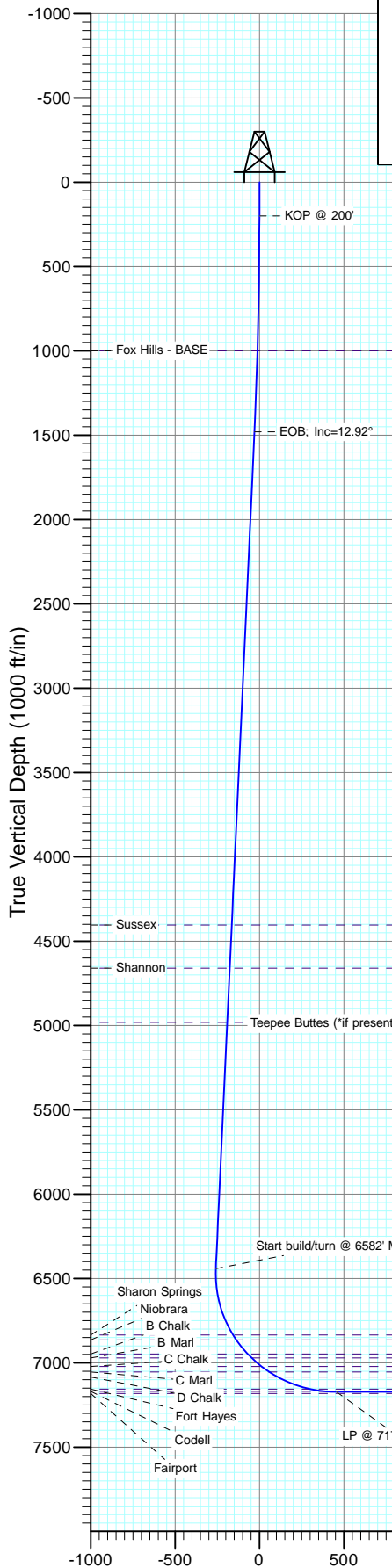
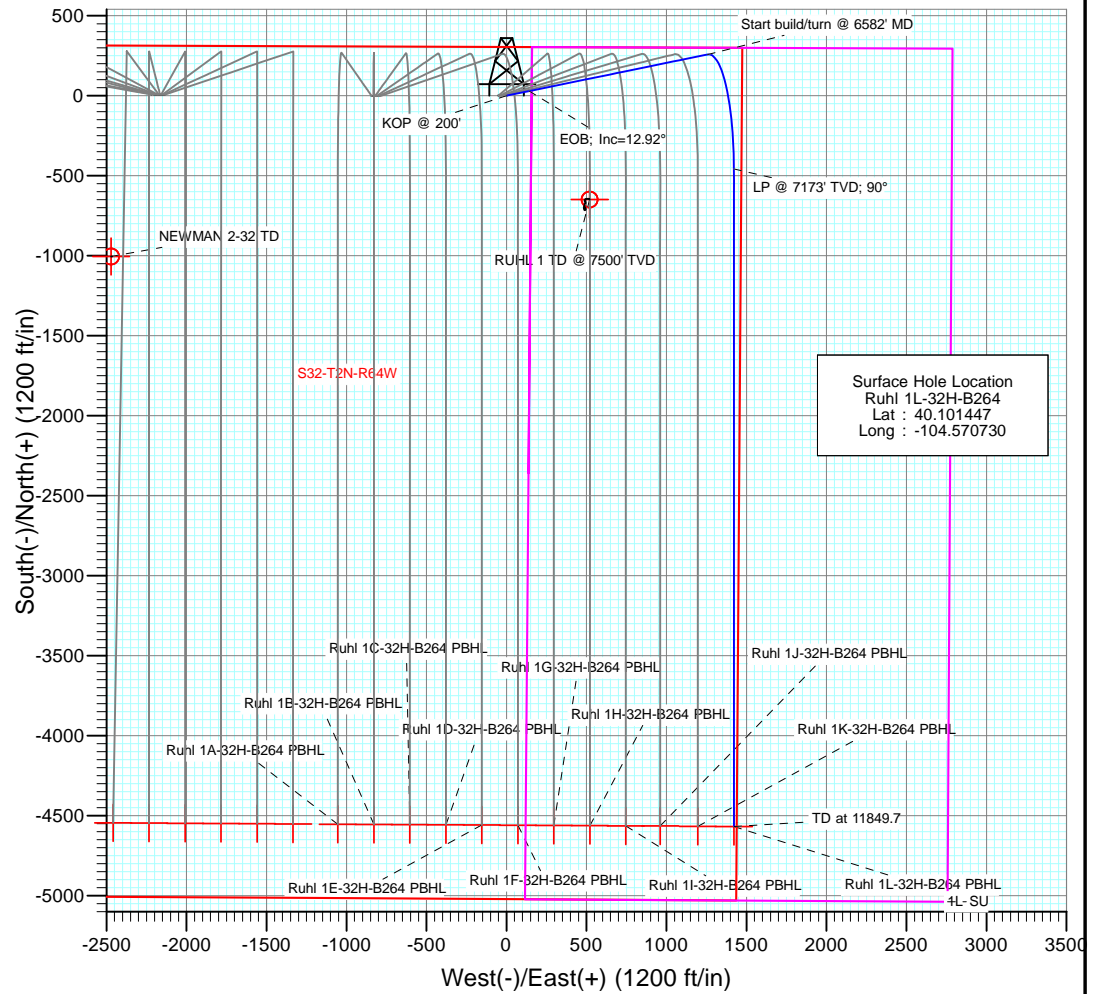




Project: DJ Wattenberg
Site: S32-T2N-R64W (Newman/Ruhl)
Well: Ruhl 1L-32H-B264
Wellbore: Hz
Design: Plan #1

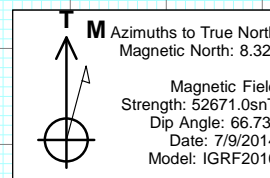


SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1491.6	12.92	78.41	1480.7	29.1	142.0	1.00	78.41	-29.1	
4	6582.5	12.92	78.41	6442.8	257.8	1256.7	0.00	0.00	-257.8	
5	7739.7	90.00	180.00	7173.0	-457.6	1420.8	8.00	101.31	457.6	
6	11849.7	90.00	180.00	7173.0	-457.6	1420.8	0.00	0.00	4567.6	Ruhl 1L-32H-B264 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Ruhl 1L-32H-B264 PBHL	-4567.6	1420.8	1276613.65	3261421.38	40.088908	-104.565652



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

Vertical Section at 180.00° (1000 ft/in)

Planning Report

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

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		S32-T2N-R64W (Newman)			
Site Position:		Northing:	1,281,150.66 ft	Latitude:	40.101468
From:	Lat/Long	Easting:	3,257,734.55 ft	Longitude:	-104.578660
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.60 °

Well	Ruhl 1L-32H-B264					
Well Position	+N/-S	0.0 ft	Northing:	1,281,166.15 ft	Latitude:	40.101447
	+E/-W	0.0 ft	Easting:	3,259,952.82 ft	Longitude:	-104.570730
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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,491.6	12.92	78.41	1,480.7	29.1	142.0	1.00	1.00	0.00	78.41	
6,582.5	12.92	78.41	6,442.8	257.8	1,256.7	0.00	0.00	0.00	0.00	
7,739.7	90.00	180.00	7,173.0	-457.6	1,420.8	8.00	6.66	8.78	101.31	
11,849.7	90.00	180.00	7,173.0	-4,567.6	1,420.8	0.00	0.00	0.00	0.00	Ruhl 1L-32H-B264 PE

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1L-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4955.0ft
Project:	DJ Wattenberg	MD Reference:	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman)	North Reference:	True
Well:	Ruhl 1L-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	KOP @ 200'
300.0	1.00	78.41	300.0	0.2	0.9	-0.2	1.00	1.00	
400.0	2.00	78.41	400.0	0.7	3.4	-0.7	1.00	1.00	
500.0	3.00	78.41	499.9	1.6	7.7	-1.6	1.00	1.00	
600.0	4.00	78.41	599.7	2.8	13.7	-2.8	1.00	1.00	
700.0	5.00	78.41	699.4	4.4	21.4	-4.4	1.00	1.00	
800.0	6.00	78.41	798.9	6.3	30.7	-6.3	1.00	1.00	
900.0	7.00	78.41	898.3	8.6	41.8	-8.6	1.00	1.00	
1,000.0	8.00	78.41	997.4	11.2	54.6	-11.2	1.00	1.00	
1,002.6	8.03	78.41	1,000.0	11.3	55.0	-11.3	1.00	1.00	Fox Hills - BASE
1,100.0	9.00	78.41	1,096.3	14.2	69.1	-14.2	1.00	1.00	
1,200.0	10.00	78.41	1,194.9	17.5	85.3	-17.5	1.00	1.00	
1,300.0	11.00	78.41	1,293.3	21.2	103.1	-21.2	1.00	1.00	
1,400.0	12.00	78.41	1,391.2	25.2	122.7	-25.2	1.00	1.00	
1,491.6	12.92	78.41	1,480.7	29.1	142.0	-29.1	1.00	1.00	EOB; Inc=12.92°
1,500.0	12.92	78.41	1,488.9	29.5	143.8	-29.5	0.00	0.00	
1,600.0	12.92	78.41	1,586.3	34.0	165.7	-34.0	0.00	0.00	
1,700.0	12.92	78.41	1,683.8	38.5	187.6	-38.5	0.00	0.00	
1,800.0	12.92	78.41	1,781.3	43.0	209.5	-43.0	0.00	0.00	
1,900.0	12.92	78.41	1,878.8	47.5	231.4	-47.5	0.00	0.00	
2,000.0	12.92	78.41	1,976.2	52.0	253.3	-52.0	0.00	0.00	
2,100.0	12.92	78.41	2,073.7	56.5	275.2	-56.5	0.00	0.00	
2,200.0	12.92	78.41	2,171.2	61.0	297.1	-61.0	0.00	0.00	
2,300.0	12.92	78.41	2,268.6	65.5	319.0	-65.5	0.00	0.00	
2,400.0	12.92	78.41	2,366.1	69.9	340.9	-69.9	0.00	0.00	
2,500.0	12.92	78.41	2,463.6	74.4	362.8	-74.4	0.00	0.00	
2,600.0	12.92	78.41	2,561.0	78.9	384.7	-78.9	0.00	0.00	
2,700.0	12.92	78.41	2,658.5	83.4	406.6	-83.4	0.00	0.00	
2,800.0	12.92	78.41	2,756.0	87.9	428.5	-87.9	0.00	0.00	
2,900.0	12.92	78.41	2,853.5	92.4	450.4	-92.4	0.00	0.00	
3,000.0	12.92	78.41	2,950.9	96.9	472.3	-96.9	0.00	0.00	
3,100.0	12.92	78.41	3,048.4	101.4	494.2	-101.4	0.00	0.00	
3,200.0	12.92	78.41	3,145.9	105.9	516.1	-105.9	0.00	0.00	
3,300.0	12.92	78.41	3,243.3	110.4	538.0	-110.4	0.00	0.00	
3,400.0	12.92	78.41	3,340.8	114.9	559.9	-114.9	0.00	0.00	
3,500.0	12.92	78.41	3,438.3	119.4	581.8	-119.4	0.00	0.00	
3,600.0	12.92	78.41	3,535.7	123.9	603.7	-123.9	0.00	0.00	
3,700.0	12.92	78.41	3,633.2	128.3	625.6	-128.3	0.00	0.00	
3,800.0	12.92	78.41	3,730.7	132.8	647.5	-132.8	0.00	0.00	
3,900.0	12.92	78.41	3,828.2	137.3	669.4	-137.3	0.00	0.00	
4,000.0	12.92	78.41	3,925.6	141.8	691.3	-141.8	0.00	0.00	
4,100.0	12.92	78.41	4,023.1	146.3	713.2	-146.3	0.00	0.00	
4,200.0	12.92	78.41	4,120.6	150.8	735.0	-150.8	0.00	0.00	
4,300.0	12.92	78.41	4,218.0	155.3	756.9	-155.3	0.00	0.00	
4,400.0	12.92	78.41	4,315.5	159.8	778.8	-159.8	0.00	0.00	
4,490.8	12.92	78.41	4,404.0	163.9	798.7	-163.9	0.00	0.00	Sussex
4,500.0	12.92	78.41	4,413.0	164.3	800.7	-164.3	0.00	0.00	
4,600.0	12.92	78.41	4,510.4	168.8	822.6	-168.8	0.00	0.00	
4,700.0	12.92	78.41	4,607.9	173.3	844.5	-173.3	0.00	0.00	
4,753.4	12.92	78.41	4,660.0	175.7	856.2	-175.7	0.00	0.00	Shannon

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1L-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4955.0ft
Project:	DJ Wattenberg	MD Reference:	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman)	North Reference:	True
Well:	Ruhl 1L-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	12.92	78.41	4,705.4	177.8	866.4	-177.8	0.00	0.00	
4,900.0	12.92	78.41	4,802.9	182.3	888.3	-182.3	0.00	0.00	
5,000.0	12.92	78.41	4,900.3	186.7	910.2	-186.7	0.00	0.00	
5,083.8	12.92	78.41	4,982.0	190.5	928.6	-190.5	0.00	0.00	Teepee Buttes (*if present)
5,100.0	12.92	78.41	4,997.8	191.2	932.1	-191.2	0.00	0.00	
5,200.0	12.92	78.41	5,095.3	195.7	954.0	-195.7	0.00	0.00	
5,300.0	12.92	78.41	5,192.7	200.2	975.9	-200.2	0.00	0.00	
5,400.0	12.92	78.41	5,290.2	204.7	997.8	-204.7	0.00	0.00	
5,500.0	12.92	78.41	5,387.7	209.2	1,019.7	-209.2	0.00	0.00	
5,600.0	12.92	78.41	5,485.1	213.7	1,041.6	-213.7	0.00	0.00	
5,700.0	12.92	78.41	5,582.6	218.2	1,063.5	-218.2	0.00	0.00	
5,800.0	12.92	78.41	5,680.1	222.7	1,085.4	-222.7	0.00	0.00	
5,900.0	12.92	78.41	5,777.5	227.2	1,107.3	-227.2	0.00	0.00	
6,000.0	12.92	78.41	5,875.0	231.7	1,129.2	-231.7	0.00	0.00	
6,100.0	12.92	78.41	5,972.5	236.2	1,151.1	-236.2	0.00	0.00	
6,200.0	12.92	78.41	6,070.0	240.7	1,173.0	-240.7	0.00	0.00	
6,300.0	12.92	78.41	6,167.4	245.1	1,194.9	-245.1	0.00	0.00	
6,400.0	12.92	78.41	6,264.9	249.6	1,216.8	-249.6	0.00	0.00	
6,500.0	12.92	78.41	6,362.4	254.1	1,238.7	-254.1	0.00	0.00	
6,582.5	12.92	78.41	6,442.8	257.8	1,256.7	-257.8	0.00	0.00	Start build/turn @ 6582' MD
6,600.0	12.71	84.64	6,459.8	258.4	1,260.6	-258.4	8.00	-1.15	
6,700.0	14.36	118.62	6,557.2	253.5	1,282.4	-253.5	8.00	1.64	
6,800.0	19.40	140.36	6,653.0	234.7	1,303.9	-234.7	8.00	5.05	
6,900.0	25.93	152.49	6,745.2	202.5	1,324.7	-202.5	8.00	6.53	
7,000.0	33.08	159.83	6,832.2	157.4	1,344.2	-157.4	8.00	7.15	
7,003.3	33.32	160.02	6,835.0	155.7	1,344.8	-155.7	8.00	7.33	Sharon Springs
7,038.5	35.92	161.94	6,864.0	136.8	1,351.4	-136.8	8.00	7.38	Niobrara
7,100.0	40.52	164.76	6,912.3	100.4	1,362.2	-100.4	8.00	7.48	
7,148.3	44.18	166.63	6,948.0	68.8	1,370.2	-68.8	8.00	7.56	B Chalk
7,181.1	46.67	167.77	6,971.0	46.0	1,375.4	-46.0	8.00	7.61	B Marl
7,200.0	48.12	168.38	6,983.8	32.4	1,378.3	-32.4	8.00	7.64	
7,260.0	52.72	170.15	7,022.0	-13.0	1,386.8	13.0	8.00	7.67	C Chalk
7,300.0	55.80	171.22	7,045.4	-45.0	1,392.1	45.0	8.00	7.70	
7,315.6	57.00	171.61	7,054.0	-57.9	1,394.0	57.9	8.00	7.72	C Marl
7,374.3	61.54	173.01	7,084.0	-107.9	1,400.8	107.9	8.00	7.74	D Chalk
7,400.0	63.53	173.58	7,095.8	-130.5	1,403.4	130.5	8.00	7.75	
7,500.0	71.31	175.64	7,134.2	-222.4	1,412.1	222.4	8.00	7.77	
7,581.4	77.65	177.18	7,156.0	-300.6	1,416.9	300.6	8.00	7.79	Fort Hayes
7,600.0	79.10	177.52	7,159.7	-318.8	1,417.8	318.8	8.00	7.80	
7,663.1	84.02	178.65	7,169.0	-381.1	1,419.9	381.1	8.00	7.80	Codell
7,700.0	86.90	179.30	7,171.9	-417.9	1,420.5	417.9	8.00	7.80	
7,739.7	90.00	180.00	7,173.0	-457.6	1,420.8	457.6	8.00	7.81	LP @ 7173' TVD; 90°
7,800.0	90.00	180.00	7,173.0	-517.9	1,420.8	517.9	0.00	0.00	
7,900.0	90.00	180.00	7,173.0	-617.9	1,420.8	617.9	0.00	0.00	
8,000.0	90.00	180.00	7,173.0	-717.9	1,420.8	717.9	0.00	0.00	
8,100.0	90.00	180.00	7,173.0	-817.9	1,420.8	817.9	0.00	0.00	
8,200.0	90.00	180.00	7,173.0	-917.9	1,420.8	917.9	0.00	0.00	
8,300.0	90.00	180.00	7,173.0	-1,017.9	1,420.8	1,017.9	0.00	0.00	
8,400.0	90.00	180.00	7,173.0	-1,117.9	1,420.8	1,117.9	0.00	0.00	
8,500.0	90.00	180.00	7,173.0	-1,217.9	1,420.8	1,217.9	0.00	0.00	
8,600.0	90.00	180.00	7,173.0	-1,317.9	1,420.8	1,317.9	0.00	0.00	
8,700.0	90.00	180.00	7,173.0	-1,417.9	1,420.8	1,417.9	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1L-32H-B264
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4955.0ft
Project:	DJ Wattenberg	MD Reference:	KB @ 4955.0ft
Site:	S32-T2N-R64W (Newman)	North Reference:	True
Well:	Ruhl 1L-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
8,800.0	90.00	180.00	7,173.0	-1,517.9	1,420.8	1,517.9	0.00	0.00	
8,900.0	90.00	180.00	7,173.0	-1,617.9	1,420.8	1,617.9	0.00	0.00	
9,000.0	90.00	180.00	7,173.0	-1,717.9	1,420.8	1,717.9	0.00	0.00	
9,100.0	90.00	180.00	7,173.0	-1,817.9	1,420.8	1,817.9	0.00	0.00	
9,200.0	90.00	180.00	7,173.0	-1,917.9	1,420.8	1,917.9	0.00	0.00	
9,300.0	90.00	180.00	7,173.0	-2,017.9	1,420.8	2,017.9	0.00	0.00	
9,400.0	90.00	180.00	7,173.0	-2,117.9	1,420.8	2,117.9	0.00	0.00	
9,500.0	90.00	180.00	7,173.0	-2,217.9	1,420.8	2,217.9	0.00	0.00	
9,600.0	90.00	180.00	7,173.0	-2,317.9	1,420.8	2,317.9	0.00	0.00	
9,700.0	90.00	180.00	7,173.0	-2,417.9	1,420.8	2,417.9	0.00	0.00	
9,800.0	90.00	180.00	7,173.0	-2,517.9	1,420.8	2,517.9	0.00	0.00	
9,900.0	90.00	180.00	7,173.0	-2,617.9	1,420.8	2,617.9	0.00	0.00	
10,000.0	90.00	180.00	7,173.0	-2,717.9	1,420.8	2,717.9	0.00	0.00	
10,100.0	90.00	180.00	7,173.0	-2,817.9	1,420.8	2,817.9	0.00	0.00	
10,200.0	90.00	180.00	7,173.0	-2,917.9	1,420.8	2,917.9	0.00	0.00	
10,300.0	90.00	180.00	7,173.0	-3,017.9	1,420.8	3,017.9	0.00	0.00	
10,400.0	90.00	180.00	7,173.0	-3,117.9	1,420.8	3,117.9	0.00	0.00	
10,500.0	90.00	180.00	7,173.0	-3,217.9	1,420.8	3,217.9	0.00	0.00	
10,600.0	90.00	180.00	7,173.0	-3,317.9	1,420.8	3,317.9	0.00	0.00	
10,700.0	90.00	180.00	7,173.0	-3,417.9	1,420.8	3,417.9	0.00	0.00	
10,800.0	90.00	180.00	7,173.0	-3,517.9	1,420.8	3,517.9	0.00	0.00	
10,900.0	90.00	180.00	7,173.0	-3,617.9	1,420.8	3,617.9	0.00	0.00	
11,000.0	90.00	180.00	7,173.0	-3,717.9	1,420.8	3,717.9	0.00	0.00	
11,100.0	90.00	180.00	7,173.0	-3,817.9	1,420.8	3,817.9	0.00	0.00	
11,200.0	90.00	180.00	7,173.0	-3,917.9	1,420.8	3,917.9	0.00	0.00	
11,300.0	90.00	180.00	7,173.0	-4,017.9	1,420.8	4,017.9	0.00	0.00	
11,400.0	90.00	180.00	7,173.0	-4,117.9	1,420.8	4,117.9	0.00	0.00	
11,500.0	90.00	180.00	7,173.0	-4,217.9	1,420.8	4,217.9	0.00	0.00	
11,600.0	90.00	180.00	7,173.0	-4,317.9	1,420.8	4,317.9	0.00	0.00	
11,700.0	90.00	180.00	7,173.0	-4,417.9	1,420.8	4,417.9	0.00	0.00	
11,800.0	90.00	180.00	7,173.0	-4,517.9	1,420.8	4,517.9	0.00	0.00	
11,849.7	90.00	180.00	7,173.0	-4,567.6	1,420.8	4,567.6	0.00	0.00	TD at 11849.7

