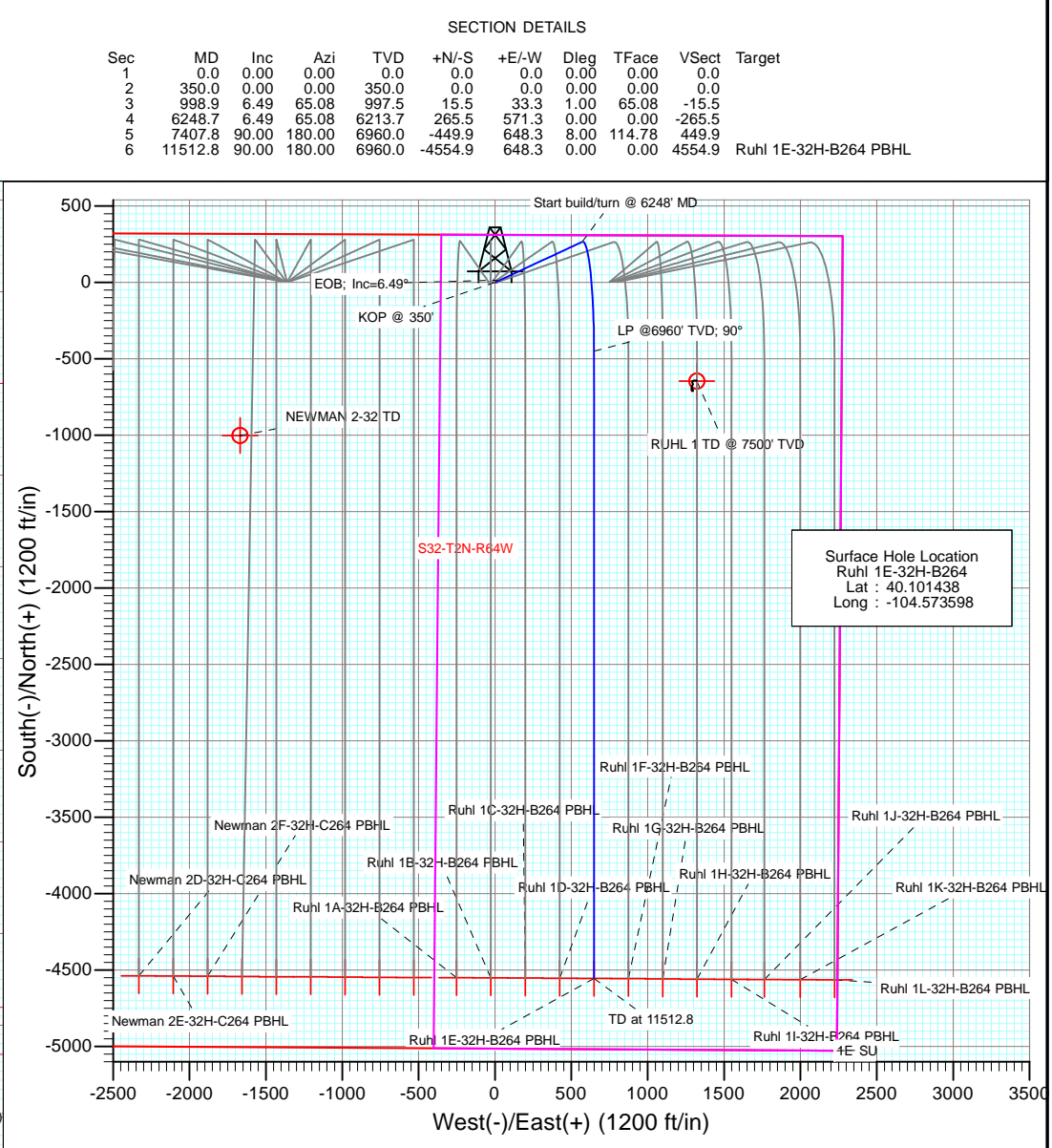
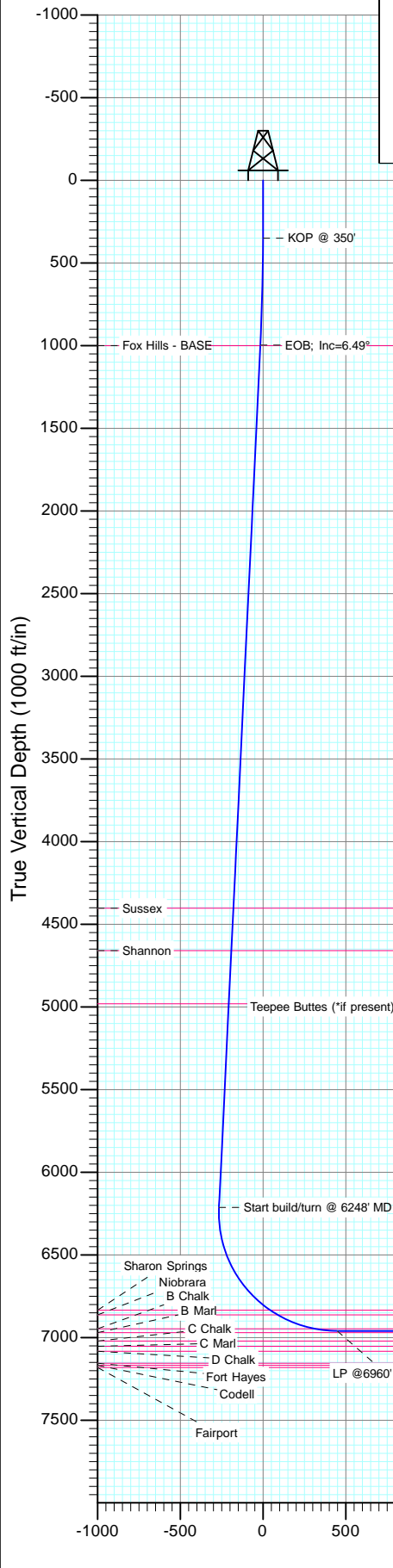


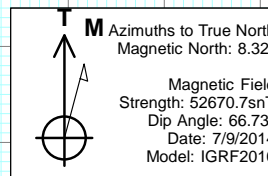


Project: DJ Wattenberg
Site: S32-T2N-R64W (Newman/Ruhl)
Well: Ruhl 1E-32H-B264
Wellbore: Hz
Design: Plan #1



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Ruhl 1E-32H-B264 PBHL	-4554.9	648.3	1276606.57	3259846.43	40.088934	-104.571281



Plan #1
Ruhl 1E-32H-B264
14xxx; LR
KB @ 4955.0ft
Ground Elevation @ 4955.0
North American Datum 1983
Well Ruhl 1E-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 1E-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 1E-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 1E-32H-B264					
Well Position	+N/-S	0.0 ft	Northing:	1,281,154.47 ft	Latitude:	40.101438
	+E/-W	0.0 ft	Easting:	3,259,150.61 ft	Longitude:	-104.573598
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	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.00	0.00	
998.9	6.49	65.08	997.5	15.5	33.3	1.00	1.00	0.00	65.08	
6,248.7	6.49	65.08	6,213.7	265.5	571.3	0.00	0.00	0.00	0.00	
7,407.8	90.00	180.00	6,960.0	-449.9	648.3	8.00	7.20	9.91	114.78	
11,512.8	90.00	180.00	6,960.0	-4,554.9	648.3	0.00	0.00	0.00	0.00	Ruhl 1E-32H-B264 Pt

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-32H-B264	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	KOP @ 350'
400.0	0.50	65.08	400.0	0.1	0.2	-0.1	1.00	1.00	
500.0	1.50	65.08	500.0	0.8	1.8	-0.8	1.00	1.00	
600.0	2.50	65.08	599.9	2.3	4.9	-2.3	1.00	1.00	
700.0	3.50	65.08	699.8	4.5	9.7	-4.5	1.00	1.00	
800.0	4.50	65.08	799.5	7.4	16.0	-7.4	1.00	1.00	
900.0	5.50	65.08	899.2	11.1	23.9	-11.1	1.00	1.00	
998.9	6.49	65.08	997.5	15.5	33.3	-15.5	1.00	1.00	EOB; Inc=6.49°
1,000.0	6.49	65.08	998.6	15.5	33.4	-15.5	0.00	0.00	
1,001.4	6.49	65.08	1,000.0	15.6	33.5	-15.6	0.00	0.00	Fox Hills - BASE
1,100.0	6.49	65.08	1,098.0	20.3	43.6	-20.3	0.00	0.00	
1,200.0	6.49	65.08	1,197.3	25.0	53.9	-25.0	0.00	0.00	
1,300.0	6.49	65.08	1,296.7	29.8	64.1	-29.8	0.00	0.00	
1,400.0	6.49	65.08	1,396.0	34.6	74.4	-34.6	0.00	0.00	
1,500.0	6.49	65.08	1,495.4	39.3	84.6	-39.3	0.00	0.00	
1,600.0	6.49	65.08	1,594.8	44.1	94.9	-44.1	0.00	0.00	
1,700.0	6.49	65.08	1,694.1	48.9	105.1	-48.9	0.00	0.00	
1,800.0	6.49	65.08	1,793.5	53.6	115.4	-53.6	0.00	0.00	
1,900.0	6.49	65.08	1,892.8	58.4	125.6	-58.4	0.00	0.00	
2,000.0	6.49	65.08	1,992.2	63.1	135.9	-63.1	0.00	0.00	
2,100.0	6.49	65.08	2,091.6	67.9	146.1	-67.9	0.00	0.00	
2,200.0	6.49	65.08	2,190.9	72.7	156.4	-72.7	0.00	0.00	
2,300.0	6.49	65.08	2,290.3	77.4	166.6	-77.4	0.00	0.00	
2,400.0	6.49	65.08	2,389.6	82.2	176.9	-82.2	0.00	0.00	
2,500.0	6.49	65.08	2,489.0	87.0	187.1	-87.0	0.00	0.00	
2,600.0	6.49	65.08	2,588.4	91.7	197.4	-91.7	0.00	0.00	
2,700.0	6.49	65.08	2,687.7	96.5	207.6	-96.5	0.00	0.00	
2,800.0	6.49	65.08	2,787.1	101.2	217.9	-101.2	0.00	0.00	
2,900.0	6.49	65.08	2,886.4	106.0	228.1	-106.0	0.00	0.00	
3,000.0	6.49	65.08	2,985.8	110.8	238.4	-110.8	0.00	0.00	
3,100.0	6.49	65.08	3,085.2	115.5	248.6	-115.5	0.00	0.00	
3,200.0	6.49	65.08	3,184.5	120.3	258.9	-120.3	0.00	0.00	
3,300.0	6.49	65.08	3,283.9	125.1	269.1	-125.1	0.00	0.00	
3,400.0	6.49	65.08	3,383.2	129.8	279.4	-129.8	0.00	0.00	
3,500.0	6.49	65.08	3,482.6	134.6	289.6	-134.6	0.00	0.00	
3,600.0	6.49	65.08	3,582.0	139.3	299.9	-139.3	0.00	0.00	
3,700.0	6.49	65.08	3,681.3	144.1	310.1	-144.1	0.00	0.00	
3,800.0	6.49	65.08	3,780.7	148.9	320.3	-148.9	0.00	0.00	
3,900.0	6.49	65.08	3,880.0	153.6	330.6	-153.6	0.00	0.00	
4,000.0	6.49	65.08	3,979.4	158.4	340.8	-158.4	0.00	0.00	
4,100.0	6.49	65.08	4,078.7	163.1	351.1	-163.1	0.00	0.00	
4,200.0	6.49	65.08	4,178.1	167.9	361.3	-167.9	0.00	0.00	
4,300.0	6.49	65.08	4,277.5	172.7	371.6	-172.7	0.00	0.00	
4,400.0	6.49	65.08	4,376.8	177.4	381.8	-177.4	0.00	0.00	
4,426.3	6.49	65.08	4,403.0	178.7	384.5	-178.7	0.00	0.00	Sussex
4,500.0	6.49	65.08	4,476.2	182.2	392.1	-182.2	0.00	0.00	
4,600.0	6.49	65.08	4,575.5	187.0	402.3	-187.0	0.00	0.00	
4,684.0	6.49	65.08	4,659.0	191.0	410.9	-191.0	0.00	0.00	Shannon

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-32H-B264	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,700.0	6.49	65.08	4,674.9	191.7	412.6	-191.7	0.00	0.00	
4,800.0	6.49	65.08	4,774.3	196.5	422.8	-196.5	0.00	0.00	
4,900.0	6.49	65.08	4,873.6	201.2	433.1	-201.2	0.00	0.00	
5,000.0	6.49	65.08	4,973.0	206.0	443.3	-206.0	0.00	0.00	
5,008.1	6.49	65.08	4,981.0	206.4	444.2	-206.4	0.00	0.00	Teepee Buttes (*if present)
5,100.0	6.49	65.08	5,072.3	210.8	453.6	-210.8	0.00	0.00	
5,200.0	6.49	65.08	5,171.7	215.5	463.8	-215.5	0.00	0.00	
5,300.0	6.49	65.08	5,271.1	220.3	474.1	-220.3	0.00	0.00	
5,400.0	6.49	65.08	5,370.4	225.1	484.3	-225.1	0.00	0.00	
5,500.0	6.49	65.08	5,469.8	229.8	494.6	-229.8	0.00	0.00	
5,600.0	6.49	65.08	5,569.1	234.6	504.8	-234.6	0.00	0.00	
5,700.0	6.49	65.08	5,668.5	239.3	515.1	-239.3	0.00	0.00	
5,800.0	6.49	65.08	5,767.9	244.1	525.3	-244.1	0.00	0.00	
5,900.0	6.49	65.08	5,867.2	248.9	535.6	-248.9	0.00	0.00	
6,000.0	6.49	65.08	5,966.6	253.6	545.8	-253.6	0.00	0.00	
6,100.0	6.49	65.08	6,065.9	258.4	556.1	-258.4	0.00	0.00	
6,200.0	6.49	65.08	6,165.3	263.2	566.3	-263.2	0.00	0.00	
6,248.7	6.49	65.08	6,213.7	265.5	571.3	-265.5	0.00	0.00	Start build/turn @ 6248' MD
6,300.0	6.05	103.18	6,264.7	266.1	576.6	-266.1	8.00	-0.86	
6,400.0	11.06	148.15	6,363.7	256.7	586.8	-256.7	8.00	5.01	
6,500.0	18.32	161.85	6,460.3	233.6	596.7	-233.6	8.00	7.26	
6,600.0	26.01	167.80	6,552.9	197.2	606.3	-197.2	8.00	7.69	
6,700.0	33.83	171.15	6,639.5	148.2	615.2	-148.2	8.00	7.83	
6,800.0	41.72	173.36	6,718.5	87.5	623.4	-87.5	8.00	7.89	
6,900.0	49.64	174.97	6,788.3	16.4	630.6	-16.4	8.00	7.92	
6,975.3	55.61	175.95	6,834.0	-43.2	635.3	43.2	8.00	7.93	Sharon Springs
7,000.0	57.57	176.24	6,847.6	-63.8	636.7	63.8	8.00	7.94	
7,029.7	59.93	176.58	6,863.0	-89.1	638.3	89.1	8.00	7.94	Niobrara
7,100.0	65.52	177.31	6,895.2	-151.5	641.6	151.5	8.00	7.95	
7,200.0	73.47	178.25	6,930.2	-245.0	645.2	245.0	8.00	7.95	
7,270.8	79.10	178.86	6,947.0	-313.7	646.9	313.7	8.00	7.96	B Chalk
7,300.0	81.42	179.11	6,951.9	-342.5	647.4	342.5	8.00	7.96	
7,400.0	89.38	179.94	6,960.0	-442.1	648.3	442.1	8.00	7.96	
7,407.8	90.00	180.00	6,960.0	-449.9	648.3	449.9	8.00	7.96	LP @6960' TVD; 90°
7,500.0	90.00	180.00	6,960.0	-542.1	648.3	542.1	0.00	0.00	
7,600.0	90.00	180.00	6,960.0	-642.1	648.3	642.1	0.00	0.00	
7,700.0	90.00	180.00	6,960.0	-742.1	648.3	742.1	0.00	0.00	
7,800.0	90.00	180.00	6,960.0	-842.1	648.3	842.1	0.00	0.00	
7,900.0	90.00	180.00	6,960.0	-942.1	648.3	942.1	0.00	0.00	
8,000.0	90.00	180.00	6,960.0	-1,042.1	648.3	1,042.1	0.00	0.00	
8,100.0	90.00	180.00	6,960.0	-1,142.1	648.3	1,142.1	0.00	0.00	
8,200.0	90.00	180.00	6,960.0	-1,242.1	648.3	1,242.1	0.00	0.00	
8,300.0	90.00	180.00	6,960.0	-1,342.1	648.3	1,342.1	0.00	0.00	
8,400.0	90.00	180.00	6,960.0	-1,442.1	648.3	1,442.1	0.00	0.00	
8,500.0	90.00	180.00	6,960.0	-1,542.1	648.3	1,542.1	0.00	0.00	
8,600.0	90.00	180.00	6,960.0	-1,642.1	648.3	1,642.1	0.00	0.00	
8,700.0	90.00	180.00	6,960.0	-1,742.1	648.3	1,742.1	0.00	0.00	
8,800.0	90.00	180.00	6,960.0	-1,842.1	648.3	1,842.1	0.00	0.00	
8,900.0	90.00	180.00	6,960.0	-1,942.1	648.3	1,942.1	0.00	0.00	
9,000.0	90.00	180.00	6,960.0	-2,042.1	648.3	2,042.1	0.00	0.00	
9,100.0	90.00	180.00	6,960.0	-2,142.1	648.3	2,142.1	0.00	0.00	
9,200.0	90.00	180.00	6,960.0	-2,242.1	648.3	2,242.1	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-32H-B264	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,300.0	90.00	180.00	6,960.0	-2,342.1	648.3	2,342.1	0.00	0.00	
9,400.0	90.00	180.00	6,960.0	-2,442.1	648.3	2,442.1	0.00	0.00	
9,500.0	90.00	180.00	6,960.0	-2,542.1	648.3	2,542.1	0.00	0.00	
9,600.0	90.00	180.00	6,960.0	-2,642.1	648.3	2,642.1	0.00	0.00	
9,700.0	90.00	180.00	6,960.0	-2,742.1	648.3	2,742.1	0.00	0.00	
9,800.0	90.00	180.00	6,960.0	-2,842.1	648.3	2,842.1	0.00	0.00	
9,900.0	90.00	180.00	6,960.0	-2,942.1	648.3	2,942.1	0.00	0.00	
10,000.0	90.00	180.00	6,960.0	-3,042.1	648.3	3,042.1	0.00	0.00	
10,100.0	90.00	180.00	6,960.0	-3,142.1	648.3	3,142.1	0.00	0.00	
10,200.0	90.00	180.00	6,960.0	-3,242.1	648.3	3,242.1	0.00	0.00	
10,300.0	90.00	180.00	6,960.0	-3,342.1	648.3	3,342.1	0.00	0.00	
10,400.0	90.00	180.00	6,960.0	-3,442.1	648.3	3,442.1	0.00	0.00	
10,500.0	90.00	180.00	6,960.0	-3,542.1	648.3	3,542.1	0.00	0.00	
10,600.0	90.00	180.00	6,960.0	-3,642.1	648.3	3,642.1	0.00	0.00	
10,700.0	90.00	180.00	6,960.0	-3,742.1	648.3	3,742.1	0.00	0.00	
10,800.0	90.00	180.00	6,960.0	-3,842.1	648.3	3,842.1	0.00	0.00	
10,900.0	90.00	180.00	6,960.0	-3,942.1	648.3	3,942.1	0.00	0.00	
11,000.0	90.00	180.00	6,960.0	-4,042.1	648.3	4,042.1	0.00	0.00	
11,100.0	90.00	180.00	6,960.0	-4,142.1	648.3	4,142.1	0.00	0.00	
11,200.0	90.00	180.00	6,960.0	-4,242.1	648.3	4,242.1	0.00	0.00	
11,300.0	90.00	180.00	6,960.0	-4,342.1	648.3	4,342.1	0.00	0.00	
11,400.0	90.00	180.00	6,960.0	-4,442.1	648.3	4,442.1	0.00	0.00	
11,500.0	90.00	180.00	6,960.0	-4,542.1	648.3	4,542.1	0.00	0.00	
11,512.8	90.00	180.00	6,960.0	-4,554.9	648.3	4,554.9	0.00	0.00	TD at 11512.8

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 1E-32H-B264 PBH - plan hits target center - Point	0.00	0.00	6,960.0	-4,554.9	648.3	1,276,606.57	3,259,846.43	40.088934	-104.571281

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,001.4	1,000.0	Fox Hills - BASE			
4,426.3	4,403.0	Sussex			
4,684.0	4,659.0	Shannon			
5,008.1	4,981.0	Teepee Buttes (*if present)			
6,975.3	6,834.0	Sharon Springs			
7,029.7	6,863.0	Niobrara			
7,270.8	6,947.0	B Chalk			

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-32H-B264	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
350.0	350.0	0.0	0.0	KOP @ 350'
998.9	997.5	15.5	33.3	EOB; Inc=6.49°
6,248.7	6,213.7	265.5	571.3	Start build/turn @ 6248' MD
7,407.8	6,960.0	-449.9	648.3	LP @6960' TVD; 90°
11,512.8	6,960.0	-4,554.9	648.3	TD at 11512.8

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S32-T2N-R64W (Newman)

