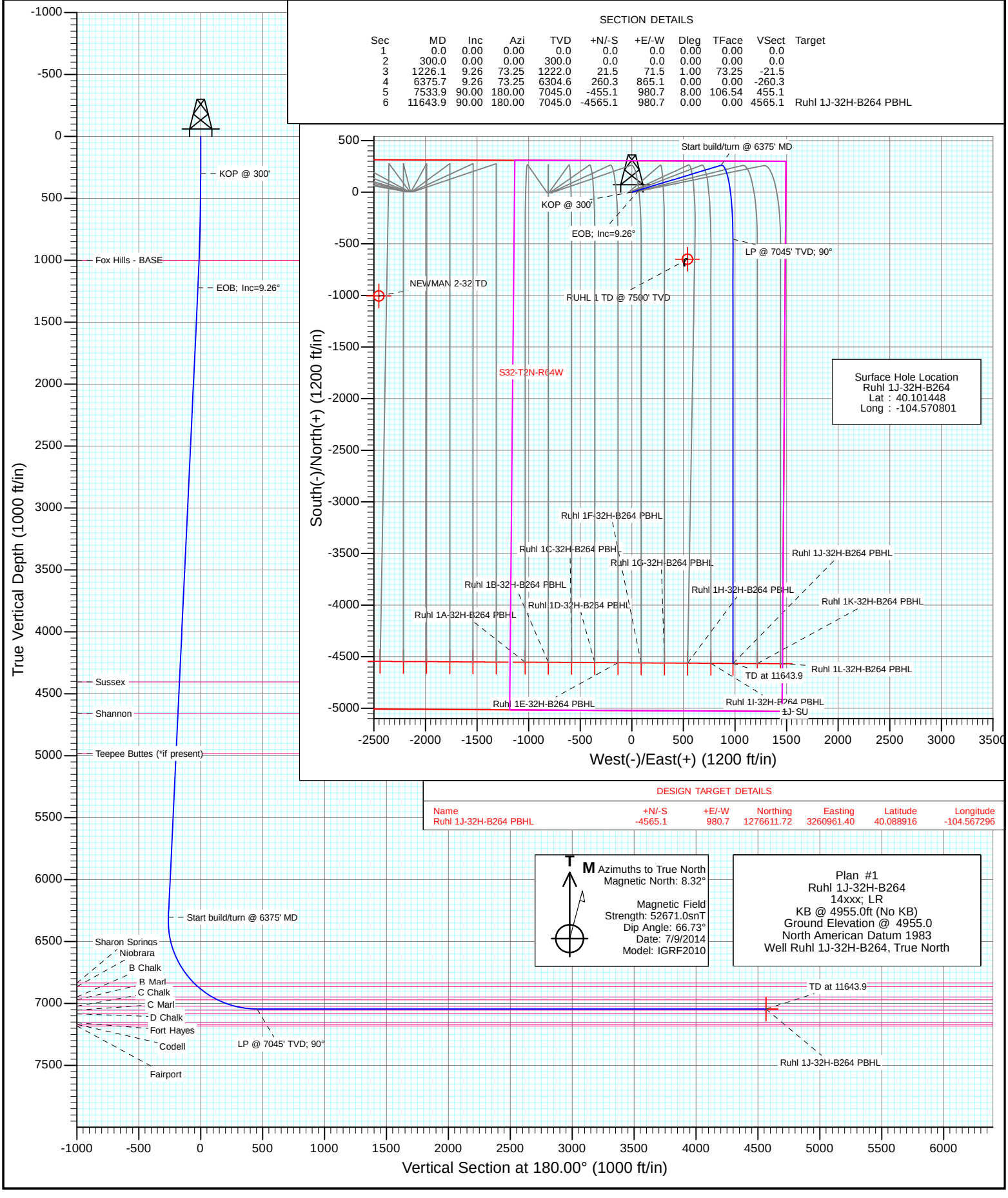
CATHEDRAL

Project: DJ Wattenberg
Site: S32-T2N-R64W (Newman/Ruhl)
Well: Ruhl 1J-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	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1226.1	9.26	73.25	1222.0	21.5	71.5	1.00	73.25	-21.5	
4	6375.7	9.26	73.25	6304.6	260.3	865.1	0.00	0.00	-260.3	
5	7533.9	90.00	180.00	7045.0	-455.1	980.7	8.00	106.54	455.1	
6	11643.9	90.00	180.00	7045.0	-4565.1	980.7	0.00	0.00	4565.1	Ruhl 1J-32H-B264 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Ruhl 1J-32H-B264 PBHL	-4565.1	980.7	1276611.72	3260961.40	40.088916	-104.567296

T M Azimuths to True North
Magnetic North: 8.32°

Magnetic Field
Strength: 52671.0snT
Dip Angle: 66.73°
Date: 7/9/2014
Model: IGRF2010

Plan #1
Ruhl 1J-32H-B264
14xxx; LR
KB @ 4955.0ft (No KB)
Ground Elevation @ 4955.0
North American Datum 1983
Well Ruhl 1J-32H-B264, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft (No KB)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft (No KB)
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1J-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 1J-32H-B264

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,281,166.29 ft	**Latitude:**	40.101448
	+E/-W	0.0 ft	**Easting:**	3,259,932.96 ft	**Longitude:**	-104.570801
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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,226.1	9.26	73.25	1,222.0	21.5	71.5	1.00	1.00	0.00	73.25	
6,375.7	9.26	73.25	6,304.6	260.3	865.1	0.00	0.00	0.00	0.00	
7,533.9	90.00	180.00	7,045.0	-455.1	980.7	8.00	6.97	9.22	106.54	
11,643.9	90.00	180.00	7,045.0	-4,565.1	980.7	0.00	0.00	0.00	0.00	Ruhl 1J-32H-B264 PE

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft (No KB)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft (No KB)
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1J-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	KOP @ 300'
400.0	1.00	73.25	400.0	0.3	0.8	-0.3	1.00	1.00	
500.0	2.00	73.25	500.0	1.0	3.3	-1.0	1.00	1.00	
600.0	3.00	73.25	599.9	2.3	7.5	-2.3	1.00	1.00	
700.0	4.00	73.25	699.7	4.0	13.4	-4.0	1.00	1.00	
800.0	5.00	73.25	799.4	6.3	20.9	-6.3	1.00	1.00	
900.0	6.00	73.25	898.9	9.0	30.1	-9.0	1.00	1.00	
1,000.0	7.00	73.25	998.3	12.3	40.9	-12.3	1.00	1.00	
1,001.8	7.02	73.25	1,000.0	12.4	41.1	-12.4	1.00	1.00	Fox Hills - BASE
1,100.0	8.00	73.25	1,097.4	16.1	53.4	-16.1	1.00	1.00	
1,200.0	9.00	73.25	1,196.3	20.3	67.5	-20.3	1.00	1.00	
1,226.1	9.26	73.25	1,222.0	21.5	71.5	-21.5	1.00	1.00	EOB; Inc=9.26°
1,300.0	9.26	73.25	1,295.0	24.9	82.9	-24.9	0.00	0.00	
1,400.0	9.26	73.25	1,393.7	29.6	98.3	-29.6	0.00	0.00	
1,500.0	9.26	73.25	1,492.4	34.2	113.7	-34.2	0.00	0.00	
1,600.0	9.26	73.25	1,591.1	38.9	129.1	-38.9	0.00	0.00	
1,700.0	9.26	73.25	1,689.8	43.5	144.5	-43.5	0.00	0.00	
1,800.0	9.26	73.25	1,788.5	48.1	160.0	-48.1	0.00	0.00	
1,900.0	9.26	73.25	1,887.2	52.8	175.4	-52.8	0.00	0.00	
2,000.0	9.26	73.25	1,985.9	57.4	190.8	-57.4	0.00	0.00	
2,100.0	9.26	73.25	2,084.6	62.0	206.2	-62.0	0.00	0.00	
2,200.0	9.26	73.25	2,183.3	66.7	221.6	-66.7	0.00	0.00	
2,300.0	9.26	73.25	2,282.0	71.3	237.0	-71.3	0.00	0.00	
2,400.0	9.26	73.25	2,380.7	76.0	252.4	-76.0	0.00	0.00	
2,500.0	9.26	73.25	2,479.4	80.6	267.8	-80.6	0.00	0.00	
2,600.0	9.26	73.25	2,578.1	85.2	283.2	-85.2	0.00	0.00	
2,700.0	9.26	73.25	2,676.8	89.9	298.6	-89.9	0.00	0.00	
2,800.0	9.26	73.25	2,775.5	94.5	314.0	-94.5	0.00	0.00	
2,900.0	9.26	73.25	2,874.2	99.1	329.5	-99.1	0.00	0.00	
3,000.0	9.26	73.25	2,972.9	103.8	344.9	-103.8	0.00	0.00	
3,100.0	9.26	73.25	3,071.5	108.4	360.3	-108.4	0.00	0.00	
3,200.0	9.26	73.25	3,170.2	113.1	375.7	-113.1	0.00	0.00	
3,300.0	9.26	73.25	3,268.9	117.7	391.1	-117.7	0.00	0.00	
3,400.0	9.26	73.25	3,367.6	122.3	406.5	-122.3	0.00	0.00	
3,500.0	9.26	73.25	3,466.3	127.0	421.9	-127.0	0.00	0.00	
3,600.0	9.26	73.25	3,565.0	131.6	437.3	-131.6	0.00	0.00	
3,700.0	9.26	73.25	3,663.7	136.2	452.7	-136.2	0.00	0.00	
3,800.0	9.26	73.25	3,762.4	140.9	468.1	-140.9	0.00	0.00	
3,900.0	9.26	73.25	3,861.1	145.5	483.6	-145.5	0.00	0.00	
4,000.0	9.26	73.25	3,959.8	150.2	499.0	-150.2	0.00	0.00	
4,100.0	9.26	73.25	4,058.5	154.8	514.4	-154.8	0.00	0.00	
4,200.0	9.26	73.25	4,157.2	159.4	529.8	-159.4	0.00	0.00	
4,300.0	9.26	73.25	4,255.9	164.1	545.2	-164.1	0.00	0.00	
4,400.0	9.26	73.25	4,354.6	168.7	560.6	-168.7	0.00	0.00	
4,450.0	9.26	73.25	4,404.0	171.0	568.3	-171.0	0.00	0.00	Sussex
4,500.0	9.26	73.25	4,453.3	173.3	576.0	-173.3	0.00	0.00	
4,600.0	9.26	73.25	4,552.0	178.0	591.4	-178.0	0.00	0.00	
4,700.0	9.26	73.25	4,650.7	182.6	606.8	-182.6	0.00	0.00	
4,709.4	9.26	73.25	4,660.0	183.1	608.3	-183.1	0.00	0.00	Shannon

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft (No KB)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft (No KB)
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1J-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
4,800.0	9.26	73.25	4,749.4	187.3	622.2	-187.3	0.00	0.00	
4,900.0	9.26	73.25	4,848.1	191.9	637.7	-191.9	0.00	0.00	
5,000.0	9.26	73.25	4,946.8	196.5	653.1	-196.5	0.00	0.00	
5,035.7	9.26	73.25	4,982.0	198.2	658.6	-198.2	0.00	0.00	Teepee Buttes (*if present)
5,100.0	9.26	73.25	5,045.5	201.2	668.5	-201.2	0.00	0.00	
5,200.0	9.26	73.25	5,144.2	205.8	683.9	-205.8	0.00	0.00	
5,300.0	9.26	73.25	5,242.9	210.4	699.3	-210.4	0.00	0.00	
5,400.0	9.26	73.25	5,341.6	215.1	714.7	-215.1	0.00	0.00	
5,500.0	9.26	73.25	5,440.3	219.7	730.1	-219.7	0.00	0.00	
5,600.0	9.26	73.25	5,539.0	224.4	745.5	-224.4	0.00	0.00	
5,700.0	9.26	73.25	5,637.7	229.0	760.9	-229.0	0.00	0.00	
5,800.0	9.26	73.25	5,736.4	233.6	776.3	-233.6	0.00	0.00	
5,900.0	9.26	73.25	5,835.1	238.3	791.7	-238.3	0.00	0.00	
6,000.0	9.26	73.25	5,933.8	242.9	807.2	-242.9	0.00	0.00	
6,100.0	9.26	73.25	6,032.5	247.5	822.6	-247.5	0.00	0.00	
6,200.0	9.26	73.25	6,131.1	252.2	838.0	-252.2	0.00	0.00	
6,300.0	9.26	73.25	6,229.8	256.8	853.4	-256.8	0.00	0.00	
6,375.7	9.26	73.25	6,304.6	260.3	865.1	-260.3	0.00	0.00	Start build/turn @ 6375' MD
6,400.0	8.90	85.38	6,328.6	261.0	868.8	-261.0	8.00	-1.47	
6,500.0	11.46	129.65	6,427.1	255.3	884.2	-255.3	8.00	2.56	
6,600.0	17.62	150.56	6,523.9	235.8	899.3	-235.8	8.00	6.16	
6,700.0	24.83	160.28	6,617.1	202.8	913.9	-202.8	8.00	7.21	
6,800.0	32.40	165.76	6,704.8	157.0	927.6	-157.0	8.00	7.57	
6,900.0	40.12	169.32	6,785.4	99.2	940.1	-99.2	8.00	7.72	
6,967.5	45.38	171.14	6,835.0	54.1	947.9	-54.1	8.00	7.79	Sharon Springs
7,000.0	47.92	171.89	6,857.3	30.7	951.4	-30.7	8.00	7.82	
7,010.1	48.70	172.12	6,864.0	23.3	952.4	-23.3	8.00	7.83	Niobrara
7,100.0	55.76	173.90	6,919.0	-47.2	961.0	47.2	8.00	7.85	
7,154.5	60.05	174.84	6,948.0	-93.2	965.5	93.2	8.00	7.87	B Chalk
7,200.0	63.63	175.56	6,969.5	-133.1	968.9	133.1	8.00	7.88	
7,203.5	63.90	175.61	6,971.0	-136.2	969.1	136.2	8.00	7.88	B Marl
7,300.0	71.52	177.01	7,007.6	-225.3	974.8	225.3	8.00	7.89	
7,350.8	75.53	177.69	7,022.0	-274.0	977.1	274.0	8.00	7.90	C Chalk
7,400.0	79.42	178.33	7,032.7	-322.0	978.7	322.0	8.00	7.90	
7,500.0	87.32	179.58	7,044.2	-421.2	980.5	421.2	8.00	7.90	
7,533.9	90.00	180.00	7,045.0	-455.1	980.7	455.1	8.00	7.90	LP @ 7045' TVD; 90°
7,600.0	90.00	180.00	7,045.0	-521.2	980.7	521.2	0.00	0.00	
7,700.0	90.00	180.00	7,045.0	-621.2	980.7	621.2	0.00	0.00	
7,800.0	90.00	180.00	7,045.0	-721.2	980.7	721.2	0.00	0.00	
7,900.0	90.00	180.00	7,045.0	-821.2	980.7	821.2	0.00	0.00	
8,000.0	90.00	180.00	7,045.0	-921.2	980.7	921.2	0.00	0.00	
8,100.0	90.00	180.00	7,045.0	-1,021.2	980.7	1,021.2	0.00	0.00	
8,200.0	90.00	180.00	7,045.0	-1,121.2	980.7	1,121.2	0.00	0.00	
8,300.0	90.00	180.00	7,045.0	-1,221.2	980.7	1,221.2	0.00	0.00	
8,400.0	90.00	180.00	7,045.0	-1,321.2	980.7	1,321.2	0.00	0.00	
8,500.0	90.00	180.00	7,045.0	-1,421.2	980.7	1,421.2	0.00	0.00	
8,600.0	90.00	180.00	7,045.0	-1,521.2	980.7	1,521.2	0.00	0.00	
8,700.0	90.00	180.00	7,045.0	-1,621.2	980.7	1,621.2	0.00	0.00	
8,800.0	90.00	180.00	7,045.0	-1,721.2	980.7	1,721.2	0.00	0.00	
8,900.0	90.00	180.00	7,045.0	-1,821.2	980.7	1,821.2	0.00	0.00	
9,000.0	90.00	180.00	7,045.0	-1,921.2	980.7	1,921.2	0.00	0.00	
9,100.0	90.00	180.00	7,045.0	-2,021.2	980.7	2,021.2	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft (No KB)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft (No KB)
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1J-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
9,200.0	90.00	180.00	7,045.0	-2,121.2	980.7	2,121.2	0.00	0.00	
9,300.0	90.00	180.00	7,045.0	-2,221.2	980.7	2,221.2	0.00	0.00	
9,400.0	90.00	180.00	7,045.0	-2,321.2	980.7	2,321.2	0.00	0.00	
9,500.0	90.00	180.00	7,045.0	-2,421.2	980.7	2,421.2	0.00	0.00	
9,600.0	90.00	180.00	7,045.0	-2,521.2	980.7	2,521.2	0.00	0.00	
9,700.0	90.00	180.00	7,045.0	-2,621.2	980.7	2,621.2	0.00	0.00	
9,800.0	90.00	180.00	7,045.0	-2,721.2	980.7	2,721.2	0.00	0.00	
9,900.0	90.00	180.00	7,045.0	-2,821.2	980.7	2,821.2	0.00	0.00	
10,000.0	90.00	180.00	7,045.0	-2,921.2	980.7	2,921.2	0.00	0.00	
10,100.0	90.00	180.00	7,045.0	-3,021.2	980.7	3,021.2	0.00	0.00	
10,200.0	90.00	180.00	7,045.0	-3,121.2	980.7	3,121.2	0.00	0.00	
10,300.0	90.00	180.00	7,045.0	-3,221.2	980.7	3,221.2	0.00	0.00	
10,400.0	90.00	180.00	7,045.0	-3,321.2	980.7	3,321.2	0.00	0.00	
10,500.0	90.00	180.00	7,045.0	-3,421.2	980.7	3,421.2	0.00	0.00	
10,600.0	90.00	180.00	7,045.0	-3,521.2	980.7	3,521.2	0.00	0.00	
10,700.0	90.00	180.00	7,045.0	-3,621.2	980.7	3,621.2	0.00	0.00	
10,800.0	90.00	180.00	7,045.0	-3,721.2	980.7	3,721.2	0.00	0.00	
10,900.0	90.00	180.00	7,045.0	-3,821.2	980.7	3,821.2	0.00	0.00	
11,000.0	90.00	180.00	7,045.0	-3,921.2	980.7	3,921.2	0.00	0.00	
11,100.0	90.00	180.00	7,045.0	-4,021.2	980.7	4,021.2	0.00	0.00	
11,200.0	90.00	180.00	7,045.0	-4,121.2	980.7	4,121.2	0.00	0.00	
11,300.0	90.00	180.00	7,045.0	-4,221.2	980.7	4,221.2	0.00	0.00	
11,400.0	90.00	180.00	7,045.0	-4,321.2	980.7	4,321.2	0.00	0.00	
11,500.0	90.00	180.00	7,045.0	-4,421.2	980.7	4,421.2	0.00	0.00	
11,600.0	90.00	180.00	7,045.0	-4,521.2	980.7	4,521.2	0.00	0.00	
11,643.9	90.00	180.00	7,045.0	-4,565.1	980.7	4,565.1	0.00	0.00	TD at 11643.9

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 1J-32H-B264 PBHl - plan hits target center - Point	0.00	0.00	7,045.0	-4,565.1	980.7	1,276,611.72	3,260,961.40	40.088916	-104.567296

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4955.0ft (No KB)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4955.0ft (No KB)
Site:	S32-T2N-R64W (Newman)	**North Reference:**	True
Well:	Ruhl 1J-32H-B264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,001.8	1,000.0	Fox Hills - BASE			
4,450.0	4,404.0	Sussex			
4,709.4	4,660.0	Shannon			
5,035.7	4,982.0	Teepee Buttes (*if present)			
6,967.5	6,835.0	Sharon Springs			
7,010.1	6,864.0	Niobrara			
7,154.5	6,948.0	B Chalk			
7,203.5	6,971.0	B Marl			
7,350.8	7,022.0	C Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP @ 300'
1,226.1	1,222.0	21.5	71.5	EOB; Inc=9.26°
6,375.7	6,304.6	260.3	865.1	Start build/turn @ 6375' MD
7,533.9	7,045.0	-455.1	980.7	LP @ 7045' TVD; 90°
11,643.9	7,045.0	-4,565.1	980.7	TD at 11643.9

