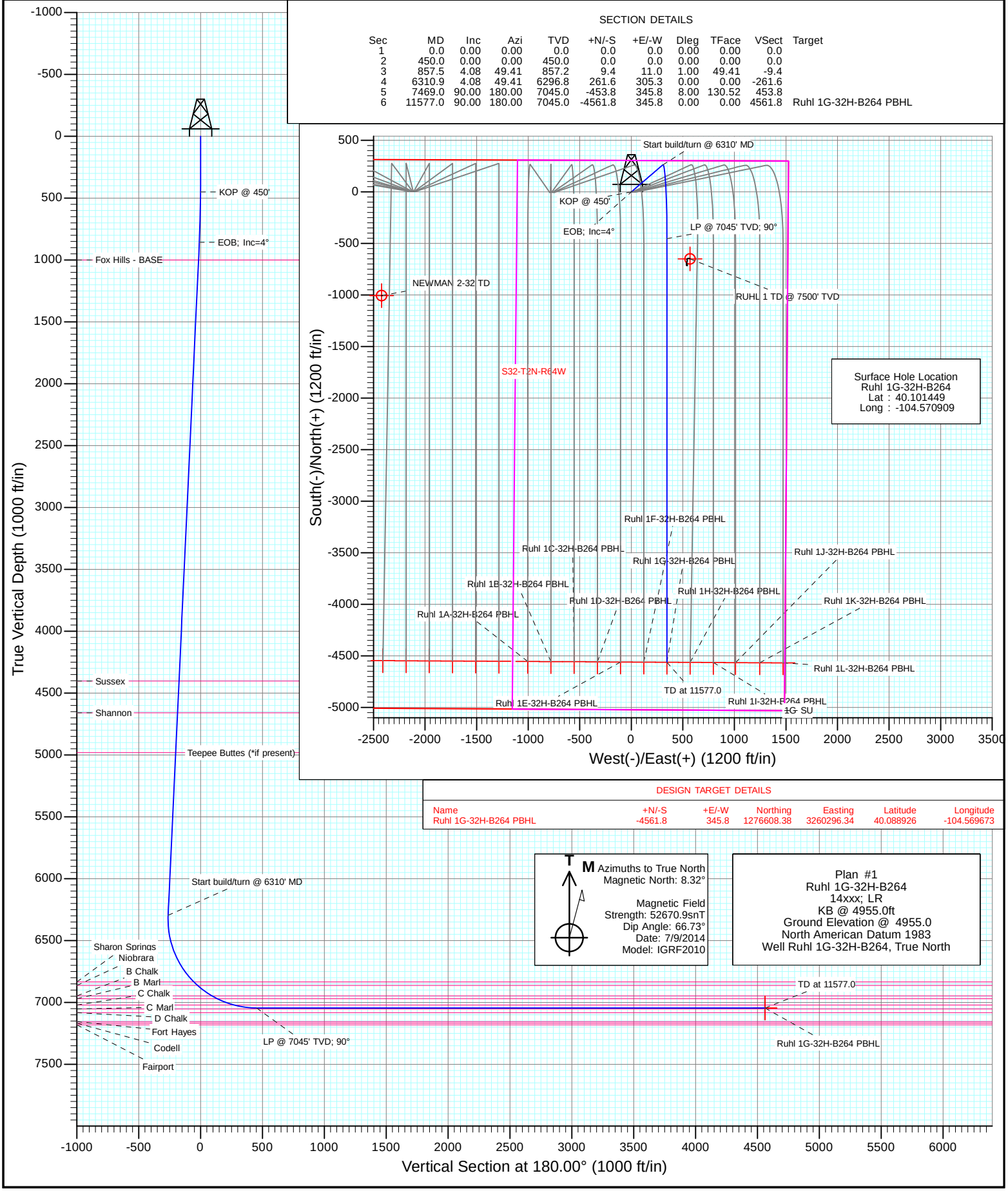
CATHEDRAL

Project: DJ Wattenberg
Site: S32-T2N-R64W (Newman/Ruhl)
Well: Ruhl 1G-32H-B264
Wellbore: Hz
Design: Plan #1

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	450.0	0.00	0.00	450.0	0.0	0.0	0.00	0.00	0.0	
3	857.5	4.08	49.41	857.2	9.4	11.0	1.00	49.41	-9.4	
4	6310.9	4.08	49.41	6296.8	261.6	305.3	0.00	0.00	-261.6	
5	7469.0	90.00	180.00	7045.0	-453.8	345.8	8.00	130.52	453.8	
6	11577.0	90.00	180.00	7045.0	-4561.8	345.8	0.00	0.00	4561.8	Ruhl 1G-32H-B264 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Ruhl 1G-32H-B264 PBHL	-4561.8	345.8	1276608.38	3260296.34	40.088926	-104.569673

T M Azimuths to True North
Magnetic North: 8.32°

Magnetic Field
Strength: 52670.9snT
Dip Angle: 66.73°
Date: 7/9/2014
Model: IGRF2010

Plan #1
Ruhl 1G-32H-B264
14xxx; LR
KB @ 4955.0ft
Ground Elevation @ 4955.0
North American Datum 1983
Well Ruhl 1G-32H-B264, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1G-32H-B264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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 S32-T2N-R64W (Newman)

Site Position:		**Northing:**	1,281,150.66 ft	**Latitude:**	40.101468
From:	Lat/Long	**Easting:**	3,257,734.55 ft	**Longitude:**	-104.578660
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.60 °

Well Ruhl 1G-32H-B264

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,281,166.35 ft	**Latitude:**	40.101449
	+E/-W	0.0 ft	**Easting:**	3,259,902.74 ft	**Longitude:**	-104.570909
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	4,955.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/9/2014	8.32	66.73	52,671

Design Plan #1

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	
450.0	0.00	0.00	450.0	0.0	0.0	0.00	0.00	0.00	0.00	
857.5	4.08	49.41	857.2	9.4	11.0	1.00	1.00	0.00	49.41	
6,310.9	4.08	49.41	6,296.8	261.6	305.3	0.00	0.00	0.00	0.00	
7,469.0	90.00	180.00	7,045.0	-453.8	345.8	8.00	7.42	11.28	130.52	
11,577.0	90.00	180.00	7,045.0	-4,561.8	345.8	0.00	0.00	0.00	0.00	Ruhl 1G-32H-B264 Pl

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1G-32H-B264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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	
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	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	KOP @ 450'
500.0	0.50	49.41	500.0	0.1	0.2	-0.1	1.00	1.00	
600.0	1.50	49.41	600.0	1.3	1.5	-1.3	1.00	1.00	
700.0	2.50	49.41	699.9	3.5	4.1	-3.5	1.00	1.00	
800.0	3.50	49.41	799.8	7.0	8.1	-7.0	1.00	1.00	
857.5	4.08	49.41	857.2	9.4	11.0	-9.4	1.00	1.00	EOB; Inc=4°
900.0	4.08	49.41	899.5	11.4	13.3	-11.4	0.00	0.00	
1,000.0	4.08	49.41	999.3	16.0	18.7	-16.0	0.00	0.00	
1,000.7	4.08	49.41	1,000.0	16.0	18.7	-16.0	0.00	0.00	Fox Hills - BASE
1,100.0	4.08	49.41	1,099.0	20.6	24.1	-20.6	0.00	0.00	
1,200.0	4.08	49.41	1,198.8	25.3	29.5	-25.3	0.00	0.00	
1,300.0	4.08	49.41	1,298.5	29.9	34.9	-29.9	0.00	0.00	
1,400.0	4.08	49.41	1,398.3	34.5	40.3	-34.5	0.00	0.00	
1,500.0	4.08	49.41	1,498.0	39.1	45.7	-39.1	0.00	0.00	
1,600.0	4.08	49.41	1,597.8	43.8	51.1	-43.8	0.00	0.00	
1,700.0	4.08	49.41	1,697.5	48.4	56.5	-48.4	0.00	0.00	
1,800.0	4.08	49.41	1,797.3	53.0	61.9	-53.0	0.00	0.00	
1,900.0	4.08	49.41	1,897.0	57.6	67.3	-57.6	0.00	0.00	
2,000.0	4.08	49.41	1,996.8	62.3	72.7	-62.3	0.00	0.00	
2,100.0	4.08	49.41	2,096.5	66.9	78.1	-66.9	0.00	0.00	
2,200.0	4.08	49.41	2,196.3	71.5	83.5	-71.5	0.00	0.00	
2,300.0	4.08	49.41	2,296.0	76.1	88.9	-76.1	0.00	0.00	
2,400.0	4.08	49.41	2,395.8	80.7	94.3	-80.7	0.00	0.00	
2,500.0	4.08	49.41	2,495.5	85.4	99.6	-85.4	0.00	0.00	
2,600.0	4.08	49.41	2,595.3	90.0	105.0	-90.0	0.00	0.00	
2,700.0	4.08	49.41	2,695.0	94.6	110.4	-94.6	0.00	0.00	
2,800.0	4.08	49.41	2,794.7	99.2	115.8	-99.2	0.00	0.00	
2,900.0	4.08	49.41	2,894.5	103.9	121.2	-103.9	0.00	0.00	
3,000.0	4.08	49.41	2,994.2	108.5	126.6	-108.5	0.00	0.00	
3,100.0	4.08	49.41	3,094.0	113.1	132.0	-113.1	0.00	0.00	
3,200.0	4.08	49.41	3,193.7	117.7	137.4	-117.7	0.00	0.00	
3,300.0	4.08	49.41	3,293.5	122.4	142.8	-122.4	0.00	0.00	
3,400.0	4.08	49.41	3,393.2	127.0	148.2	-127.0	0.00	0.00	
3,500.0	4.08	49.41	3,493.0	131.6	153.6	-131.6	0.00	0.00	
3,600.0	4.08	49.41	3,592.7	136.2	159.0	-136.2	0.00	0.00	
3,700.0	4.08	49.41	3,692.5	140.9	164.4	-140.9	0.00	0.00	
3,800.0	4.08	49.41	3,792.2	145.5	169.8	-145.5	0.00	0.00	
3,900.0	4.08	49.41	3,892.0	150.1	175.2	-150.1	0.00	0.00	
4,000.0	4.08	49.41	3,991.7	154.7	180.6	-154.7	0.00	0.00	
4,100.0	4.08	49.41	4,091.5	159.4	186.0	-159.4	0.00	0.00	
4,200.0	4.08	49.41	4,191.2	164.0	191.4	-164.0	0.00	0.00	
4,300.0	4.08	49.41	4,291.0	168.6	196.8	-168.6	0.00	0.00	
4,400.0	4.08	49.41	4,390.7	173.2	202.2	-173.2	0.00	0.00	
4,412.3	4.08	49.41	4,403.0	173.8	202.9	-173.8	0.00	0.00	Sussex
4,500.0	4.08	49.41	4,490.4	177.8	207.6	-177.8	0.00	0.00	
4,600.0	4.08	49.41	4,590.2	182.5	213.0	-182.5	0.00	0.00	
4,669.0	4.08	49.41	4,659.0	185.7	216.7	-185.7	0.00	0.00	Shannon

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Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1G-32H-B264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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
4,700.0	4.08	49.41	4,689.9	187.1	218.4	-187.1	0.00	0.00	
4,800.0	4.08	49.41	4,789.7	191.7	223.8	-191.7	0.00	0.00	
4,900.0	4.08	49.41	4,889.4	196.3	229.2	-196.3	0.00	0.00	
4,991.8	4.08	49.41	4,981.0	200.6	234.1	-200.6	0.00	0.00	Teepee Buttes (*if present)
5,000.0	4.08	49.41	4,989.2	201.0	234.6	-201.0	0.00	0.00	
5,100.0	4.08	49.41	5,088.9	205.6	240.0	-205.6	0.00	0.00	
5,200.0	4.08	49.41	5,188.7	210.2	245.4	-210.2	0.00	0.00	
5,300.0	4.08	49.41	5,288.4	214.8	250.8	-214.8	0.00	0.00	
5,400.0	4.08	49.41	5,388.2	219.5	256.2	-219.5	0.00	0.00	
5,500.0	4.08	49.41	5,487.9	224.1	261.6	-224.1	0.00	0.00	
5,600.0	4.08	49.41	5,587.7	228.7	267.0	-228.7	0.00	0.00	
5,700.0	4.08	49.41	5,687.4	233.3	272.4	-233.3	0.00	0.00	
5,800.0	4.08	49.41	5,787.2	238.0	277.8	-238.0	0.00	0.00	
5,900.0	4.08	49.41	5,886.9	242.6	283.2	-242.6	0.00	0.00	
6,000.0	4.08	49.41	5,986.7	247.2	288.6	-247.2	0.00	0.00	
6,100.0	4.08	49.41	6,086.4	251.8	293.9	-251.8	0.00	0.00	
6,200.0	4.08	49.41	6,186.1	256.5	299.3	-256.5	0.00	0.00	
6,300.0	4.08	49.41	6,285.9	261.1	304.7	-261.1	0.00	0.00	
6,310.9	4.08	49.41	6,296.8	261.6	305.3	-261.6	0.00	0.00	Start build/turn @ 6310' MD
6,400.0	5.44	145.39	6,385.7	260.2	310.1	-260.2	8.00	1.53	
6,500.0	12.85	166.28	6,484.4	245.4	315.5	-245.4	8.00	7.41	
6,600.0	20.70	171.77	6,580.0	217.1	320.7	-217.1	8.00	7.85	
6,700.0	28.63	174.31	6,670.8	175.7	325.6	-175.7	8.00	7.93	
6,800.0	36.59	175.82	6,755.0	122.0	330.1	-122.0	8.00	7.96	
6,900.0	44.56	176.85	6,830.9	57.2	334.2	-57.2	8.00	7.97	
6,904.4	44.91	176.89	6,834.0	54.1	334.4	-54.1	8.00	7.98	Sharon Springs
6,946.6	48.28	177.23	6,863.0	23.5	336.0	-23.5	8.00	7.98	Niobrara
7,000.0	52.54	177.62	6,897.0	-17.6	337.8	17.6	8.00	7.98	
7,089.7	59.70	178.19	6,947.0	-92.0	340.5	92.0	8.00	7.98	B Chalk
7,100.0	60.52	178.25	6,952.1	-100.9	340.8	100.9	8.00	7.98	
7,138.1	63.57	178.46	6,970.0	-134.6	341.8	134.6	8.00	7.99	B Marl
7,200.0	68.51	178.78	6,995.1	-191.1	343.1	191.1	8.00	7.99	
7,283.0	75.14	179.18	7,021.0	-269.9	344.5	269.9	8.00	7.99	C Chalk
7,300.0	76.50	179.26	7,025.2	-286.4	344.7	286.4	8.00	7.99	
7,400.0	84.48	179.70	7,041.7	-384.9	345.6	384.9	8.00	7.99	
7,469.0	90.00	180.00	7,045.0	-453.8	345.8	453.8	8.00	7.99	LP @ 7045' TVD; 90°
7,500.0	90.00	180.00	7,045.0	-484.8	345.8	484.8	0.00	0.00	
7,600.0	90.00	180.00	7,045.0	-584.8	345.8	584.8	0.00	0.00	
7,700.0	90.00	180.00	7,045.0	-684.8	345.8	684.8	0.00	0.00	
7,800.0	90.00	180.00	7,045.0	-784.8	345.8	784.8	0.00	0.00	
7,900.0	90.00	180.00	7,045.0	-884.8	345.8	884.8	0.00	0.00	
8,000.0	90.00	180.00	7,045.0	-984.8	345.8	984.8	0.00	0.00	
8,100.0	90.00	180.00	7,045.0	-1,084.8	345.8	1,084.8	0.00	0.00	
8,200.0	90.00	180.00	7,045.0	-1,184.8	345.8	1,184.8	0.00	0.00	
8,300.0	90.00	180.00	7,045.0	-1,284.8	345.8	1,284.8	0.00	0.00	
8,400.0	90.00	180.00	7,045.0	-1,384.8	345.8	1,384.8	0.00	0.00	
8,500.0	90.00	180.00	7,045.0	-1,484.8	345.8	1,484.8	0.00	0.00	
8,600.0	90.00	180.00	7,045.0	-1,584.8	345.8	1,584.8	0.00	0.00	
8,700.0	90.00	180.00	7,045.0	-1,684.8	345.8	1,684.8	0.00	0.00	
8,800.0	90.00	180.00	7,045.0	-1,784.8	345.8	1,784.8	0.00	0.00	
8,900.0	90.00	180.00	7,045.0	-1,884.8	345.8	1,884.8	0.00	0.00	
9,000.0	90.00	180.00	7,045.0	-1,984.8	345.8	1,984.8	0.00	0.00	

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Wellbore:	Hz		
Design:	Plan #1		

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
9,100.0	90.00	180.00	7,045.0	-2,084.8	345.8	2,084.8	0.00	0.00	
9,200.0	90.00	180.00	7,045.0	-2,184.8	345.8	2,184.8	0.00	0.00	
9,300.0	90.00	180.00	7,045.0	-2,284.8	345.8	2,284.8	0.00	0.00	
9,400.0	90.00	180.00	7,045.0	-2,384.8	345.8	2,384.8	0.00	0.00	
9,500.0	90.00	180.00	7,045.0	-2,484.8	345.8	2,484.8	0.00	0.00	
9,600.0	90.00	180.00	7,045.0	-2,584.8	345.8	2,584.8	0.00	0.00	
9,700.0	90.00	180.00	7,045.0	-2,684.8	345.8	2,684.8	0.00	0.00	
9,800.0	90.00	180.00	7,045.0	-2,784.8	345.8	2,784.8	0.00	0.00	
9,900.0	90.00	180.00	7,045.0	-2,884.8	345.8	2,884.8	0.00	0.00	
10,000.0	90.00	180.00	7,045.0	-2,984.8	345.8	2,984.8	0.00	0.00	
10,100.0	90.00	180.00	7,045.0	-3,084.8	345.8	3,084.8	0.00	0.00	
10,200.0	90.00	180.00	7,045.0	-3,184.8	345.8	3,184.8	0.00	0.00	
10,300.0	90.00	180.00	7,045.0	-3,284.8	345.8	3,284.8	0.00	0.00	
10,400.0	90.00	180.00	7,045.0	-3,384.8	345.8	3,384.8	0.00	0.00	
10,500.0	90.00	180.00	7,045.0	-3,484.8	345.8	3,484.8	0.00	0.00	
10,600.0	90.00	180.00	7,045.0	-3,584.8	345.8	3,584.8	0.00	0.00	
10,700.0	90.00	180.00	7,045.0	-3,684.8	345.8	3,684.8	0.00	0.00	
10,800.0	90.00	180.00	7,045.0	-3,784.8	345.8	3,784.8	0.00	0.00	
10,900.0	90.00	180.00	7,045.0	-3,884.8	345.8	3,884.8	0.00	0.00	
11,000.0	90.00	180.00	7,045.0	-3,984.8	345.8	3,984.8	0.00	0.00	
11,100.0	90.00	180.00	7,045.0	-4,084.8	345.8	4,084.8	0.00	0.00	
11,200.0	90.00	180.00	7,045.0	-4,184.8	345.8	4,184.8	0.00	0.00	
11,300.0	90.00	180.00	7,045.0	-4,284.8	345.8	4,284.8	0.00	0.00	
11,400.0	90.00	180.00	7,045.0	-4,384.8	345.8	4,384.8	0.00	0.00	
11,500.0	90.00	180.00	7,045.0	-4,484.8	345.8	4,484.8	0.00	0.00	
11,577.0	90.00	180.00	7,045.0	-4,561.8	345.8	4,561.8	0.00	0.00	TD at 11577.0

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
Ruhl 1G-32H-B264 PBH - plan hits target center - Point	0.00	0.00	7,045.0	-4,561.8	345.8	1,276,608.38	3,260,296.34	40.088926	-104.569673

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1G-32H-B264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,000.7	1,000.0	Fox Hills - BASE			
4,412.3	4,403.0	Sussex			
4,669.0	4,659.0	Shannon			
4,991.8	4,981.0	Teepee Buttes (*if present)			
6,904.4	6,834.0	Sharon Springs			
6,946.6	6,863.0	Niobrara			
7,089.7	6,947.0	B Chalk			
7,138.1	6,970.0	B Marl			
7,283.0	7,021.0	C Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
450.0	450.0	0.0	0.0	KOP @ 450'
857.5	857.2	9.4	11.0	EOB; Inc=4°
6,310.9	6,296.8	261.6	305.3	Start build/turn @ 6310' MD
7,469.0	7,045.0	-453.8	345.8	LP @ 7045' TVD; 90°
11,577.0	7,045.0	-4,561.8	345.8	TD at 11577.0

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S32-T2N-R64W (Newman)
Ruhl 1G-32H-B264
Hz
Plan #1

