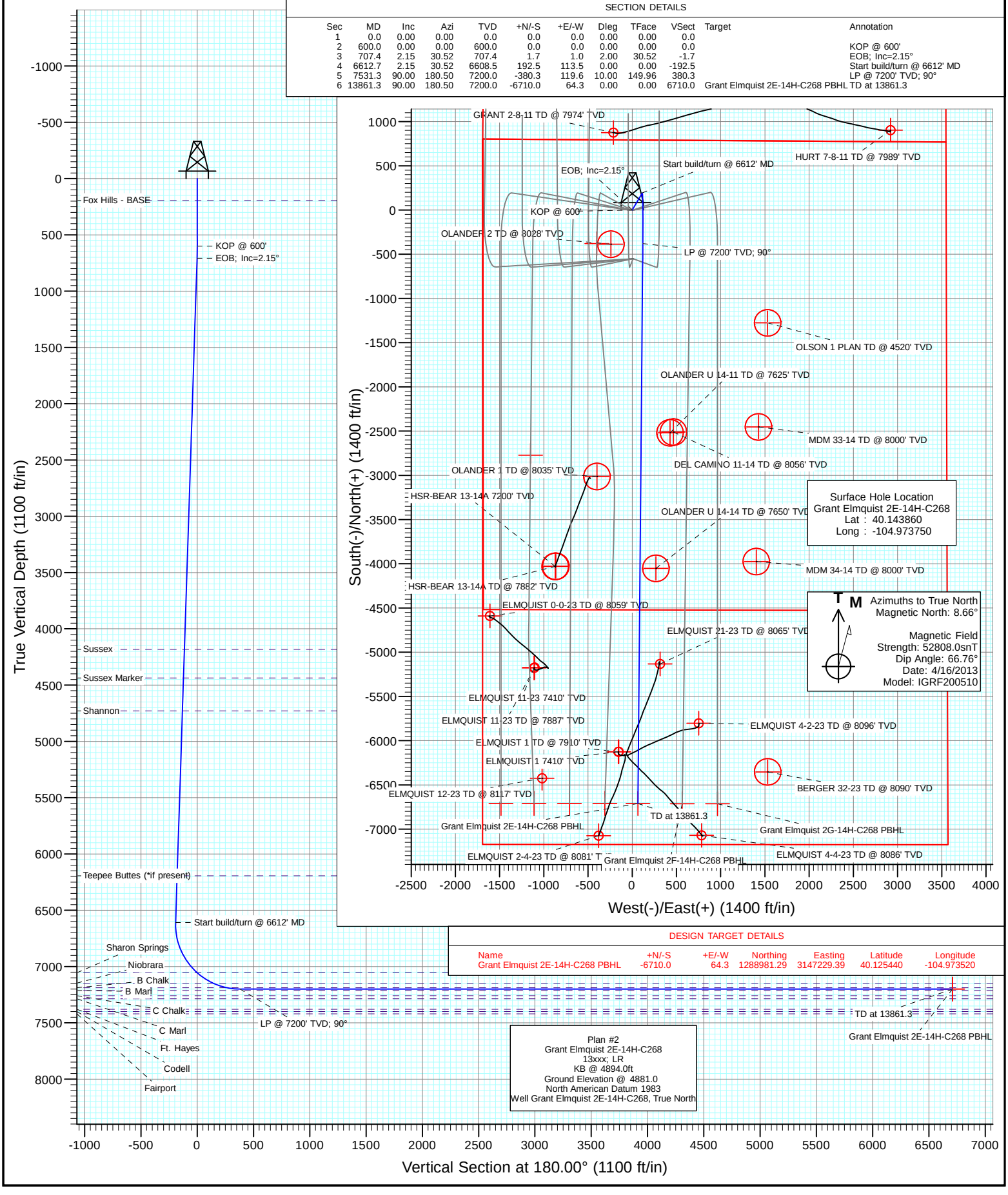
encana

Project: DJ Wattenberg
Site: S14-T2N-R68W (Grant Elmquist/Salisbury)
Well: Grant Elmquist 2E-14H-C268
Wellbore: Hz
Design: Plan #2

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0		KOP @ 600'
3	707.4	2.15	30.52	707.4	1.7	1.0	2.00	30.52	-1.7		EOB; Inc=2.15°
4	6612.7	2.15	30.52	6608.5	192.5	113.5	0.00	0.00	-192.5		Start build/turn @ 6612' MD
5	7531.3	90.00	180.50	7200.0	-380.3	119.6	10.00	149.96	380.3		LP @ 7200' TVD; 90°
6	13861.3	90.00	180.50	7200.0	-6710.0	64.3	0.00	0.00	6710.0	Grant Elmquist 2E-14H-C268 PBHL	TD at 13861.3



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Grant Elmquist 2E-14H-C268 PBHL	-6710.0	64.3	1288981.29	3147229.39	40.125440	-104.973520

Cathedral Energy Services

Planning Report

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

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)

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 2E-14H-C268

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,295,690.82 ft	**Latitude:**	40.143860
	+E/-W	0.0 ft	**Easting:**	3,147,125.26 ft	**Longitude:**	-104.973750
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)
	IGRF200510	4/16/2013	8.66	66.76	52,808

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**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

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
707.4	2.15	30.52	707.4	1.7	1.0	2.00	2.00	0.00	30.52	
6,612.7	2.15	30.52	6,608.5	192.5	113.5	0.00	0.00	0.00	0.00	
7,531.3	90.00	180.50	7,200.0	-380.3	119.6	10.00	9.56	16.33	149.96	
13,861.3	90.00	180.50	7,200.0	-6,710.0	64.3	0.00	0.00	0.00	0.00	Grant Elmquist 2E-14

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4894.0ft
Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**North Reference:**	True
Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
194.0	0.00	0.00	194.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	2.00	30.52	700.0	1.5	0.9	-1.5	2.00	2.00	
707.4	2.15	30.52	707.4	1.7	1.0	-1.7	2.00	2.00	EOB; Inc=2.15°
800.0	2.15	30.52	799.9	4.7	2.8	-4.7	0.00	0.00	
900.0	2.15	30.52	899.8	8.0	4.7	-8.0	0.00	0.00	
1,000.0	2.15	30.52	999.8	11.2	6.6	-11.2	0.00	0.00	
1,100.0	2.15	30.52	1,099.7	14.4	8.5	-14.4	0.00	0.00	
1,200.0	2.15	30.52	1,199.6	17.6	10.4	-17.6	0.00	0.00	
1,300.0	2.15	30.52	1,299.6	20.9	12.3	-20.9	0.00	0.00	
1,400.0	2.15	30.52	1,399.5	24.1	14.2	-24.1	0.00	0.00	
1,500.0	2.15	30.52	1,499.4	27.3	16.1	-27.3	0.00	0.00	
1,600.0	2.15	30.52	1,599.3	30.6	18.0	-30.6	0.00	0.00	
1,700.0	2.15	30.52	1,699.3	33.8	19.9	-33.8	0.00	0.00	
1,800.0	2.15	30.52	1,799.2	37.0	21.8	-37.0	0.00	0.00	
1,900.0	2.15	30.52	1,899.1	40.3	23.7	-40.3	0.00	0.00	
2,000.0	2.15	30.52	1,999.1	43.5	25.6	-43.5	0.00	0.00	
2,100.0	2.15	30.52	2,099.0	46.7	27.5	-46.7	0.00	0.00	
2,200.0	2.15	30.52	2,198.9	49.9	29.4	-49.9	0.00	0.00	
2,300.0	2.15	30.52	2,298.9	53.2	31.3	-53.2	0.00	0.00	
2,400.0	2.15	30.52	2,398.8	56.4	33.2	-56.4	0.00	0.00	
2,500.0	2.15	30.52	2,498.7	59.6	35.2	-59.6	0.00	0.00	
2,600.0	2.15	30.52	2,598.6	62.9	37.1	-62.9	0.00	0.00	
2,700.0	2.15	30.52	2,698.6	66.1	39.0	-66.1	0.00	0.00	
2,800.0	2.15	30.52	2,798.5	69.3	40.9	-69.3	0.00	0.00	
2,900.0	2.15	30.52	2,898.4	72.5	42.8	-72.5	0.00	0.00	
3,000.0	2.15	30.52	2,998.4	75.8	44.7	-75.8	0.00	0.00	
3,100.0	2.15	30.52	3,098.3	79.0	46.6	-79.0	0.00	0.00	
3,200.0	2.15	30.52	3,198.2	82.2	48.5	-82.2	0.00	0.00	
3,300.0	2.15	30.52	3,298.2	85.5	50.4	-85.5	0.00	0.00	
3,400.0	2.15	30.52	3,398.1	88.7	52.3	-88.7	0.00	0.00	
3,500.0	2.15	30.52	3,498.0	91.9	54.2	-91.9	0.00	0.00	
3,600.0	2.15	30.52	3,597.9	95.2	56.1	-95.2	0.00	0.00	
3,700.0	2.15	30.52	3,697.9	98.4	58.0	-98.4	0.00	0.00	
3,800.0	2.15	30.52	3,797.8	101.6	59.9	-101.6	0.00	0.00	
3,900.0	2.15	30.52	3,897.7	104.8	61.8	-104.8	0.00	0.00	
4,000.0	2.15	30.52	3,997.7	108.1	63.7	-108.1	0.00	0.00	
4,100.0	2.15	30.52	4,097.6	111.3	65.6	-111.3	0.00	0.00	
4,184.5	2.15	30.52	4,182.0	114.0	67.2	-114.0	0.00	0.00	Sussex
4,200.0	2.15	30.52	4,197.5	114.5	67.5	-114.5	0.00	0.00	
4,300.0	2.15	30.52	4,297.4	117.8	69.4	-117.8	0.00	0.00	
4,400.0	2.15	30.52	4,397.4	121.0	71.3	-121.0	0.00	0.00	
4,438.6	2.15	30.52	4,436.0	122.2	72.1	-122.2	0.00	0.00	Sussex Marker
4,500.0	2.15	30.52	4,497.3	124.2	73.2	-124.2	0.00	0.00	
4,600.0	2.15	30.52	4,597.2	127.5	75.1	-127.5	0.00	0.00	
4,700.0	2.15	30.52	4,697.2	130.7	77.0	-130.7	0.00	0.00	

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Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**North Reference:**	True
Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,731.9	2.15	30.52	4,729.0	131.7	77.6	-131.7	0.00	0.00	Shannon
4,800.0	2.15	30.52	4,797.1	133.9	78.9	-133.9	0.00	0.00	
4,900.0	2.15	30.52	4,897.0	137.1	80.8	-137.1	0.00	0.00	
5,000.0	2.15	30.52	4,997.0	140.4	82.7	-140.4	0.00	0.00	
5,100.0	2.15	30.52	5,096.9	143.6	84.7	-143.6	0.00	0.00	
5,200.0	2.15	30.52	5,196.8	146.8	86.6	-146.8	0.00	0.00	
5,300.0	2.15	30.52	5,296.7	150.1	88.5	-150.1	0.00	0.00	
5,400.0	2.15	30.52	5,396.7	153.3	90.4	-153.3	0.00	0.00	
5,500.0	2.15	30.52	5,496.6	156.5	92.3	-156.5	0.00	0.00	
5,600.0	2.15	30.52	5,596.5	159.8	94.2	-159.8	0.00	0.00	
5,700.0	2.15	30.52	5,696.5	163.0	96.1	-163.0	0.00	0.00	
5,800.0	2.15	30.52	5,796.4	166.2	98.0	-166.2	0.00	0.00	
5,900.0	2.15	30.52	5,896.3	169.4	99.9	-169.4	0.00	0.00	
6,000.0	2.15	30.52	5,996.3	172.7	101.8	-172.7	0.00	0.00	
6,100.0	2.15	30.52	6,096.2	175.9	103.7	-175.9	0.00	0.00	
6,197.9	2.15	30.52	6,194.0	179.1	105.6	-179.1	0.00	0.00	Teepee Buttes (*if present)
6,200.0	2.15	30.52	6,196.1	179.1	105.6	-179.1	0.00	0.00	
6,300.0	2.15	30.52	6,296.0	182.4	107.5	-182.4	0.00	0.00	
6,400.0	2.15	30.52	6,396.0	185.6	109.4	-185.6	0.00	0.00	
6,500.0	2.15	30.52	6,495.9	188.8	111.3	-188.8	0.00	0.00	
6,600.0	2.15	30.52	6,595.8	192.0	113.2	-192.0	0.00	0.00	
6,612.7	2.15	30.52	6,608.5	192.5	113.5	-192.5	0.00	0.00	Start build/turn @ 6612' MD
6,700.0	6.95	171.64	6,695.6	188.6	115.1	-188.6	10.00	5.50	
6,800.0	16.90	176.96	6,793.4	168.1	116.7	-168.1	10.00	9.95	
6,900.0	26.89	178.38	6,886.0	130.9	118.1	-130.9	10.00	9.99	
7,000.0	36.88	179.07	6,970.8	78.1	119.3	-78.1	10.00	9.99	
7,100.0	46.88	179.49	7,045.2	11.5	120.1	-11.5	10.00	10.00	
7,114.5	48.33	179.54	7,055.0	0.7	120.2	-0.7	10.00	10.00	Sharon Springs
7,200.0	56.87	179.80	7,106.9	-67.1	120.5	67.1	10.00	10.00	
7,285.3	65.40	180.01	7,148.0	-141.8	120.7	141.8	10.00	10.00	Niobrara
7,300.0	66.87	180.04	7,153.9	-155.2	120.7	155.2	10.00	10.00	
7,400.0	76.87	180.25	7,185.0	-250.1	120.4	250.1	10.00	10.00	
7,413.8	78.25	180.28	7,188.0	-263.6	120.3	263.6	10.00	10.00	B Chalk
7,500.0	86.87	180.44	7,199.1	-349.0	119.8	349.0	10.00	10.00	
7,531.3	90.00	180.50	7,200.0	-380.3	119.6	380.3	10.00	10.00	LP @ 7200' TVD; 90°
7,600.0	90.00	180.50	7,200.0	-448.9	119.0	448.9	0.00	0.00	
7,700.0	90.00	180.50	7,200.0	-548.9	118.1	548.9	0.00	0.00	
7,800.0	90.00	180.50	7,200.0	-648.9	117.2	648.9	0.00	0.00	
7,900.0	90.00	180.50	7,200.0	-748.9	116.3	748.9	0.00	0.00	
8,000.0	90.00	180.50	7,200.0	-848.9	115.5	848.9	0.00	0.00	
8,100.0	90.00	180.50	7,200.0	-948.9	114.6	948.9	0.00	0.00	
8,200.0	90.00	180.50	7,200.0	-1,048.9	113.7	1,048.9	0.00	0.00	
8,300.0	90.00	180.50	7,200.0	-1,148.9	112.8	1,148.9	0.00	0.00	
8,400.0	90.00	180.50	7,200.0	-1,248.9	112.0	1,248.9	0.00	0.00	
8,500.0	90.00	180.50	7,200.0	-1,348.9	111.1	1,348.9	0.00	0.00	
8,600.0	90.00	180.50	7,200.0	-1,448.9	110.2	1,448.9	0.00	0.00	
8,700.0	90.00	180.50	7,200.0	-1,548.9	109.4	1,548.9	0.00	0.00	
8,800.0	90.00	180.50	7,200.0	-1,648.9	108.5	1,648.9	0.00	0.00	
8,900.0	90.00	180.50	7,200.0	-1,748.9	107.6	1,748.9	0.00	0.00	
9,000.0	90.00	180.50	7,200.0	-1,848.9	106.7	1,848.9	0.00	0.00	
9,100.0	90.00	180.50	7,200.0	-1,948.9	105.9	1,948.9	0.00	0.00	
9,200.0	90.00	180.50	7,200.0	-2,048.9	105.0	2,048.9	0.00	0.00	

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Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,300.0	90.00	180.50	7,200.0	-2,148.9	104.1	2,148.9	0.00	0.00	
9,400.0	90.00	180.50	7,200.0	-2,248.9	103.2	2,248.9	0.00	0.00	
9,500.0	90.00	180.50	7,200.0	-2,348.9	102.4	2,348.9	0.00	0.00	
9,600.0	90.00	180.50	7,200.0	-2,448.9	101.5	2,448.9	0.00	0.00	
9,700.0	90.00	180.50	7,200.0	-2,548.9	100.6	2,548.9	0.00	0.00	
9,800.0	90.00	180.50	7,200.0	-2,648.9	99.8	2,648.9	0.00	0.00	
9,900.0	90.00	180.50	7,200.0	-2,748.9	98.9	2,748.9	0.00	0.00	
10,000.0	90.00	180.50	7,200.0	-2,848.9	98.0	2,848.9	0.00	0.00	
10,100.0	90.00	180.50	7,200.0	-2,948.8	97.1	2,948.8	0.00	0.00	
10,200.0	90.00	180.50	7,200.0	-3,048.8	96.3	3,048.8	0.00	0.00	
10,300.0	90.00	180.50	7,200.0	-3,148.8	95.4	3,148.8	0.00	0.00	
10,400.0	90.00	180.50	7,200.0	-3,248.8	94.5	3,248.8	0.00	0.00	
10,500.0	90.00	180.50	7,200.0	-3,348.8	93.6	3,348.8	0.00	0.00	
10,600.0	90.00	180.50	7,200.0	-3,448.8	92.8	3,448.8	0.00	0.00	
10,700.0	90.00	180.50	7,200.0	-3,548.8	91.9	3,548.8	0.00	0.00	
10,800.0	90.00	180.50	7,200.0	-3,648.8	91.0	3,648.8	0.00	0.00	
10,900.0	90.00	180.50	7,200.0	-3,748.8	90.2	3,748.8	0.00	0.00	
11,000.0	90.00	180.50	7,200.0	-3,848.8	89.3	3,848.8	0.00	0.00	
11,100.0	90.00	180.50	7,200.0	-3,948.8	88.4	3,948.8	0.00	0.00	
11,200.0	90.00	180.50	7,200.0	-4,048.8	87.5	4,048.8	0.00	0.00	
11,300.0	90.00	180.50	7,200.0	-4,148.8	86.7	4,148.8	0.00	0.00	
11,400.0	90.00	180.50	7,200.0	-4,248.8	85.8	4,248.8	0.00	0.00	
11,500.0	90.00	180.50	7,200.0	-4,348.8	84.9	4,348.8	0.00	0.00	
11,600.0	90.00	180.50	7,200.0	-4,448.8	84.1	4,448.8	0.00	0.00	
11,700.0	90.00	180.50	7,200.0	-4,548.8	83.2	4,548.8	0.00	0.00	
11,800.0	90.00	180.50	7,200.0	-4,648.8	82.3	4,648.8	0.00	0.00	
11,900.0	90.00	180.50	7,200.0	-4,748.8	81.4	4,748.8	0.00	0.00	
12,000.0	90.00	180.50	7,200.0	-4,848.8	80.6	4,848.8	0.00	0.00	
12,100.0	90.00	180.50	7,200.0	-4,948.8	79.7	4,948.8	0.00	0.00	
12,200.0	90.00	180.50	7,200.0	-5,048.8	78.8	5,048.8	0.00	0.00	
12,300.0	90.00	180.50	7,200.0	-5,148.8	77.9	5,148.8	0.00	0.00	
12,400.0	90.00	180.50	7,200.0	-5,248.8	77.1	5,248.8	0.00	0.00	
12,500.0	90.00	180.50	7,200.0	-5,348.8	76.2	5,348.8	0.00	0.00	
12,600.0	90.00	180.50	7,200.0	-5,448.8	75.3	5,448.8	0.00	0.00	
12,700.0	90.00	180.50	7,200.0	-5,548.7	74.5	5,548.7	0.00	0.00	
12,800.0	90.00	180.50	7,200.0	-5,648.7	73.6	5,648.7	0.00	0.00	
12,900.0	90.00	180.50	7,200.0	-5,748.7	72.7	5,748.7	0.00	0.00	
13,000.0	90.00	180.50	7,200.0	-5,848.7	71.8	5,848.7	0.00	0.00	
13,100.0	90.00	180.50	7,200.0	-5,948.7	71.0	5,948.7	0.00	0.00	
13,200.0	90.00	180.50	7,200.0	-6,048.7	70.1	6,048.7	0.00	0.00	
13,300.0	90.00	180.50	7,200.0	-6,148.7	69.2	6,148.7	0.00	0.00	
13,400.0	90.00	180.50	7,200.0	-6,248.7	68.3	6,248.7	0.00	0.00	
13,500.0	90.00	180.50	7,200.0	-6,348.7	67.5	6,348.7	0.00	0.00	
13,600.0	90.00	180.50	7,200.0	-6,448.7	66.6	6,448.7	0.00	0.00	
13,700.0	90.00	180.50	7,200.0	-6,548.7	65.7	6,548.7	0.00	0.00	
13,800.0	90.00	180.50	7,200.0	-6,648.7	64.9	6,648.7	0.00	0.00	
13,861.3	90.00	180.50	7,200.0	-6,710.0	64.3	6,710.0	0.00	0.00	TD at 13861.3 - Grant Elmquist 2E-14H-C268 F

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

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 2E-14H- - plan hits target center - Point	0.00	0.00	7,200.0	-6,710.0	64.3	1,288,981.29	3,147,229.39	40.125440	-104.973520

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
194.0	194.0	Fox Hills - BASE			
4,184.5	4,182.0	Sussex			
4,438.6	4,436.0	Sussex Marker			
4,731.9	4,729.0	Shannon			
6,197.9	6,194.0	Teepee Buttes (*if present)			
7,114.5	7,055.0	Sharon Springs			
7,285.3	7,148.0	Niobrara			
7,413.8	7,188.0	B Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
600.0	600.0	0.0	0.0	KOP @ 600'
707.4	707.4	1.7	1.0	EOB; Inc=2.15°
6,612.7	6,608.5	192.5	113.5	Start build/turn @ 6612' MD
7,531.3	7,200.0	-380.3	119.6	LP @ 7200' TVD; 90°
13,861.3	7,200.0	-6,710.0	64.3	TD at 13861.3

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S14-T2N-R68W (Grant Elmquist/Salisbury)
Grant Elmquist 2E-14H-C268
Hz
Plan #2

Anticollision Report

15 May, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,279.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 5/15/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	13,861.3	Plan #2 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S14-T2N-R68W (Grant Elmquist/Salisbury)						
BERGER 32-23 (EXISTING) - EXISTING - NO SURVEY						Out of range
DEL CAMINO 11-14 (EXISTING) - EXISTING - NO SURV	9,658.9	7,196.0	364.3	304.4	6.089	CC, ES
DEL CAMINO 11-14 (EXISTING) - EXISTING - NO SURV	9,700.0	7,196.0	366.6	306.1	6.058	SF
ELMQUIST 0-0-23 (EXISTING) - EXISTING - SURVEYS						Out of range
ELMQUIST 1 (EXISTING) - EXISTING - GYRO	13,281.2	7,224.9	226.9	110.7	1.953	CC, ES, SF
ELMQUIST 11-23 (EXISTING) - EXISTING - GYRO	12,341.6	7,240.5	1,190.1	1,090.3	11.924	CC, ES
ELMQUIST 11-23 (EXISTING) - EXISTING - GYRO	12,600.0	7,237.2	1,217.9	1,113.5	11.676	SF
ELMQUIST 12-23 (EXISTING) - EXISTING - NO SURVE	13,585.9	7,251.0	1,085.8	957.9	8.494	CC
ELMQUIST 12-23 (EXISTING) - EXISTING - NO SURVE	13,600.0	7,251.0	1,085.8	957.8	8.479	ES
ELMQUIST 12-23 (EXISTING) - EXISTING - NO SURVE	13,700.0	7,251.0	1,091.7	961.9	8.410	SF
ELMQUIST 21-23 (EXISTING) - EXISTING - SURVEYS	12,279.3	7,390.1	230.1	115.5	2.008	CC, ES, SF
ELMQUIST 2-4-23 (EXISTING) - EXISTING - SURVEYS	13,861.3	7,348.5	574.2	433.9	4.093	CC, ES, SF
ELMQUIST 4-2-23 (EXISTING) - EXISTING - SURVEYS	12,955.3	7,329.6	682.7	564.3	5.765	CC, ES
ELMQUIST 4-2-23 (EXISTING) - EXISTING - SURVEYS	13,000.0	7,329.0	684.2	565.0	5.739	SF
ELMQUIST 4-4-23 (EXISTING) - EXISTING - SURVEYS	13,861.3	7,423.3	807.3	666.8	5.746	CC, ES, SF
GRANT 23-11 (EXISTING) - EXISTING - SURVEYS						Out of range
GRANT 2-8-11 (EXISTING) - EXISTING - SURVEYS	5,169.5	5,400.7	754.5	714.8	19.005	CC
GRANT 2-8-11 (EXISTING) - EXISTING - SURVEYS	6,610.9	6,860.7	755.8	712.0	17.245	ES, SF
GRANT 3-6-11 (EXISTING) - EXISTING - SURVEYS						Out of range
Grant Elmquist 2A-14H-C268 - Hz - Plan #2	200.0	200.0	39.1	38.5	59.960	CC, ES
Grant Elmquist 2A-14H-C268 - Hz - Plan #2	500.0	495.0	54.5	52.8	31.718	SF
Grant Elmquist 2B-14H-C268 - Hz - Plan #2	300.0	300.0	30.8	29.8	30.696	CC, ES
Grant Elmquist 2B-14H-C268 - Hz - Plan #2	13,861.3	14,157.7	1,193.1	956.5	5.043	SF
Grant Elmquist 2C-14H-C268 - Hz - Plan #2	400.0	400.0	19.6	18.2	14.486	CC, ES
Grant Elmquist 2C-14H-C268 - Hz - Plan #2	13,861.3	13,887.9	774.6	534.6	3.228	SF
Grant Elmquist 2D-14H-C268 - Hz - Plan #2	500.0	500.0	11.2	9.5	6.578	CC, ES
Grant Elmquist 2D-14H-C268 - Hz - Plan #2	13,861.3	14,078.1	429.4	218.9	2.040	SF
Grant Elmquist 2F-14H-C268 - Hz - Plan #2	500.0	500.0	8.4	6.7	4.934	CC, ES
Grant Elmquist 2F-14H-C268 - Hz - Plan #2	13,861.3	14,111.4	542.8	320.8	2.445	SF
Grant Elmquist 2G-14H-C268 - Hz - Plan #2	362.5	373.5	19.6	18.3	16.039	CC
Grant Elmquist 2G-14H-C268 - Hz - Plan #2	400.0	410.9	19.6	18.2	14.502	ES
Grant Elmquist 2G-14H-C268 - Hz - Plan #2	13,861.3	13,933.4	900.5	660.7	3.755	SF
Grant Salisbury 2A-14H-C268 - Hz - Plan #1	200.0	200.0	554.6	553.9	849.571	CC
Grant Salisbury 2A-14H-C268 - Hz - Plan #1	300.0	297.8	554.8	553.8	554.212	ES
Grant Salisbury 2A-14H-C268 - Hz - Plan #1	4,500.0	4,351.6	1,256.6	1,237.2	64.799	SF
Grant Salisbury 2B-14H-C268 - Hz - Plan #1	300.0	300.0	554.2	553.2	553.152	CC
Grant Salisbury 2B-14H-C268 - Hz - Plan #1	400.0	397.6	554.4	553.0	410.942	ES
Grant Salisbury 2B-14H-C268 - Hz - Plan #1	5,500.0	5,382.6	1,271.2	1,248.8	56.905	SF
Grant Salisbury 2C-14H-C268 - Hz - Plan #1	400.0	400.0	553.8	552.5	409.968	CC
Grant Salisbury 2C-14H-C268 - Hz - Plan #1	500.0	497.3	554.1	552.4	326.479	ES
Grant Salisbury 2C-14H-C268 - Hz - Plan #1	8,100.0	6,984.1	1,014.5	981.2	30.389	SF
Grant Salisbury 2D-14H-C268 - Hz - Plan #1	400.0	400.0	553.7	552.4	409.890	CC, ES
Grant Salisbury 2D-14H-C268 - Hz - Plan #1	7,900.0	7,110.2	623.4	592.1	19.917	SF
Grant Salisbury 2E-14H-C268 - Hz - Plan #1	7,390.0	7,368.0	164.6	136.8	5.924	CC, ES, SF
Grant Salisbury 2F-14H-C268 - Hz - Plan #1	7,509.1	7,307.7	181.7	153.8	6.499	CC, ES, SF
HSR-BEAR 13-14A (EXISTING) - EXISTING - SURVEYS	11,188.9	7,487.6	958.7	863.5	10.063	CC
HSR-BEAR 13-14A (EXISTING) - EXISTING - SURVEYS	11,200.0	7,487.6	958.8	863.3	10.044	ES
HSR-BEAR 13-14A (EXISTING) - EXISTING - SURVEYS	11,400.0	7,487.0	981.7	882.8	9.924	SF
HURT 33-11 (EXISTING) - EXISTING - NO SURVEY						Out of range
HURT 34-11 (EXISTING) - EXISTING - SURVEYS						Out of range
HURT 43-11 (EXISTING) - EXISTING - SURVEYS						Out of range
HURT 7-8-11 (EXISTING) - EXISTING - SURVEYS						Out of range
MDM 33-14 (EXISTING) - EXISTING - NO SURVEYS						Out of range

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S14-T2N-R68W (Grant Elmquist/Salisbury)						
MDM 34-14 (EXISTING) - EXISTING - NO SURVEYS						Out of range
NELSON 1 (EXISTING) - EXISTING - NO SURVEYS						Out of range
NELSON 23-23C (EXISTING) - EXISTING - NO SURVEY	13,861.3	7,216.0	1,129.6	997.0	8.521	CC, ES, SF
OLANDER 1 (EXISTING) - EXISTING - NO SURVEYS	10,168.8	7,207.0	495.5	427.0	7.232	CC, ES
OLANDER 1 (EXISTING) - EXISTING - NO SURVEYS	10,200.0	7,207.0	496.5	427.5	7.190	SF
OLANDER 2 (EXISTING) - EXISTING - NO SURVEYS	7,541.2	7,193.9	361.0	333.5	13.103	CC, ES
OLANDER 2 (EXISTING) - EXISTING - NO SURVEYS	7,600.0	7,193.0	365.7	337.6	12.997	SF
OLANDER U 14-11 (EXISTING) - EXISTING - NO SURV	9,667.6	7,196.0	326.3	266.3	5.442	CC, ES
OLANDER U 14-11 (EXISTING) - EXISTING - NO SURV	9,700.0	7,196.0	327.9	267.4	5.419	SF
OLANDER U 14-14 (EXISTING) - EXISTING - NO SURV	11,201.5	7,201.0	180.1	93.8	2.087	CC, ES, SF
OLSON 1 (EXISTING) - PLAN ONLY - PLAN #1						Out of range
SALISBURY 1 (EXISTING) - EXISTING - GYRO						Out of range
SALISBURY 13-11 (EXISTING) - EXISTING - SURVEYS						Out of range
SALISBURY 14-11 (EXISTING) - EXISTING - SURVEYS						Out of range
SALISBURY 2-4-11 (EXISTING) - EXISTING - SURVEYS						Out of range

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - DEL CAMINO 11-14 (EXISTING) - EXISTING - NO SURVE

