



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4955.0ft
Project:	DJ Wattenberg	MD Reference:	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman/Ruhl)	North Reference:	True
Well:	Ruhl 1H-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/Ruhl)			
Site Position:		Northing:	1,281,150.65 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 1H-32H-B264					
Well Position	+N/-S	0.0 ft	Northing:	1,281,166.07 ft	Latitude:	40.101448
	+E/-W	0.0 ft	Easting:	3,259,912.82 ft	Longitude:	-104.570873
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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,051.2	6.51	65.13	1,049.8	15.5	33.5	1.00	1.00	0.00	65.13	
6,247.2	6.51	65.13	6,212.3	263.4	568.1	0.00	0.00	0.00	0.00	
7,407.7	90.00	181.00	6,960.0	-453.2	632.4	8.00	7.19	9.99	115.73	
11,517.7	90.00	181.00	6,960.0	-4,562.5	560.7	0.00	0.00	0.00	0.00	Ruhl 1H-32H-B264 PI

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4955.0ft
Project:	DJ Wattenberg	MD Reference:	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman/Ruhl)	North Reference:	True
Well:	Ruhl 1H-32H-B264	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	65.13	500.0	0.4	0.8	-0.4	1.00	1.00	
600.0	2.00	65.13	600.0	1.5	3.2	-1.5	1.00	1.00	
700.0	3.00	65.13	699.9	3.3	7.1	-3.3	1.00	1.00	
800.0	4.00	65.13	799.7	5.9	12.7	-5.9	1.00	1.00	
900.0	5.00	65.13	899.4	9.2	19.8	-9.2	1.00	1.00	
1,000.0	6.00	65.13	998.9	13.2	28.5	-13.2	1.00	1.00	
1,001.1	6.01	65.13	1,000.0	13.2	28.6	-13.2	1.00	1.00	Fox Hills - BASE
1,051.2	6.51	65.13	1,049.8	15.5	33.5	-15.5	1.00	1.00	EOB; Inc=6.51°
1,100.0	6.51	65.13	1,098.3	17.9	38.6	-17.9	0.00	0.00	
1,200.0	6.51	65.13	1,197.6	22.6	48.8	-22.6	0.00	0.00	
1,300.0	6.51	65.13	1,297.0	27.4	59.1	-27.4	0.00	0.00	
1,400.0	6.51	65.13	1,396.3	32.2	69.4	-32.2	0.00	0.00	
1,500.0	6.51	65.13	1,495.7	37.0	79.7	-37.0	0.00	0.00	
1,600.0	6.51	65.13	1,595.1	41.7	90.0	-41.7	0.00	0.00	
1,700.0	6.51	65.13	1,694.4	46.5	100.3	-46.5	0.00	0.00	
1,800.0	6.51	65.13	1,793.8	51.3	110.6	-51.3	0.00	0.00	
1,900.0	6.51	65.13	1,893.1	56.0	120.9	-56.0	0.00	0.00	
2,000.0	6.51	65.13	1,992.5	60.8	131.2	-60.8	0.00	0.00	
2,100.0	6.51	65.13	2,091.8	65.6	141.4	-65.6	0.00	0.00	
2,200.0	6.51	65.13	2,191.2	70.3	151.7	-70.3	0.00	0.00	
2,300.0	6.51	65.13	2,290.5	75.1	162.0	-75.1	0.00	0.00	
2,400.0	6.51	65.13	2,389.9	79.9	172.3	-79.9	0.00	0.00	
2,500.0	6.51	65.13	2,489.3	84.6	182.6	-84.6	0.00	0.00	
2,600.0	6.51	65.13	2,588.6	89.4	192.9	-89.4	0.00	0.00	
2,700.0	6.51	65.13	2,688.0	94.2	203.2	-94.2	0.00	0.00	
2,800.0	6.51	65.13	2,787.3	99.0	213.5	-99.0	0.00	0.00	
2,900.0	6.51	65.13	2,886.7	103.7	223.8	-103.7	0.00	0.00	
3,000.0	6.51	65.13	2,986.0	108.5	234.0	-108.5	0.00	0.00	
3,100.0	6.51	65.13	3,085.4	113.3	244.3	-113.3	0.00	0.00	
3,200.0	6.51	65.13	3,184.7	118.0	254.6	-118.0	0.00	0.00	
3,300.0	6.51	65.13	3,284.1	122.8	264.9	-122.8	0.00	0.00	
3,400.0	6.51	65.13	3,383.4	127.6	275.2	-127.6	0.00	0.00	
3,500.0	6.51	65.13	3,482.8	132.3	285.5	-132.3	0.00	0.00	
3,600.0	6.51	65.13	3,582.2	137.1	295.8	-137.1	0.00	0.00	
3,700.0	6.51	65.13	3,681.5	141.9	306.1	-141.9	0.00	0.00	
3,800.0	6.51	65.13	3,780.9	146.7	316.3	-146.7	0.00	0.00	
3,900.0	6.51	65.13	3,880.2	151.4	326.6	-151.4	0.00	0.00	
4,000.0	6.51	65.13	3,979.6	156.2	336.9	-156.2	0.00	0.00	
4,100.0	6.51	65.13	4,078.9	161.0	347.2	-161.0	0.00	0.00	
4,200.0	6.51	65.13	4,178.3	165.7	357.5	-165.7	0.00	0.00	
4,300.0	6.51	65.13	4,277.6	170.5	367.8	-170.5	0.00	0.00	
4,400.0	6.51	65.13	4,377.0	175.3	378.1	-175.3	0.00	0.00	
4,426.2	6.51	65.13	4,403.0	176.5	380.8	-176.5	0.00	0.00	Sussex
4,500.0	6.51	65.13	4,476.4	180.0	388.4	-180.0	0.00	0.00	
4,600.0	6.51	65.13	4,575.7	184.8	398.7	-184.8	0.00	0.00	
4,683.8	6.51	65.13	4,659.0	188.8	407.3	-188.8	0.00	0.00	Shannon
4,700.0	6.51	65.13	4,675.1	189.6	408.9	-189.6	0.00	0.00	

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Site:	S32-T2N-R64W (Newman/Ruhl)	North Reference:	True
Well:	Ruhl 1H-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	6.51	65.13	4,774.4	194.4	419.2	-194.4	0.00	0.00	
4,900.0	6.51	65.13	4,873.8	199.1	429.5	-199.1	0.00	0.00	
5,000.0	6.51	65.13	4,973.1	203.9	439.8	-203.9	0.00	0.00	
5,007.9	6.51	65.13	4,981.0	204.3	440.6	-204.3	0.00	0.00	Teepee Buttes (*if present)
5,100.0	6.51	65.13	5,072.5	208.7	450.1	-208.7	0.00	0.00	
5,200.0	6.51	65.13	5,171.8	213.4	460.4	-213.4	0.00	0.00	
5,300.0	6.51	65.13	5,271.2	218.2	470.7	-218.2	0.00	0.00	
5,400.0	6.51	65.13	5,370.5	223.0	481.0	-223.0	0.00	0.00	
5,500.0	6.51	65.13	5,469.9	227.7	491.3	-227.7	0.00	0.00	
5,600.0	6.51	65.13	5,569.3	232.5	501.5	-232.5	0.00	0.00	
5,700.0	6.51	65.13	5,668.6	237.3	511.8	-237.3	0.00	0.00	
5,800.0	6.51	65.13	5,768.0	242.0	522.1	-242.0	0.00	0.00	
5,900.0	6.51	65.13	5,867.3	246.8	532.4	-246.8	0.00	0.00	
6,000.0	6.51	65.13	5,966.7	251.6	542.7	-251.6	0.00	0.00	
6,100.0	6.51	65.13	6,066.0	256.4	553.0	-256.4	0.00	0.00	
6,200.0	6.51	65.13	6,165.4	261.1	563.3	-261.1	0.00	0.00	
6,247.2	6.51	65.13	6,212.3	263.4	568.1	-263.4	0.00	0.00	Start build/turn @ 6247' MD
6,300.0	6.02	104.33	6,264.8	264.0	573.5	-264.0	8.00	-0.92	
6,400.0	11.05	149.28	6,363.7	254.4	583.5	-254.4	8.00	5.03	
6,500.0	18.32	162.93	6,460.4	231.1	593.1	-231.1	8.00	7.27	
6,600.0	26.01	168.85	6,553.0	194.5	601.9	-194.5	8.00	7.69	
6,700.0	33.84	172.19	6,639.6	145.3	610.0	-145.3	8.00	7.83	
6,800.0	41.73	174.39	6,718.6	84.5	617.0	-84.5	8.00	7.89	
6,900.0	49.64	175.99	6,788.4	13.3	622.9	-13.3	8.00	7.92	
6,975.2	55.61	176.97	6,834.0	-46.3	626.6	46.3	8.00	7.93	Sharon Springs
7,000.0	57.58	177.26	6,847.7	-67.0	627.6	67.0	8.00	7.94	
7,029.6	59.93	177.59	6,863.0	-92.3	628.8	92.3	8.00	7.94	Niobrara
7,100.0	65.52	178.32	6,895.3	-154.8	631.0	154.8	8.00	7.95	
7,200.0	73.48	179.25	6,930.3	-248.4	632.9	248.4	8.00	7.95	
7,270.6	79.10	179.87	6,947.0	-317.0	633.5	317.0	8.00	7.96	B Chalk
7,300.0	81.43	180.11	6,952.0	-345.9	633.5	345.9	8.00	7.96	
7,400.0	89.39	180.94	6,960.0	-445.5	632.6	445.5	8.00	7.96	
7,407.7	90.00	181.00	6,960.0	-453.2	632.4	453.2	8.00	7.96	LP @ 6960' TVD; 90°
7,500.0	90.00	181.00	6,960.0	-545.5	630.8	545.5	0.00	0.00	
7,600.0	90.00	181.00	6,960.0	-645.5	629.1	645.5	0.00	0.00	
7,700.0	90.00	181.00	6,960.0	-745.5	627.3	745.5	0.00	0.00	
7,800.0	90.00	181.00	6,960.0	-845.4	625.6	845.4	0.00	0.00	
7,900.0	90.00	181.00	6,960.0	-945.4	623.8	945.4	0.00	0.00	
8,000.0	90.00	181.00	6,960.0	-1,045.4	622.1	1,045.4	0.00	0.00	
8,100.0	90.00	181.00	6,960.0	-1,145.4	620.3	1,145.4	0.00	0.00	
8,200.0	90.00	181.00	6,960.0	-1,245.4	618.6	1,245.4	0.00	0.00	
8,300.0	90.00	181.00	6,960.0	-1,345.4	616.9	1,345.4	0.00	0.00	
8,400.0	90.00	181.00	6,960.0	-1,445.4	615.1	1,445.4	0.00	0.00	
8,500.0	90.00	181.00	6,960.0	-1,545.3	613.4	1,545.3	0.00	0.00	
8,600.0	90.00	181.00	6,960.0	-1,645.3	611.6	1,645.3	0.00	0.00	
8,700.0	90.00	181.00	6,960.0	-1,745.3	609.9	1,745.3	0.00	0.00	
8,800.0	90.00	181.00	6,960.0	-1,845.3	608.1	1,845.3	0.00	0.00	
8,900.0	90.00	181.00	6,960.0	-1,945.3	606.4	1,945.3	0.00	0.00	
9,000.0	90.00	181.00	6,960.0	-2,045.3	604.6	2,045.3	0.00	0.00	
9,100.0	90.00	181.00	6,960.0	-2,145.2	602.9	2,145.2	0.00	0.00	
9,200.0	90.00	181.00	6,960.0	-2,245.2	601.1	2,245.2	0.00	0.00	
9,300.0	90.00	181.00	6,960.0	-2,345.2	599.4	2,345.2	0.00	0.00	

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Project:	DJ Wattenberg	MD Reference:	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman/Ruhl)	North Reference:	True
Well:	Ruhl 1H-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
9,400.0	90.00	181.00	6,960.0	-2,445.2	597.7	2,445.2	0.00	0.00	
9,500.0	90.00	181.00	6,960.0	-2,545.2	595.9	2,545.2	0.00	0.00	
9,600.0	90.00	181.00	6,960.0	-2,645.2	594.2	2,645.2	0.00	0.00	
9,700.0	90.00	181.00	6,960.0	-2,745.2	592.4	2,745.2	0.00	0.00	
9,800.0	90.00	181.00	6,960.0	-2,845.1	590.7	2,845.1	0.00	0.00	
9,900.0	90.00	181.00	6,960.0	-2,945.1	588.9	2,945.1	0.00	0.00	
10,000.0	90.00	181.00	6,960.0	-3,045.1	587.2	3,045.1	0.00	0.00	
10,100.0	90.00	181.00	6,960.0	-3,145.1	585.4	3,145.1	0.00	0.00	
10,200.0	90.00	181.00	6,960.0	-3,245.1	583.7	3,245.1	0.00	0.00	
10,300.0	90.00	181.00	6,960.0	-3,345.1	581.9	3,345.1	0.00	0.00	
10,400.0	90.00	181.00	6,960.0	-3,445.0	580.2	3,445.0	0.00	0.00	
10,500.0	90.00	181.00	6,960.0	-3,545.0	578.5	3,545.0	0.00	0.00	
10,600.0	90.00	181.00	6,960.0	-3,645.0	576.7	3,645.0	0.00	0.00	
10,700.0	90.00	181.00	6,960.0	-3,745.0	575.0	3,745.0	0.00	0.00	
10,800.0	90.00	181.00	6,960.0	-3,845.0	573.2	3,845.0	0.00	0.00	
10,900.0	90.00	181.00	6,960.0	-3,945.0	571.5	3,945.0	0.00	0.00	
11,000.0	90.00	181.00	6,960.0	-4,045.0	569.7	4,045.0	0.00	0.00	
11,100.0	90.00	181.00	6,960.0	-4,144.9	568.0	4,144.9	0.00	0.00	
11,200.0	90.00	181.00	6,960.0	-4,244.9	566.2	4,244.9	0.00	0.00	
11,300.0	90.00	181.00	6,960.0	-4,344.9	564.5	4,344.9	0.00	0.00	
11,400.0	90.00	181.00	6,960.0	-4,444.9	562.8	4,444.9	0.00	0.00	
11,500.0	90.00	181.00	6,960.0	-4,544.9	561.0	4,544.9	0.00	0.00	
11,517.7	90.00	181.00	6,960.0	-4,562.5	560.7	4,562.5	0.00	0.00	TD at 11517.7

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Ruhl 1H-32H-B264 PBH	0.00	0.00	6,960.0	-4,562.5	560.7	1,276,609.64	3,260,521.29	40.088923	-104.568869
- plan hits target center									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,001.1	1,000.0	Fox Hills - BASE			
4,426.2	4,403.0	Sussex			
4,683.8	4,659.0	Shannon			
5,007.9	4,981.0	Teepee Buttes (*if present)			
6,975.2	6,834.0	Sharon Springs			
7,029.6	6,863.0	Niobrara			
7,270.6	6,947.0	B Chalk			

Planning Report

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Project:	DJ Wattenberg	MD Reference:	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman/Ruhl)	North Reference:	True
Well:	Ruhl 1H-32H-B264	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP @ 400'
1,051.2	1,049.8	15.5	33.5	EOB; Inc=6.51°
6,247.2	6,212.3	263.4	568.1	Start build/turn @ 6247' MD
7,407.7	6,960.0	-453.2	632.4	LP @ 6960' TVD; 90°
11,517.7	6,960.0	-4,562.5	560.7	TD at 11517.7

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S32-T2N-R64W (Newman/Ruhl)

Ruhl 1H-32H-B264

Hz

Plan #1

Anticollision Report

31 July, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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:	Stations	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	7/24/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,517.7	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

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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	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
Offset Well - Wellbore - Design			Between Centres (ft)	Between Ellipses (ft)		
S32-T2N-R64W (Newman/Ruhl)						
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	7,601.0	7,005.5	77.8	48.0	2.610	CC, ES, SF
Ruhl 1A-32H-B264 - Hz - Plan #1	200.0	200.0	802.3	801.6	1,149.201	CC, ES
Ruhl 1A-32H-B264 - Hz - Plan #1	2,000.0	1,963.6	986.7	979.3	134.584	SF
Ruhl 1B-32H-B264 - Hz - Plan #1	400.0	400.0	792.2	790.8	567.388	CC, ES
Ruhl 1B-32H-B264 - Hz - Plan #1	2,700.0	2,691.3	994.6	984.7	100.342	SF
Ruhl 1C-32H-B264 - Hz - Plan #1	400.0	400.0	782.2	780.8	560.176	CC, ES
Ruhl 1C-32H-B264 - Hz - Plan #1	3,800.0	3,820.1	995.3	981.0	69.863	SF
Ruhl 1D-32H-B264 - Hz - Plan #1	821.4	873.5	771.8	768.8	258.923	CC
Ruhl 1D-32H-B264 - Hz - Plan #1	11,517.7	11,579.4	903.8	739.9	5.513	ES, SF
Ruhl 1E-32H-B264 - Hz - Plan #1	11,517.7	11,512.8	674.9	510.3	4.101	CC, ES, SF
Ruhl 1F-32H-B264 - Hz - Plan #1	11,517.7	11,747.9	497.8	348.1	3.325	CC, ES, SF
Ruhl 1G-32H-B264 - Hz - Plan #1	400.0	400.0	10.1	8.7	7.218	CC, ES
Ruhl 1G-32H-B264 - Hz - Plan #1	11,517.7	11,577.0	240.5	85.7	1.554	SF
Ruhl 1I-32H-B264 - Hz - Plan #1	333.4	333.4	10.1	8.9	8.653	CC
Ruhl 1I-32H-B264 - Hz - Plan #1	400.0	399.9	10.3	8.9	7.359	ES
Ruhl 1I-32H-B264 - Hz - Plan #1	11,517.7	11,741.8	310.0	188.0	2.541	SF
Ruhl 1J-32H-B264 - Hz - Plan #1	300.0	300.0	20.1	19.1	19.233	CC, ES
Ruhl 1J-32H-B264 - Hz - Plan #1	11,517.7	11,641.4	448.2	286.5	2.772	SF
Ruhl 1K-32H-B264 - Hz - Plan #1	233.3	233.3	29.9	29.1	36.747	CC
Ruhl 1K-32H-B264 - Hz - Plan #1	300.0	299.7	30.1	29.1	28.796	ES
Ruhl 1K-32H-B264 - Hz - Plan #1	11,517.7	11,594.5	675.1	510.6	4.103	SF
Ruhl 1L-32H-B264 - Hz - Plan #1	200.0	200.0	40.0	39.3	57.301	CC, ES
Ruhl 1L-32H-B264 - Hz - Plan #1	11,517.7	11,844.3	924.9	764.7	5.772	SF

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

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - RUHL 1 (EXISTING) - EXISTING - ENCANA WELL												Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
0.0	0.0	37.8	37.8	0.0	0.1	142.81	-698.0	529.6	876.1	876.1	0.07	N/A	
100.0	100.0	133.5	133.5	0.2	0.2	142.80	-698.3	530.1	876.7	876.3	0.41	2,148.638	
200.0	200.0	233.5	233.4	0.3	0.4	142.80	-699.0	530.5	877.5	876.7	0.76	1,158.500	
300.0	300.0	336.3	336.3	0.5	0.6	142.83	-699.7	530.5	878.0	876.9	1.11	789.802	
400.0	400.0	436.1	436.1	0.7	0.8	142.85	-700.1	530.5	878.4	877.0	1.46	601.372	
500.0	500.0	533.8	533.8	0.9	0.9	77.77	-700.6	530.9	878.8	877.0	1.80	486.914	
600.0	600.0	632.9	632.9	1.1	1.1	77.95	-701.4	531.0	879.0	876.9	2.16	407.760	
700.0	699.9	732.1	732.1	1.2	1.3	78.25	-702.3	531.3	879.0	876.5	2.51	349.809	
800.0	799.7	831.4	831.4	1.4	1.5	78.66	-703.2	531.6	878.7	875.8	2.88	305.190	
900.0	899.4	930.9	930.9	1.6	1.6	79.18	-704.0	532.0	878.1	874.9	3.26	269.478	
1,000.0	998.9	1,031.3	1,031.3	1.9	1.8	79.81	-704.9	532.5	877.3	873.7	3.66	239.988	
1,051.2	1,049.8	1,083.7	1,083.6	2.0	1.9	80.19	-705.2	532.7	876.8	872.9	3.87	226.765	
1,100.0	1,098.3	1,132.8	1,132.8	2.1	2.0	80.55	-705.5	532.8	876.2	872.1	4.07	215.377	
1,200.0	1,197.6	1,231.4	1,231.4	2.3	2.2	81.29	-706.2	533.0	875.0	870.5	4.48	195.235	
1,300.0	1,297.0	1,329.0	1,329.0	2.6	2.3	82.01	-707.0	533.3	874.2	869.3	4.90	178.468	
1,400.0	1,396.3	1,429.7	1,429.6	2.8	2.5	82.76	-707.7	533.7	873.5	868.2	5.32	164.074	
1,500.0	1,495.7	1,528.4	1,528.3	3.1	2.7	83.50	-708.5	533.9	872.9	867.2	5.75	151.846	
1,600.0	1,595.1	1,626.2	1,626.1	3.3	2.8	84.25	-709.5	534.1	872.7	866.5	6.17	141.339	
1,700.0	1,694.4	1,726.7	1,726.6	3.6	3.0	85.03	-710.6	534.1	872.6	866.0	6.61	132.085	
1,800.0	1,793.8	1,828.2	1,828.2	3.9	3.2	85.82	-711.5	534.0	872.5	865.4	7.04	123.901	
1,900.0	1,893.1	1,928.7	1,928.7	4.1	3.4	86.63	-712.5	533.5	872.3	864.8	7.48	116.671	
1,960.1	1,952.8	1,987.9	1,987.8	4.3	3.5	87.10	-713.0	533.2	872.2	864.5	7.74	112.754	
2,000.0	1,992.5	2,028.0	2,027.9	4.4	3.6	87.42	-713.3	533.0	872.2	864.3	7.91	110.278	
2,074.7	2,066.7	2,103.5	2,103.4	4.6	3.7	88.03	-714.0	532.5	872.2	864.0	8.24	105.908	
2,100.0	2,091.8	2,128.3	2,128.2	4.6	3.7	88.23	-714.2	532.3	872.2	863.9	8.34	104.523	
2,200.0	2,191.2	2,228.2	2,228.2	4.9	3.9	89.04	-715.0	531.7	872.4	863.6	8.78	99.364	
2,300.0	2,290.5	2,332.9	2,332.8	5.2	4.1	89.88	-715.4	530.8	872.3	863.1	9.22	94.574	
2,400.0	2,389.9	2,435.8	2,435.7	5.4	4.3	90.70	-715.4	529.8	871.9	862.3	9.66	90.223	
2,500.0	2,489.3	2,538.9	2,538.8	5.7	4.4	91.52	-714.8	528.7	871.2	861.1	10.10	86.220	
2,600.0	2,588.6	2,640.4	2,640.3	5.9	4.6	92.34	-714.0	527.4	870.4	859.8	10.54	82.558	
2,700.0	2,688.0	2,739.3	2,739.2	6.2	4.8	93.13	-713.1	526.2	869.6	858.6	10.98	79.228	
2,800.0	2,787.3	2,837.9	2,837.8	6.5	5.0	93.90	-712.2	525.3	869.1	857.6	11.41	76.185	
2,900.0	2,886.7	2,938.3	2,938.2	6.7	5.1	94.65	-711.0	524.8	868.6	856.8	11.84	73.356	
3,000.0	2,986.0	3,038.4	3,038.2	7.0	5.3	95.37	-709.6	524.7	868.3	856.0	12.27	70.741	
3,100.0	3,085.4	3,138.6	3,138.4	7.2	5.5	96.08	-708.0	524.7	867.9	855.2	12.71	68.304	
3,200.0	3,184.7	3,238.0	3,237.8	7.5	5.7	96.79	-706.4	524.7	867.7	854.6	13.14	66.051	
3,300.0	3,284.1	3,338.3	3,338.1	7.8	5.8	97.51	-704.9	524.5	867.5	854.0	13.57	63.939	
3,400.0	3,383.4	3,437.9	3,437.7	8.0	6.0	98.24	-703.2	524.2	867.5	853.5	14.00	61.975	
3,423.7	3,407.0	3,461.6	3,461.4	8.1	6.0	98.41	-702.8	524.2	867.5	853.4	14.10	61.527	
3,500.0	3,482.8	3,537.9	3,537.7	8.3	6.2	98.95	-701.5	524.2	867.5	853.1	14.43	60.134	
3,600.0	3,582.2	3,638.0	3,637.7	8.6	6.4	99.65	-699.7	524.2	867.6	852.7	14.85	58.407	
3,700.0	3,681.5	3,740.2	3,739.9	8.8	6.5	100.37	-697.7	524.3	867.6	852.4	15.28	56.767	
3,800.0	3,780.9	3,843.6	3,843.3	9.1	6.7	101.08	-695.1	524.5	867.3	851.6	15.72	55.189	
3,900.0	3,880.2	3,944.7	3,944.3	9.4	6.9	101.74	-692.1	525.0	866.9	850.8	16.14	53.703	
4,000.0	3,979.6	4,045.7	4,045.3	9.6	7.1	102.39	-689.0	525.7	866.4	849.8	16.57	52.292	
4,100.0	4,078.9	4,145.0	4,144.6	9.9	7.2	103.03	-685.8	526.4	865.9	848.9	16.99	50.962	
4,200.0	4,178.3	4,242.0	4,241.6	10.1	7.4	103.64	-682.8	527.3	865.7	848.2	17.41	49.727	
4,203.0	4,181.2	4,244.9	4,244.4	10.1	7.4	103.66	-682.7	527.4	865.7	848.2	17.42	49.692	
4,300.0	4,277.6	4,339.8	4,339.2	10.4	7.6	104.25	-680.0	528.4	865.8	848.0	17.83	48.573	
4,400.0	4,377.0	4,436.5	4,436.0	10.7	7.8	104.86	-677.5	529.3	866.2	848.0	18.24	47.492	
4,500.0	4,476.4	4,530.6	4,530.0	10.9	7.9	105.45	-675.5	530.4	867.4	848.8	18.65	46.511	
4,600.0	4,575.7	4,628.1	4,627.5	11.2	8.1	106.05	-673.9	531.7	869.0	850.0	19.06	45.587	

