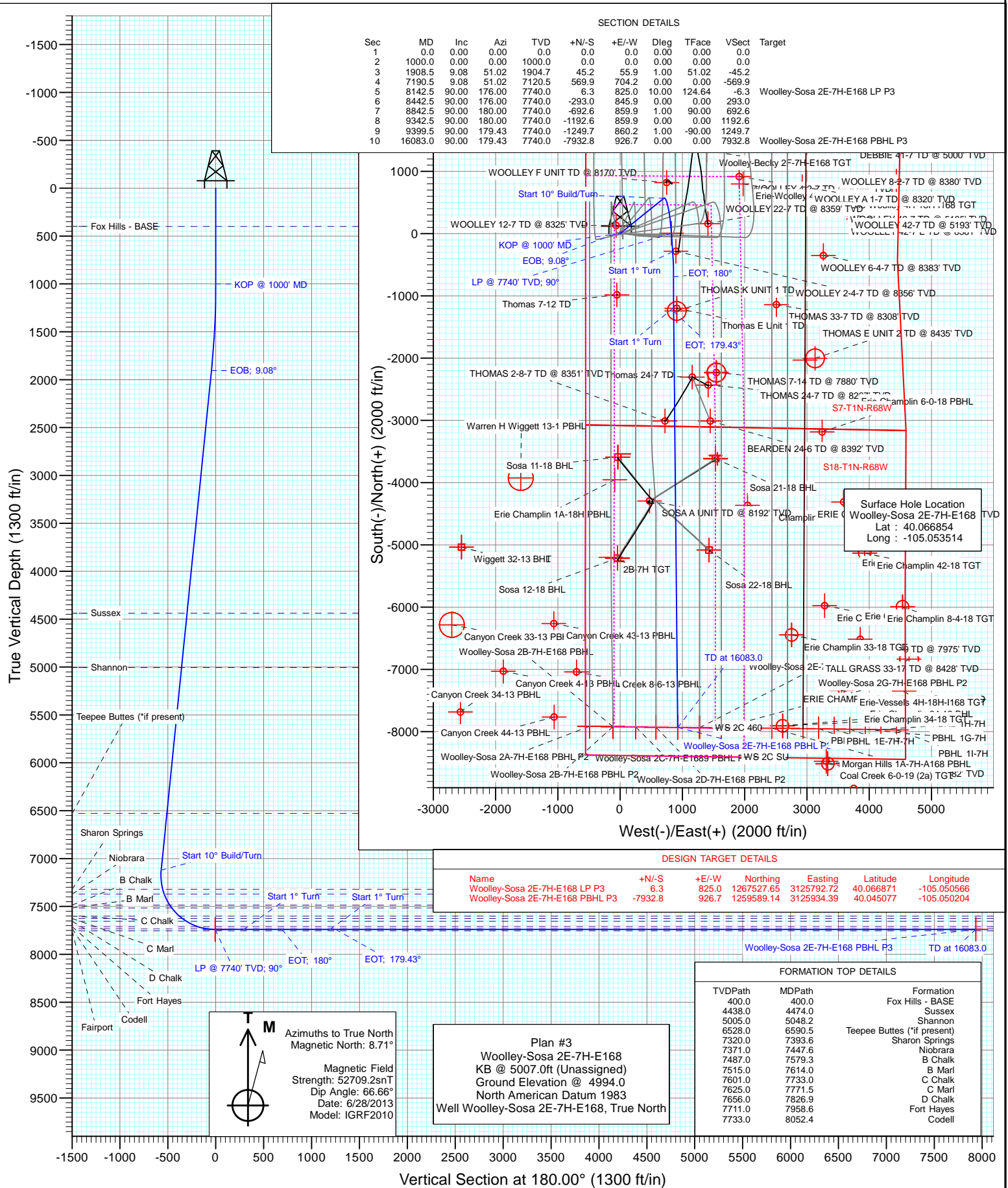




Project: DJ Wattenberg
Site: S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)
Well: Woolley-Sosa 2E-7H-E168
Wellbore: HZ
Design: Plan #3



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 5007.0ft (Unassigned)
Project:	DJ Wattenberg	MD Reference:	KB @ 5007.0ft (Unassigned)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

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		S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)			
Site Position:		Northing:	1,265,219.42 ft	Latitude:	40.060530
From:	Lat/Long	Easting:	3,126,139.27 ft	Longitude:	-105.049370
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well	Woolley-Sosa 2E-7H-E168					
Well Position	+N/-S	0.0 ft	Northing:	1,267,517.20 ft	Latitude:	40.066854
	+E/-W	0.0 ft	Easting:	3,124,967.76 ft	Longitude:	-105.053514
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,994.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	6/28/2013	8.72	66.66	52,709

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,908.5	9.08	51.02	1,904.7	45.2	55.9	1.00	1.00	0.00	51.02	
7,190.5	9.08	51.02	7,120.5	569.9	704.2	0.00	0.00	0.00	0.00	
8,142.5	90.00	176.00	7,740.0	6.3	825.0	10.00	8.50	13.13	124.64	Woolley-Sosa 2E-7H-
8,442.5	90.00	176.00	7,740.0	-293.0	845.9	0.00	0.00	0.00	0.00	
8,842.5	90.00	180.00	7,740.0	-692.6	859.9	1.00	0.00	1.00	90.00	
9,342.5	90.00	180.00	7,740.0	-1,192.6	859.9	0.00	0.00	0.00	0.00	
9,399.5	90.00	179.43	7,740.0	-1,249.7	860.2	1.00	0.00	-1.00	-90.00	
16,083.0	90.00	179.43	7,740.0	-7,932.8	926.7	0.00	0.00	0.00	0.00	Woolley-Sosa 2E-7H-

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 5007.0ft (Unassigned)
Project:	DJ Wattenberg	MD Reference:	KB @ 5007.0ft (Unassigned)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1000' MD
1,100.0	1.00	51.02	1,100.0	0.5	0.7	-0.5	1.00	1.00	
1,200.0	2.00	51.02	1,200.0	2.2	2.7	-2.2	1.00	1.00	
1,300.0	3.00	51.02	1,299.9	4.9	6.1	-4.9	1.00	1.00	
1,400.0	4.00	51.02	1,399.7	8.8	10.8	-8.8	1.00	1.00	
1,500.0	5.00	51.02	1,499.4	13.7	16.9	-13.7	1.00	1.00	
1,600.0	6.00	51.02	1,598.9	19.7	24.4	-19.7	1.00	1.00	
1,700.0	7.00	51.02	1,698.3	26.9	33.2	-26.9	1.00	1.00	
1,800.0	8.00	51.02	1,797.4	35.1	43.3	-35.1	1.00	1.00	
1,900.0	9.00	51.02	1,896.3	44.4	54.8	-44.4	1.00	1.00	
1,908.5	9.08	51.02	1,904.7	45.2	55.9	-45.2	1.00	1.00	EOB; 9.08°
2,000.0	9.08	51.02	1,995.1	54.3	67.1	-54.3	0.00	0.00	
2,100.0	9.08	51.02	2,093.8	64.2	79.4	-64.2	0.00	0.00	
2,200.0	9.08	51.02	2,192.5	74.2	91.7	-74.2	0.00	0.00	
2,300.0	9.08	51.02	2,291.3	84.1	103.9	-84.1	0.00	0.00	
2,400.0	9.08	51.02	2,390.0	94.0	116.2	-94.0	0.00	0.00	
2,500.0	9.08	51.02	2,488.8	104.0	128.5	-104.0	0.00	0.00	
2,600.0	9.08	51.02	2,587.5	113.9	140.8	-113.9	0.00	0.00	
2,700.0	9.08	51.02	2,686.3	123.8	153.0	-123.8	0.00	0.00	
2,800.0	9.08	51.02	2,785.0	133.8	165.3	-133.8	0.00	0.00	
2,900.0	9.08	51.02	2,883.8	143.7	177.6	-143.7	0.00	0.00	
3,000.0	9.08	51.02	2,982.5	153.6	189.9	-153.6	0.00	0.00	
3,100.0	9.08	51.02	3,081.3	163.6	202.1	-163.6	0.00	0.00	
3,200.0	9.08	51.02	3,180.0	173.5	214.4	-173.5	0.00	0.00	
3,300.0	9.08	51.02	3,278.7	183.4	226.7	-183.4	0.00	0.00	
3,400.0	9.08	51.02	3,377.5	193.4	239.0	-193.4	0.00	0.00	
3,500.0	9.08	51.02	3,476.2	203.3	251.2	-203.3	0.00	0.00	
3,600.0	9.08	51.02	3,575.0	213.2	263.5	-213.2	0.00	0.00	
3,700.0	9.08	51.02	3,673.7	223.2	275.8	-223.2	0.00	0.00	
3,800.0	9.08	51.02	3,772.5	233.1	288.0	-233.1	0.00	0.00	
3,900.0	9.08	51.02	3,871.2	243.0	300.3	-243.0	0.00	0.00	
4,000.0	9.08	51.02	3,970.0	253.0	312.6	-253.0	0.00	0.00	
4,100.0	9.08	51.02	4,068.7	262.9	324.9	-262.9	0.00	0.00	
4,200.0	9.08	51.02	4,167.5	272.8	337.1	-272.8	0.00	0.00	
4,300.0	9.08	51.02	4,266.2	282.8	349.4	-282.8	0.00	0.00	
4,400.0	9.08	51.02	4,365.0	292.7	361.7	-292.7	0.00	0.00	
4,474.0	9.08	51.02	4,438.0	300.0	370.8	-300.0	0.00	0.00	Sussex
4,500.0	9.08	51.02	4,463.7	302.6	374.0	-302.6	0.00	0.00	
4,600.0	9.08	51.02	4,562.4	312.5	386.2	-312.5	0.00	0.00	
4,700.0	9.08	51.02	4,661.2	322.5	398.5	-322.5	0.00	0.00	
4,800.0	9.08	51.02	4,759.9	332.4	410.8	-332.4	0.00	0.00	
4,900.0	9.08	51.02	4,858.7	342.3	423.1	-342.3	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 5007.0ft (Unassigned)
Project:	DJ Wattenberg	MD Reference:	KB @ 5007.0ft (Unassigned)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

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
5,000.0	9.08	51.02	4,957.4	352.3	435.3	-352.3	0.00	0.00	
5,048.2	9.08	51.02	5,005.0	357.1	441.3	-357.1	0.00	0.00	Shannon
5,100.0	9.08	51.02	5,056.2	362.2	447.6	-362.2	0.00	0.00	
5,200.0	9.08	51.02	5,154.9	372.1	459.9	-372.1	0.00	0.00	
5,300.0	9.08	51.02	5,253.7	382.1	472.2	-382.1	0.00	0.00	
5,400.0	9.08	51.02	5,352.4	392.0	484.4	-392.0	0.00	0.00	
5,500.0	9.08	51.02	5,451.2	401.9	496.7	-401.9	0.00	0.00	
5,600.0	9.08	51.02	5,549.9	411.9	509.0	-411.9	0.00	0.00	
5,700.0	9.08	51.02	5,648.6	421.8	521.3	-421.8	0.00	0.00	
5,800.0	9.08	51.02	5,747.4	431.7	533.5	-431.7	0.00	0.00	
5,900.0	9.08	51.02	5,846.1	441.7	545.8	-441.7	0.00	0.00	
6,000.0	9.08	51.02	5,944.9	451.6	558.1	-451.6	0.00	0.00	
6,100.0	9.08	51.02	6,043.6	461.5	570.4	-461.5	0.00	0.00	
6,200.0	9.08	51.02	6,142.4	471.5	582.6	-471.5	0.00	0.00	
6,300.0	9.08	51.02	6,241.1	481.4	594.9	-481.4	0.00	0.00	
6,400.0	9.08	51.02	6,339.9	491.3	607.2	-491.3	0.00	0.00	
6,500.0	9.08	51.02	6,438.6	501.3	619.5	-501.3	0.00	0.00	
6,590.5	9.08	51.02	6,528.0	510.3	630.6	-510.3	0.00	0.00	Teepee Buttes (*if present)
6,600.0	9.08	51.02	6,537.4	511.2	631.7	-511.2	0.00	0.00	
6,700.0	9.08	51.02	6,636.1	521.1	644.0	-521.1	0.00	0.00	
6,800.0	9.08	51.02	6,734.8	531.1	656.3	-531.1	0.00	0.00	
6,900.0	9.08	51.02	6,833.6	541.0	668.6	-541.0	0.00	0.00	
7,000.0	9.08	51.02	6,932.3	550.9	680.8	-550.9	0.00	0.00	
7,100.0	9.08	51.02	7,031.1	560.9	693.1	-560.9	0.00	0.00	
7,190.5	9.08	51.02	7,120.5	569.9	704.2	-569.9	0.00	0.00	Start 10° Build/Turn
7,200.0	8.58	56.25	7,129.8	570.7	705.4	-570.7	9.98	-5.31	
7,300.0	9.41	123.79	7,228.9	570.3	718.4	-570.3	10.00	0.83	
7,393.6	16.82	150.31	7,320.0	554.3	731.5	-554.3	10.00	7.91	Sharon Springs
7,400.0	17.39	151.27	7,326.1	552.6	732.4	-552.6	9.98	8.95	
7,447.6	21.78	156.85	7,371.0	538.2	739.3	-538.2	10.00	9.21	Niobrara
7,500.0	26.74	160.93	7,418.7	518.2	747.0	-518.2	10.00	9.48	
7,579.3	34.41	164.97	7,487.0	479.6	758.7	-479.6	10.00	9.66	B Chalk
7,600.0	36.42	165.77	7,503.8	468.0	761.7	-468.0	9.99	9.74	
7,614.0	37.79	166.27	7,515.0	459.8	763.7	-459.8	10.01	9.78	B Marl
7,700.0	46.22	168.79	7,578.9	403.6	776.1	-403.6	10.00	9.81	
7,733.0	49.47	169.57	7,601.0	379.6	780.6	-379.6	10.00	9.85	C Chalk
7,771.5	53.27	170.39	7,625.0	350.0	785.9	-350.0	10.00	9.86	C Marl
7,800.0	56.08	170.95	7,641.5	327.0	789.6	-327.0	9.99	9.87	
7,826.9	58.74	171.44	7,656.0	304.6	793.1	-304.6	10.01	9.89	D Chalk
7,900.0	65.97	172.65	7,689.9	240.6	802.0	-240.6	10.00	9.89	
7,958.6	71.78	173.53	7,711.0	186.3	808.6	-186.3	10.00	9.91	Fort Hayes
8,000.0	75.88	174.11	7,722.5	146.8	812.9	-146.8	10.00	9.90	
8,052.4	81.07	174.82	7,733.0	95.7	817.8	-95.7	10.00	9.91	Codell
8,100.0	85.79	175.45	7,738.4	48.6	821.8	-48.6	10.00	9.91	
8,142.5	90.00	176.00	7,740.0	6.3	825.0	-6.3	10.00	9.92	LP @ 7740' TVD; 90°
8,200.0	90.00	176.00	7,740.0	-51.1	829.0	51.1	0.00	0.00	
8,300.0	90.00	176.00	7,740.0	-150.9	836.0	150.9	0.00	0.00	
8,400.0	90.00	176.00	7,740.0	-250.6	843.0	250.6	0.00	0.00	
8,442.5	90.00	176.00	7,740.0	-293.0	845.9	293.0	0.00	0.00	Start 1° Turn
8,500.0	90.00	176.58	7,740.0	-350.4	849.7	350.4	1.00	0.00	
8,600.0	90.00	177.58	7,740.0	-450.3	854.8	450.3	1.00	0.00	
8,700.0	90.00	178.58	7,740.0	-550.2	858.1	550.2	1.00	0.00	

Planning Report

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Project:	DJ Wattenberg	MD Reference:	KB @ 5007.0ft (Unassigned)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,800.0	90.00	179.58	7,740.0	-650.2	859.7	650.2	1.00	0.00	
8,842.5	90.00	180.00	7,740.0	-692.6	859.9	692.6	1.00	0.00	EOT; 180°
8,900.0	90.00	180.00	7,740.0	-750.2	859.9	750.2	0.00	0.00	
9,000.0	90.00	180.00	7,740.0	-850.2	859.9	850.2	0.00	0.00	
9,100.0	90.00	180.00	7,740.0	-950.2	859.9	950.2	0.00	0.00	
9,200.0	90.00	180.00	7,740.0	-1,050.2	859.9	1,050.2	0.00	0.00	
9,300.0	90.00	180.00	7,740.0	-1,150.2	859.9	1,150.2	0.00	0.00	
9,342.5	90.00	180.00	7,740.0	-1,192.6	859.9	1,192.6	0.00	0.00	Start 1° Turn
9,399.5	90.00	179.43	7,740.0	-1,249.7	860.2	1,249.7	1.00	0.00	EOT; 179.43°
9,400.0	90.00	179.43	7,740.0	-1,250.2	860.2	1,250.2	0.00	0.00	
9,500.0	90.00	179.43	7,740.0	-1,350.2	861.2	1,350.2	0.00	0.00	
9,600.0	90.00	179.43	7,740.0	-1,450.2	862.2	1,450.2	0.00	0.00	
9,700.0	90.00	179.43	7,740.0	-1,550.2	863.2	1,550.2	0.00	0.00	
9,800.0	90.00	179.43	7,740.0	-1,650.2	864.2	1,650.2	0.00	0.00	
9,900.0	90.00	179.43	7,740.0	-1,750.2	865.2	1,750.2	0.00	0.00	
10,000.0	90.00	179.43	7,740.0	-1,850.2	866.1	1,850.2	0.00	0.00	
10,100.0	90.00	179.43	7,740.0	-1,950.2	867.1	1,950.2	0.00	0.00	
10,200.0	90.00	179.43	7,740.0	-2,050.2	868.1	2,050.2	0.00	0.00	
10,300.0	90.00	179.43	7,740.0	-2,150.1	869.1	2,150.1	0.00	0.00	
10,400.0	90.00	179.43	7,740.0	-2,250.1	870.1	2,250.1	0.00	0.00	
10,500.0	90.00	179.43	7,740.0	-2,350.1	871.1	2,350.1	0.00	0.00	
10,600.0	90.00	179.43	7,740.0	-2,450.1	872.1	2,450.1	0.00	0.00	
10,700.0	90.00	179.43	7,740.0	-2,550.1	873.1	2,550.1	0.00	0.00	
10,800.0	90.00	179.43	7,740.0	-2,650.1	874.1	2,650.1	0.00	0.00	
10,900.0	90.00	179.43	7,740.0	-2,750.1	875.1	2,750.1	0.00	0.00	
11,000.0	90.00	179.43	7,740.0	-2,850.1	876.1	2,850.1	0.00	0.00	
11,100.0	90.00	179.43	7,740.0	-2,950.1	877.1	2,950.1	0.00	0.00	
11,200.0	90.00	179.43	7,740.0	-3,050.1	878.1	3,050.1	0.00	0.00	
11,300.0	90.00	179.43	7,740.0	-3,150.1	879.1	3,150.1	0.00	0.00	
11,400.0	90.00	179.43	7,740.0	-3,250.1	880.1	3,250.1	0.00	0.00	
11,500.0	90.00	179.43	7,740.0	-3,350.1	881.1	3,350.1	0.00	0.00	
11,600.0	90.00	179.43	7,740.0	-3,450.1	882.1	3,450.1	0.00	0.00	
11,700.0	90.00	179.43	7,740.0	-3,550.1	883.1	3,550.1	0.00	0.00	
11,800.0	90.00	179.43	7,740.0	-3,650.1	884.1	3,650.1	0.00	0.00	
11,900.0	90.00	179.43	7,740.0	-3,750.1	885.1	3,750.1	0.00	0.00	
12,000.0	90.00	179.43	7,740.0	-3,850.1	886.1	3,850.1	0.00	0.00	
12,100.0	90.00	179.43	7,740.0	-3,950.1	887.0	3,950.1	0.00	0.00	
12,200.0	90.00	179.43	7,740.0	-4,050.1	888.0	4,050.1	0.00	0.00	
12,300.0	90.00	179.43	7,740.0	-4,150.1	889.0	4,150.1	0.00	0.00	
12,400.0	90.00	179.43	7,740.0	-4,250.0	890.0	4,250.0	0.00	0.00	
12,500.0	90.00	179.43	7,740.0	-4,350.0	891.0	4,350.0	0.00	0.00	
12,600.0	90.00	179.43	7,740.0	-4,450.0	892.0	4,450.0	0.00	0.00	
12,700.0	90.00	179.43	7,740.0	-4,550.0	893.0	4,550.0	0.00	0.00	
12,800.0	90.00	179.43	7,740.0	-4,650.0	894.0	4,650.0	0.00	0.00	
12,900.0	90.00	179.43	7,740.0	-4,750.0	895.0	4,750.0	0.00	0.00	
13,000.0	90.00	179.43	7,740.0	-4,850.0	896.0	4,850.0	0.00	0.00	
13,100.0	90.00	179.43	7,740.0	-4,950.0	897.0	4,950.0	0.00	0.00	
13,200.0	90.00	179.43	7,740.0	-5,050.0	898.0	5,050.0	0.00	0.00	
13,300.0	90.00	179.43	7,740.0	-5,150.0	899.0	5,150.0	0.00	0.00	
13,400.0	90.00	179.43	7,740.0	-5,250.0	900.0	5,250.0	0.00	0.00	
13,500.0	90.00	179.43	7,740.0	-5,350.0	901.0	5,350.0	0.00	0.00	
13,600.0	90.00	179.43	7,740.0	-5,450.0	902.0	5,450.0	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 5007.0ft (Unassigned)
Project:	DJ Wattenberg	MD Reference:	KB @ 5007.0ft (Unassigned)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

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
13,700.0	90.00	179.43	7,740.0	-5,550.0	903.0	5,550.0	0.00	0.00	
13,800.0	90.00	179.43	7,740.0	-5,650.0	904.0	5,650.0	0.00	0.00	
13,900.0	90.00	179.43	7,740.0	-5,750.0	905.0	5,750.0	0.00	0.00	
14,000.0	90.00	179.43	7,740.0	-5,850.0	906.0	5,850.0	0.00	0.00	
14,100.0	90.00	179.43	7,740.0	-5,950.0	907.0	5,950.0	0.00	0.00	
14,200.0	90.00	179.43	7,740.0	-6,050.0	908.0	6,050.0	0.00	0.00	
14,300.0	90.00	179.43	7,740.0	-6,150.0	908.9	6,150.0	0.00	0.00	
14,400.0	90.00	179.43	7,740.0	-6,250.0	909.9	6,250.0	0.00	0.00	
14,500.0	90.00	179.43	7,740.0	-6,349.9	910.9	6,349.9	0.00	0.00	
14,600.0	90.00	179.43	7,740.0	-6,449.9	911.9	6,449.9	0.00	0.00	
14,700.0	90.00	179.43	7,740.0	-6,549.9	912.9	6,549.9	0.00	0.00	
14,800.0	90.00	179.43	7,740.0	-6,649.9	913.9	6,649.9	0.00	0.00	
14,900.0	90.00	179.43	7,740.0	-6,749.9	914.9	6,749.9	0.00	0.00	
15,000.0	90.00	179.43	7,740.0	-6,849.9	915.9	6,849.9	0.00	0.00	
15,100.0	90.00	179.43	7,740.0	-6,949.9	916.9	6,949.9	0.00	0.00	
15,200.0	90.00	179.43	7,740.0	-7,049.9	917.9	7,049.9	0.00	0.00	
15,300.0	90.00	179.43	7,740.0	-7,149.9	918.9	7,149.9	0.00	0.00	
15,400.0	90.00	179.43	7,740.0	-7,249.9	919.9	7,249.9	0.00	0.00	
15,500.0	90.00	179.43	7,740.0	-7,349.9	920.9	7,349.9	0.00	0.00	
15,600.0	90.00	179.43	7,740.0	-7,449.9	921.9	7,449.9	0.00	0.00	
15,700.0	90.00	179.43	7,740.0	-7,549.9	922.9	7,549.9	0.00	0.00	
15,800.0	90.00	179.43	7,740.0	-7,649.9	923.9	7,649.9	0.00	0.00	
15,900.0	90.00	179.43	7,740.0	-7,749.9	924.9	7,749.9	0.00	0.00	
16,000.0	90.00	179.43	7,740.0	-7,849.9	925.9	7,849.9	0.00	0.00	
16,083.0	90.00	179.43	7,740.0	-7,932.8	926.7	7,932.8	0.00	0.00	TD at 16083.0

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Woolley-Sosa 2E-7H-E1 - plan hits target center - Point	0.00	0.00	7,740.0	6.3	825.0	1,267,527.65	3,125,792.72	40.066871	-105.050566
Woolley-Sosa 2E-7H-E1 - plan misses target center by 7.1ft at 16081.9ft MD (7740.0 TVD, -7931.7 N, 926.7 E) - Point	0.00	0.00	7,747.0	-7,931.7	927.8	1,259,590.24	3,125,935.50	40.045080	-105.050200
Woolley-Sosa 2E-7H-E1 - plan misses target center by 350.1ft at 16083.0ft MD (7740.0 TVD, -7932.8 N, 926.7 E) - Point	0.00	0.00	7,747.0	-7,937.5	1,276.7	1,259,586.18	3,126,284.37	40.045064	-105.048954
Woolley-Sosa 2E-7H-E1 - plan hits target center - Point	0.00	0.00	7,740.0	-7,932.8	926.7	1,259,589.14	3,125,934.39	40.045077	-105.050204

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 5007.0ft (Unassigned)
Project:	DJ Wattenberg	MD Reference:	KB @ 5007.0ft (Unassigned)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
400.0	400.0	Fox Hills - BASE				
4,474.0	4,438.0	Sussex				
5,048.2	5,005.0	Shannon				
6,590.5	6,528.0	Teepee Buttes (*if present)				
7,393.6	7,320.0	Sharon Springs				
7,447.6	7,371.0	Niobrara				
7,579.3	7,487.0	B Chalk				
7,614.0	7,515.0	B Marl				
7,733.0	7,601.0	C Chalk				
7,771.5	7,625.0	C Marl				
7,826.9	7,656.0	D Chalk				
7,958.6	7,711.0	Fort Hayes				
8,052.4	7,733.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.0	1,000.0	0.0	0.0	KOP @ 1000' MD	
1,908.5	1,904.7	45.2	55.9	EOB; 9.08°	
7,190.5	7,120.5	569.9	704.2	Start 10° Build/Turn	
8,142.5	7,740.0	6.3	825.0	LP @ 7740' TVD; 90°	
8,442.5	7,740.0	-293.0	845.9	Start 1° Turn	
8,842.5	7,740.0	-692.6	859.9	EOT; 180°	
9,342.5	7,740.0	-1,192.6	859.9	Start 1° Turn	
9,399.5	7,740.0	-1,249.7	860.2	EOT; 179.43°	
16,083.0	7,740.0	-7,932.8	926.7	TD at 16083.0	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)

Woolley-Sosa 2E-7H-E168

HZ

Plan #3

Anticollision Report

10 December, 2014

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Reference	Plan #3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 5,280.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	12/9/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,083.0	Plan #3 (HZ)	Geolink MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
			Between Centres (ft)	Between Ellipses (ft)		
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	11,165.3	7,798.0	571.2	496.2	7.616	CC, ES
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	11,200.0	7,798.0	572.3	496.7	7.571	SF
Morgan Hills 1A-7H-A168 - HZ - Plan #2	16,083.8	17,579.9	1,531.4	1,219.5	4.909	CC, ES, SF
Morgan Hills 1B-7H-A168 - HZ - Plan #2	16,083.8	17,762.4	1,762.7	1,446.8	5.581	CC, ES, SF
Morgan Hills 1C-7H-A168 - HZ - Plan #2	16,083.8	17,483.8	2,026.8	1,712.9	6.458	CC, ES, SF
Sosa 11-18 - DD - DD	11,744.5	7,834.1	915.3	830.7	10.822	CC, ES
Sosa 11-18 - DD - DD	11,900.0	7,834.8	928.4	841.1	10.641	SF
Sosa 11-18 - DD - Plan #1	11,730.4	7,829.3	918.7	834.3	10.885	CC, ES
Sosa 11-18 - DD - Plan #1	11,900.0	7,829.3	934.2	846.9	10.700	SF
Sosa 12-18 - DD - DD	13,378.8	7,889.3	928.5	812.0	7.969	CC
Sosa 12-18 - DD - DD	13,400.0	7,889.3	928.7	811.9	7.946	ES
Sosa 12-18 - DD - DD	13,500.0	7,889.4	936.4	817.8	7.895	SF
Sosa 12-18 - DD - Plan #3	13,351.3	7,873.1	940.4	824.8	8.132	CC, ES
Sosa 12-18 - DD - Plan #3	13,500.0	7,873.1	952.1	833.9	8.054	SF
Sosa 21-18 - DD (MWD) - DD	11,762.7	7,918.9	637.4	552.7	7.521	CC, ES
Sosa 21-18 - DD (MWD) - DD	11,800.0	7,918.1	638.5	553.1	7.477	SF
Sosa 21-18 - DD (MWD) - Plan #2	11,771.5	7,892.2	648.9	564.2	7.655	CC, ES
Sosa 21-18 - DD (MWD) - Plan #2	11,900.0	7,892.2	661.5	574.6	7.606	SF
Sosa 22-18 - DD - DD	13,255.6	7,892.8	547.5	434.8	4.855	CC, ES
Sosa 22-18 - DD - DD	13,300.0	7,892.8	549.3	435.8	4.838	SF
Sosa 22-18 - DD - Plan #2	13,238.4	7,886.1	530.4	418.2	4.725	CC, ES
Sosa 22-18 - DD - Plan #2	13,300.0	7,886.1	534.0	420.7	4.712	SF
SOSAA UNIT 1 (EXISTING) - EXISTING - EXISTING	12,443.8	7,758.6	422.4	330.4	4.589	CC, ES
SOSAA UNIT 1 (EXISTING) - EXISTING - EXISTING	12,500.0	7,758.8	426.1	333.1	4.581	SF
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	10,588.7	7,760.2	541.8	481.2	8.944	CC
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	10,600.0	7,760.2	541.9	481.2	8.919	ES
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	10,700.0	7,759.8	553.1	490.7	8.858	SF
THOMAS 24-7 (Existing) - Existing - NO SURVEYS	10,457.1	7,735.0	288.4	230.2	4.957	CC, ES
THOMAS 24-7 (Existing) - Existing - NO SURVEYS	10,500.0	7,735.0	291.6	232.7	4.951	SF
THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SURVEY	11,156.7	7,815.2	158.9	84.5	2.136	CC, ES, SF
Thomas 7-12 (Existing) - Existing - NO SURVEYS	9,132.6	7,728.0	910.8	873.7	24.512	CC, ES
Thomas 7-12 (Existing) - Existing - NO SURVEYS	9,500.0	7,728.0	983.3	940.6	23.022	SF
THOMAS E UNIT 1 (EXISTING) - Existing - NO SURVEY	9,348.7	7,734.0	51.4	11.1	1.276	Level 3, CC, ES, SF
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	1,618.3	1,705.1	142.2	136.3	24.267	CC
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	1,700.0	1,786.3	142.5	136.3	23.048	ES
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	2,200.0	2,280.5	165.4	157.2	20.091	SF
WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GYRO	7,243.7	7,155.3	1,120.1	1,093.0	41.381	CC, ES
WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GYRO	7,300.0	7,200.0	1,122.8	1,095.6	41.267	SF
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	8,048.1	8,009.1	598.0	555.0	13.918	CC, ES
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	8,050.0	8,009.4	598.0	555.0	13.918	SF
WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SURVE	8,441.1	8,172.6	52.4	1.0	1.020	Level 2, CC, ES, SF
WOOLLEY F UNIT 1 (EXISTING) - ENCANA WELL - GY	7,262.0	7,233.0	276.6	246.8	9.301	CC, ES
WOOLLEY F UNIT 1 (EXISTING) - ENCANA WELL - GY	7,300.0	7,271.3	277.8	247.9	9.287	SF
Woolley-Becky 2A-7H-E168 - Hz - Plan #2	849.8	850.6	11.9	9.0	4.002	CC, ES
Woolley-Becky 2A-7H-E168 - Hz - Plan #2	900.0	900.7	12.4	9.2	3.866	SF
Woolley-Becky 2B-7H-E168 - Hz - Plan #2	793.1	793.3	33.2	30.4	12.160	CC
Woolley-Becky 2B-7H-E168 - Hz - Plan #2	1,300.0	1,299.8	34.4	29.9	7.609	ES
Woolley-Becky 2B-7H-E168 - Hz - Plan #2	1,500.0	1,499.3	37.1	31.9	7.085	SF
Woolley-Becky 2C-7H-E168 - Hz - Plan #4	600.0	600.0	50.1	48.0	24.450	CC, ES
Woolley-Becky 2C-7H-E168 - Hz - Plan #4	2,100.0	2,093.0	82.8	74.9	10.506	SF
Woolley-Becky 2D-7H-E168 - Hz - Plan #4	500.0	500.0	59.9	58.2	35.233	CC
Woolley-Becky 2D-7H-E168 - Hz - Plan #4	7,550.0	7,841.0	80.9	47.4	2.420	SF
Woolley-Becky 2D-7H-E168 - Hz - Plan #4	7,577.6	7,827.0	77.2	45.4	2.433	ES

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	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						
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	400.0	400.0	70.0	68.6	51.796	CC
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	7,895.6	7,832.4	88.0	59.6	3.103	ES, SF
Woolley-Becky 2F-7H-E168 - Hz - Plan #3	300.0	300.0	80.0	79.0	79.901	CC, ES
Woolley-Becky 2F-7H-E168 - Hz - Plan #3	7,200.0	7,299.7	708.3	669.1	18.082	SF
Woolley-Becky 2G-7H-E168 - Hz - Plan #2	233.3	233.3	89.8	89.1	116.812	CC
Woolley-Becky 2G-7H-E168 - Hz - Plan #2	300.0	299.2	90.1	89.1	90.006	ES
Woolley-Becky 2G-7H-E168 - Hz - Plan #2	7,250.0	7,151.2	1,034.4	994.9	26.181	SF
Woolley-Becky 2H-7H-E168 - Hz - Plan #3	200.0	200.0	99.9	99.3	153.071	CC, ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #3	7,200.0	6,996.4	1,447.9	1,410.6	38.832	SF
Woolley-Sosa 2A-7H-E168 - Hz - Plan #2	200.0	200.0	488.1	487.5	747.771	CC
Woolley-Sosa 2A-7H-E168 - Hz - Plan #2	700.0	699.0	488.6	486.2	201.034	ES
Woolley-Sosa 2A-7H-E168 - Hz - Plan #2	16,083.8	15,936.0	1,415.1	1,132.0	4.999	SF
Woolley-Sosa 2B-7H-E168 - HZ - Plan #2	300.0	300.0	29.9	28.9	29.895	CC, ES
Woolley-Sosa 2B-7H-E168 - HZ - Plan #2	16,083.8	15,706.0	1,067.5	791.5	3.867	SF
Woolley-Sosa 2C-7H-E168 - HZ - Plan #2	711.7	711.9	18.3	15.8	7.474	CC, ES
Woolley-Sosa 2C-7H-E168 - HZ - Plan #2	16,083.8	15,952.8	676.5	393.2	2.388	SF
Woolley-Sosa 2D-7H-E168 - HZ - Plan #2	764.8	764.9	8.0	5.4	3.048	CC, ES
Woolley-Sosa 2D-7H-E168 - HZ - Plan #2	16,083.8	15,805.8	424.4	188.9	1.802	SF
Woolley-Sosa 2F-7H-E168 - HZ - Plan #2	300.0	300.0	10.1	9.1	10.057	CC, ES
Woolley-Sosa 2F-7H-E168 - HZ - Plan #2	16,083.8	15,835.5	424.3	188.4	1.798	SF
Woolley-Sosa 2G-7H-E168 - HZ - Plan #2	200.0	200.0	19.9	19.2	30.442	CC, ES
Woolley-Sosa 2G-7H-E168 - HZ - Plan #2	16,083.8	16,133.6	699.9	416.2	2.467	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - PL											Offset Site Error: 0.0 ft		
Survey Program: O-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	153.27	-2,303.6	1,159.9	2,579.2				
100.0	100.0	85.0	85.0	0.2	0.1	153.27	-2,303.6	1,159.9	2,579.2	2,578.9	0.28	9,328.841	
200.0	200.0	185.0	185.0	0.3	0.3	153.27	-2,303.6	1,159.9	2,579.2	2,578.6	0.62	4,150.916	
300.0	300.0	285.0	285.0	0.5	0.5	153.27	-2,303.6	1,159.9	2,579.2	2,578.2	0.97	2,657.808	
400.0	400.0	385.0	385.0	0.7	0.6	153.27	-2,303.6	1,159.9	2,579.2	2,577.9	1.32	1,954.693	
500.0	500.0	485.0	485.0	0.8	0.8	153.27	-2,303.6	1,159.9	2,579.2	2,577.5	1.67	1,545.766	
600.0	600.0	585.0	585.0	1.0	1.0	153.27	-2,303.6	1,159.9	2,579.2	2,577.2	2.02	1,278.335	
700.0	700.0	685.0	685.0	1.2	1.2	153.27	-2,303.6	1,159.9	2,579.2	2,576.8	2.37	1,089.791	
800.0	800.0	785.0	785.0	1.4	1.3	153.27	-2,303.6	1,159.9	2,579.2	2,576.5	2.72	949.716	
900.0	900.0	885.0	885.0	1.5	1.5	153.27	-2,303.6	1,159.9	2,579.2	2,576.1	3.06	841.549	
1,000.0	1,000.0	985.0	985.0	1.7	1.7	153.27	-2,303.6	1,159.9	2,579.2	2,575.8	3.41	755.501	
1,100.0	1,100.0	1,085.0	1,085.0	1.9	1.9	102.27	-2,303.6	1,159.9	2,579.4	2,575.6	3.76	685.429	
1,200.0	1,200.0	1,185.0	1,185.0	2.1	2.0	102.32	-2,303.6	1,159.9	2,579.9	2,575.8	4.11	627.142	
1,300.0	1,299.9	1,284.9	1,284.9	2.3	2.2	102.41	-2,303.6	1,159.9	2,580.9	2,576.4	4.47	577.666	
1,400.0	1,399.7	1,384.7	1,384.7	2.4	2.4	102.53	-2,303.6	1,159.9	2,582.2	2,577.4	4.83	534.896	
1,500.0	1,499.4	1,484.4	1,484.4	2.6	2.6	102.68	-2,303.6	1,159.9	2,583.9	2,578.7	5.20	497.325	
1,600.0	1,598.9	1,544.1	1,544.1	2.8	2.7	102.78	-2,304.0	1,160.1	2,586.7	2,581.2	5.51	469.821	
1,700.0	1,698.3	1,600.0	1,600.0	3.1	2.8	102.87	-2,305.3	1,160.6	2,591.7	2,585.8	5.82	445.061	
1,800.0	1,797.4	1,648.3	1,648.2	3.3	2.9	102.93	-2,307.2	1,161.4	2,598.9	2,592.8	6.14	422.946	
1,908.5	1,904.7	1,700.0	1,699.8	3.6	2.9	103.00	-2,310.1	1,162.6	2,609.3	2,602.8	6.51	400.504	
2,000.0	1,995.0	1,751.2	1,750.9	3.8	3.0	103.18	-2,313.8	1,164.1	2,619.9	2,613.1	6.85	382.492	
2,100.0	2,093.8	1,800.0	1,799.5	4.1	3.1	103.35	-2,318.2	1,165.9	2,633.3	2,626.1	7.21	365.265	
2,200.0	2,192.5	1,853.1	1,852.2	4.4	3.2	103.54	-2,323.8	1,168.2	2,648.5	2,641.0	7.58	349.265	
2,300.0	2,291.3	1,900.0	1,898.7	4.7	3.3	103.70	-2,329.4	1,170.5	2,665.6	2,657.6	7.95	335.280	
2,400.0	2,390.0	1,953.7	1,951.8	5.0	3.5	103.88	-2,336.8	1,173.5	2,684.4	2,676.1	8.33	322.101	
2,500.0	2,488.8	2,000.0	1,997.5	5.3	3.6	104.04	-2,343.9	1,176.4	2,705.0	2,696.3	8.71	310.673	
2,600.0	2,587.5	2,052.9	2,049.5	5.6	3.7	104.22	-2,352.9	1,180.1	2,727.4	2,718.3	9.09	299.886	
2,700.0	2,686.3	2,127.7	2,122.8	5.9	3.9	104.48	-2,366.6	1,185.7	2,751.3	2,741.7	9.52	288.948	
2,800.0	2,785.0	2,223.5	2,216.7	6.2	4.2	104.80	-2,384.3	1,192.9	2,775.4	2,765.4	9.99	277.942	
2,900.0	2,883.8	2,319.4	2,310.6	6.5	4.5	105.11	-2,402.0	1,200.2	2,799.6	2,789.1	10.45	267.895	
3,000.0	2,982.5	2,415.3	2,404.6	6.8	4.8	105.42	-2,419.7	1,207.4	2,823.8	2,812.9	10.92	258.692	
3,100.0	3,081.3	2,511.1	2,498.5	7.2	5.1	105.73	-2,437.3	1,214.7	2,848.2	2,836.8	11.38	250.235	
3,200.0	3,180.0	2,607.0	2,592.4	7.5	5.4	106.03	-2,455.0	1,221.9	2,872.6	2,860.8	11.85	242.441	
3,300.0	3,278.7	2,702.8	2,686.4	7.8	5.8	106.32	-2,472.7	1,229.1	2,897.1	2,884.8	12.32	235.237	
3,400.0	3,377.5	2,798.7	2,780.3	8.1	6.1	106.61	-2,490.4	1,236.4	2,921.7	2,908.9	12.78	228.560	
3,500.0	3,476.2	2,894.5	2,874.2	8.4	6.4	106.89	-2,508.1	1,243.6	2,946.3	2,933.1	13.25	222.357	
3,600.0	3,575.0	2,990.4	2,968.2	8.7	6.8	107.17	-2,525.8	1,250.9	2,971.1	2,957.3	13.72	216.579	
3,700.0	3,673.7	3,086.3	3,062.1	9.1	7.1	107.45	-2,543.5	1,258.1	2,995.8	2,981.7	14.19	211.187	
3,800.0	3,772.5	3,182.1	3,156.0	9.4	7.5	107.72	-2,561.1	1,265.3	3,020.7	3,006.0	14.65	206.143	
3,900.0	3,871.2	3,278.0	3,250.0	9.7	7.8	107.99	-2,578.8	1,272.6	3,045.6	3,030.5	15.12	201.416	
4,000.0	3,970.0	3,373.8	3,343.9	10.0	8.2	108.25	-2,596.5	1,279.8	3,070.6	3,055.0	15.59	196.976	
4,100.0	4,068.7	3,469.7	3,437.8	10.3	8.5	108.51	-2,614.2	1,287.1	3,095.6	3,079.5	16.06	192.799	
4,200.0	4,167.5	3,565.5	3,531.8	10.7	8.9	108.76	-2,631.9	1,294.3	3,120.7	3,104.2	16.52	188.863	
4,300.0	4,266.2	3,661.4	3,625.7	11.0	9.2	109.01	-2,649.6	1,301.5	3,145.8	3,128.8	16.99	185.147	
4,400.0	4,364.9	3,757.3	3,719.6	11.3	9.6	109.26	-2,667.3	1,308.8	3,171.0	3,153.6	17.46	181.634	
4,500.0	4,463.7	3,853.1	3,813.6	11.6	10.0	109.50	-2,684.9	1,316.0	3,196.3	3,178.4	17.93	178.307	
4,600.0	4,562.4	3,949.0	3,907.5	11.9	10.3	109.74	-2,702.6	1,323.3	3,221.6	3,203.2	18.39	175.153	
4,700.0	4,661.2	4,044.8	4,001.4	12.3	10.7	109.97	-2,720.3	1,330.5	3,247.0	3,228.1	18.86	172.159	
4,800.0	4,759.9	4,140.7	4,095.4	12.6	11.0	110.21	-2,738.0	1,337.7	3,272.4	3,253.1	19.33	169.312	
4,900.0	4,858.7	4,236.5	4,189.3	12.9	11.4	110.43	-2,755.7	1,345.0	3,297.9	3,278.1	19.79	166.602	
5,000.0	4,957.4	4,332.4	4,283.2	13.2	11.8	110.66	-2,773.4	1,352.2	3,323.4	3,303.1	20.26	164.020	
5,100.0	5,056.2	4,428.3	4,377.2	13.6	12.1	110.88	-2,791.1	1,359.5	3,349.0	3,328.2	20.73	161.556	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - PL													Offset Site Error:	0.0 ft
Survey Program: O-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	5,154.9	4,524.1	4,471.1	13.9	12.5	111.10	-2,808.8	1,366.7	3,374.6	3,353.4	21.20	159.204		
5,300.0	5,253.7	4,620.0	4,565.0	14.2	12.9	111.31	-2,826.4	1,373.9	3,400.2	3,378.6	21.66	156.954		
5,400.0	5,352.4	4,715.8	4,659.0	14.5	13.2	111.52	-2,844.1	1,381.2	3,425.9	3,403.8	22.13	154.802		
5,500.0	5,451.1	4,811.7	4,752.9	14.9	13.6	111.73	-2,861.8	1,388.4	3,451.7	3,429.1	22.60	152.741		
5,600.0	5,549.9	4,907.6	4,846.8	15.2	14.0	111.94	-2,879.5	1,395.7	3,477.5	3,454.4	23.07	150.764		
5,700.0	5,648.6	5,003.4	4,940.8	15.5	14.3	112.14	-2,897.2	1,402.9	3,503.3	3,479.8	23.53	148.868		
5,800.0	5,747.4	5,099.3	5,034.7	15.8	14.7	112.34	-2,914.9	1,410.1	3,529.2	3,505.2	24.00	147.047		
5,900.0	5,846.1	5,195.1	5,128.6	16.2	15.1	112.54	-2,932.6	1,417.4	3,555.1	3,530.6	24.47	145.296		
6,000.0	5,944.9	6,002.8	5,929.9	16.5	17.0	114.27	-3,009.7	1,448.9	3,574.1	3,547.9	26.11	136.861		
6,100.0	6,043.6	6,101.6	6,028.6	16.8	17.1	114.50	-3,009.7	1,448.9	3,580.6	3,554.1	26.58	134.703		
6,200.0	6,142.4	6,200.3	6,127.4	17.1	17.2	114.73	-3,009.7	1,448.9	3,587.3	3,560.2	27.05	132.626		
6,300.0	6,241.1	6,299.1	6,226.1	17.5	17.3	114.96	-3,009.7	1,448.9	3,594.0	3,566.5	27.51	130.624		
6,400.0	6,339.9	6,397.8	6,324.9	17.8	17.4	115.18	-3,009.7	1,448.9	3,600.8	3,572.8	27.98	128.695		
6,500.0	6,438.6	6,496.5	6,423.6	18.1	17.5	115.41	-3,009.7	1,448.9	3,607.6	3,579.1	28.44	126.834		
6,600.0	6,537.3	6,595.3	6,522.4	18.4	17.6	115.63	-3,009.7	1,448.9	3,614.4	3,585.5	28.91	125.038		
6,700.0	6,636.1	6,694.0	6,621.1	18.8	17.7	115.85	-3,009.7	1,448.9	3,621.4	3,592.0	29.37	123.304		
6,800.0	6,734.8	6,792.8	6,719.8	19.1	17.8	116.07	-3,009.7	1,448.9	3,628.4	3,598.5	29.83	121.628		
6,900.0	6,833.6	6,891.5	6,818.6	19.4	17.9	116.30	-3,009.7	1,448.9	3,635.4	3,605.1	30.29	120.009		
7,000.0	6,932.3	6,990.3	6,917.3	19.7	18.1	116.52	-3,009.7	1,448.9	3,642.5	3,611.7	30.75	118.444		
7,100.0	7,031.1	7,089.0	7,016.1	20.1	18.2	116.74	-3,009.7	1,448.9	3,649.6	3,618.4	31.21	116.929		
7,190.5	7,120.5	7,178.4	7,105.5	20.4	18.3	116.93	-3,009.7	1,448.9	3,656.2	3,624.5	31.63	115.599		
7,200.0	7,129.8	7,187.8	7,114.8	20.4	18.3	111.80	-3,009.7	1,448.9	3,656.8	3,625.1	31.70	115.362		
7,250.0	7,179.4	7,237.3	7,164.4	20.5	18.4	76.71	-3,009.7	1,448.9	3,657.4	3,625.4	31.96	114.447		
7,300.0	7,228.8	7,286.8	7,213.9	20.6	18.4	45.06	-3,009.7	1,448.9	3,653.7	3,621.7	32.03	114.070		
7,350.0	7,277.9	7,335.8	7,262.9	20.7	18.5	27.54	-3,009.7	1,448.9	3,645.8	3,613.9	31.92	114.231		
7,400.0	7,326.1	7,384.1	7,311.1	20.7	18.5	18.13	-3,009.7	1,448.9	3,633.6	3,602.0	31.61	114.940		
7,450.0	7,373.2	7,431.1	7,358.2	20.7	18.6	12.50	-3,009.7	1,448.9	3,617.3	3,586.2	31.13	116.217		
7,500.0	7,418.7	7,476.7	7,403.7	20.7	18.6	8.74	-3,009.7	1,448.9	3,597.0	3,566.5	30.46	118.093		
7,550.0	7,462.4	7,520.3	7,447.4	20.6	18.7	5.99	-3,009.7	1,448.9	3,572.8	3,543.1	29.62	120.608		
7,600.0	7,503.8	7,561.8	7,488.8	20.5	18.8	3.79	-3,009.7	1,448.9	3,544.9	3,516.3	28.63	123.813		
7,650.0	7,542.8	7,600.7	7,527.8	20.5	18.8	1.88	-3,009.7	1,448.9	3,513.6	3,486.1	27.50	127.759		
7,700.0	7,578.8	7,636.8	7,563.9	20.4	18.8	0.09	-3,009.7	1,448.9	3,479.0	3,452.7	26.26	132.486		
7,750.0	7,611.8	7,669.8	7,596.9	20.3	18.9	-1.75	-3,009.7	1,448.9	3,441.4	3,416.5	24.94	137.994		
7,800.0	7,641.5	7,699.5	7,626.5	20.2	18.9	-3.80	-3,009.7	1,448.9	3,401.2	3,377.6	23.59	144.164		
7,850.0	7,667.6	7,725.5	7,652.6	20.2	19.0	-6.28	-3,009.7	1,448.9	3,358.6	3,336.3	22.30	150.593		
7,900.0	7,689.9	7,747.8	7,674.9	20.2	19.0	-9.52	-3,009.7	1,448.9	3,314.0	3,292.8	21.21	156.211		
7,950.0	7,708.2	7,766.2	7,693.3	20.1	19.0	-14.18	-3,009.7	1,448.9	3,267.6	3,247.0	20.62	158.494		
8,000.0	7,722.5	7,780.5	7,707.5	20.2	19.0	-21.55	-3,009.7	1,448.9	3,219.9	3,198.8	21.12	152.479		
8,050.0	7,732.6	7,790.6	7,717.6	20.2	19.0	-34.60	-3,009.7	1,448.9	3,171.2	3,147.3	23.93	132.546		
8,100.0	7,738.4	7,796.4	7,723.4	20.3	19.0	-59.25	-3,009.7	1,448.9	3,121.9	3,092.0	29.87	104.525		
8,142.5	7,740.0	7,798.0	7,725.0	20.4	19.0	-90.00	-3,009.7	1,448.9	3,079.8	3,047.0	32.79	93.920		
8,200.0	7,740.0	7,798.0	7,725.0	20.5	19.0	-90.00	-3,009.7	1,448.9	3,022.8	2,989.8	33.02	91.552		
8,300.0	7,740.0	7,798.0	7,725.0	20.9	19.0	-90.00	-3,009.7	1,448.9	2,923.8	2,890.2	33.56	87.110		
8,400.0	7,740.0	7,798.0	7,725.0	21.4	19.0	-90.00	-3,009.7	1,448.9	2,824.8	2,790.5	34.29	82.380		
8,442.5	7,740.0	7,798.0	7,725.0	21.7	19.0	-90.00	-3,009.7	1,448.9	2,782.8	2,748.2	34.65	80.320		
8,500.0	7,740.0	7,798.0	7,725.0	22.1	19.0	-90.00	-3,009.7	1,448.9	2,726.0	2,690.9	35.08	77.718		
8,600.0	7,740.0	7,798.0	7,725.0	22.8	19.0	-90.00	-3,009.7	1,448.9	2,627.5	2,591.6	35.89	73.209		
8,700.0	7,740.0	7,798.0	7,725.0	23.6	19.0	-90.00	-3,009.7	1,448.9	2,529.4	2,492.7	36.78	68.768		
8,800.0	7,740.0	7,798.0	7,725.0	24.5	19.0	-90.00	-3,009.7	1,448.9	2,431.9	2,394.2	37.74	64.441		
8,842.5	7,740.0	7,798.0	7,725.0	25.0	19.0	-90.00	-3,009.7	1,448.9	2,390.7	2,352.6	38.16	62.646		
8,900.0	7,740.0	7,798.0	7,725.0	25.5	19.0	-90.00	-3,009.7	1,448.9	2,335.0	2,296.1	38.89	60.049		
9,000.0	7,740.0	7,798.0	7,725.0	26.6	19.0	-90.00	-3,009.7	1,448.9	2,238.4	2,198.2	40.20	55.687		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - PL													Offset Site Error:	0.0 ft
Survey Program: 0-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		
9,100.0	7,740.0	7,798.0	7,725.0	27.7	19.0	-90.00	-3,009.7	1,448.9	2,142.1	2,100.5	41.56	51.536		
9,200.0	7,740.0	7,798.0	7,725.0	28.9	19.0	-90.00	-3,009.7	1,448.9	2,046.1	2,003.1	42.98	47.603		
9,300.0	7,740.0	7,798.0	7,725.0	30.2	19.0	-90.00	-3,009.7	1,448.9	1,950.6	1,906.1	44.44	43.890		
9,342.5	7,740.0	7,798.0	7,725.0	30.7	19.0	-90.00	-3,009.7	1,448.9	1,910.1	1,865.0	45.07	42.379		
9,399.5	7,740.0	7,798.0	7,725.0	31.5	19.0	-90.00	-3,009.7	1,448.9	1,855.8	1,809.8	46.08	40.272		
9,500.0	7,740.0	7,798.0	7,725.0	32.8	19.0	-90.00	-3,009.7	1,448.9	1,760.5	1,712.9	47.62	36.973		
9,600.0	7,740.0	7,798.0	7,725.0	34.2	19.0	-90.00	-3,009.7	1,448.9	1,666.2	1,617.1	49.16	33.891		
9,700.0	7,740.0	7,798.0	7,725.0	35.6	19.0	-90.00	-3,009.7	1,448.9	1,572.7	1,521.9	50.74	30.997		
9,800.0	7,740.0	7,798.0	7,725.0	37.1	19.0	-90.00	-3,009.7	1,448.9	1,479.9	1,427.6	52.32	28.284		
9,900.0	7,740.0	7,798.0	7,725.0	38.5	19.0	-90.00	-3,009.7	1,448.9	1,388.2	1,334.3	53.93	25.742		
10,000.0	7,740.0	7,798.0	7,725.0	40.0	19.0	-90.00	-3,009.7	1,448.9	1,297.7	1,242.2	55.55	23.363		
10,100.0	7,740.0	7,798.0	7,725.0	41.6	19.0	-90.00	-3,009.7	1,448.9	1,208.7	1,151.6	57.18	21.141		
10,200.0	7,740.0	7,798.0	7,725.0	43.1	19.0	-90.00	-3,009.7	1,448.9	1,121.6	1,062.8	58.82	19.070		
10,300.0	7,740.0	7,798.0	7,725.0	44.6	19.0	-90.00	-3,009.7	1,448.9	1,036.8	976.3	60.46	17.147		
10,400.0	7,740.0	7,798.0	7,725.0	46.2	19.0	-90.00	-3,009.7	1,448.9	954.9	892.8	62.12	15.372		
10,500.0	7,740.0	7,798.0	7,725.0	47.8	19.0	-90.00	-3,009.7	1,448.9	876.8	813.1	63.79	13.746		
10,600.0	7,740.0	7,798.0	7,725.0	49.4	19.0	-90.00	-3,009.7	1,448.9	803.6	738.2	65.46	12.277		
10,700.0	7,740.0	7,798.0	7,725.0	51.0	19.0	-90.00	-3,009.7	1,448.9	736.7	669.6	67.14	10.974		
10,800.0	7,740.0	7,798.0	7,725.0	52.6	19.0	-90.00	-3,009.7	1,448.9	678.0	609.2	68.82	9.852		
10,900.0	7,740.0	7,798.0	7,725.0	54.2	19.0	-90.00	-3,009.7	1,448.9	629.8	559.3	70.50	8.933		
11,000.0	7,740.0	7,798.0	7,725.0	55.8	19.0	-90.00	-3,009.7	1,448.9	594.7	522.5	72.20	8.237		
11,100.0	7,740.0	7,798.0	7,725.0	57.5	19.0	-90.00	-3,009.7	1,448.9	574.9	501.1	73.89	7.781		
11,165.3	7,740.0	7,798.0	7,725.0	58.5	19.0	-90.00	-3,009.7	1,448.9	571.2	496.2	75.00	7.616 CC, ES		
11,200.0	7,740.0	7,798.0	7,725.0	59.1	19.0	-90.00	-3,009.7	1,448.9	572.3	496.7	75.59	7.571 SF		
11,300.0	7,740.0	7,798.0	7,725.0	60.8	19.0	-90.00	-3,009.7	1,448.9	586.9	509.6	77.29	7.593		
11,400.0	7,740.0	7,798.0	7,725.0	62.4	19.0	-90.00	-3,009.7	1,448.9	617.6	538.6	79.00	7.818		
11,500.0	7,740.0	7,798.0	7,725.0	64.1	19.0	-90.00	-3,009.7	1,448.9	662.1	581.4	80.70	8.204		
11,600.0	7,740.0	7,798.0	7,725.0	65.7	19.0	-90.00	-3,009.7	1,448.9	717.8	635.4	82.41	8.710		
11,700.0	7,740.0	7,798.0	7,725.0	67.4	19.0	-90.00	-3,009.7	1,448.9	782.5	698.3	84.13	9.301		
11,800.0	7,740.0	7,798.0	7,725.0	69.1	19.0	-90.00	-3,009.7	1,448.9	853.9	768.1	85.84	9.948		
11,900.0	7,740.0	7,798.0	7,725.0	70.8	19.0	-90.00	-3,009.7	1,448.9	930.7	843.1	87.56	10.629		
12,000.0	7,740.0	7,798.0	7,725.0	72.4	19.0	-90.00	-3,009.7	1,448.9	1,011.5	922.2	89.28	11.330		
12,100.0	7,740.0	7,798.0	7,725.0	74.1	19.0	-90.00	-3,009.7	1,448.9	1,095.5	1,004.5	91.00	12.039		
12,200.0	7,740.0	7,798.0	7,725.0	75.8	19.0	-90.00	-3,009.7	1,448.9	1,181.9	1,089.2	92.72	12.748		
12,300.0	7,740.0	7,798.0	7,725.0	77.5	19.0	-90.00	-3,009.7	1,448.9	1,270.4	1,176.0	94.44	13.452		
12,400.0	7,740.0	7,798.0	7,725.0	79.2	19.0	-90.00	-3,009.7	1,448.9	1,360.5	1,264.3	96.17	14.147		
12,500.0	7,740.0	7,798.0	7,725.0	80.9	19.0	-90.00	-3,009.7	1,448.9	1,451.8	1,354.0	97.89	14.831		
12,600.0	7,740.0	7,798.0	7,725.0	82.6	19.0	-90.00	-3,009.7	1,448.9	1,544.3	1,444.7	99.62	15.502		
12,700.0	7,740.0	7,798.0	7,725.0	84.3	19.0	-90.00	-3,009.7	1,448.9	1,637.6	1,536.3	101.35	16.158		
12,800.0	7,740.0	7,798.0	7,725.0	86.0	19.0	-90.00	-3,009.7	1,448.9	1,731.7	1,628.6	103.08	16.800		
12,900.0	7,740.0	7,798.0	7,725.0	87.7	19.0	-90.00	-3,009.7	1,448.9	1,826.4	1,721.6	104.81	17.426		
13,000.0	7,740.0	7,798.0	7,725.0	89.4	19.0	-90.00	-3,009.7	1,448.9	1,921.6	1,815.1	106.54	18.037		
13,100.0	7,740.0	7,798.0	7,725.0	91.1	19.0	-90.00	-3,009.7	1,448.9	2,017.3	1,909.0	108.27	18.632		
13,200.0	7,740.0	7,798.0	7,725.0	92.8	19.0	-90.00	-3,009.7	1,448.9	2,113.4	2,003.4	110.00	19.212		
13,300.0	7,740.0	7,798.0	7,725.0	94.5	19.0	-90.00	-3,009.7	1,448.9	2,209.9	2,098.1	111.74	19.777		
13,400.0	7,740.0	7,798.0	7,725.0	96.2	19.0	-90.00	-3,009.7	1,448.9	2,306.6	2,193.1	113.47	20.327		
13,500.0	7,740.0	7,798.0	7,725.0	98.0	19.0	-90.00	-3,009.7	1,448.9	2,403.6	2,288.4	115.21	20.863		
13,600.0	7,740.0	7,798.0	7,725.0	99.7	19.0	-90.00	-3,009.7	1,448.9	2,500.9	2,383.9	116.94	21.385		
13,700.0	7,740.0	7,798.0	7,725.0	101.4	19.0	-90.00	-3,009.7	1,448.9	2,598.3	2,479.6	118.68	21.894		
13,800.0	7,740.0	7,798.0	7,725.0	103.1	19.0	-90.00	-3,009.7	1,448.9	2,696.0	2,575.5	120.42	22.389		
13,900.0	7,740.0	7,798.0	7,725.0	104.8	19.0	-90.00	-3,009.7	1,448.9	2,793.8	2,671.6	122.15	22.871		
14,000.0	7,740.0	7,798.0	7,725.0	106.5	19.0	-90.00	-3,009.7	1,448.9	2,891.7	2,767.8	123.89	23.341		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - PL													Offset Site Error:	0.0 ft
Survey Program: 0-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		
14,100.0	7,740.0	7,798.0	7,725.0	108.3	19.0	-90.00	-3,009.7	1,448.9	2,989.8	2,864.2	125.63	23.798		
14,200.0	7,740.0	7,798.0	7,725.0	110.0	19.0	-90.00	-3,009.7	1,448.9	3,088.0	2,960.7	127.37	24.245		
14,300.0	7,740.0	7,798.0	7,725.0	111.7	19.0	-90.00	-3,009.7	1,448.9	3,186.4	3,057.3	129.11	24.679		
14,400.0	7,740.0	7,798.0	7,725.0	113.4	19.0	-90.00	-3,009.7	1,448.9	3,284.8	3,153.9	130.85	25.103		
14,500.0	7,740.0	7,798.0	7,725.0	115.2	19.0	-90.00	-3,009.7	1,448.9	3,383.3	3,250.7	132.59	25.517		
14,600.0	7,740.0	7,798.0	7,725.0	116.9	19.0	-90.00	-3,009.7	1,448.9	3,481.9	3,347.6	134.33	25.920		
14,700.0	7,740.0	7,798.0	7,725.0	118.6	19.0	-90.00	-3,009.7	1,448.9	3,580.6	3,444.5	136.07	26.314		
14,800.0	7,740.0	7,798.0	7,725.0	120.4	19.0	-90.00	-3,009.7	1,448.9	3,679.4	3,541.5	137.82	26.698		
14,900.0	7,740.0	7,798.0	7,725.0	122.1	19.0	-90.00	-3,009.7	1,448.9	3,778.2	3,638.6	139.56	27.073		
15,000.0	7,740.0	7,798.0	7,725.0	123.8	19.0	-90.00	-3,009.7	1,448.9	3,877.1	3,735.8	141.30	27.439		
15,100.0	7,740.0	7,798.0	7,725.0	125.5	19.0	-90.00	-3,009.7	1,448.9	3,976.0	3,833.0	143.04	27.796		
15,200.0	7,740.0	7,798.0	7,725.0	127.3	19.0	-90.00	-3,009.7	1,448.9	4,075.0	3,930.2	144.79	28.145		
15,300.0	7,740.0	7,798.0	7,725.0	129.0	19.0	-90.00	-3,009.7	1,448.9	4,174.0	4,027.5	146.53	28.486		
15,400.0	7,740.0	7,798.0	7,725.0	130.7	19.0	-90.00	-3,009.7	1,448.9	4,273.1	4,124.8	148.27	28.819		
15,500.0	7,740.0	7,798.0	7,725.0	132.5	19.0	-90.00	-3,009.7	1,448.9	4,372.2	4,222.2	150.02	29.145		
15,600.0	7,740.0	7,798.0	7,725.0	134.2	19.0	-90.00	-3,009.7	1,448.9	4,471.4	4,319.6	151.76	29.463		
15,700.0	7,740.0	7,798.0	7,725.0	135.9	19.0	-90.00	-3,009.7	1,448.9	4,570.6	4,417.1	153.51	29.775		
15,800.0	7,740.0	7,798.0	7,725.0	137.7	19.0	-90.00	-3,009.7	1,448.9	4,669.8	4,514.6	155.25	30.079		
15,900.0	7,740.0	7,798.0	7,725.0	139.4	19.0	-90.00	-3,009.7	1,448.9	4,769.1	4,612.1	157.00	30.377		
16,000.0	7,740.0	7,798.0	7,725.0	141.1	19.0	-90.00	-3,009.7	1,448.9	4,868.4	4,709.6	158.74	30.669		
16,083.0	7,740.0	7,798.0	7,725.0	142.6	19.0	-90.00	-3,009.7	1,448.9	4,950.8	4,790.6	160.19	30.906		
16,083.8	7,740.0	7,798.0	7,725.0	142.6	19.0	-90.00	-3,009.7	1,448.9	4,951.6	4,791.4	160.20	30.908		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													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)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	29.0	29.0	0.0	0.0	65.54	1,870.5	4,112.2	4,517.7					
100.0	100.0	129.0	129.0	0.2	0.2	65.54	1,870.5	4,112.2	4,517.7	4,517.3	0.35	N/A		
200.0	200.0	277.7	277.7	0.3	0.5	65.54	1,870.7	4,111.7	4,517.5	4,516.7	0.79	5,725.598		
300.0	300.0	545.1	544.9	0.5	1.0	65.46	1,872.9	4,102.1	4,514.6	4,513.1	1.46	3,091.907		
400.0	400.0	811.0	809.8	0.7	1.5	65.29	1,877.8	4,080.5	4,508.0	4,505.8	2.22	2,031.785		
500.0	500.0	1,074.3	1,070.9	0.8	2.3	65.02	1,885.4	4,047.4	4,497.7	4,494.6	3.12	1,443.419		
600.0	600.0	1,333.9	1,326.5	1.0	3.2	64.66	1,895.5	4,003.2	4,483.9	4,479.7	4.17	1,074.096		
700.0	700.0	1,588.9	1,575.3	1.2	4.2	64.21	1,908.0	3,949.0	4,466.6	4,461.2	5.40	827.109		
800.0	800.0	1,729.3	1,711.4	1.4	4.8	63.92	1,915.8	3,914.9	4,446.9	4,440.7	6.22	715.054		
900.0	900.0	1,826.1	1,805.0	1.5	5.3	63.72	1,921.2	3,891.1	4,427.1	4,420.3	6.84	646.911		
1,000.0	1,000.0	1,922.9	1,898.7	1.7	5.7	63.52	1,926.7	3,867.3	4,407.3	4,399.9	7.47	589.924		
1,100.0	1,100.0	2,019.5	1,992.2	1.9	6.2	12.34	1,932.1	3,843.6	4,386.8	4,380.1	6.67	657.362		
1,200.0	1,200.0	2,115.9	2,085.4	2.1	6.7	12.19	1,937.6	3,819.9	4,364.6	4,357.5	7.16	609.411		
1,300.0	1,299.9	2,211.9	2,178.3	2.3	7.1	12.04	1,943.0	3,796.3	4,340.9	4,333.2	7.65	567.444		
1,400.0	1,399.7	2,307.5	2,270.8	2.4	7.6	11.90	1,948.4	3,772.8	4,315.5	4,307.4	8.14	530.412		
1,500.0	1,499.4	2,402.7	2,363.0	2.6	8.0	11.76	1,953.7	3,749.4	4,288.6	4,279.9	8.62	497.491		
1,600.0	1,598.9	2,497.6	2,454.8	2.8	8.5	11.63	1,959.1	3,726.1	4,260.0	4,250.9	9.10	468.030		
1,700.0	1,698.3	2,592.0	2,546.1	3.1	8.9	11.51	1,964.4	3,702.9	4,229.8	4,220.3	9.58	441.506		
1,800.0	1,797.4	2,685.9	2,637.0	3.3	9.4	11.38	1,969.7	3,679.9	4,198.1	4,188.1	10.06	417.496		
1,908.5	1,904.7	2,787.2	2,735.1	3.6	9.9	11.26	1,975.4	3,655.0	4,161.9	4,151.3	10.57	393.886		
2,000.0	1,995.0	2,872.4	2,817.5	3.8	10.3	11.09	1,980.2	3,634.1	4,130.6	4,119.6	11.03	374.582		
2,100.0	2,093.8	2,965.5	2,907.6	4.1	10.7	10.90	1,985.4	3,611.2	4,096.4	4,084.9	11.53	355.178		
2,200.0	2,192.5	3,058.6	2,997.7	4.4	11.2	10.71	1,990.7	3,588.3	4,062.3	4,050.2	12.04	337.341		
2,300.0	2,291.3	3,151.7	3,087.8	4.7	11.6	10.52	1,995.9	3,565.4	4,028.2	4,015.6	12.55	320.892		
2,400.0	2,390.0	3,244.8	3,177.9	5.0	12.1	10.32	2,001.2	3,542.6	3,994.1	3,981.0	13.07	305.678		
2,500.0	2,488.8	3,337.9	3,268.0	5.3	12.5	10.12	2,006.4	3,519.7	3,960.1	3,946.5	13.58	291.568		
2,600.0	2,587.5	3,431.0	3,358.1	5.6	13.0	9.91	2,011.6	3,496.8	3,926.1	3,912.0	14.10	278.447		
2,700.0	2,686.3	3,524.1	3,448.2	5.9	13.4	9.71	2,016.9	3,473.9	3,892.2	3,877.6	14.62	266.218		
2,800.0	2,785.0	3,617.2	3,538.3	6.2	13.9	9.50	2,022.1	3,451.1	3,858.3	3,843.2	15.14	254.793		
2,900.0	2,883.8	3,710.3	3,628.4	6.5	14.3	9.28	2,027.4	3,428.2	3,824.5	3,808.8	15.67	244.098		
3,000.0	2,982.5	3,803.4	3,718.5	6.8	14.8	9.06	2,032.6	3,405.3	3,790.7	3,774.5	16.20	234.065		
3,100.0	3,081.3	3,896.5	3,808.5	7.2	15.2	8.84	2,037.9	3,382.5	3,757.0	3,740.3	16.72	224.636		
3,200.0	3,180.0	3,989.6	3,898.6	7.5	15.7	8.61	2,043.1	3,359.6	3,723.3	3,706.1	17.26	215.759		
3,300.0	3,278.7	4,082.7	3,988.7	7.8	16.1	8.38	2,048.4	3,336.7	3,689.7	3,671.9	17.79	207.387		
3,400.0	3,377.5	4,175.8	4,078.8	8.1	16.6	8.15	2,053.6	3,313.8	3,656.2	3,637.8	18.33	199.479		
3,500.0	3,476.2	4,268.9	4,168.9	8.4	17.0	7.91	2,058.8	3,291.0	3,622.6	3,603.8	18.87	191.999		
3,600.0	3,575.0	4,362.0	4,259.0	8.7	17.5	7.66	2,064.1	3,268.1	3,589.2	3,569.8	19.41	184.913		
3,700.0	3,673.7	4,455.1	4,349.1	9.1	17.9	7.42	2,069.3	3,245.2	3,555.8	3,535.9	19.95	178.192		
3,800.0	3,772.5	4,548.2	4,439.2	9.4	18.4	7.16	2,074.6	3,222.3	3,522.5	3,502.0	20.50	171.808		
3,900.0	3,871.2	4,641.3	4,529.3	9.7	18.8	6.91	2,079.8	3,199.5	3,489.2	3,468.2	21.05	165.737		
4,000.0	3,970.0	4,734.4	4,619.4	10.0	19.3	6.65	2,085.1	3,176.6	3,456.0	3,434.4	21.61	159.957		
4,100.0	4,068.7	4,827.5	4,709.5	10.3	19.7	6.38	2,090.3	3,153.7	3,422.9	3,400.7	22.16	154.449		
4,200.0	4,167.5	4,920.6	4,799.6	10.7	20.2	6.11	2,095.6	3,130.9	3,389.8	3,367.1	22.72	149.193		
4,300.0	4,266.2	5,013.7	4,889.7	11.0	20.6	5.83	2,100.8	3,108.0	3,356.8	3,333.6	23.28	144.174		
4,400.0	4,364.9	5,106.8	4,979.8	11.3	21.1	5.55	2,106.0	3,085.1	3,323.9	3,300.1	23.85	139.376		
4,500.0	4,463.7	5,199.9	5,069.9	11.6	21.5	5.26	2,111.3	3,062.2	3,291.1	3,266.7	24.42	134.785		
4,600.0	4,562.4	5,293.0	5,160.0	11.9	22.0	4.97	2,116.5	3,039.4	3,258.3	3,233.3	24.99	130.389		
4,700.0	4,661.2	5,386.1	5,250.1	12.3	22.4	4.67	2,121.8	3,016.5	3,225.6	3,200.1	25.56	126.176		
4,800.0	4,759.9	5,479.2	5,340.2	12.6	22.9	4.36	2,127.0	2,993.6	3,193.0	3,166.9	26.14	122.134		
4,900.0	4,858.7	5,572.3	5,430.3	12.9	23.3	4.05	2,132.3	2,970.7	3,160.5	3,133.8	26.73	118.255		
5,000.0	4,957.4	5,665.4	5,520.4	13.2	23.8	3.73	2,137.5	2,947.9	3,128.1	3,100.8	27.31	114.528		
5,100.0	5,056.2	5,758.5	5,610.5	13.6	24.2	3.41	2,142.8	2,925.0	3,095.8	3,067.8	27.90	110.946		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													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)				
5,200.0	5,154.9	5,851.6	5,700.6	13.9	24.7	3.08	2,148.0	2,902.1	3,063.5	3,035.0	28.50	107.500		
5,300.0	5,253.7	9,264.0	7,530.0	14.2	42.9	46.96	382.4	2,438.0	2,985.8	2,939.5	46.26	64.544		
5,400.0	5,352.4	9,254.1	7,530.0	14.5	42.8	46.63	392.3	2,438.0	2,903.9	2,857.7	46.20	62.850		
5,500.0	5,451.1	9,244.2	7,530.0	14.9	42.7	46.30	402.3	2,438.0	2,823.2	2,777.1	46.15	61.181		
5,600.0	5,549.9	9,234.3	7,530.0	15.2	42.6	45.97	412.2	2,438.0	2,743.7	2,697.6	46.08	59.537		
5,700.0	5,648.6	9,224.3	7,530.0	15.5	42.5	45.64	422.1	2,438.0	2,665.5	2,619.5	46.02	57.921		
5,800.0	5,747.4	9,214.4	7,530.0	15.8	42.4	45.30	432.1	2,438.0	2,588.8	2,542.9	45.95	56.336		
5,900.0	5,846.1	9,204.5	7,530.0	16.2	42.3	44.97	442.0	2,438.0	2,513.7	2,467.9	45.88	54.784		
6,000.0	5,944.9	9,194.5	7,530.0	16.5	42.2	44.63	451.9	2,438.0	2,440.4	2,394.6	45.81	53.267		
6,100.0	6,043.6	9,184.6	7,530.0	16.8	42.1	44.30	461.8	2,438.0	2,369.0	2,323.2	45.74	51.789		
6,200.0	6,142.4	9,174.7	7,530.0	17.1	42.0	43.96	471.8	2,438.0	2,299.6	2,253.9	45.67	50.355		
6,300.0	6,241.1	9,164.7	7,530.0	17.5	41.8	43.63	481.7	2,438.0	2,232.5	2,186.9	45.59	48.969		
6,400.0	6,339.9	9,154.8	7,530.0	17.8	41.7	43.29	491.6	2,438.0	2,168.0	2,122.4	45.51	47.635		
6,500.0	6,438.6	9,144.9	7,530.0	18.1	41.6	42.96	501.6	2,438.0	2,106.1	2,060.7	45.43	46.359		
6,600.0	6,537.3	9,135.0	7,530.0	18.4	41.5	42.62	511.5	2,438.0	2,047.2	2,001.9	45.35	45.146		
6,700.0	6,636.1	9,125.0	7,530.0	18.8	41.4	42.28	521.4	2,438.0	1,991.6	1,946.3	45.26	44.002		
6,800.0	6,734.8	9,115.1	7,530.0	19.1	41.3	41.95	531.4	2,438.0	1,939.4	1,894.3	45.17	42.933		
6,900.0	6,833.6	9,105.2	7,530.0	19.4	41.2	41.61	541.3	2,438.0	1,891.1	1,846.0	45.08	41.946		
7,000.0	6,932.3	9,095.2	7,530.0	19.7	41.1	41.27	551.2	2,438.0	1,846.9	1,801.9	44.99	41.047		
7,100.0	7,031.1	9,085.3	7,530.0	20.1	41.0	40.93	561.2	2,438.0	1,807.0	1,762.1	44.90	40.244		
7,190.5	7,120.5	9,076.3	7,530.0	20.4	40.9	40.63	570.1	2,438.0	1,775.0	1,730.2	44.82	39.605		
7,200.0	7,129.8	9,075.4	7,530.0	20.4	40.9	35.11	571.0	2,438.0	1,771.9	1,727.3	44.62	39.710		
7,250.0	7,179.4	9,073.5	7,530.0	20.5	40.9	-1.85	573.0	2,438.0	1,755.9	1,712.3	43.64	40.234		
7,300.0	7,228.8	9,075.9	7,530.0	20.6	40.9	-35.02	570.6	2,438.0	1,740.9	1,698.1	42.83	40.645		
7,350.0	7,277.9	9,082.6	7,530.0	20.7	41.0	-53.74	563.9	2,438.0	1,727.1	1,684.9	42.22	40.911		
7,400.0	7,326.1	9,093.6	7,530.0	20.7	41.1	-63.99	552.9	2,438.0	1,714.5	1,672.7	41.80	41.014		
7,450.0	7,373.2	9,108.7	7,530.0	20.7	41.3	-70.13	537.7	2,438.0	1,703.1	1,661.5	41.59	40.950		
7,500.0	7,418.7	9,128.0	7,530.0	20.7	41.5	-74.07	518.4	2,438.0	1,693.0	1,651.4	41.56	40.732		
7,550.0	7,462.4	9,151.2	7,530.0	20.6	41.7	-76.68	495.2	2,438.0	1,684.0	1,642.3	41.70	40.385		
7,600.0	7,503.8	9,178.2	7,530.0	20.5	42.0	-78.42	468.3	2,438.0	1,676.3	1,634.3	41.97	39.937		
7,650.0	7,542.8	9,208.7	7,530.0	20.5	42.3	-79.56	437.8	2,438.0	1,669.6	1,627.2	42.36	39.418		
7,700.0	7,578.8	9,242.5	7,530.0	20.4	42.7	-80.27	403.9	2,438.0	1,663.8	1,620.9	42.82	38.851		
7,750.0	7,611.8	9,279.4	7,530.0	20.3	43.1	-80.68	367.0	2,438.0	1,658.7	1,615.4	43.35	38.266		
7,800.0	7,641.5	9,319.1	7,530.0	20.2	43.6	-80.88	327.3	2,438.0	1,654.3	1,610.4	43.91	37.674		
7,850.0	7,667.6	9,361.3	7,530.0	20.2	44.0	-80.96	285.2	2,438.0	1,650.4	1,605.9	44.51	37.084		
7,900.0	7,689.9	9,405.6	7,530.0	20.2	44.6	-80.98	240.8	2,438.0	1,646.8	1,601.7	45.12	36.497		
7,950.0	7,708.2	9,451.8	7,530.0	20.1	45.1	-80.98	194.7	2,438.0	1,643.5	1,597.7	45.77	35.904		
8,000.0	7,722.5	9,499.4	7,530.0	20.2	45.7	-81.02	147.1	2,438.0	1,640.2	1,593.7	46.47	35.299		
8,050.0	7,732.6	9,548.1	7,530.0	20.2	46.3	-81.12	98.3	2,438.0	1,636.9	1,589.7	47.22	34.664		
8,100.0	7,738.4	9,597.6	7,530.0	20.3	46.9	-81.31	48.9	2,438.0	1,633.6	1,585.5	48.05	33.997		
8,142.5	7,740.0	9,639.9	7,530.0	20.4	47.4	-81.55	6.6	2,438.1	1,630.7	1,581.8	48.83	33.397		
8,200.0	7,740.0	9,697.3	7,530.0	20.5	48.2	-81.53	-50.8	2,438.1	1,626.7	1,576.7	49.97	32.556		
8,300.0	7,740.0	9,797.0	7,530.0	20.9	49.4	-81.49	-150.6	2,438.1	1,619.8	1,567.7	52.11	31.084		
8,400.0	7,740.0	9,896.8	7,530.0	21.4	50.8	-81.46	-250.3	2,438.1	1,612.9	1,558.5	54.44	29.628		
8,442.5	7,740.0	9,939.2	7,530.0	21.7	51.3	-81.44	-292.7	2,438.1	1,610.0	1,554.5	55.48	29.020		
8,500.0	7,740.0	9,996.6	7,530.0	22.1	52.1	-81.43	-350.1	2,438.1	1,606.3	1,549.2	57.15	28.105		
8,600.0	7,740.0	10,096.4	7,530.0	22.8	53.5	-81.41	-450.0	2,438.1	1,601.3	1,541.2	60.15	26.624		
8,700.0	7,740.0	10,196.4	7,530.0	23.6	54.9	-81.40	-549.9	2,438.1	1,598.0	1,534.8	63.22	25.276		
8,800.0	7,740.0	10,296.4	7,530.0	24.5	56.3	-81.39	-649.9	2,438.2	1,596.4	1,530.1	66.37	24.054		
8,841.5	7,740.0	10,337.9	7,530.0	24.9	56.9	-81.39	-691.4	2,438.2	1,596.3	1,528.6	67.69	23.581		
8,842.5	7,740.0	10,338.8	7,530.0	25.0	56.9	-81.39	-692.4	2,438.2	1,596.3	1,528.6	67.72	23.571		
8,900.0	7,740.0	10,396.4	7,530.0	25.5	57.7	-81.39	-749.9	2,438.2	1,596.3	1,526.9	69.40	23.003		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													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)				
9,000.0	7,740.0	10,496.4	7,530.0	26.6	59.2	-81.39	-849.9	2,438.2	1,596.3	1,523.9	72.36	22.061		
9,100.0	7,740.0	10,596.4	7,530.0	27.7	60.6	-81.39	-949.9	2,438.2	1,596.3	1,520.9	75.39	21.175		
9,200.0	7,740.0	10,696.4	7,530.0	28.9	62.1	-81.39	-1,049.9	2,438.2	1,596.3	1,517.9	78.46	20.345		
9,300.0	7,740.0	10,796.4	7,530.0	30.2	63.6	-81.39	-1,149.9	2,438.2	1,596.4	1,514.8	81.59	19.566		
9,342.5	7,740.0	10,838.8	7,530.0	30.7	64.3	-81.39	-1,192.4	2,438.3	1,596.4	1,513.4	82.93	19.251		
9,399.5	7,740.0	10,895.9	7,530.0	31.5	65.1	-81.39	-1,249.4	2,438.3	1,596.1	1,511.5	84.57	18.873		
9,500.0	7,740.0	10,996.4	7,530.0	32.8	66.7	-81.38	-1,349.9	2,438.3	1,595.1	1,507.3	87.78	18.172		
9,600.0	7,740.0	11,096.3	7,530.0	34.2	68.2	-81.38	-1,449.9	2,438.3	1,594.1	1,503.1	91.00	17.518		
9,700.0	7,740.0	11,196.3	7,530.0	35.6	69.7	-81.37	-1,549.9	2,438.3	1,593.2	1,498.9	94.24	16.905		
9,800.0	7,740.0	11,296.3	7,530.0	37.1	71.3	-81.37	-1,649.9	2,438.3	1,592.2	1,494.7	97.51	16.330		
9,900.0	7,740.0	11,396.3	7,530.0	38.5	72.9	-81.36	-1,749.9	2,438.3	1,591.2	1,490.5	100.79	15.788		
10,000.0	7,740.0	11,496.3	7,530.0	40.0	74.4	-81.36	-1,849.9	2,438.4	1,590.3	1,486.2	104.08	15.279		
10,100.0	7,740.0	11,596.3	7,530.0	41.6	76.0	-81.35	-1,949.9	2,438.4	1,589.3	1,481.9	107.39	14.799		
10,200.0	7,740.0	11,696.3	7,530.0	43.1	77.6	-81.35	-2,049.9	2,438.4	1,588.3	1,477.6	110.71	14.347		
10,300.0	7,740.0	11,796.3	7,530.0	44.6	79.2	-81.34	-2,149.9	2,438.4	1,587.4	1,473.3	114.04	13.919		
10,400.0	7,740.0	11,896.3	7,530.0	46.2	80.8	-81.33	-2,249.9	2,438.4	1,586.4	1,469.0	117.39	13.514		
10,500.0	7,740.0	11,996.3	7,530.0	47.8	82.4	-81.33	-2,349.9	2,438.4	1,585.4	1,464.7	120.74	13.131		
10,600.0	7,740.0	12,096.3	7,530.0	49.4	84.0	-81.32	-2,449.9	2,438.5	1,584.5	1,460.4	124.09	12.768		
10,700.0	7,740.0	12,196.3	7,530.0	51.0	85.6	-81.32	-2,549.8	2,438.5	1,583.5	1,456.0	127.46	12.424		
10,800.0	7,740.0	12,296.3	7,530.0	52.6	87.3	-81.31	-2,649.8	2,438.5	1,582.5	1,451.7	130.83	12.096		
10,900.0	7,740.0	12,396.3	7,530.0	54.2	88.9	-81.31	-2,749.8	2,438.5	1,581.6	1,447.4	134.21	11.785		
11,000.0	7,740.0	12,496.3	7,530.0	55.8	90.5	-81.30	-2,849.8	2,438.5	1,580.6	1,443.0	137.59	11.488		
11,100.0	7,740.0	12,596.3	7,530.0	57.5	92.2	-81.30	-2,949.8	2,438.5	1,579.6	1,438.7	140.97	11.205		
11,200.0	7,740.0	12,696.3	7,530.0	59.1	93.8	-81.29	-3,049.8	2,438.6	1,578.7	1,434.3	144.36	10.935		
11,300.0	7,740.0	12,796.3	7,530.0	60.8	95.5	-81.29	-3,149.8	2,438.6	1,577.7	1,429.9	147.76	10.677		
11,400.0	7,740.0	12,896.3	7,530.0	62.4	97.1	-81.28	-3,249.8	2,438.6	1,576.7	1,425.6	151.16	10.431		
11,500.0	7,740.0	12,996.3	7,530.0	64.1	98.8	-81.28	-3,349.8	2,438.6	1,575.8	1,421.2	154.56	10.195		
11,600.0	7,740.0	13,096.3	7,530.0	65.7	100.4	-81.27	-3,449.8	2,438.6	1,574.8	1,416.8	157.96	9.969		
11,700.0	7,740.0	13,196.2	7,530.0	67.4	102.1	-81.26	-3,549.8	2,438.6	1,573.8	1,412.5	161.37	9.753		
11,800.0	7,740.0	13,296.2	7,530.0	69.1	103.7	-81.26	-3,649.8	2,438.7	1,572.9	1,408.1	164.78	9.545		
11,900.0	7,740.0	13,396.2	7,530.0	70.8	105.4	-81.25	-3,749.8	2,438.7	1,571.9	1,403.7	168.19	9.346		
12,000.0	7,740.0	13,496.2	7,530.0	72.4	107.1	-81.25	-3,849.8	2,438.7	1,570.9	1,399.3	171.61	9.154		
12,100.0	7,740.0	13,596.2	7,530.0	74.1	108.8	-81.24	-3,949.8	2,438.7	1,570.0	1,394.9	175.02	8.970		
12,200.0	7,740.0	13,696.2	7,530.0	75.8	110.4	-81.24	-4,049.8	2,438.7	1,569.0	1,390.5	178.44	8.793		
12,300.0	7,740.0	13,796.2	7,530.0	77.5	112.1	-81.23	-4,149.8	2,438.7	1,568.0	1,386.2	181.86	8.622		
12,400.0	7,740.0	13,896.2	7,530.0	79.2	113.8	-81.23	-4,249.8	2,438.8	1,567.1	1,381.8	185.29	8.457		
12,500.0	7,740.0	13,996.2	7,530.0	80.9	115.5	-81.22	-4,349.8	2,438.8	1,566.1	1,377.4	188.71	8.299		
12,600.0	7,740.0	14,096.2	7,530.0	82.6	117.2	-81.22	-4,449.8	2,438.8	1,565.1	1,373.0	192.14	8.146		
12,700.0	7,740.0	14,196.2	7,530.0	84.3	118.8	-81.21	-4,549.8	2,438.8	1,564.2	1,368.6	195.56	7.998		
12,800.0	7,740.0	14,296.2	7,530.0	86.0	120.5	-81.20	-4,649.7	2,438.8	1,563.2	1,364.2	198.99	7.856		
12,900.0	7,740.0	14,396.2	7,530.0	87.7	122.2	-81.20	-4,749.7	2,438.8	1,562.2	1,359.8	202.42	7.718		
13,000.0	7,740.0	14,496.2	7,530.0	89.4	123.9	-81.19	-4,849.7	2,438.9	1,561.3	1,355.4	205.85	7.584		
13,100.0	7,740.0	14,596.2	7,530.0	91.1	125.6	-81.19	-4,949.7	2,438.9	1,560.3	1,351.0	209.28	7.455		
13,200.0	7,740.0	14,696.2	7,530.0	92.8	127.3	-81.18	-5,049.7	2,438.9	1,559.3	1,346.6	212.72	7.331		
13,300.0	7,740.0	14,796.2	7,530.0	94.5	129.0	-81.18	-5,149.7	2,438.9	1,558.3	1,342.2	216.15	7.210		
13,400.0	7,740.0	14,896.2	7,530.0	96.2	130.7	-81.17	-5,249.7	2,438.9	1,557.4	1,337.8	219.58	7.092		
13,500.0	7,740.0	14,996.2	7,530.0	98.0	132.4	-81.17	-5,349.7	2,438.9	1,556.4	1,333.4	223.02	6.979		
13,600.0	7,740.0	15,096.2	7,530.0	99.7	134.1	-81.16	-5,449.7	2,439.0	1,555.4	1,329.0	226.45	6.869		
13,700.0	7,740.0	15,196.2	7,530.0	101.4	135.8	-81.16	-5,549.7	2,439.0	1,554.5	1,324.6	229.89	6.762		
13,800.0	7,740.0	15,296.1	7,530.0	103.1	137.5	-81.15	-5,649.7	2,439.0	1,553.5	1,320.2	233.33	6.658		
13,900.0	7,740.0	15,396.1	7,530.0	104.8	139.2	-81.14	-5,749.7	2,439.0	1,552.5	1,315.8	236.77	6.557		
14,000.0	7,740.0	15,496.1	7,530.0	106.5	140.9	-81.14	-5,849.7	2,439.0	1,551.6	1,311.4	240.21	6.459		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2													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		
14,100.0	7,740.0	15,596.1	7,530.0	108.3	142.6	-81.13	-5,949.7	2,439.0	1,550.6	1,307.0	243.65	6.364		
14,200.0	7,740.0	15,696.1	7,530.0	110.0	144.3	-81.13	-6,049.7	2,439.1	1,549.6	1,302.6	247.09	6.272		
14,300.0	7,740.0	15,796.1	7,530.0	111.7	146.0	-81.12	-6,149.7	2,439.1	1,548.7	1,298.1	250.53	6.182		
14,400.0	7,740.0	15,896.1	7,530.0	113.4	147.8	-81.12	-6,249.7	2,439.1	1,547.7	1,293.7	253.97	6.094		
14,500.0	7,740.0	15,996.1	7,530.0	115.2	149.5	-81.11	-6,349.7	2,439.1	1,546.7	1,289.3	257.41	6.009		
14,600.0	7,740.0	16,096.1	7,530.0	116.9	151.2	-81.11	-6,449.7	2,439.1	1,545.8	1,284.9	260.85	5.926		
14,700.0	7,740.0	16,196.1	7,530.0	118.6	152.9	-81.10	-6,549.7	2,439.1	1,544.8	1,280.5	264.30	5.845		
14,800.0	7,740.0	16,296.1	7,530.0	120.4	154.6	-81.09	-6,649.7	2,439.2	1,543.8	1,276.1	267.74	5.766		
14,900.0	7,740.0	16,396.1	7,530.0	122.1	156.3	-81.09	-6,749.6	2,439.2	1,542.9	1,271.7	271.18	5.689		
15,000.0	7,740.0	16,496.1	7,530.0	123.8	158.0	-81.08	-6,849.6	2,439.2	1,541.9	1,267.3	274.63	5.615		
15,100.0	7,740.0	16,596.1	7,530.0	125.5	159.8	-81.08	-6,949.6	2,439.2	1,540.9	1,262.9	278.07	5.542		
15,200.0	7,740.0	16,696.1	7,530.0	127.3	161.5	-81.07	-7,049.6	2,439.2	1,540.0	1,258.5	281.52	5.470		
15,300.0	7,740.0	16,796.1	7,530.0	129.0	163.2	-81.07	-7,149.6	2,439.2	1,539.0	1,254.0	284.96	5.401		
15,400.0	7,740.0	16,896.1	7,530.0	130.7	164.9	-81.06	-7,249.6	2,439.3	1,538.0	1,249.6	288.41	5.333		
15,500.0	7,740.0	16,996.1	7,530.0	132.5	166.6	-81.05	-7,349.6	2,439.3	1,537.1	1,245.2	291.85	5.267		
15,600.0	7,740.0	17,096.1	7,530.0	134.2	168.4	-81.05	-7,449.6	2,439.3	1,536.1	1,240.8	295.30	5.202		
15,700.0	7,740.0	17,196.1	7,530.0	135.9	170.1	-81.04	-7,549.6	2,439.3	1,535.1	1,236.4	298.74	5.139		
15,800.0	7,740.0	17,296.1	7,530.0	137.7	171.8	-81.04	-7,649.6	2,439.3	1,534.2	1,232.0	302.19	5.077		
15,900.0	7,740.0	17,396.0	7,530.0	139.4	173.5	-81.03	-7,749.6	2,439.3	1,533.2	1,227.6	305.64	5.016		
16,000.0	7,740.0	17,496.0	7,530.0	141.1	175.2	-81.03	-7,849.6	2,439.4	1,532.2	1,223.2	309.08	4.957		
16,083.0	7,740.0	17,579.0	7,530.0	142.6	176.7	-81.02	-7,932.6	2,439.4	1,531.4	1,219.5	311.94	4.909		
16,083.8	7,740.0	17,579.9	7,530.0	142.6	176.7	-81.02	-7,933.4	2,439.4	1,531.4	1,219.5	311.97	4.909 CC, ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													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	29.0	29.0	0.0	0.0	65.59	1,870.5	4,122.3	4,526.9					
100.0	100.0	129.0	129.0	0.2	0.2	65.59	1,870.5	4,122.3	4,526.9	4,526.5	0.35	N/A		
200.0	200.0	229.0	229.0	0.3	0.4	65.59	1,870.5	4,122.3	4,526.9	4,526.2	0.70	6,435.970		
300.0	300.0	452.8	452.8	0.5	0.8	65.56	1,871.5	4,118.8	4,525.8	4,524.5	1.27	3,550.539		
400.0	400.0	708.8	708.3	0.7	1.3	65.45	1,875.3	4,104.6	4,521.3	4,519.4	1.95	2,317.847		
500.0	500.0	962.9	961.1	0.8	1.9	65.23	1,882.0	4,079.5	4,513.4	4,510.7	2.73	1,653.362		
600.0	600.0	1,214.3	1,209.7	1.0	2.6	64.93	1,891.5	4,044.1	4,502.2	4,498.6	3.64	1,236.058		
700.0	700.0	1,461.9	1,452.9	1.2	3.5	64.55	1,903.5	3,999.0	4,487.7	4,483.0	4.70	953.892		
800.0	800.0	1,560.2	1,548.9	1.4	3.9	64.37	1,908.9	3,979.0	4,471.5	4,466.3	5.26	850.120		
900.0	900.0	1,657.9	1,644.5	1.5	4.3	64.20	1,914.2	3,959.2	4,455.5	4,449.7	5.82	765.901		
1,000.0	1,000.0	1,755.7	1,740.1	1.7	4.7	64.02	1,919.5	3,939.3	4,439.4	4,433.1	6.38	696.047		
1,100.0	1,100.0	1,853.3	1,835.6	1.9	5.0	12.87	1,924.8	3,919.5	4,422.6	4,416.6	6.00	737.487		
1,200.0	1,200.0	1,950.8	1,930.8	2.1	5.4	12.74	1,930.1	3,899.8	4,404.1	4,397.7	6.45	682.453		
1,300.0	1,299.9	2,047.9	2,025.8	2.3	5.8	12.61	1,935.4	3,880.0	4,384.0	4,377.1	6.91	634.529		
1,400.0	1,399.7	2,144.7	2,120.5	2.4	6.2	12.50	1,940.6	3,860.4	4,362.3	4,354.9	7.36	592.424		
1,500.0	1,499.4	2,241.2	2,214.8	2.6	6.6	12.39	1,945.9	3,840.8	4,338.9	4,331.1	7.82	555.135		
1,600.0	1,598.9	2,337.4	2,308.8	2.8	7.0	12.29	1,951.1	3,821.3	4,313.9	4,305.7	8.27	521.876		
1,700.0	1,698.3	2,433.1	2,402.4	3.1	7.4	12.19	1,956.3	3,801.9	4,287.3	4,278.6	8.71	492.019		
1,800.0	1,797.4	2,528.4	2,495.6	3.3	7.8	12.10	1,961.4	3,782.5	4,259.1	4,250.0	9.16	465.060		
1,908.5	1,904.7	2,631.3	2,596.2	3.6	8.2	12.01	1,967.0	3,761.6	4,226.7	4,217.1	9.64	438.609		
2,000.0	1,995.0	2,717.9	2,680.8	3.8	8.5	11.88	1,971.7	3,744.1	4,198.6	4,188.5	10.06	417.156		
2,100.0	2,093.8	2,812.5	2,773.3	4.1	8.9	11.73	1,976.9	3,724.9	4,167.8	4,157.3	10.53	395.642		
2,200.0	2,192.5	2,907.0	2,865.8	4.4	9.3	11.58	1,982.0	3,705.7	4,137.2	4,126.1	11.01	375.910		
2,300.0	2,291.3	3,001.6	2,958.3	4.7	9.7	11.42	1,987.1	3,686.5	4,106.5	4,095.0	11.48	357.751		
2,400.0	2,390.0	3,096.2	3,050.7	5.0	10.1	11.27	1,992.3	3,667.3	4,075.8	4,063.9	11.95	340.987		
2,500.0	2,488.8	3,190.8	3,143.2	5.3	10.5	11.11	1,997.4	3,648.1	4,045.2	4,032.8	12.43	325.466		
2,600.0	2,587.5	3,285.4	3,235.7	5.6	10.9	10.95	2,002.5	3,628.9	4,014.7	4,001.8	12.91	311.057		
2,700.0	2,686.3	3,380.0	3,328.2	5.9	11.3	10.79	2,007.7	3,609.7	3,984.1	3,970.7	13.39	297.647		
2,800.0	2,785.0	3,474.6	3,420.7	6.2	11.6	10.62	2,012.8	3,590.5	3,953.6	3,939.7	13.87	285.136		
2,900.0	2,883.8	3,569.2	3,513.1	6.5	12.0	10.45	2,017.9	3,571.3	3,923.1	3,908.7	14.35	273.439		
3,000.0	2,982.5	3,663.8	3,605.6	6.8	12.4	10.28	2,023.1	3,552.1	3,892.6	3,877.8	14.83	262.479		
3,100.0	3,081.3	3,758.4	3,698.1	7.2	12.8	10.11	2,028.2	3,532.9	3,862.2	3,846.9	15.31	252.190		
3,200.0	3,180.0	3,853.0	3,790.6	7.5	13.2	9.93	2,033.3	3,513.7	3,831.8	3,816.0	15.80	242.512		
3,300.0	3,278.7	3,947.5	3,883.1	7.8	13.6	9.75	2,038.5	3,494.5	3,801.5	3,785.2	16.29	233.394		
3,400.0	3,377.5	4,042.1	3,975.5	8.1	14.0	9.57	2,043.6	3,475.3	3,771.1	3,754.3	16.78	224.788		
3,500.0	3,476.2	4,136.7	4,068.0	8.4	14.4	9.39	2,048.8	3,456.1	3,740.8	3,723.6	17.27	216.654		
3,600.0	3,575.0	4,231.3	4,160.5	8.7	14.8	9.20	2,053.9	3,436.9	3,710.6	3,692.8	17.76	208.954		
3,700.0	3,673.7	4,325.9	4,253.0	9.1	15.1	9.01	2,059.0	3,417.7	3,680.4	3,662.1	18.25	201.654		
3,800.0	3,772.5	4,420.5	4,345.5	9.4	15.5	8.81	2,064.2	3,398.5	3,650.2	3,631.4	18.75	194.725		
3,900.0	3,871.2	4,515.1	4,437.9	9.7	15.9	8.62	2,069.3	3,379.3	3,620.1	3,600.8	19.24	188.138		
4,000.0	3,970.0	4,609.7	4,530.4	10.0	16.3	8.42	2,074.4	3,360.1	3,590.0	3,570.2	19.74	181.871		
4,100.0	4,068.7	4,704.3	4,622.9	10.3	16.7	8.21	2,079.6	3,340.9	3,559.9	3,539.7	20.24	175.900		
4,200.0	4,167.5	4,798.9	4,715.4	10.7	17.1	8.01	2,084.7	3,321.8	3,529.9	3,509.1	20.74	170.205		
4,300.0	4,266.2	4,893.4	4,807.8	11.0	17.5	7.79	2,089.8	3,302.6	3,499.9	3,478.7	21.24	164.768		
4,400.0	4,364.9	4,988.0	4,900.3	11.3	17.9	7.58	2,095.0	3,283.4	3,470.0	3,448.2	21.75	159.572		
4,500.0	4,463.7	5,082.6	4,992.8	11.6	18.3	7.36	2,100.1	3,264.2	3,440.1	3,417.9	22.25	154.601		
4,600.0	4,562.4	5,177.2	5,085.3	11.9	18.6	7.14	2,105.2	3,245.0	3,410.3	3,387.5	22.76	149.841		
4,700.0	4,661.2	5,271.8	5,177.8	12.3	19.0	6.92	2,110.4	3,225.8	3,380.5	3,357.2	23.27	145.279		
4,800.0	4,759.9	5,366.4	5,270.2	12.6	19.4	6.69	2,115.5	3,206.6	3,350.7	3,327.0	23.78	140.904		
4,900.0	4,858.7	5,461.0	5,362.7	12.9	19.8	6.45	2,120.6	3,187.4	3,321.1	3,296.8	24.29	136.704		
5,000.0	4,957.4	5,555.6	5,455.2	13.2	20.2	6.22	2,125.8	3,168.2	3,291.4	3,266.6	24.81	132.669		
5,100.0	5,056.2	5,650.2	5,547.7	13.6	20.6	5.97	2,130.9	3,149.0	3,261.8	3,236.5	25.33	128.790		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,154.9	5,744.8	5,640.2	13.9	21.0	5.73	2,136.1	3,129.8	3,232.3	3,206.5	25.85	125.059		
5,300.0	5,253.7	5,839.3	5,732.6	14.2	21.4	5.48	2,141.2	3,110.6	3,202.8	3,176.5	26.37	121.466		
5,400.0	5,352.4	5,933.9	5,825.1	14.5	21.8	5.22	2,146.3	3,091.4	3,173.4	3,146.5	26.89	118.005		
5,500.0	5,451.1	6,028.5	5,917.6	14.9	22.2	4.96	2,151.5	3,072.2	3,144.1	3,116.7	27.42	114.669		
5,600.0	5,549.9	6,116.8	6,005.9	15.2	22.6	4.69	2,156.6	3,052.9	3,126.8	3,092.4	27.95	111.330		
5,700.0	5,648.6	6,205.9	6,095.0	15.5	23.0	4.42	2,161.7	3,033.6	3,107.5	3,067.3	28.48	107.981		
5,800.0	5,747.4	6,295.0	6,184.1	15.8	23.4	4.15	2,166.8	3,014.3	3,088.4	3,042.4	29.01	104.632		
5,900.0	5,846.1	6,384.1	6,273.2	16.2	23.8	3.88	2,171.9	3,000.0	3,073.5	3,027.5	29.54	101.283		
6,000.0	5,944.9	6,473.2	6,362.3	16.5	24.2	3.61	2,177.0	2,985.7	3,066.6	3,012.6	30.07	97.934		
6,100.0	6,043.6	6,562.3	6,451.4	16.8	24.6	3.34	2,182.1	2,970.8	3,059.7	3,007.7	30.60	94.585		
6,200.0	6,142.4	6,651.4	6,540.5	17.1	25.0	3.07	2,187.2	2,955.9	3,052.8	2,992.8	31.13	91.236		
6,300.0	6,241.1	6,740.5	6,629.6	17.5	25.4	2.80	2,192.3	2,941.0	3,045.9	2,987.9	31.66	87.887		
6,400.0	6,339.9	6,829.6	6,718.7	17.8	25.8	2.53	2,197.4	2,926.1	3,039.0	2,983.0	32.19	84.538		
6,500.0	6,438.6	6,918.7	6,807.8	18.1	26.2	2.26	2,202.5	2,911.2	3,032.1	2,978.1	32.72	81.189		
6,600.0	6,537.3	7,007.8	6,896.9	18.4	26.6	1.99	2,207.6	2,896.3	3,025.2	2,973.2	33.25	77.840		
6,700.0	6,636.1	7,096.9	6,986.0	18.8	27.0	1.72	2,212.7	2,881.4	3,018.3	2,968.3	33.78	74.491		
6,800.0	6,734.8	7,186.0	7,075.1	19.1	27.4	1.45	2,217.8	2,866.5	3,011.4	2,963.4	34.31	71.142		
6,900.0	6,833.6	7,275.1	7,164.2	19.4	27.8	1.18	2,222.9	2,851.6	3,004.5	2,958.5	34.84	67.793		
7,000.0	6,932.3	7,364.2	7,253.3	19.7	28.2	0.91	2,228.0	2,836.7	2,997.6	2,953.6	35.37	64.444		
7,100.0	7,031.1	7,453.3	7,342.4	20.1	28.6	0.64	2,233.1	2,821.8	2,990.7	2,948.7	35.90	61.095		
7,190.5	7,120.5	7,542.4	7,431.5	20.4	29.0	0.37	2,238.2	2,806.9	2,983.8	2,943.8	36.43	57.746		
7,200.0	7,129.8	7,551.5	7,440.6	20.4	29.0	0.37	2,238.2	2,806.9	2,983.8	2,943.8	36.43	57.746		
7,250.0	7,179.4	7,601.6	7,490.7	20.5	29.4	-0.10	2,243.3	2,792.0	2,976.9	2,938.9	36.96	54.397		
7,300.0	7,228.8	7,651.7	7,540.8	20.6	29.8	-0.37	2,248.4	2,777.1	2,970.0	2,934.0	37.49	51.048		
7,350.0	7,277.9	7,701.8	7,590.9	20.7	30.2	-0.64	2,253.5	2,762.2	2,963.1	2,929.1	38.02	47.699		
7,400.0	7,326.1	7,751.9	7,640.1	20.7	30.6	-0.91	2,258.6	2,747.3	2,956.2	2,924.2	38.55	44.350		
7,450.0	7,373.2	7,802.0	7,689.2	20.7	31.0	-1.18	2,263.7	2,732.4	2,949.3	2,919.3	39.08	41.001		
7,500.0	7,418.7	7,852.1	7,739.3	20.7	31.4	-1.45	2,268.8	2,717.5	2,942.4	2,914.4	39.61	37.652		
7,550.0	7,462.4	7,902.2	7,789.4	20.6	31.8	-1.72	2,273.9	2,702.6	2,935.5	2,909.5	40.14	34.303		
7,600.0	7,503.8	7,952.3	7,839.5	20.5	32.2	-1.99	2,279.0	2,687.7	2,928.6	2,904.6	40.67	30.954		
7,650.0	7,542.8	8,002.4	7,889.6	20.5	32.6	-2.26	2,284.1	2,672.8	2,921.7	2,899.7	41.20	27.605		
7,700.0	7,578.8	8,052.5	7,939.6	20.4	33.0	-2.53	2,289.2	2,657.9	2,914.8	2,894.8	41.73	24.256		
7,750.0	7,611.8	8,102.6	7,972.6	20.3	33.4	-2.80	2,294.3	2,643.0	2,907.9	2,889.9	42.26	20.907		
7,800.0	7,641.5	8,152.7	8,022.7	20.2	33.8	-3.07	2,299.4	2,628.1	2,901.0	2,885.0	42.79	17.558		
7,850.0	7,667.6	8,202.8	8,072.8	20.2	34.2	-3.34	2,304.5	2,613.2	2,894.1	2,880.1	43.32	14.209		
7,900.0	7,689.9	8,252.9	8,122.9	20.2	34.6	-3.61	2,309.6	2,598.3	2,887.2	2,875.2	43.85	10.860		
7,950.0	7,708.2	8,303.0	8,173.0	20.1	35.0	-3.88	2,314.7	2,583.4	2,880.3	2,870.3	44.38	7.511		
8,000.0	7,722.5	8,353.1	8,223.1	20.2	35.4	-4.15	2,319.8	2,568.5	2,873.4	2,865.4	44.91	4.162		
8,050.0	7,732.6	8,403.2	8,273.2	20.2	35.8	-4.42	2,324.9	2,553.6	2,866.5	2,858.5	45.44	0.813		
8,100.0	7,738.4	8,453.3	8,323.3	20.3	36.2	-4.69	2,330.0	2,538.7	2,859.6	2,853.6	45.97	-2.536		
8,142.5	7,740.0	8,503.4	8,373.4	20.4	36.6	-4.96	2,335.1	2,523.8	2,852.7	2,848.7	46.50	-5.687		
8,200.0	7,740.0	8,553.5	8,423.5	20.5	37.0	-5.23	2,340.2	2,508.9	2,845.8	2,843.8	47.03	-8.788		
8,300.0	7,740.0	8,603.6	8,473.6	20.9	37.4	-5.50	2,345.3	2,494.0	2,838.9	2,838.9	47.56	-11.889		
8,400.0	7,740.0	8,653.7	8,523.7	21.4	37.8	-5.77	2,350.4	2,479.1	2,832.0	2,834.0	48.09	-14.990		
8,442.5	7,740.0	8,703.8	8,573.8	21.7	38.2	-6.04	2,355.5	2,464.2	2,825.1	2,830.1	48.62	-18.091		
8,500.0	7,740.0	8,753.9	8,623.9	22.1	38.6	-6.31	2,360.6	2,449.3	2,818.2	2,823.2	49.15	-21.192		
8,600.0	7,740.0	8,804.0	8,674.0	22.8	39.0	-6.58	2,365.7	2,434.4	2,811.3	2,816.3	49.68	-24.293		
8,700.0	7,740.0	8,854.1	8,724.1	23.6	39.4	-6.85	2,370.8	2,419.5	2,804.4	2,811.4	50.21	-27.394		
8,800.0	7,740.0	8,904.2	8,774.2	24.5	39.8	-7.12	2,375.9	2,404.6	2,797.5	2,804.5	50.74	-30.495		
8,841.5	7,740.0	8,954.3	8,824.3	24.9	40.2	-7.39	2,381.0	2,389.7	2,790.6	2,801.6	51.27	-33.596		
8,842.5	7,740.0	8,954.3	8,824.3	25.0	40.2	-7.39	2,381.0	2,389.7	2,790.6	2,801.6	51.27	-33.596		
8,900.0	7,740.0	9,004.4	8,874.4	25.5	40.6	-7.66	2,386.1	2,374.8	2,783.7	2,798.7	51.80	-36.697		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					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)	Total Uncertainty Axis			
9,000.0	7,740.0	10,678.9	7,770.0	26.6	57.2	-90.03	-849.9	2,688.2	1,828.3	1,755.1	73.18	24.983		
9,100.0	7,740.0	10,778.9	7,770.0	27.7	58.8	-90.03	-949.9	2,688.2	1,828.3	1,752.1	76.24	23.980		
9,200.0	7,740.0	10,878.9	7,770.0	28.9	60.3	-90.03	-1,049.9	2,688.2	1,828.4	1,749.0	79.36	23.039		
9,300.0	7,740.0	10,978.9	7,770.0	30.2	61.8	-90.03	-1,149.9	2,688.3	1,828.4	1,745.9	82.52	22.157		
9,342.5	7,740.0	11,021.3	7,770.0	30.7	62.5	-90.03	-1,192.3	2,688.3	1,828.4	1,744.5	83.87	21.800		
9,399.5	7,740.0	11,078.4	7,770.0	31.5	63.4	-90.03	-1,249.4	2,688.3	1,828.1	1,742.5	85.58	21.361		
9,500.0	7,740.0	11,178.9	7,770.0	32.8	65.0	-90.03	-1,349.9	2,688.3	1,827.1	1,738.3	88.83	20.569		
9,600.0	7,740.0	11,278.9	7,770.0	34.2	66.5	-90.03	-1,449.9	2,688.3	1,826.1	1,734.1	92.09	19.831		
9,700.0	7,740.0	11,378.9	7,770.0	35.6	68.1	-90.03	-1,549.9	2,688.3	1,825.2	1,729.8	95.37	19.138		
9,800.0	7,740.0	11,478.9	7,770.0	37.1	69.7	-90.03	-1,649.8	2,688.3	1,824.2	1,725.5	98.67	18.488		
9,900.0	7,740.0	11,578.8	7,770.0	38.5	71.3	-90.03	-1,749.8	2,688.4	1,823.2	1,721.2	101.99	17.877		
10,000.0	7,740.0	11,678.8	7,770.0	40.0	72.9	-90.03	-1,849.8	2,688.4	1,822.2	1,716.9	105.32	17.301		
10,100.0	7,740.0	11,778.8	7,770.0	41.6	74.5	-90.03	-1,949.8	2,688.4	1,821.2	1,712.6	108.67	16.759		
10,200.0	7,740.0	11,878.8	7,770.0	43.1	76.2	-90.03	-2,049.8	2,688.4	1,820.3	1,708.2	112.03	16.248		
10,300.0	7,740.0	11,978.8	7,770.0	44.6	77.8	-90.03	-2,149.8	2,688.4	1,819.3	1,703.9	115.40	15.765		
10,400.0	7,740.0	12,078.8	7,770.0	46.2	79.4	-90.03	-2,249.8	2,688.4	1,818.3	1,699.5	118.78	15.308		
10,500.0	7,740.0	12,178.8	7,770.0	47.8	81.1	-90.03	-2,349.8	2,688.5	1,817.3	1,695.2	122.17	14.875		
10,600.0	7,740.0	12,278.8	7,770.0	49.4	82.7	-90.03	-2,449.8	2,688.5	1,816.4	1,690.8	125.57	14.465		
10,700.0	7,740.0	12,378.8	7,770.0	51.0	84.3	-90.03	-2,549.8	2,688.5	1,815.4	1,686.4	128.98	14.075		
10,800.0	7,740.0	12,478.8	7,770.0	52.6	86.0	-90.03	-2,649.8	2,688.5	1,814.4	1,682.0	132.39	13.705		
10,900.0	7,740.0	12,578.8	7,770.0	54.2	87.7	-90.03	-2,749.8	2,688.5	1,813.4	1,677.6	135.80	13.353		
11,000.0	7,740.0	12,678.8	7,770.0	55.8	89.3	-90.03	-2,849.8	2,688.5	1,812.4	1,673.2	139.23	13.018		
11,100.0	7,740.0	12,778.8	7,770.0	57.5	91.0	-90.03	-2,949.8	2,688.6	1,811.5	1,668.8	142.65	12.698		
11,200.0	7,740.0	12,878.8	7,770.0	59.1	92.6	-90.03	-3,049.8	2,688.6	1,810.5	1,664.4	146.08	12.393		
11,300.0	7,740.0	12,978.8	7,770.0	60.8	94.3	-90.03	-3,149.8	2,688.6	1,809.5	1,660.0	149.52	12.102		
11,400.0	7,740.0	13,078.8	7,770.0	62.4	96.0	-90.03	-3,249.8	2,688.6	1,808.5	1,655.6	152.96	11.824		
11,500.0	7,740.0	13,178.8	7,770.0	64.1	97.7	-90.03	-3,349.8	2,688.6	1,807.5	1,651.1	156.40	11.557		
11,600.0	7,740.0	13,278.8	7,770.0	65.7	99.3	-90.03	-3,449.8	2,688.6	1,806.6	1,646.7	159.85	11.302		
11,700.0	7,740.0	13,378.8	7,770.0	67.4	101.0	-90.03	-3,549.8	2,688.7	1,805.6	1,642.3	163.30	11.057		
11,800.0	7,740.0	13,478.8	7,770.0	69.1	102.7	-90.03	-3,649.8	2,688.7	1,804.6	1,637.9	166.75	10.822		
11,900.0	7,740.0	13,578.8	7,770.0	70.8	104.4	-90.03	-3,749.7	2,688.7	1,803.6	1,633.4	170.20	10.597		
12,000.0	7,740.0	13,678.7	7,770.0	72.4	106.1	-90.03	-3,849.7	2,688.7	1,802.6	1,629.0	173.66	10.380		
12,100.0	7,740.0	13,778.7	7,770.0	74.1	107.8	-90.03	-3,949.7	2,688.7	1,801.7	1,624.6	177.12	10.172		
12,200.0	7,740.0	13,878.7	7,770.0	75.8	109.4	-90.03	-4,049.7	2,688.7	1,800.7	1,620.1	180.58	9.972		
12,300.0	7,740.0	13,978.7	7,770.0	77.5	111.1	-90.03	-4,149.7	2,688.8	1,799.7	1,615.7	184.04	9.779		
12,400.0	7,740.0	14,078.7	7,770.0	79.2	112.8	-90.03	-4,249.7	2,688.8	1,798.7	1,611.2	187.50	9.593		
12,500.0	7,740.0	14,178.7	7,770.0	80.9	114.5	-90.03	-4,349.7	2,688.8	1,797.8	1,606.8	190.97	9.414		
12,600.0	7,740.0	14,278.7	7,770.0	82.6	116.2	-90.03	-4,449.7	2,688.8	1,796.8	1,602.3	194.44	9.241		
12,700.0	7,740.0	14,378.7	7,770.0	84.3	117.9	-90.03	-4,549.7	2,688.8	1,795.8	1,597.9	197.91	9.074		
12,800.0	7,740.0	14,478.7	7,770.0	86.0	119.6	-90.03	-4,649.7	2,688.8	1,794.8	1,593.4	201.38	8.913		
12,900.0	7,740.0	14,578.7	7,770.0	87.7	121.3	-90.03	-4,749.7	2,688.9	1,793.8	1,589.0	204.85	8.757		
13,000.0	7,740.0	14,678.7	7,770.0	89.4	123.0	-90.03	-4,849.7	2,688.9	1,792.9	1,584.5	208.32	8.606		
13,100.0	7,740.0	14,778.7	7,770.0	91.1	124.7	-90.03	-4,949.7	2,688.9	1,791.9	1,580.1	211.80	8.460		
13,200.0	7,740.0	14,878.7	7,770.0	92.8	126.5	-90.03	-5,049.7	2,688.9	1,790.9	1,575.6	215.28	8.319		
13,300.0	7,740.0	14,978.7	7,770.0	94.5	128.2	-90.03	-5,149.7	2,688.9	1,789.9	1,571.2	218.75	8.182		
13,400.0	7,740.0	15,078.7	7,770.0	96.2	129.9	-90.03	-5,249.7	2,688.9	1,788.9	1,566.7	222.23	8.050		
13,500.0	7,740.0	15,178.7	7,770.0	98.0	131.6	-90.03	-5,349.7	2,689.0	1,788.0	1,562.3	225.71	7.922		
13,600.0	7,740.0	15,278.7	7,770.0	99.7	133.3	-90.03	-5,449.7	2,689.0	1,787.0	1,557.8	229.19	7.797		
13,700.0	7,740.0	15,378.7	7,770.0	101.4	135.0	-90.03	-5,549.7	2,689.0	1,786.0	1,553.3	232.67	7.676		
13,800.0	7,740.0	15,478.7	7,770.0	103.1	136.7	-90.03	-5,649.7	2,689.0	1,785.0	1,548.9	236.15	7.559		
13,900.0	7,740.0	15,578.7	7,770.0	104.8	138.4	-90.03	-5,749.7	2,689.0	1,784.1	1,544.4	239.63	7.445		
14,000.0	7,740.0	15,678.7	7,770.0	106.5	140.2	-90.03	-5,849.6	2,689.0	1,783.1	1,540.0	243.12	7.334		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2													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		
14,100.0	7,740.0	15,778.6	7,770.0	108.3	141.9	-90.03	-5,949.6	2,689.1	1,782.1	1,535.5	246.60	7.227		
14,200.0	7,740.0	15,878.6	7,770.0	110.0	143.6	-90.03	-6,049.6	2,689.1	1,781.1	1,531.0	250.09	7.122		
14,300.0	7,740.0	15,978.6	7,770.0	111.7	145.3	-90.03	-6,149.6	2,689.1	1,780.1	1,526.6	253.57	7.020		
14,400.0	7,740.0	16,078.6	7,770.0	113.4	147.0	-90.03	-6,249.6	2,689.1	1,779.2	1,522.1	257.06	6.921		
14,500.0	7,740.0	16,178.6	7,770.0	115.2	148.8	-90.03	-6,349.6	2,689.1	1,778.2	1,517.6	260.54	6.825		
14,600.0	7,740.0	16,278.6	7,770.0	116.9	150.5	-90.03	-6,449.6	2,689.1	1,777.2	1,513.2	264.03	6.731		
14,700.0	7,740.0	16,378.6	7,770.0	118.6	152.2	-90.03	-6,549.6	2,689.2	1,776.2	1,508.7	267.52	6.640		
14,800.0	7,740.0	16,478.6	7,770.0	120.4	153.9	-90.03	-6,649.6	2,689.2	1,775.2	1,504.2	271.01	6.551		
14,900.0	7,740.0	16,578.6	7,770.0	122.1	155.6	-90.03	-6,749.6	2,689.2	1,774.3	1,499.8	274.50	6.464		
15,000.0	7,740.0	16,678.6	7,770.0	123.8	157.4	-90.03	-6,849.6	2,689.2	1,773.3	1,495.3	277.99	6.379		
15,100.0	7,740.0	16,778.6	7,770.0	125.5	159.1	-90.03	-6,949.6	2,689.2	1,772.3	1,490.8	281.48	6.296		
15,200.0	7,740.0	16,878.6	7,770.0	127.3	160.8	-90.03	-7,049.6	2,689.2	1,771.3	1,486.4	284.97	6.216		
15,300.0	7,740.0	16,978.6	7,770.0	129.0	162.5	-90.03	-7,149.6	2,689.3	1,770.3	1,481.9	288.46	6.137		
15,400.0	7,740.0	17,078.6	7,770.0	130.7	164.3	-90.03	-7,249.6	2,689.3	1,769.4	1,477.4	291.95	6.061		
15,500.0	7,740.0	17,178.6	7,770.0	132.5	166.0	-90.03	-7,349.6	2,689.3	1,768.4	1,473.0	295.44	5.986		
15,600.0	7,740.0	17,278.6	7,770.0	134.2	167.7	-90.03	-7,449.6	2,689.3	1,767.4	1,468.5	298.93	5.912		
15,700.0	7,740.0	17,378.6	7,770.0	135.9	169.5	-90.03	-7,549.6	2,689.3	1,766.4	1,464.0	302.42	5.841		
15,800.0	7,740.0	17,478.6	7,770.0	137.7	171.2	-90.03	-7,649.6	2,689.3	1,765.5	1,459.5	305.92	5.771		
15,900.0	7,740.0	17,578.6	7,770.0	139.4	172.9	-90.03	-7,749.6	2,689.4	1,764.5	1,455.1	309.41	5.703		
16,000.0	7,740.0	17,678.6	7,770.0	141.1	174.6	-90.03	-7,849.6	2,689.4	1,763.5	1,450.6	312.90	5.636		
16,083.0	7,740.0	17,761.5	7,770.0	142.6	176.1	-90.03	-7,932.5	2,689.4	1,762.7	1,446.9	315.80	5.582		
16,083.8	7,740.0	17,762.4	7,770.0	142.6	176.1	-90.03	-7,933.4	2,689.4	1,762.7	1,446.8	315.83	5.581	CC, ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2													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)				
0.0	0.0	28.0	28.0	0.0	0.0	65.65	1,870.2	4,132.4	4,535.9					
100.0	100.0	128.0	128.0	0.2	0.2	65.65	1,870.2	4,132.4	4,535.9	4,535.5	0.35	N/A		
200.0	200.0	228.0	228.0	0.3	0.4	65.65	1,870.2	4,132.4	4,535.9	4,535.2	0.70	6,464.846		
300.0	300.0	366.5	366.5	0.5	0.6	65.65	1,870.3	4,132.0	4,535.8	4,534.6	1.12	4,055.620		
400.0	400.0	603.9	603.8	0.7	1.0	65.58	1,872.8	4,124.8	4,533.4	4,531.7	1.72	2,630.006		
500.0	500.0	840.2	839.4	0.8	1.5	65.43	1,878.3	4,108.3	4,528.0	4,525.6	2.39	1,895.593		
600.0	600.0	1,074.7	1,072.4	1.0	2.1	65.20	1,886.9	4,082.8	4,519.7	4,516.5	3.15	1,435.972		
700.0	700.0	1,306.7	1,301.5	1.2	2.8	64.88	1,898.4	4,048.8	4,508.4	4,504.4	4.02	1,120.550		
800.0	800.0	1,410.4	1,403.6	1.4	3.2	64.72	1,904.2	4,031.5	4,495.6	4,491.0	4.54	990.285		
900.0	900.0	1,508.8	1,500.5	1.5	3.5	64.56	1,909.7	4,015.0	4,482.8	4,477.7	5.04	888.842		
1,000.0	1,000.0	1,607.3	1,597.4	1.7	3.8	64.41	1,915.3	3,998.6	4,470.0	4,464.5	5.55	805.294		
1,100.0	1,100.0	1,705.6	1,694.2	1.9	4.2	13.26	1,920.8	3,982.1	4,456.5	4,451.0	5.49	811.097		
1,200.0	1,200.0	1,803.8	1,790.8	2.1	4.5	13.15	1,926.4	3,965.7	4,441.2	4,435.3	5.93	748.819		
1,300.0	1,299.9	1,901.7	1,887.2	2.3	4.9	13.04	1,931.9	3,949.4	4,424.4	4,418.0	6.37	694.885		
1,400.0	1,399.7	1,999.4	1,983.3	2.4	5.2	12.94	1,937.4	3,933.0	4,405.9	4,399.1	6.80	647.723		
1,500.0	1,499.4	2,096.8	2,079.2	2.6	5.5	12.85	1,942.9	3,916.7	4,385.7	4,378.5	7.24	606.129		
1,600.0	1,598.9	2,193.8	2,174.7	2.8	5.9	12.76	1,948.3	3,900.5	4,363.9	4,356.3	7.67	569.163		
1,700.0	1,698.3	2,290.6	2,270.0	3.1	6.2	12.68	1,953.8	3,884.4	4,340.5	4,332.4	8.10	536.085		
1,800.0	1,797.4	2,386.9	2,364.8	3.3	6.5	12.61	1,959.2	3,868.2	4,315.4	4,306.9	8.52	506.299		
1,908.5	1,904.7	2,491.0	2,467.3	3.6	6.9	12.54	1,965.1	3,850.8	4,286.4	4,277.4	8.98	477.150		
2,000.0	1,995.0	2,578.6	2,553.5	3.8	7.2	12.43	1,970.0	3,836.2	4,261.1	4,251.8	9.39	453.704		
2,100.0	2,093.8	2,674.3	2,647.7	4.1	7.6	12.31	1,975.4	3,820.2	4,233.5	4,223.7	9.84	430.252		
2,200.0	2,192.5	2,770.0	2,741.9	4.4	7.9	12.18	1,980.8	3,804.2	4,206.0	4,195.7	10.29	408.793		
2,300.0	2,291.3	2,865.7	2,836.1	4.7	8.2	12.06	1,986.2	3,788.2	4,178.4	4,167.7	10.74	389.089		
2,400.0	2,390.0	2,961.4	2,930.3	5.0	8.6	11.93	1,991.6	3,772.2	4,150.8	4,139.7	11.19	370.936		
2,500.0	2,488.8	3,057.1	3,024.5	5.3	8.9	11.80	1,997.0	3,756.2	4,123.3	4,111.7	11.64	354.162		
2,600.0	2,587.5	3,152.8	3,118.7	5.6	9.3	11.66	2,002.4	3,740.2	4,095.8	4,083.7	12.10	338.616		
2,700.0	2,686.3	3,248.5	3,212.9	5.9	9.6	11.53	2,007.7	3,724.2	4,068.3	4,055.8	12.55	324.171		
2,800.0	2,785.0	3,344.2	3,307.1	6.2	9.9	11.40	2,013.1	3,708.2	4,040.9	4,027.9	13.01	310.715		
2,900.0	2,883.8	3,439.9	3,401.3	6.5	10.3	11.26	2,018.5	3,692.2	4,013.4	4,000.0	13.46	298.151		
3,000.0	2,982.5	3,535.6	3,495.5	6.8	10.6	11.12	2,023.9	3,676.2	3,986.0	3,972.1	13.92	286.395		
3,100.0	3,081.3	3,631.3	3,589.7	7.2	11.0	10.98	2,029.3	3,660.2	3,958.6	3,944.2	14.38	275.372		
3,200.0	3,180.0	3,727.0	3,683.9	7.5	11.3	10.83	2,034.7	3,644.2	3,931.2	3,916.4	14.83	265.015		
3,300.0	3,278.7	3,822.7	3,778.1	7.8	11.6	10.69	2,040.1	3,628.2	3,903.9	3,888.6	15.29	255.267		
3,400.0	3,377.5	3,918.4	3,872.3	8.1	12.0	10.54	2,045.5	3,612.3	3,876.5	3,860.8	15.75	246.077		
3,500.0	3,476.2	4,014.1	3,966.5	8.4	12.3	10.39	2,050.9	3,596.3	3,849.2	3,833.0	16.21	237.398		
3,600.0	3,575.0	4,109.8	4,060.7	8.7	12.7	10.24	2,056.3	3,580.3	3,821.9	3,805.3	16.68	229.189		
3,700.0	3,673.7	4,205.6	4,154.9	9.1	13.0	10.09	2,061.7	3,564.3	3,794.7	3,777.5	17.14	221.413		
3,800.0	3,772.5	4,301.3	4,249.1	9.4	13.3	9.93	2,067.0	3,548.3	3,767.5	3,749.9	17.60	214.037		
3,900.0	3,871.2	4,397.0	4,343.3	9.7	13.7	9.77	2,072.4	3,532.3	3,740.3	3,722.2	18.07	207.032		
4,000.0	3,970.0	4,492.7	4,437.5	10.0	14.0	9.61	2,077.8	3,516.3	3,713.1	3,694.5	18.53	200.370		
4,100.0	4,068.7	4,588.4	4,531.7	10.3	14.4	9.45	2,083.2	3,500.3	3,685.9	3,666.9	19.00	194.027		
4,200.0	4,167.5	4,684.1	4,626.0	10.7	14.7	9.28	2,088.6	3,484.3	3,658.8	3,639.3	19.46	187.981		
4,300.0	4,266.2	4,779.8	4,720.2	11.0	15.0	9.12	2,094.0	3,468.3	3,631.7	3,611.8	19.93	182.211		
4,400.0	4,364.9	4,875.5	4,814.4	11.3	15.4	8.95	2,099.4	3,452.3	3,604.7	3,584.3	20.40	176.699		
4,500.0	4,463.7	4,971.2	4,908.6	11.6	15.7	8.77	2,104.8	3,436.3	3,577.6	3,556.8	20.87	171.429		
4,600.0	4,562.4	5,066.9	5,002.8	11.9	16.1	8.60	2,110.2	3,420.3	3,550.6	3,529.3	21.34	166.385		
4,700.0	4,661.2	5,162.6	5,097.0	12.3	16.4	8.42	2,115.6	3,404.3	3,523.7	3,501.8	21.81	161.553		
4,800.0	4,759.9	5,258.3	5,191.2	12.6	16.8	8.24	2,121.0	3,388.3	3,496.7	3,474.4	22.28	156.920		
4,900.0	4,858.7	5,354.0	5,285.4	12.9	17.1	8.06	2,126.4	3,372.3	3,469.8	3,447.1	22.76	152.474		
5,000.0	4,957.4	5,449.7	5,379.6	13.2	17.4	7.87	2,131.7	3,356.3	3,442.9	3,419.7	23.23	148.204		
5,100.0	5,056.2	5,545.4	5,473.8	13.6	17.8	7.68	2,137.1	3,340.3	3,416.1	3,392.4	23.71	144.099		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2												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	5,154.9	5,641.1	5,568.0	13.9	18.1	7.49	2,142.5	3,324.3	3,389.3	3,365.1	24.18	140.152	
5,300.0	5,253.7	5,736.8	5,662.2	14.2	18.5	7.29	2,147.9	3,308.3	3,362.5	3,337.9	24.66	136.352	
5,400.0	5,352.4	9,160.4	7,530.0	14.5	36.9	45.20	379.3	2,981.6	3,295.0	3,250.2	44.74	73.649	
5,500.0	5,451.1	9,150.4	7,530.0	14.9	36.8	44.95	389.3	2,981.7	3,222.0	3,177.2	44.75	72.002	
5,600.0	5,549.9	9,140.4	7,530.0	15.2	36.7	44.69	399.3	2,981.7	3,150.4	3,105.7	44.76	70.390	
5,700.0	5,648.6	9,130.4	7,530.0	15.5	36.5	44.44	409.3	2,981.8	3,080.5	3,035.7	44.76	68.816	
5,800.0	5,747.4	9,120.5	7,530.0	15.8	36.4	44.18	419.3	2,981.8	3,012.1	2,967.4	44.77	67.283	
5,900.0	5,846.1	9,110.5	7,530.0	16.2	36.3	43.93	429.3	2,981.9	2,945.6	2,900.8	44.77	65.791	
6,000.0	5,944.9	9,100.5	7,530.0	16.5	36.1	43.67	439.3	2,981.9	2,880.9	2,836.2	44.77	64.345	
6,100.0	6,043.6	9,090.5	7,530.0	16.8	36.0	43.42	449.3	2,982.0	2,818.3	2,773.5	44.77	62.945	
6,200.0	6,142.4	9,080.5	7,530.0	17.1	35.9	43.16	459.3	2,982.0	2,757.9	2,713.1	44.77	61.595	
6,300.0	6,241.1	9,070.5	7,530.0	17.5	35.8	42.90	469.3	2,982.1	2,699.7	2,655.0	44.77	60.299	
6,400.0	6,339.9	9,060.5	7,530.0	17.8	35.6	42.65	479.3	2,982.1	2,644.1	2,599.3	44.77	59.060	
6,500.0	6,438.6	9,050.5	7,530.0	18.1	35.5	42.39	489.3	2,982.2	2,591.0	2,546.3	44.76	57.882	
6,600.0	6,537.3	9,040.5	7,530.0	18.4	35.4	42.14	499.3	2,982.2	2,540.8	2,496.0	44.76	56.768	
6,700.0	6,636.1	9,030.5	7,530.0	18.8	35.2	41.88	509.3	2,982.3	2,493.5	2,448.7	44.75	55.721	
6,800.0	6,734.8	9,020.5	7,530.0	19.1	35.1	41.62	519.3	2,982.3	2,449.3	2,404.6	44.74	54.746	
6,900.0	6,833.6	9,010.5	7,530.0	19.4	35.0	41.37	529.3	2,982.4	2,408.5	2,363.7	44.73	53.846	
7,000.0	6,932.3	9,000.5	7,530.0	19.7	34.9	41.11	539.3	2,982.4	2,371.1	2,326.4	44.72	53.026	
7,100.0	7,031.1	8,990.5	7,530.0	20.1	34.7	40.85	549.3	2,982.5	2,337.3	2,292.6	44.70	52.285	
7,190.5	7,120.5	8,981.5	7,530.0	20.4	34.6	40.62	558.3	2,982.5	2,310.1	2,265.4	44.69	51.689	
7,200.0	7,129.8	8,980.6	7,530.0	20.4	34.6	35.16	559.2	2,982.5	2,307.4	2,262.8	44.57	51.773	
7,250.0	7,179.4	8,978.6	7,530.0	20.5	34.6	-1.53	561.2	2,982.5	2,293.6	2,249.7	43.94	52.199	
7,300.0	7,228.8	8,980.9	7,530.0	20.6	34.6	-34.51	558.8	2,982.5	2,280.6	2,237.1	43.41	52.536	
7,350.0	7,277.9	8,987.6	7,530.0	20.7	34.7	-53.10	552.2	2,982.5	2,268.3	2,225.3	42.99	52.758	
7,400.0	7,326.1	8,998.6	7,530.0	20.7	34.8	-63.31	541.2	2,982.4	2,256.9	2,214.2	42.71	52.847	
7,450.0	7,373.2	9,013.7	7,530.0	20.7	35.0	-69.48	526.1	2,982.4	2,246.4	2,203.9	42.55	52.791	
7,500.0	7,418.7	9,033.0	7,530.0	20.7	35.3	-73.51	506.8	2,982.3	2,236.8	2,194.3	42.53	52.599	
7,550.0	7,462.4	9,056.1	7,530.0	20.6	35.6	-76.27	483.7	2,982.2	2,228.2	2,185.5	42.62	52.283	
7,600.0	7,503.8	9,083.0	7,530.0	20.5	35.9	-78.20	456.7	2,982.0	2,220.3	2,177.5	42.81	51.860	
7,650.0	7,542.8	9,113.5	7,530.0	20.5	36.3	-79.57	426.3	2,981.9	2,213.3	2,170.2	43.11	51.344	
7,700.0	7,578.8	9,147.3	7,530.0	20.4	36.8	-80.55	392.5	2,981.7	2,207.0	2,163.5	43.49	50.753	
7,750.0	7,611.8	9,184.2	7,530.0	20.3	37.3	-81.24	355.6	2,981.5	2,201.3	2,157.4	43.93	50.107	
7,800.0	7,641.5	9,223.8	7,530.0	20.2	37.8	-81.73	315.9	2,981.3	2,196.1	2,151.7	44.44	49.413	
7,850.0	7,667.6	9,266.0	7,530.0	20.2	38.4	-82.09	273.8	2,981.1	2,191.4	2,146.4	45.02	48.678	
7,900.0	7,689.9	9,310.3	7,530.0	20.2	39.0	-82.36	229.5	2,980.9	2,186.9	2,141.3	45.65	47.908	
7,950.0	7,708.2	9,356.4	7,530.0	20.1	39.6	-82.60	183.4	2,980.6	2,182.7	2,136.4	46.35	47.097	
8,000.0	7,722.5	9,404.0	7,530.0	20.2	40.3	-82.84	135.8	2,980.4	2,178.7	2,131.6	47.11	46.248	
8,050.0	7,732.6	9,452.7	7,530.0	20.2	40.9	-83.09	87.1	2,980.1	2,174.8	2,126.9	47.95	45.355	
8,100.0	7,738.4	9,502.1	7,530.0	20.3	41.7	-83.39	37.7	2,979.9	2,171.0	2,122.1	48.87	44.425	
8,142.5	7,740.0	9,544.4	7,530.0	20.4	42.3	-83.68	-4.6	2,979.7	2,167.8	2,118.1	49.71	43.605	
8,200.0	7,740.0	9,601.8	7,530.0	20.5	43.1	-83.67	-62.0	2,979.4	2,163.5	2,112.7	50.86	42.536	
8,300.0	7,740.0	9,701.5	7,530.0	20.9	44.5	-83.64	-161.7	2,978.9	2,156.1	2,103.1	53.03	40.662	
8,400.0	7,740.0	9,801.2	7,530.0	21.4	46.0	-83.62	-261.4	2,978.4	2,148.7	2,093.3	55.37	38.804	
8,442.5	7,740.0	9,843.6	7,530.0	21.7	46.7	-83.61	-303.8	2,978.2	2,145.5	2,089.1	56.42	38.027	
8,500.0	7,740.0	9,901.0	7,530.0	22.1	47.5	-83.61	-361.2	2,977.9	2,141.5	2,083.5	58.03	36.906	
8,600.0	7,740.0	10,000.8	7,530.0	22.8	49.0	-83.60	-461.0	2,977.4	2,135.9	2,075.0	60.89	35.076	
8,700.0	7,740.0	10,100.7	7,530.0	23.6	50.6	-83.59	-560.9	2,976.9	2,132.1	2,068.3	63.84	33.395	
8,800.0	7,740.0	10,200.7	7,530.0	24.5	52.1	-83.58	-660.9	2,976.3	2,130.0	2,063.1	66.86	31.856	
8,842.5	7,740.0	10,243.2	7,530.0	25.0	52.8	-83.58	-703.4	2,976.1	2,129.6	2,061.5	68.16	31.244	
8,900.0	7,740.0	10,300.7	7,530.0	25.5	53.7	-83.58	-760.9	2,975.8	2,129.3	2,059.5	69.84	30.487	
9,000.0	7,740.0	10,400.7	7,530.0	26.6	55.3	-83.58	-860.9	2,975.3	2,128.8	2,056.0	72.82	29.232	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2												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
9,100.0	7,740.0	10,500.7	7,530.0	27.7	56.8	-83.58	-960.9	2,974.8	2,128.3	2,052.5	75.87	28.053	
9,200.0	7,740.0	10,600.7	7,530.0	28.9	58.4	-83.58	-1,060.9	2,974.3	2,127.8	2,048.9	78.96	26.947	
9,300.0	7,740.0	10,700.7	7,530.0	30.2	60.0	-83.58	-1,160.9	2,973.8	2,127.3	2,045.2	82.10	25.910	
9,342.5	7,740.0	10,743.2	7,530.0	30.7	60.7	-83.58	-1,203.4	2,973.6	2,127.1	2,043.7	83.45	25.490	
9,399.5	7,740.0	10,800.2	7,530.0	31.5	61.6	-83.57	-1,260.4	2,973.3	2,126.5	2,041.3	85.19	24.963	
9,500.0	7,740.0	10,900.7	7,530.0	32.8	63.3	-83.57	-1,360.9	2,972.8	2,125.0	2,036.6	88.42	24.035	
9,600.0	7,740.0	11,000.7	7,530.0	34.2	64.9	-83.56	-1,460.9	2,972.3	2,123.5	2,031.9	91.65	23.169	
9,700.0	7,740.0	11,100.7	7,530.0	35.6	66.5	-83.56	-1,560.8	2,971.8	2,122.0	2,027.1	94.91	22.358	
9,800.0	7,740.0	11,200.6	7,530.0	37.1	68.2	-83.56	-1,660.8	2,971.3	2,120.6	2,022.4	98.19	21.595	
9,900.0	7,740.0	11,300.6	7,530.0	38.5	69.8	-83.55	-1,760.8	2,970.8	2,119.1	2,017.6	101.49	20.879	
10,000.0	7,740.0	11,400.6	7,530.0	40.0	71.4	-83.55	-1,860.8	2,970.3	2,117.6	2,012.8	104.81	20.204	
10,100.0	7,740.0	11,500.6	7,530.0	41.6	73.1	-83.54	-1,960.8	2,969.8	2,116.1	2,007.9	108.14	19.569	
10,200.0	7,740.0	11,600.6	7,530.0	43.1	74.8	-83.54	-2,060.8	2,969.3	2,114.6	2,003.1	111.47	18.969	
10,300.0	7,740.0	11,700.6	7,530.0	44.6	76.4	-83.53	-2,160.8	2,968.7	2,113.1	1,998.3	114.82	18.403	
10,400.0	7,740.0	11,800.6	7,530.0	46.2	78.1	-83.53	-2,260.8	2,968.2	2,111.6	1,993.4	118.18	17.867	
10,500.0	7,740.0	11,900.6	7,530.0	47.8	79.8	-83.52	-2,360.7	2,967.7	2,110.1	1,988.5	121.55	17.360	
10,600.0	7,740.0	12,000.5	7,530.0	49.4	81.4	-83.52	-2,460.7	2,967.2	2,108.6	1,983.7	124.93	16.879	
10,700.0	7,740.0	12,100.5	7,530.0	51.0	83.1	-83.51	-2,560.7	2,966.7	2,107.1	1,978.8	128.31	16.422	
10,800.0	7,740.0	12,200.5	7,530.0	52.6	84.8	-83.51	-2,660.7	2,966.2	2,105.6	1,973.9	131.70	15.988	
10,900.0	7,740.0	12,300.5	7,530.0	54.2	86.5	-83.50	-2,760.7	2,965.7	2,104.1	1,969.0	135.09	15.575	
11,000.0	7,740.0	12,400.5	7,530.0	55.8	88.2	-83.50	-2,860.7	2,965.2	2,102.6	1,964.1	138.49	15.182	
11,100.0	7,740.0	12,500.5	7,530.0	57.5	89.8	-83.50	-2,960.7	2,964.7	2,101.1	1,959.2	141.90	14.807	
11,200.0	7,740.0	12,600.5	7,530.0	59.1	91.5	-83.49	-3,060.7	2,964.2	2,099.7	1,954.3	145.31	14.450	
11,300.0	7,740.0	12,700.5	7,530.0	60.8	93.2	-83.49	-3,160.6	2,963.7	2,098.2	1,949.4	148.72	14.108	
11,400.0	7,740.0	12,800.5	7,530.0	62.4	94.9	-83.48	-3,260.6	2,963.2	2,096.7	1,944.5	152.14	13.781	
11,500.0	7,740.0	12,900.4	7,530.0	64.1	96.6	-83.48	-3,360.6	2,962.7	2,095.2	1,939.6	155.56	13.469	
11,600.0	7,740.0	13,000.4	7,530.0	65.7	98.3	-83.47	-3,460.6	2,962.2	2,093.7	1,934.7	158.98	13.170	
11,700.0	7,740.0	13,100.4	7,530.0	67.4	100.0	-83.47	-3,560.6	2,961.6	2,092.2	1,929.8	162.41	12.883	
11,800.0	7,740.0	13,200.4	7,530.0	69.1	101.7	-83.46	-3,660.6	2,961.1	2,090.7	1,924.9	165.83	12.607	
11,900.0	7,740.0	13,300.4	7,530.0	70.8	103.4	-83.46	-3,760.6	2,960.6	2,089.2	1,919.9	169.26	12.343	
12,000.0	7,740.0	13,400.4	7,530.0	72.4	105.1	-83.45	-3,860.6	2,960.1	2,087.7	1,915.0	172.70	12.089	
12,100.0	7,740.0	13,500.4	7,530.0	74.1	106.8	-83.45	-3,960.5	2,959.6	2,086.2	1,910.1	176.13	11.845	
12,200.0	7,740.0	13,600.4	7,530.0	75.8	108.6	-83.44	-4,060.5	2,959.1	2,084.7	1,905.2	179.57	11.610	
12,300.0	7,740.0	13,700.4	7,530.0	77.5	110.3	-83.44	-4,160.5	2,958.6	2,083.2	1,900.2	183.01	11.383	
12,400.0	7,740.0	13,800.3	7,530.0	79.2	112.0	-83.43	-4,260.5	2,958.1	2,081.7	1,895.3	186.45	11.165	
12,500.0	7,740.0	13,900.3	7,530.0	80.9	113.7	-83.43	-4,360.5	2,957.6	2,080.2	1,890.4	189.89	10.955	
12,600.0	7,740.0	14,000.3	7,530.0	82.6	115.4	-83.42	-4,460.5	2,957.1	2,078.8	1,885.4	193.34	10.752	
12,700.0	7,740.0	14,100.3	7,530.0	84.3	117.1	-83.42	-4,560.5	2,956.6	2,077.3	1,880.5	196.78	10.556	
12,800.0	7,740.0	14,200.3	7,530.0	86.0	118.8	-83.42	-4,660.5	2,956.1	2,075.8	1,875.5	200.23	10.367	
12,900.0	7,740.0	14,300.3	7,530.0	87.7	120.6	-83.41	-4,760.4	2,955.6	2,074.3	1,870.6	203.68	10.184	
13,000.0	7,740.0	14,400.3	7,530.0	89.4	122.3	-83.41	-4,860.4	2,955.1	2,072.8	1,865.7	207.13	10.007	
13,100.0	7,740.0	14,500.3	7,530.0	91.1	124.0	-83.40	-4,960.4	2,954.6	2,071.3	1,860.7	210.58	9.836	
13,200.0	7,740.0	14,600.3	7,530.0	92.8	125.7	-83.40	-5,060.4	2,954.0	2,069.8	1,855.8	214.03	9.671	
13,300.0	7,740.0	14,700.2	7,530.0	94.5	127.4	-83.39	-5,160.4	2,953.5	2,068.3	1,850.8	217.48	9.510	
13,400.0	7,740.0	14,800.2	7,530.0	96.2	129.2	-83.39	-5,260.4	2,953.0	2,066.8	1,845.9	220.93	9.355	
13,500.0	7,740.0	14,900.2	7,530.0	98.0	130.9	-83.38	-5,360.4	2,952.5	2,065.3	1,840.9	224.39	9.204	
13,600.0	7,740.0	15,000.2	7,530.0	99.7	132.6	-83.38	-5,460.4	2,952.0	2,063.8	1,836.0	227.84	9.058	
13,700.0	7,740.0	15,100.2	7,530.0	101.4	134.3	-83.37	-5,560.3	2,951.5	2,062.3	1,831.0	231.30	8.916	
13,800.0	7,740.0	15,200.2	7,530.0	103.1	136.1	-83.37	-5,660.3	2,951.0	2,060.8	1,826.1	234.76	8.779	
13,900.0	7,740.0	15,300.2	7,530.0	104.8	137.8	-83.36	-5,760.3	2,950.5	2,059.4	1,821.1	238.21	8.645	
14,000.0	7,740.0	15,400.2	7,530.0	106.5	139.5	-83.36	-5,860.3	2,950.0	2,057.9	1,816.2	241.67	8.515	
14,100.0	7,740.0	15,500.2	7,530.0	108.3	141.2	-83.35	-5,960.3	2,949.5	2,056.4	1,811.2	245.13	8.389	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1C-7H-A168 - HZ - Plan #2													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		
14,200.0	7,740.0	15,600.1	7,530.0	110.0	143.0	-83.35	-6,060.3	2,949.0	2,054.9	1,806.3	248.59	8.266		
14,300.0	7,740.0	15,700.1	7,530.0	111.7	144.7	-83.34	-6,160.3	2,948.5	2,053.4	1,801.3	252.05	8.147		
14,400.0	7,740.0	15,800.1	7,530.0	113.4	146.4	-83.34	-6,260.3	2,948.0	2,051.9	1,796.4	255.51	8.031		
14,500.0	7,740.0	15,900.1	7,530.0	115.2	148.2	-83.33	-6,360.2	2,947.5	2,050.4	1,791.4	258.97	7.917		
14,600.0	7,740.0	16,000.1	7,530.0	116.9	149.9	-83.33	-6,460.2	2,946.9	2,048.9	1,786.5	262.43	7.807		
14,700.0	7,740.0	16,100.1	7,530.0	118.6	151.6	-83.32	-6,560.2	2,946.4	2,047.4	1,781.5	265.90	7.700		
14,800.0	7,740.0	16,200.1	7,530.0	120.4	153.4	-83.32	-6,660.2	2,945.9	2,045.9	1,776.6	269.36	7.596		
14,900.0	7,740.0	16,300.1	7,530.0	122.1	155.1	-83.31	-6,760.2	2,945.4	2,044.4	1,771.6	272.82	7.494		
15,000.0	7,740.0	16,400.1	7,530.0	123.8	156.8	-83.31	-6,860.2	2,944.9	2,042.9	1,766.7	276.29	7.394		
15,100.0	7,740.0	16,500.0	7,530.0	125.5	158.6	-83.30	-6,960.2	2,944.4	2,041.4	1,761.7	279.75	7.297		
15,200.0	7,740.0	16,600.0	7,530.0	127.3	160.3	-83.30	-7,060.2	2,943.9	2,040.0	1,756.7	283.21	7.203		
15,300.0	7,740.0	16,700.0	7,530.0	129.0	162.0	-83.29	-7,160.1	2,943.4	2,038.5	1,751.8	286.68	7.111		
15,400.0	7,740.0	16,800.0	7,530.0	130.7	163.8	-83.29	-7,260.1	2,942.9	2,037.0	1,746.8	290.14	7.021		
15,500.0	7,740.0	16,900.0	7,530.0	132.5	165.5	-83.28	-7,360.1	2,942.4	2,035.5	1,741.9	293.61	6.933		
15,600.0	7,740.0	17,000.0	7,530.0	134.2	167.2	-83.28	-7,460.1	2,941.9	2,034.0	1,736.9	297.07	6.847		
15,700.0	7,740.0	17,100.0	7,530.0	135.9	169.0	-83.27	-7,560.1	2,941.4	2,032.5	1,732.0	300.54	6.763		
15,800.0	7,740.0	17,200.0	7,530.0	137.7	170.7	-83.27	-7,660.1	2,940.9	2,031.0	1,727.0	304.01	6.681		
15,900.0	7,740.0	17,300.0	7,530.0	139.4	172.4	-83.26	-7,760.1	2,940.4	2,029.5	1,722.0	307.47	6.601		
16,000.0	7,740.0	17,399.9	7,530.0	141.1	174.2	-83.26	-7,860.1	2,939.9	2,028.0	1,717.1	310.94	6.522		
16,083.0	7,740.0	17,482.9	7,530.0	142.6	175.6	-83.26	-7,943.0	2,939.4	2,026.8	1,713.0	313.82	6.458		
16,083.8	7,740.0	17,483.8	7,530.0	142.6	175.6	-83.26	-7,943.9	2,939.4	2,026.8	1,712.9	313.85	6.458	CC, ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - DD													Offset Site Error: 0.0 ft	
Survey Program: 811-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	27.2	27.2	0.0	0.0	173.29	-4,267.1	502.2	4,296.6					
100.0	100.0	140.4	140.4	0.2	0.2	173.29	-4,266.9	502.1	4,296.4	4,296.0	0.39	N/A		
200.0	200.0	253.6	253.6	0.3	0.4	173.29	-4,266.3	501.9	4,295.8	4,295.1	0.76	5,615.881		
300.0	300.0	366.8	366.8	0.5	0.6	173.29	-4,265.4	501.5	4,295.0	4,293.9	1.14	3,783.318		
400.0	400.0	480.0	480.0	0.7	0.8	173.30	-4,264.1	501.1	4,293.8	4,292.3	1.51	2,852.043		
500.0	500.0	593.2	593.2	0.8	1.0	173.30	-4,262.5	500.5	4,292.4	4,290.5	1.88	2,288.294		
600.0	600.0	706.4	706.3	1.0	1.2	173.31	-4,260.6	499.7	4,290.6	4,288.4	2.25	1,910.297		
700.0	700.0	849.1	849.0	1.2	1.5	173.32	-4,257.6	498.5	4,288.5	4,285.8	2.67	1,606.965		
800.0	800.0	1,481.9	1,477.0	1.4	3.1	173.88	-4,202.8	450.7	4,277.1	4,273.1	4.00	1,069.835		
900.0	900.0	1,602.9	1,595.8	1.5	3.5	174.06	-4,185.5	435.5	4,261.4	4,257.0	4.40	968.468		
1,000.0	1,000.0	1,642.7	1,634.9	1.7	3.6	174.12	-4,180.0	430.3	4,246.3	4,241.6	4.65	913.664		
1,100.0	1,100.0	1,840.8	1,829.7	1.9	4.3	123.53	-4,153.1	406.7	4,232.7	4,227.2	5.46	775.411		
1,200.0	1,200.0	1,924.0	1,911.3	2.1	4.6	123.81	-4,140.5	396.7	4,217.7	4,211.9	5.84	721.749		
1,300.0	1,299.9	1,995.8	1,981.7	2.3	4.9	124.06	-4,130.0	387.7	4,204.3	4,198.1	6.20	677.699		
1,400.0	1,399.7	2,116.0	2,099.8	2.4	5.3	124.43	-4,112.3	373.2	4,191.9	4,185.2	6.69	626.919		
1,500.0	1,499.4	2,202.3	2,184.4	2.6	5.6	124.73	-4,099.4	362.7	4,180.3	4,173.2	7.10	588.629		
1,600.0	1,598.9	2,254.7	2,235.9	2.8	5.8	124.95	-4,092.0	356.1	4,170.4	4,162.9	7.44	560.838		
1,700.0	1,698.3	2,350.2	2,329.8	3.1	6.1	125.28	-4,079.2	344.7	4,162.4	4,154.5	7.89	527.810		
1,800.0	1,797.4	2,496.0	2,473.2	3.3	6.7	125.76	-4,057.9	328.4	4,154.3	4,145.9	8.48	490.180		
1,908.5	1,904.7	2,560.0	2,536.1	3.6	6.9	126.02	-4,048.5	321.3	4,147.1	4,138.2	8.89	466.599		
2,000.0	1,995.0	2,717.6	2,690.9	3.8	7.5	126.53	-4,025.6	302.7	4,141.6	4,132.0	9.53	434.436		
2,100.0	2,093.8	2,782.0	2,754.1	4.1	7.7	126.74	-4,016.1	295.1	4,135.3	4,125.3	9.95	415.626		
2,200.0	2,192.5	2,846.2	2,817.2	4.4	7.9	126.95	-4,007.2	287.8	4,129.9	4,119.6	10.37	398.220		
2,300.0	2,291.3	2,960.6	2,929.6	4.7	8.3	127.33	-3,990.7	274.5	4,124.4	4,113.5	10.93	377.221		
2,400.0	2,390.0	3,061.8	3,029.1	5.0	8.7	127.66	-3,976.1	262.5	4,118.9	4,107.5	11.47	359.197		
2,500.0	2,488.8	3,152.2	3,118.0	5.3	9.0	127.96	-3,963.2	252.0	4,113.8	4,101.9	11.97	343.598		
2,600.0	2,587.5	3,255.1	3,219.1	5.6	9.4	128.30	-3,948.4	240.0	4,108.7	4,096.2	12.52	328.253		
2,700.0	2,686.3	3,330.4	3,293.1	5.9	9.7	128.55	-3,937.7	231.2	4,103.9	4,090.9	12.99	316.043		
2,800.0	2,785.0	3,419.1	3,380.4	6.2	10.0	128.84	-3,925.7	221.1	4,099.9	4,086.4	13.49	303.843		
2,900.0	2,883.8	3,542.1	3,501.2	6.5	10.4	129.25	-3,908.1	206.6	4,095.1	4,081.0	14.10	290.390		
3,000.0	2,982.5	3,632.4	3,590.1	6.8	10.8	129.55	-3,895.3	196.1	4,090.8	4,076.2	14.62	279.837		
3,100.0	3,081.3	3,727.1	3,683.2	7.2	11.1	129.86	-3,881.9	185.4	4,086.6	4,071.4	15.15	269.821		
3,200.0	3,180.0	3,835.2	3,789.5	7.5	11.5	130.22	-3,866.6	173.1	4,082.5	4,066.8	15.72	259.727		
3,300.0	3,278.7	3,959.0	3,911.1	7.8	12.0	130.63	-3,848.4	158.6	4,078.0	4,061.7	16.33	249.691		
3,400.0	3,377.5	4,041.2	3,991.8	8.1	12.3	130.90	-3,836.1	149.7	4,073.5	4,056.7	16.82	242.140		
3,500.0	3,476.2	4,131.3	4,080.5	8.4	12.6	131.19	-3,823.1	140.1	4,069.5	4,052.1	17.34	234.753		
3,600.0	3,575.0	4,214.5	4,162.3	8.7	12.9	131.46	-3,811.1	131.0	4,065.7	4,047.9	17.84	227.877		
3,700.0	3,673.7	4,284.4	4,231.1	9.1	13.1	131.70	-3,801.4	122.6	4,062.6	4,044.3	18.31	221.880		
3,800.0	3,772.5	4,358.1	4,303.6	9.4	13.4	131.95	-3,791.8	114.0	4,060.4	4,041.6	18.79	216.147		
3,900.0	3,871.2	4,458.4	4,402.4	9.7	13.7	132.28	-3,778.6	103.0	4,058.3	4,039.0	19.33	209.938		
4,000.0	3,970.0	4,529.0	4,472.1	10.0	14.0	132.51	-3,769.8	95.4	4,056.9	4,037.1	19.79	204.990		
4,100.0	4,068.7	4,652.0	4,593.2	10.3	14.4	132.91	-3,754.1	81.8	4,055.4	4,035.0	20.41	198.715		
4,200.0	4,167.5	4,730.2	4,670.4	10.7	14.7	133.17	-3,744.3	73.3	4,054.2	4,033.3	20.89	194.094		
4,300.0	4,266.2	4,814.0	4,753.1	11.0	14.9	133.43	-3,733.8	64.8	4,053.2	4,031.8	21.38	189.598		
4,388.8	4,353.8	4,878.0	4,816.3	11.3	15.1	133.63	-3,726.1	58.6	4,052.8	4,031.0	21.78	186.097		
4,400.0	4,364.9	4,889.2	4,827.4	11.3	15.2	133.66	-3,724.8	57.6	4,052.8	4,031.0	21.84	185.603		
4,500.0	4,463.7	4,996.4	4,933.5	11.6	15.5	133.98	-3,712.7	48.2	4,053.1	4,030.7	22.37	181.202		
4,564.8	4,527.7	5,058.2	4,994.7	11.8	15.7	134.16	-3,705.4	43.2	4,053.0	4,030.3	22.69	178.620		
4,600.0	4,562.4	5,075.3	5,011.5	11.9	15.7	134.21	-3,703.4	41.8	4,053.1	4,030.2	22.82	177.579		
4,700.0	4,661.2	5,135.2	5,071.0	12.3	15.9	134.38	-3,697.1	36.9	4,054.2	4,030.9	23.24	174.473		
4,800.0	4,759.9	5,268.7	5,203.1	12.6	16.3	134.78	-3,682.9	24.9	4,055.5	4,031.7	23.84	170.089		
4,900.0	4,858.7	5,340.1	5,273.9	12.9	16.5	134.99	-3,675.1	18.5	4,056.7	4,032.4	24.29	167.028		