Offset Site Error: 0.0 ft

Survey Program: 8056-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,500.0	7,200.0	7,196.0	7,196.0	28.2	12.6	-90.00	-2,511.0	465.2	1,214.8	1,174.1	40.70	29.845	
8,600.0	7,200.0	7,196.0	7,196.0	29.8	12.6	-90.00	-2,511.0	465.2	1,119.8	1,077.5	42.29	26.480	
8,700.0	7,200.0	7,196.0	7,196.0	31.4	12.6	-90.00	-2,511.0	465.2	1,025.8	981.9	43.89	23.370	
8,800.0	7,200.0	7,196.0	7,196.0	33.0	12.6	-90.00	-2,511.0	465.2	933.0	887.5	45.51	20.499	
8,900.0	7,200.0	7,196.0	7,196.0	34.7	12.6	-90.00	-2,511.0	465.2	841.8	794.7	47.15	17.856	
9,000.0	7,200.0	7,196.0	7,196.0	36.3	12.6	-90.00	-2,511.0	465.2	752.9	704.1	48.79	15.432	
9,100.0	7,200.0	7,196.0	7,196.0	37.9	12.6	-90.00	-2,511.0	465.2	667.2	616.7	50.44	13.226	
9,200.0	7,200.0	7,196.0	7,196.0	39.6	12.6	-90.00	-2,511.0	465.2	585.9	533.8	52.11	11.245	
9,300.0	7,200.0	7,196.0	7,196.0	41.3	12.6	-90.00	-2,511.0	465.2	511.4	457.6	53.78	9.510	
9,400.0	7,200.0	7,196.0	7,196.0	42.9	12.6	-90.00	-2,511.0	465.2	446.9	391.5	55.45	8.060	
9,500.0	7,200.0	7,196.0	7,196.0	44.6	12.6	-90.00	-2,511.0	465.2	397.4	340.3	57.13	6.956	
9,600.0	7,200.0	7,196.0	7,196.0	46.3	12.6	-90.00	-2,511.0	465.2	369.0	310.2	58.82	6.273	
9,658.9	7,200.0	7,196.0	7,196.0	47.3	12.6	-90.00	-2,511.0	465.2	364.3	304.4	59.82	6.089	CC, ES
9,700.0	7,200.0	7,196.0	7,196.0	48.0	12.6	-90.00	-2,511.0	465.2	366.6	306.1	60.52	6.058	SF
9,800.0	7,200.0	7,196.0	7,196.0	49.7	12.6	-90.00	-2,511.0	465.2	390.6	328.4	62.21	6.279	
9,900.0	7,200.0	7,196.0	7,196.0	51.4	12.6	-90.00	-2,511.0	465.2	436.8	372.9	63.91	6.834	
10,000.0	7,200.0	7,196.0	7,196.0	53.1	12.6	-90.00	-2,511.0	465.2	499.0	433.4	65.62	7.605	
10,100.0	7,200.0	7,196.0	7,196.0	54.8	12.6	-90.00	-2,511.0	465.2	572.0	504.7	67.32	8.497	
10,200.0	7,200.0	7,196.0	7,196.0	56.5	12.6	-90.00	-2,511.0	465.2	652.3	583.2	69.03	9.448	
10,300.0	7,200.0	7,196.0	7,196.0	58.2	12.6	-90.00	-2,511.0	465.2	737.3	666.6	70.75	10.422	
10,400.0	7,200.0	7,196.0	7,196.0	59.9	12.6	-90.00	-2,511.0	465.2	825.7	753.3	72.46	11.395	
10,500.0	7,200.0	7,196.0	7,196.0	61.7	12.6	-90.00	-2,511.0	465.2	916.6	842.4	74.18	12.356	
10,600.0	7,200.0	7,196.0	7,196.0	63.4	12.6	-90.00	-2,511.0	465.2	1,009.1	933.2	75.90	13.295	
10,700.0	7,200.0	7,196.0	7,196.0	65.1	12.6	-90.00	-2,511.0	465.2	1,103.0	1,025.3	77.62	14.209	
10,800.0	7,200.0	7,196.0	7,196.0	66.8	12.6	-90.00	-2,511.0	465.2	1,197.8	1,118.5	79.34	15.096	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - ELMQUIST 1 (EXISTING) - EXISTING - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,100.0	7,200.0	7,240.0	7,239.0	89.3	6.4	93.78	-6,127.7	-157.5	1,202.7	1,107.2	95.44	12.601	
12,200.0	7,200.0	7,238.7	7,237.8	91.1	6.4	93.47	-6,127.7	-157.5	1,104.6	1,007.4	97.20	11.364	
12,300.0	7,200.0	7,237.5	7,236.5	92.8	6.4	93.15	-6,127.7	-157.5	1,007.0	908.0	98.96	10.175	
12,400.0	7,200.0	7,236.2	7,235.3	94.5	6.3	92.84	-6,127.8	-157.5	909.8	809.1	100.72	9.033	
12,500.0	7,200.0	7,235.0	7,234.0	96.3	6.3	92.52	-6,127.8	-157.5	813.4	710.9	102.48	7.937	
12,600.0	7,200.0	7,233.7	7,232.7	98.0	6.3	92.20	-6,127.8	-157.5	717.9	613.7	104.24	6.887	
12,700.0	7,200.0	7,232.4	7,231.5	99.8	6.3	91.88	-6,127.8	-157.5	623.8	517.8	106.00	5.885	
12,800.0	7,200.0	7,231.1	7,230.2	101.5	6.3	91.56	-6,127.8	-157.5	531.9	424.2	107.75	4.937	
12,900.0	7,200.0	7,229.9	7,228.9	103.2	6.3	91.24	-6,127.8	-157.5	443.6	334.1	109.50	4.051	
13,000.0	7,200.0	7,228.6	7,227.6	105.0	6.3	90.91	-6,127.9	-157.5	361.3	250.0	111.25	3.247	
13,100.0	7,200.0	7,227.3	7,226.3	106.7	6.3	90.59	-6,127.9	-157.5	290.3	177.3	113.00	2.569	
13,200.0	7,200.0	7,226.0	7,225.0	108.5	6.3	90.26	-6,127.9	-157.5	241.0	126.2	114.75	2.100	
13,281.2	7,200.0	7,224.9	7,224.0	109.9	6.3	90.00	-6,127.9	-157.5	226.9	110.7	116.16	1.953	CC, ES, SF
13,300.0	7,200.0	7,224.7	7,223.7	110.2	6.3	89.93	-6,127.9	-157.5	227.7	111.2	116.49	1.955	
13,400.0	7,200.0	7,223.4	7,222.4	111.9	6.3	89.60	-6,127.9	-157.5	256.1	137.9	118.23	2.166	
13,500.0	7,200.0	7,222.1	7,221.1	113.7	6.3	89.27	-6,127.9	-157.5	315.2	195.3	119.97	2.628	
13,600.0	7,200.0	7,220.8	7,219.8	115.4	6.3	88.94	-6,128.0	-157.5	391.3	269.6	121.70	3.215	
13,700.0	7,200.0	7,219.4	7,218.5	117.2	6.3	88.61	-6,128.0	-157.5	476.3	352.9	123.43	3.859	
13,800.0	7,200.0	7,218.1	7,217.2	118.9	6.3	88.27	-6,128.0	-157.5	566.2	441.1	125.15	4.525	
13,861.3	7,200.0	7,217.3	7,216.3	120.0	6.3	88.07	-6,128.0	-157.5	622.9	496.7	126.21	4.936	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - ELMQUIST 11-23 (EXISTING) - EXISTING - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,900.0	7,200.0	7,246.3	7,243.6	85.8	6.5	90.75	-5,179.9	-1,112.4	1,269.4	1,177.3	92.14	13.777	
12,000.0	7,200.0	7,245.0	7,242.2	87.6	6.5	90.68	-5,180.0	-1,112.4	1,238.2	1,144.3	93.88	13.190	
12,100.0	7,200.0	7,243.6	7,240.9	89.3	6.5	90.62	-5,180.0	-1,112.4	1,214.4	1,118.8	95.61	12.701	
12,200.0	7,200.0	7,242.3	7,239.6	91.1	6.5	90.56	-5,180.0	-1,112.5	1,198.5	1,101.2	97.35	12.312	
12,300.0	7,200.0	7,241.0	7,238.3	92.8	6.5	90.50	-5,180.0	-1,112.5	1,190.9	1,091.8	99.09	12.018	
12,341.6	7,200.0	7,240.5	7,237.8	93.5	6.5	90.47	-5,180.0	-1,112.5	1,190.1	1,090.3	99.81	11.924	CC, ES
12,400.0	7,200.0	7,239.8	7,237.0	94.5	6.5	90.43	-5,180.0	-1,112.5	1,191.6	1,090.7	100.83	11.818	
12,500.0	7,200.0	7,238.5	7,235.8	96.3	6.5	90.37	-5,180.0	-1,112.5	1,200.6	1,098.1	102.57	11.706	
12,600.0	7,200.0	7,237.2	7,234.5	98.0	6.5	90.31	-5,180.0	-1,112.5	1,217.9	1,113.5	104.30	11.676	SF
12,700.0	7,200.0	7,236.0	7,233.3	99.8	6.5	90.25	-5,180.1	-1,112.5	1,242.9	1,136.9	106.04	11.721	
12,800.0	7,200.0	7,234.8	7,232.0	101.5	6.5	90.19	-5,180.1	-1,112.5	1,275.3	1,167.6	107.78	11.832	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - ELMQUIST 12-23 (EXISTING) - EXISTING - NO SURVEY

Offset Site Error: 0.0 ft

Survey Program: 8117-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,000.0	7,200.0	7,251.0	7,251.0	105.0	12.7	90.00	-6,425.2	-1,019.0	1,233.8	1,116.2	117.61	10.491	
13,100.0	7,200.0	7,251.0	7,251.0	106.7	12.7	90.00	-6,425.2	-1,019.0	1,189.5	1,070.2	119.35	9.967	
13,200.0	7,200.0	7,251.0	7,251.0	108.5	12.7	90.00	-6,425.2	-1,019.0	1,152.3	1,031.2	121.09	9.516	
13,300.0	7,200.0	7,251.0	7,251.0	110.2	12.7	90.00	-6,425.2	-1,019.0	1,122.8	999.9	122.83	9.141	
13,400.0	7,200.0	7,251.0	7,251.0	111.9	12.7	90.00	-6,425.2	-1,019.0	1,101.6	977.0	124.58	8.842	
13,500.0	7,200.0	7,251.0	7,251.0	113.7	12.7	90.00	-6,425.2	-1,019.0	1,089.1	962.8	126.32	8.622	
13,585.9	7,200.0	7,251.0	7,251.0	115.2	12.7	90.00	-6,425.2	-1,019.0	1,085.8	957.9	127.82	8.494	CC
13,600.0	7,200.0	7,251.0	7,251.0	115.4	12.7	90.00	-6,425.2	-1,019.0	1,085.8	957.8	128.07	8.479	ES
13,700.0	7,200.0	7,251.0	7,251.0	117.2	12.7	90.00	-6,425.2	-1,019.0	1,091.7	961.9	129.81	8.410	SF
13,800.0	7,200.0	7,251.0	7,251.0	118.9	12.7	90.00	-6,425.2	-1,019.0	1,106.7	975.1	131.55	8.412	
13,861.3	7,200.0	7,251.0	7,251.0	120.0	12.7	90.00	-6,425.2	-1,019.0	1,120.1	987.5	132.62	8.446	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - ELMQUIST 21-23 (EXISTING) - EXISTING - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 102-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,100.0	7,200.0	7,359.9	7,202.8	72.0	23.1	-81.50	-5,129.3	307.6	1,201.2	1,108.0	93.22	12.886	
11,200.0	7,200.0	7,362.5	7,205.4	73.7	23.1	-82.14	-5,129.4	307.7	1,103.2	1,008.2	95.07	11.605	
11,300.0	7,200.0	7,365.2	7,208.1	75.5	23.1	-82.79	-5,129.5	307.7	1,005.7	908.8	96.92	10.377	
11,400.0	7,200.0	7,367.9	7,210.8	77.2	23.1	-83.47	-5,129.5	307.8	908.7	809.9	98.76	9.200	
11,500.0	7,200.0	7,370.6	7,213.5	78.9	23.1	-84.14	-5,129.6	307.8	812.3	711.7	100.60	8.075	
11,600.0	7,200.0	7,373.3	7,216.2	80.6	23.1	-84.80	-5,129.7	307.9	717.0	614.6	102.43	7.000	
11,700.0	7,200.0	7,375.9	7,218.8	82.4	23.1	-85.44	-5,129.7	307.9	623.2	518.9	104.25	5.977	
11,800.0	7,200.0	7,378.4	7,221.3	84.1	23.1	-86.07	-5,129.8	308.0	531.5	425.5	106.06	5.012	
11,900.0	7,200.0	7,381.0	7,223.8	85.8	23.1	-86.70	-5,129.9	308.0	443.5	335.7	107.86	4.112	
12,000.0	7,200.0	7,383.4	7,226.3	87.6	23.1	-87.31	-5,129.9	308.0	361.8	252.2	109.65	3.300	
12,100.0	7,200.0	7,385.8	7,228.7	89.3	23.1	-87.91	-5,130.0	308.1	291.7	180.2	111.43	2.617	
12,200.0	7,200.0	7,388.2	7,231.1	91.1	23.1	-88.50	-5,130.0	308.1	243.4	130.2	113.20	2.150	
12,279.3	7,200.0	7,390.1	7,232.9	92.4	23.1	-88.96	-5,130.1	308.2	230.1	115.5	114.60	2.008	CC, ES, SF
12,300.0	7,200.0	7,390.5	7,233.4	92.8	23.1	-89.08	-5,130.1	308.2	231.0	116.1	114.96	2.010	
12,400.0	7,200.0	7,392.8	7,235.7	94.5	23.1	-89.65	-5,130.1	308.2	259.8	143.1	116.71	2.226	
12,500.0	7,200.0	7,395.1	7,237.9	96.3	23.1	-90.21	-5,130.2	308.3	318.8	200.3	118.45	2.691	
12,600.0	7,200.0	7,397.3	7,240.1	98.0	23.1	-90.76	-5,130.2	308.3	394.6	274.5	120.18	3.284	
12,700.0	7,200.0	7,399.4	7,242.3	99.8	23.1	-91.30	-5,130.3	308.3	479.4	357.5	121.90	3.933	
12,800.0	7,200.0	7,401.6	7,244.4	101.5	23.1	-91.83	-5,130.3	308.4	569.2	445.5	123.61	4.604	
12,900.0	7,200.0	7,403.7	7,246.5	103.2	23.1	-92.35	-5,130.4	308.4	661.8	536.5	125.31	5.281	
13,000.0	7,200.0	7,405.7	7,248.6	105.0	23.2	-92.86	-5,130.4	308.4	756.4	629.4	127.00	5.956	
13,100.0	7,200.0	7,407.8	7,250.6	106.7	23.2	-93.36	-5,130.5	308.5	852.2	723.5	128.69	6.622	
13,200.0	7,200.0	7,409.7	7,252.6	108.5	23.2	-93.85	-5,130.5	308.5	948.8	818.4	130.36	7.278	
13,300.0	7,200.0	7,411.7	7,254.6	110.2	23.2	-94.33	-5,130.5	308.6	1,046.1	914.1	132.02	7.924	
13,400.0	7,200.0	7,413.6	7,256.5	111.9	23.2	-94.81	-5,130.6	308.6	1,143.8	1,010.1	133.67	8.557	
13,500.0	7,200.0	7,415.5	7,258.4	113.7	23.2	-95.28	-5,130.6	308.6	1,241.9	1,106.6	135.32	9.178	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - ELMQUIST 2-4-23 (EXISTING) - EXISTING - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 72-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,100.0	7,200.0	7,348.5	7,237.1	106.7	20.9	90.00	-7,074.0	-379.8	1,212.2	1,085.2	127.04	9.542	
13,200.0	7,200.0	7,348.5	7,237.1	108.5	20.9	90.00	-7,074.0	-379.8	1,119.7	990.9	128.78	8.694	
13,300.0	7,200.0	7,348.5	7,237.1	110.2	20.9	90.00	-7,074.0	-379.8	1,028.5	898.0	130.52	7.880	
13,400.0	7,200.0	7,348.5	7,237.1	111.9	20.9	90.00	-7,074.0	-379.8	939.1	806.9	132.27	7.100	
13,500.0	7,200.0	7,348.5	7,237.1	113.7	20.9	90.00	-7,074.0	-379.8	852.1	718.1	134.01	6.359	
13,600.0	7,200.0	7,348.5	7,237.1	115.4	20.9	90.00	-7,074.0	-379.8	768.3	632.6	135.75	5.660	
13,700.0	7,200.0	7,348.5	7,237.1	117.2	20.9	90.00	-7,074.0	-379.8	688.8	551.3	137.50	5.010	
13,800.0	7,200.0	7,348.5	7,237.1	118.9	20.9	90.00	-7,074.0	-379.8	615.3	476.1	139.24	4.419	
13,861.3	7,200.0	7,348.5	7,237.1	120.0	20.9	90.00	-7,074.0	-379.8	574.2	433.9	140.31	4.093	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - ELMQUIST 4-2-23 (EXISTING) - EXISTING - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 72-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,900.0	7,200.0	7,343.5	7,251.6	85.8	20.2	-91.21	-5,809.8	754.9	1,256.8	1,156.7	100.06	12.560	
12,000.0	7,200.0	7,342.2	7,250.3	87.6	20.2	-91.11	-5,809.8	754.9	1,174.1	1,072.3	101.80	11.533	
12,100.0	7,200.0	7,340.9	7,249.0	89.3	20.2	-91.00	-5,809.8	754.9	1,094.3	990.7	103.54	10.568	
12,200.0	7,200.0	7,339.7	7,247.7	91.1	20.2	-90.89	-5,809.8	754.9	1,018.0	912.8	105.28	9.670	
12,300.0	7,200.0	7,338.4	7,246.4	92.8	20.2	-90.78	-5,809.8	754.9	946.2	839.2	107.02	8.842	
12,400.0	7,200.0	7,337.0	7,245.1	94.5	20.2	-90.67	-5,809.9	754.9	880.0	771.2	108.76	8.091	
12,500.0	7,200.0	7,335.7	7,243.8	96.3	20.2	-90.56	-5,809.9	754.9	820.6	710.1	110.50	7.426	
12,600.0	7,200.0	7,334.4	7,242.5	98.0	20.2	-90.45	-5,809.9	754.9	769.6	657.4	112.25	6.856	
12,700.0	7,200.0	7,333.1	7,241.1	99.8	20.2	-90.34	-5,809.9	754.9	728.9	614.9	113.99	6.394	
12,800.0	7,200.0	7,331.7	7,239.8	101.5	20.2	-90.23	-5,809.9	754.9	700.1	584.4	115.73	6.050	
12,900.0	7,200.0	7,330.4	7,238.4	103.2	20.2	-90.11	-5,810.0	754.9	684.9	567.5	117.47	5.831	
12,955.3	7,200.0	7,329.6	7,237.7	104.2	20.2	-90.05	-5,810.0	754.9	682.7	564.3	118.43	5.765	CC, ES
13,000.0	7,200.0	7,329.0	7,237.1	105.0	20.2	-90.00	-5,810.0	754.9	684.2	565.0	119.21	5.739	SF
13,100.0	7,200.0	7,327.6	7,235.7	106.7	20.2	-89.88	-5,810.0	754.9	697.9	576.9	120.95	5.770	
13,200.0	7,200.0	7,326.2	7,234.3	108.5	20.2	-89.76	-5,810.0	754.9	725.2	602.6	122.69	5.911	
13,300.0	7,200.0	7,324.8	7,232.9	110.2	20.2	-89.65	-5,810.0	754.9	764.8	640.4	124.43	6.146	
13,400.0	7,200.0	7,323.4	7,231.5	111.9	20.2	-89.53	-5,810.0	754.9	814.8	688.6	126.18	6.457	
13,500.0	7,200.0	7,322.0	7,230.1	113.7	20.2	-89.41	-5,810.1	754.9	873.4	745.5	127.92	6.828	
13,600.0	7,200.0	7,320.6	7,228.7	115.4	20.2	-89.30	-5,810.1	754.9	939.0	809.3	129.66	7.242	
13,700.0	7,200.0	7,319.3	7,227.3	117.2	20.2	-89.18	-5,810.1	754.9	1,010.3	878.9	131.40	7.689	
13,800.0	7,200.0	7,317.9	7,226.0	118.9	20.2	-89.07	-5,810.1	754.9	1,086.1	952.9	133.14	8.158	
13,861.3	7,200.0	7,317.1	7,225.1	120.0	20.2	-89.00	-5,810.1	754.9	1,134.4	1,000.2	134.20	8.453	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - ELMQUIST 4-4-23 (EXISTING) - EXISTING - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 102-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,200.0	7,200.0	7,425.4	7,241.4	108.5	25.5	-90.34	-7,071.1	786.4	1,248.4	1,119.4	128.97	9.680	
13,300.0	7,200.0	7,425.1	7,241.1	110.2	25.5	-90.31	-7,071.1	786.4	1,168.4	1,037.7	130.71	8.939	
13,400.0	7,200.0	7,424.7	7,240.7	111.9	25.5	-90.29	-7,071.1	786.4	1,091.8	959.3	132.45	8.243	
13,500.0	7,200.0	7,424.4	7,240.4	113.7	25.5	-90.26	-7,071.2	786.4	1,019.2	885.0	134.20	7.595	
13,600.0	7,200.0	7,424.1	7,240.1	115.4	25.5	-90.24	-7,071.2	786.4	951.6	815.6	135.94	7.000	
13,700.0	7,200.0	7,423.8	7,239.8	117.2	25.5	-90.21	-7,071.2	786.4	890.1	752.4	137.68	6.465	
13,800.0	7,200.0	7,423.5	7,239.5	118.9	25.5	-90.19	-7,071.2	786.4	836.1	696.7	139.43	5.996	
13,861.3	7,200.0	7,423.3	7,239.3	120.0	25.5	-90.17	-7,071.2	786.4	807.3	666.8	140.50	5.746	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - GRANT 2-8-11 (EXISTING) - EXISTING - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 62-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
2,300.0	2,298.9	2,781.9	2,645.9	4.1	15.2	0.66	1,082.0	653.8	1,255.0	1,239.9	15.12	83.026	
2,400.0	2,398.8	2,865.1	2,722.9	4.3	15.7	-0.39	1,073.7	623.7	1,223.4	1,207.5	15.88	77.026	
2,500.0	2,498.7	2,950.1	2,802.1	4.5	16.3	-1.48	1,065.2	593.8	1,192.8	1,176.2	16.66	71.579	
2,600.0	2,598.6	3,037.2	2,883.2	4.7	16.9	-2.65	1,057.0	563.3	1,163.3	1,145.8	17.49	66.511	
2,700.0	2,698.6	3,130.3	2,970.0	4.9	17.6	-3.95	1,048.1	530.9	1,134.4	1,116.0	18.37	61.751	
2,800.0	2,798.5	3,214.7	3,049.1	5.1	18.1	-5.14	1,040.0	502.3	1,106.4	1,087.2	19.18	57.685	
2,900.0	2,898.4	3,299.3	3,128.8	5.3	18.6	-6.31	1,031.6	475.2	1,079.6	1,059.7	19.96	54.083	
3,000.0	2,998.4	3,375.0	3,200.5	5.4	19.1	-7.34	1,024.5	452.1	1,054.5	1,033.8	20.68	50.987	
3,100.0	3,098.3	3,463.0	3,284.2	5.6	19.6	-8.58	1,017.2	425.8	1,031.2	1,009.7	21.50	47.961	
3,200.0	3,198.2	3,556.4	3,373.2	5.8	20.1	-9.91	1,009.5	398.7	1,008.7	986.4	22.35	45.138	
3,300.0	3,298.2	3,642.9	3,456.0	6.0	20.6	-11.12	1,002.4	374.6	987.3	964.1	23.13	42.679	
3,400.0	3,398.1	3,734.9	3,544.0	6.2	21.1	-12.49	995.2	348.9	966.8	942.8	23.99	40.294	
3,500.0	3,498.0	3,822.0	3,627.3	6.4	21.6	-13.87	989.2	324.0	947.6	922.8	24.85	38.139	
3,600.0	3,597.9	3,913.7	3,715.1	6.6	22.1	-15.36	983.5	298.2	929.7	904.0	25.73	36.135	
3,700.0	3,697.9	4,020.9	3,817.6	6.7	22.7	-17.18	976.0	267.7	911.9	885.1	26.78	34.055	
3,800.0	3,797.8	4,116.7	3,908.3	6.9	23.3	-19.04	969.3	237.9	894.2	866.4	27.80	32.165	
3,900.0	3,897.7	4,205.3	3,992.4	7.1	23.9	-20.80	963.2	210.5	877.6	848.9	28.75	30.522	
4,000.0	3,997.7	4,291.2	4,074.1	7.3	24.3	-22.53	958.0	184.5	863.0	833.3	29.66	29.096	
4,100.0	4,097.6	4,396.7	4,175.2	7.5	24.9	-24.55	951.5	155.0	849.7	819.0	30.67	27.705	
4,200.0	4,197.5	4,497.0	4,271.3	7.7	25.5	-26.50	943.5	127.5	835.6	804.0	31.63	26.415	
4,300.0	4,297.4	4,596.7	4,366.5	7.9	26.1	-28.58	935.5	98.7	822.3	789.6	32.64	25.195	
4,400.0	4,397.4	4,698.2	4,462.8	8.1	26.7	-30.85	926.5	68.4	809.2	775.6	33.65	24.045	
4,500.0	4,497.3	4,793.0	4,553.2	8.2	27.2	-32.98	917.8	40.8	797.1	762.5	34.58	23.053	
4,600.0	4,597.2	4,889.7	4,645.4	8.4	27.8	-35.17	908.3	13.1	785.6	750.1	35.49	22.134	
4,700.0	4,697.2	4,978.9	4,730.4	8.6	28.3	-37.25	900.2	-12.5	776.1	739.7	36.34	21.356	
4,800.0	4,797.1	5,069.1	4,816.2	8.8	28.8	-39.43	892.0	-38.9	767.9	730.7	37.19	20.648	
4,900.0	4,897.0	5,155.0	4,897.8	9.0	29.3	-41.61	885.4	-65.2	762.4	724.5	37.97	20.079	
5,000.0	4,997.0	5,255.4	4,993.9	9.2	29.8	-43.97	877.9	-93.1	758.2	719.5	38.73	19.575	
5,100.0	5,096.9	5,343.0	5,078.8	9.4	30.2	-45.77	872.1	-113.9	755.1	715.7	39.33	19.197	
5,169.5	5,166.3	5,400.7	5,134.9	9.5	30.5	-46.89	869.5	-126.8	754.5	714.8	39.70	19.005	CC
5,200.0	5,196.8	5,428.3	5,161.9	9.5	30.6	-47.39	868.5	-132.7	754.6	714.7	39.86	18.932	
5,300.0	5,296.7	5,517.7	5,249.6	9.7	30.9	-48.86	866.5	-149.8	755.9	715.6	40.31	18.750	
5,400.0	5,396.7	5,619.7	5,350.5	9.9	31.1	-50.16	866.6	-165.0	758.4	717.7	40.72	18.625	
5,500.0	5,496.6	5,726.7	5,456.9	10.1	31.4	-51.22	866.8	-176.8	760.0	718.9	41.08	18.500	
5,600.0	5,596.5	5,827.2	5,557.0	10.3	31.5	-52.03	867.4	-185.4	761.3	719.9	41.39	18.395	
5,700.0	5,696.5	5,929.9	5,659.5	10.5	31.6	-52.62	868.7	-191.0	762.3	720.7	41.65	18.303	
5,800.0	5,796.4	6,028.1	5,757.6	10.7	31.8	-53.05	870.9	-194.9	763.6	721.7	41.90	18.223	
5,900.0	5,896.3	6,136.8	5,866.2	10.8	31.9	-53.50	872.9	-198.7	764.4	722.3	42.16	18.130	
6,000.0	5,996.3	6,246.7	5,976.0	11.0	32.0	-53.95	873.5	-202.0	763.9	721.4	42.42	18.005	
6,100.0	6,096.2	6,349.3	6,078.7	11.2	32.0	-54.29	873.7	-203.6	762.5	719.9	42.65	17.879	
6,200.0	6,196.1	6,448.1	6,177.4	11.4	32.1	-54.51	874.5	-203.9	761.1	718.3	42.87	17.752	
6,300.0	6,296.0	6,548.2	6,277.5	11.6	32.2	-54.75	875.2	-204.3	759.8	716.7	43.10	17.627	
6,400.0	6,396.0	6,647.5	6,376.8	11.8	32.2	-55.00	875.9	-204.9	758.5	715.2	43.33	17.504	
6,500.0	6,495.9	6,748.4	6,477.7	12.0	32.3	-55.25	876.7	-205.5	757.3	713.8	43.56	17.384	
6,600.0	6,595.8	6,849.7	6,579.0	12.1	32.4	-55.50	877.2	-205.9	755.9	712.1	43.80	17.258	
6,610.9	6,606.8	6,860.7	6,590.0	12.2	32.4	-75.35	877.3	-206.0	755.8	712.0	43.83	17.245	ES, SF
6,700.0	6,695.6	6,950.0	6,679.3	12.3	32.5	163.21	877.6	-206.5	760.3	716.6	43.72	17.391	
6,800.0	6,793.4	7,048.9	6,778.2	12.4	32.5	157.62	877.9	-207.0	780.2	737.5	42.62	18.304	
6,900.0	6,886.0	7,142.7	6,872.0	12.4	32.6	155.69	878.1	-207.4	815.0	774.5	40.54	20.101	
7,000.0	6,970.8	7,229.1	6,958.4	12.4	32.7	154.01	878.1	-207.7	864.2	826.5	37.62	22.970	
7,100.0	7,045.2	7,304.0	7,033.3	12.5	32.7	151.68	877.9	-208.0	926.5	892.4	34.08	27.186	
7,200.0	7,106.9	7,364.1	7,093.4	12.8	32.8	147.74	877.8	-208.4	1,000.5	970.1	30.35	32.966	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - GRANT 2-8-11 (EXISTING) - EXISTING - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 62-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,300.0	7,153.9	7,409.1	7,138.4	13.3	32.8	140.63	877.7	-208.9	1,084.2	1,056.9	27.25	39.783	
7,400.0	7,185.0	7,438.8	7,168.1	13.9	32.8	126.89	877.7	-209.3	1,175.0	1,148.6	26.39	44.526	
7,500.0	7,199.1	7,452.2	7,181.5	14.7	32.9	100.27	877.7	-209.5	1,270.1	1,241.1	28.98	43.824	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2A-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-39.1	39.1				
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-39.1	39.1	38.8	0.30	128.879	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-39.1	39.1	38.5	0.65	59.960	CC, ES
300.0	300.0	298.6	298.6	0.5	0.5	-89.66	0.2	-40.8	40.8	39.8	1.00	40.809	
400.0	400.0	397.0	396.9	0.7	0.7	-88.78	1.0	-45.8	46.0	44.6	1.35	33.927	
500.0	500.0	495.0	494.4	0.8	0.9	-87.68	2.2	-54.2	54.5	52.8	1.72	31.718	SF
600.0	600.0	592.2	591.0	1.0	1.2	-86.63	3.9	-65.7	66.4	64.3	2.09	31.734	
700.0	700.0	688.4	686.0	1.2	1.5	-117.03	6.0	-80.2	82.4	80.1	2.38	34.630	
800.0	799.9	783.3	779.3	1.4	1.8	-117.94	8.5	-97.7	102.6	99.9	2.73	37.653	
900.0	899.8	879.5	873.3	1.6	2.2	-118.45	11.5	-117.8	125.4	122.3	3.08	40.766	
1,000.0	999.8	976.8	968.3	1.7	2.6	-118.79	14.5	-138.4	148.4	144.9	3.43	43.255	
1,100.0	1,099.7	1,074.1	1,063.4	1.9	3.0	-119.05	17.5	-158.9	171.3	167.5	3.78	45.267	
1,200.0	1,199.6	1,171.4	1,158.5	2.1	3.4	-119.24	20.5	-179.5	194.3	190.1	4.14	46.925	
1,300.0	1,299.6	1,268.8	1,253.6	2.3	3.8	-119.40	23.5	-200.0	217.2	212.7	4.50	48.314	
1,400.0	1,399.5	1,366.1	1,348.7	2.5	4.2	-119.52	26.5	-220.5	240.2	235.3	4.85	49.494	
1,500.0	1,499.4	1,463.4	1,443.8	2.7	4.6	-119.62	29.5	-241.1	263.2	258.0	5.21	50.509	
1,600.0	1,599.3	1,560.7	1,538.9	2.8	5.0	-119.71	32.5	-261.6	286.1	280.6	5.57	51.390	
1,700.0	1,699.3	1,658.1	1,633.9	3.0	5.4	-119.78	35.5	-282.2	309.1	303.2	5.93	52.163	
1,800.0	1,799.2	1,755.4	1,729.0	3.2	5.8	-119.85	38.5	-302.7	332.1	325.8	6.28	52.846	
1,900.0	1,899.1	1,852.7	1,824.1	3.4	6.2	-119.90	41.4	-323.3	355.0	348.4	6.64	53.454	
2,000.0	1,999.1	1,950.0	1,919.2	3.6	6.6	-119.95	44.4	-343.8	378.0	371.0	7.00	53.999	
2,100.0	2,099.0	2,047.4	2,014.3	3.8	7.0	-119.99	47.4	-364.4	401.0	393.6	7.36	54.489	
2,200.0	2,198.9	2,144.7	2,109.4	4.0	7.4	-120.03	50.4	-384.9	423.9	416.2	7.72	54.933	
2,300.0	2,298.9	2,242.0	2,204.5	4.1	7.8	-120.06	53.4	-405.5	446.9	438.8	8.08	55.337	
2,400.0	2,398.8	2,339.4	2,299.6	4.3	8.2	-120.10	56.4	-426.0	469.8	461.4	8.43	55.706	
2,500.0	2,498.7	2,436.7	2,394.6	4.5	8.6	-120.12	59.4	-446.5	492.8	484.0	8.79	56.045	
2,600.0	2,598.6	2,534.0	2,489.7	4.7	9.0	-120.15	62.4	-467.1	515.8	506.6	9.15	56.356	
2,700.0	2,698.6	2,631.3	2,584.8	4.9	9.4	-120.17	65.4	-487.6	538.7	529.2	9.51	56.644	
2,800.0	2,798.5	2,728.7	2,679.9	5.1	9.8	-120.19	68.4	-508.2	561.7	551.8	9.87	56.910	
2,900.0	2,898.4	2,826.0	2,775.0	5.3	10.2	-120.21	71.4	-528.7	584.7	574.5	10.23	57.158	
3,000.0	2,998.4	2,923.3	2,870.1	5.4	10.7	-120.23	74.4	-549.3	607.6	597.1	10.59	57.388	
3,100.0	3,098.3	3,020.6	2,965.2	5.6	11.1	-120.25	77.4	-569.8	630.6	619.7	10.95	57.603	
3,200.0	3,198.2	3,118.0	3,060.2	5.8	11.5	-120.26	80.4	-590.4	653.6	642.3	11.31	57.804	
3,300.0	3,298.2	3,215.3	3,155.3	6.0	11.9	-120.28	83.4	-610.9	676.5	664.9	11.67	57.993	
3,400.0	3,398.1	3,312.6	3,250.4	6.2	12.3	-120.29	86.4	-631.5	699.5	687.5	12.03	58.170	
3,500.0	3,498.0	3,410.0	3,345.5	6.4	12.7	-120.31	89.4	-652.0	722.5	710.1	12.38	58.337	
3,600.0	3,597.9	3,507.3	3,440.6	6.6	13.1	-120.32	92.4	-672.6	745.4	732.7	12.74	58.494	
3,700.0	3,697.9	3,604.6	3,535.7	6.7	13.5	-120.33	95.4	-693.1	768.4	755.3	13.10	58.643	
3,800.0	3,797.8	3,701.9	3,630.8	6.9	13.9	-120.34	98.4	-713.6	791.4	777.9	13.46	58.783	
3,900.0	3,897.7	3,799.3	3,725.8	7.1	14.3	-120.35	101.4	-734.2	814.4	800.5	13.82	58.917	
4,000.0	3,997.7	3,896.6	3,820.9	7.3	14.7	-120.36	104.4	-754.7	837.3	823.1	14.18	59.043	
4,100.0	4,097.6	3,993.9	3,916.0	7.5	15.1	-120.37	107.4	-775.3	860.3	845.7	14.54	59.163	
4,200.0	4,197.5	4,091.2	4,011.1	7.7	15.5	-120.38	110.4	-795.8	883.3	868.4	14.90	59.277	
4,300.0	4,297.4	4,188.6	4,106.2	7.9	15.9	-120.38	113.4	-816.4	906.2	891.0	15.26	59.386	
4,400.0	4,397.4	4,285.9	4,201.3	8.1	16.4	-120.39	116.4	-836.9	929.2	913.6	15.62	59.490	
4,500.0	4,497.3	4,383.2	4,296.4	8.2	16.8	-120.40	119.4	-857.5	952.2	936.2	15.98	59.589	
4,600.0	4,597.2	4,480.5	4,391.4	8.4	17.2	-120.41	122.4	-878.0	975.1	958.8	16.34	59.683	
4,700.0	4,697.2	4,577.9	4,486.5	8.6	17.6	-120.41	125.4	-898.6	998.1	981.4	16.70	59.774	
4,800.0	4,797.1	4,675.2	4,581.6	8.8	18.0	-120.42	128.4	-919.1	1,021.1	1,004.0	17.06	59.860	
4,900.0	4,897.0	4,772.5	4,676.7	9.0	18.4	-120.43	131.4	-939.6	1,044.0	1,026.6	17.42	59.943	
5,000.0	4,997.0	4,869.9	4,771.8	9.2	18.8	-120.43	134.4	-960.2	1,067.0	1,049.2	17.78	60.023	
5,100.0	5,096.9	4,967.2	4,866.9	9.4	19.2	-120.44	137.4	-980.7	1,090.0	1,071.8	18.14	60.099	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2A-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,064.5	4,962.0	9.5	19.6	-120.44	140.4	-1,001.3	1,112.9	1,094.4	18.50	60.173	
5,300.0	5,296.7	5,161.8	5,057.1	9.7	20.0	-120.45	143.3	-1,021.8	1,135.9	1,117.0	18.86	60.243	
5,400.0	5,396.7	5,259.2	5,152.1	9.9	20.4	-120.45	146.3	-1,042.4	1,158.9	1,139.6	19.21	60.311	
5,500.0	5,496.6	5,356.5	5,247.2	10.1	20.8	-120.46	149.3	-1,062.9	1,181.8	1,162.3	19.57	60.377	
5,600.0	5,596.5	5,453.8	5,342.3	10.3	21.2	-120.46	152.3	-1,083.5	1,204.8	1,184.9	19.93	60.440	
5,700.0	5,696.5	5,551.1	5,437.4	10.5	21.6	-120.47	155.3	-1,104.0	1,227.8	1,207.5	20.29	60.501	
5,800.0	5,796.4	5,648.5	5,532.5	10.7	22.1	-120.47	158.3	-1,124.6	1,250.7	1,230.1	20.65	60.559	
5,900.0	5,896.3	5,745.8	5,627.6	10.8	22.5	-120.47	161.3	-1,145.1	1,273.7	1,252.7	21.01	60.616	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2B-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-30.8	30.8				
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-30.8	30.8	30.4	0.30	101.262	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-30.8	30.8	30.1	0.65	47.111	
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-30.8	30.8	29.8	1.00	30.696	CC, ES
400.0	400.0	398.9	398.9	0.7	0.7	-89.42	0.3	-32.4	32.4	31.1	1.35	24.033	
500.0	500.0	497.6	497.4	0.8	0.9	-88.01	1.3	-37.4	37.5	35.8	1.70	22.042	
600.0	600.0	595.8	595.3	1.0	1.1	-86.36	2.9	-45.7	46.1	44.0	2.07	22.304	
700.0	700.0	693.2	692.0	1.2	1.3	-116.68	5.1	-57.2	58.7	56.4	2.39	24.587	
800.0	799.9	790.4	788.0	1.4	1.6	-117.72	8.0	-71.7	75.5	72.7	2.74	27.548	
900.0	899.8	888.9	885.2	1.6	1.9	-118.34	10.9	-87.0	92.9	89.8	3.09	30.036	
1,000.0	999.8	987.3	982.4	1.7	2.2	-118.76	13.9	-102.4	110.4	107.0	3.45	32.000	
1,100.0	1,099.7	1,085.8	1,079.7	1.9	2.5	-119.07	16.9	-117.8	127.9	124.1	3.81	33.587	
1,200.0	1,199.6	1,184.2	1,176.9	2.1	2.8	-119.30	19.9	-133.2	145.4	141.2	4.17	34.895	
1,300.0	1,299.6	1,282.7	1,274.1	2.3	3.2	-119.49	22.9	-148.5	162.9	158.3	4.53	35.990	
1,400.0	1,399.5	1,381.1	1,371.3	2.5	3.5	-119.63	25.9	-163.9	180.3	175.5	4.88	36.921	
1,500.0	1,499.4	1,479.6	1,468.5	2.7	3.8	-119.76	28.9	-179.3	197.8	192.6	5.24	37.722	
1,600.0	1,599.3	1,578.1	1,565.7	2.8	4.1	-119.86	31.9	-194.7	215.3	209.7	5.60	38.418	
1,700.0	1,699.3	1,676.5	1,662.9	3.0	4.4	-119.94	34.8	-210.0	232.8	226.8	5.97	39.027	
1,800.0	1,799.2	1,775.0	1,760.1	3.2	4.8	-120.02	37.8	-225.4	250.3	244.0	6.33	39.566	
1,900.0	1,899.1	1,873.4	1,857.3	3.4	5.1	-120.08	40.8	-240.8	267.8	261.1	6.69	40.046	
2,000.0	1,999.1	1,971.9	1,954.5	3.6	5.4	-120.14	43.8	-256.1	285.3	278.2	7.05	40.476	
2,100.0	2,099.0	2,070.4	2,051.7	3.8	5.7	-120.19	46.8	-271.5	302.8	295.4	7.41	40.863	
2,200.0	2,198.9	2,168.8	2,148.9	4.0	6.0	-120.24	49.8	-286.9	320.3	312.5	7.77	41.213	
2,300.0	2,298.9	2,267.3	2,246.1	4.1	6.4	-120.28	52.8	-302.3	337.7	329.6	8.13	41.532	
2,400.0	2,398.8	2,365.7	2,343.3	4.3	6.7	-120.31	55.8	-317.6	355.2	346.7	8.49	41.823	
2,500.0	2,498.7	2,464.2	2,440.5	4.5	7.0	-120.35	58.7	-333.0	372.7	363.9	8.86	42.090	
2,600.0	2,598.6	2,562.6	2,537.7	4.7	7.3	-120.38	61.7	-348.4	390.2	381.0	9.22	42.336	
2,700.0	2,698.6	2,661.1	2,634.9	4.9	7.7	-120.40	64.7	-363.7	407.7	398.1	9.58	42.563	
2,800.0	2,798.5	2,759.6	2,732.1	5.1	8.0	-120.43	67.7	-379.1	425.2	415.3	9.94	42.773	
2,900.0	2,898.4	2,858.0	2,829.3	5.3	8.3	-120.45	70.7	-394.5	442.7	432.4	10.30	42.968	
3,000.0	2,998.4	2,956.5	2,926.5	5.4	8.6	-120.47	73.7	-409.9	460.2	449.5	10.66	43.150	
3,100.0	3,098.3	3,054.9	3,023.8	5.6	9.0	-120.49	76.7	-425.2	477.7	466.6	11.03	43.320	
3,200.0	3,198.2	3,153.4	3,121.0	5.8	9.3	-120.51	79.7	-440.6	495.2	483.8	11.39	43.479	
3,300.0	3,298.2	3,251.9	3,218.2	6.0	9.6	-120.53	82.6	-456.0	512.7	500.9	11.75	43.627	
3,400.0	3,398.1	3,350.3	3,315.4	6.2	9.9	-120.54	85.6	-471.4	530.1	518.0	12.11	43.767	
3,500.0	3,498.0	3,448.8	3,412.6	6.4	10.3	-120.56	88.6	-486.7	547.6	535.2	12.47	43.899	
3,600.0	3,597.9	3,547.2	3,509.8	6.6	10.6	-120.57	91.6	-502.1	565.1	552.3	12.84	44.023	
3,700.0	3,697.9	3,645.7	3,607.0	6.7	10.9	-120.59	94.6	-517.5	582.6	569.4	13.20	44.140	
3,800.0	3,797.8	3,744.1	3,704.2	6.9	11.2	-120.60	97.6	-532.8	600.1	586.5	13.56	44.251	
3,900.0	3,897.7	3,842.6	3,801.4	7.1	11.6	-120.61	100.6	-548.2	617.6	603.7	13.92	44.356	
4,000.0	3,997.7	3,941.1	3,898.6	7.3	11.9	-120.62	103.6	-563.6	635.1	620.8	14.29	44.456	
4,100.0	4,097.6	4,039.5	3,995.8	7.5	12.2	-120.63	106.6	-579.0	652.6	637.9	14.65	44.551	
4,200.0	4,197.5	4,138.0	4,093.0	7.7	12.5	-120.64	109.5	-594.3	670.1	655.1	15.01	44.641	
4,300.0	4,297.4	4,236.4	4,190.2	7.9	12.9	-120.65	112.5	-609.7	687.6	672.2	15.37	44.727	
4,400.0	4,397.4	4,334.9	4,287.4	8.1	13.2	-120.66	115.5	-625.1	705.1	689.3	15.73	44.809	
4,500.0	4,497.3	4,433.4	4,384.6	8.2	13.5	-120.67	118.5	-640.5	722.5	706.4	16.10	44.887	
4,600.0	4,597.2	4,531.8	4,481.8	8.4	13.8	-120.68	121.5	-655.8	740.0	723.6	16.46	44.961	
4,700.0	4,697.2	4,630.3	4,579.0	8.6	14.2	-120.68	124.5	-671.2	757.5	740.7	16.82	45.033	
4,800.0	4,797.1	4,728.7	4,676.2	8.8	14.5	-120.69	127.5	-686.6	775.0	757.8	17.18	45.101	
4,900.0	4,897.0	4,827.2	4,773.4	9.0	14.8	-120.70	130.5	-701.9	792.5	775.0	17.55	45.167	
5,000.0	4,997.0	4,925.6	4,870.6	9.2	15.1	-120.71	133.4	-717.3	810.0	792.1	17.91	45.229	
5,100.0	5,096.9	5,024.1	4,967.9	9.4	15.5	-120.71	136.4	-732.7	827.5	809.2	18.27	45.290	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2B-14H-C268 - Hz - Plan #2