Anticollision Report

09 July, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1

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 1,000.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 7/9/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,577.0	Plan #1 (Hz)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**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
S32-T2N-R64W (Newman)						
LAND USX Y31-01 (EXISTING) - EXISTING - NOBLE W						Out of range
NEWMAN 2-32 (EXISTING) - EXISTING - ENCANA WE						Out of range
Newman 2A-32H-C264 - HZ - Plan #1						Out of range
Newman 2B-32H-C264 - HZ - Plan #1						Out of range
Newman 2C-32H-C264 - HZ - Plan #1						Out of range
Newman 2D-32H-C264 - HZ - Plan #1						Out of range
Newman 2E-32H-C264 - HZ - Plan #1						Out of range
Newman 2F-32H-C264 - HZ - Plan #1						Out of range
Newman 2G-32H-C264 - HZ - Plan #1						Out of range
Newman 2H-32H-C264 - HZ - Plan #1						Out of range
Newman 2I-32H-C264 - HZ - Plan #1						Out of range
Newman 2J-32H-C264 - HZ - Plan #1						Out of range
Newman 2K-32H-C264 - HZ - Plan #1						Out of range
Newman 2L-32H-C264 - HZ - Plan #1						Out of range
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	7,660.8	7,077.9	219.2	189.1	7.272	CC, ES
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	7,700.0	7,078.0	222.7	192.0	7.267	SF
Ruhl 1A-32H-B264 - Hz - Plan #1	200.0	200.0	792.2	791.5	1,134.778	CC, ES
Ruhl 1A-32H-B264 - Hz - Plan #1	2,900.0	2,866.8	994.9	984.1	92.192	SF
Ruhl 1B-32H-B264 - Hz - Plan #1	400.0	400.0	782.2	780.8	560.177	CC
Ruhl 1B-32H-B264 - Hz - Plan #1	500.0	500.0	782.3	780.6	448.240	ES
Ruhl 1B-32H-B264 - Hz - Plan #1	4,700.0	4,695.5	998.6	981.0	56.464	SF
Ruhl 1C-32H-B264 - Hz - Plan #1	400.0	400.0	772.1	770.7	552.964	CC
Ruhl 1C-32H-B264 - Hz - Plan #1	11,577.0	11,696.8	908.9	745.4	5.561	ES, SF
Ruhl 1D-32H-B264 - Hz - Plan #1	7,500.0	7,506.4	674.7	643.1	21.360	CC
Ruhl 1D-32H-B264 - Hz - Plan #1	11,577.0	11,579.4	674.9	509.9	4.091	ES, SF
Ruhl 1E-32H-B264 - Hz - Plan #1	7,500.0	7,438.6	457.7	426.8	14.803	CC
Ruhl 1E-32H-B264 - Hz - Plan #1	11,577.0	11,512.8	457.9	295.7	2.823	ES, SF
Ruhl 1F-32H-B264 - Hz - Plan #1	7,407.8	7,570.2	258.7	231.3	9.451	CC
Ruhl 1F-32H-B264 - Hz - Plan #1	11,577.0	11,747.9	258.8	114.1	1.789	ES, SF
Ruhl 1H-32H-B264 - Hz - Plan #1	400.0	400.0	10.1	8.7	7.218	CC, ES
Ruhl 1H-32H-B264 - Hz - Plan #1	11,577.0	11,508.5	240.5	85.5	1.552	SF
Ruhl 1I-32H-B264 - Hz - Plan #1	333.4	333.4	20.1	19.0	17.310	CC
Ruhl 1I-32H-B264 - Hz - Plan #1	400.0	399.8	20.3	19.0	14.575	ES
Ruhl 1I-32H-B264 - Hz - Plan #1	11,577.0	11,740.7	468.0	308.9	2.942	SF
Ruhl 1J-32H-B264 - Hz - Plan #1	300.0	300.0	30.2	29.2	28.852	CC, ES
Ruhl 1J-32H-B264 - Hz - Plan #1	11,577.0	11,640.3	665.1	500.0	4.028	SF
Ruhl 1K-32H-B264 - Hz - Plan #1	233.3	233.3	40.0	39.2	49.113	CC
Ruhl 1K-32H-B264 - Hz - Plan #1	300.0	299.7	40.2	39.2	38.423	ES
Ruhl 1K-32H-B264 - Hz - Plan #1	11,577.0	11,593.4	904.1	739.7	5.499	SF
Ruhl 1L-32H-B264 - Hz - Plan #1	200.0	200.0	50.1	49.4	71.732	CC, ES
Ruhl 1L-32H-B264 - Hz - Plan #1	1,100.0	1,088.5	94.7	90.8	24.261	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - RUHL 1 (EXISTING) - EXISTING - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 100-Geolink 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	37.8	37.8	0.0	0.1	142.30	-698.3	539.7	882.6	882.5	0.07	N/A	
100.0	100.0	133.5	133.5	0.2	0.2	142.29	-698.7	540.1	883.1	882.7	0.41	2,165.776	
200.0	200.0	233.4	233.4	0.3	0.4	142.30	-699.3	540.6	883.9	883.2	0.76	1,167.451	
300.0	300.0	336.3	336.3	0.5	0.6	142.32	-700.0	540.6	884.5	883.4	1.11	795.733	
400.0	400.0	436.1	436.1	0.7	0.8	142.34	-700.5	540.6	884.8	883.4	1.46	605.882	
500.0	500.0	533.8	533.8	0.9	0.9	92.94	-701.0	540.9	885.5	883.7	1.80	490.729	
600.0	600.0	632.9	632.9	1.0	1.1	93.07	-701.8	541.1	886.3	884.1	2.15	411.593	
700.0	699.9	732.1	732.1	1.2	1.3	93.30	-702.7	541.3	887.3	884.8	2.51	354.002	
800.0	799.8	831.4	831.4	1.4	1.5	93.64	-703.6	541.7	888.6	885.7	2.87	309.891	
900.0	899.5	931.0	931.0	1.6	1.6	94.08	-704.4	542.1	890.0	886.8	3.24	274.986	
1,000.0	999.3	1,031.6	1,031.6	1.8	1.8	94.55	-705.3	542.5	891.5	887.9	3.61	246.837	
1,100.0	1,099.0	1,133.5	1,133.5	2.0	2.0	95.02	-705.9	542.9	892.8	888.8	3.99	223.655	
1,200.0	1,198.8	1,232.5	1,232.4	2.2	2.2	95.48	-706.6	543.0	894.1	889.7	4.37	204.637	
1,300.0	1,298.5	1,330.4	1,330.4	2.4	2.3	95.94	-707.4	543.4	895.7	890.9	4.75	188.716	
1,400.0	1,398.3	1,431.5	1,431.4	2.6	2.5	96.40	-708.1	543.8	897.2	892.1	5.13	174.918	
1,500.0	1,498.0	1,530.6	1,530.5	2.8	2.7	96.87	-708.9	544.0	898.8	893.3	5.51	163.118	
1,600.0	1,597.8	1,628.8	1,628.8	3.1	2.9	97.33	-709.9	544.1	900.7	894.8	5.89	152.905	
1,700.0	1,697.5	1,729.8	1,729.8	3.3	3.0	97.82	-711.0	544.2	902.6	896.3	6.28	143.819	
1,800.0	1,797.3	1,832.0	1,831.9	3.5	3.2	98.32	-712.0	544.1	904.3	897.6	6.66	135.712	
1,900.0	1,897.0	1,933.0	1,932.9	3.7	3.4	98.83	-712.9	543.5	905.8	898.8	7.05	128.501	
2,000.0	1,996.8	2,032.7	2,032.6	3.9	3.6	99.32	-713.8	543.0	907.4	900.0	7.43	122.083	
2,100.0	2,096.5	2,133.4	2,133.3	4.1	3.7	99.83	-714.6	542.4	909.0	901.2	7.82	116.260	
2,200.0	2,196.3	2,234.2	2,234.1	4.3	3.9	100.34	-715.4	541.7	910.6	902.4	8.20	110.992	
2,300.0	2,296.0	2,339.3	2,339.2	4.5	4.1	100.86	-715.8	540.8	911.8	903.2	8.60	106.056	
2,400.0	2,395.8	2,442.8	2,442.7	4.7	4.3	101.37	-715.7	539.8	912.7	903.7	8.99	101.546	
2,500.0	2,495.5	2,546.5	2,546.4	5.0	4.5	101.86	-715.2	538.7	913.1	903.7	9.38	97.365	
2,600.0	2,595.3	2,648.4	2,648.3	5.2	4.6	102.35	-714.3	537.4	913.3	903.5	9.77	93.520	
2,700.0	2,695.0	2,747.3	2,747.2	5.4	4.8	102.83	-713.4	536.2	913.4	903.2	10.15	90.014	
2,800.0	2,794.7	2,846.2	2,846.1	5.6	5.0	103.28	-712.5	535.3	913.7	903.2	10.53	86.788	
2,900.0	2,894.5	2,946.4	2,946.2	5.8	5.1	103.70	-711.2	534.8	914.1	903.2	10.91	83.775	
3,000.0	2,994.2	3,046.8	3,046.7	6.0	5.3	104.10	-709.8	534.8	914.5	903.2	11.30	80.968	
3,100.0	3,094.0	3,147.1	3,146.9	6.2	5.5	104.49	-708.3	534.7	914.9	903.2	11.68	78.340	
3,200.0	3,193.7	3,247.2	3,247.0	6.4	5.7	104.88	-706.7	534.8	915.3	903.2	12.06	75.889	
3,300.0	3,293.5	3,348.0	3,347.8	6.7	5.8	105.28	-705.1	534.5	915.6	903.1	12.44	73.574	
3,400.0	3,393.2	3,447.9	3,447.7	6.9	6.0	105.68	-703.5	534.3	915.9	903.1	12.83	71.410	
3,500.0	3,493.0	3,548.0	3,547.8	7.1	6.2	106.06	-701.7	534.3	916.3	903.1	13.21	69.371	
3,600.0	3,592.7	3,648.6	3,648.4	7.3	6.4	106.44	-699.9	534.3	916.6	903.0	13.59	67.443	
3,700.0	3,692.5	3,751.6	3,751.3	7.5	6.5	106.83	-697.8	534.3	916.8	902.8	13.98	65.593	
3,800.0	3,792.2	3,854.5	3,854.2	7.7	6.7	107.18	-695.1	534.6	916.6	902.2	14.36	63.815	
3,900.0	3,892.0	3,955.5	3,955.1	7.9	6.9	107.51	-692.2	535.1	916.3	901.5	14.75	62.134	
4,000.0	3,991.7	4,056.7	4,056.3	8.2	7.1	107.82	-689.0	535.8	915.8	900.7	15.13	60.529	
4,100.0	4,091.5	4,155.8	4,155.4	8.4	7.3	108.12	-685.8	536.6	915.3	899.8	15.51	59.013	
4,200.0	4,191.2	4,252.7	4,252.2	8.6	7.4	108.40	-682.9	537.5	915.1	899.2	15.89	57.601	
4,213.7	4,204.8	4,265.9	4,265.4	8.6	7.5	108.44	-682.5	537.6	915.1	899.1	15.94	57.415	
4,300.0	4,291.0	4,351.2	4,350.7	8.8	7.6	108.69	-680.1	538.6	915.2	898.9	16.27	56.265	
4,400.0	4,390.7	4,447.4	4,446.8	9.0	7.8	108.99	-677.6	539.5	915.4	898.7	16.64	55.013	
4,500.0	4,490.4	4,541.8	4,541.2	9.2	7.9	109.27	-675.7	540.7	916.3	899.3	17.01	53.866	
4,600.0	4,590.2	4,639.8	4,639.2	9.4	8.1	109.57	-674.1	542.0	917.6	900.2	17.39	52.773	
4,700.0	4,689.9	4,741.4	4,740.8	9.6	8.3	109.89	-672.6	543.2	919.0	901.3	17.77	51.716	
4,800.0	4,789.7	4,846.4	4,845.7	9.9	8.5	110.25	-670.7	543.7	920.0	901.8	18.16	50.664	
4,900.0	4,889.4	4,949.0	4,948.3	10.1	8.7	110.65	-668.7	543.5	920.6	902.0	18.54	49.652	
5,000.0	4,989.2	5,049.6	5,048.9	10.3	8.8	111.07	-666.6	542.8	920.9	902.0	18.92	48.681	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - RUHL 1 (EXISTING) - EXISTING - ENCANA WELL — **Offset Site Error:** 0.0 ft

Survey Program: 100-Geolink 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
5,100.0	5,088.9	5,147.9	5,147.2	10.5	9.0	111.47	-664.7	542.0	921.4	902.1	19.29	47.765	
5,200.0	5,188.7	5,245.8	5,245.0	10.7	9.2	111.90	-663.2	541.0	922.2	902.5	19.66	46.902	
5,300.0	5,288.4	5,343.7	5,342.9	10.9	9.3	112.34	-661.8	540.0	923.2	903.2	20.03	46.083	
5,400.0	5,388.2	5,441.6	5,440.8	11.1	9.5	112.74	-660.4	539.4	924.5	904.1	20.40	45.306	
5,500.0	5,487.9	5,540.6	5,539.9	11.4	9.7	113.14	-659.2	539.1	925.9	905.1	20.78	44.563	
5,600.0	5,587.7	5,640.7	5,639.9	11.6	9.9	113.53	-657.9	538.9	927.4	906.3	21.15	43.846	
5,700.0	5,687.4	5,740.0	5,739.2	11.8	10.0	113.91	-656.5	538.8	929.0	907.5	21.53	43.158	
5,800.0	5,787.2	5,838.3	5,837.5	12.0	10.2	114.27	-655.3	539.0	930.7	908.8	21.90	42.506	
5,900.0	5,886.9	5,937.9	5,937.1	12.2	10.4	114.63	-654.1	539.3	932.6	910.3	22.27	41.876	
6,000.0	5,986.7	6,037.5	6,036.7	12.4	10.6	115.00	-652.9	539.4	934.5	911.8	22.64	41.272	
6,100.0	6,086.4	6,137.6	6,136.8	12.6	10.7	115.34	-651.6	540.0	936.4	913.4	23.02	40.686	
6,200.0	6,186.1	6,237.2	6,236.3	12.9	10.9	115.67	-650.3	540.7	938.4	915.0	23.39	40.120	
6,300.0	6,285.9	6,333.7	6,332.9	13.1	11.1	115.97	-649.1	541.6	940.5	916.7	23.76	39.589	
6,400.0	6,385.7	6,429.0	6,428.2	13.2	11.3	20.32	-648.3	543.1	937.8	913.8	24.01	39.057	
6,500.0	6,484.4	6,528.2	6,527.3	13.3	11.4	-0.69	-647.5	544.7	921.9	898.0	23.95	38.487	
6,600.0	6,580.0	6,622.6	6,621.7	13.3	11.6	-6.86	-646.8	546.5	892.9	869.3	23.58	37.871	
6,700.0	6,670.8	6,709.1	6,708.2	13.3	11.7	-10.78	-646.2	548.7	851.7	828.8	22.91	37.174	
6,800.0	6,755.0	6,790.6	6,789.6	13.3	11.9	-14.63	-645.9	551.5	799.2	777.2	22.03	36.279	
6,900.0	6,830.9	6,864.4	6,863.4	13.4	12.0	-19.43	-645.6	554.4	736.6	715.5	21.08	34.949	
7,000.0	6,897.0	6,928.3	6,927.2	13.6	12.1	-26.09	-645.5	557.4	665.2	644.9	20.35	32.690	
7,100.0	6,952.1	6,981.2	6,980.0	13.9	12.2	-35.72	-645.5	560.1	587.2	566.8	20.43	28.738	
7,200.0	6,995.1	7,024.5	7,023.2	14.4	12.3	-49.47	-645.5	562.5	504.7	482.7	22.03	22.912	
7,300.0	7,025.2	7,056.0	7,054.7	15.1	12.4	-66.18	-645.6	564.0	420.9	396.2	24.75	17.009	
7,400.0	7,041.7	7,073.5	7,072.2	15.9	12.4	-80.97	-645.6	564.7	340.7	313.7	26.93	12.651	
7,500.0	7,045.0	7,077.3	7,076.0	16.9	12.4	-87.66	-645.6	564.8	271.9	243.7	28.19	9.643	
7,600.0	7,045.0	7,077.7	7,076.4	18.0	12.4	-87.75	-645.6	564.8	227.5	198.1	29.37	7.745	
7,660.8	7,045.0	7,077.9	7,076.6	18.8	12.4	-87.81	-645.6	564.9	219.2	189.1	30.14	7.272	CC, ES
7,700.0	7,045.0	7,078.0	7,076.7	19.2	12.4	-87.84	-645.6	564.9	222.7	192.0	30.64	7.267	SF
7,800.0	7,045.0	7,078.4	7,077.1	20.5	12.4	-87.93	-645.7	564.9	259.6	227.6	31.98	8.117	
7,900.0	7,045.0	7,078.8	7,077.5	21.9	12.4	-88.03	-645.7	564.9	324.4	291.0	33.39	9.716	
8,000.0	7,045.0	7,079.1	7,077.8	23.3	12.4	-88.12	-645.7	564.9	403.8	369.0	34.85	11.589	
8,100.0	7,045.0	7,079.5	7,078.2	24.7	12.4	-88.21	-645.7	564.9	490.8	454.5	36.34	13.506	
8,200.0	7,045.0	7,079.8	7,078.5	26.2	12.4	-88.31	-645.7	564.9	582.0	544.1	37.87	15.369	
8,300.0	7,045.0	7,080.2	7,078.9	27.7	12.4	-88.40	-645.7	564.9	675.7	636.3	39.42	17.139	
8,400.0	7,045.0	7,080.6	7,079.3	29.3	12.4	-88.50	-645.7	565.0	771.0	730.0	41.00	18.802	
8,500.0	7,045.0	7,080.9	7,079.6	30.8	12.4	-88.60	-645.7	565.0	867.3	824.7	42.60	20.358	
8,600.0	7,045.0	7,081.3	7,080.0	32.4	12.4	-88.69	-645.7	565.0	964.4	920.2	44.22	21.810	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1A-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	-90.26	-3.6	-792.2	792.2				
100.0	100.0	100.0	100.0	0.2	0.2	-90.26	-3.6	-792.2	792.2	791.9	0.35	2,269.557	
200.0	200.0	200.0	200.0	0.3	0.3	-90.26	-3.6	-792.2	792.2	791.5	0.70	1,134.778	CC, ES
300.0	300.0	286.4	286.4	0.5	0.5	-90.19	-2.6	-793.0	793.1	792.1	1.03	772.848	
400.0	400.0	375.2	375.1	0.7	0.7	-89.95	0.7	-795.2	795.6	794.3	1.37	582.674	
500.0	500.0	475.0	474.8	0.9	0.9	-139.04	5.2	-798.4	798.9	797.2	1.72	463.823	
600.0	600.0	574.9	574.5	1.0	1.1	-138.77	9.7	-801.5	803.4	801.3	2.08	385.395	
700.0	699.9	674.7	674.1	1.2	1.2	-138.58	14.1	-804.6	809.2	806.8	2.45	330.418	
800.0	799.8	774.4	773.7	1.4	1.4	-138.47	18.6	-807.7	816.3	813.5	2.82	289.808	
900.0	899.5	874.1	873.2	1.6	1.6	-138.44	23.1	-810.8	824.6	821.4	3.19	258.620	
1,000.0	999.3	973.7	972.7	1.8	1.8	-138.46	27.6	-813.9	833.1	829.6	3.56	233.807	
1,100.0	1,099.0	1,073.4	1,072.2	2.0	2.0	-138.48	32.0	-817.1	841.7	837.7	3.94	213.633	
1,200.0	1,198.8	1,173.0	1,171.7	2.2	2.2	-138.50	36.5	-820.2	850.2	845.9	4.32	196.925	
1,300.0	1,298.5	1,272.6	1,271.2	2.4	2.4	-138.52	41.0	-823.3	858.7	854.0	4.70	182.870	
1,400.0	1,398.3	1,372.3	1,370.7	2.6	2.6	-138.53	45.4	-826.4	867.2	862.1	5.07	170.889	
1,500.0	1,498.0	1,471.9	1,470.2	2.8	2.8	-138.55	49.9	-829.5	875.7	870.3	5.45	160.557	
1,600.0	1,597.8	1,571.5	1,569.6	3.1	3.0	-138.57	54.4	-832.6	884.2	878.4	5.83	151.559	
1,700.0	1,697.5	1,671.2	1,669.1	3.3	3.2	-138.58	58.8	-835.7	892.7	886.5	6.21	143.654	
1,800.0	1,797.3	1,770.8	1,768.6	3.5	3.4	-138.60	63.3	-838.9	901.2	894.6	6.60	136.654	
1,900.0	1,897.0	1,870.4	1,868.1	3.7	3.6	-138.62	67.8	-842.0	909.8	902.8	6.98	130.414	
2,000.0	1,996.8	1,970.1	1,967.6	3.9	3.8	-138.63	72.2	-845.1	918.3	910.9	7.36	124.817	
2,100.0	2,096.5	2,069.7	2,067.1	4.1	4.0	-138.65	76.7	-848.2	926.8	919.0	7.74	119.769	
2,200.0	2,196.3	2,169.4	2,166.6	4.3	4.2	-138.66	81.2	-851.3	935.3	927.2	8.12	115.192	
2,300.0	2,296.0	2,269.0	2,266.1	4.5	4.4	-138.68	85.6	-854.4	943.8	935.3	8.50	111.025	
2,400.0	2,395.8	2,368.6	2,365.5	4.7	4.6	-138.69	90.1	-857.5	952.3	943.4	8.88	107.214	
2,500.0	2,495.5	2,468.3	2,465.0	5.0	4.8	-138.71	94.6	-860.7	960.8	951.6	9.26	103.716	
2,600.0	2,595.3	2,567.9	2,564.5	5.2	5.0	-138.72	99.0	-863.8	969.3	959.7	9.65	100.494	
2,700.0	2,695.0	2,667.5	2,664.0	5.4	5.2	-138.73	103.5	-866.9	977.9	967.8	10.03	97.517	
2,800.0	2,794.7	2,767.2	2,763.5	5.6	5.4	-138.75	108.0	-870.0	986.4	976.0	10.41	94.757	
2,900.0	2,894.5	2,866.8	2,863.0	5.8	5.6	-138.76	112.4	-873.1	994.9	984.1	10.79	92.192	SF

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1B-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	-90.27	-3.6	-782.1	782.2				
100.0	100.0	100.0	100.0	0.2	0.2	-90.27	-3.6	-782.1	782.2	781.8	0.35	2,240.707	
200.0	200.0	200.0	200.0	0.3	0.3	-90.27	-3.6	-782.1	782.2	781.5	0.70	1,120.354	
300.0	300.0	300.0	300.0	0.5	0.5	-90.27	-3.6	-782.1	782.2	781.1	1.05	746.902	
400.0	400.0	400.0	400.0	0.7	0.7	-90.27	-3.6	-782.1	782.2	780.8	1.40	560.177	CC
427.8	427.8	427.8	427.8	0.7	0.7	-139.68	-3.6	-782.1	782.2	780.7	1.49	523.812	
500.0	500.0	500.0	500.0	0.9	0.9	-139.69	-3.6	-782.1	782.3	780.6	1.75	448.240	ES
600.0	600.0	600.0	600.0	1.0	1.0	-139.76	-3.6	-782.1	783.7	781.6	2.09	374.116	
700.0	699.9	699.9	699.9	1.2	1.2	-139.91	-3.6	-782.1	786.3	783.9	2.45	321.552	
800.0	799.8	799.8	799.8	1.4	1.4	-140.13	-3.6	-782.1	790.3	787.5	2.80	282.397	
900.0	899.5	899.5	899.5	1.6	1.6	-140.42	-3.6	-782.1	795.6	792.4	3.16	252.158	
1,000.0	999.3	999.3	999.3	1.8	1.7	-140.75	-3.6	-782.1	801.1	797.6	3.51	227.988	
1,100.0	1,099.0	1,100.1	1,100.1	2.0	1.9	-140.95	-1.9	-782.1	806.5	802.7	3.88	208.066	
1,200.0	1,198.8	1,200.5	1,200.4	2.2	2.1	-140.92	2.9	-782.1	811.9	807.6	4.24	191.344	
1,300.0	1,298.5	1,300.4	1,300.1	2.4	2.3	-140.87	8.1	-782.0	817.2	812.6	4.61	177.173	
1,400.0	1,398.3	1,400.2	1,399.8	2.6	2.5	-140.82	13.4	-782.0	822.5	817.5	4.98	165.007	
1,500.0	1,498.0	1,500.1	1,499.5	2.8	2.7	-140.77	18.6	-781.9	827.9	822.5	5.36	154.467	
1,600.0	1,597.8	1,599.9	1,599.3	3.1	2.8	-140.72	23.8	-781.9	833.2	827.4	5.74	145.258	
1,700.0	1,697.5	1,699.8	1,699.0	3.3	3.0	-140.67	29.0	-781.8	838.5	832.4	6.11	137.148	
1,800.0	1,797.3	1,799.7	1,798.7	3.5	3.2	-140.62	34.2	-781.8	843.8	837.4	6.49	129.958	
1,900.0	1,897.0	1,899.5	1,898.4	3.7	3.4	-140.57	39.5	-781.7	849.2	842.3	6.87	123.542	
2,000.0	1,996.8	1,999.4	1,998.1	3.9	3.6	-140.52	44.7	-781.7	854.5	847.3	7.25	117.784	
2,100.0	2,096.5	2,099.2	2,097.9	4.1	3.8	-140.48	49.9	-781.6	859.8	852.2	7.64	112.590	
2,200.0	2,196.3	2,199.1	2,197.6	4.3	4.0	-140.43	55.1	-781.6	865.2	857.2	8.02	107.882	
2,300.0	2,296.0	2,298.9	2,297.3	4.5	4.2	-140.38	60.3	-781.5	870.5	862.1	8.40	103.596	
2,400.0	2,395.8	2,398.8	2,397.0	4.7	4.4	-140.34	65.6	-781.5	875.8	867.1	8.79	99.677	
2,500.0	2,495.5	2,498.6	2,496.7	5.0	4.6	-140.29	70.8	-781.4	881.2	872.0	9.17	96.082	
2,600.0	2,595.3	2,598.5	2,596.4	5.2	4.8	-140.25	76.0	-781.3	886.5	877.0	9.56	92.772	
2,700.0	2,695.0	2,698.4	2,696.2	5.4	4.9	-140.21	81.2	-781.3	891.8	881.9	9.94	89.716	
2,800.0	2,794.7	2,798.2	2,795.9	5.6	5.1	-140.16	86.4	-781.2	897.2	886.9	10.33	86.884	
2,900.0	2,894.5	2,898.1	2,895.6	5.8	5.3	-140.12	91.7	-781.2	902.5	891.8	10.71	84.254	
3,000.0	2,994.2	2,997.9	2,995.3	6.0	5.5	-140.08	96.9	-781.1	907.8	896.8	11.10	81.804	
3,100.0	3,094.0	3,097.8	3,095.0	6.2	5.7	-140.04	102.1	-781.1	913.2	901.7	11.48	79.518	
3,200.0	3,193.7	3,197.6	3,194.8	6.4	5.9	-139.99	107.3	-781.0	918.5	906.7	11.87	77.379	
3,300.0	3,293.5	3,297.5	3,294.5	6.7	6.1	-139.95	112.5	-781.0	923.9	911.6	12.26	75.373	
3,400.0	3,393.2	3,397.3	3,394.2	6.9	6.3	-139.91	117.8	-780.9	929.2	916.6	12.64	73.489	
3,500.0	3,493.0	3,497.2	3,493.9	7.1	6.5	-139.87	123.0	-780.9	934.5	921.5	13.03	71.716	
3,600.0	3,592.7	3,597.0	3,593.6	7.3	6.7	-139.83	128.2	-780.8	939.9	926.5	13.42	70.045	
3,700.0	3,692.5	3,696.9	3,693.4	7.5	6.9	-139.80	133.4	-780.8	945.2	931.4	13.81	68.466	
3,800.0	3,792.2	3,796.8	3,793.1	7.7	7.1	-139.76	138.6	-780.7	950.6	936.4	14.19	66.973	
3,900.0	3,892.0	3,896.6	3,892.8	7.9	7.3	-139.72	143.8	-780.7	955.9	941.3	14.58	65.559	
4,000.0	3,991.7	3,996.5	3,992.5	8.2	7.5	-139.68	149.1	-780.6	961.2	946.3	14.97	64.217	
4,100.0	4,091.5	4,096.3	4,092.2	8.4	7.7	-139.64	154.3	-780.6	966.6	951.2	15.36	62.943	
4,200.0	4,191.2	4,196.2	4,191.9	8.6	7.9	-139.61	159.5	-780.5	971.9	956.2	15.74	61.731	
4,300.0	4,291.0	4,296.0	4,291.7	8.8	8.1	-139.57	164.7	-780.5	977.3	961.1	16.13	60.577	
4,400.0	4,390.7	4,395.9	4,391.4	9.0	8.3	-139.53	169.9	-780.4	982.6	966.1	16.52	59.476	
4,500.0	4,490.4	4,495.7	4,491.1	9.2	8.5	-139.50	175.2	-780.4	988.0	971.0	16.91	58.426	
4,600.0	4,590.2	4,595.6	4,590.8	9.4	8.7	-139.46	180.4	-780.3	993.3	976.0	17.30	57.423	
4,700.0	4,689.9	4,695.5	4,690.5	9.6	8.8	-139.43	185.6	-780.2	998.6	981.0	17.69	56.464	SF