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

Cathedral Energy Services

Anticollision Report

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - DD													Offset Site Error: 0.0 ft	
Survey Program: 811-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,957.4	5,427.4	5,360.4	13.2	16.8	135.25	-3,666.2	10.8	4,058.6	4,033.8	24.77	163.860		
5,100.0	5,056.2	5,515.0	5,447.1	13.6	17.0	135.50	-3,657.2	3.5	4,060.5	4,035.2	25.24	160.843		
5,200.0	5,154.9	5,616.7	5,548.0	13.9	17.3	135.79	-3,647.2	-4.7	4,062.9	4,037.2	25.75	157.770		
5,300.0	5,253.7	5,706.0	5,636.7	14.2	17.6	136.04	-3,638.5	-11.5	4,065.4	4,039.2	26.22	155.049		
5,400.0	5,352.4	5,768.7	5,698.9	14.5	17.7	136.21	-3,632.7	-15.9	4,068.5	4,041.9	26.62	152.836		
5,500.0	5,451.1	5,827.0	5,756.9	14.9	17.9	136.36	-3,627.8	-19.8	4,072.5	4,045.5	27.01	150.796		
5,600.0	5,549.9	5,897.0	5,826.6	15.2	18.0	136.54	-3,622.9	-24.3	4,077.7	4,050.3	27.41	148.746		
5,700.0	5,648.6	5,951.4	5,880.8	15.5	18.1	136.67	-3,619.7	-27.4	4,083.8	4,056.1	27.78	147.020		
5,800.0	5,747.4	6,024.0	5,953.2	15.8	18.3	136.83	-3,615.9	-30.5	4,090.8	4,062.6	28.17	145.235		
5,900.0	5,846.1	6,084.3	6,013.5	16.2	18.4	136.95	-3,613.3	-32.3	4,098.5	4,070.0	28.51	143.763		
6,000.0	5,944.9	6,148.4	6,077.5	16.5	18.4	137.06	-3,611.2	-33.0	4,107.0	4,078.1	28.85	142.333		
6,100.0	6,043.6	6,215.0	6,144.1	16.8	18.5	137.17	-3,609.7	-33.6	4,116.6	4,087.3	29.20	140.965		
6,200.0	6,142.4	6,285.3	6,214.4	17.1	18.6	137.29	-3,608.8	-34.4	4,126.9	4,097.4	29.56	139.624		
6,300.0	6,241.1	6,394.4	6,323.4	17.5	18.8	137.46	-3,607.0	-35.0	4,137.0	4,107.1	29.95	138.118		
6,400.0	6,339.9	6,470.0	6,399.1	17.8	18.8	137.57	-3,606.2	-34.1	4,147.6	4,117.3	30.29	136.933		
6,500.0	6,438.6	6,527.5	6,456.5	18.1	18.9	137.64	-3,606.0	-33.6	4,158.9	4,128.3	30.62	135.818		
6,600.0	6,537.3	6,608.4	6,537.4	18.4	19.0	137.77	-3,606.5	-34.1	4,171.2	4,140.2	30.98	134.637		
6,700.0	6,636.1	6,736.2	6,665.2	18.8	19.1	137.96	-3,606.6	-34.4	4,183.1	4,151.7	31.40	133.234		
6,800.0	6,734.8	6,864.8	6,793.8	19.1	19.3	138.15	-3,606.1	-34.3	4,194.6	4,162.8	31.81	131.858		
6,900.0	6,833.6	6,963.3	6,892.4	19.4	19.4	138.29	-3,605.3	-34.1	4,205.6	4,173.4	32.19	130.667		
7,000.0	6,932.3	7,055.7	6,984.7	19.7	19.5	138.42	-3,604.7	-33.7	4,216.7	4,184.1	32.55	129.540		
7,100.0	7,031.1	7,150.7	7,079.8	20.1	19.6	138.55	-3,604.2	-33.2	4,228.0	4,195.1	32.92	128.432		
7,190.5	7,120.5	7,253.7	7,182.7	20.4	19.7	138.69	-3,603.4	-32.8	4,238.0	4,204.8	33.28	127.358		
7,200.0	7,129.8	7,262.1	7,191.1	20.4	19.7	133.52	-3,603.4	-32.7	4,239.0	4,205.7	33.34	127.144		
7,250.0	7,179.4	7,306.8	7,235.9	20.5	19.8	98.32	-3,603.0	-32.6	4,241.6	4,208.1	33.57	126.342		
7,300.0	7,228.8	7,342.0	7,271.0	20.6	19.8	66.73	-3,602.8	-32.5	4,240.1	4,206.5	33.61	126.159		
7,350.0	7,277.9	7,393.4	7,322.4	20.7	19.9	49.47	-3,602.5	-32.3	4,234.5	4,201.0	33.49	126.455		
7,400.0	7,326.1	7,435.0	7,364.0	20.7	19.9	40.51	-3,602.3	-32.2	4,224.8	4,191.6	33.18	127.335		
7,450.0	7,373.2	7,475.6	7,404.7	20.7	19.9	35.53	-3,602.3	-32.1	4,211.0	4,178.3	32.71	128.742		
7,500.0	7,418.7	7,515.0	7,444.0	20.7	20.0	32.65	-3,602.2	-32.0	4,193.4	4,161.3	32.10	130.655		
7,550.0	7,462.4	7,552.8	7,481.8	20.6	20.0	31.05	-3,602.3	-31.9	4,172.0	4,140.6	31.36	133.038		
7,600.0	7,503.8	7,588.7	7,517.7	20.5	20.1	30.34	-3,602.4	-31.8	4,147.0	4,116.5	30.53	135.824		
7,650.0	7,542.8	7,633.0	7,562.0	20.5	20.1	30.37	-3,602.5	-31.7	4,118.6	4,088.9	29.67	138.819		
7,700.0	7,578.8	7,654.5	7,583.5	20.4	20.1	30.91	-3,602.6	-31.6	4,086.9	4,058.1	28.78	142.028		
7,750.0	7,611.8	7,684.0	7,613.0	20.3	20.2	32.14	-3,602.8	-31.6	4,052.3	4,024.3	27.97	144.902		
7,800.0	7,641.5	7,710.6	7,639.6	20.2	20.2	34.05	-3,603.0	-31.6	4,015.0	3,987.7	27.31	147.013		
7,850.0	7,667.6	7,735.7	7,664.7	20.2	20.2	36.83	-3,603.1	-31.6	3,975.2	3,948.3	26.92	147.649		
7,900.0	7,689.9	7,760.0	7,689.1	20.2	20.3	40.72	-3,603.3	-31.6	3,933.3	3,906.4	26.94	145.999		
7,950.0	7,708.2	7,780.1	7,709.1	20.1	20.3	46.07	-3,603.4	-31.6	3,889.5	3,862.1	27.48	141.537		
8,000.0	7,722.5	7,795.7	7,724.7	20.2	20.3	53.38	-3,603.5	-31.7	3,844.3	3,815.7	28.61	134.348		
8,050.0	7,732.6	7,806.8	7,735.9	20.2	20.3	63.26	-3,603.6	-31.7	3,797.9	3,767.6	30.23	125.628		
8,100.0	7,738.4	7,813.4	7,742.4	20.3	20.3	76.10	-3,603.6	-31.7	3,750.7	3,718.8	31.85	117.748		
8,142.5	7,740.0	7,815.3	7,744.3	20.4	20.3	88.98	-3,603.6	-31.7	3,710.2	3,677.6	32.61	113.785		
8,200.0	7,740.0	7,815.6	7,744.6	20.5	20.3	89.00	-3,603.6	-31.7	3,655.4	3,622.5	32.83	111.330		
8,300.0	7,740.0	7,816.1	7,745.2	20.9	20.3	89.02	-3,603.6	-31.7	3,560.2	3,526.8	33.38	106.649		
8,400.0	7,740.0	7,816.7	7,745.7	21.4	20.3	89.05	-3,603.6	-31.7	3,465.3	3,431.2	34.11	101.592		
8,442.5	7,740.0	7,816.9	7,745.9	21.7	20.3	89.06	-3,603.6	-31.7	3,425.0	3,390.6	34.47	99.372		
8,500.0	7,740.0	7,817.2	7,746.3	22.1	20.3	89.05	-3,603.6	-31.7	3,370.6	3,335.7	34.87	96.670		
8,600.0	7,740.0	7,817.8	7,746.8	22.8	20.3	89.03	-3,603.6	-31.7	3,275.6	3,240.0	35.63	91.930		
8,700.0	7,740.0	7,818.3	7,747.4	23.6	20.3	89.01	-3,603.6	-31.7	3,180.5	3,144.0	36.48	87.196		
8,800.0	7,740.0	7,818.9	7,747.9	24.5	20.3	88.99	-3,603.6	-31.7	3,085.1	3,047.7	37.38	82.525		
8,842.5	7,740.0	7,819.1	7,748.1	25.0	20.3	88.98	-3,603.6	-31.7	3,044.5	3,006.7	37.79	80.570		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - DD													Offset Site Error: 0.0 ft			
Survey Program: 811-MWD															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor				
8,900.0	7,740.0	7,819.4	7,748.4	25.5	20.3	89.00	-3,603.6	-31.7	2,989.5	2,951.0	38.51	77.629				
9,000.0	7,740.0	7,820.0	7,749.0	26.6	20.3	89.03	-3,603.6	-31.7	2,894.2	2,854.4	39.82	72.678				
9,100.0	7,740.0	7,820.5	7,749.5	27.7	20.3	89.07	-3,603.6	-31.7	2,799.3	2,758.1	41.19	67.955				
9,200.0	7,740.0	7,821.1	7,750.1	28.9	20.3	89.10	-3,603.6	-31.7	2,704.7	2,662.1	42.61	63.471				
9,300.0	7,740.0	7,821.6	7,750.6	30.2	20.3	89.14	-3,603.6	-31.7	2,610.5	2,566.4	44.07	59.231				
9,342.5	7,740.0	7,821.8	7,750.8	30.7	20.3	89.15	-3,603.6	-31.7	2,570.6	2,525.9	44.70	57.503				
9,399.5	7,740.0	7,822.1	7,751.1	31.5	20.3	89.19	-3,603.6	-31.7	2,517.3	2,471.5	45.74	55.031				
9,500.0	7,740.0	7,822.7	7,751.7	32.8	20.3	89.23	-3,603.6	-31.7	2,423.9	2,376.7	47.28	51.271				
9,600.0	7,740.0	7,823.2	7,752.2	34.2	20.3	89.26	-3,603.7	-31.7	2,331.7	2,282.8	48.83	47.752				
9,700.0	7,740.0	7,823.7	7,752.7	35.6	20.3	89.29	-3,603.7	-31.7	2,240.0	2,189.6	50.40	44.445				
9,800.0	7,740.0	7,824.2	7,753.3	37.1	20.3	89.33	-3,603.7	-31.7	2,149.1	2,097.2	51.99	41.338				
9,900.0	7,740.0	7,824.8	7,753.8	38.5	20.3	89.36	-3,603.7	-31.7	2,059.1	2,005.5	53.59	38.420				
10,000.0	7,740.0	7,825.3	7,754.3	40.0	20.3	89.39	-3,603.7	-31.7	1,970.0	1,914.8	55.21	35.680				
10,100.0	7,740.0	7,825.8	7,754.8	41.6	20.3	89.42	-3,603.7	-31.7	1,882.1	1,825.2	56.84	33.109				
10,200.0	7,740.0	7,826.3	7,755.3	43.1	20.3	89.46	-3,603.7	-31.7	1,795.3	1,736.9	58.49	30.697				
10,300.0	7,740.0	7,826.8	7,755.9	44.6	20.3	89.49	-3,603.7	-31.7	1,710.1	1,649.9	60.14	28.437				
10,400.0	7,740.0	7,827.3	7,756.4	46.2	20.3	89.52	-3,603.7	-31.7	1,626.5	1,564.7	61.79	26.321				
10,500.0	7,740.0	7,827.9	7,756.9	47.8	20.3	89.55	-3,603.7	-31.7	1,544.8	1,481.4	63.46	24.344				
10,600.0	7,740.0	7,828.4	7,757.4	49.4	20.3	89.59	-3,603.7	-31.7	1,465.5	1,400.3	65.13	22.500				
10,700.0	7,740.0	7,828.9	7,757.9	51.0	20.3	89.62	-3,603.7	-31.7	1,388.8	1,322.0	66.81	20.787				
10,800.0	7,740.0	7,829.4	7,758.4	52.6	20.3	89.65	-3,603.7	-31.7	1,315.2	1,246.7	68.49	19.203				
10,900.0	7,740.0	7,829.9	7,758.9	54.2	20.3	89.68	-3,603.7	-31.7	1,245.4	1,175.2	70.18	17.745				
11,000.0	7,740.0	7,830.4	7,759.4	55.8	20.3	89.71	-3,603.7	-31.7	1,179.8	1,108.0	71.87	16.416				
11,100.0	7,740.0	7,830.9	7,759.9	57.5	20.3	89.74	-3,603.7	-31.7	1,119.4	1,045.9	73.57	15.216				
11,200.0	7,740.0	7,831.4	7,760.4	59.1	20.3	89.77	-3,603.7	-31.7	1,065.0	989.7	75.27	14.150				
11,300.0	7,740.0	7,831.9	7,760.9	60.8	20.3	89.80	-3,603.7	-31.7	1,017.5	940.5	76.97	13.219				
11,400.0	7,740.0	7,832.4	7,761.4	62.4	20.3	89.84	-3,603.7	-31.7	978.0	899.3	78.68	12.430				
11,500.0	7,740.0	7,832.9	7,761.9	64.1	20.3	89.87	-3,603.7	-31.7	947.4	867.0	80.38	11.785				
11,600.0	7,740.0	7,833.3	7,762.4	65.7	20.3	89.90	-3,603.7	-31.7	926.6	844.5	82.09	11.287				
11,700.0	7,740.0	7,833.8	7,762.9	67.4	20.3	89.93	-3,603.7	-31.7	916.3	832.5	83.81	10.934				
11,744.5	7,740.0	7,834.1	7,763.1	68.2	20.3	89.94	-3,603.7	-31.7	915.3	830.7	84.57	10.822 CC, ES				
11,800.0	7,740.0	7,834.3	7,763.3	69.1	20.3	89.96	-3,603.7	-31.7	916.9	831.4	85.52	10.722				
11,900.0	7,740.0	7,834.8	7,763.8	70.8	20.3	89.99	-3,603.7	-31.7	928.4	841.1	87.24	10.641 SF				
12,000.0	7,740.0	7,835.3	7,764.3	72.4	20.3	90.02	-3,603.7	-31.7	950.2	861.3	88.96	10.682				
12,100.0	7,740.0	7,835.8	7,764.8	74.1	20.3	90.05	-3,603.7	-31.7	981.9	891.2	90.68	10.828				
12,200.0	7,740.0	7,836.2	7,765.3	75.8	20.3	90.08	-3,603.7	-31.7	1,022.3	929.9	92.40	11.064				
12,300.0	7,740.0	7,836.7	7,765.7	77.5	20.3	90.11	-3,603.7	-31.7	1,070.6	976.5	94.13	11.374				
12,400.0	7,740.0	7,837.2	7,766.2	79.2	20.3	90.14	-3,603.7	-31.7	1,125.7	1,029.9	95.85	11.745				
12,500.0	7,740.0	7,837.7	7,766.7	80.9	20.3	90.17	-3,603.7	-31.7	1,186.8	1,089.2	97.58	12.162				
12,600.0	7,740.0	7,838.1	7,767.2	82.6	20.3	90.20	-3,603.7	-31.7	1,252.8	1,153.5	99.30	12.616				
12,700.0	7,740.0	7,838.6	7,767.6	84.3	20.3	90.23	-3,603.7	-31.7	1,323.1	1,222.1	101.03	13.096				
12,800.0	7,740.0	7,839.1	7,768.1	86.0	20.3	90.26	-3,603.7	-31.7	1,397.0	1,294.3	102.76	13.595				
12,900.0	7,740.0	7,839.5	7,768.6	87.7	20.3	90.29	-3,603.7	-31.7	1,474.0	1,369.5	104.49	14.107				
13,000.0	7,740.0	7,840.0	7,769.0	89.4	20.3	90.31	-3,603.7	-31.7	1,553.7	1,447.4	106.22	14.626				
13,100.0	7,740.0	7,840.5	7,769.5	91.1	20.3	90.34	-3,603.7	-31.7	1,635.5	1,527.6	107.96	15.150				
13,200.0	7,740.0	7,840.9	7,770.0	92.8	20.3	90.37	-3,603.7	-31.7	1,719.3	1,609.6	109.69	15.674				
13,300.0	7,740.0	7,841.4	7,770.4	94.5	20.3	90.40	-3,603.7	-31.7	1,804.7	1,693.3	111.42	16.197				
13,400.0	7,740.0	7,841.9	7,770.9	96.2	20.3	90.43	-3,603.7	-31.7	1,891.6	1,778.4	113.16	16.717				
13,500.0	7,740.0	7,842.3	7,771.3	98.0	20.3	90.46	-3,603.7	-31.7	1,979.7	1,864.8	114.89	17.231				
13,600.0	7,740.0	7,842.8	7,771.8	99.7	20.3	90.49	-3,603.7	-31.7	2,068.9	1,952.3	116.63	17.739				
13,700.0	7,740.0	7,843.2	7,772.2	101.4	20.3	90.51	-3,603.8	-31.7	2,159.0	2,040.7	118.36	18.241				
13,800.0	7,740.0	7,843.7	7,772.7	103.1	20.3	90.54	-3,603.8	-31.7	2,250.0	2,129.9	120.10	18.734				

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - DD													Offset Site Error:	0.0 ft
Survey Program: 811-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		
13,900.0	7,740.0	7,844.1	7,773.1	104.8	20.3	90.57	-3,603.8	-31.7	2,341.7	2,219.9	121.84	19.220		
14,000.0	7,740.0	7,844.6	7,773.6	106.5	20.3	90.60	-3,603.8	-31.7	2,434.1	2,310.5	123.58	19.697		
14,100.0	7,740.0	7,845.0	7,774.0	108.3	20.3	90.63	-3,603.8	-31.7	2,527.0	2,401.7	125.32	20.165		
14,200.0	7,740.0	7,845.5	7,774.5	110.0	20.3	90.65	-3,603.8	-31.7	2,620.5	2,493.4	127.05	20.625		
14,300.0	7,740.0	7,845.9	7,774.9	111.7	20.4	90.68	-3,603.8	-31.7	2,714.4	2,585.6	128.79	21.075		
14,400.0	7,740.0	7,846.3	7,775.4	113.4	20.4	90.71	-3,603.8	-31.7	2,808.7	2,678.2	130.53	21.517		
14,500.0	7,740.0	7,846.8	7,775.8	115.2	20.4	90.74	-3,603.8	-31.7	2,903.5	2,771.2	132.27	21.950		
14,600.0	7,740.0	7,847.2	7,776.2	116.9	20.4	90.77	-3,603.8	-31.7	2,998.5	2,864.5	134.01	22.375		
14,700.0	7,740.0	7,847.6	7,776.7	118.6	20.4	90.79	-3,603.8	-31.7	3,093.9	2,958.1	135.75	22.790		
14,800.0	7,740.0	7,848.1	7,777.1	120.4	20.4	90.82	-3,603.8	-31.7	3,189.6	3,052.1	137.50	23.197		
14,900.0	7,740.0	7,848.5	7,777.5	122.1	20.4	90.85	-3,603.8	-31.7	3,285.5	3,146.2	139.24	23.596		
15,000.0	7,740.0	7,848.9	7,778.0	123.8	20.4	90.87	-3,603.8	-31.7	3,381.6	3,240.7	140.98	23.987		
15,100.0	7,740.0	7,849.4	7,778.4	125.5	20.4	90.90	-3,603.8	-31.7	3,478.0	3,335.3	142.72	24.369		
15,200.0	7,740.0	7,849.8	7,778.8	127.3	20.4	90.93	-3,603.8	-31.7	3,574.6	3,430.1	144.46	24.744		
15,300.0	7,740.0	7,850.2	7,779.3	129.0	20.4	90.95	-3,603.8	-31.7	3,671.3	3,525.1	146.21	25.111		
15,400.0	7,740.0	7,850.7	7,779.7	130.7	20.4	90.98	-3,603.8	-31.7	3,768.3	3,620.3	147.95	25.470		
15,500.0	7,740.0	7,851.1	7,780.1	132.5	20.4	91.01	-3,603.8	-31.7	3,865.3	3,715.6	149.69	25.822		
15,600.0	7,740.0	7,851.5	7,780.5	134.2	20.4	91.03	-3,603.8	-31.7	3,962.6	3,811.1	151.43	26.167		
15,700.0	7,740.0	7,851.9	7,780.9	135.9	20.4	91.06	-3,603.8	-31.7	4,059.9	3,906.7	153.18	26.505		
15,800.0	7,740.0	7,852.3	7,781.4	137.7	20.4	91.09	-3,603.8	-31.7	4,157.4	4,002.5	154.92	26.836		
15,900.0	7,740.0	7,852.8	7,781.8	139.4	20.4	91.11	-3,603.8	-31.7	4,255.0	4,098.3	156.67	27.160		
16,000.0	7,740.0	7,853.2	7,782.2	141.1	20.4	91.14	-3,603.8	-31.7	4,352.7	4,194.3	158.41	27.478		
16,083.0	7,740.0	7,853.5	7,782.5	142.6	20.4	91.16	-3,603.8	-31.7	4,433.9	4,274.0	159.86	27.737		
16,083.8	7,740.0	7,853.5	7,782.5	142.6	20.4	91.16	-3,603.8	-31.7	4,434.7	4,274.9	159.87	27.739		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	24.0	24.0	0.0	0.0	173.29	-4,267.2	502.2	4,296.6					
100.0	100.0	124.0	124.0	0.2	0.2	173.29	-4,267.2	502.2	4,296.6	4,296.3	0.34	N/A		
200.0	200.0	224.0	224.0	0.3	0.4	173.29	-4,267.2	502.2	4,296.6	4,295.9	0.69	6,216.434		
300.0	300.0	324.0	324.0	0.5	0.5	173.29	-4,267.2	502.2	4,296.6	4,295.6	1.04	4,130.418		
400.0	400.0	424.0	424.0	0.7	0.7	173.29	-4,267.2	502.2	4,296.6	4,295.2	1.39	3,092.638		
500.0	500.0	524.0	524.0	0.8	0.9	173.29	-4,267.2	502.2	4,296.6	4,294.9	1.74	2,471.633		
600.0	600.0	624.0	624.0	1.0	1.1	173.29	-4,267.2	502.2	4,296.6	4,294.5	2.09	2,058.320		
700.0	700.0	724.0	724.0	1.2	1.2	173.29	-4,267.2	502.2	4,296.6	4,294.2	2.44	1,763.434		
800.0	800.0	824.0	824.0	1.4	1.4	173.29	-4,267.2	502.2	4,296.6	4,293.8	2.79	1,542.453		
900.0	900.0	924.0	924.0	1.5	1.6	173.29	-4,267.2	502.2	4,296.6	4,293.5	3.13	1,370.689		
1,000.0	1,000.0	1,024.0	1,024.0	1.7	1.8	173.29	-4,267.2	502.2	4,296.6	4,293.1	3.48	1,233.346		
1,100.0	1,100.0	1,124.0	1,124.0	1.9	1.9	122.27	-4,267.2	502.2	4,297.1	4,293.2	3.83	1,121.125		
1,200.0	1,200.0	1,788.5	1,785.0	2.1	3.3	122.91	-4,222.8	467.0	4,287.3	4,282.1	5.23	820.357		
1,300.0	1,299.9	1,887.2	1,882.6	2.3	3.5	123.16	-4,210.9	457.6	4,276.6	4,271.0	5.60	763.229		
1,400.0	1,399.7	1,985.9	1,980.0	2.4	3.8	123.42	-4,199.0	448.1	4,266.9	4,260.9	5.99	712.549		
1,500.0	1,499.4	2,084.4	2,077.4	2.6	4.1	123.69	-4,187.1	438.7	4,258.1	4,251.7	6.38	667.186		
1,600.0	1,598.9	2,182.8	2,174.5	2.8	4.4	123.97	-4,175.2	429.3	4,250.4	4,243.6	6.79	626.259		
1,700.0	1,698.3	2,280.9	2,271.6	3.1	4.7	124.26	-4,163.4	419.9	4,243.7	4,236.5	7.20	589.077		
1,800.0	1,797.4	2,378.9	2,368.4	3.3	4.9	124.57	-4,151.6	410.5	4,238.1	4,230.5	7.63	555.100		
1,908.5	1,904.7	2,485.0	2,473.1	3.6	5.3	124.90	-4,138.8	400.3	4,233.3	4,225.2	8.12	521.348		
2,000.0	1,995.0	2,574.3	2,561.4	3.8	5.5	125.16	-4,128.0	391.8	4,229.8	4,221.2	8.54	495.304		
2,100.0	2,093.8	2,671.8	2,657.8	4.1	5.8	125.45	-4,116.2	382.5	4,226.0	4,217.0	9.01	469.276		
2,200.0	2,192.5	2,769.4	2,754.2	4.4	6.1	125.73	-4,104.4	373.1	4,222.4	4,213.0	9.48	445.536		
2,300.0	2,291.3	2,867.0	2,850.7	4.7	6.4	126.02	-4,092.6	363.8	4,218.9	4,209.0	9.95	423.844		
2,400.0	2,390.0	2,964.6	2,947.1	5.0	6.7	126.31	-4,080.9	354.4	4,215.5	4,205.1	10.43	403.980		
2,500.0	2,488.8	3,062.2	3,043.5	5.3	7.0	126.59	-4,069.1	345.1	4,212.2	4,201.3	10.92	385.749		
2,600.0	2,587.5	3,159.8	3,139.9	5.6	7.3	126.88	-4,057.3	335.7	4,209.1	4,197.7	11.41	368.976		
2,700.0	2,686.3	3,257.4	3,236.4	5.9	7.6	127.17	-4,045.5	326.4	4,206.0	4,194.1	11.90	353.509		
2,800.0	2,785.0	3,355.0	3,332.8	6.2	7.9	127.45	-4,033.8	317.1	4,203.0	4,190.6	12.39	339.211		
2,900.0	2,883.8	3,452.6	3,429.2	6.5	8.2	127.74	-4,022.0	307.7	4,200.2	4,187.3	12.89	325.964		
3,000.0	2,982.5	3,550.2	3,525.6	6.8	8.5	128.03	-4,010.2	298.4	4,197.5	4,184.1	13.38	313.663		
3,100.0	3,081.3	3,647.7	3,622.1	7.2	8.8	128.32	-3,998.4	289.0	4,194.8	4,181.0	13.88	302.216		
3,200.0	3,180.0	3,745.3	3,718.5	7.5	9.1	128.61	-3,986.6	279.7	4,192.3	4,178.0	14.38	291.541		
3,300.0	3,278.7	3,842.9	3,814.9	7.8	9.4	128.90	-3,974.9	270.3	4,189.9	4,175.1	14.88	281.567		
3,400.0	3,377.5	3,940.5	3,911.3	8.1	9.7	129.19	-3,963.1	261.0	4,187.7	4,172.3	15.38	272.231		
3,500.0	3,476.2	4,038.1	4,007.8	8.4	10.1	129.48	-3,951.3	251.7	4,185.5	4,169.6	15.89	263.475		
3,600.0	3,575.0	4,135.7	4,104.2	8.7	10.4	129.77	-3,939.5	242.3	4,183.4	4,167.0	16.39	255.250		
3,700.0	3,673.7	4,233.3	4,200.6	9.1	10.7	130.06	-3,927.8	233.0	4,181.5	4,164.6	16.89	247.511		
3,800.0	3,772.5	4,330.9	4,297.0	9.4	11.0	130.35	-3,916.0	223.6	4,179.6	4,162.2	17.40	240.217		
3,900.0	3,871.2	4,428.5	4,393.5	9.7	11.3	130.64	-3,904.2	214.3	4,177.9	4,160.0	17.91	233.334		
4,000.0	3,970.0	4,526.1	4,489.9	10.0	11.6	130.93	-3,892.4	204.9	4,176.3	4,157.9	18.41	226.827		
4,100.0	4,068.7	4,623.7	4,586.3	10.3	11.9	131.22	-3,880.6	195.6	4,174.8	4,155.9	18.92	220.670		
4,200.0	4,167.5	4,721.2	4,682.7	10.7	12.2	131.52	-3,868.9	186.3	4,173.4	4,154.0	19.43	214.834		
4,300.0	4,266.2	4,818.8	4,779.2	11.0	12.5	131.81	-3,857.1	176.9	4,172.2	4,152.2	19.93	209.298		
4,400.0	4,364.9	4,916.4	4,875.6	11.3	12.8	132.10	-3,845.3	167.6	4,171.0	4,150.6	20.44	204.039		
4,500.0	4,463.7	5,014.0	4,972.0	11.6	13.1	132.39	-3,833.5	158.2	4,170.0	4,149.0	20.95	199.037		
4,600.0	4,562.4	5,111.6	5,068.4	11.9	13.5	132.68	-3,821.7	148.9	4,169.1	4,147.6	21.46	194.275		
4,700.0	4,661.2	5,209.2	5,164.9	12.3	13.8	132.98	-3,810.0	139.5	4,168.2	4,146.3	21.97	189.738		
4,800.0	4,759.9	5,306.8	5,261.3	12.6	14.1	133.27	-3,798.2	130.2	4,167.6	4,145.1	22.48	185.409		
4,900.0	4,858.7	5,404.4	5,357.7	12.9	14.4	133.56	-3,786.4	120.9	4,167.0	4,144.0	22.99	181.276		
5,000.0	4,957.4	5,502.0	5,454.1	13.2	14.7	133.85	-3,774.6	111.5	4,166.5	4,143.0	23.50	177.326		
5,100.0	5,056.2	5,599.6	5,550.6	13.6	15.0	134.15	-3,762.9	102.2	4,166.1	4,142.1	24.01	173.547		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	5,154.9	5,697.1	5,647.0	13.9	15.3	134.44	-3,751.1	92.8	4,165.9	4,141.4	24.52	169.930		
5,300.0	5,253.7	5,794.7	5,743.4	14.2	15.6	134.73	-3,739.3	83.5	4,165.8	4,140.8	25.02	166.465		
5,359.8	5,312.7	5,853.1	5,801.1	14.4	15.8	134.91	-3,732.3	77.9	4,165.8	4,140.4	25.33	164.462		
5,400.0	5,352.4	5,892.3	5,839.8	14.5	15.9	135.03	-3,727.5	74.1	4,165.8	4,140.2	25.53	163.143		
5,500.0	5,451.1	5,989.9	5,936.3	14.9	16.3	135.32	-3,715.7	64.8	4,165.9	4,139.8	26.04	159.954		
5,600.0	5,549.9	6,087.5	6,032.7	15.2	16.6	135.61	-3,704.0	55.5	4,166.1	4,139.5	26.55	156.893		
5,700.0	5,648.6	6,185.1	6,129.1	15.5	16.9	135.90	-3,692.2	46.1	4,166.4	4,139.4	27.06	153.952		
5,800.0	5,747.4	6,282.7	6,225.5	15.8	17.2	136.20	-3,680.4	36.8	4,166.9	4,139.3	27.57	151.124		
5,900.0	5,846.1	6,380.3	6,322.0	16.2	17.5	136.49	-3,668.6	27.4	4,167.4	4,139.3	28.08	148.403		
6,000.0	5,944.9	6,477.9	6,418.4	16.5	17.8	136.78	-3,656.9	18.1	4,168.1	4,139.5	28.59	145.784		
6,100.0	6,043.6	6,575.5	6,514.8	16.8	18.1	137.08	-3,645.1	8.7	4,168.9	4,139.8	29.10	143.261		
6,200.0	6,142.4	6,673.1	6,611.2	17.1	18.4	137.37	-3,633.3	-0.6	4,169.8	4,140.2	29.61	140.830		
6,300.0	6,241.1	6,770.6	6,707.7	17.5	18.7	137.66	-3,621.5	-9.9	4,170.8	4,140.7	30.12	138.485		
6,400.0	6,339.9	6,840.7	6,776.9	17.8	19.0	137.87	-3,613.2	-16.6	4,172.1	4,141.6	30.55	136.580		
6,500.0	6,438.6	6,900.0	6,835.7	18.1	19.1	138.03	-3,606.9	-21.5	4,174.6	4,143.7	30.94	134.927		
6,600.0	6,537.3	6,939.0	6,874.4	18.4	19.2	138.14	-3,603.3	-24.4	4,178.3	4,147.0	31.27	133.608		
6,700.0	6,636.1	7,000.0	6,935.1	18.8	19.4	138.29	-3,598.6	-28.2	4,183.2	4,151.6	31.65	132.171		
6,800.0	6,734.8	7,038.1	6,973.0	19.1	19.4	138.37	-3,596.1	-30.1	4,189.3	4,157.4	31.97	131.043		
6,900.0	6,833.6	7,100.0	7,034.8	19.4	19.5	138.50	-3,592.9	-32.6	4,196.7	4,164.4	32.33	129.812		
7,000.0	6,932.3	7,137.6	7,072.4	19.7	19.6	138.57	-3,591.5	-33.7	4,205.2	4,172.6	32.64	128.855		
7,100.0	7,031.1	7,200.0	7,134.8	20.1	19.7	138.68	-3,590.0	-34.9	4,215.0	4,182.0	32.98	127.816		
7,190.5	7,120.5	7,232.7	7,167.5	20.4	19.7	138.73	-3,589.7	-35.2	4,224.8	4,191.6	33.25	127.075		
7,200.0	7,129.8	7,237.5	7,172.2	20.4	19.7	133.55	-3,589.6	-35.2	4,225.8	4,192.5	33.31	126.880		
7,250.0	7,179.4	7,268.6	7,203.4	20.5	19.8	98.33	-3,589.6	-35.3	4,228.8	4,195.3	33.52	126.156		
7,300.0	7,228.8	7,318.1	7,252.9	20.6	19.8	66.76	-3,589.6	-35.3	4,227.6	4,194.1	33.58	125.916		
7,350.0	7,277.9	7,367.1	7,301.9	20.7	19.9	49.50	-3,589.6	-35.3	4,222.3	4,188.8	33.45	126.226		
7,400.0	7,326.1	7,415.4	7,350.1	20.7	19.9	40.55	-3,589.6	-35.3	4,212.7	4,179.6	33.15	127.074		
7,450.0	7,373.2	7,462.5	7,397.2	20.7	20.0	35.58	-3,589.6	-35.3	4,199.1	4,166.5	32.69	128.442		
7,500.0	7,418.7	7,508.0	7,442.7	20.7	20.0	32.73	-3,589.6	-35.3	4,181.6	4,149.5	32.09	130.309		
7,550.0	7,462.4	7,551.6	7,486.4	20.6	20.1	31.16	-3,589.6	-35.3	4,160.2	4,128.8	31.37	132.634		
7,600.0	7,503.8	7,593.1	7,527.8	20.5	20.1	30.48	-3,589.6	-35.3	4,135.1	4,104.6	30.55	135.348		
7,650.0	7,542.8	7,632.0	7,566.8	20.5	20.2	30.50	-3,589.6	-35.3	4,106.6	4,076.9	29.69	138.324		
7,700.0	7,578.8	7,668.1	7,602.9	20.4	20.2	31.15	-3,589.6	-35.3	4,074.8	4,046.0	28.83	141.347		
7,750.0	7,611.8	7,701.1	7,635.9	20.3	20.2	32.45	-3,589.6	-35.3	4,040.1	4,012.0	28.04	144.074		
7,800.0	7,641.5	7,730.8	7,665.5	20.2	20.3	34.45	-3,589.6	-35.3	4,002.6	3,975.2	27.42	145.989		
7,850.0	7,667.6	7,756.8	7,691.6	20.2	20.3	37.32	-3,589.6	-35.3	3,962.7	3,935.6	27.07	146.412		
7,900.0	7,689.9	7,779.1	7,713.9	20.2	20.3	41.29	-3,589.6	-35.3	3,920.6	3,893.5	27.11	144.592		
7,950.0	7,708.2	7,797.5	7,732.3	20.1	20.4	46.74	-3,589.6	-35.3	3,876.8	3,849.1	27.69	140.002		
8,000.0	7,722.5	7,811.8	7,746.5	20.2	20.4	54.18	-3,589.6	-35.3	3,831.5	3,802.6	28.85	132.789		
8,050.0	7,732.6	7,821.9	7,756.6	20.2	20.4	64.19	-3,589.6	-35.3	3,785.0	3,754.5	30.47	124.211		
8,100.0	7,738.4	7,827.7	7,762.4	20.3	20.4	77.12	-3,589.6	-35.3	3,737.8	3,705.8	32.04	116.649		
8,142.5	7,740.0	7,829.3	7,764.0	20.4	20.4	90.00	-3,589.6	-35.3	3,697.4	3,664.7	32.71	113.025		
8,200.0	7,740.0	7,829.3	7,764.0	20.5	20.4	90.00	-3,589.6	-35.3	3,642.5	3,609.6	32.94	110.587		
8,300.0	7,740.0	7,829.3	7,764.0	20.9	20.4	90.00	-3,589.6	-35.3	3,547.4	3,513.9	33.49	105.940		
8,400.0	7,740.0	7,829.3	7,764.0	21.4	20.4	90.00	-3,589.6	-35.3	3,452.6	3,418.4	34.21	100.920		
8,442.5	7,740.0	7,829.3	7,764.0	21.7	20.4	90.00	-3,589.6	-35.3	3,412.4	3,377.8	34.57	98.717		
8,500.0	7,740.0	7,829.3	7,764.0	22.1	20.4	90.00	-3,589.6	-35.3	3,357.9	3,323.0	34.97	96.033		
8,600.0	7,740.0	7,829.3	7,764.0	22.8	20.4	90.00	-3,589.6	-35.3	3,263.1	3,227.3	35.73	91.325		
8,700.0	7,740.0	7,829.3	7,764.0	23.6	20.4	90.00	-3,589.6	-35.3	3,168.0	3,131.4	36.57	86.623		
8,800.0	7,740.0	7,829.3	7,764.0	24.5	20.4	90.00	-3,589.6	-35.3	3,072.7	3,035.2	37.48	81.983		
8,842.5	7,740.0	7,829.3	7,764.0	25.0	20.4	90.00	-3,589.6	-35.3	3,032.1	2,994.2	37.88	80.041		
8,900.0	7,740.0	7,829.3	7,764.0	25.5	20.4	90.00	-3,589.6	-35.3	2,977.2	2,938.6	38.60	77.120		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-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
9,000.0	7,740.0	7,829.3	7,764.0	26.6	20.4	90.00	-3,589.6	-35.3	2,882.0	2,842.1	39.92	72.202	
9,100.0	7,740.0	7,829.3	7,764.0	27.7	20.4	90.00	-3,589.6	-35.3	2,787.1	2,745.8	41.28	67.510	
9,200.0	7,740.0	7,829.3	7,764.0	28.9	20.4	90.00	-3,589.6	-35.3	2,692.6	2,649.9	42.70	63.055	
9,300.0	7,740.0	7,829.3	7,764.0	30.2	20.4	90.00	-3,589.6	-35.3	2,598.5	2,554.3	44.16	58.841	
9,342.5	7,740.0	7,829.3	7,764.0	30.7	20.4	90.00	-3,589.6	-35.3	2,558.6	2,513.9	44.79	57.123	
9,399.5	7,740.0	7,829.3	7,764.0	31.5	20.4	90.00	-3,589.6	-35.3	2,505.4	2,459.6	45.83	54.667	
9,500.0	7,740.0	7,829.3	7,764.0	32.8	20.4	90.00	-3,589.6	-35.3	2,412.2	2,364.8	47.36	50.930	
9,600.0	7,740.0	7,829.3	7,764.0	34.2	20.4	90.00	-3,589.6	-35.3	2,320.0	2,271.1	48.91	47.432	
9,700.0	7,740.0	7,829.3	7,764.0	35.6	20.4	90.00	-3,589.6	-35.3	2,228.6	2,178.1	50.48	44.145	
9,800.0	7,740.0	7,829.3	7,764.0	37.1	20.4	90.00	-3,589.6	-35.3	2,137.9	2,085.8	52.07	41.056	
9,900.0	7,740.0	7,829.3	7,764.0	38.5	20.4	90.00	-3,589.6	-35.3	2,048.0	1,994.3	53.68	38.155	
10,000.0	7,740.0	7,829.3	7,764.0	40.0	20.4	90.00	-3,589.6	-35.3	1,959.1	1,903.9	55.29	35.432	
10,100.0	7,740.0	7,829.3	7,764.0	41.6	20.4	90.00	-3,589.6	-35.3	1,871.4	1,814.5	56.92	32.876	
10,200.0	7,740.0	7,829.3	7,764.0	43.1	20.4	90.00	-3,589.6	-35.3	1,785.0	1,726.4	58.56	30.479	
10,300.0	7,740.0	7,829.3	7,764.0	44.6	20.4	90.00	-3,589.6	-35.3	1,700.0	1,639.8	60.21	28.233	
10,400.0	7,740.0	7,829.3	7,764.0	46.2	20.4	90.00	-3,589.6	-35.3	1,616.8	1,554.9	61.87	26.132	
10,500.0	7,740.0	7,829.3	7,764.0	47.8	20.4	90.00	-3,589.6	-35.3	1,535.5	1,472.0	63.53	24.168	
10,600.0	7,740.0	7,829.3	7,764.0	49.4	20.4	90.00	-3,589.6	-35.3	1,456.6	1,391.4	65.21	22.339	
10,700.0	7,740.0	7,829.3	7,764.0	51.0	20.4	90.00	-3,589.6	-35.3	1,380.5	1,313.6	66.88	20.640	
10,800.0	7,740.0	7,829.3	7,764.0	52.6	20.4	90.00	-3,589.6	-35.3	1,307.5	1,239.0	68.56	19.070	
10,900.0	7,740.0	7,829.3	7,764.0	54.2	20.4	90.00	-3,589.6	-35.3	1,238.4	1,168.1	70.25	17.627	
11,000.0	7,740.0	7,829.3	7,764.0	55.8	20.4	90.00	-3,589.6	-35.3	1,173.7	1,101.7	71.94	16.314	
11,100.0	7,740.0	7,829.3	7,764.0	57.5	20.4	90.00	-3,589.6	-35.3	1,114.2	1,040.5	73.64	15.130	
11,200.0	7,740.0	7,829.3	7,764.0	59.1	20.4	90.00	-3,589.6	-35.3	1,060.8	985.5	75.34	14.081	
11,300.0	7,740.0	7,829.3	7,764.0	60.8	20.4	90.00	-3,589.6	-35.3	1,014.5	937.5	77.04	13.169	
11,400.0	7,740.0	7,829.3	7,764.0	62.4	20.4	90.00	-3,589.6	-35.3	976.3	897.5	78.74	12.398	
11,500.0	7,740.0	7,829.3	7,764.0	64.1	20.4	90.00	-3,589.6	-35.3	947.1	866.7	80.45	11.773	
11,600.0	7,740.0	7,829.3	7,764.0	65.7	20.4	90.00	-3,589.6	-35.3	927.9	845.7	82.16	11.293	
11,700.0	7,740.0	7,829.3	7,764.0	67.4	20.4	90.00	-3,589.6	-35.3	919.2	835.3	83.87	10.959	
11,730.4	7,740.0	7,829.3	7,764.0	67.9	20.4	90.00	-3,589.6	-35.3	918.7	834.3	84.40	10.885 CC, ES	
11,800.0	7,740.0	7,829.3	7,764.0	69.1	20.4	90.00	-3,589.6	-35.3	921.3	835.7	85.59	10.764	
11,900.0	7,740.0	7,829.3	7,764.0	70.8	20.4	90.00	-3,589.6	-35.3	934.2	846.9	87.31	10.700 SF	
12,000.0	7,740.0	7,829.3	7,764.0	72.4	20.4	90.00	-3,589.6	-35.3	957.4	868.4	89.02	10.755	
12,100.0	7,740.0	7,829.3	7,764.0	74.1	20.4	90.00	-3,589.6	-35.3	990.2	899.5	90.74	10.913	
12,200.0	7,740.0	7,829.3	7,764.0	75.8	20.4	90.00	-3,589.6	-35.3	1,031.8	939.3	92.47	11.158	
12,300.0	7,740.0	7,829.3	7,764.0	77.5	20.4	90.00	-3,589.6	-35.3	1,080.9	986.8	94.19	11.476	
12,400.0	7,740.0	7,829.3	7,764.0	79.2	20.4	90.00	-3,589.6	-35.3	1,136.8	1,040.9	95.91	11.852	
12,500.0	7,740.0	7,829.3	7,764.0	80.9	20.4	90.00	-3,589.6	-35.3	1,198.4	1,100.8	97.64	12.274	
12,600.0	7,740.0	7,829.3	7,764.0	82.6	20.4	90.00	-3,589.6	-35.3	1,265.0	1,165.6	99.37	12.730	
12,700.0	7,740.0	7,829.3	7,764.0	84.3	20.4	90.00	-3,589.6	-35.3	1,335.7	1,234.6	101.10	13.212	
12,800.0	7,740.0	7,829.3	7,764.0	86.0	20.4	90.00	-3,589.6	-35.3	1,410.0	1,307.2	102.82	13.712	
12,900.0	7,740.0	7,829.3	7,764.0	87.7	20.4	90.00	-3,589.6	-35.3	1,487.3	1,382.7	104.55	14.225	
13,000.0	7,740.0	7,829.3	7,764.0	89.4	20.4	90.00	-3,589.6	-35.3	1,567.1	1,460.8	106.29	14.744	
13,100.0	7,740.0	7,829.3	7,764.0	91.1	20.4	90.00	-3,589.6	-35.3	1,649.2	1,541.2	108.02	15.268	
13,200.0	7,740.0	7,829.3	7,764.0	92.8	20.4	90.00	-3,589.6	-35.3	1,733.1	1,623.4	109.75	15.791	
13,300.0	7,740.0	7,829.3	7,764.0	94.5	20.4	90.00	-3,589.6	-35.3	1,818.7	1,707.2	111.48	16.313	
13,400.0	7,740.0	7,829.3	7,764.0	96.2	20.4	90.00	-3,589.6	-35.3	1,905.7	1,792.4	113.22	16.832	
13,500.0	7,740.0	7,829.3	7,764.0	98.0	20.4	90.00	-3,589.6	-35.3	1,993.9	1,878.9	114.95	17.345	
13,600.0	7,740.0	7,829.3	7,764.0	99.7	20.4	90.00	-3,589.6	-35.3	2,083.1	1,966.4	116.69	17.852	
13,700.0	7,740.0	7,829.3	7,764.0	101.4	20.4	90.00	-3,589.6	-35.3	2,173.3	2,054.9	118.43	18.352	
13,800.0	7,740.0	7,829.3	7,764.0	103.1	20.4	90.00	-3,589.6	-35.3	2,264.3	2,144.2	120.16	18.844	
13,900.0	7,740.0	7,829.3	7,764.0	104.8	20.4	90.00	-3,589.6	-35.3	2,356.1	2,234.2	121.90	19.328	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 11-18 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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		
14,000.0	7,740.0	7,829.3	7,764.0	106.5	20.4	90.00	-3,589.6	-35.3	2,448.5	2,324.8	123.64	19.803		
14,100.0	7,740.0	7,829.3	7,764.0	108.3	20.4	90.00	-3,589.6	-35.3	2,541.5	2,416.1	125.38	20.270		
14,200.0	7,740.0	7,829.3	7,764.0	110.0	20.4	90.00	-3,589.6	-35.3	2,634.9	2,507.8	127.12	20.728		
14,300.0	7,740.0	7,829.3	7,764.0	111.7	20.4	90.00	-3,589.6	-35.3	2,728.9	2,600.0	128.86	21.178		
14,400.0	7,740.0	7,829.3	7,764.0	113.4	20.4	90.00	-3,589.6	-35.3	2,823.3	2,692.7	130.60	21.618		
14,500.0	7,740.0	7,829.3	7,764.0	115.2	20.4	90.00	-3,589.6	-35.3	2,918.0	2,785.7	132.34	22.049		
14,600.0	7,740.0	7,829.3	7,764.0	116.9	20.4	90.00	-3,589.6	-35.3	3,013.1	2,879.0	134.08	22.472		
14,700.0	7,740.0	7,829.3	7,764.0	118.6	20.4	90.00	-3,589.6	-35.3	3,108.5	2,972.6	135.82	22.886		
14,800.0	7,740.0	7,829.3	7,764.0	120.4	20.4	90.00	-3,589.6	-35.3	3,204.1	3,066.6	137.56	23.292		
14,900.0	7,740.0	7,829.3	7,764.0	122.1	20.4	90.00	-3,589.6	-35.3	3,300.1	3,160.8	139.30	23.689		
15,000.0	7,740.0	7,829.3	7,764.0	123.8	20.4	90.00	-3,589.6	-35.3	3,396.2	3,255.2	141.05	24.079		
15,100.0	7,740.0	7,829.3	7,764.0	125.5	20.4	90.00	-3,589.6	-35.3	3,492.6	3,349.8	142.79	24.460		
15,200.0	7,740.0	7,829.3	7,764.0	127.3	20.4	90.00	-3,589.6	-35.3	3,589.2	3,444.6	144.53	24.833		
15,300.0	7,740.0	7,829.3	7,764.0	129.0	20.4	90.00	-3,589.6	-35.3	3,685.9	3,539.7	146.28	25.198		
15,400.0	7,740.0	7,829.3	7,764.0	130.7	20.4	90.00	-3,589.6	-35.3	3,782.9	3,634.8	148.02	25.556		
15,500.0	7,740.0	7,829.3	7,764.0	132.5	20.4	90.00	-3,589.6	-35.3	3,879.9	3,730.2	149.76	25.907		
15,600.0	7,740.0	7,829.3	7,764.0	134.2	20.4	90.00	-3,589.6	-35.3	3,977.2	3,825.7	151.51	26.250		
15,700.0	7,740.0	7,829.3	7,764.0	135.9	20.4	90.00	-3,589.6	-35.3	4,074.5	3,921.3	153.25	26.587		
15,800.0	7,740.0	7,829.3	7,764.0	137.7	20.4	90.00	-3,589.6	-35.3	4,172.0	4,017.0	155.00	26.917		
15,900.0	7,740.0	7,829.3	7,764.0	139.4	20.4	90.00	-3,589.6	-35.3	4,269.6	4,112.9	156.74	27.240		
16,000.0	7,740.0	7,829.3	7,764.0	141.1	20.4	90.00	-3,589.6	-35.3	4,367.3	4,208.8	158.49	27.556		
16,083.0	7,740.0	7,829.3	7,764.0	142.6	20.4	90.00	-3,589.6	-35.3	4,448.5	4,288.6	159.94	27.814		
16,083.8	7,740.0	7,829.3	7,764.0	142.6	20.4	90.00	-3,589.6	-35.3	4,449.3	4,289.4	159.95	27.817		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 12-18 - DD - DD													Offset Site Error: 0.0 ft			
Survey Program: 56-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	17.2	17.2	0.0	0.0	172.88	-4,267.2	532.9	4,300.3							
100.0	100.0	98.9	98.8	0.2	0.1	172.89	-4,267.6	532.1	4,300.8	4,300.5	0.30	N/A				
200.0	200.0	196.0	196.0	0.3	0.3	172.91	-4,268.3	530.8	4,301.3	4,300.6	0.64	6,669.869				
300.0	300.0	267.8	267.8	0.5	0.4	172.92	-4,269.1	530.1	4,302.3	4,301.3	0.95	4,547.692				
400.0	400.0	339.3	339.3	0.7	0.6	172.93	-4,270.3	529.6	4,303.8	4,302.6	1.25	3,450.035				
500.0	500.0	396.3	396.2	0.8	0.7	172.94	-4,271.8	529.1	4,306.3	4,304.8	1.52	2,824.357				
600.0	600.0	450.0	449.9	1.0	0.8	172.95	-4,273.7	528.5	4,309.8	4,308.0	1.80	2,396.687				
700.0	700.0	490.6	490.5	1.2	0.9	172.96	-4,275.8	528.1	4,314.6	4,312.5	2.05	2,103.759				
800.0	800.0	548.1	547.9	1.4	1.0	172.97	-4,279.3	527.4	4,320.5	4,318.2	2.34	1,846.782				
900.0	900.0	606.0	605.6	1.5	1.1	172.99	-4,283.3	526.5	4,327.3	4,324.7	2.63	1,644.756				
1,000.0	1,000.0	680.1	679.5	1.7	1.2	173.02	-4,289.1	525.0	4,334.8	4,331.9	2.96	1,463.366				
1,100.0	1,100.0	773.5	772.5	1.9	1.4	121.98	-4,297.2	522.8	4,343.6	4,340.3	3.24	1,338.539				
1,200.0	1,200.0	862.8	861.4	2.1	1.6	121.96	-4,304.6	520.6	4,352.9	4,349.3	3.58	1,214.686				
1,300.0	1,299.9	923.0	921.4	2.3	1.8	121.93	-4,310.1	519.0	4,364.0	4,360.1	3.87	1,126.883				
1,400.0	1,399.7	972.7	970.8	2.4	1.9	121.88	-4,315.1	517.6	4,377.0	4,372.8	4.15	1,055.380				
1,500.0	1,499.4	1,004.0	1,001.9	2.6	2.0	121.79	-4,318.6	516.7	4,392.1	4,387.7	4.39	999.412				
1,600.0	1,598.9	1,068.0	1,065.3	2.8	2.2	121.75	-4,326.6	514.6	4,409.3	4,404.6	4.71	935.572				
1,700.0	1,698.3	1,101.1	1,098.1	3.1	2.3	121.65	-4,331.3	513.6	4,428.7	4,423.8	4.98	888.444				
1,800.0	1,797.4	1,133.0	1,129.6	3.3	2.4	121.53	-4,336.1	512.5	4,450.3	4,445.1	5.27	844.761				
1,908.5	1,904.7	1,197.0	1,192.7	3.6	2.6	121.45	-4,346.5	510.1	4,476.0	4,470.4	5.65	791.712				
2,000.0	1,995.0	1,240.7	1,235.7	3.8	2.7	121.57	-4,354.1	507.8	4,499.1	4,493.1	5.97	753.486				
2,100.0	2,093.8	1,310.2	1,303.8	4.1	3.0	121.78	-4,367.0	502.8	4,525.2	4,518.8	6.38	709.522				
2,200.0	2,192.5	1,420.0	1,411.0	4.4	3.4	122.15	-4,387.5	491.0	4,551.4	4,544.5	6.91	659.045				
2,300.0	2,291.3	1,471.0	1,460.7	4.7	3.6	122.33	-4,397.2	484.7	4,578.0	4,570.7	7.30	627.307				
2,400.0	2,390.0	1,518.2	1,506.5	5.0	3.8	122.50	-4,406.7	478.9	4,605.7	4,598.0	7.68	599.496				
2,500.0	2,488.8	1,633.6	1,618.7	5.3	4.3	122.90	-4,430.0	465.1	4,633.5	4,625.3	8.24	562.033				
2,600.0	2,587.5	1,678.4	1,662.2	5.6	4.5	123.05	-4,439.2	459.9	4,661.9	4,653.3	8.63	540.092				
2,700.0	2,686.3	1,738.0	1,720.0	5.9	4.8	123.25	-4,452.2	452.6	4,691.6	4,682.5	9.06	517.821				
2,800.0	2,785.0	1,788.8	1,769.0	6.2	5.0	123.43	-4,463.7	446.3	4,722.0	4,712.6	9.47	498.597				
2,900.0	2,883.8	1,946.8	1,921.8	6.5	5.7	123.97	-4,498.5	426.5	4,752.3	4,742.2	10.16	467.976				
3,000.0	2,982.5	2,058.9	2,030.7	6.8	6.2	124.33	-4,522.2	413.3	4,781.7	4,771.0	10.72	446.086				
3,100.0	3,081.3	2,145.4	2,114.6	7.2	6.6	124.62	-4,540.2	402.5	4,811.1	4,799.9	11.22	428.738				
3,200.0	3,180.0	2,262.7	2,228.4	7.5	7.1	125.00	-4,564.6	387.9	4,840.6	4,828.9	11.79	410.460				
3,300.0	3,278.7	2,363.0	2,326.0	7.8	7.5	125.31	-4,585.0	376.6	4,869.8	4,857.4	12.31	395.581				
3,400.0	3,377.5	2,527.3	2,485.6	8.1	8.3	125.85	-4,617.1	355.0	4,898.2	4,885.2	13.03	375.890				
3,500.0	3,476.2	2,630.0	2,585.5	8.4	8.7	126.18	-4,636.0	340.8	4,925.8	4,912.2	13.57	363.028				
3,600.0	3,575.0	2,697.7	2,651.6	8.7	9.0	126.39	-4,648.6	332.7	4,953.7	4,939.7	14.00	353.737				
3,700.0	3,673.7	2,748.2	2,700.8	9.1	9.2	126.54	-4,658.5	326.9	4,982.6	4,968.2	14.40	345.949				
3,800.0	3,772.5	2,819.0	2,769.5	9.4	9.5	126.75	-4,673.0	318.1	5,012.5	4,997.6	14.86	337.404				
3,900.0	3,871.2	2,864.1	2,813.2	9.7	9.8	126.89	-4,682.5	312.3	5,043.0	5,027.8	15.24	330.818				
4,000.0	3,970.0	2,957.1	2,903.3	10.0	10.2	127.17	-4,702.4	300.3	5,074.0	5,058.2	15.75	322.245				
4,100.0	4,068.7	3,092.6	3,034.6	10.3	10.8	127.58	-4,730.6	282.9	5,104.5	5,088.1	16.35	312.178				
4,200.0	4,167.5	3,207.9	3,146.5	10.7	11.3	127.92	-4,753.9	267.9	5,134.7	5,117.8	16.90	303.809				
4,300.0	4,266.2	3,306.6	3,242.4	11.0	11.8	128.21	-4,773.8	255.5	5,164.8	5,147.4	17.40	296.764				
4,400.0	4,364.9	3,404.4	3,337.6	11.3	12.2	128.48	-4,793.1	243.7	5,194.7	5,176.8	17.90	290.245				
4,500.0	4,463.7	3,464.9	3,396.3	11.6	12.5	128.65	-4,805.3	236.4	5,225.0	5,206.7	18.31	285.360				
4,600.0	4,562.4	3,600.2	3,527.8	11.9	13.1	129.03	-4,832.5	219.2	5,255.5	5,236.6	18.89	278.219				
8,200.0	7,740.0	7,886.2	7,767.4	20.5	24.0	90.16	-5,238.0	-28.7	5,257.4	5,221.6	35.75	147.060				
8,300.0	7,740.0	7,886.3	7,767.5	20.9	24.0	90.16	-5,238.0	-28.7	5,160.2	5,123.9	36.30	142.165				
8,400.0	7,740.0	7,886.4	7,767.6	21.4	24.0	90.17	-5,238.0	-28.7	5,063.0	5,026.0	37.02	136.755				
8,442.5	7,740.0	7,886.5	7,767.6	21.7	24.0	90.17	-5,238.0	-28.7	5,021.8	4,984.4	37.38	134.348				
8,500.0	7,740.0	7,886.5	7,767.7	22.1	24.0	90.18	-5,238.0	-28.7	4,966.0	4,928.0	37.92	130.954				