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,122.6	5,065.1	9.5	15.8	-120.72	139.4	-748.1	845.0	826.3	18.63	45.348	
5,300.0	5,296.7	5,221.0	5,162.3	9.7	16.1	-120.72	142.4	-763.4	862.5	843.5	19.00	45.403	
5,400.0	5,396.7	5,319.5	5,259.5	9.9	16.4	-120.73	145.4	-778.8	880.0	860.6	19.36	45.457	
5,500.0	5,496.6	5,417.9	5,356.7	10.1	16.8	-120.74	148.4	-794.2	897.5	877.7	19.72	45.509	
5,600.0	5,596.5	5,516.4	5,453.9	10.3	17.1	-120.74	151.4	-809.5	914.9	894.9	20.08	45.558	
5,700.0	5,696.5	5,614.9	5,551.1	10.5	17.4	-120.75	154.4	-824.9	932.4	912.0	20.45	45.606	
5,800.0	5,796.4	5,713.3	5,648.3	10.7	17.7	-120.75	157.3	-840.3	949.9	929.1	20.81	45.653	
5,900.0	5,896.3	5,811.8	5,745.5	10.8	18.1	-120.76	160.3	-855.7	967.4	946.3	21.17	45.697	
6,000.0	5,996.3	5,910.2	5,842.7	11.0	18.4	-120.76	163.3	-871.0	984.9	963.4	21.53	45.741	
6,100.0	6,096.2	6,008.7	5,939.9	11.2	18.7	-120.76	166.3	-886.4	1,002.4	980.5	21.89	45.782	
6,200.0	6,196.1	6,107.1	6,037.1	11.4	19.0	-120.77	169.3	-901.8	1,019.9	997.6	22.26	45.823	
6,300.0	6,296.0	6,205.6	6,134.3	11.6	19.4	-120.77	172.3	-917.2	1,037.4	1,014.8	22.62	45.862	
6,400.0	6,396.0	6,304.1	6,231.5	11.8	19.7	-120.78	175.3	-932.5	1,054.9	1,031.9	22.98	45.900	
6,500.0	6,495.9	6,402.5	6,328.7	12.0	20.0	-120.78	178.3	-947.9	1,072.4	1,049.0	23.34	45.936	
6,600.0	6,595.8	6,501.0	6,425.9	12.1	20.4	-120.78	181.2	-963.3	1,089.9	1,066.2	23.71	45.972	
6,700.0	6,695.6	6,599.1	6,522.8	12.3	20.7	96.98	184.2	-978.6	1,107.2	1,083.1	24.12	45.910	
6,800.0	6,793.4	6,694.7	6,617.2	12.4	21.0	91.21	187.1	-993.5	1,124.3	1,099.9	24.40	46.071	
6,900.0	6,886.0	6,784.9	6,706.2	12.4	21.3	89.98	189.9	-1,007.6	1,141.5	1,116.9	24.58	46.437	
7,000.0	6,970.8	6,866.8	6,787.1	12.4	21.6	89.79	192.3	-1,020.4	1,160.0	1,135.3	24.73	46.900	
7,100.0	7,045.2	6,950.8	6,870.0	12.5	21.8	90.17	193.3	-1,033.5	1,180.9	1,156.0	24.93	47.370	
7,200.0	7,106.9	7,061.8	6,978.3	12.8	22.1	91.39	177.7	-1,050.8	1,203.6	1,178.4	25.19	47.786	
7,300.0	7,153.9	7,204.5	7,109.8	13.3	22.5	93.36	127.2	-1,072.2	1,226.6	1,201.0	25.59	47.930	
7,400.0	7,185.0	7,403.4	7,263.9	13.9	22.9	96.26	5.8	-1,097.9	1,247.4	1,221.0	26.37	47.308	
7,500.0	7,199.1	7,685.1	7,393.3	14.7	24.0	99.12	-240.1	-1,121.0	1,260.6	1,232.2	28.38	44.421	
7,600.0	7,200.0	7,882.3	7,410.0	15.7	25.1	99.58	-435.9	-1,125.7	1,262.3	1,231.2	31.07	40.627	
7,700.0	7,200.0	7,982.3	7,410.0	16.9	25.8	99.58	-535.9	-1,126.7	1,262.5	1,229.2	33.28	37.932	
7,800.0	7,200.0	8,082.3	7,410.0	18.1	26.6	99.57	-635.9	-1,127.8	1,262.6	1,226.9	35.69	35.378	
7,900.0	7,200.0	8,182.3	7,410.0	19.4	27.5	99.57	-735.9	-1,128.8	1,262.8	1,224.6	38.26	33.006	
8,000.0	7,200.0	8,282.3	7,410.0	20.7	28.5	99.57	-835.9	-1,129.9	1,263.0	1,222.0	40.96	30.834	
8,100.0	7,200.0	8,382.3	7,410.0	22.2	29.5	99.57	-935.9	-1,130.9	1,263.2	1,219.4	43.77	28.859	
8,200.0	7,200.0	8,482.3	7,410.0	23.6	30.6	99.57	-1,035.9	-1,132.0	1,263.3	1,216.7	46.67	27.072	
8,300.0	7,200.0	8,582.3	7,410.0	25.1	31.8	99.57	-1,135.9	-1,133.0	1,263.5	1,213.9	49.63	25.456	
8,400.0	7,200.0	8,682.3	7,410.0	26.7	33.0	99.57	-1,235.9	-1,134.1	1,263.7	1,211.0	52.66	23.996	
8,500.0	7,200.0	8,782.3	7,410.0	28.2	34.3	99.56	-1,335.9	-1,135.1	1,263.8	1,208.1	55.74	22.673	
8,600.0	7,200.0	8,882.3	7,410.0	29.8	35.6	99.56	-1,435.9	-1,136.2	1,264.0	1,205.2	58.86	21.474	
8,700.0	7,200.0	8,982.3	7,410.0	31.4	37.0	99.56	-1,535.8	-1,137.2	1,264.2	1,202.2	62.02	20.384	
8,800.0	7,200.0	9,082.3	7,410.0	33.0	38.3	99.56	-1,635.8	-1,138.2	1,264.4	1,199.2	65.21	19.390	
8,900.0	7,200.0	9,182.3	7,410.0	34.7	39.8	99.56	-1,735.8	-1,139.3	1,264.5	1,196.1	68.42	18.481	
9,000.0	7,200.0	9,282.3	7,410.0	36.3	41.2	99.56	-1,835.8	-1,140.3	1,264.7	1,193.0	71.66	17.649	
9,100.0	7,200.0	9,382.3	7,410.0	37.9	42.7	99.56	-1,935.8	-1,141.4	1,264.9	1,190.0	74.92	16.884	
9,200.0	7,200.0	9,482.3	7,410.0	39.6	44.1	99.56	-2,035.8	-1,142.4	1,265.0	1,186.9	78.19	16.179	
9,300.0	7,200.0	9,582.3	7,410.0	41.3	45.6	99.55	-2,135.8	-1,143.5	1,265.2	1,183.7	81.48	15.528	
9,400.0	7,200.0	9,682.3	7,410.0	42.9	47.2	99.55	-2,235.8	-1,144.5	1,265.4	1,180.6	84.79	14.924	
9,500.0	7,200.0	9,782.3	7,410.0	44.6	48.7	99.55	-2,335.8	-1,145.6	1,265.6	1,177.5	88.10	14.365	
9,600.0	7,200.0	9,882.3	7,410.0	46.3	50.3	99.55	-2,435.8	-1,146.6	1,265.7	1,174.3	91.43	13.844	
9,700.0	7,200.0	9,982.3	7,410.0	48.0	51.8	99.55	-2,535.8	-1,147.7	1,265.9	1,171.1	94.77	13.358	
9,800.0	7,200.0	10,082.3	7,410.0	49.7	53.4	99.55	-2,635.8	-1,148.7	1,266.1	1,168.0	98.11	12.905	
9,900.0	7,200.0	10,182.3	7,410.0	51.4	55.0	99.55	-2,735.8	-1,149.8	1,266.3	1,164.8	101.46	12.480	
10,000.0	7,200.0	10,282.3	7,410.0	53.1	56.6	99.54	-2,835.8	-1,150.8	1,266.4	1,161.6	104.82	12.082	
10,100.0	7,200.0	10,382.3	7,410.0	54.8	58.2	99.54	-2,935.8	-1,151.9	1,266.6	1,158.4	108.19	11.707	
10,200.0	7,200.0	10,482.3	7,410.0	56.5	59.8	99.54	-3,035.8	-1,152.9	1,266.8	1,155.2	111.56	11.355	
10,300.0	7,200.0	10,582.3	7,410.0	58.2	61.4	99.54	-3,135.8	-1,154.0	1,266.9	1,152.0	114.94	11.023	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2B-14H-C268 - Hz - Plan #2

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,200.0	10,682.3	7,410.0	59.9	63.0	99.54	-3,235.8	-1,155.0	1,267.1	1,148.8	118.32	10.709	
10,500.0	7,200.0	10,782.3	7,410.0	61.7	64.7	99.54	-3,335.7	-1,156.0	1,267.3	1,145.6	121.71	10.413	
10,600.0	7,200.0	10,882.3	7,410.0	63.4	66.3	99.54	-3,435.7	-1,157.1	1,267.5	1,142.4	125.10	10.132	
10,700.0	7,200.0	10,982.3	7,410.0	65.1	68.0	99.54	-3,535.7	-1,158.1	1,267.6	1,139.1	128.49	9.865	
10,800.0	7,200.0	11,082.3	7,410.0	66.8	69.6	99.53	-3,635.7	-1,159.2	1,267.8	1,135.9	131.89	9.613	
10,900.0	7,200.0	11,182.3	7,410.0	68.5	71.3	99.53	-3,735.7	-1,160.2	1,268.0	1,132.7	135.29	9.372	
11,000.0	7,200.0	11,282.3	7,410.0	70.3	72.9	99.53	-3,835.7	-1,161.3	1,268.1	1,129.5	138.69	9.143	
11,100.0	7,200.0	11,382.3	7,410.0	72.0	74.6	99.53	-3,935.7	-1,162.3	1,268.3	1,126.2	142.10	8.925	
11,200.0	7,200.0	11,482.3	7,410.0	73.7	76.3	99.53	-4,035.7	-1,163.4	1,268.5	1,123.0	145.51	8.718	
11,300.0	7,200.0	11,582.3	7,410.0	75.5	77.9	99.53	-4,135.7	-1,164.4	1,268.7	1,119.7	148.92	8.519	
11,400.0	7,200.0	11,682.3	7,410.0	77.2	79.6	99.53	-4,235.7	-1,165.5	1,268.8	1,116.5	152.34	8.329	
11,500.0	7,200.0	11,782.3	7,410.0	78.9	81.3	99.53	-4,335.7	-1,166.5	1,269.0	1,113.3	155.75	8.148	
11,600.0	7,200.0	11,882.3	7,410.0	80.6	83.0	99.52	-4,435.7	-1,167.6	1,269.2	1,110.0	159.17	7.974	
11,700.0	7,200.0	11,982.3	7,410.0	82.4	84.7	99.52	-4,535.7	-1,168.6	1,269.4	1,106.8	162.59	7.807	
11,800.0	7,200.0	12,082.3	7,410.0	84.1	86.4	99.52	-4,635.7	-1,169.7	1,269.5	1,103.5	166.01	7.647	
11,900.0	7,200.0	12,182.3	7,410.0	85.8	88.1	99.52	-4,735.7	-1,170.7	1,269.7	1,100.3	169.44	7.494	
12,000.0	7,200.0	12,299.9	7,410.0	87.6	90.0	99.52	-4,853.2	-1,171.4	1,269.4	1,096.3	173.16	7.331	
12,100.0	7,200.0	12,427.8	7,410.0	89.3	92.2	99.55	-4,981.1	-1,169.5	1,267.1	1,090.1	177.05	7.157	
12,200.0	7,200.0	12,538.4	7,410.0	91.1	94.1	99.58	-5,091.6	-1,165.9	1,263.0	1,082.4	180.64	6.992	
12,300.0	7,200.0	12,638.3	7,410.0	92.8	95.7	99.61	-5,191.5	-1,162.5	1,258.8	1,074.7	184.05	6.839	
12,400.0	7,200.0	12,738.2	7,410.0	94.5	97.4	99.65	-5,291.3	-1,159.0	1,254.5	1,067.1	187.46	6.692	
12,500.0	7,200.0	12,838.1	7,410.0	96.3	99.1	99.68	-5,391.2	-1,155.6	1,250.3	1,059.4	190.87	6.550	
12,600.0	7,200.0	12,938.0	7,410.0	98.0	100.8	99.71	-5,491.0	-1,152.1	1,246.0	1,051.7	194.28	6.414	
12,700.0	7,200.0	13,037.9	7,410.0	99.8	102.5	99.75	-5,590.9	-1,148.7	1,241.8	1,044.1	197.69	6.281	
12,800.0	7,200.0	13,137.8	7,410.0	101.5	104.2	99.78	-5,690.7	-1,145.3	1,237.5	1,036.4	201.10	6.154	
12,900.0	7,200.0	13,237.7	7,410.0	103.2	105.9	99.81	-5,790.6	-1,141.8	1,233.3	1,028.8	204.51	6.030	
13,000.0	7,200.0	13,337.6	7,410.0	105.0	107.6	99.85	-5,890.4	-1,138.4	1,229.0	1,021.1	207.92	5.911	
13,100.0	7,200.0	13,437.5	7,410.0	106.7	109.3	99.88	-5,990.3	-1,135.0	1,224.8	1,013.4	211.33	5.796	
13,200.0	7,200.0	13,537.4	7,410.0	108.5	111.0	99.92	-6,090.1	-1,131.5	1,220.5	1,005.8	214.73	5.684	
13,300.0	7,200.0	13,637.4	7,410.0	110.2	112.7	99.95	-6,190.0	-1,128.1	1,216.3	998.1	218.14	5.576	
13,400.0	7,200.0	13,737.3	7,410.0	111.9	114.4	99.99	-6,289.8	-1,124.6	1,212.0	990.5	221.55	5.471	
13,500.0	7,200.0	13,837.2	7,410.0	113.7	116.1	100.02	-6,389.7	-1,121.2	1,207.8	982.8	224.96	5.369	
13,600.0	7,200.0	13,937.1	7,410.0	115.4	117.8	100.06	-6,489.5	-1,117.8	1,203.5	975.2	228.37	5.270	
13,700.0	7,200.0	14,037.0	7,410.0	117.2	119.5	100.09	-6,589.4	-1,114.3	1,199.3	967.5	231.78	5.174	
13,800.0	7,200.0	14,136.9	7,410.0	118.9	121.2	100.13	-6,689.2	-1,110.9	1,195.0	959.8	235.18	5.081	
13,861.3	7,200.0	14,157.7	7,410.0	120.0	121.6	100.14	-6,710.0	-1,110.2	1,193.1	956.5	236.59	5.043	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2C-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-19.6	19.6				
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-19.6	19.6	19.3	0.30	64.439	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-19.6	19.6	18.9	0.65	29.980	
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-19.6	19.6	18.6	1.00	19.534	
400.0	400.0	400.0	400.0	0.7	0.7	-90.00	0.0	-19.6	19.6	18.2	1.35	14.486	CC, ES
500.0	500.0	499.3	499.3	0.8	0.9	-88.57	0.5	-21.2	21.2	19.5	1.70	12.487	
600.0	600.0	598.4	598.2	1.0	1.0	-85.39	2.1	-26.1	26.2	24.2	2.05	12.780	
700.0	700.0	697.0	696.4	1.2	1.2	-115.09	4.7	-34.2	35.4	33.0	2.40	14.779	
800.0	799.9	796.3	795.2	1.4	1.5	-116.48	7.8	-43.9	47.0	44.3	2.75	17.103	
900.0	899.8	895.6	894.0	1.6	1.7	-117.34	11.0	-53.6	58.7	55.6	3.11	18.889	
1,000.0	999.8	994.9	992.8	1.7	1.9	-117.92	14.1	-63.4	70.4	66.9	3.47	20.299	
1,100.0	1,099.7	1,094.2	1,091.6	1.9	2.2	-118.33	17.2	-73.1	82.0	78.2	3.83	21.440	
1,200.0	1,199.6	1,193.5	1,190.4	2.1	2.4	-118.64	20.4	-82.8	93.7	89.5	4.19	22.380	
1,300.0	1,299.6	1,292.9	1,289.2	2.3	2.7	-118.88	23.5	-92.5	105.4	100.8	4.55	23.169	
1,400.0	1,399.5	1,392.2	1,388.0	2.5	2.9	-119.07	26.6	-102.2	117.0	112.1	4.91	23.839	
1,500.0	1,499.4	1,491.5	1,486.7	2.7	3.1	-119.23	29.8	-112.0	128.7	123.4	5.27	24.415	
1,600.0	1,599.3	1,590.8	1,585.5	2.8	3.4	-119.36	32.9	-121.7	140.4	134.8	5.63	24.916	
1,700.0	1,699.3	1,690.1	1,684.3	3.0	3.6	-119.47	36.0	-131.4	152.1	146.1	6.00	25.356	
1,800.0	1,799.2	1,789.4	1,783.1	3.2	3.9	-119.56	39.2	-141.1	163.7	157.4	6.36	25.744	
1,900.0	1,899.1	1,888.7	1,881.9	3.4	4.1	-119.65	42.3	-150.8	175.4	168.7	6.72	26.090	
2,000.0	1,999.1	1,988.1	1,980.7	3.6	4.4	-119.72	45.4	-160.6	187.1	180.0	7.09	26.399	
2,100.0	2,099.0	2,087.4	2,079.5	3.8	4.6	-119.78	48.6	-170.3	198.8	191.3	7.45	26.678	
2,200.0	2,198.9	2,186.7	2,178.3	4.0	4.9	-119.84	51.7	-180.0	210.5	202.6	7.81	26.931	
2,300.0	2,298.9	2,286.0	2,277.1	4.1	5.1	-119.89	54.8	-189.7	222.1	214.0	8.18	27.161	
2,400.0	2,398.8	2,385.3	2,375.8	4.3	5.4	-119.93	58.0	-199.4	233.8	225.3	8.54	27.371	
2,500.0	2,498.7	2,484.6	2,474.6	4.5	5.6	-119.98	61.1	-209.1	245.5	236.6	8.91	27.564	
2,600.0	2,598.6	2,584.0	2,573.4	4.7	5.9	-120.01	64.2	-218.9	257.2	247.9	9.27	27.741	
2,700.0	2,698.6	2,683.3	2,672.2	4.9	6.1	-120.05	67.4	-228.6	268.8	259.2	9.63	27.905	
2,800.0	2,798.5	2,782.6	2,771.0	5.1	6.4	-120.08	70.5	-238.3	280.5	270.5	10.00	28.056	
2,900.0	2,898.4	2,881.9	2,869.8	5.3	6.6	-120.11	73.6	-248.0	292.2	281.8	10.36	28.197	
3,000.0	2,998.4	2,981.2	2,968.6	5.4	6.8	-120.13	76.8	-257.7	303.9	293.2	10.73	28.328	
3,100.0	3,098.3	3,080.5	3,067.4	5.6	7.1	-120.16	79.9	-267.5	315.6	304.5	11.09	28.451	
3,200.0	3,198.2	3,179.8	3,166.2	5.8	7.3	-120.18	83.0	-277.2	327.2	315.8	11.46	28.565	
3,300.0	3,298.2	3,279.2	3,264.9	6.0	7.6	-120.20	86.1	-286.9	338.9	327.1	11.82	28.673	
3,400.0	3,398.1	3,378.5	3,363.7	6.2	7.8	-120.22	89.3	-296.6	350.6	338.4	12.18	28.774	
3,500.0	3,498.0	3,477.8	3,462.5	6.4	8.1	-120.24	92.4	-306.3	362.3	349.7	12.55	28.869	
3,600.0	3,597.9	3,577.1	3,561.3	6.6	8.3	-120.26	95.5	-316.1	374.0	361.0	12.91	28.958	
3,700.0	3,697.9	3,676.4	3,660.1	6.7	8.6	-120.28	98.7	-325.8	385.6	372.4	13.28	29.043	
3,800.0	3,797.8	3,775.7	3,758.9	6.9	8.8	-120.29	101.8	-335.5	397.3	383.7	13.64	29.123	
3,900.0	3,897.7	3,875.1	3,857.7	7.1	9.1	-120.31	104.9	-345.2	409.0	395.0	14.01	29.199	
4,000.0	3,997.7	3,974.4	3,956.5	7.3	9.3	-120.32	108.1	-354.9	420.7	406.3	14.37	29.271	
4,100.0	4,097.6	4,073.7	4,055.3	7.5	9.6	-120.33	111.2	-364.7	432.3	417.6	14.74	29.339	
4,200.0	4,197.5	4,173.0	4,154.1	7.7	9.8	-120.34	114.3	-374.4	444.0	428.9	15.10	29.405	
4,300.0	4,297.4	4,272.3	4,252.8	7.9	10.1	-120.36	117.5	-384.1	455.7	440.2	15.47	29.466	
4,400.0	4,397.4	4,371.6	4,351.6	8.1	10.3	-120.37	120.6	-393.8	467.4	451.6	15.83	29.526	
4,500.0	4,497.3	4,471.0	4,450.4	8.2	10.6	-120.38	123.7	-403.5	479.1	462.9	16.19	29.582	
4,600.0	4,597.2	4,570.3	4,549.2	8.4	10.8	-120.39	126.9	-413.2	490.7	474.2	16.56	29.636	
4,700.0	4,697.2	4,669.6	4,648.0	8.6	11.1	-120.40	130.0	-423.0	502.4	485.5	16.92	29.687	
4,800.0	4,797.1	4,768.9	4,746.8	8.8	11.3	-120.41	133.1	-432.7	514.1	496.8	17.29	29.737	
4,900.0	4,897.0	4,868.2	4,845.6	9.0	11.6	-120.42	136.3	-442.4	525.8	508.1	17.65	29.784	
5,000.0	4,997.0	4,967.5	4,944.4	9.2	11.8	-120.42	139.4	-452.1	537.5	519.4	18.02	29.830	
5,100.0	5,096.9	5,066.8	5,043.2	9.4	12.1	-120.43	142.5	-461.8	549.1	530.8	18.38	29.873	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2C-14H-C268 - Hz - Plan #2

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,166.2	5,141.9	9.5	12.3	-120.44	145.7	-471.6	560.8	542.1	18.75	29.915	
5,300.0	5,296.7	5,265.5	5,240.7	9.7	12.6	-120.45	148.8	-481.3	572.5	553.4	19.11	29.955	
5,400.0	5,396.7	5,364.8	5,339.5	9.9	12.8	-120.45	151.9	-491.0	584.2	564.7	19.48	29.994	
5,500.0	5,496.6	5,464.1	5,438.3	10.1	13.1	-120.46	155.0	-500.7	595.8	576.0	19.84	30.031	
5,600.0	5,596.5	5,563.4	5,537.1	10.3	13.3	-120.47	158.2	-510.4	607.5	587.3	20.21	30.067	
5,700.0	5,696.5	5,662.7	5,635.9	10.5	13.6	-120.47	161.3	-520.2	619.2	598.6	20.57	30.102	
5,800.0	5,796.4	5,762.1	5,734.7	10.7	13.8	-120.48	164.4	-529.9	630.9	610.0	20.94	30.135	
5,900.0	5,896.3	5,861.4	5,833.5	10.8	14.1	-120.49	167.6	-539.6	642.6	621.3	21.30	30.168	
6,000.0	5,996.3	5,960.7	5,932.3	11.0	14.3	-120.49	170.7	-549.3	654.2	632.6	21.66	30.199	
6,100.0	6,096.2	6,060.0	6,031.0	11.2	14.6	-120.50	173.8	-559.0	665.9	643.9	22.03	30.229	
6,200.0	6,196.1	6,159.3	6,129.8	11.4	14.8	-120.50	177.0	-568.8	677.6	655.2	22.39	30.258	
6,300.0	6,296.0	6,258.6	6,228.6	11.6	15.1	-120.51	180.1	-578.5	689.3	666.5	22.76	30.286	
6,400.0	6,396.0	6,357.9	6,327.4	11.8	15.3	-120.51	183.2	-588.2	701.0	677.8	23.12	30.314	
6,500.0	6,495.9	6,457.3	6,426.2	12.0	15.6	-120.52	186.4	-597.9	712.6	689.2	23.49	30.340	
6,600.0	6,595.8	6,556.6	6,525.0	12.1	15.8	-120.52	189.5	-607.6	724.3	700.5	23.85	30.366	
6,700.0	6,695.6	6,655.6	6,623.5	12.3	16.0	97.92	192.5	-617.3	735.9	711.7	24.19	30.423	
6,800.0	6,793.4	6,755.2	6,722.2	12.4	16.2	92.57	185.0	-627.1	747.4	723.0	24.37	30.672	
6,900.0	6,886.0	6,857.3	6,820.5	12.4	16.4	91.15	159.7	-636.9	758.4	734.0	24.44	31.032	
7,000.0	6,970.8	6,962.0	6,915.0	12.4	16.5	90.50	115.9	-646.4	768.7	744.2	24.50	31.370	
7,100.0	7,045.2	7,069.4	7,002.0	12.5	16.7	90.16	53.9	-655.3	777.8	753.1	24.69	31.503	
7,200.0	7,106.9	7,179.3	7,077.5	12.8	16.9	89.98	-25.4	-663.2	785.4	760.3	25.15	31.232	
7,300.0	7,153.9	7,291.6	7,137.7	13.3	17.3	89.91	-119.7	-669.6	791.2	765.2	26.01	30.423	
7,400.0	7,185.0	7,405.7	7,178.9	13.9	17.8	89.91	-225.8	-674.3	795.1	767.7	27.35	29.068	
7,500.0	7,199.1	7,521.0	7,198.5	14.7	18.6	89.97	-339.2	-676.8	796.6	767.5	29.17	27.315	
7,600.0	7,200.0	7,626.6	7,200.0	15.7	19.4	90.00	-444.8	-677.5	796.4	765.2	31.24	25.497	
7,700.0	7,200.0	7,726.6	7,200.0	16.9	20.3	90.00	-544.8	-678.0	796.1	762.6	33.49	23.770	
7,800.0	7,200.0	7,826.6	7,200.0	18.1	21.4	90.00	-644.8	-678.5	795.7	759.8	35.95	22.136	
7,900.0	7,200.0	7,926.6	7,200.0	19.4	22.5	90.00	-744.8	-679.0	795.4	756.8	38.57	20.624	
8,000.0	7,200.0	8,026.6	7,200.0	20.7	23.7	90.00	-844.8	-679.6	795.0	753.7	41.32	19.242	
8,100.0	7,200.0	8,126.6	7,200.0	22.2	24.9	90.00	-944.8	-680.1	794.7	750.5	44.18	17.989	
8,200.0	7,200.0	8,226.6	7,200.0	23.6	26.2	90.00	-1,044.8	-680.6	794.3	747.2	47.12	16.856	
8,300.0	7,200.0	8,326.6	7,200.0	25.1	27.6	90.00	-1,144.8	-681.1	794.0	743.9	50.14	15.834	
8,400.0	7,200.0	8,426.6	7,200.0	26.7	29.0	90.00	-1,244.8	-681.7	793.6	740.4	53.22	14.912	
8,500.0	7,200.0	8,526.6	7,200.0	28.2	30.4	90.00	-1,344.8	-682.2	793.3	736.9	56.35	14.077	
8,600.0	7,200.0	8,626.6	7,200.0	29.8	31.9	90.00	-1,444.8	-682.7	793.0	733.4	59.52	13.322	
8,700.0	7,200.0	8,726.6	7,200.0	31.4	33.4	90.00	-1,544.8	-683.2	792.6	729.9	62.73	12.635	
8,800.0	7,200.0	8,826.6	7,200.0	33.0	34.9	90.00	-1,644.7	-683.8	792.3	726.3	65.97	12.009	
8,900.0	7,200.0	8,926.6	7,200.0	34.7	36.5	90.00	-1,744.7	-684.3	791.9	722.7	69.23	11.438	
9,000.0	7,200.0	9,026.6	7,200.0	36.3	38.0	90.00	-1,844.7	-684.8	791.6	719.0	72.52	10.915	
9,100.0	7,200.0	9,126.6	7,200.0	37.9	39.6	90.00	-1,944.7	-685.3	791.2	715.4	75.83	10.434	
9,200.0	7,200.0	9,226.6	7,200.0	39.6	41.2	90.00	-2,044.7	-685.9	790.9	711.7	79.15	9.991	
9,300.0	7,200.0	9,326.6	7,200.0	41.3	42.8	90.00	-2,144.7	-686.4	790.5	708.0	82.49	9.583	
9,400.0	7,200.0	9,426.6	7,200.0	42.9	44.4	90.00	-2,244.7	-686.9	790.2	704.3	85.85	9.204	
9,500.0	7,200.0	9,526.6	7,200.0	44.6	46.1	90.00	-2,344.7	-687.4	789.8	700.6	89.21	8.853	
9,600.0	7,200.0	9,626.6	7,200.0	46.3	47.7	90.00	-2,444.7	-687.9	789.5	696.9	92.59	8.527	
9,700.0	7,200.0	9,726.6	7,200.0	48.0	49.3	90.00	-2,544.7	-688.5	789.1	693.1	95.97	8.222	
9,800.0	7,200.0	9,826.6	7,200.0	49.7	51.0	90.00	-2,644.7	-689.0	788.8	689.4	99.37	7.938	
9,900.0	7,200.0	9,926.6	7,200.0	51.4	52.7	90.00	-2,744.7	-689.5	788.4	685.6	102.77	7.672	
10,000.0	7,200.0	10,026.6	7,200.0	53.1	54.3	90.00	-2,844.7	-690.0	788.1	681.9	106.18	7.422	
10,100.0	7,200.0	10,126.6	7,200.0	54.8	56.0	90.00	-2,944.7	-690.6	787.7	678.1	109.59	7.188	
10,200.0	7,200.0	10,226.6	7,200.0	56.5	57.7	90.00	-3,044.7	-691.1	787.4	674.4	113.01	6.967	
10,300.0	7,200.0	10,326.6	7,200.0	58.2	59.3	90.00	-3,144.7	-691.6	787.0	670.6	116.44	6.759	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2C-14H-C268 - Hz - Plan #2