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1C-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	-90.27	-3.6	-772.1	772.1				
100.0	100.0	100.0	100.0	0.2	0.2	-90.27	-3.6	-772.1	772.1	771.7	0.35	2,211.858	
200.0	200.0	200.0	200.0	0.3	0.3	-90.27	-3.6	-772.1	772.1	771.4	0.70	1,105.929	
300.0	300.0	300.0	300.0	0.5	0.5	-90.27	-3.6	-772.1	772.1	771.0	1.05	737.286	
400.0	400.0	400.0	400.0	0.7	0.7	-90.27	-3.6	-772.1	772.1	770.7	1.40	552.964	CC
427.8	427.8	427.8	427.8	0.7	0.7	-139.69	-3.6	-772.1	772.1	770.6	1.49	517.068	
500.0	500.0	500.0	500.0	0.9	0.9	-139.69	-3.6	-772.1	772.3	770.5	1.75	442.470	
600.0	600.0	600.0	600.0	1.0	1.0	-139.77	-3.6	-772.1	773.6	771.5	2.09	369.308	
700.0	699.9	708.6	708.6	1.2	1.2	-139.87	-2.8	-771.5	775.7	773.2	2.46	315.196	
800.0	799.8	817.3	817.2	1.4	1.4	-139.95	-0.3	-769.7	778.0	775.2	2.83	274.704	
900.0	899.5	926.0	925.9	1.6	1.6	-139.98	3.9	-766.7	780.4	777.2	3.21	243.072	
1,000.0	999.3	1,026.6	1,026.3	1.8	1.8	-139.97	8.6	-763.2	782.4	778.8	3.58	218.529	
1,100.0	1,099.0	1,126.6	1,126.1	2.0	2.0	-139.96	13.3	-759.8	784.4	780.5	3.95	198.489	
1,200.0	1,198.8	1,226.6	1,225.9	2.2	2.2	-139.96	18.1	-756.4	786.4	782.1	4.33	181.796	
1,300.0	1,298.5	1,326.6	1,325.7	2.4	2.4	-139.95	22.8	-753.0	788.4	783.7	4.70	167.695	
1,400.0	1,398.3	1,426.6	1,425.5	2.6	2.6	-139.94	27.5	-749.6	790.4	785.3	5.08	155.638	
1,500.0	1,498.0	1,526.5	1,525.3	2.8	2.8	-139.93	32.2	-746.2	792.4	787.0	5.46	145.219	
1,600.0	1,597.8	1,626.5	1,625.1	3.1	3.0	-139.92	37.0	-742.8	794.4	788.6	5.84	136.129	
1,700.0	1,697.5	1,726.5	1,725.0	3.3	3.2	-139.91	41.7	-739.4	796.4	790.2	6.22	128.133	
1,800.0	1,797.3	1,826.5	1,824.8	3.5	3.4	-139.91	46.4	-736.0	798.4	791.8	6.60	121.046	
1,900.0	1,897.0	1,926.5	1,924.6	3.7	3.6	-139.90	51.1	-732.6	800.4	793.4	6.98	114.724	
2,000.0	1,996.8	2,026.4	2,024.4	3.9	3.8	-139.89	55.9	-729.2	802.4	795.0	7.36	109.050	
2,100.0	2,096.5	2,126.4	2,124.2	4.1	4.0	-139.88	60.6	-725.8	804.4	796.7	7.74	103.930	
2,200.0	2,196.3	2,226.4	2,224.0	4.3	4.2	-139.87	65.3	-722.4	806.4	798.3	8.12	99.287	
2,300.0	2,296.0	2,326.4	2,323.8	4.5	4.4	-139.86	70.0	-719.0	808.4	799.9	8.50	95.059	
2,400.0	2,395.8	2,426.4	2,423.6	4.7	4.6	-139.86	74.7	-715.6	810.4	801.5	8.89	91.191	
2,500.0	2,495.5	2,526.3	2,523.4	5.0	4.8	-139.85	79.5	-712.2	812.4	803.1	9.27	87.641	
2,600.0	2,595.3	2,626.3	2,623.3	5.2	5.0	-139.84	84.2	-708.8	814.4	804.7	9.65	84.371	
2,700.0	2,695.0	2,726.3	2,723.1	5.4	5.2	-139.83	88.9	-705.4	816.4	806.3	10.04	81.349	
2,800.0	2,794.7	2,826.3	2,822.9	5.6	5.4	-139.82	93.6	-702.0	818.4	808.0	10.42	78.548	
2,900.0	2,894.5	2,926.3	2,922.7	5.8	5.6	-139.82	98.4	-698.6	820.4	809.6	10.80	75.944	
3,000.0	2,994.2	3,026.2	3,022.5	6.0	5.8	-139.81	103.1	-695.2	822.4	811.2	11.19	73.519	
3,100.0	3,094.0	3,126.2	3,122.3	6.2	6.0	-139.80	107.8	-691.8	824.4	812.8	11.57	71.253	
3,200.0	3,193.7	3,226.2	3,222.1	6.4	6.2	-139.79	112.5	-688.4	826.4	814.4	11.95	69.133	
3,300.0	3,293.5	3,326.2	3,321.9	6.7	6.4	-139.79	117.3	-685.0	828.4	816.0	12.34	67.143	
3,400.0	3,393.2	3,426.2	3,421.7	6.9	6.6	-139.78	122.0	-681.6	830.4	817.6	12.72	65.274	
3,500.0	3,493.0	3,526.1	3,521.5	7.1	6.8	-139.77	126.7	-678.2	832.4	819.3	13.11	63.513	
3,600.0	3,592.7	3,626.1	3,621.4	7.3	7.0	-139.76	131.4	-674.8	834.4	820.9	13.49	61.852	
3,700.0	3,692.5	3,726.1	3,721.2	7.5	7.2	-139.75	136.1	-671.4	836.4	822.5	13.87	60.283	
3,800.0	3,792.2	3,826.1	3,821.0	7.7	7.4	-139.75	140.9	-668.0	838.3	824.1	14.26	58.799	
3,900.0	3,892.0	3,926.1	3,920.8	7.9	7.6	-139.74	145.6	-664.6	840.3	825.7	14.64	57.392	
4,000.0	3,991.7	4,026.0	4,020.6	8.2	7.8	-139.73	150.3	-661.2	842.3	827.3	15.03	56.056	
4,100.0	4,091.5	4,126.0	4,120.4	8.4	8.0	-139.72	155.0	-657.8	844.3	828.9	15.41	54.787	
4,200.0	4,191.2	4,226.0	4,220.2	8.6	8.2	-139.72	159.8	-654.4	846.3	830.5	15.80	53.580	
4,300.0	4,291.0	4,326.0	4,320.0	8.8	8.4	-139.71	164.5	-651.0	848.3	832.2	16.18	52.430	
4,400.0	4,390.7	4,426.0	4,419.8	9.0	8.6	-139.70	169.2	-647.6	850.3	833.8	16.56	51.333	
4,500.0	4,490.4	4,525.9	4,519.7	9.2	8.8	-139.70	173.9	-644.2	852.3	835.4	16.95	50.286	
4,600.0	4,590.2	4,625.9	4,619.5	9.4	9.0	-139.69	178.7	-640.8	854.3	837.0	17.33	49.285	
4,700.0	4,689.9	4,725.9	4,719.3	9.6	9.2	-139.68	183.4	-637.4	856.3	838.6	17.72	48.328	
4,800.0	4,789.7	4,825.9	4,819.1	9.9	9.4	-139.67	188.1	-634.0	858.3	840.2	18.10	47.411	
4,900.0	4,889.4	4,925.9	4,918.9	10.1	9.6	-139.67	192.8	-630.6	860.3	841.8	18.49	46.532	
5,000.0	4,989.2	5,025.8	5,018.7	10.3	9.8	-139.66	197.5	-627.2	862.3	843.4	18.87	45.689	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1C-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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
5,100.0	5,088.9	5,125.8	5,118.5	10.5	10.0	-139.65	202.3	-623.8	864.3	845.1	19.26	44.879	
5,200.0	5,188.7	5,225.8	5,218.3	10.7	10.2	-139.64	207.0	-620.4	866.3	846.7	19.64	44.102	
5,300.0	5,288.4	5,325.8	5,318.1	10.9	10.4	-139.64	211.7	-617.0	868.3	848.3	20.03	43.354	
5,400.0	5,388.2	5,425.8	5,417.9	11.1	10.6	-139.63	216.4	-613.6	870.3	849.9	20.41	42.634	
5,500.0	5,487.9	5,525.7	5,517.8	11.4	10.8	-139.62	221.2	-610.2	872.3	851.5	20.80	41.941	
5,600.0	5,587.7	5,625.7	5,617.6	11.6	11.0	-139.62	225.9	-606.8	874.3	853.1	21.18	41.272	
5,700.0	5,687.4	5,725.7	5,717.4	11.8	11.2	-139.61	230.6	-603.4	876.3	854.7	21.57	40.628	
5,800.0	5,787.2	5,825.7	5,817.2	12.0	11.4	-139.60	235.3	-600.0	878.3	856.3	21.95	40.006	
5,900.0	5,886.9	5,925.7	5,917.0	12.2	11.6	-139.60	240.1	-596.6	880.3	858.0	22.34	39.406	
6,000.0	5,986.7	6,025.6	6,016.8	12.4	11.8	-139.59	244.8	-593.2	882.3	859.6	22.72	38.826	
6,100.0	6,086.4	6,125.6	6,116.6	12.6	12.0	-139.58	249.5	-589.8	884.3	861.2	23.11	38.265	
6,200.0	6,186.1	6,225.6	6,216.4	12.9	12.2	-139.58	254.2	-586.4	886.3	862.8	23.49	37.723	
6,300.0	6,285.9	6,325.6	6,316.2	13.1	12.4	-139.57	258.9	-583.0	888.3	864.4	23.88	37.198	
6,400.0	6,385.7	6,425.3	6,415.8	13.2	12.6	124.87	263.7	-579.6	890.3	866.1	24.22	36.756	
6,500.0	6,484.4	6,525.8	6,516.1	13.3	12.8	104.90	262.4	-576.2	892.4	868.0	24.44	36.517	
6,600.0	6,580.0	6,628.3	6,617.2	13.3	12.8	100.32	246.7	-572.8	894.7	870.2	24.49	36.527	
6,700.0	6,670.8	6,732.8	6,717.0	13.3	12.8	98.67	216.0	-569.4	897.0	872.6	24.44	36.708	
6,800.0	6,755.0	6,839.4	6,813.0	13.3	12.8	98.02	170.1	-566.1	899.4	875.0	24.35	36.942	
6,900.0	6,830.9	6,948.0	6,902.8	13.4	12.8	97.81	109.1	-563.0	901.6	877.3	24.33	37.059	
7,000.0	6,897.0	7,058.5	6,983.6	13.6	12.9	97.80	33.9	-560.3	903.7	879.2	24.52	36.855	
7,100.0	6,952.1	7,170.8	7,052.9	13.9	13.1	97.88	-54.2	-557.9	905.6	880.5	25.05	36.144	
7,200.0	6,995.1	7,284.4	7,108.1	14.4	13.6	97.98	-153.4	-556.1	907.0	881.0	26.02	34.856	
7,300.0	7,025.2	7,399.2	7,147.3	15.1	14.3	98.06	-261.2	-554.7	908.1	880.6	27.47	33.054	
7,400.0	7,041.7	7,514.7	7,168.9	15.9	15.3	98.10	-374.5	-554.0	908.6	879.2	29.39	30.912	
7,500.0	7,045.0	7,625.2	7,173.0	16.9	16.4	98.10	-484.8	-553.9	908.7	877.1	31.62	28.738	
7,600.0	7,045.0	7,725.2	7,173.0	18.0	17.5	98.10	-584.8	-553.9	908.7	874.8	33.93	26.782	
7,700.0	7,045.0	7,825.2	7,173.0	19.2	18.8	98.10	-684.8	-553.9	908.7	872.3	36.43	24.948	
7,800.0	7,045.0	7,925.2	7,173.0	20.5	20.1	98.10	-784.8	-553.9	908.7	869.7	39.07	23.259	
7,900.0	7,045.0	8,025.2	7,173.0	21.9	21.5	98.10	-884.8	-553.9	908.7	866.9	41.84	21.721	
8,000.0	7,045.0	8,125.2	7,173.0	23.3	22.9	98.10	-984.8	-553.9	908.7	864.0	44.70	20.329	
8,100.0	7,045.0	8,225.2	7,173.0	24.7	24.3	98.10	-1,084.8	-553.9	908.8	861.1	47.65	19.072	
8,200.0	7,045.0	8,325.2	7,173.0	26.2	25.8	98.10	-1,184.8	-553.9	908.8	858.1	50.66	17.938	
8,300.0	7,045.0	8,425.2	7,173.0	27.7	27.4	98.10	-1,284.8	-553.9	908.8	855.0	53.73	16.913	
8,400.0	7,045.0	8,525.2	7,173.0	29.3	28.9	98.10	-1,384.8	-553.9	908.8	851.9	56.85	15.986	
8,500.0	7,045.0	8,625.2	7,173.0	30.8	30.5	98.10	-1,484.8	-553.9	908.8	848.8	60.00	15.146	
8,600.0	7,045.0	8,725.2	7,173.0	32.4	32.1	98.10	-1,584.8	-553.9	908.8	845.6	63.19	14.382	
8,700.0	7,045.0	8,825.2	7,173.0	34.0	33.7	98.10	-1,684.8	-553.9	908.8	842.4	66.41	13.685	
8,800.0	7,045.0	8,925.2	7,173.0	35.6	35.3	98.10	-1,784.8	-553.9	908.8	839.1	69.65	13.048	
8,900.0	7,045.0	9,025.2	7,173.0	37.2	37.0	98.10	-1,884.8	-553.9	908.8	835.9	72.91	12.464	
9,000.0	7,045.0	9,125.2	7,173.0	38.9	38.6	98.10	-1,984.8	-553.9	908.8	832.6	76.19	11.927	
9,100.0	7,045.0	9,225.2	7,173.0	40.5	40.3	98.10	-2,084.8	-553.9	908.8	829.3	79.49	11.433	
9,200.0	7,045.0	9,325.2	7,173.0	42.2	42.0	98.10	-2,184.8	-553.9	908.8	826.0	82.80	10.975	
9,300.0	7,045.0	9,425.2	7,173.0	43.9	43.6	98.10	-2,284.8	-553.9	908.8	822.7	86.13	10.552	
9,400.0	7,045.0	9,525.2	7,173.0	45.5	45.3	98.10	-2,384.8	-553.9	908.8	819.3	89.46	10.158	
9,500.0	7,045.0	9,625.2	7,173.0	47.2	47.0	98.10	-2,484.8	-553.9	908.8	816.0	92.81	9.792	
9,600.0	7,045.0	9,725.2	7,173.0	48.9	48.7	98.10	-2,584.8	-553.9	908.8	812.6	96.17	9.450	
9,700.0	7,045.0	9,825.2	7,173.0	50.6	50.4	98.10	-2,684.8	-553.9	908.8	809.3	99.53	9.131	
9,800.0	7,045.0	9,925.2	7,173.0	52.3	52.1	98.10	-2,784.8	-553.9	908.8	805.9	102.90	8.832	
9,900.0	7,045.0	10,025.2	7,173.0	54.0	53.8	98.10	-2,884.8	-553.9	908.8	802.5	106.28	8.551	
10,000.0	7,045.0	10,125.2	7,173.0	55.7	55.5	98.10	-2,984.8	-553.9	908.8	799.1	109.66	8.287	
10,100.0	7,045.0	10,225.2	7,173.0	57.4	57.2	98.10	-3,084.8	-553.9	908.8	795.8	113.05	8.039	
10,200.0	7,045.0	10,325.2	7,173.0	59.1	58.9	98.10	-3,184.8	-553.9	908.8	792.4	116.44	7.805	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1C-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,425.2	7,173.0	60.8	60.6	98.10	-3,284.8	-553.9	908.8	789.0	119.84	7.583	
10,400.0	7,045.0	10,525.2	7,173.0	62.5	62.3	98.10	-3,384.8	-553.9	908.8	785.6	123.25	7.374	
10,500.0	7,045.0	10,625.2	7,173.0	64.2	64.0	98.10	-3,484.8	-553.9	908.8	782.2	126.65	7.176	
10,600.0	7,045.0	10,725.2	7,173.0	65.9	65.7	98.10	-3,584.8	-554.0	908.8	778.8	130.06	6.988	
10,700.0	7,045.0	10,825.2	7,173.0	67.6	67.5	98.10	-3,684.8	-554.0	908.8	775.4	133.48	6.809	
10,800.0	7,045.0	10,925.2	7,173.0	69.4	69.2	98.10	-3,784.8	-554.0	908.8	771.9	136.89	6.639	
10,900.0	7,045.0	11,025.2	7,173.0	71.1	70.9	98.10	-3,884.8	-554.0	908.8	768.5	140.31	6.477	
11,000.0	7,045.0	11,125.2	7,173.0	72.8	72.6	98.10	-3,984.8	-554.0	908.8	765.1	143.73	6.323	
11,100.0	7,045.0	11,225.2	7,173.0	74.5	74.4	98.10	-4,084.8	-554.0	908.8	761.7	147.16	6.176	
11,200.0	7,045.0	11,325.2	7,173.0	76.2	76.1	98.10	-4,184.8	-554.0	908.8	758.3	150.58	6.036	
11,300.0	7,045.0	11,425.2	7,173.0	78.0	77.8	98.10	-4,284.8	-554.0	908.9	754.8	154.01	5.901	
11,400.0	7,045.0	11,525.2	7,173.0	79.7	79.6	98.10	-4,384.8	-554.0	908.9	751.4	157.44	5.773	
11,500.0	7,045.0	11,625.2	7,173.0	81.4	81.3	98.10	-4,484.8	-554.0	908.9	748.0	160.87	5.649	
11,543.6	7,045.0	11,668.8	7,173.0	82.2	82.0	98.10	-4,528.4	-554.0	908.9	746.5	162.37	5.597	
11,577.0	7,045.0	11,696.8	7,173.0	82.8	82.5	98.10	-4,556.4	-554.0	908.9	745.4	163.43	5.561	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1D-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	-90.27	-3.7	-762.0	762.0				
100.0	100.0	100.0	100.0	0.2	0.2	-90.27	-3.7	-762.0	762.0	761.7	0.35	2,183.008	
200.0	200.0	200.0	200.0	0.3	0.3	-90.27	-3.7	-762.0	762.0	761.3	0.70	1,091.504	
300.0	300.0	300.0	300.0	0.5	0.5	-90.27	-3.7	-762.0	762.0	761.0	1.05	727.669	
400.0	400.0	400.0	400.0	0.7	0.7	-90.27	-3.7	-762.0	762.0	760.6	1.40	545.752	
500.0	500.0	512.3	512.3	0.9	0.9	-139.66	-3.0	-761.1	761.4	759.6	1.77	430.865	
600.0	600.0	624.6	624.5	1.0	1.1	-139.62	-1.1	-758.4	760.3	758.1	2.14	355.325	
700.0	699.9	736.8	736.6	1.2	1.3	-139.58	2.0	-753.9	758.9	756.4	2.52	301.544	
800.0	799.8	849.0	848.5	1.4	1.5	-139.55	6.4	-747.6	757.3	754.4	2.90	261.054	
900.0	899.5	951.3	950.5	1.6	1.7	-139.54	11.2	-740.7	755.7	752.5	3.27	230.843	
1,000.0	999.3	1,051.3	1,050.2	1.8	2.0	-139.53	15.8	-734.0	754.4	750.7	3.65	206.897	
1,100.0	1,099.0	1,151.3	1,149.8	2.0	2.2	-139.53	20.5	-727.2	753.0	749.0	4.02	187.276	
1,200.0	1,198.8	1,251.3	1,249.5	2.2	2.4	-139.52	25.2	-720.5	751.7	747.3	4.40	170.932	
1,300.0	1,298.5	1,351.3	1,349.1	2.4	2.6	-139.52	29.9	-713.8	750.4	745.6	4.78	157.121	
1,400.0	1,398.3	1,451.3	1,448.8	2.6	2.8	-139.51	34.6	-707.0	749.0	743.9	5.15	145.306	
1,500.0	1,498.0	1,551.3	1,548.4	2.8	3.0	-139.51	39.3	-700.3	747.7	742.2	5.53	135.089	
1,600.0	1,597.8	1,651.2	1,648.1	3.1	3.3	-139.50	44.0	-693.6	746.3	740.4	5.92	126.170	
1,700.0	1,697.5	1,751.2	1,747.7	3.3	3.5	-139.50	48.6	-686.8	745.0	738.7	6.30	118.319	
1,800.0	1,797.3	1,851.2	1,847.4	3.5	3.7	-139.49	53.3	-680.1	743.7	737.0	6.68	111.356	
1,900.0	1,897.0	1,951.2	1,947.1	3.7	3.9	-139.49	58.0	-673.4	742.3	735.3	7.06	105.140	
2,000.0	1,996.8	2,051.2	2,046.7	3.9	4.2	-139.48	62.7	-666.6	741.0	733.5	7.44	99.558	
2,100.0	2,096.5	2,151.2	2,146.4	4.1	4.4	-139.48	67.4	-659.9	739.6	731.8	7.83	94.517	
2,200.0	2,196.3	2,251.2	2,246.0	4.3	4.6	-139.48	72.1	-653.2	738.3	730.1	8.21	89.944	
2,300.0	2,296.0	2,351.2	2,345.7	4.5	4.8	-139.47	76.8	-646.4	737.0	728.4	8.59	85.777	
2,400.0	2,395.8	2,451.2	2,445.3	4.7	5.0	-139.47	81.5	-639.7	735.6	726.7	8.98	81.963	
2,500.0	2,495.5	2,551.2	2,545.0	5.0	5.3	-139.46	86.1	-633.0	734.3	724.9	9.36	78.461	
2,600.0	2,595.3	2,651.2	2,644.6	5.2	5.5	-139.46	90.8	-626.2	732.9	723.2	9.74	75.233	
2,700.0	2,695.0	2,751.2	2,744.3	5.4	5.7	-139.45	95.5	-619.5	731.6	721.5	10.13	72.249	
2,800.0	2,794.7	2,851.1	2,843.9	5.6	5.9	-139.45	100.2	-612.8	730.3	719.8	10.51	69.482	
2,900.0	2,894.5	2,951.1	2,943.6	5.8	6.2	-139.44	104.9	-606.0	728.9	718.0	10.89	66.909	
3,000.0	2,994.2	3,051.1	3,043.2	6.0	6.4	-139.44	109.6	-599.3	727.6	716.3	11.28	64.511	
3,100.0	3,094.0	3,151.1	3,142.9	6.2	6.6	-139.43	114.3	-592.6	726.2	714.6	11.66	62.270	
3,200.0	3,193.7	3,251.1	3,242.6	6.4	6.8	-139.43	118.9	-585.8	724.9	712.9	12.05	60.172	
3,300.0	3,293.5	3,351.1	3,342.2	6.7	7.1	-139.42	123.6	-579.1	723.6	711.1	12.43	58.204	
3,400.0	3,393.2	3,451.1	3,441.9	6.9	7.3	-139.41	128.3	-572.4	722.2	709.4	12.82	56.353	
3,500.0	3,493.0	3,551.1	3,541.5	7.1	7.5	-139.41	133.0	-565.6	720.9	707.7	13.20	54.609	
3,600.0	3,592.7	3,651.1	3,641.2	7.3	7.7	-139.40	137.7	-558.9	719.5	706.0	13.59	52.964	
3,700.0	3,692.5	3,751.1	3,740.8	7.5	8.0	-139.40	142.4	-552.2	718.2	704.2	13.97	51.410	
3,800.0	3,792.2	3,851.1	3,840.5	7.7	8.2	-139.39	147.1	-545.4	716.9	702.5	14.36	49.938	
3,900.0	3,892.0	3,951.0	3,940.1	7.9	8.4	-139.39	151.7	-538.7	715.5	700.8	14.74	48.543	
4,000.0	3,991.7	4,051.0	4,039.8	8.2	8.6	-139.38	156.4	-532.0	714.2	699.1	15.12	47.219	
4,100.0	4,091.5	4,151.0	4,139.4	8.4	8.9	-139.38	161.1	-525.2	712.8	697.3	15.51	45.961	
4,200.0	4,191.2	4,251.0	4,239.1	8.6	9.1	-139.37	165.8	-518.5	711.5	695.6	15.89	44.763	
4,300.0	4,291.0	4,351.0	4,338.7	8.8	9.3	-139.37	170.5	-511.8	710.2	693.9	16.28	43.622	
4,400.0	4,390.7	4,451.0	4,438.4	9.0	9.5	-139.36	175.2	-505.0	708.8	692.2	16.67	42.534	
4,500.0	4,490.4	4,551.0	4,538.1	9.2	9.8	-139.36	179.9	-498.3	707.5	690.4	17.05	41.495	
4,600.0	4,590.2	4,651.0	4,637.7	9.4	10.0	-139.35	184.5	-491.6	706.1	688.7	17.44	40.501	
4,700.0	4,689.9	4,751.0	4,737.4	9.6	10.2	-139.35	189.2	-484.8	704.8	687.0	17.82	39.550	
4,800.0	4,789.7	4,851.0	4,837.0	9.9	10.4	-139.34	193.9	-478.1	703.5	685.3	18.21	38.640	
4,900.0	4,889.4	4,951.0	4,936.7	10.1	10.7	-139.34	198.6	-471.4	702.1	683.5	18.59	37.767	
5,000.0	4,989.2	5,050.9	5,036.3	10.3	10.9	-139.33	203.3	-464.6	700.8	681.8	18.98	36.929	
5,100.0	5,088.9	5,150.9	5,136.0	10.5	11.1	-139.32	208.0	-457.9	699.4	680.1	19.36	36.125	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1D-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	5,188.7	5,250.9	5,235.6	10.7	11.3	-139.32	212.7	-451.1	698.1	678.4	19.75	35.352	
5,300.0	5,288.4	5,350.9	5,335.3	10.9	11.6	-139.31	217.3	-444.4	696.8	676.6	20.13	34.609	
5,400.0	5,388.2	5,450.9	5,434.9	11.1	11.8	-139.31	222.0	-437.7	695.4	674.9	20.52	33.893	
5,500.0	5,487.9	5,550.9	5,534.6	11.4	12.0	-139.30	226.7	-430.9	694.1	673.2	20.90	33.204	
5,600.0	5,587.7	5,650.9	5,634.2	11.6	12.3	-139.30	231.4	-424.2	692.8	671.5	21.29	32.540	
5,700.0	5,687.4	5,750.9	5,733.9	11.8	12.5	-139.29	236.1	-417.5	691.4	669.7	21.67	31.899	
5,800.0	5,787.2	5,850.9	5,833.6	12.0	12.7	-139.29	240.8	-410.7	690.1	668.0	22.06	31.281	
5,900.0	5,886.9	5,950.9	5,933.2	12.2	12.9	-139.28	245.5	-404.0	688.7	666.3	22.45	30.684	
6,000.0	5,986.7	6,050.9	6,032.9	12.4	13.2	-139.27	250.2	-397.3	687.4	664.6	22.83	30.107	
6,100.0	6,086.4	6,150.8	6,132.5	12.6	13.4	-139.27	254.8	-390.5	686.1	662.8	23.22	29.549	
6,200.0	6,186.1	6,250.8	6,232.2	12.9	13.6	-139.26	259.5	-383.8	684.7	661.1	23.60	29.009	
6,300.0	6,285.9	6,351.0	6,332.0	13.1	13.8	-139.33	263.4	-377.1	683.4	659.4	23.97	28.508	
6,400.0	6,385.7	6,450.6	6,431.1	13.2	14.0	124.46	256.2	-370.4	682.0	657.9	24.16	28.225	
6,500.0	6,484.4	6,549.4	6,527.4	13.3	14.0	103.37	235.6	-363.9	680.8	656.6	24.20	28.135	
6,600.0	6,580.0	6,647.4	6,619.3	13.3	14.0	97.69	202.2	-357.7	679.6	655.5	24.13	28.164	
6,700.0	6,670.8	6,744.7	6,705.1	13.3	14.1	94.99	157.0	-351.9	678.6	654.5	24.04	28.223	
6,800.0	6,755.0	6,841.2	6,783.4	13.3	14.1	93.36	101.0	-346.6	677.6	653.6	24.02	28.206	
6,900.0	6,830.9	6,937.1	6,853.2	13.4	14.2	92.26	35.4	-341.9	676.8	652.6	24.17	28.000	
7,000.0	6,897.0	7,032.5	6,913.2	13.6	14.4	91.46	-38.4	-337.8	676.1	651.6	24.57	27.516	
7,100.0	6,952.1	7,127.4	6,962.8	13.9	14.7	90.88	-119.3	-334.5	675.6	650.3	25.29	26.708	
7,200.0	6,995.1	7,222.0	7,001.1	14.4	15.2	90.47	-205.6	-331.9	675.2	648.8	26.37	25.602	
7,300.0	7,025.2	7,316.3	7,027.7	15.1	15.8	90.19	-296.0	-330.1	674.9	647.1	27.80	24.277	
7,400.0	7,041.7	7,410.4	7,042.1	15.9	16.6	90.04	-388.9	-329.1	674.7	645.2	29.54	22.839	
7,474.3	7,046.2	7,480.6	7,045.0	16.7	17.3	89.90	-459.1	-328.9	674.8	643.8	31.04	21.741	
7,500.0	7,045.0	7,506.4	7,045.0	16.9	17.5	90.00	-484.8	-328.9	674.7	643.1	31.59	21.360	CC
7,600.0	7,045.0	7,606.4	7,045.0	18.0	18.6	90.00	-584.8	-328.9	674.7	640.8	33.94	19.881	
7,700.0	7,045.0	7,706.4	7,045.0	19.2	19.7	90.00	-684.8	-328.9	674.7	638.3	36.47	18.499	