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Ruhl 1L-32H-B264 PBHI - plan hits target center - Point	0.00	0.00	7,173.0	-4,567.6	1,420.8	1,276,613.65	3,261,421.38	40.088908	-104.565652

Planning Report

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,002.6	1,000.0	Fox Hills - BASE				
4,490.8	4,404.0	Sussex				
4,753.4	4,660.0	Shannon				
5,083.8	4,982.0	Teepee Buttes (*if present)				
7,003.3	6,835.0	Sharon Springs				
7,038.5	6,864.0	Niobrara				
7,148.3	6,948.0	B Chalk				
7,181.1	6,971.0	B Marl				
7,260.0	7,022.0	C Chalk				
7,315.6	7,054.0	C Marl				
7,374.3	7,084.0	D Chalk				
7,581.4	7,156.0	Fort Hayes				
7,663.1	7,169.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP @ 200'	
1,491.6	1,480.7	29.1	142.0	EOB; Inc=12.92°	
6,582.5	6,442.8	257.8	1,256.7	Start build/turn @ 6582' MD	
7,739.7	7,173.0	-457.6	1,420.8	LP @ 7173' TVD; 90°	
11,849.7	7,173.0	-4,567.6	1,420.8	TD at 11849.7	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S32-T2N-R64W (Newman)

Ruhl 1L-32H-B264

Hz

Plan #1

Anticollision Report

09 July, 2014

Anticollision Report

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

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/9/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,849.7	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

Anticollision Report

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

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S32-T2N-R64W (Newman)						
LAND USX Y31-01 (EXISTING) - EXISTING - NOBLE W						Out of range
NEWMAN 2-32 (EXISTING) - EXISTING - ENCANA WE						Out of range
Newman 2A-32H-C264 - Hz - Plan #1						Out of range
Newman 2B-32H-C264 - Hz - Plan #1						Out of range
Newman 2C-32H-C264 - Hz - Plan #1						Out of range
Newman 2D-32H-C264 - Hz - Plan #1						Out of range
Newman 2E-32H-C264 - Hz - Plan #1						Out of range
Newman 2F-32H-C264 - Hz - Plan #1						Out of range
Newman 2G-32H-C264 - Hz - Plan #1						Out of range
Newman 2H-32H-C264 - Hz - Plan #1						Out of range
Newman 2I-32H-C264 - Hz - Plan #1						Out of range
Newman 2J-32H-C264 - Hz - Plan #1						Out of range
Newman 2K-32H-C264 - Hz - Plan #1						Out of range
Newman 2L-32H-C264 - Hz - Plan #1						Out of range
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	2,404.4	2,413.3	799.1	787.2	67.363	CC
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	2,600.0	2,609.5	799.6	786.6	61.365	ES
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	8,300.0	7,227.1	976.4	940.6	27.243	SF
Ruhl 1A-32H-B264 - Hz - Plan #1	200.0	200.0	842.3	841.6	1,206.498	CC, ES
Ruhl 1A-32H-B264 - Hz - Plan #1	1,400.0	1,360.6	999.5	994.5	200.894	SF
Ruhl 1B-32H-B264 - Hz - Plan #1	200.0	200.0	832.2	831.5	1,192.073	CC, ES
Ruhl 1B-32H-B264 - Hz - Plan #1	1,600.0	1,588.1	997.7	992.1	177.421	SF
Ruhl 1C-32H-B264 - Hz - Plan #1	200.0	200.0	822.2	821.5	1,177.648	CC, ES
Ruhl 1C-32H-B264 - Hz - Plan #1	1,800.0	1,816.7	996.6	990.1	153.415	SF
Ruhl 1D-32H-B264 - Hz - Plan #1	200.0	200.0	812.1	811.4	1,163.223	CC, ES
Ruhl 1D-32H-B264 - Hz - Plan #1	2,100.0	2,144.6	987.9	980.2	127.490	SF
Ruhl 1E-32H-B264 - Hz - Plan #1	200.0	200.0	802.3	801.6	1,149.201	CC, ES
Ruhl 1E-32H-B264 - Hz - Plan #1	2,700.0	2,773.1	999.1	988.9	98.586	SF
Ruhl 1F-32H-B264 - Hz - Plan #1	962.0	1,065.1	787.3	783.7	219.197	CC
Ruhl 1F-32H-B264 - Hz - Plan #1	1,000.0	1,103.1	787.4	783.7	211.056	ES
Ruhl 1F-32H-B264 - Hz - Plan #1	3,500.0	3,594.1	992.5	979.3	74.870	SF
Ruhl 1G-32H-B264 - Hz - Plan #1	200.0	200.0	50.1	49.4	71.732	CC, ES
Ruhl 1G-32H-B264 - Hz - Plan #1	1,000.0	1,002.5	86.2	82.6	24.337	SF
Ruhl 1H-32H-B264 - Hz - Plan #1	200.0	200.0	40.0	39.3	57.301	CC, ES
Ruhl 1H-32H-B264 - Hz - Plan #1	11,849.7	11,509.6	925.0	764.0	5.748	SF
Ruhl 1I-32H-B264 - Hz - Plan #1	200.0	200.0	29.9	29.2	42.877	CC, ES
Ruhl 1I-32H-B264 - Hz - Plan #1	11,849.7	11,743.2	674.9	509.5	4.081	SF
Ruhl 1J-32H-B264 - Hz - Plan #1	200.0	200.0	19.9	19.2	28.454	CC, ES
Ruhl 1J-32H-B264 - Hz - Plan #1	11,849.7	11,643.9	477.5	318.0	2.994	SF
Ruhl 1K-32H-B264 - Hz - Plan #1	200.0	200.0	10.1	9.4	14.434	CC, ES
Ruhl 1K-32H-B264 - Hz - Plan #1	11,849.7	11,598.5	309.8	187.5	2.533	SF

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - RUHL 1 (EXISTING) - EXISTING - ENCANA WELL												Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD												Offset Well Error:	0.0 ft
Reference		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
0.0	0.0	37.9	37.9	0.0	0.1	144.94	-697.6	489.6	852.3	852.2	0.07	N/A	
100.0	100.0	133.8	133.8	0.2	0.2	144.93	-697.9	490.1	852.8	852.4	0.41	2,087.675	
200.0	200.0	233.6	233.6	0.3	0.4	144.93	-698.6	490.5	853.6	852.9	0.76	1,126.543	
300.0	300.0	336.3	336.3	0.5	0.6	66.60	-699.3	490.5	853.9	852.7	1.11	768.347	
400.0	400.0	436.2	436.2	0.7	0.8	66.79	-699.8	490.5	853.2	851.7	1.46	582.603	
500.0	499.9	533.8	533.8	0.9	0.9	67.06	-700.2	490.9	852.1	850.3	1.82	468.078	
600.0	599.7	632.7	632.7	1.1	1.1	67.47	-701.1	491.0	850.5	848.3	2.19	388.625	
700.0	699.4	731.8	731.8	1.3	1.3	67.99	-701.9	491.3	848.4	845.8	2.57	330.089	
800.0	798.9	830.8	830.8	1.5	1.5	68.63	-702.8	491.6	845.8	842.8	2.97	284.963	
900.0	898.3	930.1	930.1	1.8	1.6	69.38	-703.7	492.0	842.6	839.3	3.39	248.917	
1,000.0	997.4	1,030.1	1,030.0	2.1	1.8	70.25	-704.5	492.4	839.1	835.2	3.83	219.321	
1,100.0	1,096.3	1,131.0	1,131.0	2.4	2.0	71.26	-705.2	492.8	834.9	830.6	4.29	194.496	
1,200.0	1,194.9	1,229.0	1,228.9	2.7	2.2	72.37	-705.8	493.0	830.3	825.5	4.78	173.675	
1,300.0	1,293.3	1,325.7	1,325.6	3.0	2.3	73.59	-706.6	493.3	825.8	820.5	5.30	155.932	
1,400.0	1,391.2	1,424.9	1,424.9	3.4	2.5	74.96	-707.3	493.7	821.1	815.3	5.85	140.455	
1,500.0	1,488.9	1,521.9	1,521.8	3.8	2.7	76.43	-708.1	493.9	816.5	810.0	6.42	127.124	
1,600.0	1,586.3	1,617.7	1,617.6	4.2	2.8	77.92	-709.1	494.0	812.4	805.4	7.01	115.950	
1,700.0	1,683.8	1,715.9	1,715.8	4.7	3.0	79.47	-710.1	494.1	809.0	801.4	7.60	106.422	
1,800.0	1,781.3	1,815.3	1,815.2	5.1	3.2	81.05	-711.1	494.0	806.0	797.8	8.20	98.243	
1,900.0	1,878.8	1,913.5	1,913.5	5.5	3.4	82.65	-712.0	493.6	803.4	794.6	8.81	91.221	
2,000.0	1,976.2	2,010.7	2,010.7	5.9	3.5	84.25	-712.9	493.1	801.5	792.1	9.41	85.168	
2,100.0	2,073.7	2,109.2	2,109.1	6.3	3.7	85.87	-713.7	492.5	800.2	790.2	10.02	79.877	
2,200.0	2,171.2	2,205.8	2,205.7	6.8	3.9	87.47	-714.5	491.8	799.5	788.9	10.62	75.283	
2,300.0	2,268.6	2,308.3	2,308.2	7.2	4.0	89.18	-715.0	491.0	799.2	788.0	11.23	71.159	
2,400.0	2,366.1	2,408.9	2,408.9	7.6	4.2	90.86	-715.1	490.1	799.1	787.2	11.84	67.512	
2,404.4	2,370.4	2,413.3	2,413.3	7.7	4.2	90.93	-715.1	490.0	799.1	787.2	11.86	67.363 CC	
2,500.0	2,463.6	2,509.8	2,509.7	8.1	4.4	92.54	-714.7	489.0	799.2	786.7	12.44	64.260	
2,600.0	2,561.0	2,609.5	2,609.4	8.5	4.6	94.21	-713.9	487.8	799.6	786.6	13.03	61.365 ES	
2,700.0	2,658.5	2,707.3	2,707.2	8.9	4.7	95.85	-713.0	486.6	800.5	786.9	13.61	58.799	
2,800.0	2,756.0	2,803.8	2,803.6	9.4	4.9	97.45	-712.2	485.5	802.1	787.9	14.19	56.528	
2,900.0	2,853.5	2,903.9	2,903.7	9.8	5.1	99.07	-711.1	484.9	804.3	789.5	14.76	54.477	
3,000.0	2,950.9	3,002.4	3,002.2	10.2	5.2	100.62	-709.8	484.7	806.8	791.5	15.33	52.640	
3,100.0	3,048.4	3,101.7	3,101.5	10.7	5.4	102.17	-708.3	484.7	809.8	793.9	15.88	50.983	
3,200.0	3,145.9	3,198.7	3,198.5	11.1	5.6	103.66	-706.7	484.7	813.3	796.9	16.43	49.506	
3,300.0	3,243.3	3,296.4	3,296.2	11.5	5.8	105.16	-705.2	484.6	817.4	800.4	16.96	48.183	
3,400.0	3,340.8	3,393.9	3,393.7	11.9	5.9	106.66	-703.6	484.3	822.1	804.6	17.49	47.002	
3,500.0	3,438.3	3,493.0	3,492.8	12.4	6.1	108.15	-702.0	484.2	827.2	809.2	18.01	45.937	
3,600.0	3,535.7	3,590.9	3,590.7	12.8	6.3	109.59	-700.2	484.2	832.8	814.3	18.51	44.982	
3,700.0	3,633.2	3,689.4	3,689.1	13.3	6.4	111.03	-698.4	484.2	838.9	819.8	19.01	44.127	
3,800.0	3,730.7	3,792.6	3,792.4	13.7	6.6	112.51	-696.1	484.3	845.1	825.6	19.50	43.340	
3,900.0	3,828.2	3,893.4	3,893.0	14.1	6.8	113.93	-693.3	484.7	851.3	831.3	19.98	42.616	
4,000.0	3,925.6	3,993.4	3,993.0	14.6	7.0	115.30	-690.3	485.3	857.7	837.2	20.44	41.956	
4,100.0	4,023.1	4,092.5	4,092.1	15.0	7.1	116.64	-687.1	486.0	864.3	843.4	20.90	41.361	
4,200.0	4,120.6	4,189.3	4,188.8	15.4	7.3	117.92	-684.0	486.8	871.4	850.1	21.34	40.833	
4,300.0	4,218.0	4,285.0	4,284.5	15.9	7.5	119.15	-681.2	487.8	879.1	857.4	21.78	40.371	
4,400.0	4,315.5	4,381.4	4,380.8	16.3	7.7	120.36	-678.6	488.8	887.5	865.3	22.20	39.971	
4,500.0	4,413.0	4,474.9	4,474.3	16.7	7.8	121.51	-676.3	489.7	896.5	873.9	22.62	39.634	
4,600.0	4,510.4	4,570.0	4,569.4	17.2	8.0	122.62	-674.5	491.0	906.4	883.3	23.03	39.354	
4,700.0	4,607.9	4,666.0	4,665.4	17.6	8.2	123.72	-673.0	492.3	916.8	893.4	23.44	39.119	
4,800.0	4,705.4	4,763.0	4,762.4	18.0	8.3	124.82	-671.5	493.3	927.7	903.9	23.83	38.928	
4,900.0	4,802.9	4,859.9	4,859.2	18.5	8.5	125.93	-669.7	493.6	939.1	914.9	24.21	38.784	
5,000.0	4,900.3	4,955.8	4,955.1	18.9	8.7	127.05	-667.8	493.4	950.9	926.3	24.58	38.683	