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Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
4,700.0	4,675.1	4,727.8	4,727.2	11.5	8.3	106.66	-672.4	533.0	870.9	851.5	19.48	44.712		
4,800.0	4,774.4	4,831.1	4,830.4	11.7	8.4	107.35	-670.6	533.6	872.6	852.7	19.90	43.856		
4,900.0	4,873.8	4,932.1	4,931.4	12.0	8.6	108.05	-668.6	533.5	874.1	853.8	20.31	43.042		
5,000.0	4,973.1	5,032.1	5,031.4	12.3	8.8	108.79	-666.6	532.8	875.6	854.9	20.72	42.270		
5,100.0	5,072.5	5,130.1	5,129.4	12.5	9.0	109.51	-664.7	532.1	877.3	856.2	21.12	41.545		
5,200.0	5,171.8	5,226.8	5,226.1	12.8	9.1	110.24	-663.1	531.1	879.5	857.9	21.52	40.876		
5,300.0	5,271.2	5,324.7	5,324.0	13.0	9.3	110.97	-661.6	530.1	881.9	860.0	21.91	40.248		
5,400.0	5,370.5	5,423.2	5,422.4	13.3	9.5	111.68	-660.3	529.4	884.7	862.4	22.31	39.655		
5,500.0	5,469.9	5,522.0	5,521.3	13.6	9.7	112.37	-659.0	529.1	887.6	864.9	22.71	39.093		
5,600.0	5,569.3	5,621.8	5,621.0	13.8	9.8	113.06	-657.7	528.9	890.7	867.6	23.10	38.557		
5,700.0	5,668.6	5,721.6	5,720.8	14.1	10.0	113.73	-656.4	528.8	893.9	870.4	23.50	38.044		
5,800.0	5,768.0	5,819.9	5,819.1	14.4	10.2	114.37	-655.1	528.9	897.3	873.4	23.89	37.561		
5,900.0	5,867.3	5,919.2	5,918.4	14.6	10.4	115.01	-653.9	529.2	900.8	876.5	24.28	37.099		
6,000.0	5,966.7	6,017.9	6,017.1	14.9	10.5	115.64	-652.7	529.3	904.5	879.8	24.67	36.665		
6,100.0	6,066.0	6,119.0	6,118.2	15.2	10.7	116.27	-651.5	529.8	908.2	883.1	25.06	36.241		
6,200.0	6,165.4	6,218.7	6,217.8	15.4	10.9	116.86	-650.1	530.5	911.9	886.5	25.45	35.834		
6,247.2	6,212.3	6,265.4	6,264.5	15.5	11.0	117.14	-649.5	530.8	913.7	888.1	25.63	35.650		
6,250.0	6,215.1	6,268.1	6,267.3	15.6	11.0	115.37	-649.5	530.9	913.8	888.2	25.64	35.637		
6,300.0	6,264.8	6,316.9	6,316.1	15.7	11.1	78.46	-648.9	531.3	913.9	888.0	25.81	35.408		
6,350.0	6,314.4	6,364.3	6,363.4	15.8	11.1	49.57	-648.4	531.9	910.5	884.6	25.88	35.183		
6,400.0	6,363.7	6,411.9	6,411.1	15.8	11.2	34.49	-648.0	532.7	903.8	878.0	25.86	34.955		
6,450.0	6,412.5	6,460.8	6,459.9	15.9	11.3	26.55	-647.6	533.6	893.8	868.0	25.74	34.717		
6,500.0	6,460.4	6,508.8	6,507.9	15.9	11.4	21.97	-647.3	534.3	880.4	854.8	25.54	34.469		
6,550.0	6,507.3	6,556.1	6,555.2	16.0	11.5	19.15	-646.9	535.1	863.6	838.4	25.25	34.205		
6,600.0	6,553.0	6,602.0	6,601.1	16.0	11.6	17.38	-646.6	536.0	843.7	818.8	24.87	33.918		
6,650.0	6,597.1	6,645.4	6,644.4	16.0	11.6	16.26	-646.2	536.9	820.6	796.2	24.42	33.603		
6,700.0	6,639.6	6,687.1	6,686.2	16.1	11.7	15.63	-646.0	538.0	794.6	770.7	23.90	33.247		
6,750.0	6,680.1	6,727.1	6,726.2	16.1	11.8	15.38	-645.8	539.2	765.7	742.4	23.32	32.836		
6,800.0	6,718.6	6,765.2	6,764.2	16.2	11.8	15.48	-645.6	540.5	734.1	711.4	22.69	32.348		
6,850.0	6,754.7	6,801.0	6,800.0	16.2	11.9	15.92	-645.5	541.8	700.0	677.9	22.04	31.755		
6,900.0	6,788.4	6,834.7	6,833.7	16.3	12.0	16.74	-645.3	543.1	663.5	642.1	21.39	31.018		
6,950.0	6,819.4	6,865.8	6,864.7	16.4	12.0	18.01	-645.3	544.4	624.7	604.0	20.77	30.084		
7,000.0	6,847.7	6,894.1	6,893.0	16.6	12.1	19.86	-645.2	545.7	584.0	563.7	20.22	28.879		
7,050.0	6,873.0	6,919.1	6,918.0	16.7	12.1	22.49	-645.1	546.9	541.4	521.6	19.82	27.311		
7,100.0	6,895.3	6,941.1	6,940.0	16.9	12.2	26.21	-645.1	548.0	497.3	477.6	19.68	25.262		
7,150.0	6,914.4	6,960.1	6,958.9	17.2	12.2	31.55	-645.1	548.9	451.8	431.9	19.97	22.626		
7,200.0	6,930.3	6,975.8	6,974.6	17.4	12.2	39.20	-645.1	549.8	405.3	384.4	20.89	19.402		
7,250.0	6,942.8	6,988.3	6,987.1	17.8	12.2	49.93	-645.1	550.5	358.1	335.5	22.59	15.852		
7,300.0	6,952.0	6,997.5	6,996.3	18.1	12.3	63.78	-645.1	551.0	310.4	285.6	24.77	12.530		
7,350.0	6,957.7	7,003.1	7,001.9	18.5	12.3	78.77	-645.1	551.3	262.7	236.1	26.56	9.888		
7,400.0	6,960.0	7,005.4	7,004.2	18.9	12.3	91.51	-645.1	551.4	215.5	188.0	27.45	7.851		
7,407.7	6,960.0	7,005.4	7,004.2	19.0	12.3	93.09	-645.1	551.4	208.4	180.8	27.52	7.571		
7,500.0	6,960.0	7,005.4	7,004.2	19.8	12.3	93.12	-645.1	551.4	127.5	98.9	28.56	4.462		
7,600.0	6,960.0	7,005.5	7,004.3	20.8	12.3	93.14	-645.1	551.4	77.8	48.0	29.79	2.611		
7,601.0	6,960.0	7,005.5	7,004.3	20.9	12.3	93.14	-645.1	551.4	77.8	48.0	29.80	2.610 CC, ES, SF		
7,700.0	6,960.0	7,005.5	7,004.3	22.0	12.3	93.16	-645.1	551.4	125.9	94.8	31.10	4.049		
7,800.0	6,960.0	7,005.5	7,004.3	23.2	12.3	93.19	-645.1	551.4	213.7	181.2	32.48	6.580		
7,900.0	6,960.0	7,005.6	7,004.4	24.4	12.3	93.21	-645.1	551.4	309.0	275.1	33.91	9.112		
8,000.0	6,960.0	7,005.6	7,004.4	25.7	12.3	93.23	-645.1	551.4	406.5	371.2	35.38	11.490		
8,100.0	6,960.0	7,005.6	7,004.4	27.1	12.3	93.26	-645.1	551.4	505.1	468.2	36.89	13.690		
8,200.0	6,960.0	7,005.7	7,004.5	28.5	12.3	93.28	-645.1	551.4	604.1	565.6	38.43	15.717		
8,300.0	6,960.0	7,005.7	7,004.5	30.0	12.3	93.31	-645.1	551.4	703.3	663.3	40.00	17.584		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - RUHL 1 (EXISTING) - EXISTING - ENCANA WELL												Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
8,400.0	6,960.0	7,005.7	7,004.5	31.4	12.3	93.33	-645.1	551.4	802.8	761.2	41.59	19.305	
8,500.0	6,960.0	7,005.8	7,004.6	33.0	12.3	93.36	-645.1	551.4	902.4	859.2	43.19	20.894	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore +N/-S (ft)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.23	-3.2	-802.3	802.3					
100.0	100.0	100.0	100.0	0.2	0.2	-90.23	-3.2	-802.3	802.3	801.9	0.35	2,298.402	CC, ES	
200.0	200.0	200.0	200.0	0.3	0.3	-90.23	-3.2	-802.3	802.3	801.6	0.70	1,149.201		
300.0	300.0	286.2	286.2	0.5	0.5	-90.16	-2.2	-803.0	803.2	802.1	1.03	783.294		
400.0	400.0	374.9	374.7	0.7	0.7	-89.92	1.1	-805.3	805.7	804.3	1.36	591.405		
500.0	500.0	474.7	474.4	0.9	0.9	-154.74	5.6	-808.4	809.6	807.9	1.72	470.233		
600.0	600.0	574.5	574.1	1.1	1.1	-154.48	10.0	-811.5	815.2	813.1	2.08	391.231		
700.0	699.9	674.2	673.6	1.2	1.2	-154.27	14.5	-814.7	822.3	819.8	2.45	336.069		
800.0	799.7	773.8	773.1	1.4	1.4	-154.11	19.0	-817.8	831.0	828.2	2.81	295.564		
900.0	899.4	873.3	872.4	1.6	1.6	-154.00	23.4	-820.9	841.2	838.0	3.18	264.691		
1,000.0	998.9	972.6	971.6	1.9	1.8	-153.93	27.9	-824.0	853.0	849.5	3.55	240.480		
1,051.2	1,049.8	1,023.3	1,022.2	2.0	1.9	-153.92	30.2	-825.6	859.7	855.9	3.74	230.056		
1,100.0	1,098.3	1,071.7	1,070.5	2.1	2.0	-153.93	32.3	-827.1	866.2	862.3	3.92	220.968		
1,200.0	1,197.6	1,170.8	1,169.5	2.3	2.2	-153.97	36.8	-830.2	879.6	875.3	4.30	204.731		
1,300.0	1,297.0	1,269.9	1,268.4	2.6	2.4	-154.00	41.2	-833.3	893.0	888.3	4.67	191.063		
1,400.0	1,396.3	1,369.0	1,367.4	2.8	2.6	-154.04	45.7	-836.4	906.4	901.3	5.05	179.408		
1,500.0	1,495.7	1,468.1	1,466.3	3.1	2.8	-154.07	50.1	-839.5	919.7	914.3	5.43	169.356		
1,600.0	1,595.1	1,567.2	1,565.3	3.3	3.0	-154.10	54.6	-842.6	933.1	927.3	5.81	160.601		
1,700.0	1,694.4	1,666.3	1,664.2	3.6	3.2	-154.14	59.0	-845.7	946.5	940.3	6.19	152.909		
1,800.0	1,793.8	1,765.4	1,763.2	3.9	3.4	-154.17	63.4	-848.8	959.9	953.3	6.57	146.099		
1,900.0	1,893.1	1,864.5	1,862.1	4.1	3.6	-154.19	67.9	-851.9	973.3	966.3	6.95	140.028		
2,000.0	1,992.5	1,963.6	1,961.1	4.4	3.8	-154.22	72.3	-855.0	986.7	979.3	7.33	134.584	SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-90.23	-3.2	-792.2	792.2					
100.0	100.0	100.0	100.0	0.2	0.2	-90.23	-3.2	-792.2	792.2	791.9	0.35	2,269.552		
200.0	200.0	200.0	200.0	0.3	0.3	-90.23	-3.2	-792.2	792.2	791.5	0.70	1,134.776		
300.0	300.0	300.0	300.0	0.5	0.5	-90.23	-3.2	-792.2	792.2	791.2	1.05	756.517		
400.0	400.0	400.0	400.0	0.7	0.7	-90.23	-3.2	-792.2	792.2	790.8	1.40	567.388	CC, ES	
500.0	500.0	500.0	500.0	0.9	0.9	-155.39	-3.2	-792.2	793.0	791.3	1.75	454.379		
600.0	600.0	600.0	600.0	1.1	1.0	-155.45	-3.2	-792.2	795.4	793.3	2.09	379.774		
700.0	699.9	699.9	699.9	1.2	1.2	-155.57	-3.2	-792.2	799.4	796.9	2.44	327.069		
800.0	799.7	799.7	799.7	1.4	1.4	-155.73	-3.2	-792.2	804.9	802.1	2.79	288.031		
900.0	899.4	899.4	899.4	1.6	1.6	-155.92	-3.2	-792.2	812.1	808.9	3.15	258.097		
1,000.0	998.9	998.9	998.9	1.9	1.7	-156.16	-3.2	-792.2	820.9	817.4	3.50	234.534		
1,051.2	1,049.8	1,050.2	1,050.2	2.0	1.8	-156.27	-2.8	-792.2	825.9	822.3	3.68	224.286		
1,100.0	1,098.3	1,099.3	1,099.2	2.1	1.9	-156.33	-1.5	-792.2	831.0	827.1	3.86	215.338		
1,200.0	1,197.6	1,199.2	1,199.1	2.3	2.1	-156.32	3.2	-792.2	841.2	837.0	4.22	199.151		
1,300.0	1,297.0	1,298.7	1,298.4	2.6	2.3	-156.27	8.4	-792.1	851.4	846.9	4.59	185.410		
1,400.0	1,396.3	1,398.2	1,397.8	2.8	2.5	-156.23	13.6	-792.0	861.7	856.7	4.96	173.604		
1,500.0	1,495.7	1,497.7	1,497.1	3.1	2.6	-156.19	18.8	-792.0	871.9	866.6	5.34	163.366		
1,600.0	1,595.1	1,597.1	1,596.4	3.3	2.8	-156.14	24.0	-791.9	882.1	876.4	5.71	154.415		
1,700.0	1,694.4	1,696.6	1,695.8	3.6	3.0	-156.10	29.2	-791.9	892.3	886.3	6.09	146.529		
1,800.0	1,793.8	1,796.1	1,795.1	3.9	3.2	-156.06	34.4	-791.8	902.6	896.1	6.47	139.534		
1,900.0	1,893.1	1,895.5	1,894.5	4.1	3.4	-156.02	39.6	-791.8	912.8	906.0	6.85	133.291		
2,000.0	1,992.5	1,995.0	1,993.8	4.4	3.6	-155.99	44.8	-791.7	923.0	915.8	7.23	127.686		
2,100.0	2,091.8	2,094.5	2,093.1	4.6	3.8	-155.95	50.0	-791.7	933.3	925.6	7.61	122.628		
2,200.0	2,191.2	2,194.0	2,192.5	4.9	4.0	-155.91	55.2	-791.6	943.5	935.5	7.99	118.043		
2,300.0	2,290.5	2,293.4	2,291.8	5.2	4.2	-155.88	60.4	-791.6	953.7	945.3	8.38	113.867		
2,400.0	2,389.9	2,392.9	2,391.1	5.4	4.4	-155.84	65.6	-791.5	963.9	955.2	8.76	110.050		
2,500.0	2,489.3	2,492.4	2,490.5	5.7	4.5	-155.81	70.8	-791.5	974.2	965.0	9.14	106.547		
2,600.0	2,588.6	2,591.9	2,589.8	5.9	4.7	-155.77	76.0	-791.4	984.4	974.9	9.53	103.322		
2,700.0	2,688.0	2,691.3	2,689.2	6.2	4.9	-155.74	81.2	-791.4	994.6	984.7	9.91	100.342	SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-90.24	-3.3	-782.1	782.2					
100.0	100.0	100.0	100.0	0.2	0.2	-90.24	-3.3	-782.1	782.2	781.8	0.35	2,240.702		
200.0	200.0	200.0	200.0	0.3	0.3	-90.24	-3.3	-782.1	782.2	781.5	0.70	1,120.351		
300.0	300.0	300.0	300.0	0.5	0.5	-90.24	-3.3	-782.1	782.2	781.1	1.05	746.901		
400.0	400.0	400.0	400.0	0.7	0.7	-90.24	-3.3	-782.1	782.2	780.8	1.40	560.176 CC, ES		
500.0	500.0	500.0	500.0	0.9	0.9	-155.39	-3.3	-782.1	782.9	781.2	1.75	448.609		
600.0	600.0	600.0	600.0	1.1	1.0	-155.46	-3.3	-782.1	785.3	783.2	2.09	374.966		
700.0	699.9	708.7	708.7	1.2	1.2	-155.53	-2.4	-781.5	788.7	786.3	2.46	320.642		
800.0	799.7	817.5	817.4	1.4	1.4	-155.53	0.1	-779.7	792.6	789.8	2.83	280.206		
900.0	899.4	926.3	926.1	1.6	1.6	-155.47	4.3	-776.7	797.0	793.8	3.20	248.811		
1,000.0	998.9	1,026.8	1,026.4	1.9	1.8	-155.39	9.0	-773.3	802.3	798.7	3.57	224.830		
1,051.2	1,049.8	1,077.8	1,077.4	2.0	1.9	-155.37	11.4	-771.6	805.6	801.8	3.76	214.480		
1,100.0	1,098.3	1,126.5	1,126.0	2.1	2.0	-155.37	13.7	-769.9	809.0	805.0	3.94	205.453		
1,200.0	1,197.6	1,226.3	1,225.6	2.3	2.2	-155.38	18.4	-766.5	815.9	811.5	4.31	189.263		
1,300.0	1,297.0	1,326.1	1,325.2	2.6	2.4	-155.38	23.2	-763.1	822.8	818.1	4.69	175.580		
1,400.0	1,396.3	1,425.8	1,424.8	2.8	2.6	-155.38	27.9	-759.7	829.7	824.6	5.06	163.875		
1,500.0	1,495.7	1,525.6	1,524.4	3.1	2.8	-155.38	32.6	-756.3	836.6	831.1	5.44	153.757		
1,600.0	1,595.1	1,625.3	1,624.0	3.3	3.0	-155.38	37.3	-752.9	843.5	837.6	5.82	144.929		
1,700.0	1,694.4	1,725.1	1,723.6	3.6	3.2	-155.38	42.0	-749.6	850.4	844.2	6.20	137.163		
1,800.0	1,793.8	1,824.9	1,823.2	3.9	3.4	-155.38	46.7	-746.2	857.3	850.7	6.58	130.281		
1,900.0	1,893.1	1,924.6	1,922.8	4.1	3.6	-155.39	51.4	-742.8	864.2	857.2	6.96	124.141		
2,000.0	1,992.5	2,024.4	2,022.4	4.4	3.8	-155.39	56.2	-739.4	871.1	863.7	7.34	118.631		
2,100.0	2,091.8	2,124.2	2,121.9	4.6	4.0	-155.39	60.9	-736.0	878.0	870.2	7.72	113.659		
2,200.0	2,191.2	2,223.9	2,221.5	4.9	4.2	-155.39	65.6	-732.6	884.9	876.7	8.11	109.152		
2,300.0	2,290.5	2,323.7	2,321.1	5.2	4.4	-155.39	70.3	-729.2	891.8	883.3	8.49	105.046		
2,400.0	2,389.9	2,423.4	2,420.7	5.4	4.6	-155.39	75.0	-725.8	898.7	889.8	8.87	101.292		
2,500.0	2,489.3	2,523.2	2,520.3	5.7	4.8	-155.39	79.7	-722.4	905.6	896.3	9.25	97.845		
2,600.0	2,588.6	2,623.0	2,619.9	5.9	5.0	-155.39	84.4	-719.0	912.5	902.8	9.64	94.671		
2,700.0	2,688.0	2,722.7	2,719.5	6.2	5.2	-155.40	89.1	-715.6	919.4	909.3	10.02	91.738		
2,800.0	2,787.3	2,822.5	2,819.1	6.5	5.4	-155.40	93.9	-712.2	926.3	915.8	10.41	89.020		
2,900.0	2,886.7	2,922.2	2,918.7	6.7	5.6	-155.40	98.6	-708.8	933.2	922.4	10.79	86.494		
3,000.0	2,986.0	3,022.0	3,018.3	7.0	5.8	-155.40	103.3	-705.4	940.1	928.9	11.17	84.140		
3,100.0	3,085.4	3,121.8	3,117.9	7.2	6.0	-155.40	108.0	-702.1	947.0	935.4	11.56	81.942		
3,200.0	3,184.7	3,221.5	3,217.5	7.5	6.2	-155.40	112.7	-698.7	953.9	941.9	11.94	79.885		
3,300.0	3,284.1	3,321.3	3,317.1	7.8	6.4	-155.40	117.4	-695.3	960.8	948.4	12.32	77.955		
3,400.0	3,383.4	3,421.1	3,416.7	8.0	6.6	-155.40	122.1	-691.9	967.7	954.9	12.71	76.142		
3,500.0	3,482.8	3,520.8	3,516.2	8.3	6.8	-155.41	126.8	-688.5	974.6	961.5	13.09	74.434		
3,600.0	3,582.2	3,620.6	3,615.8	8.6	7.0	-155.41	131.6	-685.1	981.5	968.0	13.48	72.824		
3,700.0	3,681.5	3,720.3	3,715.4	8.8	7.2	-155.41	136.3	-681.7	988.4	974.5	13.86	71.302		
3,800.0	3,780.9	3,820.1	3,815.0	9.1	7.4	-155.41	141.0	-678.3	995.3	981.0	14.25	69.863 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1D-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-90.24	-3.3	-772.1	772.1					
100.0	100.0	100.0	100.0	0.2	0.2	-90.24	-3.3	-772.1	772.1	0.35	2,211.853			
200.0	200.0	200.0	200.0	0.3	0.3	-90.24	-3.3	-772.1	772.1	0.70	1,105.926			
300.0	300.0	300.0	300.0	0.5	0.5	-90.24	-3.3	-772.1	772.1	1.05	737.284			
400.0	400.0	400.0	400.0	0.7	0.7	-90.24	-3.3	-772.1	772.1	1.40	552.963			
500.0	500.0	512.5	512.5	0.9	0.9	-155.35	-2.6	-771.2	772.1	1.77	436.843			
600.0	600.0	624.9	624.9	1.1	1.1	-155.31	-0.7	-768.5	772.0	2.14	360.728			
700.0	699.9	737.4	737.2	1.2	1.3	-155.23	2.4	-763.9	772.0	2.52	306.725			
800.0	799.7	849.8	849.4	1.4	1.5	-155.11	6.8	-757.6	771.9	2.90	266.261			
821.4	821.0	873.5	873.0	1.5	1.6	-155.09	7.9	-756.0	771.8	2.98	258.923 CC			
900.0	899.4	952.1	951.3	1.6	1.7	-155.01	11.6	-750.7	772.3	3.27	236.318			
1,000.0	998.9	1,052.1	1,051.0	1.9	2.0	-154.95	16.3	-744.0	774.2	3.64	212.892			
1,051.2	1,049.8	1,103.2	1,101.9	2.0	2.1	-154.94	18.7	-740.6	775.8	3.83	202.750			
1,100.0	1,098.3	1,152.0	1,150.6	2.1	2.2	-154.94	21.0	-737.3	777.6	4.01	193.910			
1,200.0	1,197.6	1,252.0	1,250.2	2.3	2.4	-154.95	25.6	-730.5	781.2	4.39	178.068			
1,300.0	1,297.0	1,351.9	1,349.8	2.6	2.6	-154.96	30.3	-723.8	784.7	4.77	164.677			
1,400.0	1,396.3	1,451.9	1,449.4	2.8	2.8	-154.97	35.0	-717.1	788.3	5.14	153.219			
1,500.0	1,495.7	1,551.8	1,549.0	3.1	3.0	-154.97	39.7	-710.3	791.9	5.53	143.311			
1,600.0	1,595.1	1,651.7	1,648.6	3.3	3.3	-154.98	44.4	-703.6	795.4	5.91	134.662			
1,700.0	1,694.4	1,751.7	1,748.2	3.6	3.5	-154.99	49.1	-696.9	799.0	6.29	127.050			
1,800.0	1,793.8	1,851.6	1,847.8	3.9	3.7	-154.99	53.7	-690.2	802.6	6.67	120.300			
1,900.0	1,893.1	1,951.5	1,947.4	4.1	3.9	-155.00	58.4	-683.4	806.1	7.05	114.275			
2,000.0	1,992.5	2,051.5	2,047.0	4.4	4.2	-155.01	63.1	-676.7	809.7	7.44	108.866			
2,100.0	2,091.8	2,151.4	2,146.6	4.6	4.4	-155.02	67.8	-670.0	813.3	7.82	103.983			
2,200.0	2,191.2	2,251.3	2,246.2	4.9	4.6	-155.02	72.5	-663.2	816.8	8.20	99.553			
2,300.0	2,290.5	2,351.3	2,345.8	5.2	4.8	-155.03	77.2	-656.5	820.4	8.59	95.517			
2,400.0	2,389.9	2,451.2	2,445.4	5.4	5.0	-155.04	81.8	-649.8	824.0	8.97	91.824			
2,500.0	2,489.3	2,551.2	2,545.0	5.7	5.3	-155.04	86.5	-643.0	827.5	9.36	88.433			
2,600.0	2,588.6	2,651.1	2,644.6	5.9	5.5	-155.05	91.2	-636.3	831.1	9.74	85.309			
2,700.0	2,688.0	2,751.0	2,744.2	6.2	5.7	-155.05	95.9	-629.6	834.7	10.13	82.421			
2,800.0	2,787.3	2,851.0	2,843.8	6.5	5.9	-155.06	100.6	-622.9	838.2	10.51	79.743			