7,800.0	7,045.0	7,806.4	7,045.0	20.5	21.0	90.00	-784.8	-328.9	674.7	635.6	39.16	17.230	
7,900.0	7,045.0	7,906.4	7,045.0	21.9	22.3	90.00	-884.8	-328.9	674.7	632.8	41.97	16.077	
8,000.0	7,045.0	8,006.4	7,045.0	23.3	23.7	90.00	-984.8	-328.9	674.7	629.9	44.88	15.036	
8,100.0	7,045.0	8,106.4	7,045.0	24.7	25.1	90.00	-1,084.8	-328.9	674.7	626.9	47.86	14.097	
8,200.0	7,045.0	8,206.4	7,045.0	26.2	26.5	90.00	-1,184.8	-328.9	674.7	623.8	50.92	13.252	
8,300.0	7,045.0	8,306.4	7,045.0	27.7	28.0	90.00	-1,284.8	-328.9	674.8	620.7	54.03	12.489	
8,400.0	7,045.0	8,406.4	7,045.0	29.3	29.6	90.00	-1,384.8	-328.9	674.8	617.6	57.18	11.800	
8,500.0	7,045.0	8,506.4	7,045.0	30.8	31.1	90.00	-1,484.8	-328.9	674.8	614.4	60.38	11.176	
8,600.0	7,045.0	8,606.4	7,045.0	32.4	32.7	90.00	-1,584.8	-328.9	674.8	611.2	63.60	10.609	
8,700.0	7,045.0	8,706.4	7,045.0	34.0	34.3	90.00	-1,684.8	-328.9	674.8	607.9	66.86	10.092	
8,800.0	7,045.0	8,806.4	7,045.0	35.6	35.9	90.00	-1,784.8	-328.9	674.8	604.6	70.14	9.621	
8,900.0	7,045.0	8,906.4	7,045.0	37.2	37.5	90.00	-1,884.8	-328.9	674.8	601.3	73.44	9.188	
9,000.0	7,045.0	9,006.4	7,045.0	38.9	39.1	90.00	-1,984.8	-329.0	674.8	598.0	76.76	8.791	
9,100.0	7,045.0	9,106.4	7,045.0	40.5	40.7	90.00	-2,084.8	-329.0	674.8	594.7	80.09	8.425	
9,200.0	7,045.0	9,206.4	7,045.0	42.2	42.4	90.00	-2,184.8	-329.0	674.8	591.3	83.44	8.087	
9,300.0	7,045.0	9,306.4	7,045.0	43.9	44.0	90.00	-2,284.8	-329.0	674.8	588.0	86.81	7.773	
9,400.0	7,045.0	9,406.4	7,045.0	45.5	45.7	90.00	-2,384.8	-329.0	674.8	584.6	90.18	7.483	
9,500.0	7,045.0	9,506.4	7,045.0	47.2	47.4	90.00	-2,484.8	-329.0	674.8	581.2	93.56	7.212	
9,600.0	7,045.0	9,606.4	7,045.0	48.9	49.0	90.00	-2,584.8	-329.0	674.8	577.8	96.95	6.960	
9,700.0	7,045.0	9,706.4	7,045.0	50.6	50.7	90.00	-2,684.8	-329.0	674.8	574.4	100.35	6.724	
9,800.0	7,045.0	9,806.4	7,045.0	52.3	52.4	90.00	-2,784.8	-329.0	674.8	571.0	103.76	6.503	
9,900.0	7,045.0	9,906.4	7,045.0	54.0	54.1	90.00	-2,884.8	-329.0	674.8	567.6	107.18	6.296	
10,000.0	7,045.0	10,006.4	7,045.0	55.7	55.8	90.00	-2,984.8	-329.0	674.8	564.2	110.60	6.102	
10,100.0	7,045.0	10,106.4	7,045.0	57.4	57.5	90.00	-3,084.8	-329.0	674.8	560.8	114.02	5.918	
10,200.0	7,045.0	10,206.4	7,045.0	59.1	59.2	90.00	-3,184.8	-329.0	674.8	557.4	117.45	5.745	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1D-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,306.4	7,045.0	60.8	60.9	90.00	-3,284.8	-329.0	674.8	553.9	120.88	5.582	
10,400.0	7,045.0	10,406.4	7,045.0	62.5	62.6	90.00	-3,384.8	-329.0	674.8	550.5	124.32	5.428	
10,500.0	7,045.0	10,506.4	7,045.0	64.2	64.3	90.00	-3,484.8	-329.0	674.8	547.1	127.77	5.282	
10,600.0	7,045.0	10,606.4	7,045.0	65.9	66.0	90.00	-3,584.8	-329.0	674.8	543.6	131.21	5.143	
10,700.0	7,045.0	10,706.4	7,045.0	67.6	67.7	90.00	-3,684.8	-329.0	674.8	540.2	134.66	5.011	
10,800.0	7,045.0	10,806.4	7,045.0	69.4	69.4	90.00	-3,784.8	-329.0	674.8	536.7	138.11	4.886	
10,900.0	7,045.0	10,906.4	7,045.0	71.1	71.2	90.00	-3,884.8	-329.0	674.8	533.3	141.57	4.767	
11,000.0	7,045.0	11,006.4	7,045.0	72.8	72.9	90.00	-3,984.8	-329.0	674.8	529.8	145.02	4.653	
11,100.0	7,045.0	11,106.4	7,045.0	74.5	74.6	90.00	-4,084.8	-329.0	674.8	526.4	148.48	4.545	
11,200.0	7,045.0	11,206.4	7,045.0	76.2	76.3	90.00	-4,184.8	-329.0	674.8	522.9	151.95	4.441	
11,300.0	7,045.0	11,306.4	7,045.0	78.0	78.0	90.00	-4,284.8	-329.0	674.8	519.4	155.41	4.342	
11,400.0	7,045.0	11,406.4	7,045.0	79.7	79.8	90.00	-4,384.8	-329.0	674.8	516.0	158.88	4.248	
11,500.0	7,045.0	11,506.4	7,045.0	81.4	81.5	90.00	-4,484.8	-329.0	674.8	512.5	162.34	4.157	
11,544.2	7,045.0	11,550.5	7,045.0	82.2	82.3	90.00	-4,529.0	-329.0	674.8	511.0	163.88	4.118	
11,577.0	7,045.0	11,579.4	7,045.0	82.8	82.8	90.00	-4,557.8	-329.0	674.9	509.9	164.95	4.091	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1E-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	-90.30	-4.0	-752.2	752.2				
100.0	100.0	100.0	100.0	0.2	0.2	-90.30	-4.0	-752.2	752.2	751.9	0.35	2,154.965	
200.0	200.0	200.0	200.0	0.3	0.3	-90.30	-4.0	-752.2	752.2	751.5	0.70	1,077.482	
300.0	300.0	300.0	300.0	0.5	0.5	-90.30	-4.0	-752.2	752.2	751.2	1.05	718.322	
400.0	400.0	406.8	406.8	0.7	0.7	-90.30	-3.9	-752.0	752.0	750.6	1.41	534.038	
500.0	500.0	520.3	520.3	0.9	0.9	-139.66	-2.9	-749.9	750.4	748.6	1.78	421.258	
600.0	600.0	633.7	633.6	1.0	1.1	-139.62	-1.0	-745.8	748.1	745.9	2.16	346.985	
700.0	699.9	747.1	746.8	1.2	1.3	-139.62	1.8	-739.7	745.4	742.8	2.53	294.096	
800.0	799.8	860.4	859.8	1.4	1.6	-139.65	5.6	-731.6	742.2	739.2	2.92	254.266	
900.0	899.5	973.6	972.4	1.6	1.8	-139.69	10.3	-721.5	738.4	735.1	3.31	223.024	
1,000.0	999.3	1,076.5	1,074.6	1.8	2.1	-139.68	15.2	-711.0	733.5	729.9	3.69	198.886	
1,100.0	1,099.0	1,176.4	1,173.8	2.0	2.3	-139.67	19.9	-700.7	728.7	724.6	4.06	179.352	
1,200.0	1,198.8	1,276.2	1,273.1	2.2	2.6	-139.66	24.7	-690.5	723.8	719.4	4.44	163.047	
1,300.0	1,298.5	1,376.1	1,372.3	2.4	2.8	-139.65	29.4	-680.3	718.9	714.1	4.82	149.246	
1,400.0	1,398.3	1,476.0	1,471.6	2.6	3.1	-139.64	34.2	-670.0	714.1	708.9	5.20	137.423	
1,500.0	1,498.0	1,575.9	1,570.8	2.8	3.3	-139.63	38.9	-659.8	709.2	703.6	5.58	127.187	
1,600.0	1,597.8	1,675.8	1,670.0	3.1	3.6	-139.62	43.7	-649.6	704.4	698.4	5.96	118.241	
1,700.0	1,697.5	1,775.7	1,769.3	3.3	3.8	-139.61	48.5	-639.3	699.5	693.1	6.34	110.360	
1,800.0	1,797.3	1,875.5	1,868.5	3.5	4.1	-139.60	53.2	-629.1	694.6	687.9	6.72	103.365	
1,900.0	1,897.0	1,975.4	1,967.8	3.7	4.4	-139.59	58.0	-618.8	689.8	682.7	7.10	97.116	
2,000.0	1,996.8	2,075.3	2,067.0	3.9	4.6	-139.57	62.7	-608.6	684.9	677.4	7.49	91.501	
2,100.0	2,096.5	2,175.2	2,166.3	4.1	4.9	-139.56	67.5	-598.4	680.0	672.2	7.87	86.429	
2,200.0	2,196.3	2,275.1	2,265.5	4.3	5.1	-139.55	72.2	-588.1	675.2	666.9	8.25	81.824	
2,300.0	2,296.0	2,374.9	2,364.7	4.5	5.4	-139.54	77.0	-577.9	670.3	661.7	8.63	77.626	
2,400.0	2,395.8	2,474.8	2,464.0	4.7	5.7	-139.53	81.7	-567.7	665.4	656.4	9.02	73.782	
2,500.0	2,495.5	2,574.7	2,563.2	5.0	5.9	-139.52	86.5	-557.4	660.6	651.2	9.40	70.252	
2,600.0	2,595.3	2,674.6	2,662.5	5.2	6.2	-139.50	91.3	-547.2	655.7	645.9	9.79	66.996	
2,700.0	2,695.0	2,774.5	2,761.7	5.4	6.4	-139.49	96.0	-537.0	650.8	640.7	10.17	63.986	
2,800.0	2,794.7	2,874.3	2,860.9	5.6	6.7	-139.48	100.8	-526.7	646.0	635.4	10.56	61.194	
2,900.0	2,894.5	2,974.2	2,960.2	5.8	7.0	-139.47	105.5	-516.5	641.1	630.2	10.94	58.597	
3,000.0	2,994.2	3,074.1	3,059.4	6.0	7.2	-139.45	110.3	-506.3	636.2	624.9	11.33	56.176	
3,100.0	3,094.0	3,174.0	3,158.7	6.2	7.5	-139.44	115.0	-496.0	631.4	619.7	11.71	53.913	
3,200.0	3,193.7	3,273.9	3,257.9	6.4	7.8	-139.43	119.8	-485.8	626.5	614.4	12.10	51.794	
3,300.0	3,293.5	3,373.8	3,357.2	6.7	8.0	-139.41	124.6	-475.5	621.6	609.2	12.48	49.805	
3,400.0	3,393.2	3,473.6	3,456.4	6.9	8.3	-139.40	129.3	-465.3	616.8	603.9	12.87	47.935	
3,500.0	3,493.0	3,573.5	3,555.6	7.1	8.5	-139.38	134.1	-455.1	611.9	598.7	13.25	46.173	
3,600.0	3,592.7	3,673.4	3,654.9	7.3	8.8	-139.37	138.8	-444.8	607.1	593.4	13.64	44.511	
3,700.0	3,692.5	3,773.3	3,754.1	7.5	9.1	-139.35	143.6	-434.6	602.2	588.2	14.02	42.939	
3,800.0	3,792.2	3,873.2	3,853.4	7.7	9.3	-139.34	148.3	-424.4	597.3	582.9	14.41	41.452	
3,900.0	3,892.0	3,973.0	3,952.6	7.9	9.6	-139.32	153.1	-414.1	592.5	577.7	14.80	40.041	
4,000.0	3,991.7	4,072.9	4,051.8	8.2	9.9	-139.31	157.8	-403.9	587.6	572.4	15.18	38.702	
4,100.0	4,091.5	4,172.8	4,151.1	8.4	10.1	-139.29	162.6	-393.7	582.7	567.2	15.57	37.430	
4,200.0	4,191.2	4,272.7	4,250.3	8.6	10.4	-139.28	167.4	-383.4	577.9	561.9	15.96	36.218	
4,300.0	4,291.0	4,372.6	4,349.6	8.8	10.6	-139.26	172.1	-373.2	573.0	556.7	16.34	35.064	
4,400.0	4,390.7	4,472.5	4,448.8	9.0	10.9	-139.25	176.9	-362.9	568.1	551.4	16.73	33.963	
4,500.0	4,490.4	4,572.3	4,548.1	9.2	11.2	-139.23	181.6	-352.7	563.3	546.2	17.11	32.911	
4,600.0	4,590.2	4,672.2	4,647.3	9.4	11.4	-139.21	186.4	-342.5	558.4	540.9	17.50	31.906	
4,700.0	4,689.9	4,772.1	4,746.5	9.6	11.7	-139.19	191.1	-332.2	553.5	535.7	17.89	30.943	
4,800.0	4,789.7	4,872.0	4,845.8	9.9	12.0	-139.18	195.9	-322.0	548.7	530.4	18.28	30.022	
4,900.0	4,889.4	4,971.9	4,945.0	10.1	12.2	-139.16	200.7	-311.8	543.8	525.2	18.66	29.138	
5,000.0	4,989.2	5,071.7	5,044.3	10.3	12.5	-139.14	205.4	-301.5	539.0	519.9	19.05	28.291	
5,100.0	5,088.9	5,171.6	5,143.5	10.5	12.8	-139.12	210.2	-291.3	534.1	514.6	19.44	27.477	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1E-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	5,188.7	5,271.5	5,242.7	10.7	13.0	-139.10	214.9	-281.1	529.2	509.4	19.83	26.694	
5,300.0	5,288.4	5,371.4	5,342.0	10.9	13.3	-139.08	219.7	-270.8	524.4	504.1	20.21	25.941	
5,400.0	5,388.2	5,471.3	5,441.2	11.1	13.5	-139.06	224.4	-260.6	519.5	498.9	20.60	25.217	
5,500.0	5,487.9	5,571.1	5,540.5	11.4	13.8	-139.04	229.2	-250.3	514.6	493.6	20.99	24.519	
5,600.0	5,587.7	5,671.0	5,639.7	11.6	14.1	-139.02	233.9	-240.1	509.8	488.4	21.38	23.846	
5,700.0	5,687.4	5,770.9	5,739.0	11.8	14.3	-139.00	238.7	-229.9	504.9	483.1	21.77	23.198	
5,800.0	5,787.2	5,870.8	5,838.2	12.0	14.6	-138.98	243.5	-219.6	500.0	477.9	22.15	22.571	
5,900.0	5,886.9	5,970.7	5,937.4	12.2	14.9	-138.96	248.2	-209.4	495.2	472.6	22.54	21.967	
6,000.0	5,986.7	6,070.6	6,036.7	12.4	15.1	-138.94	253.0	-199.2	490.3	467.4	22.93	21.382	
6,100.0	6,086.4	6,170.4	6,135.9	12.6	15.4	-138.92	257.7	-188.9	485.5	462.1	23.32	20.817	
6,200.0	6,186.1	6,270.5	6,235.4	12.9	15.6	-138.93	262.2	-178.7	480.6	456.9	23.69	20.283	
6,300.0	6,285.9	6,370.1	6,334.2	13.1	15.8	-140.11	257.0	-168.5	475.7	451.8	23.87	19.932	
6,400.0	6,385.7	6,466.6	6,428.4	13.2	16.0	122.31	238.8	-158.8	471.3	447.5	23.86	19.757	
6,500.0	6,484.4	6,560.9	6,517.3	13.3	16.0	99.90	208.9	-149.6	467.7	443.9	23.76	19.679	
6,600.0	6,580.0	6,653.3	6,599.9	13.3	16.1	92.95	168.6	-141.1	464.7	441.0	23.67	19.632	
6,700.0	6,670.8	6,743.9	6,675.3	13.3	16.2	89.06	118.9	-133.3	462.4	438.8	23.66	19.548	
6,800.0	6,755.0	6,833.2	6,742.7	13.3	16.3	86.33	61.0	-126.4	460.7	436.9	23.79	19.368	
6,900.0	6,830.9	6,921.1	6,801.8	13.4	16.4	84.24	-3.9	-120.3	459.5	435.4	24.09	19.075	
7,000.0	6,897.0	7,008.1	6,851.9	13.6	16.7	82.60	-74.7	-115.1	458.7	434.1	24.64	18.614	
7,100.0	6,952.1	7,094.2	6,892.8	13.9	17.0	81.32	-150.2	-110.9	458.2	432.8	25.42	18.024	
7,200.0	6,995.1	7,179.6	6,924.2	14.4	17.5	80.37	-229.6	-107.6	457.9	431.5	26.44	17.318	
7,300.0	7,025.2	7,264.6	6,945.8	15.1	18.0	79.72	-311.7	-105.4	457.8	430.1	27.68	16.537	
7,400.0	7,041.7	7,350.0	6,957.7	15.9	18.6	79.37	-396.2	-104.2	457.7	428.6	29.13	15.711	
7,437.8	7,044.6	7,381.3	6,959.5	16.3	18.9	79.28	-427.4	-104.0	457.8	428.0	29.78	15.375	
7,500.0	7,045.0	7,438.6	6,960.0	16.9	19.4	79.30	-484.8	-104.0	457.7	426.8	30.92	14.803	CC
7,600.0	7,045.0	7,538.6	6,960.0	18.0	20.4	79.30	-584.8	-104.0	457.7	424.5	33.25	13.768	
7,700.0	7,045.0	7,638.6	6,960.0	19.2	21.4	79.30	-684.8	-104.0	457.7	422.0	35.75	12.803	
7,800.0	7,045.0	7,738.6	6,960.0	20.5	22.6	79.30	-784.8	-104.0	457.7	419.3	38.40	11.919	
7,900.0	7,045.0	7,838.6	6,960.0	21.9	23.8	79.30	-884.8	-104.0	457.8	416.6	41.18	11.117	
8,000.0	7,045.0	7,938.6	6,960.0	23.3	25.1	79.30	-984.8	-104.0	457.8	413.7	44.04	10.394	
8,100.0	7,045.0	8,038.6	6,960.0	24.7	26.4	79.30	-1,084.8	-104.0	457.8	410.8	46.99	9.743	
8,200.0	7,045.0	8,138.6	6,960.0	26.2	27.8	79.30	-1,184.8	-104.0	457.8	407.8	49.99	9.156	
8,300.0	7,045.0	8,238.6	6,960.0	27.7	29.2	79.30	-1,284.8	-104.0	457.8	404.7	53.06	8.628	
8,400.0	7,045.0	8,338.6	6,960.0	29.3	30.7	79.30	-1,384.8	-104.0	457.8	401.6	56.16	8.151	
8,500.0	7,045.0	8,438.6	6,960.0	30.8	32.2	79.30	-1,484.8	-104.0	457.8	398.5	59.31	7.718	
8,600.0	7,045.0	8,538.6	6,960.0	32.4	33.7	79.30	-1,584.8	-104.0	457.8	395.3	62.49	7.326	
8,700.0	7,045.0	8,638.6	6,960.0	34.0	35.2	79.30	-1,684.8	-104.0	457.8	392.1	65.69	6.969	
8,800.0	7,045.0	8,738.6	6,960.0	35.6	36.8	79.30	-1,784.8	-104.0	457.8	388.9	68.92	6.642	
8,900.0	7,045.0	8,838.6	6,960.0	37.2	38.4	79.30	-1,884.8	-104.0	457.8	385.6	72.17	6.343	
9,000.0	7,045.0	8,938.6	6,960.0	38.9	40.0	79.30	-1,984.8	-104.0	457.8	382.4	75.43	6.069	
9,100.0	7,045.0	9,038.6	6,960.0	40.5	41.6	79.30	-2,084.8	-104.0	457.8	379.1	78.71	5.816	
9,200.0	7,045.0	9,138.6	6,960.0	42.2	43.2	79.30	-2,184.8	-104.0	457.8	375.8	82.01	5.582	
9,300.0	7,045.0	9,238.6	6,960.0	43.9	44.8	79.30	-2,284.8	-104.0	457.8	372.5	85.31	5.366	
9,400.0	7,045.0	9,338.6	6,960.0	45.5	46.4	79.30	-2,384.8	-104.0	457.8	369.2	88.63	5.165	
9,500.0	7,045.0	9,438.6	6,960.0	47.2	48.1	79.30	-2,484.8	-104.0	457.8	365.8	91.96	4.978	
9,600.0	7,045.0	9,538.6	6,960.0	48.9	49.7	79.30	-2,584.8	-104.0	457.8	362.5	95.30	4.804	
9,700.0	7,045.0	9,638.6	6,960.0	50.6	51.4	79.30	-2,684.8	-104.0	457.8	359.2	98.64	4.641	
9,800.0	7,045.0	9,738.6	6,960.0	52.3	53.0	79.30	-2,784.8	-104.0	457.8	355.8	101.99	4.489	
9,900.0	7,045.0	9,838.6	6,960.0	54.0	54.7	79.30	-2,884.8	-104.0	457.8	352.5	105.35	4.346	
10,000.0	7,045.0	9,938.6	6,960.0	55.7	56.4	79.30	-2,984.8	-104.0	457.8	349.1	108.71	4.211	
10,100.0	7,045.0	10,038.6	6,960.0	57.4	58.1	79.30	-3,084.8	-104.0	457.8	345.7	112.08	4.085	
10,200.0	7,045.0	10,138.6	6,960.0	59.1	59.8	79.30	-3,184.8	-104.0	457.8	342.4	115.45	3.966	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1E-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,238.6	6,960.0	60.8	61.4	79.30	-3,284.8	-104.0	457.8	339.0	118.83	3.853	
10,400.0	7,045.0	10,338.6	6,960.0	62.5	63.1	79.30	-3,384.8	-104.0	457.8	335.6	122.21	3.746	
10,500.0	7,045.0	10,438.6	6,960.0	64.2	64.8	79.30	-3,484.8	-104.0	457.8	332.2	125.59	3.645	
10,600.0	7,045.0	10,538.6	6,960.0	65.9	66.5	79.30	-3,584.8	-104.1	457.8	328.9	128.98	3.550	
10,700.0	7,045.0	10,638.6	6,960.0	67.6	68.2	79.30	-3,684.8	-104.1	457.8	325.5	132.37	3.459	
10,800.0	7,045.0	10,738.6	6,960.0	69.4	69.9	79.30	-3,784.8	-104.1	457.8	322.1	135.77	3.372	
10,900.0	7,045.0	10,838.6	6,960.0	71.1	71.6	79.30	-3,884.8	-104.1	457.8	318.7	139.16	3.290	
11,000.0	7,045.0	10,938.6	6,960.0	72.8	73.3	79.30	-3,984.8	-104.1	457.8	315.3	142.56	3.212	
11,100.0	7,045.0	11,038.6	6,960.0	74.5	75.0	79.30	-4,084.8	-104.1	457.8	311.9	145.96	3.137	
11,200.0	7,045.0	11,138.6	6,960.0	76.2	76.8	79.30	-4,184.8	-104.1	457.8	308.5	149.37	3.065	
11,300.0	7,045.0	11,238.6	6,960.0	78.0	78.5	79.30	-4,284.8	-104.1	457.9	305.1	152.77	2.997	
11,400.0	7,045.0	11,338.6	6,960.0	79.7	80.2	79.30	-4,384.8	-104.1	457.9	301.7	156.18	2.932	
11,500.0	7,045.0	11,438.6	6,960.0	81.4	81.9	79.30	-4,484.8	-104.1	457.9	298.3	159.59	2.869	
11,544.6	7,045.0	11,483.3	6,960.0	82.2	82.7	79.30	-4,529.4	-104.1	457.9	296.8	161.11	2.842	
11,577.0	7,045.0	11,512.8	6,960.0	82.8	83.2	79.30	-4,558.9	-104.1	457.9	295.7	162.16	2.823	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1F-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	-90.31	-4.0	-742.1	742.2				
100.0	100.0	100.0	100.0	0.2	0.2	-90.31	-4.0	-742.1	742.2	741.8	0.35	2,126.115	
200.0	200.0	200.0	200.0	0.3	0.3	-90.31	-4.0	-742.1	742.2	741.5	0.70	1,063.058	
300.0	300.0	314.0	314.0	0.5	0.5	-90.28	-3.6	-741.1	741.2	740.1	1.07	691.391	
400.0	400.0	427.8	427.8	0.7	0.8	-90.20	-2.5	-737.9	738.4	736.9	1.45	510.109	
500.0	500.0	541.6	541.4	0.9	1.0	-139.49	-0.7	-732.5	733.9	732.0	1.82	402.990	
600.0	600.0	655.1	654.6	1.0	1.2	-139.43	1.9	-725.1	728.6	726.4	2.20	331.441	
700.0	699.9	768.5	767.6	1.2	1.5	-139.41	5.2	-715.5	722.8	720.2	2.58	280.220	
800.0	799.8	881.8	880.2	1.4	1.7	-139.44	9.2	-703.8	716.5	713.5	2.97	241.533	
900.0	899.5	994.3	991.8	1.6	2.0	-139.48	13.9	-690.2	709.5	706.1	3.36	211.228	
1,000.0	999.3	1,094.0	1,090.5	1.8	2.3	-139.49	18.4	-677.2	701.9	698.1	3.73	188.106	
1,100.0	1,099.0	1,193.7	1,189.3	2.0	2.6	-139.50	22.9	-664.3	694.2	690.1	4.11	169.098	
1,200.0	1,198.8	1,293.4	1,288.0	2.2	2.9	-139.51	27.3	-651.3	686.6	682.1	4.48	153.216	
1,300.0	1,298.5	1,393.1	1,386.8	2.4	3.2	-139.53	31.8	-638.3	679.0	674.1	4.86	139.760	
1,400.0	1,398.3	1,492.8	1,485.6	2.6	3.5	-139.54	36.3	-625.4	671.4	666.1	5.24	128.219	
1,500.0	1,498.0	1,592.5	1,584.3	2.8	3.8	-139.55	40.7	-612.4	663.7	658.1	5.61	118.218	
1,600.0	1,597.8	1,692.3	1,683.1	3.1	4.1	-139.56	45.2	-599.5	656.1	650.1	5.99	109.470	
1,700.0	1,697.5	1,792.0	1,781.8	3.3	4.3	-139.57	49.7	-586.5	648.5	642.1	6.37	101.756	
1,800.0	1,797.3	1,891.7	1,880.6	3.5	4.6	-139.58	54.2	-573.5	640.8	634.1	6.75	94.904	
1,900.0	1,897.0	1,991.4	1,979.4	3.7	4.9	-139.60	58.6	-560.6	633.2	626.1	7.13	88.779	
2,000.0	1,996.8	2,091.1	2,078.1	3.9	5.2	-139.61	63.1	-547.6	625.6	618.1	7.51	83.270	
2,100.0	2,096.5	2,190.8	2,176.9	4.1	5.5	-139.62	67.6	-534.6	618.0	610.1	7.89	78.291	
2,200.0	2,196.3	2,290.5	2,275.7	4.3	5.8	-139.64	72.0	-521.7	610.3	602.1	8.27	73.768	
2,300.0	2,296.0	2,390.2	2,374.4	4.5	6.1	-139.65	76.5	-508.7	602.7	594.0	8.65	69.642	
2,400.0	2,395.8	2,489.9	2,473.2	4.7	6.4	-139.67	81.0	-495.8	595.1	586.0	9.04	65.863	
2,500.0	2,495.5	2,589.6	2,571.9	5.0	6.7	-139.68	85.4	-482.8	587.4	578.0	9.42	62.390	
2,600.0	2,595.3	2,689.3	2,670.7	5.2	7.0	-139.70	89.9	-469.8	579.8	570.0	9.80	59.186	
2,700.0	2,695.0	2,789.0	2,769.5	5.4	7.3	-139.71	94.4	-456.9	572.2	562.0	10.18	56.221	
2,800.0	2,794.7	2,888.8	2,868.2	5.6	7.6	-139.73	98.8	-443.9	564.6	554.0	10.56	53.471	
2,900.0	2,894.5	2,988.5	2,967.0	5.8	7.9	-139.74	103.3	-431.0	556.9	546.0	10.94	50.912	
3,000.0	2,994.2	3,088.2	3,065.7	6.0	8.2	-139.76	107.8	-418.0	549.3	538.0	11.32	48.526	
3,100.0	3,094.0	3,187.9	3,164.5	6.2	8.5	-139.78	112.3	-405.0	541.7	530.0	11.70	46.295	
3,200.0	3,193.7	3,287.6	3,263.3	6.4	8.8	-139.80	116.7	-392.1	534.1	522.0	12.08	44.204	
3,300.0	3,293.5	3,387.3	3,362.0	6.7	9.1	-139.82	121.2	-379.1	526.4	514.0	12.46	42.242	
3,400.0	3,393.2	3,487.0	3,460.8	6.9	9.4	-139.83	125.7	-366.2	518.8	506.0	12.84	40.396	
3,500.0	3,493.0	3,586.7	3,559.6	7.1	9.7	-139.85	130.1	-353.2	511.2	498.0	13.22	38.657	
3,600.0	3,592.7	3,686.4	3,658.3	7.3	10.0	-139.87	134.6	-340.2	503.5	489.9	13.60	37.015	
3,700.0	3,692.5	3,786.1	3,757.1	7.5	10.3	-139.89	139.1	-327.3	495.9	481.9	13.98	35.462	