Ruhl 1E-32H-B264

Hz

Plan #1

Anticollision Report

09 July, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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	11,512.8	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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	7,599.3	6,966.1	664.2	634.4	22.287	CC
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	7,600.0	6,966.1	664.2	634.4	22.281	ES
RUHL 1 (EXISTING) - EXISTING - ENCANA WELL	7,800.0	6,966.0	693.9	661.4	21.344	SF
Ruhl 1A-32H-B264 - Hz - Plan #1	200.0	200.0	40.0	39.3	57.302	CC, ES
Ruhl 1A-32H-B264 - Hz - Plan #1	11,512.8	11,568.2	904.1	740.0	5.511	SF
Ruhl 1B-32H-B264 - Hz - Plan #1	300.0	300.0	29.9	28.9	28.585	CC
Ruhl 1B-32H-B264 - Hz - Plan #1	400.0	400.0	30.1	28.7	21.580	ES
Ruhl 1B-32H-B264 - Hz - Plan #1	11,512.8	11,480.8	675.1	510.4	4.099	SF
Ruhl 1C-32H-B264 - Hz - Plan #1	300.0	300.0	19.9	18.8	18.969	CC
Ruhl 1C-32H-B264 - Hz - Plan #1	400.0	400.0	20.1	18.7	14.368	ES
Ruhl 1C-32H-B264 - Hz - Plan #1	11,512.8	11,696.8	497.8	347.9	3.322	SF
Ruhl 1D-32H-B264 - Hz - Plan #1	300.0	300.0	9.8	8.7	9.355	CC
Ruhl 1D-32H-B264 - Hz - Plan #1	400.0	400.0	10.0	8.6	7.156	ES
Ruhl 1D-32H-B264 - Hz - Plan #1	11,512.8	11,579.4	240.5	85.7	1.554	SF
Ruhl 1F-32H-B264 - Hz - Plan #1	200.0	200.0	10.1	9.4	14.425	CC, ES
Ruhl 1F-32H-B264 - Hz - Plan #1	11,512.8	11,746.4	309.8	187.7	2.538	SF
Ruhl 1G-32H-B264 - Hz - Plan #1	7,425.0	7,486.3	457.7	427.0	14.934	CC
Ruhl 1G-32H-B264 - Hz - Plan #1	11,512.8	11,574.1	457.9	295.7	2.824	ES, SF
Ruhl 1H-32H-B264 - Hz - Plan #1	7,434.6	7,427.4	674.7	643.4	21.551	CC
Ruhl 1H-32H-B264 - Hz - Plan #1	11,512.8	11,505.6	674.9	510.0	4.094	ES, SF
Ruhl 1I-32H-B264 - Hz - Plan #1	1,059.0	979.7	769.3	765.7	213.302	CC
Ruhl 1I-32H-B264 - Hz - Plan #1	11,512.8	11,737.7	924.9	764.3	5.757	ES, SF
Ruhl 1J-32H-B264 - Hz - Plan #1	300.0	300.0	782.4	781.4	747.169	CC, ES
Ruhl 1J-32H-B264 - Hz - Plan #1	5,300.0	5,172.8	1,000.0	980.1	50.345	SF
Ruhl 1K-32H-B264 - Hz - Plan #1	233.3	233.3	792.2	791.4	972.667	CC
Ruhl 1K-32H-B264 - Hz - Plan #1	300.0	294.1	792.4	791.4	764.225	ES
Ruhl 1K-32H-B264 - Hz - Plan #1	3,400.0	3,235.8	996.9	984.4	80.226	SF
Ruhl 1L-32H-B264 - Hz - Plan #1	200.0	200.0	802.3	801.6	1,149.201	CC, ES
Ruhl 1L-32H-B264 - Hz - Plan #1	2,800.0	2,609.0	995.3	985.2	99.078	SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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 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		
6,800.0	6,718.5	6,740.2	6,739.3	16.2	11.8	-43.92	-642.0	1,302.0	996.5	973.0	23.50	42.402		
6,900.0	6,788.3	6,805.8	6,804.8	16.4	11.9	-51.91	-641.8	1,304.3	942.2	919.2	22.98	40.993		
7,000.0	6,847.6	6,861.4	6,860.4	16.7	12.0	-60.57	-641.6	1,306.5	885.1	861.9	23.14	38.255		
7,100.0	6,895.2	6,905.9	6,904.9	17.0	12.1	-69.27	-641.5	1,308.6	828.2	804.2	23.97	34.546		
7,200.0	6,930.2	6,938.4	6,937.2	17.6	12.2	-77.04	-641.4	1,310.1	774.8	749.7	25.16	30.797		
7,300.0	6,951.9	6,958.6	6,957.4	18.2	12.2	-83.06	-641.4	1,311.2	728.7	702.4	26.35	27.653		
7,400.0	6,960.0	6,966.1	6,964.9	19.0	12.2	-86.79	-641.4	1,311.6	693.5	666.0	27.45	25.268		
7,500.0	6,960.0	6,966.1	6,964.9	20.0	12.2	-86.97	-641.4	1,311.6	671.6	643.0	28.58	23.502		
7,599.3	6,960.0	6,966.1	6,964.9	21.0	12.2	-86.97	-641.4	1,311.6	664.2	634.4	29.80	22.287 CC		
7,600.0	6,960.0	6,966.1	6,964.9	21.0	12.2	-86.97	-641.4	1,311.6	664.2	634.4	29.81	22.281 ES		
7,700.0	6,960.0	6,966.1	6,964.9	22.1	12.2	-86.97	-641.4	1,311.6	671.8	640.7	31.13	21.582		
7,800.0	6,960.0	6,966.0	6,964.9	23.3	12.2	-86.97	-641.4	1,311.6	693.9	661.4	32.51	21.344 SF		
7,900.0	6,960.0	6,966.0	6,964.9	24.6	12.2	-86.97	-641.4	1,311.6	729.1	695.2	33.95	21.479		
8,000.0	6,960.0	6,966.0	6,964.9	25.9	12.2	-86.97	-641.4	1,311.6	775.7	740.3	35.42	21.898		
8,100.0	6,960.0	6,966.0	6,964.8	27.3	12.2	-86.97	-641.4	1,311.6	831.8	794.9	36.94	22.519		
8,200.0	6,960.0	6,966.0	6,964.8	28.7	12.2	-86.96	-641.4	1,311.6	895.6	857.1	38.48	23.272		
8,300.0	6,960.0	6,966.0	6,964.8	30.1	12.2	-86.96	-641.4	1,311.6	965.5	925.4	40.05	24.107		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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: 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	-89.47	0.4	-40.0	40.0					
100.0	100.0	100.0	100.0	0.2	0.2	-89.47	0.4	-40.0	40.0	39.7	0.35	114.604		
200.0	200.0	200.0	200.0	0.3	0.3	-89.47	0.4	-40.0	40.0	39.3	0.70	57.302 CC, ES		
300.0	300.0	299.2	299.1	0.5	0.5	-87.51	1.8	-41.0	41.0	40.0	1.05	39.134		
400.0	400.0	398.5	398.4	0.7	0.7	-147.71	5.8	-43.8	44.4	42.9	1.40	31.611		
500.0	500.0	498.3	498.0	0.9	0.9	-144.09	10.2	-46.9	49.6	47.8	1.76	28.184		
600.0	599.9	598.1	597.6	1.1	1.1	-142.26	14.7	-50.0	56.4	54.3	2.12	26.612		
700.0	699.8	697.7	697.2	1.2	1.3	-141.78	19.2	-53.1	64.5	62.1	2.48	26.021		
800.0	799.5	797.3	796.5	1.4	1.5	-142.24	23.6	-56.2	74.1	71.2	2.85	26.019		
900.0	899.2	896.7	895.8	1.7	1.7	-143.29	28.1	-59.3	85.0	81.8	3.22	26.406		
1,000.0	998.6	995.9	994.8	1.9	1.9	-144.68	32.5	-62.4	97.4	93.8	3.60	27.076		
1,100.0	1,098.0	1,095.0	1,093.8	2.1	2.1	-146.07	37.0	-65.5	110.5	106.5	3.98	27.782		
1,200.0	1,197.3	1,194.1	1,192.8	2.4	2.3	-147.16	41.4	-68.6	123.7	119.3	4.36	28.373		
1,300.0	1,296.7	1,293.2	1,291.7	2.6	2.5	-148.04	45.9	-71.7	136.9	132.2	4.74	28.876		
1,400.0	1,396.0	1,392.3	1,390.7	2.9	2.7	-148.77	50.3	-74.8	150.1	145.0	5.12	29.308		
1,500.0	1,495.4	1,491.4	1,489.6	3.1	2.9	-149.37	54.8	-77.9	163.4	157.9	5.50	29.684		
1,600.0	1,594.8	1,590.5	1,588.6	3.4	3.1	-149.89	59.2	-81.0	176.7	170.8	5.89	30.014		
1,700.0	1,694.1	1,689.6	1,687.5	3.7	3.3	-150.34	63.7	-84.1	189.9	183.7	6.27	30.306		
1,800.0	1,793.5	1,788.7	1,786.5	3.9	3.5	-150.72	68.1	-87.2	203.2	196.6	6.65	30.566		
1,900.0	1,892.8	1,887.8	1,885.4	4.2	3.7	-151.06	72.5	-90.3	216.5	209.5	7.03	30.799		
2,000.0	1,992.2	1,986.9	1,984.4	4.4	3.8	-151.36	77.0	-93.4	229.8	222.4	7.41	31.009		
2,100.0	2,091.6	2,086.0	2,083.4	4.7	4.0	-151.63	81.4	-96.5	243.1	235.4	7.79	31.199		
2,200.0	2,190.9	2,185.1	2,182.3	4.9	4.2	-151.87	85.9	-99.6	256.5	248.3	8.17	31.372		
2,300.0	2,290.3	2,284.2	2,281.3	5.2	4.4	-152.08	90.3	-102.7	269.8	261.2	8.56	31.531		
2,400.0	2,389.6	2,383.3	2,380.2	5.5	4.6	-152.28	94.8	-105.8	283.1	274.2	8.94	31.676		
2,500.0	2,489.0	2,482.4	2,479.2	5.7	4.8	-152.46	99.2	-108.9	296.4	287.1	9.32	31.810		
2,600.0	2,588.4	2,581.5	2,578.1	6.0	5.0	-152.62	103.7	-112.0	309.8	300.1	9.70	31.933		
2,700.0	2,687.7	2,680.6	2,677.1	6.3	5.2	-152.77	108.1	-115.1	323.1	313.0	10.08	32.048		
2,800.0	2,787.1	2,779.8	2,776.1	6.5	5.4	-152.90	112.5	-118.2	336.4	326.0	10.46	32.154		
2,900.0	2,886.4	2,878.9	2,875.0	6.8	5.6	-153.03	117.0	-121.3	349.8	338.9	10.84	32.253		
3,000.0	2,985.8	2,978.0	2,974.0	7.0	5.8	-153.15	121.4	-124.4	363.1	351.9	11.23	32.346		
3,100.0	3,085.2	3,077.1	3,072.9	7.3	6.0	-153.26	125.9	-127.5	376.4	364.8	11.61	32.433		
3,200.0	3,184.5	3,176.2	3,171.9	7.6	6.2	-153.36	130.3	-130.6	389.8	377.8	11.99	32.514		
3,300.0	3,283.9	3,275.3	3,270.8	7.8	6.4	-153.46	134.8	-133.7	403.1	390.7	12.37	32.590		
3,400.0	3,383.2	3,374.4	3,369.8	8.1	6.6	-153.54	139.2	-136.8	416.4	403.7	12.75	32.662		
3,500.0	3,482.6	3,473.5	3,468.7	8.4	6.8	-153.63	143.6	-139.9	429.8	416.7	13.13	32.730		
3,600.0	3,582.0	3,572.6	3,567.7	8.6	7.0	-153.71	148.1	-143.0	443.1	429.6	13.51	32.794		
3,700.0	3,681.3	3,671.7	3,666.7	8.9	7.2	-153.78	152.5	-146.1	456.5	442.6	13.89	32.855		
3,800.0	3,780.7	3,770.8	3,765.6	9.1	7.4	-153.85	157.0	-149.2	469.8	455.5	14.27	32.912		
3,900.0	3,880.0	3,869.9	3,864.6	9.4	7.6	-153.91	161.4	-152.3	483.2	468.5	14.66	32.967		
4,000.0	3,979.4	3,969.0	3,963.5	9.7	7.8	-153.98	165.9	-155.4	496.5	481.5	15.04	33.018		
4,100.0	4,078.7	4,068.1	4,062.5	9.9	8.0	-154.04	170.3	-158.4	509.9	494.4	15.42	33.068		
4,200.0	4,178.1	4,167.2	4,161.4	10.2	8.2	-154.09	174.8	-161.5	523.2	507.4	15.80	33.115		
4,300.0	4,277.5	4,266.3	4,260.4	10.5	8.4	-154.15	179.2	-164.6	536.5	520.4	16.18	33.160		
4,400.0	4,376.8	4,365.4	4,359.3	10.7	8.6	-154.20	183.6	-167.7	549.9	533.3	16.56	33.202		
4,500.0	4,476.2	4,464.5	4,458.3	11.0	8.8	-154.24	188.1	-170.8	563.2	546.3	16.94	33.243		
4,600.0	4,575.5	4,563.6	4,557.3	11.2	9.0	-154.29	192.5	-173.9	576.6	559.3	17.32	33.282		
4,700.0	4,674.9	4,662.7	4,656.2	11.5	9.2	-154.33	197.0	-177.0	589.9	572.2	17.71	33.320		
4,800.0	4,774.3	4,761.8	4,755.2	11.8	9.4	-154.38	201.4	-180.1	603.3	585.2	18.09	33.356		
4,900.0	4,873.6	4,860.9	4,854.1	12.0	9.6	-154.42	205.9	-183.2	616.6	598.2	18.47	33.390		
5,000.0	4,973.0	4,960.0	4,953.1	12.3	9.8	-154.45	210.3	-186.3	630.0	611.1	18.85	33.423		
5,100.0	5,072.3	5,059.1	5,052.0	12.6	10.0	-154.49	214.7	-189.4	643.3	624.1	19.23	33.455		

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 1E-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 1E-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							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	5,171.7	5,158.3	5,151.0	12.8	10.2	-154.53	219.2	-192.5	656.7	637.1	19.61	33.486		
5,300.0	5,271.1	5,257.4	5,250.0	13.1	10.4	-154.56	223.6	-195.6	670.0	650.0	19.99	33.515		
5,400.0	5,370.4	5,356.5	5,348.9	13.4	10.5	-154.59	228.1	-198.7	683.4	663.0	20.37	33.543		
5,500.0	5,469.8	5,455.6	5,447.9	13.6	10.7	-154.62	232.5	-201.8	696.7	676.0	20.75	33.571		
5,600.0	5,569.1	5,554.7	5,546.8	13.9	10.9	-154.65	237.0	-204.9	710.1	688.9	21.14	33.597		
5,700.0	5,668.5	5,653.8	5,645.8	14.1	11.1	-154.68	241.4	-208.0	723.4	701.9	21.52	33.622		
5,800.0	5,767.9	5,752.9	5,744.7	14.4	11.3	-154.71	245.9	-211.1	736.8	714.9	21.90	33.647		
5,900.0	5,867.2	5,852.0	5,843.7	14.7	11.5	-154.74	250.3	-214.2	750.1	727.9	22.28	33.671		
6,000.0	5,966.6	5,951.1	5,942.6	14.9	11.7	-154.76	254.7	-217.3	763.5	740.8	22.66	33.694		
6,100.0	6,065.9	6,050.2	6,041.6	15.2	11.9	-154.79	259.2	-220.4	776.8	753.8	23.04	33.716		
6,200.0	6,165.3	6,149.3	6,140.6	15.5	12.1	-154.81	263.6	-223.5	790.2	766.8	23.42	33.737		
6,300.0	6,264.7	6,248.4	6,239.5	15.7	12.3	166.84	268.1	-226.6	803.5	779.8	23.76	33.822		
6,400.0	6,363.7	6,347.3	6,338.3	15.9	12.5	122.10	271.3	-229.7	817.0	793.0	24.00	34.042		
6,500.0	6,460.3	6,448.4	6,438.9	16.0	12.6	108.79	262.9	-232.8	830.4	806.3	24.09	34.476		
6,600.0	6,552.9	6,551.9	6,539.6	16.1	12.6	103.24	239.7	-236.0	843.4	819.4	24.05	35.071		
6,700.0	6,639.5	6,657.8	6,638.2	16.1	12.6	100.30	201.2	-239.1	855.9	832.0	23.96	35.721		
6,800.0	6,718.5	6,766.3	6,732.1	16.2	12.5	98.54	147.2	-242.0	867.5	843.6	23.92	36.266		
6,900.0	6,788.3	6,877.3	6,818.5	16.4	12.6	97.39	77.9	-244.7	878.0	853.9	24.05	36.509		
7,000.0	6,847.6	6,990.6	6,894.7	16.7	12.7	96.62	-5.8	-247.1	886.9	862.5	24.47	36.248		
7,100.0	6,895.2	7,106.0	6,957.8	17.0	13.1	96.09	-102.3	-249.1	894.2	868.9	25.30	35.349		
7,200.0	6,930.2	7,223.0	7,005.1	17.6	13.7	95.74	-209.2	-250.6	899.6	873.0	26.60	33.819		
7,300.0	6,951.9	7,341.2	7,034.7	18.2	14.7	95.51	-323.5	-251.5	902.9	874.6	28.37	31.830		
7,400.0	6,960.0	7,459.9	7,045.0	19.0	15.8	95.40	-441.6	-251.8	904.1	873.5	30.53	29.609		
7,500.0	6,960.0	7,560.5	7,045.0	20.0	16.9	95.39	-542.1	-251.8	904.1	871.3	32.81	27.557		
7,600.0	6,960.0	7,660.5	7,045.0	21.0	18.1	95.39	-642.1	-251.8	904.1	868.8	35.26	25.638		
7,700.0	6,960.0	7,760.5	7,045.0	22.1	19.4	95.39	-742.1	-251.8	904.1	866.2	37.88	23.866		
7,800.0	6,960.0	7,860.5	7,045.0	23.3	20.8	95.39	-842.1	-251.8	904.1	863.4	40.63	22.250		
7,900.0	6,960.0	7,960.5	7,045.0	24.6	22.2	95.39	-942.1	-251.8	904.1	860.6	43.49	20.788		
8,000.0	6,960.0	8,060.5	7,045.0	25.9	23.6	95.39	-1,042.1	-251.8	904.1	857.6	46.44	19.470		
8,100.0	6,960.0	8,160.5	7,045.0	27.3	25.1	95.39	-1,142.1	-251.8	904.1	854.6	49.45	18.282		
8,200.0	6,960.0	8,260.5	7,045.0	28.7	26.6	95.39	-1,242.1	-251.8	904.1	851.6	52.53	17.212		
8,300.0	6,960.0	8,360.5	7,045.0	30.1	28.2	95.39	-1,342.1	-251.8	904.1	848.4	55.65	16.245		
8,400.0	6,960.0	8,460.5	7,045.0	31.6	29.8	95.39	-1,442.1	-251.8	904.1	845.3	58.82	15.371		
8,500.0	6,960.0	8,560.5	7,045.0	33.1	31.4	95.39	-1,542.1	-251.8	904.1	842.1	62.02	14.577		
8,600.0	6,960.0	8,660.5	7,045.0	34.6	33.0	95.39	-1,642.1	-251.8	904.1	838.8	65.25	13.856		
8,700.0	6,960.0	8,760.5	7,045.0	36.2	34.6	95.39	-1,742.1	-251.8	904.1	835.6	68.51	13.197		
8,800.0	6,960.0	8,860.5	7,045.0	37.8	36.2	95.39	-1,842.1	-251.8	904.1	832.3	71.79	12.594		
8,900.0	6,960.0	8,960.5	7,045.0	39.3	37.9	95.39	-1,942.1	-251.8	904.1	829.0	75.08	12.041		
9,000.0	6,960.0	9,060.5	7,045.0	40.9	39.6	95.39	-2,042.1	-251.8	904.1	825.7	78.40	11.532		
9,100.0	6,960.0	9,160.5	7,045.0	42.5	41.2	95.39	-2,142.1	-251.8	904.1	822.4	81.73	11.062		
9,200.0	6,960.0	9,260.5	7,045.0	44.2	42.9	95.39	-2,242.1	-251.8	904.1	819.0	85.07	10.627		
9,300.0	6,960.0	9,360.5	7,045.0	45.8	44.6	95.39	-2,342.1	-251.8	904.1	815.7	88.43	10.224		
9,400.0	6,960.0	9,460.5	7,045.0	47.4	46.3	95.39	-2,442.1	-251.8	904.1	812.3	91.79	9.849		
9,500.0	6,960.0	9,560.5	7,045.0	49.1	47.9	95.39	-2,542.1	-251.8	904.1	808.9	95.17	9.500		
9,600.0	6,960.0	9,660.5	7,045.0	50.7	49.6	95.39	-2,642.1	-251.8	904.1	805.5	98.55	9.174		
9,700.0	6,960.0	9,760.5	7,045.0	52.4	51.3	95.39	-2,742.1	-251.8	904.1	802.1	101.94	8.869		
9,800.0	6,960.0	9,860.5	7,045.0	54.1	53.0	95.39	-2,842.1	-251.8	904.1	798.7	105.34	8.583		
9,900.0	6,960.0	9,960.5	7,045.0	55.7	54.7	95.39	-2,942.1	-251.8	904.1	795.3	108.74	8.314		
10,000.0	6,960.0	10,060.5	7,045.0	57.4	56.4	95.39	-3,042.1	-251.8	904.1	791.9	112.15	8.062		
10,100.0	6,960.0	10,160.5	7,045.0	59.1	58.2	95.39	-3,142.1	-251.8	904.1	788.5	115.56	7.824		
10,200.0	6,960.0	10,260.5	7,045.0	60.8	59.9	95.39	-3,242.1	-251.8	904.1	785.1	118.98	7.599		
10,300.0	6,960.0	10,360.5	7,045.0	62.5	61.6	95.39	-3,342.1	-251.8	904.1	781.7	122.40	7.386		