2,900.0	2,886.7	2,950.9	2,943.4	6.7	6.2	-155.07	105.3	-616.1	841.8	10.90	77.254			
3,000.0	2,986.0	3,050.8	3,043.0	7.0	6.4	-155.07	109.9	-609.4	845.4	11.28	74.935			
3,100.0	3,085.4	3,150.8	3,142.6	7.2	6.6	-155.08	114.6	-602.7	848.9	11.67	72.768			
3,200.0	3,184.7	3,250.7	3,242.2	7.5	6.8	-155.09	119.3	-595.9	852.5	12.05	70.739			
3,300.0	3,284.1	3,350.6	3,341.8	7.8	7.1	-155.09	124.0	-589.2	856.0	12.44	68.835			
3,400.0	3,383.4	3,450.6	3,441.4	8.0	7.3	-155.10	128.7	-582.5	859.6	12.82	67.046			
3,500.0	3,482.8	3,550.5	3,541.0	8.3	7.5	-155.10	133.4	-575.7	863.2	13.21	65.360			
3,600.0	3,582.2	3,650.5	3,640.5	8.6	7.7	-155.11	138.0	-569.0	866.7	13.59	63.770			
3,700.0	3,681.5	3,750.4	3,740.1	8.8	8.0	-155.12	142.7	-562.3	870.3	13.98	62.268			
3,800.0	3,780.9	3,850.3	3,839.7	9.1	8.2	-155.12	147.4	-555.5	873.9	14.36	60.846			
3,900.0	3,880.2	3,950.3	3,939.3	9.4	8.4	-155.13	152.1	-548.8	877.4	14.75	59.498			
4,000.0	3,979.6	4,050.2	4,038.9	9.6	8.6	-155.13	156.8	-542.1	881.0	15.13	58.219			
4,100.0	4,078.9	4,150.1	4,138.5	9.9	8.9	-155.14	161.5	-535.4	884.6	15.52	57.003			
4,200.0	4,178.3	4,250.1	4,238.1	10.1	9.1	-155.15	166.1	-528.6	888.1	15.90	55.846			
4,300.0	4,277.6	4,350.0	4,337.7	10.4	9.3	-155.15	170.8	-521.9	891.7	16.29	54.744			
4,400.0	4,377.0	4,449.9	4,437.3	10.7	9.5	-155.16	175.5	-515.2	895.3	16.67	53.693			
4,500.0	4,476.4	4,549.9	4,536.9	10.9	9.8	-155.16	180.2	-508.4	898.8	17.06	52.689			
4,600.0	4,575.7	4,649.8	4,636.5	11.2	10.0	-155.17	184.9	-501.7	902.4	17.44	51.730			
4,700.0	4,675.1	4,749.8	4,736.1	11.5	10.2	-155.17	189.6	-495.0	906.0	17.83	50.812			
4,800.0	4,774.4	4,849.7	4,835.7	11.7	10.4	-155.18	194.2	-488.2	909.5	18.22	49.932			
4,900.0	4,873.8	4,949.6	4,935.3	12.0	10.7	-155.18	198.9	-481.5	913.1	18.60	49.090			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1D-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,000.0	4,973.1	5,049.6	5,034.9	12.3	10.9	-155.19	203.6	-474.8	916.7	897.7	18.99	48.281		
5,100.0	5,072.5	5,149.5	5,134.5	12.5	11.1	-155.19	208.3	-468.1	920.2	900.9	19.37	47.505		
5,200.0	5,171.8	5,249.4	5,234.1	12.8	11.3	-155.20	213.0	-461.3	923.8	904.1	19.76	46.759		
5,300.0	5,271.2	5,349.4	5,333.7	13.0	11.6	-155.20	217.7	-454.6	927.4	907.2	20.14	46.041		
5,400.0	5,370.5	5,449.3	5,433.3	13.3	11.8	-155.21	222.3	-447.9	930.9	910.4	20.53	45.351		
5,500.0	5,469.9	5,549.2	5,532.9	13.6	12.0	-155.22	227.0	-441.1	934.5	913.6	20.91	44.686		
5,600.0	5,569.3	5,649.2	5,632.5	13.8	12.2	-155.22	231.7	-434.4	938.1	916.8	21.30	44.045		
5,700.0	5,668.6	5,749.1	5,732.1	14.1	12.5	-155.23	236.4	-427.7	941.6	920.0	21.68	43.426		
5,800.0	5,768.0	5,849.1	5,831.7	14.4	12.7	-155.23	241.1	-420.9	945.2	923.1	22.07	42.830		
5,900.0	5,867.3	5,949.0	5,931.3	14.6	12.9	-155.24	245.8	-414.2	948.8	926.3	22.45	42.253		
6,000.0	5,966.7	6,048.9	6,030.9	14.9	13.1	-155.24	250.5	-407.5	952.3	929.5	22.84	41.697		
6,100.0	6,066.0	6,148.9	6,130.5	15.2	13.4	-155.25	255.1	-400.7	955.9	932.7	23.23	41.159		
6,200.0	6,165.4	6,248.8	6,230.1	15.4	13.6	-155.25	259.8	-394.0	959.5	935.9	23.61	40.638		
6,247.2	6,212.3	6,296.0	6,277.2	15.5	13.7	-155.25	262.0	-390.8	961.2	937.4	23.79	40.398		
6,250.0	6,215.1	6,298.8	6,279.9	15.6	13.7	-157.04	262.2	-390.7	961.3	937.5	23.80	40.386		
6,300.0	6,264.8	6,348.7	6,329.7	15.7	13.8	165.69	263.7	-387.3	963.0	939.1	23.95	40.206		
6,350.0	6,314.4	6,398.7	6,379.5	15.8	13.9	136.46	262.1	-383.9	964.7	940.6	24.05	40.106		
6,400.0	6,363.7	6,448.8	6,429.2	15.8	14.0	121.04	256.9	-380.6	966.3	942.2	24.11	40.073		
6,450.0	6,412.5	6,498.9	6,478.5	15.9	14.0	112.72	248.2	-377.2	967.9	943.7	24.14	40.097		
6,500.0	6,460.4	6,549.2	6,527.2	15.9	14.0	107.72	236.1	-373.9	969.3	945.2	24.13	40.168		
6,550.0	6,507.3	6,599.6	6,575.0	16.0	14.0	104.45	220.5	-370.7	970.7	946.6	24.10	40.273		
6,600.0	6,553.0	6,650.0	6,621.7	16.0	14.0	102.17	201.6	-367.6	971.9	947.9	24.06	40.395		
6,650.0	6,597.1	6,700.6	6,667.0	16.0	14.1	100.50	179.4	-364.5	973.1	949.1	24.02	40.518		
6,700.0	6,639.6	6,751.3	6,710.7	16.1	14.1	99.24	153.9	-361.5	974.1	950.2	23.98	40.620		
6,750.0	6,680.1	6,802.0	6,752.5	16.1	14.1	98.26	125.4	-358.7	975.1	951.1	23.97	40.679		
6,800.0	6,718.6	6,852.8	6,792.3	16.2	14.1	97.49	94.0	-356.0	975.9	951.9	23.99	40.673		
6,850.0	6,754.7	6,903.7	6,829.9	16.2	14.1	96.87	59.7	-353.5	976.6	952.5	24.07	40.578		
6,900.0	6,788.4	6,954.7	6,865.0	16.3	14.2	96.38	22.8	-351.1	977.1	952.9	24.20	40.375		
6,950.0	6,819.4	7,005.7	6,897.4	16.4	14.3	95.99	-16.5	-348.9	977.5	953.1	24.41	40.048		
7,000.0	6,847.7	7,056.9	6,927.0	16.6	14.5	95.67	-58.1	-346.9	977.8	953.1	24.70	39.585		
7,050.0	6,873.0	7,108.0	6,953.5	16.7	14.6	95.43	-101.8	-345.1	978.0	952.9	25.09	38.983		
7,100.0	6,895.3	7,159.2	6,976.9	16.9	14.9	95.24	-147.4	-343.6	978.0	952.4	25.57	38.249		
7,150.0	6,914.4	7,210.5	6,997.0	17.2	15.1	95.10	-194.5	-342.2	977.9	951.7	26.15	37.392		
7,200.0	6,930.3	7,261.8	7,013.7	17.4	15.5	95.00	-243.0	-341.1	977.6	950.8	26.83	36.432		
7,250.0	6,942.8	7,313.1	7,027.0	17.8	15.8	94.94	-292.5	-340.2	977.2	949.6	27.61	35.390		
7,300.0	6,952.0	7,364.5	7,036.6	18.1	16.2	94.92	-343.0	-339.5	976.7	948.2	28.48	34.291		
7,350.0	6,957.7	7,415.9	7,042.6	18.5	16.7	94.94	-394.0	-339.1	976.0	946.6	29.44	33.159		
7,400.0	6,960.0	7,467.2	7,045.0	18.9	17.1	94.99	-445.3	-339.0	975.2	944.8	30.46	32.018		
7,407.7	6,960.0	7,475.1	7,045.0	19.0	17.2	95.00	-453.1	-339.0	975.1	944.5	30.62	31.844		
7,500.0	6,960.0	7,567.4	7,045.0	19.8	18.2	95.01	-545.5	-339.0	973.5	940.8	32.70	29.767		
7,600.0	6,960.0	7,667.4	7,045.0	20.8	19.3	95.02	-645.4	-339.0	971.8	936.6	35.14	27.653		
7,700.0	6,960.0	7,767.4	7,045.0	22.0	20.5	95.03	-745.4	-339.0	970.0	932.3	37.75	25.699		
7,800.0	6,960.0	7,867.4	7,045.0	23.2	21.8	95.04	-845.4	-339.0	968.3	927.8	40.48	23.918		
7,900.0	6,960.0	7,967.4	7,045.0	24.4	23.1	95.05	-945.4	-339.0	966.6	923.2	43.33	22.306		
8,000.0	6,960.0	8,067.3	7,045.0	25.7	24.5	95.05	-1,045.4	-339.0	964.8	918.6	46.27	20.853		
8,100.0	6,960.0	8,167.3	7,045.0	27.1	26.0	95.06	-1,145.4	-339.0	963.1	913.8	49.28	19.545		
8,200.0	6,960.0	8,267.3	7,045.0	28.5	27.5	95.07	-1,245.4	-339.0	961.4	909.0	52.35	18.366		
8,300.0	6,960.0	8,367.3	7,045.0	30.0	29.0	95.08	-1,345.3	-339.0	959.6	904.2	55.46	17.302		
8,400.0	6,960.0	8,467.3	7,045.0	31.4	30.5	95.09	-1,445.3	-339.0	957.9	899.3	58.63	16.339		
8,500.0	6,960.0	8,567.3	7,045.0	33.0	32.1	95.10	-1,545.3	-339.0	956.2	894.3	61.82	15.466		
8,600.0	6,960.0	8,667.2	7,045.0	34.5	33.6	95.11	-1,645.3	-339.0	954.4	889.4	65.05	14.672		
8,700.0	6,960.0	8,767.2	7,045.0	36.0	35.2	95.12	-1,745.3	-339.0	952.7	884.4	68.31	13.948		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,800.0	6,960.0	8,867.2	7,045.0	37.6	36.8	95.13	-1,845.3	-339.0	951.0	879.4	71.58	13.285		
8,900.0	6,960.0	8,967.2	7,045.0	39.2	38.5	95.14	-1,945.2	-339.0	949.2	874.3	74.88	12.677		
9,000.0	6,960.0	9,067.2	7,045.0	40.8	40.1	95.15	-2,045.2	-339.0	947.5	869.3	78.19	12.118		
9,100.0	6,960.0	9,167.2	7,045.0	42.4	41.7	95.16	-2,145.2	-339.0	945.7	864.2	81.52	11.602		
9,200.0	6,960.0	9,267.2	7,045.0	44.0	43.4	95.17	-2,245.2	-339.0	944.0	859.2	84.86	11.125		
9,300.0	6,960.0	9,367.1	7,045.0	45.6	45.0	95.18	-2,345.2	-339.0	942.3	854.1	88.21	10.682		
9,400.0	6,960.0	9,467.1	7,045.0	47.3	46.7	95.19	-2,445.2	-339.0	940.5	849.0	91.57	10.271		
9,500.0	6,960.0	9,567.1	7,045.0	48.9	48.4	95.20	-2,545.2	-339.0	938.8	843.9	94.95	9.888		
9,600.0	6,960.0	9,667.1	7,045.0	50.6	50.1	95.21	-2,645.1	-339.0	937.1	838.7	98.33	9.530		
9,700.0	6,960.0	9,767.1	7,045.0	52.3	51.7	95.21	-2,745.1	-339.0	935.3	833.6	101.71	9.196		
9,800.0	6,960.0	9,867.1	7,045.0	53.9	53.4	95.22	-2,845.1	-339.1	933.6	828.5	105.11	8.882		
9,900.0	6,960.0	9,967.1	7,045.0	55.6	55.1	95.23	-2,945.1	-339.1	931.9	823.4	108.51	8.588		
10,000.0	6,960.0	10,067.0	7,045.0	57.3	56.8	95.24	-3,045.1	-339.1	930.1	818.2	111.92	8.311		
10,100.0	6,960.0	10,167.0	7,045.0	59.0	58.5	95.25	-3,145.1	-339.1	928.4	813.1	115.33	8.050		
10,200.0	6,960.0	10,267.0	7,045.0	60.6	60.2	95.26	-3,245.0	-339.1	926.7	807.9	118.74	7.804		
10,300.0	6,960.0	10,367.0	7,045.0	62.3	61.9	95.27	-3,345.0	-339.1	924.9	802.8	122.16	7.571		
10,400.0	6,960.0	10,467.0	7,045.0	64.0	63.6	95.28	-3,445.0	-339.1	923.2	797.6	125.59	7.351		
10,500.0	6,960.0	10,567.0	7,045.0	65.7	65.3	95.29	-3,545.0	-339.1	921.5	792.4	129.01	7.142		
10,600.0	6,960.0	10,666.9	7,045.0	67.4	67.1	95.30	-3,645.0	-339.1	919.7	787.3	132.44	6.944		
10,700.0	6,960.0	10,766.9	7,045.0	69.1	68.8	95.31	-3,745.0	-339.1	918.0	782.1	135.88	6.756		
10,800.0	6,960.0	10,866.9	7,045.0	70.8	70.5	95.32	-3,845.0	-339.1	916.3	776.9	139.31	6.577		
10,900.0	6,960.0	10,966.9	7,045.0	72.5	72.2	95.33	-3,944.9	-339.1	914.5	771.8	142.75	6.406		
11,000.0	6,960.0	11,066.9	7,045.0	74.2	73.9	95.34	-4,044.9	-339.1	912.8	766.6	146.19	6.244		
11,100.0	6,960.0	11,166.9	7,045.0	76.0	75.6	95.35	-4,144.9	-339.1	911.1	761.4	149.64	6.088		
11,200.0	6,960.0	11,266.9	7,045.0	77.7	77.4	95.36	-4,244.9	-339.1	909.3	756.2	153.08	5.940		
11,300.0	6,960.0	11,366.8	7,045.0	79.4	79.1	95.37	-4,344.9	-339.1	907.6	751.1	156.53	5.798		
11,400.0	6,960.0	11,466.8	7,045.0	81.1	80.8	95.39	-4,444.9	-339.1	905.8	745.9	159.98	5.662		
11,500.0	6,960.0	11,566.8	7,045.0	82.8	82.5	95.40	-4,544.9	-339.1	904.1	740.7	163.43	5.532		
11,517.7	6,960.0	11,579.4	7,045.0	83.1	82.8	95.40	-4,557.5	-339.1	903.8	739.9	163.95	5.513 ES, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1E-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-90.27	-3.6	-762.3	762.3					
100.0	100.0	100.0	100.0	0.2	0.2	-90.27	-3.6	-762.3	762.3	761.9	0.35	2,183.809		
200.0	200.0	200.0	200.0	0.3	0.3	-90.27	-3.6	-762.3	762.3	761.6	0.70	1,091.904		
300.0	300.0	300.0	300.0	0.5	0.5	-90.27	-3.6	-762.3	762.3	761.2	1.05	727.936		
400.0	400.0	406.9	406.9	0.7	0.7	-90.26	-3.5	-762.0	762.1	760.7	1.41	541.108		
500.0	500.0	520.6	520.6	0.9	0.9	-155.36	-2.5	-760.0	761.1	759.3	1.78	427.129		
600.0	600.0	634.3	634.2	1.1	1.1	-155.31	-0.6	-755.9	759.8	757.7	2.16	352.291		
700.0	699.9	748.0	747.6	1.2	1.3	-155.26	2.2	-749.8	758.4	755.9	2.53	299.181		
800.0	799.7	861.6	860.9	1.4	1.6	-155.20	6.0	-741.6	756.7	753.8	2.92	259.371		
900.0	899.4	975.2	973.9	1.6	1.8	-155.13	10.7	-731.4	754.9	751.6	3.31	228.295		
1,000.0	998.9	1,078.0	1,076.1	1.9	2.1	-155.08	15.6	-720.9	753.3	749.7	3.68	204.663		
1,048.6	1,047.2	1,126.6	1,124.4	2.0	2.2	-155.08	17.9	-715.9	753.1	749.3	3.86	195.036		
1,051.2	1,049.8	1,129.1	1,126.9	2.0	2.2	-155.08	18.1	-715.7	753.2	749.3	3.87	194.557		
1,100.0	1,098.3	1,178.0	1,175.4	2.1	2.3	-155.08	20.4	-710.6	753.2	749.1	4.05	185.756		
1,200.0	1,197.6	1,278.0	1,274.8	2.3	2.6	-155.08	25.1	-700.4	753.2	748.8	4.43	169.954		
1,300.0	1,297.0	1,378.0	1,374.2	2.6	2.8	-155.08	29.9	-690.1	753.3	748.4	4.81	156.577		
1,400.0	1,396.3	1,478.0	1,473.5	2.8	3.1	-155.08	34.7	-679.9	753.3	748.1	5.19	145.118		
1,500.0	1,495.7	1,578.0	1,572.9	3.1	3.3	-155.08	39.4	-669.7	753.3	747.8	5.57	135.197		
1,600.0	1,595.1	1,678.0	1,672.2	3.3	3.6	-155.08	44.2	-659.4	753.4	747.4	5.95	126.529		
1,700.0	1,694.4	1,778.0	1,771.6	3.6	3.9	-155.08	49.0	-649.2	753.4	747.1	6.34	118.894		
1,800.0	1,793.8	1,878.0	1,871.0	3.9	4.1	-155.08	53.7	-638.9	753.5	746.7	6.72	112.119		
1,900.0	1,893.1	1,978.0	1,970.3	4.1	4.4	-155.08	58.5	-628.7	753.5	746.4	7.10	106.068		
2,000.0	1,992.5	2,078.0	2,069.7	4.4	4.6	-155.08	63.2	-618.4	753.5	746.0	7.49	100.632		
2,100.0	2,091.8	2,178.0	2,169.0	4.6	4.9	-155.08	68.0	-608.2	753.6	745.7	7.87	95.723		
2,200.0	2,191.2	2,278.0	2,268.4	4.9	5.1	-155.08	72.8	-597.9	753.6	745.4	8.26	91.268		
2,300.0	2,290.5	2,378.0	2,367.8	5.2	5.4	-155.08	77.5	-587.7	753.7	745.0	8.64	87.206		
2,400.0	2,389.9	2,478.0	2,467.1	5.4	5.7	-155.09	82.3	-577.4	753.7	744.7	9.03	83.490		
2,500.0	2,489.3	2,578.0	2,566.5	5.7	5.9	-155.09	87.0	-567.2	753.7	744.3	9.41	80.075		
2,600.0	2,588.6	2,678.0	2,665.8	5.9	6.2	-155.09	91.8	-556.9	753.8	744.0	9.80	76.928		
2,700.0	2,688.0	2,778.0	2,765.2	6.2	6.5	-155.09	96.6	-546.7	753.8	743.6	10.18	74.019		
2,800.0	2,787.3	2,878.0	2,864.5	6.5	6.7	-155.09	101.3	-536.4	753.9	743.3	10.57	71.320		
2,900.0	2,886.7	2,978.0	2,963.9	6.7	7.0	-155.09	106.1	-526.2	753.9	742.9	10.96	68.812		
3,000.0	2,986.0	3,078.0	3,063.3	7.0	7.2	-155.09	110.9	-515.9	753.9	742.6	11.34	66.473		
3,100.0	3,085.4	3,178.0	3,162.6	7.2	7.5	-155.09	115.6	-505.7	754.0	742.3	11.73	64.288		
3,200.0	3,184.7	3,278.0	3,262.0	7.5	7.8	-155.09	120.4	-495.4	754.0	741.9	12.11	62.241		
3,300.0	3,284.1	3,378.0	3,361.3	7.8	8.0	-155.09	125.1	-485.2	754.1	741.6	12.50	60.321		
3,400.0	3,383.4	3,478.0	3,460.7	8.0	8.3	-155.09	129.9	-474.9	754.1	741.2	12.89	58.515		
3,500.0	3,482.8	3,578.0	3,560.1	8.3	8.6	-155.09	134.7	-464.7	754.1	740.9	13.27	56.815		
3,600.0	3,582.2	3,678.0	3,659.4	8.6	8.8	-155.09	139.4	-454.4	754.2	740.5	13.66	55.210		
3,700.0	3,681.5	3,778.0	3,758.8	8.8	9.1	-155.09	144.2	-444.2	754.2	740.2	14.05	53.693		
3,800.0	3,780.9	3,878.0	3,858.1	9.1	9.3	-155.09	149.0	-433.9	754.3	739.8	14.43	52.258		
3,900.0	3,880.2	3,978.0	3,957.5	9.4	9.6	-155.09	153.7	-423.7	754.3	739.5	14.82	50.897		
4,000.0	3,979.6	4,078.0	4,056.9	9.6	9.9	-155.10	158.5	-413.4	754.3	739.1	15.21	49.606		
4,100.0	4,078.9	4,178.0	4,156.2	9.9	10.1	-155.10	163.2	-403.2	754.4	738.8	15.59	48.378		
4,200.0	4,178.3	4,278.0	4,255.6	10.1	10.4	-155.10	168.0	-392.9	754.4	738.4	15.98	47.210		
4,300.0	4,277.6	4,378.0	4,354.9	10.4	10.7	-155.10	172.8	-382.7	754.5	738.1	16.37	46.096		
4,400.0	4,377.0	4,478.0	4,454.3	10.7	10.9	-155.10	177.5	-372.5	754.5	737.8	16.75	45.034		
4,500.0	4,476.4	4,578.0	4,553.7	10.9	11.2	-155.10	182.3	-362.2	754.5	737.4	17.14	44.020		
4,600.0	4,575.7	4,678.0	4,653.0	11.2	11.5	-155.10	187.0	-352.0	754.6	737.1	17.53	43.051		
4,700.0	4,675.1	4,778.0	4,752.4	11.5	11.7	-155.10	191.8	-341.7	754.6	736.7	17.91	42.123		
4,800.0	4,774.4	4,878.0	4,851.7	11.7	12.0	-155.10	196.6	-331.5	754.7	736.4	18.30	41.235		
4,900.0	4,873.8	4,978.0	4,951.1	12.0	12.2	-155.10	201.3	-321.2	754.7	736.0	18.69	40.383		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
5,000.0	4,973.1	5,078.0	5,050.5	12.3	12.5	-155.10	206.1	-311.0	754.7	735.7	19.08	39.566		
5,100.0	5,072.5	5,178.0	5,149.8	12.5	12.8	-155.10	210.9	-300.7	754.8	735.3	19.46	38.782		
5,200.0	5,171.8	5,278.0	5,249.2	12.8	13.0	-155.10	215.6	-290.5	754.8	735.0	19.85	38.028		
5,300.0	5,271.2	5,378.0	5,348.5	13.0	13.3	-155.10	220.4	-280.2	754.9	734.6	20.24	37.302		
5,400.0	5,370.5	5,478.0	5,447.9	13.3	13.6	-155.10	225.1	-270.0	754.9	734.3	20.62	36.604		
5,500.0	5,469.9	5,578.0	5,547.3	13.6	13.8	-155.10	229.9	-259.7	755.0	733.9	21.01	35.932		
5,600.0	5,569.3	5,678.0	5,646.6	13.8	14.1	-155.10	234.7	-249.5	755.0	733.6	21.40	35.284		
5,700.0	5,668.6	5,778.0	5,746.0	14.1	14.4	-155.11	239.4	-239.2	755.0	733.2	21.78	34.659		
5,800.0	5,768.0	5,878.0	5,845.3	14.4	14.6	-155.11	244.2	-229.0	755.1	732.9	22.17	34.055		
5,900.0	5,867.3	5,978.0	5,944.7	14.6	14.9	-155.11	248.9	-218.7	755.1	732.6	22.56	33.473		
6,000.0	5,966.7	6,078.0	6,044.1	14.9	15.1	-155.11	253.7	-208.5	755.2	732.2	22.95	32.910		
6,100.0	6,066.0	6,178.0	6,143.4	15.2	15.4	-155.11	258.5	-198.2	755.2	731.9	23.33	32.366		
6,200.0	6,165.4	6,278.0	6,242.9	15.4	15.7	-155.15	262.6	-188.0	755.2	731.5	23.70	31.866		
6,247.2	6,212.3	6,325.1	6,289.7	15.5	15.8	-155.42	261.4	-183.1	755.3	731.4	23.81	31.718		
6,250.0	6,215.1	6,327.9	6,292.4	15.6	15.8	-157.22	261.2	-182.9	755.3	731.4	23.82	31.711		
6,300.0	6,264.8	6,377.3	6,341.3	15.7	15.8	165.18	256.4	-177.8	755.3	731.4	23.87	31.638		
6,350.0	6,314.4	6,426.3	6,389.4	15.8	15.9	135.61	248.3	-172.9	755.3	731.4	23.89	31.612		