EnCana Oil & Gas (USA) Inc

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

Anticollision Report

09 July, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	11,643.9	Plan #1 (Hz)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	7,724.2	7,100.0	445.4	415.2	14.728	CC, ES
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	7,800.0	7,100.0	451.8	420.6	14.470	SF
Ruhl 1A-32H-B264 - Hz - Plan #1	200.0	200.0	822.4	821.7	1,178.051	CC, ES
Ruhl 1A-32H-B264 - Hz - Plan #1	1,600.0	1,561.2	992.3	986.5	171.888	SF
Ruhl 1B-32H-B264 - Hz - Plan #1	300.0	300.0	812.4	811.3	775.751	CC, ES
Ruhl 1B-32H-B264 - Hz - Plan #1	1,900.0	1,889.5	987.4	980.6	145.069	SF
Ruhl 1C-32H-B264 - Hz - Plan #1	300.0	300.0	802.3	801.2	766.134	CC, ES
Ruhl 1C-32H-B264 - Hz - Plan #1	2,400.0	2,417.5	999.1	990.3	113.127	SF
Ruhl 1D-32H-B264 - Hz - Plan #1	300.0	300.0	792.2	791.2	756.517	CC, ES
Ruhl 1D-32H-B264 - Hz - Plan #1	3,200.0	3,245.5	994.4	982.3	82.719	SF
Ruhl 1E-32H-B264 - Hz - Plan #1	300.0	300.0	782.4	781.4	747.169	CC, ES
Ruhl 1E-32H-B264 - Hz - Plan #1	5,100.0	5,175.2	994.9	975.4	51.101	SF
Ruhl 1F-32H-B264 - Hz - Plan #1	1,080.0	1,179.6	753.5	749.4	187.175	CC
Ruhl 1F-32H-B264 - Hz - Plan #1	11,643.9	11,747.9	899.2	735.6	5.497	ES, SF
Ruhl 1G-32H-B264 - Hz - Plan #1	300.0	300.0	30.2	29.2	28.852	CC, ES
Ruhl 1G-32H-B264 - Hz - Plan #1	11,643.9	11,577.0	665.1	499.9	4.027	SF
Ruhl 1H-32H-B264 - Hz - Plan #1	300.0	300.0	20.1	19.1	19.233	CC, ES
Ruhl 1H-32H-B264 - Hz - Plan #1	11,643.9	11,509.6	448.2	286.0	2.763	SF
Ruhl 1I-32H-B264 - Hz - Plan #1	300.0	300.0	10.1	9.0	9.617	CC, ES
Ruhl 1I-32H-B264 - Hz - Plan #1	11,643.9	11,743.2	250.1	106.7	1.744	SF
Ruhl 1K-32H-B264 - Hz - Plan #1	233.4	233.4	9.8	9.0	12.019	CC
Ruhl 1K-32H-B264 - Hz - Plan #1	300.0	299.9	10.0	9.0	9.553	ES
Ruhl 1K-32H-B264 - Hz - Plan #1	11,643.9	11,597.0	249.9	93.9	1.602	SF
Ruhl 1L-32H-B264 - Hz - Plan #1	200.0	200.0	19.9	19.2	28.454	CC, ES
Ruhl 1L-32H-B264 - Hz - Plan #1	11,643.9	11,846.8	477.5	318.0	2.995	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	143.87	-698.0	509.5	864.1	864.1	0.07	N/A	
100.0	100.0	133.6	133.6	0.2	0.2	143.86	-698.3	509.9	864.7	864.3	0.41	2,117.856	
200.0	200.0	233.5	233.5	0.3	0.4	143.87	-699.0	510.3	865.5	864.7	0.76	1,142.378	
300.0	300.0	336.3	336.3	0.5	0.6	143.89	-699.7	510.4	866.0	864.9	1.11	778.983	
400.0	400.0	436.2	436.2	0.7	0.8	70.71	-700.1	510.4	866.1	864.7	1.46	593.217	
500.0	500.0	533.8	533.8	0.9	0.9	70.87	-700.6	510.7	865.9	864.1	1.81	478.729	
600.0	599.9	632.8	632.8	1.1	1.1	71.17	-701.4	510.9	865.2	863.0	2.17	399.464	
700.0	699.7	732.0	732.0	1.3	1.3	71.58	-702.3	511.1	864.1	861.6	2.53	341.133	
800.0	799.4	831.2	831.2	1.5	1.5	72.10	-703.2	511.4	862.6	859.7	2.91	296.108	
900.0	898.9	930.6	930.6	1.7	1.6	72.74	-704.1	511.9	860.7	857.3	3.31	260.047	
1,000.0	998.3	1,030.8	1,030.8	1.9	1.8	73.49	-704.9	512.3	858.3	854.6	3.73	230.314	
1,100.0	1,097.4	1,132.0	1,132.0	2.2	2.0	74.37	-705.5	512.7	855.4	851.2	4.17	205.253	
1,200.0	1,196.3	1,230.2	1,230.2	2.5	2.2	75.36	-706.2	512.8	852.1	847.5	4.63	184.145	
1,300.0	1,295.0	1,327.2	1,327.2	2.8	2.3	76.39	-707.0	513.2	849.1	844.0	5.10	166.508	
1,400.0	1,393.7	1,427.2	1,427.2	3.1	2.5	77.45	-707.7	513.6	846.2	840.6	5.58	151.554	
1,500.0	1,492.4	1,525.2	1,525.2	3.4	2.7	78.51	-708.5	513.8	843.6	837.5	6.07	138.982	
1,600.0	1,591.1	1,622.3	1,622.3	3.8	2.8	79.57	-709.5	513.9	841.5	834.9	6.56	128.295	
1,700.0	1,689.8	1,721.9	1,721.9	4.1	3.0	80.68	-710.6	514.0	839.7	832.7	7.06	119.003	
1,800.0	1,788.5	1,822.7	1,822.6	4.4	3.2	81.81	-711.5	513.9	838.1	830.5	7.56	110.880	
1,900.0	1,887.2	1,922.4	1,922.3	4.7	3.4	82.95	-712.4	513.4	836.5	828.5	8.06	103.779	
2,000.0	1,985.9	2,020.9	2,020.8	5.0	3.5	84.09	-713.3	512.9	835.3	826.8	8.56	97.558	
2,100.0	2,084.6	2,120.6	2,120.5	5.4	3.7	85.24	-714.1	512.2	834.3	825.3	9.07	92.019	
2,200.0	2,183.3	2,219.2	2,219.1	5.7	3.9	86.39	-714.9	511.6	833.7	824.1	9.57	87.114	
2,300.0	2,282.0	2,323.1	2,323.0	6.0	4.1	87.61	-715.4	510.7	833.0	822.9	10.08	82.616	
2,400.0	2,380.7	2,425.2	2,425.1	6.4	4.2	88.80	-715.4	509.8	832.2	821.6	10.59	78.568	
2,500.0	2,479.4	2,527.4	2,527.3	6.7	4.4	89.99	-714.9	508.7	831.2	820.1	11.10	74.885	
2,600.0	2,578.1	2,628.3	2,628.1	7.0	4.6	91.18	-714.1	507.5	830.3	818.7	11.61	71.545	
2,700.0	2,676.8	2,726.9	2,726.8	7.3	4.8	92.34	-713.2	506.2	829.5	817.4	12.10	68.531	
2,800.0	2,775.5	2,824.9	2,824.8	7.7	4.9	93.48	-712.3	505.2	829.2	816.6	12.60	65.807	
2,900.0	2,874.2	2,925.3	2,925.2	8.0	5.1	94.61	-711.2	504.7	829.1	816.0	13.10	63.295	
2,914.5	2,888.4	2,939.7	2,939.5	8.1	5.1	94.77	-711.0	504.6	829.1	815.9	13.17	62.951	
3,000.0	2,972.9	3,024.9	3,024.7	8.3	5.3	95.70	-709.8	504.6	829.2	815.6	13.59	60.999	
3,100.0	3,071.5	3,124.8	3,124.7	8.7	5.5	96.79	-708.2	504.5	829.4	815.3	14.09	58.880	
3,200.0	3,170.2	3,223.2	3,223.0	9.0	5.6	97.85	-706.7	504.6	829.9	815.3	14.57	56.946	
3,300.0	3,268.9	3,322.6	3,322.4	9.3	5.8	98.94	-705.1	504.4	830.7	815.6	15.06	55.158	
3,400.0	3,367.6	3,421.6	3,421.4	9.7	6.0	100.03	-703.5	504.1	831.7	816.2	15.54	53.514	
3,500.0	3,466.3	3,521.3	3,521.1	10.0	6.1	101.11	-701.8	504.1	833.0	817.0	16.02	51.989	
3,600.0	3,565.0	3,620.6	3,620.3	10.3	6.3	102.17	-700.0	504.1	834.4	817.9	16.50	50.579	
3,700.0	3,663.7	3,721.4	3,721.1	10.7	6.5	103.25	-698.1	504.1	836.1	819.1	16.97	49.263	
3,800.0	3,762.4	3,825.2	3,824.9	11.0	6.7	104.34	-695.6	504.3	837.5	820.1	17.45	48.005	
3,900.0	3,861.1	3,926.1	3,925.8	11.3	6.9	105.37	-692.7	504.7	838.9	820.9	17.91	46.827	
4,000.0	3,959.8	4,026.8	4,026.4	11.7	7.0	106.39	-689.6	505.4	840.2	821.8	18.38	45.722	
4,100.0	4,058.5	4,126.3	4,125.8	12.0	7.2	107.38	-686.4	506.1	841.7	822.8	18.83	44.689	
4,200.0	4,157.2	4,223.3	4,222.8	12.3	7.4	108.34	-683.4	507.0	843.5	824.2	19.28	43.740	
4,300.0	4,255.9	4,320.0	4,319.5	12.7	7.5	109.28	-680.6	508.0	845.8	826.1	19.73	42.869	
4,400.0	4,354.6	4,417.3	4,416.8	13.0	7.7	110.22	-678.0	509.0	848.5	828.4	20.17	42.064	
4,500.0	4,453.3	4,510.6	4,510.0	13.3	7.9	111.11	-675.9	510.0	852.0	831.4	20.61	41.347	
4,600.0	4,552.0	4,607.5	4,606.9	13.6	8.1	112.01	-674.2	511.3	856.1	835.1	21.04	40.688	
4,700.0	4,650.7	4,705.1	4,704.4	14.0	8.2	112.90	-672.7	512.6	860.6	839.2	21.47	40.082	
4,800.0	4,749.4	4,806.2	4,805.6	14.3	8.4	113.85	-671.1	513.4	865.3	843.4	21.90	39.511	
4,900.0	4,848.1	4,905.4	4,904.7	14.6	8.6	114.83	-669.2	513.5	870.1	847.8	22.32	38.984	
5,000.0	4,946.8	5,003.8	5,003.1	15.0	8.8	115.83	-667.2	512.9	875.2	852.4	22.73	38.501	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	5,045.5	5,102.2	5,101.4	15.3	8.9	116.82	-665.2	512.2	880.5	857.4	23.14	38.059	
5,200.0	5,144.2	5,197.0	5,196.2	15.6	9.1	117.78	-663.5	511.3	886.4	862.9	23.53	37.668	
5,300.0	5,242.9	5,293.9	5,293.2	16.0	9.3	118.75	-662.1	510.3	892.8	868.9	23.92	37.319	
5,400.0	5,341.6	5,393.0	5,392.2	16.3	9.4	119.71	-660.7	509.4	899.6	875.3	24.32	36.997	
5,500.0	5,440.3	5,491.6	5,490.8	16.6	9.6	120.63	-659.4	509.0	906.6	881.9	24.70	36.698	
5,600.0	5,539.0	5,590.7	5,589.9	17.0	9.8	121.52	-658.2	508.8	913.8	888.7	25.09	36.422	
5,700.0	5,637.7	5,690.4	5,689.6	17.3	10.0	122.41	-656.8	508.6	921.1	895.7	25.47	36.164	
5,800.0	5,736.4	5,788.8	5,788.0	17.6	10.1	123.25	-655.5	508.7	928.6	902.8	25.85	35.926	
5,900.0	5,835.1	5,888.1	5,887.2	18.0	10.3	124.08	-654.3	508.9	936.4	910.1	26.23	35.705	
6,000.0	5,933.8	5,985.0	5,984.2	18.3	10.5	124.87	-653.1	509.2	944.3	917.7	26.60	35.506	
6,100.0	6,032.5	6,086.7	6,085.9	18.6	10.7	125.69	-651.9	509.4	952.5	925.5	26.97	35.320	
6,200.0	6,131.1	6,186.3	6,185.5	19.0	10.8	126.46	-650.6	510.1	960.6	933.2	27.34	35.140	
6,300.0	6,229.8	6,285.6	6,284.7	19.3	11.0	127.21	-649.3	510.9	968.8	941.1	27.70	34.972	
6,400.0	6,328.6	6,382.6	6,381.8	19.6	11.2	115.88	-648.2	512.1	976.8	948.7	28.09	34.780	
6,500.0	6,427.1	6,480.6	6,479.7	19.9	11.3	73.12	-647.5	513.7	975.9	947.7	28.28	34.512	
6,600.0	6,523.9	6,578.8	6,578.0	20.1	11.5	54.48	-646.8	515.4	962.5	934.4	28.06	34.303	
6,700.0	6,617.1	6,674.0	6,673.1	20.3	11.7	47.84	-646.1	517.5	936.9	909.5	27.48	34.092	
6,800.0	6,704.8	6,763.3	6,762.3	20.5	11.8	46.46	-645.6	520.3	900.2	873.5	26.66	33.763	
6,900.0	6,785.4	6,846.1	6,845.1	20.7	12.0	48.30	-645.3	523.5	853.5	827.7	25.77	33.114	
7,000.0	6,857.3	6,920.3	6,919.2	20.9	12.1	52.75	-645.1	526.8	798.4	773.4	25.08	31.834	
7,100.0	6,919.0	6,983.4	6,982.2	21.1	12.2	59.52	-645.1	530.1	737.3	712.5	24.86	29.654	
7,200.0	6,969.5	7,031.1	7,029.8	21.5	12.3	67.82	-645.2	532.6	673.0	647.8	25.22	26.688	
7,300.0	7,007.6	7,065.7	7,064.4	21.9	12.4	76.65	-645.2	534.2	608.9	583.0	25.95	23.465	
7,400.0	7,032.7	7,088.7	7,087.4	22.4	12.4	84.64	-645.3	535.0	549.2	522.4	26.80	20.497	
7,500.0	7,044.2	7,100.0	7,098.7	23.1	12.4	90.53	-645.4	535.4	498.6	470.9	27.67	18.019	
7,600.0	7,045.0	7,100.0	7,098.7	23.8	12.4	91.76	-645.4	535.4	462.4	433.7	28.72	16.099	
7,700.0	7,045.0	7,100.0	7,098.7	24.6	12.4	91.76	-645.4	535.4	446.1	416.2	29.93	14.904	
7,724.2	7,045.0	7,100.0	7,098.7	24.9	12.4	91.76	-645.4	535.4	445.4	415.2	30.24	14.728	CC, ES
7,800.0	7,045.0	7,100.0	7,098.7	25.6	12.4	91.76	-645.4	535.4	451.8	420.6	31.23	14.470	SF
7,900.0	7,045.0	7,100.0	7,098.7	26.6	12.4	91.76	-645.4	535.4	478.9	446.3	32.59	14.695	
8,000.0	7,045.0	7,100.0	7,098.7	27.7	12.4	91.76	-645.4	535.4	523.9	489.9	34.01	15.405	
8,100.0	7,045.0	7,100.0	7,098.7	28.8	12.4	91.76	-645.4	535.4	582.8	547.3	35.47	16.429	
8,200.0	7,045.0	7,100.0	7,098.7	30.0	12.4	91.76	-645.4	535.4	651.8	614.8	36.98	17.626	
8,300.0	7,045.0	7,103.2	7,101.9	31.3	12.4	92.18	-645.4	535.5	728.0	689.5	38.52	18.901	
8,400.0	7,045.0	7,103.6	7,102.3	32.6	12.4	92.23	-645.4	535.5	809.4	769.3	40.08	20.197	
8,500.0	7,045.0	7,104.0	7,102.7	34.0	12.4	92.28	-645.4	535.6	894.6	852.9	41.66	21.475	
8,600.0	7,045.0	7,104.4	7,103.1	35.4	12.4	92.33	-645.4	535.6	982.6	939.3	43.26	22.715	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.23	-3.3	-822.4	822.4				
100.0	100.0	100.0	100.0	0.2	0.2	-90.23	-3.3	-822.4	822.4	822.1	0.35	2,356.101	
200.0	200.0	200.0	200.0	0.3	0.3	-90.23	-3.3	-822.4	822.4	821.7	0.70	1,178.051	CC, ES
300.0	300.0	285.9	285.9	0.5	0.5	-90.15	-2.2	-823.2	823.3	822.3	1.02	803.638	
400.0	400.0	374.2	374.1	0.7	0.7	-163.19	1.0	-825.4	826.7	825.3	1.36	607.807	
500.0	500.0	474.0	473.7	0.9	0.9	-162.91	5.5	-828.5	832.3	830.6	1.72	483.829	
600.0	599.9	573.7	573.3	1.1	1.1	-162.67	10.0	-831.7	839.6	837.6	2.08	403.324	
700.0	699.7	673.2	672.7	1.3	1.2	-162.47	14.5	-834.8	848.6	846.2	2.44	347.186	
800.0	799.4	772.6	771.9	1.5	1.4	-162.30	18.9	-837.9	859.3	856.5	2.81	306.051	
900.0	898.9	871.8	871.0	1.7	1.6	-162.16	23.4	-841.0	871.6	868.4	3.17	274.790	
1,000.0	998.3	970.9	969.9	1.9	1.8	-162.05	27.8	-844.1	885.6	882.0	3.54	250.364	
1,100.0	1,097.4	1,069.6	1,068.5	2.2	2.0	-161.98	32.2	-847.2	901.2	897.3	3.90	230.865	
1,200.0	1,196.3	1,168.1	1,166.8	2.5	2.2	-161.94	36.6	-850.2	918.4	914.1	4.27	215.030	
1,300.0	1,295.0	1,266.4	1,265.0	2.8	2.4	-161.95	41.1	-853.3	936.8	932.2	4.64	201.727	
1,400.0	1,393.7	1,364.7	1,363.1	3.1	2.6	-161.99	45.5	-856.4	955.3	950.3	5.02	190.314	
1,500.0	1,492.4	1,463.0	1,461.2	3.4	2.8	-162.02	49.9	-859.5	973.8	968.4	5.40	180.467	
1,600.0	1,591.1	1,561.2	1,559.4	3.8	3.0	-162.05	54.3	-862.5	992.3	986.5	5.77	171.888	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.23	-3.3	-812.4	812.4				
100.0	100.0	100.0	100.0	0.2	0.2	-90.23	-3.3	-812.4	812.4	812.0	0.35	2,327.252	
200.0	200.0	200.0	200.0	0.3	0.3	-90.23	-3.3	-812.4	812.4	811.7	0.70	1,163.626	
300.0	300.0	300.0	300.0	0.5	0.5	-90.23	-3.3	-812.4	812.4	811.3	1.05	775.751	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-163.50	-3.3	-812.4	813.2	811.8	1.40	582.444	
500.0	500.0	500.0	500.0	0.9	0.9	-163.54	-3.3	-812.4	815.7	814.0	1.75	467.432	
600.0	599.9	599.9	599.9	1.1	1.0	-163.62	-3.3	-812.4	819.9	817.8	2.09	391.540	
700.0	699.7	699.7	699.7	1.3	1.2	-163.72	-3.3	-812.4	825.8	823.3	2.44	337.994	
800.0	799.4	799.4	799.4	1.5	1.4	-163.85	-3.3	-812.4	833.3	830.5	2.79	298.413	
900.0	898.9	898.9	898.9	1.7	1.6	-164.01	-3.3	-812.4	842.5	839.4	3.14	268.143	
1,000.0	998.3	998.3	998.3	1.9	1.7	-164.19	-3.3	-812.4	853.4	849.9	3.49	244.394	
1,100.0	1,097.4	1,098.3	1,098.3	2.2	1.9	-164.28	-1.6	-812.3	865.9	862.1	3.84	225.212	
1,200.0	1,196.3	1,197.8	1,197.7	2.5	2.1	-164.19	3.2	-812.3	880.0	875.8	4.20	209.424	
1,300.0	1,295.0	1,296.6	1,296.3	2.8	2.3	-164.12	8.3	-812.2	895.3	890.7	4.57	196.079	
1,400.0	1,393.7	1,395.4	1,395.0	3.1	2.5	-164.07	13.5	-812.2	910.6	905.7	4.93	184.546	
1,500.0	1,492.4	1,494.2	1,493.7	3.4	2.6	-164.02	18.7	-812.1	926.0	920.7	5.31	174.536	
1,600.0	1,591.1	1,593.1	1,592.4	3.8	2.8	-163.97	23.8	-812.1	941.3	935.7	5.68	165.775	
1,700.0	1,689.8	1,691.9	1,691.1	4.1	3.0	-163.93	29.0	-812.0	956.7	950.6	6.05	158.050	
1,800.0	1,788.5	1,790.7	1,789.7	4.4	3.2	-163.88	34.1	-812.0	972.0	965.6	6.43	151.193	
1,900.0	1,887.2	1,889.5	1,888.4	4.7	3.4	-163.84	39.3	-811.9	987.4	980.6	6.81	145.069	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.23	-3.3	-802.3	802.3				
100.0	100.0	100.0	100.0	0.2	0.2	-90.23	-3.3	-802.3	802.3	801.9	0.35	2,298.402	
200.0	200.0	200.0	200.0	0.3	0.3	-90.23	-3.3	-802.3	802.3	801.6	0.70	1,149.201	
300.0	300.0	300.0	300.0	0.5	0.5	-90.23	-3.3	-802.3	802.3	801.2	1.05	766.134	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-163.50	-3.3	-802.3	803.1	801.7	1.40	575.231	
500.0	500.0	500.0	500.0	0.9	0.9	-163.55	-3.3	-802.3	805.6	803.9	1.75	461.661	
600.0	599.9	599.9	599.9	1.1	1.0	-163.62	-3.3	-802.3	809.8	807.7	2.09	386.731	
700.0	699.7	708.8	708.8	1.3	1.2	-163.68	-2.4	-801.7	815.1	812.7	2.46	331.420	
800.0	799.4	817.9	817.8	1.5	1.4	-163.66	0.1	-799.9	821.0	818.1	2.83	290.327	
900.0	898.9	926.9	926.7	1.7	1.6	-163.55	4.3	-796.8	827.4	824.2	3.20	258.499	
1,000.0	998.3	1,027.2	1,026.8	1.9	1.8	-163.43	9.0	-793.4	834.8	831.3	3.56	234.333	
1,100.0	1,097.4	1,126.8	1,126.2	2.2	2.0	-163.34	13.7	-790.0	843.9	840.0	3.93	214.952	
1,200.0	1,196.3	1,226.2	1,225.5	2.5	2.2	-163.27	18.4	-786.7	854.7	850.4	4.29	199.122	
1,300.0	1,295.0	1,325.5	1,324.6	2.8	2.4	-163.26	23.1	-783.3	866.7	862.0	4.66	185.814	
1,400.0	1,393.7	1,424.7	1,423.7	3.1	2.6	-163.25	27.8	-779.9	878.7	873.7	5.04	174.378	