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,200.0	10,426.6	7,200.0	59.9	61.0	90.00	-3,244.7	-692.1	786.7	666.8	119.87	6.563	
10,500.0	7,200.0	10,526.6	7,200.0	61.7	62.7	90.00	-3,344.7	-692.7	786.3	663.0	123.30	6.377	
10,600.0	7,200.0	10,626.6	7,200.0	63.4	64.4	90.00	-3,444.7	-693.2	786.0	659.2	126.74	6.201	
10,700.0	7,200.0	10,726.6	7,200.0	65.1	66.1	90.00	-3,544.7	-693.7	785.6	655.4	130.18	6.035	
10,800.0	7,200.0	10,826.6	7,200.0	66.8	67.8	90.00	-3,644.7	-694.2	785.3	651.6	133.63	5.877	
10,900.0	7,200.0	10,926.6	7,200.0	68.5	69.5	90.00	-3,744.7	-694.8	784.9	647.8	137.08	5.726	
11,000.0	7,200.0	11,026.6	7,200.0	70.3	71.2	90.00	-3,844.7	-695.3	784.6	644.0	140.53	5.583	
11,100.0	7,200.0	11,126.6	7,200.0	72.0	72.9	90.00	-3,944.7	-695.8	784.2	640.2	143.98	5.447	
11,200.0	7,200.0	11,226.6	7,200.0	73.7	74.6	90.00	-4,044.7	-696.3	783.9	636.4	147.44	5.317	
11,300.0	7,200.0	11,326.6	7,200.0	75.5	76.3	90.00	-4,144.7	-696.8	783.5	632.6	150.90	5.192	
11,400.0	7,200.0	11,426.6	7,200.0	77.2	78.0	90.00	-4,244.7	-697.4	783.2	628.8	154.36	5.074	
11,500.0	7,200.0	11,526.6	7,200.0	78.9	79.7	90.00	-4,344.7	-697.9	782.8	625.0	157.83	4.960	
11,600.0	7,200.0	11,626.6	7,200.0	80.6	81.5	90.00	-4,444.7	-698.4	782.5	621.2	161.29	4.851	
11,700.0	7,200.0	11,726.6	7,200.0	82.4	83.2	90.00	-4,544.7	-698.9	782.1	617.4	164.76	4.747	
11,800.0	7,200.0	11,826.6	7,200.0	84.1	84.9	90.00	-4,644.7	-699.5	781.8	613.6	168.23	4.647	
11,900.0	7,200.0	11,926.6	7,200.0	85.8	86.6	90.00	-4,744.7	-700.0	781.4	609.7	171.70	4.551	
12,000.0	7,200.0	12,026.6	7,200.0	87.6	88.3	90.00	-4,844.7	-700.5	781.1	605.9	175.17	4.459	
12,100.0	7,200.0	12,126.6	7,200.0	89.3	90.1	90.00	-4,944.7	-701.0	780.7	602.1	178.65	4.370	
12,200.0	7,200.0	12,226.6	7,200.0	91.1	91.8	90.00	-5,044.7	-701.6	780.4	598.3	182.12	4.285	
12,300.0	7,200.0	12,326.6	7,200.0	92.8	93.5	90.00	-5,144.7	-702.1	780.0	594.4	185.60	4.203	
12,400.0	7,200.0	12,426.6	7,200.0	94.5	95.2	90.00	-5,244.7	-702.6	779.7	590.6	189.07	4.124	
12,500.0	7,200.0	12,526.6	7,200.0	96.3	97.0	90.00	-5,344.7	-703.1	779.3	586.8	192.55	4.047	
12,600.0	7,200.0	12,626.6	7,200.0	98.0	98.7	90.00	-5,444.7	-703.7	779.0	583.0	196.03	3.974	
12,700.0	7,200.0	12,726.6	7,200.0	99.8	100.4	90.00	-5,544.7	-704.2	778.6	579.1	199.51	3.903	
12,800.0	7,200.0	12,826.6	7,200.0	101.5	102.1	90.00	-5,644.7	-704.7	778.3	575.3	202.99	3.834	
12,900.0	7,200.0	12,926.6	7,200.0	103.2	103.9	90.00	-5,744.7	-705.2	777.9	571.5	206.48	3.768	
13,000.0	7,200.0	13,026.6	7,200.0	105.0	105.6	90.00	-5,844.7	-705.8	777.6	567.6	209.96	3.704	
13,100.0	7,200.0	13,126.6	7,200.0	106.7	107.3	90.00	-5,944.7	-706.3	777.2	563.8	213.44	3.641	
13,200.0	7,200.0	13,226.6	7,200.0	108.5	109.1	90.00	-6,044.7	-706.8	776.9	560.0	216.93	3.581	
13,300.0	7,200.0	13,326.6	7,200.0	110.2	110.8	90.00	-6,144.7	-707.3	776.5	556.1	220.41	3.523	
13,400.0	7,200.0	13,426.6	7,200.0	111.9	112.5	90.00	-6,244.7	-707.8	776.2	552.3	223.90	3.467	
13,500.0	7,200.0	13,526.6	7,200.0	113.7	114.3	90.00	-6,344.7	-708.4	775.9	548.5	227.39	3.412	
13,600.0	7,200.0	13,626.6	7,200.0	115.4	116.0	90.00	-6,444.7	-708.9	775.5	544.6	230.88	3.359	
13,700.0	7,200.0	13,726.6	7,200.0	117.2	117.7	90.00	-6,544.7	-709.4	775.2	540.8	234.36	3.307	
13,800.0	7,200.0	13,826.6	7,200.0	118.9	119.5	90.00	-6,644.7	-709.9	774.8	537.0	237.85	3.257	
13,861.3	7,200.0	13,887.9	7,200.0	120.0	120.5	90.00	-6,706.0	-710.3	774.6	534.6	239.99	3.228	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2D-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-11.2	11.2				
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-11.2	11.2	10.9	0.30	36.822	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-11.2	11.2	10.5	0.65	17.131	
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-11.2	11.2	10.2	1.00	11.162	
400.0	400.0	400.0	400.0	0.7	0.7	-90.00	0.0	-11.2	11.2	9.8	1.35	8.278	
500.0	500.0	500.0	500.0	0.8	0.8	-90.00	0.0	-11.2	11.2	9.5	1.70	6.578	CC, ES
600.0	600.0	599.6	599.6	1.0	1.0	-86.22	0.8	-12.7	12.7	10.7	2.05	6.212	
700.0	700.0	699.1	698.9	1.2	1.2	-114.65	3.3	-17.2	18.2	15.8	2.40	7.583	
800.0	799.9	798.8	798.4	1.4	1.4	-116.66	6.4	-22.7	25.6	22.9	2.75	9.298	
900.0	899.8	898.5	898.0	1.6	1.6	-117.78	9.5	-28.3	33.1	29.9	3.11	10.620	
1,000.0	999.8	998.2	997.5	1.7	1.8	-118.49	12.5	-33.8	40.5	37.0	3.47	11.667	
1,100.0	1,099.7	1,098.0	1,097.0	1.9	2.0	-118.98	15.6	-39.4	48.0	44.1	3.83	12.514	
1,200.0	1,199.6	1,197.7	1,196.5	2.1	2.2	-119.34	18.7	-44.9	55.4	51.2	4.19	13.213	
1,300.0	1,299.6	1,297.4	1,296.0	2.3	2.4	-119.61	21.7	-50.5	62.9	58.3	4.56	13.799	
1,400.0	1,399.5	1,397.1	1,395.6	2.5	2.6	-119.83	24.8	-56.0	70.3	65.4	4.92	14.298	
1,500.0	1,499.4	1,496.8	1,495.1	2.7	2.8	-120.00	27.9	-61.5	77.8	72.5	5.28	14.728	
1,600.0	1,599.3	1,596.6	1,594.6	2.8	3.0	-120.15	30.9	-67.1	85.2	79.6	5.64	15.101	
1,700.0	1,699.3	1,696.3	1,694.1	3.0	3.2	-120.27	34.0	-72.6	92.7	86.7	6.01	15.428	
1,800.0	1,799.2	1,796.0	1,793.6	3.2	3.4	-120.37	37.1	-78.2	100.2	93.8	6.37	15.718	
1,900.0	1,899.1	1,895.7	1,893.2	3.4	3.6	-120.46	40.1	-83.7	107.6	100.9	6.74	15.976	
2,000.0	1,999.1	1,995.5	1,992.7	3.6	3.8	-120.54	43.2	-89.3	115.1	108.0	7.10	16.207	
2,100.0	2,099.0	2,095.2	2,092.2	3.8	4.0	-120.60	46.3	-94.8	122.5	115.1	7.46	16.415	
2,200.0	2,198.9	2,194.9	2,191.7	4.0	4.2	-120.66	49.3	-100.4	130.0	122.2	7.83	16.604	
2,300.0	2,298.9	2,294.6	2,291.2	4.1	4.4	-120.72	52.4	-105.9	137.5	129.3	8.19	16.776	
2,400.0	2,398.8	2,394.3	2,390.8	4.3	4.6	-120.76	55.5	-111.4	144.9	136.4	8.56	16.933	
2,500.0	2,498.7	2,494.1	2,490.3	4.5	4.8	-120.81	58.5	-117.0	152.4	143.5	8.92	17.077	
2,600.0	2,598.6	2,593.8	2,589.8	4.7	5.0	-120.85	61.6	-122.5	159.8	150.6	9.29	17.209	
2,700.0	2,698.6	2,693.5	2,689.3	4.9	5.3	-120.88	64.7	-128.1	167.3	157.6	9.65	17.332	
2,800.0	2,798.5	2,793.2	2,788.8	5.1	5.5	-120.92	67.7	-133.6	174.8	164.7	10.02	17.445	
2,900.0	2,898.4	2,892.9	2,888.4	5.3	5.7	-120.95	70.8	-139.2	182.2	171.8	10.38	17.550	
3,000.0	2,998.4	2,992.7	2,987.9	5.4	5.9	-120.97	73.9	-144.7	189.7	178.9	10.75	17.648	
3,100.0	3,098.3	3,092.4	3,087.4	5.6	6.1	-121.00	76.9	-150.3	197.1	186.0	11.11	17.740	
3,200.0	3,198.2	3,192.1	3,186.9	5.8	6.3	-121.02	80.0	-155.8	204.6	193.1	11.48	17.826	
3,300.0	3,298.2	3,291.8	3,286.4	6.0	6.5	-121.04	83.1	-161.3	212.1	200.2	11.84	17.906	
3,400.0	3,398.1	3,391.5	3,385.9	6.2	6.7	-121.06	86.2	-166.9	219.5	207.3	12.21	17.982	
3,500.0	3,498.0	3,491.3	3,485.5	6.4	6.9	-121.08	89.2	-172.4	227.0	214.4	12.57	18.053	
3,600.0	3,597.9	3,591.0	3,585.0	6.6	7.1	-121.10	92.3	-178.0	234.4	221.5	12.94	18.120	
3,700.0	3,697.9	3,690.7	3,684.5	6.7	7.3	-121.12	95.4	-183.5	241.9	228.6	13.30	18.183	
3,800.0	3,797.8	3,790.4	3,784.0	6.9	7.5	-121.13	98.4	-189.1	249.4	235.7	13.67	18.243	
3,900.0	3,897.7	3,890.2	3,883.5	7.1	7.7	-121.15	101.5	-194.6	256.8	242.8	14.03	18.300	
4,000.0	3,997.7	3,989.9	3,983.1	7.3	7.9	-121.16	104.6	-200.2	264.3	249.9	14.40	18.354	
4,100.0	4,097.6	4,089.6	4,082.6	7.5	8.1	-121.18	107.6	-205.7	271.8	257.0	14.77	18.405	
4,200.0	4,197.5	4,189.3	4,182.1	7.7	8.3	-121.19	110.7	-211.2	279.2	264.1	15.13	18.454	
4,300.0	4,297.4	4,289.0	4,281.6	7.9	8.5	-121.20	113.8	-216.8	286.7	271.2	15.50	18.500	
4,400.0	4,397.4	4,388.8	4,381.1	8.1	8.7	-121.21	116.8	-222.3	294.1	278.3	15.86	18.544	
4,500.0	4,497.3	4,488.5	4,480.7	8.2	9.0	-121.22	119.9	-227.9	301.6	285.4	16.23	18.587	
4,600.0	4,597.2	4,588.2	4,580.2	8.4	9.2	-121.23	123.0	-233.4	309.1	292.5	16.59	18.627	
4,700.0	4,697.2	4,687.9	4,679.7	8.6	9.4	-121.24	126.0	-239.0	316.5	299.6	16.96	18.666	
4,800.0	4,797.1	4,787.6	4,779.2	8.8	9.6	-121.25	129.1	-244.5	324.0	306.7	17.32	18.703	
4,900.0	4,897.0	4,887.4	4,878.7	9.0	9.8	-121.26	132.2	-250.1	331.4	313.8	17.69	18.738	
5,000.0	4,997.0	4,987.1	4,978.3	9.2	10.0	-121.27	135.2	-255.6	338.9	320.9	18.05	18.772	
5,100.0	5,096.9	5,086.8	5,077.8	9.4	10.2	-121.28	138.3	-261.1	346.4	327.9	18.42	18.805	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2D-14H-C268 - Hz - Plan #2