6,400.0	6,363.7	6,475.0	6,436.5	15.8	16.0	119.86	237.0	-168.0	755.2	731.4	23.88	31.623		
6,450.0	6,412.5	6,523.3	6,482.4	15.9	16.0	111.22	222.6	-163.3	755.2	731.3	23.85	31.662		
6,500.0	6,460.4	6,571.3	6,526.9	15.9	16.1	105.91	205.3	-158.7	755.1	731.3	23.81	31.715		
6,550.0	6,507.3	6,619.1	6,569.9	16.0	16.1	102.33	185.1	-154.2	755.0	731.2	23.76	31.769		
6,600.0	6,553.0	6,666.5	6,611.3	16.0	16.1	99.75	162.3	-150.0	754.8	731.1	23.73	31.812		
6,650.0	6,597.1	6,713.7	6,650.8	16.0	16.2	97.79	136.9	-145.9	754.7	731.0	23.71	31.829		
6,700.0	6,639.6	6,760.6	6,688.4	16.1	16.2	96.26	109.1	-142.0	754.4	730.7	23.72	31.806		
6,750.0	6,680.1	6,807.3	6,724.0	16.1	16.2	95.02	79.0	-138.4	754.2	730.4	23.77	31.730		
6,800.0	6,718.6	6,853.8	6,757.3	16.2	16.3	94.01	46.8	-134.9	753.9	730.0	23.87	31.588		
6,850.0	6,754.7	6,900.0	6,788.3	16.2	16.4	93.16	12.8	-131.7	753.5	729.5	24.01	31.379		
6,900.0	6,788.4	6,946.2	6,817.1	16.3	16.5	92.46	-23.2	-128.8	753.1	728.9	24.23	31.084		
6,950.0	6,819.4	6,992.1	6,843.3	16.4	16.6	91.87	-60.8	-126.1	752.7	728.2	24.52	30.703		
7,000.0	6,847.7	7,037.8	6,867.0	16.6	16.8	91.38	-99.8	-123.6	752.2	727.3	24.87	30.241		
7,050.0	6,873.0	7,083.5	6,888.2	16.7	17.0	90.97	-140.2	-121.4	751.7	726.4	25.31	29.702		
7,100.0	6,895.3	7,129.0	6,906.7	16.9	17.2	90.64	-181.7	-119.5	751.1	725.3	25.82	29.094		
7,150.0	6,914.4	7,174.4	6,922.5	17.2	17.4	90.38	-224.2	-117.9	750.4	724.0	26.40	28.426		
7,200.0	6,930.3	7,219.7	6,935.6	17.4	17.7	90.18	-267.6	-116.5	749.8	722.7	27.06	27.712		
7,250.0	6,942.8	7,265.0	6,945.9	17.8	18.0	90.05	-311.7	-115.5	749.0	721.2	27.78	26.962		
7,300.0	6,952.0	7,310.2	6,953.4	18.1	18.3	89.97	-356.2	-114.7	748.3	719.7	28.57	26.189		
7,350.0	6,957.7	7,355.3	6,958.1	18.5	18.7	89.95	-401.1	-114.2	747.4	718.0	29.42	25.405		
7,400.0	6,960.0	7,400.5	6,960.0	18.9	19.1	89.99	-446.3	-114.0	746.6	716.3	30.33	24.619		
7,407.7	6,960.0	7,407.8	6,960.0	19.0	19.1	90.00	-453.5	-114.0	746.5	716.0	30.47	24.496		
7,500.0	6,960.0	7,499.7	6,960.0	19.8	20.0	90.00	-545.5	-114.0	744.8	712.3	32.55	22.880		
7,600.0	6,960.0	7,599.7	6,960.0	20.8	21.0	90.00	-645.5	-114.0	743.1	708.1	35.01	21.225		
7,700.0	6,960.0	7,699.7	6,960.0	22.0	22.1	90.00	-745.4	-114.0	741.4	703.7	37.64	19.698		
7,800.0	6,960.0	7,799.7	6,960.0	23.2	23.3	90.00	-845.4	-114.0	739.6	699.2	40.39	18.310		
7,900.0	6,960.0	7,899.6	6,960.0	24.4	24.6	90.00	-945.4	-114.0	737.9	694.6	43.26	17.056		
8,000.0	6,960.0	7,999.6	6,960.0	25.7	25.9	90.00	-1,045.4	-114.0	736.1	689.9	46.22	15.928		
8,100.0	6,960.0	8,099.6	6,960.0	27.1	27.3	90.00	-1,145.4	-114.0	734.4	685.1	49.25	14.913		
8,200.0	6,960.0	8,199.6	6,960.0	28.5	28.7	90.00	-1,245.4	-114.1	732.7	680.3	52.33	14.000		
8,300.0	6,960.0	8,299.6	6,960.0	30.0	30.1	90.00	-1,345.3	-114.1	730.9	675.4	55.47	13.176		
8,400.0	6,960.0	8,399.6	6,960.0	31.4	31.6	90.00	-1,445.3	-114.1	729.2	670.5	58.65	12.432		
8,500.0	6,960.0	8,499.6	6,960.0	33.0	33.1	90.00	-1,545.3	-114.1	727.4	665.6	61.87	11.758		
8,600.0	6,960.0	8,599.5	6,960.0	34.5	34.6	90.00	-1,645.3	-114.1	725.7	660.6	65.11	11.145		
8,700.0	6,960.0	8,699.5	6,960.0	36.0	36.2	90.00	-1,745.3	-114.1	723.9	655.6	68.38	10.586		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,800.0	6,960.0	8,799.5	6,960.0	37.6	37.8	90.00	-1,845.3	-114.1	722.2	650.5	71.68	10.076		
8,900.0	6,960.0	8,899.5	6,960.0	39.2	39.3	90.00	-1,945.3	-114.1	720.5	645.5	74.99	9.607		
9,000.0	6,960.0	8,999.5	6,960.0	40.8	40.9	90.00	-2,045.2	-114.1	718.7	640.4	78.32	9.176		
9,100.0	6,960.0	9,099.5	6,960.0	42.4	42.5	90.00	-2,145.2	-114.1	717.0	635.3	81.67	8.779		
9,200.0	6,960.0	9,199.5	6,960.0	44.0	44.2	90.00	-2,245.2	-114.1	715.2	630.2	85.02	8.412		
9,300.0	6,960.0	9,299.4	6,960.0	45.6	45.8	90.00	-2,345.2	-114.1	713.5	625.1	88.39	8.072		
9,400.0	6,960.0	9,399.4	6,960.0	47.3	47.4	90.00	-2,445.2	-114.1	711.7	620.0	91.77	7.755		
9,500.0	6,960.0	9,499.4	6,960.0	48.9	49.1	90.00	-2,545.2	-114.1	710.0	614.8	95.16	7.461		
9,600.0	6,960.0	9,599.4	6,960.0	50.6	50.7	90.00	-2,645.1	-114.1	708.3	609.7	98.56	7.186		
9,700.0	6,960.0	9,699.4	6,960.0	52.3	52.4	90.00	-2,745.1	-114.1	706.5	604.6	101.97	6.929		
9,800.0	6,960.0	9,799.4	6,960.0	53.9	54.1	90.00	-2,845.1	-114.1	704.8	599.4	105.38	6.688		
9,900.0	6,960.0	9,899.3	6,960.0	55.6	55.7	90.00	-2,945.1	-114.1	703.0	594.2	108.80	6.462		
10,000.0	6,960.0	9,999.3	6,960.0	57.3	57.4	90.00	-3,045.1	-114.1	701.3	589.1	112.22	6.249		
10,100.0	6,960.0	10,099.3	6,960.0	59.0	59.1	90.00	-3,145.1	-114.1	699.5	583.9	115.65	6.049		
10,200.0	6,960.0	10,199.3	6,960.0	60.6	60.8	90.00	-3,245.1	-114.1	697.8	578.7	119.08	5.860		
10,300.0	6,960.0	10,299.3	6,960.0	62.3	62.5	90.00	-3,345.0	-114.1	696.1	573.5	122.52	5.681		
10,400.0	6,960.0	10,399.3	6,960.0	64.0	64.2	90.00	-3,445.0	-114.1	694.3	568.4	125.96	5.512		
10,500.0	6,960.0	10,499.3	6,960.0	65.7	65.9	90.00	-3,545.0	-114.1	692.6	563.2	129.41	5.352		
10,600.0	6,960.0	10,599.2	6,960.0	67.4	67.6	90.00	-3,645.0	-114.1	690.8	558.0	132.85	5.200		
10,700.0	6,960.0	10,699.2	6,960.0	69.1	69.3	90.00	-3,745.0	-114.1	689.1	552.8	136.30	5.056		
10,800.0	6,960.0	10,799.2	6,960.0	70.8	71.0	90.00	-3,845.0	-114.1	687.4	547.6	139.76	4.918		
10,900.0	6,960.0	10,899.2	6,960.0	72.5	72.7	90.00	-3,945.0	-114.1	685.6	542.4	143.22	4.787		
11,000.0	6,960.0	10,999.2	6,960.0	74.2	74.4	90.00	-4,044.9	-114.1	683.9	537.2	146.67	4.663		
11,100.0	6,960.0	11,099.2	6,960.0	76.0	76.1	90.00	-4,144.9	-114.1	682.1	532.0	150.14	4.543		
11,200.0	6,960.0	11,199.1	6,960.0	77.7	77.8	90.00	-4,244.9	-114.1	680.4	526.8	153.60	4.430		
11,300.0	6,960.0	11,299.1	6,960.0	79.4	79.5	90.00	-4,344.9	-114.1	678.6	521.6	157.06	4.321		
11,400.0	6,960.0	11,399.1	6,960.0	81.1	81.2	90.00	-4,444.9	-114.2	676.9	516.4	160.53	4.217		
11,500.0	6,960.0	11,499.1	6,960.0	82.8	82.9	90.00	-4,544.9	-114.2	675.2	511.2	164.00	4.117		
11,517.7	6,960.0	11,512.8	6,960.0	83.1	83.2	90.00	-4,558.5	-114.2	674.9	510.3	164.54	4.101	CC, ES, SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-90.27	-3.6	-752.2	752.2					
100.0	100.0	100.0	100.0	0.2	0.2	-90.27	-3.6	-752.2	752.2	751.9	0.35	2,154.959		
200.0	200.0	200.0	200.0	0.3	0.3	-90.27	-3.6	-752.2	752.2	751.5	0.70	1,077.480		
300.0	300.0	314.2	314.2	0.5	0.5	-90.25	-3.2	-751.1	751.3	750.2	1.07	700.270		
400.0	400.0	428.3	428.2	0.7	0.8	-90.16	-2.1	-747.9	748.5	747.0	1.45	515.898		
500.0	500.0	542.2	542.0	0.9	1.0	-155.20	-0.3	-742.6	744.5	742.7	1.82	408.572		
600.0	600.0	656.1	655.6	1.1	1.2	-155.11	2.3	-735.1	740.3	738.1	2.20	336.506		
700.0	699.9	769.8	768.9	1.2	1.5	-155.04	5.6	-725.4	735.8	733.2	2.58	285.082		
800.0	799.7	883.5	881.8	1.4	1.7	-154.97	9.7	-713.7	731.0	728.1	2.97	246.410		
900.0	899.4	996.1	993.6	1.6	2.1	-154.91	14.4	-700.0	725.9	722.6	3.36	216.280		
1,000.0	998.9	1,096.1	1,092.5	1.9	2.3	-154.89	18.9	-687.0	721.6	717.9	3.73	193.634		
1,051.2	1,049.8	1,147.2	1,143.2	2.0	2.5	-154.90	21.2	-680.4	720.0	716.1	3.92	183.799		
1,100.0	1,098.3	1,196.0	1,191.6	2.1	2.6	-154.91	23.4	-674.0	718.7	714.6	4.10	175.248		
1,200.0	1,197.6	1,296.0	1,290.6	2.3	2.9	-154.93	27.8	-661.0	716.0	711.5	4.48	159.881		
1,300.0	1,297.0	1,395.9	1,389.6	2.6	3.2	-154.95	32.3	-648.0	713.2	708.4	4.86	146.861		
1,400.0	1,396.3	1,495.9	1,488.6	2.8	3.5	-154.97	36.8	-635.0	710.5	705.3	5.24	135.697		
1,500.0	1,495.7	1,595.9	1,587.6	3.1	3.8	-154.99	41.3	-622.1	707.8	702.2	5.62	126.025		
1,600.0	1,595.1	1,695.8	1,686.6	3.3	4.1	-155.02	45.8	-609.1	705.0	699.0	6.00	117.568		
1,700.0	1,694.4	1,795.8	1,785.6	3.6	4.4	-155.04	50.2	-596.1	702.3	695.9	6.38	110.113		
1,800.0	1,793.8	1,895.7	1,884.6	3.9	4.6	-155.06	54.7	-583.1	699.6	692.8	6.76	103.494		
1,900.0	1,893.1	1,995.7	1,983.7	4.1	4.9	-155.08	59.2	-570.1	696.9	689.7	7.14	97.578		
2,000.0	1,992.5	2,095.7	2,082.7	4.4	5.2	-155.11	63.7	-557.1	694.1	686.6	7.52	92.260		
2,100.0	2,091.8	2,195.6	2,181.7	4.6	5.5	-155.13	68.2	-544.1	691.4	683.5	7.91	87.455		
2,200.0	2,191.2	2,295.6	2,280.7	4.9	5.8	-155.15	72.6	-531.1	688.7	680.4	8.29	83.092		
2,300.0	2,290.5	2,395.6	2,379.7	5.2	6.1	-155.18	77.1	-518.1	685.9	677.3	8.67	79.112		
2,400.0	2,389.9	2,495.5	2,478.7	5.4	6.4	-155.20	81.6	-505.1	683.2	674.2	9.05	75.469		
2,500.0	2,489.3	2,595.5	2,577.7	5.7	6.7	-155.22	86.1	-492.1	680.5	671.1	9.44	72.121		
2,600.0	2,588.6	2,695.4	2,676.7	5.9	7.0	-155.25	90.6	-479.1	677.8	667.9	9.82	69.034		
2,700.0	2,688.0	2,795.4	2,775.8	6.2	7.3	-155.27	95.1	-466.1	675.0	664.8	10.20	66.178		
2,800.0	2,787.3	2,895.4	2,874.8	6.5	7.6	-155.30	99.5	-453.1	672.3	661.7	10.58	63.529		
2,900.0	2,886.7	2,995.3	2,973.8	6.7	7.9	-155.32	104.0	-440.1	669.6	658.6	10.97	61.065		
3,000.0	2,986.0	3,095.3	3,072.8	7.0	8.2	-155.34	108.5	-427.1	666.9	655.5	11.35	58.767		
3,100.0	3,085.4	3,195.3	3,171.8	7.2	8.5	-155.37	113.0	-414.2	664.1	652.4	11.73	56.620		
3,200.0	3,184.7	3,295.2	3,270.8	7.5	8.8	-155.39	117.5	-401.2	661.4	649.3	12.11	54.608		
3,300.0	3,284.1	3,395.2	3,369.8	7.8	9.1	-155.42	121.9	-388.2	658.7	646.2	12.49	52.720		
3,400.0	3,383.4	3,495.1	3,468.8	8.0	9.4	-155.45	126.4	-375.2	655.9	643.1	12.88	50.945		
3,500.0	3,482.8	3,595.1	3,567.9	8.3	9.7	-155.47	130.9	-362.2	653.2	640.0	13.26	49.272		
3,600.0	3,582.2	3,695.1	3,666.9	8.6	10.0	-155.50	135.4	-349.2	650.5	636.9	13.64	47.693		
3,700.0	3,681.5	3,795.0	3,765.9	8.8	10.3	-155.52	139.9	-336.2	647.8	633.7	14.02	46.200		
3,800.0	3,780.9	3,895.0	3,864.9	9.1	10.6	-155.55	144.3	-323.2	645.0	630.6	14.40	44.787		
3,900.0	3,880.2	3,995.0	3,963.9	9.4	10.9	-155.58	148.8	-310.2	642.3	627.5	14.78	43.448		
4,000.0	3,979.6	4,094.9	4,062.9	9.6	11.2	-155.60	153.3	-297.2	639.6	624.4	15.16	42.176		
4,100.0	4,078.9	4,194.9	4,161.9	9.9	11.5	-155.63	157.8	-284.2	636.9	621.3	15.55	40.967		
4,200.0	4,178.3	4,294.8	4,261.0	10.1	11.8	-155.66	162.3	-271.2	634.1	618.2	15.93	39.816		
4,300.0	4,277.6	4,394.8	4,360.0	10.4	12.1	-155.69	166.7	-258.2	631.4	615.1	16.31	38.719		
4,400.0	4,377.0	4,494.8	4,459.0	10.7	12.4	-155.71	171.2	-245.2	628.7	612.0	16.69	37.673		
4,500.0	4,476.4	4,594.7	4,558.0	10.9	12.7	-155.74	175.7	-232.2	626.0	608.9	17.07	36.673		
4,600.0	4,575.7	4,694.7	4,657.0	11.2	13.0	-155.77	180.2	-219.2	623.2	605.8	17.45	35.718		
4,700.0	4,675.1	4,794.7	4,756.0	11.5	13.3	-155.80	184.7	-206.2	620.5	602.7	17.83	34.804		
4,800.0	4,774.4	4,894.6	4,855.0	11.7	13.6	-155.83	189.2	-193.3	617.8	599.6	18.21	33.928		
4,900.0	4,873.8	4,994.6	4,954.0	12.0	13.9	-155.86	193.6	-180.3	615.1	596.5	18.59	33.088		
5,000.0	4,973.1	5,094.5	5,053.1	12.3	14.1	-155.89	198.1	-167.3	612.3	593.4	18.97	32.282		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
5,100.0	5,072.5	5,194.5	5,152.1	12.5	14.4	-155.92	202.6	-154.3	609.6	590.3	19.35	31.509		
5,200.0	5,171.8	5,294.5	5,251.1	12.8	14.7	-155.94	207.1	-141.3	606.9	587.2	19.73	30.765		
5,300.0	5,271.2	5,394.4	5,350.1	13.0	15.0	-155.98	211.6	-128.3	604.2	584.1	20.11	30.049		
5,400.0	5,370.5	5,494.4	5,449.1	13.3	15.3	-156.01	216.0	-115.3	601.5	581.0	20.48	29.361		
5,500.0	5,469.9	5,594.4	5,548.1	13.6	15.6	-156.04	220.5	-102.3	598.7	577.9	20.86	28.697		
5,600.0	5,569.3	5,694.3	5,647.1	13.8	15.9	-156.07	225.0	-89.3	596.0	574.8	21.24	28.058		
5,700.0	5,668.6	5,794.3	5,746.1	14.1	16.2	-156.10	229.5	-76.3	593.3	571.7	21.62	27.441		
5,800.0	5,768.0	5,894.2	5,845.2	14.4	16.5	-156.13	234.0	-63.3	590.6	568.6	22.00	26.846		
5,900.0	5,867.3	5,994.2	5,944.2	14.6	16.8	-156.16	238.4	-50.3	587.8	565.5	22.38	26.271		
6,000.0	5,966.7	6,094.2	6,043.2	14.9	17.1	-156.19	242.9	-37.3	585.1	562.4	22.75	25.715		
6,100.0	6,066.0	6,194.1	6,142.2	15.2	17.4	-156.23	247.4	-24.3	582.4	559.3	23.13	25.178		
6,200.0	6,165.4	6,294.1	6,241.2	15.4	17.7	-156.26	251.9	-11.3	579.7	556.2	23.51	24.658		
6,247.2	6,212.3	6,341.3	6,288.0	15.5	17.9	-156.27	254.0	-5.2	578.4	554.7	23.69	24.418		
6,250.0	6,215.1	6,344.1	6,290.7	15.6	17.9	-158.05	254.1	-4.8	578.3	554.6	23.70	24.403		
6,300.0	6,264.8	6,394.0	6,340.2	15.7	18.0	165.04	256.4	1.6	576.9	553.0	23.91	24.128		
6,350.0	6,314.4	6,443.7	6,389.4	15.8	18.2	136.51	258.6	8.1	575.4	551.2	24.15	23.822		
6,400.0	6,363.7	6,493.0	6,438.2	15.8	18.3	122.11	260.8	14.5	573.9	549.5	24.43	23.495		
6,450.0	6,412.5	6,542.7	6,487.5	15.9	18.4	114.93	260.8	21.0	572.6	547.9	24.67	23.206		
6,500.0	6,460.4	6,593.2	6,537.4	15.9	18.6	111.09	257.2	27.5	571.3	546.5	24.87	22.973		
6,550.0	6,507.3	6,644.4	6,587.7	16.0	18.7	108.96	250.0	34.1	570.3	545.3	25.01	22.799		
6,600.0	6,553.0	6,696.4	6,638.1	16.0	18.8	107.81	239.1	40.7	569.3	544.2	25.10	22.683		
6,650.0	6,597.1	6,749.2	6,688.3	16.0	18.8	107.26	224.2	47.3	568.6	543.4	25.13	22.624		
6,700.0	6,639.6	6,802.8	6,738.0	16.1	18.9	107.09	205.3	53.9	567.9	542.8	25.11	22.618		
6,750.0	6,680.1	6,857.2	6,786.9	16.1	19.0	107.18	182.3	60.3	567.4	542.4	25.04	22.658		
6,800.0	6,718.6	6,912.5	6,834.6	16.2	19.0	107.44	155.2	66.5	567.0	542.1	24.94	22.732		
6,850.0	6,754.7	6,968.5	6,880.8	16.2	19.1	107.82	124.0	72.6	566.7	541.9	24.83	22.826		
6,900.0	6,788.4	7,025.5	6,925.1	16.3	19.2	108.27	88.7	78.4	566.5	541.8	24.71	22.922		
6,950.0	6,819.4	7,083.2	6,967.0	16.4	19.3	108.76	49.4	83.9	566.3	541.7	24.63	22.995		
7,000.0	6,847.7	7,141.7	7,006.1	16.6	19.4	109.26	6.3	89.0	566.2	541.6	24.61	23.005		
7,050.0	6,873.0	7,201.0	7,042.1	16.7	19.6	109.77	-40.6	93.7	566.1	541.4	24.66	22.950		
7,100.0	6,895.3	7,260.9	7,074.4	16.9	19.8	110.26	-90.9	98.0	565.9	541.1	24.85	22.774		
7,150.0	6,914.4	7,321.5	7,102.7	17.2	20.0	110.72	-144.3	101.7	565.7	540.5	25.18	22.469		
7,200.0	6,930.3	7,382.6	7,126.6	17.4	20.2	111.13	-200.5	104.8	565.5	539.8	25.68	22.024		
7,250.0	6,942.8	7,444.3	7,145.9	17.8	20.6	111.49	-258.9	107.4	565.1	538.8	26.35	21.443		
7,300.0	6,952.0	7,506.3	7,160.1	18.1	20.9	111.80	-319.2	109.2	564.7	537.5	27.23	20.740		
7,350.0	6,957.7	7,568.5	7,169.2	18.5	21.3	112.03	-380.8	110.4	564.1	535.8	28.29	19.943		
7,400.0	6,960.0	7,631.0	7,172.9	18.9	21.8	112.20	-443.1	110.9	563.4	533.9	29.51	19.092		
7,407.7	6,960.0	7,640.6	7,173.0	19.0	21.9	112.22	-452.7	110.9	563.3	533.6	29.71	18.959		
7,500.0	6,960.0	7,733.3	7,173.0	19.8	22.6	112.28	-545.5	110.9	561.8	530.2	31.60	17.782		
7,600.0	6,960.0	7,833.3	7,173.0	20.8	23.5	112.35	-645.5	110.9	560.2	526.4	33.80	16.574		
7,700.0	6,960.0	7,933.3	7,173.0	22.0	24.5	112.42	-745.4	110.9	558.6	522.5	36.16	15.449		
7,800.0	6,960.0	8,033.3	7,173.0	23.2	25.6	112.49	-845.4	110.9	557.0	518.4	38.64	14.414		
7,900.0	6,960.0	8,133.3	7,173.0	24.4	26.8	112.55	-945.4	110.9	555.4	514.2	41.23	13.471		
8,000.0	6,960.0	8,233.3	7,173.0	25.7	28.0	112.62	-1,045.4	110.9	553.8	509.9	43.90	12.616		
8,100.0	6,960.0	8,333.3	7,173.0	27.1	29.3	112.69	-1,145.4	110.9	552.2	505.5	46.63	11.841		
8,200.0	6,960.0	8,433.2	7,173.0	28.5	30.6	112.76	-1,245.4	110.9	550.6	501.1	49.42	11.140		
8,300.0	6,960.0	8,533.2	7,173.0	30.0	31.9	112.83	-1,345.4	110.9	549.0	496.7	52.26	10.504		
8,400.0	6,960.0	8,633.2	7,173.0	31.4	33.3	112.90	-1,445.3	110.9	547.4	492.2	55.14	9.927		
8,500.0	6,960.0	8,733.2	7,173.0	33.0	34.8	112.98	-1,545.3	110.9	545.8	487.7	58.05	9.402		
8,600.0	6,960.0	8,833.2	7,173.0	34.5	36.2	113.05	-1,645.3	110.9	544.2	483.2	60.98	8.923		
8,700.0	6,960.0	8,933.2	7,173.0	36.0	37.7	113.12	-1,745.3	110.9	542.5	478.6	63.94	8.485		
8,800.0	6,960.0	9,033.1	7,173.0	37.6	39.2	113.19	-1,845.3	110.9	540.9	474.0	66.92	8.084		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,900.0	6,960.0	9,133.1	7,173.0	39.2	40.7	113.26	-1,945.3	110.9	539.3	469.4	69.91	7.715		
9,000.0	6,960.0	9,233.1	7,173.0	40.8	42.3	113.34	-2,045.2	110.9	537.7	464.8	72.92	7.374		
9,100.0	6,960.0	9,333.1	7,173.0	42.4	43.9	113.41	-2,145.2	110.9	536.1	460.2	75.94	7.060		