1,500.0	1,492.4	1,524.0	1,522.8	3.4	2.8	-163.25	32.5	-776.5	890.8	885.4	5.42	164.487	
1,600.0	1,591.1	1,623.3	1,621.9	3.8	3.0	-163.24	37.2	-773.2	902.8	897.0	5.79	155.854	
1,700.0	1,689.8	1,722.5	1,721.0	4.1	3.2	-163.24	41.9	-769.8	914.9	908.7	6.17	148.256	
1,800.0	1,788.5	1,821.8	1,820.1	4.4	3.4	-163.23	46.6	-766.4	926.9	920.3	6.55	141.520	
1,900.0	1,887.2	1,921.1	1,919.2	4.7	3.6	-163.23	51.3	-763.0	938.9	932.0	6.93	135.509	
2,000.0	1,985.9	2,020.4	2,018.3	5.0	3.8	-163.22	55.9	-759.7	951.0	943.7	7.31	130.114	
2,100.0	2,084.6	2,119.6	2,117.4	5.4	4.0	-163.22	60.6	-756.3	963.0	955.3	7.69	125.245	
2,200.0	2,183.3	2,218.9	2,216.5	5.7	4.2	-163.22	65.3	-752.9	975.1	967.0	8.07	120.829	
2,300.0	2,282.0	2,318.2	2,315.6	6.0	4.4	-163.21	70.0	-749.5	987.1	978.6	8.45	116.806	
2,400.0	2,380.7	2,417.5	2,414.8	6.4	4.6	-163.21	74.7	-746.1	999.1	990.3	8.83	113.127	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.24	-3.3	-792.2	792.2				
100.0	100.0	100.0	100.0	0.2	0.2	-90.24	-3.3	-792.2	792.2	791.9	0.35	2,269.552	
200.0	200.0	200.0	200.0	0.3	0.3	-90.24	-3.3	-792.2	792.2	791.5	0.70	1,134.776	
300.0	300.0	300.0	300.0	0.5	0.5	-90.24	-3.3	-792.2	792.2	791.2	1.05	756.517	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-163.50	-3.3	-792.2	793.1	791.7	1.40	568.018	
500.0	500.0	512.9	512.8	0.9	0.9	-163.51	-2.6	-791.3	794.8	793.0	1.77	449.542	
600.0	599.9	625.7	625.7	1.1	1.1	-163.47	-0.7	-788.6	796.5	794.4	2.14	371.949	
700.0	699.7	738.7	738.5	1.3	1.3	-163.38	2.4	-784.0	798.3	795.8	2.52	316.970	
800.0	799.4	851.6	851.1	1.5	1.5	-163.24	6.9	-777.6	800.2	797.3	2.90	275.849	
900.0	898.9	953.7	952.9	1.7	1.7	-163.10	11.6	-770.8	802.6	799.4	3.27	245.618	
1,000.0	998.3	1,053.6	1,052.5	1.9	2.0	-162.98	16.3	-764.0	806.8	803.1	3.63	222.024	
1,100.0	1,097.4	1,153.4	1,152.0	2.2	2.2	-162.90	21.0	-757.3	812.6	808.6	4.00	203.031	
1,200.0	1,196.3	1,253.2	1,251.3	2.5	2.4	-162.86	25.7	-750.6	820.0	815.6	4.37	187.519	
1,300.0	1,295.0	1,352.8	1,350.6	2.8	2.6	-162.85	30.3	-743.9	828.7	823.9	4.75	174.499	
1,400.0	1,393.7	1,452.4	1,449.9	3.1	2.8	-162.85	35.0	-737.2	837.4	832.3	5.13	163.317	
1,500.0	1,492.4	1,552.0	1,549.2	3.4	3.0	-162.85	39.7	-730.5	846.1	840.6	5.51	153.643	
1,600.0	1,591.1	1,651.6	1,648.5	3.8	3.3	-162.86	44.4	-723.8	854.8	849.0	5.89	145.197	
1,700.0	1,689.8	1,751.3	1,747.8	4.1	3.5	-162.86	49.0	-717.1	863.6	857.3	6.27	137.762	
1,800.0	1,788.5	1,850.9	1,847.0	4.4	3.7	-162.86	53.7	-710.3	872.3	865.6	6.65	131.167	
1,900.0	1,887.2	1,950.5	1,946.3	4.7	3.9	-162.86	58.4	-703.6	881.0	874.0	7.03	125.280	
2,000.0	1,985.9	2,050.1	2,045.6	5.0	4.1	-162.86	63.0	-696.9	889.7	882.3	7.41	119.994	
2,100.0	2,084.6	2,149.7	2,144.9	5.4	4.4	-162.86	67.7	-690.2	898.4	890.6	7.80	115.221	
2,200.0	2,183.3	2,249.4	2,244.2	5.7	4.6	-162.86	72.4	-683.5	907.2	899.0	8.18	110.892	
2,300.0	2,282.0	2,349.0	2,343.5	6.0	4.8	-162.87	77.0	-676.8	915.9	907.3	8.56	106.946	
2,400.0	2,380.7	2,448.6	2,442.7	6.4	5.0	-162.87	81.7	-670.1	924.6	915.7	8.95	103.336	
2,500.0	2,479.4	2,548.2	2,542.0	6.7	5.3	-162.87	86.4	-663.4	933.3	924.0	9.33	100.021	
2,600.0	2,578.1	2,647.8	2,641.3	7.0	5.5	-162.87	91.0	-656.7	942.0	932.3	9.72	96.967	
2,700.0	2,676.8	2,747.4	2,740.6	7.3	5.7	-162.87	95.7	-650.0	950.8	940.7	10.10	94.143	
2,800.0	2,775.5	2,847.1	2,839.9	7.7	5.9	-162.87	100.4	-643.3	959.5	949.0	10.48	91.525	
2,900.0	2,874.2	2,946.7	2,939.2	8.0	6.2	-162.87	105.0	-636.5	968.2	957.3	10.87	89.091	
3,000.0	2,972.9	3,046.3	3,038.4	8.3	6.4	-162.88	109.7	-629.8	976.9	965.7	11.25	86.822	
3,100.0	3,071.5	3,145.9	3,137.7	8.7	6.6	-162.88	114.4	-623.1	985.6	974.0	11.64	84.703	
3,200.0	3,170.2	3,245.5	3,237.0	9.0	6.8	-162.88	119.1	-616.4	994.4	982.3	12.02	82.719	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.27	-3.6	-782.4	782.4				
100.0	100.0	100.0	100.0	0.2	0.2	-90.27	-3.6	-782.4	782.4	782.1	0.35	2,241.508	
200.0	200.0	200.0	200.0	0.3	0.3	-90.27	-3.6	-782.4	782.4	781.7	0.70	1,120.754	
300.0	300.0	300.0	300.0	0.5	0.5	-90.27	-3.6	-782.4	782.4	781.4	1.05	747.169	CC, ES
400.0	400.0	407.1	407.1	0.7	0.7	-163.53	-3.5	-782.2	783.0	781.6	1.41	555.905	
500.0	500.0	521.3	521.2	0.9	0.9	-163.52	-2.6	-780.1	783.7	782.0	1.78	439.596	
600.0	599.9	635.5	635.4	1.1	1.1	-163.48	-0.6	-776.0	784.3	782.1	2.16	363.309	
700.0	699.7	749.7	749.4	1.3	1.3	-163.42	2.2	-769.8	784.7	782.2	2.54	309.246	
800.0	799.4	863.9	863.2	1.5	1.6	-163.32	6.1	-761.5	785.0	782.1	2.92	268.792	
900.0	898.9	978.1	976.8	1.7	1.8	-163.20	10.9	-751.2	785.2	781.9	3.31	237.276	
1,000.0	998.3	1,080.6	1,078.7	1.9	2.1	-163.09	15.7	-740.8	785.8	782.1	3.68	213.511	
1,100.0	1,097.4	1,180.6	1,178.0	2.2	2.3	-163.01	20.5	-730.5	788.1	784.0	4.05	194.594	
1,200.0	1,196.3	1,280.5	1,277.3	2.5	2.6	-162.97	25.2	-720.3	792.0	787.6	4.42	179.109	
1,300.0	1,295.0	1,380.4	1,376.6	2.8	2.8	-162.96	30.0	-710.0	797.1	792.3	4.80	166.104	
1,400.0	1,393.7	1,480.2	1,475.8	3.1	3.1	-162.95	34.8	-699.8	802.3	797.2	5.18	154.927	
1,500.0	1,492.4	1,580.1	1,575.0	3.4	3.3	-162.94	39.5	-689.6	807.5	802.0	5.56	145.248	
1,600.0	1,591.1	1,680.0	1,674.2	3.8	3.6	-162.94	44.3	-679.3	812.8	806.8	5.94	136.790	
1,700.0	1,689.8	1,779.8	1,773.5	4.1	3.9	-162.93	49.0	-669.1	818.0	811.6	6.32	129.339	
1,800.0	1,788.5	1,879.7	1,872.7	4.4	4.1	-162.93	53.8	-658.9	823.2	816.4	6.71	122.726	
1,900.0	1,887.2	1,979.6	1,971.9	4.7	4.4	-162.92	58.5	-648.6	828.4	821.3	7.09	116.819	
2,000.0	1,985.9	2,079.4	2,071.1	5.0	4.6	-162.91	63.3	-638.4	833.6	826.1	7.48	111.512	
2,100.0	2,084.6	2,179.3	2,170.4	5.4	4.9	-162.91	68.0	-628.2	838.8	830.9	7.86	106.718	
2,200.0	2,183.3	2,279.2	2,269.6	5.7	5.2	-162.90	72.8	-617.9	844.0	835.7	8.24	102.368	
2,300.0	2,282.0	2,379.0	2,368.8	6.0	5.4	-162.90	77.6	-607.7	849.2	840.5	8.63	98.402	
2,400.0	2,380.7	2,478.9	2,468.0	6.4	5.7	-162.89	82.3	-597.5	854.4	845.4	9.02	94.772	
2,500.0	2,479.4	2,578.8	2,567.3	6.7	5.9	-162.89	87.1	-587.2	859.6	850.2	9.40	91.438	
2,600.0	2,578.1	2,678.6	2,666.5	7.0	6.2	-162.88	91.8	-577.0	864.8	855.0	9.79	88.364	
2,700.0	2,676.8	2,778.5	2,765.7	7.3	6.5	-162.88	96.6	-566.8	870.0	859.8	10.17	85.523	
2,800.0	2,775.5	2,878.4	2,864.9	7.7	6.7	-162.87	101.3	-556.5	875.2	864.6	10.56	82.887	
2,900.0	2,874.2	2,978.2	2,964.2	8.0	7.0	-162.87	106.1	-546.3	880.4	869.4	10.95	80.437	
3,000.0	2,972.9	3,078.1	3,063.4	8.3	7.2	-162.86	110.8	-536.1	885.6	874.3	11.33	78.152	
3,100.0	3,071.5	3,177.9	3,162.6	8.7	7.5	-162.86	115.6	-525.8	890.8	879.1	11.72	76.018	
3,200.0	3,170.2	3,277.8	3,261.8	9.0	7.8	-162.85	120.4	-515.6	896.0	883.9	12.10	74.019	
3,300.0	3,268.9	3,377.7	3,361.1	9.3	8.0	-162.85	125.1	-505.4	901.2	888.7	12.49	72.143	
3,400.0	3,367.6	3,477.5	3,460.3	9.7	8.3	-162.84	129.9	-495.1	906.4	893.5	12.88	70.379	
3,500.0	3,466.3	3,577.4	3,559.5	10.0	8.6	-162.84	134.6	-484.9	911.6	898.3	13.27	68.718	
3,600.0	3,565.0	3,677.3	3,658.7	10.3	8.8	-162.83	139.4	-474.7	916.8	903.2	13.65	67.151	
3,700.0	3,663.7	3,777.1	3,758.0	10.7	9.1	-162.83	144.1	-464.4	922.0	908.0	14.04	65.669	
3,800.0	3,762.4	3,877.0	3,857.2	11.0	9.3	-162.82	148.9	-454.2	927.2	912.8	14.43	64.267	
3,900.0	3,861.1	3,976.9	3,956.4	11.3	9.6	-162.82	153.6	-443.9	932.4	917.6	14.81	62.937	
4,000.0	3,959.8	4,076.7	4,055.6	11.7	9.9	-162.81	158.4	-433.7	937.6	922.4	15.20	61.676	
4,100.0	4,058.5	4,176.6	4,154.8	12.0	10.1	-162.81	163.2	-423.5	942.8	927.2	15.59	60.476	
4,200.0	4,157.2	4,276.5	4,254.1	12.3	10.4	-162.81	167.9	-413.2	948.0	932.0	15.98	59.335	
4,300.0	4,255.9	4,376.3	4,353.3	12.7	10.7	-162.80	172.7	-403.0	953.2	936.9	16.37	58.247	
4,400.0	4,354.6	4,476.2	4,452.5	13.0	10.9	-162.80	177.4	-392.8	958.4	941.7	16.75	57.210	
4,500.0	4,453.3	4,576.0	4,551.7	13.3	11.2	-162.79	182.2	-382.5	963.6	946.5	17.14	56.219	
4,600.0	4,552.0	4,675.9	4,651.0	13.6	11.4	-162.79	186.9	-372.3	968.8	951.3	17.53	55.272	
4,700.0	4,650.7	4,775.8	4,750.2	14.0	11.7	-162.78	191.7	-362.1	974.0	956.1	17.92	54.366	
4,800.0	4,749.4	4,875.6	4,849.4	14.3	12.0	-162.78	196.4	-351.8	979.2	960.9	18.30	53.498	
4,900.0	4,848.1	4,975.5	4,948.6	14.6	12.2	-162.78	201.2	-341.6	984.4	965.8	18.69	52.666	
5,000.0	4,946.8	5,075.4	5,047.9	15.0	12.5	-162.77	206.0	-331.4	989.7	970.6	19.08	51.868	
5,100.0	5,045.5	5,175.2	5,147.1	15.3	12.8	-162.77	210.7	-321.1	994.9	975.4	19.47	51.101	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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.27	-3.6	-772.4	772.4				
100.0	100.0	100.0	100.0	0.2	0.2	-90.27	-3.6	-772.4	772.4	772.0	0.35	2,212.659	
200.0	200.0	200.0	200.0	0.3	0.3	-90.27	-3.6	-772.4	772.4	771.7	0.70	1,106.329	
300.0	300.0	314.6	314.6	0.5	0.6	-90.24	-3.2	-771.3	771.4	770.3	1.07	718.382	
400.0	400.0	429.2	429.1	0.7	0.8	-163.44	-2.1	-768.0	769.4	768.0	1.45	531.285	
500.0	500.0	543.7	543.5	0.9	1.0	-163.37	-0.3	-762.6	767.2	765.4	1.82	420.412	
600.0	599.9	658.1	657.6	1.1	1.2	-163.29	2.3	-755.1	764.8	762.6	2.20	347.028	
700.0	699.7	772.5	771.5	1.3	1.5	-163.20	5.7	-745.3	762.1	759.5	2.59	294.728	
800.0	799.4	886.8	885.1	1.5	1.8	-163.09	9.8	-733.5	759.2	756.3	2.97	255.460	
900.0	898.9	999.6	997.0	1.7	2.1	-162.97	14.5	-719.7	756.2	752.8	3.36	224.990	
1,000.0	998.3	1,099.6	1,096.1	1.9	2.3	-162.89	19.0	-706.7	754.0	750.3	3.73	202.208	
1,080.0	1,077.6	1,179.6	1,175.3	2.2	2.6	-162.84	22.6	-696.3	753.5	749.4	4.03	187.175 CC	
1,100.0	1,097.4	1,199.6	1,195.1	2.2	2.6	-162.83	23.5	-693.7	753.5	749.4	4.10	183.806	
1,200.0	1,196.3	1,299.6	1,294.2	2.5	2.9	-162.81	28.0	-680.7	754.7	750.2	4.47	168.736	
1,300.0	1,295.0	1,399.6	1,393.2	2.8	3.2	-162.82	32.5	-667.7	757.0	752.2	4.85	156.093	
1,400.0	1,393.7	1,499.5	1,492.2	3.1	3.5	-162.84	36.9	-654.7	759.5	754.2	5.23	145.227	
1,500.0	1,492.4	1,599.5	1,591.2	3.4	3.8	-162.85	41.4	-641.7	761.9	756.3	5.61	135.811	
1,600.0	1,591.1	1,699.5	1,690.2	3.8	4.1	-162.86	45.9	-628.7	764.3	758.4	5.99	127.577	
1,700.0	1,689.8	1,799.4	1,789.3	4.1	4.4	-162.88	50.4	-615.7	766.8	760.4	6.37	120.318	
1,800.0	1,788.5	1,899.4	1,888.3	4.4	4.7	-162.89	54.9	-602.7	769.2	762.5	6.76	113.873	
1,900.0	1,887.2	1,999.4	1,987.3	4.7	5.0	-162.90	59.4	-589.7	771.7	764.5	7.14	108.113	
2,000.0	1,985.9	2,099.4	2,086.3	5.0	5.2	-162.92	63.8	-576.7	774.1	766.6	7.52	102.934	
2,100.0	2,084.6	2,199.3	2,185.3	5.4	5.5	-162.93	68.3	-563.8	776.5	768.6	7.90	98.255	
2,200.0	2,183.3	2,299.3	2,284.4	5.7	5.8	-162.94	72.8	-550.8	779.0	770.7	8.29	94.006	
2,300.0	2,282.0	2,399.3	2,383.4	6.0	6.1	-162.96	77.3	-537.8	781.4	772.7	8.67	90.132	
2,400.0	2,380.7	2,499.2	2,482.4	6.4	6.4	-162.97	81.8	-524.8	783.8	774.8	9.05	86.584	
2,500.0	2,479.4	2,599.2	2,581.4	6.7	6.7	-162.98	86.2	-511.8	786.3	776.8	9.44	83.324	
2,600.0	2,578.1	2,699.2	2,680.4	7.0	7.0	-162.99	90.7	-498.8	788.7	778.9	9.82	80.318	
2,700.0	2,676.8	2,799.1	2,779.5	7.3	7.3	-163.01	95.2	-485.8	791.1	780.9	10.20	77.537	
2,800.0	2,775.5	2,899.1	2,878.5	7.7	7.6	-163.02	99.7	-472.8	793.6	783.0	10.59	74.958	
2,900.0	2,874.2	2,999.1	2,977.5	8.0	7.9	-163.03	104.2	-459.8	796.0	785.0	10.97	72.559	
3,000.0	2,972.9	3,099.1	3,076.5	8.3	8.2	-163.04	108.6	-446.8	798.4	787.1	11.35	70.322	
3,100.0	3,071.5	3,199.0	3,175.5	8.7	8.5	-163.06	113.1	-433.8	800.9	789.1	11.74	68.231	
3,200.0	3,170.2	3,299.0	3,274.6	9.0	8.8	-163.07	117.6	-420.8	803.3	791.2	12.12	66.272	
3,300.0	3,268.9	3,399.0	3,373.6	9.3	9.1	-163.08	122.1	-407.8	805.7	793.2	12.50	64.434	
3,400.0	3,367.6	3,498.9	3,472.6	9.7	9.4	-163.09	126.6	-394.8	808.2	795.3	12.89	62.706	
3,500.0	3,466.3	3,598.9	3,571.6	10.0	9.7	-163.10	131.1	-381.8	810.6	797.3	13.27	61.077	
3,600.0	3,565.0	3,698.9	3,670.7	10.3	10.0	-163.12	135.5	-368.8	813.1	799.4	13.66	59.540	
3,700.0	3,663.7	3,798.9	3,769.7	10.7	10.3	-163.13	140.0	-355.8	815.5	801.4	14.04	58.087	
3,800.0	3,762.4	3,898.8	3,868.7	11.0	10.6	-163.14	144.5	-342.8	817.9	803.5	14.42	56.711	
3,900.0	3,861.1	3,998.8	3,967.7	11.3	10.9	-163.15	149.0	-329.8	820.4	805.6	14.81	55.407	
4,000.0	3,959.8	4,098.8	4,066.7	11.7	11.2	-163.16	153.5	-316.8	822.8	807.6	15.19	54.169	
4,100.0	4,058.5	4,198.7	4,165.8	12.0	11.5	-163.17	157.9	-303.9	825.2	809.7	15.57	52.992	
4,200.0	4,157.2	4,298.7	4,264.8	12.3	11.8	-163.19	162.4	-290.9	827.7	811.7	15.96	51.871	
4,300.0	4,255.9	4,398.7	4,363.8	12.7	12.1	-163.20	166.9	-277.9	830.1	813.8	16.34	50.804	
4,400.0	4,354.6	4,498.6	4,462.8	13.0	12.4	-163.21	171.4	-264.9	832.5	815.8	16.72	49.785	
4,500.0	4,453.3	4,598.6	4,561.8	13.3	12.7	-163.22	175.9	-251.9	835.0	817.9	17.11	48.812	
4,600.0	4,552.0	4,698.6	4,660.9	13.6	13.0	-163.23	180.3	-238.9	837.4	819.9	17.49	47.882	
4,700.0	4,650.7	4,798.6	4,759.9	14.0	13.3	-163.24	184.8	-225.9	839.8	822.0	17.87	46.992	
4,800.0	4,749.4	4,898.5	4,858.9	14.3	13.6	-163.25	189.3	-212.9	842.3	824.0	18.26	46.139	
4,900.0	4,848.1	4,998.5	4,957.9	14.6	13.9	-163.26	193.8	-199.9	844.7	826.1	18.64	45.322	
5,000.0	4,946.8	5,098.5	5,056.9	15.0	14.2	-163.28	198.3	-186.9	847.2	828.1	19.02	44.538	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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
5,100.0	5,045.5	5,198.4	5,156.0	15.3	14.5	-163.29	202.8	-173.9	849.6	830.2	19.40	43.784	
5,200.0	5,144.2	5,298.4	5,255.0	15.6	14.8	-163.30	207.2	-160.9	852.0	832.2	19.79	43.060	
5,300.0	5,242.9	5,398.4	5,354.0	16.0	15.1	-163.31	211.7	-147.9	854.5	834.3	20.17	42.364	
5,400.0	5,341.6	5,498.3	5,453.0	16.3	15.4	-163.32	216.2	-134.9	856.9	836.3	20.55	41.693	
5,500.0	5,440.3	5,598.3	5,552.0	16.6	15.6	-163.33	220.7	-121.9	859.3	838.4	20.94	41.048	
5,600.0	5,539.0	5,698.3	5,651.1	17.0	15.9	-163.34	225.2	-108.9	861.8	840.5	21.32	40.425	
5,700.0	5,637.7	5,798.3	5,750.1	17.3	16.2	-163.35	229.6	-95.9	864.2	842.5	21.70	39.825	
5,800.0	5,736.4	5,898.2	5,849.1	17.6	16.5	-163.36	234.1	-82.9	866.6	844.6	22.08	39.245	
5,900.0	5,835.1	5,998.2	5,948.1	18.0	16.8	-163.37	238.6	-69.9	869.1	846.6	22.47	38.685	
6,000.0	5,933.8	6,098.2	6,047.1	18.3	17.1	-163.38	243.1	-56.9	871.5	848.7	22.85	38.145	
6,100.0	6,032.5	6,198.1	6,146.2	18.6	17.4	-163.39	247.6	-44.0	874.0	850.7	23.23	37.622	
6,200.0	6,131.1	6,298.1	6,245.2	19.0	17.7	-163.40	252.0	-31.0	876.4	852.8	23.61	37.116	
6,300.0	6,229.8	6,398.1	6,344.2	19.3	18.0	-163.41	256.5	-18.0	878.8	854.8	23.99	36.626	