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,186.5	5,177.3	9.5	10.4	-121.28	141.4	-266.7	353.8	335.0	18.78	18.836	
5,300.0	5,296.7	5,286.3	5,276.8	9.7	10.6	-121.29	144.4	-272.2	361.3	342.1	19.15	18.866	
5,400.0	5,396.7	5,386.0	5,376.3	9.9	10.8	-121.30	147.5	-277.8	368.8	349.2	19.52	18.895	
5,500.0	5,496.6	5,485.7	5,475.9	10.1	11.0	-121.31	150.6	-283.3	376.2	356.3	19.88	18.923	
5,600.0	5,596.5	5,585.4	5,575.4	10.3	11.2	-121.31	153.6	-288.9	383.7	363.4	20.25	18.950	
5,700.0	5,696.5	5,685.1	5,674.9	10.5	11.4	-121.32	156.7	-294.4	391.1	370.5	20.61	18.976	
5,800.0	5,796.4	5,784.9	5,774.4	10.7	11.6	-121.33	159.8	-300.0	398.6	377.6	20.98	19.001	
5,900.0	5,896.3	5,884.6	5,873.9	10.8	11.8	-121.33	162.8	-305.5	406.1	384.7	21.34	19.025	
6,000.0	5,996.3	5,984.3	5,973.5	11.0	12.0	-121.34	165.9	-311.0	413.5	391.8	21.71	19.049	
6,100.0	6,096.2	6,084.0	6,073.0	11.2	12.3	-121.34	169.0	-316.6	421.0	398.9	22.07	19.071	
6,200.0	6,196.1	6,183.7	6,172.5	11.4	12.5	-121.35	172.1	-322.1	428.4	406.0	22.44	19.093	
6,300.0	6,296.0	6,283.5	6,272.0	11.6	12.7	-121.35	175.1	-327.7	435.9	413.1	22.81	19.114	
6,400.0	6,396.0	6,383.2	6,371.5	11.8	12.9	-121.36	178.2	-333.2	443.4	420.2	23.17	19.135	
6,500.0	6,495.9	6,482.9	6,471.1	12.0	13.1	-121.36	181.3	-338.8	450.8	427.3	23.54	19.155	
6,600.0	6,595.8	6,582.6	6,570.6	12.1	13.3	-121.37	184.3	-344.3	458.3	434.4	23.90	19.174	
6,700.0	6,695.6	6,682.0	6,669.8	12.3	13.5	97.76	187.4	-349.8	465.6	441.4	24.22	19.227	
6,800.0	6,793.4	6,778.8	6,766.4	12.4	13.7	94.55	190.4	-355.2	473.2	448.8	24.41	19.386	
6,900.0	6,886.0	6,873.8	6,861.2	12.4	13.9	96.61	191.9	-360.5	483.2	458.7	24.50	19.720	
7,000.0	6,970.8	6,978.0	6,964.2	12.4	14.0	99.67	178.3	-366.6	496.1	471.6	24.51	20.236	
7,100.0	7,045.2	7,092.3	7,072.3	12.5	14.1	102.84	142.3	-373.3	511.1	486.6	24.53	20.838	
7,200.0	7,106.9	7,219.0	7,181.0	12.8	14.2	105.89	78.2	-380.5	526.9	502.3	24.66	21.364	
7,300.0	7,153.9	7,359.9	7,282.1	13.3	14.4	108.60	-19.1	-387.9	541.8	516.7	25.09	21.591	
7,400.0	7,185.0	7,515.2	7,362.4	13.9	15.0	110.69	-151.3	-394.7	553.7	527.6	26.06	21.249	
7,500.0	7,199.1	7,681.9	7,405.9	14.7	16.1	111.83	-311.5	-400.0	560.6	532.9	27.72	20.222	
7,600.0	7,200.0	7,810.4	7,410.0	15.7	17.3	111.94	-439.8	-402.4	562.2	532.4	29.75	18.897	
7,700.0	7,200.0	7,919.9	7,410.0	16.9	18.4	111.92	-549.3	-403.7	562.5	530.5	31.93	17.614	
7,800.0	7,200.0	8,035.6	7,410.0	18.1	19.7	112.03	-665.0	-401.9	560.2	525.8	34.37	16.299	
7,900.0	7,200.0	8,151.1	7,410.0	19.4	21.1	112.28	-780.4	-396.6	555.1	518.2	36.94	15.028	
8,000.0	7,200.0	8,264.0	7,410.0	20.7	22.5	112.66	-893.0	-388.0	547.3	507.7	39.57	13.831	
8,100.0	7,200.0	8,363.5	7,410.0	22.2	23.8	113.05	-992.1	-379.3	538.4	496.3	42.11	12.786	
8,200.0	7,200.0	8,463.1	7,410.0	23.6	25.2	113.46	-1,091.3	-370.7	529.6	484.9	44.71	11.846	
8,300.0	7,200.0	8,562.6	7,410.0	25.1	26.6	113.88	-1,190.5	-362.0	520.8	473.5	47.35	11.000	
8,400.0	7,200.0	8,662.2	7,410.0	26.7	28.1	114.31	-1,289.6	-353.3	512.1	462.1	50.02	10.238	
8,500.0	7,200.0	8,761.7	7,410.0	28.2	29.6	114.76	-1,388.8	-344.6	503.4	450.7	52.70	9.551	
8,600.0	7,200.0	8,861.2	7,410.0	29.8	31.1	115.22	-1,487.9	-335.9	494.7	439.3	55.40	8.930	
8,700.0	7,200.0	8,960.8	7,410.0	31.4	32.7	115.70	-1,587.1	-327.3	486.0	427.9	58.09	8.367	
8,800.0	7,200.0	9,060.3	7,410.0	33.0	34.2	116.20	-1,686.3	-318.6	477.4	416.6	60.77	7.855	
8,900.0	7,200.0	9,159.9	7,410.0	34.7	35.8	116.72	-1,785.4	-309.9	468.8	405.3	63.45	7.389	
9,000.0	7,200.0	9,259.4	7,410.0	36.3	37.4	117.25	-1,884.6	-301.2	460.2	394.1	66.10	6.963	
9,100.0	7,200.0	9,358.9	7,410.0	37.9	39.0	117.81	-1,983.7	-292.6	451.7	383.0	68.72	6.573	
9,200.0	7,200.0	9,458.5	7,410.0	39.6	40.6	118.39	-2,082.9	-283.9	443.3	372.0	71.32	6.216	
9,300.0	7,200.0	9,558.0	7,410.0	41.3	42.3	118.99	-2,182.1	-275.2	434.9	361.0	73.87	5.887	
9,400.0	7,200.0	9,657.6	7,410.0	42.9	43.9	119.61	-2,281.2	-266.5	426.5	350.1	76.38	5.584	
9,500.0	7,200.0	9,757.1	7,410.0	44.6	45.6	120.26	-2,380.4	-257.9	418.2	339.3	78.84	5.304	
9,600.0	7,200.0	9,856.6	7,410.0	46.3	47.2	120.93	-2,479.5	-249.2	409.9	328.7	81.24	5.046	
9,700.0	7,200.0	9,956.2	7,410.0	48.0	48.9	121.64	-2,578.7	-240.5	401.7	318.1	83.58	4.807	
9,800.0	7,200.0	10,055.7	7,410.0	49.7	50.6	122.37	-2,677.9	-231.8	393.6	307.7	85.84	4.585	
9,900.0	7,200.0	10,155.3	7,410.0	51.4	52.2	123.13	-2,777.0	-223.2	385.5	297.5	88.03	4.379	
10,000.0	7,200.0	10,254.5	7,410.0	53.1	53.9	123.92	-2,875.9	-214.5	377.5	287.4	90.13	4.189	
10,100.0	7,200.0	10,346.7	7,410.0	54.8	55.5	124.58	-2,967.8	-207.7	370.7	278.5	92.20	4.020	
10,200.0	7,200.0	10,439.2	7,410.0	56.5	57.0	125.06	-3,060.2	-203.1	365.8	271.4	94.41	3.875	
10,300.0	7,200.0	10,531.9	7,410.0	58.2	58.6	125.35	-3,152.9	-200.7	363.0	266.2	96.80	3.750	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2D-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,391.9	7,200.0	10,617.2	7,410.0	59.8	60.1	125.44	-3,238.2	-200.5	362.2	263.0	99.18	3.652	
10,400.0	7,200.0	10,624.7	7,410.0	59.9	60.2	125.44	-3,245.7	-200.5	362.2	262.8	99.39	3.644	
10,500.0	7,200.0	10,721.7	7,410.0	61.7	61.9	125.35	-3,342.6	-202.4	363.0	260.7	102.25	3.550	
10,600.0	7,200.0	10,821.6	7,410.0	63.4	63.6	125.24	-3,442.6	-204.5	364.0	258.8	105.19	3.460	
10,700.0	7,200.0	10,921.6	7,410.0	65.1	65.3	125.13	-3,542.6	-206.6	365.0	256.9	108.13	3.375	
10,800.0	7,200.0	11,021.6	7,410.0	66.8	67.0	125.02	-3,642.5	-208.7	366.0	254.9	111.09	3.295	
10,900.0	7,200.0	11,121.6	7,410.0	68.5	68.7	124.91	-3,742.5	-210.8	367.0	252.9	114.05	3.218	
11,000.0	7,200.0	11,218.7	7,410.0	70.3	70.4	124.78	-3,839.6	-213.0	368.2	251.2	117.01	3.147	
11,100.0	7,200.0	11,317.7	7,410.0	72.0	72.1	124.56	-3,938.5	-216.4	370.3	250.1	120.13	3.082	
11,200.0	7,200.0	11,417.6	7,410.0	73.7	73.8	124.34	-4,038.4	-219.8	372.3	249.1	123.28	3.020	
11,300.0	7,200.0	11,517.6	7,410.0	75.5	75.6	124.12	-4,138.3	-223.2	374.4	248.0	126.44	2.961	
11,400.0	7,200.0	11,617.6	7,410.0	77.2	77.3	123.91	-4,238.2	-226.5	376.5	246.9	129.61	2.905	
11,500.0	7,200.0	11,717.5	7,410.0	78.9	79.0	123.70	-4,338.1	-229.9	378.6	245.8	132.79	2.851	
11,600.0	7,200.0	11,817.5	7,410.0	80.6	80.8	123.49	-4,438.0	-233.3	380.7	244.7	135.98	2.800	
11,700.0	7,200.0	11,917.5	7,410.0	82.4	82.5	123.28	-4,537.9	-236.7	382.8	243.6	139.19	2.750	
11,800.0	7,200.0	12,017.4	7,410.0	84.1	84.2	123.07	-4,637.8	-240.1	384.9	242.5	142.40	2.703	
11,900.0	7,200.0	12,117.4	7,410.0	85.8	86.0	122.87	-4,737.8	-243.5	387.0	241.4	145.63	2.658	
12,000.0	7,200.0	12,217.4	7,410.0	87.6	87.7	122.67	-4,837.7	-246.9	389.2	240.3	148.86	2.614	
12,100.0	7,200.0	12,317.3	7,410.0	89.3	89.4	122.47	-4,937.6	-250.3	391.3	239.2	152.10	2.572	
12,200.0	7,200.0	12,417.3	7,410.0	91.1	91.2	122.27	-5,037.5	-253.7	393.4	238.0	155.36	2.532	
12,300.0	7,200.0	12,517.3	7,410.0	92.8	92.9	122.08	-5,137.4	-257.0	395.5	236.9	158.62	2.494	
12,400.0	7,200.0	12,617.3	7,410.0	94.5	94.6	121.88	-5,237.3	-260.4	397.7	235.8	161.89	2.456	
12,500.0	7,200.0	12,717.2	7,410.0	96.3	96.4	121.69	-5,337.2	-263.8	399.8	234.6	165.16	2.421	
12,600.0	7,200.0	12,817.2	7,410.0	98.0	98.1	121.50	-5,437.1	-267.2	402.0	233.5	168.45	2.386	
12,700.0	7,200.0	12,917.2	7,410.0	99.8	99.9	121.32	-5,537.0	-270.6	404.1	232.4	171.74	2.353	
12,800.0	7,200.0	13,017.1	7,410.0	101.5	101.6	121.13	-5,637.0	-274.0	406.3	231.2	175.04	2.321	
12,900.0	7,200.0	13,117.1	7,410.0	103.2	103.3	120.95	-5,736.9	-277.4	408.4	230.1	178.35	2.290	
13,000.0	7,200.0	13,217.1	7,410.0	105.0	105.1	120.77	-5,836.8	-280.8	410.6	228.9	181.67	2.260	
13,100.0	7,200.0	13,317.0	7,410.0	106.7	106.8	120.59	-5,936.7	-284.2	412.7	227.8	184.99	2.231	
13,200.0	7,200.0	13,417.0	7,410.0	108.5	108.6	120.41	-6,036.6	-287.6	414.9	226.6	188.32	2.203	
13,300.0	7,200.0	13,517.0	7,410.0	110.2	110.3	120.24	-6,136.5	-290.9	417.1	225.4	191.65	2.176	
13,400.0	7,200.0	13,616.9	7,410.0	111.9	112.1	120.07	-6,236.4	-294.3	419.3	224.3	194.99	2.150	
13,500.0	7,200.0	13,716.9	7,410.0	113.7	113.8	119.89	-6,336.3	-297.7	421.4	223.1	198.34	2.125	
13,600.0	7,200.0	13,816.9	7,410.0	115.4	115.5	119.72	-6,436.2	-301.1	423.6	221.9	201.69	2.100	
13,700.0	7,200.0	13,916.8	7,410.0	117.2	117.3	119.56	-6,536.2	-304.5	425.8	220.8	205.05	2.077	
13,800.0	7,200.0	14,016.8	7,410.0	118.9	119.0	119.39	-6,636.1	-307.9	428.0	219.6	208.41	2.054	
13,861.3	7,200.0	14,078.1	7,410.0	120.0	120.1	119.29	-6,697.3	-310.0	429.4	218.9	210.48	2.040	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2F-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	8.4	8.4				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	8.4	8.4	8.1	0.30	27.617	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	8.4	8.4	7.7	0.65	12.848	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	8.4	8.4	7.4	1.00	8.372	
400.0	400.0	400.0	400.0	0.7	0.7	90.00	0.0	8.4	8.4	7.0	1.35	6.208	
500.0	500.0	500.0	500.0	0.8	0.8	90.00	0.0	8.4	8.4	6.7	1.70	4.934	CC, ES
600.0	600.0	599.7	599.7	1.0	1.0	86.87	0.5	10.0	10.1	8.0	2.05	4.907	
700.0	700.0	699.2	699.0	1.2	1.2	56.58	2.2	15.0	14.1	11.7	2.40	5.884	
800.0	799.9	798.5	797.9	1.4	1.4	58.78	4.9	23.1	20.4	17.7	2.75	7.418	
900.0	899.8	898.2	897.1	1.6	1.6	58.99	8.1	32.7	28.1	25.0	3.11	9.043	
1,000.0	999.8	997.9	996.3	1.7	1.9	59.12	11.3	42.3	35.8	32.4	3.47	10.328	
1,100.0	1,099.7	1,097.6	1,095.5	1.9	2.1	59.19	14.5	51.8	43.6	39.7	3.83	11.368	
1,200.0	1,199.6	1,197.3	1,194.7	2.1	2.3	59.25	17.7	61.4	51.3	47.1	4.19	12.227	
1,300.0	1,299.6	1,297.0	1,293.9	2.3	2.6	59.29	20.9	71.0	59.0	54.4	4.56	12.947	
1,400.0	1,399.5	1,396.7	1,393.1	2.5	2.8	59.32	24.1	80.6	66.7	61.8	4.92	13.559	
1,500.0	1,499.4	1,496.4	1,492.3	2.7	3.0	59.34	27.3	90.2	74.4	69.1	5.28	14.086	
1,600.0	1,599.3	1,596.1	1,591.5	2.8	3.3	59.36	30.5	99.7	82.1	76.5	5.65	14.544	
1,700.0	1,699.3	1,695.8	1,690.6	3.0	3.5	59.38	33.7	109.3	89.8	83.8	6.01	14.946	
1,800.0	1,799.2	1,795.5	1,789.8	3.2	3.8	59.40	36.9	118.9	97.5	91.2	6.37	15.302	
1,900.0	1,899.1	1,895.2	1,889.0	3.4	4.0	59.41	40.1	128.5	105.2	98.5	6.74	15.618	
2,000.0	1,999.1	1,994.9	1,988.2	3.6	4.3	59.42	43.3	138.1	113.0	105.8	7.10	15.902	
2,100.0	2,099.0	2,094.6	2,087.4	3.8	4.5	59.43	46.5	147.6	120.7	113.2	7.47	16.158	
2,200.0	2,198.9	2,194.3	2,186.6	4.0	4.7	59.43	49.7	157.2	128.4	120.5	7.83	16.389	
2,300.0	2,298.9	2,294.0	2,285.8	4.1	5.0	59.44	52.9	166.8	136.1	127.9	8.20	16.600	
2,400.0	2,398.8	2,393.7	2,385.0	4.3	5.2	59.45	56.1	176.4	143.8	135.2	8.56	16.793	
2,500.0	2,498.7	2,493.4	2,484.2	4.5	5.5	59.45	59.3	186.0	151.5	142.6	8.93	16.969	
2,600.0	2,598.6	2,593.1	2,583.4	4.7	5.7	59.46	62.5	195.5	159.2	149.9	9.29	17.132	
2,700.0	2,698.6	2,692.8	2,682.5	4.9	6.0	59.46	65.7	205.1	166.9	157.3	9.66	17.282	
2,800.0	2,798.5	2,792.5	2,781.7	5.1	6.2	59.47	68.9	214.7	174.6	164.6	10.02	17.421	
2,900.0	2,898.4	2,892.2	2,880.9	5.3	6.5	59.47	72.1	224.3	182.3	172.0	10.39	17.551	
3,000.0	2,998.4	2,991.9	2,980.1	5.4	6.7	59.47	75.3	233.9	190.1	179.3	10.76	17.671	
3,100.0	3,098.3	3,091.6	3,079.3	5.6	7.0	59.48	78.5	243.4	197.8	186.6	11.12	17.783	
3,200.0	3,198.2	3,191.3	3,178.5	5.8	7.2	59.48	81.7	253.0	205.5	194.0	11.49	17.889	
3,300.0	3,298.2	3,291.0	3,277.7	6.0	7.5	59.48	84.9	262.6	213.2	201.3	11.85	17.987	
3,400.0	3,398.1	3,390.7	3,376.9	6.2	7.7	59.49	88.1	272.2	220.9	208.7	12.22	18.080	
3,500.0	3,498.0	3,490.4	3,476.1	6.4	8.0	59.49	91.3	281.7	228.6	216.0	12.58	18.167	
3,600.0	3,597.9	3,590.1	3,575.2	6.6	8.2	59.49	94.5	291.3	236.3	223.4	12.95	18.250	
3,700.0	3,697.9	3,689.8	3,674.4	6.7	8.4	59.49	97.7	300.9	244.0	230.7	13.32	18.327	
3,800.0	3,797.8	3,789.5	3,773.6	6.9	8.7	59.49	100.9	310.5	251.7	238.1	13.68	18.401	
3,900.0	3,897.7	3,889.2	3,872.8	7.1	8.9	59.50	104.0	320.1	259.5	245.4	14.05	18.471	
4,000.0	3,997.7	3,989.0	3,972.0	7.3	9.2	59.50	107.2	329.6	267.2	252.8	14.41	18.537	
4,100.0	4,097.6	4,088.7	4,071.2	7.5	9.4	59.50	110.4	339.2	274.9	260.1	14.78	18.600	
4,200.0	4,197.5	4,188.4	4,170.4	7.7	9.7	59.50	113.6	348.8	282.6	267.4	15.14	18.660	
4,300.0	4,297.4	4,288.1	4,269.6	7.9	9.9	59.50	116.8	358.4	290.3	274.8	15.51	18.716	
4,400.0	4,397.4	4,387.8	4,368.8	8.1	10.2	59.50	120.0	368.0	298.0	282.1	15.88	18.771	
4,500.0	4,497.3	4,487.5	4,468.0	8.2	10.4	59.51	123.2	377.5	305.7	289.5	16.24	18.823	
4,600.0	4,597.2	4,587.2	4,567.1	8.4	10.7	59.51	126.4	387.1	313.4	296.8	16.61	18.872	
4,700.0	4,697.2	4,686.9	4,666.3	8.6	10.9	59.51	129.6	396.7	321.1	304.2	16.97	18.920	
4,800.0	4,797.1	4,786.6	4,765.5	8.8	11.2	59.51	132.8	406.3	328.9	311.5	17.34	18.965	
4,900.0	4,897.0	4,886.3	4,864.7	9.0	11.4	59.51	136.0	415.9	336.6	318.9	17.71	19.009	
5,000.0	4,997.0	4,986.0	4,963.9	9.2	11.7	59.51	139.2	425.4	344.3	326.2	18.07	19.050	
5,100.0	5,096.9	5,085.7	5,063.1	9.4	11.9	59.51	142.4	435.0	352.0	333.5	18.44	19.090	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2F-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,185.4	5,162.3	9.5	12.2	59.51	145.6	444.6	359.7	340.9	18.80	19.129	
5,300.0	5,296.7	5,285.1	5,261.5	9.7	12.4	59.51	148.8	454.2	367.4	348.2	19.17	19.166	
5,400.0	5,396.7	5,384.8	5,360.7	9.9	12.7	59.52	152.0	463.7	375.1	355.6	19.54	19.201	
5,500.0	5,496.6	5,484.5	5,459.8	10.1	12.9	59.52	155.2	473.3	382.8	362.9	19.90	19.236	
5,600.0	5,596.5	5,584.2	5,559.0	10.3	13.2	59.52	158.4	482.9	390.5	370.3	20.27	19.269	
5,700.0	5,696.5	5,683.9	5,658.2	10.5	13.4	59.52	161.6	492.5	398.3	377.6	20.63	19.301	
5,800.0	5,796.4	5,783.6	5,757.4	10.7	13.6	59.52	164.8	502.1	406.0	385.0	21.00	19.332	
5,900.0	5,896.3	5,883.3	5,856.6	10.8	13.9	59.52	168.0	511.6	413.7	392.3	21.37	19.361	
6,000.0	5,996.3	5,983.0	5,955.8	11.0	14.1	59.52	171.2	521.2	421.4	399.7	21.73	19.390	
6,100.0	6,096.2	6,082.7	6,055.0	11.2	14.4	59.52	174.4	530.8	429.1	407.0	22.10	19.418	
6,200.0	6,196.1	6,182.4	6,154.2	11.4	14.6	59.52	177.6	540.4	436.8	414.3	22.46	19.445	
6,300.0	6,296.0	6,282.1	6,253.4	11.6	14.9	59.52	180.8	550.0	444.5	421.7	22.83	19.470	
6,400.0	6,396.0	6,381.8	6,352.6	11.8	15.1	59.52	184.0	559.5	452.2	429.0	23.20	19.496	
6,500.0	6,495.9	6,481.5	6,451.7	12.0	15.4	59.52	187.2	569.1	459.9	436.4	23.56	19.520	
6,600.0	6,595.8	6,581.2	6,550.9	12.1	15.6	59.52	190.4	578.7	467.7	443.7	23.93	19.544	
6,700.0	6,695.6	6,680.6	6,649.8	12.3	15.9	-81.63	193.6	588.2	475.4	451.2	24.24	19.615	
6,800.0	6,793.4	6,777.3	6,746.0	12.4	16.1	-88.71	196.7	597.5	484.0	459.6	24.37	19.862	
6,900.0	6,886.0	6,870.9	6,839.1	12.4	16.3	-93.22	199.4	606.5	495.4	471.0	24.39	20.311	
7,000.0	6,970.8	6,978.5	6,945.6	12.4	16.5	-97.68	189.3	616.6	510.3	485.9	24.38	20.925	
7,100.0	7,045.2	7,098.5	7,059.8	12.5	16.7	-101.73	154.7	627.1	527.1	502.6	24.44	21.566	
7,200.0	7,106.9	7,234.0	7,177.0	12.8	16.8	-105.40	88.0	637.4	544.2	519.5	24.66	22.071	
7,300.0	7,153.9	7,387.2	7,286.5	13.3	17.1	-108.50	-18.1	646.5	559.3	534.2	25.17	22.225	
7,400.0	7,185.0	7,557.4	7,370.7	13.9	17.7	-110.67	-165.2	652.5	569.9	543.7	26.20	21.756	
7,500.0	7,199.1	7,738.7	7,409.1	14.7	18.7	-111.49	-341.5	653.8	573.8	545.9	27.89	20.574	
7,600.0	7,200.0	7,853.5	7,410.0	15.7	19.6	-111.49	-456.4	652.2	573.2	543.4	29.77	19.255	
7,700.0	7,200.0	7,953.5	7,410.0	16.9	20.5	-111.51	-556.4	650.8	572.7	540.8	31.86	17.976	
7,800.0	7,200.0	8,053.5	7,410.0	18.1	21.6	-111.53	-656.4	649.4	572.2	538.1	34.14	16.763	
7,900.0	7,200.0	8,153.5	7,410.0	19.4	22.7	-111.55	-756.4	648.1	571.7	535.2	36.56	15.638	
8,000.0	7,200.0	8,253.5	7,410.0	20.7	23.8	-111.57	-856.3	646.7	571.2	532.1	39.11	14.607	
8,100.0	7,200.0	8,353.5	7,410.0	22.2	25.1	-111.59	-956.3	645.3	570.8	529.0	41.76	13.669	
8,200.0	7,200.0	8,453.5	7,410.0	23.6	26.4	-111.61	-1,056.3	643.9	570.3	525.8	44.48	12.820	
8,300.0	7,200.0	8,553.5	7,410.0	25.1	27.8	-111.63	-1,156.3	642.5	569.8	522.5	47.28	12.052	
8,400.0	7,200.0	8,653.5	7,410.0	26.7	29.2	-111.65	-1,256.3	641.1	569.3	519.2	50.13	11.357	
8,500.0	7,200.0	8,753.5	7,410.0	28.2	30.6	-111.67	-1,356.3	639.7	568.8	515.8	53.02	10.727	
8,600.0	7,200.0	8,853.5	7,410.0	29.8	32.1	-111.69	-1,456.3	638.3	568.3	512.4	55.96	10.156	
8,700.0	7,200.0	8,953.5	7,410.0	31.4	33.6	-111.71	-1,556.3	636.9	567.8	508.9	58.93	9.636	
8,800.0	7,200.0	9,053.5	7,410.0	33.0	35.1	-111.72	-1,656.3	635.5	567.4	505.4	61.92	9.162	
8,900.0	7,200.0	9,153.5	7,410.0	34.7	36.6	-111.74	-1,756.2	634.1	566.9	501.9	64.95	8.728	
9,000.0	7,200.0	9,253.5	7,410.0	36.3	38.2	-111.76	-1,856.2	632.7	566.4	498.4	67.99	8.331	
9,100.0	7,200.0	9,353.5	7,410.0	37.9	39.7	-111.78	-1,956.2	631.3	565.9	494.8	71.05	7.965	
9,200.0	7,200.0	9,453.5	7,410.0	39.6	41.3	-111.80	-2,056.2	629.9	565.4	491.3	74.12	7.628	
9,300.0	7,200.0	9,553.5	7,410.0	41.3	42.9	-111.82	-2,156.2	628.5	564.9	487.7	77.21	7.317	
9,400.0	7,200.0	9,653.5	7,410.0	42.9	44.6	-111.84	-2,256.2	627.1	564.4	484.1	80.31	7.028	
9,500.0	7,200.0	9,753.5	7,410.0	44.6	46.2	-111.86	-2,356.2	625.7	563.9	480.5	83.42	6.760	
9,600.0	7,200.0	9,853.5	7,410.0	46.3	47.8	-111.88	-2,456.2	624.3	563.5	476.9	86.54	6.511	
9,700.0	7,200.0	9,953.5	7,410.0	48.0	49.5	-111.90	-2,556.2	622.9	563.0	473.3	89.67	6.278	
9,800.0	7,200.0	10,053.5	7,410.0	49.7	51.1	-111.92	-2,656.1	621.5	562.5	469.7	92.81	6.061	
9,900.0	7,200.0	10,153.5	7,410.0	51.4	52.8	-111.94	-2,756.1	620.1	562.0	466.1	95.95	5.857	
10,000.0	7,200.0	10,253.5	7,410.0	53.1	54.4	-111.96	-2,856.1	618.7	561.5	462.4	99.10	5.666	
10,100.0	7,200.0	10,353.5	7,410.0	54.8	56.1	-111.98	-2,956.1	617.3	561.0	458.8	102.25	5.487	
10,200.0	7,200.0	10,453.5	7,410.0	56.5	57.8	-112.00	-3,056.1	615.9	560.5	455.1	105.41	5.318	
10,300.0	7,200.0	10,553.5	7,410.0	58.2	59.4	-112.02	-3,156.1	614.5	560.1	451.5	108.57	5.158	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2F-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,200.0	10,653.5	7,410.0	59.9	61.1	-112.04	-3,256.1	613.1	559.6	447.8	111.74	5.008	
10,500.0	7,200.0	10,753.5	7,410.0	61.7	62.8	-112.06	-3,356.1	611.8	559.1	444.2	114.91	4.866	
10,600.0	7,200.0	10,853.5	7,410.0	63.4	64.5	-112.08	-3,456.1	610.4	558.6	440.5	118.08	4.731	
10,700.0	7,200.0	10,953.5	7,410.0	65.1	66.2	-112.10	-3,556.0	609.0	558.1	436.9	121.25	4.603	
10,800.0	7,200.0	11,053.5	7,410.0	66.8	67.9	-112.12	-3,656.0	607.6	557.6	433.2	124.43	4.481	
10,900.0	7,200.0	11,153.5	7,410.0	68.5	69.6	-112.14	-3,756.0	606.2	557.2	429.5	127.61	4.366	
11,000.0	7,200.0	11,253.5	7,410.0	70.3	71.3	-112.16	-3,856.0	604.8	556.7	425.9	130.79	4.256	
11,100.0	7,200.0	11,353.5	7,410.0	72.0	73.0	-112.18	-3,956.0	603.4	556.2	422.2	133.97	4.151	
11,200.0	7,200.0	11,453.5	7,410.0	73.7	74.7	-112.20	-4,056.0	602.0	555.7	418.5	137.16	4.052	
11,300.0	7,200.0	11,553.5	7,410.0	75.5	76.4	-112.22	-4,156.0	600.6	555.2	414.9	140.34	3.956	
11,400.0	7,200.0	11,653.5	7,410.0	77.2	78.1	-112.25	-4,256.0	599.2	554.7	411.2	143.53	3.865	
11,500.0	7,200.0	11,753.5	7,410.0	78.9	79.8	-112.27	-4,356.0	597.8	554.2	407.5	146.72	3.778	
11,600.0	7,200.0	11,853.5	7,410.0	80.6	81.5	-112.29	-4,455.9	596.4	553.8	403.9	149.90	3.694	
11,700.0	7,200.0	11,953.5	7,410.0	82.4	83.3	-112.31	-4,555.9	595.0	553.3	400.2	153.09	3.614	
11,800.0	7,200.0	12,053.5	7,410.0	84.1	85.0	-112.33	-4,655.9	593.6	552.8	396.5	156.28	3.537	
11,900.0	7,200.0	12,153.5	7,410.0	85.8	86.7	-112.35	-4,755.9	592.2	552.3	392.8	159.47	3.463	
12,000.0	7,200.0	12,253.5	7,410.0	87.6	88.4	-112.37	-4,855.9	590.8	551.8	389.2	162.66	3.392	
12,100.0	7,200.0	12,353.5	7,410.0	89.3	90.1	-112.39	-4,955.9	589.4	551.3	385.5	165.85	3.324	
12,200.0	7,200.0	12,453.5	7,410.0	91.1	91.9	-112.41	-5,055.9	588.0	550.9	381.8	169.05	3.259	
12,300.0	7,200.0	12,553.5	7,410.0	92.8	93.6	-112.43	-5,155.9	586.6	550.4	378.1	172.24	3.195	
12,400.0	7,200.0	12,653.5	7,410.0	94.5	95.3	-112.45	-5,255.9	585.2	549.9	374.5	175.43	3.135	
12,500.0	7,200.0	12,753.5	7,410.0	96.3	97.0	-112.47	-5,355.8	583.8	549.4	370.8	178.62	3.076	
12,600.0	7,200.0	12,853.5	7,410.0	98.0	98.8	-112.49	-5,455.8	582.4	548.9	367.1	181.81	3.019	
12,700.0	7,200.0	12,953.5	7,410.0	99.8	100.5	-112.51	-5,555.8	581.0	548.4	363.4	185.00	2.964	
12,800.0	7,200.0	13,053.5	7,410.0	101.5	102.2	-112.54	-5,655.8	579.6	548.0	359.8	188.19	2.912	
12,900.0	7,200.0	13,153.5	7,410.0	103.2	103.9	-112.56	-5,755.8	578.2	547.5	356.1	191.39	2.861	
13,000.0	7,200.0	13,253.5	7,410.0	105.0	105.7	-112.58	-5,855.8	576.8	547.0	352.4	194.58	2.811	
13,100.0	7,200.0	13,353.5	7,410.0	106.7	107.4	-112.60	-5,955.8	575.5	546.5	348.7	197.77	2.763	
13,200.0	7,200.0	13,453.5	7,410.0	108.5	109.1	-112.62	-6,055.8	574.1	546.0	345.1	200.96	2.717	
13,300.0	7,200.0	13,553.5	7,410.0	110.2	110.9	-112.64	-6,155.8	572.7	545.5	341.4	204.15	2.672	
13,400.0	7,200.0	13,653.5	7,410.0	111.9	112.6	-112.66	-6,255.7	571.3	545.1	337.7	207.34	2.629	
13,500.0	7,200.0	13,753.5	7,410.0	113.7	114.3	-112.68	-6,355.7	569.9	544.6	334.0	210.53	2.587	
13,600.0	7,200.0	13,853.5	7,410.0	115.4	116.1	-112.70	-6,455.7	568.5	544.1	330.4	213.72	2.546	
13,700.0	7,200.0	13,953.5	7,410.0	117.2	117.8	-112.73	-6,555.7	567.1	543.6	326.7	216.90	2.506	
13,800.0	7,200.0	14,053.5	7,410.0	118.9	119.5	-112.75	-6,655.7	565.7	543.1	323.0	220.09	2.468	
13,860.6	7,200.0	14,111.4	7,410.0	120.0	120.5	-112.76	-6,713.7	564.9	542.8	320.8	221.98	2.445	
13,861.3	7,200.0	14,111.4	7,410.0	120.0	120.5	-112.76	-6,713.7	564.9	542.8	320.8	221.99	2.445	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2G-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	11.0	11.0	0.0	0.0	89.99	0.0	19.6	19.6				
100.0	100.0	111.0	111.0	0.2	0.2	89.99	0.0	19.6	19.6	19.3	0.30	64.439	
200.0	200.0	211.0	211.0	0.3	0.3	89.99	0.0	19.6	19.6	18.9	0.65	29.980	
300.0	300.0	311.0	311.0	0.5	0.5	89.99	0.0	19.6	19.6	18.6	1.00	19.534	
362.5	362.5	373.5	373.5	0.6	0.6	89.99	0.0	19.6	19.6	18.3	1.22	16.039	CC
400.0	400.0	410.9	410.9	0.7	0.7	89.97	0.0	19.6	19.6	18.2	1.35	14.502	ES
500.0	500.0	510.2	510.2	0.8	0.9	88.73	0.5	21.6	21.7	20.0	1.70	12.745	
600.0	600.0	609.2	609.0	1.0	1.0	86.35	1.7	27.0	27.1	25.1	2.05	13.245	
700.0	700.0	707.9	707.3	1.2	1.3	55.67	3.7	35.7	35.1	32.7	2.40	14.632	
800.0	799.9	806.0	804.6	1.4	1.5	57.01	6.5	47.6	45.2	42.5	2.75	16.464	
900.0	899.8	905.0	902.6	1.6	1.8	57.47	9.7	61.6	57.5	54.4	3.10	18.526	
1,000.0	999.8	1,004.3	1,000.8	1.7	2.1	57.76	13.0	75.7	69.8	66.3	3.46	20.161	
1,100.0	1,099.7	1,103.5	1,099.0	1.9	2.3	57.96	16.2	89.7	82.1	78.3	3.82	21.483	
1,200.0	1,199.6	1,202.8	1,197.2	2.1	2.6	58.11	19.5	103.8	94.4	90.2	4.18	22.573	
1,300.0	1,299.6	1,302.0	1,295.4	2.3	2.9	58.23	22.7	117.9	106.7	102.2	4.54	23.486	
1,400.0	1,399.5	1,401.2	1,393.5	2.5	3.2	58.32	26.0	132.0	119.0	114.1	4.90	24.262	
1,500.0	1,499.4	1,500.5	1,491.7	2.7	3.5	58.40	29.2	146.1	131.3	126.0	5.27	24.929	
1,600.0	1,599.3	1,599.7	1,589.9	2.8	3.8	58.46	32.5	160.1	143.6	138.0	5.63	25.509	
1,700.0	1,699.3	1,699.0	1,688.1	3.0	4.1	58.51	35.7	174.2	155.9	149.9	5.99	26.018	
1,800.0	1,799.2	1,798.2	1,786.3	3.2	4.4	58.56	39.0	188.3	168.2	161.9	6.36	26.467	
1,900.0	1,899.1	1,897.4	1,884.4	3.4	4.7	58.59	42.2	202.4	180.5	173.8	6.72	26.867	
2,000.0	1,999.1	1,996.7	1,982.6	3.6	5.0	58.63	45.5	216.5	192.8	185.7	7.08	27.226	
2,100.0	2,099.0	2,095.9	2,080.8	3.8	5.3	58.66	48.8	230.6	205.1	197.7	7.45	27.549	
2,200.0	2,198.9	2,195.2	2,179.0	4.0	5.7	58.68	52.0	244.6	217.4	209.6	7.81	27.841	
2,300.0	2,298.9	2,294.4	2,277.2	4.1	6.0	58.71	55.3	258.7	229.7	221.5	8.17	28.107	
2,400.0	2,398.8	2,393.6	2,375.4	4.3	6.3	58.73	58.5	272.8	242.0	233.5	8.54	28.350	
2,500.0	2,498.7	2,492.9	2,473.5	4.5	6.6	58.75	61.8	286.9	254.3	245.4	8.90	28.573	
2,600.0	2,598.6	2,592.1	2,571.7	4.7	6.9	58.76	65.0	301.0	266.6	257.4	9.26	28.778	
2,700.0	2,698.6	2,691.4	2,669.9	4.9	7.2	58.78	68.3	315.0	278.9	269.3	9.63	28.967	
2,800.0	2,798.5	2,790.6	2,768.1	5.1	7.5	58.79	71.5	329.1	291.2	281.2	9.99	29.143	
2,900.0	2,898.4	2,889.8	2,866.3	5.3	7.8	58.81	74.8	343.2	303.5	293.2	10.36	29.306	
3,000.0	2,998.4	2,989.1	2,964.5	5.4	8.1	58.82	78.0	357.3	315.8	305.1	10.72	29.457	
3,100.0	3,098.3	3,088.3	3,062.6	5.6	8.4	58.83	81.3	371.4	328.1	317.0	11.09	29.599	
3,200.0	3,198.2	3,187.6	3,160.8	5.8	8.7	58.84	84.5	385.4	340.4	329.0	11.45	29.732	
3,300.0	3,298.2	3,286.8	3,259.0	6.0	9.0	58.85	87.8	399.5	352.7	340.9	11.81	29.856	
3,400.0	3,398.1	3,386.0	3,357.2	6.2	9.3	58.86	91.1	413.6	365.0	352.9	12.18	29.973	
3,500.0	3,498.0	3,485.3	3,455.4	6.4	9.6	58.87	94.3	427.7	377.3	364.8	12.54	30.083	
3,600.0	3,597.9	3,584.5	3,553.5	6.6	9.9	58.88	97.6	441.8	389.6	376.7	12.91	30.186	
3,700.0	3,697.9	3,683.8	3,651.7	6.7	10.2	58.88	100.8	455.9	401.9	388.7	13.27	30.284	
3,800.0	3,797.8	3,783.0	3,749.9	6.9	10.6	58.89	104.1	469.9	414.2	400.6	13.64	30.377	
3,900.0	3,897.7	3,882.2	3,848.1	7.1	10.9	58.90	107.3	484.0	426.6	412.5	14.00	30.464	
4,000.0	3,997.7	3,981.5	3,946.3	7.3	11.2	58.90	110.6	498.1	438.9	424.5	14.37	30.548	
4,100.0	4,097.6	4,080.7	4,044.5	7.5	11.5	58.91	113.8	512.2	451.2	436.4	14.73	30.627	
4,200.0	4,197.5	4,180.0	4,142.6	7.7	11.8	58.92	117.1	526.3	463.5	448.4	15.10	30.702	
4,300.0	4,297.4	4,279.2	4,240.8	7.9	12.1	58.92	120.3	540.3	475.8	460.3	15.46	30.774	
4,400.0	4,397.4	4,378.4	4,339.0	8.1	12.4	58.93	123.6	554.4	488.1	472.2	15.82	30.842	
4,500.0	4,497.3	4,477.7	4,437.2	8.2	12.7	58.93	126.8	568.5	500.4	484.2	16.19	30.907	
4,600.0	4,597.2	4,576.9	4,535.4	8.4	13.0	58.94	130.1	582.6	512.7	496.1	16.55	30.970	
4,700.0	4,697.2	4,676.2	4,633.6	8.6	13.3	58.94	133.4	596.7	525.0	508.1	16.92	31.029	
4,800.0	4,797.1	4,775.4	4,731.7	8.8	13.6	58.94	136.6	610.7	537.3	520.0	17.28	31.086	
4,900.0	4,897.0	4,874.6	4,829.9	9.0	13.9	58.95	139.9	624.8	549.6	531.9	17.65	31.141	
5,000.0	4,997.0	4,973.9	4,928.1	9.2	14.2	58.95	143.1	638.9	561.9	543.9	18.01	31.194	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2G-14H-C268 - Hz - Plan #2