9,200.0	6,960.0	9,433.1	7,173.0	44.0	45.4	113.49	-2,245.2	110.9	534.5	455.6	78.97	6.769		
9,300.0	6,960.0	9,533.1	7,173.0	45.6	47.0	113.56	-2,345.2	110.9	533.0	450.9	82.00	6.499		
9,400.0	6,960.0	9,633.1	7,173.0	47.3	48.6	113.64	-2,445.2	110.9	531.4	446.3	85.05	6.248		
9,500.0	6,960.0	9,733.0	7,173.0	48.9	50.2	113.71	-2,545.2	110.9	529.8	441.7	88.09	6.014		
9,600.0	6,960.0	9,833.0	7,173.0	50.6	51.8	113.79	-2,645.2	110.9	528.2	437.0	91.15	5.795		
9,700.0	6,960.0	9,933.0	7,173.0	52.3	53.5	113.86	-2,745.1	110.9	526.6	432.4	94.20	5.590		
9,800.0	6,960.0	10,033.0	7,173.0	53.9	55.1	113.94	-2,845.1	110.8	525.0	427.7	97.26	5.397		
9,900.0	6,960.0	10,133.0	7,173.0	55.6	56.7	114.02	-2,945.1	110.8	523.4	423.1	100.32	5.217		
10,000.0	6,960.0	10,233.0	7,173.0	57.3	58.4	114.10	-3,045.1	110.8	521.8	418.4	103.39	5.047		
10,100.0	6,960.0	10,333.0	7,173.0	59.0	60.0	114.17	-3,145.1	110.8	520.2	413.8	106.45	4.887		
10,200.0	6,960.0	10,432.9	7,173.0	60.6	61.7	114.25	-3,245.1	110.8	518.6	409.1	109.52	4.736		
10,300.0	6,960.0	10,532.9	7,173.0	62.3	63.4	114.33	-3,345.0	110.8	517.0	404.4	112.58	4.593		
10,400.0	6,960.0	10,632.9	7,173.0	64.0	65.0	114.41	-3,445.0	110.8	515.4	399.8	115.64	4.457		
10,500.0	6,960.0	10,732.9	7,173.0	65.7	66.7	114.49	-3,545.0	110.8	513.9	395.1	118.71	4.329		
10,600.0	6,960.0	10,832.9	7,173.0	67.4	68.4	114.57	-3,645.0	110.8	512.3	390.5	121.77	4.207		
10,700.0	6,960.0	10,932.9	7,173.0	69.1	70.1	114.65	-3,745.0	110.8	510.7	385.9	124.83	4.091		
10,800.0	6,960.0	11,032.8	7,173.0	70.8	71.8	114.74	-3,845.0	110.8	509.1	381.2	127.88	3.981		
10,900.0	6,960.0	11,132.8	7,173.0	72.5	73.5	114.82	-3,945.0	110.8	507.5	376.6	130.94	3.876		
11,000.0	6,960.0	11,232.8	7,173.0	74.2	75.1	114.90	-4,044.9	110.8	505.9	371.9	133.99	3.776		
11,100.0	6,960.0	11,332.8	7,173.0	76.0	76.8	114.98	-4,144.9	110.8	504.4	367.3	137.04	3.680		
11,200.0	6,960.0	11,432.8	7,173.0	77.7	78.5	115.07	-4,244.9	110.8	502.8	362.7	140.09	3.589		
11,300.0	6,960.0	11,532.8	7,173.0	79.4	80.2	115.15	-4,344.9	110.8	501.2	358.1	143.14	3.502		
11,400.0	6,960.0	11,632.8	7,173.0	81.1	81.9	115.24	-4,444.9	110.8	499.6	353.4	146.18	3.418		
11,500.0	6,960.0	11,732.7	7,173.0	82.8	83.6	115.32	-4,544.9	110.8	498.1	348.8	149.22	3.338		
11,517.7	6,960.0	11,747.9	7,173.0	83.1	83.9	115.34	-4,560.0	110.8	497.8	348.1	149.72	3.325 CC, ES, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-87.79	0.4	-10.1	10.1	10.1	0.00	N/A		
100.0	100.0	100.0	100.0	0.2	0.2	-87.79	0.4	-10.1	10.1	9.7	0.35	28.872		
200.0	200.0	200.0	200.0	0.3	0.3	-87.79	0.4	-10.1	10.1	9.4	0.70	14.436		
300.0	300.0	300.0	300.0	0.5	0.5	-87.79	0.4	-10.1	10.1	9.0	1.05	9.624		
400.0	400.0	400.0	400.0	0.7	0.7	-87.79	0.4	-10.1	10.1	8.7	1.40	7.218 CC, ES		
500.0	500.0	500.1	500.1	0.9	0.9	-154.25	0.5	-9.9	10.7	9.0	1.75	6.129		
600.0	600.0	600.2	600.2	1.1	1.0	-154.14	1.7	-8.6	11.7	9.7	2.10	5.605		
700.0	699.9	700.4	700.3	1.2	1.2	-152.31	3.9	-5.9	13.1	10.6	2.45	5.334		
800.0	799.7	800.5	800.3	1.4	1.4	-149.31	7.4	-1.9	14.7	11.9	2.81	5.225		
900.0	899.4	900.6	900.1	1.6	1.6	-146.09	11.8	3.3	16.8	13.6	3.18	5.262		
1,000.0	998.9	1,000.5	999.8	1.9	1.8	-145.90	16.4	8.6	20.1	16.5	3.56	5.645		
1,051.2	1,049.8	1,051.6	1,050.8	2.0	1.9	-146.78	18.8	11.4	22.4	18.6	3.75	5.963		
1,100.0	1,098.3	1,100.4	1,099.5	2.1	2.0	-147.76	21.0	14.0	24.8	20.8	3.94	6.284		
1,200.0	1,197.6	1,200.3	1,199.1	2.3	2.2	-149.27	25.7	19.4	29.6	25.3	4.32	6.860		
1,300.0	1,297.0	1,300.2	1,298.7	2.6	2.4	-150.35	30.3	24.8	34.5	29.8	4.69	7.345		
1,400.0	1,396.3	1,400.1	1,398.3	2.8	2.6	-151.17	34.9	30.2	39.4	34.3	5.07	7.759		
1,500.0	1,495.7	1,499.9	1,498.0	3.1	2.8	-151.80	39.5	35.6	44.2	38.8	5.45	8.115		
1,600.0	1,595.1	1,599.8	1,597.6	3.3	3.1	-152.31	44.1	41.0	49.1	43.3	5.83	8.426		
1,700.0	1,694.4	1,699.7	1,697.2	3.6	3.3	-152.73	48.8	46.4	54.0	47.8	6.21	8.698		
1,800.0	1,793.8	1,799.6	1,796.9	3.9	3.5	-153.08	53.4	51.8	58.9	52.3	6.59	8.939		
1,900.0	1,893.1	1,899.5	1,896.5	4.1	3.7	-153.37	58.0	57.2	63.8	56.8	6.97	9.154		
2,000.0	1,992.5	1,999.3	1,996.1	4.4	3.9	-153.62	62.6	62.6	68.7	61.4	7.35	9.346		
2,100.0	2,091.8	2,099.2	2,095.7	4.6	4.1	-153.84	67.2	67.9	73.6	65.9	7.73	9.520		
2,200.0	2,191.2	2,199.1	2,195.4	4.9	4.3	-154.03	71.8	73.3	78.5	70.4	8.11	9.677		
2,300.0	2,290.5	2,299.0	2,295.0	5.2	4.5	-154.20	76.5	78.7	83.4	74.9	8.49	9.820		
2,400.0	2,389.9	2,398.9	2,394.6	5.4	4.7	-154.35	81.1	84.1	88.3	79.4	8.88	9.951		
2,500.0	2,489.3	2,498.7	2,494.2	5.7	5.0	-154.49	85.7	89.5	93.2	84.0	9.26	10.071		
2,600.0	2,588.6	2,598.6	2,593.9	5.9	5.2	-154.61	90.3	94.9	98.1	88.5	9.64	10.181		
2,700.0	2,688.0	2,698.5	2,693.5	6.2	5.4	-154.72	94.9	100.3	103.0	93.0	10.02	10.283		
2,800.0	2,787.3	2,798.4	2,793.1	6.5	5.6	-154.82	99.6	105.7	107.9	97.5	10.40	10.378		
2,900.0	2,886.7	2,898.3	2,892.7	6.7	5.8	-154.91	104.2	111.1	112.8	102.1	10.78	10.466		
3,000.0	2,986.0	2,998.1	2,992.4	7.0	6.0	-154.99	108.8	116.5	117.7	106.6	11.16	10.547		
3,100.0	3,085.4	3,098.0	3,092.0	7.2	6.2	-155.07	113.4	121.9	122.7	111.1	11.55	10.624		
3,200.0	3,184.7	3,197.9	3,191.6	7.5	6.4	-155.14	118.0	127.2	127.6	115.6	11.93	10.695		
3,300.0	3,284.1	3,297.8	3,291.3	7.8	6.7	-155.20	122.6	132.6	132.5	120.2	12.31	10.762		
3,400.0	3,383.4	3,397.7	3,390.9	8.0	6.9	-155.26	127.3	138.0	137.4	124.7	12.69	10.825		
3,500.0	3,482.8	3,497.5	3,490.5	8.3	7.1	-155.32	131.9	143.4	142.3	129.2	13.07	10.884		
3,600.0	3,582.2	3,597.4	3,590.1	8.6	7.3	-155.37	136.5	148.8	147.2	133.7	13.45	10.940		
3,700.0	3,681.5	3,697.3	3,689.8	8.8	7.5	-155.42	141.1	154.2	152.1	138.3	13.83	10.993		
3,800.0	3,780.9	3,797.2	3,789.4	9.1	7.7	-155.47	145.7	159.6	157.0	142.8	14.22	11.043		
3,900.0	3,880.2	3,897.0	3,889.0	9.4	7.9	-155.51	150.4	165.0	161.9	147.3	14.60	11.090		
4,000.0	3,979.6	3,996.9	3,988.6	9.6	8.1	-155.55	155.0	170.4	166.8	151.8	14.98	11.135		
4,100.0	4,078.9	4,096.8	4,088.3	9.9	8.4	-155.59	159.6	175.8	171.7	156.4	15.36	11.178		
4,200.0	4,178.3	4,196.7	4,187.9	10.1	8.6	-155.63	164.2	181.2	176.6	160.9	15.74	11.218		
4,300.0	4,277.6	4,296.6	4,287.5	10.4	8.8	-155.66	168.8	186.5	181.5	165.4	16.13	11.257		
4,400.0	4,377.0	4,396.4	4,387.2	10.7	9.0	-155.70	173.4	191.9	186.4	169.9	16.51	11.294		
4,500.0	4,476.4	4,496.3	4,486.8	10.9	9.2	-155.73	178.1	197.3	191.3	174.4	16.89	11.329		
4,600.0	4,575.7	4,596.2	4,586.4	11.2	9.4	-155.76	182.7	202.7	196.2	179.0	17.27	11.363		
4,700.0	4,675.1	4,696.1	4,686.0	11.5	9.6	-155.79	187.3	208.1	201.2	183.5	17.65	11.395		
4,800.0	4,774.4	4,796.0	4,785.7	11.7	9.9	-155.81	191.9	213.5	206.1	188.0	18.03	11.426		
4,900.0	4,873.8	4,895.8	4,885.3	12.0	10.1	-155.84	196.5	218.9	211.0	192.5	18.42	11.455		
5,000.0	4,973.1	4,995.7	4,984.9	12.3	10.3	-155.86	201.2	224.3	215.9	197.1	18.80	11.483		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1G-32H-B264 - Hz - Plan #1												Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,100.0	5,072.5	5,095.6	5,084.5	12.5	10.5	-155.88	205.8	229.7	220.8	201.6	19.18	11.511	
5,200.0	5,171.8	5,195.5	5,184.2	12.8	10.7	-155.91	210.4	235.1	225.7	206.1	19.56	11.537	
5,300.0	5,271.2	5,295.4	5,283.8	13.0	10.9	-155.93	215.0	240.5	230.6	210.6	19.94	11.562	
5,400.0	5,370.5	5,395.2	5,383.4	13.3	11.1	-155.95	219.6	245.8	235.5	215.2	20.33	11.586	
5,500.0	5,469.9	5,495.1	5,483.0	13.6	11.3	-155.97	224.3	251.2	240.4	219.7	20.71	11.609	
5,600.0	5,569.3	5,595.0	5,582.7	13.8	11.6	-155.99	228.9	256.6	245.3	224.2	21.09	11.632	
5,700.0	5,668.6	5,694.9	5,682.3	14.1	11.8	-156.00	233.5	262.0	250.2	228.7	21.47	11.653	
5,800.0	5,768.0	5,794.8	5,781.9	14.4	12.0	-156.02	238.1	267.4	255.1	233.3	21.85	11.674	
5,900.0	5,867.3	5,894.6	5,881.6	14.6	12.2	-156.04	242.7	272.8	260.0	237.8	22.24	11.694	
6,000.0	5,966.7	5,994.5	5,981.2	14.9	12.4	-156.06	247.3	278.2	264.9	242.3	22.62	11.714	
6,100.0	6,066.0	6,094.4	6,080.8	15.2	12.6	-156.07	252.0	283.6	269.9	246.9	23.00	11.733	
6,200.0	6,165.4	6,194.3	6,180.4	15.4	12.8	-156.09	256.6	289.0	274.8	251.4	23.38	11.751	
6,247.2	6,212.3	6,241.4	6,227.5	15.5	12.9	-156.09	258.8	291.5	277.1	253.5	23.56	11.759	
6,250.0	6,215.1	6,244.2	6,230.3	15.6	13.0	-157.89	258.9	291.7	277.2	253.6	23.57	11.760	
6,300.0	6,264.8	6,294.1	6,280.0	15.7	13.1	165.11	261.2	294.4	279.6	255.8	23.76	11.767	
6,350.0	6,314.4	6,343.9	6,329.7	15.8	13.2	136.69	262.7	297.0	282.0	258.0	23.97	11.762	
6,400.0	6,363.7	6,393.9	6,379.6	15.8	13.2	122.09	261.0	299.7	284.3	260.2	24.13	11.780	
6,450.0	6,412.5	6,444.2	6,429.6	15.9	13.3	114.58	255.7	302.4	286.6	262.4	24.25	11.820	
6,500.0	6,460.4	6,494.9	6,479.4	15.9	13.3	110.38	246.9	305.1	289.0	264.7	24.32	11.883	
6,550.0	6,507.3	6,546.0	6,528.8	16.0	13.3	107.88	234.5	307.8	291.3	266.9	24.34	11.964	
6,600.0	6,553.0	6,597.4	6,577.6	16.0	13.3	106.34	218.4	310.5	293.5	269.1	24.33	12.062	
6,650.0	6,597.1	6,649.2	6,625.4	16.0	13.3	105.39	198.7	313.0	295.6	271.3	24.29	12.171	
6,700.0	6,639.6	6,701.3	6,672.0	16.1	13.3	104.82	175.5	315.6	297.7	273.5	24.23	12.287	
6,750.0	6,680.1	6,753.8	6,717.0	16.1	13.3	104.49	148.7	318.0	299.7	275.5	24.16	12.402	
6,800.0	6,718.6	6,806.6	6,760.3	16.2	13.3	104.34	118.5	320.3	301.5	277.4	24.11	12.507	
6,850.0	6,754.7	6,859.7	6,801.4	16.2	13.4	104.31	85.0	322.6	303.2	279.1	24.08	12.593	
6,900.0	6,788.4	6,913.2	6,840.2	16.3	13.4	104.37	48.3	324.7	304.8	280.7	24.09	12.649	
6,950.0	6,819.4	6,966.9	6,876.3	16.4	13.5	104.48	8.5	326.6	306.1	281.9	24.18	12.658	
7,000.0	6,847.7	7,021.0	6,909.6	16.6	13.7	104.62	-34.1	328.4	307.3	283.0	24.34	12.624	
7,050.0	6,873.0	7,075.3	6,939.6	16.7	13.8	104.79	-79.2	330.0	308.3	283.7	24.61	12.529	
7,100.0	6,895.3	7,129.8	6,966.3	16.9	14.1	104.98	-126.8	331.5	309.1	284.1	24.98	12.371	
7,150.0	6,914.4	7,184.5	6,989.3	17.2	14.3	105.16	-176.4	332.7	309.6	284.1	25.49	12.148	
7,200.0	6,930.3	7,239.5	7,008.6	17.4	14.7	105.35	-227.8	333.8	309.9	283.8	26.12	11.867	
7,250.0	6,942.8	7,294.5	7,023.9	17.8	15.1	105.53	-280.7	334.6	310.0	283.1	26.88	11.533	
7,300.0	6,952.0	7,349.7	7,035.1	18.1	15.5	105.69	-334.7	335.2	309.8	282.1	27.77	11.157	
7,350.0	6,957.7	7,404.9	7,042.1	18.5	16.0	105.84	-389.4	335.6	309.4	280.6	28.78	10.750	
7,400.0	6,960.0	7,460.2	7,044.9	18.9	16.5	105.97	-444.7	335.7	308.7	278.8	29.90	10.325	
7,407.7	6,960.0	7,468.7	7,045.0	19.0	16.6	105.99	-453.1	335.7	308.6	278.5	30.08	10.260	
7,500.0	6,960.0	7,561.1	7,045.0	19.8	17.6	106.07	-545.5	335.7	307.1	275.0	32.08	9.573	
7,600.0	6,960.0	7,661.1	7,045.0	20.8	18.8	106.16	-645.5	335.7	305.4	271.0	34.41	8.875	
7,700.0	6,960.0	7,761.0	7,045.0	22.0	20.0	106.25	-745.5	335.7	303.7	266.8	36.90	8.230	
7,800.0	6,960.0	7,861.0	7,045.0	23.2	21.3	106.35	-845.4	335.7	302.0	262.5	39.52	7.643	
7,900.0	6,960.0	7,961.0	7,045.0	24.4	22.7	106.44	-945.4	335.7	300.4	258.1	42.24	7.111	
8,000.0	6,960.0	8,061.0	7,045.0	25.7	24.1	106.54	-1,045.4	335.7	298.7	253.6	45.04	6.632	
8,100.0	6,960.0	8,161.0	7,045.0	27.1	25.6	106.63	-1,145.4	335.7	297.0	249.1	47.91	6.199	
8,200.0	6,960.0	8,261.0	7,045.0	28.5	27.1	106.73	-1,245.4	335.7	295.3	244.5	50.84	5.810	
8,300.0	6,960.0	8,361.0	7,045.0	30.0	28.7	106.83	-1,345.4	335.7	293.7	239.9	53.81	5.458	
8,400.0	6,960.0	8,460.9	7,045.0	31.4	30.2	106.93	-1,445.4	335.7	292.0	235.2	56.81	5.140	
8,500.0	6,960.0	8,560.9	7,045.0	33.0	31.8	107.03	-1,545.3	335.7	290.3	230.5	59.85	4.851	
8,600.0	6,960.0	8,660.9	7,045.0	34.5	33.4	107.13	-1,645.3	335.7	288.7	225.8	62.92	4.588	
8,700.0	6,960.0	8,760.9	7,045.0	36.0	35.0	107.23	-1,745.3	335.7	287.0	221.0	66.00	4.348	
8,800.0	6,960.0	8,860.9	7,045.0	37.6	36.6	107.33	-1,845.3	335.7	285.3	216.2	69.11	4.129	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
8,900.0	6,960.0	8,960.9	7,045.0	39.2	38.2	107.44	-1,945.3	335.7	283.7	211.4	72.23	3.928	
9,000.0	6,960.0	9,060.8	7,045.0	40.8	39.9	107.55	-2,045.3	335.7	282.0	206.6	75.36	3.742	
9,100.0	6,960.0	9,160.8	7,045.0	42.4	41.5	107.65	-2,145.2	335.7	280.3	201.8	78.50	3.571	
9,200.0	6,960.0	9,260.8	7,045.0	44.0	43.2	107.76	-2,245.2	335.7	278.7	197.0	81.65	3.413	
9,300.0	6,960.0	9,360.8	7,045.0	45.6	44.9	107.87	-2,345.2	335.7	277.0	192.2	84.81	3.266	
9,400.0	6,960.0	9,460.8	7,045.0	47.3	46.5	107.98	-2,445.2	335.7	275.4	187.4	87.97	3.130	
9,500.0	6,960.0	9,560.8	7,045.0	48.9	48.2	108.10	-2,545.2	335.7	273.7	182.6	91.14	3.003	
9,600.0	6,960.0	9,660.8	7,045.0	50.6	49.9	108.21	-2,645.2	335.7	272.0	177.7	94.31	2.885	
9,700.0	6,960.0	9,760.7	7,045.0	52.3	51.6	108.33	-2,745.2	335.7	270.4	172.9	97.48	2.774	
9,800.0	6,960.0	9,860.7	7,045.0	53.9	53.3	108.44	-2,845.1	335.7	268.7	168.1	100.65	2.670	
9,900.0	6,960.0	9,960.7	7,045.0	55.6	55.0	108.56	-2,945.1	335.7	267.1	163.2	103.83	2.572	
10,000.0	6,960.0	10,060.7	7,045.0	57.3	56.7	108.68	-3,045.1	335.7	265.4	158.4	107.00	2.481	
10,100.0	6,960.0	10,160.7	7,045.0	59.0	58.4	108.80	-3,145.1	335.7	263.8	153.6	110.17	2.394	
10,200.0	6,960.0	10,260.7	7,045.0	60.6	60.1	108.93	-3,245.1	335.7	262.1	148.8	113.34	2.313	
10,300.0	6,960.0	10,360.6	7,045.0	62.3	61.8	109.05	-3,345.1	335.7	260.5	143.9	116.51	2.235	
10,400.0	6,960.0	10,460.6	7,045.0	64.0	63.5	109.18	-3,445.0	335.7	258.8	139.1	119.68	2.163	
10,500.0	6,960.0	10,560.6	7,045.0	65.7	65.2	109.30	-3,545.0	335.7	257.2	134.3	122.84	2.093	
10,600.0	6,960.0	10,660.6	7,045.0	67.4	67.0	109.43	-3,645.0	335.7	255.5	129.5	126.00	2.028	
10,700.0	6,960.0	10,760.6	7,045.0	69.1	68.7	109.56	-3,745.0	335.7	253.9	124.7	129.16	1.966	
10,800.0	6,960.0	10,860.6	7,045.0	70.8	70.4	109.70	-3,845.0	335.7	252.2	119.9	132.31	1.906	
10,900.0	6,960.0	10,960.6	7,045.0	72.5	72.1	109.83	-3,945.0	335.7	250.6	115.1	135.46	1.850	
11,000.0	6,960.0	11,060.5	7,045.0	74.2	73.8	109.97	-4,045.0	335.7	248.9	110.3	138.60	1.796	
11,100.0	6,960.0	11,160.5	7,045.0	76.0	75.6	110.11	-4,144.9	335.7	247.3	105.6	141.73	1.745	
11,200.0	6,960.0	11,260.5	7,045.0	77.7	77.3	110.25	-4,244.9	335.7	245.7	100.8	144.86	1.696	
11,300.0	6,960.0	11,360.5	7,045.0	79.4	79.0	110.39	-4,344.9	335.7	244.0	96.0	147.99	1.649	
11,400.0	6,960.0	11,460.5	7,045.0	81.1	80.7	110.53	-4,444.9	335.7	242.4	91.3	151.10	1.604	
11,500.0	6,960.0	11,560.5	7,045.0	82.8	82.5	110.68	-4,544.9	335.7	240.8	86.5	154.21	1.561	
11,517.7	6,960.0	11,577.0	7,045.0	83.1	82.8	110.70	-4,561.5	335.7	240.5	85.7	154.75	1.554 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.95	0.0	10.1	10.1	10.1	0.00	N/A		
100.0	100.0	100.0	100.0	0.2	0.2	89.95	0.0	10.1	10.1	9.7	0.35	28.850		
200.0	200.0	200.0	200.0	0.3	0.3	89.95	0.0	10.1	10.1	9.4	0.70	14.425		
300.0	300.0	300.0	300.0	0.5	0.5	89.95	0.0	10.1	10.1	9.0	1.05	9.617		
333.4	333.4	333.4	333.4	0.6	0.6	89.95	0.0	10.1	10.1	8.9	1.16	8.653 CC		
400.0	400.0	399.9	399.9	0.7	0.7	89.52	0.1	10.3	10.3	8.9	1.40	7.359 ES		
500.0	500.0	499.7	499.7	0.9	0.9	23.12	0.7	11.9	11.1	9.4	1.75	6.370		
600.0	600.0	599.5	599.5	1.1	1.1	22.59	1.9	15.1	12.0	9.9	2.09	5.730		
700.0	699.9	699.3	699.1	1.2	1.2	22.64	3.8	20.0	12.9	10.5	2.45	5.286		
800.0	799.7	799.1	798.6	1.4	1.4	23.15	6.3	26.5	13.9	11.1	2.80	4.962		
900.0	899.4	898.9	898.0	1.6	1.7	24.04	9.4	34.6	14.9	11.7	3.16	4.718		
1,000.0	998.9	998.6	997.2	1.9	1.9	25.23	13.1	44.3	16.0	12.4	3.53	4.526		
1,051.2	1,049.8	1,049.6	1,047.9	2.0	2.0	25.93	15.2	49.9	16.5	12.8	3.72	4.443		
1,100.0	1,098.3	1,098.4	1,096.3	2.1	2.1	26.37	17.4	55.7	17.2	13.3	3.90	4.415		
1,200.0	1,197.6	1,198.4	1,195.4	2.3	2.4	26.92	21.9	67.6	18.9	14.6	4.28	4.406		
1,300.0	1,297.0	1,298.3	1,294.6	2.6	2.7	27.39	26.4	79.5	20.5	15.9	4.67	4.394		
1,400.0	1,396.3	1,398.3	1,393.8	2.8	2.9	27.78	31.0	91.4	22.2	17.1	5.06	4.383		
1,500.0	1,495.7	1,498.3	1,492.9	3.1	3.2	28.13	35.5	103.3	23.8	18.4	5.45	4.371		
1,600.0	1,595.1	1,598.3	1,592.1	3.3	3.5	28.42	40.1	115.2	25.5	19.6	5.84	4.359		
1,700.0	1,694.4	1,698.3	1,691.3	3.6	3.8	28.69	44.6	127.2	27.1	20.9	6.24	4.347		