6,400.0	6,328.6	6,498.0	6,443.2	19.6	18.3	-175.43	260.9	-5.0	881.3	856.9	24.36	36.170	
6,500.0	6,427.1	6,598.1	6,542.3	19.9	18.6	140.83	256.7	8.0	883.7	859.1	24.56	35.977	
6,600.0	6,523.9	6,698.3	6,639.9	20.1	18.8	120.45	238.6	20.8	886.1	861.5	24.61	36.007	
6,700.0	6,617.1	6,798.8	6,734.3	20.3	18.9	111.28	206.8	33.2	888.4	863.8	24.56	36.177	
6,800.0	6,704.8	6,899.5	6,823.6	20.5	19.0	106.38	161.9	44.9	890.6	866.1	24.48	36.373	
6,900.0	6,785.4	7,000.3	6,905.9	20.7	19.2	103.42	104.7	55.7	892.6	868.1	24.49	36.452	
7,000.0	6,857.3	7,101.4	6,979.5	20.9	19.3	101.49	36.3	65.4	894.4	869.7	24.67	36.259	
7,100.0	6,919.0	7,202.6	7,043.0	21.1	19.6	100.19	-42.0	73.7	895.9	870.8	25.12	35.665	
7,200.0	6,969.5	7,303.9	7,095.0	21.5	19.9	99.30	-128.6	80.5	897.2	871.2	25.92	34.612	
7,300.0	7,007.6	7,405.4	7,134.3	21.9	20.4	98.71	-221.9	85.7	898.1	871.0	27.10	33.137	
7,400.0	7,032.7	7,506.9	7,160.2	22.4	20.9	98.35	-319.9	89.1	898.7	870.1	28.66	31.361	
7,500.0	7,044.2	7,608.5	7,172.2	23.1	21.6	98.20	-420.6	90.7	899.0	868.5	30.54	29.438	
7,600.0	7,045.0	7,709.0	7,173.0	23.8	22.4	98.19	-521.1	90.8	899.0	866.3	32.69	27.500	
7,700.0	7,045.0	7,809.0	7,173.0	24.6	23.3	98.19	-621.1	90.8	899.0	864.0	35.06	25.644	
7,800.0	7,045.0	7,909.0	7,173.0	25.6	24.3	98.19	-721.1	90.8	899.0	861.5	37.60	23.913	
7,900.0	7,045.0	8,009.0	7,173.0	26.6	25.3	98.19	-821.1	90.8	899.1	858.8	40.27	22.323	
8,000.0	7,045.0	8,109.0	7,173.0	27.7	26.5	98.19	-921.1	90.8	899.1	856.0	43.07	20.876	
8,100.0	7,045.0	8,209.0	7,173.0	28.8	27.7	98.19	-1,021.1	90.8	899.1	853.1	45.95	19.565	
8,200.0	7,045.0	8,309.0	7,173.0	30.0	28.9	98.19	-1,121.1	90.8	899.1	850.1	48.91	18.381	
8,300.0	7,045.0	8,409.0	7,173.0	31.3	30.2	98.19	-1,221.1	90.8	899.1	847.1	51.94	17.311	
8,400.0	7,045.0	8,509.0	7,173.0	32.6	31.6	98.19	-1,321.1	90.8	899.1	844.1	55.02	16.342	
8,500.0	7,045.0	8,609.0	7,173.0	34.0	33.0	98.18	-1,421.1	90.7	899.1	840.9	58.14	15.465	
8,600.0	7,045.0	8,709.0	7,173.0	35.4	34.4	98.18	-1,521.1	90.7	899.1	837.8	61.30	14.667	
8,700.0	7,045.0	8,809.0	7,173.0	36.8	35.9	98.18	-1,621.1	90.7	899.1	834.6	64.49	13.941	
8,800.0	7,045.0	8,909.0	7,173.0	38.2	37.3	98.18	-1,721.1	90.7	899.1	831.4	67.71	13.279	
8,900.0	7,045.0	9,009.0	7,173.0	39.7	38.9	98.18	-1,821.1	90.7	899.1	828.1	70.95	12.672	
9,000.0	7,045.0	9,109.0	7,173.0	41.2	40.4	98.18	-1,921.1	90.7	899.1	824.9	74.22	12.114	
9,100.0	7,045.0	9,209.0	7,173.0	42.7	41.9	98.18	-2,021.1	90.7	899.1	821.6	77.50	11.601	
9,200.0	7,045.0	9,309.0	7,173.0	44.2	43.5	98.18	-2,121.1	90.7	899.1	818.3	80.80	11.128	
9,300.0	7,045.0	9,409.0	7,173.0	45.8	45.0	98.18	-2,221.1	90.7	899.1	815.0	84.11	10.689	
9,400.0	7,045.0	9,509.0	7,173.0	47.3	46.6	98.18	-2,321.1	90.7	899.1	811.7	87.44	10.283	
9,500.0	7,045.0	9,609.0	7,173.0	48.9	48.2	98.18	-2,421.1	90.7	899.1	808.3	90.77	9.905	
9,600.0	7,045.0	9,709.0	7,173.0	50.5	49.8	98.18	-2,521.1	90.7	899.1	805.0	94.12	9.553	
9,700.0	7,045.0	9,809.0	7,173.0	52.1	51.4	98.18	-2,621.1	90.7	899.1	801.6	97.47	9.224	
9,800.0	7,045.0	9,909.0	7,173.0	53.7	53.1	98.18	-2,721.1	90.7	899.1	798.3	100.84	8.917	
9,900.0	7,045.0	10,009.0	7,173.0	55.3	54.7	98.18	-2,821.1	90.7	899.1	794.9	104.21	8.628	
10,000.0	7,045.0	10,109.0	7,173.0	56.9	56.3	98.18	-2,921.1	90.7	899.1	791.5	107.58	8.358	
10,100.0	7,045.0	10,209.0	7,173.0	58.6	58.0	98.18	-3,021.1	90.7	899.1	788.2	110.96	8.103	
10,200.0	7,045.0	10,309.0	7,173.0	60.2	59.7	98.18	-3,121.1	90.7	899.1	784.8	114.35	7.863	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	10,409.0	7,173.0	61.9	61.3	98.18	-3,221.1	90.7	899.1	781.4	117.74	7.636	
10,400.0	7,045.0	10,509.0	7,173.0	63.5	63.0	98.18	-3,321.1	90.7	899.1	778.0	121.14	7.422	
10,500.0	7,045.0	10,609.0	7,173.0	65.2	64.6	98.18	-3,421.1	90.7	899.1	774.6	124.54	7.219	
10,600.0	7,045.0	10,709.0	7,173.0	66.8	66.3	98.18	-3,521.1	90.7	899.1	771.2	127.95	7.027	
10,700.0	7,045.0	10,809.0	7,173.0	68.5	68.0	98.18	-3,621.1	90.7	899.1	767.8	131.36	6.845	
10,800.0	7,045.0	10,909.0	7,173.0	70.2	69.7	98.18	-3,721.1	90.7	899.1	764.4	134.77	6.672	
10,900.0	7,045.0	11,009.0	7,173.0	71.8	71.4	98.18	-3,821.1	90.7	899.1	761.0	138.19	6.507	
11,000.0	7,045.0	11,109.0	7,173.0	73.5	73.0	98.18	-3,921.1	90.7	899.1	757.5	141.60	6.350	
11,100.0	7,045.0	11,209.0	7,173.0	75.2	74.7	98.18	-4,021.1	90.7	899.1	754.1	145.02	6.200	
11,200.0	7,045.0	11,309.0	7,173.0	76.9	76.4	98.18	-4,121.1	90.7	899.2	750.7	148.45	6.057	
11,300.0	7,045.0	11,409.0	7,173.0	78.6	78.1	98.18	-4,221.1	90.7	899.2	747.3	151.87	5.920	
11,400.0	7,045.0	11,509.0	7,173.0	80.3	79.8	98.18	-4,321.1	90.7	899.2	743.9	155.30	5.790	
11,500.0	7,045.0	11,609.0	7,173.0	82.0	81.5	98.18	-4,421.1	90.7	899.2	740.4	158.73	5.665	
11,600.0	7,045.0	11,709.0	7,173.0	83.6	83.2	98.18	-4,521.1	90.7	899.2	737.0	162.16	5.545	
11,621.7	7,045.0	11,730.7	7,173.0	84.0	83.6	98.18	-4,542.8	90.7	899.2	736.3	162.90	5.520	
11,643.9	7,045.0	11,747.9	7,173.0	84.4	83.9	98.18	-4,560.0	90.7	899.2	735.6	163.58	5.497	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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 1G-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	-89.29	0.4	-30.2	30.2				
100.0	100.0	100.0	100.0	0.2	0.2	-89.29	0.4	-30.2	30.2	29.9	0.35	86.557	
200.0	200.0	200.0	200.0	0.3	0.3	-89.29	0.4	-30.2	30.2	29.5	0.70	43.278	
300.0	300.0	300.0	300.0	0.5	0.5	-89.29	0.4	-30.2	30.2	29.2	1.05	28.852	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-163.03	0.4	-30.2	31.0	29.7	1.40	22.237	
500.0	500.0	500.2	500.2	0.9	0.9	-164.09	0.5	-30.0	33.4	31.6	1.75	19.130	
600.0	599.9	600.6	600.6	1.1	1.0	-164.20	1.7	-28.7	36.2	34.1	2.10	17.291	
700.0	699.7	701.1	701.0	1.3	1.2	-163.35	4.0	-26.0	39.4	37.0	2.45	16.098	
800.0	799.4	801.5	801.3	1.5	1.4	-161.78	7.4	-22.0	43.0	40.2	2.81	15.302	
900.0	898.9	901.8	901.3	1.7	1.6	-159.84	11.8	-16.8	47.0	43.8	3.17	14.814	
1,000.0	998.3	1,001.6	1,000.9	1.9	1.8	-158.70	16.5	-11.4	52.6	49.0	3.55	14.822	
1,100.0	1,097.4	1,101.3	1,100.4	2.2	2.0	-158.40	21.1	-6.1	59.7	55.8	3.92	15.234	
1,200.0	1,196.3	1,201.0	1,199.7	2.5	2.2	-158.69	25.7	-0.7	68.5	64.2	4.30	15.947	
1,300.0	1,295.0	1,300.5	1,299.0	2.8	2.4	-159.27	30.3	4.7	78.5	73.8	4.67	16.791	
1,400.0	1,393.7	1,400.0	1,398.2	3.1	2.6	-159.74	34.9	10.1	88.5	83.5	5.05	17.515	
1,500.0	1,492.4	1,499.4	1,497.5	3.4	2.8	-160.11	39.5	15.4	98.6	93.1	5.43	18.137	
1,600.0	1,591.1	1,598.9	1,596.7	3.8	3.0	-160.42	44.1	20.8	108.6	102.8	5.81	18.676	
1,700.0	1,689.8	1,698.4	1,696.0	4.1	3.3	-160.67	48.7	26.2	118.6	112.4	6.20	19.148	
1,800.0	1,788.5	1,797.9	1,795.2	4.4	3.5	-160.88	53.3	31.5	128.7	122.1	6.58	19.565	
1,900.0	1,887.2	1,897.4	1,894.4	4.7	3.7	-161.07	57.9	36.9	138.7	131.8	6.96	19.936	
2,000.0	1,985.9	1,996.9	1,993.7	5.0	3.9	-161.22	62.5	42.3	148.8	141.4	7.34	20.268	
2,100.0	2,084.6	2,096.4	2,092.9	5.4	4.1	-161.36	67.1	47.7	158.8	151.1	7.72	20.567	
2,200.0	2,183.3	2,195.9	2,192.2	5.7	4.3	-161.48	71.7	53.0	168.9	160.8	8.10	20.837	
2,300.0	2,282.0	2,295.4	2,291.4	6.0	4.5	-161.59	76.3	58.4	178.9	170.4	8.49	21.083	
2,400.0	2,380.7	2,394.9	2,390.7	6.4	4.7	-161.69	80.9	63.8	189.0	180.1	8.87	21.307	
2,500.0	2,479.4	2,494.4	2,489.9	6.7	4.9	-161.77	85.5	69.1	199.0	189.8	9.25	21.513	
2,600.0	2,578.1	2,593.9	2,589.1	7.0	5.2	-161.85	90.1	74.5	209.1	199.4	9.63	21.702	
2,700.0	2,676.8	2,693.4	2,688.4	7.3	5.4	-161.92	94.7	79.9	219.1	209.1	10.02	21.876	
2,800.0	2,775.5	2,792.9	2,787.6	7.7	5.6	-161.99	99.3	85.2	229.2	218.8	10.40	22.038	
2,900.0	2,874.2	2,892.3	2,886.9	8.0	5.8	-162.05	103.9	90.6	239.2	228.4	10.78	22.188	
3,000.0	2,972.9	2,991.8	2,986.1	8.3	6.0	-162.10	108.5	96.0	249.3	238.1	11.16	22.328	
3,100.0	3,071.5	3,091.3	3,085.3	8.7	6.2	-162.15	113.1	101.4	259.3	247.8	11.55	22.458	
3,200.0	3,170.2	3,190.8	3,184.6	9.0	6.4	-162.20	117.7	106.7	269.4	257.5	11.93	22.580	
3,300.0	3,268.9	3,290.3	3,283.8	9.3	6.6	-162.24	122.3	112.1	279.4	267.1	12.31	22.694	
3,400.0	3,367.6	3,389.8	3,383.1	9.7	6.9	-162.28	126.9	117.5	289.5	276.8	12.70	22.801	
3,500.0	3,466.3	3,489.3	3,482.3	10.0	7.1	-162.32	131.5	122.8	299.5	286.5	13.08	22.902	
3,600.0	3,565.0	3,588.8	3,581.6	10.3	7.3	-162.35	136.1	128.2	309.6	296.1	13.46	22.998	
3,700.0	3,663.7	3,688.3	3,680.8	10.7	7.5	-162.39	140.7	133.6	319.6	305.8	13.85	23.088	
3,800.0	3,762.4	3,787.8	3,780.0	11.0	7.7	-162.42	145.3	138.9	329.7	315.5	14.23	23.173	
3,900.0	3,861.1	3,887.3	3,879.3	11.3	7.9	-162.45	149.9	144.3	339.8	325.1	14.61	23.253	
4,000.0	3,959.8	3,986.8	3,978.5	11.7	8.1	-162.47	154.5	149.7	349.8	334.8	14.99	23.329	
4,100.0	4,058.5	4,086.3	4,077.8	12.0	8.3	-162.50	159.1	155.1	359.9	344.5	15.38	23.402	
4,200.0	4,157.2	4,185.8	4,177.0	12.3	8.5	-162.53	163.7	160.4	369.9	354.2	15.76	23.471	
4,300.0	4,255.9	4,285.3	4,276.2	12.7	8.8	-162.55	168.3	165.8	380.0	363.8	16.14	23.537	
4,400.0	4,354.6	4,384.7	4,375.5	13.0	9.0	-162.57	172.9	171.2	390.0	373.5	16.53	23.599	
4,500.0	4,453.3	4,484.2	4,474.7	13.3	9.2	-162.59	177.5	176.5	400.1	383.2	16.91	23.659	
4,600.0	4,552.0	4,583.7	4,574.0	13.6	9.4	-162.61	182.1	181.9	410.1	392.8	17.29	23.716	
4,700.0	4,650.7	4,683.2	4,673.2	14.0	9.6	-162.63	186.7	187.3	420.2	402.5	17.68	23.771	
4,800.0	4,749.4	4,782.7	4,772.5	14.3	9.8	-162.65	191.3	192.6	430.2	412.2	18.06	23.823	
4,900.0	4,848.1	4,882.2	4,871.7	14.6	10.0	-162.67	195.9	198.0	440.3	421.8	18.44	23.873	
5,000.0	4,946.8	4,981.7	4,970.9	15.0	10.3	-162.68	200.5	203.4	450.3	431.5	18.83	23.921	
5,100.0	5,045.5	5,081.2	5,070.2	15.3	10.5	-162.70	205.1	208.8	460.4	441.2	19.21	23.968	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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 1G-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	5,144.2	5,180.7	5,169.4	15.6	10.7	-162.71	209.7	214.1	470.5	450.9	19.59	24.012	
5,300.0	5,242.9	5,280.2	5,268.7	16.0	10.9	-162.73	214.3	219.5	480.5	460.5	19.98	24.054	
5,400.0	5,341.6	5,379.7	5,367.9	16.3	11.1	-162.74	218.9	224.9	490.6	470.2	20.36	24.095	
5,500.0	5,440.3	5,479.2	5,467.1	16.6	11.3	-162.75	223.5	230.2	500.6	479.9	20.74	24.135	
5,600.0	5,539.0	5,578.7	5,566.4	17.0	11.5	-162.77	228.1	235.6	510.7	489.5	21.13	24.173	
5,700.0	5,637.7	5,678.2	5,665.6	17.3	11.7	-162.78	232.7	241.0	520.7	499.2	21.51	24.210	
5,800.0	5,736.4	5,777.7	5,764.9	17.6	12.0	-162.79	237.3	246.3	530.8	508.9	21.89	24.245	
5,900.0	5,835.1	5,877.1	5,864.1	18.0	12.2	-162.80	241.9	251.7	540.8	518.6	22.28	24.279	
6,000.0	5,933.8	5,976.6	5,963.4	18.3	12.4	-162.81	246.5	257.1	550.9	528.2	22.66	24.312	
6,100.0	6,032.5	6,076.1	6,062.6	18.6	12.6	-162.82	251.1	262.5	560.9	537.9	23.04	24.344	
6,200.0	6,131.1	6,175.6	6,161.8	19.0	12.8	-162.83	255.7	267.8	571.0	547.6	23.43	24.375	
6,300.0	6,229.8	6,275.1	6,261.1	19.3	13.0	-162.84	260.3	273.2	581.0	557.2	23.81	24.405	
6,400.0	6,328.6	6,374.8	6,360.5	19.6	13.2	-175.26	262.1	278.6	591.1	567.0	24.09	24.535	
6,500.0	6,427.1	6,473.9	6,458.8	19.9	13.3	139.76	251.0	283.9	601.2	577.1	24.09	24.949	
6,600.0	6,523.9	6,572.3	6,553.9	20.1	13.3	118.21	226.7	289.0	611.1	587.1	24.01	25.449	
6,700.0	6,617.1	6,670.1	6,644.3	20.3	13.3	107.92	189.8	293.9	620.7	596.7	23.92	25.943	
6,800.0	6,704.8	6,767.3	6,728.3	20.5	13.3	102.00	141.2	298.5	629.7	605.8	23.92	26.331	
6,900.0	6,785.4	6,864.1	6,804.7	20.7	13.4	98.12	82.1	302.6	638.1	614.0	24.07	26.513	
7,000.0	6,857.3	6,960.4	6,872.1	20.9	13.5	95.39	13.5	306.3	645.5	621.1	24.44	26.416	
7,100.0	6,919.0	7,056.4	6,929.6	21.1	13.8	93.41	-63.3	309.4	651.9	626.8	25.08	25.992	
7,200.0	6,969.5	7,152.1	6,976.1	21.5	14.2	91.96	-146.8	311.9	657.2	631.2	26.01	25.264	
7,300.0	7,007.6	7,247.7	7,011.1	21.9	14.7	90.96	-235.6	313.8	661.1	633.9	27.23	24.281	
7,400.0	7,032.7	7,343.0	7,034.0	22.4	15.4	90.32	-328.1	315.0	663.8	635.0	28.71	23.122	
7,500.0	7,044.2	7,438.3	7,044.3	23.1	16.3	90.02	-422.7	315.6	665.0	634.6	30.40	21.871	
7,600.0	7,045.0	7,536.7	7,045.0	23.8	17.3	90.00	-521.2	315.6	665.1	632.5	32.52	20.450	
7,700.0	7,045.0	7,636.7	7,045.0	24.6	18.5	90.00	-621.2	315.6	665.1	630.1	34.94	19.033	
7,800.0	7,045.0	7,736.7	7,045.0	25.6	19.7	90.00	-721.2	315.6	665.1	627.5	37.54	17.718	
7,900.0	7,045.0	7,836.7	7,045.0	26.6	21.0	90.00	-821.2	315.6	665.1	624.8	40.27	16.515	
8,000.0	7,045.0	7,936.7	7,045.0	27.7	22.4	90.00	-921.2	315.6	665.1	621.9	43.11	15.425	
8,100.0	7,045.0	8,036.7	7,045.0	28.8	23.8	90.00	-1,021.2	315.6	665.1	619.0	46.05	14.441	
8,200.0	7,045.0	8,136.7	7,045.0	30.0	25.3	90.00	-1,121.2	315.6	665.1	616.0	49.06	13.555	
8,300.0	7,045.0	8,236.7	7,045.0	31.3	26.8	90.00	-1,221.2	315.6	665.1	612.9	52.14	12.756	
8,400.0	7,045.0	8,336.7	7,045.0	32.6	28.3	90.00	-1,321.2	315.6	665.1	609.8	55.26	12.034	
8,500.0	7,045.0	8,436.7	7,045.0	34.0	29.8	90.00	-1,421.2	315.6	665.1	606.6	58.43	11.381	
8,600.0	7,045.0	8,536.7	7,045.0	35.4	31.4	90.00	-1,521.2	315.6	665.1	603.4	61.64	10.789	
8,700.0	7,045.0	8,636.7	7,045.0	36.8	33.0	90.00	-1,621.2	315.6	665.1	600.2	64.88	10.251	
8,800.0	7,045.0	8,736.7	7,045.0	38.2	34.6	90.00	-1,721.2	315.6	665.1	596.9	68.14	9.760	
8,900.0	7,045.0	8,836.7	7,045.0	39.7	36.2	90.00	-1,821.2	315.6	665.1	593.6	71.43	9.311	
9,000.0	7,045.0	8,936.7	7,045.0	41.2	37.8	90.00	-1,921.2	315.6	665.1	590.3	74.74	8.899	
9,100.0	7,045.0	9,036.7	7,045.0	42.7	39.5	90.00	-2,021.2	315.6	665.1	587.0	78.06	8.520	
9,200.0	7,045.0	9,136.7	7,045.0	44.2	41.1	90.00	-2,121.2	315.6	665.1	583.7	81.40	8.170	
9,300.0	7,045.0	9,236.7	7,045.0	45.8	42.8	90.00	-2,221.2	315.6	665.1	580.3	84.76	7.847	
9,400.0	7,045.0	9,336.7	7,045.0	47.3	44.5	90.00	-2,321.2	315.6	665.1	576.9	88.12	7.547	
9,500.0	7,045.0	9,436.7	7,045.0	48.9	46.1	90.00	-2,421.2	315.6	665.1	573.6	91.50	7.268	
9,600.0	7,045.0	9,536.7	7,045.0	50.5	47.8	90.00	-2,521.2	315.6	665.1	570.2	94.89	7.009	
9,700.0	7,045.0	9,636.7	7,045.0	52.1	49.5	90.00	-2,621.2	315.6	665.1	566.8	98.28	6.767	
9,800.0	7,045.0	9,736.7	7,045.0	53.7	51.2	90.00	-2,721.2	315.6	665.1	563.4	101.68	6.541	
9,900.0	7,045.0	9,836.7	7,045.0	55.3	52.9	90.00	-2,821.2	315.6	665.1	560.0	105.09	6.328	
10,000.0	7,045.0	9,936.7	7,045.0	56.9	54.6	90.00	-2,921.2	315.6	665.1	556.5	108.51	6.129	
10,100.0	7,045.0	10,036.7	7,045.0	58.6	56.3	90.00	-3,021.2	315.6	665.1	553.1	111.93	5.942	