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,096.9	5,073.1	5,026.3	9.4	14.6	58.96	146.4	653.0	574.2	555.8	18.38	31.244	
5,200.0	5,196.8	5,172.4	5,124.5	9.5	14.9	58.96	149.6	667.1	586.5	567.7	18.74	31.292	
5,300.0	5,296.7	5,271.6	5,222.6	9.7	15.2	58.96	152.9	681.2	598.8	579.7	19.11	31.339	
5,400.0	5,396.7	5,370.8	5,320.8	9.9	15.5	58.97	156.1	695.2	611.1	591.6	19.47	31.384	
5,500.0	5,496.6	5,470.1	5,419.0	10.1	15.8	58.97	159.4	709.3	623.4	603.5	19.84	31.427	
5,600.0	5,596.5	5,569.3	5,517.2	10.3	16.1	58.97	162.6	723.4	635.7	615.5	20.20	31.468	
5,700.0	5,696.5	5,668.6	5,615.4	10.5	16.4	58.97	165.9	737.5	648.0	627.4	20.57	31.508	
5,800.0	5,796.4	5,767.8	5,713.6	10.7	16.7	58.98	169.1	751.6	660.3	639.4	20.93	31.547	
5,900.0	5,896.3	5,867.1	5,811.7	10.8	17.0	58.98	172.4	765.6	672.6	651.3	21.30	31.584	
6,000.0	5,996.3	5,966.3	5,909.9	11.0	17.3	58.98	175.7	779.7	684.9	663.2	21.66	31.620	
6,100.0	6,096.2	6,065.5	6,008.1	11.2	17.6	58.98	178.9	793.8	697.2	675.2	22.02	31.655	
6,200.0	6,196.1	6,164.8	6,106.3	11.4	17.9	58.99	182.2	807.9	709.5	687.1	22.39	31.689	
6,300.0	6,296.0	6,264.0	6,204.5	11.6	18.2	58.99	185.4	822.0	721.8	699.0	22.75	31.722	
6,400.0	6,396.0	6,363.3	6,302.7	11.8	18.6	58.99	188.7	836.1	734.1	711.0	23.12	31.753	
6,500.0	6,495.9	6,462.5	6,400.8	12.0	18.9	58.99	191.9	850.1	746.4	722.9	23.48	31.784	
6,600.0	6,595.8	6,561.7	6,499.0	12.1	19.2	59.00	195.2	864.2	758.7	734.9	23.85	31.814	
6,700.0	6,695.6	6,660.6	6,596.9	12.3	19.5	-81.45	198.4	878.2	771.1	746.9	24.22	31.844	
6,800.0	6,793.4	6,761.2	6,696.2	12.4	19.8	-86.72	195.7	892.5	783.8	759.4	24.41	32.112	
6,900.0	6,886.0	6,865.6	6,797.3	12.4	20.0	-88.12	174.7	907.0	796.4	771.9	24.49	32.522	
7,000.0	6,970.8	6,973.8	6,896.3	12.4	20.2	-88.76	133.7	921.2	808.4	783.9	24.54	32.936	
7,100.0	7,045.2	7,085.9	6,989.0	12.5	20.4	-89.13	72.3	934.5	819.4	794.7	24.71	33.162	
7,200.0	7,106.9	7,201.9	7,070.4	12.8	20.7	-89.33	-9.2	946.2	829.0	803.9	25.14	32.982	
7,300.0	7,153.9	7,321.3	7,135.6	13.3	21.0	-89.42	-108.5	955.5	836.7	810.7	25.98	32.208	
7,400.0	7,185.0	7,443.2	7,179.7	13.9	21.5	-89.41	-221.7	961.8	842.1	814.8	27.31	30.835	
7,500.0	7,199.1	7,566.5	7,199.2	14.7	22.2	-89.30	-343.1	964.6	844.9	815.8	29.14	28.998	
7,600.0	7,200.0	7,672.3	7,200.0	15.7	22.9	-89.25	-448.9	964.7	845.9	814.7	31.19	27.121	
7,700.0	7,200.0	7,772.3	7,200.0	16.9	23.7	-89.26	-548.9	964.7	846.7	813.3	33.43	25.331	
7,800.0	7,200.0	7,872.3	7,200.0	18.1	24.6	-89.26	-648.9	964.7	847.6	811.7	35.87	23.630	
7,900.0	7,200.0	7,972.3	7,200.0	19.4	25.5	-89.26	-748.9	964.7	848.5	810.0	38.48	22.051	
8,000.0	7,200.0	8,072.3	7,200.0	20.7	26.6	-89.26	-848.9	964.7	849.4	808.1	41.22	20.605	
8,100.0	7,200.0	8,172.3	7,200.0	22.2	27.7	-89.26	-948.9	964.7	850.2	806.2	44.07	19.292	
8,200.0	7,200.0	8,272.3	7,200.0	23.6	28.9	-89.26	-1,048.9	964.7	851.1	804.1	47.01	18.104	
8,300.0	7,200.0	8,372.3	7,200.0	25.1	30.1	-89.26	-1,148.9	964.7	852.0	801.9	50.02	17.031	
8,400.0	7,200.0	8,472.3	7,200.0	26.7	31.4	-89.26	-1,248.9	964.7	852.8	799.7	53.10	16.061	
8,500.0	7,200.0	8,572.2	7,200.0	28.2	32.8	-89.26	-1,348.9	964.7	853.7	797.5	56.22	15.184	
8,600.0	7,200.0	8,672.2	7,200.0	29.8	34.1	-89.26	-1,448.9	964.7	854.6	795.2	59.39	14.389	
8,700.0	7,200.0	8,772.2	7,200.0	31.4	35.5	-89.26	-1,548.9	964.8	855.5	792.9	62.60	13.667	
8,800.0	7,200.0	8,872.2	7,200.0	33.0	37.0	-89.26	-1,648.9	964.8	856.3	790.5	65.83	13.008	
8,900.0	7,200.0	8,972.2	7,200.0	34.7	38.4	-89.26	-1,748.9	964.8	857.2	788.1	69.09	12.407	
9,000.0	7,200.0	9,072.2	7,200.0	36.3	39.9	-89.27	-1,848.9	964.8	858.1	785.7	72.38	11.856	
9,100.0	7,200.0	9,172.2	7,200.0	37.9	41.4	-89.27	-1,948.9	964.8	859.0	783.3	75.68	11.350	
9,200.0	7,200.0	9,272.2	7,200.0	39.6	42.9	-89.27	-2,048.9	964.8	859.8	780.8	79.00	10.883	
9,300.0	7,200.0	9,372.2	7,200.0	41.3	44.5	-89.27	-2,148.9	964.8	860.7	778.4	82.34	10.453	
9,400.0	7,200.0	9,472.2	7,200.0	42.9	46.0	-89.27	-2,248.9	964.8	861.6	775.9	85.69	10.054	
9,500.0	7,200.0	9,572.2	7,200.0	44.6	47.6	-89.27	-2,348.9	964.8	862.4	773.4	89.06	9.684	
9,600.0	7,200.0	9,672.2	7,200.0	46.3	49.2	-89.27	-2,448.9	964.8	863.3	770.9	92.43	9.340	
9,700.0	7,200.0	9,772.2	7,200.0	48.0	50.8	-89.27	-2,548.9	964.8	864.2	768.4	95.81	9.019	
9,800.0	7,200.0	9,872.2	7,200.0	49.7	52.4	-89.27	-2,648.9	964.8	865.1	765.9	99.21	8.720	
9,900.0	7,200.0	9,972.2	7,200.0	51.4	54.0	-89.27	-2,748.9	964.8	865.9	763.3	102.61	8.439	
10,000.0	7,200.0	10,072.2	7,200.0	53.1	55.6	-89.27	-2,848.9	964.8	866.8	760.8	106.01	8.176	
10,100.0	7,200.0	10,172.2	7,200.0	54.8	57.3	-89.27	-2,948.8	964.8	867.7	758.3	109.43	7.929	
10,200.0	7,200.0	10,272.2	7,200.0	56.5	58.9	-89.27	-3,048.8	964.8	868.6	755.7	112.85	7.697	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Elmquist 2G-14H-C268 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,200.0	10,372.2	7,200.0	58.2	60.6	-89.28	-3,148.8	964.8	869.4	753.2	116.27	7.478	
10,400.0	7,200.0	10,472.2	7,200.0	59.9	62.2	-89.28	-3,248.8	964.8	870.3	750.6	119.70	7.271	
10,500.0	7,200.0	10,572.2	7,200.0	61.7	63.9	-89.28	-3,348.8	964.8	871.2	748.0	123.13	7.075	
10,600.0	7,200.0	10,672.2	7,200.0	63.4	65.5	-89.28	-3,448.8	964.8	872.0	745.5	126.57	6.890	
10,700.0	7,200.0	10,772.2	7,200.0	65.1	67.2	-89.28	-3,548.8	964.8	872.9	742.9	130.01	6.714	
10,800.0	7,200.0	10,872.2	7,200.0	66.8	68.9	-89.28	-3,648.8	964.8	873.8	740.3	133.46	6.547	
10,900.0	7,200.0	10,972.2	7,200.0	68.5	70.5	-89.28	-3,748.8	964.8	874.7	737.8	136.91	6.389	
11,000.0	7,200.0	11,072.2	7,200.0	70.3	72.2	-89.28	-3,848.8	964.8	875.5	735.2	140.36	6.238	
11,100.0	7,200.0	11,172.1	7,200.0	72.0	73.9	-89.28	-3,948.8	964.8	876.4	732.6	143.81	6.094	
11,200.0	7,200.0	11,272.1	7,200.0	73.7	75.6	-89.28	-4,048.8	964.8	877.3	730.0	147.27	5.957	
11,300.0	7,200.0	11,372.1	7,200.0	75.5	77.3	-89.28	-4,148.8	964.8	878.2	727.4	150.73	5.826	
11,400.0	7,200.0	11,472.1	7,200.0	77.2	79.0	-89.28	-4,248.8	964.8	879.0	724.8	154.19	5.701	
11,500.0	7,200.0	11,572.1	7,200.0	78.9	80.6	-89.28	-4,348.8	964.8	879.9	722.2	157.65	5.581	
11,600.0	7,200.0	11,672.1	7,200.0	80.6	82.3	-89.28	-4,448.8	964.8	880.8	719.7	161.12	5.467	
11,700.0	7,200.0	11,772.1	7,200.0	82.4	84.0	-89.29	-4,548.8	964.8	881.6	717.1	164.58	5.357	
11,800.0	7,200.0	11,872.1	7,200.0	84.1	85.7	-89.29	-4,648.8	964.8	882.5	714.5	168.05	5.251	
11,900.0	7,200.0	11,972.1	7,200.0	85.8	87.4	-89.29	-4,748.8	964.8	883.4	711.9	171.52	5.150	
12,000.0	7,200.0	12,072.1	7,200.0	87.6	89.2	-89.29	-4,848.8	964.8	884.3	709.3	174.99	5.053	
12,100.0	7,200.0	12,172.1	7,200.0	89.3	90.9	-89.29	-4,948.8	964.8	885.1	706.7	178.47	4.960	
12,200.0	7,200.0	12,272.1	7,200.0	91.1	92.6	-89.29	-5,048.8	964.8	886.0	704.1	181.94	4.870	
12,300.0	7,200.0	12,372.1	7,200.0	92.8	94.3	-89.29	-5,148.8	964.8	886.9	701.5	185.42	4.783	
12,400.0	7,200.0	12,472.1	7,200.0	94.5	96.0	-89.29	-5,248.8	964.8	887.8	698.9	188.89	4.700	
12,500.0	7,200.0	12,572.1	7,200.0	96.3	97.7	-89.29	-5,348.8	964.8	888.6	696.3	192.37	4.619	
12,600.0	7,200.0	12,672.1	7,200.0	98.0	99.4	-89.29	-5,448.8	964.8	889.5	693.6	195.85	4.542	
12,700.0	7,200.0	12,772.1	7,200.0	99.8	101.1	-89.29	-5,548.7	964.8	890.4	691.0	199.33	4.467	
12,800.0	7,200.0	12,872.1	7,200.0	101.5	102.9	-89.29	-5,648.7	964.8	891.2	688.4	202.81	4.394	
12,900.0	7,200.0	12,972.1	7,200.0	103.2	104.6	-89.29	-5,748.7	964.8	892.1	685.8	206.29	4.325	
13,000.0	7,200.0	13,072.1	7,200.0	105.0	106.3	-89.29	-5,848.7	964.8	893.0	683.2	209.77	4.257	
13,100.0	7,200.0	13,172.1	7,200.0	106.7	108.0	-89.29	-5,948.7	964.8	893.9	680.6	213.26	4.191	
13,200.0	7,200.0	13,272.1	7,200.0	108.5	109.7	-89.30	-6,048.7	964.8	894.7	678.0	216.74	4.128	
13,300.0	7,200.0	13,372.1	7,200.0	110.2	111.5	-89.30	-6,148.7	964.8	895.6	675.4	220.23	4.067	
13,400.0	7,200.0	13,472.1	7,200.0	111.9	113.2	-89.30	-6,248.7	964.8	896.5	672.8	223.71	4.007	
13,500.0	7,200.0	13,572.1	7,200.0	113.7	114.9	-89.30	-6,348.7	964.8	897.4	670.2	227.20	3.950	
13,600.0	7,200.0	13,672.1	7,200.0	115.4	116.6	-89.30	-6,448.7	964.8	898.2	667.5	230.69	3.894	
13,700.0	7,200.0	13,772.1	7,200.0	117.2	118.4	-89.30	-6,548.7	964.8	899.1	664.9	234.17	3.839	
13,800.0	7,200.0	13,872.0	7,200.0	118.9	120.1	-89.30	-6,648.7	964.8	900.0	662.3	237.66	3.787	
13,861.3	7,200.0	13,933.4	7,200.0	120.0	121.1	-89.30	-6,710.0	964.8	900.5	660.7	239.80	3.755	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2A-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-176.82	-553.7	-30.8	554.6				
100.0	100.0	100.0	100.0	0.2	0.2	-176.82	-553.7	-30.8	554.6	554.3	0.30	1,826.087	
200.0	200.0	200.0	200.0	0.3	0.3	-176.82	-553.7	-30.8	554.6	553.9	0.65	849.571	CC
300.0	300.0	297.8	297.8	0.5	0.5	-176.65	-553.8	-32.4	554.8	553.8	1.00	554.212	ES
400.0	400.0	395.3	395.2	0.7	0.7	-176.14	-554.1	-37.4	555.4	554.0	1.36	407.606	
500.0	500.0	492.5	491.9	0.8	0.9	-175.30	-554.6	-45.6	556.5	554.8	1.75	318.305	
600.0	600.0	588.9	587.7	1.0	1.2	-174.13	-555.3	-57.1	558.3	556.2	2.17	257.503	
700.0	700.0	684.3	682.0	1.2	1.5	156.84	-556.1	-71.5	562.6	560.0	2.65	212.342	
800.0	799.9	778.3	774.3	1.4	1.8	158.69	-557.2	-88.8	569.9	566.7	3.16	180.605	
900.0	899.8	870.9	864.8	1.6	2.2	160.76	-558.4	-108.8	578.6	575.0	3.69	156.834	
1,000.0	999.8	967.4	958.6	1.7	2.6	163.00	-559.7	-131.3	588.7	584.5	4.25	138.549	
1,100.0	1,099.7	1,064.1	1,052.7	1.9	3.0	165.17	-561.0	-153.8	599.7	594.9	4.81	124.805	
1,200.0	1,199.6	1,160.8	1,146.7	2.1	3.4	167.27	-562.4	-176.2	611.6	606.3	5.36	114.210	
1,300.0	1,299.6	1,257.5	1,240.7	2.3	3.9	169.29	-563.7	-198.7	624.3	618.4	5.90	105.873	
1,400.0	1,399.5	1,354.2	1,334.8	2.5	4.3	171.22	-565.1	-221.2	637.8	631.3	6.43	99.203	
1,500.0	1,499.4	1,450.9	1,428.8	2.7	4.7	173.08	-566.4	-243.7	651.9	645.0	6.95	93.790	
1,600.0	1,599.3	1,547.6	1,522.8	2.8	5.2	174.87	-567.8	-266.2	666.8	659.3	7.46	89.346	
1,700.0	1,699.3	1,644.3	1,616.8	3.0	5.6	176.57	-569.1	-288.7	682.3	674.3	7.96	85.662	
1,800.0	1,799.2	1,740.9	1,710.9	3.2	6.0	178.20	-570.4	-311.2	698.4	689.9	8.46	82.581	
1,900.0	1,899.1	1,837.6	1,804.9	3.4	6.5	179.76	-571.8	-333.7	715.0	706.1	8.94	79.987	
2,000.0	1,999.1	1,934.3	1,898.9	3.6	6.9	-178.74	-573.1	-356.2	732.1	722.7	9.41	77.791	
2,100.0	2,099.0	2,031.0	1,993.0	3.8	7.3	-177.32	-574.5	-378.7	749.7	739.9	9.88	75.922	
2,200.0	2,198.9	2,127.7	2,087.0	4.0	7.8	-175.96	-575.8	-401.2	767.8	757.5	10.33	74.324	
2,300.0	2,298.9	2,224.4	2,181.0	4.1	8.2	-174.66	-577.1	-423.7	786.3	775.5	10.78	72.954	
2,400.0	2,398.8	2,321.1	2,275.0	4.3	8.6	-173.42	-578.5	-446.2	805.1	793.9	11.22	71.775	
2,500.0	2,498.7	2,417.8	2,369.1	4.5	9.1	-172.23	-579.8	-468.6	824.3	812.7	11.65	70.759	
2,600.0	2,598.6	2,514.5	2,463.1	4.7	9.5	-171.10	-581.2	-491.1	843.9	831.8	12.08	69.881	
2,700.0	2,698.6	2,611.2	2,557.1	4.9	9.9	-170.02	-582.5	-513.6	863.7	851.2	12.50	69.122	
2,800.0	2,798.5	2,707.9	2,651.2	5.1	10.4	-168.99	-583.9	-536.1	883.9	871.0	12.91	68.465	
2,900.0	2,898.4	2,804.5	2,745.2	5.3	10.8	-168.00	-585.2	-558.6	904.3	891.0	13.32	67.896	
3,000.0	2,998.4	2,901.2	2,839.2	5.4	11.3	-167.05	-586.5	-581.1	925.0	911.3	13.72	67.404	
3,100.0	3,098.3	2,997.9	2,933.3	5.6	11.7	-166.15	-587.9	-603.6	945.9	931.8	14.12	66.978	
3,200.0	3,198.2	3,094.6	3,027.3	5.8	12.1	-165.28	-589.2	-626.1	967.0	952.5	14.52	66.609	
3,300.0	3,298.2	3,191.3	3,121.3	6.0	12.6	-164.45	-590.6	-648.6	988.4	973.4	14.91	66.292	
3,400.0	3,398.1	3,288.0	3,215.3	6.2	13.0	-163.65	-591.9	-671.1	1,009.9	994.6	15.30	66.019	
3,500.0	3,498.0	3,384.7	3,309.4	6.4	13.4	-162.89	-593.3	-693.6	1,031.6	1,015.9	15.68	65.785	
3,600.0	3,597.9	3,481.4	3,403.4	6.6	13.9	-162.16	-594.6	-716.1	1,053.5	1,037.4	16.06	65.585	
3,700.0	3,697.9	3,578.1	3,497.4	6.7	14.3	-161.45	-595.9	-738.6	1,075.5	1,059.1	16.44	65.415	
3,800.0	3,797.8	3,674.8	3,591.5	6.9	14.7	-160.78	-597.3	-761.0	1,097.7	1,080.9	16.82	65.272	
3,900.0	3,897.7	3,771.5	3,685.5	7.1	15.2	-160.13	-598.6	-783.5	1,120.1	1,102.9	17.19	65.153	
4,000.0	3,997.7	3,868.1	3,779.5	7.3	15.6	-159.51	-600.0	-806.0	1,142.5	1,125.0	17.56	65.054	
4,100.0	4,097.6	3,964.8	3,873.5	7.5	16.1	-158.91	-601.3	-828.5	1,165.1	1,147.2	17.93	64.974	
4,200.0	4,197.5	4,061.5	3,967.6	7.7	16.5	-158.33	-602.6	-851.0	1,187.8	1,169.5	18.30	64.910	
4,300.0	4,297.4	4,158.2	4,061.6	7.9	16.9	-157.78	-604.0	-873.5	1,210.6	1,192.0	18.67	64.861	
4,400.0	4,397.4	4,254.9	4,155.6	8.1	17.4	-157.24	-605.3	-896.0	1,233.6	1,214.5	19.03	64.824	
4,500.0	4,497.3	4,351.6	4,249.7	8.2	17.8	-156.72	-606.7	-918.5	1,256.6	1,237.2	19.39	64.799	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2B-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-177.69	-553.7	-22.4	554.2				
100.0	100.0	100.0	100.0	0.2	0.2	-177.69	-553.7	-22.4	554.2	553.9	0.30	1,824.764	
200.0	200.0	200.0	200.0	0.3	0.3	-177.69	-553.7	-22.4	554.2	553.5	0.65	848.955	
300.0	300.0	300.0	300.0	0.5	0.5	-177.69	-553.7	-22.4	554.2	553.2	1.00	553.152	CC
400.0	400.0	397.6	397.6	0.7	0.7	-177.52	-553.8	-24.0	554.4	553.0	1.35	410.942	ES
500.0	500.0	495.1	494.9	0.8	0.9	-177.01	-554.3	-29.0	555.0	553.3	1.71	325.120	
600.0	600.0	592.0	591.5	1.0	1.1	-176.17	-554.9	-37.2	556.2	554.2	2.09	266.546	
700.0	700.0	688.2	687.0	1.2	1.3	154.51	-555.9	-48.5	559.7	557.2	2.51	222.993	
800.0	799.9	783.1	780.8	1.4	1.6	156.10	-557.1	-62.9	565.9	563.0	2.96	190.890	
900.0	899.8	879.5	875.7	1.6	1.9	157.94	-558.5	-80.0	573.3	569.8	3.44	166.443	
1,000.0	999.8	977.4	972.0	1.7	2.2	159.77	-560.0	-97.6	581.2	577.3	3.94	147.671	
1,100.0	1,099.7	1,075.3	1,068.3	1.9	2.6	161.56	-561.4	-115.3	589.8	585.4	4.43	133.166	
1,200.0	1,199.6	1,173.2	1,164.6	2.1	2.9	163.30	-562.9	-132.9	599.0	594.1	4.92	121.718	
1,300.0	1,299.6	1,271.1	1,260.8	2.3	3.3	164.98	-564.4	-150.5	608.7	603.3	5.41	112.515	
1,400.0	1,399.5	1,369.0	1,357.1	2.5	3.6	166.62	-565.8	-168.1	618.9	613.0	5.89	105.000	
1,500.0	1,499.4	1,466.9	1,453.4	2.7	4.0	168.19	-567.3	-185.8	629.6	623.3	6.37	98.780	
1,600.0	1,599.3	1,564.8	1,549.7	2.8	4.3	169.72	-568.7	-203.4	640.8	634.0	6.85	93.572	
1,700.0	1,699.3	1,662.7	1,646.0	3.0	4.7	171.20	-570.2	-221.0	652.5	645.2	7.32	89.168	
1,800.0	1,799.2	1,760.6	1,742.2	3.2	5.0	172.62	-571.7	-238.7	664.5	656.8	7.78	85.411	
1,900.0	1,899.1	1,858.5	1,838.5	3.4	5.4	173.99	-573.1	-256.3	677.0	668.8	8.24	82.181	
2,000.0	1,999.1	1,956.4	1,934.8	3.6	5.7	175.32	-574.6	-273.9	689.9	681.2	8.69	79.387	
2,100.0	2,099.0	2,054.3	2,031.1	3.8	6.1	176.60	-576.1	-291.6	703.1	693.9	9.14	76.954	
2,200.0	2,198.9	2,152.2	2,127.4	4.0	6.4	177.83	-577.5	-309.2	716.6	707.0	9.58	74.826	
2,300.0	2,298.9	2,250.0	2,223.6	4.1	6.8	179.01	-579.0	-326.8	730.5	720.5	10.01	72.955	
2,400.0	2,398.8	2,347.9	2,319.9	4.3	7.2	-179.85	-580.5	-344.5	744.6	734.2	10.44	71.302	
2,500.0	2,498.7	2,445.8	2,416.2	4.5	7.5	-178.75	-581.9	-362.1	759.1	748.2	10.87	69.838	
2,600.0	2,598.6	2,543.7	2,512.5	4.7	7.9	-177.69	-583.4	-379.7	773.8	762.5	11.29	68.536	
2,700.0	2,698.6	2,641.6	2,608.8	4.9	8.2	-176.67	-584.9	-397.4	788.8	777.1	11.71	67.374	
2,800.0	2,798.5	2,739.5	2,705.1	5.1	8.6	-175.69	-586.3	-415.0	804.0	791.9	12.12	66.335	
2,900.0	2,898.4	2,837.4	2,801.3	5.3	8.9	-174.74	-587.8	-432.6	819.4	806.9	12.53	65.402	
3,000.0	2,998.4	2,935.3	2,897.6	5.4	9.3	-173.83	-589.3	-450.2	835.1	822.2	12.93	64.564	
3,100.0	3,098.3	3,033.2	2,993.9	5.6	9.6	-172.95	-590.7	-467.9	850.9	837.6	13.34	63.808	
3,200.0	3,198.2	3,131.1	3,090.2	5.8	10.0	-172.11	-592.2	-485.5	867.0	853.3	13.73	63.125	
3,300.0	3,298.2	3,229.0	3,186.5	6.0	10.4	-171.29	-593.7	-503.1	883.2	869.1	14.13	62.507	
3,400.0	3,398.1	3,326.9	3,282.7	6.2	10.7	-170.50	-595.1	-520.8	899.6	885.1	14.52	61.947	
3,500.0	3,498.0	3,424.8	3,379.0	6.4	11.1	-169.74	-596.6	-538.4	916.2	901.3	14.91	61.438	
3,600.0	3,597.9	3,522.7	3,475.3	6.6	11.4	-169.01	-598.0	-556.0	932.9	917.6	15.30	60.976	
3,700.0	3,697.9	3,620.5	3,571.6	6.7	11.8	-168.30	-599.5	-573.7	949.7	934.1	15.68	60.555	
3,800.0	3,797.8	3,718.4	3,667.9	6.9	12.1	-167.62	-601.0	-591.3	966.7	950.7	16.07	60.171	
3,900.0	3,897.7	3,816.3	3,764.1	7.1	12.5	-166.96	-602.4	-608.9	983.9	967.4	16.45	59.820	
4,000.0	3,997.7	3,914.2	3,860.4	7.3	12.9	-166.33	-603.9	-626.6	1,001.1	984.3	16.83	59.499	
4,100.0	4,097.6	4,012.1	3,956.7	7.5	13.2	-165.71	-605.4	-644.2	1,018.5	1,001.3	17.20	59.206	
4,200.0	4,197.5	4,110.0	4,053.0	7.7	13.6	-165.12	-606.8	-661.8	1,036.0	1,018.4	17.58	58.937	
4,300.0	4,297.4	4,207.9	4,149.3	7.9	13.9	-164.54	-608.3	-679.4	1,053.5	1,035.6	17.95	58.691	
4,400.0	4,397.4	4,305.8	4,245.5	8.1	14.3	-163.99	-609.8	-697.1	1,071.2	1,052.9	18.32	58.465	
4,500.0	4,497.3	4,403.7	4,341.8	8.2	14.6	-163.45	-611.2	-714.7	1,089.0	1,070.3	18.69	58.257	
4,600.0	4,597.2	4,501.6	4,438.1	8.4	15.0	-162.93	-612.7	-732.3	1,106.9	1,087.8	19.06	58.066	
4,700.0	4,697.2	4,599.5	4,534.4	8.6	15.3	-162.42	-614.2	-750.0	1,124.8	1,105.4	19.43	57.891	
4,800.0	4,797.1	4,697.4	4,630.7	8.8	15.7	-161.93	-615.6	-767.6	1,142.9	1,123.1	19.80	57.730	
4,900.0	4,897.0	4,795.3	4,727.0	9.0	16.1	-161.46	-617.1	-785.2	1,161.0	1,140.8	20.16	57.581	
5,000.0	4,997.0	4,893.2	4,823.2	9.2	16.4	-161.00	-618.6	-802.9	1,179.2	1,158.7	20.53	57.444	
5,100.0	5,096.9	4,991.0	4,919.5	9.4	16.8	-160.55	-620.0	-820.5	1,197.4	1,176.6	20.89	57.318	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2B-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,088.9	5,015.8	9.5	17.1	-160.12	-621.5	-838.1	1,215.8	1,194.5	21.25	57.202	
5,300.0	5,296.7	5,186.8	5,112.1	9.7	17.5	-159.70	-623.0	-855.8	1,234.2	1,212.6	21.62	57.095	
5,400.0	5,396.7	5,284.7	5,208.4	9.9	17.8	-159.29	-624.4	-873.4	1,252.6	1,230.7	21.98	56.996	
5,500.0	5,496.6	5,382.6	5,304.6	10.1	18.2	-158.90	-625.9	-891.0	1,271.2	1,248.8	22.34	56.905	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2C-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-178.84	-553.7	-11.2	553.8				
100.0	100.0	100.0	100.0	0.2	0.2	-178.84	-553.7	-11.2	553.8	553.5	0.30	1,823.649	
200.0	200.0	200.0	200.0	0.3	0.3	-178.84	-553.7	-11.2	553.8	553.2	0.65	848.436	
300.0	300.0	300.0	300.0	0.5	0.5	-178.84	-553.7	-11.2	553.8	552.8	1.00	552.814	
400.0	400.0	400.0	400.0	0.7	0.7	-178.84	-553.7	-11.2	553.8	552.5	1.35	409.968	CC
500.0	500.0	497.3	497.3	0.8	0.8	-178.67	-553.9	-12.8	554.1	552.4	1.70	326.479	ES
600.0	600.0	594.4	594.3	1.0	1.0	-178.17	-554.5	-17.7	554.8	552.8	2.05	270.305	
700.0	700.0	690.9	690.4	1.2	1.2	152.20	-555.5	-25.8	557.7	555.3	2.43	229.355	
800.0	799.9	787.7	786.5	1.4	1.5	153.50	-556.8	-37.0	563.1	560.3	2.83	198.814	
900.0	899.8	886.6	884.7	1.6	1.7	154.87	-558.3	-49.2	569.0	565.8	3.25	175.053	
1,000.0	999.8	985.5	982.8	1.7	2.0	156.22	-559.8	-61.3	575.3	571.6	3.67	156.562	
1,100.0	1,099.7	1,084.3	1,080.9	1.9	2.2	157.54	-561.3	-73.4	581.8	577.7	4.10	141.868	
1,200.0	1,199.6	1,183.2	1,179.0	2.1	2.5	158.83	-562.7	-85.6	588.6	584.1	4.53	129.976	
1,300.0	1,299.6	1,282.1	1,277.1	2.3	2.8	160.09	-564.2	-97.7	595.8	590.8	4.96	120.196	
1,400.0	1,399.5	1,381.0	1,375.3	2.5	3.0	161.32	-565.7	-109.9	603.2	597.8	5.38	112.038	
1,500.0	1,499.4	1,479.9	1,473.4	2.7	3.3	162.52	-567.2	-122.0	610.9	605.1	5.81	105.150	
1,600.0	1,599.3	1,578.7	1,571.5	2.8	3.6	163.69	-568.6	-134.2	618.9	612.6	6.23	99.272	
1,700.0	1,699.3	1,677.6	1,669.6	3.0	3.8	164.83	-570.1	-146.3	627.1	620.4	6.66	94.207	
1,800.0	1,799.2	1,776.5	1,767.7	3.2	4.1	165.95	-571.6	-158.5	635.5	628.5	7.08	89.808	
1,900.0	1,899.1	1,875.4	1,865.9	3.4	4.4	167.03	-573.1	-170.6	644.2	636.7	7.49	85.958	
2,000.0	1,999.1	1,974.3	1,964.0	3.6	4.6	168.08	-574.5	-182.8	653.2	645.2	7.91	82.567	
2,100.0	2,099.0	2,073.1	2,062.1	3.8	4.9	169.11	-576.0	-194.9	662.3	654.0	8.32	79.563	
2,200.0	2,198.9	2,172.0	2,160.2	4.0	5.2	170.10	-577.5	-207.0	671.6	662.9	8.74	76.887	
2,300.0	2,298.9	2,270.9	2,258.3	4.1	5.5	171.07	-579.0	-219.2	681.2	672.0	9.14	74.493	
2,400.0	2,398.8	2,369.8	2,356.5	4.3	5.7	172.02	-580.5	-231.3	690.9	681.4	9.55	72.340	
2,500.0	2,498.7	2,468.7	2,454.6	4.5	6.0	172.93	-581.9	-243.5	700.8	690.9	9.96	70.398	
2,600.0	2,598.6	2,567.5	2,552.7	4.7	6.3	173.83	-583.4	-255.6	710.9	700.6	10.36	68.638	
2,700.0	2,698.6	2,666.4	2,650.8	4.9	6.6	174.69	-584.9	-267.8	721.2	710.4	10.76	67.040	
2,800.0	2,798.5	2,765.3	2,748.9	5.1	6.8	175.54	-586.4	-279.9	731.6	720.5	11.16	65.582	
2,900.0	2,898.4	2,864.2	2,847.1	5.3	7.1	176.36	-587.8	-292.1	742.2	730.6	11.55	64.249	
3,000.0	2,998.4	2,963.1	2,945.2	5.4	7.4	177.15	-589.3	-304.2	752.9	741.0	11.95	63.027	
3,100.0	3,098.3	3,061.9	3,043.3	5.6	7.7	177.93	-590.8	-316.4	763.8	751.4	12.34	61.904	
3,200.0	3,198.2	3,160.8	3,141.4	5.8	7.9	178.68	-592.3	-328.5	774.8	762.0	12.73	60.870	
3,300.0	3,298.2	3,259.7	3,239.5	6.0	8.2	179.41	-593.7	-340.6	785.9	772.8	13.12	59.915	
3,400.0	3,398.1	3,358.6	3,337.7	6.2	8.5	-179.88	-595.2	-352.8	797.2	783.7	13.50	59.031	
3,500.0	3,498.0	3,457.5	3,435.8	6.4	8.8	-179.19	-596.7	-364.9	808.5	794.6	13.89	58.212	
3,600.0	3,597.9	3,556.3	3,533.9	6.6	9.0	-178.52	-598.2	-377.1	820.0	805.7	14.27	57.451	
3,700.0	3,697.9	3,655.2	3,632.0	6.7	9.3	-177.86	-599.6	-389.2	831.6	817.0	14.66	56.744	
3,800.0	3,797.8	3,754.1	3,730.1	6.9	9.6	-177.23	-601.1	-401.4	843.3	828.3	15.04	56.084	
3,900.0	3,897.7	3,853.0	3,828.3	7.1	9.9	-176.61	-602.6	-413.5	855.1	839.7	15.42	55.468	
4,000.0	3,997.7	3,951.9	3,926.4	7.3	10.1	-176.01	-604.1	-425.7	867.0	851.2	15.79	54.892	
4,100.0	4,097.6	4,050.7	4,024.5	7.5	10.4	-175.42	-605.5	-437.8	879.0	862.8	16.17	54.354	
4,200.0	4,197.5	4,149.6	4,122.6	7.7	10.7	-174.85	-607.0	-450.0	891.1	874.5	16.55	53.848	
4,300.0	4,297.4	4,248.5	4,220.7	7.9	11.0	-174.30	-608.5	-462.1	903.2	886.3	16.92	53.374	
4,400.0	4,397.4	4,347.4	4,318.9	8.1	11.2	-173.76	-610.0	-474.2	915.5	898.2	17.30	52.928	
4,500.0	4,497.3	4,446.2	4,417.0	8.2	11.5	-173.23	-611.4	-486.4	927.8	910.1	17.67	52.509	
4,600.0	4,597.2	4,545.1	4,515.1	8.4	11.8	-172.72	-612.9	-498.5	940.2	922.2	18.04	52.113	
4,700.0	4,697.2	4,644.0	4,613.2	8.6	12.1	-172.22	-614.4	-510.7	952.7	934.3	18.41	51.741	
4,800.0	4,797.1	4,742.9	4,711.3	8.8	12.3	-171.74	-615.9	-522.8	965.2	946.4	18.78	51.388	
4,900.0	4,897.0	4,841.8	4,809.5	9.0	12.6	-171.26	-617.3	-535.0	977.8	958.7	19.15	51.056	
5,000.0	4,997.0	4,940.6	4,907.6	9.2	12.9	-170.80	-618.8	-547.1	990.5	971.0	19.52	50.741	
5,100.0	5,096.9	5,039.5	5,005.7	9.4	13.2	-170.35	-620.3	-559.3	1,003.2	983.3	19.89	50.442	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2C-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,138.4	5,103.8	9.5	13.4	-169.91	-621.8	-571.4	1,016.0	995.8	20.26	50.160	
5,300.0	5,296.7	5,237.3	5,201.9	9.7	13.7	-169.48	-623.2	-583.6	1,028.9	1,008.3	20.62	49.891	
5,400.0	5,396.7	5,336.2	5,300.1	9.9	14.0	-169.07	-624.7	-595.7	1,041.8	1,020.8	20.99	49.637	
5,500.0	5,496.6	5,435.0	5,398.2	10.1	14.3	-168.66	-626.2	-607.8	1,054.7	1,033.4	21.35	49.394	
5,600.0	5,596.5	5,533.9	5,496.3	10.3	14.5	-168.26	-627.7	-620.0	1,067.8	1,046.0	21.72	49.164	
5,700.0	5,696.5	5,632.8	5,594.4	10.5	14.8	-167.88	-629.1	-632.1	1,080.8	1,058.7	22.08	48.945	
5,800.0	5,796.4	5,731.7	5,692.5	10.7	15.1	-167.50	-630.6	-644.3	1,093.9	1,071.5	22.45	48.735	
5,900.0	5,896.3	5,830.6	5,790.7	10.8	15.4	-167.13	-632.1	-656.4	1,107.1	1,084.3	22.81	48.536	
6,000.0	5,996.3	5,929.4	5,888.8	11.0	15.6	-166.77	-633.6	-668.6	1,120.3	1,097.1	23.17	48.346	
6,100.0	6,096.2	6,028.3	5,986.9	11.2	15.9	-166.41	-635.0	-680.7	1,133.5	1,110.0	23.53	48.164	
6,200.0	6,196.1	6,127.2	6,085.0	11.4	16.2	-166.07	-636.5	-692.9	1,146.8	1,122.9	23.90	47.991	
6,300.0	6,296.0	6,226.1	6,183.1	11.6	16.5	-165.73	-638.0	-705.0	1,160.1	1,135.9	24.26	47.825	
6,400.0	6,396.0	6,325.0	6,281.3	11.8	16.7	-165.40	-639.5	-717.2	1,173.5	1,148.9	24.62	47.666	
6,500.0	6,495.9	6,423.8	6,379.4	12.0	17.0	-165.08	-640.9	-729.3	1,186.9	1,161.9	24.98	47.514	
6,600.0	6,595.8	7,904.4	7,269.0	12.1	24.1	-122.28	183.7	-846.7	1,172.5	1,141.1	31.38	37.360	
6,700.0	6,695.6	7,901.0	7,269.0	12.3	24.1	101.85	180.2	-846.7	1,119.7	1,089.1	30.59	36.606	
6,800.0	6,793.4	7,880.4	7,269.0	12.4	23.9	100.55	159.7	-846.5	1,074.3	1,044.6	29.72	36.146	
6,900.0	6,886.0	7,843.2	7,269.0	12.4	23.5	101.15	122.5	-846.2	1,037.6	1,008.6	29.00	35.774	
7,000.0	6,970.8	7,790.5	7,269.0	12.4	23.0	100.84	69.7	-845.7	1,010.0	981.6	28.44	35.509	
7,100.0	7,045.2	7,723.8	7,269.0	12.5	22.4	99.61	3.0	-845.2	990.9	962.8	28.05	35.328	
7,200.0	7,106.9	7,643.2	7,269.0	12.8	21.7	97.78	-77.6	-844.4	978.6	950.8	27.75	35.261	
7,300.0	7,153.9	7,498.8	7,250.0	13.3	20.6	93.72	-220.2	-840.9	968.5	941.2	27.28	35.501	
7,400.0	7,185.0	7,382.3	7,209.2	13.9	19.9	90.28	-329.0	-834.8	958.8	931.6	27.25	35.189	
7,500.0	7,199.1	7,283.5	7,158.1	14.7	19.4	87.29	-413.2	-827.8	950.7	923.1	27.56	34.499	
7,600.0	7,200.0	7,199.2	7,103.7	15.7	19.1	84.15	-477.0	-820.5	944.8	916.6	28.17	33.539	
7,667.6	7,200.0	7,153.0	7,070.2	16.5	19.0	82.09	-508.4	-816.1	943.4	914.7	28.74	32.831	
7,700.0	7,200.0	7,133.6	7,055.3	16.9	18.9	81.18	-520.8	-814.1	943.8	914.8	29.02	32.525	
7,800.0	7,200.0	7,082.6	7,014.4	18.1	18.7	78.68	-550.7	-808.8	949.5	919.5	29.99	31.657	
7,900.0	7,200.0	7,042.4	6,980.5	19.4	18.6	76.61	-571.7	-804.4	963.0	931.9	31.06	31.007	
8,000.0	7,200.0	7,010.3	6,952.3	20.7	18.6	74.90	-586.7	-800.8	984.7	952.5	32.19	30.586	
8,100.0	7,200.0	6,984.1	6,928.7	22.2	18.5	73.49	-597.8	-797.7	1,014.5	981.2	33.38	30.389	SF
8,200.0	7,200.0	6,962.4	6,908.9	23.6	18.4	72.31	-606.0	-795.2	1,052.2	1,017.5	34.62	30.392	
8,300.0	7,200.0	6,950.0	6,897.3	25.1	18.4	71.63	-610.5	-793.7	1,097.0	1,061.1	35.95	30.519	
8,400.0	7,200.0	6,928.9	6,877.5	26.7	18.4	70.46	-617.4	-791.2	1,148.3	1,111.1	37.20	30.872	
8,500.0	7,200.0	6,915.7	6,865.0	28.2	18.3	69.73	-621.4	-789.6	1,205.4	1,166.8	38.53	31.288	
8,600.0	7,200.0	6,900.0	6,850.1	29.8	18.3	68.86	-625.7	-787.8	1,267.5	1,227.7	39.83	31.826	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2D-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.71	-553.7	-2.8	553.7				
100.0	100.0	100.0	100.0	0.2	0.2	-179.71	-553.7	-2.8	553.7	553.4	0.30	1,823.301	
200.0	200.0	200.0	200.0	0.3	0.3	-179.71	-553.7	-2.8	553.7	553.1	0.65	848.274	
300.0	300.0	300.0	300.0	0.5	0.5	-179.71	-553.7	-2.8	553.7	552.7	1.00	552.708	
400.0	400.0	400.0	400.0	0.7	0.7	-179.71	-553.7	-2.8	553.7	552.4	1.35	409.890	CC, ES
500.0	500.0	496.2	496.1	0.8	0.8	-179.55	-554.0	-4.4	554.1	552.4	1.70	326.858	
600.0	600.0	592.1	591.9	1.0	1.0	-179.06	-555.0	-9.1	555.1	553.1	2.05	270.788	
700.0	700.0	691.0	690.6	1.2	1.2	151.20	-556.4	-16.1	558.3	555.9	2.42	230.794	
800.0	799.9	790.4	789.8	1.4	1.4	152.10	-557.9	-23.3	563.3	560.5	2.79	201.587	
900.0	899.8	889.9	889.0	1.6	1.6	152.99	-559.3	-30.4	568.5	565.3	3.17	179.168	
1,000.0	999.8	989.4	988.2	1.7	1.8	153.86	-560.8	-37.5	573.8	570.3	3.55	161.489	
1,100.0	1,099.7	1,088.9	1,087.4	1.9	2.0	154.71	-562.3	-44.7	579.3	575.3	3.93	147.229	
1,200.0	1,199.6	1,188.4	1,186.6	2.1	2.3	155.55	-563.7	-51.8	584.8	580.5	4.32	135.505	
1,300.0	1,299.6	1,287.8	1,285.8	2.3	2.5	156.38	-565.2	-59.0	590.5	585.8	4.70	125.710	
1,400.0	1,399.5	1,387.3	1,385.0	2.5	2.7	157.19	-566.6	-66.1	596.3	591.3	5.08	117.416	
1,500.0	1,499.4	1,486.8	1,484.2	2.7	2.9	157.98	-568.1	-73.2	602.3	596.8	5.46	110.308	
1,600.0	1,599.3	1,586.3	1,583.5	2.8	3.1	158.76	-569.6	-80.4	608.3	602.5	5.84	104.156	
1,700.0	1,699.3	1,685.7	1,682.7	3.0	3.3	159.52	-571.0	-87.5	614.5	608.3	6.22	98.782	
1,800.0	1,799.2	1,785.2	1,781.9	3.2	3.5	160.26	-572.5	-94.6	620.8	614.2	6.60	94.052	
1,900.0	1,899.1	1,884.7	1,881.1	3.4	3.7	161.00	-573.9	-101.8	627.1	620.1	6.98	89.860	
2,000.0	1,999.1	1,984.2	1,980.3	3.6	4.0	161.71	-575.4	-108.9	633.6	626.2	7.36	86.120	
2,100.0	2,099.0	2,083.7	2,079.5	3.8	4.2	162.42	-576.8	-116.0	640.2	632.4	7.73	82.767	
2,200.0	2,198.9	2,183.1	2,178.7	4.0	4.4	163.10	-578.3	-123.2	646.8	638.7	8.11	79.743	
2,300.0	2,298.9	2,282.6	2,277.9	4.1	4.6	163.78	-579.8	-130.3	653.6	645.1	8.49	77.006	
2,400.0	2,398.8	2,382.1	2,377.1	4.3	4.8	164.44	-581.2	-137.4	660.4	651.6	8.86	74.516	
2,500.0	2,498.7	2,481.6	2,476.4	4.5	5.0	165.08	-582.7	-144.6	667.3	658.1	9.24	72.244	
2,600.0	2,598.6	2,581.0	2,575.6	4.7	5.2	165.72	-584.1	-151.7	674.4	664.7	9.61	70.162	
2,700.0	2,698.6	2,680.5	2,674.8	4.9	5.5	166.34	-585.6	-158.8	681.5	671.5	9.98	68.249	
2,800.0	2,798.5	2,780.0	2,774.0	5.1	5.7	166.95	-587.0	-166.0	688.6	678.3	10.36	66.486	
2,900.0	2,898.4	2,879.5	2,873.2	5.3	5.9	167.54	-588.5	-173.1	695.9	685.1	10.73	64.856	
3,000.0	2,998.4	2,978.9	2,972.4	5.4	6.1	168.12	-590.0	-180.2	703.2	692.1	11.10	63.346	
3,100.0	3,098.3	3,078.4	3,071.6	5.6	6.3	168.69	-591.4	-187.4	710.6	699.1	11.47	61.943	
3,200.0	3,198.2	3,177.9	3,170.8	5.8	6.5	169.25	-592.9	-194.5	718.0	706.2	11.84	60.637	
3,300.0	3,298.2	3,277.4	3,270.0	6.0	6.7	169.80	-594.3	-201.7	725.6	713.4	12.21	59.418	
3,400.0	3,398.1	3,376.9	3,369.2	6.2	7.0	170.34	-595.8	-208.8	733.2	720.6	12.58	58.279	
3,500.0	3,498.0	3,476.3	3,468.5	6.4	7.2	170.86	-597.2	-215.9	740.8	727.9	12.95	57.212	
3,600.0	3,597.9	3,575.8	3,567.7	6.6	7.4	171.38	-598.7	-223.1	748.5	735.2	13.32	56.211	
3,700.0	3,697.9	3,675.3	3,666.9	6.7	7.6	171.88	-600.2	-230.2	756.3	742.6	13.68	55.270	
3,800.0	3,797.8	3,774.8	3,766.1	6.9	7.8	172.38	-601.6	-237.3	764.1	750.1	14.05	54.384	
3,900.0	3,897.7	3,874.2	3,865.3	7.1	8.0	172.86	-603.1	-244.5	772.0	757.6	14.42	53.550	
4,000.0	3,997.7	3,973.7	3,964.5	7.3	8.3	173.33	-604.5	-251.6	780.0	765.2	14.78	52.762	
4,100.0	4,097.6	4,073.2	4,063.7	7.5	8.5	173.80	-606.0	-258.7	788.0	772.8	15.15	52.016	
4,200.0	4,197.5	4,172.7	4,162.9	7.7	8.7	174.25	-607.5	-265.9	796.0	780.5	15.51	51.311	
4,300.0	4,297.4	4,272.2	4,262.1	7.9	8.9	174.70	-608.9	-273.0	804.1	788.2	15.88	50.643	
4,400.0	4,397.4	4,371.6	4,361.4	8.1	9.1	175.14	-610.4	-280.1	812.2	796.0	16.24	50.009	
4,500.0	4,497.3	4,471.1	4,460.6	8.2	9.3	175.57	-611.8	-287.3	820.4	803.8	16.61	49.406	
4,600.0	4,597.2	4,570.6	4,559.8	8.4	9.5	175.99	-613.3	-294.4	828.6	811.7	16.97	48.834	
4,700.0	4,697.2	4,670.1	4,659.0	8.6	9.8	176.40	-614.7	-301.5	836.9	819.6	17.33	48.288	
4,800.0	4,797.1	4,769.5	4,758.2	8.8	10.0	176.80	-616.2	-308.7	845.2	827.5	17.69	47.769	
4,900.0	4,897.0	4,869.0	4,857.4	9.0	10.2	177.20	-617.7	-315.8	853.6	835.5	18.06	47.273	
5,000.0	4,997.0	4,968.5	4,956.6	9.2	10.4	177.59	-619.1	-323.0	862.0	843.6	18.42	46.800	
5,100.0	5,096.9	5,068.0	5,055.8	9.4	10.6	177.97	-620.6	-330.1	870.4	851.7	18.78	46.349	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2D-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,167.5	5,155.0	9.5	10.8	178.34	-622.0	-337.2	878.9	859.8	19.14	45.916	
5,300.0	5,296.7	5,266.9	5,254.3	9.7	11.1	178.71	-623.5	-344.4	887.4	867.9	19.50	45.503	
5,400.0	5,396.7	5,366.4	5,353.5	9.9	11.3	179.07	-624.9	-351.5	896.0	876.1	19.86	45.107	
5,500.0	5,496.6	5,465.9	5,452.7	10.1	11.5	179.42	-626.4	-358.6	904.5	884.3	20.22	44.727	
5,600.0	5,596.5	5,565.4	5,551.9	10.3	11.7	179.76	-627.9	-365.8	913.2	892.6	20.58	44.363	
5,700.0	5,696.5	5,664.8	5,651.1	10.5	11.9	-179.90	-629.3	-372.9	921.8	900.9	20.94	44.013	
5,800.0	5,796.4	5,764.3	5,750.3	10.7	12.1	-179.56	-630.8	-380.0	930.5	909.2	21.30	43.678	
5,900.0	5,896.3	5,863.8	5,849.5	10.8	12.3	-179.24	-632.2	-387.2	939.2	917.5	21.66	43.355	
6,000.0	5,996.3	5,963.3	5,948.7	11.0	12.6	-178.92	-633.7	-394.3	947.9	925.9	22.02	43.044	
6,100.0	6,096.2	6,062.8	6,047.9	11.2	12.8	-178.60	-635.2	-401.4	956.7	934.3	22.38	42.746	
6,200.0	6,196.1	6,162.2	6,147.1	11.4	13.0	-178.29	-636.6	-408.6	965.5	942.8	22.74	42.458	
6,300.0	6,296.0	6,261.7	6,246.4	11.6	13.2	-177.99	-638.1	-415.7	974.3	951.2	23.10	42.181	
6,400.0	6,396.0	6,361.2	6,345.6	11.8	13.4	-177.69	-639.5	-422.8	983.2	959.7	23.46	41.914	
6,500.0	6,495.9	6,460.7	6,444.8	12.0	13.6	-177.40	-641.0	-430.0	992.1	968.2	23.82	41.656	
6,600.0	6,595.8	6,560.1	6,544.0	12.1	13.8	-177.11	-642.4	-437.1	1,001.0	976.8	24.17	41.407	
6,700.0	6,695.6	8,022.8	7,410.0	12.3	21.2	106.64	193.9	-492.0	937.5	906.8	30.65	30.581	
6,800.0	6,793.4	8,002.3	7,410.0	12.4	21.0	109.50	173.4	-492.2	866.6	837.1	29.46	29.415	
6,900.0	6,886.0	7,965.1	7,410.0	12.4	20.5	112.85	136.2	-492.5	804.6	776.2	28.43	28.302	
7,000.0	6,970.8	7,912.3	7,410.0	12.4	19.9	114.26	83.5	-493.0	753.5	725.9	27.58	27.317	
7,100.0	7,045.2	7,845.7	7,410.0	12.5	19.2	114.04	16.8	-493.5	713.9	686.9	26.98	26.462	
7,200.0	7,106.9	7,767.1	7,410.0	12.8	18.4	112.77	-61.7	-494.2	685.5	658.8	26.61	25.760	
7,300.0	7,153.9	7,599.4	7,388.9	13.3	16.9	106.96	-227.6	-494.2	662.2	635.8	26.40	25.085	
7,400.0	7,185.0	7,461.8	7,336.6	13.9	16.1	101.40	-354.4	-491.5	639.0	612.3	26.72	23.916	
7,500.0	7,199.1	7,352.4	7,274.3	14.7	15.6	96.54	-444.1	-487.8	619.6	592.2	27.38	22.629	
7,600.0	7,200.0	7,263.3	7,211.8	15.7	15.3	91.12	-507.3	-483.9	605.8	577.5	28.26	21.435	
7,700.0	7,200.0	7,197.3	7,159.6	16.9	15.1	86.14	-547.5	-480.5	599.9	570.7	29.23	20.526	
7,705.5	7,200.0	7,194.2	7,157.0	16.9	15.1	85.89	-549.3	-480.3	599.9	570.6	29.29	20.484	
7,800.0	7,200.0	7,150.0	7,119.5	18.1	15.0	82.31	-572.5	-477.8	605.3	575.0	30.25	20.008	
7,900.0	7,200.0	7,110.2	7,084.4	19.4	14.9	78.97	-590.8	-475.5	623.4	592.1	31.30	19.917 SF	
8,000.0	7,200.0	7,080.7	7,057.4	20.7	14.9	76.44	-602.9	-473.6	654.1	621.7	32.40	20.190	
8,100.0	7,200.0	7,050.0	7,028.8	22.2	14.8	73.80	-613.9	-471.7	696.6	663.1	33.46	20.816	
8,200.0	7,200.0	7,037.7	7,017.2	23.6	14.8	72.74	-617.9	-470.9	749.0	714.3	34.73	21.568	
8,300.0	7,200.0	7,021.6	7,001.9	25.1	14.8	71.36	-622.7	-469.8	809.7	773.8	35.94	22.528	
8,400.0	7,200.0	7,000.0	6,981.2	26.7	14.8	69.51	-628.5	-468.4	877.3	840.2	37.06	23.671	
8,500.0	7,200.0	7,000.0	6,981.2	28.2	14.8	69.51	-628.5	-468.4	950.1	911.6	38.53	24.661	
8,600.0	7,200.0	7,000.0	6,981.2	29.8	14.8	69.51	-628.5	-468.4	1,027.5	987.5	40.01	25.681	
8,700.0	7,200.0	6,978.0	6,959.8	31.4	14.7	67.65	-633.6	-466.9	1,108.0	1,066.9	41.08	26.970	
8,800.0	7,200.0	6,970.4	6,952.4	33.0	14.7	67.01	-635.1	-466.4	1,191.4	1,149.0	42.42	28.089	
8,900.0	7,200.0	6,950.0	6,932.4	34.7	14.7	65.32	-638.9	-465.0	1,277.4	1,233.9	43.45	29.401	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2E-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	179.13	-553.7	8.4	553.8				
100.0	100.0	100.0	100.0	0.2	0.2	179.13	-553.7	8.4	553.8	553.5	0.30	1,823.487	
200.0	200.0	200.0	200.0	0.3	0.3	179.13	-553.7	8.4	553.8	553.1	0.65	848.361	
300.0	300.0	300.0	300.0	0.5	0.5	179.13	-553.7	8.4	553.8	552.8	1.00	552.765	
400.0	400.0	400.0	400.0	0.7	0.7	179.13	-553.7	8.4	553.8	552.4	1.35	409.931	
500.0	500.0	500.0	500.0	0.8	0.8	179.13	-553.7	8.4	553.8	552.1	1.70	325.757	
600.0	600.0	600.0	600.0	1.0	1.0	179.13	-553.7	8.4	553.8	551.7	2.05	270.261	
700.0	700.0	700.0	700.0	1.2	1.2	148.69	-553.7	8.4	555.3	552.9	2.40	231.564	
800.0	799.9	799.9	799.9	1.4	1.4	148.89	-553.7	8.4	558.5	555.7	2.75	203.235	
900.0	899.8	899.8	899.8	1.6	1.5	149.09	-553.7	8.4	561.7	558.6	3.10	181.279	
1,000.0	999.8	999.8	999.8	1.7	1.7	149.28	-553.7	8.4	564.9	561.4	3.45	163.774	
1,100.0	1,099.7	1,099.7	1,099.7	1.9	1.9	149.47	-553.7	8.4	568.1	564.3	3.80	149.497	
1,200.0	1,199.6	1,199.6	1,199.6	2.1	2.1	149.67	-553.7	8.4	571.4	567.2	4.15	137.631	
1,300.0	1,299.6	1,299.6	1,299.6	2.3	2.2	149.85	-553.7	8.4	574.6	570.1	4.50	127.615	
1,400.0	1,399.5	1,399.5	1,399.5	2.5	2.4	150.04	-553.7	8.4	577.8	573.0	4.85	119.049	
1,500.0	1,499.4	1,499.4	1,499.4	2.7	2.6	150.23	-553.7	8.4	581.1	575.9	5.21	111.640	
1,600.0	1,599.3	1,599.3	1,599.3	2.8	2.8	150.41	-553.7	8.4	584.3	578.8	5.56	105.168	
1,700.0	1,699.3	1,699.3	1,699.3	3.0	2.9	150.59	-553.7	8.4	587.6	581.7	5.91	99.468	
1,800.0	1,799.2	1,799.2	1,799.2	3.2	3.1	150.77	-553.7	8.4	590.9	584.6	6.26	94.408	
1,900.0	1,899.1	1,899.1	1,899.1	3.4	3.3	150.94	-553.7	8.4	594.2	587.5	6.61	89.887	
2,000.0	1,999.1	1,999.1	1,999.1	3.6	3.5	151.12	-553.7	8.4	597.4	590.5	6.96	85.823	
2,100.0	2,099.0	2,099.0	2,099.0	3.8	3.6	151.29	-553.7	8.4	600.7	593.4	7.31	82.151	
2,200.0	2,198.9	2,198.9	2,198.9	4.0	3.8	151.46	-553.7	8.4	604.0	596.4	7.66	78.816	
2,300.0	2,298.9	2,298.9	2,298.9	4.1	4.0	151.63	-553.7	8.4	607.3	599.3	8.01	75.775	
2,400.0	2,398.8	2,398.8	2,398.8	4.3	4.2	151.80	-553.7	8.4	610.6	602.2	8.37	72.989	
2,500.0	2,498.7	2,498.7	2,498.7	4.5	4.3	151.96	-553.7	8.4	613.9	605.2	8.72	70.429	
2,600.0	2,598.6	2,598.6	2,598.6	4.7	4.5	152.13	-553.7	8.4	617.2	608.2	9.07	68.068	
2,700.0	2,698.6	2,698.6	2,698.6	4.9	4.7	152.29	-553.7	8.4	620.5	611.1	9.42	65.884	
2,800.0	2,798.5	2,798.5	2,798.5	5.1	4.9	152.45	-553.7	8.4	623.9	614.1	9.77	63.858	
2,900.0	2,898.4	2,898.4	2,898.4	5.3	5.0	152.61	-553.7	8.4	627.2	617.1	10.12	61.972	
3,000.0	2,998.4	2,998.4	2,998.4	5.4	5.2	152.76	-553.7	8.4	630.5	620.1	10.47	60.214	
3,100.0	3,098.3	3,098.3	3,098.3	5.6	5.4	152.92	-553.7	8.4	633.9	623.0	10.82	58.570	
3,200.0	3,198.2	3,198.2	3,198.2	5.8	5.6	153.07	-553.7	8.4	637.2	626.0	11.17	57.030	
3,300.0	3,298.2	3,298.2	3,298.2	6.0	5.7	153.22	-553.7	8.4	640.6	629.0	11.52	55.585	
3,400.0	3,398.1	3,398.1	3,398.1	6.2	5.9	153.37	-553.7	8.4	643.9	632.0	11.87	54.225	
3,500.0	3,498.0	3,498.0	3,498.0	6.4	6.1	153.52	-553.7	8.4	647.3	635.0	12.23	52.944	
3,600.0	3,597.9	3,597.9	3,597.9	6.6	6.3	153.67	-553.7	8.4	650.6	638.0	12.58	51.735	
3,700.0	3,697.9	3,697.9	3,697.9	6.7	6.4	153.82	-553.7	8.4	654.0	641.1	12.93	50.592	
3,800.0	3,797.8	3,797.8	3,797.8	6.9	6.6	153.96	-553.7	8.4	657.3	644.1	13.28	49.510	
3,900.0	3,897.7	3,897.7	3,897.7	7.1	6.8	154.10	-553.7	8.4	660.7	647.1	13.63	48.484	
4,000.0	3,997.7	3,997.7	3,997.7	7.3	7.0	154.24	-553.7	8.4	664.1	650.1	13.98	47.510	
4,100.0	4,097.6	4,097.6	4,097.6	7.5	7.1	154.38	-553.7	8.4	667.5	653.1	14.33	46.583	
4,200.0	4,197.5	4,197.5	4,197.5	7.7	7.3	154.52	-553.7	8.4	670.9	656.2	14.68	45.702	
4,300.0	4,297.4	4,297.4	4,297.4	7.9	7.5	154.66	-553.7	8.4	674.2	659.2	15.03	44.862	
4,400.0	4,397.4	4,397.4	4,397.4	8.1	7.7	154.79	-553.7	8.4	677.6	662.3	15.38	44.060	
4,500.0	4,497.3	4,497.3	4,497.3	8.2	7.8	154.93	-553.7	8.4	681.0	665.3	15.73	43.295	
4,600.0	4,597.2	4,597.2	4,597.2	8.4	8.0	155.06	-553.7	8.4	684.4	668.3	16.08	42.563	
4,700.0	4,697.2	4,697.2	4,697.2	8.6	8.2	155.19	-553.7	8.4	687.8	671.4	16.43	41.863	
4,800.0	4,797.1	4,797.1	4,797.1	8.8	8.3	155.32	-553.7	8.4	691.2	674.4	16.78	41.192	
4,900.0	4,897.0	4,897.0	4,897.0	9.0	8.5	155.45	-553.7	8.4	694.6	677.5	17.13	40.549	
5,000.0	4,997.0	4,997.0	4,997.0	9.2	8.7	155.58	-553.7	8.4	698.1	680.6	17.48	39.932	
5,100.0	5,096.9	5,078.4	5,078.3	9.4	8.8	155.71	-554.7	8.0	702.7	684.9	17.80	39.482	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2E-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,158.9	5,158.8	9.5	9.0	155.88	-557.8	6.8	710.2	692.0	18.11	39.203	
5,300.0	5,296.7	5,249.4	5,249.1	9.7	9.1	156.11	-563.3	4.6	719.9	701.4	18.45	39.023	
5,400.0	5,396.7	5,348.9	5,348.4	9.9	9.3	156.37	-569.7	2.1	729.9	711.1	18.80	38.834	
5,500.0	5,496.6	5,448.3	5,447.6	10.1	9.5	156.62	-576.0	-0.4	740.0	720.8	19.14	38.652	
5,600.0	5,596.5	5,547.7	5,546.8	10.3	9.7	156.87	-582.3	-2.9	750.0	730.5	19.49	38.478	
5,700.0	5,696.5	5,647.2	5,646.0	10.5	9.9	157.10	-588.6	-5.4	760.1	740.3	19.84	38.310	
5,800.0	5,796.4	5,746.6	5,745.2	10.7	10.0	157.33	-595.0	-7.9	770.2	750.0	20.19	38.149	
5,900.0	5,896.3	5,846.1	5,844.4	10.8	10.2	157.56	-601.3	-10.4	780.3	759.8	20.54	37.994	
6,000.0	5,996.3	5,945.5	5,943.6	11.0	10.4	157.78	-607.6	-12.9	790.4	769.5	20.89	37.845	
6,100.0	6,096.2	6,045.0	6,042.8	11.2	10.6	157.99	-613.9	-15.4	800.6	779.3	21.23	37.700	
6,200.0	6,196.1	6,144.4	6,142.0	11.4	10.8	158.20	-620.3	-18.0	810.7	789.1	21.58	37.562	
6,300.0	6,296.0	6,243.8	6,241.2	11.6	11.0	158.40	-626.6	-20.5	820.8	798.9	21.93	37.428	
6,400.0	6,396.0	7,796.6	7,203.0	11.8	19.0	-129.25	185.6	-44.7	821.6	791.1	30.53	26.908	
6,500.0	6,495.9	7,799.8	7,203.0	12.0	19.1	-128.18	188.8	-44.7	724.1	693.3	30.78	23.524	
6,600.0	6,595.8	7,803.0	7,203.0	12.1	19.1	-127.10	192.0	-44.7	627.4	596.3	31.03	20.219	
6,700.0	6,695.6	7,799.6	7,203.0	12.3	19.1	118.11	188.6	-44.7	531.9	501.4	30.52	17.430	
6,800.0	6,793.4	7,779.0	7,203.0	12.4	18.8	128.29	168.1	-44.7	440.3	411.4	28.92	15.222	
6,900.0	6,886.0	7,741.8	7,203.0	12.4	18.3	132.17	130.9	-44.7	356.4	328.7	27.66	12.883	
7,000.0	6,970.8	7,689.1	7,203.0	12.4	17.6	130.79	78.1	-44.7	284.2	257.4	26.81	10.601	
7,100.0	7,045.2	7,622.4	7,203.0	12.5	16.8	125.18	11.5	-44.7	228.2	201.6	26.51	8.607	
7,200.0	7,106.9	7,543.9	7,203.0	12.8	15.9	116.07	-67.1	-44.7	191.2	164.4	26.79	7.135	
7,300.0	7,153.9	7,448.4	7,196.7	13.3	14.9	102.45	-162.2	-44.6	170.8	143.3	27.48	6.216	
7,390.0	7,182.7	7,368.0	7,179.2	13.8	14.1	88.76	-240.6	-44.1	164.6	136.8	27.79	5.924	CC, ES, SF
7,400.0	7,185.0	7,359.5	7,176.7	13.9	14.1	87.24	-248.8	-44.1	164.7	136.9	27.76	5.932	
7,500.0	7,199.1	7,276.9	7,146.4	14.7	13.4	72.51	-325.6	-43.3	173.0	145.9	27.11	6.382	
7,600.0	7,200.0	7,200.0	7,108.6	15.7	13.0	60.53	-392.4	-42.3	193.8	167.9	25.97	7.463	
7,700.0	7,200.0	7,135.6	7,070.2	16.9	12.7	51.01	-444.1	-41.4	230.8	205.9	24.87	9.280	
7,800.0	7,200.0	7,080.8	7,033.2	18.1	12.5	43.64	-484.5	-40.4	282.4	258.4	23.94	11.794	
7,900.0	7,200.0	7,034.8	6,999.3	19.4	12.3	38.20	-515.4	-39.6	345.1	321.8	23.31	14.808	
8,000.0	7,200.0	7,000.0	6,972.0	20.7	12.2	34.56	-537.1	-38.9	416.0	393.0	23.05	18.052	
8,100.0	7,200.0	6,963.6	6,942.1	22.2	12.2	31.19	-557.8	-38.1	492.7	470.0	22.77	21.643	
8,200.0	7,200.0	6,935.9	6,918.5	23.6	12.1	28.90	-572.4	-37.5	573.8	551.0	22.74	25.229	
8,300.0	7,200.0	6,900.0	6,887.0	25.1	12.1	26.26	-589.4	-36.7	658.3	635.8	22.52	29.228	
8,400.0	7,200.0	6,900.0	6,887.0	26.7	12.1	26.26	-589.4	-36.7	745.0	721.8	23.20	32.114	
8,500.0	7,200.0	6,873.6	6,863.1	28.2	12.0	24.54	-600.7	-36.1	833.6	810.4	23.20	35.928	
8,600.0	7,200.0	6,850.0	6,841.4	29.8	12.0	23.12	-609.9	-35.6	924.0	900.8	23.27	39.702	
8,700.0	7,200.0	6,850.0	6,841.4	31.4	12.0	23.12	-609.9	-35.6	1,015.6	991.7	23.90	42.486	
8,800.0	7,200.0	6,831.8	6,824.3	33.0	12.0	22.11	-616.3	-35.2	1,108.1	1,084.1	24.08	46.017	
8,900.0	7,200.0	6,820.8	6,814.0	34.7	12.0	21.54	-620.0	-34.9	1,201.6	1,177.2	24.42	49.198	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2F-14H-C268 - Hz - Plan #1