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 1E-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 1E-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						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	6,960.0	10,460.5	7,045.0	64.2	63.3	95.39	-3,442.1	-251.8	904.1	778.3	125.83	7.185					
10,500.0	6,960.0	10,560.5	7,045.0	65.9	65.0	95.39	-3,542.1	-251.8	904.1	774.8	129.26	6.995					
10,600.0	6,960.0	10,660.5	7,045.0	67.6	66.7	95.39	-3,642.1	-251.8	904.1	771.4	132.69	6.814					
10,700.0	6,960.0	10,760.5	7,045.0	69.3	68.5	95.39	-3,742.1	-251.8	904.1	768.0	136.12	6.642					
10,800.0	6,960.0	10,860.5	7,045.0	71.0	70.2	95.39	-3,842.1	-251.8	904.1	764.5	139.56	6.478					
10,900.0	6,960.0	10,960.5	7,045.0	72.7	71.9	95.39	-3,942.1	-251.8	904.1	761.1	143.00	6.322					
11,000.0	6,960.0	11,060.5	7,045.0	74.4	73.6	95.39	-4,042.1	-251.8	904.1	757.6	146.45	6.173					
11,100.0	6,960.0	11,160.5	7,045.0	76.1	75.4	95.39	-4,142.1	-251.8	904.1	754.2	149.89	6.031					
11,200.0	6,960.0	11,260.5	7,045.0	77.8	77.1	95.39	-4,242.1	-251.8	904.1	750.7	153.34	5.896					
11,300.0	6,960.0	11,360.5	7,045.0	79.5	78.8	95.39	-4,342.1	-251.8	904.1	747.3	156.79	5.766					
11,400.0	6,960.0	11,460.5	7,045.0	81.2	80.6	95.39	-4,442.1	-251.8	904.1	743.8	160.24	5.642					
11,500.0	6,960.0	11,560.5	7,045.0	83.0	82.3	95.39	-4,542.1	-251.8	904.1	740.4	163.70	5.523					
11,500.1	6,960.0	11,560.6	7,045.0	83.0	82.3	95.39	-4,542.3	-251.8	904.1	740.4	163.70	5.523					
11,512.8	6,960.0	11,568.2	7,045.0	83.2	82.4	95.39	-4,549.8	-251.8	904.1	740.0	164.05	5.511 SF					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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: 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	-89.30	0.4	-29.9	29.9					
100.0	100.0	100.0	100.0	0.2	0.2	-89.30	0.4	-29.9	29.9	29.6	0.35	85.755		
200.0	200.0	200.0	200.0	0.3	0.3	-89.30	0.4	-29.9	29.9	29.2	0.70	42.877		
300.0	300.0	300.0	300.0	0.5	0.5	-89.30	0.4	-29.9	29.9	28.9	1.05	28.585 CC		
327.8	327.8	327.8	327.8	0.6	0.6	-154.41	0.4	-29.9	30.0	28.8	1.14	26.185		
400.0	400.0	400.0	400.0	0.7	0.7	-154.56	0.4	-29.9	30.1	28.7	1.40	21.580 ES		
500.0	500.0	500.0	500.0	0.9	0.9	-155.91	0.4	-29.9	31.7	30.0	1.75	18.172		
600.0	599.9	599.9	599.9	1.1	1.0	-158.23	0.4	-29.9	34.9	32.8	2.09	16.678		
700.0	699.8	699.8	699.8	1.2	1.2	-161.01	0.4	-29.9	39.8	37.4	2.44	16.305		
800.0	799.5	799.5	799.5	1.4	1.4	-163.79	0.4	-29.9	46.5	43.7	2.79	16.654		
900.0	899.2	899.2	899.2	1.7	1.6	-166.31	0.4	-29.9	54.9	51.8	3.14	17.497		
1,000.0	998.6	998.6	998.6	1.9	1.7	-168.46	0.4	-29.9	65.1	61.6	3.48	18.690		
1,100.0	1,098.0	1,098.6	1,098.6	2.1	1.9	-168.93	2.1	-29.9	75.8	72.0	3.84	19.757		
1,200.0	1,197.3	1,198.5	1,198.3	2.4	2.1	-167.29	6.8	-29.9	85.7	81.5	4.20	20.433		
1,300.0	1,296.7	1,297.9	1,297.7	2.6	2.3	-165.72	12.0	-29.8	95.6	91.1	4.56	20.974		
1,400.0	1,396.0	1,397.4	1,397.0	2.9	2.5	-164.45	17.2	-29.8	105.6	100.7	4.93	21.429		
1,500.0	1,495.4	1,496.9	1,496.3	3.1	2.6	-163.40	22.4	-29.7	115.6	110.3	5.30	21.815		
1,600.0	1,594.8	1,596.4	1,595.7	3.4	2.8	-162.52	27.6	-29.7	125.6	120.0	5.67	22.147		
1,700.0	1,694.1	1,695.8	1,695.0	3.7	3.0	-161.77	32.8	-29.6	135.7	129.6	6.05	22.433		
1,800.0	1,793.5	1,795.3	1,794.4	3.9	3.2	-161.12	38.0	-29.6	145.8	139.4	6.43	22.682		
1,900.0	1,892.8	1,894.8	1,893.7	4.2	3.4	-160.55	43.2	-29.5	155.9	149.1	6.81	22.901		
2,000.0	1,992.2	1,994.3	1,993.1	4.4	3.6	-160.06	48.4	-29.5	166.0	158.8	7.19	23.094		
2,100.0	2,091.6	2,093.8	2,092.4	4.7	3.8	-159.62	53.6	-29.4	176.1	168.5	7.57	23.265		
2,200.0	2,190.9	2,193.2	2,191.7	4.9	4.0	-159.23	58.8	-29.3	186.2	178.3	7.95	23.419		
2,300.0	2,290.3	2,292.7	2,291.1	5.2	4.2	-158.88	64.0	-29.3	196.4	188.0	8.34	23.556		
2,400.0	2,389.6	2,392.2	2,390.4	5.5	4.4	-158.56	69.2	-29.2	206.5	197.8	8.72	23.681		
2,500.0	2,489.0	2,491.7	2,489.8	5.7	4.5	-158.28	74.4	-29.2	216.7	207.6	9.11	23.793		
2,600.0	2,588.4	2,591.1	2,589.1	6.0	4.7	-158.01	79.6	-29.1	226.8	217.3	9.49	23.896		
2,700.0	2,687.7	2,690.6	2,688.5	6.3	4.9	-157.78	84.8	-29.1	237.0	227.1	9.88	23.990		
2,800.0	2,787.1	2,790.1	2,787.8	6.5	5.1	-157.56	90.0	-29.0	247.2	236.9	10.27	24.076		
2,900.0	2,886.4	2,889.6	2,887.1	6.8	5.3	-157.36	95.2	-29.0	257.3	246.7	10.65	24.155		
3,000.0	2,985.8	2,989.1	2,986.5	7.0	5.5	-157.17	100.4	-28.9	267.5	256.5	11.04	24.228		
3,100.0	3,085.2	3,088.5	3,085.8	7.3	5.7	-157.00	105.6	-28.9	277.7	266.2	11.43	24.296		
3,200.0	3,184.5	3,188.0	3,185.2	7.6	5.9	-156.84	110.8	-28.8	287.8	276.0	11.82	24.359		
3,300.0	3,283.9	3,287.5	3,284.5	7.8	6.1	-156.69	116.0	-28.8	298.0	285.8	12.21	24.417		
3,400.0	3,383.2	3,387.0	3,383.8	8.1	6.3	-156.55	121.2	-28.7	308.2	295.6	12.59	24.472		
3,500.0	3,482.6	3,486.4	3,483.2	8.4	6.5	-156.42	126.4	-28.7	318.4	305.4	12.98	24.523		
3,600.0	3,582.0	3,585.9	3,582.5	8.6	6.7	-156.29	131.6	-28.6	328.6	315.2	13.37	24.570		
3,700.0	3,681.3	3,685.4	3,681.9	8.9	6.9	-156.18	136.8	-28.6	338.7	325.0	13.76	24.615		
3,800.0	3,780.7	3,784.9	3,781.2	9.1	7.1	-156.07	142.0	-28.5	348.9	334.8	14.15	24.657		
3,900.0	3,880.0	3,884.4	3,880.6	9.4	7.3	-155.97	147.2	-28.5	359.1	344.6	14.54	24.697		
4,000.0	3,979.4	3,983.8	3,979.9	9.7	7.5	-155.87	152.4	-28.4	369.3	354.4	14.93	24.735		
4,100.0	4,078.7	4,083.3	4,079.2	9.9	7.7	-155.78	157.6	-28.4	379.5	364.2	15.32	24.770		
4,200.0	4,178.1	4,182.8	4,178.6	10.2	7.8	-155.69	162.8	-28.3	389.7	374.0	15.71	24.804		
4,300.0	4,277.5	4,282.3	4,277.9	10.5	8.0	-155.61	168.0	-28.3	399.9	383.8	16.10	24.835		
4,400.0	4,376.8	4,381.7	4,377.3	10.7	8.2	-155.53	173.2	-28.2	410.1	393.6	16.49	24.866		
4,500.0	4,476.2	4,481.2	4,476.6	11.0	8.4	-155.46	178.4	-28.2	420.3	403.4	16.88	24.894		
4,600.0	4,575.5	4,580.7	4,575.9	11.2	8.6	-155.39	183.6	-28.1	430.4	413.2	17.27	24.921		
4,700.0	4,674.9	4,680.2	4,675.3	11.5	8.8	-155.32	188.8	-28.0	440.6	423.0	17.66	24.947		
4,800.0	4,774.3	4,779.7	4,774.6	11.8	9.0	-155.25	194.0	-28.0	450.8	432.8	18.05	24.972		
4,900.0	4,873.6	4,879.1	4,874.0	12.0	9.2	-155.19	199.2	-27.9	461.0	442.6	18.44	24.996		
5,000.0	4,973.0	4,978.6	4,973.3	12.3	9.4	-155.13	204.4	-27.9	471.2	452.4	18.83	25.018		

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 1E-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 1E-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				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,072.3	5,078.1	5,072.7	12.6	9.6	-155.08	209.6	-27.8	481.4	462.2	19.23	25.040		
5,200.0	5,171.7	5,177.6	5,172.0	12.8	9.8	-155.02	214.8	-27.8	491.6	472.0	19.62	25.061		
5,300.0	5,271.1	5,277.1	5,271.3	13.1	10.0	-154.97	220.0	-27.7	501.8	481.8	20.01	25.081		
5,400.0	5,370.4	5,376.5	5,370.7	13.4	10.2	-154.92	225.2	-27.7	512.0	491.6	20.40	25.100		
5,500.0	5,469.8	5,476.0	5,470.0	13.6	10.4	-154.87	230.4	-27.6	522.2	501.4	20.79	25.118		
5,600.0	5,569.1	5,575.5	5,569.4	13.9	10.6	-154.83	235.6	-27.6	532.4	511.2	21.18	25.135		
5,700.0	5,668.5	5,675.0	5,668.7	14.1	10.8	-154.78	240.8	-27.5	542.6	521.0	21.57	25.152		
5,800.0	5,767.9	5,774.4	5,768.0	14.4	11.0	-154.74	246.0	-27.5	552.8	530.8	21.96	25.169		
5,900.0	5,867.2	5,873.9	5,867.4	14.7	11.2	-154.70	251.2	-27.4	563.0	540.6	22.35	25.184		
6,000.0	5,966.6	5,973.4	5,966.7	14.9	11.4	-154.66	256.4	-27.4	573.2	550.4	22.75	25.199		
6,100.0	6,065.9	6,072.9	6,066.1	15.2	11.6	-154.62	261.6	-27.3	583.4	560.2	23.14	25.214		
6,200.0	6,165.3	6,172.4	6,165.4	15.5	11.7	-154.58	266.8	-27.3	593.6	570.1	23.53	25.228		
6,300.0	6,264.7	6,272.1	6,265.1	15.7	11.9	167.08	269.6	-27.2	603.8	580.0	23.83	25.336		
6,400.0	6,363.7	6,372.1	6,364.5	15.9	12.0	121.66	259.7	-27.2	613.9	590.0	23.92	25.661		
6,500.0	6,460.3	6,472.0	6,461.5	16.0	12.0	107.53	236.0	-27.1	623.9	600.0	23.89	26.114		
6,600.0	6,552.9	6,571.8	6,554.2	16.1	11.9	101.21	199.2	-27.1	633.4	609.6	23.79	26.619		
6,700.0	6,639.5	6,671.7	6,640.9	16.1	11.9	97.56	149.7	-27.0	642.2	618.5	23.72	27.073		
6,800.0	6,718.5	6,771.6	6,719.9	16.2	11.9	95.13	88.7	-27.0	650.3	626.6	23.78	27.353		
6,900.0	6,788.3	6,871.6	6,789.7	16.4	12.0	93.41	17.3	-26.9	657.5	633.5	24.05	27.339		
7,000.0	6,847.6	6,971.6	6,848.9	16.7	12.3	92.14	-63.2	-26.9	663.6	639.0	24.63	26.944		
7,100.0	6,895.2	7,071.6	6,896.4	17.0	12.7	91.22	-151.1	-26.9	668.5	642.9	25.56	26.148		
7,200.0	6,930.2	7,171.7	6,931.1	17.6	13.4	90.57	-244.9	-26.9	672.1	645.2	26.87	25.010		
7,300.0	6,951.9	7,271.7	6,952.4	18.2	14.2	90.17	-342.5	-26.9	674.3	645.8	28.53	23.637		
7,400.0	6,960.0	7,371.7	6,960.0	19.0	15.2	90.00	-442.1	-26.9	675.1	644.6	30.47	22.156		
7,500.0	6,960.0	7,471.7	6,960.0	20.0	16.4	90.00	-542.1	-26.9	675.1	642.4	32.75	20.614		
7,600.0	6,960.0	7,571.7	6,960.0	21.0	17.6	90.00	-642.1	-26.9	675.1	639.9	35.23	19.165		
7,700.0	6,960.0	7,671.7	6,960.0	22.1	18.9	90.00	-742.1	-26.9	675.1	637.3	37.87	17.829		
7,800.0	6,960.0	7,771.7	6,960.0	23.3	20.3	90.00	-842.1	-26.9	675.1	634.5	40.64	16.613		
7,900.0	6,960.0	7,871.7	6,960.0	24.6	21.8	90.00	-942.1	-26.9	675.1	631.6	43.52	15.514		
8,000.0	6,960.0	7,971.7	6,960.0	25.9	23.2	90.00	-1,042.1	-26.9	675.1	628.6	46.48	14.525		
8,100.0	6,960.0	8,071.7	6,960.0	27.3	24.8	90.00	-1,142.1	-26.9	675.1	625.6	49.52	13.634		
8,200.0	6,960.0	8,171.7	6,960.0	28.7	26.3	90.00	-1,242.1	-26.9	675.1	622.5	52.61	12.832		
8,300.0	6,960.0	8,271.7	6,960.0	30.1	27.9	90.00	-1,342.1	-26.9	675.1	619.4	55.76	12.108		
8,400.0	6,960.0	8,371.7	6,960.0	31.6	29.5	90.00	-1,442.1	-26.9	675.1	616.2	58.94	11.454		
8,500.0	6,960.0	8,471.7	6,960.0	33.1	31.1	90.00	-1,542.1	-26.9	675.1	613.0	62.16	10.861		
8,600.0	6,960.0	8,571.7	6,960.0	34.6	32.7	90.00	-1,642.1	-26.9	675.1	609.7	65.41	10.321		
8,700.0	6,960.0	8,671.7	6,960.0	36.2	34.3	90.00	-1,742.1	-26.9	675.1	606.4	68.69	9.829		
8,800.0	6,960.0	8,771.7	6,960.0	37.8	36.0	90.00	-1,842.1	-26.9	675.1	603.1	71.98	9.379		
8,900.0	6,960.0	8,871.7	6,960.0	39.3	37.6	90.00	-1,942.1	-26.9	675.1	599.8	75.30	8.966		
9,000.0	6,960.0	8,971.7	6,960.0	40.9	39.3	90.00	-2,042.1	-26.9	675.1	596.5	78.63	8.586		
9,100.0	6,960.0	9,071.7	6,960.0	42.5	41.0	90.00	-2,142.1	-26.9	675.1	593.1	81.98	8.235		
9,200.0	6,960.0	9,171.7	6,960.0	44.2	42.7	90.00	-2,242.1	-26.9	675.1	589.8	85.34	7.911		
9,300.0	6,960.0	9,271.7	6,960.0	45.8	44.4	90.00	-2,342.1	-26.9	675.1	586.4	88.71	7.610		
9,400.0	6,960.0	9,371.7	6,960.0	47.4	46.0	90.00	-2,442.1	-26.9	675.1	583.0	92.09	7.331		
9,500.0	6,960.0	9,471.7	6,960.0	49.1	47.7	90.00	-2,542.1	-26.9	675.1	579.6	95.48	7.071		
9,600.0	6,960.0	9,571.7	6,960.0	50.7	49.4	90.00	-2,642.1	-26.9	675.1	576.2	98.88	6.828		
9,700.0	6,960.0	9,671.7	6,960.0	52.4	51.1	90.00	-2,742.1	-26.9	675.1	572.8	102.29	6.600		
9,800.0	6,960.0	9,771.7	6,960.0	54.1	52.8	90.00	-2,842.1	-26.9	675.1	569.4	105.70	6.387		
9,900.0	6,960.0	9,871.7	6,960.0	55.7	54.6	90.00	-2,942.1	-26.9	675.1	566.0	109.12	6.187		
10,000.0	6,960.0	9,971.7	6,960.0	57.4	56.3	90.00	-3,042.1	-26.9	675.1	562.6	112.55	5.999		
10,100.0	6,960.0	10,071.7	6,960.0	59.1	58.0	90.00	-3,142.1	-26.9	675.1	559.2	115.98	5.821		
10,200.0	6,960.0	10,171.7	6,960.0	60.8	59.7	90.00	-3,242.1	-26.9	675.1	555.7	119.41	5.654		

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 1E-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 1E-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 +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,300.0	6,960.0	10,271.7	6,960.0	62.5	61.4	90.00	-3,342.1	-26.9	675.1	552.3	122.85	5.496		
10,400.0	6,960.0	10,371.7	6,960.0	64.2	63.1	90.00	-3,442.1	-26.9	675.1	548.8	126.29	5.346		
10,500.0	6,960.0	10,471.7	6,960.0	65.9	64.9	90.00	-3,542.1	-26.9	675.1	545.4	129.74	5.204		
10,600.0	6,960.0	10,571.7	6,960.0	67.6	66.6	90.00	-3,642.1	-26.9	675.1	541.9	133.19	5.069		
10,700.0	6,960.0	10,671.7	6,960.0	69.3	68.3	90.00	-3,742.1	-26.9	675.1	538.5	136.64	4.941		
10,800.0	6,960.0	10,771.7	6,960.0	71.0	70.0	90.00	-3,842.1	-26.9	675.1	535.0	140.09	4.819		
10,900.0	6,960.0	10,871.7	6,960.0	72.7	71.8	90.00	-3,942.1	-26.9	675.1	531.6	143.55	4.703		
11,000.0	6,960.0	10,971.7	6,960.0	74.4	73.5	90.00	-4,042.1	-26.9	675.1	528.1	147.01	4.592		
11,100.0	6,960.0	11,071.7	6,960.0	76.1	75.2	90.00	-4,142.1	-26.9	675.1	524.7	150.47	4.487		
11,200.0	6,960.0	11,171.7	6,960.0	77.8	77.0	90.00	-4,242.1	-26.9	675.1	521.2	153.94	4.386		
11,300.0	6,960.0	11,271.7	6,960.0	79.5	78.7	90.00	-4,342.1	-26.9	675.1	517.7	157.40	4.289		
11,400.0	6,960.0	11,371.7	6,960.0	81.2	80.4	90.00	-4,442.1	-26.9	675.1	514.3	160.87	4.197		
11,500.0	6,960.0	11,471.7	6,960.0	83.0	82.2	90.00	-4,542.1	-26.9	675.1	510.8	164.34	4.108		
11,501.3	6,960.0	11,472.9	6,960.0	83.0	82.2	90.00	-4,543.4	-26.9	675.1	510.7	164.38	4.107		
11,512.8	6,960.0	11,480.8	6,960.0	83.2	82.3	90.00	-4,551.3	-26.9	675.1	510.4	164.72	4.099 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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			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		
300.0	300.0	300.0	300.0	0.5	0.5	-88.97	0.4	-19.9	19.9	18.8	1.05	18.969	CC	
327.9	327.9	327.9	327.9	0.6	0.6	-154.09	0.4	-19.9	19.9	18.8	1.14	17.384		
400.0	400.0	400.0	400.0	0.7	0.7	-154.32	0.4	-19.9	20.1	18.7	1.40	14.368	ES	
500.0	500.0	500.0	500.0	0.9	0.9	-156.32	0.4	-19.9	21.6	19.9	1.75	12.403		
600.0	599.9	599.9	599.9	1.1	1.0	-159.54	0.4	-19.9	24.9	22.8	2.09	11.881		
700.0	699.8	700.1	700.1	1.2	1.2	-161.81	1.1	-19.4	29.2	26.8	2.44	11.967		
800.0	799.5	800.4	800.3	1.4	1.4	-162.21	3.2	-17.8	34.1	31.3	2.80	12.200		
900.0	899.2	900.7	900.5	1.7	1.6	-161.41	6.8	-15.3	39.4	36.3	3.15	12.512		
1,000.0	998.6	1,000.6	1,000.3	1.9	1.8	-160.24	11.4	-11.9	45.5	42.0	3.51	12.955		
1,100.0	1,098.0	1,100.4	1,099.9	2.1	2.0	-159.61	16.1	-8.5	52.4	48.5	3.88	13.489		
1,200.0	1,197.3	1,200.2	1,199.5	2.4	2.2	-159.13	20.8	-5.1	59.2	55.0	4.25	13.922		
1,300.0	1,296.7	1,299.9	1,299.1	2.6	2.3	-158.74	25.5	-1.7	66.1	61.4	4.63	14.280		
1,400.0	1,396.0	1,399.7	1,398.7	2.9	2.5	-158.43	30.3	1.7	72.9	67.9	5.00	14.579		
1,500.0	1,495.4	1,499.5	1,498.3	3.1	2.7	-158.18	35.0	5.1	79.8	74.4	5.38	14.834		
1,600.0	1,594.8	1,599.2	1,597.9	3.4	2.9	-157.96	39.7	8.4	86.6	80.9	5.75	15.052		
1,700.0	1,694.1	1,699.0	1,697.5	3.7	3.1	-157.78	44.4	11.8	93.5	87.3	6.13	15.241		
1,800.0	1,793.5	1,798.8	1,797.1	3.9	3.3	-157.62	49.1	15.2	100.3	93.8	6.51	15.406		
1,900.0	1,892.8	1,898.5	1,896.7	4.2	3.5	-157.48	53.8	18.6	107.2	100.3	6.89	15.552		
2,000.0	1,992.2	1,998.3	1,996.3	4.4	3.7	-157.35	58.5	22.0	114.0	106.8	7.27	15.682		
2,100.0	2,091.6	2,098.1	2,095.9	4.7	3.9	-157.25	63.2	25.4	120.9	113.2	7.65	15.797		
2,200.0	2,190.9	2,197.8	2,195.5	4.9	4.1	-157.15	68.0	28.8	127.7	119.7	8.03	15.901		
2,300.0	2,290.3	2,297.6	2,295.1	5.2	4.3	-157.06	72.7	32.2	134.6	126.2	8.41	15.995		
2,400.0	2,389.6	2,397.3	2,394.7	5.5	4.5	-156.98	77.4	35.6	141.5	132.7	8.80	16.080		
2,500.0	2,489.0	2,497.1	2,494.3	5.7	4.7	-156.91	82.1	39.0	148.3	139.1	9.18	16.158		
2,600.0	2,588.4	2,596.9	2,593.9	6.0	4.9	-156.85	86.8	42.4	155.2	145.6	9.56	16.229		
2,700.0	2,687.7	2,696.6	2,693.5	6.3	5.1	-156.79	91.5	45.8	162.0	152.1	9.94	16.294		
2,800.0	2,787.1	2,796.4	2,793.1	6.5	5.3	-156.73	96.2	49.2	168.9	158.6	10.33	16.354		
2,900.0	2,886.4	2,896.2	2,892.7	6.8	5.5	-156.68	100.9	52.6	175.7	165.0	10.71	16.409		
3,000.0	2,985.8	2,995.9	2,992.3	7.0	5.7	-156.64	105.7	55.9	182.6	171.5	11.09	16.461		
3,100.0	3,085.2	3,095.7	3,091.8	7.3	5.9	-156.59	110.4	59.3	189.5	178.0	11.48	16.509		
3,200.0	3,184.5	3,195.5	3,191.4	7.6	6.1	-156.55	115.1	62.7	196.3	184.5	11.86	16.553		
3,300.0	3,283.9	3,295.2	3,291.0	7.8	6.3	-156.51	119.8	66.1	203.2	190.9	12.24	16.595		
3,400.0	3,383.2	3,395.0	3,390.6	8.1	6.5	-156.48	124.5	69.5	210.0	197.4	12.63	16.634		
3,500.0	3,482.6	3,494.8	3,490.2	8.4	6.7	-156.45	129.2	72.9	216.9	203.9	13.01	16.670		
3,600.0	3,582.0	3,594.5	3,589.8	8.6	6.9	-156.42	133.9	76.3	223.7	210.4	13.39	16.705		
3,700.0	3,681.3	3,694.3	3,689.4	8.9	7.1	-156.39	138.7	79.7	230.6	216.8	13.78	16.737		
3,800.0	3,780.7	3,794.1	3,789.0	9.1	7.3	-156.36	143.4	83.1	237.5	223.3	14.16	16.767		
3,900.0	3,880.0	3,893.8	3,888.6	9.4	7.5	-156.33	148.1	86.5	244.3	229.8	14.55	16.796		
4,000.0	3,979.4	3,993.6	3,988.2	9.7	7.7	-156.31	152.8	89.9	251.2	236.3	14.93	16.823		
4,100.0	4,078.7	4,093.3	4,087.8	9.9	7.9	-156.29	157.5	93.3	258.0	242.7	15.31	16.849		
4,200.0	4,178.1	4,193.1	4,187.4	10.2	8.1	-156.26	162.2	96.7	264.9	249.2	15.70	16.874		
4,300.0	4,277.5	4,292.9	4,287.0	10.5	8.3	-156.24	166.9	100.1	271.8	255.7	16.08	16.897		
4,400.0	4,376.8	4,392.6	4,386.6	10.7	8.5	-156.22	171.6	103.4	278.6	262.2	16.47	16.919		
4,500.0	4,476.2	4,492.4	4,486.2	11.0	8.7	-156.21	176.4	106.8	285.5	268.6	16.85	16.940		
4,600.0	4,575.5	4,592.2	4,585.8	11.2	8.9	-156.19	181.1	110.2	292.3	275.1	17.24	16.960		
4,700.0	4,674.9	4,691.9	4,685.4	11.5	9.1	-156.17	185.8	113.6	299.2	281.6	17.62	16.980		
4,800.0	4,774.3	4,791.7	4,785.0	11.8	9.3	-156.15	190.5	117.0	306.1	288.0	18.01	16.998		
4,900.0	4,873.6	4,891.5	4,884.6	12.0	9.5	-156.14	195.2	120.4	312.9	294.5	18.39	17.016		
5,000.0	4,973.0	4,991.2	4,984.2	12.3	9.7	-156.12	199.9	123.8	319.8	301.0	18.77	17.032		