10,200.0	7,045.0	10,136.7	7,045.0	60.2	58.0	90.00	-3,121.2	315.6	665.1	549.7	115.36	5.765	
10,300.0	7,045.0	10,236.7	7,045.0	61.9	59.7	90.00	-3,221.2	315.6	665.1	546.3	118.79	5.599	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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 1G-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	10,336.7	7,045.0	63.5	61.4	90.00	-3,321.2	315.6	665.1	542.8	122.22	5.441	
10,500.0	7,045.0	10,436.7	7,045.0	65.2	63.1	90.00	-3,421.2	315.6	665.1	539.4	125.66	5.292	
10,600.0	7,045.0	10,536.7	7,045.0	66.8	64.8	90.00	-3,521.2	315.6	665.1	536.0	129.11	5.151	
10,700.0	7,045.0	10,636.7	7,045.0	68.5	66.5	90.00	-3,621.2	315.6	665.1	532.5	132.55	5.017	
10,800.0	7,045.0	10,736.7	7,045.0	70.2	68.3	90.00	-3,721.2	315.6	665.1	529.1	136.00	4.890	
10,900.0	7,045.0	10,836.7	7,045.0	71.8	70.0	90.00	-3,821.2	315.6	665.1	525.6	139.46	4.769	
11,000.0	7,045.0	10,936.7	7,045.0	73.5	71.7	90.00	-3,921.2	315.6	665.1	522.1	142.91	4.654	
11,100.0	7,045.0	11,036.7	7,045.0	75.2	73.4	90.00	-4,021.2	315.6	665.1	518.7	146.37	4.544	
11,200.0	7,045.0	11,136.7	7,045.0	76.9	75.2	90.00	-4,121.2	315.6	665.1	515.2	149.83	4.439	
11,300.0	7,045.0	11,236.7	7,045.0	78.6	76.9	90.00	-4,221.2	315.6	665.1	511.8	153.29	4.339	
11,400.0	7,045.0	11,336.7	7,045.0	80.3	78.6	90.00	-4,321.2	315.6	665.1	508.3	156.76	4.243	
11,500.0	7,045.0	11,436.7	7,045.0	82.0	80.3	90.00	-4,421.2	315.6	665.1	504.8	160.22	4.151	
11,600.0	7,045.0	11,536.7	7,045.0	83.6	82.1	90.00	-4,521.2	315.6	665.1	501.4	163.69	4.063	
11,622.4	7,045.0	11,559.1	7,045.0	84.0	82.5	90.00	-4,543.6	315.6	665.1	500.6	164.47	4.044	
11,643.9	7,045.0	11,577.0	7,045.0	84.4	82.8	90.00	-4,561.5	315.6	665.1	499.9	165.15	4.027	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.05	0.0	-20.1	20.1				
100.0	100.0	100.0	100.0	0.2	0.2	-90.05	0.0	-20.1	20.1	19.8	0.35	57.700	
200.0	200.0	200.0	200.0	0.3	0.3	-90.05	0.0	-20.1	20.1	19.4	0.70	28.850	
300.0	300.0	300.0	300.0	0.5	0.5	-90.05	0.0	-20.1	20.1	19.1	1.05	19.233	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-163.98	0.0	-20.1	21.0	19.6	1.40	15.026	
500.0	500.0	500.3	500.3	0.9	0.9	-164.79	0.4	-19.4	22.7	21.0	1.75	13.014	
600.0	599.9	600.7	600.6	1.1	1.1	-164.72	1.6	-17.0	24.6	22.5	2.10	11.725	
700.0	699.7	701.1	700.9	1.3	1.2	-163.97	3.7	-13.2	26.6	24.1	2.45	10.845	
800.0	799.4	801.5	801.1	1.5	1.4	-162.67	6.6	-7.7	28.7	25.9	2.81	10.216	
900.0	898.9	901.9	901.2	1.7	1.6	-160.96	10.3	-0.7	30.9	27.7	3.17	9.753	
1,000.0	998.3	1,002.2	1,001.1	1.9	1.9	-159.00	14.8	7.7	33.4	29.8	3.55	9.413	
1,100.0	1,097.4	1,102.1	1,100.5	2.2	2.1	-157.91	19.5	16.6	37.1	33.1	3.93	9.436	
1,200.0	1,196.3	1,202.0	1,199.9	2.5	2.3	-157.93	24.3	25.5	42.4	38.1	4.31	9.831	
1,300.0	1,295.0	1,301.8	1,299.2	2.8	2.6	-158.51	29.0	34.4	48.9	44.2	4.69	10.414	
1,400.0	1,393.7	1,401.6	1,398.4	3.1	2.8	-158.99	33.7	43.3	55.4	50.3	5.08	10.916	
1,500.0	1,492.4	1,501.4	1,497.7	3.4	3.0	-159.36	38.4	52.1	62.0	56.5	5.46	11.347	
1,600.0	1,591.1	1,601.1	1,597.0	3.8	3.3	-159.66	43.2	61.0	68.5	62.7	5.85	11.720	
1,700.0	1,689.8	1,700.9	1,696.3	4.1	3.5	-159.91	47.9	69.9	75.1	68.8	6.23	12.047	
1,800.0	1,788.5	1,800.7	1,795.5	4.4	3.8	-160.12	52.6	78.8	81.6	75.0	6.62	12.335	
1,900.0	1,887.2	1,900.5	1,894.8	4.7	4.0	-160.30	57.3	87.6	88.2	81.2	7.00	12.592	
2,000.0	1,985.9	2,000.3	1,994.1	5.0	4.2	-160.45	62.1	96.5	94.7	87.3	7.39	12.821	
2,100.0	2,084.6	2,100.1	2,093.4	5.4	4.5	-160.59	66.8	105.4	101.3	93.5	7.77	13.027	
2,200.0	2,183.3	2,199.8	2,192.6	5.7	4.7	-160.71	71.5	114.3	107.8	99.7	8.16	13.213	
2,300.0	2,282.0	2,299.6	2,291.9	6.0	5.0	-160.81	76.2	123.1	114.4	105.8	8.55	13.382	
2,400.0	2,380.7	2,399.4	2,391.2	6.4	5.2	-160.90	81.0	132.0	120.9	112.0	8.93	13.537	
2,500.0	2,479.4	2,499.2	2,490.5	6.7	5.5	-160.99	85.7	140.9	127.5	118.2	9.32	13.678	
2,600.0	2,578.1	2,599.0	2,589.8	7.0	5.7	-161.06	90.4	149.8	134.1	124.4	9.71	13.808	
2,700.0	2,676.8	2,698.8	2,689.0	7.3	5.9	-161.13	95.1	158.7	140.6	130.5	10.10	13.928	
2,800.0	2,775.5	2,798.6	2,788.3	7.7	6.2	-161.19	99.9	167.5	147.2	136.7	10.48	14.039	
2,900.0	2,874.2	2,898.3	2,887.6	8.0	6.4	-161.25	104.6	176.4	153.7	142.9	10.87	14.142	
3,000.0	2,972.9	2,998.1	2,986.9	8.3	6.7	-161.30	109.3	185.3	160.3	149.0	11.26	14.238	
3,100.0	3,071.5	3,097.9	3,086.1	8.7	6.9	-161.35	114.0	194.2	166.8	155.2	11.64	14.328	
3,200.0	3,170.2	3,197.7	3,185.4	9.0	7.2	-161.39	118.8	203.0	173.4	161.4	12.03	14.411	
3,300.0	3,268.9	3,297.5	3,284.7	9.3	7.4	-161.43	123.5	211.9	180.0	167.5	12.42	14.490	
3,400.0	3,367.6	3,397.3	3,384.0	9.7	7.7	-161.47	128.2	220.8	186.5	173.7	12.81	14.563	
3,500.0	3,466.3	3,497.0	3,483.2	10.0	7.9	-161.51	132.9	229.7	193.1	179.9	13.19	14.633	
3,600.0	3,565.0	3,596.8	3,582.5	10.3	8.2	-161.54	137.7	238.6	199.6	186.1	13.58	14.698	
3,700.0	3,663.7	3,696.6	3,681.8	10.7	8.4	-161.57	142.4	247.4	206.2	192.2	13.97	14.760	
3,800.0	3,762.4	3,796.4	3,781.1	11.0	8.7	-161.60	147.1	256.3	212.8	198.4	14.36	14.818	
3,900.0	3,861.1	3,896.2	3,880.3	11.3	8.9	-161.63	151.8	265.2	219.3	204.6	14.75	14.873	
4,000.0	3,959.8	3,996.0	3,979.6	11.7	9.2	-161.65	156.6	274.1	225.9	210.7	15.13	14.925	
4,100.0	4,058.5	4,095.8	4,078.9	12.0	9.4	-161.68	161.3	282.9	232.4	216.9	15.52	14.975	
4,200.0	4,157.2	4,195.5	4,178.2	12.3	9.6	-161.70	166.0	291.8	239.0	223.1	15.91	15.022	
4,300.0	4,255.9	4,295.3	4,277.5	12.7	9.9	-161.72	170.7	300.7	245.5	229.2	16.30	15.067	
4,400.0	4,354.6	4,395.1	4,376.7	13.0	10.1	-161.74	175.5	309.6	252.1	235.4	16.68	15.110	
4,500.0	4,453.3	4,494.9	4,476.0	13.3	10.4	-161.76	180.2	318.4	258.7	241.6	17.07	15.151	
4,600.0	4,552.0	4,594.7	4,575.3	13.6	10.6	-161.78	184.9	327.3	265.2	247.8	17.46	15.190	
4,700.0	4,650.7	4,694.5	4,674.6	14.0	10.9	-161.80	189.6	336.2	271.8	253.9	17.85	15.228	
4,800.0	4,749.4	4,794.2	4,773.8	14.3	11.1	-161.82	194.3	345.1	278.3	260.1	18.24	15.263	
4,900.0	4,848.1	4,894.0	4,873.1	14.6	11.4	-161.83	199.1	354.0	284.9	266.3	18.62	15.298	
5,000.0	4,946.8	4,993.8	4,972.4	15.0	11.6	-161.85	203.8	362.8	291.5	272.4	19.01	15.330	
5,100.0	5,045.5	5,093.6	5,071.7	15.3	11.9	-161.86	208.5	371.7	298.0	278.6	19.40	15.362	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	5,144.2	5,193.4	5,170.9	15.6	12.1	-161.88	213.2	380.6	304.6	284.8	19.79	15.392	
5,300.0	5,242.9	5,293.2	5,270.2	16.0	12.4	-161.89	218.0	389.5	311.1	291.0	20.17	15.421	
5,400.0	5,341.6	5,393.0	5,369.5	16.3	12.6	-161.90	222.7	398.3	317.7	297.1	20.56	15.449	
5,500.0	5,440.3	5,492.7	5,468.8	16.6	12.9	-161.92	227.4	407.2	324.2	303.3	20.95	15.476	
5,600.0	5,539.0	5,592.5	5,568.1	17.0	13.1	-161.93	232.1	416.1	330.8	309.5	21.34	15.502	
5,700.0	5,637.7	5,692.3	5,667.3	17.3	13.4	-161.94	236.9	425.0	337.4	315.6	21.73	15.527	
5,800.0	5,736.4	5,792.1	5,766.6	17.6	13.6	-161.95	241.6	433.8	343.9	321.8	22.11	15.552	
5,900.0	5,835.1	5,891.9	5,865.9	18.0	13.8	-161.96	246.3	442.7	350.5	328.0	22.50	15.575	
6,000.0	5,933.8	5,991.7	5,965.2	18.3	14.1	-161.97	251.0	451.6	357.0	334.1	22.89	15.598	
6,100.0	6,032.5	6,091.4	6,064.4	18.6	14.3	-161.98	255.8	460.5	363.6	340.3	23.28	15.619	
6,200.0	6,131.1	6,191.2	6,163.7	19.0	14.6	-161.99	260.5	469.4	370.2	346.5	23.67	15.640	
6,300.0	6,229.8	6,291.5	6,263.5	19.3	14.8	-162.28	263.4	478.3	376.7	352.7	23.98	15.705	
6,400.0	6,328.6	6,390.5	6,361.6	19.6	15.0	-176.40	254.3	487.0	383.2	359.3	23.91	16.030	
6,500.0	6,427.1	6,486.7	6,454.9	19.9	15.1	136.97	232.4	495.4	390.5	366.8	23.64	16.518	
6,600.0	6,523.9	6,580.9	6,542.6	20.1	15.1	113.89	199.1	503.2	398.2	374.7	23.46	16.973	
6,700.0	6,617.1	6,673.3	6,623.6	20.3	15.2	102.24	155.5	510.5	406.2	382.7	23.46	17.312	
6,800.0	6,704.8	6,764.2	6,697.2	20.5	15.2	95.11	102.7	517.1	414.1	390.5	23.68	17.486	
6,900.0	6,785.4	6,853.6	6,762.6	20.7	15.3	90.19	42.0	522.9	421.8	397.6	24.13	17.479	
7,000.0	6,857.3	6,941.9	6,819.3	20.9	15.5	86.58	-25.4	528.0	428.8	404.0	24.75	17.325	
7,100.0	6,919.0	7,029.3	6,866.8	21.1	15.8	83.88	-98.6	532.2	435.0	409.4	25.55	17.028	
7,200.0	6,969.5	7,115.9	6,904.8	21.5	16.2	81.87	-176.2	535.6	440.2	413.7	26.46	16.635	
7,300.0	7,007.6	7,200.0	6,932.5	21.9	16.7	80.46	-255.6	538.1	444.2	416.7	27.46	16.176	
7,400.0	7,032.7	7,287.5	6,951.3	22.4	17.3	79.54	-340.9	539.8	446.8	418.3	28.59	15.629	
7,500.0	7,044.2	7,372.8	6,959.5	23.1	18.0	79.11	-425.8	540.5	448.1	418.3	29.80	15.039	
7,600.0	7,045.0	7,468.2	6,960.0	23.8	18.9	79.07	-521.2	540.6	448.2	416.5	31.72	14.133	
7,700.0	7,045.0	7,568.2	6,960.0	24.6	20.0	79.07	-621.2	540.6	448.2	414.1	34.12	13.139	
7,800.0	7,045.0	7,668.2	6,960.0	25.6	21.1	79.07	-721.2	540.6	448.2	411.6	36.68	12.219	
7,900.0	7,045.0	7,768.2	6,960.0	26.6	22.3	79.07	-821.2	540.6	448.2	408.9	39.38	11.381	
8,000.0	7,045.0	7,868.2	6,960.0	27.7	23.6	79.07	-921.2	540.6	448.2	406.0	42.19	10.623	
8,100.0	7,045.0	7,968.2	6,960.0	28.8	25.0	79.07	-1,021.2	540.6	448.2	403.1	45.09	9.941	
8,200.0	7,045.0	8,068.2	6,960.0	30.0	26.3	79.07	-1,121.2	540.6	448.2	400.2	48.06	9.326	
8,300.0	7,045.0	8,168.2	6,960.0	31.3	27.8	79.07	-1,221.2	540.6	448.2	397.1	51.09	8.773	
8,400.0	7,045.0	8,268.2	6,960.0	32.6	29.3	79.07	-1,321.2	540.6	448.2	394.1	54.17	8.274	
8,500.0	7,045.0	8,368.2	6,960.0	34.0	30.8	79.07	-1,421.2	540.6	448.2	390.9	57.29	7.824	
8,600.0	7,045.0	8,468.2	6,960.0	35.4	32.3	79.07	-1,521.2	540.6	448.2	387.8	60.45	7.415	
8,700.0	7,045.0	8,568.2	6,960.0	36.8	33.8	79.07	-1,621.2	540.6	448.2	384.6	63.64	7.044	
8,800.0	7,045.0	8,668.2	6,960.0	38.2	35.4	79.07	-1,721.2	540.6	448.2	381.4	66.85	6.705	
8,900.0	7,045.0	8,768.2	6,960.0	39.7	37.0	79.07	-1,821.2	540.6	448.2	378.2	70.08	6.396	
9,000.0	7,045.0	8,868.2	6,960.0	41.2	38.6	79.07	-1,921.2	540.6	448.2	374.9	73.34	6.112	
9,100.0	7,045.0	8,968.2	6,960.0	42.7	40.2	79.07	-2,021.2	540.6	448.2	371.6	76.61	5.851	
9,200.0	7,045.0	9,068.2	6,960.0	44.2	41.8	79.07	-2,121.2	540.6	448.2	368.3	79.89	5.610	
9,300.0	7,045.0	9,168.2	6,960.0	45.8	43.4	79.07	-2,221.2	540.6	448.2	365.0	83.19	5.388	
9,400.0	7,045.0	9,268.2	6,960.0	47.3	45.1	79.07	-2,321.2	540.6	448.2	361.7	86.50	5.182	
9,500.0	7,045.0	9,368.2	6,960.0	48.9	46.7	79.07	-2,421.2	540.6	448.2	358.4	89.82	4.990	
9,600.0	7,045.0	9,468.2	6,960.0	50.5	48.4	79.07	-2,521.2	540.6	448.2	355.1	93.15	4.812	
9,700.0	7,045.0	9,568.2	6,960.0	52.1	50.1	79.07	-2,621.2	540.6	448.2	351.8	96.49	4.646	
9,800.0	7,045.0	9,668.2	6,960.0	53.7	51.7	79.07	-2,721.2	540.6	448.2	348.4	99.83	4.490	
9,900.0	7,045.0	9,768.2	6,960.0	55.3	53.4	79.07	-2,821.2	540.6	448.2	345.1	103.18	4.344	
10,000.0	7,045.0	9,868.2	6,960.0	56.9	55.1	79.07	-2,921.2	540.6	448.2	341.7	106.54	4.207	
10,100.0	7,045.0	9,968.2	6,960.0	58.6	56.8	79.07	-3,021.2	540.6	448.2	338.3	109.90	4.079	
10,200.0	7,045.0	10,068.2	6,960.0	60.2	58.5	79.07	-3,121.2	540.6	448.2	335.0	113.27	3.957	
10,300.0	7,045.0	10,168.2	6,960.0	61.9	60.2	79.07	-3,221.2	540.6	448.2	331.6	116.64	3.843	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	10,268.2	6,960.0	63.5	61.8	79.07	-3,321.2	540.6	448.2	328.2	120.02	3.735	
10,500.0	7,045.0	10,368.2	6,960.0	65.2	63.5	79.07	-3,421.2	540.6	448.2	324.8	123.40	3.632	
10,600.0	7,045.0	10,468.2	6,960.0	66.8	65.3	79.07	-3,521.2	540.6	448.2	321.5	126.78	3.536	
10,700.0	7,045.0	10,568.2	6,960.0	68.5	67.0	79.07	-3,621.2	540.6	448.2	318.1	130.17	3.444	
10,800.0	7,045.0	10,668.2	6,960.0	70.2	68.7	79.07	-3,721.2	540.6	448.2	314.7	133.56	3.356	
10,900.0	7,045.0	10,768.2	6,960.0	71.8	70.4	79.07	-3,821.2	540.6	448.2	311.3	136.95	3.273	
11,000.0	7,045.0	10,868.2	6,960.0	73.5	72.1	79.07	-3,921.2	540.6	448.2	307.9	140.35	3.194	
11,100.0	7,045.0	10,968.2	6,960.0	75.2	73.8	79.07	-4,021.2	540.6	448.2	304.5	143.74	3.118	
11,200.0	7,045.0	11,068.2	6,960.0	76.9	75.5	79.07	-4,121.2	540.6	448.2	301.1	147.14	3.046	
11,300.0	7,045.0	11,168.2	6,960.0	78.6	77.2	79.07	-4,221.2	540.6	448.2	297.7	150.54	2.977	
11,400.0	7,045.0	11,268.2	6,960.0	80.3	78.9	79.07	-4,321.2	540.6	448.2	294.3	153.95	2.912	
11,500.0	7,045.0	11,368.2	6,960.0	82.0	80.7	79.07	-4,421.2	540.6	448.2	290.9	157.35	2.849	
11,600.0	7,045.0	11,468.2	6,960.0	83.6	82.4	79.07	-4,521.2	540.6	448.2	287.5	160.76	2.788	
11,622.8	7,045.0	11,491.0	6,960.0	84.0	82.8	79.07	-4,544.0	540.6	448.2	286.7	161.54	2.775	
11,643.9	7,045.0	11,509.6	6,960.0	84.4	83.1	79.07	-4,562.6	540.6	448.2	286.0	162.21	2.763	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	-90.05	0.0	-10.1	10.1	10.1	0.00	N/A	
100.0	100.0	100.0	100.0	0.2	0.2	-90.05	0.0	-10.1	10.1	9.7	0.35	28.850	
200.0	200.0	200.0	200.0	0.3	0.3	-90.05	0.0	-10.1	10.1	9.4	0.70	14.425	
300.0	300.0	300.0	300.0	0.5	0.5	-90.05	0.0	-10.1	10.1	9.0	1.05	9.617	CC, ES
400.0	400.0	400.1	400.1	0.7	0.7	-164.23	0.1	-9.9	10.7	9.3	1.40	7.665	
500.0	500.0	500.3	500.2	0.9	0.9	-164.80	0.7	-8.2	11.6	9.8	1.75	6.633	
600.0	599.9	600.5	600.4	1.1	1.1	-164.75	1.9	-5.0	12.5	10.4	2.10	5.959	
700.0	699.7	700.7	700.4	1.3	1.2	-164.19	3.8	0.0	13.4	11.0	2.45	5.488	
800.0	799.4	800.9	800.4	1.5	1.4	-163.22	6.3	6.5	14.4	11.6	2.80	5.143	
900.0	898.9	901.1	900.3	1.7	1.7	-161.93	9.4	14.7	15.4	12.3	3.16	4.879	
1,000.0	998.3	1,001.4	1,000.0	1.9	1.9	-160.40	13.2	24.5	16.5	13.0	3.54	4.671	
1,100.0	1,097.4	1,101.6	1,099.4	2.2	2.2	-158.72	17.5	35.9	17.7	13.7	3.92	4.508	
1,200.0	1,196.3	1,201.6	1,198.6	2.5	2.4	-158.44	22.0	47.8	19.9	15.6	4.30	4.634	
1,300.0	1,295.0	1,301.5	1,297.7	2.8	2.7	-159.37	26.6	59.7	23.4	18.7	4.68	4.998	
1,400.0	1,393.7	1,401.4	1,396.8	3.1	2.9	-160.11	31.1	71.6	26.9	21.8	5.06	5.320	
1,500.0	1,492.4	1,501.4	1,496.0	3.4	3.2	-160.67	35.6	83.6	30.4	25.0	5.43	5.597	
1,600.0	1,591.1	1,601.3	1,595.1	3.8	3.5	-161.12	40.2	95.5	33.9	28.1	5.81	5.839	
1,700.0	1,689.8	1,701.3	1,694.2	4.1	3.8	-161.49	44.7	107.4	37.4	31.3	6.19	6.051	
1,800.0	1,788.5	1,801.2	1,793.3	4.4	4.0	-161.79	49.3	119.3	41.0	34.4	6.57	6.238	
1,900.0	1,887.2	1,901.1	1,892.4	4.7	4.3	-162.05	53.8	131.2	44.5	37.5	6.94	6.405	
2,000.0	1,985.9	2,001.1	1,991.6	5.0	4.6	-162.26	58.3	143.1	48.0	40.7	7.32	6.555	
2,100.0	2,084.6	2,101.0	2,090.7	5.4	4.9	-162.45	62.9	155.0	51.5	43.8	7.70	6.691	
2,200.0	2,183.3	2,200.9	2,189.8	5.7	5.2	-162.62	67.4	166.9	55.0	47.0	8.08	6.813	
2,300.0	2,282.0	2,300.9	2,288.9	6.0	5.4	-162.76	71.9	178.8	58.6	50.1	8.46	6.925	