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

Offset Design S32-T2N-R64W (Newman) - RUHL 1 (EXISTING) - EXISTING - ENCANA WELL													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Total	Separation		
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Uncertainty	Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	Axis			
5,100.0	4,997.8	5,052.3	5,051.6	19.3	8.8	128.17	-665.9	492.7	963.3	938.4	24.94	38.626		
5,200.0	5,095.3	5,147.3	5,146.6	19.8	9.0	129.25	-664.0	491.9	976.1	950.8	25.29	38.598		
5,300.0	5,192.7	5,241.3	5,240.5	20.2	9.2	130.29	-662.5	491.0	989.7	964.1	25.63	38.611		
7,500.0	7,134.2	7,184.0	7,182.6	28.8	12.6	83.49	-645.6	517.6	989.6	962.5	27.10	36.520		
7,600.0	7,159.7	7,206.6	7,205.2	29.2	12.6	86.93	-645.8	517.8	957.6	930.0	27.56	34.739		
7,700.0	7,171.9	7,219.3	7,218.0	29.7	12.6	89.64	-646.0	518.0	931.0	902.8	28.19	33.027		
7,800.0	7,173.0	7,221.5	7,220.1	30.3	12.6	90.45	-646.0	518.0	911.9	882.7	29.14	31.296		
7,900.0	7,173.0	7,222.6	7,221.3	31.0	12.6	90.52	-646.0	518.0	903.3	872.9	30.33	29.778		
7,928.1	7,173.0	7,222.9	7,221.6	31.2	12.6	90.54	-646.0	518.0	902.8	872.1	30.69	29.413		
8,000.0	7,173.0	7,223.7	7,222.4	31.7	12.6	90.59	-646.0	518.0	905.7	874.1	31.62	28.646		
8,100.0	7,173.0	7,224.8	7,223.5	32.5	12.7	90.67	-646.0	518.0	919.0	886.1	32.97	27.875		
8,200.0	7,173.0	7,226.0	7,224.6	33.4	12.7	90.74	-646.1	518.0	942.9	908.5	34.38	27.423		
8,300.0	7,173.0	7,227.1	7,225.8	34.3	12.7	90.81	-646.1	518.0	976.4	940.6	35.84	27.243 SF		

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1A-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.20	-2.9	-842.3	842.3					
100.0	100.0	100.0	100.0	0.2	0.2	-90.20	-2.9	-842.3	842.3	841.9	0.35	2,412.996		
200.0	200.0	200.0	200.0	0.3	0.3	-90.20	-2.9	-842.3	842.3	841.6	0.70	1,206.498	CC, ES	
300.0	300.0	285.6	285.6	0.5	0.5	-168.54	-1.9	-843.0	844.0	843.0	1.02	824.137		
400.0	400.0	373.5	373.4	0.7	0.7	-168.34	1.4	-845.3	849.1	847.7	1.36	624.999		
500.0	499.9	473.1	472.9	0.9	0.9	-168.09	5.8	-848.4	856.5	854.8	1.72	498.436		
600.0	599.7	572.7	572.3	1.1	1.0	-167.85	10.3	-851.5	865.6	863.5	2.08	416.299		
700.0	699.4	672.0	671.5	1.3	1.2	-167.65	14.8	-854.6	876.5	874.0	2.44	359.071		
800.0	798.9	771.2	770.5	1.5	1.4	-167.47	19.2	-857.7	889.0	886.2	2.80	317.189		
900.0	898.3	870.2	869.3	1.8	1.6	-167.31	23.6	-860.8	903.2	900.0	3.16	285.407		
1,000.0	997.4	968.9	967.9	2.1	1.8	-167.18	28.1	-863.9	919.1	915.6	3.53	260.623		
1,100.0	1,096.3	1,067.3	1,066.2	2.4	2.0	-167.07	32.5	-866.9	936.7	932.8	3.89	240.881		
1,200.0	1,194.9	1,165.4	1,164.2	2.7	2.2	-166.98	36.9	-870.0	956.0	951.7	4.25	224.892		
1,300.0	1,293.3	1,263.2	1,261.8	3.0	2.4	-166.91	41.3	-873.1	976.9	972.3	4.61	211.772		
1,400.0	1,391.2	1,360.6	1,359.1	3.4	2.6	-166.87	45.6	-876.1	999.5	994.5	4.98	200.894	SF	

Anticollision Report

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

Offset Design													S32-T2N-R64W (Newman) - Ruhl 1B-32H-B264 - Hz - Plan #1		Offset Site Error:		0.0 ft
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft
Reference		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		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
							+N/-S (ft)	+E/-W (ft)									
0.0	0.0	0.0	0.0	0.0	0.0	-90.20	-2.9	-832.2	832.2								
100.0	100.0	100.0	100.0	0.2	0.2	-90.20	-2.9	-832.2	832.2	831.9	0.35	2,384.146					
200.0	200.0	200.0	200.0	0.3	0.3	-90.20	-2.9	-832.2	832.2	831.5	0.70	1,192.073	CC, ES				
300.0	300.0	300.0	300.0	0.5	0.5	-168.62	-2.9	-832.2	833.1	832.0	1.05	795.582					
400.0	400.0	400.0	400.0	0.7	0.7	-168.65	-2.9	-832.2	835.6	834.2	1.40	598.606					
500.0	499.9	499.9	499.9	0.9	0.9	-168.70	-2.9	-832.2	839.9	838.2	1.74	481.422					
600.0	599.7	599.7	599.7	1.1	1.0	-168.77	-2.9	-832.2	845.9	843.8	2.09	404.132					
700.0	699.4	699.4	699.4	1.3	1.2	-168.85	-2.9	-832.2	853.6	851.2	2.44	349.640					
800.0	798.9	798.9	798.9	1.5	1.4	-168.96	-2.9	-832.2	863.0	860.2	2.79	309.401					
900.0	898.3	898.3	898.3	1.8	1.6	-169.08	-2.9	-832.2	874.1	871.0	3.14	278.667					
1,000.0	997.4	997.4	997.4	2.1	1.7	-169.22	-2.9	-832.2	887.0	883.5	3.48	254.591					
1,100.0	1,096.3	1,097.2	1,097.1	2.4	1.9	-169.26	-1.3	-832.2	901.4	897.6	3.83	235.180					
1,200.0	1,194.9	1,196.3	1,196.1	2.7	2.1	-169.12	3.4	-832.2	917.5	913.3	4.19	219.235					
1,300.0	1,293.3	1,294.7	1,294.4	3.0	2.3	-168.98	8.6	-832.1	935.3	930.8	4.54	206.039					
1,400.0	1,391.2	1,392.7	1,392.3	3.4	2.5	-168.86	13.7	-832.1	954.8	949.9	4.90	195.016					
1,500.0	1,488.9	1,490.5	1,489.9	3.8	2.6	-168.76	18.8	-832.0	975.9	970.7	5.25	185.725					
1,600.0	1,586.3	1,588.1	1,587.4	4.2	2.8	-168.71	23.9	-831.9	997.7	992.1	5.62	177.421	SF				

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1C-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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	-90.20	-2.9	-822.1	822.2					
100.0	100.0	100.0	100.0	0.2	0.2	-90.20	-2.9	-822.1	822.2	821.8	0.35	2,355.296		
200.0	200.0	200.0	200.0	0.3	0.3	-90.20	-2.9	-822.1	822.2	821.5	0.70	1,177.648	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-168.62	-2.9	-822.1	823.0	822.0	1.05	785.965		
400.0	400.0	400.0	400.0	0.7	0.7	-168.65	-2.9	-822.1	825.6	824.2	1.40	591.392		
500.0	499.9	499.9	499.9	0.9	0.9	-168.70	-2.9	-822.1	829.9	828.1	1.74	475.650		
600.0	599.7	599.7	599.7	1.1	1.0	-168.77	-2.9	-822.1	835.8	833.7	2.09	399.321		
700.0	699.4	708.8	708.8	1.3	1.2	-168.81	-2.1	-821.5	843.0	840.5	2.46	342.910		
800.0	798.9	818.1	818.0	1.5	1.4	-168.77	0.4	-819.7	850.7	847.9	2.83	301.041		
900.0	898.3	927.3	927.1	1.8	1.6	-168.63	4.7	-816.7	859.0	855.8	3.20	268.649		
1,000.0	997.4	1,027.4	1,027.1	2.1	1.8	-168.47	9.4	-813.3	868.4	864.9	3.56	244.163		
1,100.0	1,096.3	1,126.8	1,126.3	2.4	2.0	-168.33	14.1	-809.9	879.5	875.6	3.92	224.557		
1,200.0	1,194.9	1,225.9	1,225.3	2.7	2.2	-168.22	18.8	-806.5	892.3	888.0	4.28	208.572		
1,300.0	1,293.3	1,324.9	1,324.0	3.0	2.4	-168.13	23.4	-803.2	906.8	902.2	4.64	195.390		
1,400.0	1,391.2	1,423.6	1,422.5	3.4	2.6	-168.05	28.1	-799.8	923.0	918.0	5.00	184.421		
1,500.0	1,488.9	1,521.9	1,520.8	3.8	2.8	-168.00	32.8	-796.5	940.9	935.5	5.37	175.204		
1,600.0	1,586.3	1,620.2	1,618.9	4.2	3.0	-168.00	37.4	-793.1	959.4	953.7	5.74	167.018		
1,700.0	1,683.8	1,718.5	1,716.9	4.7	3.2	-167.99	42.0	-789.8	978.0	971.9	6.12	159.809		
1,800.0	1,781.3	1,816.7	1,815.0	5.1	3.4	-167.99	46.7	-786.4	996.6	990.1	6.50	153.415	SF	

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1D-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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	-90.21	-2.9	-812.1	812.1					
100.0	100.0	100.0	100.0	0.2	0.2	-90.21	-2.9	-812.1	812.1	811.7	0.35	2,326.447		
200.0	200.0	200.0	200.0	0.3	0.3	-90.21	-2.9	-812.1	812.1	811.4	0.70	1,163.223 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-168.62	-2.9	-812.1	812.9	811.9	1.05	776.348		
400.0	400.0	400.0	400.0	0.7	0.7	-168.65	-2.9	-812.1	815.5	814.1	1.40	584.178		
500.0	499.9	513.2	513.2	0.9	0.9	-168.67	-2.3	-811.2	819.0	817.2	1.77	463.146		
600.0	599.7	626.5	626.4	1.1	1.1	-168.63	-0.4	-808.4	822.5	820.4	2.14	383.945		
700.0	699.4	739.8	739.6	1.3	1.3	-168.52	2.8	-803.8	826.1	823.6	2.52	327.877		
800.0	798.9	853.2	852.7	1.5	1.5	-168.35	7.3	-797.4	829.9	827.0	2.90	285.982		
900.0	898.3	955.2	954.3	1.8	1.7	-168.18	12.1	-790.5	834.3	831.0	3.27	255.351		
1,000.0	997.4	1,054.9	1,053.8	2.1	2.0	-168.03	16.7	-783.8	840.3	836.7	3.63	231.466		
1,100.0	1,096.3	1,154.6	1,153.1	2.4	2.2	-167.90	21.4	-777.1	848.1	844.1	4.00	212.264		
1,200.0	1,194.9	1,254.2	1,252.3	2.7	2.4	-167.79	26.1	-770.4	857.6	853.3	4.36	196.605		
1,300.0	1,293.3	1,353.5	1,351.4	3.0	2.6	-167.71	30.7	-763.7	868.8	864.1	4.73	183.687		
1,400.0	1,391.2	1,452.7	1,450.2	3.4	2.8	-167.65	35.4	-757.0	881.7	876.6	5.10	172.932		
1,500.0	1,488.9	1,551.6	1,548.8	3.8	3.0	-167.61	40.0	-750.4	896.3	890.8	5.47	163.893		
1,600.0	1,586.3	1,650.5	1,647.3	4.2	3.3	-167.62	44.7	-743.7	911.5	905.7	5.85	155.896		
1,700.0	1,683.8	1,749.3	1,745.8	4.7	3.5	-167.62	49.3	-737.0	926.8	920.6	6.23	148.852		
1,800.0	1,781.3	1,848.1	1,844.3	5.1	3.7	-167.62	53.9	-730.4	942.1	935.5	6.61	142.604		
1,900.0	1,878.8	1,946.9	1,942.8	5.5	3.9	-167.62	58.5	-723.7	957.4	950.4	6.99	137.025		
2,000.0	1,976.2	2,045.8	2,041.3	5.9	4.1	-167.62	63.2	-717.1	972.7	965.3	7.37	132.014		
2,100.0	2,073.7	2,144.6	2,139.8	6.3	4.4	-167.63	67.8	-710.4	987.9	980.2	7.75	127.490 SF		

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1E-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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)				
0.0	0.0	0.0	0.0	0.0	0.0	-90.23	-3.3	-802.3	802.3					
100.0	100.0	100.0	100.0	0.2	0.2	-90.23	-3.3	-802.3	802.3	801.9	0.35	2,298.402	CC, ES	
200.0	200.0	200.0	200.0	0.3	0.3	-90.23	-3.3	-802.3	802.3	801.6	0.70	1,149.201		
300.0	300.0	300.0	300.0	0.5	0.5	-168.65	-3.3	-802.3	803.1	802.1	1.05	766.999		
400.0	400.0	407.3	407.3	0.7	0.7	-168.68	-3.2	-802.0	805.5	804.1	1.41	571.760		
500.0	499.9	521.9	521.9	0.9	0.9	-168.67	-2.2	-799.9	807.9	806.2	1.78	452.943		
600.0	599.7	636.6	636.5	1.1	1.1	-168.63	-0.3	-795.8	810.3	808.1	2.16	375.080		
700.0	699.4	751.3	751.0	1.3	1.3	-168.55	2.6	-789.5	812.5	810.0	2.54	319.951		
800.0	798.9	866.1	865.4	1.5	1.6	-168.43	6.5	-781.2	814.7	811.8	2.92	278.739		
900.0	898.3	980.9	979.6	1.8	1.9	-168.27	11.3	-770.8	816.7	813.4	3.31	246.660		
1,000.0	997.4	1,083.2	1,081.2	2.1	2.1	-168.11	16.2	-760.4	819.3	815.6	3.68	222.648		
1,100.0	1,096.3	1,183.0	1,180.5	2.4	2.3	-167.98	21.0	-750.1	823.6	819.5	4.05	203.538		
1,200.0	1,194.9	1,282.9	1,279.6	2.7	2.6	-167.87	25.7	-739.9	829.5	825.1	4.41	187.912		
1,300.0	1,293.3	1,382.6	1,378.7	3.0	2.8	-167.79	30.5	-729.7	837.2	832.4	4.78	174.994		
1,400.0	1,391.2	1,482.1	1,477.6	3.4	3.1	-167.72	35.2	-719.5	846.6	841.5	5.16	164.218		
1,500.0	1,488.9	1,581.5	1,576.4	3.8	3.3	-167.68	39.9	-709.3	857.7	852.2	5.53	155.149		
1,600.0	1,586.3	1,680.8	1,675.0	4.2	3.6	-167.68	44.7	-699.1	869.5	863.6	5.91	147.143		
1,700.0	1,683.8	1,780.1	1,773.7	4.7	3.9	-167.67	49.4	-688.9	881.2	875.0	6.29	140.087		
1,800.0	1,781.3	1,879.4	1,872.4	5.1	4.1	-167.67	54.1	-678.8	893.0	886.4	6.67	133.825		
1,900.0	1,878.8	1,978.7	1,971.0	5.5	4.4	-167.66	58.9	-668.6	904.8	897.8	7.06	128.230		
2,000.0	1,976.2	2,078.0	2,069.7	5.9	4.6	-167.65	63.6	-658.4	916.6	909.2	7.44	123.203		
2,100.0	2,073.7	2,177.3	2,168.4	6.3	4.9	-167.65	68.3	-648.2	928.4	920.5	7.82	118.663		
2,200.0	2,171.2	2,276.6	2,267.0	6.8	5.1	-167.64	73.0	-638.1	940.2	931.9	8.21	114.542		
2,300.0	2,268.6	2,375.9	2,365.7	7.2	5.4	-167.64	77.8	-627.9	951.9	943.3	8.59	110.785		
2,400.0	2,366.1	2,475.2	2,464.4	7.6	5.7	-167.63	82.5	-617.7	963.7	954.7	8.98	107.347		
2,500.0	2,463.6	2,574.5	2,563.0	8.1	5.9	-167.63	87.2	-607.5	975.5	966.1	9.36	104.189		
2,600.0	2,561.0	2,673.8	2,661.7	8.5	6.2	-167.62	92.0	-597.3	987.3	977.5	9.75	101.277		
2,700.0	2,658.5	2,773.1	2,760.4	8.9	6.4	-167.62	96.7	-587.2	999.1	988.9	10.13	98.586	SF	