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 1E-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 1E-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			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,072.3	5,091.0	5,083.8	12.6	9.9	-156.11	204.6	127.2	326.6	307.5	19.16	17.049		
5,200.0	5,171.7	5,190.8	5,183.3	12.8	10.1	-156.10	209.3	130.6	333.5	313.9	19.54	17.064		
5,300.0	5,271.1	5,290.5	5,282.9	13.1	10.3	-156.08	214.1	134.0	340.3	320.4	19.93	17.079		
5,400.0	5,370.4	5,390.3	5,382.5	13.4	10.5	-156.07	218.8	137.4	347.2	326.9	20.31	17.093		
5,500.0	5,469.8	5,490.0	5,482.1	13.6	10.7	-156.06	223.5	140.8	354.1	333.4	20.70	17.107		
5,600.0	5,569.1	5,589.8	5,581.7	13.9	10.9	-156.05	228.2	144.2	360.9	339.8	21.08	17.120		
5,700.0	5,668.5	5,689.6	5,681.3	14.1	11.1	-156.03	232.9	147.6	367.8	346.3	21.47	17.133		
5,800.0	5,767.9	5,789.3	5,780.9	14.4	11.3	-156.02	237.6	151.0	374.6	352.8	21.85	17.145		
5,900.0	5,867.2	5,889.1	5,880.5	14.7	11.5	-156.01	242.3	154.3	381.5	359.3	22.24	17.157		
6,000.0	5,966.6	5,988.9	5,980.1	14.9	11.7	-156.00	247.1	157.7	388.4	365.7	22.62	17.168		
6,100.0	6,065.9	6,088.6	6,079.7	15.2	11.9	-155.99	251.8	161.1	395.2	372.2	23.01	17.179		
6,200.0	6,165.3	6,188.4	6,179.3	15.5	12.1	-155.98	256.5	164.5	402.1	378.7	23.39	17.190		
6,300.0	6,264.7	6,288.1	6,278.9	15.7	12.3	166.11	261.2	167.9	408.9	385.2	23.75	17.217		
6,400.0	6,363.7	6,386.8	6,377.4	15.9	12.5	122.93	265.8	171.3	415.8	391.7	24.14	17.227		
6,500.0	6,460.3	6,485.2	6,475.6	16.0	12.7	112.45	268.6	174.6	423.8	399.3	24.51	17.291		
6,600.0	6,552.9	6,588.2	6,578.0	16.1	12.8	109.83	258.6	178.1	433.3	408.6	24.67	17.561		
6,700.0	6,639.5	6,695.8	6,682.2	16.1	12.8	109.66	232.5	181.7	443.8	419.1	24.61	18.032		
6,800.0	6,718.5	6,808.4	6,785.8	16.2	12.8	110.44	188.9	185.2	454.8	430.4	24.38	18.655		
6,900.0	6,788.3	6,926.3	6,885.6	16.4	12.8	111.57	126.4	188.6	465.7	441.6	24.11	19.318		
7,000.0	6,847.6	7,049.5	6,977.5	16.7	12.9	112.75	44.5	191.7	476.0	452.0	23.99	19.844		
7,100.0	6,895.2	7,177.9	7,056.8	17.0	13.1	113.82	-56.1	194.4	484.9	460.7	24.26	19.990		
7,200.0	6,930.2	7,310.7	7,118.6	17.6	13.7	114.65	-173.4	196.5	491.8	466.7	25.12	19.577		
7,300.0	6,951.9	7,446.7	7,158.4	18.2	14.7	115.18	-303.3	197.9	496.2	469.5	26.71	18.577		
7,400.0	6,960.0	7,584.5	7,173.0	19.0	16.0	115.34	-440.1	198.4	497.8	468.8	29.01	17.158		
7,500.0	6,960.5	7,686.5	7,173.0	20.0	17.1	115.28	-542.1	198.4	497.6	466.5	31.08	16.008		
7,500.0	6,960.0	7,686.5	7,173.0	20.0	17.1	115.33	-542.1	198.4	497.8	466.7	31.08	16.018		
7,600.0	6,960.0	7,786.5	7,173.0	21.0	18.3	115.33	-642.1	198.4	497.8	464.5	33.27	14.960		
7,700.0	6,960.0	7,886.5	7,173.0	22.1	19.6	115.33	-742.1	198.4	497.8	462.2	35.62	13.975		
7,800.0	6,960.0	7,986.5	7,173.0	23.3	20.9	115.33	-842.1	198.4	497.8	459.7	38.08	13.071		
7,900.0	6,960.0	8,086.5	7,173.0	24.6	22.3	115.33	-942.1	198.4	497.8	457.1	40.65	12.246		
8,000.0	6,960.0	8,186.5	7,173.0	25.9	23.8	115.33	-1,042.1	198.4	497.8	454.5	43.29	11.498		
8,100.0	6,960.0	8,286.5	7,173.0	27.3	25.3	115.33	-1,142.1	198.4	497.8	451.8	46.00	10.820		
8,200.0	6,960.0	8,386.5	7,173.0	28.7	26.8	115.33	-1,242.1	198.4	497.8	449.0	48.77	10.206		
8,300.0	6,960.0	8,486.5	7,173.0	30.1	28.3	115.33	-1,342.1	198.4	497.8	446.2	51.59	9.649		
8,400.0	6,960.0	8,586.5	7,173.0	31.6	29.9	115.33	-1,442.1	198.4	497.8	443.3	54.44	9.143		
8,500.0	6,960.0	8,686.5	7,173.0	33.1	31.5	115.33	-1,542.1	198.4	497.8	440.4	57.33	8.683		
8,600.0	6,960.0	8,786.5	7,173.0	34.6	33.1	115.33	-1,642.1	198.4	497.8	437.5	60.25	8.262		
8,700.0	6,960.0	8,886.5	7,173.0	36.2	34.7	115.33	-1,742.1	198.4	497.8	434.6	63.19	7.878		
8,800.0	6,960.0	8,986.5	7,173.0	37.8	36.3	115.33	-1,842.1	198.4	497.8	431.6	66.15	7.525		
8,900.0	6,960.0	9,086.5	7,173.0	39.3	38.0	115.33	-1,942.1	198.4	497.8	428.6	69.14	7.200		
9,000.0	6,960.0	9,186.5	7,173.0	40.9	39.6	115.33	-2,042.1	198.4	497.8	425.6	72.13	6.901		
9,100.0	6,960.0	9,286.5	7,173.0	42.5	41.3	115.33	-2,142.1	198.4	497.8	422.6	75.15	6.624		
9,200.0	6,960.0	9,386.5	7,173.0	44.2	43.0	115.33	-2,242.1	198.4	497.8	419.6	78.17	6.368		
9,300.0	6,960.0	9,486.5	7,173.0	45.8	44.7	115.33	-2,342.1	198.4	497.8	416.6	81.21	6.129		
9,400.0	6,960.0	9,586.5	7,173.0	47.4	46.3	115.33	-2,442.1	198.4	497.8	413.5	84.26	5.908		
9,500.0	6,960.0	9,686.5	7,173.0	49.1	48.0	115.33	-2,542.1	198.4	497.8	410.5	87.32	5.701		
9,600.0	6,960.0	9,786.5	7,173.0	50.7	49.7	115.33	-2,642.1	198.4	497.8	407.4	90.38	5.508		
9,700.0	6,960.0	9,886.5	7,173.0	52.4	51.4	115.33	-2,742.1	198.4	497.8	404.3	93.45	5.326		
9,800.0	6,960.0	9,986.5	7,173.0	54.1	53.1	115.33	-2,842.1	198.4	497.8	401.2	96.53	5.157		
9,900.0	6,960.0	10,086.5	7,173.0	55.7	54.8	115.33	-2,942.1	198.4	497.8	398.2	99.62	4.997		
10,000.0	6,960.0	10,186.5	7,173.0	57.4	56.5	115.33	-3,042.1	198.4	497.8	395.1	102.71	4.847		
10,100.0	6,960.0	10,286.5	7,173.0	59.1	58.2	115.33	-3,142.1	198.4	497.8	392.0	105.80	4.705		

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 1E-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 1E-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			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
10,200.0	6,960.0	10,386.5	7,173.0	60.8	59.9	115.33	-3,242.1	198.4	497.8	388.9	108.90	4.571	
10,300.0	6,960.0	10,486.5	7,173.0	62.5	61.6	115.33	-3,342.1	198.4	497.8	385.8	112.01	4.444	
10,400.0	6,960.0	10,586.5	7,173.0	64.2	63.4	115.33	-3,442.1	198.4	497.8	382.7	115.12	4.324	
10,500.0	6,960.0	10,686.5	7,173.0	65.9	65.1	115.33	-3,542.1	198.4	497.8	379.5	118.23	4.210	
10,600.0	6,960.0	10,786.5	7,173.0	67.6	66.8	115.33	-3,642.1	198.4	497.8	376.4	121.34	4.102	
10,700.0	6,960.0	10,886.5	7,173.0	69.3	68.5	115.33	-3,742.1	198.4	497.8	373.3	124.46	3.999	
10,800.0	6,960.0	10,986.5	7,173.0	71.0	70.2	115.33	-3,842.1	198.4	497.8	370.2	127.58	3.902	
10,900.0	6,960.0	11,086.5	7,173.0	72.7	72.0	115.33	-3,942.1	198.4	497.8	367.1	130.70	3.808	
11,000.0	6,960.0	11,186.5	7,173.0	74.4	73.7	115.33	-4,042.1	198.4	497.8	363.9	133.83	3.719	
11,100.0	6,960.0	11,286.5	7,173.0	76.1	75.4	115.33	-4,142.1	198.4	497.8	360.8	136.96	3.634	
11,200.0	6,960.0	11,386.5	7,173.0	77.8	77.2	115.33	-4,242.1	198.4	497.8	357.7	140.09	3.553	
11,300.0	6,960.0	11,486.5	7,173.0	79.5	78.9	115.33	-4,342.1	198.4	497.8	354.6	143.22	3.476	
11,400.0	6,960.0	11,586.5	7,173.0	81.2	80.6	115.33	-4,442.1	198.4	497.8	351.4	146.35	3.401	
11,500.0	6,960.0	11,686.5	7,173.0	83.0	82.3	115.33	-4,542.1	198.4	497.8	348.3	149.49	3.330	
11,501.9	6,960.0	11,688.4	7,173.0	83.0	82.4	115.33	-4,544.0	198.4	497.8	348.2	149.55	3.328	
11,512.8	6,960.0	11,696.8	7,173.0	83.2	82.5	115.33	-4,552.4	198.4	497.8	347.9	149.85	3.322 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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			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	-87.97	0.3	-9.8	9.8	9.8	0.00	N/A		
100.0	100.0	100.0	100.0	0.2	0.2	-87.97	0.3	-9.8	9.8	9.4	0.35	28.066		
200.0	200.0	200.0	200.0	0.3	0.3	-87.97	0.3	-9.8	9.8	9.1	0.70	14.033		
300.0	300.0	300.0	300.0	0.5	0.5	-87.97	0.3	-9.8	9.8	8.7	1.05	9.355 CC		
327.9	327.9	327.9	327.9	0.6	0.6	-153.13	0.3	-9.8	9.8	8.7	1.14	8.585		
400.0	400.0	400.0	400.0	0.7	0.7	-153.61	0.3	-9.8	10.0	8.6	1.40	7.156 ES		
500.0	500.0	500.1	500.1	0.9	0.9	-154.97	0.8	-9.1	10.9	9.1	1.75	6.217		
600.0	599.9	600.3	600.3	1.1	1.1	-154.85	2.3	-6.9	11.9	9.8	2.10	5.660		
700.0	699.8	700.5	700.3	1.2	1.2	-153.59	4.8	-3.3	13.0	10.6	2.45	5.315		
800.0	799.5	800.7	800.3	1.4	1.4	-151.51	8.3	1.7	14.4	11.5	2.82	5.103		
900.0	899.2	900.8	900.1	1.7	1.6	-149.08	12.8	8.1	15.9	12.8	3.19	4.997		
1,000.0	998.6	1,000.7	999.8	1.9	1.8	-149.10	17.5	14.8	18.7	15.1	3.57	5.242		
1,100.0	1,098.0	1,100.7	1,099.4	2.1	2.1	-150.25	22.2	21.6	22.2	18.3	3.95	5.627		
1,200.0	1,197.3	1,200.6	1,199.0	2.4	2.3	-151.10	26.8	28.3	25.7	21.4	4.33	5.945		
1,300.0	1,296.7	1,300.6	1,298.6	2.6	2.5	-151.73	31.5	35.0	29.2	24.5	4.71	6.212		
1,400.0	1,396.0	1,400.5	1,398.2	2.9	2.7	-152.23	36.2	41.7	32.8	27.7	5.09	6.438		
1,500.0	1,495.4	1,500.4	1,497.8	3.1	2.9	-152.64	40.9	48.5	36.3	30.8	5.47	6.633		
1,600.0	1,594.8	1,600.4	1,597.4	3.4	3.1	-152.97	45.6	55.2	39.8	33.9	5.85	6.803		
1,700.0	1,694.1	1,700.3	1,697.0	3.7	3.4	-153.25	50.3	61.9	43.3	37.1	6.23	6.951		
1,800.0	1,793.5	1,800.2	1,796.6	3.9	3.6	-153.49	55.0	68.7	46.8	40.2	6.61	7.083		
1,900.0	1,892.8	1,900.2	1,896.2	4.2	3.8	-153.69	59.6	75.4	50.4	43.4	6.99	7.199		
2,000.0	1,992.2	2,000.1	1,995.8	4.4	4.0	-153.87	64.3	82.1	53.9	46.5	7.38	7.304		
2,100.0	2,091.6	2,100.1	2,095.4	4.7	4.3	-154.02	69.0	88.9	57.4	49.6	7.76	7.398		
2,200.0	2,190.9	2,200.0	2,195.0	4.9	4.5	-154.16	73.7	95.6	60.9	52.8	8.14	7.484		
2,300.0	2,290.3	2,299.9	2,294.6	5.2	4.7	-154.28	78.4	102.3	64.5	55.9	8.52	7.561		
2,400.0	2,389.6	2,399.9	2,394.2	5.5	4.9	-154.39	83.1	109.1	68.0	59.1	8.91	7.632		
2,500.0	2,489.0	2,499.8	2,493.8	5.7	5.2	-154.49	87.7	115.8	71.5	62.2	9.29	7.697		
2,600.0	2,588.4	2,599.7	2,593.4	6.0	5.4	-154.58	92.4	122.5	75.0	65.4	9.67	7.757		
2,700.0	2,687.7	2,699.7	2,693.0	6.3	5.6	-154.66	97.1	129.2	78.6	68.5	10.05	7.813		
2,800.0	2,787.1	2,799.6	2,792.6	6.5	5.8	-154.74	101.8	136.0	82.1	71.6	10.44	7.864		
2,900.0	2,886.4	2,899.6	2,892.2	6.8	6.1	-154.80	106.5	142.7	85.6	74.8	10.82	7.911		
3,000.0	2,985.8	2,999.5	2,991.8	7.0	6.3	-154.87	111.2	149.4	89.1	77.9	11.20	7.956		
3,100.0	3,085.2	3,099.4	3,091.4	7.3	6.5	-154.93	115.8	156.2	92.7	81.1	11.59	7.997		
3,200.0	3,184.5	3,199.4	3,191.0	7.6	6.7	-154.98	120.5	162.9	96.2	84.2	11.97	8.036		
3,300.0	3,283.9	3,299.3	3,290.6	7.8	7.0	-155.03	125.2	169.6	99.7	87.4	12.35	8.072		
3,400.0	3,383.2	3,399.2	3,390.2	8.1	7.2	-155.08	129.9	176.4	103.2	90.5	12.74	8.106		
3,500.0	3,482.6	3,499.2	3,489.8	8.4	7.4	-155.12	134.6	183.1	106.8	93.6	13.12	8.138		
3,600.0	3,582.0	3,599.1	3,589.4	8.6	7.6	-155.16	139.3	189.8	110.3	96.8	13.50	8.168		
3,700.0	3,681.3	3,699.1	3,689.0	8.9	7.8	-155.20	143.9	196.5	113.8	99.9	13.88	8.197		
3,800.0	3,780.7	3,799.0	3,788.6	9.1	8.1	-155.23	148.6	203.3	117.3	103.1	14.27	8.224		
3,900.0	3,880.0	3,898.9	3,888.2	9.4	8.3	-155.27	153.3	210.0	120.9	106.2	14.65	8.250		
4,000.0	3,979.4	3,998.9	3,987.8	9.7	8.5	-155.30	158.0	216.7	124.4	109.4	15.03	8.274		
4,100.0	4,078.7	4,098.8	4,087.4	9.9	8.8	-155.33	162.7	223.5	127.9	112.5	15.42	8.297		
4,200.0	4,178.1	4,198.7	4,187.0	10.2	9.0	-155.36	167.4	230.2	131.4	115.6	15.80	8.319		
4,300.0	4,277.5	4,298.7	4,286.6	10.5	9.2	-155.39	172.0	236.9	135.0	118.8	16.18	8.340		
4,400.0	4,376.8	4,398.6	4,386.2	10.7	9.4	-155.41	176.7	243.7	138.5	121.9	16.57	8.360		
4,500.0	4,476.2	4,498.6	4,485.8	11.0	9.7	-155.44	181.4	250.4	142.0	125.1	16.95	8.379		
4,600.0	4,575.5	4,598.5	4,585.4	11.2	9.9	-155.46	186.1	257.1	145.6	128.2	17.33	8.397		
4,700.0	4,674.9	4,698.4	4,685.0	11.5	10.1	-155.48	190.8	263.8	149.1	131.4	17.72	8.414		
4,800.0	4,774.3	4,798.4	4,784.6	11.8	10.3	-155.50	195.5	270.6	152.6	134.5	18.10	8.431		
4,900.0	4,873.6	4,898.3	4,884.2	12.0	10.6	-155.52	200.1	277.3	156.1	137.6	18.48	8.447		
5,000.0	4,973.0	4,998.2	4,983.8	12.3	10.8	-155.54	204.8	284.0	159.7	140.8	18.87	8.462		

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 1E-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 1E-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: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,072.3	5,098.2	5,083.4	12.6	11.0	-155.56	209.5	290.8	163.2	143.9	19.25	8.477	
5,200.0	5,171.7	5,198.1	5,183.0	12.8	11.2	-155.58	214.2	297.5	166.7	147.1	19.63	8.491	
5,300.0	5,271.1	5,298.1	5,282.6	13.1	11.5	-155.60	218.9	304.2	170.2	150.2	20.02	8.505	
5,400.0	5,370.4	5,398.0	5,382.2	13.4	11.7	-155.61	223.6	311.0	173.8	153.4	20.40	8.518	
5,500.0	5,469.8	5,497.9	5,481.8	13.6	11.9	-155.63	228.3	317.7	177.3	156.5	20.78	8.530	
5,600.0	5,569.1	5,597.9	5,581.4	13.9	12.1	-155.64	232.9	324.4	180.8	159.6	21.17	8.543	
5,700.0	5,668.5	5,697.8	5,681.0	14.1	12.4	-155.66	237.6	331.2	184.3	162.8	21.55	8.554	
5,800.0	5,767.9	5,797.8	5,780.6	14.4	12.6	-155.67	242.3	337.9	187.9	165.9	21.93	8.565	
5,900.0	5,867.2	5,897.7	5,880.2	14.7	12.8	-155.68	247.0	344.6	191.4	169.1	22.32	8.576	
6,000.0	5,966.6	5,997.6	5,979.8	14.9	13.0	-155.70	251.7	351.3	194.9	172.2	22.70	8.587	
6,100.0	6,065.9	6,097.6	6,079.4	15.2	13.3	-155.71	256.4	358.1	198.4	175.4	23.08	8.597	
6,200.0	6,165.3	6,197.5	6,179.0	15.5	13.5	-155.72	261.0	364.8	202.0	178.5	23.47	8.607	
6,300.0	6,264.7	6,297.4	6,278.6	15.7	13.7	-166.74	265.7	371.5	205.5	181.6	23.87	8.610	
6,400.0	6,363.7	6,397.5	6,378.4	15.9	13.9	124.48	265.8	378.3	209.2	184.9	24.34	8.594	
6,500.0	6,460.3	6,498.9	6,478.5	16.0	14.0	113.44	251.8	385.0	213.3	188.7	24.59	8.671	
6,600.0	6,552.9	6,601.8	6,577.1	16.1	14.0	110.01	223.4	391.7	217.5	192.9	24.62	8.834	
6,700.0	6,639.5	6,706.1	6,671.7	16.1	14.1	109.00	180.4	398.1	221.8	197.4	24.47	9.066	
6,800.0	6,718.5	6,811.7	6,760.3	16.2	14.1	108.93	123.3	404.1	226.1	201.8	24.24	9.327	
6,900.0	6,788.3	6,918.7	6,840.4	16.4	14.2	109.25	52.8	409.5	230.0	206.0	24.07	9.556	
7,000.0	6,847.6	7,026.8	6,909.9	16.7	14.4	109.68	-29.8	414.2	233.5	209.4	24.16	9.668	
7,100.0	6,895.2	7,135.9	6,966.7	17.0	14.8	110.11	-122.8	418.0	236.4	211.8	24.65	9.592	
7,200.0	6,930.2	7,245.8	7,008.9	17.6	15.4	110.44	-224.1	420.9	238.6	212.9	25.70	9.286	
7,300.0	6,951.9	7,356.3	7,035.3	18.2	16.1	110.65	-331.2	422.7	240.0	212.7	27.34	8.777	
7,400.0	6,960.0	7,467.0	7,045.0	19.0	17.1	110.70	-441.4	423.3	240.5	210.9	29.54	8.142	
7,500.0	6,960.5	7,567.7	7,045.0	20.0	18.2	110.58	-542.1	423.3	240.3	208.7	31.69	7.584	
7,500.0	6,960.0	7,567.7	7,045.0	20.0	18.2	110.70	-542.1	423.3	240.5	208.8	31.67	7.592	
7,600.0	6,960.0	7,667.7	7,045.0	21.0	19.3	110.70	-642.1	423.3	240.5	206.5	33.96	7.081	
7,700.0	6,960.0	7,767.7	7,045.0	22.1	20.5	110.70	-742.1	423.3	240.5	204.1	36.40	6.607	
7,800.0	6,960.0	7,867.7	7,045.0	23.3	21.8	110.70	-842.1	423.3	240.5	201.5	38.96	6.173	
7,900.0	6,960.0	7,967.7	7,045.0	24.6	23.1	110.70	-942.1	423.3	240.5	198.9	41.62	5.778	
8,000.0	6,960.0	8,067.7	7,045.0	25.9	24.5	110.70	-1,042.1	423.3	240.5	196.1	44.37	5.420	
8,100.0	6,960.0	8,167.7	7,045.0	27.3	26.0	110.70	-1,142.1	423.3	240.5	193.3	47.18	5.097	
8,200.0	6,960.0	8,267.7	7,045.0	28.7	27.5	110.70	-1,242.1	423.3	240.5	190.4	50.06	4.804	
8,300.0	6,960.0	8,367.7	7,045.0	30.1	29.0	110.70	-1,342.1	423.3	240.5	187.5	52.98	4.539	
8,400.0	6,960.0	8,467.7	7,045.0	31.6	30.5	110.70	-1,442.1	423.3	240.5	184.5	55.94	4.299	
8,500.0	6,960.0	8,567.7	7,045.0	33.1	32.1	110.70	-1,542.1	423.3	240.5	181.5	58.93	4.080	
8,600.0	6,960.0	8,667.7	7,045.0	34.6	33.6	110.70	-1,642.1	423.3	240.5	178.5	61.96	3.881	
8,700.0	6,960.0	8,767.7	7,045.0	36.2	35.2	110.70	-1,742.1	423.3	240.5	175.5	65.01	3.699	
8,800.0	6,960.0	8,867.7	7,045.0	37.8	36.8	110.70	-1,842.1	423.3	240.5	172.4	68.08	3.532	
8,900.0	6,960.0	8,967.7	7,045.0	39.3	38.5	110.70	-1,942.1	423.3	240.5	169.3	71.17	3.379	
9,000.0	6,960.0	9,067.7	7,045.0	40.9	40.1	110.70	-2,042.1	423.3	240.5	166.2	74.28	3.237	
9,100.0	6,960.0	9,167.7	7,045.0	42.5	41.7	110.70	-2,142.1	423.3	240.5	163.1	77.40	3.107	
9,200.0	6,960.0	9,267.7	7,045.0	44.2	43.4	110.70	-2,242.1	423.3	240.5	159.9	80.54	2.986	
9,300.0	6,960.0	9,367.7	7,045.0	45.8	45.1	110.70	-2,342.1	423.3	240.5	156.8	83.68	2.874	
9,400.0	6,960.0	9,467.7	7,045.0	47.4	46.7	110.70	-2,442.1	423.3	240.5	153.6	86.84	2.769	
9,500.0	6,960.0	9,567.7	7,045.0	49.1	48.4	110.70	-2,542.1	423.3	240.5	150.5	90.01	2.672	
9,600.0	6,960.0	9,667.7	7,045.0	50.7	50.1	110.70	-2,642.1	423.3	240.5	147.3	93.18	2.581	
9,700.0	6,960.0	9,767.7	7,045.0	52.4	51.8	110.70	-2,742.1	423.3	240.5	144.1	96.36	2.496	
9,800.0	6,960.0	9,867.7	7,045.0	54.1	53.4	110.70	-2,842.1	423.3	240.5	140.9	99.55	2.416	
9,900.0	6,960.0	9,967.7	7,045.0	55.7	55.1	110.70	-2,942.1	423.3	240.5	137.7	102.74	2.341	
10,000.0	6,960.0	10,067.7	7,045.0	57.4	56.8	110.70	-3,042.1	423.3	240.5	134.5	105.94	2.270	
10,100.0	6,960.0	10,167.7	7,045.0	59.1	58.5	110.70	-3,142.1	423.3	240.5	131.3	109.15	2.203	