2,400.0	2,380.7	2,400.8	2,388.1	6.4	5.7	-162.89	76.5	190.8	62.1	53.3	8.84	7.027	
2,500.0	2,479.4	2,500.8	2,487.2	6.7	6.0	-163.00	81.0	202.7	65.6	56.4	9.21	7.120	
2,600.0	2,578.1	2,600.7	2,586.3	7.0	6.3	-163.10	85.5	214.6	69.1	59.5	9.59	7.207	
2,700.0	2,676.8	2,700.6	2,685.4	7.3	6.6	-163.20	90.1	226.5	72.7	62.7	9.97	7.286	
2,800.0	2,775.5	2,800.6	2,784.5	7.7	6.8	-163.28	94.6	238.4	76.2	65.8	10.35	7.360	
2,900.0	2,874.2	2,900.5	2,883.7	8.0	7.1	-163.36	99.2	250.3	79.7	69.0	10.73	7.429	
3,000.0	2,972.9	3,000.4	2,982.8	8.3	7.4	-163.43	103.7	262.2	83.2	72.1	11.11	7.493	
3,100.0	3,071.5	3,100.4	3,081.9	8.7	7.7	-163.49	108.2	274.1	86.8	75.3	11.49	7.552	
3,200.0	3,170.2	3,200.3	3,181.0	9.0	8.0	-163.55	112.8	286.1	90.3	78.4	11.87	7.608	
3,300.0	3,268.9	3,300.3	3,280.2	9.3	8.2	-163.60	117.3	298.0	93.8	81.6	12.24	7.661	
3,400.0	3,367.6	3,400.2	3,379.3	9.7	8.5	-163.65	121.8	309.9	97.3	84.7	12.62	7.710	
3,500.0	3,466.3	3,500.1	3,478.4	10.0	8.8	-163.70	126.4	321.8	100.9	87.8	13.00	7.756	
3,600.0	3,565.0	3,600.1	3,577.5	10.3	9.1	-163.75	130.9	333.7	104.4	91.0	13.38	7.800	
3,700.0	3,663.7	3,700.0	3,676.6	10.7	9.4	-163.79	135.4	345.6	107.9	94.1	13.76	7.841	
3,800.0	3,762.4	3,799.9	3,775.8	11.0	9.7	-163.83	140.0	357.5	111.4	97.3	14.14	7.880	
3,900.0	3,861.1	3,899.9	3,874.9	11.3	9.9	-163.86	144.5	369.4	114.9	100.4	14.52	7.918	
4,000.0	3,959.8	3,999.8	3,974.0	11.7	10.2	-163.90	149.1	381.3	118.5	103.6	14.90	7.953	
4,100.0	4,058.5	4,099.8	4,073.1	12.0	10.5	-163.93	153.6	393.3	122.0	106.7	15.28	7.986	
4,200.0	4,157.2	4,199.7	4,172.2	12.3	10.8	-163.96	158.1	405.2	125.5	109.9	15.66	8.018	
4,300.0	4,255.9	4,299.6	4,271.4	12.7	11.1	-163.99	162.7	417.1	129.0	113.0	16.03	8.048	
4,400.0	4,354.6	4,399.6	4,370.5	13.0	11.4	-164.01	167.2	429.0	132.6	116.2	16.41	8.077	
4,500.0	4,453.3	4,499.5	4,469.6	13.3	11.6	-164.04	171.7	440.9	136.1	119.3	16.79	8.105	
4,600.0	4,552.0	4,599.5	4,568.7	13.6	11.9	-164.06	176.3	452.8	139.6	122.4	17.17	8.131	
4,700.0	4,650.7	4,699.4	4,667.9	14.0	12.2	-164.09	180.8	464.7	143.1	125.6	17.55	8.156	
4,800.0	4,749.4	4,799.3	4,767.0	14.3	12.5	-164.11	185.3	476.6	146.7	128.7	17.93	8.180	
4,900.0	4,848.1	4,899.3	4,866.1	14.6	12.8	-164.13	189.9	488.6	150.2	131.9	18.31	8.204	
5,000.0	4,946.8	4,999.2	4,965.2	15.0	13.1	-164.15	194.4	500.5	153.7	135.0	18.69	8.226	
5,100.0	5,045.5	5,099.1	5,064.3	15.3	13.3	-164.17	199.0	512.4	157.2	138.2	19.07	8.247	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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
5,200.0	5,144.2	5,199.1	5,163.5	15.6	13.6	-164.19	203.5	524.3	160.8	141.3	19.45	8.268	
5,300.0	5,242.9	5,299.0	5,262.6	16.0	13.9	-164.21	208.0	536.2	164.3	144.5	19.82	8.287	
5,400.0	5,341.6	5,399.0	5,361.7	16.3	14.2	-164.22	212.6	548.1	167.8	147.6	20.20	8.306	
5,500.0	5,440.3	5,498.9	5,460.8	16.6	14.5	-164.24	217.1	560.0	171.3	150.8	20.58	8.325	
5,600.0	5,539.0	5,598.8	5,560.0	17.0	14.8	-164.25	221.6	571.9	174.9	153.9	20.96	8.342	
5,700.0	5,637.7	5,698.8	5,659.1	17.3	15.0	-164.27	226.2	583.9	178.4	157.1	21.34	8.359	
5,800.0	5,736.4	5,798.7	5,758.2	17.6	15.3	-164.28	230.7	595.8	181.9	160.2	21.72	8.376	
5,900.0	5,835.1	5,898.6	5,857.3	18.0	15.6	-164.30	235.2	607.7	185.4	163.3	22.10	8.391	
6,000.0	5,933.8	5,998.6	5,956.4	18.3	15.9	-164.31	239.8	619.6	189.0	166.5	22.48	8.407	
6,100.0	6,032.5	6,098.5	6,055.6	18.6	16.2	-164.32	244.3	631.5	192.5	169.6	22.86	8.421	
6,200.0	6,131.1	6,198.5	6,154.7	19.0	16.5	-164.34	248.9	643.4	196.0	172.8	23.24	8.436	
6,300.0	6,229.8	6,298.4	6,253.8	19.3	16.7	-164.35	253.4	655.3	199.5	175.9	23.62	8.450	
6,400.0	6,328.6	6,398.3	6,352.9	19.6	17.0	-176.29	257.9	667.2	203.1	179.1	24.00	8.461	
6,500.0	6,427.1	6,497.9	6,451.7	19.9	17.3	142.52	262.1	679.1	206.7	181.9	24.73	8.357	
6,600.0	6,523.9	6,598.8	6,551.6	20.1	17.5	125.73	256.5	691.1	211.0	185.6	25.46	8.289	
6,700.0	6,617.1	6,701.8	6,651.8	20.3	17.7	119.91	236.2	703.1	216.1	190.3	25.87	8.355	
6,800.0	6,704.8	6,806.9	6,750.0	20.5	17.8	118.09	200.8	714.9	221.7	195.8	25.90	8.560	
6,900.0	6,785.4	6,914.2	6,843.8	20.7	17.9	117.87	150.1	726.2	227.5	201.9	25.60	8.888	
7,000.0	6,857.3	7,023.6	6,930.6	20.9	18.1	118.32	84.6	736.7	233.2	208.1	25.08	9.298	
7,100.0	6,919.0	7,135.1	7,007.8	21.1	18.3	118.99	4.9	745.9	238.4	213.8	24.60	9.693	
7,200.0	6,969.5	7,248.2	7,072.7	21.5	18.6	119.68	-87.3	753.7	243.0	218.6	24.38	9.967	
7,300.0	7,007.6	7,362.9	7,123.0	21.9	19.1	120.24	-190.1	759.8	246.6	221.8	24.80	9.944	
7,400.0	7,032.7	7,478.6	7,156.5	22.4	19.7	120.62	-300.6	763.8	249.0	222.9	26.03	9.563	
7,500.0	7,044.2	7,594.9	7,172.0	23.1	20.5	120.78	-415.8	765.7	250.1	221.9	28.13	8.889	
7,600.0	7,045.0	7,700.4	7,173.0	23.8	21.4	120.78	-521.2	765.8	250.1	219.9	30.25	8.267	
7,700.0	7,045.0	7,800.4	7,173.0	24.6	22.3	120.78	-621.2	765.8	250.1	217.8	32.27	7.751	
7,800.0	7,045.0	7,900.4	7,173.0	25.6	23.4	120.78	-721.2	765.8	250.1	215.7	34.43	7.264	
7,900.0	7,045.0	8,000.4	7,173.0	26.6	24.5	120.78	-821.2	765.8	250.1	213.4	36.72	6.812	
8,000.0	7,045.0	8,100.4	7,173.0	27.7	25.6	120.78	-921.2	765.8	250.1	211.0	39.10	6.397	
8,100.0	7,045.0	8,200.4	7,173.0	28.8	26.9	120.78	-1,021.2	765.8	250.1	208.5	41.57	6.017	
8,200.0	7,045.0	8,300.4	7,173.0	30.0	28.2	120.78	-1,121.2	765.8	250.1	206.0	44.10	5.671	
8,300.0	7,045.0	8,400.4	7,173.0	31.3	29.5	120.78	-1,221.2	765.8	250.1	203.4	46.70	5.356	
8,400.0	7,045.0	8,500.4	7,173.0	32.6	30.9	120.78	-1,321.2	765.8	250.1	200.8	49.34	5.069	
8,500.0	7,045.0	8,600.4	7,173.0	34.0	32.4	120.78	-1,421.2	765.8	250.1	198.1	52.02	4.808	
8,600.0	7,045.0	8,700.4	7,173.0	35.4	33.8	120.78	-1,521.2	765.8	250.1	195.4	54.74	4.569	
8,700.0	7,045.0	8,800.4	7,173.0	36.8	35.3	120.78	-1,621.2	765.8	250.1	192.6	57.49	4.350	
8,800.0	7,045.0	8,900.4	7,173.0	38.2	36.8	120.78	-1,721.2	765.8	250.1	189.8	60.27	4.150	
8,900.0	7,045.0	9,000.4	7,173.0	39.7	38.3	120.78	-1,821.2	765.8	250.1	187.0	63.06	3.966	
9,000.0	7,045.0	9,100.4	7,173.0	41.2	39.9	120.78	-1,921.2	765.8	250.1	184.2	65.88	3.796	
9,100.0	7,045.0	9,200.4	7,173.0	42.7	41.4	120.78	-2,021.2	765.8	250.1	181.4	68.71	3.640	
9,200.0	7,045.0	9,300.4	7,173.0	44.2	43.0	120.78	-2,121.2	765.8	250.1	178.5	71.56	3.495	
9,300.0	7,045.0	9,400.4	7,173.0	45.8	44.6	120.78	-2,221.2	765.8	250.1	175.7	74.43	3.361	
9,400.0	7,045.0	9,500.4	7,173.0	47.3	46.2	120.78	-2,321.2	765.8	250.1	172.8	77.30	3.236	
9,500.0	7,045.0	9,600.4	7,173.0	48.9	47.8	120.78	-2,421.2	765.8	250.1	169.9	80.19	3.119	
9,600.0	7,045.0	9,700.4	7,173.0	50.5	49.4	120.78	-2,521.2	765.8	250.1	167.0	83.08	3.010	
9,700.0	7,045.0	9,800.4	7,173.0	52.1	51.1	120.78	-2,621.2	765.8	250.1	164.1	85.99	2.909	
9,800.0	7,045.0	9,900.4	7,173.0	53.7	52.7	120.78	-2,721.2	765.8	250.1	161.2	88.90	2.813	
9,900.0	7,045.0	10,000.4	7,173.0	55.3	54.4	120.78	-2,821.2	765.8	250.1	158.3	91.82	2.724	
10,000.0	7,045.0	10,100.4	7,173.0	56.9	56.0	120.78	-2,921.2	765.8	250.1	155.4	94.74	2.640	
10,100.0	7,045.0	10,200.4	7,173.0	58.6	57.7	120.78	-3,021.2	765.8	250.1	152.4	97.67	2.561	
10,200.0	7,045.0	10,300.4	7,173.0	60.2	59.3	120.78	-3,121.2	765.8	250.1	149.5	100.61	2.486	
10,300.0	7,045.0	10,400.4	7,173.0	61.9	61.0	120.78	-3,221.2	765.8	250.1	146.6	103.55	2.415	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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
10,400.0	7,045.0	10,500.4	7,173.0	63.5	62.7	120.78	-3,321.2	765.8	250.1	143.6	106.50	2.349	
10,500.0	7,045.0	10,600.4	7,173.0	65.2	64.4	120.78	-3,421.2	765.8	250.1	140.7	109.45	2.285	
10,600.0	7,045.0	10,700.4	7,173.0	66.8	66.0	120.78	-3,521.2	765.8	250.1	137.7	112.40	2.225	
10,700.0	7,045.0	10,800.4	7,173.0	68.5	67.7	120.78	-3,621.2	765.8	250.1	134.8	115.36	2.168	
10,800.0	7,045.0	10,900.4	7,173.0	70.2	69.4	120.78	-3,721.2	765.8	250.1	131.8	118.32	2.114	
10,900.0	7,045.0	11,000.4	7,173.0	71.8	71.1	120.78	-3,821.2	765.8	250.1	128.8	121.28	2.062	
11,000.0	7,045.0	11,100.4	7,173.0	73.5	72.8	120.78	-3,921.2	765.8	250.1	125.9	124.24	2.013	
11,100.0	7,045.0	11,200.4	7,173.0	75.2	74.5	120.78	-4,021.2	765.8	250.1	122.9	127.21	1.966	
11,200.0	7,045.0	11,300.4	7,173.0	76.9	76.2	120.78	-4,121.2	765.8	250.1	119.9	130.18	1.921	
11,300.0	7,045.0	11,400.4	7,173.0	78.6	77.9	120.78	-4,221.2	765.8	250.1	117.0	133.16	1.878	
11,400.0	7,045.0	11,500.4	7,173.0	80.3	79.6	120.78	-4,321.2	765.8	250.1	114.0	136.13	1.837	
11,500.0	7,045.0	11,600.4	7,173.0	82.0	81.3	120.78	-4,421.2	765.8	250.1	111.0	139.11	1.798	
11,600.0	7,045.0	11,700.4	7,173.0	83.6	83.0	120.78	-4,521.2	765.8	250.1	108.0	142.09	1.760	
11,623.4	7,045.0	11,723.7	7,173.0	84.0	83.4	120.78	-4,544.5	765.8	250.1	107.3	142.78	1.752	
11,643.9	7,045.0	11,743.2	7,173.0	84.4	83.8	120.78	-4,564.0	765.8	250.1	106.7	143.38	1.744	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	89.95	0.0	9.8	9.8	9.8	0.00	N/A	
100.0	100.0	100.0	100.0	0.2	0.2	89.95	0.0	9.8	9.8	9.4	0.35	28.049	
200.0	200.0	200.0	200.0	0.3	0.3	89.95	0.0	9.8	9.8	9.1	0.70	14.024	
233.4	233.4	233.4	233.4	0.4	0.4	89.95	0.0	9.8	9.8	9.0	0.81	12.019	CC
300.0	300.0	299.9	299.9	0.5	0.5	89.66	0.1	10.0	10.0	9.0	1.05	9.553	ES
400.0	400.0	399.7	399.7	0.7	0.7	15.58	0.5	11.7	10.9	9.5	1.40	7.781	
500.0	500.0	499.5	499.5	0.9	0.9	15.32	1.3	15.1	11.7	10.0	1.74	6.729	
600.0	599.9	599.3	599.1	1.1	1.1	15.50	2.5	20.1	12.6	10.5	2.09	6.034	
700.0	699.7	699.1	698.6	1.3	1.3	16.04	4.2	26.9	13.6	11.1	2.45	5.542	
800.0	799.4	798.9	798.0	1.5	1.5	16.87	6.2	35.3	14.5	11.7	2.80	5.177	
900.0	898.9	898.6	897.2	1.7	1.7	17.93	8.7	45.4	15.5	12.3	3.16	4.894	
1,000.0	998.3	998.3	996.2	1.9	2.0	19.17	11.6	57.2	16.5	12.9	3.53	4.666	
1,100.0	1,097.4	1,098.0	1,094.9	2.2	2.3	20.56	14.9	70.7	17.5	13.6	3.90	4.477	
1,200.0	1,196.3	1,197.7	1,193.4	2.5	2.6	22.07	18.5	85.8	18.5	14.2	4.30	4.314	
1,300.0	1,295.0	1,297.4	1,291.6	2.8	2.9	23.12	22.6	102.5	20.1	15.4	4.70	4.267	
1,400.0	1,393.7	1,397.0	1,389.4	3.1	3.3	22.55	27.1	121.0	23.2	18.1	5.09	4.553	
1,500.0	1,492.4	1,496.9	1,487.3	3.4	3.6	21.55	31.8	140.2	27.1	21.6	5.47	4.948	
1,600.0	1,591.1	1,596.9	1,585.3	3.8	4.0	20.80	36.5	159.5	31.0	25.1	5.85	5.292	
1,700.0	1,689.8	1,696.8	1,683.2	4.1	4.4	20.21	41.2	178.7	34.9	28.6	6.23	5.595	
1,800.0	1,788.5	1,796.7	1,781.1	4.4	4.8	19.75	45.9	197.9	38.8	32.2	6.61	5.863	
1,900.0	1,887.2	1,896.6	1,879.1	4.7	5.1	19.37	50.6	217.2	42.7	35.7	6.99	6.102	
2,000.0	1,985.9	1,996.6	1,977.0	5.0	5.5	19.05	55.3	236.4	46.6	39.2	7.37	6.316	
2,100.0	2,084.6	2,096.5	2,075.0	5.4	5.9	18.79	60.0	255.7	50.5	42.7	7.75	6.510	
2,200.0	2,183.3	2,196.4	2,172.9	5.7	6.3	18.56	64.7	274.9	54.4	46.2	8.14	6.685	
2,300.0	2,282.0	2,296.3	2,270.8	6.0	6.7	18.36	69.4	294.2	58.3	49.8	8.52	6.845	
2,400.0	2,380.7	2,396.3	2,368.8	6.4	7.1	18.19	74.1	313.4	62.2	53.3	8.90	6.990	
2,500.0	2,479.4	2,496.2	2,466.7	6.7	7.5	18.03	78.8	332.7	66.1	56.8	9.28	7.124	
2,600.0	2,578.1	2,596.1	2,564.7	7.0	7.8	17.90	83.5	351.9	70.0	60.4	9.66	7.248	
2,700.0	2,676.8	2,696.0	2,662.6	7.3	8.2	17.78	88.1	371.2	73.9	63.9	10.04	7.362	
2,800.0	2,775.5	2,795.9	2,760.5	7.7	8.6	17.67	92.8	390.4	77.8	67.4	10.42	7.467	
2,900.0	2,874.2	2,895.9	2,858.5	8.0	9.0	17.57	97.5	409.7	81.7	70.9	10.80	7.565	
3,000.0	2,972.9	2,995.8	2,956.4	8.3	9.4	17.48	102.2	428.9	85.6	74.5	11.19	7.657	
3,100.0	3,071.5	3,095.7	3,054.4	8.7	9.8	17.40	106.9	448.2	89.6	78.0	11.57	7.742	
3,200.0	3,170.2	3,195.6	3,152.3	9.0	10.2	17.32	111.6	467.4	93.5	81.5	11.95	7.822	
3,300.0	3,268.9	3,295.6	3,250.2	9.3	10.6	17.25	116.3	486.6	97.4	85.0	12.33	7.897	
3,400.0	3,367.6	3,395.5	3,348.2	9.7	11.0	17.19	121.0	505.9	101.3	88.6	12.71	7.967	
3,500.0	3,466.3	3,495.4	3,446.1	10.0	11.4	17.13	125.7	525.1	105.2	92.1	13.10	8.033	
3,600.0	3,565.0	3,595.3	3,544.1	10.3	11.7	17.07	130.4	544.4	109.1	95.6	13.48	8.096	
3,700.0	3,663.7	3,695.3	3,642.0	10.7	12.1	17.02	135.1	563.6	113.0	99.2	13.86	8.155	
3,800.0	3,762.4	3,795.2	3,739.9	11.0	12.5	16.98	139.8	582.9	116.9	102.7	14.24	8.211	
3,900.0	3,861.1	3,895.1	3,837.9	11.3	12.9	16.93	144.5	602.1	120.8	106.2	14.62	8.264	
4,000.0	3,959.8	3,995.0	3,935.8	11.7	13.3	16.89	149.2	621.4	124.7	109.7	15.00	8.314	
4,100.0	4,058.5	4,095.0	4,033.8	12.0	13.7	16.85	153.9	640.6	128.7	113.3	15.39	8.362	
4,200.0	4,157.2	4,194.9	4,131.7	12.3	14.1	16.81	158.6	659.9	132.6	116.8	15.77	8.407	
4,300.0	4,255.9	4,294.8	4,229.6	12.7	14.5	16.78	163.3	679.1	136.5	120.3	16.15	8.451	
4,400.0	4,354.6	4,394.7	4,327.6	13.0	14.9	16.75	168.0	698.4	140.4	123.9	16.53	8.492	
4,500.0	4,453.3	4,494.6	4,425.5	13.3	15.3	16.72	172.6	717.6	144.3	127.4	16.91	8.531	
4,600.0	4,552.0	4,594.6	4,523.5	13.6	15.7	16.69	177.3	736.9	148.2	130.9	17.30	8.569	
4,700.0	4,650.7	4,694.5	4,621.4	14.0	16.1	16.66	182.0	756.1	152.1	134.4	17.68	8.605	
4,800.0	4,749.4	4,794.4	4,719.3	14.3	16.4	16.63	186.7	775.4	156.0	138.0	18.06	8.640	
4,900.0	4,848.1	4,894.3	4,817.3	14.6	16.8	16.61	191.4	794.6	159.9	141.5	18.44	8.673	
5,000.0	4,946.8	4,994.3	4,915.2	15.0	17.2	16.58	196.1	813.8	163.9	145.0	18.82	8.704	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	5,045.5	5,094.2	5,013.1	15.3	17.6	16.56	200.8	833.1	167.8	148.6	19.21	8.735	
5,200.0	5,144.2	5,194.1	5,111.1	15.6	18.0	16.54	205.5	852.3	171.7	152.1	19.59	8.764	
5,300.0	5,242.9	5,294.0	5,209.0	16.0	18.4	16.52	210.2	871.6	175.6	155.6	19.97	8.792	
5,400.0	5,341.6	5,394.0	5,307.0	16.3	18.8	16.50	214.9	890.8	179.5	159.1	20.35	8.819	
5,500.0	5,440.3	5,493.9	5,404.9	16.6	19.2	16.48	219.6	910.1	183.4	162.7	20.73	8.846	
5,600.0	5,539.0	5,593.8	5,502.8	17.0	19.6	16.46	224.3	929.3	187.3	166.2	21.12	8.871	
5,700.0	5,637.7	5,693.7	5,600.8	17.3	20.0	16.44	229.0	948.6	191.2	169.7	21.50	8.895	
5,800.0	5,736.4	5,793.7	5,698.7	17.6	20.4	16.43	233.7	967.8	195.1	173.3	21.88	8.918	
5,900.0	5,835.1	5,893.6	5,796.7	18.0	20.8	16.41	238.4	987.1	199.1	176.8	22.26	8.941	
6,000.0	5,933.8	5,993.5	5,894.6	18.3	21.1	16.39	243.1	1,006.3	203.0	180.3	22.65	8.963	
6,100.0	6,032.5	6,093.4	5,992.5	18.6	21.5	16.38	247.8	1,025.6	206.9	183.8	23.03	8.984	
6,200.0	6,131.1	6,193.3	6,090.5	19.0	21.9	16.36	252.4	1,044.8	210.8	187.4	23.41	9.004	
6,300.0	6,229.8	6,293.3	6,188.4	19.3	22.3	16.35	257.1	1,064.1	214.7	190.9	23.79	9.024	
6,400.0	6,328.6	6,393.1	6,286.3	19.6	22.7	5.06	259.0	1,083.3	218.6	194.3	24.30	8.997	