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1F-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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)				
0.0	0.0	0.0	0.0	0.0	0.0	-90.24	-3.3	-792.2	792.2					
100.0	100.0	100.0	100.0	0.2	0.2	-90.24	-3.3	-792.2	792.2	791.9	0.35	2,269.552		
200.0	200.0	200.0	200.0	0.3	0.3	-90.24	-3.3	-792.2	792.2	791.5	0.70	1,134.776		
300.0	300.0	315.1	315.1	0.5	0.6	-168.63	-2.9	-791.1	792.1	791.1	1.07	737.816		
400.0	400.0	430.1	430.1	0.7	0.8	-168.59	-1.8	-787.8	791.8	790.4	1.45	546.182		
500.0	499.9	545.1	544.9	0.9	1.0	-168.53	0.1	-782.4	791.4	789.5	1.83	433.065		
600.0	599.7	660.2	659.7	1.1	1.2	-168.44	2.8	-774.8	790.7	788.5	2.21	358.248		
700.0	699.4	775.1	774.2	1.3	1.5	-168.33	6.1	-764.9	789.9	787.3	2.59	304.969		
800.0	798.9	890.1	888.4	1.5	1.8	-168.19	10.3	-753.0	788.8	785.9	2.98	264.997		
900.0	898.3	1,003.1	1,000.5	1.8	2.1	-168.03	15.0	-739.1	787.6	784.3	3.36	234.083		
962.0	959.8	1,065.1	1,061.9	2.0	2.2	-167.95	17.8	-731.1	787.3	783.7	3.59	219.197	CC	
1,000.0	997.4	1,103.1	1,099.5	2.1	2.3	-167.90	19.5	-726.1	787.4	783.7	3.73	211.056	ES	
1,100.0	1,096.3	1,203.0	1,198.5	2.4	2.6	-167.79	24.0	-713.1	788.9	784.8	4.10	192.473		
1,200.0	1,194.9	1,303.0	1,297.5	2.7	2.9	-167.70	28.5	-700.1	792.1	787.7	4.47	177.268		
1,300.0	1,293.3	1,402.9	1,396.4	3.0	3.2	-167.64	33.0	-687.1	797.1	792.2	4.84	164.692		
1,400.0	1,391.2	1,502.6	1,495.3	3.4	3.5	-167.59	37.4	-674.2	803.7	798.5	5.21	154.199		
1,500.0	1,488.9	1,602.3	1,594.0	3.8	3.8	-167.58	41.9	-661.2	812.0	806.4	5.59	145.370		
1,600.0	1,586.3	1,701.9	1,692.6	4.2	4.1	-167.59	46.4	-648.3	821.0	815.1	5.97	137.599		
1,700.0	1,683.8	1,801.5	1,791.3	4.7	4.4	-167.60	50.8	-635.3	830.0	823.7	6.35	130.748		
1,800.0	1,781.3	1,901.1	1,889.9	5.1	4.7	-167.61	55.3	-622.4	839.1	832.3	6.73	124.665		
1,900.0	1,878.8	2,000.7	1,988.6	5.5	5.0	-167.62	59.8	-609.4	848.1	841.0	7.11	119.228		
2,000.0	1,976.2	2,100.2	2,087.2	5.9	5.3	-167.63	64.2	-596.5	857.1	849.6	7.50	114.341		
2,100.0	2,073.7	2,199.8	2,185.8	6.3	5.5	-167.65	68.7	-583.5	866.1	858.3	7.88	109.926		
2,200.0	2,171.2	2,299.4	2,284.5	6.8	5.8	-167.66	73.2	-570.6	875.2	866.9	8.26	105.917		
2,300.0	2,268.6	2,399.0	2,383.1	7.2	6.1	-167.67	77.6	-557.7	884.2	875.6	8.65	102.262		
2,400.0	2,366.1	2,498.6	2,481.8	7.6	6.4	-167.68	82.1	-544.7	893.2	884.2	9.03	98.915		
2,500.0	2,463.6	2,598.2	2,580.4	8.1	6.7	-167.68	86.6	-531.8	902.3	892.8	9.41	95.841		
2,600.0	2,561.0	2,697.8	2,679.1	8.5	7.0	-167.69	91.0	-518.8	911.3	901.5	9.80	93.006		
2,700.0	2,658.5	2,797.4	2,777.7	8.9	7.3	-167.70	95.5	-505.9	920.3	910.1	10.18	90.384		
2,800.0	2,756.0	2,897.0	2,876.4	9.4	7.6	-167.71	99.9	-492.9	929.3	918.8	10.57	87.952		
2,900.0	2,853.5	2,996.6	2,975.0	9.8	7.9	-167.72	104.4	-480.0	938.4	927.4	10.95	85.690		
3,000.0	2,950.9	3,096.2	3,073.7	10.2	8.2	-167.73	108.9	-467.0	947.4	936.1	11.33	83.582		
3,100.0	3,048.4	3,195.8	3,172.3	10.7	8.5	-167.74	113.3	-454.1	956.4	944.7	11.72	81.611		
3,200.0	3,145.9	3,295.3	3,270.9	11.1	8.8	-167.75	117.8	-441.1	965.4	953.3	12.10	79.765		
3,300.0	3,243.3	3,394.9	3,369.6	11.5	9.1	-167.76	122.3	-428.2	974.5	962.0	12.49	78.033		
3,400.0	3,340.8	3,494.5	3,468.2	11.9	9.4	-167.76	126.7	-415.3	983.5	970.6	12.87	76.404		
3,500.0	3,438.3	3,594.1	3,566.9	12.4	9.7	-167.77	131.2	-402.3	992.5	979.3	13.26	74.870	SF	

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1G-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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)				
0.0	0.0	0.0	0.0	0.0	0.0	-89.17	0.7	-50.1	50.1					
100.0	100.0	100.0	100.0	0.2	0.2	-89.17	0.7	-50.1	50.1	49.7	0.35	143.464		
200.0	200.0	200.0	200.0	0.3	0.3	-89.17	0.7	-50.1	50.1	49.4	0.70	71.732 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-167.78	0.7	-50.1	50.9	49.9	1.05	48.638		
400.0	400.0	400.0	400.0	0.7	0.7	-168.37	0.7	-50.1	53.5	52.1	1.40	38.318		
500.0	499.9	500.3	500.3	0.9	0.9	-169.10	0.9	-49.9	57.6	55.9	1.75	33.004		
600.0	599.7	601.0	600.9	1.1	1.1	-169.12	2.0	-48.6	62.3	60.2	2.10	29.702		
700.0	699.4	701.7	701.6	1.3	1.2	-168.45	4.3	-45.9	67.3	64.8	2.45	27.469		
800.0	798.9	802.5	802.2	1.5	1.4	-167.24	7.8	-41.8	72.7	69.9	2.81	25.891		
900.0	898.3	902.8	902.3	1.8	1.6	-165.72	12.2	-36.6	78.7	75.5	3.17	24.798		
1,000.0	997.4	1,002.5	1,001.8	2.1	1.8	-164.61	16.9	-31.2	86.2	82.6	3.54	24.337 SF		
1,100.0	1,096.3	1,102.1	1,101.1	2.4	2.0	-163.96	21.5	-25.9	95.4	91.5	3.91	24.374		
1,200.0	1,194.9	1,201.5	1,200.3	2.7	2.2	-163.68	26.1	-20.5	106.3	102.0	4.29	24.785		
1,300.0	1,293.3	1,300.7	1,299.2	3.0	2.4	-163.69	30.6	-15.2	118.8	114.1	4.66	25.483		
1,400.0	1,391.2	1,399.7	1,397.9	3.4	2.6	-163.90	35.2	-9.8	133.0	128.0	5.04	26.409		
1,500.0	1,488.9	1,498.4	1,496.4	3.8	2.8	-164.24	39.8	-4.5	148.9	143.5	5.41	27.518		
1,600.0	1,586.3	1,597.0	1,594.8	4.2	3.0	-164.62	44.3	0.8	165.4	159.7	5.79	28.573		
1,700.0	1,683.8	1,695.6	1,693.2	4.7	3.3	-164.93	48.9	6.2	182.0	175.8	6.17	29.499		
1,800.0	1,781.3	1,794.2	1,791.5	5.1	3.5	-165.19	53.5	11.5	198.6	192.0	6.55	30.316		
1,900.0	1,878.8	1,892.8	1,889.9	5.5	3.7	-165.41	58.0	16.8	215.2	208.2	6.93	31.043		
2,000.0	1,976.2	1,991.5	1,988.2	5.9	3.9	-165.59	62.6	22.1	231.8	224.4	7.31	31.695		
2,100.0	2,073.7	2,090.1	2,086.6	6.3	4.1	-165.76	67.1	27.5	248.3	240.6	7.69	32.281		
2,200.0	2,171.2	2,188.7	2,185.0	6.8	4.3	-165.90	71.7	32.8	264.9	256.9	8.07	32.812		
2,300.0	2,268.6	2,287.3	2,283.3	7.2	4.5	-166.02	76.3	38.1	281.5	273.1	8.46	33.295		
2,400.0	2,366.1	2,385.9	2,381.7	7.6	4.7	-166.13	80.8	43.4	298.1	289.3	8.84	33.736		
2,500.0	2,463.6	2,484.5	2,480.1	8.1	4.9	-166.23	85.4	48.7	314.7	305.5	9.22	34.140		
2,600.0	2,561.0	2,583.1	2,578.4	8.5	5.1	-166.32	89.9	54.1	331.3	321.7	9.60	34.512		
2,700.0	2,658.5	2,681.7	2,676.8	8.9	5.3	-166.40	94.5	59.4	347.9	337.9	9.98	34.856		
2,800.0	2,756.0	2,780.4	2,775.2	9.4	5.6	-166.48	99.1	64.7	364.5	354.1	10.36	35.174		
2,900.0	2,853.5	2,879.0	2,873.5	9.8	5.8	-166.55	103.6	70.0	381.1	370.3	10.74	35.470		
3,000.0	2,950.9	2,977.6	2,971.9	10.2	6.0	-166.61	108.2	75.4	397.7	386.5	11.12	35.745		
3,100.0	3,048.4	3,076.2	3,070.2	10.7	6.2	-166.66	112.7	80.7	414.2	402.7	11.51	36.001		
3,200.0	3,145.9	3,174.8	3,168.6	11.1	6.4	-166.72	117.3	86.0	430.8	419.0	11.89	36.242		
3,300.0	3,243.3	3,273.4	3,267.0	11.5	6.6	-166.76	121.9	91.3	447.4	435.2	12.27	36.467		
3,400.0	3,340.8	3,372.0	3,365.3	11.9	6.8	-166.81	126.4	96.6	464.0	451.4	12.65	36.679		
3,500.0	3,438.3	3,470.6	3,463.7	12.4	7.0	-166.85	131.0	102.0	480.6	467.6	13.03	36.878		
3,600.0	3,535.7	3,569.3	3,562.1	12.8	7.2	-166.89	135.5	107.3	497.2	483.8	13.41	37.065		
3,700.0	3,633.2	3,667.9	3,660.4	13.3	7.4	-166.93	140.1	112.6	513.8	500.0	13.80	37.243		
3,800.0	3,730.7	3,766.5	3,758.8	13.7	7.7	-166.96	144.7	117.9	530.4	516.2	14.18	37.411		
3,900.0	3,828.2	3,865.1	3,857.2	14.1	7.9	-166.99	149.2	123.3	547.0	532.4	14.56	37.569		
4,000.0	3,925.6	3,963.7	3,955.5	14.6	8.1	-167.02	153.8	128.6	563.6	548.7	14.94	37.720		
4,100.0	4,023.1	4,062.3	4,053.9	15.0	8.3	-167.05	158.3	133.9	580.2	564.9	15.32	37.863		
4,200.0	4,120.6	4,160.9	4,152.2	15.4	8.5	-167.08	162.9	139.2	596.8	581.1	15.71	38.000		
4,300.0	4,218.0	4,259.6	4,250.6	15.9	8.7	-167.10	167.5	144.5	613.4	597.3	16.09	38.129		
4,400.0	4,315.5	4,358.2	4,349.0	16.3	8.9	-167.13	172.0	149.9	630.0	613.5	16.47	38.253		
4,500.0	4,413.0	4,456.8	4,447.3	16.7	9.1	-167.15	176.6	155.2	646.6	629.7	16.85	38.371		
4,600.0	4,510.4	4,555.4	4,545.7	17.2	9.3	-167.17	181.1	160.5	663.2	645.9	17.23	38.484		
4,700.0	4,607.9	4,654.0	4,644.1	17.6	9.6	-167.19	185.7	165.8	679.8	662.2	17.61	38.592		
4,800.0	4,705.4	4,752.6	4,742.4	18.0	9.8	-167.21	190.3	171.2	696.4	678.4	18.00	38.695		
4,900.0	4,802.9	4,851.2	4,840.8	18.5	10.0	-167.23	194.8	176.5	713.0	694.6	18.38	38.794		
5,000.0	4,900.3	4,949.8	4,939.1	18.9	10.2	-167.25	199.4	181.8	729.6	710.8	18.76	38.889		
5,100.0	4,997.8	5,048.5	5,037.5	19.3	10.4	-167.27	203.9	187.1	746.2	727.0	19.14	38.981		

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

Offset Design												S32-T2N-R64W (Newman) - Ruhl 1G-32H-B264 - Hz - Plan #1		Offset Site Error:		0.0 ft
Survey Program:												0-Geolink MWD		Offset Well Error:		0.0 ft
Reference		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)						
5,200.0	5,095.3	5,147.1	5,135.9	19.8	10.6	-167.28	208.5	192.4	762.8	743.2	19.52	39.068				
5,300.0	5,192.7	5,245.7	5,234.2	20.2	10.8	-167.30	213.1	197.8	779.4	759.4	19.91	39.152				
5,400.0	5,290.2	5,344.3	5,332.6	20.6	11.0	-167.31	217.6	203.1	795.9	775.7	20.29	39.233				
5,500.0	5,387.7	5,442.9	5,431.0	21.1	11.2	-167.33	222.2	208.4	812.5	791.9	20.67	39.311				
5,600.0	5,485.1	5,541.5	5,529.3	21.5	11.4	-167.34	226.7	213.7	829.1	808.1	21.05	39.387				
5,700.0	5,582.6	5,640.1	5,627.7	21.9	11.7	-167.36	231.3	219.1	845.7	824.3	21.43	39.459				
5,800.0	5,680.1	5,738.7	5,726.1	22.4	11.9	-167.37	235.9	224.4	862.3	840.5	21.82	39.529				
5,900.0	5,777.5	5,837.4	5,824.4	22.8	12.1	-167.38	240.4	229.7	878.9	856.7	22.20	39.597				
6,000.0	5,875.0	5,936.0	5,922.8	23.2	12.3	-167.39	245.0	235.0	895.5	873.0	22.58	39.662				
6,100.0	5,972.5	6,034.6	6,021.1	23.7	12.5	-167.41	249.5	240.3	912.1	889.2	22.96	39.725				
6,200.0	6,070.0	6,133.2	6,119.5	24.1	12.7	-167.42	254.1	245.7	928.7	905.4	23.34	39.786				
6,300.0	6,167.4	6,231.8	6,217.9	24.6	12.9	-167.43	258.7	251.0	945.3	921.6	23.72	39.845				
6,400.0	6,264.9	6,330.8	6,316.6	25.0	13.1	-167.45	263.0	256.3	961.9	937.8	24.10	39.918				
6,500.0	6,362.4	6,430.2	6,415.7	25.4	13.3	-168.04	257.9	261.7	978.4	954.1	24.29	40.283				
6,600.0	6,459.8	6,525.3	6,508.9	25.9	13.3	-175.62	240.3	266.7	995.2	971.0	24.24	41.049				