1,800.0	1,793.8	1,798.3	1,790.4	3.9	4.0	28.92	49.1	139.1	28.8	22.1	6.64	4.336		
1,900.0	1,893.1	1,898.3	1,889.6	4.1	4.3	29.12	53.7	151.0	30.4	23.4	7.04	4.325		
2,000.0	1,992.5	1,998.3	1,988.8	4.4	4.6	29.31	58.2	162.9	32.1	24.6	7.44	4.315		
2,100.0	2,091.8	2,098.2	2,087.9	4.6	4.9	29.48	62.8	174.8	33.7	25.9	7.84	4.305		
2,200.0	2,191.2	2,198.2	2,187.1	4.9	5.1	29.63	67.3	186.8	35.4	27.2	8.24	4.296		
2,300.0	2,290.5	2,298.2	2,286.3	5.2	5.4	29.77	71.8	198.7	37.0	28.4	8.64	4.288		
2,400.0	2,389.9	2,398.2	2,385.5	5.4	5.7	29.89	76.4	210.6	38.7	29.7	9.04	4.279		
2,500.0	2,489.3	2,498.2	2,484.6	5.7	6.0	30.01	80.9	222.5	40.3	30.9	9.45	4.272		
2,600.0	2,588.6	2,598.2	2,583.8	5.9	6.3	30.11	85.5	234.4	42.0	32.2	9.85	4.265		
2,700.0	2,688.0	2,698.2	2,683.0	6.2	6.5	30.21	90.0	246.3	43.7	33.4	10.25	4.258		
2,800.0	2,787.3	2,798.1	2,782.1	6.5	6.8	30.30	94.5	258.3	45.3	34.7	10.66	4.251		
2,900.0	2,886.7	2,898.1	2,881.3	6.7	7.1	30.39	99.1	270.2	47.0	35.9	11.06	4.245		
3,000.0	2,986.0	2,998.1	2,980.5	7.0	7.4	30.47	103.6	282.1	48.6	37.2	11.47	4.239		
3,100.0	3,085.4	3,098.1	3,079.6	7.2	7.7	30.54	108.1	294.0	50.3	38.4	11.88	4.233		
3,200.0	3,184.7	3,198.1	3,178.8	7.5	8.0	30.61	112.7	305.9	51.9	39.6	12.28	4.228		
3,300.0	3,284.1	3,298.1	3,278.0	7.8	8.2	30.68	117.2	317.8	53.6	40.9	12.69	4.223		
3,400.0	3,383.4	3,398.1	3,377.2	8.0	8.5	30.74	121.8	329.8	55.2	42.1	13.09	4.218		
3,500.0	3,482.8	3,498.0	3,476.3	8.3	8.8	30.80	126.3	341.7	56.9	43.4	13.50	4.214		
3,600.0	3,582.2	3,598.0	3,575.5	8.6	9.1	30.85	130.8	353.6	58.5	44.6	13.91	4.209		
3,700.0	3,681.5	3,698.0	3,674.7	8.8	9.4	30.90	135.4	365.5	60.2	45.9	14.32	4.205		
3,800.0	3,780.9	3,798.0	3,773.8	9.1	9.6	30.95	139.9	377.4	61.9	47.1	14.72	4.201		
3,900.0	3,880.2	3,898.0	3,873.0	9.4	9.9	31.00	144.5	389.4	63.5	48.4	15.13	4.198		
4,000.0	3,979.6	3,998.0	3,972.2	9.6	10.2	31.04	149.0	401.3	65.2	49.6	15.54	4.194		
4,100.0	4,078.9	4,098.0	4,071.3	9.9	10.5	31.08	153.5	413.2	66.8	50.9	15.95	4.190		
4,200.0	4,178.3	4,198.0	4,170.5	10.1	10.8	31.12	158.1	425.1	68.5	52.1	16.35	4.187		
4,300.0	4,277.6	4,297.9	4,269.7	10.4	11.1	31.16	162.6	437.0	70.1	53.4	16.76	4.184		
4,400.0	4,377.0	4,397.9	4,368.9	10.7	11.3	31.19	167.1	448.9	71.8	54.6	17.17	4.181		
4,500.0	4,476.4	4,497.9	4,468.0	10.9	11.6	31.23	171.7	460.9	73.4	55.9	17.58	4.178		
4,600.0	4,575.7	4,597.9	4,567.2	11.2	11.9	31.26	176.2	472.8	75.1	57.1	17.99	4.175		
4,700.0	4,675.1	4,697.9	4,666.4	11.5	12.2	31.29	180.8	484.7	76.8	58.4	18.40	4.172		
4,800.0	4,774.4	4,797.9	4,765.5	11.7	12.5	31.32	185.3	496.6	78.4	59.6	18.80	4.170		
4,900.0	4,873.8	4,897.9	4,864.7	12.0	12.8	31.35	189.8	508.5	80.1	60.9	19.21	4.167		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,973.1	4,997.8	4,963.9	12.3	13.0	31.38	194.4	520.4	81.7	62.1	19.62	4.165		
5,100.0	5,072.5	5,097.8	5,063.0	12.5	13.3	31.40	198.9	532.4	83.4	63.3	20.03	4.162		
5,200.0	5,171.8	5,197.8	5,162.2	12.8	13.6	31.43	203.5	544.3	85.0	64.6	20.44	4.160		
5,300.0	5,271.2	5,297.8	5,261.4	13.0	13.9	31.45	208.0	556.2	86.7	65.8	20.85	4.158		
5,400.0	5,370.5	5,397.8	5,360.5	13.3	14.2	31.48	212.5	568.1	88.3	67.1	21.26	4.156		
5,500.0	5,469.9	5,497.8	5,459.7	13.6	14.5	31.50	217.1	580.0	90.0	68.3	21.67	4.154		
5,600.0	5,569.3	5,597.8	5,558.9	13.8	14.7	31.52	221.6	592.0	91.7	69.6	22.08	4.152		
5,700.0	5,668.6	5,697.7	5,658.1	14.1	15.0	31.54	226.1	603.9	93.3	70.8	22.48	4.150		
5,800.0	5,768.0	5,797.7	5,757.2	14.4	15.3	31.56	230.7	615.8	95.0	72.1	22.89	4.148		
5,900.0	5,867.3	5,897.7	5,856.4	14.6	15.6	31.58	235.2	627.7	96.6	73.3	23.30	4.146		
6,000.0	5,966.7	5,997.7	5,955.6	14.9	15.9	31.60	239.8	639.6	98.3	74.6	23.71	4.144		
6,100.0	6,066.0	6,097.7	6,054.7	15.2	16.2	31.62	244.3	651.5	99.9	75.8	24.12	4.143		
6,200.0	6,165.4	6,197.7	6,153.9	15.4	16.4	31.64	248.8	663.5	101.6	77.1	24.53	4.141		
6,247.2	6,212.3	6,244.9	6,200.7	15.5	16.6	31.65	251.0	669.1	102.4	77.6	24.72	4.140		
6,250.0	6,215.1	6,247.7	6,203.5	15.6	16.6	29.86	251.1	669.4	102.4	77.7	24.74	4.140		
6,300.0	6,264.8	6,297.6	6,253.0	15.7	16.7	-8.34	253.4	675.4	103.1	78.3	24.74	4.166		
6,350.0	6,314.4	6,347.3	6,302.3	15.8	16.9	-40.43	255.6	681.3	103.6	79.1	24.41	4.243		
6,400.0	6,363.7	6,396.5	6,351.1	15.8	17.0	-60.48	257.9	687.2	104.4	80.6	23.85	4.379		
6,450.0	6,412.5	6,445.0	6,399.2	15.9	17.2	-74.94	260.1	692.9	106.6	83.3	23.24	4.584		
6,500.0	6,460.4	6,493.3	6,447.1	15.9	17.3	-87.12	262.0	698.7	110.9	88.1	22.81	4.861		
6,550.0	6,507.3	6,543.3	6,496.8	16.0	17.4	-97.38	261.3	704.7	117.4	94.7	22.71	5.169		
6,600.0	6,553.0	6,594.7	6,547.5	16.0	17.5	-105.87	257.0	710.8	125.6	102.8	22.86	5.494		
6,650.0	6,597.1	6,647.3	6,599.1	16.0	17.6	-112.95	248.7	717.0	135.2	112.1	23.13	5.845		
6,700.0	6,639.6	6,701.3	6,651.3	16.1	17.7	-118.85	236.3	723.2	145.8	122.4	23.40	6.229		
6,750.0	6,680.1	6,756.8	6,703.8	16.1	17.8	-123.77	219.5	729.5	157.0	133.4	23.60	6.652		
6,800.0	6,718.6	6,813.8	6,756.3	16.2	17.8	-127.89	198.0	735.8	168.6	144.9	23.69	7.114		
6,850.0	6,754.7	6,872.5	6,808.2	16.2	17.9	-131.33	171.5	742.1	180.2	156.5	23.68	7.610		
6,900.0	6,788.4	6,932.9	6,859.3	16.3	17.9	-134.21	139.9	748.2	191.7	168.2	23.56	8.137		
6,950.0	6,819.4	6,995.0	6,908.8	16.4	18.0	-136.61	103.1	754.2	202.9	179.6	23.36	8.687		
7,000.0	6,847.7	7,058.8	6,956.3	16.6	18.1	-138.60	60.8	759.9	213.6	190.5	23.11	9.243		
7,050.0	6,873.0	7,124.3	7,000.9	16.7	18.2	-140.23	13.2	765.2	223.6	200.8	22.78	9.812		
7,100.0	6,895.3	7,191.5	7,042.0	16.9	18.4	-141.55	-39.7	770.2	232.7	210.2	22.48	10.351		
7,150.0	6,914.4	7,260.2	7,078.7	17.2	18.6	-142.59	-97.6	774.6	240.8	218.6	22.18	10.854		
7,200.0	6,930.3	7,330.4	7,110.4	17.4	18.9	-143.38	-160.1	778.4	247.8	225.9	21.92	11.304		
7,250.0	6,942.8	7,401.7	7,136.2	17.8	19.3	-143.93	-226.5	781.5	253.5	231.8	21.71	11.676		
7,300.0	6,952.0	7,474.1	7,155.5	18.1	19.7	-144.25	-296.2	783.8	257.9	236.3	21.58	11.949		
7,350.0	6,957.7	7,547.2	7,167.9	18.5	20.2	-144.36	-368.2	785.3	260.9	239.3	21.55	12.108		
7,400.0	6,960.0	7,620.7	7,172.9	18.9	20.7	-144.26	-441.5	785.9	262.4	240.8	21.62	12.139		
7,407.7	6,960.0	7,632.0	7,173.0	19.0	20.8	-144.23	-452.8	785.9	262.5	240.9	21.64	12.132		
7,500.0	6,960.0	7,724.7	7,173.0	19.8	21.6	-143.94	-545.5	785.9	263.5	240.5	22.99	11.462		
7,600.0	6,960.0	7,824.7	7,173.0	20.8	22.6	-143.64	-645.5	785.9	264.5	240.0	24.56	10.772		
7,700.0	6,960.0	7,924.7	7,173.0	22.0	23.6	-143.33	-745.5	785.9	265.6	239.3	26.23	10.125		
7,800.0	6,960.0	8,024.6	7,173.0	23.2	24.7	-143.03	-845.4	785.9	266.6	238.6	28.00	9.523		
7,900.0	6,960.0	8,124.6	7,173.0	24.4	25.9	-142.73	-945.4	785.9	267.7	237.8	29.84	8.969		
8,000.0	6,960.0	8,224.6	7,173.0	25.7	27.2	-142.44	-1,045.4	785.9	268.7	237.0	31.77	8.459		
8,100.0	6,960.0	8,324.6	7,173.0	27.1	28.5	-142.14	-1,145.4	785.9	269.8	236.0	33.75	7.993		
8,200.0	6,960.0	8,424.6	7,173.0	28.5	29.9	-141.85	-1,245.4	785.9	270.9	235.1	35.80	7.565		
8,300.0	6,960.0	8,524.6	7,173.0	30.0	31.3	-141.56	-1,345.4	785.9	271.9	234.0	37.91	7.174		
8,400.0	6,960.0	8,624.6	7,173.0	31.4	32.7	-141.28	-1,445.4	785.9	273.0	233.0	40.06	6.816		
8,500.0	6,960.0	8,724.5	7,173.0	33.0	34.2	-140.99	-1,545.3	785.9	274.1	231.9	42.26	6.487		
8,600.0	6,960.0	8,824.5	7,173.0	34.5	35.7	-140.71	-1,645.3	785.9	275.2	230.7	44.50	6.185		
8,700.0	6,960.0	8,924.5	7,173.0	36.0	37.2	-140.43	-1,745.3	785.9	276.3	229.6	46.78	5.907		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
8,800.0	6,960.0	9,024.5	7,173.0	37.6	38.7	-140.15	-1,845.3	785.9	277.5	228.4	49.10	5.650		
8,900.0	6,960.0	9,124.5	7,173.0	39.2	40.2	-139.88	-1,945.3	785.9	278.6	227.1	51.46	5.413		
9,000.0	6,960.0	9,224.5	7,173.0	40.8	41.8	-139.60	-2,045.3	785.9	279.7	225.9	53.85	5.194		
9,100.0	6,960.0	9,324.4	7,173.0	42.4	43.4	-139.33	-2,145.2	785.9	280.8	224.6	56.27	4.991		
9,200.0	6,960.0	9,424.4	7,173.0	44.0	45.0	-139.06	-2,245.2	785.9	282.0	223.3	58.72	4.802		
9,300.0	6,960.0	9,524.4	7,173.0	45.6	46.6	-138.80	-2,345.2	785.9	283.1	221.9	61.21	4.626		
9,400.0	6,960.0	9,624.4	7,173.0	47.3	48.2	-138.53	-2,445.2	785.9	284.3	220.6	63.72	4.462		
9,500.0	6,960.0	9,724.4	7,173.0	48.9	49.8	-138.27	-2,545.2	785.9	285.4	219.2	66.25	4.308		
9,600.0	6,960.0	9,824.4	7,173.0	50.6	51.5	-138.01	-2,645.2	785.9	286.6	217.8	68.82	4.165		
9,700.0	6,960.0	9,924.4	7,173.0	52.3	53.1	-137.75	-2,745.2	785.9	287.8	216.4	71.40	4.030		
9,800.0	6,960.0	10,024.3	7,173.0	53.9	54.8	-137.49	-2,845.1	785.9	289.0	214.9	74.01	3.904		
9,900.0	6,960.0	10,124.3	7,173.0	55.6	56.4	-137.24	-2,945.1	785.9	290.1	213.5	76.65	3.785		
10,000.0	6,960.0	10,224.3	7,173.0	57.3	58.1	-136.99	-3,045.1	785.9	291.3	212.0	79.31	3.673		
10,100.0	6,960.0	10,324.3	7,173.0	59.0	59.7	-136.74	-3,145.1	785.9	292.5	210.5	81.99	3.568		
10,200.0	6,960.0	10,424.3	7,173.0	60.6	61.4	-136.49	-3,245.1	785.9	293.7	209.0	84.69	3.468		
10,300.0	6,960.0	10,524.3	7,173.0	62.3	63.1	-136.24	-3,345.1	785.9	294.9	207.5	87.41	3.374		
10,400.0	6,960.0	10,624.3	7,173.0	64.0	64.8	-136.00	-3,445.0	785.9	296.1	206.0	90.15	3.285		
10,500.0	6,960.0	10,724.2	7,173.0	65.7	66.4	-135.76	-3,545.0	785.9	297.3	204.4	92.91	3.200		
10,600.0	6,960.0	10,824.2	7,173.0	67.4	68.1	-135.52	-3,645.0	785.9	298.6	202.9	95.69	3.120		
10,700.0	6,960.0	10,924.2	7,173.0	69.1	69.8	-135.28	-3,745.0	785.9	299.8	201.3	98.49	3.044		
10,800.0	6,960.0	11,024.2	7,173.0	70.8	71.5	-135.04	-3,845.0	785.9	301.0	199.7	101.31	2.971		
10,900.0	6,960.0	11,124.2	7,173.0	72.5	73.2	-134.81	-3,945.0	785.9	302.3	198.1	104.14	2.902		
11,000.0	6,960.0	11,224.2	7,173.0	74.2	74.9	-134.58	-4,045.0	785.9	303.5	196.5	106.99	2.837		
11,100.0	6,960.0	11,324.1	7,173.0	76.0	76.6	-134.35	-4,144.9	785.9	304.7	194.9	109.86	2.774		
11,200.0	6,960.0	11,424.1	7,173.0	77.7	78.3	-134.12	-4,244.9	785.9	306.0	193.2	112.75	2.714		
11,300.0	6,960.0	11,524.1	7,173.0	79.4	80.0	-133.89	-4,344.9	785.9	307.2	191.6	115.65	2.657		
11,400.0	6,960.0	11,624.1	7,173.0	81.1	81.7	-133.67	-4,444.9	785.9	308.5	189.9	118.56	2.602		
11,500.0	6,960.0	11,724.1	7,173.0	82.8	83.4	-133.44	-4,544.9	785.9	309.8	188.3	121.49	2.550		
11,517.7	6,960.0	11,741.8	7,173.0	83.1	83.7	-133.41	-4,562.5	785.9	310.0	188.0	122.01	2.541 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1J-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	89.95	0.0	20.1	20.1					
100.0	100.0	100.0	100.0	0.2	0.2	89.95	0.0	20.1	20.1	19.8	0.35	57.700		
200.0	200.0	200.0	200.0	0.3	0.3	89.95	0.0	20.1	20.1	19.4	0.70	28.850		
300.0	300.0	300.0	300.0	0.5	0.5	89.95	0.0	20.1	20.1	19.1	1.05	19.233 CC, ES		
400.0	400.0	399.7	399.6	0.7	0.7	89.27	0.3	21.0	21.0	19.6	1.40	15.025		
500.0	500.0	499.3	499.2	0.9	0.9	23.22	1.0	23.5	22.7	20.9	1.74	13.007		
600.0	600.0	598.9	598.7	1.1	1.1	22.98	2.3	27.6	24.5	22.4	2.09	11.693		
700.0	699.9	698.4	698.1	1.2	1.3	23.28	4.0	33.4	26.3	23.9	2.44	10.777		
800.0	799.7	797.9	797.3	1.4	1.5	24.02	6.2	40.8	28.3	25.5	2.80	10.108		
900.0	899.4	897.4	896.3	1.6	1.7	25.10	9.0	49.9	30.3	27.2	3.16	9.600		
1,000.0	998.9	996.9	995.2	1.9	1.9	26.44	12.2	60.7	32.4	28.9	3.53	9.200		
1,051.2	1,049.8	1,047.8	1,045.6	2.0	2.1	27.21	14.1	66.8	33.6	29.8	3.72	9.025		
1,100.0	1,098.3	1,096.3	1,093.7	2.1	2.2	27.84	15.9	73.0	34.8	30.9	3.90	8.923		
1,200.0	1,197.6	1,195.6	1,192.0	2.3	2.5	28.31	20.1	87.0	38.7	34.4	4.29	9.022		
1,300.0	1,297.0	1,295.3	1,290.4	2.6	2.8	28.09	24.7	102.3	43.8	39.1	4.67	9.371		
1,400.0	1,396.3	1,395.2	1,388.9	2.8	3.1	27.88	29.4	117.7	48.9	43.9	5.05	9.680		
1,500.0	1,495.7	1,495.0	1,487.5	3.1	3.4	27.72	34.0	133.1	54.1	48.7	5.44	9.944		
1,600.0	1,595.1	1,594.9	1,586.1	3.3	3.7	27.58	38.6	148.5	59.3	53.4	5.83	10.171		
1,700.0	1,694.4	1,694.8	1,684.6	3.6	4.1	27.46	43.3	163.9	64.4	58.2	6.21	10.369		
1,800.0	1,793.8	1,794.6	1,783.2	3.9	4.4	27.36	47.9	179.3	69.6	63.0	6.60	10.543		
1,900.0	1,893.1	1,894.5	1,881.8	4.1	4.7	27.28	52.5	194.7	74.7	67.8	6.99	10.697		
2,000.0	1,992.5	1,994.4	1,980.3	4.4	5.0	27.20	57.2	210.0	79.9	72.5	7.37	10.834		
2,100.0	2,091.8	2,094.2	2,078.9	4.6	5.4	27.14	61.8	225.4	85.1	77.3	7.76	10.958		
2,200.0	2,191.2	2,194.1	2,177.5	4.9	5.7	27.08	66.4	240.8	90.2	82.1	8.15	11.069		
2,300.0	2,290.5	2,294.0	2,276.0	5.2	6.0	27.03	71.1	256.2	95.4	86.8	8.54	11.169		
2,400.0	2,389.9	2,393.8	2,374.6	5.4	6.3	26.98	75.7	271.6	100.6	91.6	8.93	11.261		
2,500.0	2,489.3	2,493.7	2,473.2	5.7	6.7	26.94	80.3	287.0	105.7	96.4	9.32	11.345		
2,600.0	2,588.6	2,593.6	2,571.7	5.9	7.0	26.90	85.0	302.4	110.9	101.2	9.71	11.421		
2,700.0	2,688.0	2,693.4	2,670.3	6.2	7.3	26.87	89.6	317.8	116.0	105.9	10.10	11.492		
2,800.0	2,787.3	2,793.3	2,768.9	6.5	7.7	26.84	94.2	333.2	121.2	110.7	10.49	11.558		
2,900.0	2,886.7	2,893.2	2,867.4	6.7	8.0	26.81	98.8	348.5	126.4	115.5	10.88	11.618		
3,000.0	2,986.0	2,993.0	2,966.0	7.0	8.3	26.78	103.5	363.9	131.5	120.3	11.27	11.675		
3,100.0	3,085.4	3,092.9	3,064.5	7.2	8.6	26.76	108.1	379.3	136.7	125.0	11.66	11.727		
3,200.0	3,184.7	3,192.8	3,163.1	7.5	9.0	26.73	112.7	394.7	141.9	129.8	12.05	11.776		
3,300.0	3,284.1	3,292.6	3,261.7	7.8	9.3	26.71	117.4	410.1	147.0	134.6	12.44	11.822		
3,400.0	3,383.4	3,392.5	3,360.2	8.0	9.6	26.69	122.0	425.5	152.2	139.4	12.83	11.865		
3,500.0	3,482.8	3,492.4	3,458.8	8.3	10.0	26.67	126.6	440.9	157.3	144.1	13.22	11.905		
3,600.0	3,582.2	3,592.2	3,557.4	8.6	10.3	26.66	131.3	456.3	162.5	148.9	13.61	11.943		
3,700.0	3,681.5	3,692.1	3,655.9	8.8	10.6	26.64	135.9	471.7	167.7	153.7	14.00	11.979		
3,800.0	3,780.9	3,792.0	3,754.5	9.1	11.0	26.63	140.5	487.0	172.8	158.4	14.39	12.013		
3,900.0	3,880.2	3,891.8	3,853.1	9.4	11.3	26.61	145.2	502.4	178.0	163.2	14.78	12.045		
4,000.0	3,979.6	3,991.7	3,951.6	9.6	11.6	26.60	149.8	517.8	183.2	168.0	15.17	12.076		
4,100.0	4,078.9	4,091.6	4,050.2	9.9	12.0	26.59	154.4	533.2	188.3	172.8	15.56	12.105		
4,200.0	4,178.3	4,191.4	4,148.8	10.1	12.3	26.57	159.1	548.6	193.5	177.5	15.95	12.132		
4,300.0	4,277.6	4,291.3	4,247.3	10.4	12.6	26.56	163.7	564.0	198.6	182.3	16.34	12.158		
4,400.0	4,377.0	4,391.2	4,345.9	10.7	13.0	26.55	168.3	579.4	203.8	187.1	16.73	12.183		
4,500.0	4,476.4	4,491.0	4,444.5	10.9	13.3	26.54	172.9	594.8	209.0	191.9	17.12	12.207		
4,600.0	4,575.7	4,590.9	4,543.0	11.2	13.6	26.53	177.6	610.2	214.1	196.6	17.51	12.229		
4,700.0	4,675.1	4,690.8	4,641.6	11.5	13.9	26.52	182.2	625.6	219.3	201.4	17.90	12.251		
4,800.0	4,774.4	4,790.6	4,740.2	11.7	14.3	26.51	186.8	640.9	224.5	206.2	18.29	12.272		
4,900.0	4,873.8	4,890.5	4,838.7	12.0	14.6	26.50	191.5	656.3	229.6	210.9	18.68	12.291		
5,000.0	4,973.1	4,990.4	4,937.3	12.3	14.9	26.49	196.1	671.7	234.8	215.7	19.07	12.310		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1J-32H-B264 - Hz - Plan #1												Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,072.5	5,090.2	5,035.8	12.5	15.3	26.49	200.7	687.1	240.0	220.5	19.46	12.329	
5,200.0	5,171.8	5,190.1	5,134.4	12.8	15.6	26.48	205.4	702.5	245.1	225.3	19.85	12.346	
5,300.0	5,271.2	5,290.0	5,233.0	13.0	15.9	26.47	210.0	717.9	250.3	230.0	20.24	12.363	
5,400.0	5,370.5	5,389.8	5,331.5	13.3	16.3	26.47	214.6	733.3	255.4	234.8	20.64	12.379	
5,500.0	5,469.9	5,489.7	5,430.1	13.6	16.6	26.46	219.3	748.7	260.6	239.6	21.03	12.394	
5,600.0	5,569.3	5,589.6	5,528.7	13.8	16.9	26.45	223.9	764.1	265.8	244.4	21.42	12.409	
5,700.0	5,668.6	5,689.4	5,627.2	14.1	17.3	26.45	228.5	779.4	270.9	249.1	21.81	12.424	
5,800.0	5,768.0	5,789.3	5,725.8	14.4	17.6	26.44	233.1	794.8	276.1	253.9	22.20	12.438	
5,900.0	5,867.3	5,889.2	5,824.4	14.6	17.9	26.43	237.8	810.2	281.3	258.7	22.59	12.451	
6,000.0	5,966.7	5,989.0	5,922.9	14.9	18.3	26.43	242.4	825.6	286.4	263.4	22.98	12.464	
6,100.0	6,066.0	6,088.9	6,021.5	15.2	18.6	26.42	247.0	841.0	291.6	268.2	23.37	12.477	