3,800.0	3,792.2	3,885.8	3,855.8	7.7	10.5	-139.92	143.5	-314.3	488.3	473.9	14.36	33.993	
3,900.0	3,892.0	3,985.6	3,954.6	7.9	10.8	-139.94	148.0	-301.4	480.7	465.9	14.74	32.599	
4,000.0	3,991.7	4,085.3	4,053.4	8.2	11.1	-139.96	152.5	-288.4	473.0	457.9	15.12	31.276	
4,100.0	4,091.5	4,185.0	4,152.1	8.4	11.4	-139.98	157.0	-275.4	465.4	449.9	15.50	30.017	
4,200.0	4,191.2	4,284.7	4,250.9	8.6	11.7	-140.01	161.4	-262.5	457.8	441.9	15.88	28.819	
4,300.0	4,291.0	4,384.4	4,349.6	8.8	12.0	-140.03	165.9	-249.5	450.2	433.9	16.26	27.678	
4,400.0	4,390.7	4,484.1	4,448.4	9.0	12.3	-140.06	170.4	-236.5	442.5	425.9	16.64	26.588	
4,500.0	4,490.4	4,583.8	4,547.2	9.2	12.6	-140.09	174.8	-223.6	434.9	417.9	17.02	25.548	
4,600.0	4,590.2	4,683.5	4,645.9	9.4	12.9	-140.11	179.3	-210.6	427.3	409.9	17.40	24.553	
4,700.0	4,689.9	4,783.2	4,744.7	9.6	13.2	-140.14	183.8	-197.7	419.7	401.9	17.78	23.601	
4,800.0	4,789.7	4,882.9	4,843.5	9.9	13.5	-140.17	188.2	-184.7	412.0	393.9	18.16	22.689	
4,900.0	4,889.4	4,982.6	4,942.2	10.1	13.8	-140.20	192.7	-171.7	404.4	385.9	18.54	21.814	
5,000.0	4,989.2	5,082.3	5,041.0	10.3	14.1	-140.24	197.2	-158.8	396.8	377.9	18.92	20.975	
5,100.0	5,088.9	5,182.1	5,139.7	10.5	14.4	-140.27	201.6	-145.8	389.1	369.9	19.29	20.169	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1F-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	5,188.7	5,281.8	5,238.5	10.7	14.7	-140.31	206.1	-132.9	381.5	361.9	19.67	19.394	
5,300.0	5,288.4	5,381.5	5,337.3	10.9	15.0	-140.34	210.6	-119.9	373.9	353.8	20.05	18.648	
5,400.0	5,388.2	5,481.2	5,436.0	11.1	15.3	-140.38	215.1	-106.9	366.3	345.8	20.43	17.931	
5,500.0	5,487.9	5,580.9	5,534.8	11.4	15.6	-140.42	219.5	-94.0	358.6	337.8	20.80	17.239	
5,600.0	5,587.7	5,680.6	5,633.5	11.6	15.9	-140.46	224.0	-81.0	351.0	329.8	21.18	16.573	
5,700.0	5,687.4	5,780.3	5,732.3	11.8	16.2	-140.50	228.5	-68.1	343.4	321.8	21.56	15.930	
5,800.0	5,787.2	5,880.0	5,831.1	12.0	16.5	-140.55	232.9	-55.1	335.8	313.8	21.93	15.309	
5,900.0	5,886.9	5,979.7	5,929.8	12.2	16.8	-140.60	237.4	-42.1	328.1	305.8	22.31	14.710	
6,000.0	5,986.7	6,079.4	6,028.6	12.4	17.1	-140.64	241.9	-29.2	320.5	297.8	22.68	14.131	
6,100.0	6,086.4	6,179.1	6,127.4	12.6	17.4	-140.70	246.3	-16.2	312.9	289.8	23.06	13.571	
6,200.0	6,186.1	6,278.8	6,226.1	12.9	17.7	-140.75	250.8	-3.3	305.3	281.8	23.43	13.029	
6,300.0	6,285.9	6,378.6	6,324.9	13.1	18.0	-140.81	255.3	9.7	297.7	273.8	23.80	12.504	
6,400.0	6,385.7	6,478.0	6,423.4	13.2	18.3	124.99	259.7	22.6	290.0	265.6	24.33	11.920	
6,500.0	6,484.4	6,577.7	6,522.2	13.3	18.5	107.61	258.3	35.6	282.7	257.8	24.92	11.345	
6,600.0	6,580.0	6,679.3	6,621.6	13.3	18.7	105.74	242.7	48.7	276.4	251.0	25.31	10.917	
6,700.0	6,670.8	6,783.0	6,719.8	13.3	18.9	106.83	212.3	61.5	271.0	245.6	25.46	10.647	
6,800.0	6,755.0	6,888.7	6,814.4	13.3	19.0	108.89	166.9	73.9	266.8	241.4	25.34	10.528	
6,900.0	6,830.9	6,996.6	6,903.0	13.4	19.2	111.26	106.7	85.6	263.6	238.6	25.02	10.534	
7,000.0	6,897.0	7,106.4	6,982.9	13.6	19.3	113.60	32.3	96.1	261.4	236.7	24.63	10.613	
7,100.0	6,952.1	7,218.1	7,051.7	13.9	19.6	115.71	-55.0	105.1	260.0	235.5	24.43	10.641	
7,200.0	6,995.1	7,331.3	7,106.9	14.4	20.0	117.46	-153.6	112.3	259.2	234.5	24.63	10.520	
7,300.0	7,025.2	7,445.8	7,146.3	15.1	20.6	118.74	-260.8	117.5	258.8	233.3	25.51	10.143	
7,400.0	7,041.7	7,561.2	7,168.4	15.9	21.3	119.48	-373.9	120.4	258.7	231.5	27.21	9.507	
7,407.8	7,042.4	7,570.2	7,169.3	16.0	21.3	119.51	-382.8	120.5	258.7	231.3	27.37	9.451	CC
7,500.0	7,045.0	7,672.3	7,173.0	16.9	22.1	119.65	-484.8	121.0	258.7	229.3	29.42	8.793	
7,600.0	7,045.0	7,772.3	7,173.0	18.0	22.9	119.65	-584.8	121.0	258.7	227.3	31.42	8.234	
7,700.0	7,045.0	7,872.3	7,173.0	19.2	23.9	119.65	-684.8	121.0	258.7	225.1	33.57	7.706	
7,800.0	7,045.0	7,972.3	7,173.0	20.5	24.9	119.65	-784.8	121.0	258.7	222.9	35.86	7.216	
7,900.0	7,045.0	8,072.3	7,173.0	21.9	26.0	119.65	-884.8	121.0	258.7	220.5	38.25	6.764	
8,000.0	7,045.0	8,172.3	7,173.0	23.3	27.2	119.65	-984.8	121.0	258.7	218.0	40.73	6.353	
8,100.0	7,045.0	8,272.3	7,173.0	24.7	28.5	119.65	-1,084.8	121.0	258.7	215.4	43.28	5.978	
8,200.0	7,045.0	8,372.3	7,173.0	26.2	29.8	119.65	-1,184.8	121.0	258.7	212.8	45.90	5.637	
8,300.0	7,045.0	8,472.3	7,173.0	27.7	31.1	119.65	-1,284.8	121.0	258.7	210.2	48.56	5.328	
8,400.0	7,045.0	8,572.3	7,173.0	29.3	32.5	119.65	-1,384.8	121.0	258.7	207.5	51.27	5.046	
8,500.0	7,045.0	8,672.3	7,173.0	30.8	33.9	119.65	-1,484.8	121.0	258.7	204.7	54.02	4.790	
8,600.0	7,045.0	8,772.3	7,173.0	32.4	35.3	119.65	-1,584.8	121.0	258.7	201.9	56.80	4.555	
8,700.0	7,045.0	8,872.3	7,173.0	34.0	36.8	119.65	-1,684.8	121.0	258.7	199.1	59.60	4.341	
8,800.0	7,045.0	8,972.3	7,173.0	35.6	38.3	119.65	-1,784.8	121.0	258.7	196.3	62.43	4.144	
8,900.0	7,045.0	9,072.3	7,173.0	37.2	39.8	119.65	-1,884.8	120.9	258.7	193.5	65.28	3.964	
9,000.0	7,045.0	9,172.3	7,173.0	38.9	41.3	119.65	-1,984.8	120.9	258.8	190.6	68.15	3.797	
9,100.0	7,045.0	9,272.3	7,173.0	40.5	42.9	119.65	-2,084.8	120.9	258.8	187.7	71.03	3.643	
9,200.0	7,045.0	9,372.3	7,173.0	42.2	44.5	119.65	-2,184.8	120.9	258.8	184.8	73.93	3.500	
9,300.0	7,045.0	9,472.3	7,173.0	43.9	46.0	119.65	-2,284.8	120.9	258.8	181.9	76.84	3.368	
9,400.0	7,045.0	9,572.3	7,173.0	45.5	47.6	119.65	-2,384.8	120.9	258.8	179.0	79.76	3.244	
9,500.0	7,045.0	9,672.3	7,173.0	47.2	49.2	119.65	-2,484.8	120.9	258.8	176.1	82.69	3.129	
9,600.0	7,045.0	9,772.3	7,173.0	48.9	50.9	119.65	-2,584.8	120.9	258.8	173.1	85.63	3.022	
9,700.0	7,045.0	9,872.3	7,173.0	50.6	52.5	119.65	-2,684.8	120.9	258.8	170.2	88.57	2.922	
9,800.0	7,045.0	9,972.3	7,173.0	52.3	54.1	119.65	-2,784.8	120.9	258.8	167.2	91.53	2.827	
9,900.0	7,045.0	10,072.3	7,173.0	54.0	55.7	119.65	-2,884.8	120.9	258.8	164.3	94.49	2.739	
10,000.0	7,045.0	10,172.3	7,173.0	55.7	57.4	119.65	-2,984.8	120.9	258.8	161.3	97.45	2.655	
10,100.0	7,045.0	10,272.3	7,173.0	57.4	59.0	119.65	-3,084.8	120.9	258.8	158.4	100.42	2.577	
10,200.0	7,045.0	10,372.3	7,173.0	59.1	60.7	119.65	-3,184.8	120.9	258.8	155.4	103.40	2.503	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1F-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,472.3	7,173.0	60.8	62.4	119.64	-3,284.8	120.9	258.8	152.4	106.38	2.433	
10,400.0	7,045.0	10,572.3	7,173.0	62.5	64.0	119.64	-3,384.8	120.9	258.8	149.4	109.36	2.366	
10,500.0	7,045.0	10,672.3	7,173.0	64.2	65.7	119.64	-3,484.8	120.9	258.8	146.4	112.35	2.303	
10,600.0	7,045.0	10,772.3	7,173.0	65.9	67.4	119.64	-3,584.8	120.9	258.8	143.4	115.35	2.244	
10,700.0	7,045.0	10,872.3	7,173.0	67.6	69.1	119.64	-3,684.8	120.9	258.8	140.5	118.34	2.187	
10,800.0	7,045.0	10,972.3	7,173.0	69.4	70.7	119.64	-3,784.8	120.9	258.8	137.5	121.34	2.133	
10,900.0	7,045.0	11,072.3	7,173.0	71.1	72.4	119.64	-3,884.8	120.9	258.8	134.5	124.34	2.081	
11,000.0	7,045.0	11,172.3	7,173.0	72.8	74.1	119.64	-3,984.8	120.9	258.8	131.5	127.34	2.032	
11,100.0	7,045.0	11,272.3	7,173.0	74.5	75.8	119.64	-4,084.8	120.9	258.8	128.5	130.35	1.985	
11,200.0	7,045.0	11,372.3	7,173.0	76.2	77.5	119.64	-4,184.8	120.9	258.8	125.4	133.36	1.941	
11,300.0	7,045.0	11,472.3	7,173.0	78.0	79.2	119.64	-4,284.8	120.9	258.8	122.4	136.37	1.898	
11,400.0	7,045.0	11,572.3	7,173.0	79.7	80.9	119.64	-4,384.8	120.9	258.8	119.4	139.38	1.857	
11,500.0	7,045.0	11,672.3	7,173.0	81.4	82.6	119.64	-4,484.8	120.9	258.8	116.4	142.40	1.818	
11,545.1	7,045.0	11,717.4	7,173.0	82.2	83.4	119.64	-4,529.9	120.9	258.8	115.1	143.76	1.800	
11,577.0	7,045.0	11,747.9	7,173.0	82.8	83.9	119.64	-4,560.4	120.9	258.8	114.1	144.70	1.789	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1H-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	92.21	-0.4	10.1	10.1	10.1	0.00	N/A	
100.0	100.0	100.0	100.0	0.2	0.2	92.21	-0.4	10.1	10.1	9.7	0.35	28.872	
200.0	200.0	200.0	200.0	0.3	0.3	92.21	-0.4	10.1	10.1	9.4	0.70	14.436	
300.0	300.0	300.0	300.0	0.5	0.5	92.21	-0.4	10.1	10.1	9.0	1.05	9.624	
400.0	400.0	400.0	400.0	0.7	0.7	92.21	-0.4	10.1	10.1	8.7	1.40	7.218	CC, ES
500.0	500.0	499.8	499.8	0.9	0.9	41.24	0.0	10.8	10.7	8.9	1.75	6.117	
600.0	600.0	599.7	599.6	1.0	1.1	40.73	1.2	13.1	11.7	9.6	2.10	5.563	
700.0	699.9	699.5	699.3	1.2	1.2	41.70	3.3	17.0	12.9	10.4	2.45	5.250	
800.0	799.8	799.3	798.9	1.4	1.4	43.75	6.1	22.3	14.3	11.5	2.81	5.084	
900.0	899.5	899.0	898.4	1.6	1.6	46.09	9.8	29.2	16.1	12.9	3.18	5.052	
1,000.0	999.3	998.8	997.7	1.8	1.9	45.64	14.3	37.6	19.1	15.5	3.56	5.369	
1,100.0	1,099.0	1,098.7	1,097.1	2.0	2.1	44.56	19.0	46.5	22.6	18.6	3.93	5.743	
1,200.0	1,198.8	1,198.6	1,196.5	2.2	2.3	43.77	23.7	55.4	26.1	21.8	4.31	6.051	
1,300.0	1,298.5	1,298.6	1,296.0	2.4	2.5	43.16	28.5	64.3	29.6	24.9	4.69	6.310	
1,400.0	1,398.3	1,398.5	1,395.4	2.6	2.8	42.68	33.2	73.2	33.1	28.0	5.06	6.529	
1,500.0	1,498.0	1,498.5	1,494.8	2.8	3.0	42.30	37.9	82.1	36.6	31.1	5.44	6.718	
1,600.0	1,597.8	1,598.4	1,594.3	3.1	3.3	41.98	42.7	91.0	40.1	34.2	5.82	6.882	
1,700.0	1,697.5	1,698.3	1,693.7	3.3	3.5	41.71	47.4	99.9	43.6	37.4	6.20	7.025	
1,800.0	1,797.3	1,798.3	1,793.1	3.5	3.7	41.49	52.1	108.8	47.1	40.5	6.58	7.152	
1,900.0	1,897.0	1,898.2	1,892.6	3.7	4.0	41.29	56.9	117.6	50.6	43.6	6.96	7.265	
2,000.0	1,996.8	1,998.2	1,992.0	3.9	4.2	41.12	61.6	126.5	54.1	46.7	7.34	7.366	
2,100.0	2,096.5	2,098.1	2,091.4	4.1	4.5	40.97	66.3	135.4	57.6	49.9	7.72	7.457	
2,200.0	2,196.3	2,198.0	2,190.8	4.3	4.7	40.84	71.1	144.3	61.1	53.0	8.10	7.539	
2,300.0	2,296.0	2,298.0	2,290.3	4.5	5.0	40.72	75.8	153.2	64.6	56.1	8.49	7.614	
2,400.0	2,395.8	2,397.9	2,389.7	4.7	5.2	40.61	80.5	162.1	68.1	59.3	8.87	7.683	
2,500.0	2,495.5	2,497.8	2,489.1	5.0	5.5	40.52	85.3	171.0	71.6	62.4	9.25	7.745	
2,600.0	2,595.3	2,597.8	2,588.6	5.2	5.7	40.43	90.0	179.9	75.1	65.5	9.63	7.803	
2,700.0	2,695.0	2,697.7	2,688.0	5.4	5.9	40.35	94.7	188.8	78.6	68.6	10.01	7.856	
2,800.0	2,794.7	2,797.7	2,787.4	5.6	6.2	40.28	99.4	197.7	82.2	71.8	10.39	7.906	
2,900.0	2,894.5	2,897.6	2,886.8	5.8	6.4	40.21	104.2	206.6	85.7	74.9	10.77	7.951	
3,000.0	2,994.2	2,997.5	2,986.3	6.0	6.7	40.15	108.9	215.4	89.2	78.0	11.15	7.994	
3,100.0	3,094.0	3,097.5	3,085.7	6.2	6.9	40.09	113.6	224.3	92.7	81.1	11.54	8.034	
3,200.0	3,193.7	3,197.4	3,185.1	6.4	7.2	40.04	118.4	233.2	96.2	84.3	11.92	8.071	
3,300.0	3,293.5	3,297.4	3,284.6	6.7	7.4	39.99	123.1	242.1	99.7	87.4	12.30	8.106	
3,400.0	3,393.2	3,397.3	3,384.0	6.9	7.7	39.95	127.8	251.0	103.2	90.5	12.68	8.139	
3,500.0	3,493.0	3,497.2	3,483.4	7.1	7.9	39.91	132.6	259.9	106.7	93.6	13.06	8.169	
3,600.0	3,592.7	3,597.2	3,582.9	7.3	8.2	39.87	137.3	268.8	110.2	96.8	13.44	8.199	
3,700.0	3,692.5	3,697.1	3,682.3	7.5	8.4	39.83	142.0	277.7	113.7	99.9	13.83	8.226	
3,800.0	3,792.2	3,797.0	3,781.7	7.7	8.7	39.79	146.8	286.6	117.2	103.0	14.21	8.252	
3,900.0	3,892.0	3,897.0	3,881.1	7.9	8.9	39.76	151.5	295.5	120.7	106.2	14.59	8.277	
4,000.0	3,991.7	3,996.9	3,980.6	8.2	9.2	39.73	156.2	304.4	124.3	109.3	14.97	8.300	
4,100.0	4,091.5	4,096.9	4,080.0	8.4	9.4	39.70	161.0	313.2	127.8	112.4	15.35	8.322	
4,200.0	4,191.2	4,196.8	4,179.4	8.6	9.6	39.67	165.7	322.1	131.3	115.5	15.73	8.343	
4,300.0	4,291.0	4,296.7	4,278.9	8.8	9.9	39.65	170.4	331.0	134.8	118.7	16.12	8.363	
4,400.0	4,390.7	4,396.7	4,378.3	9.0	10.1	39.62	175.2	339.9	138.3	121.8	16.50	8.382	
4,500.0	4,490.4	4,496.6	4,477.7	9.2	10.4	39.60	179.9	348.8	141.8	124.9	16.88	8.401	
4,600.0	4,590.2	4,596.6	4,577.2	9.4	10.6	39.58	184.6	357.7	145.3	128.0	17.26	8.418	
4,700.0	4,689.9	4,696.5	4,676.6	9.6	10.9	39.55	189.3	366.6	148.8	131.2	17.64	8.435	
4,800.0	4,789.7	4,796.4	4,776.0	9.9	11.1	39.53	194.1	375.5	152.3	134.3	18.03	8.451	
4,900.0	4,889.4	4,896.4	4,875.4	10.1	11.4	39.51	198.8	384.4	155.8	137.4	18.41	8.466	
5,000.0	4,989.2	4,996.3	4,974.9	10.3	11.6	39.49	203.5	393.3	159.3	140.6	18.79	8.481	
5,100.0	5,088.9	5,096.2	5,074.3	10.5	11.9	39.48	208.3	402.2	162.9	143.7	19.17	8.495	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1H-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	5,188.7	5,196.2	5,173.7	10.7	12.1	39.46	213.0	411.0	166.4	146.8	19.55	8.509	
5,300.0	5,288.4	5,296.1	5,273.2	10.9	12.4	39.44	217.7	419.9	169.9	149.9	19.93	8.522	
5,400.0	5,388.2	5,396.1	5,372.6	11.1	12.6	39.43	222.5	428.8	173.4	153.1	20.32	8.534	
5,500.0	5,487.9	5,496.0	5,472.0	11.4	12.9	39.41	227.2	437.7	176.9	156.2	20.70	8.546	
5,600.0	5,587.7	5,595.9	5,571.4	11.6	13.1	39.40	231.9	446.6	180.4	159.3	21.08	8.558	
5,700.0	5,687.4	5,695.9	5,670.9	11.8	13.4	39.38	236.7	455.5	183.9	162.4	21.46	8.569	
5,800.0	5,787.2	5,795.8	5,770.3	12.0	13.6	39.37	241.4	464.4	187.4	165.6	21.84	8.580	
5,900.0	5,886.9	5,895.8	5,869.7	12.2	13.9	39.36	246.1	473.3	190.9	168.7	22.23	8.590	
6,000.0	5,986.7	5,995.7	5,969.2	12.4	14.1	39.34	250.9	482.2	194.4	171.8	22.61	8.600	
6,100.0	6,086.4	6,095.6	6,068.6	12.6	14.4	39.33	255.6	491.1	197.9	175.0	22.99	8.610	
6,200.0	6,186.1	6,195.6	6,168.0	12.9	14.6	39.32	260.3	500.0	201.5	178.1	23.37	8.620	
6,300.0	6,285.9	6,295.7	6,267.7	13.1	14.8	39.90	262.9	508.9	204.9	181.2	23.78	8.616	
6,400.0	6,385.7	6,394.9	6,365.9	13.2	15.0	-53.17	253.2	517.6	208.6	184.3	24.25	8.600	
6,500.0	6,484.4	6,492.9	6,460.7	13.3	15.1	-71.22	230.3	526.1	212.5	188.0	24.51	8.670	
6,600.0	6,580.0	6,589.7	6,550.5	13.3	15.1	-74.06	195.0	534.2	216.6	192.1	24.57	8.819	
6,700.0	6,670.8	6,685.5	6,633.9	13.3	15.2	-74.16	148.5	541.6	220.8	196.4	24.46	9.029	
6,800.0	6,755.0	6,780.5	6,709.7	13.3	15.2	-73.47	91.9	548.4	224.9	200.7	24.27	9.268	
6,900.0	6,830.9	6,874.6	6,776.8	13.4	15.4	-72.55	26.3	554.4	228.8	204.7	24.10	9.496	
7,000.0	6,897.0	6,968.0	6,834.3	13.6	15.6	-71.62	-47.0	559.5	232.3	208.1	24.13	9.627	
7,100.0	6,952.1	7,060.8	6,881.7	13.9	15.9	-70.79	-126.7	563.8	235.3	210.8	24.45	9.622	
7,200.0	6,995.1	7,153.2	6,918.2	14.4	16.4	-70.13	-211.4	567.0	237.6	212.4	25.21	9.426	
7,300.0	7,025.2	7,245.2	6,943.5	15.1	17.0	-69.65	-299.8	569.3	239.3	212.8	26.47	9.040	
7,400.0	7,041.7	7,337.1	6,957.3	15.9	17.7	-69.37	-390.5	570.5	240.3	212.0	28.24	8.508	
7,500.0	7,045.0	7,431.4	6,960.0	16.9	18.5	-69.30	-484.8	570.8	240.5	210.1	30.36	7.921	
7,600.0	7,045.0	7,531.4	6,960.0	18.0	19.6	-69.30	-584.8	570.8	240.5	207.9	32.54	7.389	
7,700.0	7,045.0	7,631.4	6,960.0	19.2	20.7	-69.30	-684.8	570.8	240.5	205.6	34.90	6.890	
7,800.0	7,045.0	7,731.4	6,960.0	20.5	21.9	-69.30	-784.8	570.8	240.5	203.1	37.40	6.430	
7,900.0	7,045.0	7,831.4	6,960.0	21.9	23.1	-69.30	-884.8	570.8	240.5	200.5	40.01	6.011	
8,000.0	7,045.0	7,931.4	6,960.0	23.3	24.5	-69.30	-984.8	570.8	240.5	197.8	42.71	5.630	
8,100.0	7,045.0	8,031.4	6,960.0	24.7	25.8	-69.30	-1,084.8	570.8	240.5	195.0	45.49	5.286	
8,200.0	7,045.0	8,131.4	6,960.0	26.2	27.3	-69.30	-1,184.8	570.8	240.5	192.1	48.34	4.975	
8,300.0	7,045.0	8,231.4	6,960.0	27.7	28.7	-69.30	-1,284.8	570.8	240.5	189.2	51.24	4.694	
8,400.0	7,045.0	8,331.4	6,960.0	29.3	30.2	-69.30	-1,384.8	570.8	240.5	186.3	54.18	4.439	
8,500.0	7,045.0	8,431.4	6,960.0	30.8	31.7	-69.30	-1,484.8	570.8	240.5	183.3	57.16	4.207	
8,600.0	7,045.0	8,531.4	6,960.0	32.4	33.3	-69.30	-1,584.8	570.8	240.5	180.3	60.17	3.997	
8,700.0	7,045.0	8,631.4	6,960.0	34.0	34.8	-69.30	-1,684.8	570.8	240.5	177.3	63.20	3.805	
8,800.0	7,045.0	8,731.4	6,960.0	35.6	36.4	-69.30	-1,784.8	570.8	240.5	174.2	66.26	3.629	
8,900.0	7,045.0	8,831.4	6,960.0	37.2	38.0	-69.30	-1,884.8	570.8	240.5	171.1	69.35	3.468	
9,000.0	7,045.0	8,931.4	6,960.0	38.9	39.6	-69.30	-1,984.8	570.8	240.5	168.0	72.45	3.319	
9,100.0	7,045.0	9,031.4	6,960.0	40.5	41.2	-69.30	-2,084.8	570.8	240.5	164.9	75.56	3.182	
9,200.0	7,045.0	9,131.4	6,960.0	42.2	42.8	-69.30	-2,184.8	570.8	240.5	161.8	78.69	3.056	
9,300.0	7,045.0	9,231.4	6,960.0	43.9	44.5	-69.30	-2,284.8	570.8	240.5	158.6	81.83	2.939	
9,400.0	7,045.0	9,331.4	6,960.0	45.5	46.1	-69.30	-2,384.8	570.8	240.5	155.5	84.98	2.830	
9,500.0	7,045.0	9,431.4	6,960.0	47.2	47.8	-69.30	-2,484.8	570.8	240.5	152.3	88.15	2.728	
9,600.0	7,045.0	9,531.4	6,960.0	48.9	49.4	-69.30	-2,584.8	570.8	240.5	149.2	91.32	2.633	
9,700.0	7,045.0	9,631.4	6,960.0	50.6	51.1	-69.30	-2,684.8	570.8	240.5	146.0	94.49	2.545	
9,800.0	7,045.0	9,731.4	6,960.0	52.3	52.8	-69.30	-2,784.8	570.8	240.5	142.8	97.68	2.462	
9,900.0	7,045.0	9,831.4	6,960.0	54.0	54.5	-69.30	-2,884.8	570.8	240.5	139.6	100.87	2.384	
10,000.0	7,045.0	9,931.4	6,960.0	55.7	56.2	-69.30	-2,984.8	570.8	240.5	136.4	104.07	2.311	
10,100.0	7,045.0	10,031.4	6,960.0	57.4	57.8	-69.30	-3,084.8	570.8	240.5	133.2	107.27	2.242	
10,200.0	7,045.0	10,131.4	6,960.0	59.1	59.5	-69.30	-3,184.8	570.8	240.5	130.0	110.48	2.177	
10,300.0	7,045.0	10,231.4	6,960.0	60.8	61.2	-69.30	-3,284.8	570.8	240.5	126.8	113.69	2.115	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1H-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,331.4	6,960.0	62.5	62.9	-69.30	-3,384.8	570.8	240.5	123.6	116.91	2.057	
10,500.0	7,045.0	10,431.4	6,960.0	64.2	64.6	-69.30	-3,484.8	570.8	240.5	120.3	120.13	2.002	
10,600.0	7,045.0	10,531.4	6,960.0	65.9	66.3	-69.30	-3,584.8	570.8	240.5	117.1	123.35	1.950	
10,700.0	7,045.0	10,631.4	6,960.0	67.6	68.0	-69.30	-3,684.8	570.8	240.5	113.9	126.58	1.900	
10,800.0	7,045.0	10,731.4	6,960.0	69.4	69.7	-69.30	-3,784.8	570.8	240.5	110.7	129.80	1.853	
10,900.0	7,045.0	10,831.4	6,960.0	71.1	71.5	-69.30	-3,884.8	570.8	240.5	107.4	133.04	1.808	
11,000.0	7,045.0	10,931.4	6,960.0	72.8	73.2	-69.30	-3,984.8	570.8	240.5	104.2	136.27	1.765	
11,100.0	7,045.0	11,031.4	6,960.0	74.5	74.9	-69.30	-4,084.8	570.8	240.5	101.0	139.51	1.724	
11,200.0	7,045.0	11,131.4	6,960.0	76.2	76.6	-69.30	-4,184.8	570.8	240.5	97.7	142.75	1.685	
11,300.0	7,045.0	11,231.4	6,960.0	78.0	78.3	-69.30	-4,284.8	570.8	240.5	94.5	145.99	1.647	
11,400.0	7,045.0	11,331.4	6,960.0	79.7	80.0	-69.30	-4,384.8	570.8	240.5	91.2	149.23	1.611	
11,500.0	7,045.0	11,431.4	6,960.0	81.4	81.8	-69.30	-4,484.8	570.8	240.5	88.0	152.48	1.577	
11,577.0	7,045.0	11,508.5	6,960.0	82.8	83.1	-69.30	-4,561.8	570.8	240.5	85.5	154.98	1.552	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1I-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	91.08	-0.4	20.1	20.1				
100.0	100.0	100.0	100.0	0.2	0.2	91.08	-0.4	20.1	20.1	19.8	0.35	57.710	