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1H-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 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	-89.51	0.3	-40.0	40.0					
100.0	100.0	100.0	100.0	0.2	0.2	-89.51	0.3	-40.0	40.0	39.7	0.35	114.603		
200.0	200.0	200.0	200.0	0.3	0.3	-89.51	0.3	-40.0	40.0	39.3	0.70	57.301 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-168.17	0.3	-40.0	40.9	39.8	1.05	39.018		
400.0	400.0	400.0	400.0	0.7	0.7	-168.88	0.3	-40.0	43.4	42.0	1.40	31.106		
500.0	499.9	500.6	500.6	0.9	0.9	-169.41	0.8	-39.2	46.9	45.2	1.75	26.877		
600.0	599.7	601.3	601.3	1.1	1.1	-169.32	2.0	-36.9	50.6	48.5	2.10	24.124		
700.0	699.4	702.0	701.9	1.3	1.2	-168.73	4.1	-33.0	54.4	51.9	2.45	22.204		
800.0	798.9	802.8	802.5	1.5	1.4	-167.75	7.0	-27.5	58.4	55.6	2.81	20.797		
900.0	898.3	903.7	903.0	1.8	1.6	-166.46	10.7	-20.5	62.5	59.4	3.17	19.724		
1,000.0	997.4	1,004.3	1,003.2	2.1	1.9	-164.95	15.3	-12.0	66.9	63.4	3.54	18.896		
1,100.0	1,096.3	1,104.1	1,102.5	2.4	2.1	-163.82	20.0	-3.1	72.7	68.7	3.92	18.534		
1,200.0	1,194.9	1,203.8	1,201.7	2.7	2.3	-163.22	24.7	5.8	80.1	75.8	4.30	18.613		
1,300.0	1,293.3	1,303.4	1,300.8	3.0	2.6	-163.04	29.4	14.7	89.2	84.5	4.69	19.031		
1,400.0	1,391.2	1,402.8	1,399.7	3.4	2.8	-163.18	34.1	23.5	99.9	94.8	5.07	19.718		
1,500.0	1,488.9	1,502.1	1,498.4	3.8	3.0	-163.54	38.8	32.3	112.3	106.9	5.45	20.621		
1,600.0	1,586.3	1,601.2	1,597.0	4.2	3.3	-163.95	43.5	41.2	125.4	119.6	5.83	21.508		
1,700.0	1,683.8	1,700.3	1,695.7	4.7	3.5	-164.28	48.2	50.0	138.5	132.3	6.22	22.285		
1,800.0	1,781.3	1,799.5	1,794.3	5.1	3.7	-164.56	52.9	58.8	151.6	145.0	6.60	22.971		
1,900.0	1,878.8	1,898.6	1,892.9	5.5	4.0	-164.79	57.6	67.6	164.7	157.8	6.99	23.581		
2,000.0	1,976.2	1,997.7	1,991.6	5.9	4.2	-164.99	62.3	76.4	177.9	170.5	7.37	24.127		
2,100.0	2,073.7	2,096.9	2,090.2	6.3	4.5	-165.16	67.0	85.2	191.0	183.2	7.76	24.618		
2,200.0	2,171.2	2,196.0	2,188.8	6.8	4.7	-165.31	71.7	94.1	204.1	196.0	8.14	25.063		
2,300.0	2,268.6	2,295.1	2,287.4	7.2	5.0	-165.44	76.4	102.9	217.2	208.7	8.53	25.467		
2,400.0	2,366.1	2,394.3	2,386.1	7.6	5.2	-165.55	81.1	111.7	230.3	221.4	8.92	25.836		
2,500.0	2,463.6	2,493.4	2,484.7	8.1	5.4	-165.66	85.8	120.5	243.5	234.2	9.30	26.174		
2,600.0	2,561.0	2,592.5	2,583.3	8.5	5.7	-165.75	90.5	129.3	256.6	246.9	9.69	26.485		
2,700.0	2,658.5	2,691.7	2,682.0	8.9	5.9	-165.83	95.2	138.2	269.7	259.6	10.07	26.772		
2,800.0	2,756.0	2,790.8	2,780.6	9.4	6.2	-165.91	99.9	147.0	282.8	272.4	10.46	27.038		
2,900.0	2,853.5	2,889.9	2,879.2	9.8	6.4	-165.98	104.5	155.8	296.0	285.1	10.85	27.285		
3,000.0	2,950.9	2,989.1	2,977.8	10.2	6.7	-166.04	109.2	164.6	309.1	297.9	11.23	27.514		
3,100.0	3,048.4	3,088.2	3,076.5	10.7	6.9	-166.10	113.9	173.4	322.2	310.6	11.62	27.729		
3,200.0	3,145.9	3,187.3	3,175.1	11.1	7.2	-166.15	118.6	182.3	335.3	323.3	12.01	27.929		
3,300.0	3,243.3	3,286.5	3,273.7	11.5	7.4	-166.20	123.3	191.1	348.5	336.1	12.39	28.117		
3,400.0	3,340.8	3,385.6	3,372.4	11.9	7.6	-166.25	128.0	199.9	361.6	348.8	12.78	28.293		
3,500.0	3,438.3	3,484.7	3,471.0	12.4	7.9	-166.29	132.7	208.7	374.7	361.6	13.17	28.459		
3,600.0	3,535.7	3,583.9	3,569.6	12.8	8.1	-166.33	137.4	217.5	387.9	374.3	13.55	28.616		
3,700.0	3,633.2	3,683.0	3,668.3	13.3	8.4	-166.37	142.1	226.4	401.0	387.0	13.94	28.764		
3,800.0	3,730.7	3,782.1	3,766.9	13.7	8.6	-166.40	146.8	235.2	414.1	399.8	14.33	28.903		
3,900.0	3,828.2	3,881.3	3,865.5	14.1	8.9	-166.43	151.5	244.0	427.2	412.5	14.71	29.036		
4,000.0	3,925.6	3,980.4	3,964.1	14.6	9.1	-166.46	156.2	252.8	440.4	425.3	15.10	29.161		
4,100.0	4,023.1	4,079.5	4,062.8	15.0	9.4	-166.49	160.9	261.6	453.5	438.0	15.49	29.281		
4,200.0	4,120.6	4,178.7	4,161.4	15.4	9.6	-166.52	165.6	270.5	466.6	450.7	15.87	29.394		
4,300.0	4,218.0	4,277.8	4,260.0	15.9	9.8	-166.55	170.3	279.3	479.7	463.5	16.26	29.502		
4,400.0	4,315.5	4,376.9	4,358.7	16.3	10.1	-166.57	174.9	288.1	492.9	476.2	16.65	29.605		
4,500.0	4,413.0	4,476.1	4,457.3	16.7	10.3	-166.59	179.6	296.9	506.0	489.0	17.04	29.703		
4,600.0	4,510.4	4,575.2	4,555.9	17.2	10.6	-166.62	184.3	305.7	519.1	501.7	17.42	29.797		
4,700.0	4,607.9	4,674.3	4,654.6	17.6	10.8	-166.64	189.0	314.5	532.3	514.5	17.81	29.887		
4,800.0	4,705.4	4,773.5	4,753.2	18.0	11.1	-166.66	193.7	323.4	545.4	527.2	18.20	29.973		
4,900.0	4,802.9	4,872.6	4,851.8	18.5	11.3	-166.68	198.4	332.2	558.5	539.9	18.58	30.055		
5,000.0	4,900.3	4,971.8	4,950.4	18.9	11.6	-166.69	203.1	341.0	571.6	552.7	18.97	30.134		
5,100.0	4,997.8	5,070.9	5,049.1	19.3	11.8	-166.71	207.8	349.8	584.8	565.4	19.36	30.210		

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1H-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth 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		
5,200.0	5,095.3	5,170.0	5,147.7	19.8	12.1	-166.73	212.5	358.6	597.9	578.2	19.74	30.283		
5,300.0	5,192.7	5,269.2	5,246.3	20.2	12.3	-166.74	217.2	367.5	611.0	590.9	20.13	30.353		
5,400.0	5,290.2	5,368.3	5,345.0	20.6	12.5	-166.76	221.9	376.3	624.2	603.6	20.52	30.421		
5,500.0	5,387.7	5,467.4	5,443.6	21.1	12.8	-166.77	226.6	385.1	637.3	616.4	20.90	30.485		
5,600.0	5,485.1	5,566.6	5,542.2	21.5	13.0	-166.79	231.3	393.9	650.4	629.1	21.29	30.548		
5,700.0	5,582.6	5,665.7	5,640.8	21.9	13.3	-166.80	236.0	402.7	663.6	641.9	21.68	30.608		
5,800.0	5,680.1	5,764.8	5,739.5	22.4	13.5	-166.81	240.7	411.6	676.7	654.6	22.07	30.666		
5,900.0	5,777.5	5,864.0	5,838.1	22.8	13.8	-166.83	245.4	420.4	689.8	667.4	22.45	30.723		
6,000.0	5,875.0	5,963.1	5,936.7	23.2	14.0	-166.84	250.0	429.2	702.9	680.1	22.84	30.777		
6,100.0	5,972.5	6,062.2	6,035.4	23.7	14.3	-166.85	254.7	438.0	716.1	692.8	23.23	30.829		
6,200.0	6,070.0	6,161.4	6,134.0	24.1	14.5	-166.86	259.4	446.8	729.2	705.6	23.61	30.880		
6,300.0	6,167.4	6,261.0	6,233.2	24.6	14.8	-166.89	263.9	455.7	742.3	718.3	23.99	30.943		
6,400.0	6,264.9	6,361.7	6,333.3	25.0	14.9	-167.66	258.7	464.7	755.3	731.1	24.13	31.302		
6,500.0	6,362.4	6,457.9	6,427.3	25.4	15.0	-169.35	240.6	473.1	768.5	744.5	24.01	32.001		
6,600.0	6,459.8	6,546.8	6,511.3	25.9	15.1	-177.96	212.9	480.6	783.0	759.2	23.77	32.946		
6,700.0	6,557.2	6,630.6	6,586.8	26.3	15.1	145.36	177.3	487.3	799.3	775.8	23.52	33.978		
6,800.0	6,653.0	6,711.5	6,655.3	26.6	15.2	121.15	134.8	493.5	816.6	793.0	23.63	34.563		
6,900.0	6,745.2	6,790.0	6,716.9	26.9	15.2	106.85	86.4	499.0	834.3	810.3	24.08	34.650		
7,000.0	6,832.2	6,866.7	6,771.5	27.2	15.3	97.65	32.8	503.8	851.7	826.9	24.82	34.315		
7,100.0	6,912.3	6,941.9	6,819.2	27.5	15.5	91.22	-25.0	508.1	868.2	842.6	25.63	33.874		
7,200.0	6,983.8	7,015.8	6,860.0	27.8	15.7	86.50	-86.6	511.8	883.4	856.8	26.51	33.321		
7,300.0	7,045.4	7,088.8	6,893.9	28.1	16.0	82.97	-151.1	514.8	896.6	869.3	27.33	32.806		
7,400.0	7,095.8	7,161.1	6,920.8	28.4	16.4	80.36	-218.1	517.2	907.6	879.5	28.06	32.341		
7,500.0	7,134.2	7,232.8	6,940.7	28.8	16.9	78.50	-286.9	519.0	916.1	887.4	28.72	31.900		
7,600.0	7,159.7	7,300.0	6,953.1	29.2	17.4	77.33	-353.0	520.1	921.8	892.5	29.28	31.485		
7,700.0	7,171.9	7,375.2	6,959.6	29.7	18.0	76.75	-427.9	520.7	924.6	894.7	29.93	30.893		
7,800.0	7,173.0	7,465.3	6,960.0	30.3	18.9	76.69	-517.9	520.7	924.9	893.4	31.54	29.325		
7,900.0	7,173.0	7,565.3	6,960.0	31.0	19.9	76.69	-617.9	520.7	924.9	891.0	33.91	27.277		
8,000.0	7,173.0	7,665.3	6,960.0	31.7	21.1	76.69	-717.9	520.7	924.9	888.5	36.44	25.380		
8,100.0	7,173.0	7,765.3	6,960.0	32.5	22.3	76.69	-817.9	520.7	924.9	885.8	39.11	23.648		
8,200.0	7,173.0	7,865.3	6,960.0	33.4	23.6	76.69	-917.9	520.7	924.9	883.0	41.89	22.080		
8,300.0	7,173.0	7,965.3	6,960.0	34.3	24.9	76.69	-1,017.9	520.7	924.9	880.2	44.76	20.666		
8,400.0	7,173.0	8,065.3	6,960.0	35.4	26.3	76.69	-1,117.9	520.7	924.9	877.2	47.69	19.393		
8,500.0	7,173.0	8,165.3	6,960.0	36.4	27.7	76.69	-1,217.9	520.7	924.9	874.2	50.69	18.246		
8,600.0	7,173.0	8,265.3	6,960.0	37.5	29.2	76.69	-1,317.9	520.7	924.9	871.2	53.74	17.211		
8,700.0	7,173.0	8,365.3	6,960.0	38.7	30.7	76.69	-1,417.9	520.7	924.9	868.1	56.83	16.275		
8,800.0	7,173.0	8,465.3	6,960.0	39.9	32.2	76.69	-1,517.9	520.7	924.9	865.0	59.96	15.427		
8,900.0	7,173.0	8,565.3	6,960.0	41.2	33.8	76.69	-1,617.9	520.7	924.9	861.8	63.11	14.656		
9,000.0	7,173.0	8,665.3	6,960.0	42.5	35.3	76.69	-1,717.9	520.7	924.9	858.6	66.29	13.952		
9,100.0	7,173.0	8,765.3	6,960.0	43.8	36.9	76.69	-1,817.9	520.7	924.9	855.4	69.50	13.309		
9,200.0	7,173.0	8,865.3	6,960.0	45.1	38.5	76.69	-1,917.9	520.7	924.9	852.2	72.72	12.719		
9,300.0	7,173.0	8,965.3	6,960.0	46.5	40.1	76.69	-2,017.9	520.7	924.9	849.0	75.96	12.177		
9,400.0	7,173.0	9,065.3	6,960.0	47.9	41.8	76.69	-2,117.9	520.7	924.9	845.7	79.21	11.677		
9,500.0	7,173.0	9,165.3	6,960.0	49.3	43.4	76.69	-2,217.9	520.7	924.9	842.5	82.48	11.214		
9,600.0	7,173.0	9,265.3	6,960.0	50.8	45.0	76.69	-2,317.9	520.7	924.9	839.2	85.76	10.786		
9,700.0	7,173.0	9,365.3	6,960.0	52.3	46.7	76.69	-2,417.9	520.7	924.9	835.9	89.05	10.387		
9,800.0	7,173.0	9,465.3	6,960.0	53.7	48.3	76.69	-2,517.9	520.7	924.9	832.6	92.34	10.016		
9,900.0	7,173.0	9,565.3	6,960.0	55.2	50.0	76.69	-2,617.9	520.7	924.9	829.3	95.65	9.670		
10,000.0	7,173.0	9,665.3	6,960.0	56.8	51.7	76.69	-2,717.9	520.7	924.9	826.0	98.96	9.346		
10,100.0	7,173.0	9,765.3	6,960.0	58.3	53.4	76.69	-2,817.9	520.7	924.9	822.7	102.28	9.043		
10,200.0	7,173.0	9,865.3	6,960.0	59.8	55.0	76.69	-2,917.9	520.7	924.9	819.3	105.61	8.758		
10,300.0	7,173.0	9,965.3	6,960.0	61.4	56.7	76.69	-3,017.9	520.7	924.9	816.0	108.94	8.490		

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1H-32H-B264 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		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		
10,400.0	7,173.0	10,065.3	6,960.0	62.9	58.4	76.69	-3,117.9	520.7	924.9	812.7	112.28	8.238		
10,500.0	7,173.0	10,165.3	6,960.0	64.5	60.1	76.69	-3,217.9	520.7	924.9	809.3	115.62	8.000		
10,600.0	7,173.0	10,265.3	6,960.0	66.1	61.8	76.69	-3,317.9	520.7	924.9	806.0	118.97	7.775		
10,700.0	7,173.0	10,365.3	6,960.0	67.7	63.5	76.69	-3,417.9	520.7	924.9	802.6	122.32	7.562		
10,800.0	7,173.0	10,465.3	6,960.0	69.3	65.2	76.69	-3,517.9	520.7	924.9	799.3	125.67	7.360		
10,900.0	7,173.0	10,565.3	6,960.0	70.9	66.9	76.69	-3,617.9	520.7	924.9	795.9	129.02	7.169		
11,000.0	7,173.0	10,665.3	6,960.0	72.5	68.6	76.69	-3,717.9	520.7	924.9	792.6	132.38	6.987		
11,100.0	7,173.0	10,765.3	6,960.0	74.1	70.3	76.69	-3,817.9	520.7	924.9	789.2	135.75	6.814		
11,200.0	7,173.0	10,865.3	6,960.0	75.8	72.0	76.69	-3,917.9	520.7	924.9	785.8	139.11	6.649		
11,300.0	7,173.0	10,965.3	6,960.0	77.4	73.7	76.69	-4,017.9	520.7	924.9	782.5	142.48	6.492		
11,400.0	7,173.0	11,065.3	6,960.0	79.0	75.5	76.69	-4,117.9	520.7	924.9	779.1	145.85	6.342		
11,500.0	7,173.0	11,165.3	6,960.0	80.7	77.2	76.69	-4,217.9	520.7	924.9	775.7	149.22	6.199		
11,600.0	7,173.0	11,265.3	6,960.0	82.3	78.9	76.69	-4,317.9	520.7	924.9	772.3	152.59	6.062		
11,700.0	7,173.0	11,365.3	6,960.0	84.0	80.6	76.69	-4,417.9	520.7	924.9	769.0	155.97	5.930		
11,800.0	7,173.0	11,465.3	6,960.0	85.6	82.3	76.69	-4,517.9	520.7	924.9	765.6	159.34	5.805		
11,825.6	7,173.0	11,490.8	6,960.0	86.0	82.8	76.69	-4,543.5	520.7	924.9	764.7	160.21	5.773		
11,849.7	7,173.0	11,509.6	6,960.0	86.4	83.1	76.69	-4,562.2	520.7	925.0	764.0	160.93	5.748 SF		