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 1E-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 1E-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			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
10,200.0	6,960.0	10,267.7	7,045.0	60.8	60.2	110.70	-3,242.1	423.3	240.5	128.1	112.36	2.140	
10,300.0	6,960.0	10,367.7	7,045.0	62.5	61.9	110.70	-3,342.1	423.3	240.5	124.9	115.57	2.081	
10,400.0	6,960.0	10,467.7	7,045.0	64.2	63.6	110.70	-3,442.1	423.3	240.5	121.7	118.79	2.024	
10,500.0	6,960.0	10,567.7	7,045.0	65.9	65.4	110.70	-3,542.1	423.3	240.5	118.5	122.01	1.971	
10,600.0	6,960.0	10,667.7	7,045.0	67.6	67.1	110.70	-3,642.1	423.3	240.5	115.2	125.24	1.920	
10,700.0	6,960.0	10,767.7	7,045.0	69.3	68.8	110.70	-3,742.1	423.3	240.5	112.0	128.46	1.872	
10,800.0	6,960.0	10,867.7	7,045.0	71.0	70.5	110.70	-3,842.1	423.3	240.5	108.8	131.69	1.826	
10,900.0	6,960.0	10,967.7	7,045.0	72.7	72.2	110.70	-3,942.1	423.3	240.5	105.5	134.93	1.782	
11,000.0	6,960.0	11,067.7	7,045.0	74.4	73.9	110.70	-4,042.1	423.3	240.5	102.3	138.16	1.741	
11,100.0	6,960.0	11,167.7	7,045.0	76.1	75.7	110.70	-4,142.1	423.3	240.5	99.1	141.40	1.701	
11,200.0	6,960.0	11,267.7	7,045.0	77.8	77.4	110.70	-4,242.1	423.3	240.5	95.8	144.64	1.663	
11,300.0	6,960.0	11,367.7	7,045.0	79.5	79.1	110.70	-4,342.1	423.3	240.5	92.6	147.88	1.626	
11,400.0	6,960.0	11,467.7	7,045.0	81.2	80.8	110.70	-4,442.1	423.3	240.5	89.3	151.12	1.591	
11,500.0	6,960.0	11,567.7	7,045.0	83.0	82.6	110.70	-4,542.1	423.3	240.5	86.1	154.37	1.558	
11,502.6	6,960.0	11,570.3	7,045.0	83.0	82.6	110.70	-4,544.7	423.3	240.5	86.0	154.45	1.557	
11,512.8	6,960.0	11,579.4	7,045.0	83.2	82.8	110.70	-4,553.8	423.3	240.5	85.7	154.77	1.554 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.95	0.0	10.1	10.1	10.1	0.00	N/A		
100.0	100.0	100.0	100.0	0.2	0.2	89.95	0.0	10.1	10.1	9.7	0.35	28.850		
200.0	200.0	200.0	200.0	0.3	0.3	89.95	0.0	10.1	10.1	9.4	0.70	14.425 CC, ES		
300.0	300.0	299.8	299.8	0.5	0.5	88.47	0.3	10.9	10.9	9.9	1.05	10.405		
400.0	400.0	399.6	399.6	0.7	0.7	20.36	1.1	13.4	13.2	11.8	1.40	9.462		
500.0	500.0	499.3	499.2	0.9	0.9	18.61	2.6	17.5	15.8	14.0	1.75	9.051		
600.0	599.9	599.0	598.7	1.1	1.1	17.90	4.5	23.2	18.4	16.3	2.09	8.799		
700.0	699.8	698.6	698.0	1.2	1.3	17.83	7.1	30.6	21.1	18.7	2.45	8.631		
800.0	799.5	798.2	797.1	1.4	1.5	18.20	10.2	39.6	23.8	21.0	2.80	8.513		
900.0	899.2	897.7	896.0	1.7	1.8	18.87	13.8	50.2	26.6	23.4	3.16	8.424		
1,000.0	998.6	997.3	994.7	1.9	2.1	19.74	18.1	62.4	29.4	25.9	3.52	8.352		
1,100.0	1,098.0	1,097.2	1,093.7	2.1	2.3	20.67	22.5	75.4	32.1	28.2	3.89	8.259		
1,200.0	1,197.3	1,197.2	1,192.7	2.4	2.6	21.45	27.0	88.4	34.9	30.6	4.27	8.176		
1,300.0	1,296.7	1,297.1	1,291.7	2.6	2.9	22.12	31.5	101.4	37.6	33.0	4.64	8.103		
1,400.0	1,396.0	1,397.1	1,390.7	2.9	3.2	22.69	36.0	114.4	40.4	35.4	5.02	8.037		
1,500.0	1,495.4	1,497.1	1,489.7	3.1	3.5	23.19	40.5	127.4	43.1	37.7	5.41	7.977		
1,600.0	1,594.8	1,597.0	1,588.8	3.4	3.8	23.64	45.0	140.4	45.9	40.1	5.79	7.923		
1,700.0	1,694.1	1,697.0	1,687.8	3.7	4.1	24.03	49.4	153.4	48.7	42.5	6.18	7.874		
1,800.0	1,793.5	1,796.9	1,786.8	3.9	4.4	24.38	53.9	166.4	51.4	44.9	6.57	7.829		
1,900.0	1,892.8	1,896.9	1,885.8	4.2	4.7	24.69	58.4	179.4	54.2	47.2	6.96	7.788		
2,000.0	1,992.2	1,996.9	1,984.8	4.4	4.9	24.98	62.9	192.4	57.0	49.6	7.35	7.750		
2,100.0	2,091.6	2,096.8	2,083.8	4.7	5.2	25.23	67.4	205.3	59.7	52.0	7.74	7.716		
2,200.0	2,190.9	2,196.8	2,182.8	4.9	5.5	25.47	71.8	218.3	62.5	54.4	8.13	7.683		
2,300.0	2,290.3	2,296.8	2,281.8	5.2	5.8	25.68	76.3	231.3	65.3	56.7	8.53	7.654		
2,400.0	2,389.6	2,396.7	2,380.8	5.5	6.1	25.88	80.8	244.3	68.0	59.1	8.92	7.626		
2,500.0	2,489.0	2,496.7	2,479.9	5.7	6.4	26.06	85.3	257.3	70.8	61.5	9.32	7.600		
2,600.0	2,588.4	2,596.6	2,578.9	6.0	6.7	26.23	89.8	270.3	73.6	63.9	9.71	7.576		
2,700.0	2,687.7	2,696.6	2,677.9	6.3	7.0	26.39	94.2	283.3	76.4	66.3	10.11	7.553		
2,800.0	2,787.1	2,796.6	2,776.9	6.5	7.3	26.53	98.7	296.3	79.1	68.6	10.51	7.532		
2,900.0	2,886.4	2,896.5	2,875.9	6.8	7.6	26.67	103.2	309.3	81.9	71.0	10.90	7.512		
3,000.0	2,985.8	2,996.5	2,974.9	7.0	7.9	26.79	107.7	322.3	84.7	73.4	11.30	7.494		
3,100.0	3,085.2	3,096.4	3,073.9	7.3	8.2	26.91	112.2	335.3	87.5	75.8	11.70	7.476		
3,200.0	3,184.5	3,196.4	3,172.9	7.6	8.5	27.02	116.7	348.3	90.2	78.1	12.10	7.459		
3,300.0	3,283.9	3,296.4	3,272.0	7.8	8.8	27.13	121.1	361.3	93.0	80.5	12.50	7.444		
3,400.0	3,383.2	3,396.3	3,371.0	8.1	9.1	27.22	125.6	374.3	95.8	82.9	12.89	7.429		
3,500.0	3,482.6	3,496.3	3,470.0	8.4	9.4	27.32	130.1	387.3	98.6	85.3	13.29	7.415		
3,600.0	3,582.0	3,596.2	3,569.0	8.6	9.7	27.40	134.6	400.3	101.3	87.7	13.69	7.401		
3,700.0	3,681.3	3,696.2	3,668.0	8.9	10.0	27.49	139.1	413.2	104.1	90.0	14.09	7.389		
3,800.0	3,780.7	3,796.2	3,767.0	9.1	10.3	27.57	143.5	426.2	106.9	92.4	14.49	7.377		
3,900.0	3,880.0	3,896.1	3,866.0	9.4	10.6	27.64	148.0	439.2	109.7	94.8	14.89	7.365		
4,000.0	3,979.4	3,996.1	3,965.0	9.7	10.9	27.71	152.5	452.2	112.5	97.2	15.29	7.354		
4,100.0	4,078.7	4,096.1	4,064.1	9.9	11.2	27.78	157.0	465.2	115.2	99.5	15.69	7.343		
4,200.0	4,178.1	4,196.0	4,163.1	10.2	11.5	27.84	161.5	478.2	118.0	101.9	16.09	7.333		
4,300.0	4,277.5	4,296.0	4,262.1	10.5	11.8	27.90	165.9	491.2	120.8	104.3	16.49	7.324		
4,400.0	4,376.8	4,395.9	4,361.1	10.7	12.1	27.96	170.4	504.2	123.6	106.7	16.89	7.315		
4,500.0	4,476.2	4,495.9	4,460.1	11.0	12.4	28.02	174.9	517.2	126.4	109.1	17.29	7.306		
4,600.0	4,575.5	4,595.9	4,559.1	11.2	12.7	28.07	179.4	530.2	129.1	111.4	17.70	7.297		
4,700.0	4,674.9	4,695.8	4,658.1	11.5	13.0	28.12	183.9	543.2	131.9	113.8	18.10	7.289		
4,800.0	4,774.3	4,795.8	4,757.1	11.8	13.3	28.17	188.4	556.2	134.7	116.2	18.50	7.281		
4,900.0	4,873.6	4,895.7	4,856.1	12.0	13.6	28.22	192.8	569.2	137.5	118.6	18.90	7.274		
5,000.0	4,973.0	4,995.7	4,955.2	12.3	13.9	28.27	197.3	582.2	140.2	120.9	19.30	7.267		
5,100.0	5,072.3	5,095.7	5,054.2	12.6	14.2	28.31	201.8	595.2	143.0	123.3	19.70	7.260		

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 1E-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 1E-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)				
5,200.0	5,171.7	5,195.6	5,153.2	12.8	14.4	28.35	206.3	608.2	145.8	125.7	20.10	7.253		
5,300.0	5,271.1	5,295.6	5,252.2	13.1	14.7	28.39	210.8	621.1	148.6	128.1	20.50	7.247		
5,400.0	5,370.4	5,395.6	5,351.2	13.4	15.0	28.43	215.2	634.1	151.4	130.5	20.91	7.240		
5,500.0	5,469.8	5,495.5	5,450.2	13.6	15.3	28.47	219.7	647.1	154.1	132.8	21.31	7.234		
5,600.0	5,569.1	5,595.5	5,549.2	13.9	15.6	28.51	224.2	660.1	156.9	135.2	21.71	7.229		
5,700.0	5,668.5	5,695.4	5,648.2	14.1	15.9	28.54	228.7	673.1	159.7	137.6	22.11	7.223		
5,800.0	5,767.9	5,795.4	5,747.3	14.4	16.2	28.57	233.2	686.1	162.5	140.0	22.51	7.218		
5,900.0	5,867.2	5,895.4	5,846.3	14.7	16.5	28.61	237.6	699.1	165.3	142.4	22.91	7.212		
6,000.0	5,966.6	5,995.3	5,945.3	14.9	16.8	28.64	242.1	712.1	168.0	144.7	23.32	7.207		
6,100.0	6,065.9	6,095.3	6,044.3	15.2	17.1	28.67	246.6	725.1	170.8	147.1	23.72	7.202		
6,200.0	6,165.3	6,195.2	6,143.3	15.5	17.4	28.70	251.1	738.1	173.6	149.5	24.12	7.197		
6,300.0	6,264.7	6,295.2	6,242.3	15.7	17.7	-9.66	255.6	751.1	176.3	151.9	24.41	7.221		
6,400.0	6,363.7	6,394.1	6,340.3	15.9	18.0	-58.44	260.0	763.9	178.7	154.7	23.99	7.449		
6,500.0	6,460.3	6,490.3	6,435.6	16.0	18.3	-79.56	264.3	776.4	184.0	160.7	23.26	7.911		
6,600.0	6,552.9	6,591.2	6,535.5	16.1	18.6	-94.06	261.1	789.6	194.9	172.0	22.92	8.502		
6,700.0	6,639.5	6,697.6	6,639.2	16.1	18.8	-104.87	242.4	803.2	210.3	187.1	23.11	9.097		
6,800.0	6,718.5	6,810.2	6,744.8	16.2	18.9	-113.27	206.0	817.0	228.5	205.1	23.49	9.730		
6,900.0	6,788.3	6,929.8	6,849.1	16.4	19.1	-119.81	149.6	830.7	248.0	224.2	23.79	10.426		
7,000.0	6,847.6	7,056.7	6,948.2	16.7	19.3	-124.85	71.5	843.7	267.0	243.1	23.92	11.164		
7,100.0	6,895.2	7,191.2	7,036.4	17.0	19.5	-128.60	-29.0	855.3	283.9	260.0	23.89	11.884		
7,200.0	6,930.2	7,332.4	7,107.3	17.6	20.0	-131.23	-150.5	864.6	297.4	273.5	23.87	12.457		
7,300.0	6,951.9	7,479.1	7,154.5	18.2	20.8	-132.83	-289.0	870.8	306.2	282.3	23.97	12.777		
7,400.0	6,960.0	7,629.0	7,172.9	19.0	21.8	-133.43	-437.5	873.2	309.8	285.4	24.32	12.734		
7,500.0	6,960.0	7,733.6	7,173.0	20.0	22.6	-133.44	-542.1	873.2	309.8	283.9	25.94	11.943		
7,600.0	6,960.0	7,833.6	7,173.0	21.0	23.5	-133.44	-642.1	873.2	309.8	282.0	27.76	11.160		
7,700.0	6,960.0	7,933.6	7,173.0	22.1	24.5	-133.44	-742.1	873.2	309.8	280.1	29.69	10.435		
7,800.0	6,960.0	8,033.6	7,173.0	23.3	25.6	-133.44	-842.1	873.2	309.8	278.1	31.71	9.770		
7,900.0	6,960.0	8,133.6	7,173.0	24.6	26.8	-133.44	-942.1	873.2	309.8	276.0	33.80	9.165		
8,000.0	6,960.0	8,233.6	7,173.0	25.9	28.0	-133.44	-1,042.1	873.2	309.8	273.8	35.96	8.616		
8,100.0	6,960.0	8,333.6	7,173.0	27.3	29.3	-133.44	-1,142.1	873.2	309.8	271.6	38.16	8.118		
8,200.0	6,960.0	8,433.6	7,173.0	28.7	30.6	-133.44	-1,242.1	873.2	309.8	269.4	40.41	7.667		
8,300.0	6,960.0	8,533.6	7,173.0	30.1	31.9	-133.44	-1,342.1	873.2	309.8	267.1	42.69	7.257		
8,400.0	6,960.0	8,633.6	7,173.0	31.6	33.3	-133.44	-1,442.1	873.2	309.8	264.8	45.00	6.884		
8,500.0	6,960.0	8,733.6	7,173.0	33.1	34.8	-133.44	-1,542.1	873.2	309.8	262.5	47.34	6.544		
8,600.0	6,960.0	8,833.6	7,173.0	34.6	36.2	-133.44	-1,642.1	873.2	309.8	260.1	49.70	6.233		
8,700.0	6,960.0	8,933.6	7,173.0	36.2	37.7	-133.44	-1,742.1	873.2	309.8	257.7	52.08	5.949		
8,800.0	6,960.0	9,033.6	7,173.0	37.8	39.2	-133.44	-1,842.1	873.2	309.8	255.3	54.47	5.687		
8,900.0	6,960.0	9,133.6	7,173.0	39.3	40.8	-133.44	-1,942.1	873.2	309.8	252.9	56.88	5.446		
9,000.0	6,960.0	9,233.6	7,173.0	40.9	42.3	-133.44	-2,042.1	873.2	309.8	250.5	59.31	5.224		
9,100.0	6,960.0	9,333.6	7,173.0	42.5	43.9	-133.44	-2,142.1	873.2	309.8	248.1	61.74	5.018		
9,200.0	6,960.0	9,433.6	7,173.0	44.2	45.4	-133.44	-2,242.1	873.2	309.8	245.6	64.18	4.827		
9,300.0	6,960.0	9,533.6	7,173.0	45.8	47.0	-133.44	-2,342.1	873.2	309.8	243.2	66.64	4.649		
9,400.0	6,960.0	9,633.6	7,173.0	47.4	48.6	-133.44	-2,442.1	873.2	309.8	240.7	69.10	4.483		
9,500.0	6,960.0	9,733.6	7,173.0	49.1	50.2	-133.44	-2,542.1	873.2	309.8	238.2	71.56	4.329		
9,600.0	6,960.0	9,833.6	7,173.0	50.7	51.8	-133.44	-2,642.1	873.2	309.8	235.8	74.04	4.184		
9,700.0	6,960.0	9,933.6	7,173.0	52.4	53.5	-133.44	-2,742.1	873.2	309.8	233.3	76.52	4.049		
9,800.0	6,960.0	10,033.6	7,173.0	54.1	55.1	-133.44	-2,842.1	873.2	309.8	230.8	79.00	3.921		
9,900.0	6,960.0	10,133.6	7,173.0	55.7	56.8	-133.44	-2,942.1	873.2	309.8	228.3	81.49	3.801		
10,000.0	6,960.0	10,233.6	7,173.0	57.4	58.4	-133.44	-3,042.1	873.2	309.8	225.8	83.99	3.689		
10,100.0	6,960.0	10,333.6	7,173.0	59.1	60.1	-133.44	-3,142.1	873.2	309.8	223.3	86.48	3.582		
10,200.0	6,960.0	10,433.6	7,173.0	60.8	61.7	-133.44	-3,242.1	873.2	309.8	220.8	88.99	3.481		
10,300.0	6,960.0	10,533.6	7,173.0	62.5	63.4	-133.44	-3,342.1	873.2	309.8	218.3	91.49	3.386		