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	178.26	-553.7	16.8	554.0				
100.0	100.0	100.0	100.0	0.2	0.2	178.26	-553.7	16.8	554.0	553.7	0.30	1,824.114	
200.0	200.0	200.0	200.0	0.3	0.3	178.26	-553.7	16.8	554.0	553.3	0.65	848.652	
300.0	300.0	300.0	300.0	0.5	0.5	178.26	-553.7	16.8	554.0	553.0	1.00	552.955	
400.0	400.0	400.0	400.0	0.7	0.7	178.26	-553.7	16.8	554.0	552.6	1.35	410.072	
500.0	500.0	500.0	500.0	0.8	0.8	178.26	-553.7	16.8	554.0	552.3	1.70	325.869	
600.0	600.0	600.0	600.0	1.0	1.0	178.26	-553.7	16.8	554.0	551.9	2.05	270.354	
700.0	700.0	693.2	693.2	1.2	1.2	147.67	-554.2	18.2	556.0	553.7	2.39	232.911	
800.0	799.9	790.2	790.1	1.4	1.4	147.46	-555.7	22.2	560.8	558.1	2.74	204.927	
900.0	899.8	890.1	889.8	1.6	1.5	147.23	-557.3	26.5	565.7	562.7	3.09	182.824	
1,000.0	999.8	989.9	989.6	1.7	1.7	147.00	-558.9	30.9	570.7	567.2	3.45	165.205	
1,100.0	1,099.7	1,089.8	1,089.3	1.9	1.9	146.78	-560.5	35.2	575.6	571.8	3.82	150.854	
1,200.0	1,199.6	1,189.6	1,189.1	2.1	2.1	146.56	-562.1	39.6	580.6	576.4	4.18	138.950	
1,300.0	1,299.6	1,289.5	1,288.8	2.3	2.3	146.35	-563.7	43.9	585.5	581.0	4.54	128.926	
1,400.0	1,399.5	1,389.3	1,388.6	2.5	2.5	146.13	-565.3	48.3	590.5	585.6	4.91	120.372	
1,500.0	1,499.4	1,489.2	1,488.3	2.7	2.7	145.93	-566.9	52.6	595.4	590.2	5.27	112.990	
1,600.0	1,599.3	1,589.0	1,588.1	2.8	2.9	145.72	-568.5	57.0	600.4	594.8	5.63	106.557	
1,700.0	1,699.3	1,688.9	1,687.8	3.0	3.0	145.52	-570.1	61.3	605.4	599.4	6.00	100.902	
1,800.0	1,799.2	1,788.7	1,787.5	3.2	3.2	145.32	-571.7	65.7	610.4	604.0	6.37	95.893	
1,900.0	1,899.1	1,888.6	1,887.3	3.4	3.4	145.12	-573.3	70.0	615.4	608.6	6.73	91.426	
2,000.0	1,999.1	1,988.4	1,987.0	3.6	3.6	144.93	-574.9	74.4	620.4	613.3	7.10	87.418	
2,100.0	2,099.0	2,088.3	2,086.8	3.8	3.8	144.74	-576.5	78.7	625.4	617.9	7.46	83.803	
2,200.0	2,198.9	2,188.1	2,186.5	4.0	4.0	144.56	-578.1	83.1	630.4	622.6	7.83	80.525	
2,300.0	2,298.9	2,288.0	2,286.3	4.1	4.2	144.37	-579.7	87.4	635.4	627.2	8.19	77.539	
2,400.0	2,398.8	2,387.9	2,386.0	4.3	4.4	144.19	-581.3	91.7	640.5	631.9	8.56	74.809	
2,500.0	2,498.7	2,487.7	2,485.8	4.5	4.6	144.02	-582.8	96.1	645.5	636.6	8.93	72.303	
2,600.0	2,598.6	2,587.6	2,585.5	4.7	4.8	143.84	-584.4	100.4	650.5	641.2	9.29	69.995	
2,700.0	2,698.6	2,687.4	2,685.3	4.9	5.0	143.67	-586.0	104.8	655.6	645.9	9.66	67.862	
2,800.0	2,798.5	2,787.3	2,785.0	5.1	5.1	143.50	-587.6	109.1	660.6	650.6	10.03	65.885	
2,900.0	2,898.4	2,887.1	2,884.7	5.3	5.3	143.34	-589.2	113.5	665.7	655.3	10.39	64.048	
3,000.0	2,998.4	2,987.0	2,984.5	5.4	5.5	143.17	-590.8	117.8	670.8	660.0	10.76	62.336	
3,100.0	3,098.3	3,086.8	3,084.2	5.6	5.7	143.01	-592.4	122.2	675.8	664.7	11.13	60.737	
3,200.0	3,198.2	3,186.7	3,184.0	5.8	5.9	142.85	-594.0	126.5	680.9	669.4	11.49	59.241	
3,300.0	3,298.2	3,286.5	3,283.7	6.0	6.1	142.69	-595.6	130.9	686.0	674.1	11.86	57.838	
3,400.0	3,398.1	3,386.4	3,383.5	6.2	6.3	142.54	-597.2	135.2	691.1	678.9	12.23	56.519	
3,500.0	3,498.0	3,486.2	3,483.2	6.4	6.5	142.39	-598.8	139.6	696.2	683.6	12.59	55.277	
3,600.0	3,597.9	3,586.1	3,583.0	6.6	6.7	142.24	-600.4	143.9	701.3	688.3	12.96	54.106	
3,700.0	3,697.9	3,685.9	3,682.7	6.7	6.9	142.09	-602.0	148.3	706.4	693.0	13.33	53.000	
3,800.0	3,797.8	3,785.8	3,782.5	6.9	7.1	141.94	-603.6	152.6	711.5	697.8	13.69	51.953	
3,900.0	3,897.7	3,885.6	3,882.2	7.1	7.3	141.80	-605.2	157.0	716.6	702.5	14.06	50.961	
4,000.0	3,997.7	3,985.5	3,982.0	7.3	7.4	141.66	-606.8	161.3	721.7	707.3	14.43	50.020	
4,100.0	4,097.6	4,085.4	4,081.7	7.5	7.6	141.52	-608.4	165.7	726.8	712.0	14.80	49.125	
4,200.0	4,197.5	4,185.2	4,181.4	7.7	7.8	141.38	-610.0	170.0	731.9	716.8	15.16	48.275	
4,300.0	4,297.4	4,285.1	4,281.2	7.9	8.0	141.24	-611.6	174.4	737.1	721.5	15.53	47.464	
4,400.0	4,397.4	4,384.9	4,380.9	8.1	8.2	141.11	-613.2	178.7	742.2	726.3	15.90	46.692	
4,500.0	4,497.3	4,484.8	4,480.7	8.2	8.4	140.98	-614.8	183.1	747.3	731.1	16.26	45.954	
4,600.0	4,597.2	4,584.6	4,580.4	8.4	8.6	140.85	-616.4	187.4	752.5	735.8	16.63	45.249	
4,700.0	4,697.2	4,684.5	4,680.2	8.6	8.8	140.72	-618.0	191.8	757.6	740.6	17.00	44.575	
4,800.0	4,797.1	4,784.3	4,779.9	8.8	9.0	140.59	-619.6	196.1	762.8	745.4	17.36	43.930	
4,900.0	4,897.0	4,884.2	4,879.7	9.0	9.2	140.47	-621.2	200.5	767.9	750.2	17.73	43.312	
5,000.0	4,997.0	4,984.0	4,979.4	9.2	9.4	140.34	-622.8	204.8	773.1	755.0	18.10	42.718	
5,100.0	5,096.9	5,083.9	5,079.2	9.4	9.6	140.22	-624.4	209.2	778.2	759.8	18.46	42.149	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - Grant Salisbury 2F-14H-C268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,183.7	5,178.9	9.5	9.8	140.10	-626.0	213.5	783.4	764.6	18.83	41.602	
5,300.0	5,296.7	5,283.6	5,278.6	9.7	9.9	139.98	-627.6	217.9	788.6	769.4	19.20	41.076	
5,400.0	5,396.7	5,383.4	5,378.4	9.9	10.1	139.86	-629.2	222.2	793.7	774.2	19.56	40.570	
5,500.0	5,496.6	5,483.3	5,478.1	10.1	10.3	139.75	-630.8	226.6	798.9	779.0	19.93	40.083	
5,600.0	5,596.5	5,583.2	5,577.9	10.3	10.5	139.63	-632.4	230.9	804.1	783.8	20.30	39.613	
5,700.0	5,696.5	5,683.0	5,677.6	10.5	10.7	139.52	-634.0	235.3	809.2	788.6	20.66	39.161	
5,800.0	5,796.4	5,782.9	5,777.4	10.7	10.9	139.41	-635.6	239.6	814.4	793.4	21.03	38.724	
5,900.0	5,896.3	5,882.7	5,877.1	10.8	11.1	139.30	-637.2	244.0	819.6	798.2	21.40	38.302	
6,000.0	5,996.3	5,982.6	5,976.9	11.0	11.3	139.19	-638.8	248.3	824.8	803.0	21.77	37.895	
6,100.0	6,096.2	6,082.4	6,076.6	11.2	11.5	139.08	-640.4	252.7	830.0	807.9	22.13	37.502	
6,200.0	6,196.1	6,182.3	6,176.4	11.4	11.7	138.98	-642.0	257.0	835.2	812.7	22.50	37.121	
6,300.0	6,296.0	6,282.1	6,276.1	11.6	11.9	138.87	-643.6	261.4	840.4	817.5	22.87	36.753	
6,400.0	6,396.0	6,382.0	6,375.8	11.8	12.1	138.77	-645.2	265.7	845.6	822.3	23.23	36.396	
6,500.0	6,495.9	7,869.2	7,269.0	12.0	19.8	67.46	188.8	304.7	796.9	765.5	31.44	25.348	
6,600.0	6,595.8	7,872.4	7,269.0	12.1	19.9	66.44	192.0	304.7	699.9	668.2	31.62	22.135	
6,700.0	6,695.6	7,869.0	7,269.0	12.3	19.8	-102.63	188.6	304.7	603.9	574.6	29.26	20.638	
6,800.0	6,793.4	7,848.4	7,269.0	12.4	19.5	-124.45	168.1	304.7	511.4	484.3	27.08	18.884	
6,900.0	6,886.0	7,811.2	7,269.0	12.4	19.1	-132.10	130.9	304.7	426.0	400.1	25.84	16.487	
7,000.0	6,970.8	7,758.5	7,269.0	12.4	18.4	-133.60	78.1	304.7	351.1	326.1	25.04	14.022	
7,100.0	7,045.2	7,691.8	7,269.0	12.5	17.6	-131.31	11.5	304.7	290.1	265.5	24.65	11.771	
7,200.0	7,106.9	7,613.2	7,269.0	12.8	16.8	-126.34	-67.1	304.7	245.3	220.6	24.78	9.899	
7,300.0	7,153.9	7,504.8	7,260.6	13.3	15.7	-116.20	-175.0	304.3	213.3	187.5	25.75	8.283	
7,400.0	7,185.0	7,405.4	7,235.3	13.9	14.8	-103.64	-271.0	303.2	190.7	163.7	27.04	7.054	
7,500.0	7,199.1	7,315.5	7,198.4	14.7	14.2	-89.73	-352.9	301.6	181.8	153.9	27.92	6.511	
7,509.1	7,199.6	7,307.7	7,194.6	14.8	14.2	-88.43	-359.7	301.4	181.7	153.8	27.97	6.499	CC, ES, SF
7,600.0	7,200.0	7,234.6	7,154.6	15.7	13.8	-75.89	-420.9	299.7	188.4	160.4	27.99	6.732	
7,700.0	7,200.0	7,167.4	7,111.3	16.9	13.5	-63.66	-472.1	297.8	214.6	187.2	27.40	7.833	
7,800.0	7,200.0	7,112.4	7,071.7	18.1	13.4	-54.15	-510.1	296.1	260.3	233.7	26.60	9.784	
7,900.0	7,200.0	7,067.4	7,036.5	19.4	13.3	-47.17	-538.2	294.5	320.7	294.8	25.94	12.366	
8,000.0	7,200.0	7,030.3	7,006.0	20.7	13.2	-42.08	-559.3	293.2	391.3	365.8	25.50	15.347	
8,100.0	7,200.0	7,000.0	6,980.1	22.2	13.1	-38.39	-575.0	292.1	468.7	443.4	25.29	18.535	
8,200.0	7,200.0	6,973.4	6,956.7	23.6	13.1	-35.46	-587.6	291.0	550.8	525.6	25.20	21.859	
8,300.0	7,200.0	6,950.0	6,935.7	25.1	13.0	-33.13	-597.8	290.1	636.4	611.2	25.22	25.238	
8,400.0	7,200.0	6,932.4	6,919.6	26.7	13.0	-31.50	-605.0	289.4	724.4	699.0	25.42	28.503	
8,500.0	7,200.0	6,916.0	6,904.4	28.2	13.0	-30.08	-611.1	288.8	814.4	788.8	25.64	31.757	
8,600.0	7,200.0	6,900.0	6,889.5	29.8	13.0	-28.79	-616.7	288.1	905.9	880.0	25.87	35.016	
8,700.0	7,200.0	6,900.0	6,889.5	31.4	13.0	-28.79	-616.7	288.1	998.7	972.0	26.63	37.498	
8,800.0	7,200.0	6,878.0	6,868.7	33.0	12.9	-27.13	-623.7	287.2	1,092.1	1,065.5	26.62	41.031	
8,900.0	7,200.0	6,868.2	6,859.2	34.7	12.9	-26.43	-626.6	286.8	1,186.5	1,159.5	27.01	43.936	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - HSR-BEAR 13-14A (EXISTING) - EXISTING - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 547-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,200.0	7,490.0	7,235.9	59.9	22.8	90.59	-4,029.3	-871.0	1,241.6	1,159.9	81.67	15.202	
10,500.0	7,200.0	7,489.7	7,235.6	61.7	22.8	90.57	-4,029.3	-871.0	1,180.6	1,097.2	83.39	14.157	
10,600.0	7,200.0	7,489.4	7,235.3	63.4	22.8	90.56	-4,029.3	-871.0	1,125.2	1,040.0	85.11	13.220	
10,700.0	7,200.0	7,489.1	7,235.0	65.1	22.8	90.54	-4,029.3	-871.0	1,076.2	989.4	86.83	12.394	
10,800.0	7,200.0	7,488.8	7,234.7	66.8	22.8	90.52	-4,029.3	-871.0	1,034.6	946.1	88.55	11.683	
10,900.0	7,200.0	7,488.5	7,234.4	68.5	22.8	90.50	-4,029.3	-871.0	1,001.3	911.0	90.28	11.091	
11,000.0	7,200.0	7,488.2	7,234.1	70.3	22.8	90.49	-4,029.3	-871.0	977.2	885.2	92.00	10.621	
11,100.0	7,200.0	7,487.9	7,233.9	72.0	22.8	90.47	-4,029.4	-871.0	962.8	869.1	93.73	10.272	
11,188.9	7,200.0	7,487.6	7,233.6	73.5	22.8	90.45	-4,029.4	-871.0	958.7	863.5	95.27	10.063	CC
11,200.0	7,200.0	7,487.6	7,233.6	73.7	22.8	90.45	-4,029.4	-871.0	958.8	863.3	95.46	10.044	ES
11,300.0	7,200.0	7,487.3	7,233.3	75.5	22.8	90.43	-4,029.4	-871.0	965.1	868.0	97.19	9.930	
11,400.0	7,200.0	7,487.0	7,233.0	77.2	22.8	90.42	-4,029.4	-871.0	981.7	882.8	98.92	9.924	SF
11,500.0	7,200.0	7,486.7	7,232.7	78.9	22.8	90.40	-4,029.4	-871.0	1,007.9	907.3	100.65	10.014	
11,600.0	7,200.0	7,486.4	7,232.4	80.6	22.8	90.38	-4,029.4	-871.0	1,043.1	940.8	102.39	10.188	
11,700.0	7,200.0	7,486.1	7,232.1	82.4	22.8	90.36	-4,029.4	-871.0	1,086.5	982.3	104.12	10.435	
11,800.0	7,200.0	7,485.8	7,231.8	84.1	22.8	90.35	-4,029.4	-871.0	1,136.9	1,031.1	105.85	10.740	
11,900.0	7,200.0	7,485.6	7,231.5	85.8	22.8	90.33	-4,029.4	-871.0	1,193.7	1,086.1	107.59	11.095	
12,000.0	7,200.0	7,485.3	7,231.2	87.6	22.8	90.31	-4,029.4	-871.0	1,255.8	1,146.5	109.33	11.487	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - NELSON 23-23C (EXISTING) - EXISTING - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7658-MWD