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 12-18 - DD - DD												Offset Site Error:	0.0 ft
Survey Program: 56-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
8,600.0	7,740.0	7,886.6	7,767.8	22.8	24.0	90.20	-5,238.0	-28.7	4,868.6	4,829.7	38.93	125.050	
8,700.0	7,740.0	7,886.7	7,767.8	23.6	24.0	90.22	-5,238.0	-28.7	4,771.0	4,731.0	40.02	119.210	
8,800.0	7,740.0	7,886.7	7,767.9	24.5	24.0	90.24	-5,238.0	-28.7	4,673.1	4,631.9	41.17	113.497	
8,842.5	7,740.0	7,886.8	7,767.9	25.0	24.0	90.25	-5,238.0	-28.7	4,631.4	4,589.7	41.68	111.120	
8,900.0	7,740.0	7,886.8	7,768.0	25.5	24.0	90.25	-5,238.0	-28.7	4,575.0	4,532.6	42.40	107.895	
9,000.0	7,740.0	7,886.8	7,768.0	26.6	24.0	90.26	-5,238.0	-28.7	4,476.9	4,433.2	43.71	102.417	
9,100.0	7,740.0	7,886.9	7,768.1	27.7	24.0	90.26	-5,238.0	-28.7	4,379.0	4,333.9	45.08	97.134	
9,200.0	7,740.0	7,886.9	7,768.1	28.9	24.0	90.26	-5,238.0	-28.7	4,281.1	4,234.6	46.50	92.067	
9,300.0	7,740.0	7,887.0	7,768.2	30.2	24.0	90.27	-5,238.0	-28.7	4,183.3	4,135.4	47.96	87.228	
9,342.5	7,740.0	7,887.0	7,768.2	30.7	24.0	90.27	-5,238.0	-28.7	4,141.8	4,093.2	48.59	85.243	
9,399.5	7,740.0	7,887.0	7,768.2	31.5	24.0	90.26	-5,238.0	-28.7	4,086.2	4,036.7	49.49	82.569	
9,500.0	7,740.0	7,887.1	7,768.3	32.8	24.0	90.26	-5,238.0	-28.7	3,988.4	3,937.4	51.02	78.172	
9,600.0	7,740.0	7,887.1	7,768.3	34.2	24.0	90.27	-5,238.0	-28.7	3,891.2	3,838.6	52.57	74.019	
9,700.0	7,740.0	7,887.2	7,768.4	35.6	24.0	90.27	-5,238.0	-28.7	3,794.2	3,740.0	54.14	70.080	
9,800.0	7,740.0	7,887.3	7,768.4	37.1	24.0	90.27	-5,238.0	-28.7	3,697.3	3,641.6	55.73	66.344	
9,900.0	7,740.0	7,887.3	7,768.5	38.5	24.0	90.28	-5,238.0	-28.7	3,600.6	3,543.3	57.33	62.801	
10,000.0	7,740.0	7,887.4	7,768.6	40.0	24.0	90.28	-5,238.0	-28.7	3,504.1	3,445.1	58.95	59.440	
10,100.0	7,740.0	7,887.4	7,768.6	41.6	24.0	90.28	-5,238.0	-28.7	3,407.8	3,347.2	60.58	56.251	
10,200.0	7,740.0	7,887.5	7,768.7	43.1	24.0	90.29	-5,238.0	-28.7	3,311.6	3,249.4	62.22	53.224	
10,300.0	7,740.0	7,887.5	7,768.7	44.6	24.0	90.29	-5,238.0	-28.7	3,215.8	3,151.9	63.87	50.349	
10,400.0	7,740.0	7,887.6	7,768.8	46.2	24.0	90.29	-5,238.0	-28.7	3,120.2	3,054.6	65.53	47.616	
10,500.0	7,740.0	7,887.7	7,768.8	47.8	24.0	90.30	-5,238.0	-28.7	3,024.9	2,957.7	67.19	45.018	
10,600.0	7,740.0	7,887.7	7,768.9	49.4	24.0	90.30	-5,238.0	-28.7	2,929.8	2,861.0	68.86	42.546	
10,700.0	7,740.0	7,887.8	7,768.9	51.0	24.0	90.30	-5,238.0	-28.7	2,835.2	2,764.6	70.54	40.192	
10,800.0	7,740.0	7,887.8	7,769.0	52.6	24.0	90.31	-5,238.0	-28.7	2,740.9	2,668.7	72.22	37.951	
10,900.0	7,740.0	7,887.9	7,769.1	54.2	24.0	90.31	-5,238.0	-28.7	2,647.0	2,573.1	73.91	35.814	
11,000.0	7,740.0	7,887.9	7,769.1	55.8	24.0	90.32	-5,238.0	-28.7	2,553.6	2,478.0	75.60	33.778	
11,100.0	7,740.0	7,888.0	7,769.2	57.5	24.0	90.32	-5,238.0	-28.7	2,460.7	2,383.4	77.30	31.835	
11,200.0	7,740.0	7,888.1	7,769.2	59.1	24.0	90.32	-5,238.0	-28.7	2,368.4	2,289.4	78.99	29.982	
11,300.0	7,740.0	7,888.1	7,769.3	60.8	24.0	90.33	-5,238.0	-28.7	2,276.8	2,196.1	80.70	28.214	
11,400.0	7,740.0	7,888.2	7,769.3	62.4	24.0	90.33	-5,238.0	-28.7	2,185.8	2,103.4	82.40	26.527	
11,500.0	7,740.0	7,888.2	7,769.4	64.1	24.0	90.33	-5,238.0	-28.7	2,095.7	2,011.6	84.11	24.917	
11,600.0	7,740.0	7,888.3	7,769.5	65.7	24.0	90.34	-5,238.0	-28.7	2,006.6	1,920.8	85.82	23.381	
11,700.0	7,740.0	7,888.3	7,769.5	67.4	24.0	90.34	-5,238.0	-28.7	1,918.5	1,830.9	87.53	21.918	
11,800.0	7,740.0	7,888.4	7,769.6	69.1	24.0	90.34	-5,238.0	-28.7	1,831.6	1,742.4	89.25	20.523	
11,900.0	7,740.0	7,888.5	7,769.6	70.8	24.0	90.35	-5,238.0	-28.7	1,746.1	1,655.2	90.96	19.196	
12,000.0	7,740.0	7,888.5	7,769.7	72.4	24.0	90.35	-5,238.0	-28.7	1,662.3	1,569.6	92.68	17.936	
12,100.0	7,740.0	7,888.6	7,769.7	74.1	24.0	90.35	-5,238.0	-28.7	1,580.3	1,485.9	94.40	16.741	
12,200.0	7,740.0	7,888.6	7,769.8	75.8	24.0	90.36	-5,238.0	-28.7	1,500.6	1,404.5	96.12	15.611	
12,300.0	7,740.0	7,888.7	7,769.9	77.5	24.0	90.36	-5,238.0	-28.7	1,423.4	1,325.5	97.85	14.547	
12,400.0	7,740.0	7,888.7	7,769.9	79.2	24.0	90.36	-5,238.0	-28.7	1,349.2	1,249.6	99.57	13.550	
12,500.0	7,740.0	7,888.8	7,770.0	80.9	24.0	90.37	-5,238.0	-28.7	1,278.5	1,177.2	101.30	12.621	
12,600.0	7,740.0	7,888.9	7,770.0	82.6	24.0	90.37	-5,238.0	-28.7	1,211.9	1,108.9	103.02	11.763	
12,700.0	7,740.0	7,888.9	7,770.1	84.3	24.0	90.37	-5,238.0	-28.7	1,150.2	1,045.4	104.75	10.980	
12,800.0	7,740.0	7,889.0	7,770.1	86.0	24.0	90.38	-5,238.0	-28.7	1,094.1	987.7	106.48	10.276	
12,900.0	7,740.0	7,889.0	7,770.2	87.7	24.0	90.38	-5,238.0	-28.7	1,044.7	936.5	108.21	9.654	
13,000.0	7,740.0	7,889.1	7,770.3	89.4	24.0	90.39	-5,238.0	-28.7	1,002.8	892.9	109.94	9.121	
13,100.0	7,740.0	7,889.1	7,770.3	91.1	24.0	90.39	-5,238.0	-28.7	969.5	857.8	111.67	8.681	
13,200.0	7,740.0	7,889.2	7,770.4	92.8	24.0	90.39	-5,238.0	-28.7	945.6	832.2	113.41	8.338	
13,300.0	7,740.0	7,889.2	7,770.4	94.5	24.0	90.40	-5,238.0	-28.7	931.8	816.7	115.14	8.093	
13,378.8	7,740.0	7,889.3	7,770.5	95.9	24.0	90.40	-5,238.0	-28.7	928.5	812.0	116.51	7.969 CC	
13,400.0	7,740.0	7,889.3	7,770.5	96.2	24.0	90.40	-5,238.0	-28.7	928.7	811.9	116.88	7.946 ES	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 12-18 - DD - DD												Offset Site Error:	0.0 ft
Survey Program: 56-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
13,500.0	7,740.0	7,889.4	7,770.5	98.0	24.0	90.40	-5,238.0	-28.7	936.4	817.8	118.61	7.895 SF	
13,600.0	7,740.0	7,889.4	7,770.6	99.7	24.0	90.41	-5,238.0	-28.7	954.5	834.1	120.35	7.931	
13,700.0	7,740.0	7,889.5	7,770.7	101.4	24.0	90.41	-5,238.0	-28.7	982.5	860.4	122.08	8.048	
13,800.0	7,740.0	7,889.5	7,770.7	103.1	24.0	90.41	-5,238.0	-28.7	1,019.6	895.7	123.82	8.234	
13,900.0	7,740.0	7,889.6	7,770.8	104.8	24.0	90.42	-5,238.0	-28.7	1,064.8	939.2	125.56	8.480	
14,000.0	7,740.0	7,889.6	7,770.8	106.5	24.0	90.42	-5,238.0	-28.7	1,117.1	989.8	127.30	8.776	
14,100.0	7,740.0	7,889.7	7,770.9	108.3	24.0	90.42	-5,238.0	-28.7	1,175.7	1,046.6	129.03	9.111	
14,200.0	7,740.0	7,889.8	7,770.9	110.0	24.0	90.43	-5,238.0	-28.7	1,239.5	1,108.8	130.77	9.479	
14,300.0	7,740.0	7,889.8	7,771.0	111.7	24.0	90.43	-5,238.0	-28.7	1,307.9	1,175.4	132.51	9.870	
14,400.0	7,740.0	7,889.9	7,771.1	113.4	24.0	90.43	-5,238.0	-28.7	1,380.2	1,245.9	134.25	10.281	
14,500.0	7,740.0	7,889.9	7,771.1	115.2	24.0	90.44	-5,238.0	-28.7	1,455.7	1,319.7	135.99	10.704	
14,600.0	7,740.0	7,890.0	7,771.2	116.9	24.0	90.44	-5,238.0	-28.7	1,534.1	1,396.3	137.74	11.138	
14,700.0	7,740.0	7,890.0	7,771.2	118.6	24.0	90.45	-5,238.0	-28.7	1,614.8	1,475.3	139.48	11.578	
14,800.0	7,740.0	7,890.1	7,771.3	120.4	24.0	90.45	-5,238.0	-28.7	1,697.6	1,556.4	141.22	12.021	
14,900.0	7,740.0	7,890.2	7,771.3	122.1	24.0	90.45	-5,238.0	-28.7	1,782.2	1,639.2	142.96	12.466	
15,000.0	7,740.0	7,890.2	7,771.4	123.8	24.0	90.46	-5,238.0	-28.7	1,868.2	1,723.5	144.70	12.911	
15,100.0	7,740.0	7,890.3	7,771.4	125.5	24.0	90.46	-5,238.0	-28.7	1,955.7	1,809.2	146.45	13.354	
15,200.0	7,740.0	7,890.3	7,771.5	127.3	24.0	90.46	-5,238.0	-28.7	2,044.2	1,896.0	148.19	13.795	
15,300.0	7,740.0	7,890.4	7,771.6	129.0	24.0	90.47	-5,238.0	-28.7	2,133.8	1,983.9	149.93	14.232	
15,400.0	7,740.0	7,890.4	7,771.6	130.7	24.0	90.47	-5,238.0	-28.7	2,224.3	2,072.6	151.68	14.665	
15,500.0	7,740.0	7,890.5	7,771.7	132.5	24.0	90.47	-5,238.0	-28.7	2,315.5	2,162.1	153.42	15.093	
15,600.0	7,740.0	7,890.6	7,771.7	134.2	24.0	90.48	-5,238.0	-28.7	2,407.4	2,252.3	155.16	15.516	
15,700.0	7,740.0	7,890.6	7,771.8	135.9	24.0	90.48	-5,238.0	-28.7	2,500.0	2,343.1	156.91	15.933	
15,800.0	7,740.0	7,890.7	7,771.8	137.7	24.0	90.48	-5,238.0	-28.7	2,593.1	2,434.5	158.65	16.345	
15,900.0	7,740.0	7,890.7	7,771.9	139.4	24.0	90.49	-5,238.0	-28.7	2,686.7	2,526.3	160.40	16.750	
16,000.0	7,740.0	7,890.8	7,772.0	141.1	24.0	90.49	-5,238.0	-28.6	2,780.8	2,618.6	162.14	17.150	
16,083.0	7,740.0	7,890.8	7,772.0	142.6	24.0	90.49	-5,238.0	-28.6	2,859.1	2,695.5	163.59	17.477	
16,083.8	7,740.0	7,890.8	7,772.0	142.6	24.0	90.49	-5,238.0	-28.6	2,859.9	2,696.3	163.61	17.481	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 12-18 - DD - Plan #3												Offset Site Error: 0.0 ft			
Survey Program: 0-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	24.0	24.0	0.0	0.0	172.88	-4,267.2	533.0	4,300.3						
100.0	100.0	124.0	124.0	0.2	0.2	172.88	-4,267.2	533.0	4,300.3	4,300.0	0.34	N/A			
156.1	156.1	180.1	180.1	0.2	0.3	172.88	-4,267.2	533.0	4,300.3	4,299.8	0.54	7,992.403			
200.0	200.0	200.0	200.0	0.3	0.3	172.88	-4,267.2	533.0	4,300.4	4,299.7	0.65	6,623.468			
300.0	300.0	271.5	271.5	0.5	0.4	172.88	-4,267.6	532.9	4,301.1	4,300.1	0.95	4,531.525			
400.0	400.0	329.2	329.2	0.7	0.5	172.88	-4,268.6	532.9	4,302.8	4,301.6	1.23	3,510.398			
500.0	500.0	400.0	400.0	0.8	0.7	172.89	-4,270.6	532.7	4,305.5	4,304.0	1.53	2,819.853			
600.0	600.0	444.4	444.3	1.0	0.8	172.89	-4,272.3	532.5	4,309.2	4,307.4	1.78	2,416.045			
700.0	700.0	500.0	499.9	1.2	0.9	172.90	-4,275.0	532.3	4,313.8	4,311.8	2.06	2,092.993			
800.0	800.0	559.4	559.2	1.4	1.0	172.91	-4,278.4	532.0	4,319.5	4,317.1	2.35	1,837.186			
900.0	900.0	629.3	628.9	1.5	1.1	172.93	-4,283.1	531.6	4,326.0	4,323.4	2.66	1,624.773			
1,000.0	1,000.0	729.0	728.4	1.7	1.3	172.94	-4,290.0	531.0	4,332.9	4,329.8	3.04	1,427.541			
1,100.0	1,100.0	825.0	824.1	1.9	1.5	121.89	-4,296.7	530.4	4,340.1	4,336.8	3.32	1,308.999			
1,200.0	1,200.0	878.2	877.2	2.1	1.6	121.85	-4,300.7	529.7	4,348.9	4,345.4	3.59	1,212.646			
1,300.0	1,299.9	929.2	927.9	2.3	1.8	121.80	-4,305.3	528.4	4,359.8	4,355.9	3.86	1,130.168			
1,400.0	1,399.7	1,000.0	998.3	2.4	1.9	121.79	-4,312.6	525.6	4,372.7	4,368.5	4.17	1,048.025			
1,500.0	1,499.4	1,029.9	1,028.0	2.6	2.0	121.72	-4,316.1	524.0	4,387.5	4,383.1	4.42	992.455			
1,600.0	1,598.9	1,100.0	1,097.3	2.8	2.2	121.72	-4,325.1	519.5	4,404.5	4,399.7	4.76	925.513			
1,700.0	1,698.3	1,128.5	1,125.4	3.1	2.3	121.63	-4,329.1	517.3	4,423.3	4,418.2	5.03	879.326			
1,800.0	1,797.4	1,200.0	1,195.8	3.3	2.5	121.66	-4,340.1	510.9	4,444.3	4,438.9	5.41	821.482			
1,908.5	1,904.7	1,228.1	1,223.4	3.6	2.6	121.53	-4,344.7	508.0	4,469.1	4,463.4	5.74	779.117			
2,000.0	1,995.0	1,291.2	1,285.1	3.8	2.9	121.75	-4,355.6	501.2	4,491.6	4,485.4	6.11	734.941			
2,100.0	2,093.8	1,384.7	1,376.7	4.1	3.2	122.07	-4,371.8	490.9	4,516.3	4,509.7	6.59	685.268			
2,200.0	2,192.5	1,478.3	1,468.3	4.4	3.6	122.38	-4,388.1	480.6	4,541.2	4,534.2	7.08	641.594			
2,300.0	2,291.3	1,571.8	1,559.8	4.7	3.9	122.70	-4,404.3	470.3	4,566.3	4,558.7	7.57	603.088			
2,400.0	2,390.0	1,665.4	1,651.4	5.0	4.3	123.00	-4,420.6	460.0	4,591.5	4,583.4	8.07	569.015			
2,500.0	2,488.8	1,759.0	1,742.9	5.3	4.6	123.31	-4,436.8	449.7	4,616.8	4,608.2	8.57	538.742			
2,600.0	2,587.5	1,852.5	1,834.5	5.6	5.0	123.61	-4,453.1	439.4	4,642.2	4,633.2	9.07	511.727			
2,700.0	2,686.3	1,946.1	1,926.0	5.9	5.3	123.91	-4,469.3	429.0	4,667.8	4,658.2	9.57	487.514			
2,800.0	2,785.0	2,039.6	2,017.6	6.2	5.7	124.21	-4,485.6	418.7	4,693.5	4,683.4	10.08	465.719			
2,900.0	2,883.8	2,133.2	2,109.2	6.5	6.1	124.50	-4,501.8	408.4	4,719.3	4,708.8	10.58	446.020			
3,000.0	2,982.5	2,226.7	2,200.7	6.8	6.4	124.80	-4,518.1	398.1	4,745.3	4,734.2	11.08	428.145			
3,100.0	3,081.3	2,320.3	2,292.3	7.2	6.8	125.08	-4,534.3	387.8	4,771.3	4,759.8	11.58	411.866			
3,200.0	3,180.0	2,413.9	2,383.8	7.5	7.2	125.37	-4,550.6	377.5	4,797.5	4,785.5	12.08	396.989			
3,300.0	3,278.7	2,507.4	2,475.4	7.8	7.6	125.65	-4,566.9	367.2	4,823.8	4,811.3	12.58	383.347			
3,400.0	3,377.5	2,601.0	2,566.9	8.1	7.9	125.93	-4,583.1	356.9	4,850.3	4,837.2	13.08	370.800			
3,500.0	3,476.2	2,694.5	2,658.5	8.4	8.3	126.21	-4,599.4	346.6	4,876.8	4,863.2	13.58	359.226			
3,600.0	3,575.0	2,788.1	2,750.1	8.7	8.7	126.48	-4,615.6	336.3	4,903.4	4,889.4	14.07	348.521			
3,700.0	3,673.7	2,881.6	2,841.6	9.1	9.0	126.75	-4,631.9	326.0	4,930.2	4,915.6	14.56	338.595			
3,800.0	3,772.5	2,975.2	2,933.2	9.4	9.4	127.02	-4,648.1	315.7	4,957.0	4,942.0	15.05	329.369			
3,900.0	3,871.2	3,068.8	3,024.7	9.7	9.8	127.28	-4,664.4	305.4	4,984.0	4,968.5	15.54	320.773			
4,000.0	3,970.0	3,162.3	3,116.3	10.0	10.1	127.55	-4,680.6	295.1	5,011.1	4,995.0	16.02	312.749			
4,100.0	4,068.7	3,255.9	3,207.8	10.3	10.5	127.81	-4,696.9	284.8	5,038.2	5,021.7	16.51	305.243			
4,200.0	4,167.5	3,349.4	3,299.4	10.7	10.9	128.06	-4,713.1	274.5	5,065.5	5,048.5	16.99	298.207			
4,300.0	4,266.2	3,443.0	3,391.0	11.0	11.3	128.32	-4,729.4	264.2	5,092.9	5,075.4	17.47	291.602			
4,400.0	4,364.9	3,536.5	3,482.5	11.3	11.6	128.57	-4,745.6	253.9	5,120.3	5,102.4	17.94	285.390			
4,500.0	4,463.7	3,630.1	3,574.1	11.6	12.0	128.82	-4,761.9	243.6	5,147.9	5,129.5	18.42	279.538			
4,600.0	4,562.4	3,723.7	3,665.6	11.9	12.4	129.07	-4,778.1	233.3	5,175.5	5,156.7	18.89	274.017			
4,700.0	4,661.2	3,817.2	3,757.2	12.3	12.8	129.31	-4,794.4	223.0	5,203.3	5,183.9	19.36	268.801			
4,800.0	4,759.9	3,910.8	3,848.7	12.6	13.1	129.55	-4,810.6	212.7	5,231.1	5,211.3	19.82	263.866			
4,900.0	4,858.7	4,004.3	3,940.3	12.9	13.5	129.79	-4,826.9	202.4	5,259.1	5,238.8	20.29	259.191			
8,200.0	7,740.0	7,873.1	7,764.0	20.5	23.7	90.00	-5,210.6	-40.9	5,232.4	5,197.0	35.35	148.009			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 12-18 - DD - Plan #3												Offset Site Error: 0.0 ft			
Survey Program: 0-MWD														Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
8,300.0	7,740.0	7,873.1	7,764.0	20.9	23.7	90.00	-5,210.6	-40.9	5,135.2	5,099.3	35.90	143.048			
8,400.0	7,740.0	7,873.1	7,764.0	21.4	23.7	90.00	-5,210.6	-40.9	5,038.2	5,001.5	36.62	137.564			
8,442.5	7,740.0	7,873.1	7,764.0	21.7	23.7	90.00	-5,210.6	-40.9	4,997.0	4,960.0	36.98	135.124			
8,500.0	7,740.0	7,873.1	7,764.0	22.1	23.7	90.00	-5,210.6	-40.9	4,941.2	4,903.6	37.52	131.683			
8,600.0	7,740.0	7,873.1	7,764.0	22.8	23.7	90.00	-5,210.6	-40.9	4,843.9	4,805.4	38.54	125.698			
8,700.0	7,740.0	7,873.1	7,764.0	23.6	23.7	90.00	-5,210.6	-40.9	4,746.4	4,706.7	39.63	119.781			
8,800.0	7,740.0	7,873.1	7,764.0	24.5	23.7	90.00	-5,210.6	-40.9	4,648.5	4,607.7	40.78	113.995			
8,842.5	7,740.0	7,873.1	7,764.0	25.0	23.7	90.00	-5,210.6	-40.9	4,606.9	4,565.6	41.28	111.588			
8,900.0	7,740.0	7,873.1	7,764.0	25.5	23.7	90.00	-5,210.6	-40.9	4,550.5	4,508.5	42.01	108.326			
9,000.0	7,740.0	7,873.1	7,764.0	26.6	23.7	90.00	-5,210.6	-40.9	4,452.5	4,409.2	43.32	102.787			
9,100.0	7,740.0	7,873.1	7,764.0	27.7	23.7	90.00	-5,210.6	-40.9	4,354.6	4,309.9	44.69	97.447			
9,200.0	7,740.0	7,873.1	7,764.0	28.9	23.7	90.00	-5,210.6	-40.9	4,256.8	4,210.7	46.11	92.329			
9,300.0	7,740.0	7,873.1	7,764.0	30.2	23.7	90.00	-5,210.6	-40.9	4,159.2	4,111.6	47.56	87.443			
9,342.5	7,740.0	7,873.1	7,764.0	30.7	23.7	90.00	-5,210.6	-40.9	4,117.7	4,069.5	48.19	85.439			
9,399.5	7,740.0	7,873.1	7,764.0	31.5	23.7	90.00	-5,210.6	-40.9	4,062.1	4,013.0	49.09	82.743			
9,500.0	7,740.0	7,873.1	7,764.0	32.8	23.7	90.00	-5,210.6	-40.9	3,964.4	3,913.8	50.63	78.308			
9,600.0	7,740.0	7,873.1	7,764.0	34.2	23.7	90.00	-5,210.6	-40.9	3,867.4	3,815.2	52.18	74.122			
9,700.0	7,740.0	7,873.1	7,764.0	35.6	23.7	90.00	-5,210.6	-40.9	3,770.5	3,716.7	53.75	70.153			
9,800.0	7,740.0	7,873.1	7,764.0	37.1	23.7	90.00	-5,210.6	-40.9	3,673.7	3,618.4	55.34	66.390			
9,900.0	7,740.0	7,873.1	7,764.0	38.5	23.7	90.00	-5,210.6	-40.9	3,577.1	3,520.2	56.94	62.823			
10,000.0	7,740.0	7,873.1	7,764.0	40.0	23.7	90.00	-5,210.6	-40.9	3,480.7	3,422.2	58.56	59.442			
10,100.0	7,740.0	7,873.1	7,764.0	41.6	23.7	90.00	-5,210.6	-40.9	3,384.6	3,324.4	60.19	56.235			
10,200.0	7,740.0	7,873.1	7,764.0	43.1	23.7	90.00	-5,210.6	-40.9	3,288.6	3,226.8	61.83	53.191			
10,300.0	7,740.0	7,873.1	7,764.0	44.6	23.7	90.00	-5,210.6	-40.9	3,192.9	3,129.4	63.48	50.301			
10,400.0	7,740.0	7,873.1	7,764.0	46.2	23.7	90.00	-5,210.6	-40.9	3,097.5	3,032.4	65.13	47.556			
10,500.0	7,740.0	7,873.1	7,764.0	47.8	23.7	90.00	-5,210.6	-40.9	3,002.4	2,935.6	66.80	44.947			
10,600.0	7,740.0	7,873.1	7,764.0	49.4	23.7	90.00	-5,210.6	-40.9	2,907.6	2,839.1	68.47	42.466			
10,700.0	7,740.0	7,873.1	7,764.0	51.0	23.7	90.00	-5,210.6	-40.9	2,813.1	2,743.0	70.15	40.104			
10,800.0	7,740.0	7,873.1	7,764.0	52.6	23.7	90.00	-5,210.6	-40.9	2,719.1	2,647.3	71.83	37.855			
10,900.0	7,740.0	7,873.1	7,764.0	54.2	23.7	90.00	-5,210.6	-40.9	2,625.5	2,552.0	73.52	35.714			
11,000.0	7,740.0	7,873.1	7,764.0	55.8	23.7	90.00	-5,210.6	-40.9	2,532.4	2,457.2	75.21	33.672			
11,100.0	7,740.0	7,873.1	7,764.0	57.5	23.7	90.00	-5,210.6	-40.9	2,439.8	2,362.9	76.90	31.726			
11,200.0	7,740.0	7,873.1	7,764.0	59.1	23.7	90.00	-5,210.6	-40.9	2,347.9	2,269.3	78.60	29.871			
11,300.0	7,740.0	7,873.1	7,764.0	60.8	23.7	90.00	-5,210.6	-40.9	2,256.6	2,176.3	80.30	28.101			
11,400.0	7,740.0	7,873.1	7,764.0	62.4	23.7	90.00	-5,210.6	-40.9	2,166.1	2,084.1	82.01	26.413			
11,500.0	7,740.0	7,873.1	7,764.0	64.1	23.7	90.00	-5,210.6	-40.9	2,076.5	1,992.7	83.72	24.804			
11,600.0	7,740.0	7,873.1	7,764.0	65.7	23.7	90.00	-5,210.6	-40.9	1,987.8	1,902.4	85.43	23.270			
11,700.0	7,740.0	7,873.1	7,764.0	67.4	23.7	90.00	-5,210.6	-40.9	1,900.3	1,813.2	87.14	21.808			
11,800.0	7,740.0	7,873.1	7,764.0	69.1	23.7	90.00	-5,210.6	-40.9	1,814.1	1,725.2	88.85	20.417			
11,900.0	7,740.0	7,873.1	7,764.0	70.8	23.7	90.00	-5,210.6	-40.9	1,729.3	1,638.8	90.57	19.094			
12,000.0	7,740.0	7,873.1	7,764.0	72.4	23.7	90.00	-5,210.6	-40.9	1,646.3	1,554.0	92.29	17.839			
12,100.0	7,740.0	7,873.1	7,764.0	74.1	23.7	90.00	-5,210.6	-40.9	1,565.3	1,471.3	94.01	16.651			
12,200.0	7,740.0	7,873.1	7,764.0	75.8	23.7	90.00	-5,210.6	-40.9	1,486.6	1,390.8	95.73	15.529			
12,300.0	7,740.0	7,873.1	7,764.0	77.5	23.7	90.00	-5,210.6	-40.9	1,410.5	1,313.1	97.45	14.474			
12,400.0	7,740.0	7,873.1	7,764.0	79.2	23.7	90.00	-5,210.6	-40.9	1,337.7	1,238.5	99.18	13.488			
12,500.0	7,740.0	7,873.1	7,764.0	80.9	23.7	90.00	-5,210.6	-40.9	1,268.5	1,167.6	100.90	12.571			
12,600.0	7,740.0	7,873.1	7,764.0	82.6	23.7	90.00	-5,210.6	-40.9	1,203.7	1,101.0	102.63	11.728			
12,700.0	7,740.0	7,873.1	7,764.0	84.3	23.7	90.00	-5,210.6	-40.9	1,143.9	1,039.6	104.36	10.962			
12,800.0	7,740.0	7,873.1	7,764.0	86.0	23.7	90.00	-5,210.6	-40.9	1,090.1	984.0	106.09	10.275			
12,900.0	7,740.0	7,873.1	7,764.0	87.7	23.7	90.00	-5,210.6	-40.9	1,043.1	935.3	107.82	9.675			
13,000.0	7,740.0	7,873.1	7,764.0	89.4	23.7	90.00	-5,210.6	-40.9	1,003.9	894.3	109.55	9.164			
13,100.0	7,740.0	7,873.1	7,764.0	91.1	23.7	90.00	-5,210.6	-40.9	973.4	862.1	111.28	8.747			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 12-18 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-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		
13,200.0	7,740.0	7,873.1	7,764.0	92.8	23.7	90.00	-5,210.6	-40.9	952.5	839.5	113.01	8.428		
13,300.0	7,740.0	7,873.1	7,764.0	94.5	23.7	90.00	-5,210.6	-40.9	941.8	827.1	114.75	8.208		
13,351.3	7,740.0	7,873.1	7,764.0	95.4	23.7	90.00	-5,210.6	-40.9	940.4	824.8	115.64	8.132 CC, ES		
13,400.0	7,740.0	7,873.1	7,764.0	96.2	23.7	90.00	-5,210.6	-40.9	941.7	825.2	116.48	8.084		
13,500.0	7,740.0	7,873.1	7,764.0	98.0	23.7	90.00	-5,210.6	-40.9	952.1	833.9	118.22	8.054 SF		
13,600.0	7,740.0	7,873.1	7,764.0	99.7	23.7	90.00	-5,210.6	-40.9	972.8	852.8	119.95	8.109		
13,700.0	7,740.0	7,873.1	7,764.0	101.4	23.7	90.00	-5,210.6	-40.9	1,003.0	881.3	121.69	8.242		
13,800.0	7,740.0	7,873.1	7,764.0	103.1	23.7	90.00	-5,210.6	-40.9	1,042.0	918.6	123.43	8.442		
13,900.0	7,740.0	7,873.1	7,764.0	104.8	23.7	90.00	-5,210.6	-40.9	1,088.8	963.6	125.17	8.699		
14,000.0	7,740.0	7,873.1	7,764.0	106.5	23.7	90.00	-5,210.6	-40.9	1,142.5	1,015.6	126.90	9.003		
14,100.0	7,740.0	7,873.1	7,764.0	108.3	23.7	90.00	-5,210.6	-40.9	1,202.1	1,073.4	128.64	9.344		
14,200.0	7,740.0	7,873.1	7,764.0	110.0	23.7	90.00	-5,210.6	-40.9	1,266.8	1,136.4	130.38	9.716		
14,300.0	7,740.0	7,873.1	7,764.0	111.7	23.7	90.00	-5,210.6	-40.9	1,335.8	1,203.7	132.12	10.111		
14,400.0	7,740.0	7,873.1	7,764.0	113.4	23.7	90.00	-5,210.6	-40.9	1,408.6	1,274.8	133.86	10.523		
14,500.0	7,740.0	7,873.1	7,764.0	115.2	23.7	90.00	-5,210.6	-40.9	1,484.6	1,349.0	135.60	10.948		
14,600.0	7,740.0	7,873.1	7,764.0	116.9	23.7	90.00	-5,210.6	-40.9	1,563.2	1,425.9	137.34	11.382		
14,700.0	7,740.0	7,873.1	7,764.0	118.6	23.7	90.00	-5,210.6	-40.9	1,644.2	1,505.1	139.08	11.822		
14,800.0	7,740.0	7,873.1	7,764.0	120.4	23.7	90.00	-5,210.6	-40.9	1,727.2	1,586.4	140.83	12.265		
14,900.0	7,740.0	7,873.1	7,764.0	122.1	23.7	90.00	-5,210.6	-40.9	1,811.9	1,669.3	142.57	12.709		
15,000.0	7,740.0	7,873.1	7,764.0	123.8	23.7	90.00	-5,210.6	-40.9	1,898.1	1,753.8	144.31	13.153		
15,100.0	7,740.0	7,873.1	7,764.0	125.5	23.7	90.00	-5,210.6	-40.9	1,985.5	1,839.5	146.05	13.595		
15,200.0	7,740.0	7,873.1	7,764.0	127.3	23.7	90.00	-5,210.6	-40.9	2,074.2	1,926.4	147.80	14.034		
15,300.0	7,740.0	7,873.1	7,764.0	129.0	23.7	90.00	-5,210.6	-40.9	2,163.8	2,014.2	149.54	14.469		
15,400.0	7,740.0	7,873.1	7,764.0	130.7	23.7	90.00	-5,210.6	-40.9	2,254.2	2,103.0	151.28	14.901		
15,500.0	7,740.0	7,873.1	7,764.0	132.5	23.7	90.00	-5,210.6	-40.9	2,345.5	2,192.5	153.03	15.327		
15,600.0	7,740.0	7,873.1	7,764.0	134.2	23.7	90.00	-5,210.6	-40.9	2,437.4	2,282.7	154.77	15.749		
15,700.0	7,740.0	7,873.1	7,764.0	135.9	23.7	90.00	-5,210.6	-40.9	2,530.0	2,373.5	156.52	16.164		
15,800.0	7,740.0	7,873.1	7,764.0	137.7	23.7	90.00	-5,210.6	-40.9	2,623.1	2,464.8	158.26	16.574		
15,900.0	7,740.0	7,873.1	7,764.0	139.4	23.7	90.00	-5,210.6	-40.9	2,716.7	2,556.7	160.01	16.979		
16,000.0	7,740.0	7,873.1	7,764.0	141.1	23.7	90.00	-5,210.6	-40.9	2,810.7	2,649.0	161.75	17.377		
16,083.0	7,740.0	7,873.1	7,764.0	142.6	23.7	90.00	-5,210.6	-40.9	2,889.0	2,725.8	163.20	17.702		
16,083.8	7,740.0	7,873.1	7,764.0	142.6	23.7	90.00	-5,210.6	-40.9	2,889.8	2,726.6	163.21	17.706		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - DD													Offset Site Error: 0.0 ft			
Survey Program: 814-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	23.2	23.2	0.0	0.0	173.10	-4,267.2	516.2	4,298.3							
100.0	100.0	123.9	123.9	0.2	0.2	173.10	-4,267.1	516.2	4,298.3	4,297.9	0.36	N/A				
200.0	200.0	224.7	224.7	0.3	0.4	173.10	-4,267.1	516.2	4,298.2	4,297.5	0.71	6,041.936				
300.0	300.0	325.5	325.5	0.5	0.6	173.10	-4,267.1	516.2	4,298.2	4,297.1	1.06	4,060.326				
400.0	400.0	426.2	426.2	0.7	0.7	173.10	-4,267.0	516.3	4,298.1	4,296.7	1.41	3,057.500				
500.0	500.0	527.0	527.0	0.8	0.9	173.10	-4,266.9	516.3	4,298.0	4,296.3	1.75	2,451.895				
600.0	600.0	627.8	627.8	1.0	1.1	173.10	-4,266.8	516.4	4,297.9	4,295.8	2.10	2,046.513				
700.0	700.0	728.5	728.5	1.2	1.2	173.10	-4,266.7	516.5	4,297.8	4,295.4	2.45	1,756.141				
800.0	800.0	829.1	829.1	1.4	1.4	173.10	-4,266.5	516.6	4,297.7	4,294.9	2.79	1,537.798				
900.0	900.0	1,104.2	1,103.7	1.5	1.9	172.91	-4,260.4	529.7	4,297.0	4,293.5	3.47	1,237.235				
1,000.0	1,000.0	1,269.3	1,267.4	1.7	2.3	172.65	-4,249.3	547.8	4,291.4	4,287.4	4.01	1,069.514				
1,100.0	1,100.0	1,533.2	1,526.3	1.9	3.2	121.10	-4,223.3	591.4	4,284.0	4,279.0	4.98	859.996				
1,200.0	1,200.0	1,691.6	1,680.0	2.1	3.8	120.75	-4,203.3	623.9	4,275.6	4,269.9	5.76	742.002				
1,300.0	1,299.9	1,865.0	1,846.9	2.3	4.6	120.34	-4,177.0	663.0	4,265.5	4,258.8	6.66	640.024				
1,400.0	1,399.7	1,929.0	1,908.5	2.4	4.9	120.25	-4,167.2	677.5	4,256.7	4,249.5	7.13	597.289				
1,500.0	1,499.4	2,006.8	1,983.4	2.6	5.3	120.12	-4,155.9	695.1	4,249.5	4,241.8	7.66	555.108				
1,600.0	1,598.9	2,135.6	2,107.6	2.8	5.9	119.90	-4,137.0	723.7	4,243.1	4,234.7	8.42	503.900				
1,700.0	1,698.3	2,216.0	2,185.0	3.1	6.3	119.78	-4,125.2	741.9	4,237.6	4,228.6	9.00	470.809				
1,800.0	1,797.4	2,311.0	2,276.5	3.3	6.7	119.64	-4,111.4	763.4	4,233.2	4,223.5	9.65	438.747				
1,908.5	1,904.7	2,406.0	2,368.2	3.6	7.2	119.53	-4,097.9	784.3	4,229.6	4,219.3	10.34	409.194				
2,000.0	1,995.0	2,479.8	2,439.5	3.8	7.5	119.43	-4,087.7	800.5	4,227.5	4,216.6	10.90	388.015				
2,100.0	2,093.8	2,563.5	2,520.4	4.1	7.9	119.31	-4,076.3	818.7	4,225.4	4,213.8	11.53	366.533				
2,200.0	2,192.5	2,642.4	2,596.7	4.4	8.3	119.20	-4,066.1	835.9	4,223.9	4,211.7	12.15	347.677				
2,300.0	2,291.3	2,795.6	2,744.6	4.7	9.1	118.98	-4,044.9	869.8	4,221.5	4,208.3	13.12	321.687				
2,400.0	2,390.0	2,881.7	2,827.6	5.0	9.5	118.86	-4,032.9	888.8	4,219.1	4,205.3	13.79	305.857				
2,500.0	2,488.8	2,996.7	2,938.6	5.3	10.0	118.69	-4,016.9	914.5	4,216.8	4,202.2	14.61	288.687				
2,600.0	2,587.5	3,137.0	3,073.8	5.6	10.8	118.48	-3,996.1	945.8	4,213.7	4,198.1	15.56	270.793				
2,700.0	2,686.3	3,203.5	3,137.7	5.9	11.1	118.38	-3,986.1	961.0	4,210.5	4,194.3	16.16	260.603				
2,800.0	2,785.0	3,281.4	3,212.8	6.2	11.5	118.26	-3,975.1	978.7	4,208.1	4,191.3	16.82	250.229				
2,900.0	2,883.8	3,359.0	3,287.6	6.5	11.9	118.14	-3,964.4	996.5	4,206.2	4,188.7	17.47	240.704				
3,000.0	2,982.5	3,498.4	3,422.2	6.8	12.5	117.94	-3,945.5	1,027.0	4,204.4	4,186.0	18.41	228.355				
3,100.0	3,081.3	3,574.6	3,495.8	7.2	12.9	117.83	-3,934.8	1,043.9	4,202.2	4,183.2	19.07	220.374				
3,200.0	3,180.0	3,671.1	3,588.7	7.5	13.4	117.68	-3,921.5	1,066.2	4,200.4	4,180.5	19.84	211.711				
3,300.0	3,278.7	3,764.8	3,678.9	7.8	13.9	117.53	-3,908.4	1,088.0	4,198.5	4,177.9	20.58	203.971				
3,400.0	3,377.5	3,846.6	3,758.0	8.1	14.3	117.41	-3,897.5	1,105.9	4,197.0	4,175.7	21.26	197.450				
3,500.0	3,476.2	3,931.0	3,839.7	8.4	14.7	117.30	-3,886.8	1,124.0	4,196.0	4,174.1	21.94	191.260				
3,600.0	3,575.0	4,028.1	3,933.8	8.7	15.1	117.17	-3,874.7	1,144.9	4,195.3	4,172.6	22.69	184.896				
3,700.0	3,673.7	4,214.8	4,114.1	9.1	16.1	116.90	-3,848.7	1,185.9	4,193.2	4,169.3	23.88	175.572				
3,800.0	3,772.5	4,314.9	4,210.6	9.4	16.6	116.76	-3,833.9	1,207.8	4,190.2	4,165.6	24.66	169.913				
3,900.0	3,871.2	4,395.1	4,288.0	9.7	17.0	116.64	-3,822.1	1,225.2	4,187.6	4,162.2	25.34	165.245				
4,000.0	3,970.0	4,453.9	4,344.8	10.0	17.2	116.56	-3,814.0	1,237.8	4,185.7	4,159.8	25.91	161.525				
4,100.0	4,068.7	4,516.4	4,405.4	10.3	17.5	116.48	-3,806.1	1,251.0	4,184.9	4,158.4	26.50	157.919				
4,200.0	4,167.5	4,661.0	4,545.6	10.7	18.2	116.30	-3,787.7	1,281.6	4,184.0	4,156.5	27.47	152.289				
4,300.0	4,266.2	4,747.7	4,629.7	11.0	18.6	116.19	-3,776.3	1,299.5	4,182.6	4,154.5	28.16	148.515				
4,400.0	4,364.9	4,829.0	4,708.7	11.3	19.0	116.10	-3,766.1	1,315.4	4,181.7	4,152.9	28.80	145.207				
4,500.0	4,463.7	4,914.5	4,792.2	11.6	19.3	116.03	-3,756.1	1,330.9	4,181.1	4,151.7	29.44	142.013				
4,600.0	4,562.4	5,008.5	4,884.1	11.9	19.7	115.96	-3,745.3	1,347.4	4,180.8	4,150.7	30.11	138.839				
4,699.8	4,661.0	5,098.6	4,972.3	12.3	20.0	115.90	-3,735.3	1,362.7	4,180.7	4,149.9	30.76	135.917				
4,700.0	4,661.2	5,098.8	4,972.5	12.3	20.0	115.90	-3,735.3	1,362.8	4,180.7	4,149.9	30.76	135.912				
4,800.0	4,759.9	5,187.4	5,059.3	12.6	20.4	115.84	-3,725.8	1,377.3	4,180.8	4,149.5	31.39	133.175				
4,900.0	4,858.7	5,290.6	5,160.4	12.9	20.8	115.77	-3,714.7	1,394.9	4,181.1	4,149.0	32.10	130.269				
5,000.0	4,957.4	5,387.3	5,255.3	13.2	21.2	115.72	-3,704.5	1,410.5	4,181.4	4,148.6	32.75	127.685				