6,500.0	6,427.1	6,492.2	6,382.9	19.9	23.0	-36.92	248.1	1,102.3	222.6	197.8	24.85	8.958	
6,600.0	6,523.9	6,590.7	6,476.5	20.1	23.3	-55.62	223.9	1,120.7	226.7	201.5	25.18	9.003	
6,700.0	6,617.1	6,688.4	6,565.3	20.3	23.5	-63.25	187.2	1,138.1	230.7	205.4	25.26	9.131	
6,800.0	6,704.8	6,785.6	6,647.9	20.5	23.8	-66.76	138.8	1,154.3	234.5	209.4	25.15	9.327	
6,900.0	6,785.4	6,882.2	6,722.9	20.7	24.0	-68.48	79.8	1,169.1	238.1	213.2	24.91	9.559	
7,000.0	6,857.3	6,978.4	6,789.2	20.9	24.2	-69.34	11.5	1,182.1	241.4	216.7	24.72	9.765	
7,100.0	6,919.0	7,074.2	6,845.7	21.1	24.5	-69.75	-65.0	1,193.2	244.2	219.5	24.70	9.885	
7,200.0	6,969.5	7,169.6	6,891.5	21.5	24.9	-69.94	-148.2	1,202.2	246.5	221.4	25.08	9.829	
7,300.0	7,007.6	7,264.9	6,926.0	21.9	25.3	-70.03	-236.6	1,209.0	248.2	222.2	25.99	9.552	
7,400.0	7,032.7	7,359.9	6,948.7	22.4	25.7	-70.07	-328.7	1,213.5	249.4	221.9	27.50	9.069	
7,500.0	7,044.2	7,454.9	6,959.2	23.1	26.3	-70.10	-423.0	1,215.5	249.9	220.3	29.58	8.449	
7,600.0	7,045.0	7,553.1	6,960.0	23.8	26.9	-70.12	-521.2	1,215.7	249.9	218.1	31.77	7.865	
7,700.0	7,045.0	7,653.1	6,960.0	24.6	27.6	-70.12	-621.2	1,215.7	249.9	215.9	34.01	7.349	
7,800.0	7,045.0	7,753.1	6,960.0	25.6	28.5	-70.12	-721.2	1,215.7	249.9	213.5	36.40	6.866	
7,900.0	7,045.0	7,853.1	6,960.0	26.6	29.4	-70.12	-821.2	1,215.7	249.9	211.0	38.93	6.420	
8,000.0	7,045.0	7,953.1	6,960.0	27.7	30.4	-70.12	-921.2	1,215.7	249.9	208.4	41.57	6.012	
8,100.0	7,045.0	8,053.1	6,960.0	28.8	31.4	-70.12	-1,021.2	1,215.7	249.9	205.6	44.29	5.642	
8,200.0	7,045.0	8,153.1	6,960.0	30.0	32.5	-70.12	-1,121.2	1,215.7	249.9	202.8	47.09	5.307	
8,300.0	7,045.0	8,253.1	6,960.0	31.3	33.7	-70.12	-1,221.2	1,215.7	249.9	200.0	49.96	5.003	
8,400.0	7,045.0	8,353.1	6,960.0	32.6	34.9	-70.12	-1,321.2	1,215.7	249.9	197.1	52.87	4.727	
8,500.0	7,045.0	8,453.1	6,960.0	34.0	36.2	-70.12	-1,421.2	1,215.7	249.9	194.1	55.82	4.477	
8,600.0	7,045.0	8,553.1	6,960.0	35.4	37.5	-70.12	-1,521.2	1,215.7	249.9	191.1	58.82	4.249	
8,700.0	7,045.0	8,653.1	6,960.0	36.8	38.8	-70.12	-1,621.2	1,215.7	249.9	188.1	61.84	4.041	
8,800.0	7,045.0	8,753.1	6,960.0	38.2	40.2	-70.12	-1,721.2	1,215.7	249.9	185.0	64.89	3.851	
8,900.0	7,045.0	8,853.1	6,960.0	39.7	41.6	-70.12	-1,821.2	1,215.7	249.9	182.0	67.97	3.677	
9,000.0	7,045.0	8,953.1	6,960.0	41.2	43.0	-70.12	-1,921.2	1,215.7	249.9	178.9	71.06	3.517	
9,100.0	7,045.0	9,053.1	6,960.0	42.7	44.4	-70.12	-2,021.2	1,215.7	249.9	175.7	74.18	3.369	
9,200.0	7,045.0	9,153.1	6,960.0	44.2	45.9	-70.12	-2,121.2	1,215.7	249.9	172.6	77.31	3.233	
9,300.0	7,045.0	9,253.1	6,960.0	45.8	47.4	-70.12	-2,221.2	1,215.7	249.9	169.5	80.45	3.107	
9,400.0	7,045.0	9,353.1	6,960.0	47.3	48.9	-70.12	-2,321.2	1,215.7	249.9	166.3	83.60	2.989	
9,500.0	7,045.0	9,453.1	6,960.0	48.9	50.4	-70.12	-2,421.2	1,215.7	249.9	163.2	86.77	2.880	
9,600.0	7,045.0	9,553.1	6,960.0	50.5	52.0	-70.12	-2,521.2	1,215.7	249.9	160.0	89.94	2.779	
9,700.0	7,045.0	9,653.1	6,960.0	52.1	53.5	-70.12	-2,621.2	1,215.7	249.9	156.8	93.13	2.684	
9,800.0	7,045.0	9,753.1	6,960.0	53.7	55.1	-70.12	-2,721.2	1,215.7	249.9	153.6	96.32	2.595	
9,900.0	7,045.0	9,853.1	6,960.0	55.3	56.7	-70.12	-2,821.2	1,215.7	249.9	150.4	99.52	2.511	
10,000.0	7,045.0	9,953.1	6,960.0	56.9	58.2	-70.12	-2,921.2	1,215.7	249.9	147.2	102.73	2.433	
10,100.0	7,045.0	10,053.1	6,960.0	58.6	59.8	-70.12	-3,021.2	1,215.7	249.9	144.0	105.94	2.359	
10,200.0	7,045.0	10,153.1	6,960.0	60.2	61.4	-70.12	-3,121.2	1,215.7	249.9	140.8	109.15	2.290	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	10,253.1	6,960.0	61.9	63.1	-70.12	-3,221.2	1,215.7	249.9	137.5	112.38	2.224	
10,400.0	7,045.0	10,353.1	6,960.0	63.5	64.7	-70.12	-3,321.2	1,215.7	249.9	134.3	115.60	2.162	
10,500.0	7,045.0	10,453.1	6,960.0	65.2	66.3	-70.12	-3,421.2	1,215.7	249.9	131.1	118.83	2.103	
10,600.0	7,045.0	10,553.1	6,960.0	66.8	67.9	-70.12	-3,521.2	1,215.7	249.9	127.9	122.07	2.047	
10,700.0	7,045.0	10,653.1	6,960.0	68.5	69.6	-70.12	-3,621.2	1,215.7	249.9	124.6	125.31	1.994	
10,800.0	7,045.0	10,753.1	6,960.0	70.2	71.2	-70.12	-3,721.2	1,215.7	249.9	121.4	128.55	1.944	
10,900.0	7,045.0	10,853.1	6,960.0	71.8	72.9	-70.12	-3,821.2	1,215.7	249.9	118.1	131.79	1.896	
11,000.0	7,045.0	10,953.1	6,960.0	73.5	74.5	-70.12	-3,921.2	1,215.7	249.9	114.9	135.04	1.851	
11,100.0	7,045.0	11,053.1	6,960.0	75.2	76.2	-70.12	-4,021.2	1,215.7	249.9	111.6	138.29	1.807	
11,200.0	7,045.0	11,153.1	6,960.0	76.9	77.8	-70.12	-4,121.2	1,215.7	249.9	108.4	141.54	1.766	
11,300.0	7,045.0	11,253.1	6,960.0	78.6	79.5	-70.12	-4,221.2	1,215.7	249.9	105.1	144.79	1.726	
11,400.0	7,045.0	11,353.1	6,960.0	80.3	81.2	-70.12	-4,321.2	1,215.7	249.9	101.9	148.05	1.688	
11,500.0	7,045.0	11,453.1	6,960.0	82.0	82.9	-70.12	-4,421.2	1,215.7	249.9	98.6	151.31	1.652	
11,600.0	7,045.0	11,553.1	6,960.0	83.6	84.5	-70.12	-4,521.2	1,215.7	249.9	95.4	154.57	1.617	
11,643.9	7,045.0	11,597.0	6,960.0	84.4	85.3	-70.12	-4,565.1	1,215.7	249.9	93.9	156.00	1.602 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	91.03	-0.4	19.9	19.9	19.9	0.00	N/A	
100.0	100.0	100.0	100.0	0.2	0.2	91.03	-0.4	19.9	19.9	19.5	0.35	56.908	
200.0	200.0	200.0	200.0	0.3	0.3	91.03	-0.4	19.9	19.9	19.2	0.70	28.454	CC, ES
300.0	300.0	299.7	299.6	0.5	0.5	90.50	-0.2	20.7	20.7	19.7	1.05	19.779	
400.0	400.0	399.3	399.2	0.7	0.7	16.51	0.3	23.3	22.4	21.0	1.40	16.079	
500.0	500.0	498.9	498.7	0.9	0.9	16.24	1.2	27.5	24.2	22.4	1.74	13.867	
600.0	599.9	598.4	598.1	1.1	1.1	16.35	2.4	33.4	26.0	23.9	2.09	12.402	
700.0	699.7	697.9	697.3	1.3	1.3	16.75	4.0	41.0	27.8	25.3	2.45	11.361	
800.0	799.4	797.4	796.4	1.5	1.5	17.41	5.9	50.3	29.6	26.8	2.80	10.584	
900.0	898.9	896.9	895.2	1.7	1.8	18.25	8.2	61.3	31.5	28.3	3.16	9.978	
1,000.0	998.3	996.3	993.8	1.9	2.1	19.27	10.7	74.0	33.4	29.9	3.52	9.490	
1,100.0	1,097.4	1,095.7	1,092.1	2.2	2.3	20.41	13.7	88.3	35.4	31.5	3.90	9.082	
1,200.0	1,196.3	1,195.1	1,190.1	2.5	2.7	21.66	17.0	104.3	37.4	33.1	4.29	8.730	
1,300.0	1,295.0	1,294.4	1,287.8	2.8	3.0	22.73	20.6	121.9	39.9	35.3	4.69	8.516	
1,400.0	1,393.7	1,393.7	1,385.0	3.1	3.4	23.00	24.5	141.2	44.1	39.0	5.09	8.653	
1,500.0	1,492.4	1,492.7	1,481.8	3.4	3.8	22.60	28.8	162.1	49.8	44.4	5.49	9.085	
1,600.0	1,591.1	1,592.5	1,579.0	3.8	4.2	22.03	33.3	184.0	56.4	50.5	5.87	9.605	
1,700.0	1,689.8	1,692.3	1,676.3	4.1	4.6	21.58	37.8	205.8	63.0	56.7	6.26	10.060	
1,800.0	1,788.5	1,792.1	1,773.6	4.4	5.0	21.21	42.3	227.7	69.6	62.9	6.65	10.463	
1,900.0	1,887.2	1,891.8	1,870.8	4.7	5.5	20.91	46.8	249.5	76.2	69.1	7.04	10.821	
2,000.0	1,985.9	1,991.6	1,968.1	5.0	5.9	20.65	51.2	271.4	82.8	75.3	7.43	11.141	
2,100.0	2,084.6	2,091.4	2,065.3	5.4	6.3	20.44	55.7	293.2	89.4	81.5	7.82	11.430	
2,200.0	2,183.3	2,191.2	2,162.6	5.7	6.7	20.25	60.2	315.1	95.9	87.7	8.21	11.691	
2,300.0	2,282.0	2,291.0	2,259.8	6.0	7.2	20.09	64.7	336.9	102.5	93.9	8.60	11.928	
2,400.0	2,380.7	2,390.8	2,357.1	6.4	7.6	19.94	69.2	358.8	109.1	100.1	8.99	12.145	
2,500.0	2,479.4	2,490.5	2,454.4	6.7	8.0	19.82	73.7	380.6	115.7	106.4	9.38	12.344	
2,600.0	2,578.1	2,590.3	2,551.6	7.0	8.5	19.70	78.1	402.4	122.3	112.6	9.77	12.527	
2,700.0	2,676.8	2,690.1	2,648.9	7.3	8.9	19.60	82.6	424.3	128.9	118.8	10.15	12.695	
2,800.0	2,775.5	2,789.9	2,746.1	7.7	9.3	19.51	87.1	446.1	135.5	125.0	10.54	12.852	
2,900.0	2,874.2	2,889.7	2,843.4	8.0	9.7	19.43	91.6	468.0	142.1	131.2	10.93	12.997	
3,000.0	2,972.9	2,989.5	2,940.6	8.3	10.2	19.35	96.1	489.8	148.7	137.4	11.32	13.132	
3,100.0	3,071.5	3,089.2	3,037.9	8.7	10.6	19.28	100.5	511.7	155.3	143.6	11.71	13.258	
3,200.0	3,170.2	3,189.0	3,135.2	9.0	11.0	19.22	105.0	533.5	161.9	149.8	12.10	13.375	
3,300.0	3,268.9	3,288.8	3,232.4	9.3	11.5	19.16	109.5	555.4	168.5	156.0	12.49	13.486	
3,400.0	3,367.6	3,388.6	3,329.7	9.7	11.9	19.10	114.0	577.2	175.1	162.2	12.88	13.590	
3,500.0	3,466.3	3,488.4	3,426.9	10.0	12.3	19.05	118.5	599.1	181.7	168.4	13.28	13.687	
3,600.0	3,565.0	3,588.1	3,524.2	10.3	12.8	19.01	123.0	620.9	188.3	174.6	13.67	13.779	
3,700.0	3,663.7	3,687.9	3,621.4	10.7	13.2	18.96	127.4	642.8	194.9	180.8	14.06	13.866	
3,800.0	3,762.4	3,787.7	3,718.7	11.0	13.6	18.92	131.9	664.6	201.5	187.0	14.45	13.948	
3,900.0	3,861.1	3,887.5	3,816.0	11.3	14.1	18.88	136.4	686.5	208.1	193.3	14.84	14.026	
4,000.0	3,959.8	3,987.3	3,913.2	11.7	14.5	18.85	140.9	708.3	214.7	199.5	15.23	14.100	
4,100.0	4,058.5	4,087.1	4,010.5	12.0	14.9	18.81	145.4	730.2	221.3	205.7	15.62	14.170	
4,200.0	4,157.2	4,186.8	4,107.7	12.3	15.4	18.78	149.9	752.0	227.9	211.9	16.01	14.237	
4,300.0	4,255.9	4,286.6	4,205.0	12.7	15.8	18.75	154.3	773.9	234.5	218.1	16.40	14.300	
4,400.0	4,354.6	4,386.4	4,302.2	13.0	16.2	18.72	158.8	795.7	241.1	224.3	16.79	14.361	
4,500.0	4,453.3	4,486.2	4,399.5	13.3	16.7	18.70	163.3	817.6	247.7	230.5	17.18	14.419	
4,600.0	4,552.0	4,586.0	4,496.8	13.6	17.1	18.67	167.8	839.4	254.3	236.7	17.57	14.474	
4,700.0	4,650.7	4,685.7	4,594.0	14.0	17.5	18.65	172.3	861.3	260.9	242.9	17.96	14.527	
4,800.0	4,749.4	4,785.5	4,691.3	14.3	18.0	18.62	176.8	883.1	267.5	249.1	18.35	14.577	
4,900.0	4,848.1	4,885.3	4,788.5	14.6	18.4	18.60	181.2	905.0	274.1	255.3	18.74	14.626	
5,000.0	4,946.8	4,985.1	4,885.8	15.0	18.8	18.58	185.7	926.8	280.7	261.5	19.13	14.672	
5,100.0	5,045.5	5,084.9	4,983.0	15.3	19.3	18.56	190.2	948.7	287.3	267.8	19.52	14.717	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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	5,144.2	5,184.7	5,080.3	15.6	19.7	18.54	194.7	970.5	293.9	274.0	19.91	14.760	
5,300.0	5,242.9	5,284.4	5,177.6	16.0	20.1	18.52	199.2	992.4	300.5	280.2	20.30	14.801	
5,400.0	5,341.6	5,384.2	5,274.8	16.3	20.6	18.51	203.6	1,014.2	307.1	286.4	20.69	14.841	
5,500.0	5,440.3	5,484.0	5,372.1	16.6	21.0	18.49	208.1	1,036.1	313.7	292.6	21.08	14.879	
5,600.0	5,539.0	5,583.8	5,469.3	17.0	21.4	18.47	212.6	1,057.9	320.3	298.8	21.47	14.915	
5,700.0	5,637.7	5,683.6	5,566.6	17.3	21.9	18.46	217.1	1,079.8	326.9	305.0	21.86	14.951	
5,800.0	5,736.4	5,783.3	5,663.8	17.6	22.3	18.44	221.6	1,101.6	333.5	311.2	22.25	14.985	
5,900.0	5,835.1	5,883.1	5,761.1	18.0	22.7	18.43	226.1	1,123.5	340.1	317.4	22.64	15.018	
6,000.0	5,933.8	5,982.9	5,858.4	18.3	23.2	18.42	230.5	1,145.3	346.7	323.6	23.03	15.050	
6,100.0	6,032.5	6,082.7	5,955.6	18.6	23.6	18.40	235.0	1,167.1	353.3	329.8	23.42	15.081	
6,200.0	6,131.1	6,182.5	6,052.9	19.0	24.0	18.39	239.5	1,189.0	359.9	336.0	23.82	15.111	
6,300.0	6,229.8	6,282.3	6,150.1	19.3	24.5	18.38	244.0	1,210.8	366.5	342.3	24.21	15.140	
6,400.0	6,328.6	6,382.0	6,247.4	19.6	24.9	6.45	248.5	1,232.7	373.0	348.4	24.61	15.160	
6,500.0	6,427.1	6,481.2	6,344.1	19.9	25.3	-38.25	252.9	1,254.4	379.4	354.8	24.62	15.409	
6,600.0	6,523.9	6,578.0	6,438.4	20.1	25.8	-61.41	257.3	1,275.6	386.5	362.3	24.20	15.974	
6,700.0	6,617.1	6,677.8	6,535.7	20.3	26.2	-74.28	255.4	1,297.5	395.7	371.9	23.79	16.633	
6,800.0	6,704.8	6,782.8	6,636.7	20.5	26.5	-82.70	238.6	1,320.1	406.7	383.0	23.74	17.133	
6,900.0	6,785.4	6,893.3	6,739.2	20.7	26.9	-88.95	204.7	1,343.2	419.2	395.1	24.06	17.425	
7,000.0	6,857.3	7,010.0	6,840.6	20.9	27.2	-93.85	151.9	1,366.0	432.3	407.6	24.66	17.527	
7,100.0	6,919.0	7,133.4	6,937.2	21.1	27.6	-97.78	78.5	1,387.6	445.2	419.7	25.46	17.484	
7,200.0	6,969.5	7,263.4	7,024.1	21.5	27.9	-100.88	-16.0	1,407.2	457.0	430.6	26.34	17.346	
7,300.0	7,007.6	7,399.7	7,095.7	21.9	28.4	-103.19	-130.6	1,423.3	466.7	439.4	27.32	17.087	
7,400.0	7,032.7	7,541.2	7,146.3	22.4	29.0	-104.73	-262.0	1,434.6	473.7	445.3	28.35	16.708	
7,500.0	7,044.2	7,686.0	7,171.0	23.1	29.7	-105.48	-404.3	1,440.2	477.1	447.6	29.48	16.182	
7,600.0	7,045.0	7,802.9	7,173.0	23.8	30.3	-105.55	-521.2	1,440.6	477.4	446.1	31.36	15.225	
7,700.0	7,045.0	7,902.9	7,173.0	24.6	31.0	-105.55	-621.2	1,440.6	477.4	443.7	33.71	14.162	
7,800.0	7,045.0	8,002.9	7,173.0	25.6	31.7	-105.55	-721.2	1,440.6	477.4	441.2	36.23	13.179	
7,900.0	7,045.0	8,102.9	7,173.0	26.6	32.5	-105.55	-821.2	1,440.6	477.4	438.6	38.88	12.281	
8,000.0	7,045.0	8,202.9	7,173.0	27.7	33.4	-105.55	-921.2	1,440.6	477.4	435.8	41.63	11.469	
8,100.0	7,045.0	8,302.9	7,173.0	28.8	34.4	-105.55	-1,021.2	1,440.6	477.4	433.0	44.47	10.736	
8,200.0	7,045.0	8,402.9	7,173.0	30.0	35.4	-105.55	-1,121.2	1,440.6	477.4	430.1	47.38	10.076	
8,300.0	7,045.0	8,502.9	7,173.0	31.3	36.5	-105.55	-1,221.2	1,440.6	477.4	427.1	50.35	9.482	
8,400.0	7,045.0	8,602.9	7,173.0	32.6	37.6	-105.55	-1,321.2	1,440.6	477.4	424.1	53.37	8.945	
8,500.0	7,045.0	8,702.9	7,173.0	34.0	38.7	-105.55	-1,421.2	1,440.6	477.4	421.0	56.43	8.460	
8,600.0	7,045.0	8,802.9	7,173.0	35.4	40.0	-105.55	-1,521.2	1,440.6	477.4	417.9	59.53	8.020	
8,700.0	7,045.0	8,902.9	7,173.0	36.8	41.2	-105.55	-1,621.2	1,440.6	477.4	414.8	62.65	7.620	
8,800.0	7,045.0	9,002.9	7,173.0	38.2	42.5	-105.55	-1,721.2	1,440.6	477.4	411.6	65.80	7.256	
8,900.0	7,045.0	9,102.9	7,173.0	39.7	43.8	-105.55	-1,821.2	1,440.6	477.4	408.5	68.98	6.922	
9,000.0	7,045.0	9,202.9	7,173.0	41.2	45.2	-105.55	-1,921.2	1,440.6	477.4	405.3	72.17	6.616	
9,100.0	7,045.0	9,302.9	7,173.0	42.7	46.6	-105.55	-2,021.2	1,440.6	477.4	402.1	75.37	6.334	
9,200.0	7,045.0	9,402.9	7,173.0	44.2	48.0	-105.55	-2,121.2	1,440.6	477.4	398.9	78.60	6.075	
9,300.0	7,045.0	9,502.9	7,173.0	45.8	49.4	-105.55	-2,221.2	1,440.6	477.4	395.6	81.83	5.834	
9,400.0	7,045.0	9,602.9	7,173.0	47.3	50.8	-105.55	-2,321.2	1,440.6	477.4	392.4	85.08	5.612	
9,500.0	7,045.0	9,702.9	7,173.0	48.9	52.3	-105.55	-2,421.2	1,440.6	477.4	389.1	88.34	5.405	
9,600.0	7,045.0	9,802.9	7,173.0	50.5	53.8	-105.55	-2,521.2	1,440.6	477.4	385.8	91.60	5.212	
9,700.0	7,045.0	9,902.9	7,173.0	52.1	55.3	-105.55	-2,621.2	1,440.6	477.4	382.6	94.87	5.032	
9,800.0	7,045.0	10,002.9	7,173.0	53.7	56.8	-105.55	-2,721.2	1,440.6	477.4	379.3	98.16	4.864	
9,900.0	7,045.0	10,102.9	7,173.0	55.3	58.3	-105.55	-2,821.2	1,440.6	477.4	376.0	101.44	4.707	
10,000.0	7,045.0	10,202.9	7,173.0	56.9	59.9	-105.55	-2,921.2	1,440.6	477.4	372.7	104.74	4.559	
10,100.0	7,045.0	10,302.9	7,173.0	58.6	61.4	-105.55	-3,021.2	1,440.6	477.4	369.4	108.04	4.419	
10,200.0	7,045.0	10,402.9	7,173.0	60.2	63.0	-105.55	-3,121.2	1,440.6	477.4	366.1	111.34	4.288	
10,300.0	7,045.0	10,502.9	7,173.0	61.9	64.6	-105.55	-3,221.2	1,440.6	477.4	362.8	114.65	4.164	