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1L-32H-B264 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		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	-89.33	0.3	-29.9	29.9					
100.0	100.0	100.0	100.0	0.2	0.2	-89.33	0.3	-29.9	29.9	29.6	0.35	85.754	CC, ES	
200.0	200.0	200.0	200.0	0.3	0.3	-89.33	0.3	-29.9	29.9	29.2	0.70	42.877		
300.0	300.0	300.0	300.0	0.5	0.5	-168.08	0.3	-29.9	30.8	29.7	1.05	29.401		
400.0	400.0	400.2	400.2	0.7	0.7	-168.88	0.4	-29.7	33.1	31.8	1.40	23.737		
500.0	499.9	500.8	500.7	0.9	0.9	-169.25	1.1	-28.1	35.8	34.0	1.75	20.490		
600.0	599.7	601.3	601.3	1.1	1.1	-169.15	2.3	-24.8	38.5	36.4	2.10	18.352		
700.0	699.4	702.0	701.7	1.3	1.2	-168.68	4.2	-19.8	41.3	38.8	2.45	16.842		
800.0	798.9	802.6	802.1	1.5	1.5	-167.91	6.7	-13.2	44.1	41.3	2.81	15.721		
900.0	898.3	903.3	902.5	1.8	1.7	-166.91	9.8	-5.0	47.0	43.9	3.17	14.853		
1,000.0	997.4	1,004.0	1,002.6	2.1	1.9	-165.70	13.6	4.9	50.0	46.5	3.53	14.156		
1,100.0	1,096.3	1,104.6	1,102.5	2.4	2.2	-164.36	18.0	16.4	53.2	49.3	3.91	13.589		
1,200.0	1,194.9	1,204.5	1,201.5	2.7	2.4	-163.44	22.5	28.3	57.6	53.3	4.30	13.390		
1,300.0	1,293.3	1,304.4	1,300.5	3.0	2.7	-163.12	27.1	40.2	63.6	58.9	4.68	13.578		
1,400.0	1,391.2	1,404.1	1,399.4	3.4	3.0	-163.26	31.6	52.1	71.3	66.3	5.07	14.074		
1,500.0	1,488.9	1,503.6	1,498.2	3.8	3.2	-163.72	36.1	64.0	80.7	75.3	5.45	14.818		
1,600.0	1,586.3	1,603.1	1,596.8	4.2	3.5	-164.22	40.6	75.8	90.8	85.0	5.83	15.577		
1,700.0	1,683.8	1,702.6	1,695.5	4.7	3.8	-164.63	45.1	87.7	100.9	94.7	6.21	16.243		
1,800.0	1,781.3	1,802.1	1,794.2	5.1	4.0	-164.97	49.7	99.5	111.0	104.4	6.59	16.831		
1,900.0	1,878.8	1,901.6	1,892.9	5.5	4.3	-165.24	54.2	111.4	121.1	114.1	6.97	17.355		
2,000.0	1,976.2	2,001.0	1,991.6	5.9	4.6	-165.48	58.7	123.2	131.1	123.8	7.36	17.825		
2,100.0	2,073.7	2,100.5	2,090.2	6.3	4.9	-165.68	63.2	135.1	141.2	133.5	7.74	18.248		
2,200.0	2,171.2	2,200.0	2,188.9	6.8	5.1	-165.85	67.7	147.0	151.3	143.2	8.12	18.632		
2,300.0	2,268.6	2,299.5	2,287.6	7.2	5.4	-166.01	72.2	158.8	161.5	152.9	8.51	18.980		
2,400.0	2,366.1	2,399.0	2,386.3	7.6	5.7	-166.14	76.7	170.7	171.6	162.7	8.89	19.299		
2,500.0	2,463.6	2,498.5	2,484.9	8.1	6.0	-166.26	81.3	182.5	181.7	172.4	9.27	19.591		
2,600.0	2,561.0	2,598.0	2,583.6	8.5	6.3	-166.37	85.8	194.4	191.8	182.1	9.66	19.860		
2,700.0	2,658.5	2,697.5	2,682.3	8.9	6.5	-166.47	90.3	206.3	201.9	191.8	10.04	20.109		
2,800.0	2,756.0	2,796.9	2,781.0	9.4	6.8	-166.55	94.8	218.1	212.0	201.6	10.42	20.339		
2,900.0	2,853.5	2,896.4	2,879.6	9.8	7.1	-166.63	99.3	230.0	222.1	211.3	10.81	20.553		
3,000.0	2,950.9	2,995.9	2,978.3	10.2	7.4	-166.70	103.8	241.8	232.2	221.0	11.19	20.752		
3,100.0	3,048.4	3,095.4	3,077.0	10.7	7.7	-166.77	108.4	253.7	242.3	230.7	11.57	20.938		
3,200.0	3,145.9	3,194.9	3,175.7	11.1	7.9	-166.83	112.9	265.5	252.4	240.4	11.96	21.112		
3,300.0	3,243.3	3,294.4	3,274.3	11.5	8.2	-166.89	117.4	277.4	262.5	250.2	12.34	21.275		
3,400.0	3,340.8	3,393.9	3,373.0	11.9	8.5	-166.94	121.9	289.3	272.6	259.9	12.72	21.428		
3,500.0	3,438.3	3,493.4	3,471.7	12.4	8.8	-166.99	126.4	301.1	282.7	269.6	13.11	21.572		
3,600.0	3,535.7	3,592.8	3,570.4	12.8	9.1	-167.03	130.9	313.0	292.8	279.3	13.49	21.709		
3,700.0	3,633.2	3,692.3	3,669.0	13.3	9.4	-167.08	135.5	324.8	302.9	289.1	13.87	21.837		
3,800.0	3,730.7	3,791.8	3,767.7	13.7	9.6	-167.12	140.0	336.7	313.0	298.8	14.26	21.959		
3,900.0	3,828.2	3,891.3	3,866.4	14.1	9.9	-167.15	144.5	348.6	323.2	308.5	14.64	22.074		
4,000.0	3,925.6	3,990.8	3,965.1	14.6	10.2	-167.19	149.0	360.4	333.3	318.2	15.02	22.183		
4,100.0	4,023.1	4,090.3	4,063.7	15.0	10.5	-167.22	153.5	372.3	343.4	328.0	15.41	22.287		
4,200.0	4,120.6	4,189.8	4,162.4	15.4	10.8	-167.25	158.0	384.1	353.5	337.7	15.79	22.386		
4,300.0	4,218.0	4,289.3	4,261.1	15.9	11.0	-167.28	162.6	396.0	363.6	347.4	16.17	22.480		
4,400.0	4,315.5	4,388.7	4,359.8	16.3	11.3	-167.31	167.1	407.8	373.7	357.1	16.56	22.570		
4,500.0	4,413.0	4,488.2	4,458.4	16.7	11.6	-167.33	171.6	419.7	383.8	366.9	16.94	22.655		
4,600.0	4,510.4	4,587.7	4,557.1	17.2	11.9	-167.36	176.1	431.6	393.9	376.6	17.32	22.737		
4,700.0	4,607.9	4,687.2	4,655.8	17.6	12.2	-167.38	180.6	443.4	404.0	386.3	17.71	22.815		
4,800.0	4,705.4	4,786.7	4,754.5	18.0	12.4	-167.40	185.1	455.3	414.1	396.0	18.09	22.890		
4,900.0	4,802.9	4,886.2	4,853.1	18.5	12.7	-167.42	189.6	467.1	424.2	405.8	18.48	22.962		
5,000.0	4,900.3	4,985.7	4,951.8	18.9	13.0	-167.44	194.2	479.0	434.3	415.5	18.86	23.031		
5,100.0	4,997.8	5,085.2	5,050.5	19.3	13.3	-167.46	198.7	490.9	444.5	425.2	19.24	23.097		

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1L-32H-B264 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		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		
5,200.0	5,095.3	5,184.6	5,149.2	19.8	13.6	-167.48	203.2	502.7	454.6	434.9	19.63	23.161		
5,300.0	5,192.7	5,284.1	5,247.8	20.2	13.9	-167.50	207.7	514.6	464.7	444.7	20.01	23.222		
5,400.0	5,290.2	5,383.6	5,346.5	20.6	14.1	-167.52	212.2	526.4	474.8	454.4	20.39	23.281		
5,500.0	5,387.7	5,483.1	5,445.2	21.1	14.4	-167.53	216.7	538.3	484.9	464.1	20.78	23.337		
5,600.0	5,485.1	5,582.6	5,543.9	21.5	14.7	-167.55	221.3	550.1	495.0	473.8	21.16	23.392		
5,700.0	5,582.6	5,682.1	5,642.5	21.9	15.0	-167.56	225.8	562.0	505.1	483.6	21.55	23.445		
5,800.0	5,680.1	5,781.6	5,741.2	22.4	15.3	-167.58	230.3	573.9	515.2	493.3	21.93	23.495		
5,900.0	5,777.5	5,881.1	5,839.9	22.8	15.6	-167.59	234.8	585.7	525.3	503.0	22.31	23.544		
6,000.0	5,875.0	5,980.5	5,938.6	23.2	15.8	-167.61	239.3	597.6	535.4	512.7	22.70	23.592		
6,100.0	5,972.5	6,080.0	6,037.2	23.7	16.1	-167.62	243.8	609.4	545.6	522.5	23.08	23.638		
6,200.0	6,070.0	6,179.5	6,135.9	24.1	16.4	-167.63	248.4	621.3	555.7	532.2	23.46	23.682		
6,300.0	6,167.4	6,279.0	6,234.6	24.6	16.7	-167.64	252.9	633.1	565.8	541.9	23.85	23.725		
6,400.0	6,264.9	6,378.5	6,333.3	25.0	17.0	-167.65	257.4	645.0	575.9	551.7	24.23	23.766		
6,500.0	6,362.4	6,478.0	6,432.0	25.4	17.2	-167.67	261.9	656.9	586.0	561.4	24.61	23.807		
6,600.0	6,459.8	6,577.9	6,531.0	25.9	17.5	-174.58	259.1	668.8	596.1	571.3	24.74	24.097		
6,700.0	6,557.2	6,676.0	6,627.0	26.3	17.6	150.42	243.0	680.3	606.2	581.7	24.52	24.730		
6,800.0	6,653.0	6,772.7	6,718.6	26.6	17.8	127.76	214.2	691.3	616.5	592.1	24.33	25.336		
6,900.0	6,745.2	6,868.1	6,804.4	26.9	17.9	114.85	174.0	701.6	626.5	602.2	24.29	25.797		
7,000.0	6,832.2	6,962.2	6,883.1	27.2	18.0	106.88	123.4	711.1	636.1	611.6	24.45	26.020		
7,100.0	6,912.3	7,055.4	6,953.9	27.5	18.1	101.52	63.5	719.6	645.0	620.2	24.84	25.966		
7,200.0	6,983.8	7,147.7	7,015.8	27.8	18.3	97.70	-4.5	727.0	653.1	627.6	25.46	25.651		
7,300.0	7,045.4	7,239.3	7,068.1	28.1	18.6	94.90	-79.3	733.3	660.1	633.8	26.29	25.103		
7,400.0	7,095.8	7,330.3	7,110.4	28.4	18.9	92.86	-159.7	738.4	665.8	638.5	27.30	24.394		
7,500.0	7,134.2	7,420.9	7,142.0	28.8	19.4	91.42	-244.4	742.2	670.3	641.8	28.43	23.578		
7,600.0	7,159.7	7,511.1	7,162.7	29.2	19.9	90.50	-332.1	744.7	673.2	643.6	29.67	22.693		
7,700.0	7,171.9	7,600.0	7,172.2	29.7	20.6	90.05	-420.5	745.8	674.7	643.7	30.99	21.774		
7,800.0	7,173.0	7,697.4	7,173.0	30.3	21.4	90.00	-517.9	745.9	674.8	642.0	32.90	20.515		
7,900.0	7,173.0	7,797.4	7,173.0	31.0	22.3	90.00	-617.9	745.9	674.8	639.6	35.29	19.124		
8,000.0	7,173.0	7,897.4	7,173.0	31.7	23.3	90.00	-717.9	745.9	674.8	637.0	37.85	17.827		
8,100.0	7,173.0	7,997.4	7,173.0	32.5	24.4	90.00	-817.9	745.9	674.8	634.3	40.56	16.637		
8,200.0	7,173.0	8,097.4	7,173.0	33.4	25.6	90.00	-917.9	745.9	674.8	631.5	43.38	15.555		
8,300.0	7,173.0	8,197.4	7,173.0	34.3	26.9	90.00	-1,017.9	745.9	674.8	628.5	46.30	14.575		
8,400.0	7,173.0	8,297.4	7,173.0	35.4	28.2	90.00	-1,117.9	745.9	674.8	625.6	49.29	13.690		
8,500.0	7,173.0	8,397.4	7,173.0	36.4	29.5	90.00	-1,217.9	745.9	674.8	622.5	52.35	12.891		
8,600.0	7,173.0	8,497.4	7,173.0	37.5	30.9	90.00	-1,317.9	745.9	674.8	619.4	55.46	12.168		
8,700.0	7,173.0	8,597.4	7,173.0	38.7	32.3	90.00	-1,417.9	745.9	674.8	616.2	58.62	11.513		
8,800.0	7,173.0	8,697.4	7,173.0	39.9	33.8	90.00	-1,517.9	745.9	674.8	613.0	61.81	10.918		
8,900.0	7,173.0	8,797.4	7,173.0	41.2	35.2	90.00	-1,617.9	745.9	674.8	609.8	65.04	10.376		
9,000.0	7,173.0	8,897.4	7,173.0	42.5	36.8	90.00	-1,717.9	745.9	674.8	606.6	68.29	9.882		
9,100.0	7,173.0	8,997.4	7,173.0	43.8	38.3	90.00	-1,817.9	745.9	674.8	603.3	71.57	9.429		
9,200.0	7,173.0	9,097.4	7,173.0	45.1	39.8	90.00	-1,917.9	745.9	674.8	600.0	74.87	9.014		
9,300.0	7,173.0	9,197.4	7,173.0	46.5	41.4	90.00	-2,017.9	745.9	674.8	596.7	78.19	8.631		
9,400.0	7,173.0	9,297.4	7,173.0	47.9	43.0	90.00	-2,117.9	745.9	674.8	593.3	81.52	8.278		
9,500.0	7,173.0	9,397.4	7,173.0	49.3	44.6	90.00	-2,217.9	745.9	674.8	590.0	84.87	7.952		
9,600.0	7,173.0	9,497.4	7,173.0	50.8	46.2	90.00	-2,317.9	745.9	674.8	586.6	88.23	7.649		
9,700.0	7,173.0	9,597.4	7,173.0	52.3	47.8	90.00	-2,417.9	745.9	674.8	583.3	91.60	7.368		
9,800.0	7,173.0	9,697.4	7,173.0	53.7	49.4	90.00	-2,517.9	745.9	674.8	579.9	94.98	7.105		
9,900.0	7,173.0	9,797.4	7,173.0	55.2	51.0	90.00	-2,617.9	745.9	674.8	576.5	98.37	6.861		
10,000.0	7,173.0	9,897.4	7,173.0	56.8	52.7	90.00	-2,717.9	745.9	674.8	573.1	101.76	6.631		
10,100.0	7,173.0	9,997.4	7,173.0	58.3	54.3	90.00	-2,817.9	745.9	674.8	569.7	105.17	6.417		
10,200.0	7,173.0	10,097.4	7,173.0	59.8	56.0	90.00	-2,917.9	745.9	674.8	566.3	108.58	6.215		
10,300.0	7,173.0	10,197.4	7,173.0	61.4	57.6	90.00	-3,017.9	745.9	674.8	562.9	112.00	6.026		

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

Offset Design													S32-T2N-R64W (Newman) - Ruhl 1L-32H-B264 - Hz - Plan #1		Offset Site Error:		0.0 ft
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft
Reference		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		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning				
							+N/-S (ft)	+E/-W (ft)									
10,400.0	7,173.0	10,297.4	7,173.0	62.9	59.3	90.00	-3,117.9	745.9	674.8	559.4	115.42	5.847					
10,500.0	7,173.0	10,397.4	7,173.0	64.5	61.0	90.00	-3,217.9	745.9	674.8	556.0	118.85	5.678					
10,600.0	7,173.0	10,497.4	7,173.0	66.1	62.6	90.00	-3,317.9	745.9	674.8	552.6	122.28	5.519					
10,700.0	7,173.0	10,597.4	7,173.0	67.7	64.3	90.00	-3,417.9	745.9	674.8	549.1	125.72	5.368					
10,800.0	7,173.0	10,697.4	7,173.0	69.3	66.0	90.00	-3,517.9	745.9	674.8	545.7	129.16	5.225					
10,900.0	7,173.0	10,797.4	7,173.0	70.9	67.7	90.00	-3,617.9	745.9	674.8	542.2	132.60	5.089					
11,000.0	7,173.0	10,897.4	7,173.0	72.5	69.4	90.00	-3,717.9	745.9	674.8	538.8	136.05	4.960					
11,100.0	7,173.0	10,997.4	7,173.0	74.1	71.1	90.00	-3,817.9	745.9	674.9	535.4	139.50	4.838					
11,200.0	7,173.0	11,097.4	7,173.0	75.8	72.8	90.00	-3,917.9	745.9	674.9	531.9	142.95	4.721					
11,300.0	7,173.0	11,197.4	7,173.0	77.4	74.4	90.00	-4,017.9	745.9	674.9	528.4	146.41	4.609					
11,400.0	7,173.0	11,297.4	7,173.0	79.0	76.2	90.00	-4,117.9	745.9	674.9	525.0	149.87	4.503					
11,500.0	7,173.0	11,397.4	7,173.0	80.7	77.9	90.00	-4,217.9	745.9	674.9	521.5	153.33	4.401					
11,600.0	7,173.0	11,497.4	7,173.0	82.3	79.6	90.00	-4,317.9	745.9	674.9	518.1	156.79	4.304					
11,700.0	7,173.0	11,597.4	7,173.0	84.0	81.3	90.00	-4,417.9	745.9	674.9	514.6	160.25	4.211					
11,800.0	7,173.0	11,697.4	7,173.0	85.6	83.0	90.00	-4,517.9	745.9	674.9	511.1	163.72	4.122					
11,826.2	7,173.0	11,723.6	7,173.0	86.1	83.4	90.00	-4,544.1	745.9	674.9	510.2	164.63	4.099					
11,849.7	7,173.0	11,743.2	7,173.0	86.4	83.8	90.00	-4,563.7	745.9	674.9	509.5	165.38	4.081 SF					