200.0	200.0	200.0	200.0	0.3	0.3	91.08	-0.4	20.1	20.1	19.4	0.70	28.855	
300.0	300.0	300.0	300.0	0.5	0.5	91.08	-0.4	20.1	20.1	19.1	1.05	19.237	
333.4	333.4	333.4	333.4	0.6	0.6	91.08	-0.4	20.1	20.1	19.0	1.16	17.310	CC
400.0	400.0	399.8	399.8	0.7	0.7	90.86	-0.3	20.3	20.3	19.0	1.40	14.575	ES
500.0	500.0	499.5	499.5	0.9	0.9	40.13	0.3	22.0	21.8	20.1	1.74	12.498	
600.0	600.0	599.1	599.0	1.0	1.1	39.91	1.5	25.2	23.7	21.6	2.09	11.332	
700.0	699.9	698.7	698.4	1.2	1.2	40.86	3.4	30.1	26.0	23.5	2.45	10.608	
800.0	799.8	798.2	797.7	1.4	1.4	42.68	5.9	36.5	28.5	25.7	2.81	10.157	
900.0	899.5	897.7	896.8	1.6	1.7	44.91	8.9	44.6	31.5	28.3	3.17	9.926	
1,000.0	999.3	997.0	995.7	1.8	1.9	45.83	12.6	54.2	35.9	32.4	3.55	10.116	
1,100.0	1,099.0	1,096.3	1,094.2	2.0	2.1	45.50	16.9	65.5	41.8	37.9	3.93	10.658	
1,200.0	1,198.8	1,196.1	1,193.2	2.2	2.4	44.91	21.4	77.4	48.4	44.1	4.30	11.237	
1,300.0	1,298.5	1,295.9	1,292.2	2.4	2.7	44.47	25.9	89.3	54.9	50.2	4.68	11.721	
1,400.0	1,398.3	1,395.7	1,391.2	2.6	2.9	44.12	30.5	101.2	61.4	56.4	5.07	12.130	
1,500.0	1,498.0	1,495.5	1,490.1	2.8	3.2	43.83	35.0	113.1	68.0	62.5	5.45	12.481	
1,600.0	1,597.8	1,595.3	1,589.1	3.1	3.5	43.60	39.5	125.0	74.5	68.7	5.83	12.785	
1,700.0	1,697.5	1,695.1	1,688.1	3.3	3.7	43.40	44.1	136.9	81.0	74.8	6.21	13.051	
1,800.0	1,797.3	1,794.8	1,787.0	3.5	4.0	43.24	48.6	148.7	87.6	81.0	6.59	13.285	
1,900.0	1,897.0	1,894.6	1,886.0	3.7	4.3	43.09	53.1	160.6	94.1	87.2	6.98	13.493	
2,000.0	1,996.8	1,994.4	1,985.0	3.9	4.6	42.97	57.7	172.5	100.7	93.3	7.36	13.679	
2,100.0	2,096.5	2,094.2	2,083.9	4.1	4.9	42.86	62.2	184.4	107.2	99.5	7.74	13.847	
2,200.0	2,196.3	2,194.0	2,182.9	4.3	5.1	42.76	66.7	196.3	113.7	105.6	8.13	13.998	
2,300.0	2,296.0	2,293.8	2,281.9	4.5	5.4	42.67	71.2	208.2	120.3	111.8	8.51	14.136	
2,400.0	2,395.8	2,393.6	2,380.9	4.7	5.7	42.60	75.8	220.1	126.8	117.9	8.89	14.261	
2,500.0	2,495.5	2,493.3	2,479.8	5.0	6.0	42.53	80.3	232.0	133.4	124.1	9.28	14.376	
2,600.0	2,595.3	2,593.1	2,578.8	5.2	6.3	42.46	84.8	243.9	139.9	130.3	9.66	14.481	
2,700.0	2,695.0	2,692.9	2,677.8	5.4	6.5	42.41	89.4	255.8	146.5	136.4	10.05	14.579	
2,800.0	2,794.7	2,792.7	2,776.7	5.6	6.8	42.35	93.9	267.7	153.0	142.6	10.43	14.669	
2,900.0	2,894.5	2,892.5	2,875.7	5.8	7.1	42.30	98.4	279.6	159.5	148.7	10.81	14.752	
3,000.0	2,994.2	2,992.3	2,974.7	6.0	7.4	42.26	103.0	291.5	166.1	154.9	11.20	14.830	
3,100.0	3,094.0	3,092.1	3,073.7	6.2	7.7	42.22	107.5	303.4	172.6	161.0	11.58	14.903	
3,200.0	3,193.7	3,191.8	3,172.6	6.4	7.9	42.18	112.0	315.3	179.2	167.2	11.97	14.971	
3,300.0	3,293.5	3,291.6	3,271.6	6.7	8.2	42.14	116.5	327.2	185.7	173.4	12.35	15.034	
3,400.0	3,393.2	3,391.4	3,370.6	6.9	8.5	42.11	121.1	339.0	192.3	179.5	12.74	15.094	
3,500.0	3,493.0	3,491.2	3,469.5	7.1	8.8	42.08	125.6	350.9	198.8	185.7	13.12	15.150	
3,600.0	3,592.7	3,591.0	3,568.5	7.3	9.1	42.05	130.1	362.8	205.3	191.8	13.51	15.203	
3,700.0	3,692.5	3,690.8	3,667.5	7.5	9.3	42.02	134.7	374.7	211.9	198.0	13.89	15.253	
3,800.0	3,792.2	3,790.6	3,766.4	7.7	9.6	42.00	139.2	386.6	218.4	204.1	14.28	15.300	
3,900.0	3,892.0	3,890.3	3,865.4	7.9	9.9	41.97	143.7	398.5	225.0	210.3	14.66	15.345	
4,000.0	3,991.7	3,990.1	3,964.4	8.2	10.2	41.95	148.2	410.4	231.5	216.5	15.05	15.387	
4,100.0	4,091.5	4,089.9	4,063.4	8.4	10.5	41.93	152.8	422.3	238.0	222.6	15.43	15.427	
4,200.0	4,191.2	4,189.7	4,162.3	8.6	10.8	41.91	157.3	434.2	244.6	228.8	15.82	15.466	
4,300.0	4,291.0	4,289.5	4,261.3	8.8	11.0	41.89	161.8	446.1	251.1	234.9	16.20	15.502	
4,400.0	4,390.7	4,389.3	4,360.3	9.0	11.3	41.87	166.4	458.0	257.7	241.1	16.58	15.537	
4,500.0	4,490.4	4,489.1	4,459.2	9.2	11.6	41.85	170.9	469.9	264.2	247.3	16.97	15.570	
4,600.0	4,590.2	4,588.8	4,558.2	9.4	11.9	41.84	175.4	481.8	270.8	253.4	17.35	15.602	
4,700.0	4,689.9	4,688.6	4,657.2	9.6	12.2	41.82	180.0	493.7	277.3	259.6	17.74	15.632	
4,800.0	4,789.7	4,788.4	4,756.2	9.9	12.5	41.81	184.5	505.6	283.8	265.7	18.12	15.661	
4,900.0	4,889.4	4,888.2	4,855.1	10.1	12.7	41.79	189.0	517.4	290.4	271.9	18.51	15.689	
5,000.0	4,989.2	4,988.0	4,954.1	10.3	13.0	41.78	193.5	529.3	296.9	278.0	18.89	15.715	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1I-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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
5,100.0	5,088.9	5,087.8	5,053.1	10.5	13.3	41.77	198.1	541.2	303.5	284.2	19.28	15.741	
5,200.0	5,188.7	5,187.6	5,152.0	10.7	13.6	41.75	202.6	553.1	310.0	290.4	19.66	15.765	
5,300.0	5,288.4	5,287.3	5,251.0	10.9	13.9	41.74	207.1	565.0	316.6	296.5	20.05	15.789	
5,400.0	5,388.2	5,387.1	5,350.0	11.1	14.1	41.73	211.7	576.9	323.1	302.7	20.43	15.812	
5,500.0	5,487.9	5,486.9	5,449.0	11.4	14.4	41.72	216.2	588.8	329.7	308.8	20.82	15.834	
5,600.0	5,587.7	5,586.7	5,547.9	11.6	14.7	41.71	220.7	600.7	336.2	315.0	21.20	15.855	
5,700.0	5,687.4	5,686.5	5,646.9	11.8	15.0	41.70	225.2	612.6	342.7	321.1	21.59	15.875	
5,800.0	5,787.2	5,786.3	5,745.9	12.0	15.3	41.69	229.8	624.5	349.3	327.3	21.97	15.894	
5,900.0	5,886.9	5,886.1	5,844.8	12.2	15.6	41.68	234.3	636.4	355.8	333.5	22.36	15.913	
6,000.0	5,986.7	5,985.8	5,943.8	12.4	15.8	41.67	238.8	648.3	362.4	339.6	22.75	15.932	
6,100.0	6,086.4	6,085.6	6,042.8	12.6	16.1	41.66	243.4	660.2	368.9	345.8	23.13	15.949	
6,200.0	6,186.1	6,185.4	6,141.7	12.9	16.4	41.65	247.9	672.1	375.5	351.9	23.52	15.966	
6,300.0	6,285.9	6,285.2	6,240.7	13.1	16.7	41.64	252.4	684.0	382.0	358.1	23.90	15.983	
6,400.0	6,385.7	6,384.8	6,339.5	13.2	17.0	-54.50	256.9	695.8	388.5	364.3	24.19	16.060	
6,500.0	6,484.4	6,482.8	6,436.7	13.3	17.3	-77.37	261.4	707.5	395.2	371.1	24.18	16.349	
6,600.0	6,580.0	6,583.4	6,536.4	13.3	17.5	-85.56	257.9	719.5	403.3	379.3	24.01	16.797	
6,700.0	6,670.8	6,687.9	6,638.5	13.3	17.7	-90.67	239.4	731.8	412.4	388.6	23.85	17.292	
6,800.0	6,755.0	6,796.7	6,740.6	13.3	17.8	-94.54	204.5	744.0	422.3	398.5	23.79	17.754	
6,900.0	6,830.9	6,910.0	6,840.2	13.4	17.9	-97.68	152.0	756.0	432.4	408.5	23.89	18.099	
7,000.0	6,897.0	7,028.0	6,933.9	13.6	18.1	-100.28	81.3	767.3	442.2	418.0	24.24	18.247	
7,100.0	6,952.1	7,150.6	7,017.6	13.9	18.3	-102.37	-7.5	777.3	451.2	426.3	24.86	18.149	
7,200.0	6,995.1	7,277.3	7,087.0	14.4	18.7	-103.99	-113.0	785.7	458.7	432.9	25.82	17.765	
7,300.0	7,025.2	7,407.6	7,138.0	15.1	19.3	-105.12	-232.5	791.8	464.2	437.1	27.11	17.123	
7,400.0	7,041.7	7,540.2	7,167.0	15.9	20.1	-105.74	-361.7	795.3	467.4	438.6	28.73	16.268	
7,500.0	7,045.0	7,663.6	7,173.0	16.9	21.1	-105.87	-484.8	796.0	468.0	437.3	30.68	15.254	
7,600.0	7,045.0	7,763.6	7,173.0	18.0	22.0	-105.87	-584.8	796.0	468.0	435.1	32.96	14.202	
7,700.0	7,045.0	7,863.6	7,173.0	19.2	23.0	-105.87	-684.8	796.0	468.0	432.6	35.40	13.221	
7,800.0	7,045.0	7,963.6	7,173.0	20.5	24.0	-105.87	-784.8	796.0	468.0	430.0	37.99	12.321	
7,900.0	7,045.0	8,063.6	7,173.0	21.9	25.2	-105.87	-884.8	796.0	468.0	427.3	40.69	11.502	
8,000.0	7,045.0	8,163.6	7,173.0	23.3	26.4	-105.87	-984.8	796.0	468.0	424.5	43.49	10.762	
8,100.0	7,045.0	8,263.6	7,173.0	24.7	27.7	-105.87	-1,084.8	796.0	468.0	421.7	46.36	10.095	
8,200.0	7,045.0	8,363.6	7,173.0	26.2	29.0	-105.87	-1,184.8	796.0	468.0	418.7	49.30	9.493	
8,300.0	7,045.0	8,463.6	7,173.0	27.7	30.4	-105.87	-1,284.8	796.0	468.0	415.7	52.29	8.950	
8,400.0	7,045.0	8,563.6	7,173.0	29.3	31.8	-105.87	-1,384.8	796.0	468.0	412.7	55.33	8.459	
8,500.0	7,045.0	8,663.6	7,173.0	30.8	33.3	-105.87	-1,484.8	796.0	468.0	409.6	58.40	8.014	
8,600.0	7,045.0	8,763.6	7,173.0	32.4	34.7	-105.87	-1,584.8	796.0	468.0	406.5	61.50	7.610	
8,700.0	7,045.0	8,863.6	7,173.0	34.0	36.2	-105.87	-1,684.8	796.0	468.0	403.4	64.64	7.241	
8,800.0	7,045.0	8,963.6	7,173.0	35.6	37.8	-105.87	-1,784.8	796.0	468.0	400.2	67.79	6.904	
8,900.0	7,045.0	9,063.6	7,173.0	37.2	39.3	-105.87	-1,884.8	796.0	468.0	397.1	70.97	6.595	
9,000.0	7,045.0	9,163.6	7,173.0	38.9	40.9	-105.87	-1,984.8	796.0	468.0	393.9	74.16	6.311	
9,100.0	7,045.0	9,263.6	7,173.0	40.5	42.4	-105.87	-2,084.8	796.0	468.0	390.7	77.37	6.049	
9,200.0	7,045.0	9,363.6	7,173.0	42.2	44.0	-105.87	-2,184.8	796.0	468.0	387.4	80.59	5.807	
9,300.0	7,045.0	9,463.6	7,173.0	43.9	45.6	-105.87	-2,284.8	796.0	468.0	384.2	83.83	5.583	
9,400.0	7,045.0	9,563.6	7,173.0	45.5	47.2	-105.87	-2,384.8	796.0	468.0	380.9	87.07	5.375	
9,500.0	7,045.0	9,663.6	7,173.0	47.2	48.8	-105.87	-2,484.8	796.0	468.0	377.7	90.33	5.181	
9,600.0	7,045.0	9,763.6	7,173.0	48.9	50.5	-105.87	-2,584.8	796.0	468.0	374.4	93.59	5.001	
9,700.0	7,045.0	9,863.6	7,173.0	50.6	52.1	-105.87	-2,684.8	796.0	468.0	371.2	96.86	4.832	
9,800.0	7,045.0	9,963.6	7,173.0	52.3	53.8	-105.87	-2,784.8	796.0	468.0	367.9	100.14	4.674	
9,900.0	7,045.0	10,063.6	7,173.0	54.0	55.4	-105.87	-2,884.8	796.0	468.0	364.6	103.43	4.525	
10,000.0	7,045.0	10,163.6	7,173.0	55.7	57.1	-105.87	-2,984.8	796.0	468.0	361.3	106.72	4.386	
10,100.0	7,045.0	10,263.6	7,173.0	57.4	58.7	-105.87	-3,084.8	796.0	468.0	358.0	110.01	4.254	
10,200.0	7,045.0	10,363.6	7,173.0	59.1	60.4	-105.87	-3,184.8	796.0	468.0	354.7	113.31	4.130	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1I-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,463.6	7,173.0	60.8	62.1	-105.87	-3,284.8	796.0	468.0	351.4	116.62	4.013	
10,400.0	7,045.0	10,563.6	7,173.0	62.5	63.7	-105.87	-3,384.8	796.0	468.0	348.1	119.93	3.903	
10,500.0	7,045.0	10,663.6	7,173.0	64.2	65.4	-105.87	-3,484.8	796.0	468.0	344.8	123.24	3.798	
10,600.0	7,045.0	10,763.6	7,173.0	65.9	67.1	-105.87	-3,584.8	796.0	468.0	341.5	126.55	3.698	
10,700.0	7,045.0	10,863.6	7,173.0	67.6	68.8	-105.87	-3,684.8	796.0	468.0	338.2	129.87	3.604	
10,800.0	7,045.0	10,963.6	7,173.0	69.4	70.5	-105.87	-3,784.8	796.0	468.0	334.8	133.19	3.514	
10,900.0	7,045.0	11,063.6	7,173.0	71.1	72.2	-105.87	-3,884.8	796.0	468.0	331.5	136.52	3.428	
11,000.0	7,045.0	11,163.6	7,173.0	72.8	73.9	-105.87	-3,984.8	796.0	468.0	328.2	139.84	3.347	
11,100.0	7,045.0	11,263.6	7,173.0	74.5	75.6	-105.87	-4,084.8	796.0	468.0	324.8	143.17	3.269	
11,200.0	7,045.0	11,363.6	7,173.0	76.2	77.3	-105.87	-4,184.8	796.0	468.0	321.5	146.50	3.195	
11,300.0	7,045.0	11,463.6	7,173.0	78.0	79.0	-105.87	-4,284.8	796.0	468.0	318.2	149.84	3.124	
11,400.0	7,045.0	11,563.6	7,173.0	79.7	80.7	-105.87	-4,384.8	796.0	468.0	314.9	153.17	3.056	
11,500.0	7,045.0	11,663.6	7,173.0	81.4	82.4	-105.87	-4,484.8	796.0	468.0	311.5	156.51	2.990	
11,577.0	7,045.0	11,740.7	7,173.0	82.8	83.7	-105.87	-4,561.8	796.0	468.0	308.9	159.08	2.942	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1J-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	90.71	-0.4	30.2	30.2				
100.0	100.0	100.0	100.0	0.2	0.2	90.71	-0.4	30.2	30.2	29.9	0.35	86.557	
200.0	200.0	200.0	200.0	0.3	0.3	90.71	-0.4	30.2	30.2	29.5	0.70	43.278	
300.0	300.0	300.0	300.0	0.5	0.5	90.71	-0.4	30.2	30.2	29.2	1.05	28.852	CC, ES
400.0	400.0	399.5	399.5	0.7	0.7	90.23	-0.1	31.0	31.0	29.6	1.40	22.244	
500.0	500.0	498.9	498.9	0.9	0.9	39.75	0.6	33.5	33.4	31.6	1.74	19.139	
600.0	600.0	598.3	598.2	1.0	1.1	39.62	1.9	37.6	36.2	34.1	2.09	17.298	
700.0	699.9	697.6	697.3	1.2	1.3	40.43	3.6	43.4	39.4	36.9	2.44	16.100	
800.0	799.8	796.9	796.3	1.4	1.5	41.95	5.8	50.8	42.9	40.1	2.80	15.299	
900.0	899.5	896.1	895.0	1.6	1.7	43.87	8.6	59.9	46.9	43.7	3.17	14.797	
1,000.0	999.3	995.1	993.4	1.8	1.9	45.02	11.8	70.5	52.4	48.8	3.54	14.781	
1,100.0	1,099.0	1,093.9	1,091.4	2.0	2.2	45.33	15.5	82.8	59.4	55.5	3.92	15.167	
1,200.0	1,198.8	1,192.6	1,188.9	2.2	2.5	45.04	19.6	96.6	68.1	63.8	4.30	15.853	
1,300.0	1,298.5	1,291.7	1,286.8	2.4	2.8	44.46	24.2	111.8	78.0	73.4	4.68	16.694	
1,400.0	1,398.3	1,391.2	1,385.0	2.6	3.1	43.98	28.8	127.2	88.1	83.0	5.05	17.425	
1,500.0	1,498.0	1,490.7	1,483.2	2.8	3.4	43.61	33.4	142.5	98.1	92.7	5.43	18.053	
1,600.0	1,597.8	1,590.2	1,581.4	3.1	3.7	43.30	38.0	157.8	108.2	102.3	5.82	18.598	
1,700.0	1,697.5	1,689.6	1,679.6	3.3	4.0	43.05	42.6	173.2	118.2	112.0	6.20	19.075	
1,800.0	1,797.3	1,789.1	1,777.8	3.5	4.4	42.83	47.3	188.5	128.2	121.7	6.58	19.496	
1,900.0	1,897.0	1,888.6	1,876.0	3.7	4.7	42.65	51.9	203.8	138.3	131.3	6.96	19.871	
2,000.0	1,996.8	1,988.1	1,974.2	3.9	5.0	42.49	56.5	219.2	148.3	141.0	7.34	20.206	
2,100.0	2,096.5	2,087.6	2,072.4	4.1	5.3	42.35	61.1	234.5	158.4	150.7	7.72	20.508	
2,200.0	2,196.3	2,187.1	2,170.6	4.3	5.7	42.23	65.7	249.8	168.4	160.3	8.10	20.781	
2,300.0	2,296.0	2,286.6	2,268.8	4.5	6.0	42.12	70.3	265.1	178.5	170.0	8.49	21.030	
2,400.0	2,395.8	2,386.1	2,367.0	4.7	6.3	42.02	74.9	280.5	188.5	179.7	8.87	21.256	
2,500.0	2,495.5	2,485.6	2,465.1	5.0	6.6	41.94	79.6	295.8	198.6	189.3	9.25	21.464	
2,600.0	2,595.3	2,585.1	2,563.3	5.2	7.0	41.86	84.2	311.1	208.6	199.0	9.63	21.655	
2,700.0	2,695.0	2,684.6	2,661.5	5.4	7.3	41.79	88.8	326.5	218.7	208.7	10.02	21.832	
2,800.0	2,794.7	2,784.1	2,759.7	5.6	7.6	41.72	93.4	341.8	228.7	218.3	10.40	21.995	
2,900.0	2,894.5	2,883.6	2,857.9	5.8	8.0	41.66	98.0	357.1	238.8	228.0	10.78	22.146	
3,000.0	2,994.2	2,983.1	2,956.1	6.0	8.3	41.61	102.6	372.5	248.8	237.7	11.16	22.288	
3,100.0	3,094.0	3,082.6	3,054.3	6.2	8.6	41.56	107.2	387.8	258.9	247.3	11.55	22.419	
3,200.0	3,193.7	3,182.0	3,152.5	6.4	8.9	41.51	111.9	403.1	268.9	257.0	11.93	22.542	
3,300.0	3,293.5	3,281.5	3,250.7	6.7	9.3	41.47	116.5	418.5	279.0	266.7	12.31	22.658	
3,400.0	3,393.2	3,381.0	3,348.9	6.9	9.6	41.43	121.1	433.8	289.0	276.4	12.70	22.766	
3,500.0	3,493.0	3,480.5	3,447.1	7.1	9.9	41.39	125.7	449.1	299.1	286.0	13.08	22.868	
3,600.0	3,592.7	3,580.0	3,545.3	7.3	10.3	41.35	130.3	464.5	309.2	295.7	13.46	22.965	
3,700.0	3,692.5	3,679.5	3,643.5	7.5	10.6	41.32	134.9	479.8	319.2	305.4	13.85	23.055	
3,800.0	3,792.2	3,779.0	3,741.7	7.7	10.9	41.29	139.5	495.1	329.3	315.0	14.23	23.141	
3,900.0	3,892.0	3,878.5	3,839.9	7.9	11.3	41.26	144.1	510.5	339.3	324.7	14.61	23.223	
4,000.0	3,991.7	3,978.0	3,938.1	8.2	11.6	41.23	148.8	525.8	349.4	334.4	14.99	23.300	
4,100.0	4,091.5	4,077.5	4,036.3	8.4	11.9	41.21	153.4	541.1	359.4	344.0	15.38	23.373	
4,200.0	4,191.2	4,177.0	4,134.5	8.6	12.2	41.18	158.0	556.4	369.5	353.7	15.76	23.443	
4,300.0	4,291.0	4,276.5	4,232.7	8.8	12.6	41.16	162.6	571.8	379.5	363.4	16.14	23.509	
4,400.0	4,390.7	4,376.0	4,330.9	9.0	12.9	41.14	167.2	587.1	389.6	373.1	16.53	23.573	
4,500.0	4,490.4	4,475.5	4,429.1	9.2	13.2	41.12	171.8	602.4	399.6	382.7	16.91	23.633	
4,600.0	4,590.2	4,574.9	4,527.3	9.4	13.6	41.10	176.4	617.8	409.7	392.4	17.29	23.691	
4,700.0	4,689.9	4,674.4	4,625.5	9.6	13.9	41.08	181.1	633.1	419.7	402.1	17.68	23.746	
4,800.0	4,789.7	4,773.9	4,723.7	9.9	14.2	41.06	185.7	648.4	429.8	411.7	18.06	23.799	
4,900.0	4,889.4	4,873.4	4,821.9	10.1	14.6	41.04	190.3	663.8	439.8	421.4	18.44	23.849	
5,000.0	4,989.2	4,972.9	4,920.1	10.3	14.9	41.02	194.9	679.1	449.9	431.1	18.83	23.898	
5,100.0	5,088.9	5,072.4	5,018.3	10.5	15.2	41.01	199.5	694.4	460.0	440.7	19.21	23.945	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1J-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	5,188.7	5,171.9	5,116.5	10.7	15.5	40.99	204.1	709.8	470.0	450.4	19.59	23.989	
5,300.0	5,288.4	5,271.4	5,214.7	10.9	15.9	40.98	208.7	725.1	480.1	460.1	19.98	24.032	
5,400.0	5,388.2	5,370.9	5,312.8	11.1	16.2	40.97	213.4	740.4	490.1	469.8	20.36	24.074	
5,500.0	5,487.9	5,470.4	5,411.0	11.4	16.5	40.95	218.0	755.8	500.2	479.4	20.74	24.114	
5,600.0	5,587.7	5,569.9	5,509.2	11.6	16.9	40.94	222.6	771.1	510.2	489.1	21.13	24.152	
5,700.0	5,687.4	5,669.4	5,607.4	11.8	17.2	40.93	227.2	786.4	520.3	498.8	21.51	24.189	
5,800.0	5,787.2	5,768.9	5,705.6	12.0	17.5	40.92	231.8	801.8	530.3	508.4	21.89	24.225	
5,900.0	5,886.9	5,868.4	5,803.8	12.2	17.9	40.90	236.4	817.1	540.4	518.1	22.28	24.260	
6,000.0	5,986.7	5,967.9	5,902.0	12.4	18.2	40.89	241.0	832.4	550.4	527.8	22.66	24.293	
6,100.0	6,086.4	6,067.3	6,000.2	12.6	18.5	40.88	245.7	847.7	560.5	537.5	23.04	24.325	
6,200.0	6,186.1	6,166.8	6,098.4	12.9	18.9	40.87	250.3	863.1	570.6	547.1	23.43	24.356	
6,300.0	6,285.9	6,266.3	6,196.6	13.1	19.2	40.86	254.9	878.4	580.6	556.8	23.81	24.386	
6,400.0	6,385.7	6,365.6	6,294.6	13.2	19.5	-54.75	259.5	893.7	590.6	566.5	24.16	24.445	
6,500.0	6,484.4	6,465.0	6,392.7	13.3	19.8	-75.93	258.5	909.0	600.7	576.4	24.27	24.750	
6,600.0	6,580.0	6,566.4	6,491.7	13.3	20.1	-81.71	243.5	924.5	610.8	586.6	24.24	25.194	
6,700.0	6,670.8	6,670.0	6,589.6	13.3	20.3	-84.50	213.7	939.8	620.7	596.6	24.15	25.703	
6,800.0	6,755.0	6,775.7	6,684.1	13.3	20.4	-86.23	168.8	954.5	630.1	606.1	24.08	26.174	
6,900.0	6,830.9	6,883.7	6,772.9	13.4	20.6	-87.42	109.0	968.4	638.9	614.8	24.13	26.476	
7,000.0	6,897.0	6,993.9	6,853.2	13.6	20.8	-88.30	34.8	980.9	646.7	622.3	24.43	26.475	
7,100.0	6,952.1	7,106.0	6,922.4	13.9	21.1	-88.95	-52.6	991.7	653.4	628.3	25.07	26.063	
7,200.0	6,995.1	7,219.9	6,978.1	14.4	21.5	-89.44	-151.4	1,000.4	658.7	632.6	26.13	25.210	
7,300.0	7,025.2	7,335.2	7,017.9	15.1	22.1	-89.76	-259.3	1,006.6	662.5	634.9	27.61	23.991	
7,400.0	7,041.7	7,451.5	7,040.3	15.9	22.8	-89.95	-373.2	1,010.1	664.6	635.1	29.49	22.536	
7,500.0	7,045.0	7,563.3	7,045.0	16.9	23.5	-90.00	-484.8	1,010.9	665.1	633.4	31.67	20.996	
7,600.0	7,045.0	7,663.3	7,045.0	18.0	24.3	-90.00	-584.8	1,010.9	665.1	631.0	34.03	19.543	
7,700.0	7,045.0	7,763.3	7,045.0	19.2	25.2	-90.00	-684.8	1,010.9	665.1	628.5	36.57	18.188	
7,800.0	7,045.0	7,863.3	7,045.0	20.5	26.2	-90.00	-784.8	1,010.9	665.1	625.8	39.25	16.944	
7,900.0	7,045.0	7,963.3	7,045.0	21.9	27.3	-90.00	-884.8	1,010.9	665.1	623.0	42.06	15.813	
8,000.0	7,045.0	8,063.3	7,045.0	23.3	28.4	-90.00	-984.8	1,010.9	665.1	620.1	44.96	14.791	
8,100.0	7,045.0	8,163.3	7,045.0	24.7	29.6	-90.00	-1,084.8	1,010.9	665.1	617.1	47.95	13.870	
8,200.0	7,045.0	8,263.3	7,045.0	26.2	30.8	-90.00	-1,184.8	1,010.9	665.1	614.1	51.00	13.040	
8,300.0	7,045.0	8,363.3	7,045.0	27.7	32.1	-90.00	-1,284.8	1,010.9	665.1	610.9	54.11	12.291	
8,400.0	7,045.0	8,463.3	7,045.0	29.3	33.5	-90.00	-1,384.8	1,010.9	665.1	607.8	57.27	11.614	
8,500.0	7,045.0	8,563.3	7,045.0	30.8	34.8	-90.00	-1,484.8	1,010.9	665.1	604.6	60.46	11.000	
8,600.0	7,045.0	8,663.3	7,045.0	32.4	36.2	-90.00	-1,584.8	1,010.9	665.1	601.4	63.69	10.443	