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - DD												Offset Site Error: 0.0 ft			
Survey Program: 814-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	5,056.2	5,459.9	5,326.7	13.6	21.4	115.69	-3,697.2	1,421.6	4,182.0	4,148.7	33.30	125.573			
5,200.0	5,154.9	5,530.3	5,396.0	13.9	21.7	115.67	-3,690.7	1,432.3	4,183.2	4,149.4	33.85	123.578			
5,300.0	5,253.7	5,677.5	5,540.7	14.2	22.2	115.60	-3,676.6	1,455.1	4,184.3	4,149.7	34.68	120.649			
5,400.0	5,352.4	5,746.1	5,608.2	14.5	22.4	115.58	-3,669.9	1,465.4	4,185.1	4,149.9	35.22	118.843			
5,500.0	5,451.1	5,817.5	5,678.7	14.9	22.7	115.57	-3,663.8	1,475.3	4,186.8	4,151.1	35.75	117.126			
5,600.0	5,549.9	5,900.0	5,760.1	15.2	23.0	115.56	-3,657.2	1,486.6	4,189.1	4,152.7	36.31	115.355			
5,700.0	5,648.6	5,984.4	5,843.6	15.5	23.2	115.55	-3,650.8	1,497.9	4,191.6	4,154.7	36.87	113.684			
5,800.0	5,747.4	6,094.2	5,952.4	15.8	23.5	115.58	-3,643.5	1,509.9	4,194.6	4,157.1	37.45	112.006			
5,900.0	5,846.1	6,180.0	6,037.7	16.2	23.7	115.64	-3,638.1	1,517.2	4,197.2	4,159.2	37.93	110.651			
6,000.0	5,944.9	6,250.4	6,107.9	16.5	23.9	115.69	-3,634.2	1,522.2	4,200.4	4,162.0	38.37	109.481			
6,100.0	6,043.6	6,316.2	6,173.4	16.8	24.0	115.76	-3,631.2	1,526.4	4,204.3	4,165.5	38.77	108.442			
6,200.0	6,142.4	6,379.0	6,236.2	17.1	24.1	115.83	-3,629.2	1,529.3	4,209.2	4,170.0	39.15	107.513			
6,300.0	6,241.1	6,506.0	6,363.1	17.5	24.2	116.05	-3,625.9	1,531.0	4,213.8	4,174.3	39.52	106.638			
6,400.0	6,339.9	6,547.8	6,404.9	17.8	24.2	116.13	-3,625.2	1,530.5	4,219.0	4,179.2	39.83	105.932			
6,500.0	6,438.6	6,600.5	6,457.6	18.1	24.2	116.24	-3,625.3	1,529.8	4,225.8	4,185.6	40.15	105.250			
6,600.0	6,537.3	6,705.3	6,562.3	18.4	24.3	116.45	-3,625.4	1,529.6	4,232.9	4,192.4	40.51	104.490			
6,700.0	6,636.1	6,821.3	6,678.4	18.8	24.4	116.66	-3,624.9	1,530.3	4,239.8	4,198.9	40.88	103.704			
6,800.0	6,734.8	6,929.9	6,787.0	19.1	24.5	116.86	-3,624.2	1,530.7	4,246.4	4,205.1	41.25	102.942			
6,900.0	6,833.6	7,048.1	6,905.1	19.4	24.7	117.08	-3,623.1	1,531.0	4,252.7	4,211.1	41.62	102.174			
7,000.0	6,932.3	7,171.6	7,028.6	19.7	24.8	117.31	-3,621.3	1,530.8	4,258.6	4,216.6	41.99	101.419			
7,100.0	7,031.1	7,281.3	7,138.3	20.1	24.9	117.51	-3,619.2	1,530.4	4,263.9	4,221.6	42.35	100.681			
7,190.5	7,120.5	7,388.5	7,245.5	20.4	25.0	117.72	-3,617.0	1,530.1	4,268.7	4,226.0	42.68	100.013			
7,200.0	7,129.8	7,400.1	7,257.1	20.4	25.0	112.58	-3,616.7	1,530.0	4,269.1	4,226.4	42.72	99.939			
7,250.0	7,179.4	7,449.4	7,306.4	20.5	25.1	77.46	-3,615.5	1,529.7	4,268.6	4,225.9	42.73	99.889			
7,300.0	7,228.8	7,498.0	7,354.9	20.6	25.1	45.80	-3,614.4	1,529.1	4,263.8	4,221.3	42.48	100.363			
7,350.0	7,277.9	7,541.8	7,398.8	20.7	25.1	28.26	-3,613.5	1,528.4	4,254.7	4,212.8	41.97	101.382			
7,400.0	7,326.1	7,586.2	7,443.2	20.7	25.2	18.85	-3,612.7	1,527.6	4,241.5	4,200.3	41.20	102.958			
7,450.0	7,373.2	7,634.6	7,491.5	20.7	25.2	13.23	-3,611.7	1,526.7	4,224.2	4,184.0	40.18	105.125			
7,500.0	7,418.7	7,681.3	7,538.2	20.7	25.3	9.49	-3,610.8	1,525.8	4,202.9	4,163.9	38.94	107.937			
7,550.0	7,462.4	7,722.1	7,579.0	20.6	25.3	6.75	-3,610.0	1,525.0	4,177.7	4,140.2	37.48	111.467			
7,600.0	7,503.8	7,756.9	7,613.8	20.5	25.3	4.58	-3,609.4	1,524.3	4,149.0	4,113.2	35.83	115.797			
7,650.0	7,542.8	7,789.7	7,646.5	20.5	25.3	2.72	-3,608.8	1,523.7	4,116.9	4,082.9	34.02	121.011			
7,700.0	7,578.8	7,830.5	7,687.4	20.4	25.4	0.99	-3,608.2	1,522.8	4,081.6	4,049.5	32.10	127.167			
7,750.0	7,611.8	7,871.9	7,728.7	20.3	25.4	-0.78	-3,607.4	1,521.9	4,043.3	4,013.2	30.10	134.315			
7,800.0	7,641.5	7,904.1	7,760.9	20.2	25.4	-2.75	-3,606.7	1,521.3	4,002.4	3,974.3	28.10	142.415			
7,850.0	7,667.6	7,927.5	7,784.3	20.2	25.5	-5.14	-3,606.2	1,520.8	3,959.2	3,933.0	26.19	151.152			
7,900.0	7,689.9	7,947.3	7,804.1	20.2	25.5	-8.32	-3,605.8	1,520.4	3,914.0	3,889.5	24.53	159.569			
7,950.0	7,708.2	7,963.5	7,820.3	20.1	25.5	-12.98	-3,605.5	1,520.1	3,867.2	3,843.8	23.38	165.403			
8,000.0	7,722.5	7,975.8	7,832.6	20.2	25.5	-20.66	-3,605.3	1,519.9	3,819.1	3,795.8	23.30	163.893			
8,050.0	7,732.6	7,987.0	7,843.8	20.2	25.5	-35.39	-3,605.1	1,519.7	3,770.1	3,744.6	25.51	147.765			
8,100.0	7,738.4	7,987.0	7,843.8	20.3	25.5	-64.97	-3,605.1	1,519.7	3,720.6	3,690.2	30.46	122.136			
8,142.5	7,740.0	7,987.0	7,843.8	20.4	25.5	-100.38	-3,605.1	1,519.7	3,678.4	3,647.5	30.91	119.014			
8,200.0	7,740.0	7,987.0	7,843.8	20.5	25.5	-100.38	-3,605.1	1,519.7	3,621.4	3,590.2	31.13	116.317			
8,300.0	7,740.0	7,987.0	7,843.8	20.9	25.5	-100.38	-3,605.1	1,519.7	3,522.1	3,490.5	31.68	111.182			
8,400.0	7,740.0	7,987.0	7,843.8	21.4	25.5	-100.38	-3,605.1	1,519.7	3,423.0	3,390.6	32.40	105.645			
8,442.5	7,740.0	7,983.5	7,840.3	21.7	25.5	-99.93	-3,605.1	1,519.8	3,380.9	3,348.1	32.80	103.090			
8,500.0	7,740.0	7,982.4	7,839.1	22.1	25.5	-99.12	-3,605.1	1,519.8	3,323.9	3,290.5	33.44	99.388			
8,600.0	7,740.0	7,980.4	7,837.2	22.8	25.5	-97.95	-3,605.2	1,519.8	3,225.1	3,190.5	34.61	93.178			
8,700.0	7,740.0	7,978.5	7,835.3	23.6	25.5	-97.04	-3,605.2	1,519.8	3,126.7	3,090.9	35.84	87.253			
8,800.0	7,740.0	7,976.6	7,833.4	24.5	25.5	-96.29	-3,605.3	1,519.9	3,028.7	2,991.6	37.11	81.621			
8,842.5	7,740.0	7,975.8	7,832.6	25.0	25.5	-96.02	-3,605.3	1,519.9	2,987.3	2,949.6	37.66	79.318			
8,900.0	7,740.0	7,974.7	7,831.5	25.5	25.5	-95.92	-3,605.3	1,519.9	2,931.2	2,892.8	38.39	76.356			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - DD												Offset Site Error:	0.0 ft
Survey Program: 814-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
9,000.0	7,740.0	7,972.8	7,829.6	26.6	25.5	-95.76	-3,605.3	1,519.9	2,833.9	2,794.2	39.71	71.372	
9,100.0	7,740.0	7,971.0	7,827.7	27.7	25.5	-95.60	-3,605.4	1,520.0	2,736.8	2,695.7	41.08	66.618	
9,200.0	7,740.0	7,969.1	7,825.8	28.9	25.5	-95.44	-3,605.4	1,520.0	2,639.9	2,597.4	42.51	62.105	
9,300.0	7,740.0	7,967.2	7,824.0	30.2	25.5	-95.27	-3,605.4	1,520.0	2,543.2	2,499.2	43.97	57.837	
9,342.5	7,740.0	7,966.4	7,823.2	30.7	25.5	-95.21	-3,605.5	1,520.1	2,502.2	2,457.6	44.61	56.097	
9,399.5	7,740.0	7,965.3	7,822.1	31.5	25.5	-95.30	-3,605.5	1,520.1	2,447.2	2,401.7	45.45	53.839	
9,500.0	7,740.0	7,963.4	7,820.1	32.8	25.5	-95.13	-3,605.5	1,520.1	2,350.3	2,303.3	46.99	50.014	
9,600.0	7,740.0	7,961.4	7,818.2	34.2	25.5	-94.96	-3,605.6	1,520.1	2,254.3	2,205.7	48.55	46.431	
9,700.0	7,740.0	7,959.5	7,816.3	35.6	25.5	-94.79	-3,605.6	1,520.2	2,158.6	2,108.4	50.13	43.060	
9,800.0	7,740.0	7,957.6	7,814.4	37.1	25.5	-94.61	-3,605.6	1,520.2	2,063.2	2,011.5	51.73	39.889	
9,900.0	7,740.0	7,955.6	7,812.4	38.5	25.5	-94.44	-3,605.7	1,520.2	1,968.4	1,915.1	53.34	36.905	
10,000.0	7,740.0	7,953.7	7,810.5	40.0	25.5	-94.27	-3,605.7	1,520.3	1,874.1	1,819.1	54.96	34.097	
10,100.0	7,740.0	7,951.8	7,808.6	41.6	25.5	-94.09	-3,605.8	1,520.3	1,780.4	1,723.8	56.60	31.456	
10,200.0	7,740.0	7,949.8	7,806.6	43.1	25.5	-93.92	-3,605.8	1,520.4	1,687.4	1,629.2	58.25	28.969	
10,300.0	7,740.0	7,947.9	7,804.7	44.6	25.5	-93.74	-3,605.8	1,520.4	1,595.3	1,535.4	59.91	26.630	
10,400.0	7,740.0	7,945.9	7,802.7	46.2	25.5	-93.57	-3,605.9	1,520.4	1,504.2	1,442.6	61.57	24.430	
10,500.0	7,740.0	7,944.0	7,800.7	47.8	25.5	-93.39	-3,605.9	1,520.5	1,414.2	1,351.0	63.24	22.362	
10,600.0	7,740.0	7,942.0	7,798.8	49.4	25.5	-93.22	-3,606.0	1,520.5	1,325.8	1,260.8	64.92	20.420	
10,700.0	7,740.0	7,940.0	7,796.8	51.0	25.5	-93.04	-3,606.0	1,520.5	1,239.0	1,172.4	66.61	18.601	
10,800.0	7,740.0	7,938.1	7,794.8	52.6	25.5	-92.86	-3,606.0	1,520.6	1,154.4	1,086.1	68.30	16.903	
10,900.0	7,740.0	7,936.1	7,792.9	54.2	25.5	-92.68	-3,606.1	1,520.6	1,072.5	1,002.5	70.00	15.323	
11,000.0	7,740.0	7,934.1	7,790.9	55.8	25.5	-92.51	-3,606.1	1,520.7	993.9	922.2	71.69	13.863	
11,100.0	7,740.0	7,932.1	7,788.9	57.5	25.5	-92.33	-3,606.2	1,520.7	919.4	846.0	73.40	12.526	
11,200.0	7,740.0	7,930.1	7,786.9	59.1	25.5	-92.15	-3,606.2	1,520.7	850.2	775.1	75.10	11.320	
11,300.0	7,740.0	7,928.1	7,784.9	60.8	25.5	-91.97	-3,606.2	1,520.8	787.6	710.8	76.81	10.254	
11,400.0	7,740.0	7,926.1	7,782.9	62.4	25.5	-91.79	-3,606.3	1,520.8	733.4	654.8	78.53	9.339	
11,500.0	7,740.0	7,924.1	7,780.9	64.1	25.5	-91.61	-3,606.3	1,520.9	689.4	609.2	80.24	8.592	
11,600.0	7,740.0	7,922.1	7,778.9	65.7	25.5	-91.43	-3,606.4	1,520.9	657.9	575.9	81.96	8.027	
11,700.0	7,740.0	7,920.1	7,776.9	67.4	25.5	-91.25	-3,606.4	1,520.9	640.5	556.8	83.67	7.655	
11,762.7	7,740.0	7,918.9	7,775.7	68.5	25.5	-91.14	-3,606.4	1,521.0	637.4	552.7	84.75	7.521 CC, ES	
11,800.0	7,740.0	7,918.1	7,774.9	69.1	25.4	-91.07	-3,606.4	1,521.0	638.5	553.1	85.39	7.477 SF	
11,900.0	7,740.0	7,916.1	7,772.9	70.8	25.4	-90.89	-3,606.5	1,521.0	652.0	564.9	87.11	7.485	
12,000.0	7,740.0	7,914.1	7,770.9	72.4	25.4	-90.71	-3,606.5	1,521.1	680.1	591.3	88.84	7.656	
12,100.0	7,740.0	7,912.0	7,768.8	74.1	25.4	-90.52	-3,606.6	1,521.1	721.1	630.6	90.56	7.963	
12,200.0	7,740.0	7,910.0	7,766.8	75.8	25.4	-90.34	-3,606.6	1,521.1	772.9	680.7	92.28	8.376	
12,300.0	7,740.0	7,908.0	7,764.8	77.5	25.4	-90.16	-3,606.6	1,521.2	833.6	739.6	94.01	8.867	
12,400.0	7,740.0	7,905.9	7,762.7	79.2	25.4	-89.97	-3,606.7	1,521.2	901.3	805.5	95.73	9.414	
12,500.0	7,740.0	7,903.9	7,760.7	80.9	25.4	-89.79	-3,606.7	1,521.3	974.5	877.0	97.46	9.999	
12,600.0	7,740.0	7,901.8	7,758.6	82.6	25.4	-89.61	-3,606.8	1,521.3	1,052.2	953.0	99.19	10.608	
12,700.0	7,740.0	7,899.8	7,756.6	84.3	25.4	-89.42	-3,606.8	1,521.3	1,133.3	1,032.4	100.91	11.231	
12,800.0	7,740.0	7,897.7	7,754.5	86.0	25.4	-89.24	-3,606.9	1,521.4	1,217.3	1,114.7	102.64	11.860	
12,900.0	7,740.0	7,895.6	7,752.4	87.7	25.4	-89.05	-3,606.9	1,521.4	1,303.5	1,199.2	104.36	12.490	
13,000.0	7,740.0	7,893.6	7,750.4	89.4	25.4	-88.86	-3,606.9	1,521.5	1,391.6	1,285.5	106.09	13.117	
13,100.0	7,740.0	7,892.0	7,748.8	91.1	25.4	-88.73	-3,607.0	1,521.5	1,481.2	1,373.4	107.82	13.738	
13,200.0	7,740.0	7,892.0	7,748.8	92.8	25.4	-88.73	-3,607.0	1,521.5	1,572.0	1,462.5	109.55	14.350	
13,300.0	7,740.0	7,887.6	7,744.5	94.5	25.4	-88.33	-3,607.1	1,521.6	1,663.9	1,552.6	111.26	14.954	
13,400.0	7,740.0	7,885.7	7,742.6	96.2	25.4	-88.16	-3,607.1	1,521.6	1,756.7	1,643.7	112.99	15.547	
13,500.0	7,740.0	7,883.9	7,740.7	98.0	25.4	-87.99	-3,607.1	1,521.7	1,850.2	1,735.5	114.71	16.129	
13,600.0	7,740.0	7,882.0	7,738.8	99.7	25.4	-87.83	-3,607.2	1,521.7	1,944.4	1,827.9	116.44	16.699	
13,700.0	7,740.0	7,880.1	7,737.0	101.4	25.4	-87.66	-3,607.2	1,521.8	2,039.1	1,920.9	118.16	17.257	
13,800.0	7,740.0	7,878.3	7,735.1	103.1	25.4	-87.50	-3,607.3	1,521.8	2,134.3	2,014.4	119.88	17.803	
13,900.0	7,740.0	7,876.5	7,733.3	104.8	25.4	-87.34	-3,607.3	1,521.8	2,229.9	2,108.3	121.60	18.337	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - DD											Offset Site Error:		0.0 ft	
Survey Program: 814-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)				
14,000.0	7,740.0	7,874.7	7,731.5	106.5	25.4	-87.18	-3,607.3	1,521.9	2,325.9	2,202.5	123.32	18.860		
14,100.0	7,740.0	7,872.9	7,729.8	108.3	25.4	-87.02	-3,607.4	1,521.9	2,422.2	2,297.1	125.04	19.370		
14,200.0	7,740.0	7,871.2	7,728.0	110.0	25.4	-86.86	-3,607.4	1,522.0	2,518.8	2,392.0	126.76	19.870		
14,300.0	7,740.0	7,869.4	7,726.3	111.7	25.4	-86.70	-3,607.4	1,522.0	2,615.6	2,487.1	128.48	20.358		
14,400.0	7,740.0	7,867.7	7,724.5	113.4	25.4	-86.55	-3,607.5	1,522.0	2,712.7	2,582.5	130.20	20.835		
14,500.0	7,740.0	7,866.0	7,722.8	115.2	25.4	-86.40	-3,607.5	1,522.1	2,810.0	2,678.1	131.92	21.301		
14,600.0	7,740.0	7,864.3	7,721.1	116.9	25.4	-86.25	-3,607.5	1,522.1	2,907.4	2,773.8	133.64	21.757		
14,700.0	7,740.0	7,862.6	7,719.5	118.6	25.4	-86.10	-3,607.6	1,522.1	3,005.1	2,869.7	135.35	22.202		
14,800.0	7,740.0	7,861.0	7,717.8	120.4	25.4	-85.95	-3,607.6	1,522.2	3,102.8	2,965.8	137.07	22.638		
14,900.0	7,740.0	7,859.3	7,716.2	122.1	25.4	-85.80	-3,607.6	1,522.2	3,200.8	3,062.0	138.78	23.064		
15,000.0	7,740.0	7,857.7	7,714.5	123.8	25.4	-85.66	-3,607.7	1,522.2	3,298.8	3,158.3	140.49	23.480		
15,100.0	7,740.0	7,856.1	7,712.9	125.5	25.4	-85.51	-3,607.7	1,522.3	3,396.9	3,254.7	142.20	23.888		
15,200.0	7,740.0	7,854.5	7,711.3	127.3	25.4	-85.37	-3,607.7	1,522.3	3,495.2	3,351.3	143.91	24.287		
15,300.0	7,740.0	7,852.9	7,709.7	129.0	25.4	-85.23	-3,607.7	1,522.3	3,593.6	3,447.9	145.63	24.677		
15,400.0	7,740.0	7,851.3	7,708.2	130.7	25.4	-85.09	-3,607.8	1,522.4	3,692.0	3,544.7	147.33	25.059		
15,500.0	7,740.0	7,849.8	7,706.6	132.5	25.4	-84.95	-3,607.8	1,522.4	3,790.5	3,641.5	149.04	25.433		
15,600.0	7,740.0	7,848.2	7,705.1	134.2	25.4	-84.82	-3,607.8	1,522.4	3,889.1	3,738.4	150.75	25.799		
15,700.0	7,740.0	7,846.7	7,703.5	135.9	25.4	-84.68	-3,607.9	1,522.5	3,987.8	3,835.3	152.46	26.157		
15,800.0	7,740.0	7,845.2	7,702.0	137.7	25.4	-84.55	-3,607.9	1,522.5	4,086.5	3,932.3	154.16	26.508		
15,900.0	7,740.0	7,843.7	7,700.5	139.4	25.4	-84.41	-3,607.9	1,522.5	4,185.3	4,029.4	155.86	26.852		
16,000.0	7,740.0	7,842.2	7,699.1	141.1	25.4	-84.28	-3,607.9	1,522.6	4,284.1	4,126.6	157.57	27.189		
16,083.0	7,740.0	7,841.0	7,697.8	142.6	25.4	-84.17	-3,608.0	1,522.6	4,366.2	4,207.2	158.98	27.464		
16,083.8	7,740.0	7,841.0	7,697.8	142.6	25.4	-84.17	-3,608.0	1,522.6	4,367.0	4,208.1	158.99	27.467		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-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	23.0	23.0	0.0	0.0	173.10	-4,267.2	516.2	4,298.3					
100.0	100.0	123.0	123.0	0.2	0.2	173.10	-4,267.2	516.2	4,298.3	4,297.9	0.34	N/A		
200.0	200.0	223.0	223.0	0.3	0.4	173.10	-4,267.2	516.2	4,298.3	4,297.6	0.69	6,234.589		
300.0	300.0	323.0	323.0	0.5	0.5	173.10	-4,267.2	516.2	4,298.3	4,297.2	1.04	4,138.965		
400.0	400.0	423.0	423.0	0.7	0.7	173.10	-4,267.2	516.2	4,298.3	4,296.9	1.39	3,097.729		
500.0	500.0	523.0	523.0	0.8	0.9	173.10	-4,267.2	516.2	4,298.3	4,296.5	1.74	2,475.076		
600.0	600.0	623.0	623.0	1.0	1.1	173.10	-4,267.2	516.2	4,298.3	4,296.2	2.09	2,060.841		
700.0	700.0	723.0	723.0	1.2	1.2	173.10	-4,267.2	516.2	4,298.3	4,295.8	2.43	1,765.382		
800.0	800.0	823.0	823.0	1.4	1.4	173.10	-4,267.2	516.2	4,298.3	4,295.5	2.78	1,544.019		
900.0	900.0	923.0	923.0	1.5	1.6	173.10	-4,267.2	516.2	4,298.3	4,295.1	3.13	1,371.985		
1,000.0	1,000.0	1,023.0	1,023.0	1.7	1.8	173.10	-4,267.2	516.2	4,298.3	4,294.8	3.48	1,234.443		
1,100.0	1,100.0	1,123.0	1,123.0	1.9	1.9	122.09	-4,267.2	516.2	4,298.7	4,294.9	3.83	1,122.070		
1,200.0	1,200.0	1,266.3	1,266.3	2.1	2.2	122.11	-4,266.7	516.8	4,300.0	4,295.8	4.26	1,010.073		
1,300.0	1,299.9	1,554.7	1,553.8	2.3	2.7	122.01	-4,255.3	534.6	4,299.1	4,294.1	4.98	863.829		
1,400.0	1,399.7	1,836.6	1,831.4	2.4	3.5	121.65	-4,229.1	575.5	4,294.8	4,289.0	5.86	732.356		
1,500.0	1,499.4	1,935.6	1,928.0	2.6	3.8	121.52	-4,217.4	593.8	4,289.4	4,283.1	6.36	674.892		
1,600.0	1,598.9	2,034.8	2,024.7	2.8	4.2	121.40	-4,205.6	612.2	4,285.0	4,278.1	6.87	623.672		
1,700.0	1,698.3	2,134.2	2,121.7	3.1	4.5	121.30	-4,193.8	630.6	4,281.5	4,274.1	7.41	577.818		
1,800.0	1,797.4	2,233.8	2,218.8	3.3	4.9	121.20	-4,182.0	649.0	4,278.9	4,270.9	7.97	536.686		
1,908.5	1,904.7	2,342.0	2,324.4	3.6	5.3	121.11	-4,169.1	669.0	4,277.1	4,268.5	8.61	496.685		
2,000.0	1,995.0	2,433.3	2,413.4	3.8	5.6	121.03	-4,158.3	685.9	4,276.1	4,266.9	9.17	466.543		
2,100.0	2,093.8	2,533.0	2,510.8	4.1	6.0	120.94	-4,146.4	704.4	4,275.0	4,265.2	9.78	436.993		
2,200.0	2,192.5	2,632.8	2,608.1	4.4	6.4	120.85	-4,134.6	722.9	4,273.9	4,263.5	10.41	410.552		
2,300.0	2,291.3	2,732.6	2,705.4	4.7	6.8	120.77	-4,122.7	741.3	4,272.8	4,261.7	11.05	386.818		
2,400.0	2,390.0	2,832.4	2,802.8	5.0	7.2	120.68	-4,110.9	759.8	4,271.7	4,260.0	11.69	365.442		
2,500.0	2,488.8	2,932.2	2,900.1	5.3	7.6	120.59	-4,099.0	778.3	4,270.6	4,258.3	12.34	346.121		
2,600.0	2,587.5	3,031.9	2,997.5	5.6	8.1	120.50	-4,087.2	796.7	4,269.6	4,256.6	12.99	328.595		
2,700.0	2,686.3	3,131.7	3,094.8	5.9	8.5	120.42	-4,075.3	815.2	4,268.5	4,254.8	13.65	312.642		
2,800.0	2,785.0	3,231.5	3,192.1	6.2	8.9	120.33	-4,063.5	833.7	4,267.4	4,253.1	14.32	298.072		
2,900.0	2,883.8	3,331.3	3,289.5	6.5	9.3	120.24	-4,051.6	852.1	4,266.4	4,251.4	14.98	284.723		
3,000.0	2,982.5	3,431.1	3,386.8	6.8	9.7	120.15	-4,039.8	870.6	4,265.4	4,249.7	15.66	272.455		
3,100.0	3,081.3	3,530.8	3,484.1	7.2	10.1	120.06	-4,027.9	889.1	4,264.4	4,248.0	16.33	261.147		
3,200.0	3,180.0	3,630.6	3,581.5	7.5	10.5	119.98	-4,016.1	907.5	4,263.4	4,246.4	17.01	250.694		
3,300.0	3,278.7	3,730.4	3,678.8	7.8	10.9	119.89	-4,004.2	926.0	4,262.4	4,244.7	17.69	241.008		
3,400.0	3,377.5	3,830.2	3,776.1	8.1	11.4	119.80	-3,992.4	944.5	4,261.4	4,243.0	18.37	232.009		
3,500.0	3,476.2	3,930.0	3,873.5	8.4	11.8	119.71	-3,980.5	962.9	4,260.4	4,241.4	19.05	223.630		
3,600.0	3,575.0	4,029.7	3,970.8	8.7	12.2	119.62	-3,968.7	981.4	4,259.4	4,239.7	19.74	215.809		
3,700.0	3,673.7	4,129.5	4,068.2	9.1	12.6	119.54	-3,956.8	999.9	4,258.5	4,238.1	20.42	208.495		
3,800.0	3,772.5	4,229.3	4,165.5	9.4	13.0	119.45	-3,945.0	1,018.4	4,257.5	4,236.4	21.11	201.641		
3,900.0	3,871.2	4,329.1	4,262.8	9.7	13.5	119.36	-3,933.2	1,036.8	4,256.6	4,234.8	21.81	195.205		
4,000.0	3,970.0	4,428.9	4,360.2	10.0	13.9	119.27	-3,921.3	1,055.3	4,255.7	4,233.2	22.50	189.153		
4,100.0	4,068.7	4,528.6	4,457.5	10.3	14.3	119.18	-3,909.5	1,073.8	4,254.8	4,231.6	23.19	183.450		
4,200.0	4,167.5	4,628.4	4,554.8	10.7	14.7	119.09	-3,897.6	1,092.2	4,253.9	4,230.0	23.89	178.069		
4,300.0	4,266.2	4,728.2	4,652.2	11.0	15.1	119.01	-3,885.8	1,110.7	4,253.0	4,228.4	24.59	172.983		
4,400.0	4,364.9	4,828.0	4,749.5	11.3	15.6	118.92	-3,873.9	1,129.2	4,252.1	4,226.8	25.28	168.169		
4,500.0	4,463.7	4,927.8	4,846.9	11.6	16.0	118.83	-3,862.1	1,147.6	4,251.2	4,225.2	25.98	163.606		
4,600.0	4,562.4	5,027.5	4,944.2	11.9	16.4	118.74	-3,850.2	1,166.1	4,250.3	4,223.7	26.69	159.275		
4,700.0	4,661.2	5,127.3	5,041.5	12.3	16.8	118.65	-3,838.4	1,184.6	4,249.5	4,222.1	27.39	155.160		
4,800.0	4,759.9	5,227.1	5,138.9	12.6	17.3	118.56	-3,826.5	1,203.0	4,248.6	4,220.6	28.09	151.245		
4,900.0	4,858.7	5,326.9	5,236.2	12.9	17.7	118.48	-3,814.7	1,221.5	4,247.8	4,219.0	28.80	147.516		
5,000.0	4,957.4	5,426.7	5,333.5	13.2	18.1	118.39	-3,802.8	1,240.0	4,247.0	4,217.5	29.50	143.960		
5,100.0	5,056.2	5,526.4	5,430.9	13.6	18.5	118.30	-3,791.0	1,258.5	4,246.2	4,216.0	30.21	140.565		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-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	5,154.9	5,626.2	5,528.2	13.9	18.9	118.21	-3,779.1	1,276.9	4,245.4	4,214.5	30.92	137.321	
5,300.0	5,253.7	5,726.0	5,625.5	14.2	19.4	118.12	-3,767.3	1,295.4	4,244.6	4,213.0	31.62	134.219	
5,400.0	5,352.4	5,825.8	5,722.9	14.5	19.8	118.03	-3,755.4	1,313.9	4,243.8	4,211.5	32.33	131.249	
5,500.0	5,451.1	5,925.6	5,820.2	14.9	20.2	117.94	-3,743.6	1,332.3	4,243.0	4,210.0	33.04	128.403	
5,600.0	5,549.9	6,025.3	5,917.6	15.2	20.6	117.85	-3,731.7	1,350.8	4,242.3	4,208.5	33.76	125.674	
5,700.0	5,648.6	6,125.1	6,014.9	15.5	21.1	117.77	-3,719.9	1,369.3	4,241.5	4,207.0	34.47	123.054	
5,800.0	5,747.4	6,224.9	6,112.2	15.8	21.5	117.68	-3,708.0	1,387.7	4,240.8	4,205.6	35.18	120.538	
5,900.0	5,846.1	6,324.7	6,209.6	16.2	21.9	117.59	-3,696.2	1,406.2	4,240.0	4,204.1	35.90	118.119	
6,000.0	5,944.9	6,424.4	6,306.9	16.5	22.3	117.50	-3,684.3	1,424.7	4,239.3	4,202.7	36.61	115.792	
6,100.0	6,043.6	6,524.2	6,404.2	16.8	22.8	117.41	-3,672.5	1,443.1	4,238.6	4,201.3	37.33	113.552	
6,200.0	6,142.4	6,624.0	6,501.6	17.1	23.2	117.32	-3,660.6	1,461.6	4,237.9	4,199.9	38.04	111.394	
6,300.0	6,241.1	6,700.0	6,575.7	17.5	23.5	117.25	-3,651.6	1,475.7	4,237.3	4,198.6	38.66	109.599	
6,358.5	6,298.8	6,749.9	6,624.5	17.7	23.7	117.22	-3,646.0	1,484.4	4,237.2	4,198.2	39.02	108.598	
6,400.0	6,339.9	6,777.0	6,651.1	17.8	23.8	117.20	-3,643.2	1,488.8	4,237.3	4,198.0	39.24	107.987	
6,500.0	6,438.6	6,842.3	6,715.4	18.1	24.0	117.18	-3,636.9	1,498.6	4,238.1	4,198.4	39.75	106.620	
6,600.0	6,537.3	6,900.0	6,772.4	18.4	24.2	117.17	-3,632.0	1,506.3	4,239.8	4,199.5	40.22	105.408	
6,700.0	6,636.1	6,973.1	6,844.7	18.8	24.4	117.19	-3,626.7	1,514.6	4,242.2	4,201.5	40.70	104.227	
6,800.0	6,734.8	7,038.3	6,909.6	19.1	24.5	117.22	-3,622.7	1,520.7	4,245.5	4,204.4	41.14	103.199	
6,900.0	6,833.6	7,100.0	6,971.0	19.4	24.6	117.27	-3,619.8	1,525.3	4,249.6	4,208.1	41.55	102.269	
7,000.0	6,932.3	7,168.2	7,039.1	19.7	24.8	117.34	-3,617.3	1,529.1	4,254.5	4,212.6	41.94	101.438	
7,100.0	7,031.1	7,232.8	7,103.6	20.1	24.8	117.43	-3,615.8	1,531.4	4,260.3	4,218.0	42.31	100.699	
7,190.5	7,120.5	7,300.0	7,170.8	20.4	24.9	117.54	-3,615.1	1,532.6	4,266.2	4,223.6	42.63	100.085	
7,200.0	7,129.8	7,300.0	7,170.8	20.4	24.9	112.38	-3,615.1	1,532.6	4,266.8	4,224.2	42.66	100.030	
7,250.0	7,179.4	7,331.6	7,202.4	20.5	24.9	77.24	-3,615.0	1,532.7	4,267.4	4,224.8	42.67	100.019	
7,300.0	7,228.8	7,381.1	7,251.9	20.6	25.0	45.59	-3,615.0	1,532.7	4,263.8	4,221.4	42.42	100.509	
7,350.0	7,277.9	7,430.1	7,300.9	20.7	25.0	28.06	-3,615.0	1,532.7	4,255.9	4,214.0	41.92	101.530	
7,400.0	7,326.1	7,478.3	7,349.1	20.7	25.1	18.66	-3,615.0	1,532.7	4,243.8	4,202.6	41.16	103.109	
7,450.0	7,373.2	7,525.4	7,396.2	20.7	25.1	13.03	-3,615.0	1,532.7	4,227.5	4,187.4	40.15	105.283	
7,500.0	7,418.7	7,571.0	7,441.7	20.7	25.1	9.29	-3,615.0	1,532.7	4,207.2	4,168.3	38.92	108.105	
7,550.0	7,462.4	7,614.6	7,485.4	20.6	25.2	6.56	-3,615.0	1,532.7	4,183.0	4,145.6	37.47	111.643	
7,600.0	7,503.8	7,656.1	7,526.8	20.5	25.2	4.39	-3,615.0	1,532.7	4,155.2	4,119.4	35.83	115.979	
7,650.0	7,542.8	7,695.0	7,565.8	20.5	25.3	2.53	-3,615.0	1,532.7	4,123.9	4,089.8	34.02	121.204	
7,700.0	7,578.8	7,731.1	7,601.9	20.4	25.3	0.79	-3,615.0	1,532.7	4,089.3	4,057.2	32.10	127.407	
7,750.0	7,611.8	7,764.1	7,634.9	20.3	25.3	-0.96	-3,615.0	1,532.7	4,051.7	4,021.7	30.09	134.648	
7,800.0	7,641.5	7,793.7	7,664.5	20.2	25.4	-2.90	-3,615.0	1,532.7	4,011.5	3,983.4	28.08	142.883	
7,850.0	7,667.6	7,819.8	7,690.6	20.2	25.4	-5.22	-3,615.0	1,532.7	3,968.9	3,942.8	26.14	151.819	
7,900.0	7,689.9	7,842.1	7,712.9	20.2	25.4	-8.26	-3,615.0	1,532.7	3,924.2	3,899.8	24.44	160.595	
7,950.0	7,708.2	7,860.5	7,731.3	20.1	25.4	-12.60	-3,615.0	1,532.7	3,877.8	3,854.6	23.20	167.141	
8,000.0	7,722.5	7,874.7	7,745.5	20.2	25.4	-19.51	-3,615.0	1,532.7	3,830.1	3,807.2	22.91	167.167	
8,050.0	7,732.6	7,884.8	7,755.6	20.2	25.4	-32.01	-3,615.0	1,532.7	3,781.3	3,756.8	24.54	154.105	
8,100.0	7,738.4	7,890.7	7,761.4	20.3	25.4	-56.90	-3,615.0	1,532.7	3,732.0	3,702.9	29.07	128.365	
8,142.5	7,740.0	7,892.2	7,763.0	20.4	25.4	-90.00	-3,615.0	1,532.7	3,689.8	3,658.5	31.34	117.750	
8,200.0	7,740.0	7,892.2	7,763.0	20.5	25.4	-90.00	-3,615.0	1,532.7	3,632.8	3,601.2	31.56	115.100	
8,300.0	7,740.0	7,892.2	7,763.0	20.9	25.4	-90.00	-3,615.0	1,532.7	3,533.6	3,501.5	32.11	110.050	
8,400.0	7,740.0	7,892.2	7,763.0	21.4	25.4	-90.00	-3,615.0	1,532.7	3,434.4	3,401.6	32.83	104.598	
8,442.5	7,740.0	7,892.2	7,763.0	21.7	25.4	-90.00	-3,615.0	1,532.7	3,392.3	3,359.1	33.19	102.206	
8,500.0	7,740.0	7,892.2	7,763.0	22.1	25.4	-90.00	-3,615.0	1,532.7	3,335.4	3,301.6	33.76	98.788	
8,600.0	7,740.0	7,892.2	7,763.0	22.8	25.4	-90.00	-3,615.0	1,532.7	3,236.6	3,201.8	34.83	92.926	
8,700.0	7,740.0	7,892.2	7,763.0	23.6	25.4	-90.00	-3,615.0	1,532.7	3,138.2	3,102.2	35.98	87.225	
8,800.0	7,740.0	7,892.2	7,763.0	24.5	25.4	-90.00	-3,615.0	1,532.7	3,040.3	3,003.1	37.20	81.738	
8,842.5	7,740.0	7,892.2	7,763.0	25.0	25.4	-90.00	-3,615.0	1,532.7	2,998.8	2,961.1	37.73	79.481	
8,900.0	7,740.0	7,892.2	7,763.0	25.5	25.4	-90.00	-3,615.0	1,532.7	2,942.8	2,904.4	38.45	76.530	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-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		
9,000.0	7,740.0	7,892.2	7,763.0	26.6	25.4	-90.00	-3,615.0	1,532.7	2,845.6	2,805.8	39.76	71.562		
9,100.0	7,740.0	7,892.2	7,763.0	27.7	25.4	-90.00	-3,615.0	1,532.7	2,748.5	2,707.4	41.13	66.820		
9,200.0	7,740.0	7,892.2	7,763.0	28.9	25.4	-90.00	-3,615.0	1,532.7	2,651.6	2,609.1	42.55	62.317		
9,300.0	7,740.0	7,892.2	7,763.0	30.2	25.4	-90.00	-3,615.0	1,532.7	2,555.0	2,511.0	44.01	58.056		
9,342.5	7,740.0	7,892.2	7,763.0	30.7	25.4	-90.00	-3,615.0	1,532.7	2,514.1	2,469.5	44.64	56.319		
9,399.5	7,740.0	7,892.2	7,763.0	31.5	25.4	-90.00	-3,615.0	1,532.7	2,459.1	2,413.6	45.50	54.045		
9,500.0	7,740.0	7,892.2	7,763.0	32.8	25.4	-90.00	-3,615.0	1,532.7	2,362.3	2,315.3	47.03	50.226		
9,600.0	7,740.0	7,892.2	7,763.0	34.2	25.4	-90.00	-3,615.0	1,532.7	2,266.3	2,217.8	48.58	46.648		
9,700.0	7,740.0	7,892.2	7,763.0	35.6	25.4	-90.00	-3,615.0	1,532.7	2,170.7	2,120.6	50.15	43.281		
9,800.0	7,740.0	7,892.2	7,763.0	37.1	25.4	-90.00	-3,615.0	1,532.7	2,075.5	2,023.8	51.74	40.112		
9,900.0	7,740.0	7,892.2	7,763.0	38.5	25.4	-90.00	-3,615.0	1,532.7	1,980.8	1,927.4	53.35	37.130		
10,000.0	7,740.0	7,892.2	7,763.0	40.0	25.4	-90.00	-3,615.0	1,532.7	1,886.6	1,831.6	54.96	34.323		
10,100.0	7,740.0	7,892.2	7,763.0	41.6	25.4	-90.00	-3,615.0	1,532.7	1,793.0	1,736.4	56.59	31.682		
10,200.0	7,740.0	7,892.2	7,763.0	43.1	25.4	-90.00	-3,615.0	1,532.7	1,700.2	1,641.9	58.23	29.195		
10,300.0	7,740.0	7,892.2	7,763.0	44.6	25.4	-90.00	-3,615.0	1,532.7	1,608.2	1,548.3	59.88	26.855		
10,400.0	7,740.0	7,892.2	7,763.0	46.2	25.4	-90.00	-3,615.0	1,532.7	1,517.2	1,455.7	61.54	24.654		
10,500.0	7,740.0	7,892.2	7,763.0	47.8	25.4	-90.00	-3,615.0	1,532.7	1,427.5	1,364.3	63.21	22.585		
10,600.0	7,740.0	7,892.2	7,763.0	49.4	25.4	-90.00	-3,615.0	1,532.7	1,339.2	1,274.3	64.88	20.642		
10,700.0	7,740.0	7,892.2	7,763.0	51.0	25.4	-90.00	-3,615.0	1,532.7	1,252.6	1,186.1	66.55	18.822		
10,800.0	7,740.0	7,892.2	7,763.0	52.6	25.4	-90.00	-3,615.0	1,532.7	1,168.3	1,100.0	68.24	17.121		
10,900.0	7,740.0	7,892.2	7,763.0	54.2	25.4	-90.00	-3,615.0	1,532.7	1,086.5	1,016.6	69.92	15.539		
11,000.0	7,740.0	7,892.2	7,763.0	55.8	25.4	-90.00	-3,615.0	1,532.7	1,008.1	936.5	71.61	14.077		
11,100.0	7,740.0	7,892.2	7,763.0	57.5	25.4	-90.00	-3,615.0	1,532.7	933.8	860.5	73.31	12.738		
11,200.0	7,740.0	7,892.2	7,763.0	59.1	25.4	-90.00	-3,615.0	1,532.7	864.7	789.7	75.01	11.528		
11,300.0	7,740.0	7,892.2	7,763.0	60.8	25.4	-90.00	-3,615.0	1,532.7	802.1	725.4	76.71	10.456		
11,400.0	7,740.0	7,892.2	7,763.0	62.4	25.4	-90.00	-3,615.0	1,532.7	747.7	669.3	78.41	9.535		
11,500.0	7,740.0	7,892.2	7,763.0	64.1	25.4	-90.00	-3,615.0	1,532.7	703.4	623.3	80.12	8.779		
11,600.0	7,740.0	7,892.2	7,763.0	65.7	25.4	-90.00	-3,615.0	1,532.7	671.2	589.4	81.83	8.202		
11,700.0	7,740.0	7,892.2	7,763.0	67.4	25.4	-90.00	-3,615.0	1,532.7	652.8	569.3	83.55	7.814		
11,771.5	7,740.0	7,892.2	7,763.0	68.6	25.4	-90.00	-3,615.0	1,532.7	648.9	564.2	84.77	7.655 CC, ES		
11,800.0	7,740.0	7,892.2	7,763.0	69.1	25.4	-90.00	-3,615.0	1,532.7	649.6	564.3	85.26	7.619		
11,900.0	7,740.0	7,892.2	7,763.0	70.8	25.4	-90.00	-3,615.0	1,532.7	661.5	574.6	86.98	7.606 SF		
12,000.0	7,740.0	7,892.2	7,763.0	72.4	25.4	-90.00	-3,615.0	1,532.7	688.0	599.3	88.69	7.757		
12,100.0	7,740.0	7,892.2	7,763.0	74.1	25.4	-90.00	-3,615.0	1,532.7	727.4	636.9	90.42	8.045		
12,200.0	7,740.0	7,892.2	7,763.0	75.8	25.4	-90.00	-3,615.0	1,532.7	777.7	685.5	92.14	8.440		
12,300.0	7,740.0	7,892.2	7,763.0	77.5	25.4	-90.00	-3,615.0	1,532.7	836.9	743.1	93.86	8.917		
12,400.0	7,740.0	7,892.2	7,763.0	79.2	25.4	-90.00	-3,615.0	1,532.7	903.4	807.8	95.58	9.452		
12,500.0	7,740.0	7,892.2	7,763.0	80.9	25.4	-90.00	-3,615.0	1,532.7	975.6	878.3	97.31	10.026		
12,600.0	7,740.0	7,892.2	7,763.0	82.6	25.4	-90.00	-3,615.0	1,532.7	1,052.4	953.4	99.04	10.627		
12,700.0	7,740.0	7,892.2	7,763.0	84.3	25.4	-90.00	-3,615.0	1,532.7	1,132.8	1,032.1	100.77	11.242		
12,800.0	7,740.0	7,892.2	7,763.0	86.0	25.4	-90.00	-3,615.0	1,532.7	1,216.2	1,113.7	102.50	11.865		
12,900.0	7,740.0	7,892.2	7,763.0	87.7	25.4	-90.00	-3,615.0	1,532.7	1,301.8	1,197.6	104.23	12.490		
13,000.0	7,740.0	7,892.2	7,763.0	89.4	25.4	-90.00	-3,615.0	1,532.7	1,389.4	1,283.4	105.96	13.113		
13,100.0	7,740.0	7,892.2	7,763.0	91.1	25.4	-90.00	-3,615.0	1,532.7	1,478.6	1,370.9	107.69	13.730		
13,200.0	7,740.0	7,892.2	7,763.0	92.8	25.4	-90.00	-3,615.0	1,532.7	1,569.0	1,459.6	109.42	14.339		
13,300.0	7,740.0	7,892.2	7,763.0	94.5	25.4	-90.00	-3,615.0	1,532.7	1,660.6	1,549.4	111.16	14.939		
13,400.0	7,740.0	7,892.2	7,763.0	96.2	25.4	-90.00	-3,615.0	1,532.7	1,753.1	1,640.2	112.89	15.529		
13,500.0	7,740.0	7,892.2	7,763.0	98.0	25.4	-90.00	-3,615.0	1,532.7	1,846.3	1,731.7	114.63	16.108		
13,600.0	7,740.0	7,892.2	7,763.0	99.7	25.4	-90.00	-3,615.0	1,532.7	1,940.3	1,823.9	116.36	16.675		
13,700.0	7,740.0	7,892.2	7,763.0	101.4	25.4	-90.00	-3,615.0	1,532.7	2,034.8	1,916.7	118.10	17.230		
13,800.0	7,740.0	7,892.2	7,763.0	103.1	25.4	-90.00	-3,615.0	1,532.7	2,129.8	2,010.0	119.84	17.773		
13,900.0	7,740.0	7,892.2	7,763.0	104.8	25.4	-90.00	-3,615.0	1,532.7	2,225.3	2,103.7	121.57	18.304		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-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		
14,000.0	7,740.0	7,892.2	7,763.0	106.5	25.4	-90.00	-3,615.0	1,532.7	2,321.1	2,197.8	123.31	18.823		
14,100.0	7,740.0	7,892.2	7,763.0	108.3	25.4	-90.00	-3,615.0	1,532.7	2,417.3	2,292.2	125.05	19.331		
14,200.0	7,740.0	7,892.2	7,763.0	110.0	25.4	-90.00	-3,615.0	1,532.7	2,513.8	2,387.0	126.79	19.826		
14,300.0	7,740.0	7,892.2	7,763.0	111.7	25.4	-90.00	-3,615.0	1,532.7	2,610.5	2,482.0	128.53	20.311		
14,400.0	7,740.0	7,892.2	7,763.0	113.4	25.4	-90.00	-3,615.0	1,532.7	2,707.5	2,577.2	130.27	20.784		
14,500.0	7,740.0	7,892.2	7,763.0	115.2	25.4	-90.00	-3,615.0	1,532.7	2,804.7	2,672.6	132.01	21.246		
14,600.0	7,740.0	7,892.2	7,763.0	116.9	25.4	-90.00	-3,615.0	1,532.7	2,902.0	2,768.3	133.75	21.697		
14,700.0	7,740.0	7,892.2	7,763.0	118.6	25.4	-90.00	-3,615.0	1,532.7	2,999.6	2,864.1	135.49	22.138		
14,800.0	7,740.0	7,892.2	7,763.0	120.4	25.4	-90.00	-3,615.0	1,532.7	3,097.3	2,960.1	137.23	22.569		
14,900.0	7,740.0	7,892.2	7,763.0	122.1	25.4	-90.00	-3,615.0	1,532.7	3,195.1	3,056.2	138.98	22.991		
15,000.0	7,740.0	7,892.2	7,763.0	123.8	25.4	-90.00	-3,615.0	1,532.7	3,293.1	3,152.4	140.72	23.402		
15,100.0	7,740.0	7,892.2	7,763.0	125.5	25.4	-90.00	-3,615.0	1,532.7	3,391.2	3,248.8	142.46	23.805		
15,200.0	7,740.0	7,892.2	7,763.0	127.3	25.4	-90.00	-3,615.0	1,532.7	3,489.4	3,345.2	144.20	24.198		
15,300.0	7,740.0	7,892.2	7,763.0	129.0	25.4	-90.00	-3,615.0	1,532.7	3,587.7	3,441.8	145.95	24.582		
15,400.0	7,740.0	7,892.2	7,763.0	130.7	25.4	-90.00	-3,615.0	1,532.7	3,686.1	3,538.4	147.69	24.958		
15,500.0	7,740.0	7,892.2	7,763.0	132.5	25.4	-90.00	-3,615.0	1,532.7	3,784.6	3,635.2	149.44	25.326		
15,600.0	7,740.0	7,892.2	7,763.0	134.2	25.4	-90.00	-3,615.0	1,532.7	3,883.2	3,732.0	151.18	25.686		
15,700.0	7,740.0	7,892.2	7,763.0	135.9	25.4	-90.00	-3,615.0	1,532.7	3,981.8	3,828.9	152.92	26.038		
15,800.0	7,740.0	7,892.2	7,763.0	137.7	25.4	-90.00	-3,615.0	1,532.7	4,080.5	3,925.8	154.67	26.382		
15,900.0	7,740.0	7,892.2	7,763.0	139.4	25.4	-90.00	-3,615.0	1,532.7	4,179.2	4,022.8	156.41	26.719		
16,000.0	7,740.0	7,892.2	7,763.0	141.1	25.4	-90.00	-3,615.0	1,532.7	4,278.1	4,119.9	158.16	27.049		
16,083.0	7,740.0	7,892.2	7,763.0	142.6	25.4	-90.00	-3,615.0	1,532.7	4,360.1	4,200.5	159.61	27.318		
16,083.8	7,740.0	7,892.2	7,763.0	142.6	25.4	-90.00	-3,615.0	1,532.7	4,360.9	4,201.3	159.62	27.320		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - DD													Offset Site Error: 0.0 ft	
Survey Program: 41-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	33.7	33.7	0.0	0.0	172.70	-4,267.1	547.0	4,302.0					
100.0	100.0	118.0	118.0	0.2	0.2	172.69	-4,267.0	547.2	4,301.9	4,301.6	0.33	N/A		
200.0	200.0	178.0	178.0	0.3	0.3	172.68	-4,267.5	547.8	4,302.8	4,302.1	0.61	7,043.624		
300.0	300.0	208.0	208.0	0.5	0.3	172.68	-4,268.1	548.5	4,304.7	4,303.9	0.84	5,134.570		
400.0	400.0	270.0	269.9	0.7	0.5	172.65	-4,270.0	550.6	4,308.1	4,307.0	1.12	3,843.492		
500.0	500.0	298.8	298.7	0.8	0.5	172.64	-4,271.2	552.0	4,312.6	4,311.3	1.35	3,201.962		
600.0	600.0	362.0	361.6	1.0	0.7	172.59	-4,274.6	555.8	4,318.5	4,316.9	1.63	2,646.464		
700.0	700.0	362.0	361.6	1.2	0.7	172.59	-4,274.6	555.8	4,325.7	4,323.9	1.81	2,394.745		
800.0	800.0	426.4	425.7	1.4	0.8	172.54	-4,279.3	560.7	4,334.1	4,332.0	2.10	2,067.012		
900.0	900.0	454.0	453.1	1.5	0.9	172.51	-4,281.6	563.1	4,344.0	4,341.6	2.32	1,872.574		
1,000.0	1,000.0	512.4	511.0	1.7	1.1	172.44	-4,287.3	568.7	4,355.0	4,352.4	2.60	1,673.852		
1,100.0	1,100.0	546.0	544.1	1.9	1.2	121.27	-4,290.9	572.3	4,367.9	4,365.0	2.93	1,491.112		
1,200.0	1,200.0	600.4	597.7	2.1	1.4	121.09	-4,297.4	578.8	4,382.9	4,379.6	3.24	1,351.003		
1,300.0	1,299.9	642.0	638.6	2.3	1.5	120.89	-4,302.8	584.5	4,400.0	4,396.4	3.53	1,247.417		
1,400.0	1,399.7	701.2	696.6	2.4	1.8	120.66	-4,311.1	593.5	4,419.0	4,415.2	3.87	1,141.053		
1,500.0	1,499.4	834.7	827.2	2.6	2.3	120.37	-4,329.9	614.0	4,439.2	4,434.8	4.42	1,004.821		
1,600.0	1,598.9	904.5	895.5	2.8	2.5	120.15	-4,339.6	624.0	4,460.0	4,455.2	4.80	928.971		
1,700.0	1,698.3	940.0	930.2	3.1	2.7	119.94	-4,344.7	629.5	4,482.4	4,477.3	5.10	878.081		
1,800.0	1,797.4	1,004.0	992.6	3.3	3.0	119.69	-4,354.6	639.9	4,506.7	4,501.2	5.51	818.041		
1,908.5	1,904.7	1,068.0	1,054.6	3.6	3.3	119.42	-4,365.4	651.2	4,535.4	4,529.4	5.96	761.495		
2,000.0	1,995.0	1,121.5	1,106.4	3.8	3.5	119.41	-4,374.7	660.9	4,560.6	4,554.3	6.35	717.949		
2,100.0	2,093.8	1,206.3	1,188.4	4.1	3.9	119.38	-4,389.5	676.8	4,588.6	4,581.7	6.87	667.635		
2,200.0	2,192.5	1,387.7	1,364.0	4.4	4.8	119.34	-4,420.4	710.1	4,616.1	4,608.4	7.70	599.761		
2,300.0	2,291.3	1,478.6	1,452.2	4.7	5.2	119.32	-4,434.8	726.7	4,642.4	4,634.1	8.25	562.924		
2,400.0	2,390.0	1,565.9	1,536.9	5.0	5.6	119.30	-4,449.0	742.3	4,668.9	4,660.1	8.79	531.454		
2,500.0	2,488.8	1,641.0	1,609.8	5.3	5.9	119.29	-4,461.4	755.6	4,695.7	4,686.4	9.29	505.505		
2,600.0	2,587.5	1,723.8	1,689.9	5.6	6.3	119.27	-4,475.3	770.7	4,722.8	4,713.0	9.83	480.501		
2,700.0	2,686.3	1,803.2	1,766.8	5.9	6.7	119.25	-4,488.8	785.6	4,750.2	4,739.9	10.36	458.496		
2,800.0	2,785.0	1,943.2	1,902.3	6.2	7.4	119.20	-4,512.3	812.1	4,777.5	4,766.4	11.09	430.639		
2,900.0	2,883.8	2,021.0	1,977.6	6.5	7.8	119.18	-4,525.1	826.8	4,804.4	4,792.8	11.62	413.344		
3,000.0	2,982.5	2,117.0	2,070.6	6.8	8.2	119.16	-4,541.1	844.5	4,831.4	4,819.2	12.21	395.715		
3,100.0	3,081.3	2,183.1	2,134.5	7.2	8.5	119.14	-4,552.2	856.7	4,858.8	4,846.1	12.70	382.540		
3,200.0	3,180.0	2,337.2	2,283.9	7.5	9.2	119.12	-4,578.6	884.2	4,886.3	4,872.8	13.46	363.077		
3,300.0	3,278.7	2,432.7	2,376.6	7.8	9.7	119.10	-4,593.8	901.5	4,912.6	4,898.5	14.05	349.620		
3,400.0	3,377.5	2,497.0	2,438.8	8.1	10.0	119.08	-4,604.5	913.7	4,939.6	4,925.1	14.55	339.509		
3,500.0	3,476.2	2,610.4	2,548.6	8.4	10.5	119.06	-4,623.7	934.3	4,966.9	4,951.7	15.18	327.110		
3,600.0	3,575.0	2,709.2	2,644.5	8.7	11.0	119.05	-4,640.1	951.4	4,993.7	4,977.9	15.77	316.664		
3,700.0	3,673.7	2,816.9	2,749.1	9.1	11.5	119.04	-4,658.0	970.0	5,020.5	5,004.2	16.39	306.323		
3,800.0	3,772.5	2,911.5	2,840.9	9.4	11.9	119.02	-4,673.1	987.2	5,046.9	5,029.9	16.98	297.208		
3,900.0	3,871.2	2,975.0	2,902.4	9.7	12.2	119.01	-4,683.8	998.9	5,074.0	5,056.5	17.47	290.428		
4,000.0	3,970.0	3,014.1	2,940.2	10.0	12.4	119.00	-4,690.8	1,006.1	5,101.9	5,084.0	17.88	285.302		
4,100.0	4,068.7	3,084.8	3,008.5	10.3	12.8	118.99	-4,703.8	1,018.9	5,130.6	5,112.2	18.39	278.975		
4,200.0	4,167.5	3,189.6	3,109.8	10.7	13.3	118.98	-4,722.8	1,037.7	5,159.0	5,140.0	19.01	271.448		
4,300.0	4,266.2	3,347.9	3,262.8	11.0	14.0	118.95	-4,751.1	1,066.8	5,187.3	5,167.5	19.80	262.026		
4,400.0	4,364.9	3,500.4	3,410.4	11.3	14.8	118.91	-4,776.1	1,095.8	5,214.2	5,193.6	20.59	253.259		
4,500.0	4,463.7	3,570.8	3,478.6	11.6	15.1	118.88	-4,787.5	1,109.3	5,240.9	5,219.8	21.11	248.245		
4,600.0	4,562.4	3,660.2	3,565.0	11.9	15.5	118.86	-4,802.3	1,126.5	5,267.9	5,246.2	21.70	242.815		
8,050.0	7,732.6	7,882.3	7,746.5	20.2	25.6	-10.32	-5,100.1	1,445.9	5,236.1	5,217.4	18.63	281.003		
8,100.0	7,738.4	7,888.8	7,753.0	20.3	25.7	-28.76	-5,100.1	1,446.0	5,186.5	5,163.3	23.18	223.779		
8,142.5	7,740.0	7,890.6	7,754.7	20.4	25.7	-88.20	-5,100.1	1,446.0	5,144.1	5,109.0	35.12	146.453		
8,200.0	7,740.0	7,890.6	7,754.8	20.5	25.7	-88.21	-5,100.1	1,446.0	5,086.6	5,051.3	35.35	143.897		
8,300.0	7,740.0	7,890.8	7,754.9	20.9	25.7	-88.24	-5,100.1	1,446.0	4,986.8	4,950.9	35.89	138.927		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - DD													Offset Site Error:	0.0 ft
Survey Program: 41-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)				
8,400.0	7,740.0	7,890.9	7,755.0	21.4	25.7	-88.26	-5,100.1	1,446.0	4,886.9	4,850.3	36.62	133.453		
8,442.5	7,740.0	7,890.9	7,755.1	21.7	25.7	-88.27	-5,100.1	1,446.0	4,844.5	4,807.5	36.97	131.022		
8,500.0	7,740.0	7,891.0	7,755.1	22.1	25.7	-88.55	-5,100.1	1,446.0	4,787.1	4,749.8	37.32	128.287		
8,600.0	7,740.0	7,891.1	7,755.2	22.8	25.7	-88.87	-5,100.1	1,446.0	4,687.4	4,649.4	37.98	123.419		
8,700.0	7,740.0	7,891.1	7,755.3	23.6	25.7	-89.07	-5,100.1	1,446.0	4,587.8	4,549.1	38.72	118.480		
8,800.0	7,740.0	7,891.2	7,755.3	24.5	25.7	-89.21	-5,100.1	1,446.0	4,488.4	4,448.9	39.53	113.542		
8,842.5	7,740.0	7,891.2	7,755.4	25.0	25.7	-89.25	-5,100.1	1,446.0	4,446.3	4,406.4	39.89	111.459		
8,900.0	7,740.0	7,891.2	7,755.4	25.5	25.7	-89.25	-5,100.1	1,446.0	4,389.3	4,348.7	40.61	108.072		
9,000.0	7,740.0	7,891.2	7,755.4	26.6	25.7	-89.26	-5,100.1	1,446.0	4,290.2	4,248.3	41.92	102.332		
9,100.0	7,740.0	7,891.3	7,755.4	27.7	25.7	-89.26	-5,100.1	1,446.0	4,191.2	4,147.9	43.29	96.810		
9,200.0	7,740.0	7,891.3	7,755.5	28.9	25.7	-89.26	-5,100.1	1,446.0	4,092.2	4,047.5	44.71	91.526		
9,300.0	7,740.0	7,891.3	7,755.5	30.2	25.7	-89.26	-5,100.1	1,446.0	3,993.2	3,947.1	46.17	86.492		
9,342.5	7,740.0	7,891.3	7,755.5	30.7	25.7	-89.27	-5,100.1	1,446.0	3,951.2	3,904.4	46.80	84.430		
9,399.5	7,740.0	7,891.4	7,755.5	31.5	25.7	-89.22	-5,100.1	1,446.0	3,894.8	3,846.9	47.89	81.325		
9,500.0	7,740.0	7,891.4	7,755.6	32.8	25.7	-89.22	-5,100.1	1,446.0	3,795.3	3,745.9	49.42	76.791		
9,600.0	7,740.0	7,891.4	7,755.6	34.2	25.7	-89.22	-5,100.1	1,446.0	3,696.4	3,645.4	50.97	72.516		
9,700.0	7,740.0	7,891.5	7,755.6	35.6	25.7	-89.23	-5,100.1	1,446.0	3,597.5	3,545.0	52.54	68.467		
9,800.0	7,740.0	7,891.5	7,755.7	37.1	25.7	-89.23	-5,100.1	1,446.0	3,498.7	3,444.6	54.13	64.633		
9,900.0	7,740.0	7,891.6	7,755.7	38.5	25.7	-89.24	-5,100.1	1,446.0	3,400.0	3,344.3	55.74	61.002		
10,000.0	7,740.0	7,891.6	7,755.8	40.0	25.7	-89.24	-5,100.1	1,446.0	3,301.3	3,244.0	57.35	57.562		
10,100.0	7,740.0	7,891.6	7,755.8	41.6	25.7	-89.25	-5,100.1	1,446.0	3,202.8	3,143.8	58.98	54.301		
10,200.0	7,740.0	7,891.7	7,755.8	43.1	25.7	-89.25	-5,100.1	1,446.0	3,104.3	3,043.7	60.62	51.207		
10,300.0	7,740.0	7,891.7	7,755.9	44.6	25.7	-89.25	-5,100.1	1,446.0	3,005.9	2,943.6	62.27	48.271		
10,400.0	7,740.0	7,891.8	7,755.9	46.2	25.7	-89.26	-5,100.1	1,446.0	2,907.6	2,843.7	63.93	45.483		
10,500.0	7,740.0	7,891.8	7,756.0	47.8	25.7	-89.26	-5,100.1	1,446.0	2,809.5	2,743.9	65.59	42.833		
10,600.0	7,740.0	7,891.8	7,756.0	49.4	25.7	-89.27	-5,100.1	1,446.0	2,711.5	2,644.2	67.26	40.311		
10,700.0	7,740.0	7,891.9	7,756.0	51.0	25.7	-89.27	-5,100.1	1,446.0	2,613.6	2,544.7	68.94	37.911		
10,800.0	7,740.0	7,891.9	7,756.1	52.6	25.7	-89.27	-5,100.1	1,446.0	2,515.9	2,445.3	70.62	35.625		
10,900.0	7,740.0	7,891.9	7,756.1	54.2	25.7	-89.28	-5,100.1	1,446.0	2,418.4	2,346.1	72.31	33.446		
11,000.0	7,740.0	7,892.0	7,756.1	55.8	25.7	-89.28	-5,100.1	1,446.0	2,321.1	2,247.1	74.00	31.367		
11,100.0	7,740.0	7,892.0	7,756.2	57.5	25.7	-89.29	-5,100.1	1,446.0	2,224.1	2,148.4	75.69	29.382		
11,200.0	7,740.0	7,892.1	7,756.2	59.1	25.7	-89.29	-5,100.1	1,446.0	2,127.3	2,049.9	77.39	27.487		
11,300.0	7,740.0	7,892.1	7,756.3	60.8	25.7	-89.29	-5,100.1	1,446.0	2,030.8	1,951.7	79.10	25.676		
11,400.0	7,740.0	7,892.1	7,756.3	62.4	25.7	-89.30	-5,100.1	1,446.0	1,934.7	1,853.9	80.80	23.945		
11,500.0	7,740.0	7,892.2	7,756.3	64.1	25.7	-89.30	-5,100.1	1,446.0	1,839.0	1,756.5	82.51	22.289		
11,600.0	7,740.0	7,892.2	7,756.4	65.7	25.7	-89.30	-5,100.1	1,446.0	1,743.8	1,659.6	84.22	20.706		
11,700.0	7,740.0	7,892.2	7,756.4	67.4	25.7	-89.31	-5,100.1	1,446.0	1,649.2	1,563.2	85.93	19.192		
11,800.0	7,740.0	7,892.3	7,756.4	69.1	25.7	-89.31	-5,100.1	1,446.0	1,555.2	1,467.5	87.64	17.744		
11,900.0	7,740.0	7,892.3	7,756.5	70.8	25.7	-89.32	-5,100.1	1,446.0	1,462.0	1,372.7	89.36	16.361		
12,000.0	7,740.0	7,892.4	7,756.5	72.4	25.7	-89.32	-5,100.1	1,446.0	1,369.8	1,278.7	91.08	15.040		
12,100.0	7,740.0	7,892.4	7,756.5	74.1	25.7	-89.32	-5,100.1	1,446.0	1,278.8	1,186.0	92.80	13.780		
12,200.0	7,740.0	7,892.4	7,756.6	75.8	25.7	-89.33	-5,100.1	1,446.0	1,189.2	1,094.7	94.52	12.581		
12,300.0	7,740.0	7,892.5	7,756.6	77.5	25.7	-89.33	-5,100.1	1,446.0	1,101.4	1,005.1	96.24	11.443		
12,400.0	7,740.0	7,892.5	7,756.7	79.2	25.7	-89.33	-5,100.1	1,446.0	1,015.8	917.8	97.97	10.369		
12,500.0	7,740.0	7,892.5	7,756.7	80.9	25.7	-89.34	-5,100.1	1,446.0	933.1	833.5	99.69	9.360		
12,600.0	7,740.0	7,892.6	7,756.7	82.6	25.7	-89.34	-5,100.1	1,446.0	854.2	752.8	101.42	8.422		
12,700.0	7,740.0	7,892.6	7,756.8	84.3	25.7	-89.35	-5,100.1	1,446.0	780.1	676.9	103.15	7.563		
12,800.0	7,740.0	7,892.6	7,756.8	86.0	25.7	-89.35	-5,100.1	1,446.0	712.3	607.4	104.88	6.792		
12,900.0	7,740.0	7,892.7	7,756.8	87.7	25.7	-89.35	-5,100.1	1,446.0	652.9	546.3	106.61	6.124		
13,000.0	7,740.0	7,892.7	7,756.9	89.4	25.7	-89.36	-5,100.1	1,446.0	604.3	495.9	108.34	5.578		
13,100.0	7,740.0	7,892.7	7,756.9	91.1	25.7	-89.36	-5,100.1	1,446.0	569.2	459.2	110.07	5.171		
13,200.0	7,740.0	7,892.8	7,756.9	92.8	25.7	-89.36	-5,100.1	1,446.0	550.4	438.6	111.80	4.923		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - DD													Offset Site Error:	0.0 ft
Survey Program: 41-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		
13,255.6	7,740.0	7,892.8	7,757.0	93.8	25.7	-89.37	-5,100.1	1,446.0	547.5	434.8	112.77	4.855 CC, ES		
13,300.0	7,740.0	7,892.8	7,757.0	94.5	25.7	-89.37	-5,100.1	1,446.0	549.3	435.8	113.54	4.838 SF		
13,400.0	7,740.0	7,892.8	7,757.0	96.2	25.7	-89.37	-5,100.1	1,446.0	566.3	451.0	115.27	4.912		
13,500.0	7,740.0	7,892.9	7,757.0	98.0	25.7	-89.38	-5,100.1	1,446.0	599.6	482.6	117.01	5.124		
13,600.0	7,740.0	7,892.9	7,757.1	99.7	25.7	-89.38	-5,100.1	1,446.0	646.8	528.1	118.74	5.447		
13,700.0	7,740.0	7,893.0	7,757.1	101.4	25.7	-89.38	-5,100.1	1,446.0	705.2	584.7	120.48	5.853		
13,800.0	7,740.0	7,893.0	7,757.1	103.1	25.7	-89.39	-5,100.1	1,446.0	772.1	649.9	122.22	6.318		
13,900.0	7,740.0	7,893.0	7,757.2	104.8	25.7	-89.39	-5,100.1	1,446.0	845.6	721.6	123.96	6.822		
14,000.0	7,740.0	7,893.1	7,757.2	106.5	25.7	-89.39	-5,100.1	1,446.0	924.1	798.4	125.69	7.352		
14,100.0	7,740.0	7,893.1	7,757.2	108.3	25.7	-89.40	-5,100.1	1,446.0	1,006.4	878.9	127.43	7.897		
14,200.0	7,740.0	7,893.1	7,757.3	110.0	25.7	-89.40	-5,100.1	1,446.0	1,091.6	962.5	129.17	8.451		
14,300.0	7,740.0	7,893.2	7,757.3	111.7	25.7	-89.40	-5,100.1	1,446.0	1,179.2	1,048.3	130.91	9.008		
14,400.0	7,740.0	7,893.2	7,757.3	113.4	25.7	-89.41	-5,100.1	1,446.0	1,268.6	1,136.0	132.65	9.564		
14,500.0	7,740.0	7,893.2	7,757.4	115.2	25.7	-89.41	-5,100.1	1,446.0	1,359.5	1,225.1	134.39	10.116		
14,600.0	7,740.0	7,893.3	7,757.4	116.9	25.7	-89.41	-5,100.1	1,446.0	1,451.6	1,315.5	136.13	10.663		
14,700.0	7,740.0	7,893.3	7,757.4	118.6	25.7	-89.42	-5,100.1	1,446.0	1,544.7	1,406.8	137.87	11.204		
14,800.0	7,740.0	7,893.3	7,757.5	120.4	25.7	-89.42	-5,100.1	1,446.0	1,638.6	1,499.0	139.62	11.736		
14,900.0	7,740.0	7,893.4	7,757.5	122.1	25.7	-89.42	-5,100.1	1,446.0	1,733.1	1,591.8	141.36	12.261		
15,000.0	7,740.0	7,893.4	7,757.5	123.8	25.7	-89.43	-5,100.1	1,446.0	1,828.3	1,685.2	143.10	12.776		
15,100.0	7,740.0	7,893.4	7,757.6	125.5	25.7	-89.43	-5,100.1	1,446.0	1,923.9	1,779.1	144.84	13.283		
15,200.0	7,740.0	7,893.4	7,757.6	127.3	25.7	-89.43	-5,100.1	1,446.0	2,020.0	1,873.4	146.59	13.780		
15,300.0	7,740.0	7,893.5	7,757.6	129.0	25.7	-89.44	-5,100.1	1,446.0	2,116.4	1,968.1	148.33	14.268		
15,400.0	7,740.0	7,893.5	7,757.7	130.7	25.7	-89.44	-5,100.1	1,446.0	2,213.2	2,063.1	150.07	14.747		
15,500.0	7,740.0	7,893.5	7,757.7	132.5	25.7	-89.44	-5,100.1	1,446.0	2,310.2	2,158.4	151.82	15.217		
15,600.0	7,740.0	7,893.6	7,757.7	134.2	25.7	-89.45	-5,100.1	1,446.0	2,407.5	2,253.9	153.56	15.678		
15,700.0	7,740.0	7,893.6	7,757.8	135.9	25.7	-89.45	-5,100.1	1,446.0	2,505.0	2,349.6	155.31	16.129		
15,800.0	7,740.0	7,893.6	7,757.8	137.7	25.7	-89.45	-5,100.1	1,446.0	2,602.6	2,445.6	157.05	16.572		
15,900.0	7,740.0	7,893.7	7,757.8	139.4	25.7	-89.46	-5,100.1	1,446.0	2,700.5	2,541.7	158.80	17.006		
16,000.0	7,740.0	7,893.7	7,757.9	141.1	25.7	-89.46	-5,100.1	1,446.0	2,798.5	2,637.9	160.54	17.432		
16,083.0	7,740.0	7,893.7	7,757.9	142.6	25.7	-89.46	-5,100.1	1,446.0	2,879.9	2,717.9	161.99	17.778		
16,083.8	7,740.0	7,893.7	7,757.9	142.6	25.7	-89.46	-5,100.1	1,446.0	2,880.7	2,718.7	162.00	17.782		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-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	23.0	23.0	0.0	0.0	172.70	-4,267.2	547.0	4,302.1					
100.0	100.0	123.0	123.0	0.2	0.2	172.70	-4,267.2	547.0	4,302.1	4,301.7	0.34	N/A		
156.7	156.7	179.7	179.7	0.3	0.3	172.70	-4,267.2	547.0	4,302.1	4,301.5	0.54	7,992.074		
200.0	200.0	200.0	200.0	0.3	0.3	172.70	-4,267.2	547.0	4,302.1	4,301.5	0.65	6,626.185		
300.0	300.0	257.2	257.2	0.5	0.4	172.69	-4,267.6	547.4	4,303.0	4,302.1	0.92	4,657.180		
400.0	400.0	300.0	300.0	0.7	0.5	172.68	-4,268.3	548.3	4,305.2	4,304.0	1.17	3,670.185		
500.0	500.0	350.0	349.9	0.8	0.6	172.66	-4,269.8	549.9	4,308.6	4,307.1	1.44	3,000.658		
600.0	600.0	400.0	399.8	1.0	0.7	172.64	-4,271.9	552.1	4,313.2	4,311.5	1.70	2,541.031		
700.0	700.0	442.5	442.2	1.2	0.8	172.61	-4,274.1	554.5	4,319.1	4,317.1	1.95	2,217.241		
800.0	800.0	500.0	499.5	1.4	0.9	172.56	-4,277.8	558.5	4,326.2	4,324.0	2.22	1,946.070		
900.0	900.0	534.5	533.7	1.5	1.0	172.53	-4,280.4	561.3	4,334.6	4,332.1	2.46	1,761.843		
1,000.0	1,000.0	600.0	598.7	1.7	1.2	172.46	-4,286.1	567.4	4,344.3	4,341.5	2.75	1,579.410		
1,100.0	1,100.0	600.0	598.7	1.9	1.2	121.34	-4,286.1	567.4	4,355.6	4,352.6	2.99	1,456.996		
1,200.0	1,200.0	671.2	669.0	2.1	1.4	121.15	-4,293.4	575.4	4,368.9	4,365.5	3.33	1,310.783		
1,300.0	1,299.9	700.0	697.5	2.3	1.5	120.99	-4,296.7	578.9	4,384.5	4,380.9	3.58	1,225.437		
1,400.0	1,399.7	761.1	757.5	2.4	1.7	120.78	-4,304.4	587.2	4,402.0	4,398.1	3.92	1,122.887		
1,500.0	1,499.4	806.3	801.8	2.6	1.9	120.57	-4,310.6	593.9	4,421.7	4,417.5	4.23	1,046.414		
1,600.0	1,598.9	902.5	895.9	2.8	2.3	120.32	-4,324.3	608.7	4,442.9	4,438.2	4.68	949.398		
1,700.0	1,698.3	1,000.0	991.2	3.1	2.7	120.08	-4,338.2	623.8	4,464.9	4,459.8	5.15	866.834		
1,800.0	1,797.4	1,097.3	1,086.3	3.3	3.0	119.85	-4,352.1	638.8	4,487.8	4,482.2	5.64	796.243		
1,908.5	1,904.7	1,202.7	1,189.3	3.6	3.5	119.62	-4,367.1	655.0	4,513.6	4,507.5	6.18	730.273		
2,000.0	1,995.0	1,291.5	1,276.1	3.8	3.8	119.62	-4,379.8	668.7	4,535.8	4,529.2	6.66	681.483		
2,100.0	2,093.8	1,388.5	1,371.0	4.1	4.2	119.63	-4,393.6	683.7	4,560.0	4,552.9	7.18	634.908		
2,200.0	2,192.5	1,485.5	1,465.8	4.4	4.6	119.64	-4,407.5	698.6	4,584.3	4,576.6	7.71	594.214		
2,300.0	2,291.3	1,582.5	1,560.7	4.7	5.0	119.65	-4,421.3	713.6	4,608.5	4,600.3	8.25	558.429		
2,400.0	2,390.0	1,679.5	1,655.5	5.0	5.4	119.65	-4,435.2	728.5	4,632.7	4,624.0	8.79	526.768		
2,500.0	2,488.8	1,776.6	1,750.4	5.3	5.8	119.66	-4,449.0	743.5	4,657.0	4,647.6	9.34	498.594		
2,600.0	2,587.5	1,873.6	1,845.3	5.6	6.2	119.67	-4,462.8	758.5	4,681.2	4,671.3	9.89	473.385		
2,700.0	2,686.3	1,970.6	1,940.1	5.9	6.6	119.67	-4,476.7	773.4	4,705.4	4,695.0	10.44	450.716		
2,800.0	2,785.0	2,067.6	2,035.0	6.2	7.0	119.68	-4,490.5	788.4	4,729.7	4,718.7	10.99	430.235		
2,900.0	2,883.8	2,164.6	2,129.8	6.5	7.4	119.69	-4,504.4	803.3	4,753.9	4,742.4	11.55	411.649		
3,000.0	2,982.5	2,261.7	2,224.7	6.8	7.8	119.69	-4,518.2	818.3	4,778.2	4,766.0	12.11	394.714		
3,100.0	3,081.3	2,358.7	2,319.5	7.2	8.2	119.70	-4,532.1	833.3	4,802.4	4,789.7	12.66	379.226		
3,200.0	3,180.0	2,455.7	2,414.4	7.5	8.6	119.70	-4,545.9	848.2	4,826.6	4,813.4	13.22	365.011		
3,300.0	3,278.7	2,552.7	2,509.2	7.8	9.0	119.71	-4,559.7	863.2	4,850.9	4,837.1	13.78	351.922		
3,400.0	3,377.5	2,649.7	2,604.1	8.1	9.4	119.72	-4,573.6	878.1	4,875.1	4,860.7	14.35	339.832		
3,500.0	3,476.2	2,746.7	2,698.9	8.4	9.8	119.72	-4,587.4	893.1	4,899.3	4,884.4	14.91	328.634		
3,600.0	3,575.0	2,843.8	2,793.8	8.7	10.1	119.73	-4,601.3	908.1	4,923.6	4,908.1	15.47	318.234		
3,700.0	3,673.7	2,940.8	2,888.6	9.1	10.5	119.73	-4,615.1	923.0	4,947.8	4,931.8	16.04	308.552		
3,800.0	3,772.5	3,037.8	2,983.5	9.4	10.9	119.74	-4,628.9	938.0	4,972.0	4,955.4	16.60	299.515		
3,900.0	3,871.2	3,134.8	3,078.3	9.7	11.3	119.75	-4,642.8	952.9	4,996.3	4,979.1	17.17	291.063		
4,000.0	3,970.0	3,231.8	3,173.2	10.0	11.7	119.75	-4,656.6	967.9	5,020.5	5,002.8	17.73	283.142		
4,100.0	4,068.7	3,328.9	3,268.0	10.3	12.1	119.76	-4,670.5	982.8	5,044.7	5,026.4	18.30	275.703		
4,200.0	4,167.5	3,425.9	3,362.9	10.7	12.5	119.76	-4,684.3	997.8	5,069.0	5,050.1	18.86	268.705		
4,300.0	4,266.2	3,522.9	3,457.8	11.0	12.9	119.77	-4,698.1	1,012.8	5,093.2	5,073.8	19.43	262.109		
4,400.0	4,364.9	3,619.9	3,552.6	11.3	13.3	119.77	-4,712.0	1,027.7	5,117.4	5,097.4	20.00	255.883		
4,500.0	4,463.7	3,716.9	3,647.5	11.6	13.7	119.78	-4,725.8	1,042.7	5,141.7	5,121.1	20.57	249.996		
4,600.0	4,562.4	3,813.9	3,742.3	11.9	14.1	119.79	-4,739.7	1,057.6	5,165.9	5,144.8	21.14	244.422		
4,700.0	4,661.2	3,911.0	3,837.2	12.3	14.5	119.79	-4,753.5	1,072.6	5,190.1	5,168.4	21.70	239.137		
4,800.0	4,759.9	4,008.0	3,932.0	12.6	14.9	119.80	-4,767.4	1,087.6	5,214.4	5,192.1	22.27	234.118		
4,900.0	4,858.7	4,105.0	4,026.9	12.9	15.3	119.80	-4,781.2	1,102.5	5,238.6	5,215.8	22.84	229.347		
5,000.0	4,957.4	4,202.0	4,121.7	13.2	15.7	119.81	-4,795.0	1,117.5	5,262.8	5,239.4	23.41	224.805		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,000.0	7,722.5	7,868.6	7,745.5	20.2	25.3	-3.39	-5,083.1	1,428.8	5,266.0	5,247.0	19.06	276.359	
8,050.0	7,732.6	7,878.7	7,755.6	20.2	25.3	-9.43	-5,083.1	1,428.8	5,217.1	5,198.6	18.48	282.300	
8,100.0	7,738.4	7,884.5	7,761.4	20.3	25.3	-27.54	-5,083.1	1,428.8	5,167.5	5,144.8	22.72	227.482	
8,142.5	7,740.0	7,886.1	7,763.0	20.4	25.3	-90.00	-5,083.1	1,428.8	5,125.1	5,090.2	34.87	146.964	
8,200.0	7,740.0	7,886.1	7,763.0	20.5	25.3	-90.00	-5,083.1	1,428.8	5,067.6	5,032.5	35.10	144.383	
8,300.0	7,740.0	7,886.1	7,763.0	20.9	25.3	-90.00	-5,083.1	1,428.8	4,967.7	4,932.1	35.65	139.366	
8,400.0	7,740.0	7,886.1	7,763.0	21.4	25.3	-90.00	-5,083.1	1,428.8	4,867.9	4,831.5	36.37	133.839	
8,442.5	7,740.0	7,886.1	7,763.0	21.7	25.3	-90.00	-5,083.1	1,428.8	4,825.5	4,788.7	36.73	131.385	
8,500.0	7,740.0	7,886.1	7,763.0	22.1	25.3	-90.00	-5,083.1	1,428.8	4,768.0	4,730.9	37.08	128.603	
8,600.0	7,740.0	7,886.1	7,763.0	22.8	25.3	-90.00	-5,083.1	1,428.8	4,668.3	4,630.5	37.75	123.662	
8,700.0	7,740.0	7,886.1	7,763.0	23.6	25.3	-90.00	-5,083.1	1,428.8	4,568.7	4,530.2	38.50	118.658	
8,800.0	7,740.0	7,886.1	7,763.0	24.5	25.3	-90.00	-5,083.1	1,428.8	4,469.3	4,430.0	39.32	113.662	
8,842.5	7,740.0	7,886.1	7,763.0	25.0	25.3	-90.00	-5,083.1	1,428.8	4,427.2	4,387.5	39.69	111.556	
8,900.0	7,740.0	7,886.1	7,763.0	25.5	25.3	-90.00	-5,083.1	1,428.8	4,370.1	4,329.7	40.41	108.149	
9,000.0	7,740.0	7,886.1	7,763.0	26.6	25.3	-90.00	-5,083.1	1,428.8	4,271.0	4,229.3	41.72	102.375	
9,100.0	7,740.0	7,886.1	7,763.0	27.7	25.3	-90.00	-5,083.1	1,428.8	4,171.9	4,128.8	43.09	96.823	
9,200.0	7,740.0	7,886.1	7,763.0	28.9	25.3	-90.00	-5,083.1	1,428.8	4,072.8	4,028.3	44.51	91.512	
9,300.0	7,740.0	7,886.1	7,763.0	30.2	25.3	-90.00	-5,083.1	1,428.8	3,973.9	3,927.9	45.96	86.454	
9,342.5	7,740.0	7,886.1	7,763.0	30.7	25.3	-90.00	-5,083.1	1,428.8	3,931.8	3,885.2	46.60	84.382	
9,399.5	7,740.0	7,886.1	7,763.0	31.5	25.3	-90.00	-5,083.1	1,428.8	3,875.4	3,827.7	47.68	81.271	
9,500.0	7,740.0	7,886.1	7,763.0	32.8	25.3	-90.00	-5,083.1	1,428.8	3,775.8	3,726.6	49.22	76.718	
9,600.0	7,740.0	7,886.1	7,763.0	34.2	25.3	-90.00	-5,083.1	1,428.8	3,676.9	3,626.1	50.77	72.426	
9,700.0	7,740.0	7,886.1	7,763.0	35.6	25.3	-90.00	-5,083.1	1,428.8	3,577.9	3,525.6	52.34	68.362	
9,800.0	7,740.0	7,886.1	7,763.0	37.1	25.3	-90.00	-5,083.1	1,428.8	3,479.1	3,425.1	53.93	64.515	
9,900.0	7,740.0	7,886.1	7,763.0	38.5	25.3	-90.00	-5,083.1	1,428.8	3,380.3	3,324.7	55.53	60.872	
10,000.0	7,740.0	7,886.1	7,763.0	40.0	25.3	-90.00	-5,083.1	1,428.8	3,281.5	3,224.4	57.15	57.422	
10,100.0	7,740.0	7,886.1	7,763.0	41.6	25.3	-90.00	-5,083.1	1,428.8	3,182.9	3,124.1	58.78	54.151	
10,200.0	7,740.0	7,886.1	7,763.0	43.1	25.3	-90.00	-5,083.1	1,428.8	3,084.3	3,023.9	60.42	51.050	
10,300.0	7,740.0	7,886.1	7,763.0	44.6	25.3	-90.00	-5,083.1	1,428.8	2,985.9	2,923.8	62.07	48.107	
10,400.0	7,740.0	7,886.1	7,763.0	46.2	25.3	-90.00	-5,083.1	1,428.8	2,887.5	2,823.8	63.72	45.313	
10,500.0	7,740.0	7,886.1	7,763.0	47.8	25.3	-90.00	-5,083.1	1,428.8	2,789.3	2,723.9	65.39	42.657	
10,600.0	7,740.0	7,886.1	7,763.0	49.4	25.3	-90.00	-5,083.1	1,428.8	2,691.2	2,624.1	67.06	40.131	
10,700.0	7,740.0	7,886.1	7,763.0	51.0	25.3	-90.00	-5,083.1	1,428.8	2,593.2	2,524.5	68.74	37.727	
10,800.0	7,740.0	7,886.1	7,763.0	52.6	25.3	-90.00	-5,083.1	1,428.8	2,495.4	2,425.0	70.42	35.436	
10,900.0	7,740.0	7,886.1	7,763.0	54.2	25.3	-90.00	-5,083.1	1,428.8	2,397.8	2,325.7	72.11	33.254	
11,000.0	7,740.0	7,886.1	7,763.0	55.8	25.3	-90.00	-5,083.1	1,428.8	2,300.4	2,226.6	73.80	31.171	
11,100.0	7,740.0	7,886.1	7,763.0	57.5	25.3	-90.00	-5,083.1	1,428.8	2,203.2	2,127.7	75.49	29.184	
11,200.0	7,740.0	7,886.1	7,763.0	59.1	25.3	-90.00	-5,083.1	1,428.8	2,106.3	2,029.1	77.19	27.286	
11,300.0	7,740.0	7,886.1	7,763.0	60.8	25.3	-90.00	-5,083.1	1,428.8	2,009.7	1,930.8	78.89	25.473	
11,400.0	7,740.0	7,886.1	7,763.0	62.4	25.3	-90.00	-5,083.1	1,428.8	1,913.4	1,832.8	80.60	23.740	
11,500.0	7,740.0	7,886.1	7,763.0	64.1	25.3	-90.00	-5,083.1	1,428.8	1,817.5	1,735.2	82.31	22.082	
11,600.0	7,740.0	7,886.1	7,763.0	65.7	25.3	-90.00	-5,083.1	1,428.8	1,722.1	1,638.1	84.02	20.497	
11,700.0	7,740.0	7,886.1	7,763.0	67.4	25.3	-90.00	-5,083.1	1,428.8	1,627.3	1,541.5	85.73	18.982	
11,800.0	7,740.0	7,886.1	7,763.0	69.1	25.3	-90.00	-5,083.1	1,428.8	1,533.1	1,445.6	87.44	17.532	
11,900.0	7,740.0	7,886.1	7,763.0	70.8	25.3	-90.00	-5,083.1	1,428.8	1,439.7	1,350.5	89.16	16.147	
12,000.0	7,740.0	7,886.1	7,763.0	72.4	25.3	-90.00	-5,083.1	1,428.8	1,347.2	1,256.3	90.88	14.824	
12,100.0	7,740.0	7,886.1	7,763.0	74.1	25.3	-90.00	-5,083.1	1,428.8	1,255.9	1,163.3	92.60	13.563	
12,200.0	7,740.0	7,886.1	7,763.0	75.8	25.3	-90.00	-5,083.1	1,428.8	1,166.0	1,071.7	94.32	12.362	
12,300.0	7,740.0	7,886.1	7,763.0	77.5	25.3	-90.00	-5,083.1	1,428.8	1,077.9	981.9	96.04	11.223	
12,400.0	7,740.0	7,886.1	7,763.0	79.2	25.3	-90.00	-5,083.1	1,428.8	992.1	894.3	97.77	10.147	
12,500.0	7,740.0	7,886.1	7,763.0	80.9	25.3	-90.00	-5,083.1	1,428.8	909.2	809.7	99.49	9.138	
12,600.0	7,740.0	7,886.1	7,763.0	82.6	25.3	-90.00	-5,083.1	1,428.8	830.0	728.8	101.22	8.200	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-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		
12,700.0	7,740.0	7,886.1	7,763.0	84.3	25.3	-90.00	-5,083.1	1,428.8	755.8	652.9	102.95	7.341		
12,800.0	7,740.0	7,886.1	7,763.0	86.0	25.3	-90.00	-5,083.1	1,428.8	688.2	583.5	104.68	6.574		
12,900.0	7,740.0	7,886.1	7,763.0	87.7	25.3	-90.00	-5,083.1	1,428.8	629.2	522.8	106.41	5.913		
13,000.0	7,740.0	7,886.1	7,763.0	89.4	25.3	-90.00	-5,083.1	1,428.8	581.5	473.4	108.14	5.378		
13,100.0	7,740.0	7,886.1	7,763.0	91.1	25.3	-90.00	-5,083.1	1,428.8	548.2	438.3	109.87	4.989		
13,200.0	7,740.0	7,886.1	7,763.0	92.8	25.3	-90.00	-5,083.1	1,428.8	531.8	420.2	111.61	4.765		
13,238.4	7,740.0	7,886.1	7,763.0	93.5	25.3	-90.00	-5,083.1	1,428.8	530.4	418.2	112.27	4.725 CC, ES		
13,300.0	7,740.0	7,886.1	7,763.0	94.5	25.3	-90.00	-5,083.1	1,428.8	534.0	420.7	113.34	4.712 SF		
13,400.0	7,740.0	7,886.1	7,763.0	96.2	25.3	-90.00	-5,083.1	1,428.8	554.5	439.4	115.07	4.819		
13,500.0	7,740.0	7,886.1	7,763.0	98.0	25.3	-90.00	-5,083.1	1,428.8	591.4	474.6	116.81	5.063		
13,600.0	7,740.0	7,886.1	7,763.0	99.7	25.3	-90.00	-5,083.1	1,428.8	642.0	523.4	118.55	5.415		
13,700.0	7,740.0	7,886.1	7,763.0	101.4	25.3	-90.00	-5,083.1	1,428.8	703.2	582.9	120.28	5.846		
13,800.0	7,740.0	7,886.1	7,763.0	103.1	25.3	-90.00	-5,083.1	1,428.8	772.5	650.5	122.02	6.331		
13,900.0	7,740.0	7,886.1	7,763.0	104.8	25.3	-90.00	-5,083.1	1,428.8	848.0	724.2	123.76	6.852		
14,000.0	7,740.0	7,886.1	7,763.0	106.5	25.3	-90.00	-5,083.1	1,428.8	928.1	802.6	125.49	7.396		
14,100.0	7,740.0	7,886.1	7,763.0	108.3	25.3	-90.00	-5,083.1	1,428.8	1,011.8	884.6	127.23	7.952		
14,200.0	7,740.0	7,886.1	7,763.0	110.0	25.3	-90.00	-5,083.1	1,428.8	1,098.2	969.2	128.97	8.515		
14,300.0	7,740.0	7,886.1	7,763.0	111.7	25.3	-90.00	-5,083.1	1,428.8	1,186.8	1,056.0	130.71	9.079		
14,400.0	7,740.0	7,886.1	7,763.0	113.4	25.3	-90.00	-5,083.1	1,428.8	1,277.0	1,144.5	132.45	9.641		
14,500.0	7,740.0	7,886.1	7,763.0	115.2	25.3	-90.00	-5,083.1	1,428.8	1,368.6	1,234.4	134.19	10.199		
14,600.0	7,740.0	7,886.1	7,763.0	116.9	25.3	-90.00	-5,083.1	1,428.8	1,461.3	1,325.3	135.93	10.750		
14,700.0	7,740.0	7,886.1	7,763.0	118.6	25.3	-90.00	-5,083.1	1,428.8	1,554.9	1,417.2	137.68	11.294		
14,800.0	7,740.0	7,886.1	7,763.0	120.4	25.3	-90.00	-5,083.1	1,428.8	1,649.2	1,509.8	139.42	11.830		
14,900.0	7,740.0	7,886.1	7,763.0	122.1	25.3	-90.00	-5,083.1	1,428.8	1,744.2	1,603.1	141.16	12.356		
15,000.0	7,740.0	7,886.1	7,763.0	123.8	25.3	-90.00	-5,083.1	1,428.8	1,839.7	1,696.8	142.90	12.874		
15,100.0	7,740.0	7,886.1	7,763.0	125.5	25.3	-90.00	-5,083.1	1,428.8	1,935.7	1,791.1	144.64	13.382		
15,200.0	7,740.0	7,886.1	7,763.0	127.3	25.3	-90.00	-5,083.1	1,428.8	2,032.1	1,885.7	146.39	13.881		
15,300.0	7,740.0	7,886.1	7,763.0	129.0	25.3	-90.00	-5,083.1	1,428.8	2,128.8	1,980.6	148.13	14.371		
15,400.0	7,740.0	7,886.1	7,763.0	130.7	25.3	-90.00	-5,083.1	1,428.8	2,225.7	2,075.9	149.87	14.851		
15,500.0	7,740.0	7,886.1	7,763.0	132.5	25.3	-90.00	-5,083.1	1,428.8	2,323.0	2,171.4	151.62	15.321		
15,600.0	7,740.0	7,886.1	7,763.0	134.2	25.3	-90.00	-5,083.1	1,428.8	2,420.4	2,267.1	153.36	15.782		
15,700.0	7,740.0	7,886.1	7,763.0	135.9	25.3	-90.00	-5,083.1	1,428.8	2,518.1	2,363.0	155.11	16.235		
15,800.0	7,740.0	7,886.1	7,763.0	137.7	25.3	-90.00	-5,083.1	1,428.8	2,616.0	2,459.1	156.85	16.678		
15,900.0	7,740.0	7,886.1	7,763.0	139.4	25.3	-90.00	-5,083.1	1,428.8	2,714.0	2,555.4	158.60	17.112		
16,000.0	7,740.0	7,886.1	7,763.0	141.1	25.3	-90.00	-5,083.1	1,428.8	2,812.1	2,651.7	160.34	17.538		
16,083.0	7,740.0	7,886.1	7,763.0	142.6	25.3	-90.00	-5,083.1	1,428.8	2,893.6	2,731.8	161.79	17.885		
16,083.8	7,740.0	7,886.1	7,763.0	142.6	25.3	-90.00	-5,083.1	1,428.8	2,894.5	2,732.7	161.81	17.889		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - SOSA A UNIT 1 (EXISTING) - EXISTING - EXISTIN												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	
0.0	0.0	0.0	0.0	0.0	0.0	172.90	-4,325.4	538.6	4,358.8				
100.0	100.0	83.2	83.2	0.2	0.1	172.90	-4,325.6	538.8	4,359.1	4,358.8	0.30	N/A	
200.0	200.0	163.7	163.7	0.3	0.3	172.90	-4,326.1	539.1	4,359.8	4,359.2	0.61	7,119.411	
300.0	300.0	270.6	270.6	0.5	0.5	172.90	-4,327.2	539.1	4,360.8	4,359.8	0.97	4,476.365	
400.0	400.0	368.8	368.8	0.7	0.6	172.91	-4,328.0	538.7	4,361.5	4,360.2	1.32	3,302.507	
500.0	500.0	475.4	475.3	0.8	0.8	172.91	-4,328.9	538.6	4,362.4	4,360.7	1.68	2,594.190	
600.0	600.0	599.6	599.6	1.0	1.0	172.92	-4,329.5	538.0	4,362.8	4,360.7	2.07	2,104.152	
700.0	700.0	690.9	690.9	1.2	1.2	172.92	-4,329.7	537.5	4,363.0	4,360.6	2.41	1,812.305	
800.0	800.0	800.0	800.0	1.4	1.4	172.93	-4,330.1	536.7	4,363.2	4,360.5	2.77	1,573.431	
900.0	900.0	898.5	898.5	1.5	1.6	172.95	-4,330.4	535.6	4,363.4	4,360.2	3.12	1,398.558	
1,000.0	1,000.0	989.7	989.7	1.7	1.7	172.96	-4,330.7	534.7	4,363.6	4,360.2	3.45	1,263.133	
1,100.0	1,100.0	1,105.9	1,105.8	1.9	1.9	121.97	-4,331.1	532.8	4,364.3	4,360.4	3.83	1,139.056	
1,200.0	1,200.0	1,207.4	1,207.3	2.1	2.1	122.01	-4,331.3	531.2	4,365.6	4,361.4	4.19	1,042.991	
1,300.0	1,299.9	1,305.5	1,305.4	2.3	2.3	122.07	-4,331.5	529.2	4,367.9	4,363.4	4.54	962.642	
1,400.0	1,399.7	1,417.7	1,417.6	2.4	2.5	122.15	-4,331.6	526.4	4,370.9	4,366.0	4.92	888.659	
1,500.0	1,499.4	1,508.6	1,508.5	2.6	2.6	122.22	-4,331.7	524.7	4,375.0	4,369.7	5.27	830.616	
1,600.0	1,598.9	1,628.2	1,628.0	2.8	2.9	122.34	-4,331.4	522.3	4,379.6	4,374.0	5.68	771.640	
1,700.0	1,698.3	1,718.2	1,718.0	3.1	3.0	122.43	-4,331.3	520.5	4,385.4	4,379.3	6.04	725.748	
1,800.0	1,797.4	1,840.6	1,840.4	3.3	3.2	122.59	-4,330.8	517.4	4,391.7	4,385.2	6.48	677.639	
1,908.5	1,904.7	1,935.6	1,935.4	3.6	3.4	122.71	-4,330.3	514.8	4,399.6	4,392.7	6.91	637.078	
2,000.0	1,995.0	2,015.6	2,015.4	3.8	3.6	122.87	-4,330.2	512.7	4,407.1	4,399.8	7.27	605.943	
2,100.0	2,093.8	2,124.5	2,124.2	4.1	3.7	123.10	-4,329.8	509.8	4,415.2	4,407.5	7.72	572.089	
2,200.0	2,192.5	2,200.0	2,199.6	4.4	3.9	123.25	-4,329.8	507.9	4,423.6	4,415.5	8.11	545.628	
2,300.0	2,291.3	2,321.3	2,320.9	4.7	4.1	123.51	-4,329.8	504.2	4,432.1	4,423.5	8.58	516.303	
2,400.0	2,390.0	2,426.1	2,425.6	5.0	4.3	123.73	-4,329.6	500.8	4,440.4	4,431.4	9.03	491.500	
2,500.0	2,488.8	2,552.3	2,551.7	5.3	4.5	124.00	-4,328.5	496.4	4,448.1	4,438.5	9.52	466.988	
2,600.0	2,587.5	2,638.6	2,638.0	5.6	4.7	124.18	-4,327.7	493.6	4,455.8	4,445.8	9.94	448.051	
2,700.0	2,686.3	2,721.6	2,720.9	5.9	4.8	124.34	-4,327.1	491.7	4,463.9	4,453.6	10.36	430.931	
2,800.0	2,785.0	2,817.4	2,816.7	6.2	5.0	124.53	-4,326.7	489.6	4,472.3	4,461.5	10.80	414.252	
2,900.0	2,883.8	2,924.8	2,924.2	6.5	5.2	124.73	-4,326.1	487.8	4,480.7	4,469.4	11.25	398.195	
3,000.0	2,982.5	3,025.1	3,024.4	6.8	5.4	124.91	-4,325.3	486.2	4,488.9	4,477.2	11.70	383.743	
3,100.0	3,081.3	3,114.5	3,113.8	7.2	5.5	125.08	-4,324.8	484.6	4,497.3	4,485.2	12.13	370.900	
3,200.0	3,180.0	3,200.0	3,199.3	7.5	5.7	125.24	-4,324.4	483.1	4,505.9	4,493.4	12.55	359.144	
3,300.0	3,278.7	3,285.5	3,284.8	7.8	5.8	125.40	-4,324.2	481.9	4,514.8	4,501.9	12.97	348.199	
3,400.0	3,377.5	3,386.1	3,385.4	8.1	6.0	125.58	-4,324.2	480.9	4,524.1	4,510.7	13.41	337.348	
3,500.0	3,476.2	3,475.7	3,474.9	8.4	6.2	125.73	-4,324.3	480.2	4,533.4	4,519.5	13.84	327.623	
3,600.0	3,575.0	3,572.3	3,571.6	8.7	6.3	125.90	-4,324.5	479.3	4,542.9	4,528.6	14.28	318.228	
3,700.0	3,673.7	3,680.2	3,679.4	9.1	6.5	126.08	-4,324.7	478.4	4,552.3	4,537.6	14.73	309.010	
3,800.0	3,772.5	3,776.5	3,775.8	9.4	6.7	126.25	-4,324.7	477.8	4,561.7	4,546.5	15.17	300.733	
3,900.0	3,871.2	3,875.3	3,874.5	9.7	6.9	126.41	-4,324.8	477.1	4,571.2	4,555.6	15.61	292.825	
4,000.0	3,970.0	3,970.1	3,969.3	10.0	7.0	126.58	-4,324.9	475.8	4,580.7	4,564.7	16.05	285.464	
4,100.0	4,068.7	4,073.0	4,072.2	10.3	7.2	126.77	-4,325.0	474.0	4,590.4	4,573.9	16.50	278.261	
4,200.0	4,167.5	4,190.0	4,189.2	10.7	7.4	126.98	-4,324.9	471.6	4,599.8	4,582.8	16.97	271.062	
4,300.0	4,266.2	4,293.4	4,292.6	11.0	7.6	127.17	-4,324.6	469.3	4,608.9	4,591.5	17.42	264.561	
4,400.0	4,364.9	4,387.4	4,386.5	11.3	7.8	127.35	-4,324.2	466.7	4,618.1	4,600.3	17.86	258.633	
4,500.0	4,463.7	4,477.8	4,476.9	11.6	7.9	127.52	-4,324.0	464.5	4,627.5	4,609.3	18.28	253.113	
4,600.0	4,562.4	4,567.9	4,567.0	11.9	8.1	127.68	-4,324.0	462.8	4,637.2	4,618.5	18.71	247.867	
4,700.0	4,661.2	4,700.0	4,699.1	12.3	8.3	127.92	-4,323.7	460.4	4,646.7	4,627.5	19.20	241.980	
4,800.0	4,759.9	4,779.8	4,778.8	12.6	8.5	128.06	-4,323.3	458.9	4,655.9	4,636.3	19.61	237.414	
4,900.0	4,858.7	4,889.8	4,888.9	12.9	8.7	128.26	-4,322.9	456.5	4,665.4	4,645.4	20.07	232.474	
5,000.0	4,957.4	5,013.7	5,012.7	13.2	8.9	128.47	-4,321.9	454.5	4,674.5	4,653.9	20.55	227.518	
5,100.0	5,056.2	5,107.6	5,106.6	13.6	9.0	128.62	-4,320.9	453.4	4,683.4	4,662.4	20.97	223.299	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - SOSAA UNIT 1 (EXISTING) - EXISTING - EXISTIN													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		
5,200.0	5,154.9	5,233.9	5,232.9	13.9	9.3	128.83	-4,319.3	451.9	4,692.0	4,670.6	21.45	218.712		
5,300.0	5,253.7	5,337.5	5,336.5	14.2	9.4	129.00	-4,317.6	451.0	4,700.3	4,678.4	21.89	214.681		
5,400.0	5,352.4	5,424.3	5,423.3	14.5	9.6	129.14	-4,316.2	450.4	4,708.8	4,686.5	22.31	211.075		
5,500.0	5,451.1	5,515.2	5,514.1	14.9	9.8	129.29	-4,315.1	449.5	4,717.6	4,694.9	22.73	207.556		
5,600.0	5,549.9	5,625.4	5,624.3	15.2	9.9	129.46	-4,313.5	448.6	4,726.2	4,703.1	23.18	203.899		
5,700.0	5,648.6	5,703.4	5,702.4	15.5	10.1	129.58	-4,312.5	448.2	4,735.1	4,711.5	23.58	200.832		
5,800.0	5,747.4	5,821.7	5,820.6	15.8	10.3	129.76	-4,311.0	447.5	4,744.1	4,720.0	24.04	197.346		
5,900.0	5,846.1	5,926.9	5,925.8	16.2	10.5	129.92	-4,309.3	447.2	4,752.6	4,728.1	24.48	194.152		
6,000.0	5,944.9	6,000.0	5,998.9	16.5	10.6	130.03	-4,308.4	447.0	4,761.5	4,736.7	24.87	191.478		
6,100.0	6,043.6	6,073.6	6,072.5	16.8	10.7	130.14	-4,307.8	446.8	4,771.0	4,745.8	25.26	188.901		
6,200.0	6,142.4	6,145.0	6,143.9	17.1	10.9	130.25	-4,307.7	446.3	4,781.1	4,755.4	25.64	186.448		
6,300.0	6,241.1	6,222.5	6,221.4	17.5	11.0	130.37	-4,307.9	445.5	4,791.7	4,765.7	26.04	184.029		
6,400.0	6,339.9	6,357.8	6,356.7	17.8	11.2	130.58	-4,308.3	444.5	4,802.4	4,775.8	26.52	181.070		
6,500.0	6,438.6	6,478.2	6,477.1	18.1	11.4	130.76	-4,307.5	443.9	4,812.1	4,785.1	26.98	178.337		
6,600.0	6,537.3	6,572.7	6,571.6	18.4	11.6	130.90	-4,306.9	443.2	4,821.8	4,794.4	27.40	175.961		
6,700.0	6,636.1	6,680.2	6,679.1	18.8	11.8	131.07	-4,306.1	442.4	4,831.6	4,803.8	27.84	173.537		
6,800.0	6,734.8	6,808.9	6,807.8	19.1	12.0	131.26	-4,304.7	441.5	4,841.0	4,812.7	28.31	170.974		
6,900.0	6,833.6	6,912.8	6,911.7	19.4	12.2	131.42	-4,303.1	440.7	4,850.0	4,821.3	28.75	168.719		
7,000.0	6,932.3	7,000.0	6,998.8	19.7	12.3	131.54	-4,301.8	440.5	4,859.1	4,830.0	29.15	166.689		
7,100.0	7,031.1	7,089.6	7,088.4	20.1	12.5	131.66	-4,300.8	440.8	4,868.5	4,838.9	29.56	164.706		
7,190.5	7,120.5	7,190.4	7,189.2	20.4	12.7	131.79	-4,299.7	442.1	4,877.0	4,847.0	29.96	162.810		
7,200.0	7,129.8	7,201.8	7,200.6	20.4	12.7	126.63	-4,299.5	442.3	4,877.8	4,847.8	30.01	162.524		
7,250.0	7,179.4	7,278.2	7,276.9	20.5	12.8	91.49	-4,298.4	445.1	4,879.3	4,849.1	30.23	161.380		
7,300.0	7,228.8	7,323.4	7,322.1	20.6	12.9	59.88	-4,297.7	447.5	4,876.3	4,846.1	30.23	161.290		
7,350.0	7,277.9	7,355.9	7,354.5	20.7	12.9	42.50	-4,297.3	449.5	4,869.2	4,839.2	30.04	162.109		
7,400.0	7,326.1	7,400.0	7,398.5	20.7	13.0	33.39	-4,296.9	452.4	4,858.0	4,828.4	29.69	163.650		
7,450.0	7,373.2	7,419.9	7,418.4	20.7	13.0	28.16	-4,296.8	453.7	4,842.8	4,813.7	29.14	166.204		
7,500.0	7,418.7	7,451.3	7,449.7	20.7	13.1	24.98	-4,296.7	455.7	4,823.7	4,795.3	28.45	169.521		
7,550.0	7,462.4	7,481.5	7,479.9	20.6	13.1	23.01	-4,296.7	457.4	4,800.8	4,773.2	27.63	173.733		
7,600.0	7,503.8	7,512.6	7,510.9	20.5	13.2	21.83	-4,296.7	459.1	4,774.3	4,747.6	26.70	178.838		
7,650.0	7,542.8	7,545.6	7,543.9	20.5	13.2	21.25	-4,296.8	460.8	4,744.3	4,718.7	25.67	184.811		
7,700.0	7,578.8	7,576.4	7,574.6	20.4	13.3	21.17	-4,297.0	462.1	4,711.1	4,686.5	24.59	191.621		
7,750.0	7,611.8	7,600.0	7,598.2	20.3	13.3	21.55	-4,297.1	463.1	4,674.8	4,651.4	23.48	199.122		
7,800.0	7,641.5	7,631.7	7,629.9	20.2	13.4	22.49	-4,297.3	464.3	4,635.8	4,613.4	22.43	206.700		
7,850.0	7,667.6	7,655.4	7,653.6	20.2	13.4	24.05	-4,297.4	465.1	4,594.3	4,572.8	21.50	213.710		
7,900.0	7,689.9	7,675.8	7,673.9	20.2	13.5	26.48	-4,297.6	465.8	4,550.6	4,529.8	20.81	218.637		
7,950.0	7,708.2	7,692.6	7,690.8	20.1	13.5	30.24	-4,297.7	466.3	4,505.1	4,484.6	20.55	219.185		
8,000.0	7,722.5	7,709.3	7,707.5	20.2	13.5	36.30	-4,297.8	466.8	4,458.1	4,437.1	21.02	212.123		
8,050.0	7,732.6	7,724.3	7,722.4	20.2	13.5	46.60	-4,297.9	467.2	4,410.0	4,387.3	22.64	194.773		
8,100.0	7,738.4	7,733.0	7,731.2	20.3	13.6	64.82	-4,298.0	467.5	4,361.0	4,335.4	25.64	170.111		
8,142.5	7,740.0	7,735.7	7,733.8	20.4	13.6	89.02	-4,298.0	467.6	4,319.1	4,291.4	27.71	155.864		
8,200.0	7,740.0	7,736.2	7,734.4	20.5	13.6	89.07	-4,298.0	467.6	4,262.3	4,234.3	27.94	152.560		
8,300.0	7,740.0	7,737.2	7,735.3	20.9	13.6	89.16	-4,298.0	467.6	4,163.5	4,135.0	28.49	146.144		
8,400.0	7,740.0	7,738.1	7,736.3	21.4	13.6	89.24	-4,298.0	467.6	4,064.8	4,035.5	29.22	139.117		
8,442.5	7,740.0	7,738.5	7,736.6	21.7	13.6	89.27	-4,298.0	467.7	4,022.8	3,993.3	29.58	136.016		
8,500.0	7,740.0	7,739.0	7,737.2	22.1	13.6	89.27	-4,298.0	467.7	3,966.1	3,936.0	30.03	132.050		
8,600.0	7,740.0	7,739.9	7,738.0	22.8	13.6	89.27	-4,298.0	467.7	3,867.2	3,836.3	30.90	125.139		
8,700.0	7,740.0	7,740.6	7,738.7	23.6	13.6	89.26	-4,298.0	467.7	3,768.1	3,736.2	31.85	118.304		
8,800.0	7,740.0	7,741.3	7,739.4	24.5	13.6	89.24	-4,298.0	467.7	3,668.8	3,636.0	32.87	111.632		
8,842.5	7,740.0	7,741.5	7,739.7	25.0	13.6	89.22	-4,298.0	467.7	3,626.6	3,593.3	33.31	108.862		
8,900.0	7,740.0	7,741.9	7,740.0	25.5	13.6	89.27	-4,298.0	467.8	3,569.4	3,535.4	34.04	104.865		
9,000.0	7,740.0	7,742.5	7,740.6	26.6	13.6	89.36	-4,298.0	467.8	3,470.1	3,434.7	35.35	98.158		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - SOSA A UNIT 1 (EXISTING) - EXISTING - EXISTIN												Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,100.0	7,740.0	7,743.0	7,741.2	27.7	13.6	89.44	-4,298.0	467.8	3,370.7	3,334.0	36.72	91.787	
9,200.0	7,740.0	7,743.6	7,741.7	28.9	13.6	89.52	-4,298.0	467.8	3,271.4	3,233.3	38.14	85.766	
9,300.0	7,740.0	7,744.2	7,742.3	30.2	13.6	89.61	-4,298.0	467.8	3,172.2	3,132.6	39.60	80.095	
9,342.5	7,740.0	7,744.4	7,742.5	30.7	13.6	89.64	-4,298.0	467.8	3,130.0	3,089.8	40.24	77.791	
9,399.5	7,740.0	7,744.7	7,742.9	31.5	13.6	89.71	-4,298.0	467.8	3,073.5	3,032.3	41.21	74.572	
9,500.0	7,740.0	7,745.3	7,743.4	32.8	13.6	89.79	-4,298.0	467.9	2,974.0	2,931.2	42.75	69.568	
9,600.0	7,740.0	7,745.9	7,744.0	34.2	13.6	89.86	-4,298.0	467.9	2,875.0	2,830.7	44.30	64.898	
9,700.0	7,740.0	7,746.4	7,744.6	35.6	13.6	89.94	-4,298.0	467.9	2,776.1	2,730.3	45.87	60.518	
9,800.0	7,740.0	7,747.0	7,745.1	37.1	13.6	90.01	-4,298.0	467.9	2,677.4	2,629.9	47.46	56.409	
9,900.0	7,740.0	7,747.5	7,745.6	38.5	13.6	90.09	-4,298.0	467.9	2,578.7	2,529.6	49.07	52.552	
10,000.0	7,740.0	7,748.0	7,746.2	40.0	13.6	90.16	-4,298.0	467.9	2,480.1	2,429.4	50.69	48.929	
10,100.0	7,740.0	7,748.5	7,746.7	41.6	13.6	90.23	-4,298.0	467.9	2,381.6	2,329.3	52.32	45.521	
10,200.0	7,740.0	7,749.1	7,747.2	43.1	13.6	90.30	-4,298.0	468.0	2,283.2	2,229.3	53.96	42.314	
10,300.0	7,740.0	7,749.6	7,747.7	44.6	13.6	90.36	-4,298.0	468.0	2,185.0	2,129.4	55.61	39.293	
10,400.0	7,740.0	7,750.0	7,748.2	46.2	13.6	90.43	-4,298.0	468.0	2,087.0	2,029.8	57.27	36.444	
10,500.0	7,740.0	7,750.5	7,748.7	47.8	13.6	90.50	-4,298.0	468.0	1,989.2	1,930.3	58.93	33.754	
10,600.0	7,740.0	7,751.0	7,749.1	49.4	13.6	90.56	-4,298.0	468.0	1,891.6	1,831.0	60.60	31.213	
10,700.0	7,740.0	7,751.5	7,749.6	51.0	13.6	90.63	-4,298.0	468.0	1,794.3	1,732.0	62.28	28.809	
10,800.0	7,740.0	7,751.9	7,750.1	52.6	13.6	90.69	-4,298.0	468.0	1,697.2	1,633.3	63.96	26.534	
10,900.0	7,740.0	7,752.4	7,750.5	54.2	13.6	90.75	-4,298.0	468.1	1,600.6	1,534.9	65.65	24.380	
11,000.0	7,740.0	7,752.8	7,751.0	55.8	13.6	90.81	-4,298.0	468.1	1,504.4	1,437.0	67.34	22.339	
11,100.0	7,740.0	7,753.3	7,751.4	57.5	13.6	90.87	-4,298.0	468.1	1,408.7	1,339.6	69.04	20.405	
11,200.0	7,740.0	7,753.7	7,751.9	59.1	13.6	90.93	-4,298.0	468.1	1,313.6	1,242.9	70.74	18.571	
11,300.0	7,740.0	7,754.2	7,752.3	60.8	13.6	90.99	-4,298.1	468.1	1,219.3	1,146.9	72.44	16.833	
11,400.0	7,740.0	7,754.6	7,752.7	62.4	13.6	91.05	-4,298.1	468.1	1,126.1	1,051.9	74.14	15.188	
11,500.0	7,740.0	7,755.0	7,753.1	64.1	13.6	91.10	-4,298.1	468.1	1,034.1	958.2	75.85	13.633	
11,600.0	7,740.0	7,755.4	7,753.5	65.7	13.6	91.16	-4,298.1	468.1	943.7	866.1	77.56	12.167	
11,700.0	7,740.0	7,755.8	7,753.9	67.4	13.6	91.21	-4,298.1	468.1	855.4	776.2	79.27	10.791	
11,800.0	7,740.0	7,756.2	7,754.3	69.1	13.6	91.27	-4,298.1	468.2	770.0	689.1	80.98	9.509	
11,900.0	7,740.0	7,756.6	7,754.7	70.8	13.6	91.32	-4,298.1	468.2	688.6	605.9	82.70	8.327	
12,000.0	7,740.0	7,757.0	7,755.1	72.4	13.6	91.37	-4,298.1	468.2	612.7	528.3	84.41	7.259	
12,100.0	7,740.0	7,757.4	7,755.5	74.1	13.6	91.42	-4,298.1	468.2	544.7	458.5	86.13	6.324	
12,200.0	7,740.0	7,757.7	7,755.9	75.8	13.6	91.47	-4,298.1	468.2	487.8	399.9	87.85	5.552	
12,300.0	7,740.0	7,758.1	7,756.2	77.5	13.6	91.53	-4,298.1	468.2	446.2	356.7	89.57	4.982	
12,400.0	7,740.0	7,758.5	7,756.6	79.2	13.6	91.57	-4,298.1	468.2	424.7	333.4	91.30	4.652	
12,443.8	7,740.0	7,758.6	7,756.8	79.9	13.6	91.60	-4,298.1	468.2	422.4	330.4	92.05	4.589 CC, ES	
12,500.0	7,740.0	7,758.8	7,757.0	80.9	13.6	91.62	-4,298.1	468.2	426.1	333.1	93.02	4.581 SF	
12,600.0	7,740.0	7,759.2	7,757.3	82.6	13.6	91.67	-4,298.1	468.2	450.4	355.6	94.75	4.753	
12,700.0	7,740.0	7,759.5	7,757.7	84.3	13.6	91.72	-4,298.1	468.3	494.0	397.6	96.47	5.121	
12,800.0	7,740.0	7,759.9	7,758.0	86.0	13.6	91.77	-4,298.1	468.3	552.5	454.3	98.20	5.627	
12,900.0	7,740.0	7,760.2	7,758.4	87.7	13.6	91.81	-4,298.1	468.3	621.7	521.8	99.93	6.222	
13,000.0	7,740.0	7,760.6	7,758.7	89.4	13.6	91.86	-4,298.1	468.3	698.4	596.7	101.66	6.870	
13,100.0	7,740.0	7,760.9	7,759.0	91.1	13.6	91.90	-4,298.1	468.3	780.4	677.0	103.39	7.548	
13,200.0	7,740.0	7,761.2	7,759.4	92.8	13.6	91.95	-4,298.1	468.3	866.1	761.0	105.12	8.240	
13,300.0	7,740.0	7,761.6	7,759.7	94.5	13.6	91.99	-4,298.1	468.3	954.7	847.8	106.85	8.935	
13,400.0	7,740.0	7,761.9	7,760.0	96.2	13.6	92.04	-4,298.1	468.3	1,045.3	936.7	108.58	9.627	
13,500.0	7,740.0	7,762.2	7,760.3	98.0	13.6	92.08	-4,298.1	468.3	1,137.5	1,027.2	110.31	10.312	
13,600.0	7,740.0	7,762.5	7,760.6	99.7	13.6	92.12	-4,298.1	468.3	1,230.9	1,118.9	112.04	10.986	
13,700.0	7,740.0	7,762.8	7,760.9	101.4	13.6	92.16	-4,298.1	468.3	1,325.3	1,211.5	113.77	11.648	
13,800.0	7,740.0	7,763.1	7,761.3	103.1	13.6	92.20	-4,298.1	468.4	1,420.4	1,304.9	115.51	12.297	
13,900.0	7,740.0	7,763.4	7,761.6	104.8	13.6	92.25	-4,298.1	468.4	1,516.2	1,398.9	117.24	12.932	
14,000.0	7,740.0	7,763.7	7,761.8	106.5	13.6	92.29	-4,298.1	468.4	1,612.5	1,493.5	118.98	13.553	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - SOSA A UNIT 1 (EXISTING) - EXISTING - EXISTIN													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		
14,100.0	7,740.0	7,764.0	7,762.1	108.3	13.6	92.33	-4,298.1	468.4	1,709.2	1,588.5	120.71	14.159		
14,200.0	7,740.0	7,764.3	7,762.4	110.0	13.6	92.36	-4,298.1	468.4	1,806.2	1,683.8	122.45	14.751		
14,300.0	7,740.0	7,764.6	7,762.7	111.7	13.6	92.40	-4,298.1	468.4	1,903.6	1,779.4	124.18	15.329		
14,400.0	7,740.0	7,764.9	7,763.0	113.4	13.6	92.44	-4,298.1	468.4	2,001.2	1,875.3	125.92	15.893		
14,500.0	7,740.0	7,765.2	7,763.3	115.2	13.6	92.48	-4,298.1	468.4	2,099.1	1,971.4	127.65	16.444		
14,600.0	7,740.0	7,765.4	7,763.6	116.9	13.6	92.52	-4,298.1	468.4	2,197.1	2,067.7	129.39	16.981		
14,700.0	7,740.0	7,765.7	7,763.8	118.6	13.6	92.55	-4,298.1	468.4	2,295.4	2,164.2	131.13	17.505		
14,800.0	7,740.0	7,766.0	7,764.1	120.4	13.6	92.59	-4,298.1	468.4	2,393.7	2,260.8	132.86	18.016		
14,900.0	7,740.0	7,766.2	7,764.4	122.1	13.6	92.63	-4,298.1	468.4	2,492.2	2,357.6	134.60	18.516		
15,000.0	7,740.0	7,766.5	7,764.6	123.8	13.6	92.66	-4,298.1	468.4	2,590.8	2,454.5	136.34	19.003		
15,100.0	7,740.0	7,766.8	7,764.9	125.5	13.6	92.70	-4,298.1	468.5	2,689.5	2,551.4	138.08	19.479		
15,200.0	7,740.0	7,767.0	7,765.1	127.3	13.6	92.73	-4,298.1	468.5	2,788.3	2,648.5	139.81	19.943		
15,300.0	7,740.0	7,767.3	7,765.4	129.0	13.6	92.77	-4,298.1	468.5	2,887.2	2,745.7	141.55	20.397		
15,400.0	7,740.0	7,767.5	7,765.6	130.7	13.6	92.80	-4,298.1	468.5	2,986.2	2,842.9	143.29	20.840		