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 1E-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 1E-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							
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Total	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Uncertainty	Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	Axis			
10,400.0	6,960.0	10,633.6	7,173.0	64.2	65.1	-133.44	-3,442.1	873.2	309.8	215.8	94.00	3.296		
10,500.0	6,960.0	10,733.6	7,173.0	65.9	66.7	-133.44	-3,542.1	873.2	309.8	213.3	96.51	3.210		
10,600.0	6,960.0	10,833.6	7,173.0	67.6	68.4	-133.44	-3,642.1	873.2	309.8	210.8	99.02	3.128		
10,700.0	6,960.0	10,933.6	7,173.0	69.3	70.1	-133.44	-3,742.1	873.2	309.8	208.3	101.54	3.051		
10,800.0	6,960.0	11,033.6	7,173.0	71.0	71.8	-133.44	-3,842.1	873.2	309.8	205.7	104.06	2.977		
10,900.0	6,960.0	11,133.6	7,173.0	72.7	73.5	-133.44	-3,942.1	873.2	309.8	203.2	106.58	2.907		
11,000.0	6,960.0	11,233.6	7,173.0	74.4	75.2	-133.44	-4,042.1	873.2	309.8	200.7	109.10	2.840		
11,100.0	6,960.0	11,333.6	7,173.0	76.1	76.9	-133.44	-4,142.1	873.2	309.8	198.2	111.62	2.775		
11,200.0	6,960.0	11,433.6	7,173.0	77.8	78.5	-133.44	-4,242.1	873.2	309.8	195.6	114.15	2.714		
11,300.0	6,960.0	11,533.6	7,173.0	79.5	80.2	-133.44	-4,342.1	873.2	309.8	193.1	116.67	2.655		
11,400.0	6,960.0	11,633.6	7,173.0	81.2	81.9	-133.44	-4,442.1	873.2	309.8	190.6	119.20	2.599		
11,500.0	6,960.0	11,733.6	7,173.0	83.0	83.7	-133.44	-4,542.1	873.2	309.8	188.1	121.73	2.545		
11,512.8	6,960.0	11,746.4	7,173.0	83.2	83.9	-133.44	-4,554.9	873.2	309.8	187.7	122.06	2.538 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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 (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	89.69	4.0	752.2	752.2					
100.0	100.0	100.0	100.0	0.2	0.2	89.69	4.0	752.2	752.2	751.9	0.35	2,154.965		
200.0	200.0	200.0	200.0	0.3	0.3	89.69	4.0	752.2	752.2	751.5	0.70	1,077.482		
300.0	300.0	300.0	300.0	0.5	0.5	89.69	4.0	752.2	752.2	751.2	1.05	718.322		
400.0	400.0	400.0	400.0	0.7	0.7	24.62	4.0	752.2	752.0	750.6	1.40	538.608		
500.0	500.0	495.4	495.4	0.9	0.9	24.67	4.1	752.4	750.6	748.9	1.74	432.023		
600.0	599.9	586.4	586.3	1.1	1.0	24.71	5.1	753.4	748.6	746.6	2.07	361.373		
700.0	699.8	677.3	677.2	1.2	1.2	24.73	7.0	755.6	746.3	743.9	2.41	309.867		
800.0	799.5	768.2	768.1	1.4	1.4	24.73	9.8	758.9	743.6	740.8	2.75	270.449		
900.0	899.2	859.4	859.0	1.7	1.5	24.71	13.5	763.3	740.5	737.4	3.10	239.206		
1,000.0	998.6	959.3	958.7	1.9	1.7	24.71	18.2	768.7	736.4	732.9	3.46	212.612		
1,100.0	1,098.0	1,059.2	1,058.3	2.1	1.9	24.72	22.8	774.1	731.5	727.7	3.84	190.661		
1,200.0	1,197.3	1,159.1	1,158.0	2.4	2.1	24.73	27.4	779.5	726.7	722.5	4.21	172.512		
1,300.0	1,296.7	1,258.9	1,257.6	2.6	2.3	24.74	32.0	784.9	721.8	717.2	4.59	157.276		
1,400.0	1,396.0	1,358.8	1,357.2	2.9	2.5	24.75	36.6	790.3	716.9	712.0	4.97	144.316		
1,500.0	1,495.4	1,458.7	1,456.8	3.1	2.8	24.76	41.3	795.7	712.1	706.7	5.35	133.165		
1,600.0	1,594.8	1,558.6	1,556.5	3.4	3.0	24.77	45.9	801.1	707.2	701.5	5.73	123.474		
1,700.0	1,694.1	1,658.5	1,656.1	3.7	3.2	24.78	50.5	806.4	702.3	696.2	6.11	114.976		
1,800.0	1,793.5	1,758.4	1,755.7	3.9	3.4	24.79	55.1	811.8	697.5	691.0	6.49	107.467		
1,900.0	1,892.8	1,858.2	1,855.4	4.2	3.6	24.80	59.7	817.2	692.6	685.7	6.87	100.785		
2,000.0	1,992.2	1,958.1	1,955.0	4.4	3.8	24.82	64.3	822.6	687.7	680.5	7.25	94.800		
2,100.0	2,091.6	2,058.0	2,054.6	4.7	4.0	24.83	69.0	828.0	682.9	675.2	7.64	89.411		
2,200.0	2,190.9	2,157.9	2,154.2	4.9	4.2	24.84	73.6	833.4	678.0	670.0	8.02	84.533		
2,300.0	2,290.3	2,257.8	2,253.9	5.2	4.4	24.85	78.2	838.8	673.1	664.7	8.40	80.098		
2,400.0	2,389.6	2,357.6	2,353.5	5.5	4.7	24.86	82.8	844.2	668.3	659.5	8.79	76.047		
2,500.0	2,489.0	2,457.5	2,453.1	5.7	4.9	24.87	87.4	849.6	663.4	654.2	9.17	72.333		
2,600.0	2,588.4	2,557.4	2,552.8	6.0	5.1	24.89	92.1	855.0	658.6	649.0	9.56	68.916		
2,700.0	2,687.7	2,657.3	2,652.4	6.3	5.3	24.90	96.7	860.3	653.7	643.7	9.94	65.762		
2,800.0	2,787.1	2,757.2	2,752.0	6.5	5.5	24.91	101.3	865.7	648.8	638.5	10.32	62.842		
2,900.0	2,886.4	2,857.0	2,851.6	6.8	5.7	24.92	105.9	871.1	644.0	633.2	10.71	60.130		
3,000.0	2,985.8	2,956.9	2,951.3	7.0	5.9	24.94	110.5	876.5	639.1	628.0	11.09	57.606		
3,100.0	3,085.2	3,056.8	3,050.9	7.3	6.1	24.95	115.1	881.9	634.2	622.7	11.48	55.250		
3,200.0	3,184.5	3,156.7	3,150.5	7.6	6.4	24.96	119.8	887.3	629.4	617.5	11.86	53.046		
3,300.0	3,283.9	3,256.6	3,250.2	7.8	6.6	24.98	124.4	892.7	624.5	612.2	12.25	50.981		
3,400.0	3,383.2	3,356.5	3,349.8	8.1	6.8	24.99	129.0	898.1	619.6	607.0	12.64	49.041		
3,500.0	3,482.6	3,456.3	3,449.4	8.4	7.0	25.01	133.6	903.5	614.8	601.7	13.02	47.215		
3,600.0	3,582.0	3,556.2	3,549.1	8.6	7.2	25.02	138.2	908.9	609.9	596.5	13.41	45.494		
3,700.0	3,681.3	3,656.1	3,648.7	8.9	7.4	25.03	142.9	914.3	605.0	591.2	13.79	43.869		
3,800.0	3,780.7	3,756.0	3,748.3	9.1	7.6	25.05	147.5	919.6	600.2	586.0	14.18	42.332		
3,900.0	3,880.0	3,855.9	3,847.9	9.4	7.8	25.06	152.1	925.0	595.3	580.7	14.56	40.876		
4,000.0	3,979.4	3,955.7	3,947.6	9.7	8.1	25.08	156.7	930.4	590.4	575.5	14.95	39.495		
4,100.0	4,078.7	4,055.6	4,047.2	9.9	8.3	25.09	161.3	935.8	585.6	570.2	15.34	38.183		
4,200.0	4,178.1	4,155.5	4,146.8	10.2	8.5	25.11	166.0	941.2	580.7	565.0	15.72	36.935		
4,300.0	4,277.5	4,255.4	4,246.5	10.5	8.7	25.13	170.6	946.6	575.9	559.7	16.11	35.747		
4,400.0	4,376.8	4,355.3	4,346.1	10.7	8.9	25.14	175.2	952.0	571.0	554.5	16.50	34.614		
4,500.0	4,476.2	4,455.2	4,445.7	11.0	9.1	25.16	179.8	957.4	566.1	549.2	16.88	33.533		
4,600.0	4,575.5	4,555.0	4,545.3	11.2	9.3	25.18	184.4	962.8	561.3	544.0	17.27	32.501		
4,700.0	4,674.9	4,654.9	4,645.0	11.5	9.6	25.19	189.0	968.2	556.4	538.7	17.66	31.513		
4,800.0	4,774.3	4,754.8	4,744.6	11.8	9.8	25.21	193.7	973.6	551.5	533.5	18.04	30.567		
4,900.0	4,873.6	4,854.7	4,844.2	12.0	10.0	25.23	198.3	978.9	546.7	528.2	18.43	29.661		
5,000.0	4,973.0	4,954.6	4,943.9	12.3	10.2	25.25	202.9	984.3	541.8	523.0	18.82	28.792		
5,100.0	5,072.3	5,054.4	5,043.5	12.6	10.4	25.26	207.5	989.7	536.9	517.7	19.20	27.958		

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 1E-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 1E-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: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,171.7	5,154.3	5,143.1	12.8	10.6	25.28	212.1	995.1	532.1	512.5	19.59	27.157	
5,300.0	5,271.1	5,254.2	5,242.7	13.1	10.8	25.30	216.8	1,000.5	527.2	507.2	19.98	26.387	
5,400.0	5,370.4	5,354.1	5,342.4	13.4	11.0	25.32	221.4	1,005.9	522.3	502.0	20.37	25.646	
5,500.0	5,469.8	5,454.0	5,442.0	13.6	11.3	25.34	226.0	1,011.3	517.5	496.7	20.76	24.932	
5,600.0	5,569.1	5,553.8	5,541.6	13.9	11.5	25.36	230.6	1,016.7	512.6	491.5	21.14	24.245	
5,700.0	5,668.5	5,653.7	5,641.3	14.1	11.7	25.38	235.2	1,022.1	507.8	486.2	21.53	23.582	
5,800.0	5,767.9	5,753.6	5,740.9	14.4	11.9	25.40	239.8	1,027.5	502.9	481.0	21.92	22.942	
5,900.0	5,867.2	5,853.5	5,840.5	14.7	12.1	25.42	244.5	1,032.9	498.0	475.7	22.31	22.325	
6,000.0	5,966.6	5,953.4	5,940.1	14.9	12.3	25.45	249.1	1,038.2	493.2	470.5	22.70	21.728	
6,100.0	6,065.9	6,053.3	6,039.8	15.2	12.5	25.47	253.7	1,043.6	488.3	465.2	23.09	21.152	
6,200.0	6,165.3	6,153.1	6,139.4	15.5	12.8	25.49	258.3	1,049.0	483.4	460.0	23.47	20.594	
6,300.0	6,264.7	6,253.0	6,239.0	15.7	13.0	-12.81	262.9	1,054.4	478.6	454.8	23.79	20.113	
6,400.0	6,363.7	6,352.4	6,338.2	15.9	13.2	-59.27	266.3	1,059.8	473.8	449.9	23.86	19.860	
6,500.0	6,460.3	6,453.5	6,438.8	16.0	13.3	-74.77	258.0	1,065.2	469.6	445.8	23.78	19.746	
6,600.0	6,552.9	6,557.0	6,539.4	16.1	13.3	-82.48	235.0	1,070.7	466.1	442.4	23.68	19.684	
6,700.0	6,639.5	6,662.8	6,637.7	16.1	13.3	-87.51	196.6	1,076.0	463.3	439.7	23.63	19.604	
6,800.0	6,718.5	6,771.0	6,731.3	16.2	13.3	-91.25	142.9	1,081.1	461.2	437.5	23.73	19.436	
6,900.0	6,788.3	6,881.4	6,817.5	16.4	13.4	-94.19	74.1	1,085.7	459.7	435.7	24.04	19.123	
7,000.0	6,847.6	6,994.1	6,893.4	16.7	13.6	-96.52	-8.9	1,089.8	458.8	434.1	24.61	18.638	
7,100.0	6,895.2	7,108.7	6,956.4	17.0	14.0	-98.32	-104.5	1,093.2	458.2	432.7	25.52	17.957	
7,200.0	6,930.2	7,224.8	7,003.8	17.6	14.6	-99.62	-210.3	1,095.8	457.9	431.2	26.74	17.124	
7,300.0	6,951.9	7,342.1	7,033.8	18.2	15.4	-100.41	-323.5	1,097.4	457.8	429.5	28.27	16.192	
7,400.0	6,960.0	7,460.0	7,044.9	19.0	16.5	-100.70	-440.7	1,098.0	457.7	427.7	30.09	15.214	
7,425.0	6,960.2	7,486.3	7,045.0	19.3	16.8	-100.68	-467.1	1,098.0	457.7	427.0	30.65	14.934 CC	
7,500.0	6,960.0	7,561.3	7,045.0	20.0	17.6	-100.70	-542.1	1,098.0	457.7	425.4	32.33	14.160	
7,600.0	6,960.0	7,661.3	7,045.0	21.0	18.8	-100.70	-642.1	1,098.1	457.7	423.0	34.77	13.166	
7,700.0	6,960.0	7,761.3	7,045.0	22.1	20.0	-100.70	-742.1	1,098.1	457.7	420.4	37.36	12.251	
7,800.0	6,960.0	7,861.3	7,045.0	23.3	21.3	-100.70	-842.1	1,098.1	457.7	417.7	40.09	11.417	
7,900.0	6,960.0	7,961.3	7,045.0	24.6	22.7	-100.70	-942.1	1,098.1	457.8	414.8	42.92	10.664	
8,000.0	6,960.0	8,061.3	7,045.0	25.9	24.2	-100.70	-1,042.1	1,098.1	457.8	411.9	45.84	9.986	
8,100.0	6,960.0	8,161.3	7,045.0	27.3	25.6	-100.70	-1,142.1	1,098.1	457.8	408.9	48.82	9.376	
8,200.0	6,960.0	8,261.3	7,045.0	28.7	27.1	-100.70	-1,242.1	1,098.1	457.8	405.9	51.87	8.826	
8,300.0	6,960.0	8,361.3	7,045.0	30.1	28.7	-100.70	-1,342.1	1,098.1	457.8	402.8	54.96	8.329	
8,400.0	6,960.0	8,461.3	7,045.0	31.6	30.2	-100.70	-1,442.1	1,098.1	457.8	399.7	58.09	7.880	
8,500.0	6,960.0	8,561.3	7,045.0	33.1	31.8	-100.70	-1,542.1	1,098.1	457.8	396.5	61.25	7.473	
8,600.0	6,960.0	8,661.3	7,045.0	34.6	33.4	-100.70	-1,642.1	1,098.1	457.8	393.3	64.45	7.103	
8,700.0	6,960.0	8,761.3	7,045.0	36.2	35.0	-100.70	-1,742.1	1,098.1	457.8	390.1	67.67	6.765	
8,800.0	6,960.0	8,861.3	7,045.0	37.8	36.6	-100.70	-1,842.1	1,098.1	457.8	386.9	70.91	6.456	
8,900.0	6,960.0	8,961.3	7,045.0	39.3	38.3	-100.70	-1,942.1	1,098.1	457.8	383.6	74.17	6.172	
9,000.0	6,960.0	9,061.3	7,045.0	40.9	39.9	-100.70	-2,042.1	1,098.1	457.8	380.3	77.44	5.911	
9,100.0	6,960.0	9,161.3	7,045.0	42.5	41.6	-100.70	-2,142.1	1,098.1	457.8	377.1	80.73	5.670	
9,200.0	6,960.0	9,261.3	7,045.0	44.2	43.2	-100.70	-2,242.1	1,098.1	457.8	373.8	84.04	5.448	
9,300.0	6,960.0	9,361.3	7,045.0	45.8	44.9	-100.70	-2,342.1	1,098.1	457.8	370.4	87.35	5.241	
9,400.0	6,960.0	9,461.3	7,045.0	47.4	46.6	-100.70	-2,442.1	1,098.1	457.8	367.1	90.67	5.049	
9,500.0	6,960.0	9,561.3	7,045.0	49.1	48.2	-100.70	-2,542.1	1,098.1	457.8	363.8	94.01	4.870	
9,600.0	6,960.0	9,661.3	7,045.0	50.7	49.9	-100.70	-2,642.1	1,098.1	457.8	360.5	97.35	4.703	
9,700.0	6,960.0	9,761.3	7,045.0	52.4	51.6	-100.70	-2,742.1	1,098.1	457.8	357.1	100.69	4.546	
9,800.0	6,960.0	9,861.3	7,045.0	54.1	53.3	-100.70	-2,842.1	1,098.1	457.8	353.8	104.05	4.400	
9,900.0	6,960.0	9,961.3	7,045.0	55.7	55.0	-100.70	-2,942.1	1,098.1	457.8	350.4	107.41	4.262	
10,000.0	6,960.0	10,061.3	7,045.0	57.4	56.7	-100.70	-3,042.1	1,098.1	457.8	347.0	110.78	4.133	
10,100.0	6,960.0	10,161.3	7,045.0	59.1	58.4	-100.70	-3,142.1	1,098.1	457.8	343.7	114.15	4.011	
10,200.0	6,960.0	10,261.3	7,045.0	60.8	60.1	-100.70	-3,242.1	1,098.1	457.8	340.3	117.52	3.896	

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 1E-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 1E-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 (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						
10,300.0	6,960.0	10,361.3	7,045.0	62.5	61.8	-100.70	-3,342.1	1,098.1	457.8	336.9	120.90	3.787						
10,400.0	6,960.0	10,461.3	7,045.0	64.2	63.5	-100.70	-3,442.1	1,098.1	457.8	333.5	124.28	3.684						
10,500.0	6,960.0	10,561.3	7,045.0	65.9	65.3	-100.70	-3,542.1	1,098.1	457.8	330.2	127.67	3.586						
10,600.0	6,960.0	10,661.3	7,045.0	67.6	67.0	-100.70	-3,642.1	1,098.1	457.8	326.8	131.06	3.493						
10,700.0	6,960.0	10,761.3	7,045.0	69.3	68.7	-100.70	-3,742.1	1,098.1	457.8	323.4	134.45	3.405						
10,800.0	6,960.0	10,861.3	7,045.0	71.0	70.4	-100.70	-3,842.1	1,098.1	457.8	320.0	137.85	3.321						
10,900.0	6,960.0	10,961.3	7,045.0	72.7	72.1	-100.70	-3,942.1	1,098.2	457.8	316.6	141.25	3.241						
11,000.0	6,960.0	11,061.3	7,045.0	74.4	73.9	-100.70	-4,042.1	1,098.2	457.8	313.2	144.65	3.165						
11,100.0	6,960.0	11,161.3	7,045.0	76.1	75.6	-100.70	-4,142.1	1,098.2	457.8	309.8	148.05	3.093						
11,200.0	6,960.0	11,261.3	7,045.0	77.8	77.3	-100.70	-4,242.1	1,098.2	457.9	306.4	151.45	3.023						
11,300.0	6,960.0	11,361.3	7,045.0	79.5	79.0	-100.70	-4,342.1	1,098.2	457.9	303.0	154.86	2.957						
11,400.0	6,960.0	11,461.3	7,045.0	81.2	80.8	-100.70	-4,442.1	1,098.2	457.9	299.6	158.27	2.893						
11,500.0	6,960.0	11,561.3	7,045.0	83.0	82.5	-100.70	-4,542.1	1,098.2	457.9	296.2	161.68	2.832						
11,512.8	6,960.0	11,574.1	7,045.0	83.2	82.7	-100.70	-4,554.9	1,098.2	457.9	295.7	162.12	2.824 ES, SF						

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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		
0.0	0.0	0.0	0.0	0.0	0.0	89.73	3.6	762.3	762.3					
100.0	100.0	100.0	100.0	0.2	0.2	89.73	3.6	762.3	762.3	761.9	0.35	2,183.809		
200.0	200.0	200.0	200.0	0.3	0.3	89.73	3.6	762.3	762.3	761.6	0.70	1,091.904		
300.0	300.0	300.0	300.0	0.5	0.5	89.73	3.6	762.3	762.3	761.2	1.05	727.936		
400.0	400.0	400.0	400.0	0.7	0.7	24.66	3.6	762.3	762.1	760.7	1.40	545.819		
500.0	500.0	489.5	489.5	0.9	0.9	24.69	4.0	762.9	761.2	759.5	1.73	440.749		
600.0	599.9	579.0	578.9	1.1	1.0	24.72	5.0	764.8	760.1	758.0	2.06	369.165		
700.0	699.8	668.5	668.4	1.2	1.2	24.75	6.6	767.8	758.8	756.4	2.39	317.078		
800.0	799.5	758.0	757.7	1.4	1.3	24.78	8.9	772.2	757.3	754.6	2.73	277.333		
900.0	899.2	847.5	847.1	1.7	1.5	24.81	11.8	777.7	755.6	752.5	3.07	245.895		
1,000.0	998.6	937.1	936.3	1.9	1.7	24.84	15.5	784.5	753.7	750.2	3.42	220.334		
1,100.0	1,098.0	1,032.3	1,031.0	2.1	1.9	24.85	19.9	792.8	752.2	748.4	3.79	198.714		
1,200.0	1,197.3	1,132.2	1,130.5	2.4	2.2	24.85	24.6	801.7	750.8	746.6	4.16	180.436		
1,300.0	1,296.7	1,232.2	1,230.0	2.6	2.4	24.85	29.4	810.6	749.4	744.9	4.54	165.118		
1,400.0	1,396.0	1,332.2	1,329.4	2.9	2.6	24.86	34.1	819.5	748.1	743.2	4.92	152.110		
1,500.0	1,495.4	1,432.2	1,428.9	3.1	2.9	24.86	38.8	828.4	746.7	741.4	5.30	140.935		
1,600.0	1,594.8	1,532.2	1,528.4	3.4	3.1	24.86	43.6	837.3	745.4	739.7	5.68	131.236		
1,700.0	1,694.1	1,632.2	1,627.9	3.7	3.3	24.86	48.3	846.2	744.0	738.0	6.06	122.742		
1,800.0	1,793.5	1,732.2	1,727.4	3.9	3.6	24.87	53.0	855.1	742.7	736.2	6.44	115.244		
1,900.0	1,892.8	1,832.2	1,826.9	4.2	3.8	24.87	57.8	864.0	741.3	734.5	6.83	108.578		
2,000.0	1,992.2	1,932.2	1,926.3	4.4	4.1	24.87	62.5	872.9	739.9	732.7	7.21	102.615		
2,100.0	2,091.6	2,032.2	2,025.8	4.7	4.3	24.87	67.2	881.8	738.6	731.0	7.59	97.250		
2,200.0	2,190.9	2,132.2	2,125.3	4.9	4.6	24.87	72.0	890.7	737.2	729.2	7.98	92.397		
2,300.0	2,290.3	2,232.1	2,224.8	5.2	4.8	24.88	76.7	899.6	735.9	727.5	8.36	87.987		
2,400.0	2,389.6	2,332.1	2,324.3	5.5	5.0	24.88	81.4	908.5	734.5	725.8	8.75	83.963		
2,500.0	2,489.0	2,432.1	2,423.7	5.7	5.3	24.88	86.2	917.4	733.1	724.0	9.13	80.275		
2,600.0	2,588.4	2,532.1	2,523.2	6.0	5.5	24.88	90.9	926.3	731.8	722.3	9.52	76.885		
2,700.0	2,687.7	2,632.1	2,622.7	6.3	5.8	24.89	95.6	935.1	730.4	720.5	9.90	73.757		
2,800.0	2,787.1	2,732.1	2,722.2	6.5	6.0	24.89	100.4	944.0	729.1	718.8	10.29	70.862		
2,900.0	2,886.4	2,832.1	2,821.7	6.8	6.3	24.89	105.1	952.9	727.7	717.0	10.67	68.175		
3,000.0	2,985.8	2,932.1	2,921.1	7.0	6.5	24.89	109.8	961.8	726.4	715.3	11.06	65.675		
3,100.0	3,085.2	3,032.1	3,020.6	7.3	6.8	24.90	114.6	970.7	725.0	713.6	11.45	63.343		
3,200.0	3,184.5	3,132.1	3,120.1	7.6	7.0	24.90	119.3	979.6	723.6	711.8	11.83	61.162		
3,300.0	3,283.9	3,232.0	3,219.6	7.8	7.3	24.90	124.0	988.5	722.3	710.1	12.22	59.119		
3,400.0	3,383.2	3,332.0	3,319.1	8.1	7.5	24.90	128.8	997.4	720.9	708.3	12.60	57.201		
3,500.0	3,482.6	3,432.0	3,418.6	8.4	7.8	24.90	133.5	1,006.3	719.6	706.6	12.99	55.396		
3,600.0	3,582.0	3,532.0	3,518.0	8.6	8.0	24.91	138.3	1,015.2	718.2	704.8	13.38	53.695		
3,700.0	3,681.3	3,632.0	3,617.5	8.9	8.3	24.91	143.0	1,024.1	716.8	703.1	13.76	52.089		
3,800.0	3,780.7	3,732.0	3,717.0	9.1	8.5	24.91	147.7	1,033.0	715.5	701.3	14.15	50.571		
3,900.0	3,880.0	3,832.0	3,816.5	9.4	8.7	24.91	152.5	1,041.9	714.1	699.6	14.53	49.133		
4,000.0	3,979.4	3,932.0	3,916.0	9.7	9.0	24.92	157.2	1,050.8	712.8	697.9	14.92	47.770		
4,100.0	4,078.7	4,032.0	4,015.4	9.9	9.2	24.92	161.9	1,059.7	711.4	696.1	15.31	46.475		
4,200.0	4,178.1	4,132.0	4,114.9	10.2	9.5	24.92	166.7	1,068.6	710.1	694.4	15.69	45.244		
4,300.0	4,277.5	4,232.0	4,214.4	10.5	9.7	24.92	171.4	1,077.5	708.7	692.6	16.08	44.071		
4,400.0	4,376.8	4,331.9	4,313.9	10.7	10.0	24.93	176.1	1,086.4	707.3	690.9	16.47	42.954		
4,500.0	4,476.2	4,431.9	4,413.4	11.0	10.2	24.93	180.9	1,095.3	706.0	689.1	16.85	41.888		
4,600.0	4,575.5	4,531.9	4,512.9	11.2	10.5	24.93	185.6	1,104.2	704.6	687.4	17.24	40.870		
4,700.0	4,674.9	4,631.9	4,612.3	11.5	10.7	24.93	190.3	1,113.1	703.3	685.6	17.63	39.896		
4,800.0	4,774.3	4,731.9	4,711.8	11.8	11.0	24.94	195.1	1,121.9	701.9	683.9	18.01	38.964		
4,900.0	4,873.6	4,831.9	4,811.3	12.0	11.2	24.94	199.8	1,130.8	700.5	682.1	18.40	38.071		
5,000.0	4,973.0	4,931.9	4,910.8	12.3	11.5	24.94	204.5	1,139.7	699.2	680.4	18.79	37.215		
5,100.0	5,072.3	5,031.9	5,010.3	12.6	11.7	24.94	209.3	1,148.6	697.8	678.7	19.17	36.393		