8,700.0	7,045.0	8,763.3	7,045.0	34.0	37.7	-90.00	-1,684.8	1,010.9	665.1	598.1	66.94	9.935	
8,800.0	7,045.0	8,863.3	7,045.0	35.6	39.1	-90.00	-1,784.8	1,010.9	665.1	594.8	70.22	9.471	
8,900.0	7,045.0	8,963.3	7,045.0	37.2	40.6	-90.00	-1,884.8	1,010.9	665.1	591.5	73.52	9.046	
9,000.0	7,045.0	9,063.3	7,045.0	38.9	42.1	-90.00	-1,984.8	1,010.9	665.1	588.2	76.84	8.655	
9,100.0	7,045.0	9,163.3	7,045.0	40.5	43.7	-90.00	-2,084.8	1,010.9	665.1	584.9	80.17	8.295	
9,200.0	7,045.0	9,263.3	7,045.0	42.2	45.2	-90.00	-2,184.8	1,010.9	665.1	581.5	83.52	7.963	
9,300.0	7,045.0	9,363.3	7,045.0	43.9	46.8	-90.00	-2,284.8	1,010.9	665.1	578.2	86.88	7.654	
9,400.0	7,045.0	9,463.3	7,045.0	45.5	48.3	-90.00	-2,384.8	1,010.9	665.1	574.8	90.26	7.368	
9,500.0	7,045.0	9,563.3	7,045.0	47.2	49.9	-90.00	-2,484.8	1,010.9	665.1	571.4	93.64	7.102	
9,600.0	7,045.0	9,663.3	7,045.0	48.9	51.5	-90.00	-2,584.8	1,010.9	665.1	568.0	97.03	6.854	
9,700.0	7,045.0	9,763.3	7,045.0	50.6	53.1	-90.00	-2,684.8	1,010.9	665.1	564.6	100.43	6.622	
9,800.0	7,045.0	9,863.3	7,045.0	52.3	54.7	-90.00	-2,784.8	1,010.9	665.1	561.2	103.84	6.405	
9,900.0	7,045.0	9,963.3	7,045.0	54.0	56.3	-90.00	-2,884.8	1,010.9	665.1	557.8	107.25	6.201	
10,000.0	7,045.0	10,063.3	7,045.0	55.7	58.0	-90.00	-2,984.8	1,010.9	665.1	554.4	110.67	6.009	
10,100.0	7,045.0	10,163.3	7,045.0	57.4	59.6	-90.00	-3,084.8	1,010.9	665.1	551.0	114.10	5.829	
10,200.0	7,045.0	10,263.3	7,045.0	59.1	61.3	-90.00	-3,184.8	1,010.9	665.1	547.5	117.53	5.659	
10,300.0	7,045.0	10,363.3	7,045.0	60.8	62.9	-90.00	-3,284.8	1,010.9	665.1	544.1	120.96	5.498	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1J-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,463.3	7,045.0	62.5	64.6	-90.00	-3,384.8	1,010.9	665.1	540.7	124.40	5.346	
10,500.0	7,045.0	10,563.3	7,045.0	64.2	66.2	-90.00	-3,484.8	1,010.9	665.1	537.2	127.84	5.202	
10,600.0	7,045.0	10,663.3	7,045.0	65.9	67.9	-90.00	-3,584.8	1,010.9	665.1	533.8	131.29	5.066	
10,700.0	7,045.0	10,763.3	7,045.0	67.6	69.5	-90.00	-3,684.8	1,010.9	665.1	530.3	134.73	4.936	
10,800.0	7,045.0	10,863.3	7,045.0	69.4	71.2	-90.00	-3,784.8	1,010.9	665.1	526.9	138.19	4.813	
10,900.0	7,045.0	10,963.3	7,045.0	71.1	72.9	-90.00	-3,884.8	1,010.9	665.1	523.4	141.64	4.695	
11,000.0	7,045.0	11,063.3	7,045.0	72.8	74.6	-90.00	-3,984.8	1,010.9	665.1	520.0	145.10	4.584	
11,100.0	7,045.0	11,163.3	7,045.0	74.5	76.3	-90.00	-4,084.8	1,010.9	665.1	516.5	148.56	4.477	
11,200.0	7,045.0	11,263.3	7,045.0	76.2	77.9	-90.00	-4,184.8	1,010.9	665.1	513.0	152.02	4.375	
11,300.0	7,045.0	11,363.3	7,045.0	78.0	79.6	-90.00	-4,284.8	1,010.9	665.1	509.6	155.48	4.277	
11,400.0	7,045.0	11,463.3	7,045.0	79.7	81.3	-90.00	-4,384.8	1,010.9	665.1	506.1	158.95	4.184	
11,500.0	7,045.0	11,563.3	7,045.0	81.4	83.0	-90.00	-4,484.8	1,010.9	665.1	502.6	162.42	4.095	
11,577.0	7,045.0	11,640.3	7,045.0	82.8	84.3	-90.00	-4,561.8	1,010.9	665.1	500.0	165.09	4.028	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1K-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	90.52	-0.4	40.0	40.0				
100.0	100.0	100.0	100.0	0.2	0.2	90.52	-0.4	40.0	40.0	39.7	0.35	114.603	
200.0	200.0	200.0	200.0	0.3	0.3	90.52	-0.4	40.0	40.0	39.3	0.70	57.302	
233.3	233.3	233.3	233.3	0.4	0.4	90.52	-0.4	40.0	40.0	39.2	0.81	49.113 CC	
300.0	300.0	299.7	299.7	0.5	0.5	90.45	-0.3	40.2	40.2	39.2	1.05	38.423 ES	
400.0	400.0	399.0	398.9	0.7	0.7	89.87	0.1	41.9	41.9	40.5	1.40	30.031	
500.0	500.0	498.2	498.1	0.9	0.9	39.60	0.9	45.2	45.1	43.4	1.74	25.883	
600.0	600.0	597.3	597.1	1.0	1.1	39.54	2.1	50.2	48.8	46.7	2.09	23.346	
700.0	699.9	696.4	695.9	1.2	1.3	40.27	3.8	56.9	52.9	50.5	2.44	21.655	
800.0	799.8	795.3	794.5	1.4	1.5	41.60	5.8	65.2	57.3	54.5	2.80	20.482	
900.0	899.5	894.2	892.8	1.6	1.7	43.30	8.2	75.1	62.3	59.1	3.16	19.690	
1,000.0	999.3	992.9	990.8	1.8	2.0	44.49	11.0	86.7	68.7	65.2	3.53	19.447	
1,100.0	1,099.0	1,091.4	1,088.4	2.0	2.3	45.07	14.2	99.9	76.8	72.9	3.91	19.652	
1,200.0	1,198.8	1,189.6	1,185.4	2.2	2.6	45.18	17.9	114.7	86.6	82.3	4.29	20.190	
1,300.0	1,298.5	1,287.5	1,281.8	2.4	2.9	44.95	21.8	131.0	97.9	93.2	4.67	20.984	
1,400.0	1,398.3	1,384.9	1,377.5	2.6	3.2	44.50	26.2	148.8	110.8	105.8	5.04	21.981	
1,500.0	1,498.0	1,483.8	1,474.4	2.8	3.6	44.00	30.8	167.9	124.7	119.3	5.42	23.007	
1,600.0	1,597.8	1,582.8	1,571.5	3.1	4.0	43.60	35.5	187.0	138.7	132.9	5.80	23.899	
1,700.0	1,697.5	1,681.8	1,668.5	3.3	4.3	43.28	40.1	206.0	152.6	146.4	6.18	24.680	
1,800.0	1,797.3	1,780.9	1,765.6	3.5	4.7	43.00	44.8	225.1	166.5	159.9	6.56	25.371	
1,900.0	1,897.0	1,879.9	1,862.6	3.7	5.1	42.77	49.4	244.2	180.4	173.5	6.94	25.986	
2,000.0	1,996.8	1,978.9	1,959.7	3.9	5.5	42.58	54.1	263.3	194.3	187.0	7.32	26.537	
2,100.0	2,096.5	2,077.9	2,056.8	4.1	5.8	42.41	58.7	282.3	208.3	200.6	7.70	27.033	
2,200.0	2,196.3	2,176.9	2,153.8	4.3	6.2	42.26	63.4	301.4	222.2	214.1	8.08	27.482	
2,300.0	2,296.0	2,276.0	2,250.9	4.5	6.6	42.12	68.0	320.5	236.1	227.6	8.47	27.891	
2,400.0	2,395.8	2,375.0	2,347.9	4.7	7.0	42.01	72.7	339.5	250.0	241.2	8.85	28.264	
2,500.0	2,495.5	2,474.0	2,445.0	5.0	7.4	41.90	77.3	358.6	264.0	254.7	9.23	28.606	
2,600.0	2,595.3	2,573.0	2,542.1	5.2	7.8	41.81	82.0	377.7	277.9	268.3	9.61	28.921	
2,700.0	2,695.0	2,672.1	2,639.1	5.4	8.1	41.72	86.7	396.8	291.8	281.8	9.99	29.212	
2,800.0	2,794.7	2,771.1	2,736.2	5.6	8.5	41.65	91.3	415.8	305.8	295.4	10.37	29.482	
2,900.0	2,894.5	2,870.1	2,833.2	5.8	8.9	41.58	96.0	434.9	319.7	308.9	10.75	29.732	
3,000.0	2,994.2	2,969.1	2,930.3	6.0	9.3	41.51	100.6	454.0	333.6	322.5	11.13	29.965	
3,100.0	3,094.0	3,068.2	3,027.3	6.2	9.7	41.45	105.3	473.1	347.6	336.1	11.52	30.182	
3,200.0	3,193.7	3,167.2	3,124.4	6.4	10.1	41.40	109.9	492.1	361.5	349.6	11.90	30.386	
3,300.0	3,293.5	3,266.2	3,221.5	6.7	10.5	41.35	114.6	511.2	375.4	363.2	12.28	30.576	
3,400.0	3,393.2	3,365.2	3,318.5	6.9	10.8	41.30	119.2	530.3	389.4	376.7	12.66	30.756	
3,500.0	3,493.0	3,464.3	3,415.6	7.1	11.2	41.25	123.9	549.4	403.3	390.3	13.04	30.924	
3,600.0	3,592.7	3,563.3	3,512.6	7.3	11.6	41.21	128.5	568.4	417.2	403.8	13.42	31.083	
3,700.0	3,692.5	3,662.3	3,609.7	7.5	12.0	41.17	133.2	587.5	431.2	417.4	13.80	31.233	
3,800.0	3,792.2	3,761.3	3,706.8	7.7	12.4	41.14	137.8	606.6	445.1	430.9	14.19	31.376	
3,900.0	3,892.0	3,860.4	3,803.8	7.9	12.8	41.10	142.5	625.6	459.0	444.5	14.57	31.510	
4,000.0	3,991.7	3,959.4	3,900.9	8.2	13.2	41.07	147.1	644.7	473.0	458.0	14.95	31.638	
4,100.0	4,091.5	4,058.4	3,997.9	8.4	13.6	41.04	151.8	663.8	486.9	471.6	15.33	31.759	
4,200.0	4,191.2	4,157.4	4,095.0	8.6	13.9	41.01	156.4	682.9	500.9	485.1	15.71	31.875	
4,300.0	4,291.0	4,256.5	4,192.0	8.8	14.3	40.99	161.1	701.9	514.8	498.7	16.09	31.985	
4,400.0	4,390.7	4,355.5	4,289.1	9.0	14.7	40.96	165.7	721.0	528.7	512.2	16.48	32.089	
4,500.0	4,490.4	4,454.5	4,386.2	9.2	15.1	40.94	170.4	740.1	542.7	525.8	16.86	32.189	
4,600.0	4,590.2	4,553.5	4,483.2	9.4	15.5	40.92	175.0	759.2	556.6	539.4	17.24	32.285	
4,700.0	4,689.9	4,652.5	4,580.3	9.6	15.9	40.89	179.7	778.2	570.5	552.9	17.62	32.376	
4,800.0	4,789.7	4,751.6	4,677.3	9.9	16.3	40.87	184.3	797.3	584.5	566.5	18.00	32.464	
4,900.0	4,889.4	4,850.6	4,774.4	10.1	16.7	40.85	189.0	816.4	598.4	580.0	18.39	32.548	
5,000.0	4,989.2	4,949.6	4,871.4	10.3	17.1	40.83	193.6	835.5	612.3	593.6	18.77	32.628	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1K-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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
5,100.0	5,088.9	5,048.6	4,968.5	10.5	17.4	40.82	198.3	854.5	626.3	607.1	19.15	32.706	
5,200.0	5,188.7	5,147.7	5,065.6	10.7	17.8	40.80	203.0	873.6	640.2	620.7	19.53	32.780	
5,300.0	5,288.4	5,246.7	5,162.6	10.9	18.2	40.78	207.6	892.7	654.2	634.2	19.91	32.851	
5,400.0	5,388.2	5,345.7	5,259.7	11.1	18.6	40.77	212.3	911.8	668.1	647.8	20.29	32.920	
5,500.0	5,487.9	5,444.7	5,356.7	11.4	19.0	40.75	216.9	930.8	682.0	661.4	20.68	32.986	
5,600.0	5,587.7	5,543.8	5,453.8	11.6	19.4	40.74	221.6	949.9	696.0	674.9	21.06	33.050	
5,700.0	5,687.4	5,642.8	5,550.9	11.8	19.8	40.72	226.2	969.0	709.9	688.5	21.44	33.111	
5,800.0	5,787.2	5,741.8	5,647.9	12.0	20.2	40.71	230.9	988.0	723.8	702.0	21.82	33.170	
5,900.0	5,886.9	5,840.8	5,745.0	12.2	20.5	40.70	235.5	1,007.1	737.8	715.6	22.20	33.228	
6,000.0	5,986.7	5,939.9	5,842.0	12.4	20.9	40.68	240.2	1,026.2	751.7	729.1	22.59	33.283	
6,100.0	6,086.4	6,038.9	5,939.1	12.6	21.3	40.67	244.8	1,045.3	765.7	742.7	22.97	33.336	
6,200.0	6,186.1	6,137.9	6,036.1	12.9	21.7	40.66	249.5	1,064.3	779.6	756.2	23.35	33.388	
6,300.0	6,285.9	6,236.9	6,133.2	13.1	22.1	40.65	254.1	1,083.4	793.5	769.8	23.73	33.438	
6,400.0	6,385.7	6,335.7	6,230.0	13.2	22.5	-54.54	258.7	1,102.4	807.4	783.3	24.16	33.423	
6,500.0	6,484.4	6,434.7	6,327.0	13.3	22.8	-74.92	255.7	1,121.5	821.3	796.9	24.36	33.708	
6,600.0	6,580.0	6,535.3	6,424.3	13.3	23.1	-79.92	238.7	1,140.6	834.9	810.5	24.41	34.205	
6,700.0	6,670.8	6,637.9	6,520.0	13.3	23.4	-81.99	207.3	1,159.4	848.0	823.6	24.34	34.842	
6,800.0	6,755.0	6,742.3	6,611.9	13.3	23.7	-83.05	161.4	1,177.5	860.3	836.0	24.23	35.497	
6,900.0	6,830.9	6,848.8	6,697.8	13.4	23.9	-83.65	101.0	1,194.4	871.5	847.3	24.21	35.996	
7,000.0	6,897.0	6,957.1	6,775.3	13.6	24.2	-84.02	27.0	1,209.6	881.4	857.0	24.40	36.121	
7,100.0	6,952.1	7,067.3	6,842.0	13.9	24.5	-84.25	-59.6	1,222.7	889.7	864.8	24.94	35.668	
7,200.0	6,995.1	7,179.1	6,895.4	14.4	24.9	-84.41	-157.1	1,233.2	896.3	870.4	25.93	34.562	
7,300.0	7,025.2	7,292.1	6,933.8	15.1	25.4	-84.51	-263.0	1,240.7	900.9	873.5	27.41	32.866	
7,400.0	7,041.7	7,406.0	6,955.3	15.9	26.0	-84.58	-374.7	1,245.0	903.5	874.2	29.36	30.772	
7,500.0	7,045.0	7,516.3	6,960.0	16.9	26.7	-84.61	-484.8	1,245.9	904.1	872.5	31.63	28.587	
7,600.0	7,045.0	7,616.3	6,960.0	18.0	27.4	-84.61	-584.8	1,245.9	904.1	870.1	33.96	26.621	
7,700.0	7,045.0	7,716.3	6,960.0	19.2	28.2	-84.61	-684.8	1,245.9	904.1	867.6	36.48	24.781	
7,800.0	7,045.0	7,816.3	6,960.0	20.5	29.0	-84.61	-784.8	1,245.9	904.1	864.9	39.15	23.091	
7,900.0	7,045.0	7,916.3	6,960.0	21.9	30.0	-84.61	-884.8	1,245.9	904.1	862.1	41.94	21.554	
8,000.0	7,045.0	8,016.3	6,960.0	23.3	31.0	-84.61	-984.8	1,245.9	904.1	859.2	44.83	20.165	
8,100.0	7,045.0	8,116.3	6,960.0	24.7	32.1	-84.61	-1,084.8	1,245.9	904.1	856.3	47.81	18.912	
8,200.0	7,045.0	8,216.3	6,960.0	26.2	33.2	-84.61	-1,184.8	1,245.9	904.1	853.2	50.84	17.782	
8,300.0	7,045.0	8,316.3	6,960.0	27.7	34.4	-84.61	-1,284.8	1,245.9	904.1	850.1	53.93	16.762	
8,400.0	7,045.0	8,416.3	6,960.0	29.3	35.7	-84.61	-1,384.8	1,245.9	904.1	847.0	57.07	15.841	
8,500.0	7,045.0	8,516.3	6,960.0	30.8	37.0	-84.61	-1,484.8	1,245.9	904.1	843.8	60.25	15.005	
8,600.0	7,045.0	8,616.3	6,960.0	32.4	38.3	-84.61	-1,584.8	1,245.9	904.1	840.6	63.46	14.246	
8,700.0	7,045.0	8,716.3	6,960.0	34.0	39.7	-84.61	-1,684.8	1,245.9	904.1	837.4	66.70	13.554	
8,800.0	7,045.0	8,816.3	6,960.0	35.6	41.0	-84.61	-1,784.8	1,245.9	904.1	834.1	69.96	12.922	
8,900.0	7,045.0	8,916.3	6,960.0	37.2	42.5	-84.61	-1,884.8	1,245.9	904.1	830.8	73.25	12.343	
9,000.0	7,045.0	9,016.3	6,960.0	38.9	43.9	-84.61	-1,984.8	1,245.9	904.1	827.5	76.55	11.810	
9,100.0	7,045.0	9,116.3	6,960.0	40.5	45.4	-84.61	-2,084.8	1,245.9	904.1	824.2	79.87	11.319	
9,200.0	7,045.0	9,216.3	6,960.0	42.2	46.9	-84.61	-2,184.8	1,245.9	904.1	820.9	83.20	10.866	
9,300.0	7,045.0	9,316.3	6,960.0	43.9	48.4	-84.61	-2,284.8	1,245.9	904.1	817.5	86.55	10.446	
9,400.0	7,045.0	9,416.3	6,960.0	45.5	49.9	-84.61	-2,384.8	1,245.9	904.1	814.2	89.91	10.056	
9,500.0	7,045.0	9,516.3	6,960.0	47.2	51.4	-84.61	-2,484.8	1,245.9	904.1	810.8	93.28	9.693	
9,600.0	7,045.0	9,616.3	6,960.0	48.9	53.0	-84.61	-2,584.8	1,245.9	904.1	807.4	96.65	9.354	
9,700.0	7,045.0	9,716.3	6,960.0	50.6	54.5	-84.61	-2,684.8	1,245.9	904.1	804.0	100.04	9.038	
9,800.0	7,045.0	9,816.3	6,960.0	52.3	56.1	-84.61	-2,784.8	1,245.9	904.1	800.7	103.43	8.741	
9,900.0	7,045.0	9,916.3	6,960.0	54.0	57.7	-84.61	-2,884.8	1,245.9	904.1	797.3	106.82	8.463	
10,000.0	7,045.0	10,016.3	6,960.0	55.7	59.3	-84.61	-2,984.8	1,245.9	904.1	793.9	110.23	8.202	
10,100.0	7,045.0	10,116.3	6,960.0	57.4	60.9	-84.61	-3,084.8	1,245.9	904.1	790.4	113.64	7.956	
10,200.0	7,045.0	10,216.3	6,960.0	59.1	62.5	-84.61	-3,184.8	1,245.9	904.1	787.0	117.05	7.724	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1K-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	7,045.0	10,316.3	6,960.0	60.8	64.1	-84.61	-3,284.8	1,245.9	904.1	783.6	120.47	7.505	
10,400.0	7,045.0	10,416.3	6,960.0	62.5	65.7	-84.61	-3,384.8	1,245.9	904.1	780.2	123.89	7.297	
10,500.0	7,045.0	10,516.3	6,960.0	64.2	67.3	-84.61	-3,484.8	1,245.9	904.1	776.8	127.32	7.101	
10,600.0	7,045.0	10,616.3	6,960.0	65.9	69.0	-84.61	-3,584.8	1,245.9	904.1	773.3	130.75	6.915	
10,700.0	7,045.0	10,716.3	6,960.0	67.6	70.6	-84.61	-3,684.8	1,245.9	904.1	769.9	134.18	6.738	
10,800.0	7,045.0	10,816.3	6,960.0	69.4	72.3	-84.61	-3,784.8	1,245.9	904.1	766.5	137.62	6.569	
10,900.0	7,045.0	10,916.3	6,960.0	71.1	73.9	-84.61	-3,884.8	1,245.9	904.1	763.0	141.06	6.409	
11,000.0	7,045.0	11,016.3	6,960.0	72.8	75.6	-84.61	-3,984.8	1,245.9	904.1	759.6	144.50	6.257	
11,100.0	7,045.0	11,116.3	6,960.0	74.5	77.2	-84.61	-4,084.8	1,245.9	904.1	756.1	147.94	6.111	
11,200.0	7,045.0	11,216.3	6,960.0	76.2	78.9	-84.61	-4,184.8	1,245.9	904.1	752.7	151.39	5.972	
11,300.0	7,045.0	11,316.3	6,960.0	78.0	80.6	-84.61	-4,284.8	1,245.9	904.1	749.2	154.84	5.839	
11,400.0	7,045.0	11,416.3	6,960.0	79.7	82.2	-84.61	-4,384.8	1,245.9	904.1	745.8	158.29	5.712	
11,500.0	7,045.0	11,516.3	6,960.0	81.4	83.9	-84.61	-4,484.8	1,245.9	904.1	742.3	161.74	5.590	
11,577.0	7,045.0	11,593.4	6,960.0	82.8	85.2	-84.61	-4,561.8	1,245.9	904.1	739.7	164.40	5.499	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1L-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	90.83	-0.7	50.1	50.1				
100.0	100.0	100.0	100.0	0.2	0.2	90.83	-0.7	50.1	50.1	49.7	0.35	143.464	
200.0	200.0	200.0	200.0	0.3	0.3	90.83	-0.7	50.1	50.1	49.4	0.70	71.732	CC, ES
300.0	300.0	299.1	299.1	0.5	0.5	90.63	-0.6	50.9	50.9	49.9	1.05	48.683	
400.0	400.0	398.2	398.2	0.7	0.7	90.04	0.0	53.4	53.5	52.1	1.40	38.314	
500.0	500.0	497.2	497.1	0.9	0.9	39.90	0.8	57.6	57.5	55.8	1.74	33.044	
600.0	600.0	596.1	595.8	1.0	1.1	39.84	2.0	63.5	62.1	60.0	2.09	29.735	
700.0	699.9	694.9	694.2	1.2	1.3	40.46	3.6	71.0	67.1	64.7	2.44	27.491	
800.0	799.8	793.5	792.5	1.4	1.5	41.60	5.4	80.2	72.4	69.6	2.80	25.900	
900.0	899.5	892.1	890.4	1.6	1.8	43.08	7.7	91.0	78.3	75.1	3.16	24.778	
1,000.0	999.3	990.4	987.9	1.8	2.0	44.20	10.2	103.4	85.7	82.1	3.53	24.270	
1,100.0	1,099.0	1,088.5	1,085.0	2.0	2.3	44.85	13.1	117.4	94.7	90.8	3.90	24.261	SF
1,200.0	1,198.8	1,186.3	1,181.5	2.2	2.6	45.13	16.3	133.0	105.4	101.1	4.28	24.623	
1,300.0	1,298.5	1,283.8	1,277.3	2.4	3.0	45.12	19.8	150.2	117.7	113.0	4.66	25.269	
1,400.0	1,398.3	1,380.8	1,372.4	2.6	3.3	44.92	23.6	168.8	131.6	126.5	5.03	26.137	
1,500.0	1,498.0	1,477.3	1,466.7	2.8	3.7	44.57	27.8	189.0	147.1	141.7	5.41	27.185	
1,600.0	1,597.8	1,575.5	1,562.5	3.1	4.1	44.19	32.2	210.5	163.7	157.9	5.79	28.263	
1,700.0	1,697.5	1,674.2	1,658.6	3.3	4.5	43.87	36.6	232.1	180.2	174.1	6.17	29.208	
1,800.0	1,797.3	1,772.8	1,754.7	3.5	5.0	43.61	41.0	253.6	196.8	190.2	6.55	30.042	
1,900.0	1,897.0	1,871.4	1,850.9	3.7	5.4	43.39	45.5	275.2	213.4	206.4	6.93	30.785	
2,000.0	1,996.8	1,970.0	1,947.0	3.9	5.8	43.20	49.9	296.8	230.0	222.7	7.31	31.450	
2,100.0	2,096.5	2,068.6	2,043.1	4.1	6.2	43.03	54.3	318.4	246.5	238.9	7.69	32.049	
2,200.0	2,196.3	2,167.2	2,139.2	4.3	6.6	42.89	58.8	340.0	263.1	255.1	8.07	32.592	
2,300.0	2,296.0	2,265.8	2,235.3	4.5	7.1	42.76	63.2	361.6	279.7	271.3	8.45	33.085	
2,400.0	2,395.8	2,364.4	2,331.4	4.7	7.5	42.65	67.6	383.2	296.3	287.5	8.84	33.535	
2,500.0	2,495.5	2,463.1	2,427.6	5.0	7.9	42.55	72.0	404.8	312.9	303.7	9.22	33.948	
2,600.0	2,595.3	2,561.7	2,523.7	5.2	8.3	42.46	76.5	426.4	329.5	319.9	9.60	34.329	
2,700.0	2,695.0	2,660.3	2,619.8	5.4	8.8	42.37	80.9	448.0	346.1	336.1	9.98	34.679	
2,800.0	2,794.7	2,758.9	2,715.9	5.6	9.2	42.30	85.3	469.6	362.7	352.3	10.36	35.004	
2,900.0	2,894.5	2,857.5	2,812.0	5.8	9.6	42.23	89.8	491.2	379.3	368.5	10.74	35.306	
3,000.0	2,994.2	2,956.1	2,908.2	6.0	10.0	42.17	94.2	512.8	395.9	384.7	11.12	35.587	
3,100.0	3,094.0	3,054.7	3,004.3	6.2	10.5	42.11	98.6	534.3	412.5	400.9	11.51	35.849	
3,200.0	3,193.7	3,153.3	3,100.4	6.4	10.9	42.06	103.1	555.9	429.0	417.2	11.89	36.095	
3,300.0	3,293.5	3,252.0	3,196.5	6.7	11.3	42.01	107.5	577.5	445.6	433.4	12.27	36.325	
3,400.0	3,393.2	3,350.6	3,292.6	6.9	11.7	41.97	111.9	599.1	462.2	449.6	12.65	36.541	
3,500.0	3,493.0	3,449.2	3,388.7	7.1	12.2	41.92	116.3	620.7	478.8	465.8	13.03	36.744	
3,600.0	3,592.7	3,547.8	3,484.9	7.3	12.6	41.88	120.8	642.3	495.4	482.0	13.41	36.936	
3,700.0	3,692.5	3,646.4	3,581.0	7.5	13.0	41.85	125.2	663.9	512.0	498.2	13.79	37.117	
3,800.0	3,792.2	3,745.0	3,677.1	7.7	13.4	41.81	129.6	685.5	528.6	514.4	14.18	37.289	
3,900.0	3,892.0	3,843.6	3,773.2	7.9	13.9	41.78	134.1	707.1	545.2	530.7	14.56	37.451	
4,000.0	3,991.7	3,942.3	3,869.3	8.2	14.3	41.75	138.5	728.7	561.8	546.9	14.94	37.605	
4,100.0	4,091.5	4,040.9	3,965.5	8.4	14.7	41.72	142.9	750.3	578.4	563.1	15.32	37.751	
4,200.0	4,191.2	4,139.5	4,061.6	8.6	15.2	41.69	147.4	771.9	595.0	579.3	15.70	37.890	
4,300.0	4,291.0	4,238.1	4,157.7	8.8	15.6	41.67	151.8	793.5	611.6	595.5	16.08	38.023	
4,400.0	4,390.7	4,336.7	4,253.8	9.0	16.0	41.64	156.2	815.1	628.2	611.7	16.47	38.149	
4,500.0	4,490.4	4,435.3	4,349.9	9.2	16.4	41.62	160.6	836.6	644.8	627.9	16.85	38.270	
4,600.0	4,590.2	4,533.9	4,446.0	9.4	16.9	41.60	165.1	858.2	661.4	644.2	17.23	38.385	
4,700.0	4,689.9	4,632.5	4,542.2	9.6	17.3	41.58	169.5	879.8	678.0	660.4	17.61	38.495	
4,800.0	4,789.7	4,731.2	4,638.3	9.9	17.7	41.56	173.9	901.4	694.6	676.6	17.99	38.601	
4,900.0	4,889.4	4,829.8	4,734.4	10.1	18.2	41.54	178.4	923.0	711.2	692.8	18.38	38.702	
5,000.0	4,989.2	4,928.4	4,830.5	10.3	18.6	41.52	182.8	944.6	727.8	709.0	18.76	38.799	
5,100.0	5,088.9	5,027.0	4,926.6	10.5	19.0	41.50	187.2	966.2	744.4	725.2	19.14	38.892	