15,500.0	7,740.0	7,767.8	7,765.9	132.5	13.6	92.83	-4,298.1	468.5	3,085.2	2,940.2	145.03	21.273		
15,600.0	7,740.0	7,768.0	7,766.1	134.2	13.6	92.87	-4,298.1	468.5	3,184.3	3,037.5	146.77	21.696		
15,700.0	7,740.0	7,768.3	7,766.4	135.9	13.6	92.90	-4,298.1	468.5	3,283.4	3,134.9	148.51	22.110		
15,800.0	7,740.0	7,768.5	7,766.6	137.7	13.6	92.93	-4,298.1	468.5	3,382.6	3,232.4	150.24	22.514		
15,900.0	7,740.0	7,768.7	7,766.9	139.4	13.6	92.97	-4,298.1	468.5	3,481.9	3,329.9	151.98	22.909		
16,000.0	7,740.0	7,769.0	7,767.1	141.1	13.6	93.00	-4,298.1	468.5	3,581.1	3,427.4	153.72	23.296		
16,083.0	7,740.0	7,769.2	7,767.3	142.6	13.6	93.02	-4,298.1	468.5	3,663.6	3,508.4	155.17	23.611		
16,083.8	7,740.0	7,769.2	7,767.3	142.6	13.6	93.02	-4,298.1	468.5	3,664.4	3,509.2	155.18	23.614		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - SUR												Offset Site Error: 0.0 ft	
Survey Program: 1024-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	11.3	11.3	0.0	0.0	153.27	-2,303.7	1,159.9	2,579.2				
100.0	100.0	114.1	114.1	0.2	0.2	153.27	-2,303.6	1,159.9	2,579.1	2,578.8	0.35	7,383.463	
200.0	200.0	216.9	216.9	0.3	0.4	153.27	-2,303.4	1,159.9	2,579.0	2,578.3	0.70	3,675.156	
300.0	300.0	319.7	319.7	0.5	0.6	153.27	-2,303.1	1,159.9	2,578.7	2,577.6	1.05	2,446.230	
400.0	400.0	422.5	422.5	0.7	0.7	153.26	-2,302.6	1,159.9	2,578.3	2,576.9	1.41	1,833.048	
500.0	500.0	525.3	525.3	0.8	0.9	153.26	-2,302.0	1,160.0	2,577.8	2,576.0	1.76	1,465.510	
600.0	600.0	628.1	628.1	1.0	1.1	153.25	-2,301.3	1,160.0	2,577.2	2,575.1	2.11	1,220.613	
700.0	700.0	730.9	730.9	1.2	1.3	153.24	-2,300.5	1,160.0	2,576.5	2,574.0	2.46	1,045.732	
800.0	800.0	833.7	833.7	1.4	1.4	153.23	-2,299.5	1,160.0	2,575.6	2,572.8	2.82	914.581	
900.0	900.0	936.5	936.5	1.5	1.6	153.22	-2,298.4	1,160.0	2,574.7	2,571.5	3.17	812.570	
1,000.0	1,000.0	1,034.7	1,034.7	1.7	1.8	153.21	-2,297.3	1,160.0	2,573.7	2,570.2	3.51	732.576	
1,061.3	1,061.3	1,078.8	1,078.8	1.8	1.9	102.19	-2,296.9	1,160.2	2,573.4	2,569.7	3.69	697.804	
1,100.0	1,100.0	1,105.9	1,105.8	1.9	1.9	102.19	-2,296.8	1,160.3	2,573.5	2,569.7	3.80	676.729	
1,200.0	1,200.0	1,183.0	1,183.0	2.1	2.0	102.21	-2,297.1	1,161.3	2,574.9	2,570.7	4.11	625.835	
1,300.0	1,299.9	1,245.9	1,245.9	2.3	2.2	102.23	-2,298.0	1,162.5	2,577.7	2,573.3	4.40	585.316	
1,400.0	1,399.7	1,325.7	1,325.6	2.4	2.3	102.28	-2,299.8	1,164.2	2,582.0	2,577.3	4.73	545.968	
1,500.0	1,499.4	1,411.4	1,411.3	2.6	2.4	102.35	-2,302.1	1,166.2	2,587.3	2,582.2	5.07	509.930	
1,600.0	1,598.9	1,494.0	1,493.7	2.8	2.6	102.43	-2,304.6	1,168.9	2,593.5	2,588.0	5.43	478.052	
1,700.0	1,698.3	1,564.0	1,563.7	3.1	2.7	102.49	-2,306.9	1,171.9	2,600.8	2,595.1	5.77	450.766	
1,800.0	1,797.4	1,645.3	1,644.8	3.3	2.9	102.57	-2,309.8	1,176.7	2,609.5	2,603.4	6.15	423.966	
1,908.5	1,904.7	1,735.6	1,734.8	3.6	3.0	102.66	-2,313.2	1,183.3	2,620.3	2,613.7	6.60	396.987	
2,000.0	1,995.0	1,824.7	1,823.5	3.8	3.2	102.86	-2,316.9	1,190.0	2,630.0	2,623.0	7.01	375.187	
2,100.0	2,093.8	1,921.2	1,919.7	4.1	3.4	103.08	-2,320.8	1,197.4	2,640.6	2,633.1	7.46	353.753	
2,200.0	2,192.5	2,029.3	2,027.3	4.4	3.6	103.32	-2,325.2	1,205.7	2,651.2	2,643.3	7.95	333.622	
2,300.0	2,291.3	2,106.9	2,104.6	4.7	3.8	103.49	-2,328.4	1,211.5	2,662.0	2,653.6	8.38	317.698	
2,400.0	2,390.0	2,191.6	2,189.0	5.0	4.0	103.68	-2,332.5	1,218.3	2,673.5	2,664.7	8.83	302.816	
2,500.0	2,488.8	2,276.9	2,273.9	5.3	4.2	103.86	-2,337.0	1,225.3	2,685.5	2,676.3	9.28	289.237	
2,600.0	2,587.5	2,386.5	2,382.9	5.6	4.4	104.09	-2,342.9	1,234.7	2,698.0	2,688.2	9.79	275.672	
2,700.0	2,686.3	2,531.1	2,527.0	5.9	4.7	104.43	-2,349.7	1,244.6	2,709.1	2,698.7	10.35	261.635	
2,800.0	2,785.0	2,629.3	2,624.9	6.2	4.9	104.65	-2,353.4	1,251.5	2,719.4	2,708.5	10.84	250.806	
2,900.0	2,883.8	2,709.4	2,704.7	6.5	5.1	104.82	-2,356.5	1,257.5	2,730.1	2,718.8	11.30	241.670	
3,000.0	2,982.5	2,810.4	2,805.3	6.8	5.3	105.04	-2,361.1	1,264.9	2,741.3	2,729.5	11.79	232.482	
3,100.0	3,081.3	2,928.1	2,922.7	7.2	5.6	105.30	-2,365.9	1,273.0	2,752.1	2,739.7	12.32	223.422	
3,200.0	3,180.0	3,023.0	3,017.3	7.5	5.8	105.51	-2,369.5	1,279.5	2,762.5	2,749.7	12.80	215.742	
3,300.0	3,278.7	3,118.0	3,112.0	7.8	6.0	105.71	-2,373.2	1,286.2	2,773.2	2,759.9	13.29	208.655	
3,400.0	3,377.5	3,206.9	3,200.6	8.1	6.2	105.90	-2,376.9	1,292.6	2,784.2	2,770.5	13.77	202.200	
3,500.0	3,476.2	3,327.3	3,320.6	8.4	6.4	106.15	-2,381.5	1,301.3	2,795.0	2,780.6	14.31	195.337	
3,600.0	3,575.0	3,410.9	3,403.8	8.7	6.6	106.31	-2,384.5	1,307.8	2,805.7	2,790.9	14.78	189.808	
3,700.0	3,673.7	3,507.8	3,500.4	9.1	6.8	106.50	-2,388.3	1,315.2	2,816.8	2,801.5	15.28	184.383	
3,800.0	3,772.5	3,603.4	3,595.7	9.4	7.1	106.70	-2,392.4	1,322.1	2,828.0	2,812.3	15.77	179.334	
3,900.0	3,871.2	3,712.7	3,704.5	9.7	7.3	106.90	-2,396.6	1,330.8	2,839.2	2,822.9	16.30	174.215	
4,000.0	3,970.0	3,812.4	3,803.8	10.0	7.5	107.08	-2,400.0	1,338.9	2,850.0	2,833.2	16.80	169.610	
4,100.0	4,068.7	3,897.2	3,888.4	10.3	7.7	107.24	-2,403.4	1,345.3	2,861.3	2,844.0	17.28	165.595	
4,200.0	4,167.5	3,989.6	3,980.4	10.7	7.9	107.41	-2,407.3	1,352.8	2,872.9	2,855.1	17.77	161.643	
4,300.0	4,266.2	4,089.7	4,080.0	11.0	8.2	107.59	-2,411.4	1,361.1	2,884.6	2,866.3	18.28	157.777	
4,400.0	4,364.9	4,179.6	4,169.5	11.3	8.4	107.75	-2,415.3	1,368.6	2,896.5	2,877.7	18.77	154.293	
4,500.0	4,463.7	4,263.7	4,253.2	11.6	8.6	107.89	-2,419.2	1,375.8	2,908.8	2,889.6	19.25	151.085	
4,600.0	4,562.4	4,385.1	4,374.1	11.9	8.9	108.11	-2,424.9	1,385.7	2,921.0	2,901.2	19.80	147.524	
4,700.0	4,661.2	4,506.9	4,495.4	12.3	9.1	108.33	-2,429.7	1,395.2	2,932.5	2,912.1	20.35	144.076	
4,800.0	4,759.9	4,633.3	4,621.4	12.6	9.4	108.56	-2,433.9	1,404.7	2,943.2	2,922.3	20.91	140.741	
4,900.0	4,858.7	4,742.8	4,730.6	12.9	9.6	108.77	-2,437.0	1,411.7	2,953.2	2,931.8	21.43	137.800	
5,000.0	4,957.4	4,870.9	4,858.6	13.2	9.9	109.05	-2,440.6	1,418.0	2,962.8	2,940.8	21.97	134.875	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - SUR												Offset Site Error: 0.0 ft	
Survey Program: 1024-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	5,056.2	5,064.3	5,051.9	13.6	10.2	109.59	-2,444.1	1,420.2	2,970.1	2,947.5	22.58	131.546	
5,200.0	5,154.9	5,160.7	5,148.3	13.9	10.3	109.87	-2,444.7	1,420.2	2,976.1	2,953.0	23.04	129.186	
5,300.0	5,253.7	5,276.9	5,264.4	14.2	10.5	110.21	-2,445.2	1,419.8	2,981.9	2,958.4	23.52	126.757	
5,400.0	5,352.4	5,387.4	5,374.9	14.5	10.7	110.54	-2,445.0	1,419.2	2,987.1	2,963.1	24.00	124.452	
5,500.0	5,451.1	5,485.5	5,473.1	14.9	10.8	110.83	-2,444.9	1,418.5	2,992.4	2,968.0	24.46	122.343	
5,600.0	5,549.9	5,589.0	5,576.5	15.2	11.0	111.13	-2,444.7	1,417.7	2,997.7	2,972.7	24.92	120.274	
5,700.0	5,648.6	5,685.3	5,672.9	15.5	11.1	111.42	-2,444.4	1,416.9	3,002.9	2,977.6	25.38	118.332	
5,800.0	5,747.4	5,786.8	5,774.4	15.8	11.3	111.71	-2,444.2	1,416.2	3,008.4	2,982.5	25.84	116.432	
5,900.0	5,846.1	5,897.2	5,884.7	16.2	11.4	112.03	-2,443.7	1,415.3	3,013.6	2,987.3	26.31	114.540	
6,000.0	5,944.9	5,999.2	5,986.8	16.5	11.6	112.33	-2,442.9	1,414.2	3,018.6	2,991.9	26.77	112.767	
6,100.0	6,043.6	6,095.4	6,082.9	16.8	11.7	112.62	-2,442.2	1,413.0	3,023.7	2,996.5	27.22	111.089	
6,200.0	6,142.4	6,183.6	6,171.1	17.1	11.9	112.86	-2,441.7	1,412.8	3,029.1	3,001.5	27.66	109.506	
6,300.0	6,241.1	6,286.9	6,274.4	17.5	12.0	113.14	-2,440.9	1,412.8	3,034.7	3,006.6	28.13	107.896	
6,400.0	6,339.9	6,387.4	6,374.9	17.8	12.2	113.42	-2,440.1	1,412.7	3,040.2	3,011.6	28.59	106.353	
6,500.0	6,438.6	6,482.7	6,470.2	18.1	12.3	113.67	-2,439.4	1,412.7	3,045.9	3,016.8	29.04	104.897	
6,600.0	6,537.3	6,580.0	6,567.5	18.4	12.5	113.94	-2,438.8	1,412.5	3,051.6	3,022.1	29.49	103.486	
6,700.0	6,636.1	6,671.6	6,659.1	18.8	12.6	114.19	-2,438.3	1,412.3	3,057.6	3,027.7	29.93	102.157	
6,800.0	6,734.8	6,763.0	6,750.5	19.1	12.8	114.44	-2,438.2	1,412.2	3,063.9	3,033.6	30.37	100.883	
6,900.0	6,833.6	6,860.1	6,847.6	19.4	12.9	114.70	-2,438.1	1,411.9	3,070.4	3,039.6	30.82	99.628	
7,000.0	6,932.3	6,955.7	6,943.2	19.7	13.1	114.96	-2,438.1	1,411.8	3,077.1	3,045.8	31.26	98.421	
7,100.0	7,031.1	7,055.2	7,042.7	20.1	13.2	115.23	-2,438.1	1,411.7	3,083.9	3,052.1	31.72	97.237	
7,190.5	7,120.5	7,155.3	7,142.8	20.4	13.4	115.49	-2,438.0	1,411.8	3,089.9	3,057.8	32.14	96.144	
7,200.0	7,129.8	7,167.3	7,154.8	20.4	13.4	110.37	-2,437.9	1,411.8	3,090.5	3,058.3	32.20	95.983	
7,250.0	7,179.4	7,229.7	7,217.2	20.5	13.5	75.32	-2,437.5	1,411.9	3,090.6	3,058.2	32.40	95.398	
7,300.0	7,228.8	7,288.9	7,276.4	20.6	13.6	43.68	-2,436.8	1,412.0	3,086.3	3,053.9	32.40	95.244	
7,350.0	7,277.9	7,334.4	7,321.9	20.7	13.7	26.13	-2,436.2	1,412.1	3,077.6	3,045.4	32.20	95.571	
7,400.0	7,326.1	7,373.0	7,360.5	20.7	13.8	16.67	-2,435.8	1,412.2	3,064.9	3,033.1	31.81	96.364	
7,450.0	7,373.2	7,416.3	7,403.7	20.7	13.8	10.98	-2,435.5	1,412.3	3,048.2	3,016.9	31.24	97.586	
7,500.0	7,418.7	7,462.5	7,450.0	20.7	13.9	7.16	-2,435.2	1,412.3	3,027.4	2,996.9	30.50	99.260	
7,550.0	7,462.4	7,504.4	7,491.9	20.6	14.0	4.31	-2,434.9	1,412.3	3,002.9	2,973.3	29.60	101.451	
7,600.0	7,503.8	7,541.3	7,528.8	20.5	14.0	1.99	-2,434.7	1,412.4	2,974.8	2,946.2	28.55	104.197	
7,650.0	7,542.8	7,579.2	7,566.7	20.5	14.1	-0.08	-2,434.5	1,412.6	2,943.2	2,915.9	27.38	107.497	
7,700.0	7,578.8	7,615.0	7,602.5	20.4	14.2	-2.08	-2,434.3	1,412.7	2,908.5	2,882.4	26.11	111.380	
7,750.0	7,611.8	7,649.7	7,637.2	20.3	14.2	-4.20	-2,434.1	1,413.0	2,870.8	2,846.0	24.79	115.801	
7,800.0	7,641.5	7,677.0	7,664.5	20.2	14.3	-6.60	-2,433.9	1,413.2	2,830.5	2,807.0	23.46	120.658	
7,850.0	7,667.6	7,702.4	7,689.9	20.2	14.3	-9.57	-2,433.7	1,413.4	2,787.8	2,765.6	22.21	125.522	
7,900.0	7,689.9	7,721.5	7,709.0	20.2	14.3	-13.47	-2,433.6	1,413.5	2,743.2	2,722.0	21.18	129.518	
7,950.0	7,708.2	7,740.0	7,727.5	20.1	14.4	-19.06	-2,433.5	1,413.7	2,696.9	2,676.3	20.64	130.656	
8,000.0	7,722.5	7,751.1	7,738.6	20.2	14.4	-27.61	-2,433.5	1,413.7	2,649.3	2,628.3	21.05	125.848	
8,050.0	7,732.6	7,761.1	7,748.6	20.2	14.4	-41.90	-2,433.5	1,413.8	2,600.8	2,577.6	23.16	112.299	
8,100.0	7,738.4	7,766.8	7,754.3	20.3	14.4	-65.36	-2,433.4	1,413.8	2,551.7	2,525.0	26.71	95.543	
8,142.5	7,740.0	7,768.3	7,755.8	20.4	14.4	-90.65	-2,433.4	1,413.8	2,509.8	2,481.8	27.95	89.785	
8,200.0	7,740.0	7,768.1	7,755.6	20.5	14.4	-90.63	-2,433.4	1,413.8	2,453.1	2,424.9	28.18	87.053	
8,300.0	7,740.0	7,767.8	7,755.3	20.9	14.4	-90.59	-2,433.4	1,413.8	2,354.6	2,325.9	28.73	81.965	
8,400.0	7,740.0	7,767.5	7,755.0	21.4	14.4	-90.55	-2,433.4	1,413.8	2,256.3	2,226.8	29.45	76.604	
8,442.5	7,740.0	7,767.4	7,754.9	21.7	14.4	-90.53	-2,433.4	1,413.8	2,214.5	2,184.7	29.81	74.288	
8,500.0	7,740.0	7,767.2	7,754.7	22.1	14.4	-90.48	-2,433.4	1,413.8	2,158.1	2,127.9	30.26	71.317	
8,600.0	7,740.0	7,766.9	7,754.4	22.8	14.4	-90.41	-2,433.4	1,413.8	2,060.5	2,029.4	31.12	66.218	
8,700.0	7,740.0	7,766.6	7,754.1	23.6	14.4	-90.34	-2,433.4	1,413.8	1,963.5	1,931.5	32.05	61.261	
8,800.0	7,740.0	7,766.2	7,753.7	24.5	14.4	-90.29	-2,433.4	1,413.8	1,867.4	1,834.3	33.05	56.495	
8,842.5	7,740.0	7,766.1	7,753.6	25.0	14.4	-90.27	-2,433.4	1,413.8	1,826.8	1,793.3	33.50	54.536	
8,900.0	7,740.0	7,765.9	7,753.4	25.5	14.4	-90.24	-2,433.4	1,413.8	1,772.1	1,737.9	34.22	51.784	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - SUR												Offset Site Error:	0.0 ft
Survey Program: 1024-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
9,000.0	7,740.0	7,765.6	7,753.0	26.6	14.4	-90.21	-2,433.4	1,413.8	1,677.4	1,641.8	35.53	47.209	
9,100.0	7,740.0	7,765.2	7,752.7	27.7	14.4	-90.17	-2,433.4	1,413.8	1,583.3	1,546.4	36.90	42.908	
9,200.0	7,740.0	7,764.9	7,752.3	28.9	14.4	-90.14	-2,433.4	1,413.8	1,490.1	1,451.7	38.32	38.886	
9,300.0	7,740.0	7,764.5	7,752.0	30.2	14.4	-90.10	-2,433.4	1,413.8	1,397.7	1,358.0	39.78	35.139	
9,342.5	7,740.0	7,764.4	7,751.9	30.7	14.4	-90.09	-2,433.4	1,413.8	1,358.8	1,318.4	40.41	33.628	
9,399.5	7,740.0	7,764.2	7,751.7	31.5	14.4	-90.07	-2,433.4	1,413.8	1,306.8	1,265.5	41.39	31.573	
9,500.0	7,740.0	7,763.9	7,751.3	32.8	14.4	-90.03	-2,433.5	1,413.8	1,216.1	1,173.2	42.92	28.331	
9,600.0	7,740.0	7,763.5	7,751.0	34.2	14.4	-90.00	-2,433.5	1,413.8	1,127.5	1,083.0	44.47	25.351	
9,700.0	7,740.0	7,763.2	7,750.7	35.6	14.4	-89.96	-2,433.5	1,413.8	1,040.9	994.8	46.04	22.606	
9,800.0	7,740.0	7,762.9	7,750.3	37.1	14.4	-89.93	-2,433.5	1,413.8	956.9	909.3	47.63	20.089	
9,900.0	7,740.0	7,762.5	7,750.0	38.5	14.4	-89.89	-2,433.5	1,413.8	876.3	827.1	49.24	17.798	
10,000.0	7,740.0	7,762.2	7,749.7	40.0	14.4	-89.86	-2,433.5	1,413.8	800.1	749.3	50.85	15.733	
10,100.0	7,740.0	7,761.8	7,749.3	41.6	14.4	-89.82	-2,433.5	1,413.8	729.7	677.2	52.48	13.903	
10,200.0	7,740.0	7,761.5	7,749.0	43.1	14.4	-89.79	-2,433.5	1,413.8	666.9	612.7	54.12	12.321	
10,300.0	7,740.0	7,761.2	7,748.7	44.6	14.4	-89.75	-2,433.5	1,413.8	614.0	558.2	55.77	11.008	
10,400.0	7,740.0	7,760.8	7,748.3	46.2	14.4	-89.72	-2,433.5	1,413.8	573.8	516.3	57.43	9.991	
10,500.0	7,740.0	7,760.5	7,748.0	47.8	14.4	-89.68	-2,433.5	1,413.8	549.0	489.9	59.09	9.291	
10,588.7	7,740.0	7,760.2	7,747.7	49.2	14.4	-89.65	-2,433.5	1,413.8	541.8	481.2	60.58	8.944 CC	
10,600.0	7,740.0	7,760.2	7,747.7	49.4	14.4	-89.64	-2,433.5	1,413.8	541.9	481.2	60.76	8.919 ES	
10,700.0	7,740.0	7,759.8	7,747.3	51.0	14.4	-89.61	-2,433.5	1,413.8	553.1	490.7	62.44	8.858 SF	
10,800.0	7,740.0	7,759.5	7,747.0	52.6	14.4	-89.57	-2,433.5	1,413.8	581.6	517.4	64.12	9.069	
10,900.0	7,740.0	7,759.2	7,746.6	54.2	14.4	-89.54	-2,433.5	1,413.8	624.9	559.1	65.81	9.495	
11,000.0	7,740.0	7,758.8	7,746.3	55.8	14.4	-89.50	-2,433.5	1,413.8	680.2	612.7	67.50	10.077	
11,100.0	7,740.0	7,758.5	7,746.0	57.5	14.4	-89.47	-2,433.5	1,413.8	745.0	675.8	69.19	10.766	
11,200.0	7,740.0	7,758.2	7,745.6	59.1	14.4	-89.43	-2,433.5	1,413.8	816.8	745.9	70.89	11.522	
11,300.0	7,740.0	7,757.8	7,745.3	60.8	14.4	-89.40	-2,433.5	1,413.8	894.1	821.5	72.59	12.317	
11,400.0	7,740.0	7,757.5	7,745.0	62.4	14.4	-89.36	-2,433.5	1,413.8	975.6	901.3	74.30	13.130	
11,500.0	7,740.0	7,757.2	7,744.7	64.1	14.4	-89.33	-2,433.5	1,413.8	1,060.2	984.2	76.00	13.949	
11,600.0	7,740.0	7,756.8	7,744.3	65.7	14.4	-89.29	-2,433.5	1,413.8	1,147.3	1,069.5	77.71	14.763	
11,700.0	7,740.0	7,756.5	7,744.0	67.4	14.4	-89.26	-2,433.5	1,413.8	1,236.3	1,156.9	79.43	15.566	
11,800.0	7,740.0	7,756.2	7,743.7	69.1	14.4	-89.22	-2,433.5	1,413.8	1,326.9	1,245.8	81.14	16.354	
11,900.0	7,740.0	7,755.9	7,743.3	70.8	14.4	-89.19	-2,433.5	1,413.8	1,418.8	1,335.9	82.85	17.124	
12,000.0	7,740.0	7,755.5	7,743.0	72.4	14.4	-89.15	-2,433.5	1,413.8	1,511.7	1,427.1	84.57	17.875	
12,100.0	7,740.0	7,755.2	7,742.7	74.1	14.4	-89.12	-2,433.5	1,413.8	1,605.4	1,519.2	86.29	18.605	
12,200.0	7,740.0	7,754.9	7,742.3	75.8	14.4	-89.08	-2,433.5	1,413.8	1,699.9	1,611.9	88.01	19.315	
12,300.0	7,740.0	7,754.5	7,742.0	77.5	14.4	-89.05	-2,433.5	1,413.8	1,795.0	1,705.2	89.73	20.004	
12,400.0	7,740.0	7,754.2	7,741.7	79.2	14.4	-89.01	-2,433.5	1,413.8	1,890.6	1,799.1	91.46	20.672	
12,500.0	7,740.0	7,753.9	7,741.3	80.9	14.4	-88.98	-2,433.5	1,413.8	1,986.6	1,893.4	93.18	21.320	
12,600.0	7,740.0	7,753.5	7,741.0	82.6	14.4	-88.94	-2,433.5	1,413.8	2,082.9	1,988.0	94.91	21.948	
12,700.0	7,740.0	7,753.2	7,740.7	84.3	14.4	-88.91	-2,433.5	1,413.7	2,179.7	2,083.0	96.63	22.556	
12,800.0	7,740.0	7,752.9	7,740.3	86.0	14.4	-88.87	-2,433.5	1,413.7	2,276.7	2,178.3	98.36	23.146	
12,900.0	7,740.0	7,752.5	7,740.0	87.7	14.4	-88.84	-2,433.5	1,413.7	2,373.9	2,273.8	100.09	23.718	
13,000.0	7,740.0	7,752.2	7,739.7	89.4	14.4	-88.80	-2,433.5	1,413.7	2,471.4	2,369.6	101.82	24.272	
13,100.0	7,740.0	7,751.9	7,739.4	91.1	14.4	-88.77	-2,433.5	1,413.7	2,569.0	2,465.5	103.55	24.810	
13,200.0	7,740.0	7,751.5	7,739.0	92.8	14.4	-88.73	-2,433.5	1,413.7	2,666.9	2,561.6	105.28	25.331	
13,300.0	7,740.0	7,751.2	7,738.7	94.5	14.4	-88.70	-2,433.5	1,413.7	2,764.9	2,657.8	107.01	25.837	
13,400.0	7,740.0	7,750.9	7,738.4	96.2	14.4	-88.66	-2,433.5	1,413.7	2,863.0	2,754.2	108.74	26.328	
13,500.0	7,740.0	7,750.6	7,738.0	98.0	14.4	-88.63	-2,433.5	1,413.7	2,961.2	2,850.8	110.48	26.804	
13,600.0	7,740.0	7,750.2	7,737.7	99.7	14.4	-88.59	-2,433.5	1,413.7	3,059.6	2,947.4	112.21	27.267	
13,700.0	7,740.0	7,749.9	7,737.4	101.4	14.4	-88.56	-2,433.5	1,413.7	3,158.1	3,044.1	113.94	27.716	
13,800.0	7,740.0	7,749.6	7,737.0	103.1	14.4	-88.52	-2,433.5	1,413.7	3,256.6	3,140.9	115.68	28.152	
13,900.0	7,740.0	7,749.2	7,736.7	104.8	14.4	-88.49	-2,433.5	1,413.7	3,355.3	3,237.9	117.41	28.577	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - SUR													Offset Site Error: 0.0 ft
Survey Program: 1024-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	
14,000.0	7,740.0	7,748.9	7,736.4	106.5	14.4	-88.45	-2,433.5	1,413.7	3,454.0	3,334.9	119.15	28.989	
14,100.0	7,740.0	7,748.6	7,736.1	108.3	14.4	-88.42	-2,433.5	1,413.7	3,552.8	3,431.9	120.88	29.390	
14,200.0	7,740.0	7,748.3	7,735.7	110.0	14.4	-88.38	-2,433.5	1,413.7	3,651.7	3,529.0	122.62	29.780	
14,300.0	7,740.0	7,747.9	7,735.4	111.7	14.4	-88.35	-2,433.5	1,413.7	3,750.6	3,626.2	124.36	30.160	
14,400.0	7,740.0	7,747.6	7,735.1	113.4	14.4	-88.31	-2,433.5	1,413.7	3,849.6	3,723.5	126.10	30.529	
14,500.0	7,740.0	7,747.3	7,734.7	115.2	14.4	-88.28	-2,433.5	1,413.7	3,948.6	3,820.8	127.83	30.889	
14,600.0	7,740.0	7,746.9	7,734.4	116.9	14.4	-88.25	-2,433.5	1,413.7	4,047.7	3,918.1	129.57	31.239	
14,700.0	7,740.0	7,746.6	7,734.1	118.6	14.4	-88.21	-2,433.5	1,413.7	4,146.8	4,015.5	131.31	31.581	
14,800.0	7,740.0	7,746.3	7,733.8	120.4	14.4	-88.18	-2,433.5	1,413.7	4,245.9	4,112.9	133.05	31.913	
14,900.0	7,740.0	7,746.0	7,733.4	122.1	14.4	-88.14	-2,433.5	1,413.7	4,345.1	4,210.4	134.78	32.238	
15,000.0	7,740.0	7,745.6	7,733.1	123.8	14.4	-88.11	-2,433.5	1,413.7	4,444.4	4,307.9	136.52	32.554	
15,100.0	7,740.0	7,745.3	7,732.8	125.5	14.4	-88.07	-2,433.5	1,413.7	4,543.7	4,405.4	138.26	32.863	
15,200.0	7,740.0	7,745.0	7,732.4	127.3	14.4	-88.04	-2,433.5	1,413.7	4,643.0	4,503.0	140.00	33.164	
15,300.0	7,740.0	7,744.6	7,732.1	129.0	14.4	-88.00	-2,433.5	1,413.7	4,742.3	4,600.5	141.74	33.457	
15,400.0	7,740.0	7,744.3	7,731.8	130.7	14.4	-87.97	-2,433.5	1,413.7	4,841.6	4,698.2	143.48	33.744	
15,500.0	7,740.0	7,744.0	7,731.5	132.5	14.4	-87.93	-2,433.5	1,413.7	4,941.0	4,795.8	145.22	34.025	
15,600.0	7,740.0	7,743.7	7,731.1	134.2	14.4	-87.90	-2,433.5	1,413.7	5,040.4	4,893.5	146.96	34.298	
15,700.0	7,740.0	7,743.3	7,730.8	135.9	14.4	-87.86	-2,433.5	1,413.7	5,139.9	4,991.2	148.70	34.566	
15,800.0	7,740.0	7,743.0	7,730.5	137.7	14.4	-87.83	-2,433.5	1,413.7	5,239.3	5,088.9	150.44	34.827	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (Existing) - Existing - NO SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 8365-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	153.30	-2,304.4	1,159.1	2,579.5					
100.0	100.0	95.0	95.0	0.2	0.2	153.30	-2,304.4	1,159.1	2,579.5	2,579.2	0.32	8,115.433		
200.0	200.0	195.0	195.0	0.3	0.3	153.30	-2,304.4	1,159.1	2,579.5	2,578.8	0.67	3,867.790		
300.0	300.0	295.0	295.0	0.5	0.5	153.30	-2,304.4	1,159.1	2,579.5	2,578.5	1.02	2,538.914		
400.0	400.0	395.0	395.0	0.7	0.7	153.30	-2,304.4	1,159.1	2,579.5	2,578.1	1.37	1,889.671		
500.0	500.0	495.0	495.0	0.8	0.9	153.30	-2,304.4	1,159.1	2,579.5	2,577.8	1.71	1,504.854		
600.0	600.0	595.0	595.0	1.0	1.0	153.30	-2,304.4	1,159.1	2,579.5	2,577.4	2.06	1,250.250		
700.0	700.0	695.0	695.0	1.2	1.2	153.30	-2,304.4	1,159.1	2,579.5	2,577.1	2.41	1,069.332		
800.0	800.0	795.0	795.0	1.4	1.4	153.30	-2,304.4	1,159.1	2,579.5	2,576.7	2.76	934.154		
900.0	900.0	895.0	895.0	1.5	1.6	153.30	-2,304.4	1,159.1	2,579.5	2,576.4	3.11	829.318		
1,000.0	1,000.0	995.0	995.0	1.7	1.7	153.30	-2,304.4	1,159.1	2,579.5	2,576.0	3.46	745.638		
1,100.0	1,100.0	1,095.0	1,095.0	1.9	1.9	102.29	-2,304.4	1,159.1	2,579.7	2,575.8	3.81	677.309		
1,200.0	1,200.0	1,195.0	1,195.0	2.1	2.1	102.35	-2,304.4	1,159.1	2,580.2	2,576.1	4.16	620.345		
1,300.0	1,299.9	1,294.9	1,294.9	2.3	2.3	102.43	-2,304.4	1,159.1	2,581.2	2,576.6	4.51	571.902		
1,400.0	1,399.7	1,394.7	1,394.7	2.4	2.4	102.55	-2,304.4	1,159.1	2,582.5	2,577.6	4.87	529.958		
1,500.0	1,499.4	1,494.4	1,494.4	2.6	2.6	102.70	-2,304.4	1,159.1	2,584.2	2,579.0	5.24	493.062		
1,600.0	1,598.9	1,593.9	1,593.9	2.8	2.8	102.89	-2,304.4	1,159.1	2,586.3	2,580.7	5.62	460.163		
1,700.0	1,698.3	1,693.3	1,693.3	3.1	3.0	103.11	-2,304.4	1,159.1	2,588.9	2,582.9	6.01	430.495		
1,800.0	1,797.4	1,792.4	1,792.4	3.3	3.1	103.36	-2,304.4	1,159.1	2,591.9	2,585.5	6.42	403.501		
1,908.5	1,904.7	1,899.7	1,899.7	3.6	3.3	103.66	-2,304.4	1,159.1	2,595.7	2,588.8	6.89	376.735		
2,000.0	1,995.0	1,990.0	1,990.0	3.8	3.5	103.97	-2,304.4	1,159.1	2,599.2	2,591.9	7.29	356.452		
2,100.0	2,093.8	2,088.8	2,088.8	4.1	3.6	104.30	-2,304.4	1,159.1	2,603.1	2,595.4	7.74	336.410		
2,200.0	2,192.5	2,187.5	2,187.5	4.4	3.8	104.63	-2,304.4	1,159.1	2,607.1	2,598.9	8.19	318.344		
2,300.0	2,291.3	2,286.3	2,286.3	4.7	4.0	104.96	-2,304.4	1,159.1	2,611.2	2,602.5	8.65	302.019		
2,400.0	2,390.0	2,385.0	2,385.0	5.0	4.2	105.29	-2,304.4	1,159.1	2,615.3	2,606.2	9.11	287.229		
2,500.0	2,488.8	2,483.8	2,483.8	5.3	4.3	105.62	-2,304.4	1,159.1	2,619.6	2,610.0	9.57	273.788		
2,600.0	2,587.5	2,582.5	2,582.5	5.6	4.5	105.95	-2,304.4	1,159.1	2,623.9	2,613.9	10.03	261.538		
2,700.0	2,686.3	2,681.3	2,681.3	5.9	4.7	106.28	-2,304.4	1,159.1	2,628.4	2,617.9	10.50	250.339		
2,800.0	2,785.0	2,780.0	2,780.0	6.2	4.9	106.60	-2,304.4	1,159.1	2,632.9	2,621.9	10.97	240.071		
2,900.0	2,883.8	2,878.8	2,878.8	6.5	5.0	106.93	-2,304.4	1,159.1	2,637.5	2,626.1	11.44	230.630		
3,000.0	2,982.5	2,977.5	2,977.5	6.8	5.2	107.25	-2,304.4	1,159.1	2,642.2	2,630.3	11.91	221.925		
3,100.0	3,081.3	3,076.3	3,076.3	7.2	5.4	107.58	-2,304.4	1,159.1	2,647.0	2,634.6	12.38	213.878		
3,200.0	3,180.0	3,175.0	3,175.0	7.5	5.5	107.90	-2,304.4	1,159.1	2,651.9	2,639.0	12.85	206.422		
3,300.0	3,278.7	3,273.7	3,273.7	7.8	5.7	108.22	-2,304.4	1,159.1	2,656.8	2,643.5	13.32	199.495		
3,400.0	3,377.5	3,372.5	3,372.5	8.1	5.9	108.54	-2,304.4	1,159.1	2,661.8	2,648.0	13.79	193.047		
3,500.0	3,476.2	3,471.2	3,471.2	8.4	6.1	108.86	-2,304.4	1,159.1	2,667.0	2,652.7	14.26	187.032		
3,600.0	3,575.0	3,570.0	3,570.0	8.7	6.2	109.17	-2,304.4	1,159.1	2,672.2	2,657.4	14.73	181.409		
3,700.0	3,673.7	3,668.7	3,668.7	9.1	6.4	109.49	-2,304.4	1,159.1	2,677.4	2,662.2	15.20	176.142		
3,800.0	3,772.5	3,767.5	3,767.5	9.4	6.6	109.80	-2,304.4	1,159.1	2,682.8	2,667.1	15.67	171.201		
3,900.0	3,871.2	3,866.2	3,866.2	9.7	6.7	110.12	-2,304.4	1,159.1	2,688.3	2,672.1	16.14	166.557		
4,000.0	3,970.0	3,965.0	3,965.0	10.0	6.9	110.43	-2,304.4	1,159.1	2,693.8	2,677.2	16.61	162.185		
4,100.0	4,068.7	4,063.7	4,063.7	10.3	7.1	110.74	-2,304.4	1,159.1	2,699.4	2,682.3	17.08	158.062		
4,200.0	4,167.5	4,162.5	4,162.5	10.7	7.3	111.05	-2,304.4	1,159.1	2,705.1	2,687.6	17.55	154.170		
4,300.0	4,266.2	4,261.2	4,261.2	11.0	7.4	111.36	-2,304.4	1,159.1	2,710.9	2,692.9	18.01	150.490		
4,400.0	4,364.9	4,359.9	4,359.9	11.3	7.6	111.66	-2,304.4	1,159.1	2,716.7	2,698.2	18.48	147.005		
4,500.0	4,463.7	4,458.7	4,458.7	11.6	7.8	111.97	-2,304.4	1,159.1	2,722.7	2,703.7	18.95	143.701		
4,600.0	4,562.4	4,557.4	4,557.4	11.9	8.0	112.27	-2,304.4	1,159.1	2,728.7	2,709.3	19.41	140.566		
4,700.0	4,661.2	4,656.2	4,656.2	12.3	8.1	112.57	-2,304.4	1,159.1	2,734.8	2,714.9	19.88	137.586		
4,800.0	4,759.9	4,754.9	4,754.9	12.6	8.3	112.88	-2,304.4	1,159.1	2,740.9	2,720.6	20.34	134.752		
4,900.0	4,858.7	4,853.7	4,853.7	12.9	8.5	113.18	-2,304.4	1,159.1	2,747.2	2,726.4	20.80	132.053		
5,000.0	4,957.4	4,952.4	4,952.4	13.2	8.6	113.48	-2,304.4	1,159.1	2,753.5	2,732.2	21.27	129.480		
5,100.0	5,056.2	5,051.2	5,051.2	13.6	8.8	113.77	-2,304.4	1,159.1	2,759.9	2,738.2	21.73	127.025		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (Existing) - Existing - NO SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 8365-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	5,154.9	5,149.9	5,149.9	13.9	9.0	114.07	-2,304.4	1,159.1	2,766.3	2,744.2	22.19	124.681	
5,300.0	5,253.7	5,248.7	5,248.7	14.2	9.2	114.36	-2,304.4	1,159.1	2,772.9	2,750.2	22.65	122.440	
5,400.0	5,352.4	5,347.4	5,347.4	14.5	9.3	114.66	-2,304.4	1,159.1	2,779.5	2,756.4	23.11	120.296	
5,500.0	5,451.1	5,446.1	5,446.1	14.9	9.5	114.95	-2,304.4	1,159.1	2,786.2	2,762.6	23.56	118.243	
5,600.0	5,549.9	5,544.9	5,544.9	15.2	9.7	115.24	-2,304.4	1,159.1	2,793.0	2,769.0	24.02	116.276	
5,700.0	5,648.6	5,643.6	5,643.6	15.5	9.9	115.53	-2,304.4	1,159.1	2,799.8	2,775.3	24.48	114.391	
5,800.0	5,747.4	5,742.4	5,742.4	15.8	10.0	115.82	-2,304.4	1,159.1	2,806.7	2,781.8	24.93	112.581	
5,900.0	5,846.1	5,841.1	5,841.1	16.2	10.2	116.10	-2,304.4	1,159.1	2,813.7	2,788.3	25.38	110.843	
6,000.0	5,944.9	5,939.9	5,939.9	16.5	10.4	116.39	-2,304.4	1,159.1	2,820.8	2,794.9	25.84	109.173	
6,100.0	6,043.6	6,038.6	6,038.6	16.8	10.5	116.67	-2,304.4	1,159.1	2,827.9	2,801.6	26.29	107.568	
6,200.0	6,142.4	6,137.4	6,137.4	17.1	10.7	116.95	-2,304.4	1,159.1	2,835.1	2,808.3	26.74	106.023	
6,300.0	6,241.1	6,236.1	6,236.1	17.5	10.9	117.24	-2,304.4	1,159.1	2,842.3	2,815.1	27.19	104.536	
6,400.0	6,339.9	6,334.9	6,334.9	17.8	11.1	117.52	-2,304.4	1,159.1	2,849.7	2,822.0	27.64	103.103	
6,500.0	6,438.6	6,433.6	6,433.6	18.1	11.2	117.79	-2,304.4	1,159.1	2,857.1	2,829.0	28.09	101.723	
6,600.0	6,537.3	6,532.3	6,532.3	18.4	11.4	118.07	-2,304.4	1,159.1	2,864.5	2,836.0	28.53	100.392	
6,700.0	6,636.1	6,631.1	6,631.1	18.8	11.6	118.35	-2,304.4	1,159.1	2,872.1	2,843.1	28.98	99.107	
6,800.0	6,734.8	6,729.8	6,729.8	19.1	11.7	118.62	-2,304.4	1,159.1	2,879.7	2,850.3	29.42	97.868	
6,900.0	6,833.6	6,828.6	6,828.6	19.4	11.9	118.89	-2,304.4	1,159.1	2,887.4	2,857.5	29.87	96.671	
7,000.0	6,932.3	6,927.3	6,927.3	19.7	12.1	119.16	-2,304.4	1,159.1	2,895.1	2,864.8	30.31	95.514	
7,100.0	7,031.1	7,026.1	7,026.1	20.1	12.3	119.43	-2,304.4	1,159.1	2,902.9	2,872.1	30.75	94.396	
7,190.5	7,120.5	7,115.5	7,115.5	20.4	12.4	119.67	-2,304.4	1,159.1	2,910.0	2,878.9	31.15	93.415	
7,200.0	7,129.8	7,124.8	7,124.8	20.4	12.4	114.54	-2,304.4	1,159.1	2,910.7	2,879.5	31.20	93.288	
7,250.0	7,179.4	7,174.4	7,174.4	20.5	12.5	79.48	-2,304.4	1,159.1	2,911.6	2,880.3	31.36	92.856	
7,300.0	7,228.8	7,223.8	7,223.8	20.6	12.6	47.88	-2,304.4	1,159.1	2,908.3	2,876.9	31.33	92.820	
7,350.0	7,277.9	7,272.9	7,272.9	20.7	12.7	30.43	-2,304.4	1,159.1	2,900.6	2,869.5	31.13	93.181	
7,400.0	7,326.1	7,321.1	7,321.1	20.7	12.8	21.12	-2,304.4	1,159.1	2,888.7	2,857.9	30.75	93.947	
7,450.0	7,373.2	7,368.2	7,368.2	20.7	12.9	15.62	-2,304.4	1,159.1	2,872.6	2,842.4	30.19	95.135	
7,500.0	7,418.7	7,413.7	7,413.7	20.7	12.9	12.02	-2,304.4	1,159.1	2,852.5	2,823.0	29.48	96.769	
7,550.0	7,462.4	7,457.4	7,457.4	20.6	13.0	9.47	-2,304.4	1,159.1	2,828.4	2,799.8	28.61	98.877	
7,600.0	7,503.8	7,498.8	7,498.8	20.5	13.1	7.53	-2,304.4	1,159.1	2,800.7	2,773.1	27.59	101.496	
7,650.0	7,542.8	7,537.8	7,537.8	20.5	13.2	5.95	-2,304.4	1,159.1	2,769.5	2,743.0	26.46	104.662	
7,700.0	7,578.8	7,573.8	7,573.8	20.4	13.2	4.56	-2,304.4	1,159.1	2,735.0	2,709.7	25.23	108.406	
7,750.0	7,611.8	7,606.8	7,606.8	20.3	13.3	3.25	-2,304.4	1,159.1	2,697.5	2,673.5	23.93	112.740	
7,800.0	7,641.5	7,636.5	7,636.5	20.2	13.3	1.90	-2,304.4	1,159.1	2,657.2	2,634.7	22.59	117.632	
7,850.0	7,667.6	7,662.6	7,662.6	20.2	13.4	0.37	-2,304.4	1,159.1	2,614.6	2,593.3	21.27	122.952	
7,900.0	7,689.9	7,684.9	7,684.9	20.2	13.4	-1.57	-2,304.4	1,159.1	2,569.9	2,549.9	20.02	128.374	
7,950.0	7,708.2	7,703.2	7,703.2	20.1	13.4	-4.30	-2,304.4	1,159.1	2,523.4	2,504.4	18.95	133.143	
8,000.0	7,722.5	7,717.5	7,717.5	20.2	13.5	-8.75	-2,304.4	1,159.1	2,475.5	2,457.2	18.28	135.453	
8,050.0	7,732.6	7,727.6	7,727.6	20.2	13.5	-17.51	-2,304.4	1,159.1	2,426.6	2,408.0	18.62	130.344	
8,100.0	7,738.4	7,733.4	7,733.4	20.3	13.5	-40.62	-2,304.4	1,159.1	2,377.0	2,354.5	22.51	105.620	
8,142.5	7,740.0	7,735.0	7,735.0	20.4	13.5	-90.00	-2,304.4	1,159.1	2,334.7	2,307.0	27.72	84.239	
8,200.0	7,740.0	7,735.0	7,735.0	20.5	13.5	-90.00	-2,304.4	1,159.1	2,277.3	2,249.4	27.94	81.506	
8,300.0	7,740.0	7,735.0	7,735.0	20.9	13.5	-90.00	-2,304.4	1,159.1	2,177.6	2,149.2	28.49	76.441	
8,400.0	7,740.0	7,735.0	7,735.0	21.4	13.5	-90.00	-2,304.4	1,159.1	2,078.0	2,048.8	29.21	71.131	
8,442.5	7,740.0	7,735.0	7,735.0	21.7	13.5	-90.00	-2,304.4	1,159.1	2,035.6	2,006.1	29.57	68.842	
8,500.0	7,740.0	7,735.0	7,735.0	22.1	13.5	-90.00	-2,304.4	1,159.1	1,978.4	1,948.3	30.03	65.884	
8,600.0	7,740.0	7,735.0	7,735.0	22.8	13.5	-90.00	-2,304.4	1,159.1	1,879.0	1,848.1	30.90	60.817	
8,700.0	7,740.0	7,735.0	7,735.0	23.6	13.5	-90.00	-2,304.4	1,159.1	1,779.8	1,748.0	31.84	55.895	
8,800.0	7,740.0	7,735.0	7,735.0	24.5	13.5	-90.00	-2,304.4	1,159.1	1,681.1	1,648.2	32.86	51.164	
8,842.5	7,740.0	7,735.0	7,735.0	25.0	13.5	-90.00	-2,304.4	1,159.1	1,639.3	1,606.0	33.31	49.220	
8,900.0	7,740.0	7,735.0	7,735.0	25.5	13.5	-90.00	-2,304.4	1,159.1	1,582.8	1,548.7	34.03	46.513	
9,000.0	7,740.0	7,735.0	7,735.0	26.6	13.5	-90.00	-2,304.4	1,159.1	1,484.7	1,449.3	35.34	42.013	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (Existing) - Existing - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8365-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					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)	Total Uncertainty Axis			
9,100.0	7,740.0	7,735.0	7,735.0	27.7	13.5	-90.00	-2,304.4	1,159.1	1,386.9	1,350.2	36.71	37.781		
9,200.0	7,740.0	7,735.0	7,735.0	28.9	13.5	-90.00	-2,304.4	1,159.1	1,289.4	1,251.3	38.13	33.820		
9,300.0	7,740.0	7,735.0	7,735.0	30.2	13.5	-90.00	-2,304.4	1,159.1	1,192.4	1,152.8	39.58	30.122		
9,342.5	7,740.0	7,735.0	7,735.0	30.7	13.5	-90.00	-2,304.4	1,159.1	1,151.3	1,111.1	40.22	28.629		
9,399.5	7,740.0	7,735.0	7,735.0	31.5	13.5	-90.00	-2,304.4	1,159.1	1,096.2	1,055.1	41.19	26.613		
9,500.0	7,740.0	7,735.0	7,735.0	32.8	13.5	-90.00	-2,304.4	1,159.1	999.6	956.9	42.72	23.397		
9,600.0	7,740.0	7,735.0	7,735.0	34.2	13.5	-90.00	-2,304.4	1,159.1	904.4	860.1	44.27	20.426		
9,700.0	7,740.0	7,735.0	7,735.0	35.6	13.5	-90.00	-2,304.4	1,159.1	810.2	764.4	45.84	17.673		
9,800.0	7,740.0	7,735.0	7,735.0	37.1	13.5	-90.00	-2,304.4	1,159.1	717.6	670.2	47.43	15.129		
9,900.0	7,740.0	7,735.0	7,735.0	38.5	13.5	-90.00	-2,304.4	1,159.1	627.4	578.3	49.04	12.793		
10,000.0	7,740.0	7,735.0	7,735.0	40.0	13.5	-90.00	-2,304.4	1,159.1	540.5	489.9	50.66	10.670		
10,100.0	7,740.0	7,735.0	7,735.0	41.6	13.5	-90.00	-2,304.4	1,159.1	459.0	406.8	52.29	8.780		
10,200.0	7,740.0	7,735.0	7,735.0	43.1	13.5	-90.00	-2,304.4	1,159.1	386.4	332.5	53.93	7.165		
10,300.0	7,740.0	7,735.0	7,735.0	44.6	13.5	-90.00	-2,304.4	1,159.1	328.4	272.9	55.57	5.910		
10,400.0	7,740.0	7,735.0	7,735.0	46.2	13.5	-90.00	-2,304.4	1,159.1	294.0	236.8	57.23	5.137		
10,457.1	7,740.0	7,735.0	7,735.0	47.1	13.5	-90.00	-2,304.4	1,159.1	288.4	230.2	58.18	4.957 CC, ES		
10,500.0	7,740.0	7,735.0	7,735.0	47.8	13.5	-90.00	-2,304.4	1,159.1	291.6	232.7	58.90	4.951 SF		
10,600.0	7,740.0	7,735.0	7,735.0	49.4	13.5	-90.00	-2,304.4	1,159.1	321.9	261.3	60.57	5.314		
10,700.0	7,740.0	7,735.0	7,735.0	51.0	13.5	-90.00	-2,304.4	1,159.1	377.0	314.8	62.24	6.057		
10,800.0	7,740.0	7,735.0	7,735.0	52.6	13.5	-90.00	-2,304.4	1,159.1	448.0	384.1	63.93	7.009		
10,900.0	7,740.0	7,735.0	7,735.0	54.2	13.5	-90.00	-2,304.4	1,159.1	528.5	462.9	65.61	8.055		
11,000.0	7,740.0	7,735.0	7,735.0	55.8	13.5	-90.00	-2,304.4	1,159.1	614.7	547.4	67.31	9.133		
11,100.0	7,740.0	7,735.0	7,735.0	57.5	13.5	-90.00	-2,304.4	1,159.1	704.6	635.6	69.00	10.211		
11,200.0	7,740.0	7,735.0	7,735.0	59.1	13.5	-90.00	-2,304.4	1,159.1	796.9	726.2	70.70	11.272		
11,300.0	7,740.0	7,735.0	7,735.0	60.8	13.5	-90.00	-2,304.4	1,159.1	890.8	818.4	72.40	12.304		
11,400.0	7,740.0	7,735.0	7,735.0	62.4	13.5	-90.00	-2,304.4	1,159.1	986.0	911.9	74.11	13.305		
11,500.0	7,740.0	7,735.0	7,735.0	64.1	13.5	-90.00	-2,304.4	1,159.1	1,082.0	1,006.2	75.81	14.272		
11,600.0	7,740.0	7,735.0	7,735.0	65.7	13.5	-90.00	-2,304.4	1,159.1	1,178.7	1,101.2	77.52	15.204		
11,700.0	7,740.0	7,735.0	7,735.0	67.4	13.5	-90.00	-2,304.4	1,159.1	1,275.9	1,196.7	79.24	16.102		
11,800.0	7,740.0	7,735.0	7,735.0	69.1	13.5	-90.00	-2,304.4	1,159.1	1,373.5	1,292.5	80.95	16.967		
11,900.0	7,740.0	7,735.0	7,735.0	70.8	13.5	-90.00	-2,304.4	1,159.1	1,471.4	1,388.7	82.67	17.799		
12,000.0	7,740.0	7,735.0	7,735.0	72.4	13.5	-90.00	-2,304.4	1,159.1	1,569.6	1,485.2	84.39	18.600		
12,100.0	7,740.0	7,735.0	7,735.0	74.1	13.5	-90.00	-2,304.4	1,159.1	1,668.0	1,581.9	86.11	19.371		
12,200.0	7,740.0	7,735.0	7,735.0	75.8	13.5	-90.00	-2,304.4	1,159.1	1,766.6	1,678.7	87.83	20.114		
12,300.0	7,740.0	7,735.0	7,735.0	77.5	13.5	-90.00	-2,304.4	1,159.1	1,865.3	1,775.7	89.55	20.829		
12,400.0	7,740.0	7,735.0	7,735.0	79.2	13.5	-90.00	-2,304.4	1,159.1	1,964.2	1,872.9	91.28	21.519		
12,500.0	7,740.0	7,735.0	7,735.0	80.9	13.5	-90.00	-2,304.4	1,159.1	2,063.1	1,970.1	93.00	22.184		
12,600.0	7,740.0	7,735.0	7,735.0	82.6	13.5	-90.00	-2,304.4	1,159.1	2,162.2	2,067.5	94.73	22.825		
12,700.0	7,740.0	7,735.0	7,735.0	84.3	13.5	-90.00	-2,304.4	1,159.1	2,261.3	2,164.9	96.46	23.444		
12,800.0	7,740.0	7,735.0	7,735.0	86.0	13.5	-90.00	-2,304.4	1,159.1	2,360.5	2,262.4	98.19	24.042		
12,900.0	7,740.0	7,735.0	7,735.0	87.7	13.5	-90.00	-2,304.4	1,159.1	2,459.8	2,359.9	99.92	24.619		
13,000.0	7,740.0	7,735.0	7,735.0	89.4	13.5	-90.00	-2,304.4	1,159.1	2,559.2	2,457.5	101.65	25.177		
13,100.0	7,740.0	7,735.0	7,735.0	91.1	13.5	-90.00	-2,304.4	1,159.1	2,658.6	2,555.2	103.38	25.716		
13,200.0	7,740.0	7,735.0	7,735.0	92.8	13.5	-90.00	-2,304.4	1,159.1	2,758.0	2,652.9	105.11	26.238		
13,300.0	7,740.0	7,735.0	7,735.0	94.5	13.5	-90.00	-2,304.4	1,159.1	2,857.5	2,750.6	106.85	26.743		
13,400.0	7,740.0	7,735.0	7,735.0	96.2	13.5	-90.00	-2,304.4	1,159.1	2,957.0	2,848.4	108.58	27.233		
13,500.0	7,740.0	7,735.0	7,735.0	98.0	13.5	-90.00	-2,304.4	1,159.1	3,056.5	2,946.2	110.32	27.707		
13,600.0	7,740.0	7,735.0	7,735.0	99.7	13.5	-90.00	-2,304.4	1,159.1	3,156.1	3,044.0	112.05	28.166		
13,700.0	7,740.0	7,735.0	7,735.0	101.4	13.5	-90.00	-2,304.4	1,159.1	3,255.7	3,141.9	113.79	28.611		
13,800.0	7,740.0	7,735.0	7,735.0	103.1	13.5	-90.00	-2,304.4	1,159.1	3,355.3	3,239.8	115.53	29.044		
13,900.0	7,740.0	7,735.0	7,735.0	104.8	13.5	-90.00	-2,304.4	1,159.1	3,454.9	3,337.7	117.26	29.463		
14,000.0	7,740.0	7,735.0	7,735.0	106.5	13.5	-90.00	-2,304.4	1,159.1	3,554.6	3,435.6	119.00	29.870		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (Existing) - Existing - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8365-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		
14,100.0	7,740.0	7,735.0	7,735.0	108.3	13.5	-90.00	-2,304.4	1,159.1	3,654.3	3,533.5	120.74	30.265		
14,200.0	7,740.0	7,735.0	7,735.0	110.0	13.5	-90.00	-2,304.4	1,159.1	3,754.0	3,631.5	122.48	30.650		
14,300.0	7,740.0	7,735.0	7,735.0	111.7	13.5	-90.00	-2,304.4	1,159.1	3,853.7	3,729.5	124.22	31.023		
14,400.0	7,740.0	7,735.0	7,735.0	113.4	13.5	-90.00	-2,304.4	1,159.1	3,953.4	3,827.4	125.96	31.386		
14,500.0	7,740.0	7,735.0	7,735.0	115.2	13.5	-90.00	-2,304.4	1,159.1	4,053.1	3,925.4	127.70	31.739		
14,600.0	7,740.0	7,735.0	7,735.0	116.9	13.5	-90.00	-2,304.4	1,159.1	4,152.9	4,023.4	129.44	32.083		
14,700.0	7,740.0	7,735.0	7,735.0	118.6	13.5	-90.00	-2,304.4	1,159.1	4,252.7	4,121.5	131.18	32.418		
14,800.0	7,740.0	7,735.0	7,735.0	120.4	13.5	-90.00	-2,304.4	1,159.1	4,352.4	4,219.5	132.92	32.744		
14,900.0	7,740.0	7,735.0	7,735.0	122.1	13.5	-90.00	-2,304.4	1,159.1	4,452.2	4,317.5	134.67	33.061		
15,000.0	7,740.0	7,735.0	7,735.0	123.8	13.5	-90.00	-2,304.4	1,159.1	4,552.0	4,415.6	136.41	33.370		
15,100.0	7,740.0	7,735.0	7,735.0	125.5	13.5	-90.00	-2,304.4	1,159.1	4,651.8	4,513.7	138.15	33.672		
15,200.0	7,740.0	7,735.0	7,735.0	127.3	13.5	-90.00	-2,304.4	1,159.1	4,751.6	4,611.7	139.90	33.966		
15,300.0	7,740.0	7,735.0	7,735.0	129.0	13.5	-90.00	-2,304.4	1,159.1	4,851.4	4,709.8	141.64	34.252		
15,400.0	7,740.0	7,735.0	7,735.0	130.7	13.5	-90.00	-2,304.4	1,159.1	4,951.3	4,807.9	143.38	34.532		
15,500.0	7,740.0	7,735.0	7,735.0	132.5	13.5	-90.00	-2,304.4	1,159.1	5,051.1	4,906.0	145.13	34.805		
15,600.0	7,740.0	7,735.0	7,735.0	134.2	13.5	-90.00	-2,304.4	1,159.1	5,150.9	5,004.1	146.87	35.071		
15,700.0	7,740.0	7,735.0	7,735.0	135.9	13.5	-90.00	-2,304.4	1,159.1	5,250.8	5,102.2	148.61	35.332		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SUR													Offset Site Error:	0.0 ft
Survey Program: 838-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	11.7	11.7	0.0	0.0	153.56	-2,332.8	1,159.9	2,605.3					
100.0	100.0	118.2	118.2	0.2	0.2	153.56	-2,332.7	1,159.7	2,605.1	2,604.8	0.35	7,342.296		
200.0	200.0	224.6	224.6	0.3	0.4	153.57	-2,332.5	1,159.3	2,604.7	2,604.0	0.71	3,657.420		
300.0	300.0	331.1	331.1	0.5	0.6	153.58	-2,332.1	1,158.5	2,604.1	2,603.0	1.07	2,434.783		
400.0	400.0	437.5	437.5	0.7	0.8	153.60	-2,331.6	1,157.4	2,603.2	2,601.7	1.43	1,824.394		
500.0	500.0	544.0	544.0	0.8	1.0	153.62	-2,330.9	1,156.1	2,602.0	2,600.2	1.78	1,458.378		
600.0	600.0	650.4	650.4	1.0	1.1	153.64	-2,330.0	1,154.4	2,600.6	2,598.5	2.14	1,214.402		
700.0	700.0	756.8	756.8	1.2	1.3	153.67	-2,329.1	1,152.5	2,599.0	2,596.5	2.50	1,040.109		
800.0	800.0	854.5	854.4	1.4	1.5	153.70	-2,328.1	1,150.4	2,597.2	2,594.3	2.84	913.997		
893.8	893.8	904.5	904.4	1.5	1.6	153.71	-2,327.8	1,149.8	2,596.3	2,593.2	3.09	839.637		
900.0	900.0	909.3	909.2	1.5	1.6	153.71	-2,327.8	1,149.8	2,596.3	2,593.2	3.11	834.435		
1,000.0	1,000.0	986.2	986.1	1.7	1.7	153.73	-2,328.5	1,149.4	2,596.8	2,593.4	3.42	759.500		
1,100.0	1,100.0	1,060.0	1,059.9	1.9	1.9	102.75	-2,330.5	1,148.1	2,598.6	2,594.9	3.74	694.114		
1,200.0	1,200.0	1,115.4	1,115.2	2.1	2.0	102.80	-2,333.1	1,146.7	2,602.2	2,598.2	4.03	646.140		
1,300.0	1,299.9	1,184.1	1,183.7	2.3	2.1	102.90	-2,337.5	1,144.4	2,607.5	2,603.2	4.34	601.332		
1,400.0	1,399.7	1,276.2	1,275.5	2.4	2.3	103.10	-2,344.7	1,140.8	2,614.1	2,609.4	4.70	555.615		
1,500.0	1,499.4	1,377.3	1,376.2	2.6	2.5	103.36	-2,352.2	1,136.4	2,620.8	2,615.7	5.10	513.548		
1,600.0	1,598.9	1,474.0	1,472.5	2.8	2.7	103.65	-2,359.9	1,131.8	2,628.3	2,622.8	5.51	477.267		
1,700.0	1,698.3	1,564.1	1,562.1	3.1	2.9	103.93	-2,367.2	1,127.7	2,636.5	2,630.5	5.91	445.892		
1,800.0	1,797.4	1,641.4	1,639.0	3.3	3.0	104.19	-2,373.9	1,123.9	2,645.7	2,639.4	6.32	418.891		
1,908.5	1,904.7	1,721.6	1,718.8	3.6	3.2	104.48	-2,381.9	1,119.5	2,657.2	2,650.5	6.77	392.404		
2,000.0	1,995.0	1,797.5	1,794.1	3.8	3.4	104.89	-2,390.2	1,115.2	2,668.1	2,660.9	7.19	371.157		
2,100.0	2,093.8	1,881.6	1,877.5	4.1	3.6	105.36	-2,400.0	1,109.4	2,680.5	2,672.8	7.66	349.854		
2,200.0	2,192.5	1,952.0	1,947.0	4.4	3.8	105.76	-2,409.0	1,104.2	2,694.0	2,685.8	8.11	332.119		
2,300.0	2,291.3	2,027.6	2,021.7	4.7	4.1	106.21	-2,419.6	1,098.3	2,708.5	2,699.9	8.59	315.391		
2,400.0	2,390.0	2,097.8	2,090.8	5.0	4.3	106.63	-2,430.0	1,092.3	2,723.9	2,714.9	9.06	300.671		
2,500.0	2,488.8	2,184.3	2,175.8	5.3	4.5	107.16	-2,443.9	1,084.6	2,740.5	2,731.0	9.58	286.184		
2,600.0	2,587.5	2,289.7	2,279.6	5.6	4.9	107.79	-2,460.1	1,075.7	2,757.0	2,746.9	10.14	271.925		
2,700.0	2,686.3	2,400.2	2,388.5	5.9	5.2	108.44	-2,476.7	1,066.3	2,773.4	2,762.7	10.72	258.780		
2,800.0	2,785.0	2,497.7	2,484.5	6.2	5.5	109.01	-2,491.1	1,057.4	2,789.8	2,778.5	11.27	247.580		
2,900.0	2,883.8	2,594.9	2,580.1	6.5	5.9	109.59	-2,505.7	1,047.8	2,806.3	2,794.5	11.83	237.268		
3,000.0	2,982.5	2,680.7	2,664.5	6.8	6.2	110.10	-2,518.6	1,039.3	2,823.3	2,810.9	12.35	228.664		
3,100.0	3,081.3	2,759.7	2,742.3	7.2	6.4	110.55	-2,530.7	1,032.2	2,840.9	2,828.0	12.84	221.195		
3,200.0	3,180.0	2,870.4	2,851.3	7.5	6.8	111.17	-2,547.6	1,022.8	2,858.9	2,845.5	13.41	213.128		
3,300.0	3,278.7	2,960.2	2,939.7	7.8	7.1	111.66	-2,560.9	1,015.2	2,876.8	2,862.8	13.93	206.504		
3,400.0	3,377.5	3,067.0	3,044.9	8.1	7.4	112.23	-2,576.7	1,006.0	2,894.8	2,880.3	14.49	199.791		
3,500.0	3,476.2	3,149.6	3,126.3	8.4	7.7	112.68	-2,588.9	998.8	2,913.0	2,898.0	14.99	194.387		
3,600.0	3,575.0	3,273.9	3,248.8	8.7	8.1	113.33	-2,607.0	988.1	2,931.3	2,915.7	15.57	188.212		
3,700.0	3,673.7	3,361.8	3,335.6	9.1	8.4	113.78	-2,619.3	981.0	2,949.4	2,933.3	16.07	183.534		
3,800.0	3,772.5	3,448.0	3,420.5	9.4	8.7	114.22	-2,631.8	973.7	2,968.1	2,951.5	16.57	179.121		
3,900.0	3,871.2	3,518.5	3,489.9	9.7	9.0	114.59	-2,642.5	967.2	2,987.5	2,970.4	17.04	175.335		
4,000.0	3,970.0	3,628.1	3,597.7	10.0	9.3	115.16	-2,659.5	956.8	3,007.3	2,989.8	17.59	170.991		
4,100.0	4,068.7	3,741.9	3,709.8	10.3	9.7	115.74	-2,676.1	946.6	3,026.7	3,008.6	18.14	166.882		
4,200.0	4,167.5	3,844.4	3,811.0	10.7	10.1	116.23	-2,690.4	938.3	3,045.9	3,027.2	18.65	163.348		
4,300.0	4,266.2	3,947.1	3,912.3	11.0	10.4	116.72	-2,704.6	929.4	3,064.9	3,045.8	19.17	159.911		
4,400.0	4,364.9	4,029.5	3,993.5	11.3	10.7	117.12	-2,716.1	922.0	3,084.3	3,064.7	19.64	157.045		
4,500.0	4,463.7	4,115.0	4,077.7	11.6	11.0	117.54	-2,728.6	913.7	3,104.3	3,084.2	20.13	154.214		
4,600.0	4,562.4	4,183.3	4,144.9	11.9	11.2	117.88	-2,739.0	906.8	3,125.1	3,104.5	20.57	151.904		
4,700.0	4,661.2	4,282.0	4,241.9	12.3	11.6	118.35	-2,754.1	897.6	3,146.4	3,125.3	21.07	149.308		
4,800.0	4,759.9	4,448.8	4,406.5	12.6	12.1	119.12	-2,777.2	882.3	3,166.2	3,144.5	21.70	145.896		
4,900.0	4,858.7	4,518.1	4,474.9	12.9	12.4	119.44	-2,786.4	876.0	3,185.9	3,163.8	22.14	143.930		
5,000.0	4,957.4	4,624.0	4,579.3	13.2	12.7	119.91	-2,801.1	866.4	3,206.4	3,183.8	22.63	141.670		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SUR													Offset Site Error:	0.0 ft
Survey Program: 838-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	5,056.2	4,687.0	4,641.4	13.6	12.9	120.19	-2,809.6	860.8	3,226.9	3,203.8	23.05	140.011		
5,200.0	5,154.9	4,753.5	4,706.9	13.9	13.2	120.49	-2,819.4	854.7	3,248.5	3,225.0	23.47	138.382		
5,300.0	5,253.7	4,913.1	4,864.1	14.2	13.7	121.19	-2,842.6	839.5	3,270.1	3,246.1	24.07	135.882		
5,400.0	5,352.4	5,009.6	4,959.3	14.5	14.0	121.61	-2,855.4	830.8	3,290.7	3,266.2	24.54	134.122		
5,500.0	5,451.1	5,103.1	5,051.6	14.9	14.3	122.00	-2,867.8	822.1	3,311.4	3,286.5	24.99	132.490		
5,600.0	5,549.9	5,192.3	5,139.7	15.2	14.6	122.37	-2,879.7	814.5	3,332.4	3,307.0	25.43	131.025		
5,700.0	5,648.6	5,290.2	5,236.5	15.5	14.9	122.74	-2,892.9	807.2	3,353.8	3,327.9	25.88	129.583		
5,800.0	5,747.4	5,424.6	5,369.4	15.8	15.3	123.26	-2,909.8	796.7	3,374.4	3,348.0	26.40	127.840		
5,900.0	5,846.1	5,501.4	5,445.3	16.2	15.6	123.56	-2,919.2	790.0	3,394.8	3,368.0	26.81	126.625		
6,000.0	5,944.9	5,576.7	5,519.6	16.5	15.8	123.85	-2,929.1	783.6	3,416.2	3,389.0	27.22	125.486		
6,100.0	6,043.6	5,676.5	5,618.1	16.8	16.2	124.24	-2,942.5	774.7	3,437.9	3,410.3	27.67	124.227		
6,200.0	6,142.4	5,831.9	5,771.8	17.1	16.6	124.82	-2,961.7	761.9	3,459.0	3,430.8	28.20	122.654		
6,300.0	6,241.1	5,923.4	5,862.4	17.5	16.9	125.15	-2,972.0	754.6	3,479.0	3,450.4	28.63	121.533		
6,400.0	6,339.9	6,022.5	5,960.5	17.8	17.2	125.50	-2,983.6	747.0	3,499.6	3,470.5	29.05	120.456		
6,500.0	6,438.6	6,469.8	6,406.1	18.1	18.1	126.77	-3,014.5	728.2	3,517.7	3,487.9	29.85	117.855		
6,600.0	6,537.3	6,609.8	6,546.1	18.4	18.3	127.08	-3,015.8	727.2	3,528.3	3,498.0	30.26	116.591		
6,700.0	6,636.1	6,734.2	6,670.5	18.8	18.4	127.33	-3,015.3	727.1	3,537.5	3,506.8	30.66	115.369		
6,800.0	6,734.8	6,837.0	6,773.3	19.1	18.5	127.55	-3,014.6	726.9	3,546.5	3,515.4	31.04	114.246		
6,900.0	6,833.6	6,950.0	6,886.3	19.4	18.6	127.78	-3,013.4	726.5	3,555.1	3,523.7	31.43	113.098		
7,000.0	6,932.3	7,046.2	6,982.5	19.7	18.7	127.98	-3,012.3	726.1	3,563.7	3,531.9	31.81	112.030		
7,100.0	7,031.1	7,136.0	7,072.3	20.1	18.8	128.17	-3,011.4	725.5	3,572.5	3,540.3	32.18	111.011		
7,190.5	7,120.5	7,214.9	7,151.2	20.4	18.9	128.34	-3,010.8	724.8	3,580.8	3,548.2	32.52	110.117		
7,200.0	7,129.8	7,222.7	7,158.9	20.4	18.9	123.19	-3,010.7	724.8	3,581.6	3,549.0	32.57	109.972		
7,250.0	7,179.4	7,279.8	7,216.0	20.5	19.0	88.10	-3,010.4	724.0	3,583.2	3,550.5	32.73	109.466		
7,300.0	7,228.8	7,335.9	7,272.1	20.6	19.0	56.56	-3,009.9	723.1	3,580.4	3,547.7	32.69	109.510		
7,350.0	7,277.9	7,376.5	7,312.8	20.7	19.1	39.21	-3,009.6	722.3	3,573.3	3,540.9	32.44	110.164		
7,400.0	7,326.1	7,423.0	7,359.2	20.7	19.2	30.11	-3,009.4	721.6	3,562.1	3,530.1	31.99	111.357		
7,450.0	7,373.2	7,460.6	7,396.8	20.7	19.2	24.87	-3,009.2	721.0	3,546.7	3,515.4	31.34	113.163		
7,500.0	7,418.7	7,504.2	7,440.5	20.7	19.3	21.67	-3,009.1	720.4	3,527.4	3,496.8	30.52	115.557		
7,550.0	7,462.4	7,545.8	7,482.0	20.6	19.3	19.63	-3,009.0	719.9	3,504.1	3,474.6	29.54	118.608		
7,600.0	7,503.8	7,585.2	7,521.4	20.5	19.4	18.35	-3,008.9	719.4	3,477.1	3,448.7	28.42	122.352		
7,650.0	7,542.8	7,622.3	7,558.5	20.5	19.4	17.62	-3,008.8	719.1	3,446.6	3,419.5	27.18	126.813		
7,700.0	7,578.8	7,658.1	7,594.3	20.4	19.4	17.34	-3,008.8	718.8	3,412.9	3,387.0	25.86	131.979		
7,750.0	7,611.8	7,693.7	7,629.9	20.3	19.5	17.48	-3,008.7	718.7	3,376.1	3,351.5	24.51	137.752		
7,800.0	7,641.5	7,725.6	7,661.8	20.2	19.5	18.07	-3,008.6	718.6	3,336.4	3,313.3	23.19	143.883		
7,850.0	7,667.6	7,752.5	7,688.7	20.2	19.6	19.17	-3,008.5	718.7	3,294.4	3,272.4	21.99	149.806		
7,900.0	7,689.9	7,773.9	7,710.1	20.2	19.6	20.98	-3,008.5	718.7	3,250.1	3,229.1	21.05	154.397		
7,950.0	7,708.2	7,791.6	7,727.8	20.1	19.6	23.92	-3,008.4	718.7	3,204.1	3,183.5	20.59	155.632		
8,000.0	7,722.5	7,805.3	7,741.5	20.2	19.6	28.91	-3,008.4	718.8	3,156.6	3,135.6	20.99	150.402		
8,050.0	7,732.6	7,815.0	7,751.2	20.2	19.6	38.18	-3,008.4	718.8	3,108.0	3,085.0	23.01	135.054		
8,100.0	7,738.4	7,820.5	7,756.7	20.3	19.6	57.99	-3,008.4	718.8	3,058.7	3,030.8	27.91	109.610		
8,142.5	7,740.0	7,822.0	7,758.2	20.4	19.6	91.30	-3,008.4	718.8	3,016.5	2,984.7	31.83	94.758		
8,200.0	7,740.0	7,821.9	7,758.1	20.5	19.6	91.28	-3,008.4	718.8	2,959.3	2,927.3	32.06	92.309		
8,300.0	7,740.0	7,821.6	7,757.8	20.9	19.6	91.24	-3,008.4	718.8	2,859.9	2,827.3	32.60	87.714		
8,400.0	7,740.0	7,821.4	7,757.6	21.4	19.6	91.20	-3,008.4	718.8	2,760.6	2,727.2	33.33	82.826		
8,442.5	7,740.0	7,821.4	7,757.6	21.7	19.6	91.19	-3,008.4	718.8	2,718.4	2,684.7	33.69	80.699		
8,500.0	7,740.0	7,821.2	7,757.4	22.1	19.6	91.27	-3,008.4	718.8	2,661.2	2,627.0	34.20	77.818		
8,600.0	7,740.0	7,821.0	7,757.2	22.8	19.6	91.46	-3,008.4	718.8	2,561.7	2,526.6	35.16	72.862		
8,700.0	7,740.0	7,820.8	7,757.0	23.6	19.6	91.72	-3,008.4	718.8	2,462.1	2,425.9	36.20	68.022		
8,800.0	7,740.0	7,820.6	7,756.8	24.5	19.6	92.09	-3,008.4	718.8	2,362.4	2,325.1	37.30	63.340		
8,842.5	7,740.0	7,820.5	7,756.7	25.0	19.6	92.31	-3,008.4	718.8	2,320.0	2,282.2	37.78	61.408		
8,900.0	7,740.0	7,820.4	7,756.6	25.5	19.6	92.26	-3,008.4	718.8	2,262.6	2,224.1	38.50	58.765		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SUR												Offset Site Error: 0.0 ft			
Survey Program: 838-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			
9,000.0	7,740.0	7,820.1	7,756.3	26.6	19.6	92.16	-3,008.4	718.8	2,162.8	2,123.0	39.81	54.326			
9,100.0	7,740.0	7,819.9	7,756.1	27.7	19.6	92.07	-3,008.4	718.8	2,063.0	2,021.8	41.18	50.099			
9,200.0	7,740.0	7,819.7	7,755.9	28.9	19.6	91.98	-3,008.4	718.8	1,963.3	1,920.7	42.60	46.090			
9,300.0	7,740.0	7,819.5	7,755.7	30.2	19.6	91.89	-3,008.4	718.8	1,863.5	1,819.5	44.05	42.301			
9,342.5	7,740.0	7,819.4	7,755.6	30.7	19.6	91.85	-3,008.4	718.8	1,821.2	1,776.5	44.68	40.757			
9,399.5	7,740.0	7,819.2	7,755.4	31.5	19.6	91.60	-3,008.4	718.8	1,764.4	1,718.7	45.61	38.682			
9,500.0	7,740.0	7,819.0	7,755.2	32.8	19.6	91.51	-3,008.4	718.8	1,664.3	1,617.2	47.14	35.302			
9,600.0	7,740.0	7,818.8	7,755.0	34.2	19.6	91.43	-3,008.4	718.8	1,564.8	1,516.1	48.69	32.135			
9,700.0	7,740.0	7,818.6	7,754.8	35.6	19.6	91.35	-3,008.4	718.8	1,465.3	1,415.1	50.27	29.152			
9,800.0	7,740.0	7,818.3	7,754.5	37.1	19.6	91.27	-3,008.4	718.8	1,366.0	1,314.1	51.85	26.343			
9,900.0	7,740.0	7,818.1	7,754.3	38.5	19.6	91.19	-3,008.4	718.8	1,266.7	1,213.2	53.46	23.695			
10,000.0	7,740.0	7,817.9	7,754.1	40.0	19.6	91.11	-3,008.4	718.8	1,167.6	1,112.5	55.08	21.199			
10,100.0	7,740.0	7,817.6	7,753.8	41.6	19.6	91.02	-3,008.4	718.8	1,068.6	1,011.9	56.71	18.844			
10,200.0	7,740.0	7,817.4	7,753.6	43.1	19.6	90.94	-3,008.4	718.8	969.8	911.5	58.35	16.621			
10,300.0	7,740.0	7,817.2	7,753.4	44.6	19.6	90.86	-3,008.4	718.8	871.3	811.3	60.00	14.523			
10,400.0	7,740.0	7,817.0	7,753.2	46.2	19.6	90.78	-3,008.4	718.8	773.2	711.5	61.65	12.541			
10,500.0	7,740.0	7,816.7	7,752.9	47.8	19.6	90.69	-3,008.4	718.8	675.6	612.3	63.32	10.670			
10,600.0	7,740.0	7,816.5	7,752.7	49.4	19.6	90.61	-3,008.4	718.8	578.9	513.9	64.99	8.908			
10,700.0	7,740.0	7,816.3	7,752.5	51.0	19.6	90.53	-3,008.4	718.8	483.5	416.9	66.67	7.253			
10,800.0	7,740.0	7,816.0	7,752.2	52.6	19.6	90.44	-3,008.4	718.8	390.5	322.1	68.35	5.713			
10,900.0	7,740.0	7,815.8	7,752.0	54.2	19.6	90.36	-3,008.4	718.8	301.9	231.8	70.04	4.310			
11,000.0	7,740.0	7,815.6	7,751.8	55.8	19.6	90.28	-3,008.4	718.8	223.1	151.4	71.73	3.111			
11,100.0	7,740.0	7,815.3	7,751.5	57.5	19.6	90.19	-3,008.4	718.8	168.7	95.3	73.43	2.297			
11,156.7	7,740.0	7,815.2	7,751.4	58.4	19.6	90.14	-3,008.4	718.8	158.9	84.5	74.39	2.136 CC, ES, SF			
11,200.0	7,740.0	7,815.1	7,751.3	59.1	19.6	90.11	-3,008.4	718.8	164.7	89.5	75.12	2.192			
11,300.0	7,740.0	7,814.9	7,751.1	60.8	19.6	90.02	-3,008.4	718.8	213.9	137.1	76.83	2.785			
11,400.0	7,740.0	7,814.6	7,750.8	62.4	19.6	89.94	-3,008.4	718.8	290.6	212.0	78.53	3.700			
11,500.0	7,740.0	7,814.4	7,750.6	64.1	19.6	89.85	-3,008.4	718.8	378.3	298.0	80.24	4.714			
11,600.0	7,740.0	7,814.2	7,750.4	65.7	19.6	89.77	-3,008.4	718.8	470.9	389.0	81.95	5.746			
11,700.0	7,740.0	7,813.9	7,750.1	67.4	19.6	89.68	-3,008.4	718.8	566.0	482.4	83.66	6.766			
11,800.0	7,740.0	7,813.7	7,749.9	69.1	19.6	89.60	-3,008.4	718.8	662.6	577.2	85.37	7.761			
11,900.0	7,740.0	7,813.5	7,749.7	70.8	19.6	89.51	-3,008.4	718.8	760.1	673.0	87.09	8.728			
12,000.0	7,740.0	7,813.2	7,749.4	72.4	19.6	89.43	-3,008.4	718.8	858.1	769.3	88.81	9.663			
12,100.0	7,740.0	7,813.0	7,749.2	74.1	19.6	89.34	-3,008.4	718.8	956.6	866.0	90.53	10.567			
12,200.0	7,740.0	7,812.7	7,748.9	75.8	19.6	89.26	-3,008.4	718.8	1,055.3	963.1	92.25	11.440			
12,300.0	7,740.0	7,812.5	7,748.7	77.5	19.6	89.17	-3,008.4	718.8	1,154.3	1,060.3	93.97	12.284			
12,400.0	7,740.0	7,812.3	7,748.5	79.2	19.6	89.08	-3,008.4	718.8	1,253.4	1,157.7	95.69	13.099			
12,500.0	7,740.0	7,812.0	7,748.2	80.9	19.6	89.00	-3,008.4	718.8	1,352.7	1,255.2	97.41	13.886			
12,600.0	7,740.0	7,811.8	7,748.0	82.6	19.6	88.91	-3,008.4	718.8	1,452.0	1,352.9	99.14	14.646			
12,700.0	7,740.0	7,811.5	7,747.7	84.3	19.6	88.82	-3,008.4	718.8	1,551.4	1,450.6	100.86	15.382			
12,800.0	7,740.0	7,811.3	7,747.5	86.0	19.6	88.74	-3,008.4	718.8	1,650.9	1,548.4	102.59	16.093			
12,900.0	7,740.0	7,811.1	7,747.3	87.7	19.6	88.65	-3,008.4	718.8	1,750.5	1,646.2	104.31	16.781			
13,000.0	7,740.0	7,810.8	7,747.0	89.4	19.6	88.56	-3,008.4	718.8	1,850.1	1,744.1	106.04	17.447			
13,100.0	7,740.0	7,810.6	7,746.8	91.1	19.6	88.47	-3,008.4	718.8	1,949.8	1,842.0	107.77	18.092			
13,200.0	7,740.0	7,810.3	7,746.5	92.8	19.6	88.38	-3,008.4	718.8	2,049.5	1,940.0	109.50	18.717			
13,300.0	7,740.0	7,810.1	7,746.3	94.5	19.6	88.30	-3,008.4	718.8	2,149.2	2,037.9	111.23	19.323			
13,400.0	7,740.0	7,809.8	7,746.0	96.2	19.6	88.21	-3,008.4	718.8	2,248.9	2,136.0	112.96	19.910			
13,500.0	7,740.0	7,809.6	7,745.8	98.0	19.6	88.12	-3,008.4	718.8	2,348.7	2,234.0	114.68	20.479			
13,600.0	7,740.0	7,809.3	7,745.5	99.7	19.6	88.03	-3,008.4	718.8	2,448.4	2,332.0	116.41	21.032			
13,700.0	7,740.0	7,809.1	7,745.3	101.4	19.6	87.94	-3,008.4	718.8	2,548.2	2,430.1	118.14	21.569			
13,800.0	7,740.0	7,808.9	7,745.1	103.1	19.6	87.85	-3,008.4	718.8	2,648.1	2,528.2	119.87	22.091			
13,900.0	7,740.0	7,808.6	7,744.8	104.8	19.6	87.76	-3,008.4	718.8	2,747.9	2,626.3	121.60	22.597			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SUR													Offset Site Error:	0.0 ft
Survey Program: 838-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		
14,000.0	7,740.0	7,808.4	7,744.6	106.5	19.6	87.68	-3,008.4	718.8	2,847.7	2,724.4	123.33	23.090		
14,100.0	7,740.0	7,808.1	7,744.3	108.3	19.6	87.59	-3,008.4	718.8	2,947.6	2,822.5	125.06	23.569		
14,200.0	7,740.0	7,807.9	7,744.1	110.0	19.6	87.50	-3,008.4	718.8	3,047.4	2,920.6	126.79	24.035		
14,300.0	7,740.0	7,807.6	7,743.8	111.7	19.6	87.41	-3,008.4	718.8	3,147.3	3,018.8	128.52	24.488		
14,400.0	7,740.0	7,807.4	7,743.6	113.4	19.6	87.32	-3,008.4	718.8	3,247.2	3,116.9	130.25	24.930		
14,500.0	7,740.0	7,807.1	7,743.3	115.2	19.6	87.23	-3,008.4	718.8	3,347.1	3,215.1	131.98	25.360		
14,600.0	7,740.0	7,806.9	7,743.1	116.9	19.6	87.14	-3,008.4	718.8	3,446.9	3,313.2	133.71	25.779		
14,700.0	7,740.0	7,806.6	7,742.8	118.6	19.6	87.04	-3,008.4	718.8	3,546.8	3,411.4	135.44	26.188		
14,800.0	7,740.0	7,806.4	7,742.6	120.4	19.6	86.95	-3,008.4	718.8	3,646.7	3,509.6	137.17	26.586		
14,900.0	7,740.0	7,806.1	7,742.3	122.1	19.6	86.86	-3,008.4	718.8	3,746.7	3,607.8	138.90	26.974		
15,000.0	7,740.0	7,805.8	7,742.0	123.8	19.6	86.77	-3,008.4	718.8	3,846.6	3,705.9	140.63	27.353		
15,100.0	7,740.0	7,805.6	7,741.8	125.5	19.6	86.68	-3,008.4	718.8	3,946.5	3,804.1	142.35	27.723		
15,200.0	7,740.0	7,805.3	7,741.5	127.3	19.6	86.59	-3,008.4	718.8	4,046.4	3,902.3	144.08	28.084		
15,300.0	7,740.0	7,805.1	7,741.3	129.0	19.6	86.50	-3,008.4	718.8	4,146.3	4,000.5	145.81	28.437		
15,400.0	7,740.0	7,804.8	7,741.0	130.7	19.6	86.40	-3,008.4	718.8	4,246.3	4,098.7	147.54	28.781		
15,500.0	7,740.0	7,804.6	7,740.8	132.5	19.6	86.31	-3,008.4	718.8	4,346.2	4,196.9	149.26	29.118		
15,600.0	7,740.0	7,804.3	7,740.5	134.2	19.6	86.22	-3,008.4	718.8	4,446.1	4,295.1	150.99	29.447		
15,700.0	7,740.0	7,804.1	7,740.3	135.9	19.6	86.13	-3,008.4	718.8	4,546.1	4,393.3	152.71	29.769		
15,800.0	7,740.0	7,803.8	7,740.0	137.7	19.6	86.04	-3,008.4	718.8	4,646.0	4,491.6	154.44	30.083		
15,900.0	7,740.0	7,803.5	7,739.7	139.4	19.6	85.94	-3,008.4	718.8	4,745.9	4,589.8	156.16	30.391		
16,000.0	7,740.0	7,803.3	7,739.5	141.1	19.6	85.85	-3,008.4	718.8	4,845.9	4,688.0	157.89	30.692		
16,083.0	7,740.0	7,803.1	7,739.3	142.6	19.6	85.77	-3,008.4	718.8	4,928.8	4,769.5	159.32	30.938		
16,083.8	7,740.0	7,803.1	7,739.3	142.6	19.6	85.77	-3,008.4	718.8	4,929.7	4,770.3	159.33	30.940		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Thomas 7-12 (Existing) - Existing - NO SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 7894-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	-177.03	-982.8	-50.9	984.2					
100.0	100.0	88.0	88.0	0.2	0.2	-177.03	-982.8	-50.9	984.1	983.8	0.31	3,220.014		
200.0	200.0	188.0	188.0	0.3	0.3	-177.03	-982.8	-50.9	984.1	983.5	0.65	1,503.198		
300.0	300.0	288.0	288.0	0.5	0.5	-177.03	-982.8	-50.9	984.1	983.1	1.00	980.451		
400.0	400.0	388.0	388.0	0.7	0.7	-177.03	-982.8	-50.9	984.1	982.8	1.35	727.469		
500.0	500.0	488.0	488.0	0.8	0.9	-177.03	-982.8	-50.9	984.1	982.4	1.70	578.262		
600.0	600.0	588.0	588.0	1.0	1.0	-177.03	-982.8	-50.9	984.1	982.1	2.05	479.844		
700.0	700.0	688.0	688.0	1.2	1.2	-177.03	-982.8	-50.9	984.1	981.7	2.40	410.054		
800.0	800.0	788.0	788.0	1.4	1.4	-177.03	-982.8	-50.9	984.1	981.4	2.75	357.988		
900.0	900.0	888.0	888.0	1.5	1.6	-177.03	-982.8	-50.9	984.1	981.0	3.10	317.654		
1,000.0	1,000.0	988.0	988.0	1.7	1.7	-177.03	-982.8	-50.9	984.1	980.7	3.45	285.488		
1,100.0	1,100.0	1,088.0	1,088.0	1.9	1.9	131.98	-982.8	-50.9	984.7	980.9	3.80	259.394		
1,200.0	1,200.0	1,188.0	1,188.0	2.1	2.1	132.08	-982.8	-50.9	986.5	982.3	4.15	237.953		
1,300.0	1,299.9	1,287.9	1,287.9	2.3	2.2	132.25	-982.8	-50.9	989.4	984.9	4.50	220.036		
1,400.0	1,399.7	1,387.7	1,387.7	2.4	2.4	132.48	-982.8	-50.9	993.5	988.7	4.85	204.843		
1,500.0	1,499.4	1,487.4	1,487.4	2.6	2.6	132.77	-982.8	-50.9	998.8	993.6	5.21	191.796		
1,600.0	1,598.9	1,586.9	1,586.9	2.8	2.8	133.12	-982.8	-50.9	1,005.4	999.8	5.57	180.470		
1,700.0	1,698.3	1,686.3	1,686.3	3.1	2.9	133.53	-982.8	-50.9	1,013.2	1,007.2	5.94	170.549		
1,800.0	1,797.4	1,785.4	1,785.4	3.3	3.1	133.99	-982.8	-50.9	1,022.2	1,015.9	6.32	161.796		
1,908.5	1,904.7	1,892.7	1,892.7	3.6	3.3	134.55	-982.8	-50.9	1,033.6	1,026.8	6.74	153.402		
2,000.0	1,995.0	1,983.0	1,983.0	3.8	3.5	135.11	-982.8	-50.9	1,043.8	1,036.7	7.10	147.048		
2,100.0	2,093.8	2,081.8	2,081.8	4.1	3.6	135.71	-982.8	-50.9	1,055.1	1,047.6	7.50	140.774		
2,200.0	2,192.5	2,180.5	2,180.5	4.4	3.8	136.30	-982.8	-50.9	1,066.6	1,058.7	7.89	135.118		
2,300.0	2,291.3	2,279.3	2,279.3	4.7	4.0	136.88	-982.8	-50.9	1,078.1	1,069.8	8.29	130.005		
2,400.0	2,390.0	2,378.0	2,378.0	5.0	4.2	137.44	-982.8	-50.9	1,089.7	1,081.0	8.69	125.368		
2,500.0	2,488.8	2,476.8	2,476.8	5.3	4.3	137.99	-982.8	-50.9	1,101.5	1,092.4	9.09	121.152		
2,600.0	2,587.5	2,575.5	2,575.5	5.6	4.5	138.54	-982.8	-50.9	1,113.3	1,103.8	9.49	117.306		
2,700.0	2,686.3	2,674.3	2,674.3	5.9	4.7	139.06	-982.8	-50.9	1,125.3	1,115.4	9.89	113.788		
2,800.0	2,785.0	2,773.0	2,773.0	6.2	4.8	139.58	-982.8	-50.9	1,137.3	1,127.0	10.29	110.561		
2,900.0	2,883.8	2,871.8	2,871.8	6.5	5.0	140.09	-982.8	-50.9	1,149.5	1,138.8	10.68	107.593		
3,000.0	2,982.5	2,970.5	2,970.5	6.8	5.2	140.59	-982.8	-50.9	1,161.7	1,150.6	11.08	104.855		
3,100.0	3,081.3	3,069.3	3,069.3	7.2	5.4	141.08	-982.8	-50.9	1,174.0	1,162.5	11.47	102.325		
3,200.0	3,180.0	3,168.0	3,168.0	7.5	5.5	141.55	-982.8	-50.9	1,186.4	1,174.5	11.87	99.980		
3,300.0	3,278.7	3,266.7	3,266.7	7.8	5.7	142.02	-982.8	-50.9	1,198.8	1,186.6	12.26	97.803		
3,400.0	3,377.5	3,365.5	3,365.5	8.1	5.9	142.48	-982.8	-50.9	1,211.4	1,198.7	12.65	95.776		
3,500.0	3,476.2	3,464.2	3,464.2	8.4	6.0	142.92	-982.8	-50.9	1,224.0	1,211.0	13.04	93.887		
3,600.0	3,575.0	3,563.0	3,563.0	8.7	6.2	143.36	-982.8	-50.9	1,236.7	1,223.3	13.42	92.121		
3,700.0	3,673.7	3,661.7	3,661.7	9.1	6.4	143.79	-982.8	-50.9	1,249.4	1,235.6	13.81	90.469		
3,800.0	3,772.5	3,760.5	3,760.5	9.4	6.6	144.22	-982.8	-50.9	1,262.3	1,248.1	14.20	88.920		
3,900.0	3,871.2	3,859.2	3,859.2	9.7	6.7	144.63	-982.8	-50.9	1,275.2	1,260.6	14.58	87.465		
4,000.0	3,970.0	3,958.0	3,958.0	10.0	6.9	145.03	-982.8	-50.9	1,288.1	1,273.2	14.96	86.097		
4,100.0	4,068.7	4,056.7	4,056.7	10.3	7.1	145.43	-982.8	-50.9	1,301.2	1,285.8	15.34	84.808		
4,200.0	4,167.5	4,155.5	4,155.5	10.7	7.3	145.82	-982.8	-50.9	1,314.2	1,298.5	15.72	83.592		
4,300.0	4,266.2	4,254.2	4,254.2	11.0	7.4	146.20	-982.8	-50.9	1,327.4	1,311.3	16.10	82.443		
4,400.0	4,364.9	4,352.9	4,352.9	11.3	7.6	146.57	-982.8	-50.9	1,340.6	1,324.1	16.48	81.357		
4,500.0	4,463.7	4,451.7	4,451.7	11.6	7.8	146.94	-982.8	-50.9	1,353.8	1,337.0	16.85	80.329		
4,600.0	4,562.4	4,550.4	4,550.4	11.9	7.9	147.30	-982.8	-50.9	1,367.1	1,349.9	17.23	79.353		
4,700.0	4,661.2	4,649.2	4,649.2	12.3	8.1	147.65	-982.8	-50.9	1,380.5	1,362.9	17.60	78.427		
4,800.0	4,759.9	4,747.9	4,747.9	12.6	8.3	148.00	-982.8	-50.9	1,393.9	1,375.9	17.98	77.548		
4,900.0	4,858.7	4,846.7	4,846.7	12.9	8.5	148.34	-982.8	-50.9	1,407.4	1,389.0	18.35	76.711		
5,000.0	4,957.4	4,945.4	4,945.4	13.2	8.6	148.67	-982.8	-50.9	1,420.9	1,402.2	18.72	75.914		
5,100.0	5,056.2	5,044.2	5,044.2	13.6	8.8	149.00	-982.8	-50.9	1,434.5	1,415.4	19.09	75.154		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Thomas 7-12 (Existing) - Existing - NO SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 7894-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	5,154.9	5,142.9	5,142.9	13.9	9.0	149.32	-982.8	-50.9	1,448.1	1,428.6	19.46	74.430		
5,300.0	5,253.7	5,241.7	5,241.7	14.2	9.1	149.63	-982.8	-50.9	1,461.7	1,441.9	19.82	73.738		
5,400.0	5,352.4	5,340.4	5,340.4	14.5	9.3	149.94	-982.8	-50.9	1,475.4	1,455.2	20.19	73.077		
5,500.0	5,451.1	5,439.1	5,439.1	14.9	9.5	150.25	-982.8	-50.9	1,489.1	1,468.6	20.56	72.444		
5,600.0	5,549.9	5,537.9	5,537.9	15.2	9.7	150.55	-982.8	-50.9	1,502.9	1,482.0	20.92	71.839		
5,700.0	5,648.6	5,636.6	5,636.6	15.5	9.8	150.84	-982.8	-50.9	1,516.7	1,495.4	21.28	71.259		
5,800.0	5,747.4	5,735.4	5,735.4	15.8	10.0	151.12	-982.8	-50.9	1,530.5	1,508.9	21.65	70.702		
5,900.0	5,846.1	5,834.1	5,834.1	16.2	10.2	151.41	-982.8	-50.9	1,544.4	1,522.4	22.01	70.169		
6,000.0	5,944.9	5,932.9	5,932.9	16.5	10.4	151.68	-982.8	-50.9	1,558.4	1,536.0	22.37	69.657		
6,100.0	6,043.6	6,031.6	6,031.6	16.8	10.5	151.96	-982.8	-50.9	1,572.3	1,549.6	22.73	69.164		
6,200.0	6,142.4	6,130.4	6,130.4	17.1	10.7	152.22	-982.8	-50.9	1,586.3	1,563.2	23.09	68.691		
6,300.0	6,241.1	6,229.1	6,229.1	17.5	10.9	152.49	-982.8	-50.9	1,600.3	1,576.9	23.45	68.236		
6,400.0	6,339.9	6,327.9	6,327.9	17.8	11.0	152.74	-982.8	-50.9	1,614.4	1,590.6	23.81	67.797		
6,500.0	6,438.6	6,426.6	6,426.6	18.1	11.2	153.00	-982.8	-50.9	1,628.5	1,604.3	24.17	67.375		
6,600.0	6,537.3	6,525.3	6,525.3	18.4	11.4	153.25	-982.8	-50.9	1,642.6	1,618.1	24.53	66.968		
6,700.0	6,636.1	6,624.1	6,624.1	18.8	11.6	153.49	-982.8	-50.9	1,656.7	1,631.9	24.89	66.576		
6,800.0	6,734.8	6,722.8	6,722.8	19.1	11.7	153.73	-982.8	-50.9	1,670.9	1,645.7	25.24	66.197		
6,900.0	6,833.6	6,821.6	6,821.6	19.4	11.9	153.97	-982.8	-50.9	1,685.1	1,659.5	25.60	65.831		
7,000.0	6,932.3	6,920.3	6,920.3	19.7	12.1	154.20	-982.8	-50.9	1,699.4	1,673.4	25.95	65.478		
7,100.0	7,031.1	7,019.1	7,019.1	20.1	12.3	154.43	-982.8	-50.9	1,713.6	1,687.3	26.31	65.137		
7,190.5	7,120.5	7,108.5	7,108.5	20.4	12.4	154.64	-982.8	-50.9	1,726.6	1,699.9	26.63	64.838		
7,200.0	7,129.8	7,117.8	7,117.8	20.4	12.4	149.43	-982.8	-50.9	1,727.9	1,701.2	26.69	64.741		
7,250.0	7,179.4	7,167.4	7,167.4	20.5	12.5	114.16	-982.8	-50.9	1,732.4	1,705.5	26.93	64.341		
7,300.0	7,228.8	7,216.8	7,216.8	20.6	12.6	82.66	-982.8	-50.9	1,733.2	1,706.2	27.02	64.149		
7,350.0	7,277.9	7,265.9	7,265.9	20.7	12.7	65.60	-982.8	-50.9	1,730.3	1,703.3	26.97	64.148		
7,400.0	7,326.1	7,314.1	7,314.1	20.7	12.8	56.99	-982.8	-50.9	1,723.7	1,696.9	26.80	64.310		
7,450.0	7,373.2	7,361.2	7,361.2	20.7	12.8	52.51	-982.8	-50.9	1,713.5	1,687.0	26.53	64.598		
7,500.0	7,418.7	7,406.7	7,406.7	20.7	12.9	50.28	-982.8	-50.9	1,699.9	1,673.7	26.17	64.956		
7,550.0	7,462.4	7,450.4	7,450.4	20.6	13.0	49.47	-982.8	-50.9	1,683.0	1,657.2	25.77	65.306		
7,600.0	7,503.8	7,491.8	7,491.8	20.5	13.1	49.69	-982.8	-50.9	1,662.9	1,637.5	25.37	65.543		
7,650.0	7,542.8	7,530.8	7,530.8	20.5	13.1	50.73	-982.8	-50.9	1,639.9	1,614.9	25.02	65.537		
7,700.0	7,578.8	7,566.8	7,566.8	20.4	13.2	52.49	-982.8	-50.9	1,614.4	1,589.6	24.78	65.146		
7,750.0	7,611.8	7,599.8	7,599.8	20.3	13.3	54.92	-982.8	-50.9	1,586.4	1,561.7	24.69	64.248		
7,800.0	7,641.5	7,629.5	7,629.5	20.2	13.3	57.98	-982.8	-50.9	1,556.4	1,531.6	24.79	62.785		
7,850.0	7,667.6	7,655.6	7,655.6	20.2	13.4	61.64	-982.8	-50.9	1,524.6	1,499.5	25.08	60.801		
7,900.0	7,689.9	7,677.9	7,677.9	20.2	13.4	65.84	-982.8	-50.9	1,491.4	1,465.9	25.52	58.442		
7,950.0	7,708.2	7,696.2	7,696.2	20.1	13.4	70.50	-982.8	-50.9	1,457.1	1,431.0	26.06	55.920		
8,000.0	7,722.5	7,710.5	7,710.5	20.2	13.5	75.48	-982.8	-50.9	1,422.1	1,395.4	26.61	53.449		
8,050.0	7,732.6	7,720.6	7,720.6	20.2	13.5	80.63	-982.8	-50.9	1,386.6	1,359.5	27.09	51.181		
8,100.0	7,738.4	7,726.4	7,726.4	20.3	13.5	85.77	-982.8	-50.9	1,351.1	1,323.7	27.47	49.184		
8,142.5	7,740.0	7,728.0	7,728.0	20.4	13.5	90.00	-982.8	-50.9	1,321.2	1,293.5	27.70	47.692		
8,200.0	7,740.0	7,728.0	7,728.0	20.5	13.5	90.00	-982.8	-50.9	1,281.6	1,253.6	27.93	45.888		
8,300.0	7,740.0	7,728.0	7,728.0	20.9	13.5	90.00	-982.8	-50.9	1,216.1	1,187.6	28.48	42.706		
8,400.0	7,740.0	7,728.0	7,728.0	21.4	13.5	90.00	-982.8	-50.9	1,155.5	1,126.3	29.20	39.571		
8,442.5	7,740.0	7,728.0	7,728.0	21.7	13.5	90.00	-982.8	-50.9	1,131.5	1,101.9	29.56	38.280		
8,500.0	7,740.0	7,728.0	7,728.0	22.1	13.5	90.00	-982.8	-50.9	1,100.5	1,070.5	30.02	36.664		
8,600.0	7,740.0	7,728.0	7,728.0	22.8	13.5	90.00	-982.8	-50.9	1,050.7	1,019.8	30.88	34.021		
8,700.0	7,740.0	7,728.0	7,728.0	23.6	13.5	90.00	-982.8	-50.9	1,006.7	974.9	31.83	31.629		
8,800.0	7,740.0	7,728.0	7,728.0	24.5	13.5	90.00	-982.8	-50.9	969.5	936.7	32.84	29.518		
8,842.5	7,740.0	7,728.0	7,728.0	25.0	13.5	90.00	-982.8	-50.9	955.9	922.6	33.29	28.713		
8,900.0	7,740.0	7,728.0	7,728.0	25.5	13.5	90.00	-982.8	-50.9	940.1	906.0	34.02	27.636		
9,000.0	7,740.0	7,728.0	7,728.0	26.6	13.5	90.00	-982.8	-50.9	920.4	885.1	35.33	26.055		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Thomas 7-12 (Existing) - Existing - NO SURVEYS											Offset Site Error: 0.0 ft		
Survey Program: 7894-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	
9,100.0	7,740.0	7,728.0	7,728.0	27.7	13.5	90.00	-982.8	-50.9	911.4	874.7	36.70	24.837	
9,132.6	7,740.0	7,728.0	7,728.0	28.1	13.5	90.00	-982.8	-50.9	910.8	873.7	37.16	24.512 CC, ES	
9,200.0	7,740.0	7,728.0	7,728.0	28.9	13.5	90.00	-982.8	-50.9	913.3	875.2	38.11	23.963	
9,300.0	7,740.0	7,728.0	7,728.0	30.2	13.5	90.00	-982.8	-50.9	926.1	886.5	39.57	23.402	
9,342.5	7,740.0	7,728.0	7,728.0	30.7	13.5	90.00	-982.8	-50.9	934.7	894.5	40.20	23.249	
9,399.5	7,740.0	7,728.0	7,728.0	31.5	13.5	90.00	-982.8	-50.9	949.4	908.2	41.18	23.055	
9,500.0	7,740.0	7,728.0	7,728.0	32.8	13.5	90.00	-982.8	-50.9	983.3	940.6	42.71	23.022 SF	
9,600.0	7,740.0	7,728.0	7,728.0	34.2	13.5	90.00	-982.8	-50.9	1,025.8	981.5	44.26	23.175	
9,700.0	7,740.0	7,728.0	7,728.0	35.6	13.5	90.00	-982.8	-50.9	1,075.8	1,030.0	45.83	23.473	
9,800.0	7,740.0	7,728.0	7,728.0	37.1	13.5	90.00	-982.8	-50.9	1,132.6	1,085.2	47.42	23.883	
9,900.0	7,740.0	7,728.0	7,728.0	38.5	13.5	90.00	-982.8	-50.9	1,195.0	1,146.0	49.03	24.375	
10,000.0	7,740.0	7,728.0	7,728.0	40.0	13.5	90.00	-982.8	-50.9	1,262.3	1,211.6	50.64	24.925	
10,100.0	7,740.0	7,728.0	7,728.0	41.6	13.5	90.00	-982.8	-50.9	1,333.6	1,281.4	52.27	25.513	
10,200.0	7,740.0	7,728.0	7,728.0	43.1	13.5	90.00	-982.8	-50.9	1,408.5	1,354.6	53.91	26.125	
10,300.0	7,740.0	7,728.0	7,728.0	44.6	13.5	90.00	-982.8	-50.9	1,486.3	1,430.8	55.56	26.751	
10,400.0	7,740.0	7,728.0	7,728.0	46.2	13.5	90.00	-982.8	-50.9	1,566.7	1,509.4	57.22	27.380	
10,500.0	7,740.0	7,728.0	7,728.0	47.8	13.5	90.00	-982.8	-50.9	1,649.2	1,590.3	58.88	28.007	
10,600.0	7,740.0	7,728.0	7,728.0	49.4	13.5	90.00	-982.8	-50.9	1,733.5	1,672.9	60.56	28.627	
10,700.0	7,740.0	7,728.0	7,728.0	51.0	13.5	90.00	-982.8	-50.9	1,819.4	1,757.2	62.23	29.236	
10,800.0	7,740.0	7,728.0	7,728.0	52.6	13.5	90.00	-982.8	-50.9	1,906.7	1,842.8	63.91	29.832	
10,900.0	7,740.0	7,728.0	7,728.0	54.2	13.5	90.00	-982.8	-50.9	1,995.2	1,929.6	65.60	30.414	
11,000.0	7,740.0	7,728.0	7,728.0	55.8	13.5	90.00	-982.8	-50.9	2,084.7	2,017.4	67.29	30.980	
11,100.0	7,740.0	7,728.0	7,728.0	57.5	13.5	90.00	-982.8	-50.9	2,175.2	2,106.2	68.99	31.530	
11,200.0	7,740.0	7,728.0	7,728.0	59.1	13.5	90.00	-982.8	-50.9	2,266.4	2,195.7	70.69	32.063	
11,300.0	7,740.0	7,728.0	7,728.0	60.8	13.5	90.00	-982.8	-50.9	2,358.4	2,286.0	72.39	32.579	
11,400.0	7,740.0	7,728.0	7,728.0	62.4	13.5	90.00	-982.8	-50.9	2,451.0	2,376.9	74.09	33.079	
11,500.0	7,740.0	7,728.0	7,728.0	64.1	13.5	90.00	-982.8	-50.9	2,544.1	2,468.3	75.80	33.563	
11,600.0	7,740.0	7,728.0	7,728.0	65.7	13.5	90.00	-982.8	-50.9	2,637.8	2,560.3	77.51	34.031	
11,700.0	7,740.0	7,728.0	7,728.0	67.4	13.5	90.00	-982.8	-50.9	2,731.9	2,652.6	79.22	34.483	
11,800.0	7,740.0	7,728.0	7,728.0	69.1	13.5	90.00	-982.8	-50.9	2,826.4	2,745.4	80.94	34.920	
11,900.0	7,740.0	7,728.0	7,728.0	70.8	13.5	90.00	-982.8	-50.9	2,921.2	2,838.6	82.66	35.342	
12,000.0	7,740.0	7,728.0	7,728.0	72.4	13.5	90.00	-982.8	-50.9	3,016.4	2,932.1	84.37	35.751	
12,100.0	7,740.0	7,728.0	7,728.0	74.1	13.5	90.00	-982.8	-50.9	3,111.9	3,025.9	86.09	36.146	
12,200.0	7,740.0	7,728.0	7,728.0	75.8	13.5	90.00	-982.8	-50.9	3,207.7	3,119.9	87.82	36.528	
12,300.0	7,740.0	7,728.0	7,728.0	77.5	13.5	90.00	-982.8	-50.9	3,303.8	3,214.2	89.54	36.897	
12,400.0	7,740.0	7,728.0	7,728.0	79.2	13.5	90.00	-982.8	-50.9	3,400.0	3,308.7	91.26	37.255	
12,500.0	7,740.0	7,728.0	7,728.0	80.9	13.5	90.00	-982.8	-50.9	3,496.5	3,403.5	92.99	37.601	
12,600.0	7,740.0	7,728.0	7,728.0	82.6	13.5	90.00	-982.8	-50.9	3,593.1	3,498.4	94.72	37.936	
12,700.0	7,740.0	7,728.0	7,728.0	84.3	13.5	90.00	-982.8	-50.9	3,690.0	3,593.5	96.44	38.260	
12,800.0	7,740.0	7,728.0	7,728.0	86.0	13.5	90.00	-982.8	-50.9	3,787.0	3,688.8	98.17	38.574	
12,900.0	7,740.0	7,728.0	7,728.0	87.7	13.5	90.00	-982.8	-50.9	3,884.1	3,784.2	99.90	38.879	
13,000.0	7,740.0	7,728.0	7,728.0	89.4	13.5	90.00	-982.8	-50.9	3,981.4	3,879.8	101.64	39.174	
13,100.0	7,740.0	7,728.0	7,728.0	91.1	13.5	90.00	-982.8	-50.9	4,078.9	3,975.5	103.37	39.460	
13,200.0	7,740.0	7,728.0	7,728.0	92.8	13.5	90.00	-982.8	-50.9	4,176.4	4,071.3	105.10	39.737	
13,300.0	7,740.0	7,728.0	7,728.0	94.5	13.5	90.00	-982.8	-50.9	4,274.1	4,167.2	106.83	40.006	
13,400.0	7,740.0	7,728.0	7,728.0	96.2	13.5	90.00	-982.8	-50.9	4,371.8	4,263.3	108.57	40.268	
13,500.0	7,740.0	7,728.0	7,728.0	98.0	13.5	90.00	-982.8	-50.9	4,469.7	4,359.4	110.30	40.522	
13,600.0	7,740.0	7,728.0	7,728.0	99.7	13.5	90.00	-982.8	-50.9	4,567.7	4,455.6	112.04	40.768	
13,700.0	7,740.0	7,728.0	7,728.0	101.4	13.5	90.00	-982.8	-50.9	4,665.7	4,551.9	113.78	41.008	
13,800.0	7,740.0	7,728.0	7,728.0	103.1	13.5	90.00	-982.8	-50.9	4,763.8	4,648.3	115.51	41.240	
13,900.0	7,740.0	7,728.0	7,728.0	104.8	13.5	90.00	-982.8	-50.9	4,862.0	4,744.8	117.25	41.467	
14,000.0	7,740.0	7,728.0	7,728.0	106.5	13.5	90.00	-982.8	-50.9	4,960.3	4,841.3	118.99	41.687	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design													S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Thomas 7-12 (Existing) - Existing - NO SURVEYS													Offset Site Error:		0.0 ft	
Survey Program: 7894-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																	
14,100.0	7,740.0	7,728.0	7,728.0	108.3	13.5	90.00	-982.8	-50.9	5,058.6	4,937.9	120.73	41.901																	
14,200.0	7,740.0	7,728.0	7,728.0	110.0	13.5	90.00	-982.8	-50.9	5,157.0	5,034.6	122.47	42.109																	
14,300.0	7,740.0	7,728.0	7,728.0	111.7	13.5	90.00	-982.8	-50.9	5,255.5	5,131.3	124.21	42.312																	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS E UNIT 1 (EXISTING) - Existing - NO SUR											Offset Site Error: 0.0 ft		
Survey Program: 8332-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	142.76	-1,198.8	911.3	1,505.9				
100.0	100.0	94.0	94.0	0.2	0.2	142.76	-1,198.8	911.3	1,505.9	1,505.6	0.32	4,763.917	
200.0	200.0	194.0	194.0	0.3	0.3	142.76	-1,198.8	911.3	1,505.9	1,505.2	0.67	2,263.926	
300.0	300.0	294.0	294.0	0.5	0.5	142.76	-1,198.8	911.3	1,505.9	1,504.9	1.01	1,484.759	
400.0	400.0	394.0	394.0	0.7	0.7	142.76	-1,198.8	911.3	1,505.9	1,504.5	1.36	1,104.595	
500.0	500.0	494.0	494.0	0.8	0.9	142.76	-1,198.8	911.3	1,505.9	1,504.2	1.71	879.423	
600.0	600.0	594.0	594.0	1.0	1.0	142.76	-1,198.8	911.3	1,505.9	1,503.8	2.06	730.509	
700.0	700.0	694.0	694.0	1.2	1.2	142.76	-1,198.8	911.3	1,505.9	1,503.5	2.41	624.724	
800.0	800.0	794.0	794.0	1.4	1.4	142.76	-1,198.8	911.3	1,505.9	1,503.1	2.76	545.701	
900.0	900.0	894.0	894.0	1.5	1.6	142.76	-1,198.8	911.3	1,505.9	1,502.8	3.11	484.424	
1,000.0	1,000.0	994.0	994.0	1.7	1.7	142.76	-1,198.8	911.3	1,505.9	1,502.4	3.46	435.520	
1,100.0	1,100.0	1,094.0	1,094.0	1.9	1.9	91.77	-1,198.8	911.3	1,505.9	1,502.1	3.81	395.567	
1,200.0	1,200.0	1,194.0	1,194.0	2.1	2.1	91.87	-1,198.8	911.3	1,506.0	1,501.8	4.16	362.215	
1,300.0	1,299.9	1,293.9	1,293.9	2.3	2.3	92.03	-1,198.8	911.3	1,506.1	1,501.6	4.51	333.806	
1,400.0	1,399.7	1,393.7	1,393.7	2.4	2.4	92.26	-1,198.8	911.3	1,506.4	1,501.5	4.87	309.163	
1,500.0	1,499.4	1,493.4	1,493.4	2.6	2.6	92.56	-1,198.8	911.3	1,506.7	1,501.5	5.24	287.444	
1,600.0	1,598.9	1,592.9	1,592.9	2.8	2.8	92.91	-1,198.8	911.3	1,507.2	1,501.5	5.62	268.040	
1,700.0	1,698.3	1,692.3	1,692.3	3.1	3.0	93.34	-1,198.8	911.3	1,507.8	1,501.8	6.02	250.510	
1,800.0	1,797.4	1,791.4	1,791.4	3.3	3.1	93.82	-1,198.8	911.3	1,508.6	1,502.2	6.43	234.537	
1,908.5	1,904.7	1,898.7	1,898.7	3.6	3.3	94.41	-1,198.8	911.3	1,509.8	1,502.9	6.90	218.682	
2,000.0	1,995.0	1,989.0	1,989.0	3.8	3.5	94.95	-1,198.8	911.3	1,511.0	1,503.7	7.31	206.688	
2,100.0	2,093.8	2,087.8	2,087.8	4.1	3.6	95.54	-1,198.8	911.3	1,512.4	1,504.7	7.76	194.856	
2,200.0	2,192.5	2,186.5	2,186.5	4.4	3.8	96.12	-1,198.8	911.3	1,514.1	1,505.8	8.22	184.210	
2,300.0	2,291.3	2,285.3	2,285.3	4.7	4.0	96.71	-1,198.8	911.3	1,515.8	1,507.2	8.68	174.610	
2,400.0	2,390.0	2,384.0	2,384.0	5.0	4.2	97.30	-1,198.8	911.3	1,517.8	1,508.6	9.15	165.931	
2,500.0	2,488.8	2,482.8	2,482.8	5.3	4.3	97.88	-1,198.8	911.3	1,519.9	1,510.3	9.62	158.062	
2,600.0	2,587.5	2,581.5	2,581.5	5.6	4.5	98.46	-1,198.8	911.3	1,522.2	1,512.1	10.09	150.907	
2,700.0	2,686.3	2,680.3	2,680.3	5.9	4.7	99.04	-1,198.8	911.3	1,524.6	1,514.0	10.56	144.382	
2,800.0	2,785.0	2,779.0	2,779.0	6.2	4.9	99.62	-1,198.8	911.3	1,527.2	1,516.2	11.03	138.415	
2,900.0	2,883.8	2,877.8	2,877.8	6.5	5.0	100.19	-1,198.8	911.3	1,529.9	1,518.4	11.51	132.943	
3,000.0	2,982.5	2,976.5	2,976.5	6.8	5.2	100.77	-1,198.8	911.3	1,532.9	1,520.9	11.98	127.911	
3,100.0	3,081.3	3,075.3	3,075.3	7.2	5.4	101.34	-1,198.8	911.3	1,535.9	1,523.5	12.46	123.273	
3,200.0	3,180.0	3,174.0	3,174.0	7.5	5.5	101.91	-1,198.8	911.3	1,539.1	1,526.2	12.94	118.988	
3,300.0	3,278.7	3,272.7	3,272.7	7.8	5.7	102.48	-1,198.8	911.3	1,542.5	1,529.1	13.41	115.020	
3,400.0	3,377.5	3,371.5	3,371.5	8.1	5.9	103.04	-1,198.8	911.3	1,546.0	1,532.2	13.89	111.338	
3,500.0	3,476.2	3,470.2	3,470.2	8.4	6.1	103.60	-1,198.8	911.3	1,549.7	1,535.4	14.36	107.913	
3,600.0	3,575.0	3,569.0	3,569.0	8.7	6.2	104.16	-1,198.8	911.3	1,553.6	1,538.7	14.84	104.723	
3,700.0	3,673.7	3,667.7	3,667.7	9.1	6.4	104.72	-1,198.8	911.3	1,557.5	1,542.2	15.31	101.745	
3,800.0	3,772.5	3,766.5	3,766.5	9.4	6.6	105.27	-1,198.8	911.3	1,561.7	1,545.9	15.78	98.960	
3,900.0	3,871.2	3,865.2	3,865.2	9.7	6.7	105.82	-1,198.8	911.3	1,566.0	1,549.7	16.25	96.352	
4,000.0	3,970.0	3,964.0	3,964.0	10.0	6.9	106.37	-1,198.8	911.3	1,570.4	1,553.7	16.72	93.907	
4,100.0	4,068.7	4,062.7	4,062.7	10.3	7.1	106.92	-1,198.8	911.3	1,575.0	1,557.8	17.19	91.609	
4,200.0	4,167.5	4,161.5	4,161.5	10.7	7.3	107.46	-1,198.8	911.3	1,579.7	1,562.0	17.66	89.449	
4,300.0	4,266.2	4,260.2	4,260.2	11.0	7.4	108.00	-1,198.8	911.3	1,584.5	1,566.4	18.13	87.414	
4,400.0	4,364.9	4,358.9	4,358.9	11.3	7.6	108.53	-1,198.8	911.3	1,589.6	1,571.0	18.59	85.495	
4,500.0	4,463.7	4,457.7	4,457.7	11.6	7.8	109.06	-1,198.8	911.3	1,594.7	1,575.6	19.06	83.683	
4,600.0	4,562.4	4,556.4	4,556.4	11.9	8.0	109.59	-1,198.8	911.3	1,600.0	1,580.5	19.52	81.971	
4,700.0	4,661.2	4,655.2	4,655.2	12.3	8.1	110.12	-1,198.8	911.3	1,605.4	1,585.4	19.98	80.351	
4,800.0	4,759.9	4,753.9	4,753.9	12.6	8.3	110.64	-1,198.8	911.3	1,611.0	1,590.5	20.44	78.817	
4,900.0	4,858.7	4,852.7	4,852.7	12.9	8.5	111.16	-1,198.8	911.3	1,616.7	1,595.8	20.90	77.363	
5,000.0	4,957.4	4,951.4	4,951.4	13.2	8.6	111.67	-1,198.8	911.3	1,622.5	1,601.1	21.35	75.983	
5,100.0	5,056.2	5,050.2	5,050.2	13.6	8.8	112.18	-1,198.8	911.3	1,628.4	1,606.6	21.81	74.673	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS E UNIT 1 (EXISTING) - Existing - NO SUR													Offset Site Error:	0.0 ft
Survey Program: 8332-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	5,154.9	5,148.9	5,148.9	13.9	9.0	112.69	-1,198.8	911.3	1,634.5	1,612.3	22.26	73.428		
5,300.0	5,253.7	5,247.7	5,247.7	14.2	9.2	113.19	-1,198.8	911.3	1,640.8	1,618.0	22.71	72.243		
5,400.0	5,352.4	5,346.4	5,346.4	14.5	9.3	113.69	-1,198.8	911.3	1,647.1	1,623.9	23.16	71.116		
5,500.0	5,451.1	5,445.1	5,445.1	14.9	9.5	114.19	-1,198.8	911.3	1,653.6	1,630.0	23.61	70.042		
5,600.0	5,549.9	5,543.9	5,543.9	15.2	9.7	114.68	-1,198.8	911.3	1,660.2	1,636.1	24.05	69.018		
5,700.0	5,648.6	5,642.6	5,642.6	15.5	9.8	115.17	-1,198.8	911.3	1,666.9	1,642.4	24.50	68.042		