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1J-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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	-88.97	0.4	-19.9	19.9	19.9	0.00	N/A		
100.0	100.0	100.0	100.0	0.2	0.2	-88.97	0.4	-19.9	19.9	19.5	0.35	56.908		
200.0	200.0	200.0	200.0	0.3	0.3	-88.97	0.4	-19.9	19.9	19.2	0.70	28.454 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-167.90	0.4	-19.9	20.7	19.7	1.05	19.784		
400.0	400.0	400.3	400.3	0.7	0.7	-168.64	0.6	-19.0	22.4	21.0	1.40	16.068		
500.0	499.9	500.7	500.7	0.9	0.9	-168.91	1.4	-16.5	24.2	22.5	1.75	13.856		
600.0	599.7	601.1	601.0	1.1	1.1	-168.79	2.6	-12.3	26.0	23.9	2.10	12.392		
700.0	699.4	701.6	701.2	1.3	1.3	-168.37	4.4	-6.4	27.8	25.4	2.45	11.353		
800.0	798.9	802.0	801.4	1.5	1.5	-167.71	6.7	1.2	29.7	26.9	2.81	10.576		
900.0	898.3	902.5	901.4	1.8	1.7	-166.84	9.5	10.4	31.6	28.4	3.16	9.972		
1,000.0	997.4	1,003.0	1,001.3	2.1	2.0	-165.81	12.8	21.4	33.5	30.0	3.53	9.485		
1,100.0	1,096.3	1,103.6	1,100.9	2.4	2.2	-164.64	16.6	34.0	35.5	31.6	3.91	9.078		
1,200.0	1,194.9	1,204.2	1,200.4	2.7	2.5	-163.37	20.9	48.3	37.5	33.2	4.30	8.726		
1,300.0	1,293.3	1,304.3	1,299.2	3.0	2.8	-162.31	25.5	63.7	40.1	35.4	4.70	8.533		
1,400.0	1,391.2	1,404.2	1,397.8	3.4	3.1	-162.08	30.1	79.1	44.3	39.2	5.10	8.696		
1,500.0	1,488.9	1,504.0	1,496.3	3.8	3.4	-162.50	34.8	94.5	50.2	44.7	5.49	9.153		
1,600.0	1,586.3	1,603.8	1,594.8	4.2	3.8	-163.06	39.4	109.9	56.8	50.9	5.87	9.668		
1,700.0	1,683.8	1,703.6	1,693.3	4.7	4.1	-163.51	44.0	125.2	63.4	57.1	6.26	10.120		
1,800.0	1,781.3	1,803.3	1,791.8	5.1	4.4	-163.87	48.6	140.6	70.0	63.3	6.65	10.519		
1,900.0	1,878.8	1,903.1	1,890.3	5.5	4.7	-164.17	53.3	156.0	76.5	69.5	7.04	10.874		
2,000.0	1,976.2	2,002.9	1,988.7	5.9	5.1	-164.42	57.9	171.4	83.1	75.7	7.43	11.192		
2,100.0	2,073.7	2,102.7	2,087.2	6.3	5.4	-164.64	62.5	186.7	89.7	81.9	7.82	11.478		
2,200.0	2,171.2	2,202.5	2,185.7	6.8	5.7	-164.82	67.2	202.1	96.3	88.1	8.21	11.737		
2,300.0	2,268.6	2,302.2	2,284.2	7.2	6.0	-164.98	71.8	217.5	102.9	94.3	8.60	11.972		
2,400.0	2,366.1	2,402.0	2,382.7	7.6	6.4	-165.13	76.4	232.9	109.5	100.5	8.99	12.187		
2,500.0	2,463.6	2,501.8	2,481.2	8.1	6.7	-165.25	81.0	248.2	116.1	106.7	9.38	12.384		
2,600.0	2,561.0	2,601.6	2,579.6	8.5	7.0	-165.36	85.7	263.6	122.7	112.9	9.77	12.565		
2,700.0	2,658.5	2,701.4	2,678.1	8.9	7.4	-165.47	90.3	279.0	129.3	119.1	10.15	12.732		
2,800.0	2,756.0	2,801.2	2,776.6	9.4	7.7	-165.56	94.9	294.4	135.9	125.3	10.54	12.887		
2,900.0	2,853.5	2,900.9	2,875.1	9.8	8.0	-165.64	99.5	309.7	142.5	131.6	10.93	13.031		
3,000.0	2,950.9	3,000.7	2,973.6	10.2	8.3	-165.72	104.2	325.1	149.1	137.8	11.32	13.164		
3,100.0	3,048.4	3,100.5	3,072.0	10.7	8.7	-165.78	108.8	340.5	155.7	144.0	11.71	13.289		
3,200.0	3,145.9	3,200.3	3,170.5	11.1	9.0	-165.85	113.4	355.9	162.3	150.2	12.10	13.406		
3,300.0	3,243.3	3,300.1	3,269.0	11.5	9.3	-165.91	118.1	371.2	168.9	156.4	12.49	13.516		
3,400.0	3,340.8	3,399.8	3,367.5	11.9	9.7	-165.96	122.7	386.6	175.5	162.6	12.88	13.618		
3,500.0	3,438.3	3,499.6	3,466.0	12.4	10.0	-166.01	127.3	402.0	182.1	168.8	13.28	13.715		
3,600.0	3,535.7	3,599.4	3,564.4	12.8	10.3	-166.06	131.9	417.4	188.7	175.0	13.67	13.806		
3,700.0	3,633.2	3,699.2	3,662.9	13.3	10.7	-166.10	136.6	432.7	195.3	181.2	14.06	13.892		
3,800.0	3,730.7	3,799.0	3,761.4	13.7	11.0	-166.14	141.2	448.1	201.9	187.4	14.45	13.974		
3,900.0	3,828.2	3,898.8	3,859.9	14.1	11.3	-166.18	145.8	463.5	208.5	193.6	14.84	14.051		
4,000.0	3,925.6	3,998.5	3,958.4	14.6	11.6	-166.22	150.4	478.9	215.1	199.8	15.23	14.124		
4,100.0	4,023.1	4,098.3	4,056.9	15.0	12.0	-166.25	155.1	494.3	221.7	206.0	15.62	14.194		
4,200.0	4,120.6	4,198.1	4,155.3	15.4	12.3	-166.28	159.7	509.6	228.3	212.3	16.01	14.260		
4,300.0	4,218.0	4,297.9	4,253.8	15.9	12.6	-166.31	164.3	525.0	234.9	218.5	16.40	14.323		
4,400.0	4,315.5	4,397.7	4,352.3	16.3	13.0	-166.34	169.0	540.4	241.5	224.7	16.79	14.383		
4,500.0	4,413.0	4,497.4	4,450.8	16.7	13.3	-166.37	173.6	555.8	248.1	230.9	17.18	14.440		
4,600.0	4,510.4	4,597.2	4,549.3	17.2	13.6	-166.39	178.2	571.1	254.7	237.1	17.57	14.495		
4,700.0	4,607.9	4,697.0	4,647.7	17.6	14.0	-166.42	182.8	586.5	261.3	243.3	17.96	14.547		
4,800.0	4,705.4	4,796.8	4,746.2	18.0	14.3	-166.44	187.5	601.9	267.8	249.5	18.35	14.597		
4,900.0	4,802.9	4,896.6	4,844.7	18.5	14.6	-166.46	192.1	617.3	274.4	255.7	18.74	14.645		
5,000.0	4,900.3	4,996.4	4,943.2	18.9	15.0	-166.48	196.7	632.6	281.0	261.9	19.13	14.691		
5,100.0	4,997.8	5,096.1	5,041.7	19.3	15.3	-166.50	201.3	648.0	287.6	268.1	19.52	14.736		

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1J-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 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		
5,200.0	5,095.3	5,195.9	5,140.2	19.8	15.6	-166.52	206.0	663.4	294.2	274.3	19.91	14.778		
5,300.0	5,192.7	5,295.7	5,238.6	20.2	16.0	-166.54	210.6	678.8	300.8	280.5	20.30	14.819		
5,400.0	5,290.2	5,395.5	5,337.1	20.6	16.3	-166.56	215.2	694.1	307.4	286.8	20.69	14.858		
5,500.0	5,387.7	5,495.3	5,435.6	21.1	16.6	-166.57	219.9	709.5	314.0	293.0	21.08	14.896		
5,600.0	5,485.1	5,595.0	5,534.1	21.5	17.0	-166.59	224.5	724.9	320.6	299.2	21.47	14.933		
5,700.0	5,582.6	5,694.8	5,632.6	21.9	17.3	-166.60	229.1	740.3	327.2	305.4	21.86	14.968		
5,800.0	5,680.1	5,794.6	5,731.0	22.4	17.6	-166.62	233.7	755.6	333.8	311.6	22.25	15.002		
5,900.0	5,777.5	5,894.4	5,829.5	22.8	18.0	-166.63	238.4	771.0	340.4	317.8	22.64	15.034		
6,000.0	5,875.0	5,994.2	5,928.0	23.2	18.3	-166.65	243.0	786.4	347.0	324.0	23.03	15.066		
6,100.0	5,972.5	6,094.0	6,026.5	23.7	18.6	-166.66	247.6	801.8	353.6	330.2	23.43	15.096		
6,200.0	6,070.0	6,193.7	6,125.0	24.1	19.0	-166.67	252.2	817.2	360.2	336.4	23.82	15.126		
6,300.0	6,167.4	6,293.5	6,223.5	24.6	19.3	-166.68	256.9	832.5	366.8	342.6	24.21	15.155		
6,400.0	6,264.9	6,393.6	6,322.2	25.0	19.6	-166.73	261.3	848.0	373.4	348.8	24.58	15.190		
6,500.0	6,362.4	6,494.0	6,421.2	25.4	19.9	-168.18	256.4	863.4	379.8	355.3	24.51	15.496		
6,600.0	6,459.8	6,590.0	6,514.4	25.9	20.1	-177.61	238.7	878.0	387.0	363.0	24.01	16.120		
6,700.0	6,557.2	6,681.9	6,600.6	26.3	20.3	145.09	210.0	891.4	395.8	372.2	23.62	16.756		
6,800.0	6,653.0	6,771.1	6,680.2	26.6	20.4	120.37	171.8	903.8	405.9	382.2	23.78	17.073		
6,900.0	6,745.2	6,858.0	6,752.5	26.9	20.6	105.64	125.2	915.1	416.8	392.4	24.41	17.074		
7,000.0	6,832.2	6,942.8	6,817.4	27.2	20.7	96.12	71.5	925.3	427.9	402.6	25.35	16.880		
7,100.0	6,912.3	7,026.1	6,874.4	27.5	20.9	89.45	11.6	934.2	438.8	412.4	26.35	16.649		
7,200.0	6,983.8	7,107.9	6,923.5	27.8	21.1	84.56	-53.4	941.8	448.9	421.5	27.34	16.421		
7,300.0	7,045.4	7,188.7	6,964.4	28.1	21.4	80.91	-122.7	948.2	457.9	429.7	28.13	16.274		
7,400.0	7,095.8	7,268.6	6,997.0	28.4	21.7	78.22	-195.4	953.3	465.4	436.7	28.74	16.193		
7,500.0	7,134.2	7,350.0	7,021.8	28.8	22.2	76.30	-272.8	957.2	471.3	442.1	29.20	16.138		
7,600.0	7,159.7	7,426.6	7,037.1	29.2	22.6	75.09	-347.8	959.6	475.3	445.7	29.52	16.098		
7,700.0	7,171.9	7,505.0	7,044.4	29.7	23.1	74.51	-425.9	960.7	477.2	447.4	29.83	15.997		
7,800.0	7,173.0	7,597.1	7,045.0	30.3	23.8	74.45	-517.9	960.8	477.4	446.2	31.29	15.257		
7,900.0	7,173.0	7,697.1	7,045.0	31.0	24.6	74.45	-617.9	960.8	477.4	443.8	33.64	14.192		
8,000.0	7,173.0	7,797.1	7,045.0	31.7	25.5	74.45	-717.9	960.8	477.4	441.3	36.15	13.206		
8,100.0	7,173.0	7,897.1	7,045.0	32.5	26.6	74.45	-817.9	960.8	477.4	438.6	38.80	12.306		
8,200.0	7,173.0	7,997.1	7,045.0	33.4	27.6	74.45	-917.9	960.8	477.4	435.9	41.55	11.491		
8,300.0	7,173.0	8,097.1	7,045.0	34.3	28.8	74.45	-1,017.9	960.8	477.4	433.1	44.39	10.756		
8,400.0	7,173.0	8,197.1	7,045.0	35.4	30.0	74.45	-1,117.9	960.8	477.4	430.2	47.30	10.094		
8,500.0	7,173.0	8,297.1	7,045.0	36.4	31.3	74.45	-1,217.9	960.8	477.4	427.2	50.27	9.498		
8,600.0	7,173.0	8,397.1	7,045.0	37.5	32.6	74.45	-1,317.9	960.8	477.4	424.2	53.28	8.960		
8,700.0	7,173.0	8,497.1	7,045.0	38.7	33.9	74.45	-1,417.9	960.8	477.4	421.1	56.34	8.474		
8,800.0	7,173.0	8,597.1	7,045.0	39.9	35.3	74.45	-1,517.9	960.8	477.4	418.0	59.44	8.033		
8,900.0	7,173.0	8,697.1	7,045.0	41.2	36.7	74.45	-1,617.9	960.8	477.4	414.9	62.56	7.632		
9,000.0	7,173.0	8,797.1	7,045.0	42.5	38.2	74.45	-1,717.9	960.8	477.4	411.7	65.71	7.266		
9,100.0	7,173.0	8,897.1	7,045.0	43.8	39.6	74.45	-1,817.9	960.8	477.4	408.6	68.88	6.931		
9,200.0	7,173.0	8,997.1	7,045.0	45.1	41.1	74.45	-1,917.9	960.8	477.4	405.4	72.07	6.624		
9,300.0	7,173.0	9,097.1	7,045.0	46.5	42.7	74.45	-2,017.9	960.8	477.4	402.2	75.28	6.342		
9,400.0	7,173.0	9,197.1	7,045.0	47.9	44.2	74.45	-2,117.9	960.8	477.4	398.9	78.50	6.082		
9,500.0	7,173.0	9,297.1	7,045.0	49.3	45.7	74.45	-2,217.9	960.8	477.4	395.7	81.74	5.841		
9,600.0	7,173.0	9,397.1	7,045.0	50.8	47.3	74.45	-2,317.9	960.8	477.4	392.5	84.98	5.618		
9,700.0	7,173.0	9,497.1	7,045.0	52.3	48.9	74.45	-2,417.9	960.8	477.4	389.2	88.24	5.411		
9,800.0	7,173.0	9,597.1	7,045.0	53.7	50.4	74.45	-2,517.9	960.8	477.4	385.9	91.51	5.218		
9,900.0	7,173.0	9,697.1	7,045.0	55.2	52.0	74.45	-2,617.9	960.8	477.4	382.7	94.78	5.038		
10,000.0	7,173.0	9,797.1	7,045.0	56.8	53.7	74.45	-2,717.9	960.8	477.4	379.4	98.06	4.869		
10,100.0	7,173.0	9,897.1	7,045.0	58.3	55.3	74.45	-2,817.9	960.8	477.4	376.1	101.35	4.711		
10,200.0	7,173.0	9,997.1	7,045.0	59.8	56.9	74.45	-2,917.9	960.8	477.4	372.8	104.64	4.563		
10,300.0	7,173.0	10,097.1	7,045.0	61.4	58.5	74.45	-3,017.9	960.8	477.4	369.5	107.94	4.423		

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1J-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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)				
10,400.0	7,173.0	10,197.1	7,045.0	62.9	60.2	74.45	-3,117.9	960.8	477.4	366.2	111.24	4.292		
10,500.0	7,173.0	10,297.1	7,045.0	64.5	61.8	74.45	-3,217.9	960.8	477.4	362.9	114.55	4.168		
10,600.0	7,173.0	10,397.1	7,045.0	66.1	63.5	74.45	-3,317.9	960.8	477.4	359.6	117.86	4.051		
10,700.0	7,173.0	10,497.1	7,045.0	67.7	65.1	74.45	-3,417.9	960.8	477.4	356.3	121.18	3.940		
10,800.0	7,173.0	10,597.1	7,045.0	69.3	66.8	74.45	-3,517.9	960.8	477.4	353.0	124.50	3.835		
10,900.0	7,173.0	10,697.1	7,045.0	70.9	68.4	74.45	-3,617.9	960.8	477.5	349.6	127.82	3.735		
11,000.0	7,173.0	10,797.1	7,045.0	72.5	70.1	74.45	-3,717.9	960.8	477.5	346.3	131.15	3.641		
11,100.0	7,173.0	10,897.1	7,045.0	74.1	71.8	74.45	-3,817.9	960.8	477.5	343.0	134.48	3.550		
11,200.0	7,173.0	10,997.1	7,045.0	75.8	73.5	74.45	-3,917.9	960.8	477.5	339.6	137.81	3.465		
11,300.0	7,173.0	11,097.1	7,045.0	77.4	75.1	74.45	-4,017.9	960.8	477.5	336.3	141.14	3.383		
11,400.0	7,173.0	11,197.1	7,045.0	79.0	76.8	74.45	-4,117.9	960.8	477.5	333.0	144.48	3.305		
11,500.0	7,173.0	11,297.1	7,045.0	80.7	78.5	74.45	-4,217.9	960.8	477.5	329.6	147.82	3.230		
11,600.0	7,173.0	11,397.1	7,045.0	82.3	80.2	74.45	-4,317.9	960.8	477.5	326.3	151.16	3.159		
11,700.0	7,173.0	11,497.1	7,045.0	84.0	81.9	74.45	-4,417.9	960.8	477.5	323.0	154.50	3.090		
11,800.0	7,173.0	11,597.1	7,045.0	85.6	83.6	74.45	-4,517.9	960.8	477.5	319.6	157.84	3.025		
11,826.6	7,173.0	11,623.7	7,045.0	86.1	84.0	74.45	-4,544.5	960.8	477.5	318.7	158.73	3.008		
11,849.7	7,173.0	11,643.9	7,045.0	86.4	84.4	74.45	-4,564.7	960.8	477.5	318.0	159.46	2.994 SF		