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 Ruhl 1G-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1L-32H-B264 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink 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	5,188.7	5,125.6	5,022.7	10.7	19.4	41.49	191.7	987.8	761.0	741.4	19.52	38.982	
5,300.0	5,288.4	5,224.2	5,118.9	10.9	19.9	41.47	196.1	1,009.4	777.6	757.7	19.90	39.068	
5,400.0	5,388.2	5,322.8	5,215.0	11.1	20.3	41.46	200.5	1,031.0	794.2	773.9	20.28	39.150	
5,500.0	5,487.9	5,421.4	5,311.1	11.4	20.7	41.44	204.9	1,052.6	810.8	790.1	20.67	39.230	
5,600.0	5,587.7	5,520.1	5,407.2	11.6	21.2	41.43	209.4	1,074.2	827.3	806.3	21.05	39.307	
5,700.0	5,687.4	5,618.7	5,503.3	11.8	21.6	41.41	213.8	1,095.8	843.9	822.5	21.43	39.381	
5,800.0	5,787.2	5,717.3	5,599.5	12.0	22.0	41.40	218.2	1,117.3	860.5	838.7	21.81	39.452	
5,900.0	5,886.9	5,815.9	5,695.6	12.2	22.4	41.39	222.7	1,138.9	877.1	854.9	22.19	39.521	
6,000.0	5,986.7	5,914.5	5,791.7	12.4	22.9	41.38	227.1	1,160.5	893.7	871.2	22.58	39.588	
6,100.0	6,086.4	6,013.1	5,887.8	12.6	23.3	41.37	231.5	1,182.1	910.3	887.4	22.96	39.652	
6,200.0	6,186.1	6,111.7	5,983.9	12.9	23.7	41.36	236.0	1,203.7	926.9	903.6	23.34	39.715	
6,300.0	6,285.9	6,210.3	6,080.0	13.1	24.2	41.34	240.4	1,225.3	943.5	919.8	23.72	39.775	
6,400.0	6,385.7	6,308.7	6,175.9	13.2	24.6	-53.59	244.8	1,246.9	960.0	935.8	24.21	39.656	
6,500.0	6,484.4	6,405.4	6,270.2	13.3	25.0	-74.07	249.2	1,268.0	976.3	951.9	24.48	39.888	
6,600.0	6,580.0	6,498.5	6,361.0	13.3	25.4	-79.79	253.3	1,288.4	992.9	968.4	24.55	40.452	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1G-32H-B264
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Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1G-32H-B264	**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 #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4955.0ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Ruhl 1G-32H-B264
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.60°