Offset Well Error: 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,800.0	7,200.0	7,216.0	7,216.0	118.9	12.6	-90.00	-7,837.5	134.0	1,190.8	1,059.3	131.49	9.056	
13,861.3	7,200.0	7,216.0	7,216.0	120.0	12.6	-90.00	-7,837.5	134.0	1,129.6	997.0	132.56	8.521	CC, ES, SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - OLANDER 1 (EXISTING) - EXISTING - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8035-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,200.0	7,207.0	7,207.0	36.3	12.6	90.00	-3,013.3	-399.0	1,269.5	1,220.7	48.81	26.010	
9,100.0	7,200.0	7,207.0	7,207.0	37.9	12.6	90.00	-3,013.3	-399.0	1,178.1	1,127.6	50.46	23.346	
9,200.0	7,200.0	7,207.0	7,207.0	39.6	12.6	90.00	-3,013.3	-399.0	1,088.2	1,036.1	52.12	20.877	
9,300.0	7,200.0	7,207.0	7,207.0	41.3	12.6	90.00	-3,013.3	-399.0	1,000.2	946.4	53.79	18.593	
9,400.0	7,200.0	7,207.0	7,207.0	42.9	12.6	90.00	-3,013.3	-399.0	914.7	859.2	55.47	16.489	
9,500.0	7,200.0	7,207.0	7,207.0	44.6	12.6	90.00	-3,013.3	-399.0	832.4	775.2	57.15	14.564	
9,600.0	7,200.0	7,207.0	7,207.0	46.3	12.6	90.00	-3,013.3	-399.0	754.4	695.5	58.84	12.821	
9,700.0	7,200.0	7,207.0	7,207.0	48.0	12.6	90.00	-3,013.3	-399.0	682.2	621.6	60.53	11.269	
9,800.0	7,200.0	7,207.0	7,207.0	49.7	12.6	90.00	-3,013.3	-399.0	617.7	555.5	62.23	9.926	
9,900.0	7,200.0	7,207.0	7,207.0	51.4	12.6	90.00	-3,013.3	-399.0	563.8	499.8	63.93	8.818	
10,000.0	7,200.0	7,207.0	7,207.0	53.1	12.6	90.00	-3,013.3	-399.0	523.5	457.9	65.64	7.976	
10,100.0	7,200.0	7,207.0	7,207.0	54.8	12.6	90.00	-3,013.3	-399.0	500.3	433.0	67.34	7.429	
10,168.8	7,200.0	7,207.0	7,207.0	56.0	12.6	90.00	-3,013.3	-399.0	495.5	427.0	68.52	7.232	CC, ES
10,200.0	7,200.0	7,207.0	7,207.0	56.5	12.6	90.00	-3,013.3	-399.0	496.5	427.5	69.05	7.190	SF
10,300.0	7,200.0	7,207.0	7,207.0	58.2	12.6	90.00	-3,013.3	-399.0	512.6	441.9	70.77	7.244	
10,400.0	7,200.0	7,207.0	7,207.0	59.9	12.6	90.00	-3,013.3	-399.0	546.8	474.3	72.48	7.544	
10,500.0	7,200.0	7,207.0	7,207.0	61.7	12.6	90.00	-3,013.3	-399.0	596.0	521.8	74.20	8.033	
10,600.0	7,200.0	7,207.0	7,207.0	63.4	12.6	90.00	-3,013.3	-399.0	656.9	581.0	75.92	8.652	
10,700.0	7,200.0	7,207.0	7,207.0	65.1	12.6	90.00	-3,013.3	-399.0	726.5	648.8	77.64	9.357	
10,800.0	7,200.0	7,207.0	7,207.0	66.8	12.6	90.00	-3,013.3	-399.0	802.5	723.1	79.36	10.111	
10,900.0	7,200.0	7,207.0	7,207.0	68.5	12.6	90.00	-3,013.3	-399.0	883.3	802.2	81.09	10.893	
11,000.0	7,200.0	7,207.0	7,207.0	70.3	12.6	90.00	-3,013.3	-399.0	967.7	884.9	82.81	11.685	
11,100.0	7,200.0	7,207.0	7,207.0	72.0	12.6	90.00	-3,013.3	-399.0	1,054.8	970.3	84.54	12.477	
11,200.0	7,200.0	7,207.0	7,207.0	73.7	12.6	90.00	-3,013.3	-399.0	1,144.1	1,057.8	86.27	13.262	
11,300.0	7,200.0	7,207.0	7,207.0	75.5	12.6	90.00	-3,013.3	-399.0	1,235.0	1,147.0	88.00	14.034	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - OLANDER 2 (EXISTING) - EXISTING - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8028-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-148.04	-387.2	-241.5	456.4				
100.0	100.0	93.0	93.0	0.2	0.2	-148.04	-387.2	-241.5	456.4	456.1	0.31	1,451.818	
200.0	200.0	193.0	193.0	0.3	0.3	-148.04	-387.2	-241.5	456.4	455.7	0.66	687.934	
300.0	300.0	293.0	293.0	0.5	0.5	-148.04	-387.2	-241.5	456.4	455.4	1.01	450.762	
400.0	400.0	393.0	393.0	0.7	0.7	-148.04	-387.2	-241.5	456.4	455.0	1.36	335.199	
500.0	500.0	493.0	493.0	0.8	0.9	-148.04	-387.2	-241.5	456.4	454.7	1.71	266.799	
600.0	600.0	593.0	593.0	1.0	1.0	-148.04	-387.2	-241.5	456.4	454.3	2.06	221.583	
700.0	700.0	693.0	693.0	1.2	1.2	-178.57	-387.2	-241.5	458.1	455.7	2.41	190.270	
800.0	799.9	792.9	792.9	1.4	1.4	-178.58	-387.2	-241.5	461.9	459.1	2.76	167.555	
900.0	899.8	892.8	892.8	1.6	1.6	-178.59	-387.2	-241.5	465.6	462.5	3.11	149.935	
1,000.0	999.8	992.8	992.8	1.7	1.7	-178.60	-387.2	-241.5	469.4	465.9	3.45	135.875	
1,100.0	1,099.7	1,092.7	1,092.7	1.9	1.9	-178.61	-387.2	-241.5	473.1	469.3	3.80	124.396	
1,200.0	1,199.6	1,192.6	1,192.6	2.1	2.1	-178.62	-387.2	-241.5	476.9	472.7	4.15	114.845	
1,300.0	1,299.6	1,292.6	1,292.6	2.3	2.3	-178.64	-387.2	-241.5	480.6	476.1	4.50	106.776	
1,400.0	1,399.5	1,392.5	1,392.5	2.5	2.4	-178.65	-387.2	-241.5	484.4	479.5	4.85	99.867	
1,500.0	1,499.4	1,492.4	1,492.4	2.7	2.6	-178.66	-387.2	-241.5	488.1	482.9	5.20	93.886	
1,600.0	1,599.3	1,592.3	1,592.3	2.8	2.8	-178.67	-387.2	-241.5	491.9	486.3	5.55	88.657	
1,700.0	1,699.3	1,692.3	1,692.3	3.0	3.0	-178.68	-387.2	-241.5	495.6	489.7	5.90	84.047	
1,800.0	1,799.2	1,792.2	1,792.2	3.2	3.1	-178.69	-387.2	-241.5	499.4	493.1	6.25	79.952	
1,900.0	1,899.1	1,892.1	1,892.1	3.4	3.3	-178.70	-387.2	-241.5	503.1	496.5	6.59	76.290	
2,000.0	1,999.1	1,992.1	1,992.1	3.6	3.5	-178.71	-387.2	-241.5	506.8	499.9	6.94	72.996	
2,100.0	2,099.0	2,092.0	2,092.0	3.8	3.7	-178.72	-387.2	-241.5	510.6	503.3	7.29	70.018	
2,200.0	2,198.9	2,191.9	2,191.9	4.0	3.8	-178.72	-387.2	-241.5	514.3	506.7	7.64	67.311	
2,300.0	2,298.9	2,291.9	2,291.9	4.1	4.0	-178.73	-387.2	-241.5	518.1	510.1	7.99	64.841	
2,400.0	2,398.8	2,391.8	2,391.8	4.3	4.2	-178.74	-387.2	-241.5	521.8	513.5	8.34	62.578	
2,500.0	2,498.7	2,491.7	2,491.7	4.5	4.3	-178.75	-387.2	-241.5	525.6	516.9	8.69	60.496	
2,600.0	2,598.6	2,591.6	2,591.6	4.7	4.5	-178.76	-387.2	-241.5	529.3	520.3	9.04	58.575	
2,700.0	2,698.6	2,691.6	2,691.6	4.9	4.7	-178.77	-387.2	-241.5	533.1	523.7	9.39	56.797	
2,800.0	2,798.5	2,791.5	2,791.5	5.1	4.9	-178.78	-387.2	-241.5	536.8	527.1	9.73	55.147	
2,900.0	2,898.4	2,891.4	2,891.4	5.3	5.0	-178.79	-387.2	-241.5	540.6	530.5	10.08	53.610	
3,000.0	2,998.4	2,991.4	2,991.4	5.4	5.2	-178.80	-387.2	-241.5	544.3	533.9	10.43	52.177	
3,100.0	3,098.3	3,091.3	3,091.3	5.6	5.4	-178.80	-387.2	-241.5	548.1	537.3	10.78	50.836	
3,200.0	3,198.2	3,191.2	3,191.2	5.8	5.6	-178.81	-387.2	-241.5	551.8	540.7	11.13	49.579	
3,300.0	3,298.2	3,291.2	3,291.2	6.0	5.7	-178.82	-387.2	-241.5	555.6	544.1	11.48	48.399	
3,400.0	3,398.1	3,391.1	3,391.1	6.2	5.9	-178.83	-387.2	-241.5	559.3	547.5	11.83	47.288	
3,500.0	3,498.0	3,491.0	3,491.0	6.4	6.1	-178.84	-387.2	-241.5	563.1	550.9	12.18	46.241	
3,600.0	3,597.9	3,590.9	3,590.9	6.6	6.3	-178.84	-387.2	-241.5	566.8	554.3	12.53	45.252	
3,700.0	3,697.9	3,690.9	3,690.9	6.7	6.4	-178.85	-387.2	-241.5	570.6	557.7	12.87	44.317	
3,800.0	3,797.8	3,790.8	3,790.8	6.9	6.6	-178.86	-387.2	-241.5	574.3	561.1	13.22	43.431	
3,900.0	3,897.7	3,890.7	3,890.7	7.1	6.8	-178.87	-387.2	-241.5	578.1	564.5	13.57	42.591	
4,000.0	3,997.7	3,990.7	3,990.7	7.3	7.0	-178.87	-387.2	-241.5	581.8	567.9	13.92	41.793	
4,100.0	4,097.6	4,090.6	4,090.6	7.5	7.1	-178.88	-387.2	-241.5	585.6	571.3	14.27	41.034	
4,200.0	4,197.5	4,190.5	4,190.5	7.7	7.3	-178.89	-387.2	-241.5	589.3	574.7	14.62	40.311	
4,300.0	4,297.4	4,290.4	4,290.4	7.9	7.5	-178.89	-387.2	-241.5	593.1	578.1	14.97	39.622	
4,400.0	4,397.4	4,390.4	4,390.4	8.1	7.7	-178.90	-387.2	-241.5	596.8	581.5	15.32	38.964	
4,500.0	4,497.3	4,490.3	4,490.3	8.2	7.8	-178.91	-387.2	-241.5	600.6	584.9	15.67	38.335	
4,600.0	4,597.2	4,590.2	4,590.2	8.4	8.0	-178.91	-387.2	-241.5	604.3	588.3	16.01	37.734	
4,700.0	4,697.2	4,690.2	4,690.2	8.6	8.2	-178.92	-387.2	-241.5	608.1	591.7	16.36	37.159	
4,800.0	4,797.1	4,790.1	4,790.1	8.8	8.4	-178.93	-387.2	-241.5	611.8	595.1	16.71	36.607	
4,900.0	4,897.0	4,890.0	4,890.0	9.0	8.5	-178.93	-387.2	-241.5	615.5	598.5	17.06	36.078	
5,000.0	4,997.0	4,990.0	4,990.0	9.2	8.7	-178.94	-387.2	-241.5	619.3	601.9	17.41	35.571	
5,100.0	5,096.9	5,089.9	5,089.9	9.4	8.9	-178.95	-387.2	-241.5	623.0	605.3	17.76	35.083	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - OLANDER 2 (EXISTING) - EXISTING - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8028-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,196.8	5,189.8	5,189.8	9.5	9.1	-178.95	-387.2	-241.5	626.8	608.7	18.11	34.614	
5,300.0	5,296.7	5,289.7	5,289.7	9.7	9.2	-178.96	-387.2	-241.5	630.5	612.1	18.46	34.163	
5,400.0	5,396.7	5,389.7	5,389.7	9.9	9.4	-178.97	-387.2	-241.5	634.3	615.5	18.81	33.728	
5,500.0	5,496.6	5,489.6	5,489.6	10.1	9.6	-178.97	-387.2	-241.5	638.0	618.9	19.15	33.310	
5,600.0	5,596.5	5,589.5	5,589.5	10.3	9.8	-178.98	-387.2	-241.5	641.8	622.3	19.50	32.906	
5,700.0	5,696.5	5,689.5	5,689.5	10.5	9.9	-178.98	-387.2	-241.5	645.5	625.7	19.85	32.517	
5,800.0	5,796.4	5,789.4	5,789.4	10.7	10.1	-178.99	-387.2	-241.5	649.3	629.1	20.20	32.141	
5,900.0	5,896.3	5,889.3	5,889.3	10.8	10.3	-179.00	-387.2	-241.5	653.0	632.5	20.55	31.777	
6,000.0	5,996.3	5,989.3	5,989.3	11.0	10.5	-179.00	-387.2	-241.5	656.8	635.9	20.90	31.426	
6,100.0	6,096.2	6,089.2	6,089.2	11.2	10.6	-179.01	-387.2	-241.5	660.5	639.3	21.25	31.087	
6,200.0	6,196.1	6,189.1	6,189.1	11.4	10.8	-179.01	-387.2	-241.5	664.3	642.7	21.60	30.758	
6,300.0	6,296.0	6,289.0	6,289.0	11.6	11.0	-179.02	-387.2	-241.5	668.0	646.1	21.95	30.440	
6,400.0	6,396.0	6,389.0	6,389.0	11.8	11.2	-179.02	-387.2	-241.5	671.8	649.5	22.29	30.132	
6,500.0	6,495.9	6,488.9	6,488.9	12.0	11.3	-179.03	-387.2	-241.5	675.5	652.9	22.64	29.833	
6,600.0	6,595.8	6,588.8	6,588.8	12.1	11.5	-179.03	-387.2	-241.5	679.3	656.3	22.99	29.543	
6,700.0	6,695.6	6,688.6	6,688.6	12.3	11.7	40.33	-387.2	-241.5	677.3	654.1	23.25	29.131	
6,800.0	6,793.4	6,786.4	6,786.4	12.4	11.8	37.08	-387.2	-241.5	660.8	637.6	23.20	28.484	
6,900.0	6,886.0	6,879.0	6,879.0	12.4	12.0	39.57	-387.2	-241.5	630.7	607.8	22.95	27.477	
7,000.0	6,970.8	6,963.8	6,963.8	12.4	12.2	45.07	-387.2	-241.5	588.8	566.1	22.77	25.855	
7,100.0	7,045.2	7,038.2	7,038.2	12.5	12.3	53.48	-387.2	-241.5	538.3	515.2	23.03	23.370	
7,200.0	7,106.9	7,099.9	7,099.9	12.8	12.4	64.37	-387.2	-241.5	483.3	459.4	23.93	20.199	
7,300.0	7,153.9	7,146.9	7,146.9	13.3	12.5	75.85	-387.2	-241.5	430.2	405.0	25.14	17.109	
7,400.0	7,185.0	7,178.0	7,178.0	13.9	12.5	85.02	-387.2	-241.5	387.1	360.9	26.21	14.769	
7,500.0	7,199.1	7,192.1	7,192.1	14.7	12.6	89.64	-387.2	-241.5	363.4	336.2	27.14	13.390	
7,541.2	7,200.9	7,193.9	7,193.9	15.1	12.6	90.00	-387.2	-241.5	361.0	333.5	27.55	13.103	CC, ES
7,600.0	7,200.0	7,193.0	7,193.0	15.7	12.6	90.00	-387.2	-241.5	365.7	337.6	28.14	12.997	SF
7,700.0	7,200.0	7,193.0	7,193.0	16.9	12.6	90.00	-387.2	-241.5	394.3	365.0	29.27	13.472	
7,800.0	7,200.0	7,193.0	7,193.0	18.1	12.6	90.00	-387.2	-241.5	444.1	413.6	30.50	14.561	
7,900.0	7,200.0	7,193.0	7,193.0	19.4	12.6	90.00	-387.2	-241.5	508.8	477.0	31.81	15.998	
8,000.0	7,200.0	7,193.0	7,193.0	20.7	12.6	90.00	-387.2	-241.5	583.6	550.4	33.18	17.589	
8,100.0	7,200.0	7,193.0	7,193.0	22.2	12.6	90.00	-387.2	-241.5	665.1	630.5	34.61	19.216	
8,200.0	7,200.0	7,193.0	7,193.0	23.6	12.6	90.00	-387.2	-241.5	751.0	714.9	36.08	20.813	
8,300.0	7,200.0	7,193.0	7,193.0	25.1	12.6	90.00	-387.2	-241.5	840.1	802.5	37.59	22.346	
8,400.0	7,200.0	7,193.0	7,193.0	26.7	12.6	90.00	-387.2	-241.5	931.4	892.3	39.13	23.800	
8,500.0	7,200.0	7,193.0	7,193.0	28.2	12.6	90.00	-387.2	-241.5	1,024.3	983.6	40.70	25.168	
8,600.0	7,200.0	7,193.0	7,193.0	29.8	12.6	90.00	-387.2	-241.5	1,118.4	1,076.2	42.29	26.450	
8,700.0	7,200.0	7,193.0	7,193.0	31.4	12.6	90.00	-387.2	-241.5	1,213.5	1,169.6	43.89	27.650	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - OLANDER U 14-11 (EXISTING) - EXISTING - NO SURVE

Offset Site Error: 0.0 ft

Survey Program: 7625-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,500.0	7,200.0	7,196.0	7,196.0	28.2	12.6	-90.00	-2,519.4	427.2	1,212.4	1,171.7	40.70	29.785	
8,600.0	7,200.0	7,196.0	7,196.0	29.8	12.6	-90.00	-2,519.4	427.2	1,116.4	1,074.1	42.29	26.399	
8,700.0	7,200.0	7,196.0	7,196.0	31.4	12.6	-90.00	-2,519.4	427.2	1,021.2	977.3	43.89	23.265	
8,800.0	7,200.0	7,196.0	7,196.0	33.0	12.6	-90.00	-2,519.4	427.2	927.0	881.5	45.51	20.367	
8,900.0	7,200.0	7,196.0	7,196.0	34.7	12.6	-90.00	-2,519.4	427.2	834.1	787.0	47.15	17.693	
9,000.0	7,200.0	7,196.0	7,196.0	36.3	12.6	-90.00	-2,519.4	427.2	743.1	694.3	48.79	15.231	
9,100.0	7,200.0	7,196.0	7,196.0	37.9	12.6	-90.00	-2,519.4	427.2	654.8	604.3	50.44	12.980	
9,200.0	7,200.0	7,196.0	7,196.0	39.6	12.6	-90.00	-2,519.4	427.2	570.2	518.1	52.11	10.944	
9,300.0	7,200.0	7,196.0	7,196.0	41.3	12.6	-90.00	-2,519.4	427.2	491.6	437.8	53.78	9.141	
9,400.0	7,200.0	7,196.0	7,196.0	42.9	12.6	-90.00	-2,519.4	427.2	422.0	366.6	55.45	7.611	
9,500.0	7,200.0	7,196.0	7,196.0	44.6	12.6	-90.00	-2,519.4	427.2	366.9	309.7	57.13	6.421	
9,600.0	7,200.0	7,196.0	7,196.0	46.3	12.6	-90.00	-2,519.4	427.2	333.3	274.4	58.82	5.665	
9,667.6	7,200.0	7,196.0	7,196.0	47.5	12.6	-90.00	-2,519.4	427.2	326.3	266.3	59.97	5.442	CC, ES
9,700.0	7,200.0	7,196.0	7,196.0	48.0	12.6	-90.00	-2,519.4	427.2	327.9	267.4	60.52	5.419	SF
9,800.0	7,200.0	7,196.0	7,196.0	49.7	12.6	-90.00	-2,519.4	427.2	352.1	289.9	62.21	5.660	
9,900.0	7,200.0	7,196.0	7,196.0	51.4	12.6	-90.00	-2,519.4	427.2	400.6	336.7	63.91	6.268	
10,000.0	7,200.0	7,196.0	7,196.0	53.1	12.6	-90.00	-2,519.4	427.2	465.8	400.1	65.62	7.098	
10,100.0	7,200.0	7,196.0	7,196.0	54.8	12.6	-90.00	-2,519.4	427.2	541.7	474.3	67.32	8.046	
10,200.0	7,200.0	7,196.0	7,196.0	56.5	12.6	-90.00	-2,519.4	427.2	624.4	555.4	69.03	9.045	
10,300.0	7,200.0	7,196.0	7,196.0	58.2	12.6	-90.00	-2,519.4	427.2	711.6	640.8	70.75	10.058	
10,400.0	7,200.0	7,196.0	7,196.0	59.9	12.6	-90.00	-2,519.4	427.2	801.8	729.3	72.46	11.064	
10,500.0	7,200.0	7,196.0	7,196.0	61.7	12.6	-90.00	-2,519.4	427.2	894.0	819.9	74.18	12.052	
10,600.0	7,200.0	7,196.0	7,196.0	63.4	12.6	-90.00	-2,519.4	427.2	987.8	911.9	75.90	13.015	
10,700.0	7,200.0	7,196.0	7,196.0	65.1	12.6	-90.00	-2,519.4	427.2	1,082.7	1,005.1	77.62	13.949	
10,800.0	7,200.0	7,196.0	7,196.0	66.8	12.6	-90.00	-2,519.4	427.2	1,178.4	1,099.1	79.34	14.852	
10,900.0	7,200.0	7,196.0	7,196.0	68.5	12.6	-90.00	-2,519.4	427.2	1,274.8	1,193.8	81.07	15.725	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S14-T2N-R68W (Grant Elmquist/Salisbury) - OLANDER U 14-14 (EXISTING) - EXISTING - NO SURVE

Offset Site Error: 0.0 ft

Survey Program: 7650-MWD

Offset Well Error: 0.0 ft

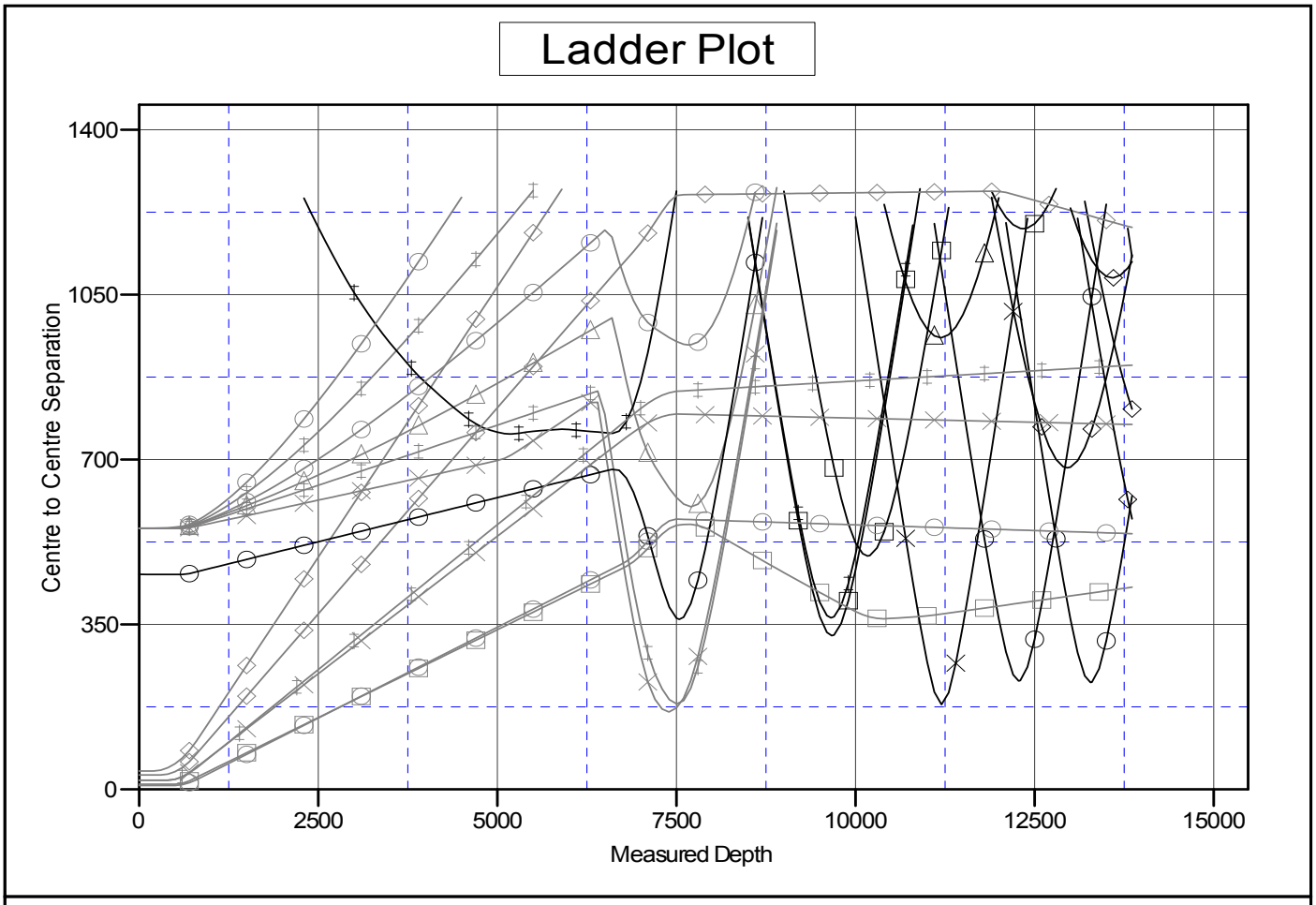
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,000.0	7,200.0	7,201.0	7,201.0	53.1	12.6	-90.00	-4,051.9	267.6	1,214.9	1,149.3	65.63	18.513	
10,100.0	7,200.0	7,201.0	7,201.0	54.8	12.6	-90.00	-4,051.9	267.6	1,116.1	1,048.8	67.33	16.576	
10,200.0	7,200.0	7,201.0	7,201.0	56.5	12.6	-90.00	-4,051.9	267.6	1,017.6	948.5	69.04	14.738	
10,300.0	7,200.0	7,201.0	7,201.0	58.2	12.6	-90.00	-4,051.9	267.6	919.3	848.6	70.76	12.993	
10,400.0	7,200.0	7,201.0	7,201.0	59.9	12.6	-90.00	-4,051.9	267.6	821.5	749.0	72.47	11.335	
10,500.0	7,200.0	7,201.0	7,201.0	61.7	12.6	-90.00	-4,051.9	267.6	724.3	650.1	74.19	9.762	
10,600.0	7,200.0	7,201.0	7,201.0	63.4	12.6	-90.00	-4,051.9	267.6	627.9	552.0	75.91	8.272	
10,700.0	7,200.0	7,201.0	7,201.0	65.1	12.6	-90.00	-4,051.9	267.6	532.9	455.2	77.63	6.864	
10,800.0	7,200.0	7,201.0	7,201.0	66.8	12.6	-90.00	-4,051.9	267.6	440.0	360.7	79.35	5.545	
10,900.0	7,200.0	7,201.0	7,201.0	68.5	12.6	-90.00	-4,051.9	267.6	351.2	270.1	81.08	4.332	
11,000.0	7,200.0	7,201.0	7,201.0	70.3	12.6	-90.00	-4,051.9	267.6	270.2	187.4	82.80	3.264	
11,100.0	7,200.0	7,201.0	7,201.0	72.0	12.6	-90.00	-4,051.9	267.6	206.7	122.2	84.53	2.445	
11,200.0	7,200.0	7,201.0	7,201.0	73.7	12.6	-90.00	-4,051.9	267.6	180.1	93.8	86.26	2.088	
11,201.5	7,200.0	7,201.0	7,201.0	73.7	12.6	-90.00	-4,051.9	267.6	180.1	93.8	86.29	2.087	CC, ES, SF
11,300.0	7,200.0	7,201.0	7,201.0	75.5	12.6	-90.00	-4,051.9	267.6	205.2	117.2	87.99	2.333	
11,400.0	7,200.0	7,201.0	7,201.0	77.2	12.6	-90.00	-4,051.9	267.6	268.0	178.3	89.72	2.987	
11,500.0	7,200.0	7,201.0	7,201.0	78.9	12.6	-90.00	-4,051.9	267.6	348.6	257.1	91.45	3.812	
11,600.0	7,200.0	7,201.0	7,201.0	80.6	12.6	-90.00	-4,051.9	267.6	437.3	344.1	93.18	4.693	
11,700.0	7,200.0	7,201.0	7,201.0	82.4	12.6	-90.00	-4,051.9	267.6	530.0	435.1	94.92	5.584	
11,800.0	7,200.0	7,201.0	7,201.0	84.1	12.6	-90.00	-4,051.9	267.6	625.0	528.3	96.65	6.466	
11,900.0	7,200.0	7,201.0	7,201.0	85.8	12.6	-90.00	-4,051.9	267.6	721.3	622.9	98.39	7.331	
12,000.0	7,200.0	7,201.0	7,201.0	87.6	12.6	-90.00	-4,051.9	267.6	818.5	718.4	100.13	8.175	
12,100.0	7,200.0	7,201.0	7,201.0	89.3	12.6	-90.00	-4,051.9	267.6	916.4	814.5	101.86	8.996	
12,200.0	7,200.0	7,201.0	7,201.0	91.1	12.6	-90.00	-4,051.9	267.6	1,014.6	911.0	103.60	9.793	
12,300.0	7,200.0	7,201.0	7,201.0	92.8	12.6	-90.00	-4,051.9	267.6	1,113.1	1,007.8	105.34	10.567	
12,400.0	7,200.0	7,201.0	7,201.0	94.5	12.6	-90.00	-4,051.9	267.6	1,211.9	1,104.9	107.08	11.318	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Grant Elmquist 2E-14H-C268
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4894.0ft
Reference Site:	S14-T2N-R68W (Grant Elmquist/Salisbury)	**MD Reference:**	KB @ 4894.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Grant Elmquist 2E-14H-C268	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4894.0ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Grant Elmquist 2E-14H-C268
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.34°



L E G E N D

3 (EXISTING), EXISTING, SURVEYS V0	ELMQUIST 21-23 (EXISTING), EXISTING, SURVEYS V0	Grant Salisbury 2E-14H-C268, Hz, Plan #
-14H-C268, Hz, Plan #1 V0	ELMQUIST 2-4-23 (EXISTING), EXISTING, SURVEYS V0	Grant Salisbury 2C-14H-C268, Hz, Plan #
(EXISTING), EXISTING, GYRO V0	OLANDER U 14-14 (EXISTING), EXISTING, NO SURVEYS V0	Grant Salisbury 2A-14H-C268, Hz, Plan #
-14H-C268, Hz, Plan #1 V0	HSR-BEAR 13-14A (EXISTING), EXISTING, SURVEYS V0	ELMQUIST 12-23 (EXISTING), EXISTIN
STING), EXISTING, NO SURVEYS V0	DEL CAMINO 11-14 (EXISTING), EXISTING, NO SURVEYS V0	Grant Elmquist 2C-14H-C268, Hz, Plan #
ISTING), EXISTING, GYRO V0	GRANT 2-8-11 (EXISTING), EXISTING, SURVEYS V0	OLANDER 2 (EXISTING), EXISTING, N
(EXISTING), EXISTING, NO SURVEYS V0	OLANDER U 14-11 (EXISTING), EXISTING, NO SURVEYS V0	Grant Elmquist 2D-14H-C268, Hz, Plan #
-14H-C268, Hz, Plan #2 V0	Grant Salisbury 2F-14H-C268, Hz, Plan #1 V0	Grant Elmquist 2G-14H-C268, Hz, Plan #
3 (EXISTING), EXISTING, SURVEYS V0	Grant Elmquist 2B-14H-C268, Hz, Plan #2 V0	Grant Elmquist 2F-14H-C268, Hz, Plan #