5,800.0	5,747.4	5,741.4	5,741.4	15.8	10.0	115.65	-1,198.8	911.3	1,673.8	1,648.8	24.94	67.110		
5,900.0	5,846.1	5,840.1	5,840.1	16.2	10.2	116.13	-1,198.8	911.3	1,680.7	1,655.3	25.38	66.220		
6,000.0	5,944.9	5,938.9	5,938.9	16.5	10.4	116.61	-1,198.8	911.3	1,687.8	1,662.0	25.82	65.369		
6,100.0	6,043.6	6,037.6	6,037.6	16.8	10.5	117.08	-1,198.8	911.3	1,695.0	1,668.7	26.26	64.556		
6,200.0	6,142.4	6,136.4	6,136.4	17.1	10.7	117.55	-1,198.8	911.3	1,702.3	1,675.6	26.69	63.779		
6,300.0	6,241.1	6,235.1	6,235.1	17.5	10.9	118.01	-1,198.8	911.3	1,709.8	1,682.6	27.12	63.034		
6,400.0	6,339.9	6,333.9	6,333.9	17.8	11.1	118.47	-1,198.8	911.3	1,717.3	1,689.7	27.56	62.321		
6,500.0	6,438.6	6,432.6	6,432.6	18.1	11.2	118.93	-1,198.8	911.3	1,725.0	1,697.0	27.99	61.639		
6,600.0	6,537.3	6,531.3	6,531.3	18.4	11.4	119.38	-1,198.8	911.3	1,732.7	1,704.3	28.41	60.984		
6,700.0	6,636.1	6,630.1	6,630.1	18.8	11.6	119.83	-1,198.8	911.3	1,740.6	1,711.8	28.84	60.357		
6,800.0	6,734.8	6,728.8	6,728.8	19.1	11.7	120.28	-1,198.8	911.3	1,748.6	1,719.3	29.26	59.755		
6,900.0	6,833.6	6,827.6	6,827.6	19.4	11.9	120.72	-1,198.8	911.3	1,756.7	1,727.0	29.68	59.177		
7,000.0	6,932.3	6,926.3	6,926.3	19.7	12.1	121.15	-1,198.8	911.3	1,764.9	1,734.8	30.11	58.623		
7,100.0	7,031.1	7,025.1	7,025.1	20.1	12.3	121.59	-1,198.8	911.3	1,773.2	1,742.6	30.52	58.090		
7,190.5	7,120.5	7,114.5	7,114.5	20.4	12.4	121.97	-1,198.8	911.3	1,780.8	1,749.9	30.90	57.626		
7,200.0	7,129.8	7,123.8	7,123.8	20.4	12.4	116.86	-1,198.8	911.3	1,781.5	1,750.5	30.95	57.559		
7,250.0	7,179.4	7,173.4	7,173.4	20.5	12.5	81.87	-1,198.8	911.3	1,782.7	1,751.6	31.10	57.319		
7,300.0	7,228.8	7,222.8	7,222.8	20.6	12.6	50.37	-1,198.8	911.3	1,779.6	1,748.5	31.07	57.271		
7,350.0	7,277.9	7,271.9	7,271.9	20.7	12.7	33.03	-1,198.8	911.3	1,772.2	1,741.3	30.87	57.415		
7,400.0	7,326.1	7,320.1	7,320.1	20.7	12.8	23.87	-1,198.8	911.3	1,760.5	1,730.1	30.48	57.754		
7,450.0	7,373.2	7,367.2	7,367.2	20.7	12.9	18.54	-1,198.8	911.3	1,744.7	1,714.8	29.93	58.294		
7,500.0	7,418.7	7,412.7	7,412.7	20.7	12.9	15.16	-1,198.8	911.3	1,724.8	1,695.6	29.21	59.045		
7,550.0	7,462.4	7,456.4	7,456.4	20.6	13.0	12.88	-1,198.8	911.3	1,701.0	1,672.7	28.34	60.016		
7,600.0	7,503.8	7,497.8	7,497.8	20.5	13.1	11.26	-1,198.8	911.3	1,673.5	1,646.2	27.34	61.220		
7,650.0	7,542.8	7,536.8	7,536.8	20.5	13.2	10.07	-1,198.8	911.3	1,642.5	1,616.3	26.21	62.665		
7,700.0	7,578.8	7,572.8	7,572.8	20.4	13.2	9.19	-1,198.8	911.3	1,608.2	1,583.2	24.99	64.354		
7,750.0	7,611.8	7,605.8	7,605.8	20.3	13.3	8.52	-1,198.8	911.3	1,570.8	1,547.1	23.70	66.278		
7,800.0	7,641.5	7,635.5	7,635.5	20.2	13.3	8.02	-1,198.8	911.3	1,530.7	1,508.3	22.38	68.399		
7,850.0	7,667.6	7,661.6	7,661.6	20.2	13.4	7.64	-1,198.8	911.3	1,488.2	1,467.1	21.07	70.638		
7,900.0	7,689.9	7,683.9	7,683.9	20.2	13.4	7.35	-1,198.8	911.3	1,443.5	1,423.7	19.82	72.844		
7,950.0	7,708.2	7,702.2	7,702.2	20.1	13.4	7.13	-1,198.8	911.3	1,397.1	1,378.4	18.69	74.767		
8,000.0	7,722.5	7,716.5	7,716.5	20.2	13.5	6.95	-1,198.8	911.3	1,349.2	1,331.5	17.74	76.046		
8,050.0	7,732.6	7,726.6	7,726.6	20.2	13.5	6.74	-1,198.8	911.3	1,300.3	1,283.2	17.05	76.252		
8,100.0	7,738.4	7,732.4	7,732.4	20.3	13.5	6.09	-1,198.8	911.3	1,250.6	1,234.0	16.66	75.047		
8,142.5	7,740.0	7,734.0	7,734.0	20.4	13.5	-90.00	-1,198.8	911.3	1,208.2	1,180.5	27.71	43.596		
8,200.0	7,740.0	7,734.0	7,734.0	20.5	13.5	-90.00	-1,198.8	911.3	1,150.7	1,122.7	27.94	41.185		
8,300.0	7,740.0	7,734.0	7,734.0	20.9	13.5	-90.00	-1,198.8	911.3	1,050.7	1,022.2	28.49	36.884		
8,400.0	7,740.0	7,734.0	7,734.0	21.4	13.5	-90.00	-1,198.8	911.3	950.7	921.5	29.21	32.544		
8,442.5	7,740.0	7,734.0	7,734.0	21.7	13.5	-90.00	-1,198.8	911.3	908.2	878.6	29.57	30.716		
8,500.0	7,740.0	7,734.0	7,734.0	22.1	13.5	-90.00	-1,198.8	911.3	850.7	820.7	30.03	28.332		
8,600.0	7,740.0	7,734.0	7,734.0	22.8	13.5	-90.00	-1,198.8	911.3	750.7	719.8	30.89	24.300		
8,700.0	7,740.0	7,734.0	7,734.0	23.6	13.5	-90.00	-1,198.8	911.3	650.8	619.0	31.84	20.440		
8,800.0	7,740.0	7,734.0	7,734.0	24.5	13.5	-90.00	-1,198.8	911.3	551.1	518.2	32.86	16.773		
8,842.5	7,740.0	7,734.0	7,734.0	25.0	13.5	-90.00	-1,198.8	911.3	508.8	475.5	33.30	15.277		
8,900.0	7,740.0	7,734.0	7,734.0	25.5	13.5	-90.00	-1,198.8	911.3	451.6	417.6	34.03	13.272		
9,000.0	7,740.0	7,734.0	7,734.0	26.6	13.5	-90.00	-1,198.8	911.3	352.4	317.1	35.34	9.973		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS E UNIT 1 (EXISTING) - Existing - NO SUR												Offset Site Error:	0.0 ft
Survey Program: 8332-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
9,100.0	7,740.0	7,734.0	7,734.0	27.7	13.5	-90.00	-1,198.8	911.3	253.9	217.2	36.71	6.917	
9,200.0	7,740.0	7,734.0	7,734.0	28.9	13.5	-90.00	-1,198.8	911.3	157.3	119.2	38.12	4.126	
9,300.0	7,740.0	7,734.0	7,734.0	30.2	13.5	-90.00	-1,198.8	911.3	70.8	31.2	39.58	1.789	
9,342.5	7,740.0	7,734.0	7,734.0	30.7	13.5	-90.00	-1,198.8	911.3	51.8	11.6	40.21	1.289	Level 3
9,348.7	7,740.0	7,734.0	7,734.0	30.8	13.5	-90.00	-1,198.8	911.3	51.4	11.1	40.32	1.276	Level 3, CC, ES, SF
9,399.5	7,740.0	7,734.0	7,734.0	31.5	13.5	-90.00	-1,198.8	911.3	72.1	31.0	41.19	1.751	
9,500.0	7,740.0	7,734.0	7,734.0	32.8	13.5	-90.00	-1,198.8	911.3	159.4	116.7	42.72	3.732	
9,600.0	7,740.0	7,734.0	7,734.0	34.2	13.5	-90.00	-1,198.8	911.3	256.1	211.8	44.27	5.785	
9,700.0	7,740.0	7,734.0	7,734.0	35.6	13.5	-90.00	-1,198.8	911.3	354.6	308.8	45.84	7.736	
9,800.0	7,740.0	7,734.0	7,734.0	37.1	13.5	-90.00	-1,198.8	911.3	453.8	406.4	47.43	9.567	
9,900.0	7,740.0	7,734.0	7,734.0	38.5	13.5	-90.00	-1,198.8	911.3	553.3	504.2	49.04	11.283	
10,000.0	7,740.0	7,734.0	7,734.0	40.0	13.5	-90.00	-1,198.8	911.3	652.9	602.2	50.65	12.889	
10,100.0	7,740.0	7,734.0	7,734.0	41.6	13.5	-90.00	-1,198.8	911.3	752.6	700.3	52.28	14.395	
10,200.0	7,740.0	7,734.0	7,734.0	43.1	13.5	-90.00	-1,198.8	911.3	852.4	798.5	53.92	15.808	
10,300.0	7,740.0	7,734.0	7,734.0	44.6	13.5	-90.00	-1,198.8	911.3	952.2	896.7	55.57	17.135	
10,400.0	7,740.0	7,734.0	7,734.0	46.2	13.5	-90.00	-1,198.8	911.3	1,052.1	994.9	57.23	18.384	
10,500.0	7,740.0	7,734.0	7,734.0	47.8	13.5	-90.00	-1,198.8	911.3	1,152.0	1,093.1	58.89	19.560	
10,600.0	7,740.0	7,734.0	7,734.0	49.4	13.5	-90.00	-1,198.8	911.3	1,251.9	1,191.3	60.57	20.670	
10,700.0	7,740.0	7,734.0	7,734.0	51.0	13.5	-90.00	-1,198.8	911.3	1,351.8	1,289.6	62.24	21.719	
10,800.0	7,740.0	7,734.0	7,734.0	52.6	13.5	-90.00	-1,198.8	911.3	1,451.8	1,387.8	63.93	22.710	
10,900.0	7,740.0	7,734.0	7,734.0	54.2	13.5	-90.00	-1,198.8	911.3	1,551.7	1,486.1	65.61	23.650	
11,000.0	7,740.0	7,734.0	7,734.0	55.8	13.5	-90.00	-1,198.8	911.3	1,651.6	1,584.3	67.30	24.540	
11,100.0	7,740.0	7,734.0	7,734.0	57.5	13.5	-90.00	-1,198.8	911.3	1,751.6	1,682.6	69.00	25.386	
11,200.0	7,740.0	7,734.0	7,734.0	59.1	13.5	-90.00	-1,198.8	911.3	1,851.6	1,780.9	70.70	26.190	
11,300.0	7,740.0	7,734.0	7,734.0	60.8	13.5	-90.00	-1,198.8	911.3	1,951.5	1,879.1	72.40	26.955	
11,400.0	7,740.0	7,734.0	7,734.0	62.4	13.5	-90.00	-1,198.8	911.3	2,051.5	1,977.4	74.10	27.684	
11,500.0	7,740.0	7,734.0	7,734.0	64.1	13.5	-90.00	-1,198.8	911.3	2,151.5	2,075.6	75.81	28.379	
11,600.0	7,740.0	7,734.0	7,734.0	65.7	13.5	-90.00	-1,198.8	911.3	2,251.4	2,173.9	77.52	29.043	
11,700.0	7,740.0	7,734.0	7,734.0	67.4	13.5	-90.00	-1,198.8	911.3	2,351.4	2,272.2	79.23	29.677	
11,800.0	7,740.0	7,734.0	7,734.0	69.1	13.5	-90.00	-1,198.8	911.3	2,451.4	2,370.4	80.95	30.283	
11,900.0	7,740.0	7,734.0	7,734.0	70.8	13.5	-90.00	-1,198.8	911.3	2,551.4	2,468.7	82.67	30.864	
12,000.0	7,740.0	7,734.0	7,734.0	72.4	13.5	-90.00	-1,198.8	911.3	2,651.3	2,567.0	84.38	31.420	
12,100.0	7,740.0	7,734.0	7,734.0	74.1	13.5	-90.00	-1,198.8	911.3	2,751.3	2,665.2	86.10	31.953	
12,200.0	7,740.0	7,734.0	7,734.0	75.8	13.5	-90.00	-1,198.8	911.3	2,851.3	2,763.5	87.83	32.465	
12,300.0	7,740.0	7,734.0	7,734.0	77.5	13.5	-90.00	-1,198.8	911.3	2,951.3	2,861.7	89.55	32.957	
12,400.0	7,740.0	7,734.0	7,734.0	79.2	13.5	-90.00	-1,198.8	911.3	3,051.3	2,960.0	91.27	33.430	
12,500.0	7,740.0	7,734.0	7,734.0	80.9	13.5	-90.00	-1,198.8	911.3	3,151.3	3,058.3	93.00	33.885	
12,600.0	7,740.0	7,734.0	7,734.0	82.6	13.5	-90.00	-1,198.8	911.3	3,251.3	3,156.5	94.73	34.322	
12,700.0	7,740.0	7,734.0	7,734.0	84.3	13.5	-90.00	-1,198.8	911.3	3,351.2	3,254.8	96.46	34.744	
12,800.0	7,740.0	7,734.0	7,734.0	86.0	13.5	-90.00	-1,198.8	911.3	3,451.2	3,353.0	98.18	35.150	
12,900.0	7,740.0	7,734.0	7,734.0	87.7	13.5	-90.00	-1,198.8	911.3	3,551.2	3,451.3	99.91	35.542	
13,000.0	7,740.0	7,734.0	7,734.0	89.4	13.5	-90.00	-1,198.8	911.3	3,651.2	3,549.6	101.65	35.921	
13,100.0	7,740.0	7,734.0	7,734.0	91.1	13.5	-90.00	-1,198.8	911.3	3,751.2	3,647.8	103.38	36.286	
13,200.0	7,740.0	7,734.0	7,734.0	92.8	13.5	-90.00	-1,198.8	911.3	3,851.2	3,746.1	105.11	36.639	
13,300.0	7,740.0	7,734.0	7,734.0	94.5	13.5	-90.00	-1,198.8	911.3	3,951.2	3,844.3	106.84	36.980	
13,400.0	7,740.0	7,734.0	7,734.0	96.2	13.5	-90.00	-1,198.8	911.3	4,051.2	3,942.6	108.58	37.311	
13,500.0	7,740.0	7,734.0	7,734.0	98.0	13.5	-90.00	-1,198.8	911.3	4,151.2	4,040.8	110.31	37.630	
13,600.0	7,740.0	7,734.0	7,734.0	99.7	13.5	-90.00	-1,198.8	911.3	4,251.2	4,139.1	112.05	37.940	
13,700.0	7,740.0	7,734.0	7,734.0	101.4	13.5	-90.00	-1,198.8	911.3	4,351.1	4,237.4	113.79	38.239	
13,800.0	7,740.0	7,734.0	7,734.0	103.1	13.5	-90.00	-1,198.8	911.3	4,451.1	4,335.6	115.52	38.530	
13,900.0	7,740.0	7,734.0	7,734.0	104.8	13.5	-90.00	-1,198.8	911.3	4,551.1	4,433.9	117.26	38.812	
14,000.0	7,740.0	7,734.0	7,734.0	106.5	13.5	-90.00	-1,198.8	911.3	4,651.1	4,532.1	119.00	39.085	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design												S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS E UNIT 1 (EXISTING) - Existing - NO SUR		Offset Site Error:		0.0 ft	
Survey Program:												8332-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	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis						
14,100.0	7,740.0	7,734.0	7,734.0	108.3	13.5	-90.00	-1,198.8	911.3	4,751.1	4,630.4	120.74	39.350					
14,200.0	7,740.0	7,734.0	7,734.0	110.0	13.5	-90.00	-1,198.8	911.3	4,851.1	4,728.6	122.48	39.608					
14,300.0	7,740.0	7,734.0	7,734.0	111.7	13.5	-90.00	-1,198.8	911.3	4,951.1	4,826.9	124.22	39.858					
14,400.0	7,740.0	7,734.0	7,734.0	113.4	13.5	-90.00	-1,198.8	911.3	5,051.1	4,925.1	125.96	40.101					
14,500.0	7,740.0	7,734.0	7,734.0	115.2	13.5	-90.00	-1,198.8	911.3	5,151.1	5,023.4	127.70	40.338					
14,600.0	7,740.0	7,734.0	7,734.0	116.9	13.5	-90.00	-1,198.8	911.3	5,251.1	5,121.7	129.44	40.568					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO													Offset Site Error:	0.0 ft
Survey Program: 8325-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	88.0	88.0	0.0	0.2	-25.79	131.5	-63.5	146.0					
100.0	100.0	188.0	188.0	0.2	0.3	-25.79	131.5	-63.5	146.0	145.6	0.48	304.162		
200.0	200.0	288.0	288.0	0.3	0.5	-25.79	131.5	-63.5	146.0	145.2	0.83	176.125		
300.0	300.0	388.0	388.0	0.5	0.7	-25.79	131.5	-63.5	146.0	144.9	1.18	123.948		
400.0	400.0	488.0	488.0	0.7	0.9	-25.79	131.5	-63.5	146.0	144.5	1.53	95.621		
500.0	500.0	588.0	588.0	0.8	1.0	-25.79	131.5	-63.5	146.0	144.2	1.88	77.833		
600.0	600.0	688.0	688.0	1.0	1.2	-25.79	131.5	-63.5	146.0	143.8	2.23	65.625		
700.0	700.0	788.0	788.0	1.2	1.4	-25.79	131.5	-63.5	146.0	143.5	2.57	56.727		
800.0	800.0	888.0	888.0	1.4	1.6	-25.79	131.5	-63.5	146.0	143.1	2.92	49.954		
900.0	900.0	988.0	988.0	1.5	1.7	-25.79	131.5	-63.5	146.0	142.8	3.27	44.626		
1,000.0	1,000.0	1,088.0	1,088.0	1.7	1.9	-25.79	131.5	-63.5	146.0	142.4	3.62	40.325		
1,100.0	1,100.0	1,188.0	1,188.0	1.9	2.1	-77.14	131.5	-63.5	145.9	141.9	3.97	36.729		
1,200.0	1,200.0	1,288.0	1,288.0	2.1	2.2	-78.15	131.5	-63.5	145.3	141.0	4.32	33.619		
1,300.0	1,299.9	1,387.9	1,387.9	2.3	2.4	-79.85	131.5	-63.5	144.5	139.8	4.68	30.895		
1,400.0	1,399.7	1,487.7	1,487.7	2.4	2.6	-82.26	131.5	-63.5	143.5	138.5	5.04	28.496		
1,500.0	1,499.4	1,587.4	1,587.4	2.6	2.8	-85.38	131.5	-63.5	142.7	137.3	5.41	26.391		
1,600.0	1,598.9	1,686.9	1,686.9	2.8	2.9	-89.22	131.5	-63.5	142.2	136.4	5.79	24.572		
1,618.3	1,617.1	1,705.1	1,705.1	2.9	3.0	-90.00	131.5	-63.5	142.2	136.3	5.86	24.267 CC		
1,700.0	1,698.3	1,786.3	1,786.3	3.1	3.1	-93.74	131.5	-63.5	142.5	136.3	6.18	23.048 ES		
1,800.0	1,797.4	1,885.4	1,885.4	3.3	3.3	-98.88	131.5	-63.5	143.9	137.4	6.59	21.837		
1,908.5	1,904.7	1,992.7	1,992.7	3.6	3.5	-104.98	131.5	-63.5	147.3	140.3	7.05	20.901		
2,000.0	1,995.0	2,083.0	2,083.0	3.8	3.6	-110.20	131.5	-63.5	151.7	144.3	7.43	20.425		
2,100.0	2,093.8	2,181.8	2,181.8	4.1	3.8	-115.53	131.5	-63.5	158.0	150.1	7.84	20.154		
2,200.0	2,192.5	2,280.5	2,280.5	4.4	4.0	-120.43	131.5	-63.5	165.4	157.2	8.23	20.091 SF		
2,300.0	2,291.3	2,379.3	2,379.3	4.7	4.2	-124.87	131.5	-63.5	174.0	165.4	8.62	20.190		
2,400.0	2,390.0	2,478.0	2,478.0	5.0	4.3	-128.89	131.5	-63.5	183.6	174.6	9.00	20.410		
2,500.0	2,488.8	2,576.8	2,576.8	5.3	4.5	-132.50	131.5	-63.5	194.0	184.6	9.36	20.720		
2,600.0	2,587.5	2,675.5	2,675.5	5.6	4.7	-135.73	131.5	-63.5	205.0	195.3	9.72	21.095		
2,700.0	2,686.3	2,774.3	2,774.3	5.9	4.8	-138.63	131.5	-63.5	216.7	206.6	10.07	21.514		
2,800.0	2,785.0	2,873.0	2,873.0	6.2	5.0	-141.23	131.5	-63.5	228.8	218.4	10.42	21.962		
2,900.0	2,883.8	2,971.8	2,971.8	6.5	5.2	-143.57	131.5	-63.5	241.4	230.7	10.76	22.428		
3,000.0	2,982.5	3,070.5	3,070.5	6.8	5.4	-145.67	131.5	-63.5	254.3	243.2	11.11	22.903		
3,100.0	3,081.3	3,169.3	3,169.3	7.2	5.5	-147.57	131.5	-63.5	267.6	256.1	11.44	23.381		
3,200.0	3,180.0	3,268.0	3,268.0	7.5	5.7	-149.29	131.5	-63.5	281.1	269.3	11.78	23.856		
3,300.0	3,278.7	3,366.7	3,366.7	7.8	5.9	-150.86	131.5	-63.5	294.8	282.7	12.12	24.326		
3,400.0	3,377.5	3,465.5	3,465.5	8.1	6.0	-152.28	131.5	-63.5	308.7	296.3	12.46	24.788		
3,500.0	3,476.2	3,564.2	3,564.2	8.4	6.2	-153.58	131.5	-63.5	322.8	310.0	12.79	25.240		
3,600.0	3,575.0	3,663.0	3,663.0	8.7	6.4	-154.77	131.5	-63.5	337.1	324.0	13.13	25.681		
3,700.0	3,673.7	3,761.7	3,761.7	9.1	6.6	-155.87	131.5	-63.5	351.5	338.0	13.46	26.109		
3,800.0	3,772.5	3,860.5	3,860.5	9.4	6.7	-156.88	131.5	-63.5	366.0	352.2	13.80	26.525		
3,900.0	3,871.2	3,959.2	3,959.2	9.7	6.9	-157.81	131.5	-63.5	380.6	366.4	14.13	26.929		
4,000.0	3,970.0	4,058.0	4,058.0	10.0	7.1	-158.67	131.5	-63.5	395.3	380.8	14.47	27.319		
4,100.0	4,068.7	4,156.7	4,156.7	10.3	7.3	-159.47	131.5	-63.5	410.0	395.2	14.80	27.698		
4,200.0	4,167.5	4,255.5	4,255.5	10.7	7.4	-160.22	131.5	-63.5	424.9	409.7	15.14	28.064		
4,300.0	4,266.2	4,354.2	4,354.2	11.0	7.6	-160.91	131.5	-63.5	439.8	424.3	15.48	28.417		
4,400.0	4,364.9	4,452.9	4,452.9	11.3	7.8	-161.56	131.5	-63.5	454.8	438.9	15.81	28.759		
4,500.0	4,463.7	4,551.7	4,551.7	11.6	7.9	-162.17	131.5	-63.5	469.8	453.6	16.15	29.090		
4,600.0	4,562.4	4,650.4	4,650.4	11.9	8.1	-162.74	131.5	-63.5	484.8	468.4	16.49	29.409		
4,700.0	4,661.2	4,749.2	4,749.2	12.3	8.3	-163.28	131.5	-63.5	500.0	483.1	16.82	29.718		
4,800.0	4,759.9	4,847.9	4,847.9	12.6	8.5	-163.78	131.5	-63.5	515.1	498.0	17.16	30.016		
4,900.0	4,858.7	4,946.7	4,946.7	12.9	8.6	-164.26	131.5	-63.5	530.3	512.8	17.50	30.305		
5,000.0	4,957.4	5,045.4	5,045.4	13.2	8.8	-164.71	131.5	-63.5	545.5	527.7	17.84	30.584		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO												Offset Site Error:	0.0 ft
Survey Program: 8325-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	5,056.2	5,144.2	5,144.2	13.6	9.0	-165.13	131.5	-63.5	560.8	542.6	18.18	30.854	
5,200.0	5,154.9	5,242.9	5,242.9	13.9	9.2	-165.54	131.5	-63.5	576.1	557.6	18.51	31.116	
5,300.0	5,253.7	5,341.7	5,341.7	14.2	9.3	-165.92	131.5	-63.5	591.4	572.6	18.85	31.369	
5,400.0	5,352.4	5,440.4	5,440.4	14.5	9.5	-166.28	131.5	-63.5	606.7	587.6	19.19	31.614	
5,500.0	5,451.1	5,539.1	5,539.1	14.9	9.7	-166.63	131.5	-63.5	622.1	602.6	19.53	31.851	
5,600.0	5,549.9	5,637.9	5,637.9	15.2	9.8	-166.95	131.5	-63.5	637.5	617.6	19.87	32.081	
5,700.0	5,648.6	5,736.6	5,736.6	15.5	10.0	-167.27	131.5	-63.5	652.9	632.7	20.21	32.303	
5,800.0	5,747.4	5,835.4	5,835.4	15.8	10.2	-167.56	131.5	-63.5	668.3	647.8	20.55	32.519	
5,900.0	5,846.1	5,934.1	5,934.1	16.2	10.4	-167.85	131.5	-63.5	683.7	662.9	20.89	32.728	
6,000.0	5,944.9	6,032.9	6,032.9	16.5	10.5	-168.12	131.5	-63.5	699.2	678.0	21.23	32.932	
6,100.0	6,043.6	6,131.6	6,131.6	16.8	10.7	-168.38	131.5	-63.5	714.7	693.1	21.57	33.129	
6,200.0	6,142.4	6,230.4	6,230.4	17.1	10.9	-168.63	131.5	-63.5	730.1	708.2	21.91	33.320	
6,300.0	6,241.1	6,329.1	6,329.1	17.5	11.0	-168.87	131.5	-63.5	745.6	723.4	22.25	33.506	
6,400.0	6,339.9	6,427.9	6,427.9	17.8	11.2	-169.10	131.5	-63.5	761.1	738.6	22.59	33.687	
6,500.0	6,438.6	6,526.6	6,526.6	18.1	11.4	-169.32	131.5	-63.5	776.7	753.7	22.94	33.862	
6,600.0	6,537.3	6,625.3	6,625.3	18.4	11.6	-169.53	131.5	-63.5	792.2	768.9	23.28	34.033	
6,700.0	6,636.1	6,724.1	6,724.1	18.8	11.7	-169.73	131.5	-63.5	807.7	784.1	23.62	34.199	
6,800.0	6,734.8	6,822.8	6,822.8	19.1	11.9	-169.93	131.5	-63.5	823.3	799.3	23.96	34.360	
6,900.0	6,833.6	6,921.6	6,921.6	19.4	12.1	-170.12	131.5	-63.5	838.8	814.5	24.30	34.517	
7,000.0	6,932.3	7,020.3	7,020.3	19.7	12.3	-170.30	131.5	-63.5	854.4	829.8	24.64	34.670	
7,100.0	7,031.1	7,119.1	7,119.1	20.1	12.4	-170.48	131.5	-63.5	870.0	845.0	24.99	34.819	
7,190.5	7,120.5	7,208.5	7,208.5	20.4	12.6	-170.63	131.5	-63.5	884.1	858.8	25.30	34.950	
7,200.0	7,129.8	7,217.8	7,217.8	20.4	12.6	-175.93	131.5	-63.5	885.5	860.2	25.33	34.958	
7,250.0	7,179.4	7,267.4	7,267.4	20.5	12.7	148.36	131.5	-63.5	892.0	866.5	25.51	34.963	
7,300.0	7,228.8	7,316.8	7,316.8	20.6	12.8	116.59	131.5	-63.5	896.7	871.0	25.69	34.901	
7,350.0	7,277.9	7,365.9	7,365.9	20.7	12.9	99.42	131.5	-63.5	899.5	873.6	25.86	34.781	
7,400.0	7,326.1	7,414.1	7,414.1	20.7	12.9	90.81	131.5	-63.5	900.5	874.5	26.02	34.603	
7,450.0	7,373.2	7,461.2	7,461.2	20.7	13.0	86.40	131.5	-63.5	900.0	873.8	26.19	34.368	
7,500.0	7,418.7	7,506.7	7,506.7	20.7	13.1	84.25	131.5	-63.5	898.0	871.7	26.35	34.079	
7,550.0	7,462.4	7,550.4	7,550.4	20.6	13.2	83.48	131.5	-63.5	895.0	868.5	26.52	33.743	
7,600.0	7,503.8	7,591.8	7,591.8	20.5	13.3	83.58	131.5	-63.5	891.2	864.5	26.70	33.375	
7,650.0	7,542.8	7,630.8	7,630.8	20.5	13.3	84.27	131.5	-63.5	886.9	860.0	26.88	32.996	
7,700.0	7,578.8	7,666.8	7,666.8	20.4	13.4	85.32	131.5	-63.5	882.6	855.5	27.05	32.633	
7,750.0	7,611.8	7,699.8	7,699.8	20.3	13.4	86.56	131.5	-63.5	878.6	851.4	27.19	32.312	
7,800.0	7,641.5	7,729.5	7,729.5	20.2	13.5	87.85	131.5	-63.5	875.3	848.0	27.31	32.054	
7,850.0	7,667.6	7,755.6	7,755.6	20.2	13.5	89.05	131.5	-63.5	873.1	845.7	27.39	31.873	
7,896.2	7,688.3	7,776.3	7,776.3	20.2	13.6	90.00	131.5	-63.5	872.4	845.0	27.46	31.774	
7,900.0	7,689.9	7,777.9	7,777.9	20.2	13.6	90.07	131.5	-63.5	872.4	845.0	27.46	31.772	
7,950.0	7,708.2	7,796.2	7,796.2	20.1	13.6	90.81	131.5	-63.5	873.5	846.0	27.52	31.745	
8,000.0	7,722.5	7,810.5	7,810.5	20.2	13.6	91.20	131.5	-63.5	876.5	849.0	27.58	31.784	
8,050.0	7,732.6	7,820.6	7,820.6	20.2	13.6	91.18	131.5	-63.5	881.8	854.1	27.66	31.878	
8,100.0	7,738.4	7,826.4	7,826.4	20.3	13.7	90.73	131.5	-63.5	889.2	861.5	27.77	32.023	
8,142.5	7,740.0	7,828.0	7,828.0	20.4	13.7	90.00	131.5	-63.5	897.3	869.4	27.88	32.187	
8,200.0	7,740.0	7,828.0	7,828.0	20.5	13.7	90.00	131.5	-63.5	911.0	882.9	28.10	32.417	
8,300.0	7,740.0	7,828.0	7,828.0	20.9	13.7	90.00	131.5	-63.5	942.8	914.1	28.65	32.907	
8,400.0	7,740.0	7,828.0	7,828.0	21.4	13.7	90.00	131.5	-63.5	983.7	954.4	29.38	33.488	
8,442.5	7,740.0	7,828.0	7,828.0	21.7	13.7	90.00	131.5	-63.5	1,003.6	973.9	29.73	33.756	
8,500.0	7,740.0	7,828.0	7,828.0	22.1	13.7	90.00	131.5	-63.5	1,032.5	1,002.3	30.19	34.201	
8,600.0	7,740.0	7,828.0	7,828.0	22.8	13.7	90.00	131.5	-63.5	1,087.1	1,056.0	31.06	35.001	
8,700.0	7,740.0	7,828.0	7,828.0	23.6	13.7	90.00	131.5	-63.5	1,146.4	1,114.4	32.00	35.818	
8,800.0	7,740.0	7,828.0	7,828.0	24.5	13.7	90.00	131.5	-63.5	1,209.7	1,176.7	33.02	36.637	
8,842.5	7,740.0	7,828.0	7,828.0	25.0	13.7	90.00	131.5	-63.5	1,237.7	1,204.2	33.47	36.982	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO											Offset Site Error:		0.0 ft
Survey Program: 8325-Geolink MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
8,900.0	7,740.0	7,828.0	7,828.0	25.5	13.7	90.00	131.5	-63.5	1,276.7	1,242.5	34.19	37.342	
9,000.0	7,740.0	7,828.0	7,828.0	26.6	13.7	90.00	131.5	-63.5	1,347.7	1,312.2	35.50	37.963	
9,100.0	7,740.0	7,828.0	7,828.0	27.7	13.7	90.00	131.5	-63.5	1,422.2	1,385.4	36.87	38.574	
9,200.0	7,740.0	7,828.0	7,828.0	28.9	13.7	90.00	131.5	-63.5	1,499.7	1,461.4	38.29	39.168	
9,300.0	7,740.0	7,828.0	7,828.0	30.2	13.7	90.00	131.5	-63.5	1,579.7	1,539.9	39.75	39.743	
9,342.5	7,740.0	7,828.0	7,828.0	30.7	13.7	90.00	131.5	-63.5	1,614.3	1,574.0	40.38	39.981	
9,399.5	7,740.0	7,828.0	7,828.0	31.5	13.7	90.00	131.5	-63.5	1,661.6	1,620.2	41.35	40.180	
9,500.0	7,740.0	7,828.0	7,828.0	32.8	13.7	90.00	131.5	-63.5	1,746.5	1,703.7	42.89	40.724	
9,600.0	7,740.0	7,828.0	7,828.0	34.2	13.7	90.00	131.5	-63.5	1,832.6	1,788.2	44.44	41.242	
9,700.0	7,740.0	7,828.0	7,828.0	35.6	13.7	90.00	131.5	-63.5	1,920.1	1,874.1	46.01	41.734	
9,800.0	7,740.0	7,828.0	7,828.0	37.1	13.7	90.00	131.5	-63.5	2,008.7	1,961.1	47.60	42.203	
9,900.0	7,740.0	7,828.0	7,828.0	38.5	13.7	90.00	131.5	-63.5	2,098.3	2,049.1	49.20	42.649	
10,000.0	7,740.0	7,828.0	7,828.0	40.0	13.7	90.00	131.5	-63.5	2,188.9	2,138.1	50.82	43.073	
10,100.0	7,740.0	7,828.0	7,828.0	41.6	13.7	90.00	131.5	-63.5	2,280.2	2,227.8	52.45	43.476	
10,200.0	7,740.0	7,828.0	7,828.0	43.1	13.7	90.00	131.5	-63.5	2,372.2	2,318.2	54.09	43.859	
10,300.0	7,740.0	7,828.0	7,828.0	44.6	13.7	90.00	131.5	-63.5	2,464.9	2,409.2	55.74	44.224	
10,400.0	7,740.0	7,828.0	7,828.0	46.2	13.7	90.00	131.5	-63.5	2,558.1	2,500.7	57.39	44.571	
10,500.0	7,740.0	7,828.0	7,828.0	47.8	13.7	90.00	131.5	-63.5	2,651.8	2,592.7	59.06	44.901	
10,600.0	7,740.0	7,828.0	7,828.0	49.4	13.7	90.00	131.5	-63.5	2,745.9	2,685.2	60.73	45.216	
10,700.0	7,740.0	7,828.0	7,828.0	51.0	13.7	90.00	131.5	-63.5	2,840.5	2,778.1	62.41	45.516	
10,800.0	7,740.0	7,828.0	7,828.0	52.6	13.7	90.00	131.5	-63.5	2,935.4	2,871.3	64.09	45.802	
10,900.0	7,740.0	7,828.0	7,828.0	54.2	13.7	90.00	131.5	-63.5	3,030.6	2,964.8	65.78	46.075	
11,000.0	7,740.0	7,828.0	7,828.0	55.8	13.7	90.00	131.5	-63.5	3,126.2	3,058.7	67.47	46.336	
11,100.0	7,740.0	7,828.0	7,828.0	57.5	13.7	90.00	131.5	-63.5	3,222.0	3,152.8	69.16	46.585	
11,200.0	7,740.0	7,828.0	7,828.0	59.1	13.7	90.00	131.5	-63.5	3,318.0	3,247.1	70.86	46.824	
11,300.0	7,740.0	7,828.0	7,828.0	60.8	13.7	90.00	131.5	-63.5	3,414.3	3,341.7	72.56	47.052	
11,400.0	7,740.0	7,828.0	7,828.0	62.4	13.7	90.00	131.5	-63.5	3,510.8	3,436.5	74.27	47.271	
11,500.0	7,740.0	7,828.0	7,828.0	64.1	13.7	90.00	131.5	-63.5	3,607.4	3,531.5	75.98	47.481	
11,600.0	7,740.0	7,828.0	7,828.0	65.7	13.7	90.00	131.5	-63.5	3,704.3	3,626.6	77.69	47.683	
11,700.0	7,740.0	7,828.0	7,828.0	67.4	13.7	90.00	131.5	-63.5	3,801.3	3,721.9	79.40	47.876	
11,800.0	7,740.0	7,828.0	7,828.0	69.1	13.7	90.00	131.5	-63.5	3,898.5	3,817.4	81.11	48.062	
11,900.0	7,740.0	7,828.0	7,828.0	70.8	13.7	90.00	131.5	-63.5	3,995.8	3,913.0	82.83	48.241	
12,000.0	7,740.0	7,828.0	7,828.0	72.4	13.7	90.00	131.5	-63.5	4,093.2	4,008.7	84.55	48.413	
12,100.0	7,740.0	7,828.0	7,828.0	74.1	13.7	90.00	131.5	-63.5	4,190.8	4,104.5	86.27	48.578	
12,200.0	7,740.0	7,828.0	7,828.0	75.8	13.7	90.00	131.5	-63.5	4,288.4	4,200.5	87.99	48.738	
12,300.0	7,740.0	7,828.0	7,828.0	77.5	13.7	90.00	131.5	-63.5	4,386.2	4,296.5	89.71	48.891	
12,400.0	7,740.0	7,828.0	7,828.0	79.2	13.7	90.00	131.5	-63.5	4,484.1	4,392.7	91.44	49.040	
12,500.0	7,740.0	7,828.0	7,828.0	80.9	13.7	90.00	131.5	-63.5	4,582.1	4,488.9	93.16	49.183	
12,600.0	7,740.0	7,828.0	7,828.0	82.6	13.7	90.00	131.5	-63.5	4,680.1	4,585.2	94.89	49.321	
12,700.0	7,740.0	7,828.0	7,828.0	84.3	13.7	90.00	131.5	-63.5	4,778.2	4,681.6	96.62	49.454	
12,800.0	7,740.0	7,828.0	7,828.0	86.0	13.7	90.00	131.5	-63.5	4,876.4	4,778.1	98.35	49.583	
12,900.0	7,740.0	7,828.0	7,828.0	87.7	13.7	90.00	131.5	-63.5	4,974.7	4,874.6	100.08	49.708	
13,000.0	7,740.0	7,828.0	7,828.0	89.4	13.7	90.00	131.5	-63.5	5,073.1	4,971.3	101.81	49.829	
13,100.0	7,740.0	7,828.0	7,828.0	91.1	13.7	90.00	131.5	-63.5	5,171.5	5,067.9	103.54	49.946	
13,200.0	7,740.0	7,828.0	7,828.0	92.8	13.7	90.00	131.5	-63.5	5,269.9	5,164.7	105.28	50.059	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GY											Offset Site Error: 0.0 ft		
Survey Program: 100-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	44.3	44.3	0.0	0.1	38.55	1,576.6	1,256.4	2,016.0				
100.0	100.0	141.7	141.7	0.2	0.2	38.58	1,576.3	1,257.4	2,016.4	2,016.0	0.40	5,029.209	
200.0	200.0	247.1	247.1	0.3	0.4	38.63	1,575.3	1,258.9	2,016.6	2,015.8	0.76	2,652.199	
300.0	300.0	349.3	349.3	0.5	0.6	38.66	1,574.7	1,259.8	2,016.6	2,015.5	1.11	1,811.780	
400.0	400.0	454.4	454.4	0.7	0.8	38.67	1,574.4	1,260.0	2,016.5	2,015.1	1.47	1,371.402	
500.0	500.0	556.8	556.7	0.8	1.0	38.67	1,574.1	1,259.8	2,016.1	2,014.3	1.82	1,106.054	
600.0	600.0	666.9	666.8	1.0	1.2	38.66	1,573.9	1,259.2	2,015.6	2,013.4	2.19	920.863	
700.0	700.0	778.6	778.6	1.2	1.4	38.66	1,572.9	1,258.2	2,014.4	2,011.9	2.56	787.494	
800.0	800.0	882.3	882.3	1.4	1.5	38.67	1,571.3	1,257.5	2,012.8	2,009.9	2.91	690.847	
900.0	900.0	985.7	985.6	1.5	1.7	38.69	1,569.5	1,256.9	2,011.1	2,007.8	3.27	615.260	
1,000.0	1,000.0	1,087.8	1,087.7	1.7	1.9	38.69	1,567.9	1,255.8	2,009.2	2,005.6	3.62	554.724	
1,100.0	1,100.0	1,196.0	1,195.9	1.9	2.1	-12.35	1,566.4	1,254.1	2,006.2	2,002.3	3.99	503.396	
1,200.0	1,200.0	1,295.0	1,294.8	2.1	2.3	-12.40	1,565.1	1,251.9	2,001.4	1,997.0	4.33	462.143	
1,300.0	1,299.9	1,396.5	1,396.3	2.3	2.5	-12.48	1,564.1	1,249.4	1,994.8	1,990.1	4.68	426.278	
1,400.0	1,399.7	1,492.2	1,492.0	2.4	2.6	-12.59	1,563.5	1,246.6	1,986.5	1,981.5	5.02	395.891	
1,500.0	1,499.4	1,586.5	1,586.3	2.6	2.8	-12.71	1,563.2	1,244.0	1,976.8	1,971.5	5.35	369.259	
1,600.0	1,598.9	1,690.6	1,690.3	2.8	3.0	-12.86	1,562.7	1,241.2	1,965.5	1,959.8	5.71	344.468	
1,700.0	1,698.3	1,782.1	1,781.7	3.1	3.1	-13.01	1,562.5	1,238.5	1,952.5	1,946.4	6.04	323.448	
1,800.0	1,797.4	1,879.5	1,879.1	3.3	3.3	-13.20	1,562.6	1,235.8	1,938.1	1,931.7	6.38	303.913	
1,908.5	1,904.7	1,976.0	1,975.6	3.6	3.5	-13.39	1,562.5	1,233.6	1,920.8	1,914.1	6.73	285.391	
2,000.0	1,995.0	2,057.8	2,057.3	3.8	3.6	-13.52	1,562.7	1,232.1	1,905.9	1,898.9	7.04	270.757	
2,100.0	2,093.8	2,154.4	2,154.0	4.1	3.8	-13.67	1,563.2	1,230.6	1,890.0	1,882.6	7.39	255.747	
2,200.0	2,192.5	2,253.2	2,252.7	4.4	4.0	-13.82	1,563.2	1,229.5	1,874.1	1,866.3	7.74	241.971	
2,300.0	2,291.3	2,352.4	2,352.0	4.7	4.1	-13.95	1,563.2	1,228.6	1,858.1	1,850.0	8.10	229.370	
2,400.0	2,390.0	2,446.7	2,446.2	5.0	4.3	-14.09	1,563.2	1,227.7	1,842.2	1,833.8	8.45	218.017	
2,500.0	2,488.8	2,534.2	2,533.7	5.3	4.5	-14.24	1,563.9	1,226.6	1,826.8	1,818.0	8.79	207.863	
2,600.0	2,587.5	2,626.5	2,626.0	5.6	4.6	-14.42	1,565.5	1,225.2	1,812.0	1,802.9	9.14	198.305	
2,700.0	2,686.3	2,733.6	2,733.1	5.9	4.8	-14.64	1,567.5	1,223.2	1,797.1	1,787.5	9.51	188.883	
2,800.0	2,785.0	2,837.4	2,836.9	6.2	5.0	-14.87	1,569.0	1,220.9	1,781.7	1,771.8	9.89	180.226	
2,900.0	2,883.8	2,931.8	2,931.3	6.5	5.2	-15.06	1,570.1	1,219.3	1,766.3	1,756.1	10.24	172.489	
3,000.0	2,982.5	3,023.9	3,023.3	6.8	5.3	-15.23	1,571.2	1,218.3	1,751.4	1,740.8	10.59	165.365	
3,100.0	3,081.3	3,119.1	3,118.5	7.2	5.5	-15.41	1,572.5	1,217.5	1,736.7	1,725.8	10.95	158.642	
3,200.0	3,180.0	3,228.1	3,227.5	7.5	5.7	-15.61	1,573.6	1,216.8	1,722.0	1,710.6	11.33	151.996	
3,300.0	3,278.7	3,342.0	3,341.4	7.8	5.9	-15.80	1,573.7	1,215.8	1,706.3	1,694.6	11.72	145.601	
3,400.0	3,377.5	3,449.9	3,449.3	8.1	6.1	-15.99	1,573.3	1,214.5	1,690.1	1,678.0	12.10	139.689	
3,500.0	3,476.2	3,557.5	3,556.8	8.4	6.3	-16.17	1,572.1	1,213.0	1,673.2	1,660.8	12.48	134.092	
3,600.0	3,575.0	3,669.2	3,668.5	8.7	6.5	-16.34	1,570.2	1,211.5	1,655.9	1,643.0	12.86	128.719	
3,700.0	3,673.7	3,761.7	3,761.0	9.1	6.6	-16.47	1,567.8	1,210.5	1,638.1	1,624.8	13.22	123.947	
3,800.0	3,772.5	3,857.5	3,856.8	9.4	6.8	-16.59	1,565.6	1,210.1	1,620.9	1,607.3	13.57	119.412	
3,900.0	3,871.2	3,967.9	3,967.1	9.7	7.0	-16.75	1,563.0	1,209.1	1,603.2	1,589.3	13.96	114.853	
4,000.0	3,970.0	4,067.6	4,066.8	10.0	7.2	-16.91	1,560.3	1,207.6	1,585.1	1,570.7	14.33	110.643	
4,100.0	4,068.7	4,168.5	4,167.6	10.3	7.3	-17.04	1,557.2	1,206.7	1,567.0	1,552.3	14.69	106.633	
4,200.0	4,167.5	4,264.7	4,263.8	10.7	7.5	-17.19	1,554.4	1,205.3	1,548.7	1,533.6	15.06	102.851	
4,300.0	4,266.2	4,352.6	4,351.7	11.0	7.7	-17.34	1,552.3	1,204.1	1,530.8	1,515.4	15.41	99.358	
4,400.0	4,364.9	4,439.2	4,438.2	11.3	7.8	-17.51	1,551.0	1,202.9	1,513.8	1,498.1	15.76	96.077	
4,500.0	4,463.7	4,529.7	4,528.8	11.6	8.0	-17.69	1,550.3	1,202.0	1,497.5	1,481.4	16.11	92.930	
4,600.0	4,562.4	4,627.8	4,626.8	11.9	8.1	-17.89	1,549.7	1,201.0	1,481.4	1,465.0	16.49	89.858	
4,700.0	4,661.2	4,729.6	4,728.6	12.3	8.3	-18.11	1,549.0	1,199.9	1,465.2	1,448.3	16.87	86.864	
4,800.0	4,759.9	4,825.1	4,824.1	12.6	8.5	-18.31	1,548.3	1,198.9	1,449.1	1,431.8	17.24	84.064	
4,900.0	4,858.7	4,925.3	4,924.3	12.9	8.7	-18.54	1,547.7	1,197.7	1,433.0	1,415.3	17.62	81.331	
5,000.0	4,957.4	5,020.8	5,019.8	13.2	8.8	-18.78	1,547.4	1,196.4	1,416.9	1,398.9	17.99	78.743	
5,100.0	5,056.2	5,110.8	5,109.8	13.6	9.0	-19.01	1,547.5	1,195.1	1,401.3	1,383.0	18.36	76.325	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GY													Offset Site Error:	0.0 ft
Survey Program: 100-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	5,154.9	5,209.6	5,208.6	13.9	9.2	-19.27	1,547.7	1,194.2	1,386.1	1,367.3	18.74	73.948		
5,300.0	5,253.7	5,306.9	5,305.8	14.2	9.3	-19.52	1,548.0	1,193.1	1,370.8	1,351.7	19.13	71.671		
5,400.0	5,352.4	5,400.0	5,399.0	14.5	9.5	-19.80	1,548.9	1,192.0	1,356.1	1,336.6	19.51	69.524		
5,500.0	5,451.1	5,499.2	5,498.1	14.9	9.7	-20.09	1,550.1	1,190.8	1,341.6	1,321.7	19.90	67.424		
5,600.0	5,549.9	5,594.0	5,592.9	15.2	9.8	-20.39	1,551.2	1,189.5	1,327.1	1,306.8	20.28	65.421		
5,700.0	5,648.6	5,697.8	5,696.7	15.5	10.0	-20.73	1,552.4	1,188.0	1,312.5	1,291.8	20.69	63.432		
5,800.0	5,747.4	5,790.7	5,789.6	15.8	10.2	-21.03	1,553.5	1,186.7	1,298.0	1,277.0	21.08	61.579		
5,900.0	5,846.1	5,888.7	5,887.6	16.2	10.4	-21.37	1,554.9	1,185.3	1,283.9	1,262.4	21.48	59.771		
6,000.0	5,944.9	5,981.6	5,980.5	16.5	10.5	-21.70	1,556.5	1,184.1	1,269.9	1,248.1	21.87	58.060		
6,100.0	6,043.6	6,078.0	6,076.8	16.8	10.7	-22.04	1,558.4	1,183.1	1,256.4	1,234.2	22.27	56.408		
6,200.0	6,142.4	6,176.7	6,175.6	17.1	10.9	-22.37	1,560.1	1,182.5	1,243.1	1,220.4	22.68	54.806		
6,300.0	6,241.1	6,279.2	6,278.0	17.5	11.0	-22.74	1,561.9	1,181.7	1,229.6	1,206.5	23.10	53.231		
6,400.0	6,339.9	6,374.6	6,373.4	17.8	11.2	-23.09	1,563.5	1,180.8	1,216.1	1,192.6	23.51	51.736		
6,500.0	6,438.6	6,477.2	6,475.9	18.1	11.4	-23.48	1,565.5	1,179.8	1,202.8	1,178.8	23.93	50.259		
6,600.0	6,537.3	6,576.1	6,574.8	18.4	11.6	-23.88	1,567.2	1,178.5	1,189.2	1,164.8	24.35	48.830		
6,700.0	6,636.1	6,666.7	6,665.4	18.8	11.7	-24.25	1,569.0	1,177.4	1,176.0	1,151.2	24.76	47.493		
6,800.0	6,734.8	6,766.4	6,765.0	19.1	11.9	-24.64	1,571.6	1,176.5	1,163.7	1,138.5	25.17	46.230		
6,900.0	6,833.6	6,848.0	6,846.6	19.4	12.0	-25.02	1,574.6	1,176.1	1,152.1	1,126.5	25.59	45.029		
7,000.0	6,932.3	6,940.3	6,938.8	19.7	12.2	-25.39	1,577.9	1,176.5	1,141.2	1,115.2	26.00	43.892		
7,100.0	7,031.1	7,030.9	7,029.4	20.1	12.3	-25.73	1,581.5	1,177.7	1,130.9	1,104.5	26.41	42.824		
7,190.5	7,120.5	7,110.8	7,109.1	20.4	12.5	-26.03	1,585.1	1,179.1	1,122.5	1,095.7	26.78	41.920		
7,200.0	7,129.8	7,118.7	7,117.0	20.4	12.5	-31.26	1,585.6	1,179.2	1,121.7	1,094.9	26.84	41.796		
7,243.7	7,173.1	7,155.3	7,153.6	20.5	12.6	-61.93	1,587.5	1,180.0	1,120.1	1,093.0	27.07	41.381 CC, ES		
7,250.0	7,179.4	7,160.6	7,158.9	20.5	12.6	-66.76	1,587.8	1,180.1	1,120.1	1,093.1	27.09	41.346		
7,300.0	7,228.8	7,200.0	7,198.2	20.6	12.6	-98.61	1,590.2	1,181.1	1,122.8	1,095.6	27.21	41.267 SF		
7,350.0	7,277.9	7,244.4	7,242.5	20.7	12.7	-116.20	1,593.1	1,182.4	1,129.6	1,102.4	27.21	41.520		
7,400.0	7,326.1	7,285.5	7,283.5	20.7	12.8	-125.44	1,596.0	1,183.8	1,140.5	1,113.4	27.07	42.136		
7,450.0	7,373.2	7,336.0	7,333.8	20.7	12.9	-130.84	1,599.5	1,185.8	1,155.4	1,128.5	26.84	43.049		
7,500.0	7,418.7	7,390.7	7,388.3	20.7	13.0	-134.24	1,602.9	1,188.0	1,173.6	1,147.1	26.52	44.259		
7,550.0	7,462.4	7,442.2	7,439.8	20.6	13.0	-136.39	1,605.6	1,190.1	1,195.2	1,169.1	26.10	45.800		
7,600.0	7,503.8	7,491.2	7,488.7	20.5	13.1	-137.67	1,607.7	1,192.2	1,220.0	1,194.4	25.60	47.657		
7,650.0	7,542.8	7,538.2	7,535.6	20.5	13.2	-138.32	1,609.4	1,194.2	1,248.0	1,222.9	25.06	49.801		
7,700.0	7,578.8	7,582.2	7,579.5	20.4	13.3	-138.38	1,610.8	1,195.9	1,279.0	1,254.5	24.51	52.177		
7,750.0	7,611.8	7,618.3	7,615.6	20.3	13.3	-137.75	1,611.7	1,197.2	1,312.8	1,288.8	24.01	54.688		
7,800.0	7,641.5	7,647.6	7,644.8	20.2	13.4	-136.33	1,612.4	1,198.2	1,349.5	1,325.9	23.62	57.137		
7,850.0	7,667.6	7,673.1	7,670.3	20.2	13.4	-134.07	1,613.0	1,199.0	1,388.7	1,365.3	23.44	59.252		
7,900.0	7,689.9	7,694.7	7,691.9	20.2	13.5	-130.73	1,613.6	1,199.7	1,430.2	1,406.7	23.56	60.716		
7,950.0	7,708.2	7,712.4	7,709.6	20.1	13.5	-125.96	1,614.0	1,200.3	1,473.7	1,449.6	24.06	61.249		
8,000.0	7,722.5	7,726.0	7,723.2	20.2	13.5	-119.19	1,614.4	1,200.7	1,518.7	1,493.7	24.99	60.771		
8,050.0	7,732.6	7,735.2	7,732.4	20.2	13.6	-109.75	1,614.6	1,200.9	1,565.0	1,538.7	26.24	59.638		
8,100.0	7,738.4	7,740.1	7,737.2	20.3	13.6	-97.08	1,614.7	1,201.1	1,612.1	1,584.8	27.39	58.850		
8,142.5	7,740.0	7,740.7	7,737.8	20.4	13.6	-84.01	1,614.7	1,201.1	1,652.6	1,624.9	27.74	59.574		
8,200.0	7,740.0	7,739.3	7,736.5	20.5	13.6	-83.85	1,614.7	1,201.0	1,707.6	1,679.7	27.96	61.077		
8,300.0	7,740.0	7,736.9	7,734.1	20.9	13.6	-83.57	1,614.6	1,201.0	1,803.7	1,775.2	28.49	63.308		
8,400.0	7,740.0	7,734.5	7,731.7	21.4	13.5	-83.29	1,614.6	1,200.9	1,900.1	1,870.9	29.20	65.079		
8,442.5	7,740.0	7,733.5	7,730.7	21.7	13.5	-83.17	1,614.6	1,200.9	1,941.1	1,911.6	29.54	65.704		
8,500.0	7,740.0	7,732.1	7,729.3	22.1	13.5	-82.73	1,614.5	1,200.8	1,996.9	1,966.9	29.98	66.607		
8,600.0	7,740.0	7,729.7	7,726.9	22.8	13.5	-81.84	1,614.5	1,200.8	2,094.4	2,063.6	30.80	67.999		
8,700.0	7,740.0	7,727.2	7,724.4	23.6	13.5	-80.74	1,614.4	1,200.7	2,192.5	2,160.8	31.68	69.208		
8,800.0	7,740.0	7,724.7	7,721.8	24.5	13.5	-79.37	1,614.3	1,200.6	2,291.0	2,258.4	32.59	70.291		
8,842.5	7,740.0	7,723.6	7,720.7	25.0	13.5	-78.67	1,614.3	1,200.6	2,333.0	2,300.0	32.98	70.730		
8,900.0	7,740.0	7,722.1	7,719.3	25.5	13.5	-78.43	1,614.3	1,200.5	2,389.9	2,356.2	33.67	70.985		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 21-7 (EXISTING) - ENCANA WELL - GY													Offset Site Error:	0.0 ft
Survey Program: 100-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		
9,000.0	7,740.0	7,719.5	7,716.7	26.6	13.5	-78.01	1,614.2	1,200.5	2,488.8	2,453.9	34.90	71.306		
9,100.0	7,740.0	7,716.9	7,714.1	27.7	13.5	-77.59	1,614.1	1,200.4	2,587.9	2,551.7	36.19	71.504		
9,200.0	7,740.0	7,714.3	7,711.5	28.9	13.5	-77.17	1,614.1	1,200.3	2,687.0	2,649.5	37.52	71.611		
9,300.0	7,740.0	7,711.7	7,708.9	30.2	13.5	-76.76	1,614.0	1,200.2	2,786.2	2,747.3	38.89	71.649		
9,342.5	7,740.0	7,710.6	7,707.8	30.7	13.5	-76.58	1,614.0	1,200.2	2,828.3	2,788.9	39.48	71.649		
9,399.5	7,740.0	7,709.1	7,706.3	31.5	13.5	-77.36	1,613.9	1,200.2	2,884.9	2,844.4	40.50	71.224		
9,500.0	7,740.0	7,706.6	7,703.8	32.8	13.5	-76.97	1,613.9	1,200.1	2,984.6	2,942.6	41.94	71.158		
9,600.0	7,740.0	7,704.0	7,701.2	34.2	13.5	-76.59	1,613.8	1,200.0	3,083.8	3,040.4	43.39	71.069		
9,700.0	7,740.0	7,701.4	7,698.7	35.6	13.5	-76.22	1,613.7	1,199.9	3,183.1	3,138.2	44.86	70.963		
9,800.0	7,740.0	7,698.9	7,696.1	37.1	13.5	-75.84	1,613.7	1,199.9	3,282.4	3,236.0	46.33	70.847		
9,900.0	7,740.0	7,696.4	7,693.7	38.5	13.5	-75.48	1,613.6	1,199.8	3,381.7	3,333.9	47.82	70.723		
10,000.0	7,740.0	7,694.0	7,691.2	40.0	13.5	-75.12	1,613.6	1,199.7	3,481.1	3,431.8	49.31	70.598		
10,100.0	7,740.0	7,691.5	7,688.7	41.6	13.5	-74.75	1,613.5	1,199.6	3,580.5	3,529.7	50.81	70.474		
10,200.0	7,740.0	7,689.0	7,686.3	43.1	13.5	-74.40	1,613.4	1,199.5	3,680.0	3,627.7	52.31	70.353		
10,300.0	7,740.0	7,686.6	7,683.8	44.6	13.5	-74.04	1,613.4	1,199.5	3,779.4	3,725.6	53.81	70.236		
10,400.0	7,740.0	7,684.1	7,681.4	46.2	13.5	-73.68	1,613.3	1,199.4	3,878.9	3,823.6	55.31	70.125		
10,500.0	7,740.0	7,681.7	7,678.9	47.8	13.5	-73.33	1,613.2	1,199.3	3,978.5	3,921.6	56.82	70.020		
10,600.0	7,740.0	7,679.2	7,676.5	49.4	13.5	-72.98	1,613.2	1,199.2	4,078.0	4,019.7	58.32	69.922		
10,700.0	7,740.0	7,676.8	7,674.0	51.0	13.4	-72.63	1,613.1	1,199.2	4,177.6	4,117.7	59.82	69.831		
10,800.0	7,740.0	7,674.4	7,671.6	52.6	13.4	-72.28	1,613.1	1,199.1	4,277.1	4,215.8	61.32	69.748		
10,900.0	7,740.0	7,671.9	7,669.2	54.2	13.4	-71.93	1,613.0	1,199.0	4,376.7	4,313.9	62.82	69.672		
11,000.0	7,740.0	7,669.5	7,666.7	55.8	13.4	-71.58	1,612.9	1,198.9	4,476.4	4,412.1	64.31	69.604		
11,100.0	7,740.0	7,667.1	7,664.3	57.5	13.4	-71.24	1,612.9	1,198.9	4,576.0	4,510.2	65.80	69.543		
11,200.0	7,740.0	7,664.6	7,661.9	59.1	13.4	-70.90	1,612.8	1,198.8	4,675.6	4,608.4	67.29	69.490		
11,300.0	7,740.0	7,662.2	7,659.5	60.8	13.4	-70.56	1,612.8	1,198.7	4,775.3	4,706.5	68.77	69.444		
11,400.0	7,740.0	7,659.8	7,657.1	62.4	13.4	-70.22	1,612.7	1,198.6	4,875.0	4,804.7	70.24	69.405		
11,500.0	7,740.0	7,657.4	7,654.7	64.1	13.4	-69.89	1,612.6	1,198.5	4,974.7	4,903.0	71.71	69.373		
11,600.0	7,740.0	7,655.0	7,652.3	65.7	13.4	-69.55	1,612.6	1,198.5	5,074.4	5,001.2	73.17	69.348		
11,700.0	7,740.0	7,652.6	7,649.9	67.4	13.4	-69.22	1,612.5	1,198.4	5,174.1	5,099.4	74.63	69.330		
11,800.0	7,740.0	7,650.2	7,647.5	69.1	13.4	-68.89	1,612.5	1,198.3	5,273.8	5,197.7	76.08	69.319		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SU													Offset Site Error:	0.0 ft
Survey Program: 71-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	52.2	52.2	0.0	0.1	36.97	1,594.4	1,200.1	1,995.6					
100.0	100.0	151.2	151.2	0.2	0.3	36.97	1,594.4	1,200.1	1,995.6	1,995.2	0.42	4,800.945		
200.0	200.0	246.3	246.3	0.3	0.4	36.96	1,594.8	1,199.9	1,995.8	1,995.0	0.76	2,638.670		
300.0	300.0	382.9	382.9	0.5	0.7	36.92	1,595.1	1,198.7	1,995.5	1,994.3	1.17	1,705.629		
400.0	400.0	526.3	526.2	0.7	0.9	37.04	1,589.3	1,199.4	1,992.4	1,990.9	1.59	1,249.647		
500.0	500.0	811.0	807.6	0.8	1.7	38.01	1,549.2	1,210.7	1,982.7	1,980.4	2.27	875.361		
600.0	600.0	902.0	896.6	1.0	2.0	38.44	1,531.2	1,215.3	1,970.1	1,967.5	2.60	758.290		
700.0	700.0	1,126.9	1,115.6	1.2	3.0	39.60	1,480.8	1,224.9	1,955.9	1,952.7	3.16	618.402		
800.0	800.0	1,293.8	1,275.1	1.4	3.9	40.67	1,432.1	1,230.5	1,934.9	1,931.3	3.63	533.695		
900.0	900.0	1,397.0	1,372.9	1.5	4.4	41.41	1,399.4	1,234.3	1,912.8	1,908.8	3.98	480.881		
1,000.0	1,000.0	1,498.6	1,468.9	1.7	5.0	42.20	1,366.3	1,238.8	1,890.9	1,886.5	4.33	436.945		
1,100.0	1,100.0	1,580.8	1,546.5	1.9	5.5	-8.20	1,339.4	1,242.8	1,868.4	1,861.8	6.57	284.507		
1,200.0	1,200.0	1,660.6	1,621.9	2.1	6.0	-7.59	1,313.8	1,246.8	1,845.3	1,838.1	7.14	258.470		
1,300.0	1,299.9	1,760.8	1,716.5	2.3	6.6	-6.78	1,281.4	1,252.8	1,821.2	1,813.3	7.83	232.450		
1,400.0	1,399.7	1,843.7	1,794.7	2.4	7.1	-6.08	1,254.2	1,258.1	1,795.6	1,787.1	8.45	212.427		
1,500.0	1,499.4	1,967.4	1,911.4	2.6	7.8	-5.02	1,213.9	1,264.6	1,768.2	1,759.0	9.27	190.826		
1,600.0	1,598.9	2,037.0	1,977.3	2.8	8.2	-4.44	1,191.6	1,267.5	1,739.3	1,729.5	9.79	177.588		
1,700.0	1,698.3	2,101.9	2,038.9	3.1	8.6	-3.89	1,171.4	1,270.9	1,710.3	1,700.1	10.30	166.105		
1,800.0	1,797.4	2,204.9	2,136.8	3.3	9.2	-2.96	1,140.0	1,277.3	1,681.1	1,670.1	11.02	152.587		
1,908.5	1,904.7	2,315.6	2,241.4	3.6	9.8	-1.87	1,104.5	1,284.1	1,646.7	1,634.9	11.83	139.225		
2,000.0	1,995.0	2,400.9	2,321.9	3.8	10.3	-0.98	1,076.8	1,289.2	1,617.0	1,604.5	12.49	129.477		
2,100.0	2,093.8	2,494.9	2,410.9	4.1	10.9	0.00	1,047.0	1,294.0	1,584.7	1,571.5	13.20	120.014		
2,200.0	2,192.5	2,586.9	2,498.1	4.4	11.4	0.99	1,018.0	1,298.4	1,552.9	1,538.9	13.92	111.586		
2,300.0	2,291.3	2,678.6	2,585.2	4.7	11.9	1.98	989.5	1,302.3	1,521.3	1,506.7	14.63	103.985		
2,400.0	2,390.0	2,802.1	2,702.1	5.0	12.7	3.42	950.1	1,307.7	1,490.0	1,474.5	15.56	95.731		
2,500.0	2,488.8	2,925.6	2,818.0	5.3	13.4	4.99	907.6	1,310.7	1,456.1	1,439.5	16.55	87.990		
2,600.0	2,587.5	3,004.1	2,891.3	5.6	13.9	6.07	879.6	1,312.9	1,422.5	1,405.3	17.26	82.393		
2,700.0	2,686.3	3,084.0	2,966.1	5.9	14.4	7.21	851.4	1,315.3	1,390.0	1,372.0	17.99	77.257		
2,800.0	2,785.0	3,172.0	3,048.5	6.2	15.0	8.51	820.7	1,318.4	1,358.7	1,339.9	18.80	72.283		
2,900.0	2,883.8	3,273.0	3,143.0	6.5	15.6	10.08	785.3	1,322.0	1,328.2	1,308.5	19.70	67.410		
3,000.0	2,982.5	3,371.9	3,235.7	6.8	16.3	11.64	750.7	1,323.7	1,297.2	1,276.6	20.59	63.000		
3,100.0	3,081.3	3,433.0	3,293.0	7.2	16.6	12.63	729.7	1,325.0	1,267.7	1,246.5	21.22	59.753		
3,200.0	3,180.0	3,502.0	3,358.2	7.5	17.0	13.75	707.1	1,327.5	1,240.8	1,218.9	21.88	56.704		
3,300.0	3,278.7	3,578.2	3,430.6	7.8	17.5	14.99	683.6	1,331.2	1,216.6	1,194.0	22.60	53.836		
3,400.0	3,377.5	3,653.6	3,502.3	8.1	17.9	16.24	660.8	1,335.5	1,194.3	1,171.0	23.32	51.219		
3,500.0	3,476.2	3,733.3	3,578.3	8.4	18.3	17.59	637.4	1,341.1	1,174.2	1,150.2	24.05	48.827		
3,600.0	3,575.0	3,845.9	3,686.7	8.7	18.9	19.35	607.9	1,347.4	1,155.0	1,130.1	24.92	46.348		
3,700.0	3,673.7	3,984.4	3,820.7	9.1	19.5	21.46	572.9	1,349.5	1,133.2	1,107.3	25.96	43.660		
3,800.0	3,772.5	4,069.6	3,902.2	9.4	20.0	22.96	548.3	1,350.1	1,110.6	1,083.8	26.73	41.540		
3,900.0	3,871.2	4,132.0	3,961.8	9.7	20.3	24.13	529.7	1,352.2	1,091.0	1,063.6	27.38	39.852		
4,000.0	3,970.0	4,219.7	4,045.1	10.0	20.9	25.90	502.6	1,356.9	1,074.0	1,045.8	28.24	38.029		
4,100.0	4,068.7	4,328.7	4,147.4	10.3	21.6	28.33	465.7	1,362.4	1,057.5	1,028.2	29.32	36.071		
4,200.0	4,167.5	4,421.5	4,234.3	10.7	22.2	30.51	433.0	1,366.2	1,041.5	1,011.2	30.27	34.412		
4,300.0	4,266.2	4,501.2	4,308.7	11.0	22.7	32.43	405.1	1,369.9	1,027.8	996.7	31.09	33.054		
4,400.0	4,364.9	4,586.0	4,388.8	11.3	23.1	34.40	377.3	1,374.2	1,016.4	984.5	31.90	31.858		
4,500.0	4,463.7	4,673.0	4,471.8	11.6	23.6	36.31	351.4	1,378.9	1,007.1	974.4	32.67	30.822		
4,600.0	4,562.4	4,769.7	4,564.2	11.9	24.1	38.40	323.9	1,384.2	999.3	965.8	33.47	29.853		
4,700.0	4,661.2	4,883.2	4,673.4	12.3	24.7	40.80	293.0	1,389.0	991.7	957.4	34.32	28.897		
4,800.0	4,759.9	4,979.0	4,765.8	12.6	25.2	42.81	268.0	1,391.5	983.9	948.9	35.02	28.093		
4,900.0	4,858.7	5,068.8	4,853.0	12.9	25.5	44.59	246.6	1,394.5	977.8	942.2	35.64	27.436		
5,000.0	4,957.4	5,175.0	4,956.9	13.2	25.9	46.52	224.9	1,398.1	972.5	936.3	36.25	26.832		
5,100.0	5,056.2	5,281.0	5,061.3	13.6	26.3	48.25	207.1	1,400.8	966.9	930.1	36.78	26.290		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SU											Offset Site Error: 0.0 ft		
Survey Program: 71-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	5,154.9	5,385.9	5,165.1	13.9	26.6	49.85	191.9	1,403.1	961.2	923.9	37.27	25.793	
5,300.0	5,253.7	5,496.4	5,274.7	14.2	26.8	51.42	178.4	1,404.6	954.9	917.2	37.72	25.319	
5,400.0	5,352.4	5,609.1	5,386.9	14.5	27.1	52.87	168.0	1,405.2	947.7	909.6	38.12	24.863	
5,500.0	5,451.1	5,705.6	5,483.2	14.9	27.2	53.98	161.6	1,405.5	940.2	901.7	38.47	24.442	
5,600.0	5,549.9	5,814.7	5,592.3	15.2	27.3	55.03	158.1	1,406.8	933.0	894.3	38.76	24.070	
5,700.0	5,648.6	5,932.4	5,709.9	15.5	27.4	56.02	157.7	1,405.6	923.0	883.9	39.06	23.631	
5,800.0	5,747.4	6,018.8	5,796.3	15.8	27.5	56.75	157.5	1,405.2	913.8	874.5	39.35	23.225	
5,900.0	5,846.1	6,114.5	5,892.0	16.2	27.5	57.56	157.2	1,405.8	905.9	866.2	39.62	22.861	
6,000.0	5,944.9	6,216.0	5,993.6	16.5	27.6	58.40	157.5	1,406.5	897.9	858.0	39.90	22.505	
6,100.0	6,043.6	6,311.6	6,089.2	16.8	27.6	59.18	158.0	1,407.2	890.2	850.0	40.18	22.157	
6,200.0	6,142.4	6,406.9	6,184.5	17.1	27.7	59.97	158.4	1,408.3	883.1	842.6	40.45	21.830	
6,300.0	6,241.1	6,509.5	6,287.0	17.5	27.8	60.84	158.8	1,409.4	876.1	835.4	40.73	21.511	
6,400.0	6,339.9	6,610.4	6,387.9	17.8	27.8	61.72	159.1	1,410.2	869.0	828.0	41.00	21.194	
6,500.0	6,438.6	6,708.4	6,485.9	18.1	27.9	62.60	159.4	1,410.8	862.0	820.8	41.27	20.885	
6,600.0	6,537.3	6,806.2	6,583.7	18.4	28.0	63.50	159.5	1,411.5	855.4	813.9	41.55	20.589	
6,700.0	6,636.1	6,903.7	6,681.2	18.8	28.1	64.41	159.4	1,412.2	849.1	807.3	41.82	20.307	
6,800.0	6,734.8	7,001.6	6,779.1	19.1	28.1	65.34	159.3	1,413.1	843.2	801.2	42.08	20.039	
6,900.0	6,833.6	7,100.0	6,877.5	19.4	28.2	66.30	159.0	1,414.1	837.7	795.3	42.34	19.783	
7,000.0	6,932.3	7,193.2	6,970.7	19.7	28.3	67.22	158.4	1,415.2	832.7	790.1	42.61	19.541	
7,100.0	7,031.1	7,288.5	7,065.9	20.1	28.4	68.21	157.2	1,416.6	828.6	785.8	42.87	19.327	
7,190.5	7,120.5	7,385.4	7,162.9	20.4	28.5	69.24	156.0	1,417.7	824.9	781.8	43.10	19.139	
7,200.0	7,129.8	7,395.6	7,173.0	20.4	28.5	64.14	155.9	1,417.8	824.4	781.3	43.10	19.127	
7,250.0	7,179.4	7,449.3	7,226.7	20.5	28.6	28.98	155.5	1,418.0	820.3	777.2	43.07	19.044	
7,300.0	7,228.8	7,504.1	7,281.6	20.6	28.6	-3.15	155.2	1,418.0	813.5	770.5	43.03	18.907	
7,350.0	7,277.9	7,558.3	7,335.8	20.7	28.7	-21.61	154.9	1,417.6	803.9	761.0	42.95	18.716	
7,400.0	7,326.1	7,611.6	7,389.0	20.7	28.7	-32.43	154.7	1,416.8	791.7	748.9	42.87	18.469	
7,450.0	7,373.2	7,658.4	7,435.8	20.7	28.7	-39.88	154.6	1,416.0	777.2	734.4	42.76	18.175	
7,500.0	7,418.7	7,702.1	7,479.6	20.7	28.8	-45.84	154.5	1,415.3	760.9	718.2	42.66	17.836	
7,550.0	7,462.4	7,744.1	7,521.5	20.6	28.8	-51.19	154.5	1,414.8	743.0	700.5	42.58	17.452	
7,600.0	7,503.8	7,784.0	7,561.4	20.5	28.8	-56.31	154.4	1,414.3	724.1	681.6	42.53	17.026	
7,650.0	7,542.8	7,822.3	7,599.7	20.5	28.9	-61.39	154.3	1,414.0	704.5	662.0	42.53	16.565	
7,700.0	7,578.8	7,858.2	7,635.7	20.4	28.9	-66.45	154.3	1,413.7	684.7	642.1	42.57	16.084	
7,750.0	7,611.8	7,891.0	7,668.4	20.3	28.9	-71.38	154.4	1,413.5	665.4	622.7	42.64	15.604	
7,800.0	7,641.5	7,920.3	7,697.7	20.2	28.9	-76.04	154.4	1,413.3	647.2	604.4	42.72	15.147	
7,850.0	7,667.6	7,946.0	7,723.4	20.2	29.0	-80.27	154.5	1,413.2	630.8	588.0	42.80	14.739	
7,900.0	7,689.9	7,967.9	7,745.3	20.2	29.0	-83.92	154.6	1,413.1	617.1	574.2	42.85	14.400	
7,950.0	7,708.2	7,985.8	7,763.2	20.1	29.0	-86.85	154.7	1,413.0	606.6	563.7	42.89	14.145	
8,000.0	7,722.5	7,999.7	7,777.1	20.2	29.0	-88.98	154.8	1,412.9	600.1	557.2	42.92	13.983	
8,048.1	7,732.3	8,009.1	7,786.5	20.2	29.0	-90.21	154.9	1,412.9	598.0	555.0	42.96	13.918 CC, ES	
8,050.0	7,732.6	8,009.4	7,786.8	20.2	29.0	-90.24	154.9	1,412.9	598.0	555.0	42.97	13.918 SF	
8,100.0	7,738.4	8,014.8	7,792.2	20.3	29.0	-90.59	154.9	1,412.9	600.5	557.5	43.05	13.949	
8,142.5	7,740.0	8,016.1	7,793.5	20.4	29.0	-90.15	154.9	1,412.9	606.3	563.2	43.16	14.049	
8,200.0	7,740.0	8,015.8	7,793.2	20.5	29.0	-90.12	154.9	1,412.9	619.1	575.7	43.39	14.270	
8,300.0	7,740.0	8,015.2	7,792.7	20.9	29.0	-90.06	154.9	1,412.9	652.9	608.9	43.93	14.861	
8,400.0	7,740.0	8,014.7	7,792.1	21.4	29.0	-90.01	154.9	1,412.9	699.4	654.8	44.66	15.662	
8,442.5	7,740.0	8,014.4	7,791.8	21.7	29.0	-89.99	154.9	1,412.9	722.5	677.5	45.02	16.050	
8,500.0	7,740.0	8,014.1	7,791.5	22.1	29.0	-89.95	154.9	1,412.9	756.6	711.2	45.46	16.646	
8,600.0	7,740.0	8,013.5	7,791.0	22.8	29.0	-89.90	154.9	1,412.9	823.2	776.9	46.29	17.785	
8,700.0	7,740.0	8,013.0	7,790.4	23.6	29.0	-89.84	154.9	1,412.9	897.1	850.0	47.19	19.012	
8,800.0	7,740.0	8,012.5	7,789.9	24.5	29.0	-89.78	154.9	1,412.9	976.8	928.6	48.15	20.285	
8,842.5	7,740.0	8,012.2	7,789.6	25.0	29.0	-89.76	154.9	1,412.9	1,012.0	963.4	48.58	20.832	
8,900.0	7,740.0	8,011.9	7,789.3	25.5	29.0	-89.72	154.9	1,412.9	1,060.6	1,011.3	49.30	21.513	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SU													Offset Site Error:	0.0 ft
Survey Program: 71-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		
9,000.0	7,740.0	8,011.4	7,788.8	26.6	29.0	-89.67	154.9	1,412.9	1,147.1	1,096.5	50.61	22.666		
9,100.0	7,740.0	8,010.9	7,788.3	27.7	29.0	-89.61	154.9	1,412.9	1,235.7	1,183.7	51.98	23.772		
9,200.0	7,740.0	8,010.3	7,787.7	28.9	29.0	-89.56	154.9	1,412.9	1,325.9	1,272.5	53.40	24.830		
9,300.0	7,740.0	8,009.8	7,787.2	30.2	29.0	-89.50	154.9	1,412.9	1,417.4	1,362.5	54.86	25.838		
9,342.5	7,740.0	8,009.6	7,787.0	30.7	29.0	-89.48	154.9	1,412.9	1,456.6	1,401.1	55.49	26.251		
9,399.5	7,740.0	8,009.3	7,786.7	31.5	29.0	-89.46	154.9	1,412.9	1,509.4	1,452.9	56.49	26.718		
9,500.0	7,740.0	8,008.7	7,786.1	32.8	29.0	-89.41	154.8	1,412.9	1,603.0	1,544.9	58.03	27.625		
9,600.0	7,740.0	8,008.2	7,785.6	34.2	29.0	-89.35	154.8	1,412.9	1,696.9	1,637.3	59.58	28.483		
9,700.0	7,740.0	8,007.7	7,785.1	35.6	29.0	-89.30	154.8	1,412.9	1,791.4	1,730.3	61.14	29.298		
9,800.0	7,740.0	8,007.1	7,784.5	37.1	29.0	-89.25	154.8	1,412.9	1,886.6	1,823.8	62.73	30.073		
9,900.0	7,740.0	8,006.6	7,784.0	38.5	29.0	-89.19	154.8	1,412.9	1,982.2	1,917.8	64.34	30.810		
10,000.0	7,740.0	8,006.1	7,783.5	40.0	29.0	-89.14	154.8	1,412.9	2,078.2	2,012.3	65.95	31.511		
10,100.0	7,740.0	8,005.5	7,783.0	41.6	29.0	-89.09	154.8	1,412.9	2,174.6	2,107.0	67.58	32.178		
10,200.0	7,740.0	8,005.0	7,782.4	43.1	29.0	-89.03	154.8	1,412.9	2,271.3	2,202.1	69.22	32.813		
10,300.0	7,740.0	8,004.5	7,781.9	44.6	29.0	-88.98	154.8	1,412.9	2,368.2	2,297.4	70.87	33.418		
10,400.0	7,740.0	8,004.0	7,781.4	46.2	29.0	-88.93	154.8	1,412.9	2,465.5	2,392.9	72.52	33.995		
10,500.0	7,740.0	8,003.5	7,780.9	47.8	29.0	-88.87	154.8	1,412.9	2,562.9	2,488.7	74.19	34.547		
10,600.0	7,740.0	8,002.9	7,780.3	49.4	29.0	-88.82	154.8	1,412.9	2,660.5	2,584.6	75.86	35.073		
10,700.0	7,740.0	8,002.4	7,779.8	51.0	29.0	-88.77	154.8	1,412.9	2,758.3	2,680.8	77.53	35.577		
10,800.0	7,740.0	8,001.9	7,779.3	52.6	29.0	-88.72	154.8	1,412.9	2,856.2	2,777.0	79.21	36.059		
10,900.0	7,740.0	8,001.4	7,778.8	54.2	29.0	-88.66	154.8	1,412.9	2,954.3	2,873.4	80.90	36.520		
11,000.0	7,740.0	8,000.9	7,778.3	55.8	29.0	-88.61	154.8	1,412.9	3,052.5	2,969.9	82.58	36.962		
11,100.0	7,740.0	8,000.3	7,777.7	57.5	29.0	-88.56	154.8	1,412.9	3,150.8	3,066.5	84.28	37.386		
11,200.0	7,740.0	7,999.8	7,777.2	59.1	29.0	-88.51	154.8	1,412.9	3,249.2	3,163.3	85.97	37.794		
11,300.0	7,740.0	7,999.3	7,776.7	60.8	29.0	-88.46	154.8	1,412.9	3,347.7	3,260.1	87.67	38.185		
11,400.0	7,740.0	7,998.8	7,776.2	62.4	29.0	-88.40	154.8	1,412.9	3,446.3	3,357.0	89.37	38.561		
11,500.0	7,740.0	7,998.3	7,775.7	64.1	29.0	-88.35	154.8	1,412.9	3,545.0	3,453.9	91.08	38.922		
11,600.0	7,740.0	7,997.8	7,775.2	65.7	29.0	-88.30	154.8	1,412.9	3,643.8	3,551.0	92.79	39.271		
11,700.0	7,740.0	7,997.2	7,774.7	67.4	29.0	-88.25	154.8	1,412.9	3,742.6	3,648.1	94.50	39.606		
11,800.0	7,740.0	7,996.7	7,774.2	69.1	29.0	-88.20	154.8	1,412.9	3,841.5	3,745.3	96.21	39.929		
11,900.0	7,740.0	7,996.2	7,773.6	70.8	29.0	-88.14	154.8	1,412.9	3,940.4	3,842.5	97.92	40.241		
12,000.0	7,740.0	7,995.7	7,773.1	72.4	29.0	-88.09	154.8	1,412.9	4,039.4	3,939.7	99.63	40.542		
12,100.0	7,740.0	7,995.2	7,772.6	74.1	29.0	-88.04	154.8	1,412.9	4,138.4	4,037.1	101.35	40.833		
12,200.0	7,740.0	7,994.7	7,772.1	75.8	29.0	-87.99	154.8	1,412.9	4,237.5	4,134.4	103.07	41.114		
12,300.0	7,740.0	7,994.2	7,771.6	77.5	29.0	-87.94	154.8	1,412.9	4,336.6	4,231.8	104.79	41.385		
12,400.0	7,740.0	7,993.7	7,771.1	79.2	29.0	-87.89	154.8	1,413.0	4,435.8	4,329.3	106.51	41.648		
12,500.0	7,740.0	7,993.2	7,770.6	80.9	29.0	-87.84	154.8	1,413.0	4,535.0	4,426.7	108.23	41.902		
12,600.0	7,740.0	7,992.7	7,770.1	82.6	29.0	-87.79	154.8	1,413.0	4,634.2	4,524.3	109.95	42.148		
12,700.0	7,740.0	7,992.2	7,769.6	84.3	29.0	-87.74	154.8	1,413.0	4,733.5	4,621.8	111.67	42.387		
12,800.0	7,740.0	7,991.7	7,769.1	86.0	29.0	-87.69	154.8	1,413.0	4,832.8	4,719.4	113.40	42.618		
12,900.0	7,740.0	7,991.2	7,768.6	87.7	29.0	-87.64	154.8	1,413.0	4,932.1	4,817.0	115.12	42.842		
13,000.0	7,740.0	7,990.7	7,768.1	89.4	29.0	-87.59	154.8	1,413.0	5,031.4	4,914.6	116.85	43.060		
13,100.0	7,740.0	7,990.2	7,767.6	91.1	29.0	-87.54	154.8	1,413.0	5,130.8	5,012.2	118.57	43.271		
13,200.0	7,740.0	7,989.7	7,767.1	92.8	29.0	-87.48	154.7	1,413.0	5,230.2	5,109.9	120.30	43.476		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SU										Offset Site Error:		0.0 ft	
Survey Program: 41-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	105.7	105.7	0.0	0.2	37.12	1,584.2	1,198.8	1,987.4				
100.0	100.0	306.3	306.0	0.2	0.6	37.18	1,574.6	1,194.2	1,982.2	1,981.5	0.71	2,777.764	
200.0	200.0	503.1	501.5	0.3	1.1	37.41	1,553.8	1,188.2	1,971.9	1,970.6	1.28	1,542.265	
300.0	300.0	617.0	614.2	0.5	1.5	37.64	1,537.5	1,185.7	1,959.2	1,957.6	1.68	1,168.870	
400.0	400.0	755.3	750.5	0.7	1.9	38.01	1,513.6	1,183.2	1,944.2	1,942.1	2.12	915.629	
500.0	500.0	868.4	861.5	0.8	2.4	38.38	1,491.9	1,181.7	1,928.2	1,925.7	2.52	765.946	
600.0	600.0	941.1	932.9	1.0	2.6	38.62	1,478.5	1,181.3	1,913.1	1,910.3	2.83	676.764	
700.0	700.0	1,085.9	1,074.9	1.2	3.2	39.13	1,450.7	1,180.3	1,897.8	1,894.6	3.28	579.324	
800.0	800.0	1,314.8	1,297.0	1.4	4.2	40.09	1,395.6	1,174.7	1,877.6	1,873.7	3.92	478.666	
900.0	900.0	1,450.5	1,426.8	1.5	5.0	40.77	1,356.4	1,169.5	1,852.8	1,848.4	4.39	422.466	
1,000.0	1,000.0	1,575.5	1,545.6	1.7	5.7	41.47	1,317.5	1,164.6	1,826.4	1,821.6	4.82	378.950	
1,100.0	1,100.0	1,713.0	1,675.1	1.9	6.5	-8.73	1,272.0	1,159.0	1,797.8	1,791.4	6.35	283.112	
1,200.0	1,200.0	1,896.0	1,844.5	2.1	7.8	-7.43	1,203.2	1,149.8	1,763.3	1,755.9	7.36	239.440	
1,300.0	1,299.9	2,001.4	1,940.5	2.3	8.6	-6.56	1,160.2	1,144.9	1,725.6	1,717.5	8.08	213.571	
1,400.0	1,399.7	2,104.9	2,034.4	2.4	9.3	-5.66	1,116.9	1,139.3	1,685.5	1,676.7	8.81	191.236	
1,500.0	1,499.4	2,221.6	2,139.2	2.6	10.3	-4.48	1,065.9	1,133.9	1,643.3	1,633.6	9.70	169.490	
1,600.0	1,598.9	2,341.5	2,245.3	2.8	11.2	-3.09	1,010.4	1,127.7	1,597.5	1,586.9	10.65	149.953	
1,700.0	1,698.3	2,420.3	2,315.1	3.1	11.9	-2.14	974.2	1,122.8	1,550.4	1,539.0	11.34	136.685	
1,800.0	1,797.4	2,491.8	2,378.7	3.3	12.5	-1.24	941.7	1,118.4	1,502.6	1,490.6	11.99	125.275	
1,908.5	1,904.7	2,562.4	2,441.8	3.6	13.0	-0.30	910.3	1,114.5	1,450.7	1,438.0	12.66	114.566	
2,000.0	1,995.0	2,645.6	2,516.5	3.8	13.7	0.85	874.2	1,109.5	1,406.9	1,393.5	13.42	104.836	
2,100.0	2,093.8	2,730.0	2,592.4	4.1	14.3	2.07	837.7	1,104.0	1,359.3	1,345.0	14.24	95.423	
2,200.0	2,192.5	2,790.1	2,646.5	4.4	14.8	3.02	811.5	1,100.9	1,312.9	1,298.0	14.91	88.081	
2,300.0	2,291.3	2,910.0	2,754.5	4.7	15.7	5.02	759.8	1,094.8	1,267.8	1,251.7	16.09	78.807	
2,400.0	2,390.0	2,990.3	2,826.3	5.0	16.4	6.46	724.4	1,089.1	1,221.3	1,204.3	16.97	71.964	
2,500.0	2,488.8	3,084.0	2,910.3	5.3	17.1	8.22	683.5	1,081.9	1,175.4	1,157.4	17.99	65.339	
2,600.0	2,587.5	3,160.3	2,978.9	5.6	17.7	9.71	650.7	1,075.5	1,130.1	1,111.2	18.87	59.877	
2,700.0	2,686.3	3,259.0	3,067.5	5.9	18.5	11.81	608.0	1,067.2	1,085.5	1,065.5	20.03	54.195	
2,800.0	2,785.0	3,325.7	3,127.1	6.2	19.0	13.36	578.5	1,061.8	1,042.0	1,021.1	20.92	49.805	
2,900.0	2,883.8	3,423.3	3,214.4	6.5	19.8	15.81	535.5	1,054.6	1,000.1	978.0	22.18	45.082	
3,000.0	2,982.5	3,495.9	3,279.2	6.8	20.4	17.77	503.2	1,048.7	959.0	935.8	23.22	41.304	
3,100.0	3,081.3	3,570.4	3,345.7	7.2	21.0	19.93	470.1	1,043.7	920.5	896.2	24.32	37.856	
3,200.0	3,180.0	3,658.9	3,424.8	7.5	21.7	22.67	430.8	1,038.0	884.1	858.5	25.62	34.514	
3,300.0	3,278.7	3,750.8	3,507.0	7.8	22.4	25.66	390.5	1,030.7	848.8	821.8	26.97	31.469	
3,400.0	3,377.5	3,836.6	3,584.3	8.1	23.1	28.54	354.0	1,023.0	815.2	787.0	28.24	28.872	
3,500.0	3,476.2	3,918.1	3,658.4	8.4	23.7	31.34	321.0	1,015.2	783.9	754.5	29.43	26.633	
3,600.0	3,575.0	3,994.5	3,728.0	8.7	24.2	34.10	290.3	1,008.5	755.7	725.1	30.58	24.710	
3,700.0	3,673.7	4,072.4	3,799.0	9.1	24.8	37.09	258.6	1,002.7	731.4	699.7	31.76	23.027	
3,800.0	3,772.5	4,152.2	3,871.3	9.4	25.4	40.34	225.4	997.0	710.5	677.5	32.96	21.554	
3,900.0	3,871.2	4,219.0	3,931.7	9.7	25.9	43.20	197.1	993.6	694.9	660.9	33.99	20.444	
4,000.0	3,970.0	4,304.1	4,008.6	10.0	26.6	46.96	160.8	990.4	684.2	649.0	35.16	19.456	
4,100.0	4,068.7	4,386.8	4,083.5	10.3	27.2	50.64	125.8	987.2	677.4	641.2	36.21	18.709	
4,200.0	4,167.5	4,469.6	4,158.0	10.7	27.9	54.44	89.8	984.0	675.0	637.8	37.21	18.142	
4,201.5	4,168.9	4,470.8	4,159.0	10.7	27.9	54.50	89.3	983.9	675.0	637.8	37.22	18.135	
4,300.0	4,266.2	4,556.5	4,234.7	11.0	28.6	58.67	49.3	979.5	677.1	639.0	38.13	17.758	
4,400.0	4,364.9	4,640.5	4,308.6	11.3	29.3	62.76	9.7	974.4	683.6	644.7	38.87	17.588	
4,500.0	4,463.7	4,725.9	4,384.5	11.6	30.0	66.73	-29.1	969.8	694.5	655.1	39.41	17.621	
4,600.0	4,562.4	4,826.7	4,476.2	11.9	30.7	70.98	-70.9	965.7	708.4	668.6	39.79	17.804	
4,700.0	4,661.2	4,933.7	4,575.5	12.3	31.4	75.01	-110.5	961.6	723.5	683.5	39.99	18.092	
4,800.0	4,759.9	5,044.7	4,680.1	12.6	32.1	78.83	-147.3	956.1	738.2	698.1	40.04	18.438	
4,900.0	4,858.7	5,150.3	4,780.6	12.9	32.6	82.13	-179.3	951.3	753.7	713.7	39.98	18.853	
5,000.0	4,957.4	5,266.0	4,892.3	13.2	33.2	85.30	-209.2	946.7	768.4	728.6	39.82	19.299	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SU												Offset Site Error:	0.0 ft
Survey Program: 41-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	5,056.2	5,388.4	5,011.9	13.6	33.6	88.17	-234.4	942.8	781.3	741.7	39.57	19.746	
5,200.0	5,154.9	5,498.1	5,120.0	13.9	34.0	90.43	-252.8	940.0	792.9	753.5	39.39	20.130	
5,300.0	5,253.7	5,629.7	5,250.4	14.2	34.3	92.89	-270.4	936.3	802.6	763.6	39.08	20.539	
5,400.0	5,352.4	5,746.9	5,367.1	14.5	34.5	94.83	-281.2	932.8	809.7	770.8	38.85	20.841	
5,500.0	5,451.1	5,861.4	5,481.3	14.9	34.7	96.49	-287.5	930.2	814.7	776.1	38.65	21.079	
5,600.0	5,549.9	5,978.6	5,598.4	15.2	34.8	98.02	-290.9	928.3	818.4	779.9	38.47	21.273	
5,700.0	5,648.6	6,089.2	5,709.0	15.5	34.8	99.36	-291.4	926.3	820.2	781.9	38.33	21.399	
5,800.0	5,747.4	6,186.9	5,806.7	15.8	34.9	100.52	-291.3	924.5	822.0	783.8	38.25	21.491	
5,900.0	5,846.1	6,284.2	5,904.0	16.2	34.9	101.68	-291.3	922.9	824.3	786.1	38.17	21.597	
6,000.0	5,944.9	6,382.1	6,001.9	16.5	35.0	102.83	-291.4	921.2	827.0	788.9	38.08	21.720	
6,100.0	6,043.6	6,480.3	6,100.1	16.8	35.1	103.98	-291.6	919.6	830.1	792.2	37.98	21.855	
6,200.0	6,142.4	6,580.3	6,200.1	17.1	35.1	105.11	-291.5	918.3	833.5	795.7	37.88	22.005	
6,300.0	6,241.1	6,680.1	6,299.9	17.5	35.1	106.19	-291.0	917.5	837.1	799.3	37.80	22.145	
6,400.0	6,339.9	6,776.7	6,396.5	17.8	35.2	107.21	-290.5	917.0	841.0	803.2	37.74	22.282	
6,500.0	6,438.6	6,873.8	6,493.5	18.1	35.3	108.24	-290.3	916.3	845.4	807.7	37.68	22.436	
6,600.0	6,537.3	6,971.7	6,591.4	18.4	35.3	109.27	-290.3	915.6	850.2	812.6	37.62	22.601	
6,700.0	6,636.1	7,069.9	6,689.6	18.8	35.4	110.31	-290.4	914.7	855.4	817.9	37.56	22.775	
6,800.0	6,734.8	7,168.2	6,788.0	19.1	35.5	111.36	-290.6	913.5	861.0	823.5	37.50	22.958	
6,900.0	6,833.6	7,266.9	6,886.6	19.4	35.5	112.41	-290.9	912.2	866.8	829.3	37.44	23.150	
7,000.0	6,932.3	7,365.6	6,985.3	19.7	35.6	113.46	-291.2	910.7	872.9	835.5	37.39	23.346	
7,100.0	7,031.1	7,465.9	7,085.6	20.1	35.7	114.51	-291.4	909.0	879.2	841.8	37.34	23.546	
7,190.5	7,120.5	7,556.5	7,176.2	20.4	35.7	115.46	-291.5	907.3	884.9	847.6	37.30	23.727	
7,200.0	7,129.8	7,565.9	7,185.6	20.4	35.7	110.41	-291.5	907.2	885.5	848.2	37.28	23.754	
7,250.0	7,179.4	7,615.8	7,235.5	20.5	35.8	75.70	-291.4	906.2	885.7	848.7	37.09	23.884	
7,300.0	7,228.8	7,665.6	7,285.3	20.6	35.8	44.40	-291.4	905.2	881.7	845.0	36.76	23.988	
7,350.0	7,277.9	7,715.0	7,334.7	20.7	35.8	27.19	-291.3	904.3	873.5	837.2	36.28	24.073	
7,400.0	7,326.1	7,764.5	7,384.1	20.7	35.9	18.09	-291.2	903.3	861.0	825.3	35.66	24.143	
7,450.0	7,373.2	7,812.7	7,432.3	20.7	35.9	12.75	-291.0	902.4	844.3	809.4	34.90	24.196	
7,500.0	7,418.7	7,859.2	7,478.9	20.7	35.9	9.28	-290.8	901.5	823.6	789.6	33.99	24.232	
7,550.0	7,462.4	7,903.3	7,523.0	20.6	35.9	6.80	-290.5	900.6	799.0	766.0	32.95	24.249	
7,600.0	7,503.8	7,944.6	7,564.2	20.5	36.0	4.87	-290.1	900.0	770.7	738.9	31.80	24.239	
7,650.0	7,542.8	7,983.2	7,602.9	20.5	36.0	3.23	-289.8	899.4	738.9	708.4	30.55	24.187	
7,700.0	7,578.8	8,019.1	7,638.7	20.4	36.0	1.68	-289.5	899.0	704.0	674.7	29.25	24.071	
7,750.0	7,611.8	8,051.7	7,671.3	20.3	36.0	0.08	-289.2	898.7	666.1	638.2	27.92	23.853	
7,800.0	7,641.5	8,080.9	7,700.5	20.2	36.0	-1.78	-288.9	898.6	625.5	598.9	26.65	23.467	
7,850.0	7,667.6	8,106.4	7,726.0	20.2	36.1	-4.13	-288.6	898.4	582.6	557.0	25.56	22.792	
7,900.0	7,689.9	8,128.2	7,747.8	20.2	36.1	-7.43	-288.4	898.3	537.7	512.8	24.90	21.596	
7,950.0	7,708.2	8,146.0	7,765.6	20.1	36.1	-12.54	-288.2	898.2	491.1	465.8	25.23	19.461	
8,000.0	7,722.5	8,159.7	7,779.3	20.2	36.1	-21.32	-288.1	898.2	443.2	415.3	27.90	15.884	
8,050.0	7,732.6	8,169.3	7,788.9	20.2	36.1	-37.77	-288.0	898.1	394.4	359.0	35.32	11.167	
8,100.0	7,738.4	8,174.6	7,794.2	20.3	36.1	-66.58	-287.9	898.1	345.1	298.7	46.41	7.436	
8,142.5	7,740.0	8,175.7	7,795.3	20.4	36.1	-93.59	-287.9	898.1	303.2	253.8	49.38	6.139	
8,200.0	7,740.0	8,175.1	7,794.7	20.5	36.1	-92.93	-287.9	898.1	246.7	197.1	49.64	4.969	
8,300.0	7,740.0	8,174.0	7,793.6	20.9	36.1	-91.79	-287.9	898.1	150.5	100.2	50.24	2.995	
8,400.0	7,740.0	8,173.0	7,792.6	21.4	36.1	-90.65	-287.9	898.1	66.6	15.6	51.00	1.306 Level 3	
8,441.1	7,740.0	8,172.6	7,792.2	21.7	36.1	-90.18	-287.9	898.1	52.4	1.0	51.35	1.020 Level 2, CC, ES, SF	
8,442.5	7,740.0	8,172.6	7,792.2	21.7	36.1	-90.16	-287.9	898.1	52.4	1.1	51.36	1.021 Level 2	
8,500.0	7,740.0	8,172.0	7,791.5	22.1	36.1	-89.50	-287.9	898.1	79.0	27.1	51.89	1.523	
8,600.0	7,740.0	8,170.9	7,790.5	22.8	36.1	-88.30	-287.9	898.1	168.0	115.1	52.86	3.178	
8,700.0	7,740.0	8,169.9	7,789.5	23.6	36.1	-86.89	-288.0	898.1	265.3	211.4	53.88	4.924	
8,800.0	7,740.0	8,168.9	7,788.4	24.5	36.1	-85.05	-288.0	898.1	364.3	309.4	54.90	6.635	
8,842.5	7,740.0	8,168.4	7,788.0	25.0	36.1	-84.04	-288.0	898.1	406.5	351.2	55.31	7.349	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SU												Offset Site Error:	0.0 ft
Survey Program: 41-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
8,900.0	7,740.0	8,167.8	7,787.4	25.5	36.1	-83.17	-288.0	898.1	463.8	407.8	55.95	8.289	
9,000.0	7,740.0	8,166.8	7,786.4	26.6	36.1	-81.67	-288.0	898.1	563.5	506.4	57.09	9.870	
9,100.0	7,740.0	8,165.8	7,785.4	27.7	36.1	-80.18	-288.0	898.1	663.3	605.1	58.24	11.389	
9,200.0	7,740.0	8,164.8	7,784.4	28.9	36.1	-78.70	-288.0	898.1	763.2	703.8	59.40	12.849	
9,300.0	7,740.0	8,163.7	7,783.3	30.2	36.1	-77.23	-288.0	898.1	863.1	802.5	60.54	14.256	
9,342.5	7,740.0	8,163.3	7,782.9	30.7	36.1	-76.62	-288.0	898.1	905.5	844.5	61.02	14.838	
9,399.5	7,740.0	8,162.7	7,782.3	31.5	36.1	-78.49	-288.0	898.1	962.5	900.2	62.29	15.450	
9,500.0	7,740.0	8,161.7	7,781.3	32.8	36.1	-77.30	-288.0	898.1	1,062.8	999.3	63.55	16.725	
9,600.0	7,740.0	8,160.7	7,780.3	34.2	36.1	-76.13	-288.0	898.1	1,162.7	1,098.0	64.78	17.948	
9,700.0	7,740.0	8,159.6	7,779.2	35.6	36.1	-74.97	-288.1	898.2	1,262.7	1,196.6	66.00	19.131	
9,800.0	7,740.0	8,158.6	7,778.2	37.1	36.1	-73.82	-288.1	898.2	1,362.6	1,295.4	67.20	20.277	
9,900.0	7,740.0	8,157.6	7,777.2	38.5	36.1	-72.69	-288.1	898.2	1,462.5	1,394.1	68.37	21.390	
10,000.0	7,740.0	8,156.6	7,776.1	40.0	36.1	-71.57	-288.1	898.2	1,562.5	1,492.9	69.52	22.473	
10,100.0	7,740.0	8,155.5	7,775.1	41.6	36.1	-70.46	-288.1	898.2	1,662.4	1,591.8	70.65	23.531	
10,200.0	7,740.0	8,154.5	7,774.1	43.1	36.1	-69.37	-288.1	898.2	1,762.4	1,690.6	71.74	24.565	
10,300.0	7,740.0	8,153.5	7,773.1	44.6	36.1	-68.30	-288.1	898.2	1,862.3	1,789.5	72.81	25.579	
10,400.0	7,740.0	8,152.4	7,772.0	46.2	36.1	-67.24	-288.1	898.2	1,962.3	1,888.5	73.84	26.574	
10,500.0	7,740.0	8,151.4	7,771.0	47.8	36.1	-66.20	-288.1	898.2	2,062.3	1,987.4	74.85	27.554	
10,600.0	7,740.0	8,150.4	7,770.0	49.4	36.1	-65.17	-288.2	898.2	2,162.2	2,086.4	75.82	28.519	
10,700.0	7,740.0	8,149.4	7,769.0	51.0	36.1	-64.16	-288.2	898.2	2,262.2	2,185.4	76.76	29.472	
10,800.0	7,740.0	8,148.3	7,767.9	52.6	36.1	-63.17	-288.2	898.2	2,362.2	2,284.5	77.67	30.415	
10,900.0	7,740.0	8,147.3	7,766.9	54.2	36.1	-62.20	-288.2	898.2	2,462.2	2,383.6	78.54	31.348	
11,000.0	7,740.0	8,146.3	7,765.9	55.8	36.1	-61.24	-288.2	898.2	2,562.1	2,482.7	79.39	32.273	
11,100.0	7,740.0	8,145.2	7,764.8	57.5	36.1	-60.30	-288.2	898.2	2,662.1	2,581.9	80.20	33.192	
11,200.0	7,740.0	8,144.2	7,763.8	59.1	36.1	-59.38	-288.2	898.2	2,762.1	2,681.1	80.99	34.105	
11,300.0	7,740.0	8,143.2	7,762.8	60.8	36.1	-58.47	-288.2	898.2	2,862.1	2,780.3	81.74	35.013	
11,400.0	7,740.0	8,142.2	7,761.8	62.4	36.1	-57.58	-288.2	898.2	2,962.0	2,879.6	82.47	35.917	
11,500.0	7,740.0	8,141.1	7,760.7	64.1	36.1	-56.71	-288.2	898.2	3,062.0	2,978.9	83.17	36.818	
11,600.0	7,740.0	8,140.1	7,759.7	65.7	36.1	-55.86	-288.3	898.2	3,162.0	3,078.2	83.84	37.716	
11,700.0	7,740.0	8,139.1	7,758.7	67.4	36.1	-55.02	-288.3	898.2	3,262.0	3,177.5	84.48	38.612	
11,800.0	7,740.0	8,138.0	7,757.6	69.1	36.1	-54.20	-288.3	898.2	3,362.0	3,276.9	85.10	39.507	
11,900.0	7,740.0	8,137.0	7,756.6	70.8	36.1	-53.40	-288.3	898.3	3,462.0	3,376.3	85.69	40.400	
12,000.0	7,740.0	8,136.0	7,755.6	72.4	36.1	-52.61	-288.3	898.3	3,562.0	3,475.7	86.26	41.293	
12,100.0	7,740.0	8,134.9	7,754.5	74.1	36.1	-51.84	-288.3	898.3	3,661.9	3,575.1	86.80	42.186	
12,200.0	7,740.0	8,133.9	7,753.5	75.8	36.1	-51.08	-288.3	898.3	3,761.9	3,674.6	87.33	43.079	
12,300.0	7,740.0	8,132.9	7,752.5	77.5	36.1	-50.35	-288.3	898.3	3,861.9	3,774.1	87.83	43.972	
12,400.0	7,740.0	8,131.9	7,751.5	79.2	36.1	-49.62	-288.3	898.3	3,961.9	3,873.6	88.31	44.865	
12,500.0	7,740.0	8,130.8	7,750.4	80.9	36.1	-48.91	-288.4	898.3	4,061.9	3,973.1	88.77	45.759	
12,600.0	7,740.0	8,129.8	7,749.4	82.6	36.1	-48.22	-288.4	898.3	4,161.9	4,072.7	89.21	46.654	
12,700.0	7,740.0	8,128.8	7,748.4	84.3	36.1	-47.54	-288.4	898.3	4,261.9	4,172.2	89.63	47.550	
12,800.0	7,740.0	8,127.7	7,747.3	86.0	36.1	-46.88	-288.4	898.3	4,361.9	4,271.8	90.03	48.448	
12,900.0	7,740.0	8,126.7	7,746.3	87.7	36.1	-46.23	-288.4	898.3	4,461.8	4,371.4	90.42	49.346	
13,000.0	7,740.0	8,125.7	7,745.3	89.4	36.1	-45.59	-288.4	898.3	4,561.8	4,471.0	90.79	50.246	
13,100.0	7,740.0	8,124.6	7,744.2	91.1	36.1	-44.97	-288.4	898.3	4,661.8	4,570.7	91.15	51.147	
13,200.0	7,740.0	8,123.6	7,743.2	92.8	36.1	-44.36	-288.4	898.3	4,761.8	4,670.3	91.49	52.049	
13,300.0	7,740.0	8,122.6	7,742.2	94.5	36.1	-43.77	-288.4	898.3	4,861.8	4,770.0	91.81	52.953	
13,400.0	7,740.0	8,121.5	7,741.1	96.2	36.1	-43.18	-288.4	898.3	4,961.8	4,869.7	92.13	53.859	
13,500.0	7,740.0	8,120.5	7,740.1	98.0	36.1	-42.61	-288.5	898.3	5,061.8	4,969.4	92.43	54.766	
13,600.0	7,740.0	8,119.5	7,739.1	99.7	36.1	-42.05	-288.5	898.3	5,161.8	5,069.1	92.71	55.674	
13,700.0	7,740.0	8,118.5	7,738.1	101.4	36.1	-41.51	-288.5	898.3	5,261.8	5,168.8	92.99	56.584	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY F UNIT 1 (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	
0.0	0.0	33.1	33.1	0.0	0.1	46.07	801.4	831.9	1,155.1				
100.0	100.0	121.8	121.8	0.2	0.2	46.09	801.6	832.9	1,156.1	1,155.7	0.37	3,147.232	
200.0	200.0	219.9	219.9	0.3	0.4	46.15	801.9	834.8	1,157.7	1,157.0	0.72	1,616.223	
300.0	300.0	332.7	332.7	0.5	0.6	46.19	802.1	836.1	1,158.7	1,157.6	1.09	1,065.723	
400.0	400.0	436.3	436.2	0.7	0.8	46.19	802.2	836.3	1,158.8	1,157.4	1.44	804.139	
500.0	500.0	535.9	535.9	0.8	0.9	46.17	802.6	836.2	1,159.1	1,157.3	1.79	648.041	
600.0	600.0	639.7	639.7	1.0	1.1	46.17	802.7	836.1	1,159.1	1,156.9	2.14	540.714	
700.0	700.0	744.8	744.7	1.2	1.3	46.16	802.7	835.8	1,158.8	1,156.3	2.50	463.431	
800.0	800.0	849.0	848.9	1.4	1.5	46.12	802.5	834.6	1,157.9	1,155.0	2.86	405.440	
900.0	900.0	949.1	949.1	1.5	1.7	46.07	802.7	833.2	1,157.0	1,153.8	3.20	361.033	
1,000.0	1,000.0	1,051.0	1,051.0	1.7	1.8	46.04	802.4	832.0	1,155.9	1,152.4	3.56	324.967	
1,100.0	1,100.0	1,152.8	1,152.7	1.9	2.0	-5.02	802.0	830.7	1,153.9	1,150.0	3.91	295.201	
1,200.0	1,200.0	1,254.8	1,254.8	2.1	2.2	-5.08	801.7	829.0	1,149.9	1,145.6	4.26	269.888	
1,300.0	1,299.9	1,350.9	1,350.8	2.3	2.4	-5.16	801.6	827.3	1,144.2	1,139.6	4.60	248.675	
1,400.0	1,399.7	1,446.2	1,446.1	2.4	2.5	-5.26	801.9	825.8	1,137.2	1,132.3	4.94	230.237	
1,500.0	1,499.4	1,547.0	1,546.9	2.6	2.7	-5.38	802.5	824.2	1,128.7	1,123.4	5.29	213.513	
1,600.0	1,598.9	1,645.1	1,644.9	2.8	2.9	-5.51	802.8	822.6	1,118.2	1,112.6	5.63	198.715	
1,700.0	1,698.3	1,739.7	1,739.5	3.1	3.0	-5.65	803.6	821.3	1,106.5	1,100.6	5.96	185.617	
1,800.0	1,797.4	1,838.6	1,838.4	3.3	3.2	-5.81	804.5	820.1	1,093.3	1,087.0	6.30	173.484	
1,908.5	1,904.7	1,944.4	1,944.2	3.6	3.4	-6.01	805.7	818.5	1,077.0	1,070.3	6.67	161.515	
2,000.0	1,995.0	2,029.7	2,029.5	3.8	3.6	-6.19	806.9	817.3	1,062.7	1,055.7	6.98	152.257	
2,100.0	2,093.8	2,121.4	2,121.1	4.1	3.7	-6.37	808.6	816.5	1,047.7	1,040.3	7.32	143.174	
2,200.0	2,192.5	2,216.3	2,216.1	4.4	3.9	-6.57	810.8	816.0	1,033.2	1,025.5	7.66	134.849	
2,300.0	2,291.3	2,314.4	2,314.1	4.7	4.1	-6.77	813.1	815.7	1,019.0	1,010.9	8.01	127.187	
2,400.0	2,390.0	2,418.1	2,417.8	5.0	4.2	-6.98	815.1	815.5	1,004.5	996.1	8.37	120.000	
2,500.0	2,488.8	2,520.7	2,520.3	5.3	4.4	-7.16	816.5	815.3	989.6	980.9	8.73	113.390	
2,600.0	2,587.5	2,621.3	2,621.0	5.6	4.6	-7.33	817.5	815.0	974.5	965.5	9.08	107.311	
2,700.0	2,686.3	2,722.0	2,721.7	5.9	4.8	-7.51	818.4	814.6	959.2	949.8	9.44	101.656	
2,800.0	2,785.0	2,820.0	2,819.7	6.2	4.9	-7.68	819.2	814.2	943.9	934.1	9.79	96.461	
2,900.0	2,883.8	2,921.9	2,921.6	6.5	5.1	-7.87	820.0	813.7	928.4	918.3	10.14	91.536	
3,000.0	2,982.5	3,022.1	3,021.8	6.8	5.3	-8.10	820.9	812.5	912.7	902.2	10.50	86.936	
3,100.0	3,081.3	3,121.8	3,121.4	7.2	5.5	-8.34	821.8	811.3	896.9	886.1	10.85	82.635	
3,200.0	3,180.0	3,222.7	3,222.4	7.5	5.7	-8.60	822.6	809.9	880.9	869.7	11.21	78.563	
3,300.0	3,278.7	3,320.0	3,319.6	7.8	5.8	-8.87	823.4	808.4	864.8	853.3	11.57	74.776	
3,400.0	3,377.5	3,414.7	3,414.3	8.1	6.0	-9.15	824.6	806.9	849.1	837.2	11.92	71.264	
3,500.0	3,476.2	3,509.3	3,508.9	8.4	6.2	-9.42	825.8	806.1	833.9	821.7	12.26	67.994	
3,600.0	3,575.0	3,600.0	3,599.6	8.7	6.3	-9.68	827.4	805.7	819.4	806.8	12.61	64.988	
3,700.0	3,673.7	3,693.9	3,693.5	9.1	6.5	-9.97	829.7	805.7	805.7	792.7	12.96	62.171	
3,800.0	3,772.5	3,799.8	3,799.3	9.4	6.7	-10.32	832.5	805.5	792.0	778.6	13.33	59.398	
3,900.0	3,871.2	3,905.1	3,904.6	9.7	6.9	-10.67	834.4	804.9	777.4	763.7	13.71	56.723	
4,000.0	3,970.0	4,008.8	4,008.3	10.0	7.0	-11.00	835.5	804.2	762.2	748.2	14.08	54.148	
4,100.0	4,068.7	4,116.5	4,116.0	10.3	7.2	-11.37	835.8	802.5	746.0	731.5	14.46	51.600	
4,200.0	4,167.5	4,213.2	4,212.7	10.7	7.4	-11.75	836.2	800.4	729.4	714.6	14.82	49.218	
4,300.0	4,266.2	4,311.9	4,311.3	11.0	7.6	-12.13	836.3	798.6	713.0	697.8	15.19	46.947	
4,400.0	4,364.9	4,409.2	4,408.6	11.3	7.7	-12.49	836.3	797.3	696.6	681.1	15.55	44.798	
4,500.0	4,463.7	4,509.2	4,508.6	11.6	7.9	-12.94	836.8	795.2	680.3	664.3	15.93	42.709	
4,600.0	4,562.4	4,601.1	4,600.5	11.9	8.1	-13.46	838.0	792.8	664.4	648.1	16.30	40.771	
4,700.0	4,661.2	4,702.5	4,701.8	12.3	8.3	-14.02	839.4	790.6	648.8	632.2	16.68	38.893	
4,800.0	4,759.9	4,803.2	4,802.5	12.6	8.4	-14.57	840.3	788.6	633.0	615.9	17.07	37.080	
4,900.0	4,858.7	4,902.1	4,901.4	12.9	8.6	-15.06	840.5	787.1	617.0	599.5	17.45	35.352	
5,000.0	4,957.4	5,003.2	5,002.5	13.2	8.8	-15.53	840.1	785.9	600.7	582.9	17.84	33.676	
5,100.0	5,056.2	5,100.0	5,099.3	13.6	9.0	-16.04	840.0	784.5	584.7	566.4	18.22	32.082	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY F UNIT 1 (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	
5,200.0	5,154.9	5,197.4	5,196.6	13.9	9.1	-16.64	840.5	782.8	568.9	550.3	18.62	30.554	
5,300.0	5,253.7	5,297.9	5,297.2	14.2	9.3	-17.33	840.9	780.7	553.0	533.9	19.03	29.060	
5,400.0	5,352.4	5,390.7	5,390.0	14.5	9.5	-17.97	841.4	779.2	537.4	518.0	19.42	27.671	
5,500.0	5,451.1	5,491.7	5,490.9	14.9	9.7	-18.64	842.0	778.2	522.4	502.5	19.84	26.333	
5,600.0	5,549.9	5,589.6	5,588.8	15.2	9.8	-19.34	842.3	777.1	507.1	486.9	20.25	25.041	
5,700.0	5,648.6	5,689.5	5,688.7	15.5	10.0	-20.14	842.9	775.6	492.0	471.3	20.68	23.785	
5,800.0	5,747.4	5,790.0	5,789.1	15.8	10.2	-21.05	843.5	773.5	476.6	455.4	21.13	22.553	
5,900.0	5,846.1	5,887.7	5,886.8	16.2	10.4	-22.00	843.9	771.4	461.1	439.6	21.58	21.366	
6,000.0	5,944.9	5,985.6	5,984.7	16.5	10.5	-23.01	844.4	769.4	446.1	424.0	22.05	20.233	
6,100.0	6,043.6	6,087.6	6,086.7	16.8	10.7	-24.13	844.7	767.3	430.8	408.3	22.53	19.119	
6,200.0	6,142.4	6,186.5	6,185.5	17.1	10.9	-25.32	844.5	764.8	415.2	392.2	23.03	18.027	
6,300.0	6,241.1	6,284.2	6,283.3	17.5	11.1	-26.58	844.4	762.4	399.8	376.3	23.54	16.982	
6,400.0	6,339.9	6,381.5	6,380.5	17.8	11.2	-27.89	844.4	760.4	384.9	360.8	24.07	15.991	
6,500.0	6,438.6	6,477.1	6,476.1	18.1	11.4	-29.28	844.8	758.6	370.7	346.0	24.61	15.061	
6,600.0	6,537.3	6,575.6	6,574.5	18.4	11.6	-30.84	845.8	756.8	357.2	332.0	25.18	14.185	
6,700.0	6,636.1	6,674.3	6,673.2	18.8	11.8	-32.40	846.5	755.6	343.9	318.2	25.77	13.346	
6,800.0	6,734.8	6,774.1	6,773.1	19.1	11.9	-34.14	847.1	754.2	330.8	304.4	26.39	12.535	
6,900.0	6,833.6	6,873.7	6,872.6	19.4	12.1	-35.99	847.2	752.9	317.6	290.6	27.04	11.747	
7,000.0	6,932.3	6,971.7	6,970.6	19.7	12.3	-38.10	847.5	750.8	304.7	277.0	27.73	10.988	
7,100.0	7,031.1	7,071.3	7,070.2	20.1	12.5	-40.45	847.8	748.7	292.3	263.8	28.46	10.268	
7,190.5	7,120.5	7,161.6	7,160.5	20.4	12.6	-42.63	847.5	747.2	281.0	251.8	29.15	9.639	
7,200.0	7,129.8	7,170.9	7,169.8	20.4	12.6	-48.07	847.5	746.9	279.9	250.6	29.24	9.571	
7,250.0	7,179.4	7,220.9	7,219.8	20.5	12.7	-84.85	847.3	745.6	276.7	247.0	29.66	9.329	
7,262.0	7,191.2	7,233.0	7,231.9	20.5	12.7	-94.09	847.2	745.3	276.6	246.8	29.73	9.301 CC, ES	
7,300.0	7,228.8	7,271.3	7,270.1	20.6	12.8	-118.26	846.9	744.1	277.8	247.9	29.92	9.287 SF	
7,350.0	7,277.9	7,323.4	7,322.2	20.7	12.9	-137.64	846.3	742.3	283.2	253.2	30.01	9.439	
7,400.0	7,326.1	7,377.7	7,376.5	20.7	13.0	-148.98	844.6	740.1	292.4	262.4	29.93	9.769	
7,450.0	7,373.2	7,433.2	7,431.8	20.7	13.1	-156.45	841.7	737.9	304.9	275.3	29.64	10.287	
7,500.0	7,418.7	7,489.8	7,488.2	20.7	13.2	-161.63	837.0	737.3	320.5	291.4	29.13	11.002	
7,550.0	7,462.4	7,532.1	7,530.3	20.6	13.3	-165.03	832.9	737.9	339.6	311.3	28.36	11.975	
7,600.0	7,503.8	7,569.3	7,567.4	20.5	13.3	-167.53	830.0	738.8	363.6	336.2	27.42	13.262	
7,650.0	7,542.8	7,600.0	7,598.0	20.5	13.4	-169.39	828.1	739.9	392.1	365.8	26.32	14.897	
7,700.0	7,578.8	7,637.2	7,635.2	20.4	13.4	-171.05	826.4	741.2	424.6	399.4	25.13	16.893	
7,750.0	7,611.8	7,667.2	7,665.1	20.3	13.5	-172.45	825.3	742.0	460.6	436.8	23.85	19.312	
7,800.0	7,641.5	7,700.0	7,697.9	20.2	13.5	-173.80	824.5	742.6	500.0	477.4	22.54	22.183	
7,850.0	7,667.6	7,718.6	7,716.5	20.2	13.6	-174.95	824.1	742.9	541.9	520.7	21.20	25.562	
7,900.0	7,689.9	7,740.7	7,738.6	20.2	13.6	-176.23	823.7	743.3	586.2	566.3	19.92	29.421	
7,950.0	7,708.2	7,758.9	7,756.7	20.1	13.6	-177.70	823.4	743.7	632.3	613.6	18.76	33.700	
8,000.0	7,722.5	7,773.1	7,771.0	20.2	13.7	-179.72	823.2	744.0	680.0	662.2	17.81	38.188	
8,050.0	7,732.6	7,783.3	7,781.1	20.2	13.7	176.71	823.1	744.2	728.8	711.6	17.21	42.355	
8,100.0	7,738.4	7,789.3	7,787.2	20.3	13.7	166.88	823.0	744.3	778.4	760.6	17.71	43.959	
8,142.5	7,740.0	7,791.3	7,789.2	20.4	13.7	115.47	823.0	744.3	820.7	794.3	26.47	31.012	
8,200.0	7,740.0	7,792.0	7,789.9	20.5	13.7	116.85	823.0	744.4	878.2	851.7	26.51	33.131	
8,300.0	7,740.0	7,793.2	7,791.1	20.9	13.7	119.15	823.0	744.4	978.2	951.5	26.70	36.643	
8,400.0	7,740.0	7,794.4	7,792.3	21.4	13.7	121.31	823.0	744.4	1,078.2	1,051.2	27.00	39.929	
8,442.5	7,740.0	7,794.9	7,792.7	21.7	13.7	122.20	823.0	744.4	1,120.6	1,093.5	27.16	41.257	
8,500.0	7,740.0	7,800.0	7,797.9	22.1	13.7	119.68	822.9	744.5	1,178.1	1,150.2	27.95	42.147	
8,600.0	7,740.0	7,800.0	7,797.9	22.8	13.7	109.44	822.9	744.5	1,278.1	1,248.0	30.08	42.496	