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 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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
10,400.0	7,045.0	10,602.9	7,173.0	63.5	66.1	-105.55	-3,321.2	1,440.6	477.4	359.5	117.96	4.048	
10,500.0	7,045.0	10,702.9	7,173.0	65.2	67.7	-105.55	-3,421.2	1,440.6	477.4	356.2	121.28	3.937	
10,600.0	7,045.0	10,802.9	7,173.0	66.8	69.3	-105.55	-3,521.2	1,440.6	477.4	352.9	124.60	3.832	
10,700.0	7,045.0	10,902.9	7,173.0	68.5	70.9	-105.55	-3,621.2	1,440.6	477.5	349.5	127.92	3.732	
10,800.0	7,045.0	11,002.9	7,173.0	70.2	72.6	-105.55	-3,721.2	1,440.6	477.5	346.2	131.25	3.638	
10,900.0	7,045.0	11,102.9	7,173.0	71.8	74.2	-105.55	-3,821.2	1,440.6	477.5	342.9	134.57	3.548	
11,000.0	7,045.0	11,202.9	7,173.0	73.5	75.8	-105.55	-3,921.2	1,440.6	477.5	339.5	137.91	3.462	
11,100.0	7,045.0	11,302.9	7,173.0	75.2	77.4	-105.55	-4,021.2	1,440.6	477.5	336.2	141.24	3.380	
11,200.0	7,045.0	11,402.9	7,173.0	76.9	79.1	-105.55	-4,121.2	1,440.6	477.5	332.9	144.58	3.302	
11,300.0	7,045.0	11,502.9	7,173.0	78.6	80.7	-105.55	-4,221.2	1,440.6	477.5	329.5	147.91	3.228	
11,400.0	7,045.0	11,602.9	7,173.0	80.3	82.4	-105.55	-4,321.2	1,440.6	477.5	326.2	151.25	3.157	
11,500.0	7,045.0	11,702.9	7,173.0	82.0	84.0	-105.55	-4,421.2	1,440.6	477.5	322.9	154.59	3.088	
11,600.0	7,045.0	11,802.9	7,173.0	83.6	85.7	-105.55	-4,521.2	1,440.6	477.5	319.5	157.94	3.023	
11,643.9	7,045.0	11,846.8	7,173.0	84.4	86.4	-105.55	-4,565.1	1,440.6	477.5	318.0	159.41	2.995	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ruhl 1J-32H-B264
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4955.0ft (No KB)
Reference Site:	S32-T2N-R64W (Newman)	**MD Reference:**	KB @ 4955.0ft (No KB)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ruhl 1J-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 (No KB)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

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