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 1E-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 1E-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			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	5,171.7	5,131.9	5,109.7	12.8	12.0	24.95	214.0	1,157.5	696.5	676.9	19.56	35.604		
5,300.0	5,271.1	5,231.9	5,209.2	13.1	12.2	24.95	218.7	1,166.4	695.1	675.2	19.95	34.845		
5,400.0	5,370.4	5,331.9	5,308.7	13.4	12.5	24.95	223.5	1,175.3	693.8	673.4	20.34	34.115		
5,500.0	5,469.8	5,431.8	5,408.2	13.6	12.7	24.95	228.2	1,184.2	692.4	671.7	20.72	33.413		
5,600.0	5,569.1	5,531.8	5,507.7	13.9	13.0	24.96	232.9	1,193.1	691.0	669.9	21.11	32.736		
5,700.0	5,668.5	5,631.8	5,607.2	14.1	13.2	24.96	237.7	1,202.0	689.7	668.2	21.50	32.083		
5,800.0	5,767.9	5,731.8	5,706.6	14.4	13.4	24.96	242.4	1,210.9	688.3	666.4	21.88	31.454		
5,900.0	5,867.2	5,831.8	5,806.1	14.7	13.7	24.96	247.1	1,219.8	687.0	664.7	22.27	30.846		
6,000.0	5,966.6	5,931.8	5,905.6	14.9	13.9	24.97	251.9	1,228.7	685.6	662.9	22.66	30.259		
6,100.0	6,065.9	6,031.8	6,005.1	15.2	14.2	24.97	256.6	1,237.6	684.2	661.2	23.05	29.692		
6,200.0	6,165.3	6,131.8	6,104.6	15.5	14.4	24.97	261.3	1,246.5	682.9	659.5	23.43	29.143		
6,300.0	6,264.7	6,231.7	6,204.0	15.7	14.7	-13.13	266.1	1,255.4	681.5	657.8	23.77	28.674		
6,400.0	6,363.7	6,331.9	6,303.7	15.9	14.9	-58.49	265.0	1,264.3	680.2	656.3	23.88	28.485		
6,500.0	6,460.3	6,433.4	6,403.5	16.0	15.0	-72.57	249.8	1,273.2	679.1	655.2	23.86	28.464		
6,600.0	6,552.9	6,536.0	6,501.3	16.1	15.1	-78.87	220.1	1,282.0	678.0	654.3	23.77	28.529		
6,700.0	6,639.5	6,639.8	6,594.9	16.1	15.1	-82.52	176.2	1,290.3	677.2	653.5	23.70	28.575		
6,800.0	6,718.5	6,744.8	6,682.1	16.2	15.2	-84.95	118.4	1,298.1	676.5	652.7	23.75	28.483		
6,900.0	6,788.3	6,850.8	6,760.7	16.4	15.3	-86.68	47.7	1,305.2	675.9	651.9	24.02	28.135		
7,000.0	6,847.6	6,957.8	6,828.6	16.7	15.6	-87.95	-34.6	1,311.2	675.5	650.8	24.61	27.452		
7,100.0	6,895.2	7,065.7	6,883.9	17.0	15.9	-88.87	-126.9	1,316.2	675.1	649.6	25.55	26.423		
7,200.0	6,930.2	7,174.1	6,924.9	17.6	16.5	-89.50	-227.2	1,319.9	674.9	648.0	26.87	25.114		
7,300.0	6,951.9	7,283.0	6,950.6	18.2	17.3	-89.87	-332.9	1,322.1	674.8	646.2	28.55	23.636		
7,400.0	6,960.0	7,392.2	6,960.0	19.0	18.2	-90.00	-441.5	1,323.0	674.7	644.2	30.52	22.108		
7,434.6	6,960.3	7,427.4	6,960.0	19.4	18.5	-89.98	-476.7	1,323.0	674.7	643.4	31.31	21.551 CC		
7,500.0	6,960.0	7,492.8	6,960.0	20.0	19.1	-90.00	-542.1	1,323.0	674.7	641.9	32.79	20.575		
7,600.0	6,960.0	7,592.8	6,960.0	21.0	20.2	-90.00	-642.1	1,323.0	674.7	639.5	35.27	19.129		
7,700.0	6,960.0	7,692.8	6,960.0	22.1	21.4	-90.00	-742.1	1,323.0	674.7	636.8	37.92	17.795		
7,800.0	6,960.0	7,792.8	6,960.0	23.3	22.6	-90.00	-842.1	1,323.0	674.7	634.0	40.69	16.582		
7,900.0	6,960.0	7,892.8	6,960.0	24.6	23.9	-90.00	-942.1	1,323.0	674.7	631.2	43.57	15.486		
8,000.0	6,960.0	7,992.8	6,960.0	25.9	25.3	-90.00	-1,042.1	1,323.0	674.7	628.2	46.54	14.499		
8,100.0	6,960.0	8,092.8	6,960.0	27.3	26.7	-90.00	-1,142.1	1,323.0	674.7	625.2	49.57	13.611		
8,200.0	6,960.0	8,192.8	6,960.0	28.7	28.1	-90.00	-1,242.1	1,323.0	674.7	622.1	52.67	12.811		
8,300.0	6,960.0	8,292.8	6,960.0	30.1	29.6	-90.00	-1,342.1	1,323.0	674.8	618.9	55.81	12.089		
8,400.0	6,960.0	8,392.8	6,960.0	31.6	31.1	-90.00	-1,442.1	1,323.0	674.8	615.8	59.00	11.437		
8,500.0	6,960.0	8,492.8	6,960.0	33.1	32.7	-90.00	-1,542.1	1,323.0	674.8	612.5	62.22	10.845		
8,600.0	6,960.0	8,592.8	6,960.0	34.6	34.2	-90.00	-1,642.1	1,323.0	674.8	609.3	65.47	10.307		
8,700.0	6,960.0	8,692.8	6,960.0	36.2	35.8	-90.00	-1,742.1	1,323.0	674.8	606.0	68.74	9.816		
8,800.0	6,960.0	8,792.8	6,960.0	37.8	37.4	-90.00	-1,842.1	1,323.0	674.8	602.7	72.04	9.366		
8,900.0	6,960.0	8,892.8	6,960.0	39.3	39.0	-90.00	-1,942.1	1,323.0	674.8	599.4	75.36	8.954		
9,000.0	6,960.0	8,992.8	6,960.0	40.9	40.6	-90.00	-2,042.1	1,323.0	674.8	596.1	78.69	8.575		
9,100.0	6,960.0	9,092.8	6,960.0	42.5	42.2	-90.00	-2,142.1	1,323.0	674.8	592.7	82.04	8.225		
9,200.0	6,960.0	9,192.8	6,960.0	44.2	43.8	-90.00	-2,242.1	1,323.1	674.8	589.4	85.40	7.902		
9,300.0	6,960.0	9,292.8	6,960.0	45.8	45.5	-90.00	-2,342.1	1,323.1	674.8	586.0	88.77	7.601		
9,400.0	6,960.0	9,392.8	6,960.0	47.4	47.1	-90.00	-2,442.1	1,323.1	674.8	582.6	92.15	7.322		
9,500.0	6,960.0	9,492.8	6,960.0	49.1	48.8	-90.00	-2,542.1	1,323.1	674.8	579.2	95.54	7.063		
9,600.0	6,960.0	9,592.8	6,960.0	50.7	50.5	-90.00	-2,642.1	1,323.1	674.8	575.8	98.94	6.820		
9,700.0	6,960.0	9,692.8	6,960.0	52.4	52.1	-90.00	-2,742.1	1,323.1	674.8	572.4	102.35	6.593		
9,800.0	6,960.0	9,792.8	6,960.0	54.1	53.8	-90.00	-2,842.1	1,323.1	674.8	569.0	105.76	6.380		
9,900.0	6,960.0	9,892.8	6,960.0	55.7	55.5	-90.00	-2,942.1	1,323.1	674.8	565.6	109.18	6.181		
10,000.0	6,960.0	9,992.8	6,960.0	57.4	57.2	-90.00	-3,042.1	1,323.1	674.8	562.2	112.61	5.993		
10,100.0	6,960.0	10,092.8	6,960.0	59.1	58.9	-90.00	-3,142.1	1,323.1	674.8	558.8	116.04	5.815		
10,200.0	6,960.0	10,192.8	6,960.0	60.8	60.6	-90.00	-3,242.1	1,323.1	674.8	555.3	119.47	5.648		

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 1E-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 1E-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		
10,300.0	6,960.0	10,292.8	6,960.0	62.5	62.3	-90.00	-3,342.1	1,323.1	674.8	551.9	122.91	5.490		
10,400.0	6,960.0	10,392.8	6,960.0	64.2	64.0	-90.00	-3,442.1	1,323.1	674.8	548.5	126.35	5.341		
10,500.0	6,960.0	10,492.8	6,960.0	65.9	65.7	-90.00	-3,542.1	1,323.1	674.8	545.0	129.80	5.199		
10,600.0	6,960.0	10,592.8	6,960.0	67.6	67.4	-90.00	-3,642.1	1,323.1	674.8	541.6	133.25	5.064		
10,700.0	6,960.0	10,692.8	6,960.0	69.3	69.1	-90.00	-3,742.1	1,323.1	674.8	538.1	136.70	4.937		
10,800.0	6,960.0	10,792.8	6,960.0	71.0	70.8	-90.00	-3,842.1	1,323.1	674.8	534.7	140.15	4.815		
10,900.0	6,960.0	10,892.8	6,960.0	72.7	72.5	-90.00	-3,942.1	1,323.1	674.8	531.2	143.61	4.699		
11,000.0	6,960.0	10,992.8	6,960.0	74.4	74.2	-90.00	-4,042.1	1,323.1	674.8	527.8	147.07	4.589		
11,100.0	6,960.0	11,092.8	6,960.0	76.1	75.9	-90.00	-4,142.1	1,323.1	674.8	524.3	150.53	4.483		
11,200.0	6,960.0	11,192.8	6,960.0	77.8	77.7	-90.00	-4,242.1	1,323.1	674.8	520.8	154.00	4.382		
11,300.0	6,960.0	11,292.8	6,960.0	79.5	79.4	-90.00	-4,342.1	1,323.1	674.8	517.4	157.46	4.286		
11,400.0	6,960.0	11,392.8	6,960.0	81.2	81.1	-90.00	-4,442.1	1,323.1	674.8	513.9	160.93	4.193		
11,500.0	6,960.0	11,492.8	6,960.0	83.0	82.8	-90.00	-4,542.1	1,323.1	674.9	510.5	164.40	4.105		
11,512.8	6,960.0	11,505.6	6,960.0	83.2	83.0	-90.00	-4,554.9	1,323.1	674.9	510.0	164.84	4.094 ES, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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						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	89.73	3.6	772.4	772.4					
100.0	100.0	100.0	100.0	0.2	0.2	89.73	3.6	772.4	772.4	772.0	0.35	2,212.659		
200.0	200.0	200.0	200.0	0.3	0.3	89.73	3.6	772.4	772.4	771.7	0.70	1,106.329		
300.0	300.0	300.0	300.0	0.5	0.5	89.73	3.6	772.4	772.4	771.3	1.05	737.553		
400.0	400.0	394.4	394.4	0.7	0.7	24.65	3.7	772.5	772.3	771.0	1.39	557.060		
500.0	500.0	483.2	483.2	0.9	0.8	24.67	4.2	773.8	772.2	770.5	1.72	449.957		
600.0	599.9	572.0	571.9	1.1	1.0	24.69	5.2	776.4	771.9	769.9	2.05	377.118		
700.0	699.8	660.8	660.6	1.2	1.2	24.73	6.6	780.2	771.5	769.2	2.38	324.219		
800.0	799.5	749.6	749.3	1.4	1.3	24.78	8.6	785.4	771.0	768.3	2.72	283.939		
900.0	899.2	838.4	837.8	1.7	1.5	24.84	11.1	791.8	770.3	767.3	3.06	252.148		
1,000.0	998.6	927.3	926.3	1.9	1.7	24.92	14.0	799.5	769.5	766.1	3.40	226.341		
1,059.0	1,057.2	979.7	978.4	2.0	1.8	24.96	15.9	804.7	769.3	765.7	3.61	213.302 CC		
1,100.0	1,098.0	1,016.1	1,014.6	2.1	1.9	24.98	17.4	808.5	769.4	765.6	3.75	205.133		
1,200.0	1,197.3	1,107.7	1,105.5	2.4	2.2	25.01	21.4	819.1	770.7	766.5	4.11	187.511		
1,300.0	1,296.7	1,207.7	1,204.7	2.6	2.4	25.02	26.0	831.0	772.3	767.9	4.49	172.138		
1,400.0	1,396.0	1,307.7	1,303.9	2.9	2.7	25.04	30.5	842.9	774.0	769.2	4.87	159.096		
1,500.0	1,495.4	1,407.7	1,403.0	3.1	3.0	25.05	35.1	854.8	775.7	770.5	5.24	147.902		
1,600.0	1,594.8	1,507.7	1,502.2	3.4	3.2	25.07	39.6	866.7	777.4	771.8	5.63	138.193		
1,700.0	1,694.1	1,607.7	1,601.4	3.7	3.5	25.09	44.1	878.6	779.1	773.1	6.01	129.697		
1,800.0	1,793.5	1,707.7	1,700.6	3.9	3.8	25.10	48.7	890.6	780.7	774.4	6.39	122.203		
1,900.0	1,892.8	1,807.6	1,799.7	4.2	4.1	25.12	53.2	902.5	782.4	775.7	6.77	115.544		
2,000.0	1,992.2	1,907.6	1,898.9	4.4	4.3	25.13	57.7	914.4	784.1	777.0	7.15	109.590		
2,100.0	2,091.6	2,007.6	1,998.1	4.7	4.6	25.15	62.3	926.3	785.8	778.3	7.54	104.235		
2,200.0	2,190.9	2,107.6	2,097.2	4.9	4.9	25.16	66.8	938.2	787.5	779.5	7.92	99.393		
2,300.0	2,290.3	2,207.6	2,196.4	5.2	5.2	25.18	71.4	950.2	789.2	780.8	8.31	94.996		
2,400.0	2,389.6	2,307.6	2,295.6	5.5	5.4	25.19	75.9	962.1	790.8	782.1	8.69	90.984		
2,500.0	2,489.0	2,407.6	2,394.7	5.7	5.7	25.21	80.4	974.0	792.5	783.4	9.08	87.310		
2,600.0	2,588.4	2,507.5	2,493.9	6.0	6.0	25.22	85.0	985.9	794.2	784.7	9.46	83.932		
2,700.0	2,687.7	2,607.5	2,593.1	6.3	6.3	25.24	89.5	997.8	795.9	786.0	9.85	80.817		
2,800.0	2,787.1	2,707.5	2,692.2	6.5	6.6	25.25	94.1	1,009.7	797.6	787.3	10.23	77.935		
2,900.0	2,886.4	2,807.5	2,791.4	6.8	6.9	25.27	98.6	1,021.7	799.2	788.6	10.62	75.260		
3,000.0	2,985.8	2,907.5	2,890.6	7.0	7.1	25.28	103.1	1,033.6	800.9	789.9	11.01	72.772		
3,100.0	3,085.2	3,007.5	2,989.8	7.3	7.4	25.30	107.7	1,045.5	802.6	791.2	11.39	70.452		
3,200.0	3,184.5	3,107.5	3,088.9	7.6	7.7	25.31	112.2	1,057.4	804.3	792.5	11.78	68.283		
3,300.0	3,283.9	3,207.4	3,188.1	7.8	8.0	25.33	116.8	1,069.3	806.0	793.8	12.17	66.251		
3,400.0	3,383.2	3,307.4	3,287.3	8.1	8.3	25.34	121.3	1,081.2	807.7	795.1	12.55	64.343		
3,500.0	3,482.6	3,407.4	3,386.4	8.4	8.5	25.36	125.8	1,093.2	809.3	796.4	12.94	62.548		
3,600.0	3,582.0	3,507.4	3,485.6	8.6	8.8	25.37	130.4	1,105.1	811.0	797.7	13.33	60.858		
3,700.0	3,681.3	3,607.4	3,584.8	8.9	9.1	25.39	134.9	1,117.0	812.7	799.0	13.71	59.262		
3,800.0	3,780.7	3,707.4	3,683.9	9.1	9.4	25.40	139.4	1,128.9	814.4	800.3	14.10	57.753		
3,900.0	3,880.0	3,807.4	3,783.1	9.4	9.7	25.41	144.0	1,140.8	816.1	801.6	14.49	56.324		
4,000.0	3,979.4	3,907.3	3,882.3	9.7	10.0	25.43	148.5	1,152.7	817.7	802.9	14.88	54.970		
4,100.0	4,078.7	4,007.3	3,981.4	9.9	10.2	25.44	153.1	1,164.7	819.4	804.2	15.26	53.683		
4,200.0	4,178.1	4,107.3	4,080.6	10.2	10.5	25.46	157.6	1,176.6	821.1	805.5	15.65	52.460		
4,300.0	4,277.5	4,207.3	4,179.8	10.5	10.8	25.47	162.1	1,188.5	822.8	806.8	16.04	51.296		
4,400.0	4,376.8	4,307.3	4,278.9	10.7	11.1	25.49	166.7	1,200.4	824.5	808.1	16.43	50.187		
4,500.0	4,476.2	4,407.3	4,378.1	11.0	11.4	25.50	171.2	1,212.3	826.2	809.3	16.82	49.128		
4,600.0	4,575.5	4,507.3	4,477.3	11.2	11.7	25.51	175.8	1,224.3	827.8	810.6	17.20	48.117		
4,700.0	4,674.9	4,607.2	4,576.5	11.5	11.9	25.53	180.3	1,236.2	829.5	811.9	17.59	47.151		
4,800.0	4,774.3	4,707.2	4,675.6	11.8	12.2	25.54	184.8	1,248.1	831.2	813.2	17.98	46.225		
4,900.0	4,873.6	4,807.2	4,774.8	12.0	12.5	25.55	189.4	1,260.0	832.9	814.5	18.37	45.339		
5,000.0	4,973.0	4,907.2	4,874.0	12.3	12.8	25.57	193.9	1,271.9	834.6	815.8	18.76	44.489		

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 1E-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 1E-32H-B264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1I-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,072.3	5,007.2	4,973.1	12.6	13.1	25.58	198.5	1,283.8	836.3	817.1	19.15	43.674		
5,200.0	5,171.7	5,107.2	5,072.3	12.8	13.4	25.60	203.0	1,295.8	837.9	818.4	19.54	42.891		
5,300.0	5,271.1	5,207.2	5,171.5	13.1	13.6	25.61	207.5	1,307.7	839.6	819.7	19.93	42.138		
5,400.0	5,370.4	5,307.1	5,270.6	13.4	13.9	25.62	212.1	1,319.6	841.3	821.0	20.31	41.414		
5,500.0	5,469.8	5,407.1	5,369.8	13.6	14.2	25.64	216.6	1,331.5	843.0	822.3	20.70	40.716		
5,600.0	5,569.1	5,507.1	5,469.0	13.9	14.5	25.65	221.1	1,343.4	844.7	823.6	21.09	40.045		
5,700.0	5,668.5	5,607.1	5,568.1	14.1	14.8	25.66	225.7	1,355.3	846.4	824.9	21.48	39.397		
5,800.0	5,767.9	5,707.1	5,667.3	14.4	15.1	25.68	230.2	1,367.3	848.0	826.2	21.87	38.773		
5,900.0	5,867.2	5,807.1	5,766.5	14.7	15.3	25.69	234.8	1,379.2	849.7	827.5	22.26	38.170		
6,000.0	5,966.6	5,907.0	5,865.7	14.9	15.6	25.70	239.3	1,391.1	851.4	828.8	22.65	37.588		
6,100.0	6,065.9	6,007.0	5,964.8	15.2	15.9	25.72	243.8	1,403.0	853.1	830.1	23.04	37.025		
6,200.0	6,165.3	6,107.0	6,064.0	15.5	16.2	25.73	248.4	1,414.9	854.8	831.3	23.43	36.481		
6,300.0	6,264.7	6,207.0	6,163.1	15.7	16.5	-12.21	252.9	1,426.8	856.4	832.6	23.79	36.005		
6,400.0	6,363.7	6,305.9	6,261.3	15.9	16.8	-57.55	257.4	1,438.6	858.0	834.1	23.94	35.845		
6,500.0	6,460.3	6,401.9	6,356.5	16.0	17.0	-72.43	261.8	1,450.1	860.1	836.2	23.92	35.960		
6,600.0	6,552.9	6,495.1	6,448.9	16.1	17.3	-80.14	265.7	1,461.2	863.9	840.1	23.84	36.244		
6,700.0	6,639.5	6,597.7	6,550.6	16.1	17.5	-85.56	260.3	1,473.4	870.0	846.3	23.77	36.603		
6,800.0	6,718.5	6,708.6	6,658.3	16.2	17.7	-89.80	238.0	1,486.4	878.1	854.3	23.81	36.882		
6,900.0	6,788.3	6,829.6	6,770.4	16.4	17.8	-93.39	194.9	1,499.8	887.6	863.6	24.01	36.969		
7,000.0	6,847.6	6,962.4	6,883.3	16.7	18.0	-96.51	126.6	1,513.4	897.9	873.4	24.43	36.752		
7,100.0	6,895.2	7,108.5	6,990.6	17.0	18.2	-99.18	28.6	1,526.3	907.9	882.7	25.15	36.100		
7,200.0	6,930.2	7,268.2	7,082.6	17.6	18.7	-101.32	-100.9	1,537.4	916.5	890.2	26.25	34.913		
7,300.0	6,951.9	7,439.6	7,147.2	18.2	19.5	-102.75	-259.1	1,545.1	922.4	894.6	27.84	33.135		
7,400.0	6,960.0	7,618.3	7,172.8	19.0	20.7	-103.31	-435.5	1,548.2	924.8	894.9	29.92	30.905		
7,500.0	6,960.0	7,725.0	7,173.0	20.0	21.6	-103.32	-542.1	1,548.2	924.8	892.6	32.17	28.749		
7,600.0	6,960.0	7,825.0	7,173.0	21.0	22.6	-103.32	-642.1	1,548.2	924.8	890.2	34.58	26.743		
7,700.0	6,960.0	7,925.0	7,173.0	22.1	23.6	-103.32	-742.1	1,548.2	924.8	887.7	37.15	24.894		
7,800.0	6,960.0	8,025.0	7,173.0	23.3	24.7	-103.32	-842.1	1,548.2	924.8	885.0	39.85	23.209		
7,900.0	6,960.0	8,125.0	7,173.0	24.6	25.9	-103.32	-942.1	1,548.2	924.8	882.2	42.65	21.685		
8,000.0	6,960.0	8,225.0	7,173.0	25.9	27.2	-103.32	-1,042.1	1,548.2	924.8	879.3	45.53	20.312		
8,100.0	6,960.0	8,325.0	7,173.0	27.3	28.5	-103.32	-1,142.1	1,548.2	924.8	876.4	48.49	19.074		
8,200.0	6,960.0	8,425.0	7,173.0	28.7	29.9	-103.32	-1,242.1	1,548.2	924.8	873.3	51.50	17.959		
8,300.0	6,960.0	8,525.0	7,173.0	30.1	31.3	-103.32	-1,342.1	1,548.3	924.8	870.3	54.55	16.953		
8,400.0	6,960.0	8,625.0	7,173.0	31.6	32.7	-103.32	-1,442.1	1,548.3	924.8	867.2	57.65	16.042		
8,500.0	6,960.0	8,725.0	7,173.0	33.1	34.2	-103.32	-1,542.1	1,548.3	924.8	864.1	60.78	15.215		
8,600.0	6,960.0	8,825.0	7,173.0	34.6	35.7	-103.32	-1,642.1	1,548.3	924.9	860.9	63.95	14.463		
8,700.0	6,960.0	8,925.0	7,173.0	36.2	37.2	-103.32	-1,742.1	1,548.3	924.9	857.7	67.13	13.777		
8,800.0	6,960.0	9,025.0	7,173.0	37.8	38.7	-103.32	-1,842.1	1,548.3	924.9	854.5	70.34	13.148		
8,900.0	6,960.0	9,125.0	7,173.0	39.3	40.3	-103.32	-1,942.1	1,548.3	924.9	851.3	73.57	12.572		
9,000.0	6,960.0	9,225.0	7,173.0	40.9	41.8	-103.31	-2,042.1	1,548.3	924.9	848.1	76.81	12.041		
9,100.0	6,960.0	9,325.0	7,173.0	42.5	43.4	-103.31	-2,142.1	1,548.3	924.9	844.8	80.07	11.551		
9,200.0	6,960.0	9,425.0	7,173.0	44.2	45.0	-103.31	-2,242.1	1,548.3	924.9	841.5	83.33	11.098		
9,300.0	6,960.0	9,525.0	7,173.0	45.8	46.6	-103.31	-2,342.1	1,548.3	924.9	838.3	86.62	10.678		
9,400.0	6,960.0	9,625.0	7,173.0	47.4	48.2	-103.31	-2,442.1	1,548.3	924.9	835.0	89.91	10.287		
9,500.0	6,960.0	9,725.0	7,173.0	49.1	49.8	-103.31	-2,542.1	1,548.3	924.9	831.7	93.21	9.923		
9,600.0	6,960.0	9,825.0	7,173.0	50.7	51.5	-103.31	-2,642.1	1,548.3	924.9	828.4	96.51	9.583		
9,700.0	6,960.0	9,925.0	7,173.0	52.4	53.1	-103.31	-2,742.1	1,548.3	924.9	825.1	99.83	9.265		
9,800.0	6,960.0	10,025.0	7,173.0	54.1	54.8	-103.31	-2,842.1	1,548.3	924.9	821.7	103.15	8.966		
9,900.0	6,960.0	10,125.0	7,173.0	55.7	56.4	-103.31	-2,942.1	1,548.3	924.9	818.4	106.48	8.686		
10,000.0	6,960.0	10,225.0	7,173.0	57.4	58.1	-103.31	-3,042.1	1,548.3	924.9	815.1	109.81	8.423		
10,100.0	6,960.0	10,325.0	7,173.0	59.1	59.7	-103.31	-3,142.1	1,548.3	924.9	811.7	113.15	8.174		
10,200.0	6,960.0	10,425.0	7,173.0	60.8	61.4	-103.31	-3,242.1	1,548.3	924.9	808.4	116.49	7.940		