8,700.0	7,740.0	7,800.0	7,797.9	23.6	13.7	104.04	822.9	744.5	1,377.9	1,346.4	31.48	43.773	
8,800.0	7,740.0	7,800.0	7,797.9	24.5	13.7	100.78	822.9	744.5	1,477.7	1,445.0	32.69	45.197	
8,842.5	7,740.0	7,800.0	7,797.9	25.0	13.7	99.77	822.9	744.5	1,520.1	1,486.9	33.19	45.793	
8,900.0	7,740.0	7,800.0	7,797.9	25.5	13.7	99.77	822.9	744.5	1,577.4	1,543.5	33.90	46.529	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY F UNIT 1 (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		
9,000.0	7,740.0	7,800.0	7,797.9	26.6	13.7	99.77	822.9	744.5	1,677.2	1,642.0	35.19	47.666		
9,100.0	7,740.0	7,800.0	7,797.9	27.7	13.7	99.77	822.9	744.5	1,776.9	1,740.4	36.53	48.646		
9,200.0	7,740.0	7,800.0	7,797.9	28.9	13.7	99.77	822.9	744.5	1,876.7	1,838.8	37.92	49.494		
9,300.0	7,740.0	7,800.0	7,797.9	30.2	13.7	99.77	822.9	744.5	1,976.5	1,937.2	39.35	50.230		
9,342.5	7,740.0	7,800.0	7,797.9	30.7	13.7	99.77	822.9	744.5	2,018.9	1,979.0	39.97	50.514		
9,399.5	7,740.0	7,800.0	7,797.9	31.5	13.7	101.81	822.9	744.5	2,075.9	2,035.2	40.73	50.965		
9,500.0	7,740.0	7,800.0	7,797.9	32.8	13.7	101.81	822.9	744.5	2,176.3	2,134.1	42.23	51.540		
9,600.0	7,740.0	7,800.0	7,797.9	34.2	13.7	101.81	822.9	744.5	2,276.2	2,232.5	43.74	52.044		
9,700.0	7,740.0	7,800.0	7,797.9	35.6	13.7	101.81	822.9	744.5	2,376.1	2,330.8	45.27	52.490		
9,800.0	7,740.0	7,807.9	7,805.8	37.1	13.7	106.31	822.8	744.7	2,476.0	2,429.9	46.14	53.668		
9,900.0	7,740.0	7,808.8	7,806.6	38.5	13.7	106.80	822.8	744.7	2,575.9	2,528.4	47.58	54.142		
10,000.0	7,740.0	7,809.6	7,807.5	40.0	13.7	107.28	822.8	744.7	2,675.9	2,626.8	49.02	54.584		
10,100.0	7,740.0	7,810.5	7,808.3	41.6	13.7	107.75	822.8	744.8	2,775.8	2,725.3	50.47	54.998		
10,200.0	7,740.0	7,811.3	7,809.2	43.1	13.7	108.21	822.8	744.8	2,875.7	2,823.8	51.92	55.387		
10,300.0	7,740.0	7,812.1	7,810.0	44.6	13.7	108.66	822.8	744.8	2,975.7	2,922.3	53.37	55.756		
10,400.0	7,740.0	7,813.0	7,810.8	46.2	13.7	109.11	822.8	744.8	3,075.6	3,020.8	54.82	56.106		
10,500.0	7,740.0	7,813.8	7,811.6	47.8	13.7	109.54	822.8	744.8	3,175.6	3,119.3	56.26	56.441		
10,600.0	7,740.0	7,814.6	7,812.4	49.4	13.7	109.98	822.8	744.8	3,275.5	3,217.8	57.71	56.761		
10,700.0	7,740.0	7,815.3	7,813.2	51.0	13.7	110.40	822.7	744.9	3,375.5	3,316.3	59.15	57.069		
10,800.0	7,740.0	7,816.1	7,814.0	52.6	13.7	110.82	822.7	744.9	3,475.4	3,414.8	60.58	57.367		
10,900.0	7,740.0	7,816.9	7,814.8	54.2	13.7	111.23	822.7	744.9	3,575.4	3,513.4	62.01	57.654		
11,000.0	7,740.0	7,817.7	7,815.5	55.8	13.7	111.63	822.7	744.9	3,675.3	3,611.9	63.44	57.933		
11,100.0	7,740.0	7,818.4	7,816.3	57.5	13.7	112.02	822.7	744.9	3,775.3	3,710.4	64.86	58.204		
11,200.0	7,740.0	7,819.2	7,817.0	59.1	13.7	112.41	822.7	744.9	3,875.3	3,809.0	66.28	58.468		
11,300.0	7,740.0	7,819.9	7,817.7	60.8	13.7	112.80	822.7	745.0	3,975.2	3,907.5	67.69	58.726		
11,400.0	7,740.0	7,820.6	7,818.5	62.4	13.7	113.17	822.7	745.0	4,075.2	4,006.1	69.10	58.978		
11,500.0	7,740.0	7,821.3	7,819.2	64.1	13.7	113.54	822.7	745.0	4,175.2	4,104.7	70.50	59.225		
11,600.0	7,740.0	7,822.0	7,819.9	65.7	13.7	113.91	822.7	745.0	4,275.1	4,203.3	71.89	59.468		
11,700.0	7,740.0	7,822.8	7,820.6	67.4	13.7	114.26	822.7	745.0	4,375.1	4,301.8	73.28	59.706		
11,800.0	7,740.0	7,823.4	7,821.3	69.1	13.7	114.62	822.7	745.0	4,475.1	4,400.4	74.66	59.940		
11,900.0	7,740.0	7,824.1	7,822.0	70.8	13.7	114.96	822.7	745.0	4,575.1	4,499.0	76.03	60.171		
12,000.0	7,740.0	7,824.8	7,822.7	72.4	13.7	115.30	822.7	745.1	4,675.0	4,597.6	77.40	60.398		
12,100.0	7,740.0	7,825.5	7,823.3	74.1	13.7	115.64	822.6	745.1	4,775.0	4,696.2	78.77	60.622		
12,200.0	7,740.0	7,826.1	7,824.0	75.8	13.7	115.97	822.6	745.1	4,875.0	4,794.9	80.12	60.843		
12,300.0	7,740.0	7,826.8	7,824.7	77.5	13.7	116.29	822.6	745.1	4,975.0	4,893.5	81.47	61.062		
12,400.0	7,740.0	7,827.5	7,825.3	79.2	13.7	116.61	822.6	745.1	5,074.9	4,992.1	82.82	61.278		
12,500.0	7,740.0	7,828.1	7,826.0	80.9	13.7	116.93	822.6	745.1	5,174.9	5,090.8	84.16	61.492		
12,600.0	7,740.0	7,828.7	7,826.6	82.6	13.8	117.24	822.6	745.1	5,274.9	5,189.4	85.49	61.703		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2A-7H-E168 - Hz - Plan #2													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)				
0.0	0.0	0.0	0.0	0.0	0.0	89.99	0.0	29.9	29.9					
100.0	100.0	100.0	100.0	0.2	0.2	89.99	0.0	29.9	29.9	29.6	0.30	98.612		
200.0	200.0	200.0	200.0	0.3	0.3	89.99	0.0	29.9	29.9	29.3	0.65	45.878		
300.0	300.0	300.4	300.4	0.5	0.5	90.86	-0.4	29.2	29.2	28.2	1.00	29.112		
400.0	400.0	400.8	400.8	0.7	0.7	93.73	-1.8	26.9	27.0	25.6	1.35	19.933		
500.0	500.0	501.1	500.9	0.8	0.9	99.71	-4.0	23.1	23.5	21.7	1.70	13.774		
600.0	600.0	601.2	600.8	1.0	1.1	111.52	-7.0	17.8	19.1	17.1	2.05	9.332		
700.0	700.0	701.1	700.6	1.2	1.3	129.35	-9.6	11.7	15.2	12.8	2.40	6.307		
800.0	800.0	800.9	800.2	1.4	1.5	152.98	-11.0	5.6	12.3	9.6	2.78	4.439		
849.8	849.8	850.6	849.8	1.5	1.6	167.58	-11.7	2.6	11.9	9.0	2.99	4.002 CC, ES		
900.0	900.0	900.7	899.8	1.5	1.7	-177.68	-12.3	-0.5	12.4	9.2	3.20	3.866 SF		
1,000.0	1,000.0	1,000.5	999.4	1.7	1.9	-154.22	-13.7	-6.6	15.2	11.6	3.60	4.230		
1,100.0	1,100.0	1,100.3	1,099.0	1.9	2.1	169.66	-15.0	-12.7	20.6	16.7	3.84	5.357		
1,200.0	1,200.0	1,199.9	1,198.4	2.1	2.3	178.19	-16.4	-18.8	28.5	24.3	4.17	6.827		
1,300.0	1,299.9	1,299.4	1,297.7	2.3	2.5	-177.16	-17.7	-24.9	38.5	34.0	4.51	8.532		
1,400.0	1,399.7	1,398.7	1,396.7	2.4	2.7	-174.62	-19.1	-31.0	50.3	45.5	4.85	10.379		
1,500.0	1,499.4	1,497.7	1,495.6	2.6	2.9	-173.24	-20.4	-37.0	64.0	58.8	5.19	12.325		
1,600.0	1,598.9	1,596.5	1,594.2	2.8	3.1	-172.50	-21.7	-43.1	79.4	73.8	5.53	14.346		
1,700.0	1,698.3	1,695.0	1,692.5	3.1	3.3	-172.13	-23.0	-49.1	96.4	90.6	5.87	16.426		
1,800.0	1,797.4	1,793.3	1,790.6	3.3	3.5	-171.99	-24.4	-55.1	115.2	109.0	6.21	18.556		
1,908.5	1,904.7	1,899.4	1,896.5	3.6	3.7	-171.99	-25.8	-61.6	137.5	131.0	6.58	20.916		
2,000.0	1,995.0	1,988.8	1,985.7	3.8	3.9	-172.06	-27.0	-67.1	157.2	150.3	6.90	22.799		
2,100.0	2,093.8	2,086.5	2,083.2	4.1	4.1	-172.11	-28.3	-73.1	178.7	171.4	7.24	24.666		
2,200.0	2,192.5	2,184.1	2,180.7	4.4	4.3	-172.15	-29.6	-79.1	200.2	192.6	7.59	26.361		
2,300.0	2,291.3	2,281.8	2,278.1	4.7	4.5	-172.19	-31.0	-85.0	221.6	213.7	7.94	27.907		
2,400.0	2,390.0	2,379.5	2,375.6	5.0	4.7	-172.21	-32.3	-91.0	243.1	234.8	8.29	29.322		
2,500.0	2,488.8	2,477.1	2,473.1	5.3	4.9	-172.24	-33.6	-97.0	264.6	256.0	8.64	30.623		
2,600.0	2,587.5	2,574.8	2,570.6	5.6	5.1	-172.26	-34.9	-103.0	286.1	277.1	8.99	31.822		
2,700.0	2,686.3	2,672.5	2,668.0	5.9	5.3	-172.27	-36.2	-109.0	307.5	298.2	9.34	32.932		
2,800.0	2,785.0	2,770.1	2,765.5	6.2	5.5	-172.29	-37.5	-114.9	329.0	319.3	9.69	33.961		
2,900.0	2,883.8	2,867.8	2,863.0	6.5	5.7	-172.30	-38.9	-120.9	350.5	340.5	10.04	34.919		
3,000.0	2,982.5	2,965.5	2,960.5	6.8	5.9	-172.31	-40.2	-126.9	372.0	361.6	10.39	35.812		
3,100.0	3,081.3	3,063.1	3,057.9	7.2	6.1	-172.32	-41.5	-132.9	393.5	382.7	10.74	36.646		
3,200.0	3,180.0	3,160.8	3,155.4	7.5	6.3	-172.33	-42.8	-138.9	414.9	403.9	11.09	37.428		
3,300.0	3,278.7	3,258.5	3,252.9	7.8	6.5	-172.34	-44.1	-144.8	436.4	425.0	11.44	38.162		
3,400.0	3,377.5	3,356.1	3,350.4	8.1	6.7	-172.35	-45.4	-150.8	457.9	446.1	11.79	38.852		
3,500.0	3,476.2	3,453.8	3,447.8	8.4	6.9	-172.36	-46.8	-156.8	479.4	467.2	12.14	39.503		
3,600.0	3,575.0	3,551.5	3,545.3	8.7	7.1	-172.36	-48.1	-162.8	500.9	488.4	12.49	40.117		
3,700.0	3,673.7	3,649.1	3,642.8	9.1	7.3	-172.37	-49.4	-168.7	522.3	509.5	12.83	40.697		
3,800.0	3,772.5	3,746.8	3,740.3	9.4	7.5	-172.37	-50.7	-174.7	543.8	530.6	13.18	41.247		
3,900.0	3,871.2	3,844.5	3,837.7	9.7	7.7	-172.38	-52.0	-180.7	565.3	551.8	13.53	41.768		
4,000.0	3,970.0	3,942.1	3,935.2	10.0	7.9	-172.38	-53.3	-186.7	586.8	572.9	13.88	42.263		
4,100.0	4,068.7	4,039.8	4,032.7	10.3	8.1	-172.39	-54.7	-192.7	608.3	594.0	14.23	42.733		
4,200.0	4,167.5	4,137.5	4,130.1	10.7	8.3	-172.39	-56.0	-198.6	629.7	615.1	14.58	43.181		
4,300.0	4,266.2	4,235.1	4,227.6	11.0	8.5	-172.39	-57.3	-204.6	651.2	636.3	14.93	43.608		
4,400.0	4,364.9	4,332.8	4,325.1	11.3	8.7	-172.40	-58.6	-210.6	672.7	657.4	15.28	44.015		
4,500.0	4,463.7	4,430.5	4,422.6	11.6	8.9	-172.40	-59.9	-216.6	694.2	678.5	15.63	44.404		
4,600.0	4,562.4	4,528.1	4,520.0	11.9	9.1	-172.40	-61.2	-222.6	715.6	699.7	15.98	44.776		
4,700.0	4,661.2	4,625.8	4,617.5	12.3	9.3	-172.41	-62.6	-228.5	737.1	720.8	16.33	45.131		
4,800.0	4,759.9	4,723.4	4,715.0	12.6	9.5	-172.41	-63.9	-234.5	758.6	741.9	16.68	45.472		
4,900.0	4,858.7	4,821.1	4,812.5	12.9	9.7	-172.41	-65.2	-240.5	780.1	763.1	17.03	45.799		
5,000.0	4,957.4	4,918.8	4,909.9	13.2	9.9	-172.41	-66.5	-246.5	801.6	784.2	17.38	46.113		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2A-7H-E168 - Hz - Plan #2												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	5,056.2	5,016.4	5,007.4	13.6	10.1	-172.42	-67.8	-252.4	823.0	805.3	17.73	46.414	
5,200.0	5,154.9	5,114.1	5,104.9	13.9	10.3	-172.42	-69.1	-258.4	844.5	826.4	18.08	46.704	
5,300.0	5,253.7	5,211.8	5,202.4	14.2	10.5	-172.42	-70.5	-264.4	866.0	847.6	18.43	46.983	
5,400.0	5,352.4	5,309.4	5,299.8	14.5	10.7	-172.42	-71.8	-270.4	887.5	868.7	18.78	47.251	
5,500.0	5,451.1	5,407.1	5,397.3	14.9	10.9	-172.42	-73.1	-276.4	909.0	889.8	19.13	47.509	
5,600.0	5,549.9	5,504.8	5,494.8	15.2	11.1	-172.43	-74.4	-282.3	930.4	911.0	19.48	47.758	
5,700.0	5,648.6	5,602.4	5,592.3	15.5	11.3	-172.43	-75.7	-288.3	951.9	932.1	19.83	47.999	
5,800.0	5,747.4	5,700.1	5,689.7	15.8	11.5	-172.43	-77.0	-294.3	973.4	953.2	20.18	48.231	
5,900.0	5,846.1	5,797.8	5,787.2	16.2	11.7	-172.43	-78.4	-300.3	994.9	974.3	20.53	48.455	
6,000.0	5,944.9	5,895.4	5,884.7	16.5	11.9	-172.43	-79.7	-306.3	1,016.3	995.5	20.88	48.671	
6,100.0	6,043.6	5,993.1	5,982.2	16.8	12.1	-172.43	-81.0	-312.2	1,037.8	1,016.6	21.23	48.880	
6,200.0	6,142.4	6,090.8	6,079.6	17.1	12.3	-172.44	-82.3	-318.2	1,059.3	1,037.7	21.58	49.083	
6,300.0	6,241.1	6,188.4	6,177.1	17.5	12.5	-172.44	-83.6	-324.2	1,080.8	1,058.9	21.93	49.279	
6,400.0	6,339.9	6,286.1	6,274.6	17.8	12.7	-172.44	-84.9	-330.2	1,102.3	1,080.0	22.28	49.469	
6,500.0	6,438.6	6,383.8	6,372.0	18.1	12.9	-172.44	-86.3	-336.1	1,123.7	1,101.1	22.63	49.653	
6,600.0	6,537.3	6,481.4	6,469.5	18.4	13.1	-172.44	-87.6	-342.1	1,145.2	1,122.2	22.98	49.831	
6,700.0	6,636.1	6,579.1	6,567.0	18.8	13.3	-172.44	-88.9	-348.1	1,166.7	1,143.4	23.33	50.005	
6,800.0	6,734.8	6,676.8	6,664.5	19.1	13.6	-172.44	-90.2	-354.1	1,188.2	1,164.5	23.68	50.172	
6,900.0	6,833.6	6,774.4	6,761.9	19.4	13.8	-172.44	-91.5	-360.1	1,209.7	1,185.6	24.03	50.335	
7,000.0	6,932.3	6,872.1	6,859.4	19.7	14.0	-172.45	-92.8	-366.0	1,231.1	1,206.8	24.38	50.494	
7,100.0	7,031.1	6,969.8	6,956.9	20.1	14.2	-172.45	-94.2	-372.0	1,252.6	1,227.9	24.73	50.648	
7,190.5	7,120.5	7,058.2	7,045.1	20.4	14.3	-172.45	-95.3	-377.4	1,272.1	1,247.0	25.05	50.783	
7,200.0	7,129.8	7,067.4	7,054.4	20.4	14.4	-177.79	-95.5	-378.0	1,274.1	1,249.0	25.09	50.774	
7,250.0	7,179.4	7,117.1	7,104.0	20.5	19.3	178.32	572.7	-420.1	1,263.1	1,229.4	33.62	37.564	
7,300.0	7,228.8	7,165.7	7,152.0	20.6	19.3	148.09	570.3	-420.1	1,248.0	1,214.3	33.67	37.070	
7,350.0	7,277.9	7,215.0	7,201.0	20.7	19.2	131.60	563.6	-420.1	1,235.1	1,201.5	33.57	36.790	
7,400.0	7,326.1	7,263.2	7,249.0	20.7	19.1	122.84	552.6	-420.1	1,224.6	1,191.2	33.36	36.713	
7,450.0	7,373.2	7,310.3	7,296.0	20.7	19.0	117.51	537.4	-420.1	1,216.4	1,183.3	33.03	36.826	
7,500.0	7,418.7	7,355.8	7,341.0	20.7	18.8	113.74	518.2	-420.1	1,210.5	1,177.9	32.61	37.114	
7,550.0	7,462.4	7,399.5	7,384.0	20.6	18.5	110.72	495.0	-420.1	1,206.8	1,174.7	32.13	37.562	
7,600.0	7,503.8	7,440.9	7,425.0	20.5	18.2	107.71	458.7	-420.0	1,205.1	1,173.6	31.51	38.241	
7,642.0	7,536.7	7,473.8	7,457.0	20.5	17.8	104.78	412.0	-419.8	1,204.7	1,173.8	30.85	39.046	
7,650.0	7,542.8	7,479.9	7,463.0	20.5	17.7	104.27	403.8	-419.8	1,204.7	1,174.0	30.74	39.194	
7,700.0	7,578.8	7,515.9	7,499.0	20.4	17.3	101.29	356.3	-419.3	1,205.5	1,175.4	30.08	40.071	
7,750.0	7,611.8	7,548.9	7,532.0	20.3	16.9	98.63	314.3	-418.6	1,207.3	1,177.8	29.53	40.881	
7,800.0	7,641.5	7,578.6	7,561.0	20.2	16.7	96.18	276.3	-417.9	1,210.2	1,181.1	29.07	41.631	
7,850.0	7,667.6	7,604.7	7,587.0	20.2	16.4	93.90	241.6	-417.0	1,214.0	1,185.3	28.68	42.324	
7,900.0	7,689.9	7,627.0	7,609.0	20.2	16.2	91.74	209.5	-416.0	1,218.6	1,190.2	28.36	42.960	
7,950.0	7,708.2	7,645.3	7,627.0	20.1	16.0	89.68	179.7	-415.0	1,223.8	1,195.7	28.11	43.534	
8,000.0	7,722.5	7,659.6	7,641.0	20.2	15.9	87.73	152.0	-413.9	1,229.6	1,201.7	27.90	44.065	
8,050.0	7,732.6	7,669.7	7,650.0	20.2	15.7	85.88	126.0	-412.7	1,235.7	1,208.0	27.74	44.551	
8,100.0	7,738.4	7,675.5	7,655.0	20.3	15.6	84.13	101.7	-411.5	1,242.1	1,214.5	27.61	44.984	
8,142.5	7,740.0	7,680.0	7,660.0	20.4	15.5	82.82	84.2	-410.6	1,247.6	1,220.1	27.54	45.305	
8,200.0	7,740.0	7,680.0	7,660.0	20.5	15.4	81.67	58.9	-409.0	1,255.9	1,228.3	27.58	45.535	
8,300.0	7,740.0	7,680.0	7,660.0	20.9	15.3	79.97	26.7	-406.7	1,274.0	1,246.1	27.88	45.699	
8,400.0	7,740.0	7,680.0	7,660.0	21.4	15.2	78.50	2.7	-404.7	1,297.4	1,269.0	28.39	45.691	
8,442.5	7,740.0	7,680.0	7,660.0	21.7	15.1	77.94	-5.6	-404.0	1,309.0	1,280.3	28.67	45.654	
8,500.0	7,740.0	7,680.0	7,660.0	22.1	15.1	77.62	-10.6	-403.5	1,326.2	1,297.1	29.08	45.608	
8,600.0	7,740.0	7,680.0	7,660.0	22.8	15.1	76.27	-29.3	-401.5	1,359.0	1,329.2	29.75	45.681	
8,700.0	7,740.0	7,680.0	7,660.0	23.6	15.0	75.87	-35.1	-400.8	1,395.9	1,365.3	30.62	45.593	
8,800.0	7,740.0	7,680.0	7,660.0	24.5	15.0	74.75	-48.6	-399.1	1,436.5	1,405.0	31.45	45.672	
8,842.5	7,740.0	7,680.0	7,660.0	25.0	15.0	74.07	-55.8	-398.0	1,454.9	1,423.1	31.79	45.766	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2A-7H-E168 - Hz - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	7,740.0	7,400.0	7,381.0	25.5	15.0	74.07	-55.8	-398.0	1,481.0	1,448.5	32.49	45.583	
9,000.0	7,740.0	7,400.0	7,381.0	26.6	15.0	74.07	-55.8	-398.0	1,530.5	1,496.7	33.76	45.336	
9,100.0	7,740.0	7,372.7	7,355.5	27.7	14.9	72.98	-65.3	-396.5	1,584.1	1,549.1	34.90	45.382	
9,200.0	7,740.0	7,350.0	7,334.0	28.9	14.9	72.07	-72.3	-395.1	1,642.0	1,605.9	36.11	45.477	
9,300.0	7,740.0	7,350.0	7,334.0	30.2	14.9	72.07	-72.3	-395.1	1,703.4	1,665.9	37.50	45.426	
9,342.5	7,740.0	7,350.0	7,334.0	30.7	14.9	72.07	-72.3	-395.1	1,730.6	1,692.5	38.10	45.422	
9,399.5	7,740.0	7,350.0	7,334.0	31.5	14.9	71.92	-72.3	-395.1	1,768.3	1,729.3	39.00	45.337	
9,500.0	7,740.0	7,350.0	7,334.0	32.8	14.9	71.92	-72.3	-395.1	1,837.4	1,796.9	40.46	45.408	
9,600.0	7,740.0	7,325.4	7,310.3	34.2	14.8	70.92	-79.0	-393.7	1,908.4	1,866.7	41.72	45.740	
9,700.0	7,740.0	7,318.5	7,303.7	35.6	14.8	70.64	-80.6	-393.3	1,982.1	1,938.9	43.15	45.939	
9,800.0	7,740.0	7,300.0	7,285.6	37.1	14.8	69.89	-84.7	-392.2	2,058.0	2,013.5	44.46	46.289	
9,900.0	7,740.0	7,300.0	7,285.6	38.5	14.8	69.89	-84.7	-392.2	2,135.6	2,089.7	45.97	46.458	
10,000.0	7,740.0	7,300.0	7,285.6	40.0	14.8	69.89	-84.7	-392.2	2,215.1	2,167.6	47.49	46.641	
10,100.0	7,740.0	7,300.0	7,285.6	41.6	14.8	69.89	-84.7	-392.2	2,296.1	2,247.1	49.02	46.836	
10,200.0	7,740.0	7,300.0	7,285.6	43.1	14.8	69.89	-84.7	-392.2	2,378.6	2,328.0	50.57	47.039	
10,300.0	7,740.0	7,300.0	7,285.6	44.6	14.8	69.89	-84.7	-392.2	2,462.4	2,410.2	52.12	47.246	
10,400.0	7,740.0	7,300.0	7,285.6	46.2	14.8	69.89	-84.7	-392.2	2,547.3	2,493.6	53.68	47.457	
10,500.0	7,740.0	7,300.0	7,285.6	47.8	14.8	69.89	-84.7	-392.2	2,633.3	2,578.1	55.24	47.669	
10,600.0	7,740.0	7,277.2	7,263.3	49.4	14.8	68.96	-89.0	-390.8	2,719.8	2,663.3	56.50	48.139	
10,700.0	7,740.0	7,274.1	7,260.2	51.0	14.8	68.83	-89.5	-390.6	2,807.5	2,749.5	58.02	48.387	
10,800.0	7,740.0	7,271.2	7,257.3	52.6	14.8	68.72	-89.9	-390.4	2,895.9	2,836.4	59.55	48.632	
10,900.0	7,740.0	7,250.0	7,236.4	54.2	14.7	67.86	-92.9	-389.2	2,985.5	2,924.7	60.79	49.111	
11,000.0	7,740.0	7,250.0	7,236.4	55.8	14.7	67.86	-92.9	-389.2	3,075.2	3,012.8	62.36	49.315	
11,100.0	7,740.0	7,250.0	7,236.4	57.5	14.7	67.86	-92.9	-389.2	3,165.6	3,101.6	63.93	49.516	
11,200.0	7,740.0	7,250.0	7,236.4	59.1	14.7	67.86	-92.9	-389.2	3,256.5	3,191.0	65.51	49.713	
11,300.0	7,740.0	7,250.0	7,236.4	60.8	14.7	67.86	-92.9	-389.2	3,347.9	3,280.9	67.08	49.906	
11,400.0	7,740.0	7,250.0	7,236.4	62.4	14.7	67.86	-92.9	-389.2	3,439.9	3,371.2	68.67	50.096	
11,500.0	7,740.0	7,250.0	7,236.4	64.1	14.7	67.86	-92.9	-389.2	3,532.2	3,462.0	70.25	50.282	
11,600.0	7,740.0	7,250.0	7,236.4	65.7	14.7	67.86	-92.9	-389.2	3,625.0	3,553.1	71.83	50.463	
11,700.0	7,740.0	7,250.0	7,236.4	67.4	14.7	67.86	-92.9	-389.2	3,718.1	3,644.7	73.42	50.640	
11,800.0	7,740.0	7,250.0	7,236.4	69.1	14.7	67.86	-92.9	-389.2	3,811.6	3,736.6	75.01	50.813	
11,900.0	7,740.0	7,250.0	7,236.4	70.8	14.7	67.86	-92.9	-389.2	3,905.4	3,828.8	76.60	50.982	
12,000.0	7,740.0	7,250.0	7,236.4	72.4	14.7	67.86	-92.9	-389.2	3,999.5	3,921.3	78.20	51.146	
12,100.0	7,740.0	7,250.0	7,236.4	74.1	14.7	67.86	-92.9	-389.2	4,093.9	4,014.1	79.79	51.307	
12,200.0	7,740.0	7,250.0	7,236.4	75.8	14.7	67.86	-92.9	-389.2	4,188.6	4,107.2	81.39	51.463	
12,300.0	7,740.0	7,250.0	7,236.4	77.5	14.7	67.86	-92.9	-389.2	4,283.5	4,200.5	82.99	51.616	
12,400.0	7,740.0	7,250.0	7,236.4	79.2	14.7	67.86	-92.9	-389.2	4,378.6	4,294.0	84.59	51.765	
12,500.0	7,740.0	7,250.0	7,236.4	80.9	14.7	67.86	-92.9	-389.2	4,473.9	4,387.7	86.19	51.909	
12,600.0	7,740.0	7,250.0	7,236.4	82.6	14.7	67.86	-92.9	-389.2	4,569.5	4,481.7	87.79	52.051	
12,700.0	7,740.0	7,250.0	7,236.4	84.3	14.7	67.86	-92.9	-389.2	4,665.2	4,575.8	89.39	52.188	
12,800.0	7,740.0	7,250.0	7,236.4	86.0	14.7	67.86	-92.9	-389.2	4,761.1	4,670.1	90.99	52.323	
12,900.0	7,740.0	7,250.0	7,236.4	87.7	14.7	67.86	-92.9	-389.2	4,857.1	4,764.5	92.60	52.453	
13,000.0	7,740.0	7,250.0	7,236.4	89.4	14.7	67.86	-92.9	-389.2	4,953.3	4,859.1	94.20	52.581	
13,100.0	7,740.0	7,250.0	7,236.4	91.1	14.7	67.86	-92.9	-389.2	5,049.7	4,953.9	95.81	52.705	
13,200.0	7,740.0	7,250.0	7,236.4	92.8	14.7	67.86	-92.9	-389.2	5,146.2	5,048.8	97.42	52.827	
13,300.0	7,740.0	7,250.0	7,236.4	94.5	14.7	67.86	-92.9	-389.2	5,242.8	5,143.8	99.02	52.945	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2B-7H-E168 - Hz - Plan #2												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	89.99	0.0	40.0	40.0				
100.0	100.0	100.0	100.0	0.2	0.2	89.99	0.0	40.0	40.0	39.7	0.30	131.789	
200.0	200.0	200.0	200.0	0.3	0.3	89.99	0.0	40.0	40.0	39.4	0.65	61.314	
300.0	300.0	300.0	300.0	0.5	0.5	89.99	0.0	40.0	40.0	39.0	1.00	39.950	
400.0	400.0	400.4	400.4	0.7	0.7	90.97	-0.7	39.5	39.5	38.1	1.35	29.197	
500.0	500.0	500.8	500.8	0.8	0.9	94.08	-2.7	37.8	37.9	36.2	1.70	22.255	
600.0	600.0	601.1	600.9	1.0	1.0	99.83	-6.1	34.9	35.5	33.4	2.05	17.293	
700.0	700.0	700.6	700.4	1.2	1.2	106.39	-9.5	32.3	33.7	31.3	2.40	14.015	
793.1	793.1	793.3	793.1	1.4	1.4	110.72	-11.7	31.0	33.2	30.4	2.73	12.160 CC	
800.0	800.0	800.2	800.0	1.4	1.4	110.96	-11.9	31.0	33.2	30.4	2.75	12.054	
900.0	900.0	900.1	899.8	1.5	1.6	113.13	-13.2	30.9	33.7	30.6	3.10	10.848	
1,000.0	1,000.0	1,000.0	999.8	1.7	1.7	114.69	-14.3	31.2	34.4	30.9	3.45	9.948	
1,100.0	1,100.0	1,100.0	1,099.7	1.9	1.9	66.46	-15.5	31.5	34.7	30.9	3.82	9.086	
1,200.0	1,200.0	1,200.0	1,199.7	2.1	2.1	71.90	-16.6	31.7	34.6	30.4	4.17	8.291	
1,292.9	1,292.8	1,292.8	1,292.5	2.2	2.3	79.48	-17.6	32.0	34.4	29.9	4.50	7.650	
1,300.0	1,299.9	1,299.8	1,299.5	2.3	2.3	80.15	-17.7	32.0	34.4	29.9	4.52	7.609 ES	
1,400.0	1,399.7	1,399.6	1,399.3	2.4	2.4	91.15	-18.9	32.3	35.0	30.1	4.88	7.164	
1,500.0	1,499.4	1,499.3	1,498.9	2.6	2.6	104.05	-20.0	32.5	37.1	31.9	5.24	7.085 SF	
1,600.0	1,598.9	1,598.8	1,598.4	2.8	2.8	117.17	-21.1	32.8	41.7	36.1	5.60	7.449	
1,700.0	1,698.3	1,698.0	1,697.7	3.1	3.0	128.87	-22.2	33.1	49.1	43.1	5.95	8.249	
1,800.0	1,797.4	1,797.1	1,796.8	3.3	3.1	138.38	-23.3	33.3	59.3	53.0	6.30	9.413	
1,908.5	1,904.7	1,904.3	1,904.0	3.6	3.3	146.30	-24.5	33.6	73.2	66.6	6.67	10.986	
2,000.0	1,995.0	1,994.6	1,994.2	3.8	3.5	151.25	-25.6	33.8	86.5	79.5	6.98	12.396	
2,100.0	2,093.8	2,093.3	2,092.9	4.1	3.7	155.15	-26.7	34.1	101.6	94.2	7.32	13.868	
2,200.0	2,192.5	2,191.9	2,191.5	4.4	3.8	158.03	-27.8	34.4	116.9	109.3	7.67	15.251	
2,300.0	2,291.3	2,290.6	2,290.2	4.7	4.0	160.25	-28.9	34.6	132.6	124.5	8.01	16.542	
2,400.0	2,390.0	2,389.2	2,388.8	5.0	4.2	161.99	-30.0	34.9	148.3	140.0	8.36	17.743	
2,500.0	2,488.8	2,487.9	2,487.5	5.3	4.4	163.40	-31.1	35.2	164.2	155.5	8.71	18.861	
2,600.0	2,587.5	2,586.6	2,586.2	5.6	4.5	164.56	-32.2	35.4	180.1	171.1	9.05	19.902	
2,700.0	2,686.3	2,685.2	2,684.8	5.9	4.7	165.54	-33.3	35.7	196.2	186.8	9.40	20.872	
2,800.0	2,785.0	2,783.9	2,783.5	6.2	4.9	166.36	-34.5	35.9	212.2	202.5	9.74	21.778	
2,900.0	2,883.8	2,882.5	2,882.1	6.5	5.0	167.07	-35.6	36.2	228.3	218.2	10.09	22.625	
3,000.0	2,982.5	2,981.2	2,980.8	6.8	5.2	167.69	-36.7	36.5	244.4	234.0	10.44	23.418	
3,100.0	3,081.3	3,079.8	3,079.4	7.2	5.4	168.23	-37.8	36.7	260.6	249.8	10.78	24.162	
3,200.0	3,180.0	3,178.5	3,178.1	7.5	5.6	168.70	-38.9	37.0	276.8	265.6	11.13	24.862	
3,300.0	3,278.7	3,277.2	3,276.7	7.8	5.7	169.13	-40.0	37.2	292.9	281.5	11.48	25.520	
3,400.0	3,377.5	3,375.8	3,375.4	8.1	5.9	169.51	-41.1	37.5	309.1	297.3	11.83	26.141	
3,500.0	3,476.2	3,474.5	3,474.0	8.4	6.1	169.85	-42.2	37.8	325.4	313.2	12.17	26.728	
3,600.0	3,575.0	3,573.1	3,572.7	8.7	6.3	170.16	-43.4	38.0	341.6	329.1	12.52	27.283	
3,700.0	3,673.7	3,671.8	3,671.3	9.1	6.4	170.44	-44.5	38.3	357.8	344.9	12.87	27.808	
3,800.0	3,772.5	3,770.5	3,770.0	9.4	6.6	170.70	-45.6	38.5	374.0	360.8	13.21	28.306	
3,900.0	3,871.2	3,869.1	3,868.6	9.7	6.8	170.93	-46.7	38.8	390.3	376.7	13.56	28.780	
4,000.0	3,970.0	3,967.8	3,967.3	10.0	7.0	171.15	-47.8	39.1	406.5	392.6	13.91	29.230	
4,100.0	4,068.7	4,066.4	4,065.9	10.3	7.1	171.35	-48.9	39.3	422.8	408.5	14.26	29.658	
4,200.0	4,167.5	4,165.1	4,164.6	10.7	7.3	171.53	-50.0	39.6	439.1	424.5	14.60	30.066	
4,300.0	4,266.2	4,263.8	4,263.3	11.0	7.5	171.70	-51.1	39.8	455.3	440.4	14.95	30.456	
4,400.0	4,364.9	4,362.4	4,361.9	11.3	7.6	171.86	-52.2	40.1	471.6	456.3	15.30	30.828	
4,500.0	4,463.7	4,461.1	4,460.6	11.6	7.8	172.01	-53.4	40.4	487.9	472.2	15.64	31.184	
4,600.0	4,562.4	4,559.7	4,559.2	11.9	8.0	172.15	-54.5	40.6	504.1	488.2	15.99	31.524	
4,700.0	4,661.2	4,658.4	4,657.9	12.3	8.2	172.28	-55.6	40.9	520.4	504.1	16.34	31.851	
4,800.0	4,759.9	4,757.1	4,756.5	12.6	8.3	172.41	-56.7	41.2	536.7	520.0	16.69	32.163	
4,900.0	4,858.7	4,855.7	4,855.2	12.9	8.5	172.52	-57.8	41.4	553.0	536.0	17.03	32.463	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2B-7H-E168 - Hz - Plan #2											Offset Site Error: 0.0 ft		
Survey Program: 0-Geolink MWD											Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,000.0	4,957.4	4,954.4	4,953.8	13.2	8.7	172.63	-58.9	41.7	569.3	551.9	17.38	32.752	
5,100.0	5,056.2	5,053.0	5,052.5	13.6	8.9	172.74	-60.0	41.9	585.6	567.8	17.73	33.029	
5,200.0	5,154.9	5,151.7	5,151.1	13.9	9.0	172.83	-61.1	42.2	601.8	583.8	18.08	33.295	
5,300.0	5,253.7	5,250.4	5,249.8	14.2	9.2	172.93	-62.3	42.5	618.1	599.7	18.42	33.552	
5,400.0	5,352.4	5,349.0	5,348.4	14.5	9.4	173.01	-63.4	42.7	634.4	615.7	18.77	33.799	
5,500.0	5,451.1	5,447.7	5,447.1	14.9	9.6	173.10	-64.5	43.0	650.7	631.6	19.12	34.037	
5,600.0	5,549.9	5,546.3	5,545.7	15.2	9.7	173.18	-65.6	43.2	667.0	647.6	19.47	34.267	
5,700.0	5,648.6	5,645.0	5,644.4	15.5	9.9	173.25	-66.7	43.5	683.3	663.5	19.81	34.488	
5,800.0	5,747.4	5,743.7	5,743.0	15.8	10.1	173.32	-67.8	43.8	699.6	679.5	20.16	34.702	
5,900.0	5,846.1	5,842.3	5,841.7	16.2	10.2	173.39	-68.9	44.0	715.9	695.4	20.51	34.909	
6,000.0	5,944.9	5,941.0	5,940.4	16.5	10.4	173.46	-70.0	44.3	732.2	711.4	20.86	35.109	
6,100.0	6,043.6	6,039.6	6,039.0	16.8	10.6	173.52	-71.2	44.5	748.5	727.3	21.20	35.303	
6,200.0	6,142.4	6,138.3	6,137.7	17.1	10.8	173.58	-72.3	44.8	764.8	743.3	21.55	35.490	
6,300.0	6,241.1	6,236.9	6,236.3	17.5	10.9	173.64	-73.4	45.1	781.1	759.2	21.90	35.671	
6,400.0	6,339.9	6,335.6	6,335.0	17.8	11.1	173.69	-74.5	45.3	797.4	775.2	22.24	35.847	
6,500.0	6,438.6	6,434.3	6,433.6	18.1	11.3	173.75	-75.6	45.6	813.7	791.1	22.59	36.018	
6,600.0	6,537.3	6,532.9	6,532.3	18.4	11.5	173.80	-76.7	45.9	830.0	807.1	22.94	36.183	
6,700.0	6,636.1	6,631.6	6,630.9	18.8	11.6	173.85	-77.8	46.1	846.3	823.0	23.29	36.343	
6,800.0	6,734.8	6,730.2	6,729.6	19.1	11.8	173.89	-78.9	46.4	862.6	839.0	23.63	36.499	
6,900.0	6,833.6	6,828.9	6,828.2	19.4	12.0	173.94	-80.0	46.6	878.9	854.9	23.98	36.650	
7,000.0	6,932.3	7,875.7	7,500.0	19.7	16.9	-146.15	539.7	37.5	858.1	826.4	31.73	27.042	
7,100.0	7,031.1	7,885.4	7,500.0	20.1	17.0	-145.38	549.4	37.3	806.3	774.1	32.18	25.053	
7,190.5	7,120.5	7,894.2	7,500.0	20.4	17.1	-144.67	558.2	37.1	767.6	735.0	32.60	23.548	
7,200.0	7,129.8	7,895.0	7,500.0	20.4	17.1	-149.38	559.1	37.1	764.0	731.3	32.69	23.371	
7,250.0	7,179.4	7,896.9	7,500.0	20.5	17.1	177.37	560.9	37.1	747.1	714.0	33.04	22.611	
7,300.0	7,228.8	7,894.4	7,500.0	20.6	17.1	146.90	558.4	37.1	733.4	700.2	33.18	22.105	
7,350.0	7,277.9	7,887.6	7,500.0	20.7	17.0	129.89	551.6	37.3	723.1	690.0	33.11	21.841	
7,400.0	7,326.1	7,876.5	7,500.0	20.7	16.9	120.37	540.5	37.4	716.5	683.7	32.86	21.807	
7,450.0	7,373.2	7,861.1	7,500.0	20.7	16.7	114.04	525.2	37.7	713.4	681.0	32.45	21.984	
7,470.5	7,392.1	7,853.7	7,500.0	20.7	16.6	111.89	517.7	37.8	713.2	680.9	32.24	22.117	
7,500.0	7,418.7	7,841.7	7,500.0	20.7	16.5	109.07	505.8	38.1	713.7	681.8	31.92	22.356	
7,550.0	7,462.4	7,817.8	7,499.9	20.6	16.2	104.63	481.8	38.5	717.0	685.7	31.31	22.903	
7,600.0	7,503.8	7,791.7	7,498.9	20.5	16.0	100.51	455.8	38.9	722.9	692.2	30.67	23.567	
7,650.0	7,542.8	7,765.8	7,496.7	20.5	15.7	96.66	429.9	39.4	731.1	701.0	30.08	24.304	
7,700.0	7,578.8	7,739.9	7,493.3	20.4	15.4	92.99	404.3	39.8	741.2	711.7	29.53	25.098	
7,750.0	7,611.8	7,714.1	7,488.8	20.3	15.2	89.45	378.9	40.2	753.0	723.9	29.04	25.932	
7,800.0	7,641.5	7,688.3	7,483.1	20.2	14.9	86.04	353.8	40.7	766.0	737.4	28.58	26.799	
7,850.0	7,667.6	7,662.6	7,476.4	20.2	14.7	82.75	328.9	41.1	780.0	751.8	28.17	27.693	
7,900.0	7,689.9	7,636.9	7,468.5	20.2	14.5	79.61	304.5	41.5	794.7	766.9	27.77	28.613	
7,950.0	7,708.2	7,611.3	7,459.6	20.1	14.3	76.64	280.5	41.9	809.7	782.3	27.39	29.558	
8,000.0	7,722.5	7,585.7	7,449.6	20.2	14.1	73.85	256.9	42.3	824.9	797.9	27.03	30.522	
8,050.0	7,732.6	7,560.1	7,438.6	20.2	13.9	71.27	233.8	42.7	839.9	813.2	26.67	31.497	
8,100.0	7,738.4	7,534.5	7,426.6	20.3	13.7	68.90	211.2	43.0	854.5	828.2	26.33	32.459	
8,142.5	7,740.0	7,512.8	7,415.6	20.4	13.6	67.07	192.5	43.3	866.6	840.5	26.06	33.252	
8,200.0	7,740.0	7,484.4	7,400.2	20.5	13.5	66.13	168.7	43.7	883.5	857.4	26.01	33.964	
8,300.0	7,740.0	7,450.0	7,379.9	20.9	13.3	64.93	140.9	44.1	917.5	891.3	26.21	35.012	
8,400.0	7,740.0	7,400.0	7,347.6	21.4	13.1	63.05	102.7	44.7	957.1	930.7	26.41	36.240	
8,442.5	7,740.0	7,383.5	7,336.2	21.7	13.0	62.40	90.8	44.9	975.7	949.1	26.58	36.702	
8,500.0	7,740.0	7,363.6	7,322.1	22.1	12.9	61.74	76.8	45.1	1,002.2	975.4	26.83	37.352	
8,600.0	7,740.0	7,332.1	7,298.7	22.8	12.8	60.73	55.8	45.4	1,051.6	1,024.2	27.35	38.448	
8,700.0	7,740.0	7,300.0	7,273.7	23.6	12.7	59.69	35.6	45.7	1,104.8	1,076.9	27.92	39.572	
8,800.0	7,740.0	7,279.5	7,257.1	24.5	12.7	59.16	23.5	45.9	1,161.6	1,133.0	28.66	40.528	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2B-7H-E168 - Hz - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,842.5	7,740.0	7,269.9	7,249.2	25.0	12.7	58.91	18.0	46.0	1,186.8	1,157.8	28.98	40.950		
8,900.0	7,740.0	7,250.0	7,232.6	25.5	12.6	58.06	7.1	46.1	1,222.0	1,192.6	29.38	41.585		
9,000.0	7,740.0	7,250.0	7,232.6	26.6	12.6	58.06	7.1	46.1	1,286.3	1,255.8	30.50	42.171		
9,100.0	7,740.0	7,220.1	7,206.9	27.7	12.6	56.76	-8.1	46.3	1,354.1	1,322.8	31.31	43.248		
9,200.0	7,740.0	7,200.0	7,189.2	28.9	12.5	55.90	-17.6	46.4	1,425.2	1,393.0	32.24	44.205		
9,300.0	7,740.0	7,200.0	7,189.2	30.2	12.5	55.90	-17.6	46.4	1,499.2	1,465.8	33.45	44.820		
9,342.5	7,740.0	7,200.0	7,189.2	30.7	12.5	55.90	-17.6	46.4	1,531.6	1,497.6	33.97	45.082		
9,399.5	7,740.0	7,176.7	7,168.3	31.5	12.5	54.50	-27.9	46.6	1,575.3	1,541.0	34.33	45.881		
9,500.0	7,740.0	7,150.0	7,143.8	32.8	12.5	53.35	-38.5	46.7	1,655.1	1,619.9	35.18	47.047		
9,600.0	7,740.0	7,150.0	7,143.8	34.2	12.5	53.35	-38.5	46.7	1,735.8	1,699.4	36.42	47.660		
9,700.0	7,740.0	7,150.0	7,143.8	35.6	12.5	53.35	-38.5	46.7	1,818.5	1,780.9	37.68	48.261		
9,800.0	7,740.0	7,150.0	7,143.8	37.1	12.5	53.35	-38.5	46.7	1,902.9	1,863.9	38.96	48.848		
9,900.0	7,740.0	7,126.3	7,121.7	38.5	12.4	52.35	-47.0	46.8	1,988.1	1,948.3	39.82	49.932		
10,000.0	7,740.0	7,100.0	7,096.7	40.0	12.4	51.25	-55.4	46.9	2,075.1	2,034.5	40.60	51.111		
10,100.0	7,740.0	7,100.0	7,096.7	41.6	12.4	51.25	-55.4	46.9	2,162.5	2,120.7	41.87	51.648		
10,200.0	7,740.0	7,100.0	7,096.7	43.1	12.4	51.25	-55.4	46.9	2,251.0	2,207.9	43.15	52.169		
10,300.0	7,740.0	7,100.0	7,096.7	44.6	12.4	51.25	-55.4	46.9	2,340.5	2,296.0	44.44	52.671		
10,400.0	7,740.0	7,100.0	7,096.7	46.2	12.4	51.25	-55.4	46.9	2,430.7	2,385.0	45.73	53.155		
10,500.0	7,740.0	7,100.0	7,096.7	47.8	12.4	51.25	-55.4	46.9	2,521.7	2,474.6	47.03	53.622		
10,600.0	7,740.0	7,100.0	7,096.7	49.4	12.4	51.25	-55.4	46.9	2,613.3	2,565.0	48.33	54.071		
10,700.0	7,740.0	7,077.0	7,074.7	51.0	12.4	50.30	-61.8	46.9	2,705.0	2,655.9	49.08	55.109		
10,800.0	7,740.0	7,072.5	7,070.3	52.6	12.4	50.11	-62.9	46.9	2,797.5	2,747.3	50.27	55.654		
10,900.0	7,740.0	7,050.0	7,048.4	54.2	12.3	49.21	-68.1	47.0	2,890.9	2,839.9	50.98	56.701		
11,000.0	7,740.0	7,050.0	7,048.4	55.8	12.3	49.21	-68.1	47.0	2,984.1	2,931.9	52.27	57.095		
11,100.0	7,740.0	7,050.0	7,048.4	57.5	12.3	49.21	-68.1	47.0	3,077.8	3,024.3	53.55	57.475		
11,200.0	7,740.0	7,050.0	7,048.4	59.1	12.3	49.21	-68.1	47.0	3,171.9	3,117.1	54.84	57.841		
11,300.0	7,740.0	7,050.0	7,048.4	60.8	12.3	49.21	-68.1	47.0	3,266.4	3,210.2	56.13	58.194		
11,400.0	7,740.0	7,050.0	7,048.4	62.4	12.3	49.21	-68.1	47.0	3,361.1	3,303.7	57.42	58.533		
11,500.0	7,740.0	7,050.0	7,048.4	64.1	12.3	49.21	-68.1	47.0	3,456.2	3,397.5	58.72	58.861		
11,600.0	7,740.0	7,050.0	7,048.4	65.7	12.3	49.21	-68.1	47.0	3,551.5	3,491.5	60.01	59.177		
11,700.0	7,740.0	7,050.0	7,048.4	67.4	12.3	49.21	-68.1	47.0	3,647.1	3,585.8	61.31	59.482		
11,800.0	7,740.0	7,050.0	7,048.4	69.1	12.3	49.21	-68.1	47.0	3,742.9	3,680.3	62.61	59.776		
11,900.0	7,740.0	7,050.0	7,048.4	70.8	12.3	49.21	-68.1	47.0	3,838.9	3,775.0	63.92	60.060		
12,000.0	7,740.0	7,050.0	7,048.4	72.4	12.3	49.21	-68.1	47.0	3,935.1	3,869.9	65.22	60.335		
12,100.0	7,740.0	7,050.0	7,048.4	74.1	12.3	49.21	-68.1	47.0	4,031.5	3,965.0	66.53	60.600		
12,200.0	7,740.0	7,050.0	7,048.4	75.8	12.3	49.21	-68.1	47.0	4,128.1	4,060.3	67.83	60.856		
12,300.0	7,740.0	7,027.0	7,025.8	77.5	12.3	48.29	-72.5	47.0	4,224.3	4,156.0	68.30	61.848		
12,400.0	7,740.0	7,025.0	7,023.8	79.2	12.3	48.21	-72.9	47.0	4,321.1	4,251.6	69.52	62.159		
12,500.0	7,740.0	7,023.0	7,021.9	80.9	12.3	48.14	-73.2	47.0	4,418.0	4,347.3	70.73	62.461		
12,600.0	7,740.0	7,000.0	6,999.1	82.6	12.3	47.25	-76.6	47.0	4,515.5	4,444.4	71.14	63.477		
12,700.0	7,740.0	7,000.0	6,999.1	84.3	12.3	47.25	-76.6	47.0	4,612.6	4,540.2	72.41	63.702		
12,800.0	7,740.0	7,000.0	6,999.1	86.0	12.3	47.25	-76.6	47.0	4,709.8	4,636.2	73.68	63.920		
12,900.0	7,740.0	7,000.0	6,999.1	87.7	12.3	47.25	-76.6	47.0	4,807.2	4,732.2	74.96	64.131		
13,000.0	7,740.0	7,000.0	6,999.1	89.4	12.3	47.25	-76.6	47.0	4,904.6	4,828.4	76.23	64.336		
13,100.0	7,740.0	7,000.0	6,999.1	91.1	12.3	47.25	-76.6	47.0	5,002.2	4,924.6	77.51	64.535		
13,200.0	7,740.0	7,000.0	6,999.1	92.8	12.3	47.25	-76.6	47.0	5,099.8	5,021.0	78.79	64.729		
13,300.0	7,740.0	7,000.0	6,999.1	94.5	12.3	47.25	-76.6	47.0	5,197.5	5,117.5	80.07	64.916		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2C-7H-E168 - Hz - Plan #4														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		
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	50.1	50.1						
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	50.1	50.1	49.8	0.30	164.967			
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	50.1	50.1	49.4	0.65	76.749			
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	50.1	50.1	49.1	1.00	50.007			
400.0	400.0	400.0	400.0	0.7	0.7	90.00	0.0	50.1	50.1	48.7	1.35	37.086			
500.0	500.0	500.0	500.0	0.8	0.8	90.00	0.0	50.1	50.1	48.4	1.70	29.471			
600.0	600.0	600.0	600.0	1.0	1.0	90.00	0.0	50.1	50.1	48.0	2.05	24.450	CC, ES		
700.0	700.0	699.1	699.1	1.2	1.2	90.11	-0.1	51.0	51.0	48.6	2.40	21.260			
800.0	800.0	798.2	798.2	1.4	1.4	90.42	-0.4	53.5	53.5	50.8	2.75	19.495			
900.0	900.0	897.2	897.0	1.5	1.6	90.89	-0.9	57.7	57.8	54.7	3.10	18.665			
1,000.0	1,000.0	997.0	996.7	1.7	1.7	91.37	-1.5	62.9	63.0	59.5	3.45	18.236			
1,100.0	1,100.0	1,096.9	1,096.5	1.9	1.9	41.21	-2.1	68.1	67.5	63.7	3.79	17.818			
1,200.0	1,200.0	1,196.8	1,196.3	2.1	2.1	42.91	-2.7	73.2	70.8	66.6	4.14	17.097			
1,300.0	1,299.9	1,296.8	1,296.1	2.3	2.3	45.43	-3.3	78.4	72.8	68.3	4.49	16.220			
1,400.0	1,399.7	1,396.7	1,395.8	2.4	2.5	48.82	-3.9	83.5	73.9	69.0	4.85	15.244			
1,500.0	1,499.4	1,496.5	1,495.6	2.6	2.7	53.16	-4.5	88.7	74.1	68.9	5.21	14.222			
1,600.0	1,598.9	1,596.2	1,595.2	2.8	2.9	58.59	-5.1	93.8	73.8	68.2	5.59	13.206			
1,700.0	1,698.3	1,695.9	1,694.7	3.1	3.1	65.22	-5.8	98.9	73.5	67.5	6.00	12.254			
1,738.2	1,736.1	1,733.9	1,732.6	3.2	3.1	68.08	-6.0	100.9	73.4	67.3	6.16	11.919			
1,800.0	1,797.4	1,795.4	1,794.0	3.3	3.3	73.09	-6.4	104.1	73.6	67.2	6.43	11.436			
1,908.5	1,904.7	1,903.1	1,901.6	3.6	3.5	82.87	-7.0	109.6	75.0	68.1	6.95	10.789			
2,000.0	1,995.0	1,993.8	1,992.2	3.8	3.7	91.29	-7.6	114.3	77.9	70.5	7.40	10.524			
2,100.0	2,093.8	2,093.0	2,091.3	4.1	3.8	99.64	-8.2	119.4	82.8	74.9	7.88	10.506	SF		
2,200.0	2,192.5	2,192.2	2,190.3	4.4	4.0	106.93	-8.8	124.5	89.2	80.9	8.34	10.700			
2,300.0	2,291.3	2,291.4	2,289.4	4.7	4.2	113.17	-9.4	129.7	97.0	88.2	8.78	11.039			
2,400.0	2,390.0	2,390.6	2,388.4	5.0	4.4	118.44	-10.0	134.8	105.7	96.4	9.21	11.472			
2,500.0	2,488.8	2,489.8	2,487.5	5.3	4.6	122.88	-10.6	139.9	115.1	105.5	9.62	11.962			
2,600.0	2,587.5	2,589.0	2,586.5	5.6	4.8	126.63	-11.2	145.0	125.1	115.1	10.03	12.482			
2,700.0	2,686.3	2,688.1	2,685.6	5.9	5.0	129.82	-11.8	150.1	135.6	125.2	10.42	13.015			
2,800.0	2,785.0	2,787.3	2,784.6	6.2	5.2	132.55	-12.4	155.2	146.5	135.7	10.81	13.548			
2,900.0	2,883.8	2,886.5	2,883.7	6.5	5.4	134.89	-13.0	160.3	157.6	146.4	11.20	14.073			
3,000.0	2,982.5	2,985.7	2,982.7	6.8	5.6	136.93	-13.6	165.5	169.0	157.4	11.59	14.586			
3,100.0	3,081.3	3,084.9	3,081.8	7.2	5.8	138.71	-14.2	170.6	180.5	168.6	11.97	15.083			
3,200.0	3,180.0	3,184.1	3,180.8	7.5	6.0	140.27	-14.8	175.7	192.2	179.9	12.35	15.563			
3,300.0	3,278.7	3,283.3	3,279.9	7.8	6.2	141.65	-15.4	180.8	204.0	191.3	12.73	16.025			
3,400.0	3,377.5	3,382.4	3,379.0	8.1	6.4	142.88	-16.0	185.9	216.0	202.9	13.11	16.469			
3,500.0	3,476.2	3,481.6	3,478.0	8.4	6.6	143.99	-16.6	191.0	228.0	214.5	13.49	16.895			
3,600.0	3,575.0	3,580.8	3,577.1	8.7	6.8	144.98	-17.2	196.1	240.1	226.2	13.87	17.303			
3,700.0	3,673.7	3,680.0	3,676.1	9.1	6.9	145.88	-17.8	201.3	252.2	238.0	14.25	17.695			
3,800.0	3,772.5	3,779.2	3,775.2	9.4	7.1	146.69	-18.4	206.4	264.4	249.8	14.63	18.069			
3,900.0	3,871.2	3,878.4	3,874.2	9.7	7.3	147.43	-19.0	211.5	276.7	261.7	15.01	18.428			
4,000.0	3,970.0	3,977.5	3,973.3	10.0	7.5	148.11	-19.6	216.6	289.0	273.6	15.39	18.772			
4,100.0	4,068.7	4,076.7	4,072.3	10.3	7.7	148.74	-20.2	221.7	301.3	285.6	15.77	19.102			
4,200.0	4,167.5	4,175.9	4,171.4	10.7	7.9	149.31	-20.8	226.8	313.7	297.5	16.15	19.418			
4,300.0	4,266.2	4,275.1	4,270.4	11.0	8.1	149.84	-21.4	232.0	326.1	309.6	16.54	19.721			
4,400.0	4,364.9	4,374.3	4,369.5	11.3	8.3	150.33	-22.0	237.1	338.5	321.6	16.92	20.012			
4,500.0	4,463.7	4,473.5	4,468.5	11.6	8.5	150.79	-22.6	242.2	351.0	333.7	17.30	20.292			
4,600.0	4,562.4	4,572.7	4,567.6	11.9	8.7	151.22	-23.2	247.3	363.4	345.8	17.68	20.560			
4,700.0	4,661.2	4,671.8	4,666.6	12.3	8.9	151.62	-23.8	252.4	375.9	357.9	18.06	20.819			
4,800.0	4,759.9	4,771.0	4,765.7	12.6	9.1	151.99	-24.4	257.5	388.4	370.0	18.44	21.067			
4,900.0	4,858.7	4,870.2	4,864.7	12.9	9.3	152.34	-25.0	262.6	400.9	382.1	18.82	21.306			
5,000.0	4,957.4	4,969.4	4,963.8	13.2	9.5	152.66	-25.6	267.8	413.5	394.3	19.20	21.536			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2C-7H-E168 - Hz - Plan #4												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	5,056.2	5,068.6	5,062.8	13.6	9.7	152.97	-26.2	272.9	426.0	406.4	19.58	21.758	
5,200.0	5,154.9	5,167.8	5,161.9	13.9	9.9	153.26	-26.8	278.0	438.6	418.6	19.96	21.972	
5,300.0	5,253.7	5,267.0	5,260.9	14.2	10.1	153.54	-27.4	283.1	451.1	430.8	20.34	22.178	
5,400.0	5,352.4	5,366.1	5,360.0	14.5	10.3	153.80	-28.0	288.2	463.7	443.0	21.72	22.378	
5,500.0	5,451.1	5,465.3	5,459.0	14.9	10.5	154.04	-28.7	293.3	476.3	455.2	20.10	22.570	
5,600.0	5,549.9	5,564.5	5,558.1	15.2	10.6	154.28	-29.3	298.4	488.9	467.4	21.48	22.756	
5,700.0	5,648.6	5,663.7	5,657.1	15.5	10.8	154.50	-29.9	303.6	501.5	479.6	21.86	22.935	
5,800.0	5,747.4	5,762.9	5,756.2	15.8	11.0	154.71	-30.5	308.7	514.1	491.8	22.25	23.109	
5,900.0	5,846.1	5,862.1	5,855.2	16.2	11.2	154.91	-31.1	313.8	526.7	504.1	22.63	23.277	
6,000.0	5,944.9	5,961.2	5,954.3	16.5	11.4	155.10	-31.7	318.9	539.3	516.3	23.01	23.440	
6,100.0	6,043.6	6,060.4	6,053.3	16.8	11.6	155.29	-32.3	324.0	551.9	528.5	23.39	23.598	
6,200.0	6,142.4	6,159.6	6,152.4	17.1	11.8	155.46	-32.9	329.1	564.6	540.8	23.77	23.751	
6,300.0	6,241.1	6,258.8	6,251.4	17.5	12.0	155.63	-33.5	334.3	577.2	553.0	24.15	23.899	
6,400.0	6,339.9	6,358.0	6,350.5	17.8	12.2	155.79	-34.1	339.4	589.8	565.3	24.53	24.043	
6,500.0	6,438.6	6,457.2	6,449.5	18.1	12.4	155.94	-34.7	344.5	602.5	577.6	24.91	24.182	
6,600.0	6,537.3	6,556.4	6,548.6	18.4	12.6	156.09	-35.3	349.6	615.1	589.8	25.30	24.317	
6,700.0	6,636.1	6,655.5	6,647.6	18.8	12.8	156.23	-35.9	354.7	627.8	602.1	25.68	24.449	
6,800.0	6,734.8	6,754.7	6,746.7	19.1	13.0	156.36	-36.5	359.8	640.4	614.4	26.06	24.577	
6,900.0	6,833.6	6,853.9	6,845.7	19.4	13.2	156.49	-37.1	364.9	653.1	626.6	26.44	24.701	
7,000.0	6,932.3	6,953.1	6,944.8	19.7	13.4	156.62	-37.7	370.1	665.7	638.9	26.82	24.821	
7,100.0	7,031.1	7,052.3	7,043.8	20.1	13.6	156.74	-38.3	375.2	678.4	651.2	27.20	24.939	
7,190.5	7,120.5	8,106.6	7,740.0	20.4	18.5	-150.78	564.6	400.5	690.0	658.4	31.55	21.873	
7,200.0	7,129.8	8,107.5	7,740.0	20.4	18.5	-154.42	565.4	400.5	682.1	650.2	31.89	21.392	
7,250.0	7,179.4	8,109.3	7,740.0	20.5	18.5	177.74	567.3	400.5	641.3	607.8	33.46	19.163	
7,300.0	7,228.8	8,106.8	7,740.0	20.6	18.5	152.00	564.8	400.5	602.0	567.4	34.56	17.418	
7,350.0	7,277.9	8,100.0	7,740.0	20.7	18.4	138.96	557.9	400.6	564.8	529.7	35.14	16.074	
7,400.0	7,326.1	8,088.9	7,740.0	20.7	18.3	132.71	546.8	400.8	530.4	495.1	35.25	15.044	
7,450.0	7,373.2	8,069.2	7,740.0	20.7	18.1	128.46	527.1	401.2	499.2	464.3	34.87	14.314	
7,500.0	7,418.7	8,029.3	7,738.1	20.7	17.7	123.00	487.3	401.8	471.3	437.5	33.83	13.932	
7,550.0	7,462.4	7,993.8	7,734.1	20.6	17.4	118.67	452.1	402.2	446.9	414.0	32.84	13.606	
7,600.0	7,503.8	7,960.9	7,728.4	20.5	17.0	114.84	419.7	402.5	426.4	394.5	31.91	13.365	
7,650.0	7,542.8	7,929.8	7,721.4	20.5	16.8	111.17	389.4	402.6	410.4	379.4	31.03	13.226	
7,700.0	7,578.8	7,899.9	7,713.0	20.4	16.5	107.47	360.6	402.7	399.1	368.8	30.23	13.203	
7,750.0	7,611.8	7,870.8	7,703.5	20.3	16.3	103.64	333.1	402.7	392.6	363.1	29.53	13.294	
7,792.7	7,637.4	7,846.4	7,694.5	20.3	16.1	100.23	310.5	402.6	390.9	361.9	29.03	13.467	
7,800.0	7,641.5	7,842.3	7,692.9	20.2	16.1	99.63	306.7	402.6	391.0	362.0	28.95	13.505	
7,850.0	7,667.6	7,814.3	7,681.2	20.2	15.9	95.45	281.3	402.4	393.8	365.3	28.48	13.830	
7,900.0	7,689.9	7,786.7	7,668.4	20.2	15.7	91.13	256.8	402.2	400.7	372.6	28.09	14.268	
7,950.0	7,708.2	7,759.4	7,654.6	20.1	15.5	86.73	233.3	401.9	411.1	383.4	27.74	14.819	
8,000.0	7,722.5	7,732.4	7,639.9	20.2	15.4	82.31	210.6	401.5	424.4	397.0	27.41	15.480	
8,050.0	7,732.6	7,700.0	7,620.9	20.2	15.2	77.46	184.4	401.0	439.9	412.9	26.98	16.300	
8,100.0	7,738.4	7,678.8	7,607.7	20.3	15.1	73.80	167.9	400.6	456.9	430.2	26.67	17.128	
8,142.5	7,740.0	7,650.0	7,588.7	20.4	15.0	69.94	146.2	400.0	472.3	446.0	26.23	18.003	
8,200.0	7,740.0	7,627.2	7,573.0	20.5	14.9	68.12	129.7	399.5	495.0	468.9	26.14	18.936	
8,300.0	7,740.0	7,582.9	7,540.5	20.9	14.7	64.55	99.5	398.4	542.2	516.2	26.02	20.836	
8,400.0	7,740.0	7,550.0	7,515.0	21.4	14.6	61.91	78.8	397.4	598.0	571.8	26.19	22.834	
8,442.5	7,740.0	7,531.2	7,499.9	21.7	14.5	60.41	67.6	396.8	624.0	597.8	26.22	23.798	
8,500.0	7,740.0	7,513.4	7,485.3	22.1	14.5	59.26	57.5	396.3	660.9	634.5	26.39	25.045	
8,600.0	7,740.0	7,486.0	7,462.2	22.8	14.4	57.62	42.9	395.3	729.0	702.2	26.79	27.208	
8,700.0	7,740.0	7,450.0	7,430.8	23.6	14.3	55.48	25.3	394.0	801.4	774.3	27.11	29.565	
8,800.0	7,740.0	7,450.0	7,430.8	24.5	14.3	56.13	25.3	394.0	876.8	848.7	28.10	31.207	
8,842.5	7,740.0	7,433.9	7,416.3	25.0	14.3	55.25	18.1	393.4	909.7	881.4	28.25	32.199	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2C-7H-E168 - Hz - Plan #4											Offset Site Error:		0.0 ft
Survey Program: 0-Geolink MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
8,900.0	7,740.0	7,423.8	7,407.2	25.5	14.3	54.52	13.7	393.0	955.1	926.5	28.66	33.323	
9,000.0	7,740.0	7,400.0	7,385.5	26.6	14.2	52.85	4.2	392.0	1,036.6	1,007.3	29.28	35.408	
9,100.0	7,740.0	7,400.0	7,385.5	27.7	14.2	52.85	4.2	392.0	1,120.5	1,090.1	30.37	36.894	
9,200.0	7,740.0	7,381.3	7,368.1	28.9	14.2	51.57	-2.6	391.3	1,206.4	1,175.3	31.11	38.780	
9,300.0	7,740.0	7,370.1	7,357.6	30.2	14.2	50.81	-6.4	390.8	1,294.0	1,262.0	32.00	40.434	
9,342.5	7,740.0	7,350.0	7,338.5	30.7	14.1	49.49	-12.8	389.9	1,332.0	1,299.9	32.04	41.571	
9,399.5	7,740.0	7,350.0	7,338.5	31.5	14.1	48.76	-12.8	389.9	1,382.8	1,350.3	32.54	42.502	
9,500.0	7,740.0	7,350.0	7,338.5	32.8	14.1	48.76	-12.8	389.9	1,473.7	1,440.0	33.69	43.749	
9,600.0	7,740.0	7,350.0	7,338.5	34.2	14.1	48.76	-12.8	389.9	1,565.3	1,530.5	34.85	44.918	
9,700.0	7,740.0	7,350.0	7,338.5	35.6	14.1	48.76	-12.8	389.9	1,657.9	1,621.9	36.03	46.018	
9,800.0	7,740.0	7,328.2	7,317.6	37.1	14.1	47.38	-18.9	388.9	1,750.8	1,714.1	36.62	47.810	
9,900.0	7,740.0	7,321.9	7,311.5	38.5	14.1	46.98	-20.5	388.7	1,844.5	1,806.9	37.62	49.034	
10,000.0	7,740.0	7,300.0	7,290.3	40.0	14.0	45.67	-25.6	387.7	1,939.1	1,900.9	38.16	50.816	
10,100.0	7,740.0	7,300.0	7,290.3	41.6	14.0	45.67	-25.6	387.7	2,033.7	1,994.3	39.32	51.718	
10,200.0	7,740.0	7,300.0	7,290.3	43.1	14.0	45.67	-25.6	387.7	2,128.8	2,088.3	40.49	52.571	
10,300.0	7,740.0	7,300.0	7,290.3	44.6	14.0	45.67	-25.6	387.7	2,224.3	2,182.6	41.67	53.377	
10,400.0	7,740.0	7,300.0	7,290.3	46.2	14.0	45.67	-25.6	387.7	2,320.2	2,277.3	42.86	54.139	
10,500.0	7,740.0	7,300.0	7,290.3	47.8	14.0	45.67	-25.6	387.7	2,416.4	2,372.4	44.05	54.861	
10,600.0	7,740.0	7,300.0	7,290.3	49.4	14.0	45.67	-25.6	387.7	2,513.0	2,467.7	45.24	55.546	
10,700.0	7,740.0	7,300.0	7,290.3	51.0	14.0	45.67	-25.6	387.7	2,609.8	2,563.3	46.44	56.195	
10,800.0	7,740.0	7,300.0	7,290.3	52.6	14.0	45.67	-25.6	387.7	2,706.8	2,659.1	47.65	56.811	
10,900.0	7,740.0	7,278.7	7,269.5	54.2	14.0	44.44	-29.8	386.7	2,803.5	2,755.5	48.02	58.385	
11,000.0	7,740.0	7,275.8	7,266.6	55.8	14.0	44.27	-30.3	386.5	2,900.8	2,851.7	49.08	59.098	
11,100.0	7,740.0	7,273.0	7,263.8	57.5	14.0	44.11	-30.8	386.4	2,998.3	2,948.1	50.16	59.780	
11,200.0	7,740.0	7,250.0	7,241.1	59.1	14.0	42.85	-34.2	385.3	3,096.3	3,045.9	50.39	61.452	
11,300.0	7,740.0	7,250.0	7,241.1	60.8	14.0	42.85	-34.2	385.3	3,193.9	3,142.4	51.54	61.964	
11,400.0	7,740.0	7,250.0	7,241.1	62.4	14.0	42.85	-34.2	385.3	3,291.7	3,239.0	52.71	62.453	
11,500.0	7,740.0	7,250.0	7,241.1	64.1	14.0	42.85	-34.2	385.3	3,389.6	3,335.7	53.87	62.921	
11,600.0	7,740.0	7,250.0	7,241.1	65.7	14.0	42.85	-34.2	385.3	3,487.6	3,432.6	55.04	63.370	
11,700.0	7,740.0	7,250.0	7,241.1	67.4	14.0	42.85	-34.2	385.3	3,585.8	3,529.5	56.20	63.799	
11,800.0	7,740.0	7,250.0	7,241.1	69.1	14.0	42.85	-34.2	385.3	3,684.0	3,626.6	57.37	64.211	
11,900.0	7,740.0	7,250.0	7,241.1	70.8	14.0	42.85	-34.2	385.3	3,782.3	3,723.8	58.54	64.606	
12,000.0	7,740.0	7,250.0	7,241.1	72.4	14.0	42.85	-34.2	385.3	3,880.7	3,821.0	59.72	64.986	
12,100.0	7,740.0	7,250.0	7,241.1	74.1	14.0	42.85	-34.2	385.3	3,979.2	3,918.3	60.89	65.350	
12,200.0	7,740.0	7,250.0	7,241.1	75.8	14.0	42.85	-34.2	385.3	4,077.8	4,015.7	62.07	65.701	
12,300.0	7,740.0	7,250.0	7,241.1	77.5	14.0	42.85	-34.2	385.3	4,176.4	4,113.2	63.24	66.039	
12,400.0	7,740.0	7,250.0	7,241.1	79.2	14.0	42.85	-34.2	385.3	4,275.1	4,210.7	64.42	66.364	
12,500.0	7,740.0	7,250.0	7,241.1	80.9	14.0	42.85	-34.2	385.3	4,373.8	4,308.3	65.60	66.678	
12,600.0	7,740.0	7,250.0	7,241.1	82.6	14.0	42.85	-34.2	385.3	4,472.7	4,405.9	66.78	66.980	
12,700.0	7,740.0	7,250.0	7,241.1	84.3	14.0	42.85	-34.2	385.3	4,571.5	4,503.6	67.96	67.271	
12,800.0	7,740.0	7,250.0	7,241.1	86.0	14.0	42.85	-34.2	385.3	4,670.4	4,601.3	69.14	67.553	
12,900.0	7,740.0	7,250.0	7,241.1	87.7	14.0	42.85	-34.2	385.3	4,769.4	4,699.1	70.32	67.825	
13,000.0	7,740.0	7,250.0	7,241.1	89.4	14.0	42.85	-34.2	385.3	4,868.4	4,796.9	71.50	68.087	
13,100.0	7,740.0	7,250.0	7,241.1	91.1	14.0	42.85	-34.2	385.3	4,967.4	4,894.7	72.69	68.342	
13,200.0	7,740.0	7,250.0	7,241.1	92.8	14.0	42.85	-34.2	385.3	5,066.5	4,992.6	73.87	68.587	
13,300.0	7,740.0	7,250.0	7,241.1	94.5	14.0	42.85	-34.2	385.3	5,165.6	5,090.6	75.05	68.825	
13,400.0	7,740.0	7,250.0	7,241.1	96.2	14.0	42.85	-34.2	385.3	5,264.8	5,188.5	76.24	69.056	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2D-7H-E168 - Hz - Plan #4												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	90.00	0.0	59.9	59.9				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	59.9	59.9	59.6	0.30	197.223	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	59.9	59.9	59.2	0.65	91.756	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	59.9	59.9	58.9	1.00	59.785	
400.0	400.0	400.0	400.0	0.7	0.7	90.00	0.0	59.9	59.9	58.5	1.35	44.337	
500.0	500.0	500.0	500.0	0.8	0.8	90.00	0.0	59.9	59.9	58.2	1.70	35.233 CC	
600.0	600.0	599.0	599.0	1.0	1.0	90.09	-0.1	60.7	60.8	58.7	2.05	29.671	
700.0	700.0	697.9	697.8	1.2	1.2	90.34	-0.4	63.3	63.3	60.9	2.40	26.422	
800.0	800.0	796.7	796.5	1.4	1.4	90.72	-0.9	67.5	67.6	64.9	2.75	24.593	
900.0	900.0	895.3	894.9	1.5	1.6	91.18	-1.5	73.4	73.6	70.5	3.11	23.690	
1,000.0	1,000.0	993.6	993.0	1.7	1.8	91.67	-2.4	81.0	81.3	77.9	3.47	23.417	
1,100.0	1,100.0	1,092.8	1,091.8	1.9	2.0	41.43	-3.4	90.0	89.7	86.0	3.78	23.728	
1,200.0	1,200.0	1,192.5	1,191.1	2.1	2.2	42.78	-4.4	99.1	97.0	92.8	4.13	23.472	
1,300.0	1,299.9	1,292.3	1,290.4	2.3	2.4	44.61	-5.4	108.2	103.0	98.5	4.48	22.980	
1,400.0	1,399.7	1,392.1	1,389.8	2.4	2.6	46.91	-6.4	117.3	107.9	103.1	4.84	22.314	
1,500.0	1,499.4	1,491.8	1,489.1	2.6	2.9	49.68	-7.4	126.4	111.9	106.7	5.20	21.518	
1,600.0	1,598.9	1,591.6	1,588.4	2.8	3.1	52.95	-8.5	135.4	115.0	109.5	5.58	20.631	
1,700.0	1,698.3	1,691.2	1,687.7	3.1	3.3	56.73	-9.5	144.5	117.6	111.6	5.97	19.686	
1,800.0	1,797.4	1,790.8	1,786.8	3.3	3.6	61.05	-10.5	153.6	119.8	113.4	6.40	18.715	
1,908.5	1,904.7	1,898.7	1,894.3	3.6	3.8	66.37	-11.6	163.5	122.1	115.2	6.91	17.674	
2,000.0	1,995.0	1,989.6	1,984.8	3.8	4.0	71.05	-12.5	171.7	124.6	117.2	7.37	16.909	
2,100.0	2,093.8	2,088.9	2,083.7	4.1	4.2	75.94	-13.5	180.8	128.2	120.3	7.89	16.248	
2,200.0	2,192.5	2,188.3	2,182.6	4.4	4.5	80.52	-14.6	189.9	132.7	124.3	8.43	15.744	
2,300.0	2,291.3	2,287.6	2,281.6	4.7	4.7	84.78	-15.6	198.9	138.0	129.1	8.98	15.372	
2,400.0	2,390.0	2,387.0	2,380.5	5.0	4.9	88.71	-16.6	208.0	144.1	134.5	9.53	15.110	
2,500.0	2,488.8	2,486.3	2,479.4	5.3	5.2	92.31	-17.6	217.0	150.7	140.6	10.09	14.939	
2,600.0	2,587.5	2,585.7	2,578.3	5.6	5.4	95.60	-18.6	226.1	157.9	147.2	10.64	14.840	
2,700.0	2,686.3	2,685.0	2,677.3	5.9	5.6	98.59	-19.6	235.2	165.6	154.4	11.19	14.799	
2,800.0	2,785.0	2,784.4	2,776.2	6.2	5.9	101.31	-20.7	244.2	173.6	161.9	11.73	14.803	
2,900.0	2,883.8	2,883.7	2,875.1	6.5	6.1	103.79	-21.7	253.3	182.1	169.8	12.27	14.843	
3,000.0	2,982.5	2,983.1	2,974.1	6.8	6.3	106.05	-22.7	262.3	190.8	178.0	12.80	14.910	
3,100.0	3,081.3	3,082.4	3,073.0	7.2	6.6	108.11	-23.7	271.4	199.8	186.5	13.32	14.998	
3,200.0	3,180.0	3,181.7	3,171.9	7.5	6.8	109.98	-24.7	280.5	209.1	195.2	13.84	15.102	
3,300.0	3,278.7	3,281.1	3,270.8	7.8	7.0	111.70	-25.7	289.5	218.5	204.2	14.36	15.218	
3,400.0	3,377.5	3,380.4	3,369.8	8.1	7.3	113.28	-26.7	298.6	228.2	213.3	14.87	15.342	
3,500.0	3,476.2	3,479.8	3,468.7	8.4	7.5	114.72	-27.8	307.6	238.0	222.6	15.38	15.473	
3,600.0	3,575.0	3,579.1	3,567.6	8.7	7.7	116.05	-28.8	316.7	247.9	232.0	15.88	15.607	
3,700.0	3,673.7	3,678.5	3,666.6	9.1	8.0	117.28	-29.8	325.7	257.9	241.6	16.38	15.743	
3,800.0	3,772.5	3,777.8	3,765.5	9.4	8.2	118.42	-30.8	334.8	268.1	251.2	16.88	15.881	
3,900.0	3,871.2	3,877.2	3,864.4	9.7	8.4	119.47	-31.8	343.9	278.4	261.0	17.38	16.018	
4,000.0	3,970.0	3,976.5	3,963.3	10.0	8.7	120.45	-32.8	352.9	288.7	270.8	17.87	16.155	
4,100.0	4,068.7	4,075.9	4,062.3	10.3	8.9	121.36	-33.9	362.0	299.1	280.8	18.36	16.290	
4,200.0	4,167.5	4,175.2	4,161.2	10.7	9.2	122.21	-34.9	371.0	309.6	290.8	18.85	16.424	
4,300.0	4,266.2	4,274.6	4,260.1	11.0	9.4	123.00	-35.9	380.1	320.2	300.8	19.34	16.555	
4,400.0	4,364.9	4,373.9	4,359.0	11.3	9.6	123.75	-36.9	389.2	330.8	310.9	19.83	16.685	
4,500.0	4,463.7	4,473.3	4,458.0	11.6	9.9	124.44	-37.9	398.2	341.4	321.1	20.31	16.811	
4,600.0	4,562.4	4,572.6	4,556.9	11.9	10.1	125.10	-38.9	407.3	352.1	331.4	20.79	16.935	
4,700.0	4,661.2	4,671.9	4,655.8	12.3	10.3	125.71	-39.9	416.3	362.9	341.6	21.28	17.056	
4,800.0	4,759.9	4,771.3	4,754.8	12.6	10.6	126.29	-41.0	425.4	373.7	351.9	21.76	17.175	
4,900.0	4,858.7	4,870.6	4,853.7	12.9	10.8	126.84	-42.0	434.5	384.5	362.3	22.24	17.290	
5,000.0	4,957.4	4,970.0	4,952.6	13.2	11.0	127.36	-43.0	443.5	395.4	372.7	22.72	17.403	
5,100.0	5,056.2	5,069.3	5,051.5	13.6	11.3	127.85	-44.0	452.6	406.3	383.1	23.20	17.513	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2D-7H-E168 - Hz - Plan #4											Offset Site Error: 0.0 ft			
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore +N/-S (ft)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,154.9	5,168.7	5,150.5	13.9	11.5	128.31	-45.0	461.6	417.2	393.5	23.68	17.620		
5,300.0	5,253.7	5,268.0	5,249.4	14.2	11.7	128.75	-46.0	470.7	428.1	404.0	24.16	17.724		
5,400.0	5,352.4	5,367.4	5,348.3	14.5	12.0	129.17	-47.1	479.8	439.1	414.5	24.63	17.826		
5,500.0	5,451.1	5,466.7	5,447.2	14.9	12.2	129.57	-48.1	488.8	450.1	425.0	25.11	17.925		
5,600.0	5,549.9	5,566.1	5,546.2	15.2	12.4	129.95	-49.1	497.9	461.1	435.5	25.59	18.021		
5,700.0	5,648.6	5,665.4	5,645.1	15.5	12.7	130.31	-50.1	506.9	472.1	446.1	26.06	18.115		
5,800.0	5,747.4	5,764.8	5,744.0	15.8	12.9	130.66	-51.1	516.0	483.2	456.6	26.54	18.207		
5,900.0	5,846.1	5,864.1	5,843.0	16.2	13.1	130.98	-52.1	525.1	494.2	467.2	27.01	18.296		
6,000.0	5,944.9	5,963.5	5,941.9	16.5	13.4	131.30	-53.1	534.1	505.3	477.8	27.49	18.383		
6,100.0	6,043.6	6,062.8	6,040.8	16.8	13.6	131.60	-54.2	543.2	516.4	488.5	27.96	18.468		
6,200.0	6,142.4	6,162.1	6,139.7	17.1	13.9	131.89	-55.2	552.2	527.5	499.1	28.44	18.550		
6,300.0	6,241.1	6,261.5	6,238.7	17.5	14.1	132.17	-56.2	561.3	538.6	509.7	28.91	18.631		
6,400.0	6,339.9	6,360.8	6,337.6	17.8	14.3	132.43	-57.2	570.3	549.8	520.4	29.39	18.709		
6,500.0	6,438.6	6,460.2	6,436.5	18.1	14.6	132.69	-58.2	579.4	560.9	531.1	29.86	18.786		
6,600.0	6,537.3	6,559.5	6,535.5	18.4	14.8	132.93	-59.2	588.5	572.1	541.7	30.33	18.860		
6,700.0	6,636.1	6,658.9	6,634.4	18.8	15.0	133.17	-60.2	597.5	583.2	552.4	30.81	18.933		
6,800.0	6,734.8	6,758.2	6,733.3	19.1	15.3	133.40	-61.3	606.6	594.4	563.1	31.28	19.004		
6,900.0	6,833.6	6,857.6	6,832.2	19.4	15.5	133.62	-62.3	615.6	605.6	573.8	31.75	19.073		
7,000.0	6,932.3	7,897.0	7,500.0	19.7	20.3	178.98	550.9	683.3	567.7	541.7	26.00	21.834		
7,100.0	7,031.1	7,907.0	7,500.0	20.1	20.4	-175.65	561.0	683.4	469.0	442.6	26.41	17.762		
7,190.5	7,120.5	7,916.1	7,500.0	20.4	20.5	-170.10	570.1	683.5	380.1	352.9	27.15	13.998		
7,200.0	7,129.8	7,917.0	7,500.0	20.4	20.5	-170.41	570.9	683.5	370.8	342.9	27.90	13.292		
7,250.0	7,179.4	7,919.0	7,500.0	20.5	20.5	179.52	573.0	683.5	321.9	288.2	33.71	9.547		
7,300.0	7,228.8	7,916.7	7,500.0	20.6	20.5	165.36	570.7	683.5	273.4	235.8	37.59	7.274		
7,350.0	7,277.9	7,910.1	7,500.0	20.7	20.4	156.76	564.0	683.4	226.0	187.3	38.72	5.838		
7,400.0	7,326.1	7,899.2	7,500.0	20.7	20.3	150.25	553.1	683.3	180.7	142.2	38.50	4.693		
7,450.0	7,373.2	7,884.1	7,500.0	20.7	20.1	142.85	538.0	683.2	138.8	101.3	37.56	3.697		
7,500.0	7,418.7	7,864.9	7,500.0	20.7	19.9	132.78	518.8	683.0	103.5	67.5	35.95	2.878		
7,550.0	7,462.4	7,841.0	7,499.8	20.6	19.7	118.11	494.9	682.7	80.9	47.4	33.42	2.420 SF		
7,577.6	7,485.5	7,827.0	7,499.3	20.6	19.6	108.48	481.0	682.5	77.2	45.4	31.72	2.433 ES		
7,600.0	7,503.8	7,815.7	7,498.6	20.5	19.5	100.32	469.7	682.3	79.6	49.3	30.31	2.625		
7,650.0	7,542.8	7,790.4	7,496.4	20.5	19.3	82.35	444.5	681.8	98.9	71.4	27.58	3.587		
7,700.0	7,578.8	7,765.2	7,493.0	20.4	19.0	66.83	419.5	681.3	128.9	103.1	25.77	5.001		
7,750.0	7,611.8	7,740.0	7,488.5	20.3	18.8	54.85	394.7	680.6	162.7	138.1	24.57	6.623		
7,800.0	7,641.5	7,714.8	7,483.0	20.2	18.6	46.00	370.2	679.8	197.6	174.1	23.52	8.403		
7,850.0	7,667.6	7,689.7	7,476.4	20.2	18.4	39.51	345.9	679.0	232.4	209.9	22.43	10.358		
7,900.0	7,689.9	7,664.5	7,468.7	20.2	18.3	34.68	322.0	678.0	266.3	245.0	21.32	12.494		
7,950.0	7,708.2	7,639.3	7,460.0	20.1	18.1	31.03	298.4	677.0	299.2	279.0	20.23	14.787		
8,000.0	7,722.5	7,614.2	7,450.3	20.2	17.9	28.22	275.2	675.8	330.8	311.5	19.27	17.162		
8,050.0	7,732.6	7,589.0	7,439.5	20.2	17.8	26.04	252.5	674.6	360.8	342.3	18.52	19.487		
8,100.0	7,738.4	7,563.8	7,427.8	20.3	17.6	24.33	230.3	673.3	389.3	371.2	18.05	21.570		
8,142.5	7,740.0	7,550.0	7,421.0	20.4	17.5	23.28	218.3	672.6	412.3	394.3	17.95	22.964		
8,200.0	7,740.0	7,514.4	7,402.0	20.5	17.3	22.71	188.2	670.5	443.4	425.4	17.96	24.689		
8,300.0	7,740.0	7,469.8	7,375.7	20.9	17.1	21.94	152.3	667.7	502.9	484.8	18.09	27.794		
8,400.0	7,740.0	7,430.2	7,350.1	21.4	17.0	21.23	122.2	665.1	568.0	549.7	18.29	31.061		
8,442.5	7,740.0	7,414.8	7,339.6	21.7	16.9	20.95	111.0	664.0	597.2	578.8	18.39	32.482		
8,500.0	7,740.0	7,400.0	7,329.2	22.1	16.8	21.22	100.5	662.9	637.9	619.3	18.61	34.269		
8,600.0	7,740.0	7,363.9	7,302.8	22.8	16.7	21.48	76.1	660.2	711.3	692.4	18.99	37.459		
8,700.0	7,740.0	7,350.0	7,292.2	23.6	16.7	22.29	67.1	659.2	788.1	768.6	19.52	40.383		
8,800.0	7,740.0	7,300.0	7,252.5	24.5	16.5	22.25	37.1	655.2	867.1	847.2	19.86	43.652		
8,842.5	7,740.0	7,300.0	7,252.5	25.0	16.5	22.77	37.1	655.2	901.2	881.0	20.15	44.712		
8,900.0	7,740.0	7,300.0	7,252.5	25.5	16.5	22.77	37.1	655.2	948.4	927.9	20.44	46.390		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2D-7H-E168 - Hz - Plan #4													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		
9,000.0	7,740.0	7,269.5	7,226.9	26.6	16.4	21.99	20.5	652.7	1,031.6	1,010.9	20.74	49.738		
9,100.0	7,740.0	7,250.0	7,210.2	27.7	16.4	21.51	10.7	651.1	1,116.9	1,095.8	21.12	52.889		
9,200.0	7,740.0	7,250.0	7,210.2	28.9	16.4	21.51	10.7	651.1	1,204.0	1,182.4	21.64	55.638		
9,300.0	7,740.0	7,221.1	7,184.9	30.2	16.3	20.84	-2.9	648.6	1,291.9	1,270.0	21.95	58.851		
9,342.5	7,740.0	7,200.0	7,165.9	30.7	16.3	20.37	-12.0	646.8	1,330.0	1,308.0	22.02	60.404		
9,399.5	7,740.0	7,200.0	7,165.9	31.5	16.3	19.30	-12.0	646.8	1,381.0	1,358.9	22.05	62.639		
9,500.0	7,740.0	7,200.0	7,165.9	32.8	16.3	19.30	-12.0	646.8	1,471.9	1,449.3	22.56	65.255		
9,600.0	7,740.0	7,200.0	7,165.9	34.2	16.3	19.30	-12.0	646.8	1,563.5	1,540.4	23.07	67.772		
9,700.0	7,740.0	7,175.0	7,143.0	35.6	16.2	18.81	-21.8	644.6	1,655.3	1,631.9	23.39	70.761		
9,800.0	7,740.0	7,150.0	7,119.7	37.1	16.2	18.35	-30.6	642.3	1,748.4	1,724.7	23.71	73.736		
9,900.0	7,740.0	7,150.0	7,119.7	38.5	16.2	18.35	-30.6	642.3	1,841.5	1,817.3	24.22	76.030		
10,000.0	7,740.0	7,150.0	7,119.7	40.0	16.2	18.35	-30.6	642.3	1,935.3	1,910.6	24.73	78.244		
10,100.0	7,740.0	7,150.0	7,119.7	41.6	16.2	18.35	-30.6	642.3	2,029.7	2,004.5	25.25	80.377		
10,200.0	7,740.0	7,150.0	7,119.7	43.1	16.2	18.35	-30.6	642.3	2,124.6	2,098.9	25.77	82.431		
10,300.0	7,740.0	7,129.0	7,099.8	44.6	16.1	17.97	-37.3	640.4	2,219.5	2,193.4	26.10	85.041		
10,400.0	7,740.0	7,123.0	7,094.2	46.2	16.1	17.87	-39.0	639.9	2,315.0	2,288.4	26.56	87.155		
10,500.0	7,740.0	7,100.0	7,072.1	47.8	16.0	17.48	-45.2	637.8	2,411.1	2,384.2	26.86	89.777		
10,600.0	7,740.0	7,100.0	7,072.1	49.4	16.0	17.48	-45.2	637.8	2,506.9	2,479.5	27.37	91.597		
10,700.0	7,740.0	7,100.0	7,072.1	51.0	16.0	17.48	-45.2	637.8	2,603.1	2,575.2	27.88	93.353		
10,800.0	7,740.0	7,100.0	7,072.1	52.6	16.0	17.48	-45.2	637.8	2,699.5	2,671.1	28.40	95.048		
10,900.0	7,740.0	7,100.0	7,072.1	54.2	16.0	17.48	-45.2	637.8	2,796.2	2,767.3	28.92	96.684		
11,000.0	7,740.0	7,100.0	7,072.1	55.8	16.0	17.48	-45.2	637.8	2,893.2	2,863.7	29.44	98.264		
11,100.0	7,740.0	7,100.0	7,072.1	57.5	16.0	17.48	-45.2	637.8	2,990.3	2,960.3	29.97	99.789		
11,200.0	7,740.0	7,100.0	7,072.1	59.1	16.0	17.48	-45.2	637.8	3,087.6	3,057.1	30.49	101.262		
11,300.0	7,740.0	7,100.0	7,072.1	60.8	16.0	17.48	-45.2	637.8	3,185.1	3,154.0	31.02	102.686		
11,400.0	7,740.0	7,100.0	7,072.1	62.4	16.0	17.48	-45.2	637.8	3,282.7	3,251.1	31.55	104.062		
11,500.0	7,740.0	7,077.2	7,050.0	64.1	16.0	17.12	-50.4	635.7	3,379.9	3,348.2	31.77	106.387		
11,600.0	7,740.0	7,074.2	7,047.1	65.7	16.0	17.07	-51.1	635.5	3,477.7	3,445.4	32.25	107.830		
11,700.0	7,740.0	7,050.0	7,023.4	67.4	15.9	16.70	-55.5	633.2	3,576.0	3,543.5	32.45	110.202		
11,800.0	7,740.0	7,050.0	7,023.4	69.1	15.9	16.70	-55.5	633.2	3,673.8	3,640.9	32.96	111.457		
11,900.0	7,740.0	7,050.0	7,023.4	70.8	15.9	16.70	-55.5	633.2	3,771.8	3,738.3	33.48	112.674		
12,000.0	7,740.0	7,050.0	7,023.4	72.4	15.9	16.70	-55.5	633.2	3,869.9	3,835.9	33.99	113.853		
12,100.0	7,740.0	7,050.0	7,023.4	74.1	15.9	16.70	-55.5	633.2	3,968.0	3,933.5	34.51	114.998		
12,200.0	7,740.0	7,050.0	7,023.4	75.8	15.9	16.70	-55.5	633.2	4,066.3	4,031.3	35.02	116.108		
12,300.0	7,740.0	7,050.0	7,023.4	77.5	15.9	16.70	-55.5	633.2	4,164.6	4,129.1	35.54	117.186		
12,400.0	7,740.0	7,050.0	7,023.4	79.2	15.9	16.70	-55.5	633.2	4,263.0	4,227.0	36.06	118.233		
12,500.0	7,740.0	7,050.0	7,023.4	80.9	15.9	16.70	-55.5	633.2	4,361.5	4,324.9	36.57	119.249		
12,600.0	7,740.0	7,050.0	7,023.4	82.6	15.9	16.70	-55.5	633.2	4,460.1	4,423.0	37.09	120.237		
12,700.0	7,740.0	7,050.0	7,023.4	84.3	15.9	16.70	-55.5	633.2	4,558.7	4,521.1	37.61	121.197		
12,800.0	7,740.0	7,050.0	7,023.4	86.0	15.9	16.70	-55.5	633.2	4,657.3	4,619.2	38.13	122.130		
12,900.0	7,740.0	7,050.0	7,023.4	87.7	15.9	16.70	-55.5	633.2	4,756.1	4,717.4	38.66	123.038		
13,000.0	7,740.0	7,050.0	7,023.4	89.4	15.9	16.70	-55.5	633.2	4,854.8	4,815.7	39.18	123.922		
13,100.0	7,740.0	7,050.0	7,023.4	91.1	15.9	16.70	-55.5	633.2	4,953.7	4,914.0	39.70	124.782		
13,200.0	7,740.0	7,050.0	7,023.4	92.8	15.9	16.70	-55.5	633.2	5,052.6	5,012.3	40.22	125.618		
13,300.0	7,740.0	7,050.0	7,023.4	94.5	15.9	16.70	-55.5	633.2	5,151.5	5,110.7	40.74	126.434		
13,400.0	7,740.0	7,050.0	7,023.4	96.2	15.9	16.70	-55.5	633.2	5,250.4	5,209.2	41.27	127.228		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2E-7H-E168 - Hz - Plan #2												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	90.00	0.0	70.0	70.0				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	70.0	70.0	69.7	0.30	230.401	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	70.0	70.0	69.3	0.65	107.192	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	70.0	70.0	69.0	1.00	69.843	
400.0	400.0	400.0	400.0	0.7	0.7	90.00	0.0	70.0	70.0	68.6	1.35	51.796 CC	
500.0	500.0	498.8	498.8	0.8	0.8	90.04	-0.1	70.8	70.8	69.1	1.70	41.709	
600.0	600.0	597.5	597.5	1.0	1.0	90.18	-0.2	73.4	73.4	71.4	2.05	35.856	
700.0	700.0	696.1	696.0	1.2	1.2	90.39	-0.5	77.6	77.7	75.3	2.40	32.374	
800.0	800.0	794.6	794.2	1.4	1.4	90.65	-0.9	83.5	83.7	81.0	2.76	30.343	
900.0	900.0	892.8	892.2	1.5	1.6	90.93	-1.5	91.1	91.4	88.3	3.13	29.255	
1,000.0	1,000.0	990.7	989.6	1.7	1.8	91.21	-2.1	100.3	100.9	97.4	3.50	28.805	
1,100.0	1,100.0	1,088.5	1,086.9	1.9	2.1	40.69	-2.9	111.2	111.3	107.6	3.77	29.493	
1,200.0	1,200.0	1,188.0	1,185.7	2.1	2.3	41.65	-3.7	122.9	121.1	117.0	4.12	29.379	
1,300.0	1,299.9	1,287.6	1,284.6	2.3	2.5	42.99	-4.5	134.6	129.7	125.3	4.47	28.994	
1,400.0	1,399.7	1,387.3	1,383.5	2.4	2.8	44.67	-5.4	146.3	137.1	132.3	4.83	28.398	
1,500.0	1,499.4	1,486.9	1,482.5	2.6	3.1	46.68	-6.2	158.0	143.4	138.3	5.19	27.636	
1,600.0	1,598.9	1,586.6	1,581.5	2.8	3.3	49.03	-7.0	169.7	148.8	143.2	5.56	26.740	
1,700.0	1,698.3	1,686.2	1,680.4	3.1	3.6	51.71	-7.8	181.4	153.3	147.3	5.96	25.736	
1,800.0	1,797.4	1,785.8	1,779.3	3.3	3.8	54.75	-8.6	193.1	157.1	150.7	6.37	24.649	
1,908.5	1,904.7	1,893.8	1,886.5	3.6	4.1	58.47	-9.5	205.8	160.7	153.8	6.87	23.400	
2,000.0	1,995.0	1,984.7	1,976.8	3.8	4.4	61.76	-10.3	216.5	163.8	156.5	7.31	22.403	
2,100.0	2,093.8	2,084.1	2,075.6	4.1	4.6	65.20	-11.1	228.2	167.8	160.0	7.82	21.454	
2,200.0	2,192.5	2,183.6	2,174.3	4.4	4.9	68.47	-11.9	239.9	172.4	164.0	8.35	20.636	
2,300.0	2,291.3	2,283.0	2,273.0	4.7	5.2	71.56	-12.7	251.6	177.5	168.6	8.90	19.935	
2,400.0	2,390.0	2,382.4	2,371.7	5.0	5.4	74.47	-13.6	263.3	183.1	173.7	9.47	19.337	
2,500.0	2,488.8	2,481.8	2,470.5	5.3	5.7	77.21	-14.4	274.9	189.2	179.1	10.05	18.829	
2,600.0	2,587.5	2,581.2	2,569.2	5.6	6.0	79.77	-15.2	286.6	195.7	185.0	10.63	18.400	
2,700.0	2,686.3	2,680.7	2,667.9	5.9	6.2	82.16	-16.0	298.3	202.5	191.3	11.22	18.039	
2,800.0	2,785.0	2,780.1	2,766.6	6.2	6.5	84.39	-16.8	310.0	209.7	197.8	11.82	17.736	
2,900.0	2,883.8	2,879.5	2,865.4	6.5	6.8	86.48	-17.7	321.7	217.1	204.7	12.42	17.483	
3,000.0	2,982.5	2,978.9	2,964.1	6.8	7.0	88.42	-18.5	333.4	224.8	211.8	13.02	17.273	
3,100.0	3,081.3	3,078.3	3,062.8	7.2	7.3	90.24	-19.3	345.0	232.8	219.2	13.62	17.099	
3,200.0	3,180.0	3,177.7	3,161.5	7.5	7.6	91.93	-20.1	356.7	241.0	226.8	14.21	16.956	
3,300.0	3,278.7	3,277.2	3,260.3	7.8	7.8	93.51	-20.9	368.4	249.4	234.6	14.81	16.840	
3,400.0	3,377.5	3,376.6	3,359.0	8.1	8.1	94.99	-21.8	380.1	258.0	242.6	15.40	16.746	
3,500.0	3,476.2	3,476.0	3,457.7	8.4	8.4	96.37	-22.6	391.8	266.7	250.7	16.00	16.671	
3,600.0	3,575.0	3,575.4	3,556.4	8.7	8.6	97.66	-23.4	403.5	275.5	259.0	16.59	16.612	
3,700.0	3,673.7	3,674.8	3,655.2	9.1	8.9	98.88	-24.2	415.2	284.5	267.4	17.18	16.567	
3,800.0	3,772.5	3,774.3	3,753.9	9.4	9.2	100.02	-25.0	426.8	293.7	275.9	17.76	16.533	
3,900.0	3,871.2	3,873.7	3,852.6	9.7	9.4	101.09	-25.9	438.5	302.9	284.5	18.35	16.510	
4,000.0	3,970.0	3,973.1	3,951.3	10.0	9.7	102.09	-26.7	450.2	312.2	293.3	18.93	16.495	
4,100.0	4,068.7	4,072.5	4,050.1	10.3	10.0	103.04	-27.5	461.9	321.6	302.1	19.51	16.488	
4,200.0	4,167.5	4,171.9	4,148.8	10.7	10.2	103.93	-28.3	473.6	331.1	311.0	20.09	16.486	
4,300.0	4,266.2	4,271.4	4,247.5	11.0	10.5	104.78	-29.1	485.3	340.7	320.0	20.66	16.490	
4,400.0	4,364.9	4,370.8	4,346.3	11.3	10.8	105.58	-30.0	497.0	350.3	329.1	21.23	16.498	
4,500.0	4,463.7	4,470.2	4,445.0	11.6	11.0	106.33	-30.8	508.6	360.1	338.2	21.81	16.511	
4,600.0	4,562.4	4,569.6	4,543.7	11.9	11.3	107.05	-31.6	520.3	369.8	347.4	22.38	16.526	
4,700.0	4,661.2	4,669.0	4,642.4	12.3	11.6	107.72	-32.4	532.0	379.6	356.7	22.95	16.544	
4,800.0	4,759.9	4,768.4	4,741.2	12.6	11.8	108.37	-33.2	543.7	389.5	366.0	23.51	16.564	
4,900.0	4,858.7	4,867.9	4,839.9	12.9	12.1	108.98	-34.1	555.4	399.4	375.3	24.08	16.586	
5,000.0	4,957.4	4,967.3	4,938.6	13.2	12.4	109.56	-34.9	567.1	409.4	384.7	24.65	16.610	
5,100.0	5,056.2	5,066.7	5,037.3	13.6	12.6	110.12	-35.7	578.8	419.4	394.2	25.21	16.635	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2E-7H-E168 - Hz - Plan #2											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	5,154.9	5,166.1	5,136.1	13.9	12.9	110.65	-36.5	590.4	429.4	403.6	25.77	16.662	
5,300.0	5,253.7	5,265.5	5,234.8	14.2	13.2	111.15	-37.3	602.1	439.5	413.2	26.33	16.689	
5,400.0	5,352.4	5,365.0	5,333.5	14.5	13.5	111.64	-38.2	613.8	449.6	422.7	26.90	16.717	
5,500.0	5,451.1	5,464.4	5,432.2	14.9	13.7	112.10	-39.0	625.5	459.7	432.3	27.45	16.745	
5,600.0	5,549.9	5,563.8	5,531.0	15.2	14.0	112.54	-39.8	637.2	469.9	441.9	28.01	16.774	
5,700.0	5,648.6	5,663.2	5,629.7	15.5	14.3	112.96	-40.6	648.9	480.1	451.5	28.57	16.803	
5,800.0	5,747.4	5,762.6	5,728.4	15.8	14.5	113.37	-41.4	660.5	490.3	461.2	29.13	16.832	
5,900.0	5,846.1	5,862.0	5,827.1	16.2	14.8	113.75	-42.3	672.2	500.5	470.8	29.68	16.861	
6,000.0	5,944.9	5,961.5	5,925.9	16.5	15.1	114.13	-43.1	683.9	510.8	480.5	30.24	16.891	
6,100.0	6,043.6	6,060.9	6,024.6	16.8	15.3	114.48	-43.9	695.6	521.1	490.3	30.80	16.920	
6,200.0	6,142.4	6,160.3	6,123.3	17.1	15.6	114.83	-44.7	707.3	531.4	500.0	31.35	16.949	
6,300.0	6,241.1	6,259.7	6,222.0	17.5	15.9	115.16	-45.5	719.0	541.7	509.8	31.90	16.979	
6,400.0	6,339.9	6,359.1	6,320.8	17.8	16.1	115.48	-46.4	730.7	552.0	519.6	32.46	17.008	
6,500.0	6,438.6	6,458.6	6,419.5	18.1	16.4	115.79	-47.2	742.3	562.4	529.4	33.01	17.037	
6,600.0	6,537.3	6,558.0	6,518.2	18.4	16.7	116.08	-48.0	754.0	572.7	539.2	33.56	17.065	
6,700.0	6,636.1	6,657.4	6,617.0	18.8	16.9	116.37	-48.8	765.7	583.1	549.0	34.11	17.093	
6,800.0	6,734.8	6,756.8	6,715.7	19.1	17.2	116.64	-49.6	777.4	593.5	558.8	34.66	17.122	
6,900.0	6,833.6	6,856.2	6,814.4	19.4	17.5	116.91	-50.5	789.1	603.9	568.7	35.21	17.149	
7,000.0	6,932.3	6,955.7	6,913.1	19.7	17.8	117.17	-51.3	800.8	614.3	578.6	35.77	17.177	
7,100.0	7,031.1	7,055.1	7,011.9	20.1	18.0	117.42	-52.1	812.5	624.8	588.4	36.31	17.204	
7,190.5	7,120.5	7,145.1	7,101.2	20.4	18.3	117.63	-52.8	823.0	634.2	597.4	36.81	17.228	
7,200.0	7,129.8	7,154.5	7,110.6	20.4	18.3	112.50	-52.9	824.1	635.1	598.2	36.89	17.218	
7,250.0	7,179.4	8,169.5	7,740.0	20.5	22.8	-3.87	574.3	893.1	589.2	556.1	33.17	17.764	
7,300.0	7,228.8	8,167.0	7,740.0	20.6	22.8	-59.15	571.8	893.1	540.2	512.4	27.81	19.427	
7,350.0	7,277.9	8,160.3	7,740.0	20.7	22.8	-91.76	565.1	893.2	491.7	464.6	27.04	18.185	
7,400.0	7,326.1	8,149.2	7,740.0	20.7	22.7	-109.83	554.0	893.3	444.0	416.4	27.63	16.071	
7,450.0	7,373.2	8,134.0	7,740.0	20.7	22.5	-120.29	538.8	893.4	397.7	369.7	28.02	14.193	
7,500.0	7,418.7	8,113.7	7,740.0	20.7	22.4	-126.35	518.4	893.6	353.1	325.2	27.96	12.632	
7,550.0	7,462.4	8,066.6	7,737.9	20.6	22.0	-125.77	471.4	893.8	309.7	282.6	27.14	11.411	
7,600.0	7,503.8	8,025.6	7,733.0	20.5	21.7	-124.31	430.8	893.5	267.0	240.6	26.44	10.099	
7,650.0	7,542.8	7,988.5	7,726.1	20.5	21.4	-121.74	394.3	893.0	225.6	199.7	25.92	8.705	
7,700.0	7,578.8	7,953.9	7,717.6	20.4	21.2	-117.69	360.8	892.3	186.0	160.3	25.69	7.241	
7,750.0	7,611.8	7,921.2	7,707.7	20.3	20.9	-111.66	329.7	891.4	149.4	123.5	25.93	5.761	
7,800.0	7,641.5	7,889.8	7,696.5	20.2	20.7	-103.04	300.4	890.4	117.8	91.1	26.71	4.411	
7,850.0	7,667.6	7,859.4	7,684.2	20.2	20.6	-91.40	272.6	889.1	95.4	67.6	27.78	3.434	
7,895.6	7,688.1	7,832.4	7,672.0	20.2	20.4	-78.43	248.5	887.9	88.0	59.6	28.35	3.103 ES, SF	
7,900.0	7,689.9	7,829.8	7,670.8	20.2	20.4	-77.09	246.2	887.8	88.0	59.7	28.36	3.105	
7,950.0	7,708.2	7,800.0	7,656.0	20.1	20.3	-61.55	220.4	886.3	97.9	70.3	27.55	3.553	
8,000.0	7,722.5	7,772.1	7,640.9	20.2	20.1	-48.08	197.0	884.7	119.7	94.2	25.53	4.690	
8,050.0	7,732.6	7,743.9	7,624.6	20.2	20.0	-36.99	174.1	883.0	147.4	124.3	23.07	6.388	
8,100.0	7,738.4	7,716.0	7,607.3	20.3	19.9	-28.58	152.2	881.1	177.3	156.3	21.00	8.443	
8,142.5	7,740.0	7,692.5	7,592.0	20.4	19.8	-23.14	134.5	879.4	203.3	183.4	19.85	10.240	
8,200.0	7,740.0	7,662.4	7,571.3	20.5	19.7	-19.42	112.7	877.2	240.1	220.8	19.28	12.449	
8,300.0	7,740.0	7,616.8	7,537.9	20.9	19.5	-14.87	82.0	873.5	310.6	291.9	18.74	16.570	
8,400.0	7,740.0	7,578.5	7,508.0	21.4	19.4	-11.86	58.3	870.2	387.2	368.7	18.53	20.901	
8,442.5	7,740.0	7,564.2	7,496.4	21.7	19.3	-10.88	49.9	868.9	421.2	402.7	18.49	22.777	
8,500.0	7,740.0	7,550.0	7,484.8	22.1	19.3	-9.20	41.9	867.6	468.4	449.9	18.41	25.442	
8,600.0	7,740.0	7,518.6	7,458.3	22.8	19.2	-6.07	25.3	864.6	552.8	534.5	18.27	30.262	
8,700.0	7,740.0	7,500.0	7,442.2	23.6	19.2	-3.60	16.2	862.8	639.9	621.6	18.27	35.031	
8,800.0	7,740.0	7,474.2	7,419.4	24.5	19.1	-0.95	4.4	860.2	728.8	710.5	18.30	39.835	
8,842.5	7,740.0	7,466.3	7,412.3	25.0	19.1	0.09	0.9	859.4	767.1	748.8	18.34	41.830	
8,900.0	7,740.0	7,450.0	7,397.6	25.5	19.0	0.37	-5.8	857.7	819.4	800.9	18.45	44.402	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2E-7H-E168 - Hz - Plan #2													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		
9,000.0	7,740.0	7,450.0	7,397.6	26.6	19.0	0.37	-5.8	857.7	911.2	892.5	18.71	48.700		
9,100.0	7,740.0	7,426.4	7,375.9	27.7	19.0	0.74	-14.7	855.2	1,003.8	984.9	18.92	53.049		
9,200.0	7,740.0	7,400.0	7,351.2	28.9	18.9	1.11	-23.7	852.4	1,097.6	1,078.5	19.13	57.373		
9,300.0	7,740.0	7,400.0	7,351.2	30.2	18.9	1.11	-23.7	852.4	1,191.7	1,172.3	19.38	61.484		
9,342.5	7,740.0	7,400.0	7,351.2	30.7	18.9	1.11	-23.7	852.4	1,231.9	1,212.4	19.49	63.214		
9,399.5	7,740.0	7,400.0	7,351.2	31.5	18.9	-0.65	-23.7	852.4	1,286.2	1,266.5	19.71	65.265		
9,500.0	7,740.0	7,400.0	7,351.2	32.8	18.9	-0.65	-23.7	852.4	1,382.3	1,362.3	19.95	69.275		
9,600.0	7,740.0	7,376.0	7,328.5	34.2	18.9	-0.23	-30.9	849.7	1,477.8	1,457.7	20.15	73.349		
9,700.0	7,740.0	7,368.6	7,321.4	35.6	18.8	-0.12	-32.9	848.9	1,574.0	1,553.7	20.38	77.251		
9,800.0	7,740.0	7,350.0	7,303.5	37.1	18.8	0.17	-37.5	846.8	1,670.8	1,650.2	20.58	81.173		
9,900.0	7,740.0	7,350.0	7,303.5	38.5	18.8	0.17	-37.5	846.8	1,767.5	1,746.7	20.82	84.886		
10,000.0	7,740.0	7,350.0	7,303.5	40.0	18.8	0.17	-37.5	846.8	1,864.6	1,843.5	21.06	88.537		
10,100.0	7,740.0	7,350.0	7,303.5	41.6	18.8	0.17	-37.5	846.8	1,961.9	1,940.6	21.30	92.126		
10,200.0	7,740.0	7,350.0	7,303.5	43.1	18.8	0.17	-37.5	846.8	2,059.5	2,038.0	21.53	95.653		
10,300.0	7,740.0	7,350.0	7,303.5	44.6	18.8	0.17	-37.5	846.8	2,157.4	2,135.6	21.77	99.120		
10,400.0	7,740.0	7,350.0	7,303.5	46.2	18.8	0.17	-37.5	846.8	2,255.4	2,233.4	22.00	102.527		
10,500.0	7,740.0	7,327.2	7,281.4	47.8	18.7	0.49	-42.4	844.3	2,353.0	2,330.8	22.20	106.011		
10,600.0	7,740.0	7,323.5	7,277.8	49.4	18.7	0.54	-43.1	843.8	2,451.1	2,428.7	22.42	109.320		
10,700.0	7,740.0	7,300.0	7,254.8	51.0	18.7	0.83	-47.1	841.1	2,549.8	2,527.2	22.62	112.706		
10,800.0	7,740.0	7,300.0	7,254.8	52.6	18.7	0.83	-47.1	841.1	2,648.1	2,625.2	22.85	115.872		
10,900.0	7,740.0	7,300.0	7,254.8	54.2	18.7	0.83	-47.1	841.1	2,746.5	2,723.4	23.08	118.985		
11,000.0	7,740.0	7,300.0	7,254.8	55.8	18.7	0.83	-47.1	841.1	2,844.9	2,821.6	23.31	122.047		
11,100.0	7,740.0	7,300.0	7,254.8	57.5	18.7	0.83	-47.1	841.1	2,943.5	2,920.0	23.54	125.058		
11,200.0	7,740.0	7,300.0	7,254.8	59.1	18.7	0.83	-47.1	841.1	3,042.2	3,018.4	23.76	128.019		
11,300.0	7,740.0	7,300.0	7,254.8	60.8	18.7	0.83	-47.1	841.1	3,141.0	3,117.0	23.99	130.932		
11,400.0	7,740.0	7,300.0	7,254.8	62.4	18.7	0.83	-47.1	841.1	3,239.8	3,215.6	24.21	133.798		
11,500.0	7,740.0	7,300.0	7,254.8	64.1	18.7	0.83	-47.1	841.1	3,338.7	3,314.3	24.44	136.618		
11,600.0	7,740.0	7,300.0	7,254.8	65.7	18.7	0.83	-47.1	841.1	3,437.7	3,413.0	24.66	139.393		
11,700.0	7,740.0	7,300.0	7,254.8	67.4	18.7	0.83	-47.1	841.1	3,536.7	3,511.8	24.88	142.124		
11,800.0	7,740.0	7,300.0	7,254.8	69.1	18.7	0.83	-47.1	841.1	3,635.8	3,610.7	25.11	144.812		
11,900.0	7,740.0	7,300.0	7,254.8	70.8	18.7	0.83	-47.1	841.1	3,734.9	3,709.6	25.33	147.459		
12,000.0	7,740.0	7,300.0	7,254.8	72.4	18.7	0.83	-47.1	841.1	3,834.1	3,808.5	25.55	150.064		
12,100.0	7,740.0	7,300.0	7,254.8	74.1	18.7	0.83	-47.1	841.1	3,933.3	3,907.5	25.77	152.630		
12,200.0	7,740.0	7,300.0	7,254.8	75.8	18.7	0.83	-47.1	841.1	4,032.5	4,006.6	25.99	155.157		
12,300.0	7,740.0	7,300.0	7,254.8	77.5	18.7	0.83	-47.1	841.1	4,131.8	4,105.6	26.21	157.646		
12,400.0	7,740.0	7,300.0	7,254.8	79.2	18.7	0.83	-47.1	841.1	4,231.2	4,204.7	26.43	160.098		
12,500.0	7,740.0	7,300.0	7,254.8	80.9	18.7	0.83	-47.1	841.1	4,330.5	4,303.9	26.65	162.514		
12,600.0	7,740.0	7,300.0	7,254.8	82.6	18.7	0.83	-47.1	841.1	4,429.9	4,403.0	26.87	164.894		
12,700.0	7,740.0	7,300.0	7,254.8	84.3	18.7	0.83	-47.1	841.1	4,529.3	4,502.2	27.08	167.240		
12,800.0	7,740.0	7,300.0	7,254.8	86.0	18.7	0.83	-47.1	841.1	4,628.7	4,601.4	27.30	169.552		
12,900.0	7,740.0	7,276.8	7,232.0	87.7	18.6	1.10	-50.0	838.5	4,727.7	4,700.2	27.51	171.850		
13,000.0	7,740.0	7,275.7	7,230.8	89.4	18.6	1.11	-50.2	838.3	4,827.1	4,799.4	27.73	174.090		
13,100.0	7,740.0	7,274.6	7,229.8	91.1	18.6	1.12	-50.3	838.2	4,926.6	4,898.6	27.94	176.298		
13,200.0	7,740.0	7,273.5	7,228.7	92.8	18.6	1.14	-50.4	838.1	5,026.0	4,997.9	28.16	178.475		
13,300.0	7,740.0	7,272.5	7,227.7	94.5	18.6	1.15	-50.5	838.0	5,125.5	5,097.1	28.38	180.620		
13,400.0	7,740.0	7,250.0	7,205.4	96.2	18.5	1.38	-52.3	835.4	5,225.5	5,196.9	28.60	182.718		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2F-7H-E168 - Hz - Plan #3												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	90.26	-0.4	80.0	80.0					
100.0	100.0	100.0	100.0	0.2	0.2	90.26	-0.4	80.0	80.0	79.7	0.30	263.581		
200.0	200.0	200.0	200.0	0.3	0.3	90.26	-0.4	80.0	80.0	79.4	0.65	122.629		
300.0	300.0	300.0	300.0	0.5	0.5	90.26	-0.4	80.0	80.0	79.0	1.00	79.901	CC, ES	
400.0	400.0	398.6	398.6	0.7	0.7	90.17	-0.2	80.9	80.9	79.5	1.35	59.978		
500.0	500.0	497.2	497.2	0.8	0.8	89.93	0.1	83.4	83.5	81.8	1.70	49.169		
600.0	600.0	595.6	595.5	1.0	1.0	89.55	0.7	87.6	87.7	85.7	2.05	42.811		
700.0	700.0	693.9	693.6	1.2	1.2	89.08	1.5	93.5	93.7	91.3	2.41	38.947		
800.0	800.0	792.0	791.4	1.4	1.4	88.56	2.5	101.0	101.4	98.6	2.77	36.608		
900.0	900.0	889.7	888.7	1.5	1.7	88.03	3.8	110.1	110.7	107.6	3.14	35.257		
1,000.0	1,000.0	987.1	985.5	1.7	1.9	87.50	5.3	120.8	121.8	118.3	3.52	34.572		
1,100.0	1,100.0	1,084.2	1,081.8	1.9	2.2	36.12	7.0	133.1	133.8	130.1	3.77	35.511		
1,200.0	1,200.0	1,181.1	1,177.7	2.1	2.4	36.15	8.9	147.0	146.2	142.1	4.11	35.527		
1,300.0	1,299.9	1,277.8	1,273.0	2.3	2.7	36.48	11.0	162.5	158.8	154.3	4.46	35.590		
1,400.0	1,399.7	1,374.1	1,367.9	2.4	3.1	37.03	13.4	179.5	171.7	166.9	4.81	35.679		
1,500.0	1,499.4	1,471.9	1,463.8	2.6	3.4	37.77	16.0	198.1	184.6	179.5	5.17	35.713		
1,600.0	1,598.9	1,571.1	1,561.2	2.8	3.8	38.74	18.6	217.2	196.5	190.9	5.54	35.463		
1,700.0	1,698.3	1,670.5	1,658.6	3.1	4.1	39.90	21.2	236.3	207.0	201.1	5.92	34.953		
1,800.0	1,797.4	1,769.9	1,756.2	3.3	4.5	41.25	23.9	255.4	216.3	210.0	6.32	34.215		
1,908.5	1,904.7	1,877.9	1,862.0	3.6	4.9	42.93	26.8	276.2	225.1	218.3	6.78	33.188		
2,000.0	1,995.0	1,968.9	1,951.3	3.8	5.2	44.45	29.2	293.7	232.1	224.9	7.19	32.262		
2,100.0	2,093.8	2,068.4	2,048.9	4.1	5.6	46.00	31.8	312.8	239.9	232.2	7.66	31.318		
2,200.0	2,192.5	2,167.9	2,146.5	4.4	6.0	47.46	34.5	331.9	247.8	239.7	8.14	30.442		
2,300.0	2,291.3	2,267.4	2,244.1	4.7	6.4	48.82	37.1	351.0	255.9	247.3	8.64	29.628		
2,400.0	2,390.0	2,366.9	2,341.7	5.0	6.7	50.10	39.7	370.2	264.1	255.0	9.15	28.873		
2,500.0	2,488.8	2,466.4	2,439.3	5.3	7.1	51.30	42.4	389.3	272.5	262.8	9.67	28.173		
2,600.0	2,587.5	2,565.8	2,536.9	5.6	7.5	52.43	45.0	408.4	281.0	270.7	10.21	27.524		
2,700.0	2,686.3	2,665.3	2,634.5	5.9	7.9	53.50	47.7	427.5	289.5	278.8	10.75	26.923		
2,800.0	2,785.0	2,764.8	2,732.1	6.2	8.3	54.50	50.3	446.7	298.2	286.9	11.31	26.366		
2,900.0	2,883.8	2,864.3	2,829.7	6.5	8.6	55.45	53.0	465.8	306.9	295.1	11.87	25.849		
3,000.0	2,982.5	2,963.8	2,927.3	6.8	9.0	56.34	55.6	484.9	315.8	303.3	12.45	25.369		
3,100.0	3,081.3	3,063.3	3,024.9	7.2	9.4	57.19	58.3	504.0	324.7	311.6	13.03	24.924		