Anticollision Report

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1K-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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	-87.93	0.4	-10.1	10.1	10.1	0.00	N/A		
100.0	100.0	100.0	100.0	0.2	0.2	-87.93	0.4	-10.1	10.1	9.7	0.35	28.869		
200.0	200.0	200.0	200.0	0.3	0.3	-87.93	0.4	-10.1	10.1	9.4	0.70	14.434	CC, ES	
300.0	300.0	300.1	300.1	0.5	0.5	-167.12	0.4	-9.9	10.7	9.7	1.05	10.232		
400.0	400.0	400.3	400.3	0.7	0.7	-167.77	0.8	-8.2	11.6	10.2	1.40	8.290		
500.0	499.9	500.5	500.4	0.9	0.9	-168.03	1.7	-4.8	12.5	10.7	1.75	7.131		
600.0	599.7	600.7	600.5	1.1	1.1	-167.99	2.9	0.4	13.3	11.2	2.10	6.362		
700.0	699.4	700.9	700.5	1.3	1.3	-167.70	4.6	7.2	14.2	11.8	2.45	5.813		
800.0	798.9	801.2	800.3	1.5	1.5	-167.20	6.6	15.7	15.2	12.3	2.80	5.402		
900.0	898.3	901.4	900.0	1.8	1.7	-166.53	9.1	25.9	16.1	12.9	3.16	5.081		
1,000.0	997.4	1,001.7	999.5	2.1	2.0	-165.72	12.0	37.8	17.0	13.5	3.53	4.821		
1,100.0	1,096.3	1,102.0	1,098.8	2.4	2.3	-164.79	15.3	51.4	18.0	14.1	3.90	4.604		
1,200.0	1,194.9	1,202.3	1,197.9	2.7	2.6	-163.77	19.1	66.6	18.9	14.6	4.29	4.417		
1,300.0	1,293.3	1,302.6	1,296.7	3.0	2.9	-162.67	23.2	83.6	19.9	15.2	4.69	4.251		
1,400.0	1,391.2	1,402.9	1,395.1	3.4	3.3	-161.51	27.8	102.2	20.9	15.8	5.11	4.101		
1,500.0	1,488.9	1,502.9	1,493.1	3.8	3.7	-161.25	32.5	121.5	22.9	17.4	5.52	4.156		
1,600.0	1,586.3	1,602.8	1,591.1	4.2	4.0	-161.57	37.1	140.7	25.6	19.7	5.93	4.326		
1,700.0	1,683.8	1,702.8	1,689.1	4.7	4.4	-161.83	41.8	160.0	28.3	22.0	6.33	4.474		
1,800.0	1,781.3	1,802.8	1,787.1	5.1	4.8	-162.04	46.5	179.3	31.0	24.3	6.74	4.604		
1,900.0	1,878.8	1,902.7	1,885.0	5.5	5.2	-162.22	51.2	198.5	33.7	26.6	7.15	4.719		
2,000.0	1,976.2	2,002.7	1,983.0	5.9	5.6	-162.37	55.9	217.8	36.4	28.9	7.56	4.821		
2,100.0	2,073.7	2,102.7	2,081.0	6.3	5.9	-162.51	60.6	237.0	39.1	31.2	7.96	4.913		
2,200.0	2,171.2	2,202.6	2,179.0	6.8	6.3	-162.62	65.3	256.3	41.8	33.4	8.37	4.995		
2,300.0	2,268.6	2,302.6	2,277.0	7.2	6.7	-162.72	70.0	275.5	44.5	35.7	8.78	5.069		
2,400.0	2,366.1	2,402.5	2,374.9	7.6	7.1	-162.81	74.7	294.8	47.2	38.0	9.19	5.137		
2,500.0	2,463.6	2,502.5	2,472.9	8.1	7.5	-162.89	79.4	314.0	49.9	40.3	9.60	5.199		
2,600.0	2,561.0	2,602.5	2,570.9	8.5	7.9	-162.96	84.1	333.3	52.6	42.6	10.01	5.256		
2,700.0	2,658.5	2,702.4	2,668.9	8.9	8.3	-163.03	88.8	352.5	55.3	44.9	10.42	5.308		
2,800.0	2,756.0	2,802.4	2,766.9	9.4	8.7	-163.08	93.5	371.8	58.0	47.2	10.83	5.356		
2,900.0	2,853.5	2,902.4	2,864.8	9.8	9.0	-163.14	98.2	391.1	60.7	49.5	11.24	5.401		
3,000.0	2,950.9	3,002.3	2,962.8	10.2	9.4	-163.19	102.9	410.3	63.4	51.7	11.65	5.442		
3,100.0	3,048.4	3,102.3	3,060.8	10.7	9.8	-163.23	107.6	429.6	66.1	54.0	12.06	5.481		
3,200.0	3,145.9	3,202.3	3,158.8	11.1	10.2	-163.27	112.3	448.8	68.8	56.3	12.47	5.517		
3,300.0	3,243.3	3,302.2	3,256.8	11.5	10.6	-163.31	117.0	468.1	71.5	58.6	12.88	5.550		
3,400.0	3,340.8	3,402.2	3,354.7	11.9	11.0	-163.35	121.7	487.3	74.2	60.9	13.29	5.582		
3,500.0	3,438.3	3,502.1	3,452.7	12.4	11.4	-163.38	126.4	506.6	76.9	63.2	13.70	5.611		
3,600.0	3,535.7	3,602.1	3,550.7	12.8	11.8	-163.41	131.1	525.8	79.6	65.5	14.11	5.639		
3,700.0	3,633.2	3,702.1	3,648.7	13.3	12.2	-163.44	135.8	545.1	82.3	67.8	14.52	5.665		
3,800.0	3,730.7	3,802.0	3,746.7	13.7	12.6	-163.47	140.5	564.3	85.0	70.0	14.93	5.690		
3,900.0	3,828.2	3,902.0	3,844.6	14.1	12.9	-163.49	145.2	583.6	87.7	72.3	15.35	5.714		
4,000.0	3,925.6	4,002.0	3,942.6	14.6	13.3	-163.51	149.9	602.9	90.4	74.6	15.76	5.736		
4,100.0	4,023.1	4,101.9	4,040.6	15.0	13.7	-163.54	154.6	622.1	93.1	76.9	16.17	5.757		
4,200.0	4,120.6	4,201.9	4,138.6	15.4	14.1	-163.56	159.2	641.4	95.8	79.2	16.58	5.777		
4,300.0	4,218.0	4,301.9	4,236.5	15.9	14.5	-163.58	163.9	660.6	98.5	81.5	16.99	5.796		
4,400.0	4,315.5	4,401.8	4,334.5	16.3	14.9	-163.60	168.6	679.9	101.2	83.8	17.40	5.814		
4,500.0	4,413.0	4,501.8	4,432.5	16.7	15.3	-163.61	173.3	699.1	103.9	86.1	17.81	5.831		
4,600.0	4,510.4	4,601.7	4,530.5	17.2	15.7	-163.63	178.0	718.4	106.6	88.3	18.22	5.848		
4,700.0	4,607.9	4,701.7	4,628.5	17.6	16.1	-163.65	182.7	737.6	109.3	90.6	18.63	5.864		
4,800.0	4,705.4	4,801.7	4,726.4	18.0	16.5	-163.66	187.4	756.9	112.0	92.9	19.05	5.879		
4,900.0	4,802.9	4,901.6	4,824.4	18.5	16.9	-163.68	192.1	776.1	114.7	95.2	19.46	5.893		
5,000.0	4,900.3	5,001.6	4,922.4	18.9	17.3	-163.69	196.8	795.4	117.4	97.5	19.87	5.907		
5,100.0	4,997.8	5,101.6	5,020.4	19.3	17.6	-163.70	201.5	814.7	120.1	99.8	20.28	5.920		

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

Offset Design S32-T2N-R64W (Newman) - Ruhl 1K-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		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)				
5,200.0	5,095.3	5,201.5	5,118.4	19.8	18.0	-163.72	206.2	833.9	122.8	102.1	20.69	5.933		
5,300.0	5,192.7	5,301.5	5,216.3	20.2	18.4	-163.73	210.9	853.2	125.5	104.3	21.10	5.945		
5,400.0	5,290.2	5,401.5	5,314.3	20.6	18.8	-163.74	215.6	872.4	128.1	106.6	21.51	5.957		
5,500.0	5,387.7	5,501.4	5,412.3	21.1	19.2	-163.75	220.3	891.7	130.8	108.9	21.92	5.968		
5,600.0	5,485.1	5,601.4	5,510.3	21.5	19.6	-163.76	225.0	910.9	133.5	111.2	22.34	5.979		
5,700.0	5,582.6	5,701.3	5,608.3	21.9	20.0	-163.77	229.7	930.2	136.2	113.5	22.75	5.989		
5,800.0	5,680.1	5,801.3	5,706.2	22.4	20.4	-163.78	234.4	949.4	138.9	115.8	23.16	6.000		
5,900.0	5,777.5	5,901.3	5,804.2	22.8	20.8	-163.79	239.1	968.7	141.6	118.1	23.57	6.009		
6,000.0	5,875.0	6,001.2	5,902.2	23.2	21.2	-163.80	243.8	987.9	144.3	120.4	23.98	6.019		
6,100.0	5,972.5	6,101.2	6,000.2	23.7	21.6	-163.81	248.5	1,007.2	147.0	122.6	24.39	6.028		
6,200.0	6,070.0	6,201.2	6,098.2	24.1	22.0	-163.82	253.2	1,026.5	149.7	124.9	24.80	6.037		
6,300.0	6,167.4	6,301.1	6,196.1	24.6	22.4	-163.83	257.9	1,045.7	152.4	127.2	25.22	6.045		
6,400.0	6,264.9	6,402.2	6,295.2	25.0	22.7	-165.18	259.0	1,065.2	154.9	129.7	25.14	6.161		
6,500.0	6,362.4	6,500.9	6,391.3	25.4	23.0	-171.25	246.9	1,084.1	157.5	133.7	23.76	6.625		
6,600.0	6,459.8	6,593.6	6,479.2	25.9	23.3	172.95	223.3	1,101.3	164.2	141.0	23.14	7.096		
6,700.0	6,557.2	6,681.5	6,559.2	26.3	23.5	129.76	190.5	1,117.1	177.0	151.7	25.23	7.014		
6,800.0	6,653.0	6,766.5	6,632.1	26.6	23.7	100.61	149.6	1,131.4	193.5	165.0	28.55	6.778		
6,900.0	6,745.2	6,850.0	6,698.8	26.9	23.9	82.72	101.0	1,144.5	212.0	180.5	31.48	6.734		
7,000.0	6,832.2	6,929.4	6,756.5	27.2	24.1	71.19	47.8	1,155.8	230.7	197.4	33.31	6.927		
7,100.0	6,912.3	7,008.1	6,807.8	27.5	24.3	63.21	-11.0	1,165.9	248.7	214.8	33.95	7.326		
7,200.0	6,983.8	7,085.4	6,851.6	27.8	24.5	57.53	-74.1	1,174.5	265.2	231.6	33.61	7.890		
7,300.0	7,045.4	7,161.7	6,888.1	28.1	24.8	53.42	-140.7	1,181.7	279.5	247.1	32.45	8.615		
7,400.0	7,095.8	7,237.1	6,917.2	28.4	25.1	50.49	-210.0	1,187.4	291.4	260.7	30.70	9.492		
7,500.0	7,134.2	7,311.8	6,938.7	28.8	25.5	48.47	-281.3	1,191.6	300.5	271.8	28.62	10.497		
7,600.0	7,159.7	7,386.1	6,952.8	29.2	25.9	47.21	-354.2	1,194.4	306.5	280.0	26.51	11.564		
7,700.0	7,171.9	7,460.1	6,959.5	29.7	26.3	46.62	-427.9	1,195.7	309.5	284.8	24.65	12.555		
7,800.0	7,173.0	7,550.2	6,960.0	30.3	26.9	46.56	-517.9	1,195.8	309.8	284.7	25.10	12.344		
7,900.0	7,173.0	7,650.2	6,960.0	31.0	27.6	46.56	-617.9	1,195.8	309.8	282.9	26.92	11.510		
8,000.0	7,173.0	7,750.2	6,960.0	31.7	28.4	46.56	-717.9	1,195.8	309.8	280.9	28.85	10.739		
8,100.0	7,173.0	7,850.2	6,960.0	32.5	29.3	46.56	-817.9	1,195.8	309.8	278.9	30.87	10.034		
8,200.0	7,173.0	7,950.2	6,960.0	33.4	30.3	46.56	-917.9	1,195.8	309.8	276.8	32.97	9.396		
8,300.0	7,173.0	8,050.2	6,960.0	34.3	31.4	46.56	-1,017.9	1,195.8	309.8	274.7	35.13	8.818		
8,400.0	7,173.0	8,150.2	6,960.0	35.4	32.5	46.56	-1,117.9	1,195.8	309.8	272.4	37.34	8.296		
8,500.0	7,173.0	8,250.2	6,960.0	36.4	33.6	46.56	-1,217.9	1,195.8	309.8	270.2	39.60	7.823		
8,600.0	7,173.0	8,350.2	6,960.0	37.5	34.9	46.56	-1,317.9	1,195.8	309.8	267.9	41.89	7.396		
8,700.0	7,173.0	8,450.2	6,960.0	38.7	36.1	46.56	-1,417.9	1,195.8	309.8	265.6	44.21	7.008		
8,800.0	7,173.0	8,550.2	6,960.0	39.9	37.4	46.56	-1,517.9	1,195.8	309.8	263.2	46.55	6.655		
8,900.0	7,173.0	8,650.2	6,960.0	41.2	38.8	46.56	-1,617.9	1,195.8	309.8	260.9	48.92	6.333		
9,000.0	7,173.0	8,750.2	6,960.0	42.5	40.1	46.56	-1,717.9	1,195.8	309.8	258.5	51.30	6.039		
9,100.0	7,173.0	8,850.2	6,960.0	43.8	41.5	46.56	-1,817.9	1,195.8	309.8	256.1	53.70	5.769		
9,200.0	7,173.0	8,950.2	6,960.0	45.1	42.9	46.56	-1,917.9	1,195.8	309.8	253.7	56.12	5.520		
9,300.0	7,173.0	9,050.2	6,960.0	46.5	44.4	46.56	-2,017.9	1,195.8	309.8	251.2	58.55	5.291		
9,400.0	7,173.0	9,150.2	6,960.0	47.9	45.9	46.56	-2,117.9	1,195.8	309.8	248.8	60.99	5.080		
9,500.0	7,173.0	9,250.2	6,960.0	49.3	47.4	46.56	-2,217.9	1,195.8	309.8	246.4	63.43	4.884		
9,600.0	7,173.0	9,350.2	6,960.0	50.8	48.9	46.56	-2,317.9	1,195.8	309.8	243.9	65.89	4.702		
9,700.0	7,173.0	9,450.2	6,960.0	52.3	50.4	46.56	-2,417.9	1,195.8	309.8	241.4	68.36	4.532		
9,800.0	7,173.0	9,550.2	6,960.0	53.7	51.9	46.56	-2,517.9	1,195.8	309.8	239.0	70.83	4.374		
9,900.0	7,173.0	9,650.2	6,960.0	55.2	53.5	46.56	-2,617.9	1,195.8	309.8	236.5	73.30	4.226		
10,000.0	7,173.0	9,750.2	6,960.0	56.8	55.0	46.56	-2,717.9	1,195.8	309.8	234.0	75.79	4.088		
10,100.0	7,173.0	9,850.2	6,960.0	58.3	56.6	46.56	-2,817.9	1,195.8	309.8	231.5	78.28	3.958		
10,200.0	7,173.0	9,950.2	6,960.0	59.8	58.2	46.56	-2,917.9	1,195.8	309.8	229.0	80.77	3.836		
10,300.0	7,173.0	10,050.2	6,960.0	61.4	59.8	46.56	-3,017.9	1,195.8	309.8	226.5	83.27	3.720		

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

Offset Design													S32-T2N-R64W (Newman) - Ruhl 1K-32H-B264 - Hz - Plan #1		Offset Site Error:		0.0 ft
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft
Reference		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					
10,400.0	7,173.0	10,150.2	6,960.0	62.9	61.4	46.56	-3,117.9	1,195.8	309.8	224.0	85.77	3.612					
10,500.0	7,173.0	10,250.2	6,960.0	64.5	63.0	46.56	-3,217.9	1,195.8	309.8	221.5	88.27	3.510					
10,600.0	7,173.0	10,350.2	6,960.0	66.1	64.6	46.56	-3,317.9	1,195.8	309.8	219.0	90.78	3.413					
10,700.0	7,173.0	10,450.2	6,960.0	67.7	66.3	46.56	-3,417.9	1,195.8	309.8	216.5	93.29	3.321					
10,800.0	7,173.0	10,550.2	6,960.0	69.3	67.9	46.56	-3,517.9	1,195.8	309.8	214.0	95.80	3.234					
10,900.0	7,173.0	10,650.2	6,960.0	70.9	69.5	46.56	-3,617.9	1,195.8	309.8	211.5	98.32	3.151					
11,000.0	7,173.0	10,750.2	6,960.0	72.5	71.2	46.56	-3,717.9	1,195.8	309.8	209.0	100.84	3.072					
11,100.0	7,173.0	10,850.2	6,960.0	74.1	72.8	46.56	-3,817.9	1,195.8	309.8	206.4	103.36	2.997					
11,200.0	7,173.0	10,950.2	6,960.0	75.8	74.5	46.56	-3,917.9	1,195.8	309.8	203.9	105.88	2.926					
11,300.0	7,173.0	11,050.2	6,960.0	77.4	76.1	46.56	-4,017.9	1,195.8	309.8	201.4	108.40	2.858					
11,400.0	7,173.0	11,150.2	6,960.0	79.0	77.8	46.56	-4,117.9	1,195.8	309.8	198.9	110.93	2.793					
11,500.0	7,173.0	11,250.2	6,960.0	80.7	79.5	46.56	-4,217.9	1,195.8	309.8	196.3	113.46	2.731					
11,600.0	7,173.0	11,350.2	6,960.0	82.3	81.1	46.56	-4,317.9	1,195.8	309.8	193.8	115.98	2.671					
11,700.0	7,173.0	11,450.2	6,960.0	84.0	82.8	46.56	-4,417.9	1,195.8	309.8	191.3	118.51	2.614					
11,800.0	7,173.0	11,550.2	6,960.0	85.6	84.5	46.56	-4,517.9	1,195.8	309.8	188.7	121.05	2.559					
11,827.1	7,173.0	11,577.3	6,960.0	86.1	84.9	46.56	-4,545.0	1,195.8	309.8	188.1	121.73	2.545					
11,849.7	7,173.0	11,598.5	6,960.0	86.4	85.3	46.56	-4,566.2	1,195.8	309.8	187.5	122.29	2.533 SF					

Anticollision Report

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

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