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 1E-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 1E-32H-B264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S32-T2N-R64W (Newman) - Ruhl 1I-32H-B264 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth 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		
10,300.0	6,960.0	10,525.0	7,173.0	62.5	63.1	-103.31	-3,342.1	1,548.3	924.9	805.1	119.84	7.718		
10,400.0	6,960.0	10,625.0	7,173.0	64.2	64.8	-103.31	-3,442.1	1,548.3	924.9	801.7	123.19	7.508		
10,500.0	6,960.0	10,725.0	7,173.0	65.9	66.5	-103.31	-3,542.1	1,548.3	924.9	798.4	126.54	7.309		
10,600.0	6,960.0	10,825.0	7,173.0	67.6	68.1	-103.31	-3,642.1	1,548.3	924.9	795.0	129.90	7.120		
10,700.0	6,960.0	10,925.0	7,173.0	69.3	69.8	-103.31	-3,742.1	1,548.3	924.9	791.7	133.26	6.941		
10,800.0	6,960.0	11,025.0	7,173.0	71.0	71.5	-103.31	-3,842.1	1,548.3	924.9	788.3	136.62	6.770		
10,900.0	6,960.0	11,125.0	7,173.0	72.7	73.2	-103.31	-3,942.1	1,548.3	924.9	784.9	139.98	6.607		
11,000.0	6,960.0	11,225.0	7,173.0	74.4	74.9	-103.31	-4,042.1	1,548.3	924.9	781.6	143.35	6.452		
11,100.0	6,960.0	11,325.0	7,173.0	76.1	76.6	-103.31	-4,142.1	1,548.3	924.9	778.2	146.72	6.304		
11,200.0	6,960.0	11,425.0	7,173.0	77.8	78.3	-103.31	-4,242.1	1,548.3	924.9	774.8	150.09	6.162		
11,300.0	6,960.0	11,525.0	7,173.0	79.5	80.0	-103.31	-4,342.1	1,548.3	924.9	771.5	153.47	6.027		
11,400.0	6,960.0	11,625.0	7,173.0	81.2	81.7	-103.31	-4,442.1	1,548.3	924.9	768.1	156.84	5.897		
11,500.0	6,960.0	11,725.0	7,173.0	83.0	83.4	-103.31	-4,542.1	1,548.4	924.9	764.7	160.22	5.773		
11,512.8	6,960.0	11,737.7	7,173.0	83.2	83.7	-103.31	-4,554.9	1,548.4	924.9	764.3	160.65	5.757 ES, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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				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	89.73	3.7	782.4	782.4					
100.0	100.0	100.0	100.0	0.2	0.2	89.73	3.7	782.4	782.4	782.1	0.35	2,241.508		
200.0	200.0	200.0	200.0	0.3	0.3	89.73	3.7	782.4	782.4	781.7	0.70	1,120.754		
300.0	300.0	300.0	300.0	0.5	0.5	89.73	3.7	782.4	782.4	781.4	1.05	747.169	CC, ES	
400.0	400.0	388.4	388.4	0.7	0.7	24.65	3.9	783.1	783.0	781.6	1.38	568.991		
500.0	500.0	476.8	476.8	0.9	0.8	24.65	4.4	785.0	783.6	781.9	1.71	459.529		
600.0	599.9	565.2	565.1	1.1	1.0	24.67	5.4	788.3	784.1	782.1	2.04	385.245		
700.0	699.8	653.6	653.4	1.2	1.2	24.71	6.8	792.9	784.6	782.2	2.37	331.395		
800.0	799.5	742.0	741.6	1.4	1.3	24.77	8.6	798.7	784.9	782.2	2.70	290.457		
900.0	899.2	830.4	829.6	1.7	1.5	24.85	10.7	805.9	785.1	782.0	3.04	258.197		
1,000.0	998.6	918.8	917.6	1.9	1.7	24.95	13.3	814.4	785.2	781.8	3.38	232.046		
1,100.0	1,098.0	1,007.2	1,005.4	2.1	2.0	25.04	16.2	824.2	786.0	782.3	3.73	210.583		
1,200.0	1,197.3	1,100.0	1,097.4	2.4	2.2	25.10	19.7	835.8	788.3	784.2	4.09	192.621		
1,300.0	1,296.7	1,183.8	1,180.3	2.6	2.5	25.13	23.3	847.6	792.0	787.6	4.44	178.430		
1,400.0	1,396.0	1,278.1	1,273.4	2.9	2.7	25.14	27.6	862.0	797.1	792.3	4.81	165.826		
1,500.0	1,495.4	1,378.0	1,372.0	3.1	3.1	25.15	32.2	877.3	802.3	797.1	5.19	154.689		
1,600.0	1,594.8	1,477.8	1,470.5	3.4	3.4	25.16	36.9	892.7	807.5	801.9	5.57	145.042		
1,700.0	1,694.1	1,577.7	1,569.1	3.7	3.7	25.16	41.5	908.1	812.7	806.7	5.95	136.610		
1,800.0	1,793.5	1,677.6	1,667.7	3.9	4.0	25.17	46.1	923.5	817.9	811.6	6.33	129.180		
1,900.0	1,892.8	1,777.4	1,766.2	4.2	4.3	25.17	50.7	938.9	823.1	816.4	6.71	122.584		
2,000.0	1,992.2	1,877.3	1,864.8	4.4	4.6	25.18	55.4	954.3	828.3	821.2	7.10	116.692		
2,100.0	2,091.6	1,977.2	1,963.4	4.7	5.0	25.18	60.0	969.7	833.5	826.0	7.48	111.398		
2,200.0	2,190.9	2,077.0	2,061.9	4.9	5.3	25.19	64.6	985.1	838.7	830.8	7.87	106.615		
2,300.0	2,290.3	2,176.9	2,160.5	5.2	5.6	25.20	69.3	1,000.5	843.9	835.7	8.25	102.273		
2,400.0	2,389.6	2,276.8	2,259.0	5.5	6.0	25.20	73.9	1,015.8	849.1	840.5	8.64	98.315		
2,500.0	2,489.0	2,376.6	2,357.6	5.7	6.3	25.21	78.5	1,031.2	854.3	845.3	9.02	94.692		
2,600.0	2,588.4	2,476.5	2,456.2	6.0	6.6	25.21	83.2	1,046.6	859.5	850.1	9.41	91.364		
2,700.0	2,687.7	2,576.4	2,554.7	6.3	6.9	25.22	87.8	1,062.0	864.7	854.9	9.79	88.296		
2,800.0	2,787.1	2,676.2	2,653.3	6.5	7.3	25.22	92.4	1,077.4	869.9	859.7	10.18	85.459		
2,900.0	2,886.4	2,776.1	2,751.9	6.8	7.6	25.23	97.1	1,092.8	875.1	864.6	10.57	82.828		
3,000.0	2,985.8	2,875.9	2,850.4	7.0	7.9	25.23	101.7	1,108.2	880.3	869.4	10.95	80.381		
3,100.0	3,085.2	2,975.8	2,949.0	7.3	8.3	25.24	106.3	1,123.6	885.5	874.2	11.34	78.100		
3,200.0	3,184.5	3,075.7	3,047.5	7.6	8.6	25.24	111.0	1,139.0	890.7	879.0	11.73	75.969		
3,300.0	3,283.9	3,175.5	3,146.1	7.8	8.9	25.25	115.6	1,154.3	895.9	883.8	12.11	73.973		
3,400.0	3,383.2	3,275.4	3,244.7	8.1	9.2	25.25	120.2	1,169.7	901.1	888.6	12.50	72.099		
3,500.0	3,482.6	3,375.3	3,343.2	8.4	9.6	25.26	124.9	1,185.1	906.3	893.5	12.89	70.338		
3,600.0	3,582.0	3,475.1	3,441.8	8.6	9.9	25.26	129.5	1,200.5	911.5	898.3	13.27	68.679		
3,700.0	3,681.3	3,575.0	3,540.4	8.9	10.2	25.27	134.1	1,215.9	916.8	903.1	13.66	67.113		
3,800.0	3,780.7	3,674.9	3,638.9	9.1	10.6	25.27	138.7	1,231.3	922.0	907.9	14.05	65.634		
3,900.0	3,880.0	3,774.7	3,737.5	9.4	10.9	25.28	143.4	1,246.7	927.2	912.7	14.43	64.233		
4,000.0	3,979.4	3,874.6	3,836.0	9.7	11.2	25.28	148.0	1,262.1	932.4	917.5	14.82	62.905		
4,100.0	4,078.7	3,974.5	3,934.6	9.9	11.6	25.28	152.6	1,277.4	937.6	922.4	15.21	61.645		
4,200.0	4,178.1	4,074.3	4,033.2	10.2	11.9	25.29	157.3	1,292.8	942.8	927.2	15.60	60.447		
4,300.0	4,277.5	4,174.2	4,131.7	10.5	12.2	25.29	161.9	1,308.2	948.0	932.0	15.98	59.307		
4,400.0	4,376.8	4,274.1	4,230.3	10.7	12.6	25.30	166.5	1,323.6	953.2	936.8	16.37	58.220		
4,500.0	4,476.2	4,373.9	4,328.9	11.0	12.9	25.30	171.2	1,339.0	958.4	941.6	16.76	57.184		
4,600.0	4,575.5	4,473.8	4,427.4	11.2	13.2	25.31	175.8	1,354.4	963.6	946.4	17.15	56.194		
4,700.0	4,674.9	4,573.6	4,526.0	11.5	13.6	25.31	180.4	1,369.8	968.8	951.2	17.54	55.248		
4,800.0	4,774.3	4,673.5	4,624.6	11.8	13.9	25.31	185.1	1,385.2	974.0	956.1	17.92	54.343		
4,900.0	4,873.6	4,773.4	4,723.1	12.0	14.2	25.32	189.7	1,400.6	979.2	960.9	18.31	53.476		
5,000.0	4,973.0	4,873.2	4,821.7	12.3	14.6	25.32	194.3	1,415.9	984.4	965.7	18.70	52.645		
5,100.0	5,072.3	4,973.1	4,920.2	12.6	14.9	25.33	199.0	1,431.3	989.6	970.5	19.09	51.847		

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 1E-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 1E-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)					
5,200.0	5,171.7	5,073.0	5,018.8	12.8	15.2	25.33	203.6	1,446.7	994.8	975.3	19.47	51.081			
5,300.0	5,271.1	5,172.8	5,117.4	13.1	15.6	25.33	208.2	1,462.1	1,000.0	980.1	19.86	50.345 SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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	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)				
0.0	0.0	0.0	0.0	0.0	0.0	89.74	3.7	792.2	792.2					
100.0	100.0	100.0	100.0	0.2	0.2	89.74	3.7	792.2	792.2	791.9	0.35	2,269.557		
200.0	200.0	200.0	200.0	0.3	0.3	89.74	3.7	792.2	792.2	791.5	0.70	1,134.778		
233.3	233.3	233.3	233.3	0.4	0.4	89.74	3.7	792.2	792.2	791.4	0.81	972.667 CC		
300.0	300.0	294.1	294.1	0.5	0.5	89.73	3.7	792.4	792.4	791.4	1.04	764.225 ES		
400.0	400.0	382.2	382.2	0.7	0.7	24.64	4.0	793.7	793.7	792.3	1.37	581.354		
500.0	500.0	470.3	470.3	0.9	0.8	24.63	4.7	796.3	795.1	793.4	1.69	469.372		
600.0	599.9	558.4	558.2	1.1	1.0	24.65	5.6	800.3	796.4	794.4	2.02	393.556		
700.0	699.8	646.5	646.2	1.2	1.2	24.69	6.9	805.5	797.7	795.3	2.36	338.694		
800.0	799.5	734.5	734.0	1.4	1.4	24.76	8.5	812.1	798.8	796.1	2.69	297.050		
900.0	899.2	822.6	821.6	1.7	1.6	24.85	10.4	820.0	799.8	796.8	3.03	264.276		
1,000.0	998.6	910.6	909.1	1.9	1.8	24.96	12.7	829.2	800.8	797.4	3.37	237.738		
1,100.0	1,098.0	1,000.0	997.9	2.1	2.0	25.08	15.3	839.8	802.5	798.8	3.72	215.839		
1,200.0	1,197.3	1,086.6	1,083.6	2.4	2.2	25.17	18.1	851.4	805.6	801.6	4.07	198.176		
1,300.0	1,296.7	1,174.5	1,170.5	2.6	2.5	25.24	21.3	864.5	810.3	805.9	4.42	183.431		
1,400.0	1,396.0	1,262.2	1,256.9	2.9	2.8	25.28	24.8	878.9	816.5	811.7	4.77	171.099		
1,500.0	1,495.4	1,349.7	1,343.0	3.1	3.1	25.30	28.6	894.4	824.1	819.0	5.13	160.703		
1,600.0	1,594.8	1,443.2	1,434.7	3.4	3.4	25.30	33.0	912.3	833.0	827.5	5.50	151.542		
1,700.0	1,694.1	1,542.8	1,532.3	3.7	3.8	25.30	37.6	931.5	842.1	836.2	5.88	143.258		
1,800.0	1,793.5	1,642.4	1,629.9	3.9	4.2	25.30	42.3	950.6	851.2	844.9	6.26	135.965		
1,900.0	1,892.8	1,742.0	1,727.5	4.2	4.6	25.30	47.0	969.8	860.3	853.7	6.64	129.498		
2,000.0	1,992.2	1,841.6	1,825.1	4.4	4.9	25.29	51.7	989.0	869.4	862.4	7.03	123.726		
2,100.0	2,091.6	1,941.2	1,922.7	4.7	5.3	25.29	56.3	1,008.2	878.5	871.1	7.41	118.543		
2,200.0	2,190.9	2,040.7	2,020.3	4.9	5.7	25.29	61.0	1,027.4	887.6	879.8	7.80	113.865		
2,300.0	2,290.3	2,140.3	2,117.9	5.2	6.1	25.29	65.7	1,046.6	896.7	888.5	8.18	109.622		
2,400.0	2,389.6	2,239.9	2,215.5	5.5	6.5	25.28	70.4	1,065.7	905.8	897.3	8.57	105.757		
2,500.0	2,489.0	2,339.5	2,313.1	5.7	6.9	25.28	75.1	1,084.9	914.9	906.0	8.95	102.221		
2,600.0	2,588.4	2,439.1	2,410.7	6.0	7.2	25.28	79.7	1,104.1	924.0	914.7	9.34	98.975		
2,700.0	2,687.7	2,538.7	2,508.4	6.3	7.6	25.28	84.4	1,123.3	933.1	923.4	9.72	95.985		
2,800.0	2,787.1	2,638.2	2,606.0	6.5	8.0	25.28	89.1	1,142.5	942.2	932.1	10.11	93.221		
2,900.0	2,886.4	2,737.8	2,703.6	6.8	8.4	25.27	93.8	1,161.6	951.3	940.9	10.49	90.659		
3,000.0	2,985.8	2,837.4	2,801.2	7.0	8.8	25.27	98.5	1,180.8	960.5	949.6	10.88	88.277		
3,100.0	3,085.2	2,937.0	2,898.8	7.3	9.2	25.27	103.1	1,200.0	969.6	958.3	11.27	86.058		
3,200.0	3,184.5	3,036.6	2,996.4	7.6	9.6	25.27	107.8	1,219.2	978.7	967.0	11.65	83.986		
3,300.0	3,283.9	3,136.2	3,094.0	7.8	10.0	25.27	112.5	1,238.4	987.8	975.7	12.04	82.046		
3,400.0	3,383.2	3,235.8	3,191.6	8.1	10.3	25.26	117.2	1,257.6	996.9	984.4	12.43	80.226 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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		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)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	89.76	3.3	802.3	802.3					
100.0	100.0	100.0	100.0	0.2	0.2	89.76	3.3	802.3	802.3	801.9	0.35	2,298.402		
200.0	200.0	200.0	200.0	0.3	0.3	89.76	3.3	802.3	802.3	801.6	0.70	1,149.201	CC, ES	
300.0	300.0	287.9	287.9	0.5	0.5	89.75	3.4	802.9	803.0	802.0	1.03	782.212		
400.0	400.0	375.8	375.8	0.7	0.7	24.65	3.8	804.9	805.1	803.7	1.35	594.512		
500.0	500.0	463.7	463.6	0.9	0.8	24.64	4.5	808.2	807.3	805.6	1.68	479.778		
600.0	599.9	551.5	551.3	1.1	1.0	24.66	5.5	812.8	809.4	807.4	2.01	402.288		
700.0	699.8	639.3	638.9	1.2	1.2	24.70	6.7	818.8	811.4	809.0	2.34	346.315		
800.0	799.5	727.1	726.3	1.4	1.4	24.77	8.2	826.0	813.3	810.6	2.68	303.888		
900.0	899.2	814.8	813.6	1.7	1.6	24.86	9.9	834.6	815.1	812.1	3.01	270.536		
1,000.0	998.6	900.0	898.3	1.9	1.8	24.98	11.9	844.1	816.9	813.6	3.35	243.890		
1,100.0	1,098.0	990.2	987.7	2.1	2.0	25.12	14.2	855.6	819.4	815.7	3.70	221.452		
1,200.0	1,197.3	1,077.9	1,074.4	2.4	2.3	25.23	16.8	868.0	823.4	819.4	4.05	203.380		
1,300.0	1,296.7	1,165.4	1,160.8	2.6	2.6	25.32	19.6	881.8	828.9	824.5	4.40	188.423		
1,400.0	1,396.0	1,252.7	1,246.8	2.9	2.9	25.39	22.7	896.8	835.9	831.1	4.75	175.918		
1,500.0	1,495.4	1,339.9	1,332.3	3.1	3.2	25.44	26.0	913.0	844.3	839.2	5.11	165.378		
1,600.0	1,594.8	1,426.8	1,417.4	3.4	3.5	25.47	29.6	930.4	854.3	848.8	5.46	156.436		
1,700.0	1,694.1	1,516.6	1,505.1	3.7	3.9	25.48	33.6	949.8	865.7	859.8	5.82	148.652		
1,800.0	1,793.5	1,615.9	1,601.9	3.9	4.3	25.49	38.0	971.5	877.4	871.2	6.20	141.418		
1,900.0	1,892.8	1,715.2	1,698.7	4.2	4.7	25.49	42.5	993.3	889.2	882.6	6.59	135.005		
2,000.0	1,992.2	1,814.5	1,795.5	4.4	5.1	25.50	46.9	1,015.0	901.0	894.0	6.97	129.283		
2,100.0	2,091.6	1,913.8	1,892.2	4.7	5.6	25.50	51.4	1,036.7	912.8	905.4	7.35	124.148		
2,200.0	2,190.9	2,013.1	1,989.0	4.9	6.0	25.51	55.9	1,058.5	924.6	916.8	7.74	119.514		
2,300.0	2,290.3	2,112.4	2,085.8	5.2	6.4	25.51	60.3	1,080.2	936.4	928.2	8.12	115.312		
2,400.0	2,389.6	2,211.8	2,182.6	5.5	6.8	25.52	64.8	1,102.0	948.1	939.6	8.50	111.485		
2,500.0	2,489.0	2,311.1	2,279.4	5.7	7.3	25.52	69.3	1,123.7	959.9	951.0	8.89	107.985		
2,600.0	2,588.4	2,410.4	2,376.2	6.0	7.7	25.53	73.7	1,145.5	971.7	962.4	9.27	104.772		
2,700.0	2,687.7	2,509.7	2,473.0	6.3	8.1	25.53	78.2	1,167.2	983.5	973.8	9.66	101.813		
2,800.0	2,787.1	2,609.0	2,569.8	6.5	8.5	25.54	82.6	1,189.0	995.3	985.2	10.05	99.078	SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Ruhl 1E-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 1E-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 1E-32H-B264
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.60°