6,200.0	6,165.4	6,188.8	6,120.1	15.4	18.9	26.42	251.7	856.4	296.7	273.0	23.76	12.489	
6,247.2	6,212.3	6,235.9	6,166.6	15.5	19.1	26.42	253.9	863.7	299.2	275.2	23.95	12.494	
6,250.0	6,215.1	6,238.7	6,169.3	15.6	19.1	26.42	254.0	864.1	299.3	275.4	23.96	12.494	
6,300.0	6,264.8	6,288.6	6,218.6	15.7	19.3	-12.72	256.3	871.8	301.9	277.8	24.10	12.528	
6,350.0	6,314.4	6,338.2	6,267.6	15.8	19.4	-42.70	258.6	879.4	304.5	280.4	24.10	12.633	
6,400.0	6,363.7	6,387.5	6,316.2	15.8	19.6	-59.46	260.8	887.0	307.2	283.3	23.99	12.807	
6,450.0	6,412.5	6,437.2	6,365.3	15.9	19.7	-69.27	260.6	894.7	310.3	286.5	23.84	13.018	
6,500.0	6,460.4	6,487.7	6,415.0	15.9	19.9	-75.72	256.8	902.4	313.8	290.1	23.70	13.241	
6,550.0	6,507.3	6,538.8	6,465.0	16.0	20.0	-80.42	249.4	910.2	317.4	293.9	23.57	13.467	
6,600.0	6,553.0	6,590.8	6,515.1	16.0	20.1	-84.08	238.2	918.1	321.4	297.9	23.48	13.687	
6,650.0	6,597.1	6,643.4	6,565.0	16.0	20.2	-87.07	223.1	925.9	325.5	302.1	23.43	13.893	
6,700.0	6,639.6	6,696.9	6,614.3	16.1	20.3	-89.59	204.0	933.6	329.8	306.4	23.43	14.078	
6,750.0	6,680.1	6,751.2	6,662.8	16.1	20.4	-91.77	180.9	941.1	334.3	310.8	23.48	14.235	
6,800.0	6,718.6	6,806.3	6,710.2	16.2	20.5	-93.67	153.7	948.5	338.7	315.2	23.59	14.357	
6,850.0	6,754.7	6,862.3	6,756.0	16.2	20.6	-95.33	122.4	955.7	343.2	319.5	23.77	14.441	
6,900.0	6,788.4	6,919.0	6,799.8	16.3	20.7	-96.80	87.0	962.5	347.7	323.7	24.00	14.484	
6,950.0	6,819.4	6,976.5	6,841.3	16.4	20.8	-98.08	47.7	969.0	352.0	327.7	24.30	14.483	
7,000.0	6,847.7	7,034.8	6,880.0	16.6	20.9	-99.20	4.6	975.0	356.2	331.6	24.63	14.463	
7,050.0	6,873.0	7,093.9	6,915.6	16.7	21.1	-100.16	-42.2	980.6	360.1	335.1	25.06	14.371	
7,100.0	6,895.3	7,153.6	6,947.5	16.9	21.3	-100.98	-92.3	985.6	363.8	338.3	25.54	14.248	
7,150.0	6,914.4	7,213.9	6,975.5	17.2	21.5	-101.66	-145.6	990.0	367.2	341.1	26.07	14.084	
7,200.0	6,930.3	7,274.8	6,999.2	17.4	21.8	-102.19	-201.5	993.6	370.2	343.5	26.66	13.884	
7,250.0	6,942.8	7,336.1	7,018.2	17.8	22.1	-102.59	-259.8	996.6	372.8	345.5	27.31	13.651	
7,300.0	6,952.0	7,397.8	7,032.3	18.1	22.4	-102.86	-319.8	998.8	375.0	347.0	28.01	13.388	
7,350.0	6,957.7	7,459.8	7,041.2	18.5	22.8	-103.00	-381.1	1,000.2	376.7	347.9	28.77	13.095	
7,400.0	6,960.0	7,522.0	7,044.9	18.9	23.2	-103.01	-443.2	1,000.8	377.9	348.3	29.57	12.779	
7,407.7	6,960.0	7,531.6	7,045.0	19.0	23.3	-102.99	-452.7	1,000.8	378.1	348.4	29.70	12.729	
7,500.0	6,960.0	7,624.3	7,045.0	19.8	24.0	-102.94	-545.5	1,000.8	379.6	347.9	31.76	11.953	
7,600.0	6,960.0	7,724.3	7,045.0	20.8	24.9	-102.88	-645.5	1,000.8	381.3	347.2	34.17	11.160	
7,700.0	6,960.0	7,824.3	7,045.0	22.0	25.8	-102.82	-745.5	1,000.8	383.0	346.3	36.74	10.425	
7,800.0	6,960.0	7,924.3	7,045.0	23.2	26.8	-102.77	-845.4	1,000.8	384.7	345.3	39.44	9.754	
7,900.0	6,960.0	8,024.3	7,045.0	24.4	28.0	-102.71	-945.4	1,000.8	386.4	344.2	42.25	9.146	
8,000.0	6,960.0	8,124.3	7,045.0	25.7	29.1	-102.65	-1,045.4	1,000.8	388.1	343.0	45.15	8.597	
8,100.0	6,960.0	8,224.2	7,045.0	27.1	30.3	-102.60	-1,145.4	1,000.8	389.8	341.7	48.12	8.102	
8,200.0	6,960.0	8,324.2	7,045.0	28.5	31.6	-102.54	-1,245.4	1,000.8	391.5	340.4	51.14	7.656	
8,300.0	6,960.0	8,424.2	7,045.0	30.0	32.9	-102.48	-1,345.4	1,000.8	393.2	339.0	54.22	7.253	
8,400.0	6,960.0	8,524.2	7,045.0	31.4	34.3	-102.43	-1,445.4	1,000.8	394.9	337.6	57.34	6.888	
8,500.0	6,960.0	8,624.2	7,045.0	33.0	35.7	-102.38	-1,545.3	1,000.8	396.7	336.2	60.49	6.557	
8,600.0	6,960.0	8,724.2	7,045.0	34.5	37.1	-102.32	-1,645.3	1,000.8	398.4	334.7	63.68	6.256	
8,700.0	6,960.0	8,824.2	7,045.0	36.0	38.6	-102.27	-1,745.3	1,000.8	400.1	333.2	66.89	5.981	
8,800.0	6,960.0	8,924.1	7,045.0	37.6	40.0	-102.22	-1,845.3	1,000.8	401.8	331.6	70.12	5.729	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1J-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,900.0	6,960.0	9,024.1	7,045.0	39.2	41.5	-102.16	-1,945.3	1,000.8	403.5	330.1	73.38	5.499		
9,000.0	6,960.0	9,124.1	7,045.0	40.8	43.1	-102.11	-2,045.3	1,000.8	405.2	328.5	76.65	5.286		
9,100.0	6,960.0	9,224.1	7,045.0	42.4	44.6	-102.06	-2,145.2	1,000.8	406.9	327.0	79.94	5.090		
9,200.0	6,960.0	9,324.1	7,045.0	44.0	46.1	-102.01	-2,245.2	1,000.8	408.6	325.4	83.24	4.909		
9,300.0	6,960.0	9,424.1	7,045.0	45.6	47.7	-101.96	-2,345.2	1,000.8	410.3	323.8	86.55	4.741		
9,400.0	6,960.0	9,524.0	7,045.0	47.3	49.3	-101.91	-2,445.2	1,000.8	412.0	322.1	89.87	4.584		
9,500.0	6,960.0	9,624.0	7,045.0	48.9	50.9	-101.86	-2,545.2	1,000.8	413.7	320.5	93.21	4.439		
9,600.0	6,960.0	9,724.0	7,045.0	50.6	52.5	-101.81	-2,645.2	1,000.8	415.4	318.9	96.55	4.303		
9,700.0	6,960.0	9,824.0	7,045.0	52.3	54.1	-101.76	-2,745.2	1,000.8	417.1	317.2	99.90	4.175		
9,800.0	6,960.0	9,924.0	7,045.0	53.9	55.7	-101.71	-2,845.1	1,000.8	418.8	315.6	103.26	4.056		
9,900.0	6,960.0	10,024.0	7,045.0	55.6	57.3	-101.66	-2,945.1	1,000.8	420.6	313.9	106.63	3.944		
10,000.0	6,960.0	10,124.0	7,045.0	57.3	59.0	-101.61	-3,045.1	1,000.8	422.3	312.3	110.00	3.839		
10,100.0	6,960.0	10,223.9	7,045.0	59.0	60.6	-101.57	-3,145.1	1,000.8	424.0	310.6	113.38	3.739		
10,200.0	6,960.0	10,323.9	7,045.0	60.6	62.3	-101.52	-3,245.1	1,000.8	425.7	308.9	116.76	3.646		
10,300.0	6,960.0	10,423.9	7,045.0	62.3	63.9	-101.47	-3,345.1	1,000.8	427.4	307.2	120.15	3.557		
10,400.0	6,960.0	10,523.9	7,045.0	64.0	65.6	-101.43	-3,445.0	1,000.8	429.1	305.6	123.54	3.473		
10,500.0	6,960.0	10,623.9	7,045.0	65.7	67.2	-101.38	-3,545.0	1,000.8	430.8	303.9	126.94	3.394		
10,600.0	6,960.0	10,723.9	7,045.0	67.4	68.9	-101.34	-3,645.0	1,000.8	432.5	302.2	130.34	3.318		
10,700.0	6,960.0	10,823.8	7,045.0	69.1	70.6	-101.29	-3,745.0	1,000.8	434.2	300.5	133.75	3.247		
10,800.0	6,960.0	10,923.8	7,045.0	70.8	72.2	-101.25	-3,845.0	1,000.8	435.9	298.8	137.16	3.179		
10,900.0	6,960.0	11,023.8	7,045.0	72.5	73.9	-101.20	-3,945.0	1,000.8	437.7	297.1	140.57	3.114		
11,000.0	6,960.0	11,123.8	7,045.0	74.2	75.6	-101.16	-4,045.0	1,000.8	439.4	295.4	143.98	3.052		
11,100.0	6,960.0	11,223.8	7,045.0	76.0	77.3	-101.11	-4,144.9	1,000.8	441.1	293.7	147.40	2.992		
11,200.0	6,960.0	11,323.8	7,045.0	77.7	79.0	-101.07	-4,244.9	1,000.8	442.8	292.0	150.82	2.936		
11,300.0	6,960.0	11,423.8	7,045.0	79.4	80.7	-101.03	-4,344.9	1,000.8	444.5	290.3	154.25	2.882		
11,400.0	6,960.0	11,523.7	7,045.0	81.1	82.4	-100.98	-4,444.9	1,000.8	446.2	288.6	157.67	2.830		
11,500.0	6,960.0	11,623.7	7,045.0	82.8	84.1	-100.94	-4,544.9	1,000.8	447.9	286.8	161.10	2.780		
11,517.7	6,960.0	11,641.4	7,045.0	83.1	84.4	-100.93	-4,562.5	1,000.8	448.2	286.5	161.71	2.772 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1K-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	89.95	0.0	29.9	29.9					
100.0	100.0	100.0	100.0	0.2	0.2	89.95	0.0	29.9	29.9	29.6	0.35	85.749		
200.0	200.0	200.0	200.0	0.3	0.3	89.95	0.0	29.9	29.9	29.2	0.70	42.874		
233.3	233.3	233.3	233.3	0.4	0.4	89.95	0.0	29.9	29.9	29.1	0.81	36.747 CC		
300.0	300.0	299.7	299.7	0.5	0.5	89.85	0.1	30.1	30.1	29.1	1.05	28.796 ES		
400.0	400.0	399.2	399.2	0.7	0.7	89.13	0.5	31.8	31.8	30.4	1.40	22.801		
500.0	500.0	498.6	498.5	0.9	0.9	23.30	1.3	35.2	34.4	32.7	1.74	19.745		
600.0	600.0	598.0	597.8	1.1	1.1	23.20	2.5	40.2	37.1	35.0	2.09	17.736		
700.0	699.9	697.3	696.8	1.2	1.3	23.57	4.2	46.9	39.9	37.4	2.44	16.328		
800.0	799.7	796.5	795.7	1.4	1.5	24.33	6.2	55.2	42.8	40.0	2.80	15.293		
900.0	899.4	895.7	894.4	1.6	1.7	25.39	8.6	65.2	45.7	42.6	3.15	14.501		
1,000.0	998.9	994.9	992.8	1.9	2.0	26.69	11.5	76.9	48.8	45.3	3.52	13.872		
1,051.2	1,049.8	1,045.6	1,043.0	2.0	2.1	27.43	13.1	83.5	50.5	46.8	3.71	13.597		
1,100.0	1,098.3	1,094.0	1,090.9	2.1	2.3	28.08	14.7	90.2	52.3	48.4	3.90	13.406		
1,200.0	1,197.6	1,193.0	1,188.7	2.3	2.6	28.87	18.4	105.1	57.2	52.9	4.28	13.345		
1,300.0	1,297.0	1,291.8	1,286.0	2.6	2.9	29.06	22.4	121.7	63.7	59.0	4.67	13.643		
1,400.0	1,396.3	1,390.3	1,382.8	2.8	3.2	28.78	26.8	139.8	71.9	66.8	5.05	14.224		
1,500.0	1,495.7	1,489.9	1,480.4	3.1	3.6	28.36	31.5	159.0	80.9	75.5	5.44	14.884		
1,600.0	1,595.1	1,589.5	1,578.0	3.3	4.0	28.03	36.2	178.2	90.0	84.2	5.82	15.456		
1,700.0	1,694.4	1,689.1	1,675.6	3.6	4.4	27.76	40.9	197.4	99.0	92.8	6.21	15.956		
1,800.0	1,793.8	1,788.6	1,773.2	3.9	4.7	27.53	45.5	216.5	108.1	101.5	6.59	16.397		
1,900.0	1,893.1	1,888.2	1,870.8	4.1	5.1	27.34	50.2	235.7	117.1	110.2	6.98	16.790		
2,000.0	1,992.5	1,987.8	1,968.4	4.4	5.5	27.18	54.9	254.9	126.2	118.8	7.36	17.140		
2,100.0	2,091.8	2,087.4	2,066.1	4.6	5.9	27.04	59.6	274.1	135.3	127.5	7.75	17.456		
2,200.0	2,191.2	2,187.0	2,163.7	4.9	6.3	26.91	64.3	293.3	144.3	136.2	8.13	17.741		
2,300.0	2,290.5	2,286.6	2,261.3	5.2	6.6	26.80	68.9	312.4	153.4	144.8	8.52	18.000		
2,400.0	2,389.9	2,386.2	2,358.9	5.4	7.0	26.71	73.6	331.6	162.4	153.5	8.91	18.237		
2,500.0	2,489.3	2,485.8	2,456.5	5.7	7.4	26.62	78.3	350.8	171.5	162.2	9.29	18.453		
2,600.0	2,588.6	2,585.3	2,554.1	5.9	7.8	26.54	83.0	370.0	180.5	170.9	9.68	18.653		
2,700.0	2,688.0	2,684.9	2,651.7	6.2	8.2	26.47	87.6	389.2	189.6	179.5	10.07	18.836		
2,800.0	2,787.3	2,784.5	2,749.3	6.5	8.6	26.41	92.3	408.4	198.7	188.2	10.45	19.006		
2,900.0	2,886.7	2,884.1	2,846.9	6.7	9.0	26.35	97.0	427.5	207.7	196.9	10.84	19.164		
3,000.0	2,986.0	2,983.7	2,944.6	7.0	9.4	26.29	101.7	446.7	216.8	205.6	11.23	19.311		
3,100.0	3,085.4	3,083.3	3,042.2	7.2	9.7	26.24	106.4	465.9	225.9	214.2	11.61	19.448		
3,200.0	3,184.7	3,182.9	3,139.8	7.5	10.1	26.20	111.0	485.1	234.9	222.9	12.00	19.576		
3,300.0	3,284.1	3,282.5	3,237.4	7.8	10.5	26.16	115.7	504.3	244.0	231.6	12.39	19.696		
3,400.0	3,383.4	3,382.1	3,335.0	8.0	10.9	26.12	120.4	523.5	253.0	240.3	12.77	19.809		
3,500.0	3,482.8	3,481.6	3,432.6	8.3	11.3	26.08	125.1	542.6	262.1	248.9	13.16	19.915		
3,600.0	3,582.2	3,581.2	3,530.2	8.6	11.7	26.05	129.8	561.8	271.2	257.6	13.55	20.015		
3,700.0	3,681.5	3,680.8	3,627.8	8.8	12.1	26.01	134.4	581.0	280.2	266.3	13.94	20.109		
3,800.0	3,780.9	3,780.4	3,725.5	9.1	12.5	25.98	139.1	600.2	289.3	275.0	14.32	20.198		
3,900.0	3,880.2	3,880.0	3,823.1	9.4	12.9	25.96	143.8	619.4	298.3	283.6	14.71	20.283		
4,000.0	3,979.6	3,979.6	3,920.7	9.6	13.2	25.93	148.5	638.5	307.4	292.3	15.10	20.363		
4,100.0	4,078.9	4,079.2	4,018.3	9.9	13.6	25.90	153.1	657.7	316.5	301.0	15.48	20.439		
4,200.0	4,178.3	4,178.8	4,115.9	10.1	14.0	25.88	157.8	676.9	325.5	309.7	15.87	20.511		
4,300.0	4,277.6	4,278.4	4,213.5	10.4	14.4	25.86	162.5	696.1	334.6	318.3	16.26	20.580		
4,400.0	4,377.0	4,377.9	4,311.1	10.7	14.8	25.84	167.2	715.3	343.7	327.0	16.65	20.646		
4,500.0	4,476.4	4,477.5	4,408.7	10.9	15.2	25.82	171.9	734.5	352.7	335.7	17.03	20.708		
4,600.0	4,575.7	4,577.1	4,506.3	11.2	15.6	25.80	176.5	753.6	361.8	344.4	17.42	20.768		
4,700.0	4,675.1	4,676.7	4,604.0	11.5	16.0	25.78	181.2	772.8	370.9	353.0	17.81	20.825		
4,800.0	4,774.4	4,776.3	4,701.6	11.7	16.4	25.76	185.9	792.0	379.9	361.7	18.19	20.880		
4,900.0	4,873.8	4,875.9	4,799.2	12.0	16.8	25.75	190.6	811.2	389.0	370.4	18.58	20.933		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1K-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,973.1	4,975.5	4,896.8	12.3	17.2	25.73	195.3	830.4	398.0	379.1	18.97	20.983		
5,100.0	5,072.5	5,075.1	4,994.4	12.5	17.5	25.72	199.9	849.5	407.1	387.7	19.36	21.031		
5,200.0	5,171.8	5,174.6	5,092.0	12.8	17.9	25.70	204.6	868.7	416.2	396.4	19.74	21.078		
5,300.0	5,271.2	5,274.2	5,189.6	13.0	18.3	25.69	209.3	887.9	425.2	405.1	20.13	21.122		
5,400.0	5,370.5	5,373.8	5,287.2	13.3	18.7	25.68	214.0	907.1	434.3	413.8	20.52	21.165		
5,500.0	5,469.9	5,473.4	5,384.8	13.6	19.1	25.66	218.6	926.3	443.4	422.4	20.91	21.206		
5,600.0	5,569.3	5,573.0	5,482.5	13.8	19.5	25.65	223.3	945.5	452.4	431.1	21.29	21.246		
5,700.0	5,668.6	5,672.6	5,580.1	14.1	19.9	25.64	228.0	964.6	461.5	439.8	21.68	21.284		
5,800.0	5,768.0	5,772.2	5,677.7	14.4	20.3	25.63	232.7	983.8	470.5	448.5	22.07	21.321		
5,900.0	5,867.3	5,871.8	5,775.3	14.6	20.7	25.62	237.4	1,003.0	479.6	457.1	22.46	21.357		
6,000.0	5,966.7	5,971.4	5,872.9	14.9	21.1	25.61	242.0	1,022.2	488.7	465.8	22.84	21.392		
6,100.0	6,066.0	6,070.9	5,970.5	15.2	21.5	25.60	246.7	1,041.4	497.7	474.5	23.23	21.425		
6,200.0	6,165.4	6,170.5	6,068.1	15.4	21.8	25.59	251.4	1,060.6	506.8	483.2	23.62	21.457		
6,247.2	6,212.3	6,217.6	6,114.2	15.5	22.0	25.58	253.6	1,069.6	511.1	487.3	23.80	21.472		
6,250.0	6,215.1	6,220.3	6,116.9	15.6	22.0	23.82	253.7	1,070.1	511.3	487.5	23.82	21.470		
6,300.0	6,264.8	6,270.1	6,165.7	15.7	22.2	-13.24	256.1	1,079.7	515.9	491.8	24.01	21.481		
6,350.0	6,314.4	6,319.6	6,214.2	15.8	22.4	-42.64	258.4	1,089.3	520.4	496.3	24.11	21.583		
6,400.0	6,363.7	6,368.8	6,262.5	15.8	22.6	-58.48	259.6	1,098.8	525.1	501.0	24.13	21.764		
6,450.0	6,412.5	6,418.6	6,311.3	15.9	22.8	-67.23	257.5	1,108.3	529.9	505.8	24.10	21.983		
6,500.0	6,460.4	6,469.0	6,360.4	15.9	22.9	-72.64	251.9	1,118.0	534.8	510.7	24.06	22.229		
6,550.0	6,507.3	6,519.9	6,409.6	16.0	23.1	-76.31	242.6	1,127.7	539.7	515.8	24.00	22.493		
6,600.0	6,553.0	6,571.5	6,458.5	16.0	23.2	-79.00	229.7	1,137.3	544.8	520.8	23.93	22.765		
6,650.0	6,597.1	6,623.6	6,507.0	16.0	23.4	-81.05	212.9	1,146.8	549.8	525.9	23.87	23.033		
6,700.0	6,639.6	6,676.4	6,554.7	16.1	23.5	-82.69	192.4	1,156.2	554.8	530.9	23.83	23.284		
6,750.0	6,680.1	6,729.8	6,601.3	16.1	23.6	-84.03	168.0	1,165.3	559.7	535.9	23.81	23.504		
6,800.0	6,718.6	6,783.9	6,646.5	16.2	23.7	-85.14	139.7	1,174.2	564.6	540.7	23.84	23.680		
6,850.0	6,754.7	6,838.6	6,690.0	16.2	23.9	-86.08	107.7	1,182.8	569.3	545.3	23.92	23.796		
6,900.0	6,788.4	6,894.0	6,731.5	16.3	24.0	-86.88	72.0	1,190.9	573.8	549.8	24.07	23.841		
6,950.0	6,819.4	6,949.9	6,770.5	16.4	24.2	-87.56	32.7	1,198.6	578.2	553.9	24.29	23.805		
7,000.0	6,847.7	7,006.5	6,806.8	16.6	24.3	-88.14	-10.1	1,205.7	582.3	557.7	24.59	23.677		
7,050.0	6,873.0	7,063.6	6,839.9	16.7	24.5	-88.63	-56.2	1,212.2	586.2	561.2	24.99	23.455		
7,100.0	6,895.3	7,121.3	6,869.7	16.9	24.7	-89.04	-105.2	1,218.1	589.7	564.2	25.48	23.143		
7,150.0	6,914.4	7,179.4	6,895.6	17.2	24.9	-89.37	-157.0	1,223.2	593.0	566.9	26.07	22.748		
7,200.0	6,930.3	7,238.0	6,917.5	17.4	25.1	-89.63	-211.1	1,227.5	595.8	569.1	26.74	22.278		
7,250.0	6,942.8	7,296.9	6,935.0	17.8	25.4	-89.82	-267.3	1,230.9	598.3	570.8	27.51	21.746		
7,300.0	6,952.0	7,356.2	6,948.0	18.1	25.7	-89.94	-325.0	1,233.5	600.4	572.0	28.37	21.162		
7,350.0	6,957.7	7,415.7	6,956.4	18.5	26.0	-90.01	-383.9	1,235.1	602.0	572.7	29.31	20.540		
7,400.0	6,960.0	7,475.3	6,959.9	18.9	26.4	-90.00	-443.4	1,235.8	603.2	572.9	30.32	19.899		
7,407.7	6,960.0	7,484.4	6,960.0	19.0	26.5	-90.00	-452.5	1,235.8	603.4	572.9	30.47	19.800		
7,500.0	6,960.0	7,577.4	6,960.0	19.8	27.1	-90.00	-545.5	1,235.8	605.0	572.4	32.56	18.579		
7,600.0	6,960.0	7,677.4	6,960.0	20.8	27.8	-90.00	-645.5	1,235.8	606.8	571.7	35.01	17.331		
7,700.0	6,960.0	7,777.4	6,960.0	22.0	28.7	-90.00	-745.5	1,235.8	608.5	570.9	37.62	16.173		
7,800.0	6,960.0	7,877.4	6,960.0	23.2	29.6	-90.00	-845.4	1,235.8	610.2	569.9	40.37	15.115		
7,900.0	6,960.0	7,977.4	6,960.0	24.4	30.6	-90.00	-945.4	1,235.8	612.0	568.8	43.23	14.155		
8,000.0	6,960.0	8,077.3	6,960.0	25.7	31.7	-90.00	-1,045.4	1,235.8	613.7	567.6	46.18	13.289		
8,100.0	6,960.0	8,177.3	6,960.0	27.1	32.8	-90.00	-1,145.4	1,235.8	615.5	566.3	49.21	12.508		
8,200.0	6,960.0	8,277.3	6,960.0	28.5	34.0	-90.00	-1,245.4	1,235.8	617.2	564.9	52.29	11.804		
8,300.0	6,960.0	8,377.3	6,960.0	30.0	35.2	-90.00	-1,345.4	1,235.8	619.0	563.5	55.42	11.168		
8,400.0	6,960.0	8,477.3	6,960.0	31.4	36.5	-90.00	-1,445.4	1,235.8	620.7	562.1	58.60	10.593		
8,500.0	6,960.0	8,577.3	6,960.0	33.0	37.8	-90.00	-1,545.3	1,235.8	622.5	560.6	61.81	10.070		
8,600.0	6,960.0	8,677.2	6,960.0	34.5	39.1	-90.00	-1,645.3	1,235.8	624.2	559.2	65.05	9.595		
8,700.0	6,960.0	8,777.2	6,960.0	36.0	40.5	-90.00	-1,745.3	1,235.8	626.0	557.6	68.32	9.162		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,800.0	6,960.0	8,877.2	6,960.0	37.6	41.9	-90.00	-1,845.3	1,235.8	627.7	556.1	71.62	8.765		
8,900.0	6,960.0	8,977.2	6,960.0	39.2	43.3	-90.00	-1,945.3	1,235.8	629.4	554.5	74.93	8.401		
9,000.0	6,960.0	9,077.2	6,960.0	40.8	44.8	-90.00	-2,045.3	1,235.8	631.2	552.9	78.25	8.066		
9,100.0	6,960.0	9,177.2	6,960.0	42.4	46.3	-90.00	-2,145.2	1,235.8	632.9	551.3	81.60	7.757		
9,200.0	6,960.0	9,277.2	6,960.0	44.0	47.8	-90.00	-2,245.2	1,235.8	634.7	549.7	84.96	7.471		
9,300.0	6,960.0	9,377.1	6,960.0	45.6	49.3	-90.00	-2,345.2	1,235.8	636.4	548.1	88.32	7.206		
9,400.0	6,960.0	9,477.1	6,960.0	47.3	50.8	-90.00	-2,445.2	1,235.8	638.2	546.5	91.70	6.959		
9,500.0	6,960.0	9,577.1	6,960.0	48.9	52.3	-90.00	-2,545.2	1,235.8	639.9	544.8	95.09	6.730		
9,600.0	6,960.0	9,677.1	6,960.0	50.6	53.9	-90.00	-2,645.2	1,235.8	641.7	543.2	98.49	6.515		
9,700.0	6,960.0	9,777.1	6,960.0	52.3	55.5	-90.00	-2,745.2	1,235.8	643.4	541.5	101.89	6.315		
9,800.0	6,960.0	9,877.1	6,960.0	53.9	57.0	-90.00	-2,845.1	1,235.8	645.2	539.8	105.30	6.127		
9,900.0	6,960.0	9,977.0	6,960.0	55.6	58.6	-90.00	-2,945.1	1,235.8	646.9	538.2	108.72	5.950		
10,000.0	6,960.0	10,077.0	6,960.0	57.3	60.2	-90.00	-3,045.1	1,235.8	648.6	536.5	112.14	5.784		
10,100.0	6,960.0	10,177.0	6,960.0	59.0	61.8	-90.00	-3,145.1	1,235.8	650.4	534.8	115.57	5.628		
10,200.0	6,960.0	10,277.0	6,960.0	60.6	63.4	-90.00	-3,245.1	1,235.8	652.1	533.1	119.00	5.480		
10,300.0	6,960.0	10,377.0	6,960.0	62.3	65.1	-90.00	-3,345.1	1,235.8	653.9	531.4	122.44	5.340		
10,400.0	6,960.0	10,477.0	6,960.0	64.0	66.7	-90.00	-3,445.0	1,235.8	655.6	529.7	125.88	5.208		
10,500.0	6,960.0	10,577.0	6,960.0	65.7	68.3	-90.00	-3,545.0	1,235.8	657.4	528.0	129.32	5.083		
10,600.0	6,960.0	10,676.9	6,960.0	67.4	70.0	-90.00	-3,645.0	1,235.8	659.1	526.3	132.77	4.964		
10,700.0	6,960.0	10,776.9	6,960.0	69.1	71.6	-90.00	-3,745.0	1,235.8	660.9	524.6	136.22	4.851		
10,800.0	6,960.0	10,876.9	6,960.0	70.8	73.3	-90.00	-3,845.0	1,235.8	662.6	522.9	139.68	4.744		
10,900.0	6,960.0	10,976.9	6,960.0	72.5	74.9	-90.00	-3,945.0	1,235.8	664.4	521.2	143.13	4.642		
11,000.0	6,960.0	11,076.9	6,960.0	74.2	76.6	-90.00	-4,045.0	1,235.8	666.1	519.5	146.59	4.544		
11,100.0	6,960.0	11,176.9	6,960.0	76.0	78.2	-90.00	-4,144.9	1,235.8	667.8	517.8	150.05	4.451		
11,200.0	6,960.0	11,276.8	6,960.0	77.7	79.9	-90.00	-4,244.9	1,235.8	669.6	516.1	153.51	4.362		
11,300.0	6,960.0	11,376.8	6,960.0	79.4	81.6	-90.00	-4,344.9	1,235.8	671.3	514.4	156.98	4.277		
11,400.0	6,960.0	11,476.8	6,960.0	81.1	83.3	-90.00	-4,444.9	1,235.8	673.1	512.6	160.45	4.195		
11,500.0	6,960.0	11,576.8	6,960.0	82.8	84.9	-90.00	-4,544.9	1,235.8	674.8	510.9	163.92	4.117		
11,517.7	6,960.0	11,594.5	6,960.0	83.1	85.2	-90.00	-4,562.5	1,235.8	675.1	510.6	164.53	4.103 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - Ruhl 1L-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.49	-0.3	40.0	40.0					
100.0	100.0	100.0	100.0	0.2	0.2	90.49	-0.3	40.0	40.0	39.7	0.35	114.603		
200.0	200.0	200.0	200.0	0.3	0.3	90.49	-0.3	40.0	40.0	39.3	0.70	57.301	CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	90.23	-0.2	40.8	40.9	39.8	1.05	39.034		
400.0	400.0	398.6	398.5	0.7	0.7	89.53	0.4	43.4	43.4	42.0	1.40	31.052		
500.0	500.0	497.7	497.6	0.9	0.9	23.82	1.2	47.6	46.9	45.1	1.74	26.897		
600.0	600.0	596.8	596.5	1.1	1.1	23.74	2.4	53.5	50.4	48.3	2.09	24.115		
700.0	699.9	695.9	695.3	1.2	1.3	24.09	4.0	61.0	54.1	51.6	2.44	22.158		
800.0	799.7	794.9	793.8	1.4	1.5	24.76	5.9	70.2	57.9	55.1	2.79	20.709		
900.0	899.4	893.8	892.1	1.6	1.8	25.71	8.1	81.1	61.8	58.6	3.15	19.594		
1,000.0	998.9	992.6	990.1	1.9	2.0	26.86	10.7	93.6	65.8	62.3	3.52	18.702		
1,051.2	1,049.8	1,043.1	1,040.1	2.0	2.2	27.52	12.1	100.7	67.9	64.2	3.71	18.310		
1,100.0	1,098.3	1,091.4	1,087.8	2.1	2.3	28.12	13.6	107.8	70.2	66.3	3.89	18.016		
1,200.0	1,197.6	1,190.0	1,185.1	2.3	2.7	28.97	16.8	123.6	76.0	71.7	4.28	17.769		
1,300.0	1,297.0	1,288.4	1,281.9	2.6	3.0	29.36	20.4	141.0	83.5	78.9	4.66	17.908		
1,400.0	1,396.3	1,386.5	1,378.1	2.8	3.4	29.39	24.3	159.9	92.7	87.6	5.05	18.349		
1,500.0	1,495.7	1,484.3	1,473.6	3.1	3.8	29.15	28.5	180.4	103.5	98.0	5.44	19.034		
1,600.0	1,595.1	1,583.5	1,570.3	3.3	4.2	28.82	32.9	202.1	115.2	109.4	5.82	19.786		
1,700.0	1,694.4	1,682.8	1,667.1	3.6	4.6	28.56	37.4	223.9	126.9	120.7	6.21	20.444		
1,800.0	1,793.8	1,782.1	1,763.9	3.9	5.0	28.33	41.8	245.6	138.6	132.0	6.59	21.024		
1,900.0	1,893.1	1,881.4	1,860.7	4.1	5.4	28.14	46.3	267.4	150.4	143.4	6.98	21.539		
2,000.0	1,992.5	1,980.7	1,957.5	4.4	5.8	27.98	50.8	289.1	162.1	154.7	7.37	21.999		
2,100.0	2,091.8	2,080.1	2,054.3	4.6	6.3	27.84	55.2	310.9	173.8	166.1	7.76	22.413		
2,200.0	2,191.2	2,179.4	2,151.0	4.9	6.7	27.72	59.7	332.6	185.6	177.4	8.14	22.787		
2,300.0	2,290.5	2,278.7	2,247.8	5.2	7.1	27.62	64.2	354.3	197.3	188.8	8.53	23.127		
2,400.0	2,389.9	2,378.0	2,344.6	5.4	7.5	27.52	68.6	376.1	209.1	200.1	8.92	23.437		
2,500.0	2,489.3	2,477.3	2,441.4	5.7	8.0	27.44	73.1	397.8	220.8	211.5	9.31	23.720		
2,600.0	2,588.6	2,576.6	2,538.2	5.9	8.4	27.36	77.5	419.6	232.5	222.8	9.70	23.981		
2,700.0	2,688.0	2,675.9	2,635.0	6.2	8.8	27.29	82.0	441.3	244.3	234.2	10.08	24.222		
2,800.0	2,787.3	2,775.2	2,731.8	6.5	9.2	27.23	86.5	463.1	256.0	245.5	10.47	24.444		
2,900.0	2,886.7	2,874.5	2,828.6	6.7	9.7	27.17	90.9	484.8	267.7	256.9	10.86	24.651		
3,000.0	2,986.0	2,973.8	2,925.4	7.0	10.1	27.12	95.4	506.6	279.5	268.2	11.25	24.843		
3,100.0	3,085.4	3,073.1	3,022.2	7.2	10.5	27.07	99.8	528.3	291.2	279.6	11.64	25.022		
3,200.0	3,184.7	3,172.4	3,119.0	7.5	11.0	27.03	104.3	550.1	303.0	290.9	12.03	25.189		
3,300.0	3,284.1	3,271.7	3,215.8	7.8	11.4	26.98	108.8	571.8	314.7	302.3	12.42	25.346		
3,400.0	3,383.4	3,371.1	3,312.6	8.0	11.8	26.95	113.2	593.5	326.5	313.6	12.81	25.493		
3,500.0	3,482.8	3,470.4	3,409.4	8.3	12.3	26.91	117.7	615.3	338.2	325.0	13.19	25.632		
3,600.0	3,582.2	3,569.7	3,506.2	8.6	12.7	26.88	122.1	637.0	349.9	336.4	13.58	25.763		
3,700.0	3,681.5	3,669.0	3,603.0	8.8	13.1	26.85	126.6	658.8	361.7	347.7	13.97	25.886		
3,800.0	3,780.9	3,768.3	3,699.8	9.1	13.5	26.82	131.1	680.5	373.4	359.1	14.36	26.002		
3,900.0	3,880.2	3,867.6	3,796.6	9.4	14.0	26.79	135.5	702.3	385.2	370.4	14.75	26.113		
4,000.0	3,979.6	3,966.9	3,893.4	9.6	14.4	26.76	140.0	724.0	396.9	381.8	15.14	26.217		
4,100.0	4,078.9	4,066.2	3,990.2	9.9	14.8	26.74	144.5	745.8	408.6	393.1	15.53	26.316		
4,200.0	4,178.3	4,165.5	4,087.0	10.1	15.3	26.72	148.9	767.5	420.4	404.5	15.92	26.411		
4,300.0	4,277.6	4,264.8	4,183.8	10.4	15.7	26.70	153.4	789.2	432.1	415.8	16.31	26.501		
4,400.0	4,377.0	4,364.1	4,280.5	10.7	16.1	26.68	157.8	811.0	443.9	427.2	16.70	26.586		
4,500.0	4,476.4	4,463.4	4,377.3	10.9	16.6	26.66	162.3	832.7	455.6	438.5	17.08	26.668		
4,600.0	4,575.7	4,562.8	4,474.1	11.2	17.0	26.64	166.8	854.5	467.3	449.9	17.47	26.746		
4,700.0	4,675.1	4,662.1	4,570.9	11.5	17.4	26.62	171.2	876.2	479.1	461.2	17.86	26.821		
4,800.0	4,774.4	4,761.4	4,667.7	11.7	17.9	26.60	175.7	898.0	490.8	472.6	18.25	26.892		
4,900.0	4,873.8	4,860.7	4,764.5	12.0	18.3	26.59	180.1	919.7	502.6	483.9	18.64	26.961		
5,000.0	4,973.1	4,960.0	4,861.3	12.3	18.7	26.57	184.6	941.5	514.3	495.3	19.03	27.026		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,100.0	5,072.5	5,059.3	4,958.1	12.5	19.2	26.56	189.1	963.2	526.1	506.6	19.42	27.089	
5,200.0	5,171.8	5,158.6	5,054.9	12.8	19.6	26.54	193.5	984.9	537.8	518.0	19.81	27.150	
5,300.0	5,271.2	5,257.9	5,151.7	13.0	20.0	26.53	198.0	1,006.7	549.5	529.3	20.20	27.208	
5,400.0	5,370.5	5,357.2	5,248.5	13.3	20.5	26.52	202.5	1,028.4	561.3	540.7	20.59	27.264	
5,500.0	5,469.9	5,456.5	5,345.3	13.6	20.9	26.51	206.9	1,050.2	573.0	552.0	20.98	27.318	
5,600.0	5,569.3	5,555.8	5,442.1	13.8	21.3	26.49	211.4	1,071.9	584.8	563.4	21.37	27.370	
5,700.0	5,668.6	5,655.1	5,538.9	14.1	21.7	26.48	215.8	1,093.7	596.5	574.8	21.75	27.420	
5,800.0	5,768.0	5,754.5	5,635.7	14.4	22.2	26.47	220.3	1,115.4	608.3	586.1	22.14	27.468	
5,900.0	5,867.3	5,853.8	5,732.5	14.6	22.6	26.46	224.8	1,137.2	620.0	597.5	22.53	27.515	
6,000.0	5,966.7	5,953.1	5,829.3	14.9	23.0	26.45	229.2	1,158.9	631.7	608.8	22.92	27.560	
6,100.0	6,066.0	6,052.4	5,926.1	15.2	23.5	26.44	233.7	1,180.7	643.5	620.2	23.31	27.603	
6,200.0	6,165.4	6,151.7	6,022.9	15.4	23.9	26.43	238.1	1,202.4	655.2	631.5	23.70	27.645	
6,247.2	6,212.3	6,198.6	6,068.6	15.5	24.1	26.43	240.2	1,212.7	660.8	636.9	23.88	27.665	
6,250.0	6,215.1	6,201.3	6,071.3	15.6	24.1	24.67	240.4	1,213.3	661.1	637.2	23.90	27.659	
6,300.0	6,264.8	6,250.9	6,119.6	15.7	24.3	-12.23	242.6	1,224.1	666.9	642.8	24.14	27.630	
6,350.0	6,314.4	6,300.3	6,167.7	15.8	24.6	-41.40	244.8	1,234.9	672.7	648.5	24.28	27.704	
6,400.0	6,363.7	6,349.2	6,215.3	15.8	24.8	-57.04	247.0	1,245.6	678.6	654.2	24.34	27.877	
6,450.0	6,412.5	6,397.3	6,262.3	15.9	25.0	-65.84	249.2	1,256.2	684.5	660.2	24.33	28.138	
6,500.0	6,460.4	6,444.4	6,308.2	15.9	25.2	-71.52	251.3	1,266.5	690.7	666.5	24.26	28.472	
6,550.0	6,507.3	6,490.4	6,353.0	16.0	25.4	-75.65	253.4	1,276.6	697.4	673.2	24.16	28.862	
6,600.0	6,553.0	6,535.0	6,396.4	16.0	25.6	-78.91	255.4	1,286.3	704.7	680.6	24.06	29.291	
6,650.0	6,597.1	6,577.9	6,438.3	16.0	25.8	-81.63	257.3	1,295.7	712.9	688.9	23.97	29.743	
6,700.0	6,639.6	6,625.8	6,485.0	16.1	26.0	-84.18	258.1	1,306.2	722.1	698.2	23.88	30.240	
6,750.0	6,680.1	6,676.5	6,534.4	16.1	26.2	-86.48	255.6	1,317.3	732.0	708.2	23.82	30.726	
6,800.0	6,718.6	6,729.8	6,586.0	16.2	26.4	-88.57	249.0	1,328.9	742.6	718.8	23.81	31.182	
6,850.0	6,754.7	6,785.9	6,639.7	16.2	26.6	-90.52	237.9	1,341.0	753.7	729.9	23.85	31.596	
6,900.0	6,788.4	6,845.5	6,695.5	16.3	26.7	-92.35	221.4	1,353.5	765.3	741.3	23.95	31.955	
6,950.0	6,819.4	6,908.8	6,753.1	16.4	26.9	-94.10	198.7	1,366.4	777.1	753.0	24.10	32.246	
7,000.0	6,847.7	6,976.5	6,812.3	16.6	27.1	-95.78	168.8	1,379.7	789.0	764.7	24.31	32.454	
7,050.0	6,873.0	7,049.0	6,872.4	16.7	27.3	-97.39	130.5	1,393.3	800.8	776.2	24.59	32.571	
7,100.0	6,895.3	7,127.0	6,932.5	16.9	27.5	-98.92	82.7	1,406.7	812.2	787.2	24.94	32.560	
7,150.0	6,914.4	7,210.8	6,990.9	17.2	27.8	-100.35	24.2	1,419.9	822.8	797.5	25.39	32.413	
7,200.0	6,930.3	7,300.6	7,045.7	17.4	28.1	-101.65	-45.9	1,432.2	832.5	806.6	25.91	32.134	
7,250.0	6,942.8	7,396.5	7,094.3	17.8	28.4	-102.76	-127.8	1,443.1	840.9	814.3	26.57	31.655	
7,300.0	6,952.0	7,497.9	7,133.5	18.1	28.8	-103.63	-220.7	1,451.9	847.6	820.3	27.36	30.984	
7,350.0	6,957.7	7,603.8	7,160.4	18.5	29.3	-104.20	-322.8	1,458.0	852.4	824.1	28.30	30.124	
7,400.0	6,960.0	7,712.4	7,172.5	18.9	29.8	-104.42	-430.7	1,460.7	855.1	825.7	29.39	29.098	
7,407.7	6,960.0	7,729.2	7,172.9	19.0	29.9	-104.42	-447.5	1,460.8	855.3	825.7	29.56	28.929	
7,500.0	6,960.0	7,827.2	7,173.0	19.8	30.5	-104.40	-545.5	1,460.8	856.9	825.2	31.65	27.073	
7,600.0	6,960.0	7,927.2	7,173.0	20.8	31.2	-104.37	-645.5	1,460.8	858.5	824.5	34.03	25.231	
7,700.0	6,960.0	8,027.2	7,173.0	22.0	31.9	-104.34	-745.5	1,460.8	860.2	823.7	36.57	23.524	
7,800.0	6,960.0	8,127.2	7,173.0	23.2	32.7	-104.31	-845.4	1,460.8	861.9	822.7	39.24	21.966	
7,900.0	6,960.0	8,227.2	7,173.0	24.4	33.6	-104.28	-945.4	1,460.8	863.6	821.6	42.02	20.553	
8,000.0	6,960.0	8,327.2	7,173.0	25.7	34.6	-104.25	-1,045.4	1,460.8	865.3	820.4	44.88	19.279	
8,100.0	6,960.0	8,427.2	7,173.0	27.1	35.6	-104.22	-1,145.4	1,460.8	867.0	819.2	47.82	18.130	
8,200.0	6,960.0	8,527.1	7,173.0	28.5	36.7	-104.20	-1,245.4	1,460.8	868.7	817.9	50.82	17.094	
8,300.0	6,960.0	8,627.1	7,173.0	30.0	37.9	-104.17	-1,345.4	1,460.8	870.4	816.5	53.86	16.159	
8,400.0	6,960.0	8,727.1	7,173.0	31.4	39.0	-104.14	-1,445.4	1,460.8	872.1	815.1	56.95	15.313	
8,500.0	6,960.0	8,827.1	7,173.0	33.0	40.3	-104.11	-1,545.3	1,460.8	873.8	813.7	60.08	14.545	
8,600.0	6,960.0	8,927.1	7,173.0	34.5	41.5	-104.08	-1,645.3	1,460.8	875.5	812.2	63.23	13.846	
8,700.0	6,960.0	9,027.1	7,173.0	36.0	42.8	-104.06	-1,745.3	1,460.8	877.2	810.7	66.41	13.209	
8,800.0	6,960.0	9,127.0	7,173.0	37.6	44.1	-104.03	-1,845.3	1,460.8	878.8	809.2	69.61	12.625	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-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) - 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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,900.0	6,960.0	9,227.0	7,173.0	39.2	45.5	-104.00	-1,945.3	1,460.8	880.5	807.7	72.83	12.090		
9,000.0	6,960.0	9,327.0	7,173.0	40.8	46.9	-103.97	-2,045.3	1,460.8	882.2	806.2	76.07	11.597		
9,100.0	6,960.0	9,427.0	7,173.0	42.4	48.3	-103.95	-2,145.2	1,460.8	883.9	804.6	79.33	11.143		
9,200.0	6,960.0	9,527.0	7,173.0	44.0	49.7	-103.92	-2,245.2	1,460.8	885.6	803.0	82.59	10.723		
9,300.0	6,960.0	9,627.0	7,173.0	45.6	51.2	-103.89	-2,345.2	1,460.8	887.3	801.4	85.87	10.333		
9,400.0	6,960.0	9,727.0	7,173.0	47.3	52.7	-103.86	-2,445.2	1,460.8	889.0	799.8	89.17	9.970		
9,500.0	6,960.0	9,826.9	7,173.0	48.9	54.1	-103.84	-2,545.2	1,460.8	890.7	798.2	92.47	9.633		
9,600.0	6,960.0	9,926.9	7,173.0	50.6	55.7	-103.81	-2,645.2	1,460.8	892.4	796.6	95.78	9.318		
9,700.0	6,960.0	10,026.9	7,173.0	52.3	57.2	-103.78	-2,745.2	1,460.8	894.1	795.0	99.09	9.023		
9,800.0	6,960.0	10,126.9	7,173.0	53.9	58.7	-103.76	-2,845.1	1,460.8	895.8	793.4	102.42	8.746		
9,900.0	6,960.0	10,226.9	7,173.0	55.6	60.2	-103.73	-2,945.1	1,460.8	897.5	791.7	105.75	8.487		
10,000.0	6,960.0	10,326.9	7,173.0	57.3	61.8	-103.70	-3,045.1	1,460.8	899.2	790.1	109.09	8.243		
10,100.0	6,960.0	10,426.8	7,173.0	59.0	63.4	-103.68	-3,145.1	1,460.8	900.9	788.4	112.43	8.013		
10,200.0	6,960.0	10,526.8	7,173.0	60.6	64.9	-103.65	-3,245.1	1,460.8	902.6	786.8	115.78	7.796		
10,300.0	6,960.0	10,626.8	7,173.0	62.3	66.5	-103.63	-3,345.1	1,460.8	904.3	785.1	119.13	7.590		
10,400.0	6,960.0	10,726.8	7,173.0	64.0	68.1	-103.60	-3,445.0	1,460.8	906.0	783.5	122.49	7.396		
10,500.0	6,960.0	10,826.8	7,173.0	65.7	69.7	-103.57	-3,545.0	1,460.8	907.7	781.8	125.85	7.212		
10,600.0	6,960.0	10,926.8	7,173.0	67.4	71.3	-103.55	-3,645.0	1,460.8	909.4	780.1	129.22	7.037		
10,700.0	6,960.0	11,026.8	7,173.0	69.1	72.9	-103.52	-3,745.0	1,460.8	911.1	778.5	132.59	6.871		
10,800.0	6,960.0	11,126.7	7,173.0	70.8	74.6	-103.50	-3,845.0	1,460.8	912.8	776.8	135.96	6.713		
10,900.0	6,960.0	11,226.7	7,173.0	72.5	76.2	-103.47	-3,945.0	1,460.8	914.5	775.1	139.34	6.563		
11,000.0	6,960.0	11,326.7	7,173.0	74.2	77.8	-103.45	-4,045.0	1,460.8	916.2	773.4	142.72	6.419		
11,100.0	6,960.0	11,426.7	7,173.0	76.0	79.5	-103.42	-4,144.9	1,460.8	917.8	771.8	146.10	6.282		
11,200.0	6,960.0	11,526.7	7,173.0	77.7	81.1	-103.40	-4,244.9	1,460.8	919.5	770.1	149.48	6.152		
11,300.0	6,960.0	11,626.7	7,173.0	79.4	82.8	-103.37	-4,344.9	1,460.8	921.2	768.4	152.87	6.026		
11,400.0	6,960.0	11,726.7	7,173.0	81.1	84.4	-103.35	-4,444.9	1,460.8	922.9	766.7	156.26	5.907		
11,500.0	6,960.0	11,826.6	7,173.0	82.8	86.1	-103.32	-4,544.9	1,460.8	924.6	765.0	159.65	5.792		
11,517.7	6,960.0	11,844.3	7,173.0	83.1	86.4	-103.32	-4,562.5	1,460.8	924.9	764.7	160.25	5.772 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1H-32H-B264
Project:	DJ Wattenberg	TVD Reference:	KB @ 4955.0ft
Reference Site:	S32-T2N-R64W (Newman/Ruhl)	MD Reference:	KB @ 4955.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ruhl 1H-32H-B264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4955.0ft

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Ruhl 1H-32H-B264

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