3,200.0	3,180.0	3,162.8	3,122.5	7.5	9.8	57.99	60.9	523.2	333.6	320.0	13.61	24.510		
3,300.0	3,278.7	3,262.3	3,220.1	7.8	10.2	58.75	63.5	542.3	342.7	328.5	14.20	24.124		
3,400.0	3,377.5	3,361.8	3,317.7	8.1	10.6	59.46	66.2	561.4	351.7	336.9	14.80	23.765		
3,500.0	3,476.2	3,461.3	3,415.3	8.4	10.9	60.15	68.8	580.5	360.9	345.5	15.40	23.430		
3,600.0	3,575.0	3,560.8	3,512.9	8.7	11.3	60.80	71.5	599.7	370.1	354.0	16.01	23.117		
3,700.0	3,673.7	3,660.3	3,610.5	9.1	11.7	61.41	74.1	618.8	379.3	362.7	16.62	22.825		
3,800.0	3,772.5	3,759.7	3,708.1	9.4	12.1	62.00	76.8	637.9	388.6	371.3	17.23	22.551		
3,900.0	3,871.2	3,859.2	3,805.7	9.7	12.5	62.56	79.4	657.0	397.9	380.0	17.85	22.294		
4,000.0	3,970.0	3,958.7	3,903.3	10.0	12.8	63.10	82.1	676.2	407.2	388.7	18.47	22.053		
4,100.0	4,068.7	4,058.2	4,000.9	10.3	13.2	63.61	84.7	695.3	416.6	397.5	19.09	21.826		
4,200.0	4,167.5	4,157.7	4,098.5	10.7	13.6	64.10	87.3	714.4	426.0	406.3	19.71	21.612		
4,300.0	4,266.2	4,257.2	4,196.1	11.0	14.0	64.57	90.0	733.5	435.4	415.1	20.34	21.411		
4,400.0	4,364.9	4,356.7	4,293.7	11.3	14.4	65.01	92.6	752.7	444.9	423.9	20.97	21.221		
4,500.0	4,463.7	4,456.2	4,391.4	11.6	14.8	65.44	95.3	771.8	454.4	432.8	21.60	21.042		
4,600.0	4,562.4	4,555.7	4,489.0	11.9	15.1	65.85	97.9	790.9	463.9	441.7	22.23	20.872		
4,700.0	4,661.2	4,655.2	4,586.6	12.3	15.5	66.25	100.6	810.0	473.5	450.6	22.86	20.712		
4,800.0	4,759.9	4,754.7	4,684.2	12.6	15.9	66.63	103.2	829.2	483.0	459.5	23.49	20.559		
4,900.0	4,858.7	4,854.2	4,781.8	12.9	16.3	66.99	105.9	848.3	492.6	468.5	24.13	20.415		
5,000.0	4,957.4	4,953.6	4,879.4	13.2	16.7	67.34	108.5	867.4	502.2	477.4	24.77	20.277		
5,100.0	5,056.2	5,053.1	4,977.0	13.6	17.1	67.68	111.1	886.5	511.8	486.4	25.40	20.147		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2F-7H-E168 - Hz - Plan #3												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	5,154.9	5,152.6	5,074.6	13.9	17.4	68.00	113.8	905.7	521.5	495.4	26.04	20.023	
5,300.0	5,253.7	5,252.1	5,172.2	14.2	17.8	68.32	116.4	924.8	531.1	504.4	26.68	19.904	
5,400.0	5,352.4	5,351.6	5,269.8	14.5	18.2	68.62	119.1	943.9	540.8	513.5	27.32	19.791	
5,500.0	5,451.1	5,451.1	5,367.4	14.9	18.6	68.91	121.7	963.0	550.5	522.5	27.97	19.684	
5,600.0	5,549.9	5,550.6	5,465.0	15.2	19.0	69.19	124.4	982.2	560.2	531.5	28.61	19.581	
5,700.0	5,648.6	5,650.1	5,562.6	15.5	19.4	69.46	127.0	1,001.3	569.9	540.6	29.25	19.482	
5,800.0	5,747.4	5,749.6	5,660.2	15.8	19.7	69.73	129.6	1,020.4	579.6	549.7	29.89	19.388	
5,900.0	5,846.1	5,849.1	5,757.8	16.2	20.1	69.98	132.3	1,039.5	589.3	558.8	30.54	19.298	
6,000.0	5,944.9	5,948.6	5,855.4	16.5	20.5	70.23	134.9	1,058.7	599.1	567.9	31.18	19.211	
6,100.0	6,043.6	6,048.1	5,953.0	16.8	20.9	70.47	137.6	1,077.8	608.8	577.0	31.83	19.128	
6,200.0	6,142.4	6,147.6	6,050.6	17.1	21.3	70.70	140.2	1,096.9	618.6	586.1	32.47	19.049	
6,300.0	6,241.1	6,247.0	6,148.2	17.5	21.7	70.92	142.9	1,116.0	628.3	595.2	33.12	18.972	
6,400.0	6,339.9	6,346.5	6,245.8	17.8	22.0	71.14	145.5	1,135.2	638.1	604.4	33.77	18.899	
6,500.0	6,438.6	6,446.0	6,343.4	18.1	22.4	71.35	148.2	1,154.3	647.9	613.5	34.41	18.828	
6,600.0	6,537.3	6,545.5	6,441.0	18.4	22.8	71.55	150.8	1,173.4	657.7	622.7	35.06	18.760	
6,700.0	6,636.1	6,645.0	6,538.6	18.8	23.2	71.75	153.4	1,192.5	667.5	631.8	35.71	18.695	
6,800.0	6,734.8	6,744.5	6,636.2	19.1	23.6	71.94	156.1	1,211.7	677.3	641.0	36.36	18.631	
6,900.0	6,833.6	6,844.0	6,733.8	19.4	24.0	72.12	158.7	1,230.8	687.2	650.2	37.00	18.571	
7,000.0	6,932.3	6,943.5	6,831.4	19.7	24.4	72.31	161.4	1,249.9	697.0	659.3	37.65	18.512	
7,100.0	7,031.1	7,043.0	6,929.0	20.1	24.7	72.48	164.0	1,269.1	706.8	668.5	38.30	18.455	
7,190.5	7,120.5	7,272.3	7,148.7	20.4	25.7	70.44	206.0	1,312.4	709.3	670.1	39.15	18.116	
7,200.0	7,129.8	7,299.7	7,173.4	20.4	25.8	64.52	216.9	1,317.4	708.3	669.1	39.17	18.082 SF	
7,250.0	7,179.4	7,424.6	7,278.2	20.5	26.5	23.80	280.9	1,338.4	698.3	659.7	38.60	18.090	
7,300.0	7,228.8	7,513.3	7,343.1	20.6	27.0	-14.37	339.7	1,351.6	683.5	646.3	37.22	18.363	
7,350.0	7,277.9	7,571.7	7,380.7	20.7	27.3	-37.76	383.7	1,359.4	667.0	631.4	35.60	18.738	
7,400.0	7,326.1	7,608.2	7,401.8	20.7	27.6	-51.75	413.2	1,363.8	651.0	616.8	34.13	19.073	
7,450.0	7,373.2	7,629.7	7,413.4	20.7	27.7	-60.59	431.1	1,366.2	636.7	603.8	32.98	19.307	
7,500.0	7,418.7	7,640.7	7,419.1	20.7	27.8	-66.29	440.5	1,367.4	625.2	593.1	32.14	19.453	
7,550.0	7,462.4	7,644.4	7,420.9	20.6	27.8	-69.87	443.7	1,367.8	616.9	585.4	31.56	19.549	
7,600.0	7,503.8	7,642.7	7,420.1	20.5	27.8	-71.92	442.2	1,367.6	612.2	581.0	31.17	19.643	
7,640.5	7,535.6	7,638.4	7,417.9	20.5	27.8	-72.71	438.5	1,367.1	611.0	580.1	30.94	19.750	
7,650.0	7,542.8	7,637.0	7,417.2	20.5	27.8	-72.79	437.4	1,367.0	611.1	580.2	30.89	19.780	
7,700.0	7,578.8	7,628.4	7,412.7	20.4	27.7	-72.74	430.0	1,366.1	613.5	582.8	30.68	19.999	
7,750.0	7,611.8	7,617.4	7,406.9	20.3	27.6	-71.93	420.8	1,364.8	619.3	588.8	30.46	20.334	
7,800.0	7,641.5	7,600.0	7,397.2	20.2	27.5	-70.11	406.5	1,362.8	628.1	597.9	30.18	20.814	
7,850.0	7,667.6	7,590.3	7,391.7	20.2	27.5	-68.60	398.6	1,361.7	639.5	609.7	29.80	21.465	
7,900.0	7,689.9	7,574.8	7,382.6	20.2	27.4	-66.31	386.2	1,359.8	653.2	624.0	29.28	22.307	
7,950.0	7,708.2	7,550.0	7,367.2	20.1	27.2	-63.09	367.0	1,356.6	668.9	640.3	28.55	23.426	
8,000.0	7,722.5	7,550.0	7,367.2	20.2	27.2	-61.60	367.0	1,356.6	685.8	657.8	27.97	24.519	
8,050.0	7,732.6	7,523.3	7,349.9	20.2	27.0	-58.09	347.0	1,353.0	703.6	676.6	27.05	26.011	
8,100.0	7,738.4	7,500.0	7,334.0	20.3	26.9	-54.88	330.3	1,349.8	722.2	696.1	26.19	27.577	
8,142.5	7,740.0	7,488.7	7,326.1	20.4	26.8	-52.73	322.4	1,348.2	738.2	712.5	25.68	28.742	
8,200.0	7,740.0	7,467.6	7,310.8	20.5	26.7	-51.52	308.2	1,345.0	761.3	735.7	25.60	29.732	
8,300.0	7,740.0	7,434.8	7,286.2	20.9	26.5	-49.61	287.2	1,340.0	807.4	781.8	25.61	31.528	
8,400.0	7,740.0	7,400.0	7,258.7	21.4	26.3	-47.56	266.5	1,334.5	860.6	834.9	25.68	33.514	
8,442.5	7,740.0	7,400.0	7,258.7	21.7	26.3	-47.56	266.5	1,334.5	885.0	859.1	25.94	34.122	
8,500.0	7,740.0	7,381.4	7,243.5	22.1	26.2	-46.17	256.1	1,331.4	920.0	894.0	25.99	35.403	
8,600.0	7,740.0	7,350.0	7,217.2	22.8	26.1	-43.73	239.8	1,326.1	985.7	959.7	26.07	37.817	
8,700.0	7,740.0	7,350.0	7,217.2	23.6	26.1	-43.00	239.8	1,326.1	1,056.6	1,030.0	26.61	39.714	
8,800.0	7,740.0	7,322.2	7,193.3	24.5	26.0	-40.57	226.6	1,321.3	1,131.7	1,105.0	26.68	42.426	
8,842.5	7,740.0	7,300.0	7,173.7	25.0	25.8	-38.93	217.0	1,317.4	1,165.1	1,138.6	26.51	43.952	
8,900.0	7,740.0	7,300.0	7,173.7	25.5	25.8	-38.93	217.0	1,317.4	1,210.5	1,183.6	26.94	44.937	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2F-7H-E168 - Hz - Plan #3													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		
9,000.0	7,740.0	7,300.0	7,173.7	26.6	25.8	-38.93	217.0	1,317.4	1,291.8	1,264.1	27.72	46.606		
9,100.0	7,740.0	7,279.7	7,155.5	27.7	25.7	-37.83	208.8	1,313.8	1,375.1	1,347.0	28.15	48.848		
9,200.0	7,740.0	7,268.3	7,145.0	28.9	25.7	-37.21	204.5	1,311.7	1,460.2	1,431.5	28.75	50.791		
9,300.0	7,740.0	7,250.0	7,128.3	30.2	25.6	-36.25	198.1	1,308.4	1,547.0	1,517.7	29.21	52.955		
9,342.5	7,740.0	7,250.0	7,128.3	30.7	25.6	-36.25	198.1	1,308.4	1,584.1	1,554.5	29.57	53.576		
9,399.5	7,740.0	7,250.0	7,128.3	31.5	25.6	-37.10	198.1	1,308.4	1,634.3	1,603.9	30.39	53.775		
9,500.0	7,740.0	7,250.0	7,128.3	32.8	25.6	-37.10	198.1	1,308.4	1,723.7	1,692.4	31.28	55.110		
9,600.0	7,740.0	7,250.0	7,128.3	34.2	25.6	-37.10	198.1	1,308.4	1,813.8	1,781.6	32.18	56.371		
9,700.0	7,740.0	7,224.5	7,104.6	35.6	25.5	-35.77	190.0	1,303.6	1,904.2	1,871.7	32.46	58.656		
9,800.0	7,740.0	7,200.0	7,081.4	37.1	25.4	-34.53	183.3	1,299.1	1,996.1	1,963.3	32.74	60.960		
9,900.0	7,740.0	7,200.0	7,081.4	38.5	25.4	-34.53	183.3	1,299.1	2,088.1	2,054.5	33.62	62.102		
10,000.0	7,740.0	7,200.0	7,081.4	40.0	25.4	-34.53	183.3	1,299.1	2,180.8	2,146.3	34.51	63.187		
10,100.0	7,740.0	7,200.0	7,081.4	41.6	25.4	-34.53	183.3	1,299.1	2,274.1	2,238.7	35.41	64.219		
10,200.0	7,740.0	7,200.0	7,081.4	43.1	25.4	-34.53	183.3	1,299.1	2,368.0	2,331.7	36.32	65.201		
10,300.0	7,740.0	7,200.0	7,081.4	44.6	25.4	-34.53	183.3	1,299.1	2,462.4	2,425.1	37.23	66.135		
10,400.0	7,740.0	7,200.0	7,081.4	46.2	25.4	-34.53	183.3	1,299.1	2,557.2	2,519.0	38.15	67.024		
10,500.0	7,740.0	7,200.0	7,081.4	47.8	25.4	-34.53	183.3	1,299.1	2,652.3	2,613.3	39.08	67.871		
10,600.0	7,740.0	7,178.2	7,060.7	49.4	25.3	-33.46	178.1	1,295.0	2,747.4	2,708.1	39.28	69.950		
10,700.0	7,740.0	7,174.6	7,057.2	51.0	25.3	-33.29	177.4	1,294.3	2,843.0	2,802.9	40.06	70.968		
10,800.0	7,740.0	7,171.1	7,053.9	52.6	25.3	-33.12	176.6	1,293.6	2,938.9	2,898.1	40.85	71.947		
10,900.0	7,740.0	7,150.0	7,033.5	54.2	25.2	-32.12	172.7	1,289.6	3,035.4	2,994.4	41.00	74.041		
11,000.0	7,740.0	7,150.0	7,033.5	55.8	25.2	-32.12	172.7	1,289.6	3,131.7	3,089.8	41.89	74.768		
11,100.0	7,740.0	7,150.0	7,033.5	57.5	25.2	-32.12	172.7	1,289.6	3,228.2	3,185.4	42.78	75.464		
11,200.0	7,740.0	7,150.0	7,033.5	59.1	25.2	-32.12	172.7	1,289.6	3,324.9	3,281.2	43.67	76.131		
11,300.0	7,740.0	7,150.0	7,033.5	60.8	25.2	-32.12	172.7	1,289.6	3,421.8	3,377.2	44.57	76.771		
11,400.0	7,740.0	7,150.0	7,033.5	62.4	25.2	-32.12	172.7	1,289.6	3,518.8	3,473.4	45.47	77.385		
11,500.0	7,740.0	7,150.0	7,033.5	64.1	25.2	-32.12	172.7	1,289.6	3,616.1	3,569.7	46.37	77.975		
11,600.0	7,740.0	7,150.0	7,033.5	65.7	25.2	-32.12	172.7	1,289.6	3,713.4	3,666.2	47.28	78.542		
11,700.0	7,740.0	7,150.0	7,033.5	67.4	25.2	-32.12	172.7	1,289.6	3,810.9	3,762.8	48.19	79.087		
11,800.0	7,740.0	7,150.0	7,033.5	69.1	25.2	-32.12	172.7	1,289.6	3,908.6	3,859.5	49.10	79.611		
11,900.0	7,740.0	7,150.0	7,033.5	70.8	25.2	-32.12	172.7	1,289.6	4,006.3	3,956.3	50.01	80.115		
12,000.0	7,740.0	7,150.0	7,033.5	72.4	25.2	-32.12	172.7	1,289.6	4,104.2	4,053.3	50.92	80.601		
12,100.0	7,740.0	7,150.0	7,033.5	74.1	25.2	-32.12	172.7	1,289.6	4,202.2	4,150.3	51.83	81.070		
12,200.0	7,740.0	7,150.0	7,033.5	75.8	25.2	-32.12	172.7	1,289.6	4,300.2	4,247.5	52.75	81.522		
12,300.0	7,740.0	7,150.0	7,033.5	77.5	25.2	-32.12	172.7	1,289.6	4,398.4	4,344.7	53.67	81.958		
12,400.0	7,740.0	7,150.0	7,033.5	79.2	25.2	-32.12	172.7	1,289.6	4,496.6	4,442.0	54.58	82.378		
12,500.0	7,740.0	7,150.0	7,033.5	80.9	25.2	-32.12	172.7	1,289.6	4,594.9	4,539.4	55.50	82.785		
12,600.0	7,740.0	7,150.0	7,033.5	82.6	25.2	-32.12	172.7	1,289.6	4,693.3	4,636.8	56.42	83.178		
12,700.0	7,740.0	7,150.0	7,033.5	84.3	25.2	-32.12	172.7	1,289.6	4,791.7	4,734.4	57.35	83.558		
12,800.0	7,740.0	7,150.0	7,033.5	86.0	25.2	-32.12	172.7	1,289.6	4,890.2	4,831.9	58.27	83.925		
12,900.0	7,740.0	7,127.0	7,011.2	87.7	25.1	-31.07	169.3	1,285.2	4,988.3	4,930.4	57.86	86.219		
13,000.0	7,740.0	7,125.7	7,009.9	89.4	25.1	-31.01	169.1	1,284.9	5,086.8	5,028.1	58.68	86.690		
13,100.0	7,740.0	7,124.4	7,008.7	91.1	25.1	-30.95	168.9	1,284.7	5,185.4	5,125.9	59.50	87.148		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2G-7H-E168 - Hz - Plan #2														Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	90.23	-0.4	89.8	89.8						
100.0	100.0	100.0	100.0	0.2	0.2	90.23	-0.4	89.8	89.8	89.5	0.30	295.837			
200.0	200.0	200.0	200.0	0.3	0.3	90.23	-0.4	89.8	89.8	89.2	0.65	137.636			
233.3	233.3	233.3	233.3	0.4	0.4	90.23	-0.4	89.8	89.8	89.1	0.77	116.812 CC			
300.0	300.0	299.2	299.2	0.5	0.5	90.26	-0.4	90.0	90.1	89.1	1.00	90.006 ES			
400.0	400.0	397.7	397.7	0.7	0.7	90.43	-0.7	91.7	91.7	90.4	1.35	68.042			
500.0	500.0	496.0	496.0	0.8	0.9	90.77	-1.3	95.0	95.1	93.4	1.70	55.956			
600.0	600.0	594.3	594.1	1.0	1.0	91.24	-2.2	100.0	100.2	98.2	2.06	48.691			
700.0	700.0	692.3	691.8	1.2	1.2	91.79	-3.3	106.6	107.0	104.6	2.43	44.126			
800.0	800.0	790.0	789.2	1.4	1.5	92.38	-4.8	114.9	115.5	112.7	2.80	41.217			
900.0	900.0	887.5	886.2	1.5	1.7	92.99	-6.5	124.7	125.7	122.5	3.19	39.385			
1,000.0	1,000.0	984.5	982.5	1.7	1.9	93.58	-8.5	136.1	137.5	133.9	3.59	38.284			
1,100.0	1,100.0	1,081.3	1,078.3	1.9	2.2	43.26	-10.8	149.1	150.4	146.7	3.77	39.955			
1,200.0	1,200.0	1,177.7	1,173.6	2.1	2.5	44.30	-13.4	163.6	163.8	159.7	4.11	39.866			
1,300.0	1,299.9	1,273.8	1,268.3	2.3	2.8	45.58	-16.2	179.7	177.7	173.2	4.45	39.900			
1,400.0	1,399.7	1,369.5	1,362.4	2.4	3.2	47.04	-19.3	197.2	192.1	187.3	4.80	40.025			
1,500.0	1,499.4	1,464.8	1,455.8	2.6	3.5	48.62	-22.6	216.2	207.2	202.0	5.15	40.213			
1,600.0	1,598.9	1,559.8	1,548.4	2.8	3.9	50.29	-26.2	236.6	223.0	217.4	5.51	40.432			
1,700.0	1,698.3	1,654.3	1,640.3	3.1	4.3	52.00	-30.1	258.5	239.5	233.6	5.89	40.653			
1,800.0	1,797.4	1,748.4	1,731.4	3.3	4.8	53.73	-34.2	281.7	256.8	250.6	6.29	40.845			
1,908.5	1,904.7	1,855.8	1,835.1	3.6	5.3	55.55	-38.0	309.2	275.6	268.8	6.76	40.735			
2,000.0	1,995.0	1,946.8	1,923.0	3.8	5.7	56.86	-39.7	332.6	290.7	283.5	7.19	40.428			
2,100.0	2,093.8	2,049.2	2,022.0	4.1	6.2	57.97	-40.3	358.7	306.8	299.1	7.68	39.947			
2,200.0	2,192.5	2,153.3	2,123.2	4.4	6.6	59.06	-40.8	383.5	321.3	313.1	8.19	39.232			
2,300.0	2,291.3	2,253.7	2,221.0	4.7	7.1	60.11	-41.2	406.2	334.7	325.9	8.71	38.434			
2,400.0	2,390.0	2,352.7	2,317.4	5.0	7.5	61.07	-41.6	428.4	348.1	338.8	9.24	37.687			
2,500.0	2,488.8	2,451.6	2,413.8	5.3	7.9	61.95	-42.0	450.7	361.6	351.8	9.78	36.984			
2,600.0	2,587.5	2,550.5	2,510.2	5.6	8.3	62.77	-42.4	472.9	375.2	364.8	10.33	36.325			
2,700.0	2,686.3	2,649.5	2,606.6	5.9	8.8	63.53	-42.9	495.2	388.8	377.9	10.89	35.708			
2,800.0	2,785.0	2,748.4	2,703.0	6.2	9.2	64.24	-43.3	517.4	402.5	391.1	11.46	35.131			
2,900.0	2,883.8	2,847.3	2,799.4	6.5	9.6	64.91	-43.7	539.6	416.3	404.3	12.03	34.593			
3,000.0	2,982.5	2,946.3	2,895.8	6.8	10.1	65.53	-44.1	561.9	430.1	417.5	12.62	34.090			
3,100.0	3,081.3	3,045.2	2,992.2	7.2	10.5	66.11	-44.5	584.1	444.0	430.8	13.21	33.621			
3,200.0	3,180.0	3,144.1	3,088.6	7.5	10.9	66.66	-44.9	606.4	457.9	444.1	13.80	33.182			
3,300.0	3,278.7	3,243.1	3,185.0	7.8	11.3	67.18	-45.3	628.6	471.9	457.5	14.40	32.771			
3,400.0	3,377.5	3,342.0	3,281.4	8.1	11.8	67.66	-45.7	650.9	485.9	470.9	15.00	32.387			
3,500.0	3,476.2	3,441.0	3,377.8	8.4	12.2	68.12	-46.2	673.1	499.9	484.3	15.61	32.027			
3,600.0	3,575.0	3,539.9	3,474.2	8.7	12.6	68.55	-46.6	695.4	514.0	497.7	16.22	31.689			
3,700.0	3,673.7	3,638.8	3,570.6	9.1	13.1	68.96	-47.0	717.6	528.0	511.2	16.83	31.372			
3,800.0	3,772.5	3,737.8	3,667.0	9.4	13.5	69.35	-47.4	739.9	542.1	524.7	17.45	31.074			
3,900.0	3,871.2	3,836.7	3,763.4	9.7	13.9	69.72	-47.8	762.1	556.3	538.2	18.06	30.793			
4,000.0	3,970.0	3,935.6	3,859.8	10.0	14.4	70.07	-48.2	784.3	570.4	551.7	18.69	30.528			
4,100.0	4,068.7	4,034.6	3,956.2	10.3	14.8	70.41	-48.6	806.6	584.6	565.3	19.31	30.278			
4,200.0	4,167.5	4,133.5	4,052.6	10.7	15.2	70.73	-49.0	828.8	598.8	578.9	19.93	30.042			
4,300.0	4,266.2	4,232.4	4,149.0	11.0	15.7	71.03	-49.5	851.1	613.0	592.4	20.56	29.819			
4,400.0	4,364.9	4,331.4	4,245.4	11.3	16.1	71.32	-49.9	873.3	627.2	606.0	21.18	29.607			
4,500.0	4,463.7	4,430.3	4,341.8	11.6	16.5	71.60	-50.3	895.6	641.4	619.6	21.81	29.407			
4,600.0	4,562.4	4,529.2	4,438.2	11.9	17.0	71.86	-50.7	917.8	655.7	633.3	22.44	29.216			
4,700.0	4,661.2	4,628.2	4,534.6	12.3	17.4	72.12	-51.1	940.1	670.0	646.9	23.07	29.036			
4,800.0	4,759.9	4,727.1	4,631.0	12.6	17.8	72.36	-51.5	962.3	684.2	660.5	23.71	28.863			
4,900.0	4,858.7	4,826.0	4,727.4	12.9	18.2	72.59	-51.9	984.6	698.5	674.2	24.34	28.699			
5,000.0	4,957.4	4,925.0	4,823.8	13.2	18.7	72.82	-52.3	1,006.8	712.8	687.9	24.97	28.543			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2G-7H-E168 - Hz - Plan #2											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	5,056.2	5,023.9	4,920.2	13.6	19.1	73.03	-52.7	1,029.0	727.1	701.5	25.61	28.394	
5,200.0	5,154.9	5,122.8	5,016.6	13.9	19.5	73.24	-53.2	1,051.3	741.5	715.2	26.24	28.252	
5,300.0	5,253.7	5,221.8	5,113.0	14.2	20.0	73.44	-53.6	1,073.5	755.8	728.9	26.88	28.116	
5,400.0	5,352.4	5,320.7	5,209.4	14.5	20.4	73.63	-54.0	1,095.8	770.1	742.6	27.52	27.986	
5,500.0	5,451.1	5,419.6	5,305.8	14.9	20.8	73.81	-54.4	1,118.0	784.5	756.3	28.16	27.861	
5,600.0	5,549.9	5,518.6	5,402.2	15.2	21.3	73.99	-54.8	1,140.3	798.8	770.0	28.79	27.742	
5,700.0	5,648.6	5,617.5	5,498.6	15.5	21.7	74.16	-55.2	1,162.5	813.2	783.7	29.43	27.627	
5,800.0	5,747.4	5,716.5	5,595.0	15.8	22.1	74.33	-55.6	1,184.8	827.5	797.5	30.07	27.517	
5,900.0	5,846.1	5,815.4	5,691.4	16.2	22.6	74.49	-56.0	1,207.0	841.9	811.2	30.71	27.412	
6,000.0	5,944.9	5,914.3	5,787.8	16.5	23.0	74.64	-56.5	1,229.3	856.3	824.9	31.35	27.310	
6,100.0	6,043.6	6,013.3	5,884.2	16.8	23.4	74.79	-56.9	1,251.5	870.7	838.7	32.00	27.213	
6,200.0	6,142.4	6,112.2	5,980.6	17.1	23.9	74.94	-57.3	1,273.7	885.1	852.4	32.64	27.119	
6,300.0	6,241.1	6,211.1	6,077.0	17.5	24.3	75.08	-57.7	1,296.0	899.5	866.2	33.28	27.028	
6,400.0	6,339.9	6,310.1	6,173.4	17.8	24.7	75.21	-58.1	1,318.2	913.9	880.0	33.92	26.941	
6,500.0	6,438.6	6,409.0	6,269.8	18.1	25.2	75.34	-58.5	1,340.5	928.3	893.7	34.56	26.857	
6,600.0	6,537.3	6,507.9	6,366.2	18.4	25.6	75.47	-58.9	1,362.7	942.7	907.5	35.21	26.776	
6,700.0	6,636.1	6,606.9	6,462.6	18.8	26.0	75.60	-59.3	1,385.0	957.1	921.3	35.85	26.698	
6,800.0	6,734.8	6,705.8	6,559.0	19.1	26.5	75.72	-59.8	1,407.2	971.5	935.0	36.49	26.622	
6,900.0	6,833.6	6,804.7	6,655.4	19.4	26.9	75.83	-60.2	1,429.5	986.0	948.8	37.14	26.549	
7,000.0	6,932.3	6,903.7	6,751.8	19.7	27.3	75.95	-60.6	1,451.7	1,000.4	962.6	37.78	26.479	
7,100.0	7,031.1	7,002.6	6,848.2	20.1	27.8	76.05	-61.0	1,474.0	1,014.8	976.4	38.42	26.410	
7,190.5	7,120.5	7,092.2	6,935.5	20.4	28.2	76.15	-61.4	1,494.1	1,027.9	988.9	39.01	26.350	
7,200.0	7,129.8	7,101.5	6,944.6	20.4	28.2	71.09	-61.4	1,496.2	1,029.2	990.1	39.12	26.305	
7,250.0	7,179.4	7,151.2	6,993.1	20.5	28.4	36.21	-61.6	1,507.4	1,034.4	994.9	39.51	26.181 SF	
7,300.0	7,228.8	7,201.0	7,041.5	20.6	28.6	4.44	-61.8	1,518.6	1,036.8	997.2	39.54	26.222	
7,350.0	7,277.9	7,250.3	7,089.6	20.7	28.9	-13.53	-62.0	1,529.7	1,036.2	997.0	39.21	26.429	
7,400.0	7,326.1	8,291.2	7,740.0	20.7	33.5	-69.82	557.6	1,676.5	1,030.8	1,000.5	30.33	33.991	
7,450.0	7,373.2	8,276.0	7,740.0	20.7	33.4	-77.18	542.3	1,676.6	1,006.1	976.5	29.67	33.905	
7,500.0	7,418.7	8,256.7	7,740.0	20.7	33.3	-82.07	523.0	1,676.7	983.6	954.4	29.20	33.690	
7,550.0	7,462.4	8,176.3	7,736.0	20.6	32.8	-82.14	442.8	1,676.2	963.0	933.8	29.17	33.007	
7,600.0	7,503.8	8,088.2	7,719.3	20.5	32.4	-80.76	356.5	1,672.7	942.8	913.6	29.19	32.295	
7,650.0	7,542.8	8,031.5	7,701.7	20.5	32.1	-80.57	302.7	1,669.0	923.9	894.8	29.02	31.839	
7,700.0	7,578.8	7,987.4	7,684.6	20.4	31.9	-80.64	262.3	1,665.2	906.5	877.8	28.78	31.499	
7,750.0	7,611.8	7,949.7	7,667.6	20.3	31.7	-80.68	228.9	1,661.5	891.0	862.5	28.53	31.226	
7,800.0	7,641.5	7,915.7	7,650.4	20.2	31.6	-80.57	199.8	1,657.7	877.4	849.1	28.31	30.989	
7,850.0	7,667.6	7,883.9	7,632.8	20.2	31.5	-80.28	173.6	1,653.8	865.7	837.5	28.11	30.798	
7,900.0	7,689.9	7,853.6	7,614.8	20.2	31.3	-79.78	149.6	1,649.7	855.9	827.9	27.93	30.649	
7,950.0	7,708.2	7,824.4	7,596.3	20.1	31.2	-79.09	127.4	1,645.6	848.0	820.2	27.78	30.524	
8,000.0	7,722.5	7,796.0	7,577.2	20.2	31.1	-78.19	106.7	1,641.3	842.0	814.3	27.67	30.431	
8,050.0	7,732.6	7,768.1	7,557.6	20.2	31.0	-77.12	87.4	1,636.9	837.8	810.2	27.61	30.343	
8,100.0	7,738.4	7,740.6	7,537.4	20.3	30.9	-75.88	69.4	1,632.3	835.3	807.7	27.61	30.254	
8,142.5	7,740.0	7,717.6	7,519.8	20.4	30.8	-74.70	55.0	1,628.3	834.4	806.7	27.67	30.154	
8,153.3	7,740.0	7,711.8	7,515.3	20.4	30.8	-74.38	51.6	1,627.3	834.3	806.6	27.69	30.132	
8,200.0	7,740.0	7,688.7	7,497.0	20.5	30.7	-73.07	38.1	1,623.1	835.2	807.5	27.79	30.055	
8,300.0	7,740.0	7,650.0	7,465.2	20.9	30.5	-70.81	17.3	1,615.9	843.8	815.7	28.15	29.975	
8,400.0	7,740.0	7,614.1	7,434.5	21.4	30.4	-68.65	0.0	1,608.9	861.9	833.2	28.65	30.079	
8,442.5	7,740.0	7,600.0	7,422.2	21.7	30.3	-67.79	-6.2	1,606.1	872.4	843.5	28.89	30.193	
8,500.0	7,740.0	7,587.3	7,410.9	22.1	30.3	-66.93	-11.6	1,603.5	889.6	860.4	29.19	30.472	
8,600.0	7,740.0	7,565.0	7,391.0	22.8	30.2	-65.38	-20.4	1,599.0	927.6	897.9	29.75	31.175	
8,700.0	7,740.0	7,550.0	7,377.4	23.6	30.1	-64.21	-25.8	1,595.9	975.1	944.6	30.42	32.050	
8,800.0	7,740.0	7,530.2	7,359.2	24.5	30.0	-62.66	-32.5	1,591.7	1,030.7	999.6	31.07	33.175	
8,842.5	7,740.0	7,524.0	7,353.5	25.0	30.0	-62.12	-34.4	1,590.4	1,056.6	1,025.2	31.37	33.682	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2G-7H-E168 - Hz - Plan #2													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)				
8,900.0	7,740.0	7,516.3	7,346.3	25.5	30.0	-61.62	-36.7	1,588.8	1,093.3	1,061.4	31.91	34.265		
9,000.0	7,740.0	7,500.0	7,331.0	26.6	29.9	-60.59	-41.3	1,585.3	1,160.9	1,128.0	32.83	35.357		
9,100.0	7,740.0	7,500.0	7,331.0	27.7	29.9	-60.59	-41.3	1,585.3	1,232.6	1,198.6	34.00	36.255		
9,200.0	7,740.0	7,500.0	7,331.0	28.9	29.9	-60.59	-41.3	1,585.3	1,308.1	1,272.9	35.21	37.154		
9,300.0	7,740.0	7,476.4	7,308.8	30.2	29.8	-59.09	-47.2	1,580.2	1,386.1	1,350.0	36.10	38.400		
9,342.5	7,740.0	7,473.2	7,305.8	30.7	29.8	-58.89	-47.9	1,579.5	1,420.1	1,383.5	36.58	38.826		
9,399.5	7,740.0	7,469.2	7,301.9	31.5	29.8	-59.04	-48.8	1,578.6	1,466.3	1,428.9	37.43	39.170		
9,500.0	7,740.0	7,450.0	7,283.6	32.8	29.7	-57.85	-52.7	1,574.4	1,549.4	1,511.0	38.39	40.356		
9,600.0	7,740.0	7,450.0	7,283.6	34.2	29.7	-57.85	-52.7	1,574.4	1,633.6	1,593.9	39.68	41.165		
9,700.0	7,740.0	7,450.0	7,283.6	35.6	29.7	-57.85	-52.7	1,574.4	1,719.5	1,678.5	40.99	41.946		
9,800.0	7,740.0	7,450.0	7,283.6	37.1	29.7	-57.85	-52.7	1,574.4	1,806.8	1,764.5	42.32	42.695		
9,900.0	7,740.0	7,450.0	7,283.6	38.5	29.7	-57.85	-52.7	1,574.4	1,895.5	1,851.8	43.66	43.413		
10,000.0	7,740.0	7,450.0	7,283.6	40.0	29.7	-57.85	-52.7	1,574.4	1,985.2	1,940.1	45.02	44.099		
10,100.0	7,740.0	7,450.0	7,283.6	41.6	29.7	-57.85	-52.7	1,574.4	2,075.8	2,029.4	46.38	44.755		
10,200.0	7,740.0	7,450.0	7,283.6	43.1	29.7	-57.85	-52.7	1,574.4	2,167.2	2,119.5	47.76	45.381		
10,300.0	7,740.0	7,428.0	7,262.4	44.6	29.6	-56.49	-56.3	1,569.5	2,258.9	2,210.4	48.57	46.506		
10,400.0	7,740.0	7,425.0	7,259.6	46.2	29.6	-56.31	-56.7	1,568.8	2,351.6	2,301.7	49.86	47.161		
10,500.0	7,740.0	7,422.3	7,256.9	47.8	29.6	-56.14	-57.1	1,568.2	2,444.9	2,393.7	51.16	47.788		
10,600.0	7,740.0	7,400.0	7,235.4	49.4	29.5	-54.78	-59.7	1,563.3	2,539.0	2,487.1	51.88	48.941		
10,700.0	7,740.0	7,400.0	7,235.4	51.0	29.5	-54.78	-59.7	1,563.3	2,633.1	2,579.9	53.24	49.458		
10,800.0	7,740.0	7,400.0	7,235.4	52.6	29.5	-54.78	-59.7	1,563.3	2,727.6	2,673.0	54.60	49.952		
10,900.0	7,740.0	7,400.0	7,235.4	54.2	29.5	-54.78	-59.7	1,563.3	2,822.5	2,766.5	55.98	50.424		
11,000.0	7,740.0	7,400.0	7,235.4	55.8	29.5	-54.78	-59.7	1,563.3	2,917.7	2,860.4	57.35	50.876		
11,100.0	7,740.0	7,400.0	7,235.4	57.5	29.5	-54.78	-59.7	1,563.3	3,013.3	2,954.6	58.73	51.309		
11,200.0	7,740.0	7,400.0	7,235.4	59.1	29.5	-54.78	-59.7	1,563.3	3,109.1	3,049.0	60.11	51.724		
11,300.0	7,740.0	7,400.0	7,235.4	60.8	29.5	-54.78	-59.7	1,563.3	3,205.2	3,143.7	61.49	52.122		
11,400.0	7,740.0	7,400.0	7,235.4	62.4	29.5	-54.78	-59.7	1,563.3	3,301.5	3,238.6	62.88	52.503		
11,500.0	7,740.0	7,400.0	7,235.4	64.1	29.5	-54.78	-59.7	1,563.3	3,398.0	3,333.8	64.27	52.869		
11,600.0	7,740.0	7,400.0	7,235.4	65.7	29.5	-54.78	-59.7	1,563.3	3,494.8	3,429.1	65.67	53.220		
11,700.0	7,740.0	7,400.0	7,235.4	67.4	29.5	-54.78	-59.7	1,563.3	3,591.7	3,524.6	67.06	53.558		
11,800.0	7,740.0	7,400.0	7,235.4	69.1	29.5	-54.78	-59.7	1,563.3	3,688.7	3,620.3	68.46	53.882		
11,900.0	7,740.0	7,400.0	7,235.4	70.8	29.5	-54.78	-59.7	1,563.3	3,785.9	3,716.1	69.86	54.194		
12,000.0	7,740.0	7,400.0	7,235.4	72.4	29.5	-54.78	-59.7	1,563.3	3,883.3	3,812.0	71.26	54.495		
12,100.0	7,740.0	7,400.0	7,235.4	74.1	29.5	-54.78	-59.7	1,563.3	3,980.8	3,908.1	72.66	54.785		
12,200.0	7,740.0	7,400.0	7,235.4	75.8	29.5	-54.78	-59.7	1,563.3	4,078.4	4,004.3	74.07	55.064		
12,300.0	7,740.0	7,400.0	7,235.4	77.5	29.5	-54.78	-59.7	1,563.3	4,176.1	4,100.7	75.47	55.333		
12,400.0	7,740.0	7,400.0	7,235.4	79.2	29.5	-54.78	-59.7	1,563.3	4,274.0	4,197.1	76.88	55.592		
12,500.0	7,740.0	7,400.0	7,235.4	80.9	29.5	-54.78	-59.7	1,563.3	4,371.9	4,293.6	78.29	55.843		
12,600.0	7,740.0	7,400.0	7,235.4	82.6	29.5	-54.78	-59.7	1,563.3	4,469.9	4,390.2	79.70	56.085		
12,700.0	7,740.0	7,400.0	7,235.4	84.3	29.5	-54.78	-59.7	1,563.3	4,568.0	4,486.9	81.11	56.318		
12,800.0	7,740.0	7,400.0	7,235.4	86.0	29.5	-54.78	-59.7	1,563.3	4,666.2	4,583.7	82.52	56.545		
12,900.0	7,740.0	7,400.0	7,235.4	87.7	29.5	-54.78	-59.7	1,563.3	4,764.5	4,680.5	83.94	56.763		
13,000.0	7,740.0	7,400.0	7,235.4	89.4	29.5	-54.78	-59.7	1,563.3	4,862.8	4,777.5	85.35	56.975		
13,100.0	7,740.0	7,400.0	7,235.4	91.1	29.5	-54.78	-59.7	1,563.3	4,961.2	4,874.4	86.77	57.180		
13,200.0	7,740.0	7,400.0	7,235.4	92.8	29.5	-54.78	-59.7	1,563.3	5,059.7	4,971.5	88.18	57.378		
13,300.0	7,740.0	7,400.0	7,235.4	94.5	29.5	-54.78	-59.7	1,563.3	5,158.2	5,068.6	89.60	57.571		
13,400.0	7,740.0	7,400.0	7,235.4	96.2	29.5	-54.78	-59.7	1,563.3	5,256.8	5,165.8	91.02	57.757		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #3														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		
0.0	0.0	0.0	0.0	0.0	0.0	90.21	-0.4	99.9	99.9						
100.0	100.0	100.0	100.0	0.2	0.2	90.21	-0.4	99.9	99.9	99.6	0.30	329.014			
200.0	200.0	200.0	200.0	0.3	0.3	90.21	-0.4	99.9	99.9	99.3	0.65	153.071	CC, ES		
300.0	300.0	298.3	298.3	0.5	0.5	90.22	-0.4	100.8	100.8	99.8	1.00	100.837			
400.0	400.0	396.5	396.5	0.7	0.7	90.26	-0.5	103.3	103.3	102.0	1.35	76.635			
500.0	500.0	494.6	494.5	0.8	0.9	90.32	-0.6	107.5	107.6	105.9	1.70	63.223			
600.0	600.0	592.5	592.2	1.0	1.1	90.40	-0.8	113.4	113.6	111.6	2.06	55.078			
700.0	700.0	690.2	689.6	1.2	1.3	90.48	-1.0	120.9	121.3	118.9	2.43	49.882			
800.0	800.0	787.7	786.6	1.4	1.5	90.57	-1.3	130.0	130.7	127.9	2.81	46.491			
900.0	900.0	884.7	883.1	1.5	1.7	90.67	-1.6	140.8	141.8	138.6	3.20	44.274			
1,000.0	1,000.0	981.4	979.0	1.7	2.0	90.76	-2.0	153.1	154.5	150.9	3.61	42.852			
1,100.0	1,100.0	1,077.7	1,074.3	1.9	2.3	39.92	-2.5	167.0	168.3	164.5	3.76	44.817			
1,200.0	1,200.0	1,173.8	1,169.1	2.1	2.6	40.41	-2.9	182.4	182.4	178.3	4.10	44.508			
1,300.0	1,299.9	1,269.5	1,263.3	2.3	2.9	41.14	-3.5	199.4	196.9	192.5	4.44	44.320			
1,400.0	1,399.7	1,364.9	1,356.9	2.4	3.3	42.05	-4.1	217.9	211.8	207.0	4.79	44.217			
1,500.0	1,499.4	1,460.0	1,449.9	2.6	3.6	43.09	-4.7	237.8	227.1	222.0	5.14	44.167			
1,600.0	1,598.9	1,554.7	1,542.2	2.8	4.1	44.23	-5.4	259.3	242.9	237.4	5.50	44.140			
1,700.0	1,698.3	1,649.1	1,633.7	3.1	4.5	45.45	-6.1	282.1	259.2	253.4	5.88	44.110			
1,800.0	1,797.4	1,743.1	1,724.5	3.3	4.9	46.72	-6.8	306.3	276.1	269.9	6.27	44.050			
1,908.5	1,904.7	1,844.6	1,822.1	3.6	5.5	48.13	-7.7	334.2	295.1	288.4	6.72	43.923			
2,000.0	1,995.0	1,929.8	1,903.6	3.8	5.9	49.36	-8.5	358.9	312.2	305.1	7.12	43.855			
2,100.0	2,093.8	2,022.8	1,992.2	4.1	6.4	50.52	-9.4	387.3	332.5	324.9	7.57	43.920			
2,200.0	2,192.5	2,119.8	2,084.4	4.4	7.0	51.57	-10.3	417.6	353.7	345.6	8.05	43.961			
2,300.0	2,291.3	2,217.4	2,177.0	4.7	7.6	52.50	-11.3	448.1	375.0	366.5	8.54	43.933			
2,400.0	2,390.0	2,314.9	2,269.6	5.0	8.1	53.34	-12.2	478.6	396.4	387.4	9.04	43.860			
2,500.0	2,488.8	2,412.4	2,362.3	5.3	8.7	54.09	-13.2	509.1	417.9	408.3	9.55	43.752			
2,600.0	2,587.5	2,510.0	2,454.9	5.6	9.3	54.76	-14.2	539.6	439.4	429.3	10.07	43.621			
2,700.0	2,686.3	2,607.5	2,547.6	5.9	9.8	55.37	-15.1	570.1	461.0	450.4	10.60	43.473			
2,800.0	2,785.0	2,705.0	2,640.2	6.2	10.4	55.93	-16.1	600.6	482.6	471.4	11.14	43.314			
2,900.0	2,883.8	2,802.5	2,732.8	6.5	11.0	56.44	-17.0	631.1	504.2	492.6	11.69	43.149			
3,000.0	2,982.5	2,900.1	2,825.5	6.8	11.6	56.91	-18.0	661.6	525.9	513.7	12.24	42.981			
3,100.0	3,081.3	2,997.6	2,918.1	7.2	12.1	57.34	-18.9	692.1	547.7	534.9	12.79	42.813			
3,200.0	3,180.0	3,095.1	3,010.7	7.5	12.7	57.74	-19.9	722.5	569.4	556.1	13.35	42.645			
3,300.0	3,278.7	3,192.7	3,103.4	7.8	13.3	58.11	-20.9	753.0	591.2	577.3	13.92	42.480			
3,400.0	3,377.5	3,290.2	3,196.0	8.1	13.9	58.45	-21.8	783.5	613.0	598.5	14.49	42.319			
3,500.0	3,476.2	3,387.7	3,288.7	8.4	14.5	58.77	-22.8	814.0	634.8	619.8	15.06	42.162			
3,600.0	3,575.0	3,485.3	3,381.3	8.7	15.0	59.07	-23.7	844.5	656.7	641.1	15.63	42.009			
3,700.0	3,673.7	3,582.8	3,473.9	9.1	15.6	59.35	-24.7	875.0	678.5	662.3	16.21	41.861			
3,800.0	3,772.5	3,680.3	3,566.6	9.4	16.2	59.61	-25.6	905.5	700.4	683.6	16.79	41.717			
3,900.0	3,871.2	3,777.9	3,659.2	9.7	16.8	59.85	-26.6	936.0	722.3	704.9	17.37	41.579			
4,000.0	3,970.0	3,875.4	3,751.8	10.0	17.4	60.08	-27.6	966.5	744.2	726.2	17.96	41.445			
4,100.0	4,068.7	3,972.9	3,844.5	10.3	17.9	60.30	-28.5	997.0	766.1	747.6	18.54	41.317			
4,200.0	4,167.5	4,070.4	3,937.1	10.7	18.5	60.51	-29.5	1,027.5	788.0	768.9	19.13	41.193			
4,300.0	4,266.2	4,168.0	4,029.7	11.0	19.1	60.70	-30.4	1,058.0	809.9	790.2	19.72	41.073			
4,400.0	4,364.9	4,265.5	4,122.4	11.3	19.7	60.89	-31.4	1,088.4	831.9	811.6	20.31	40.958			
4,500.0	4,463.7	4,363.0	4,215.0	11.6	20.3	61.06	-32.3	1,118.9	853.8	832.9	20.90	40.847			
4,600.0	4,562.4	4,460.6	4,307.7	11.9	20.8	61.23	-33.3	1,149.4	875.8	854.3	21.50	40.740			
4,700.0	4,661.2	4,558.1	4,400.3	12.3	21.4	61.39	-34.3	1,179.9	897.7	875.6	22.09	40.638			
4,800.0	4,759.9	4,655.6	4,492.9	12.6	22.0	61.54	-35.2	1,210.4	919.7	897.0	22.69	40.539			
4,900.0	4,858.7	4,753.2	4,585.6	12.9	22.6	61.68	-36.2	1,240.9	941.7	918.4	23.28	40.443			
5,000.0	4,957.4	4,850.7	4,678.2	13.2	23.2	61.82	-37.1	1,271.4	963.6	939.8	23.88	40.351			
5,100.0	5,056.2	4,948.2	4,770.8	13.6	23.7	61.95	-38.1	1,301.9	985.6	961.1	24.48	40.263			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #3											Offset Site Error: 0.0 ft		
Survey Program: O-Geolink MWD											Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis		Separation Factor
5,200.0	5,154.9	5,045.8	4,863.5	13.9	24.3	62.07	-39.0	1,332.4	1,007.6	982.5	25.08	40.177	
5,300.0	5,253.7	5,143.3	4,956.1	14.2	24.9	62.19	-40.0	1,362.9	1,029.6	1,003.9	25.68	40.095	
5,400.0	5,352.4	5,240.8	5,048.7	14.5	25.5	62.31	-41.0	1,393.4	1,051.6	1,025.3	26.28	40.015	
5,500.0	5,451.1	5,338.3	5,141.4	14.9	26.1	62.42	-41.9	1,423.9	1,073.6	1,046.7	26.88	39.938	
5,600.0	5,549.9	5,435.9	5,234.0	15.2	26.7	62.52	-42.9	1,454.3	1,095.6	1,068.1	27.48	39.864	
5,700.0	5,648.6	5,533.4	5,326.7	15.5	27.2	62.63	-43.8	1,484.8	1,117.6	1,089.5	28.09	39.792	
5,800.0	5,747.4	5,630.9	5,419.3	15.8	27.8	62.72	-44.8	1,515.3	1,139.6	1,110.9	28.69	39.723	
5,900.0	5,846.1	5,728.5	5,511.9	16.2	28.4	62.82	-45.7	1,545.8	1,161.6	1,132.3	29.29	39.655	
6,000.0	5,944.9	5,826.0	5,604.6	16.5	29.0	62.91	-46.7	1,576.3	1,183.6	1,153.7	29.90	39.590	
6,100.0	6,043.6	5,923.5	5,697.2	16.8	29.6	62.99	-47.7	1,606.8	1,205.6	1,175.1	30.50	39.528	
6,200.0	6,142.4	6,021.1	5,789.8	17.1	30.1	63.08	-48.6	1,637.3	1,227.6	1,196.5	31.11	39.467	
6,300.0	6,241.1	6,118.6	5,882.5	17.5	30.7	63.16	-49.6	1,667.8	1,249.6	1,217.9	31.71	39.408	
6,400.0	6,339.9	6,216.1	5,975.1	17.8	31.3	63.24	-50.5	1,698.3	1,271.7	1,239.4	32.32	39.351	
6,500.0	6,438.6	6,313.7	6,067.8	18.1	31.9	63.31	-51.5	1,728.8	1,293.7	1,260.8	32.92	39.295	
6,600.0	6,537.3	6,411.2	6,160.4	18.4	32.5	63.39	-52.4	1,759.3	1,315.7	1,282.2	33.53	39.241	
6,700.0	6,636.1	6,508.7	6,253.0	18.8	33.1	63.46	-53.4	1,789.8	1,337.7	1,303.6	34.14	39.189	
6,800.0	6,734.8	6,606.2	6,345.7	19.1	33.6	63.53	-54.4	1,820.3	1,359.8	1,325.0	34.74	39.139	
6,900.0	6,833.6	6,703.8	6,438.3	19.4	34.2	63.59	-55.3	1,850.7	1,381.8	1,346.5	35.35	39.090	
7,000.0	6,932.3	6,801.3	6,530.9	19.7	34.8	63.66	-56.3	1,881.2	1,403.8	1,367.9	35.96	39.042	
7,100.0	7,031.1	6,898.8	6,623.6	20.1	35.4	63.72	-57.2	1,911.7	1,425.9	1,389.3	36.57	38.995	
7,190.5	7,120.5	6,987.1	6,707.4	20.4	35.9	63.77	-58.1	1,939.3	1,445.8	1,408.7	37.12	38.954	
7,200.0	7,129.8	6,996.4	6,716.2	20.4	36.0	58.80	-58.2	1,942.2	1,447.9	1,410.6	37.29	38.832 SF	
7,250.0	7,179.4	8,330.6	7,500.0	20.5	41.7	-7.56	708.8	2,125.6	1,456.1	1,423.6	32.49	44.819	
7,300.0	7,228.8	8,327.6	7,500.0	20.6	41.7	-40.86	705.8	2,125.9	1,439.7	1,408.0	31.76	45.337	
7,350.0	7,277.9	8,320.3	7,500.0	20.7	41.6	-59.58	698.5	2,126.6	1,425.1	1,393.9	31.18	45.709	
7,400.0	7,326.1	8,308.7	7,500.0	20.7	41.6	-69.74	687.0	2,127.7	1,412.4	1,381.7	30.73	45.956	
7,450.0	7,373.2	8,292.9	7,500.0	20.7	41.5	-75.68	671.2	2,129.2	1,401.7	1,371.3	30.41	46.098	
7,500.0	7,418.7	8,273.0	7,500.0	20.7	41.4	-79.32	651.4	2,131.1	1,392.9	1,362.7	30.17	46.163	
7,550.0	7,462.4	8,249.2	7,500.0	20.6	41.3	-81.56	627.7	2,133.4	1,385.9	1,355.9	29.99	46.208	
7,600.0	7,503.8	8,221.6	7,500.0	20.5	41.2	-82.86	600.3	2,136.0	1,380.7	1,350.8	29.84	46.272	
7,650.0	7,542.8	8,190.6	7,500.0	20.5	41.1	-83.50	569.4	2,139.0	1,377.1	1,347.4	29.70	46.372	
7,700.0	7,578.8	8,156.2	7,500.0	20.4	41.0	-83.67	535.2	2,142.3	1,374.8	1,345.3	29.55	46.518	
7,750.0	7,611.8	8,082.3	7,496.4	20.3	40.8	-82.43	461.7	2,148.2	1,373.4	1,344.0	29.34	46.816	
7,800.0	7,641.5	8,010.3	7,484.3	20.2	40.6	-80.99	390.8	2,151.0	1,371.9	1,342.9	29.06	47.219	
7,850.0	7,667.6	7,948.7	7,467.3	20.2	40.4	-79.66	331.6	2,151.2	1,370.7	1,341.9	28.74	47.686	
7,900.0	7,689.9	7,894.4	7,447.5	20.2	40.2	-78.41	281.1	2,149.5	1,369.7	1,341.3	28.43	48.179	
7,950.0	7,708.2	7,845.5	7,425.8	20.1	40.1	-77.20	237.4	2,146.6	1,369.1	1,341.0	28.13	48.676	
8,000.0	7,722.5	7,800.7	7,402.9	20.2	39.9	-76.02	199.1	2,142.8	1,368.8	1,340.9	27.86	49.123	
8,024.3	7,728.0	7,780.1	7,391.4	20.2	39.9	-75.46	182.1	2,140.7	1,368.7	1,341.0	27.77	49.282	
8,050.0	7,732.6	7,759.0	7,379.1	20.2	39.8	-74.86	165.1	2,138.3	1,368.8	1,341.1	27.68	49.454	
8,100.0	7,738.4	7,719.7	7,354.7	20.3	39.6	-73.71	134.8	2,133.2	1,369.0	1,341.4	27.59	49.616	
8,142.5	7,740.0	7,687.8	7,333.5	20.4	39.5	-72.73	111.5	2,128.4	1,369.4	1,341.8	27.62	49.579	
8,200.0	7,740.0	7,648.5	7,305.7	20.5	39.4	-71.52	84.4	2,121.9	1,370.6	1,342.9	27.74	49.416	
8,300.0	7,740.0	7,592.6	7,263.4	20.9	39.2	-69.67	49.4	2,111.4	1,376.2	1,348.1	28.11	48.955	
8,400.0	7,740.0	7,550.0	7,229.2	21.4	39.0	-68.18	25.7	2,102.5	1,387.0	1,358.3	28.66	48.394	
8,442.5	7,740.0	7,533.2	7,215.3	21.7	38.9	-67.57	17.1	2,098.7	1,393.2	1,364.3	28.94	48.145	
8,500.0	7,740.0	7,514.1	7,199.2	22.1	38.8	-66.83	7.8	2,094.4	1,403.6	1,374.3	29.24	48.002	
8,600.0	7,740.0	7,485.7	7,174.7	22.8	38.7	-65.68	-5.0	2,087.6	1,427.4	1,397.6	29.83	47.845	
8,700.0	7,740.0	7,462.1	7,154.0	23.6	38.6	-64.64	-14.7	2,081.7	1,458.5	1,428.0	30.50	47.826	
8,800.0	7,740.0	7,450.0	7,143.3	24.5	38.5	-64.00	-19.3	2,078.6	1,496.6	1,465.3	31.28	47.842	
8,842.5	7,740.0	7,434.6	7,129.5	25.0	38.5	-63.32	-24.8	2,074.6	1,514.7	1,483.1	31.56	47.987	
8,900.0	7,740.0	7,425.1	7,120.9	25.5	38.4	-62.95	-28.0	2,072.1	1,540.9	1,508.7	32.13	47.954	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #3											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	
9,000.0	7,740.0	7,400.0	7,098.0	26.6	38.3	-61.96	-35.8	2,065.4	1,590.1	1,557.0	33.09	48.058	
9,100.0	7,740.0	7,400.0	7,098.0	27.7	38.3	-61.96	-35.8	2,065.4	1,643.6	1,609.3	34.27	47.959	
9,200.0	7,740.0	7,400.0	7,098.0	28.9	38.3	-61.96	-35.8	2,065.4	1,701.2	1,665.7	35.50	47.926	
9,300.0	7,740.0	7,377.3	7,077.1	30.2	38.2	-61.07	-42.0	2,059.1	1,762.3	1,725.7	36.55	48.210	
9,342.5	7,740.0	7,373.5	7,073.6	30.7	38.2	-60.92	-42.9	2,058.0	1,789.3	1,752.2	37.06	48.281	
9,399.5	7,740.0	7,368.8	7,069.2	31.5	38.1	-60.97	-44.1	2,056.7	1,826.3	1,788.3	37.92	48.166	
9,500.0	7,740.0	7,350.0	7,051.7	32.8	38.0	-60.22	-48.2	2,051.3	1,893.5	1,854.5	39.04	48.504	
9,600.0	7,740.0	7,350.0	7,051.7	34.2	38.0	-60.22	-48.2	2,051.3	1,963.0	1,922.6	40.36	48.633	
9,700.0	7,740.0	7,350.0	7,051.7	35.6	38.0	-60.22	-48.2	2,051.3	2,035.1	1,993.3	41.71	48.791	
9,800.0	7,740.0	7,350.0	7,051.7	37.1	38.0	-60.22	-48.2	2,051.3	2,109.4	2,066.3	43.07	48.973	
9,900.0	7,740.0	7,350.0	7,051.7	38.5	38.0	-60.22	-48.2	2,051.3	2,185.7	2,141.3	44.45	49.174	
10,000.0	7,740.0	7,350.0	7,051.7	40.0	38.0	-60.22	-48.2	2,051.3	2,263.9	2,218.1	45.84	49.389	
10,100.0	7,740.0	7,329.0	7,032.0	41.6	37.9	-59.40	-52.1	2,045.3	2,343.4	2,296.5	46.94	49.922	
10,200.0	7,740.0	7,325.1	7,028.3	43.1	37.9	-59.24	-52.8	2,044.1	2,424.6	2,376.3	48.28	50.217	
10,300.0	7,740.0	7,321.6	7,025.0	44.6	37.9	-59.10	-53.4	2,043.1	2,507.2	2,457.5	49.63	50.515	
10,400.0	7,740.0	7,300.0	7,004.6	46.2	37.8	-58.25	-56.3	2,036.7	2,591.2	2,540.5	50.69	51.122	
10,500.0	7,740.0	7,300.0	7,004.6	47.8	37.8	-58.25	-56.3	2,036.7	2,676.0	2,623.9	52.09	51.370	
10,600.0	7,740.0	7,300.0	7,004.6	49.4	37.8	-58.25	-56.3	2,036.7	2,761.7	2,708.2	53.50	51.617	
10,700.0	7,740.0	7,300.0	7,004.6	51.0	37.8	-58.25	-56.3	2,036.7	2,848.4	2,793.5	54.92	51.863	
10,800.0	7,740.0	7,300.0	7,004.6	52.6	37.8	-58.25	-56.3	2,036.7	2,936.0	2,879.6	56.34	52.108	
10,900.0	7,740.0	7,300.0	7,004.6	54.2	37.8	-58.25	-56.3	2,036.7	3,024.3	2,966.5	57.77	52.349	
11,000.0	7,740.0	7,300.0	7,004.6	55.8	37.8	-58.25	-56.3	2,036.7	3,113.3	3,054.1	59.20	52.587	
11,100.0	7,740.0	7,300.0	7,004.6	57.5	37.8	-58.25	-56.3	2,036.7	3,203.0	3,142.4	60.64	52.820	
11,200.0	7,740.0	7,300.0	7,004.6	59.1	37.8	-58.25	-56.3	2,036.7	3,293.3	3,231.2	62.08	53.050	
11,300.0	7,740.0	7,300.0	7,004.6	60.8	37.8	-58.25	-56.3	2,036.7	3,384.1	3,320.6	63.52	53.275	
11,400.0	7,740.0	7,300.0	7,004.6	62.4	37.8	-58.25	-56.3	2,036.7	3,475.4	3,410.4	64.97	53.496	
11,500.0	7,740.0	7,300.0	7,004.6	64.1	37.8	-58.25	-56.3	2,036.7	3,567.2	3,500.8	66.41	53.711	
11,600.0	7,740.0	7,300.0	7,004.6	65.7	37.8	-58.25	-56.3	2,036.7	3,659.4	3,591.6	67.86	53.922	
11,700.0	7,740.0	7,300.0	7,004.6	67.4	37.8	-58.25	-56.3	2,036.7	3,752.0	3,682.7	69.32	54.128	
11,800.0	7,740.0	7,300.0	7,004.6	69.1	37.8	-58.25	-56.3	2,036.7	3,845.0	3,774.2	70.77	54.329	
11,900.0	7,740.0	7,300.0	7,004.6	70.8	37.8	-58.25	-56.3	2,036.7	3,938.3	3,866.1	72.23	54.525	
12,000.0	7,740.0	7,300.0	7,004.6	72.4	37.8	-58.25	-56.3	2,036.7	4,032.0	3,958.3	73.69	54.717	
12,100.0	7,740.0	7,300.0	7,004.6	74.1	37.8	-58.25	-56.3	2,036.7	4,125.9	4,050.8	75.15	54.904	
12,200.0	7,740.0	7,300.0	7,004.6	75.8	37.8	-58.25	-56.3	2,036.7	4,220.2	4,143.6	76.61	55.086	
12,300.0	7,740.0	7,300.0	7,004.6	77.5	37.8	-58.25	-56.3	2,036.7	4,314.7	4,236.6	78.07	55.263	
12,400.0	7,740.0	7,300.0	7,004.6	79.2	37.8	-58.25	-56.3	2,036.7	4,409.4	4,329.8	79.54	55.436	
12,500.0	7,740.0	7,300.0	7,004.6	80.9	37.8	-58.25	-56.3	2,036.7	4,504.3	4,423.3	81.01	55.605	
12,600.0	7,740.0	7,300.0	7,004.6	82.6	37.8	-58.25	-56.3	2,036.7	4,599.5	4,517.0	82.47	55.770	
12,700.0	7,740.0	7,300.0	7,004.6	84.3	37.8	-58.25	-56.3	2,036.7	4,694.9	4,610.9	83.94	55.930	
12,800.0	7,740.0	7,277.8	6,983.6	86.0	37.6	-57.37	-58.6	2,030.0	4,790.0	4,705.3	84.70	56.553	
12,900.0	7,740.0	7,277.0	6,982.7	87.7	37.6	-57.34	-58.6	2,029.7	4,885.7	4,799.6	86.13	56.727	
13,000.0	7,740.0	7,276.1	6,981.9	89.4	37.6	-57.31	-58.7	2,029.5	4,981.6	4,894.0	87.55	56.896	
13,100.0	7,740.0	7,275.3	6,981.2	91.1	37.6	-57.27	-58.8	2,029.2	5,077.6	4,988.6	88.98	57.061	
13,200.0	7,740.0	7,274.5	6,980.4	92.8	37.6	-57.24	-58.8	2,029.0	5,173.8	5,083.3	90.41	57.222	
13,300.0	7,740.0	7,273.8	6,979.7	94.5	37.6	-57.21	-58.9	2,028.8	5,270.1	5,178.2	91.85	57.379	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2A-7H-E168 - Hz - Plan #2													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	-89.96	0.4	-488.1	488.1					
100.0	100.0	100.0	100.0	0.2	0.2	-89.96	0.4	-488.1	488.1	487.8	0.30	1,607.276		
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.4	-488.1	488.1	487.5	0.65	747.771	CC	
200.3	200.3	200.3	200.3	0.3	0.3	-89.96	0.4	-488.1	488.1	487.5	0.65	746.577		
300.0	300.0	300.0	300.0	0.5	0.5	-89.85	1.2	-488.1	488.1	487.1	1.00	487.059		
400.0	400.0	399.9	399.9	0.7	0.7	-89.55	3.9	-488.1	488.1	486.8	1.35	360.716		
500.0	500.0	499.7	499.6	0.8	0.9	-89.04	8.2	-488.1	488.2	486.5	1.71	285.906		
600.0	600.0	599.3	599.0	1.0	1.1	-88.32	14.3	-488.1	488.3	486.3	2.07	236.271		
700.0	700.0	699.0	698.4	1.2	1.3	-87.45	21.7	-488.1	488.6	486.2	2.43	201.034	ES	
800.0	800.0	798.7	797.8	1.4	1.5	-86.57	29.2	-488.1	489.0	486.2	2.80	174.835		
900.0	900.0	898.4	897.2	1.5	1.7	-85.70	36.7	-488.1	489.5	486.3	3.17	154.636		
1,000.0	1,000.0	998.1	996.7	1.7	1.9	-84.82	44.3	-488.1	490.1	486.6	3.54	138.608		
1,100.0	1,100.0	1,097.9	1,096.1	1.9	2.1	-135.03	51.8	-488.1	491.5	487.5	4.02	122.335		
1,200.0	1,200.0	1,197.7	1,195.6	2.1	2.3	-134.35	59.3	-488.1	494.2	489.7	4.41	112.150		
1,300.0	1,299.9	1,297.5	1,295.2	2.3	2.6	-133.82	66.8	-488.1	498.1	493.3	4.80	103.841		
1,400.0	1,399.7	1,397.3	1,394.7	2.4	2.8	-133.43	74.4	-488.1	503.3	498.1	5.19	96.963		
1,500.0	1,499.4	1,497.1	1,494.2	2.6	3.0	-133.19	81.9	-488.1	509.7	504.1	5.59	91.196		
1,600.0	1,598.9	1,596.8	1,593.6	2.8	3.2	-133.08	89.4	-488.1	517.2	511.3	5.99	86.307		
1,700.0	1,698.3	1,696.4	1,693.0	3.1	3.4	-133.10	96.9	-488.1	526.0	519.6	6.41	82.126		
1,800.0	1,797.4	1,795.9	1,792.2	3.3	3.6	-133.25	104.4	-488.1	536.0	529.2	6.83	78.524		
1,908.5	1,904.7	1,903.6	1,899.6	3.6	3.9	-133.54	112.6	-488.1	548.2	540.9	7.29	75.157		
2,000.0	1,995.0	1,994.4	1,990.1	3.8	4.1	-133.91	119.4	-488.1	559.0	551.3	7.70	72.630		
2,100.0	2,093.8	2,093.6	2,089.1	4.1	4.3	-134.30	126.9	-488.1	571.0	562.8	8.14	70.128		
2,200.0	2,192.5	2,192.8	2,188.0	4.4	4.5	-134.68	134.4	-488.1	582.9	574.3	8.59	67.866		
2,300.0	2,291.3	2,292.1	2,286.9	4.7	4.7	-135.04	141.9	-488.1	594.9	585.8	9.04	65.816		
2,400.0	2,390.0	2,391.3	2,385.8	5.0	4.9	-135.38	149.4	-488.1	606.9	597.4	9.49	63.953		
2,500.0	2,488.8	2,490.5	2,484.8	5.3	5.1	-135.72	156.8	-488.1	618.9	608.9	9.94	62.254		
2,600.0	2,587.5	2,589.7	2,583.7	5.6	5.4	-136.04	164.3	-488.1	630.9	620.5	10.39	60.700		
2,700.0	2,686.3	2,688.9	2,682.6	5.9	5.6	-136.34	171.8	-488.1	642.9	632.1	10.85	59.274		
2,800.0	2,785.0	2,788.1	2,781.6	6.2	5.8	-136.64	179.3	-488.1	655.0	643.7	11.30	57.963		
2,900.0	2,883.8	2,887.3	2,880.5	6.5	6.0	-136.93	186.8	-488.1	667.1	655.3	11.75	56.754		
3,000.0	2,982.5	2,986.6	2,979.4	6.8	6.2	-137.20	194.3	-488.1	679.2	667.0	12.21	55.635		
3,100.0	3,081.3	3,085.8	3,078.4	7.2	6.4	-137.47	201.7	-488.1	691.3	678.6	12.66	54.599		
3,200.0	3,180.0	3,185.0	3,177.3	7.5	6.7	-137.72	209.2	-488.1	703.4	690.3	13.11	53.635		
3,300.0	3,278.7	3,284.2	3,276.2	7.8	6.9	-137.97	216.7	-488.1	715.6	702.0	13.57	52.738		
3,400.0	3,377.5	3,383.4	3,375.2	8.1	7.1	-138.21	224.2	-488.1	727.7	713.7	14.02	51.901		
3,500.0	3,476.2	3,482.6	3,474.1	8.4	7.3	-138.44	231.7	-488.1	739.9	725.4	14.47	51.117		
3,600.0	3,575.0	3,581.8	3,573.0	8.7	7.5	-138.67	239.2	-488.1	752.1	737.1	14.93	50.384		
3,700.0	3,673.7	3,681.0	3,671.9	9.1	7.7	-138.89	246.7	-488.1	764.2	748.9	15.38	49.695		
3,800.0	3,772.5	3,780.3	3,770.9	9.4	8.0	-139.10	254.1	-488.1	776.4	760.6	15.83	49.047		
3,900.0	3,871.2	3,879.5	3,869.8	9.7	8.2	-139.30	261.6	-488.1	788.6	772.4	16.28	48.437		
4,000.0	3,970.0	3,978.7	3,968.7	10.0	8.4	-139.50	269.1	-488.1	800.9	784.1	16.73	47.861		
4,100.0	4,068.7	4,077.9	4,067.7	10.3	8.6	-139.69	276.6	-488.1	813.1	795.9	17.18	47.317		
4,200.0	4,167.5	4,177.1	4,166.6	10.7	8.8	-139.88	284.1	-488.1	825.3	807.7	17.63	46.803		
4,300.0	4,266.2	4,276.3	4,265.5	11.0	9.0	-140.06	291.6	-488.1	837.6	819.5	18.08	46.315		
4,400.0	4,364.9	4,375.5	4,364.5	11.3	9.3	-140.23	299.0	-488.1	849.8	831.3	18.53	45.853		
4,500.0	4,463.7	4,474.8	4,463.4	11.6	9.5	-140.40	306.5	-488.1	862.1	843.1	18.98	45.414		
4,600.0	4,562.4	4,574.0	4,562.3	11.9	9.7	-140.57	314.0	-488.1	874.4	854.9	19.43	44.996		
4,700.0	4,661.2	4,673.2	4,661.3	12.3	9.9	-140.73	321.5	-488.1	886.6	866.7	19.88	44.598		
4,800.0	4,759.9	4,772.4	4,760.2	12.6	10.1	-140.89	329.0	-488.1	898.9	878.6	20.33	44.219		
4,900.0	4,858.7	4,871.6	4,859.1	12.9	10.3	-141.04	336.5	-488.1	911.2	890.4	20.78	43.857		
5,000.0	4,957.4	4,970.8	4,958.0	13.2	10.6	-141.19	343.9	-488.1	923.5	902.3	21.22	43.512		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2A-7H-E168 - Hz - Plan #2											Offset Site Error: 0.0 ft		
Survey Program: O-Geolink MWD											Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,100.0	5,056.2	5,070.0	5,057.0	13.6	10.8	-141.33	351.4	-488.1	935.8	914.1	21.67	43.181	
5,200.0	5,154.9	5,169.2	5,155.9	13.9	11.0	-141.47	358.9	-488.1	948.1	926.0	22.12	42.865	
5,300.0	5,253.7	5,268.5	5,254.8	14.2	11.2	-141.61	366.4	-488.1	960.4	937.8	22.56	42.562	
5,400.0	5,352.4	5,367.7	5,353.8	14.5	11.4	-141.74	373.9	-488.1	972.7	949.7	23.01	42.272	
5,500.0	5,451.1	5,466.9	5,452.7	14.9	11.6	-141.88	381.4	-488.1	985.0	961.6	23.46	41.994	
5,600.0	5,549.9	5,566.1	5,551.6	15.2	11.9	-142.00	388.9	-488.1	997.4	973.5	23.90	41.727	
5,700.0	5,648.6	5,665.3	5,650.6	15.5	12.1	-142.13	396.3	-488.1	1,009.7	985.3	24.35	41.470	
5,800.0	5,747.4	5,764.5	5,749.5	15.8	12.3	-142.25	403.8	-488.1	1,022.0	997.2	24.79	41.223	
5,900.0	5,846.1	5,863.7	5,848.4	16.2	12.5	-142.37	411.3	-488.1	1,034.4	1,009.1	25.24	40.985	
6,000.0	5,944.9	5,963.0	5,947.4	16.5	12.7	-142.48	418.8	-488.1	1,046.7	1,021.0	25.68	40.756	
6,100.0	6,043.6	6,062.2	6,046.3	16.8	12.9	-142.59	426.3	-488.1	1,059.1	1,032.9	26.13	40.536	
6,200.0	6,142.4	6,161.4	6,145.2	17.1	13.2	-142.70	433.8	-488.1	1,071.4	1,044.8	26.57	40.323	
6,300.0	6,241.1	6,260.6	6,244.1	17.5	13.4	-142.81	441.2	-488.1	1,083.8	1,056.7	27.01	40.118	
6,400.0	6,339.9	6,359.8	6,343.1	17.8	13.6	-142.92	448.7	-488.1	1,096.1	1,068.7	27.46	39.920	
6,500.0	6,438.6	6,459.0	6,442.0	18.1	13.8	-143.02	456.2	-488.1	1,108.5	1,080.6	27.90	39.729	
6,600.0	6,537.3	6,558.2	6,540.9	18.4	14.0	-143.12	463.7	-488.1	1,120.9	1,092.5	28.34	39.544	
6,700.0	6,636.1	6,657.4	6,639.9	18.8	14.2	-143.22	471.2	-488.1	1,133.2	1,104.4	28.79	39.366	
6,800.0	6,734.8	6,756.7	6,738.8	19.1	14.5	-143.32	478.7	-488.1	1,145.6	1,116.4	29.23	39.193	
6,900.0	6,833.6	6,855.9	6,837.7	19.4	14.7	-143.41	486.1	-488.1	1,158.0	1,128.3	29.67	39.025	
7,000.0	6,932.3	6,955.1	6,936.7	19.7	14.9	-143.50	493.6	-488.1	1,170.3	1,140.2	30.11	38.863	
7,100.0	7,031.1	7,054.3	7,035.6	20.1	15.1	-143.59	501.1	-488.1	1,182.7	1,152.2	30.56	38.706	
7,190.5	7,120.5	7,144.0	7,125.0	20.4	15.3	-143.67	507.9	-488.1	1,193.9	1,163.0	30.96	38.569	
7,200.0	7,129.8	7,152.5	7,133.5	20.4	15.3	-148.96	508.4	-488.1	1,195.1	1,164.1	30.97	38.585	
7,250.0	7,179.4	7,197.1	7,178.1	20.5	15.4	175.16	509.3	-488.1	1,201.5	1,170.5	30.99	38.769	
7,300.0	7,228.8	7,241.7	7,222.6	20.6	15.4	142.79	506.7	-488.1	1,208.2	1,177.3	30.93	39.059	
7,350.0	7,277.9	7,286.3	7,266.8	20.7	15.4	124.60	500.7	-488.1	1,215.1	1,184.3	30.81	39.444	
7,400.0	7,326.1	7,330.8	7,310.3	20.7	15.3	114.61	491.2	-488.1	1,222.2	1,191.6	30.62	39.912	
7,450.0	7,373.2	7,375.4	7,352.9	20.7	15.3	108.47	478.4	-488.1	1,229.4	1,199.0	30.39	40.455	
7,500.0	7,418.7	7,420.0	7,394.6	20.7	15.2	104.31	462.3	-488.1	1,236.6	1,206.5	30.12	41.059	
7,550.0	7,462.4	7,464.7	7,434.9	20.6	15.0	101.27	443.0	-488.1	1,243.9	1,214.0	29.82	41.713	
7,600.0	7,503.8	7,509.6	7,473.7	20.5	14.9	98.93	420.5	-488.1	1,251.1	1,221.6	29.51	42.401	
7,650.0	7,542.8	7,554.7	7,510.8	20.5	14.8	97.06	394.9	-488.1	1,258.2	1,229.0	29.19	43.106	
7,700.0	7,578.8	7,600.0	7,545.9	20.4	14.6	95.54	366.3	-488.1	1,265.1	1,236.3	28.88	43.811	
7,750.0	7,611.8	7,645.5	7,578.8	20.3	14.4	94.27	334.8	-488.1	1,271.9	1,243.3	28.59	44.493	
7,800.0	7,641.5	7,691.4	7,609.4	20.2	14.3	93.21	300.6	-488.1	1,278.4	1,250.1	28.33	45.130	
7,850.0	7,667.6	7,737.6	7,637.3	20.2	14.1	92.32	263.8	-488.1	1,284.6	1,256.5	28.11	45.698	
7,900.0	7,689.9	7,784.2	7,662.3	20.2	14.0	91.59	224.6	-488.1	1,290.5	1,262.6	27.95	46.175	
7,950.0	7,708.2	7,831.2	7,684.2	20.1	13.9	90.99	183.0	-488.1	1,296.1	1,268.2	27.85	46.538	
8,000.0	7,722.5	7,878.6	7,702.9	20.2	13.9	90.52	139.4	-488.1	1,301.2	1,273.3	27.82	46.768	
8,050.0	7,732.6	7,926.5	7,717.9	20.2	13.9	90.17	93.9	-488.1	1,305.8	1,277.9	27.87	46.849	
8,100.0	7,738.4	7,975.0	7,729.3	20.3	13.9	89.93	46.8	-488.1	1,310.0	1,282.0	28.01	46.772	
8,142.5	7,740.0	8,016.5	7,735.8	20.4	14.0	89.82	5.8	-488.1	1,313.1	1,284.9	28.19	46.581	
8,200.0	7,740.0	8,073.6	7,739.9	20.5	14.1	89.99	-51.1	-488.1	1,317.1	1,288.6	28.57	46.100	
8,300.0	7,740.0	8,173.3	7,740.0	20.9	14.6	90.00	-150.8	-488.1	1,324.1	1,294.5	29.57	44.783	
8,400.0	7,740.0	8,273.1	7,740.0	21.4	15.2	90.00	-250.6	-488.1	1,331.1	1,300.2	30.91	43.058	
8,442.5	7,740.0	8,315.5	7,740.0	21.7	15.5	90.00	-292.9	-488.1	1,334.0	1,302.5	31.58	42.244	
8,500.0	7,740.0	8,372.9	7,740.0	22.1	16.0	90.00	-350.3	-488.1	1,337.8	1,305.3	32.52	41.140	
8,600.0	7,740.0	8,472.7	7,740.0	22.8	16.9	90.00	-450.2	-488.1	1,342.9	1,308.6	34.32	39.125	
8,700.0	7,740.0	8,572.7	7,740.0	23.6	18.0	90.00	-550.2	-488.1	1,346.2	1,309.9	36.33	37.055	
8,800.0	7,740.0	8,672.7	7,740.0	24.5	19.2	90.00	-650.1	-488.1	1,347.8	1,309.3	38.51	35.001	
8,842.5	7,740.0	8,715.1	7,740.0	25.0	19.7	90.00	-692.6	-488.1	1,348.0	1,308.5	39.47	34.149	
8,900.0	7,740.0	8,772.7	7,740.0	25.5	20.4	90.00	-750.1	-488.1	1,348.0	1,307.1	40.93	32.937	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2A-7H-E168 - Hz - Plan #2													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)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
9,000.0	7,740.0	8,872.7	7,740.0	26.6	21.7	90.00	-850.1	-488.1	1,348.0	1,304.5	43.56	30.949		
9,100.0	7,740.0	8,972.7	7,740.0	27.7	23.1	90.00	-950.1	-488.1	1,348.0	1,301.7	46.30	29.115		
9,200.0	7,740.0	9,072.7	7,740.0	28.9	24.5	90.00	-1,050.1	-488.1	1,348.0	1,298.9	49.14	27.431		
9,300.0	7,740.0	9,172.7	7,740.0	30.2	26.0	90.00	-1,150.1	-488.1	1,348.0	1,296.0	52.07	25.891		
9,342.5	7,740.0	9,215.1	7,740.0	30.7	26.6	90.00	-1,192.6	-488.1	1,348.0	1,294.7	53.33	25.278		
9,399.5	7,740.0	9,272.2	7,740.0	31.5	27.5	90.00	-1,249.7	-488.1	1,348.3	1,293.1	55.16	24.442		
9,500.0	7,740.0	9,372.6	7,740.0	32.8	29.0	90.00	-1,350.1	-488.1	1,349.3	1,291.1	58.23	23.172		
9,600.0	7,740.0	9,472.6	7,740.0	34.2	30.6	90.00	-1,450.1	-488.1	1,350.3	1,289.0	61.33	22.016		
9,700.0	7,740.0	9,572.6	7,740.0	35.6	32.1	90.00	-1,550.1	-488.1	1,351.3	1,286.8	64.47	20.959		
9,800.0	7,740.0	9,672.6	7,740.0	37.1	33.7	90.00	-1,650.1	-488.1	1,352.3	1,284.6	67.65	19.989		
9,900.0	7,740.0	9,772.6	7,740.0	38.5	35.3	90.00	-1,750.1	-488.1	1,353.3	1,282.4	70.86	19.097		
10,000.0	7,740.0	9,872.6	7,740.0	40.0	36.9	90.00	-1,850.1	-488.1	1,354.3	1,280.2	74.10	18.276		
10,100.0	7,740.0	9,972.6	7,740.0	41.6	38.6	90.00	-1,950.1	-488.1	1,355.3	1,277.9	77.36	17.519		
10,200.0	7,740.0	10,072.6	7,740.0	43.1	40.2	90.00	-2,050.1	-488.2	1,356.3	1,275.6	80.64	16.819		
10,300.0	7,740.0	10,172.6	7,740.0	44.6	41.9	90.00	-2,150.1	-488.2	1,357.3	1,273.3	83.94	16.169		
10,400.0	7,740.0	10,272.6	7,740.0	46.2	43.5	90.00	-2,250.1	-488.2	1,358.3	1,271.0	87.26	15.566		
10,500.0	7,740.0	10,372.6	7,740.0	47.8	45.2	90.00	-2,350.1	-488.2	1,359.3	1,268.7	90.59	15.005		
10,600.0	7,740.0	10,472.6	7,740.0	49.4	46.9	90.00	-2,450.1	-488.2	1,360.3	1,266.3	93.93	14.482		
10,700.0	7,740.0	10,572.6	7,740.0	51.0	48.5	90.00	-2,550.1	-488.2	1,361.3	1,264.0	97.29	13.992		
10,800.0	7,740.0	10,672.6	7,740.0	52.6	50.2	90.00	-2,650.1	-488.2	1,362.3	1,261.6	100.65	13.534		
10,900.0	7,740.0	10,772.6	7,740.0	54.2	51.9	90.00	-2,750.1	-488.2	1,363.3	1,259.2	104.03	13.105		
11,000.0	7,740.0	10,872.6	7,740.0	55.8	53.6	90.00	-2,850.1	-488.2	1,364.3	1,256.9	107.41	12.701		
11,100.0	7,740.0	10,972.6	7,740.0	57.5	55.3	90.00	-2,950.1	-488.2	1,365.3	1,254.5	110.80	12.322		
11,200.0	7,740.0	11,072.6	7,740.0	59.1	57.0	90.00	-3,050.1	-488.2	1,366.3	1,252.1	114.20	11.964		
11,300.0	7,740.0	11,172.6	7,740.0	60.8	58.7	90.00	-3,150.1	-488.2	1,367.3	1,249.7	117.60	11.626		
11,400.0	7,740.0	11,272.6	7,740.0	62.4	60.4	90.00	-3,250.0	-488.2	1,368.3	1,247.2	121.02	11.306		
11,500.0	7,740.0	11,372.5	7,740.0	64.1	62.1	90.00	-3,350.0	-488.2	1,369.3	1,244.8	124.43	11.004		
11,600.0	7,740.0	11,472.5	7,740.0	65.7	63.8	90.00	-3,450.0	-488.2	1,370.2	1,242.4	127.85	10.717		
11,700.0	7,740.0	11,572.5	7,740.0	67.4	65.5	90.00	-3,550.0	-488.2	1,371.2	1,240.0	131.28	10.445		
11,800.0	7,740.0	11,672.5	7,740.0	69.1	67.3	90.00	-3,650.0	-488.2	1,372.2	1,237.5	134.71	10.187		
11,900.0	7,740.0	11,772.5	7,740.0	70.8	69.0	90.00	-3,750.0	-488.2	1,373.2	1,235.1	138.14	9.941		
12,000.0	7,740.0	11,872.5	7,740.0	72.4	70.7	90.00	-3,850.0	-488.2	1,374.2	1,232.7	141.58	9.707		
12,100.0	7,740.0	11,972.5	7,740.0	74.1	72.4	90.00	-3,950.0	-488.2	1,375.2	1,230.2	145.02	9.483		
12,200.0	7,740.0	12,072.5	7,740.0	75.8	74.1	90.00	-4,050.0	-488.2	1,376.2	1,227.8	148.46	9.270		
12,300.0	7,740.0	12,172.5	7,740.0	77.5	75.9	90.00	-4,150.0	-488.2	1,377.2	1,225.3	151.91	9.066		
12,400.0	7,740.0	12,272.5	7,740.0	79.2	77.6	90.00	-4,250.0	-488.2	1,378.2	1,222.9	155.36	8.871		
12,500.0	7,740.0	12,372.5	7,740.0	80.9	79.3	90.00	-4,350.0	-488.2	1,379.2	1,220.4	158.81	8.685		
12,600.0	7,740.0	12,472.5	7,740.0	82.6	81.0	90.00	-4,450.0	-488.2	1,380.2	1,218.0	162.27	8.506		
12,700.0	7,740.0	12,572.5	7,740.0	84.3	82.8	90.00	-4,550.0	-488.2	1,381.2	1,215.5	165.72	8.335		
12,800.0	7,740.0	12,672.5	7,740.0	86.0	84.5	90.00	-4,650.0	-488.2	1,382.2	1,213.0	169.18	8.170		
12,900.0	7,740.0	12,772.5	7,740.0	87.7	86.2	90.00	-4,750.0	-488.2	1,383.2	1,210.6	172.64	8.012		
13,000.0	7,740.0	12,872.5	7,740.0	89.4	88.0	90.00	-4,850.0	-488.2	1,384.2	1,208.1	176.11	7.860		
13,100.0	7,740.0	12,972.5	7,740.0	91.1	89.7	90.00	-4,950.0	-488.2	1,385.2	1,205.6	179.57	7.714		
13,200.0	7,740.0	13,072.5	7,740.0	92.8	91.4	90.00	-5,050.0	-488.2	1,386.2	1,203.2	183.04	7.573		
13,300.0	7,740.0	13,172.5	7,740.0	94.5	93.2	90.00	-5,150.0	-488.2	1,387.2	1,200.7	186.50	7.438		
13,400.0	7,740.0	13,272.5	7,740.0	96.2	94.9	90.00	-5,249.9	-488.2	1,388.2	1,198.2	189.97	7.307		
13,500.0	7,740.0	13,372.4	7,740.0	98.0	96.6	90.00	-5,349.9	-488.2	1,389.2	1,195.8	193.44	7.181		
13,600.0	7,740.0	13,472.4	7,740.0	99.7	98.4	90.00	-5,449.9	-488.2	1,390.2	1,193.3	196.92	7.060		
13,700.0	7,740.0	13,572.4	7,740.0	101.4	100.1	90.00	-5,549.9	-488.2	1,391.2	1,190.8	200.39	6.942		
13,800.0	7,740.0	13,672.4	7,740.0	103.1	101.8	90.00	-5,649.9	-488.2	1,392.2	1,188.3	203.86	6.829		
13,900.0	7,740.0	13,772.4	7,740.0	104.8	103.6	90.00	-5,749.9	-488.2	1,393.2	1,185.9	207.34	6.719		
14,000.0	7,740.0	13,872.4	7,740.0	106.5	105.3	90.00	-5,849.9	-488.2	1,394.2	1,183.4	210.81	6.613		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2A-7H-E168 - Hz - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,740.0	13,972.4	7,740.0	108.3	107.1	90.00	-5,949.9	-488.2	1,395.2	1,180.9	214.29	6.511	
14,200.0	7,740.0	14,072.4	7,740.0	110.0	108.8	90.00	-6,049.9	-488.2	1,396.2	1,178.4	217.77	6.411	
14,300.0	7,740.0	14,172.4	7,740.0	111.7	110.5	90.00	-6,149.9	-488.2	1,397.2	1,175.9	221.25	6.315	
14,400.0	7,740.0	14,272.4	7,740.0	113.4	112.3	90.00	-6,249.9	-488.2	1,398.2	1,173.4	224.73	6.222	
14,500.0	7,740.0	14,372.4	7,740.0	115.2	114.0	90.00	-6,349.9	-488.2	1,399.2	1,171.0	228.21	6.131	
14,600.0	7,740.0	14,472.4	7,740.0	116.9	115.8	90.00	-6,449.9	-488.2	1,400.2	1,168.5	231.69	6.043	
14,700.0	7,740.0	14,572.4	7,740.0	118.6	117.5	90.00	-6,549.9	-488.2	1,401.2	1,166.0	235.18	5.958	
14,800.0	7,740.0	14,672.4	7,740.0	120.4	119.2	90.00	-6,649.9	-488.2	1,402.2	1,163.5	238.66	5.875	
14,900.0	7,740.0	14,772.4	7,740.0	122.1	121.0	90.00	-6,749.9	-488.2	1,403.2	1,161.0	242.14	5.795	
15,000.0	7,740.0	14,872.4	7,740.0	123.8	122.7	90.00	-6,849.9	-488.2	1,404.2	1,158.5	245.63	5.717	
15,100.0	7,740.0	14,972.4	7,740.0	125.5	124.5	90.00	-6,949.9	-488.2	1,405.2	1,156.0	249.12	5.641	
15,200.0	7,740.0	15,072.4	7,740.0	127.3	126.2	90.00	-7,049.9	-488.2	1,406.2	1,153.6	252.60	5.567	
15,300.0	7,740.0	15,172.4	7,740.0	129.0	128.0	90.00	-7,149.9	-488.3	1,407.2	1,151.1	256.09	5.495	
15,400.0	7,740.0	15,272.4	7,740.0	130.7	129.7	90.00	-7,249.8	-488.3	1,408.2	1,148.6	259.58	5.425	
15,500.0	7,740.0	15,372.3	7,740.0	132.5	131.4	90.00	-7,349.8	-488.3	1,409.1	1,146.1	263.06	5.357	
15,600.0	7,740.0	15,472.3	7,740.0	134.2	133.2	90.00	-7,449.8	-488.3	1,410.1	1,143.6	266.55	5.290	
15,700.0	7,740.0	15,572.3	7,740.0	135.9	134.9	90.00	-7,549.8	-488.3	1,411.1	1,141.1	270.04	5.226	
15,800.0	7,740.0	15,672.3	7,740.0	137.7	136.7	90.00	-7,649.8	-488.3	1,412.1	1,138.6	273.53	5.163	
15,900.0	7,740.0	15,772.3	7,740.0	139.4	138.4	90.00	-7,749.8	-488.3	1,413.1	1,136.1	277.02	5.101	
16,000.0	7,740.0	15,872.3	7,740.0	141.1	140.2	90.00	-7,849.8	-488.3	1,414.1	1,133.6	280.51	5.041	
16,083.0	7,740.0	15,936.0	7,740.0	142.6	141.3	90.00	-7,913.5	-488.3	1,415.1	1,132.0	283.07	4.999	
16,083.8	7,740.0	15,936.0	7,740.0	142.6	141.3	90.00	-7,913.5	-488.3	1,415.1	1,132.0	283.09	4.999 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2B-7H-E168 - HZ - Plan #2													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	-89.30	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	0.30	98.619		
200.0	200.0	200.0	200.0	0.3	0.3	-89.30	0.4	-29.9	29.9	29.3	0.65	45.882		
300.0	300.0	300.0	300.0	0.5	0.5	-89.30	0.4	-29.9	29.9	28.9	1.00	29.895 CC, ES		
400.0	400.0	399.7	399.6	0.7	0.7	-88.06	1.0	-30.5	30.5	29.2	1.35	22.594		
500.0	500.0	499.2	499.2	0.8	0.9	-84.63	3.0	-32.2	32.3	30.6	1.70	18.976		
600.0	600.0	598.7	598.6	1.0	1.0	-79.73	6.3	-35.0	35.5	33.5	2.06	17.233		
700.0	700.0	698.0	697.7	1.2	1.2	-74.25	11.0	-38.8	40.4	38.0	2.43	16.617		
800.0	800.0	797.7	797.2	1.4	1.4	-69.39	16.3	-43.3	46.3	43.5	2.81	16.520		
900.0	900.0	897.5	896.7	1.5	1.6	-65.66	21.6	-47.8	52.5	49.4	3.18	16.519		
1,000.0	1,000.0	997.3	996.2	1.7	1.8	-62.72	26.9	-52.2	58.9	55.4	3.56	16.566		
1,100.0	1,100.0	1,097.0	1,095.7	1.9	2.0	-112.03	32.3	-56.7	65.7	61.9	3.81	17.252		
1,200.0	1,200.0	1,196.7	1,195.2	2.1	2.3	-111.90	37.6	-61.2	73.2	69.1	4.16	17.585		
1,300.0	1,299.9	1,296.8	1,295.0	2.3	2.5	-112.38	43.5	-65.1	81.1	76.6	4.53	17.917		
1,400.0	1,399.7	1,397.0	1,394.9	2.4	2.7	-112.73	50.6	-67.7	89.1	84.2	4.90	18.180		
1,500.0	1,499.4	1,496.9	1,494.5	2.6	2.9	-113.09	58.8	-69.2	97.3	92.0	5.29	18.396		
1,600.0	1,598.9	1,596.5	1,593.7	2.8	3.1	-114.11	67.1	-70.5	106.1	100.4	5.69	18.643		
1,700.0	1,698.3	1,696.0	1,692.8	3.1	3.3	-115.75	75.4	-71.7	115.7	109.6	6.11	18.932		
1,800.0	1,797.4	1,795.3	1,791.8	3.3	3.5	-117.82	83.7	-73.0	126.2	119.7	6.55	19.270		
1,908.5	1,904.7	1,902.9	1,899.0	3.6	3.8	-120.38	92.6	-74.4	138.8	131.7	7.04	19.702		
2,000.0	1,995.0	1,993.6	1,989.4	3.8	4.0	-122.57	100.2	-75.6	150.0	142.5	7.47	20.089		
2,100.0	2,093.8	2,092.6	2,088.1	4.1	4.2	-124.62	108.4	-76.9	162.5	154.5	7.93	20.488		
2,200.0	2,192.5	2,191.7	2,186.8	4.4	4.4	-126.37	116.7	-78.1	175.1	166.7	8.40	20.861		
2,300.0	2,291.3	2,290.7	2,285.5	4.7	4.6	-127.88	125.0	-79.4	187.9	179.1	8.86	21.211		
2,400.0	2,390.0	2,389.8	2,384.2	5.0	4.9	-129.20	133.2	-80.7	200.8	191.5	9.32	21.539		
2,500.0	2,488.8	2,488.9	2,482.9	5.3	5.1	-130.36	141.5	-82.0	213.9	204.1	9.79	21.847		
2,600.0	2,587.5	2,587.9	2,581.6	5.6	5.3	-131.39	149.7	-83.3	226.9	216.7	10.25	22.135		
2,700.0	2,686.3	2,687.0	2,680.3	5.9	5.5	-132.31	158.0	-84.5	240.1	229.4	10.72	22.406		
2,800.0	2,785.0	2,786.1	2,779.0	6.2	5.8	-133.13	166.3	-85.8	253.3	242.1	11.18	22.660		
2,900.0	2,883.8	2,885.1	2,877.8	6.5	6.0	-133.87	174.5	-87.1	266.5	254.9	11.64	22.899		
3,000.0	2,982.5	2,984.2	2,976.5	6.8	6.2	-134.54	182.8	-88.4	279.8	267.7	12.10	23.124		
3,100.0	3,081.3	3,083.2	3,075.2	7.2	6.4	-135.15	191.0	-89.6	293.1	280.6	12.56	23.336		
3,200.0	3,180.0	3,182.3	3,173.9	7.5	6.7	-135.70	199.3	-90.9	306.5	293.5	13.02	23.536		
3,300.0	3,278.7	3,281.4	3,272.6	7.8	6.9	-136.21	207.6	-92.2	319.8	306.4	13.48	23.726		
3,400.0	3,377.5	3,380.4	3,371.3	8.1	7.1	-136.68	215.8	-93.5	333.2	319.3	13.94	23.905		
3,500.0	3,476.2	3,479.5	3,470.0	8.4	7.3	-137.11	224.1	-94.8	346.7	332.3	14.40	24.075		
3,600.0	3,575.0	3,578.6	3,568.7	8.7	7.6	-137.51	232.3	-96.0	360.1	345.2	14.86	24.236		
3,700.0	3,673.7	3,677.6	3,667.4	9.1	7.8	-137.88	240.6	-97.3	373.6	358.2	15.32	24.388		
3,800.0	3,772.5	3,776.7	3,766.1	9.4	8.0	-138.23	248.9	-98.6	387.0	371.2	15.77	24.534		
3,900.0	3,871.2	3,875.8	3,864.9	9.7	8.2	-138.55	257.1	-99.9	400.5	384.3	16.23	24.672		
4,000.0	3,970.0	3,974.8	3,963.6	10.0	8.5	-138.85	265.4	-101.2	414.0	397.3	16.69	24.804		
4,100.0	4,068.7	4,073.9	4,062.3	10.3	8.7	-139.13	273.6	-102.4	427.5	410.3	17.15	24.929		
4,200.0	4,167.5	4,172.9	4,161.0	10.7	8.9	-139.40	281.9	-103.7	441.0	423.4	17.61	25.049		
4,300.0	4,266.2	4,272.0	4,259.7	11.0	9.1	-139.65	290.1	-105.0	454.5	436.5	18.06	25.164		
4,400.0	4,364.9	4,371.1	4,358.4	11.3	9.4	-139.88	298.4	-106.3	468.0	449.5	18.52	25.274		
4,500.0	4,463.7	4,470.1	4,457.1	11.6	9.6	-140.10	306.7	-107.5	481.6	462.6	18.98	25.378		
4,600.0	4,562.4	4,569.2	4,555.8	11.9	9.8	-140.31	314.9	-108.8	495.1	475.7	19.43	25.479		
4,700.0	4,661.2	4,668.3	4,654.5	12.3	10.0	-140.51	323.2	-110.1	508.7	488.8	19.89	25.575		
4,800.0	4,759.9	4,767.3	4,753.2	12.6	10.3	-140.70	331.4	-111.4	522.2	501.9	20.35	25.668		
4,900.0	4,858.7	4,866.4	4,852.0	12.9	10.5	-140.88	339.7	-112.7	535.8	515.0	20.80	25.757		
5,000.0	4,957.4	4,965.4	4,950.7	13.2	10.7	-141.05	348.0	-113.9	549.3	528.1	21.26	25.842		
5,100.0	5,056.2	5,064.5	5,049.4	13.6	10.9	-141.21	356.2	-115.2	562.9	541.2	21.71	25.924		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2B-7H-E168 - HZ - Plan #2											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	5,154.9	5,163.6	5,148.1	13.9	11.2	-141.36	364.5	-116.5	576.5	554.3	22.17	26.003	
5,300.0	5,253.7	5,262.6	5,246.8	14.2	11.4	-141.51	372.7	-117.8	590.0	567.4	22.63	26.080	
5,400.0	5,352.4	5,361.7	5,345.5	14.5	11.6	-141.65	381.0	-119.0	603.6	580.5	23.08	26.153	
5,500.0	5,451.1	5,460.8	5,444.2	14.9	11.8	-141.78	389.3	-120.3	617.2	593.7	23.54	26.224	
5,600.0	5,549.9	5,559.8	5,542.9	15.2	12.1	-141.91	397.5	-121.6	630.8	606.8	23.99	26.292	
5,700.0	5,648.6	5,658.9	5,641.6	15.5	12.3	-142.04	405.8	-122.9	644.4	619.9	24.45	26.358	
5,800.0	5,747.4	5,758.0	5,740.3	15.8	12.5	-142.15	414.0	-124.2	658.0	633.1	24.90	26.422	
5,900.0	5,846.1	5,857.0	5,839.1	16.2	12.7	-142.27	422.3	-125.4	671.6	646.2	25.36	26.483	
6,000.0	5,944.9	5,956.1	5,937.8	16.5	13.0	-142.37	430.6	-126.7	685.2	659.4	25.81	26.543	
6,100.0	6,043.6	6,055.1	6,036.5	16.8	13.2	-142.48	438.8	-128.0	698.8	672.5	26.27	26.601	
6,200.0	6,142.4	6,154.2	6,135.2	17.1	13.4	-142.58	447.1	-129.3	712.4	685.6	26.72	26.657	
6,300.0	6,241.1	6,253.3	6,233.9	17.5	13.6	-142.68	455.3	-130.6	726.0	698.8	27.18	26.711	
6,400.0	6,339.9	6,352.3	6,332.6	17.8	13.9	-142.77	463.6	-131.8	739.6	711.9	27.63	26.763	
6,500.0	6,438.6	6,451.4	6,431.3	18.1	14.1	-142.86	471.8	-133.1	753.2	725.1	28.09	26.814	
6,600.0	6,537.3	6,550.5	6,530.0	18.4	14.3	-142.94	480.1	-134.4	766.8	738.2	28.54	26.863	
6,700.0	6,636.1	6,649.5	6,628.7	18.8	14.5	-143.03	488.4	-135.7	780.4	751.4	29.00	26.911	
6,800.0	6,734.8	6,748.6	6,727.4	19.1	14.8	-143.11	496.6	-136.9	794.0	764.6	29.45	26.958	
6,900.0	6,833.6	6,847.7	6,826.2	19.4	15.0	-143.19	504.9	-138.2	807.6	777.7	29.91	27.003	
7,000.0	6,932.3	6,943.8	6,922.1	19.7	15.2	-143.37	511.3	-139.5	821.3	791.0	30.31	27.100	
7,100.0	7,031.1	7,034.0	7,011.9	20.1	15.2	-144.39	505.0	-140.6	835.8	805.4	30.44	27.454	
7,190.5	7,120.5	7,110.0	7,086.1	20.4	15.1	-145.95	488.8	-141.6	850.4	820.0	30.38	27.989	
7,200.0	7,129.8	7,117.5	7,093.4	20.4	15.1	-151.47	486.7	-141.7	852.0	821.7	30.35	28.077	
7,250.0	7,179.4	7,157.0	7,130.7	20.5	15.0	171.49	473.9	-142.2	861.0	830.9	30.11	28.594	
7,300.0	7,228.8	7,200.0	7,170.3	20.6	14.9	137.91	457.2	-142.7	870.5	840.7	29.81	29.197	
7,350.0	7,277.9	7,233.9	7,200.5	20.7	14.8	118.73	441.9	-143.1	880.3	850.8	29.53	29.810	
7,400.0	7,326.1	7,271.4	7,232.9	20.7	14.7	107.72	422.9	-143.5	890.4	861.2	29.22	30.476	
7,450.0	7,373.2	7,308.5	7,263.6	20.7	14.6	100.62	402.1	-143.9	900.6	871.7	28.90	31.163	
7,500.0	7,418.7	7,350.0	7,296.2	20.7	14.4	95.49	376.5	-144.3	910.8	882.2	28.56	31.888	
7,550.0	7,462.4	7,381.4	7,319.7	20.6	14.3	91.69	355.7	-144.6	920.8	892.5	28.28	32.556	
7,600.0	7,503.8	7,417.4	7,345.1	20.5	14.2	88.59	330.2	-144.9	930.7	902.7	28.00	33.239	
7,650.0	7,542.8	7,450.0	7,366.7	20.5	14.1	86.07	305.8	-145.2	940.2	912.5	27.75	33.887	
7,700.0	7,578.8	7,488.6	7,390.4	20.4	13.9	83.91	275.3	-145.5	949.3	921.9	27.49	34.529	
7,750.0	7,611.8	7,524.0	7,410.4	20.3	13.8	82.11	246.1	-145.8	958.0	930.7	27.28	35.115	
7,800.0	7,641.5	7,559.2	7,428.4	20.2	13.8	80.59	215.8	-146.0	966.1	939.0	27.10	35.651	
7,850.0	7,667.6	7,600.0	7,446.8	20.2	13.7	79.31	179.5	-146.3	973.5	946.6	26.94	36.140	
7,900.0	7,689.9	7,629.5	7,458.5	20.2	13.6	78.28	152.4	-146.4	980.2	953.4	26.85	36.509	
7,950.0	7,708.2	7,664.6	7,470.6	20.1	13.6	77.44	119.4	-146.6	986.2	959.4	26.79	36.810	
8,000.0	7,722.5	7,700.0	7,480.8	20.2	13.6	76.80	85.5	-146.7	991.5	964.7	26.79	37.015	
8,050.0	7,732.6	7,735.0	7,488.7	20.2	13.6	76.35	51.5	-146.8	995.9	969.0	26.85	37.095	
8,100.0	7,738.4	7,770.3	7,494.6	20.3	13.7	76.09	16.7	-146.9	999.4	972.5	26.97	37.058	
8,142.5	7,740.0	7,800.0	7,497.9	20.4	13.8	76.00	-12.9	-146.9	1,001.8	974.7	27.11	36.948	
8,200.0	7,740.0	7,841.3	7,500.0	20.5	13.9	76.15	-54.1	-146.9	1,005.1	977.6	27.47	36.586	
8,300.0	7,740.0	7,938.0	7,500.0	20.9	14.3	76.25	-150.8	-146.9	1,011.8	983.4	28.45	35.566	
8,400.0	7,740.0	8,037.8	7,500.0	21.4	15.0	76.34	-250.6	-146.9	1,018.6	988.8	29.77	34.210	
8,442.5	7,740.0	8,080.2	7,500.0	21.7	15.3	76.38	-293.0	-146.9	1,021.5	991.0	30.43	33.567	
8,500.0	7,740.0	8,137.6	7,500.0	22.1	15.8	76.44	-350.4	-146.9	1,025.1	993.7	31.36	32.687	
8,600.0	7,740.0	8,237.4	7,500.0	22.8	16.7	76.51	-450.2	-146.9	1,030.1	996.9	33.15	31.071	
8,700.0	7,740.0	8,337.4	7,500.0	23.6	17.8	76.57	-550.2	-146.9	1,033.3	998.2	35.14	29.403	
8,800.0	7,740.0	8,437.4	7,500.0	24.5	18.9	76.59	-650.2	-146.9	1,034.9	997.6	37.30	27.744	
8,842.5	7,740.0	8,479.8	7,500.0	25.0	19.5	76.59	-692.6	-146.9	1,035.0	996.8	38.26	27.054	
8,900.0	7,740.0	8,537.4	7,500.0	25.5	20.2	76.59	-750.2	-146.9	1,035.0	995.4	39.68	26.084	
9,000.0	7,740.0	8,637.4	7,500.0	26.6	21.5	76.59	-850.2	-146.9	1,035.0	992.8	42.26	24.495	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2B-7H-E168 - HZ - Plan #2													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	
9,100.0	7,740.0	8,737.4	7,500.0	27.7	22.9	76.59	-950.2	-146.9	1,035.0	990.1	44.94	23.030		
9,200.0	7,740.0	8,837.4	7,500.0	28.9	24.3	76.59	-1,050.2	-146.9	1,035.0	987.3	47.72	21.689		
9,300.0	7,740.0	8,937.4	7,500.0	30.2	25.8	76.59	-1,150.2	-146.9	1,035.0	984.5	50.58	20.464		
9,342.5	7,740.0	8,979.8	7,500.0	30.7	26.4	76.59	-1,192.6	-146.9	1,035.0	983.2	51.81	19.977		
9,399.5	7,740.0	9,036.9	7,500.0	31.5	27.3	76.60	-1,249.7	-146.9	1,035.3	981.7	53.59	19.318		
9,500.0	7,740.0	9,137.4	7,500.0	32.8	28.9	76.61	-1,350.2	-146.9	1,036.3	979.7	56.59	18.312		
9,600.0	7,740.0	9,237.4	7,500.0	34.2	30.4	76.62	-1,450.2	-146.9	1,037.3	977.6	59.62	17.398		
9,700.0	7,740.0	9,337.4	7,500.0	35.6	32.0	76.63	-1,550.2	-146.9	1,038.2	975.5	62.69	16.562		
9,800.0	7,740.0	9,437.4	7,500.0	37.1	33.6	76.65	-1,650.2	-146.9	1,039.2	973.4	65.79	15.795		
9,900.0	7,740.0	9,537.3	7,500.0	38.5	35.2	76.66	-1,750.1	-146.9	1,040.2	971.2	68.93	15.091		
10,000.0	7,740.0	9,637.3	7,500.0	40.0	36.8	76.67	-1,850.1	-146.9	1,041.1	969.0	72.09	14.443		
10,100.0	7,740.0	9,737.3	7,500.0	41.6	38.4	76.68	-1,950.1	-146.9	1,042.1	966.8	75.27	13.845		
10,200.0	7,740.0	9,837.3	7,500.0	43.1	40.1	76.70	-2,050.1	-146.9	1,043.1	964.6	78.47	13.292		
10,300.0	7,740.0	9,937.3	7,500.0	44.6	41.7	76.71	-2,150.1	-146.9	1,044.0	962.3	81.70	12.780		
10,400.0	7,740.0	10,037.3	7,500.0	46.2	43.4	76.72	-2,250.1	-146.9	1,045.0	960.1	84.93	12.304		
10,500.0	7,740.0	10,137.3	7,500.0	47.8	45.1	76.73	-2,350.1	-146.9	1,046.0	957.8	88.18	11.862		
10,600.0	7,740.0	10,237.3	7,500.0	49.4	46.8	76.75	-2,450.1	-147.0	1,046.9	955.5	91.45	11.449		
10,700.0	7,740.0	10,337.3	7,500.0	51.0	48.4	76.76	-2,550.1	-147.0	1,047.9	953.2	94.72	11.063		
10,800.0	7,740.0	10,437.3	7,500.0	52.6	50.1	76.77	-2,650.1	-147.0	1,048.9	950.9	98.01	10.702		
10,900.0	7,740.0	10,537.3	7,500.0	54.2	51.8	76.78	-2,750.1	-147.0	1,049.9	948.6	101.30	10.364		
11,000.0	7,740.0	10,637.3	7,500.0	55.8	53.5	76.80	-2,850.1	-147.0	1,050.8	946.2	104.60	10.046		
11,100.0	7,740.0	10,737.3	7,500.0	57.5	55.2	76.81	-2,950.1	-147.0	1,051.8	943.9	107.91	9.747		
11,200.0	7,740.0	10,837.3	7,500.0	59.1	56.9	76.82	-3,050.1	-147.0	1,052.8	941.5	111.23	9.465		
11,300.0	7,740.0	10,937.3	7,500.0	60.8	58.6	76.83	-3,150.1	-147.0	1,053.7	939.2	114.55	9.198		
11,400.0	7,740.0	11,037.3	7,500.0	62.4	60.3	76.85	-3,250.1	-147.0	1,054.7	936.8	117.88	8.947		
11,500.0	7,740.0	11,137.3	7,500.0	64.1	62.0	76.86	-3,350.1	-147.0	1,055.7	934.5	121.22	8.709		
11,600.0	7,740.0	11,237.3	7,500.0	65.7	63.7	76.87	-3,450.1	-147.0	1,056.6	932.1	124.56	8.483		
11,700.0	7,740.0	11,337.3	7,500.0	67.4	65.5	76.88	-3,550.1	-147.0	1,057.6	929.7	127.91	8.269		
11,800.0	7,740.0	11,437.3	7,500.0	69.1	67.2	76.90	-3,650.1	-147.0	1,058.6	927.3	131.25	8.065		
11,900.0	7,740.0	11,537.3	7,500.0	70.8	68.9	76.91	-3,750.0	-147.0	1,059.5	924.9	134.61	7.871		
12,000.0	7,740.0	11,637.2	7,500.0	72.4	70.6	76.92	-3,850.0	-147.0	1,060.5	922.6	137.97	7.687		
12,100.0	7,740.0	11,737.2	7,500.0	74.1	72.3	76.93	-3,950.0	-147.0	1,061.5	920.2	141.33	7.511		
12,200.0	7,740.0	11,837.2	7,500.0	75.8	74.1	76.94	-4,050.0	-147.0	1,062.5	917.8	144.69	7.343		
12,300.0	7,740.0	11,937.2	7,500.0	77.5	75.8	76.96	-4,150.0	-147.0	1,063.4	915.4	148.06	7.183		
12,400.0	7,740.0	12,037.2	7,500.0	79.2	77.5	76.97	-4,250.0	-147.0	1,064.4	913.0	151.43	7.029		
12,500.0	7,740.0	12,137.2	7,500.0	80.9	79.2	76.98	-4,350.0	-147.0	1,065.4	910.6	154.80	6.882		
12,600.0	7,740.0	12,237.2	7,500.0	82.6	81.0	76.99	-4,450.0	-147.0	1,066.3	908.2	158.18	6.741		
12,700.0	7,740.0	12,337.2	7,500.0	84.3	82.7	77.00	-4,550.0	-147.0	1,067.3	905.8	161.55	6.607		
12,800.0	7,740.0	12,437.2	7,500.0	86.0	84.4	77.02	-4,650.0	-147.0	1,068.3	903.3	164.93	6.477		
12,900.0	7,740.0	12,537.2	7,500.0	87.7	86.1	77.03	-4,750.0	-147.0	1,069.2	900.9	168.32	6.353		
13,000.0	7,740.0	12,637.2	7,500.0	89.4	87.9	77.04	-4,850.0	-147.0	1,070.2	898.5	171.70	6.233		
13,100.0	7,740.0	12,737.2	7,500.0	91.1	89.6	77.05	-4,950.0	-147.0	1,071.2	896.1	175.09	6.118		
13,200.0	7,740.0	12,837.2	7,500.0	92.8	91.3	77.06	-5,050.0	-147.0	1,072.2	893.7	178.48	6.007		
13,300.0	7,740.0	12,937.2	7,500.0	94.5	93.1	77.08	-5,150.0	-147.0	1,073.1	891.3	181.87	5.901		
13,400.0	7,740.0	13,048.4	7,500.0	96.2	95.0	77.09	-5,261.2	-146.6	1,073.8	888.4	185.45	5.791		
13,500.0	7,740.0	13,150.3	7,500.0	98.0	96.8	77.08	-5,363.1	-145.4	1,073.6	884.7	188.86	5.685		
13,600.0	7,740.0	13,250.3	7,500.0	99.7	98.5	77.08	-5,463.0	-144.1	1,073.3	881.1	192.24	5.583		
13,700.0	7,740.0	13,350.3	7,500.0	101.4	100.3	77.08	-5,563.0	-142.9	1,073.1	877.5	195.63	5.485		
13,800.0	7,740.0	13,450.3	7,500.0	103.1	102.0	77.07	-5,663.0	-141.6	1,072.8	873.8	199.01	5.391		
13,900.0	7,740.0	13,550.3	7,500.0	104.8	103.7	77.07	-5,763.0	-140.4	1,072.6	870.2	202.40	5.299		
14,000.0	7,740.0	13,650.3	7,500.0	106.5	105.5	77.07	-5,863.0	-139.1	1,072.3	866.6	205.79	5.211		
14,100.0	7,740.0	13,750.3	7,500.0	108.3	107.2	77.06	-5,963.0	-137.9	1,072.1	862.9	209.18	5.125		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2B-7H-E168 - HZ - Plan #2												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	
14,200.0	7,740.0	13,850.3	7,500.0	110.0	108.9	77.06	-6,063.0	-136.6	1,071.9	859.3	212.57	5.042	
14,300.0	7,740.0	13,950.3	7,500.0	111.7	110.7	77.06	-6,163.0	-135.4	1,071.6	855.6	215.96	4.962	
14,400.0	7,740.0	14,050.3	7,500.0	113.4	112.4	77.05	-6,263.0	-134.1	1,071.4	852.0	219.35	4.884	
14,500.0	7,740.0	14,150.3	7,500.0	115.2	114.2	77.05	-6,363.0	-132.8	1,071.1	848.4	222.74	4.809	
14,600.0	7,740.0	14,250.3	7,500.0	116.9	115.9	77.05	-6,463.0	-131.6	1,070.9	844.7	226.14	4.735	
14,700.0	7,740.0	14,350.3	7,500.0	118.6	117.7	77.05	-6,563.0	-130.3	1,070.6	841.1	229.53	4.664	
14,800.0	7,740.0	14,450.3	7,500.0	120.4	119.4	77.04	-6,663.0	-129.1	1,070.4	837.4	232.92	4.595	
14,900.0	7,740.0	14,550.3	7,500.0	122.1	121.1	77.04	-6,762.9	-127.8	1,070.1	833.8	236.32	4.528	
15,000.0	7,740.0	14,650.3	7,500.0	123.8	122.9	77.04	-6,862.9	-126.6	1,069.9	830.1	239.71	4.463	
15,100.0	7,740.0	14,750.3	7,500.0	125.5	124.6	77.03	-6,962.9	-125.3	1,069.6	826.5	243.11	4.400	
15,200.0	7,740.0	14,850.3	7,500.0	127.3	126.4	77.03	-7,062.9	-124.1	1,069.4	822.9	246.50	4.338	
15,300.0	7,740.0	14,950.3	7,500.0	129.0	128.1	77.03	-7,162.9	-122.8	1,069.1	819.2	249.90	4.278	
15,400.0	7,740.0	15,050.3	7,500.0	130.7	129.9	77.02	-7,262.9	-121.6	1,068.9	815.6	253.30	4.220	
15,500.0	7,740.0	15,150.3	7,500.0	132.5	131.6	77.02	-7,362.9	-120.3	1,068.6	811.9	256.70	4.163	
15,600.0	7,740.0	15,250.3	7,500.0	134.2	133.3	77.02	-7,462.9	-119.1	1,068.4	808.3	260.09	4.108	
15,700.0	7,740.0	15,350.3	7,500.0	135.9	135.1	77.02	-7,562.9	-117.8	1,068.1	804.6	263.49	4.054	
15,800.0	7,740.0	15,450.3	7,500.0	137.7	136.8	77.01	-7,662.9	-116.6	1,067.9	801.0	266.89	4.001	
15,900.0	7,740.0	15,550.3	7,500.0	139.4	138.6	77.01	-7,762.9	-115.3	1,067.6	797.3	270.29	3.950	
16,000.0	7,740.0	15,650.3	7,500.0	141.1	140.3	77.01	-7,862.9	-114.1	1,067.4	793.7	273.69	3.900	
16,053.7	7,740.0	15,704.0	7,500.0	142.1	141.3	77.00	-7,916.6	-113.4	1,067.2	791.7	275.52	3.874	
16,083.0	7,740.0	15,706.0	7,500.0	142.6	141.3	77.00	-7,918.6	-113.4	1,067.5	791.5	276.05	3.867	
16,083.8	7,740.0	15,706.0	7,500.0	142.6	141.3	77.00	-7,918.6	-113.4	1,067.5	791.5	276.06	3.867 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2C-7H-E168 - HZ - Plan #2													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	-88.95	0.4	-20.2	20.2					
100.0	100.0	100.0	100.0	0.2	0.2	-88.95	0.4	-20.2	20.2	19.9	0.30	66.367		
200.0	200.0	200.0	200.0	0.3	0.3	-88.95	0.4	-20.2	20.2	19.5	0.65	30.876		
300.0	300.0	300.0	300.0	0.5	0.5	-88.95	0.4	-20.2	20.2	19.2	1.00	20.118		
400.0	400.0	400.0	400.0	0.7	0.7	-88.95	0.4	-20.2	20.2	18.8	1.35	14.920		
500.0	500.0	500.1	500.1	0.8	0.9	-86.66	1.2	-19.8	19.8	18.1	1.70	11.647		
600.0	600.0	600.2	600.2	1.0	1.0	-79.31	3.5	-18.6	19.0	16.9	2.05	9.244		
700.0	700.0	700.2	700.0	1.2	1.2	-66.01	7.4	-16.7	18.3	15.9	2.40	7.611		
711.7	711.7	711.9	711.7	1.2	1.2	-64.05	8.0	-16.4	18.3	15.8	2.45	7.474 CC, ES		
800.0	800.0	799.9	799.6	1.4	1.4	-47.40	12.9	-14.0	19.1	16.3	2.77	6.890		
900.0	900.0	899.5	898.8	1.5	1.6	-28.07	19.9	-10.6	22.6	19.5	3.16	7.166		
1,000.0	1,000.0	999.1	998.1	1.7	1.8	-13.88	27.7	-6.8	28.6	25.1	3.55	8.064		
1,100.0	1,100.0	1,098.8	1,097.4	1.9	2.0	-57.07	35.5	-3.1	35.2	31.4	3.83	9.190		
1,200.0	1,200.0	1,198.6	1,196.8	2.1	2.3	-53.67	43.3	0.7	41.3	37.1	4.19	9.853		
1,300.0	1,299.9	1,298.4	1,296.3	2.3	2.5	-52.83	51.1	4.5	46.3	41.8	4.55	10.182		
1,400.0	1,399.7	1,398.4	1,395.8	2.4	2.7	-53.73	58.9	8.3	50.3	45.4	4.92	10.227		
1,500.0	1,499.4	1,498.3	1,495.4	2.6	2.9	-56.02	66.7	12.1	53.3	48.0	5.31	10.049		
1,600.0	1,598.9	1,598.2	1,594.9	2.8	3.2	-59.59	74.5	15.9	55.5	49.8	5.72	9.709		
1,700.0	1,698.3	1,698.1	1,694.4	3.1	3.4	-64.44	82.3	19.7	57.2	51.0	6.17	9.268		
1,800.0	1,797.4	1,797.9	1,793.8	3.3	3.6	-70.57	90.1	23.5	58.6	51.9	6.66	8.795		
1,908.5	1,904.7	1,906.0	1,901.6	3.6	3.9	-78.63	98.5	27.6	60.4	53.2	7.25	8.333		
2,000.0	1,995.0	1,997.2	1,992.4	3.8	4.1	-85.75	105.6	31.1	62.8	55.0	7.77	8.084		
2,100.0	2,093.8	2,096.8	2,091.6	4.1	4.3	-92.83	113.4	34.9	66.4	58.1	8.32	7.977		
2,200.0	2,192.5	2,196.4	2,190.9	4.4	4.5	-99.11	121.2	38.6	70.9	62.0	8.86	8.002		
2,300.0	2,291.3	2,296.0	2,290.1	4.7	4.7	-104.59	129.0	42.4	76.1	66.8	9.38	8.121		
2,400.0	2,390.0	2,395.6	2,389.4	5.0	5.0	-109.32	136.8	46.2	82.0	72.1	9.87	8.307		
2,500.0	2,488.8	2,495.3	2,488.6	5.3	5.2	-113.40	144.5	50.0	88.3	78.0	10.35	8.536		
2,600.0	2,587.5	2,594.9	2,587.8	5.6	5.4	-116.92	152.3	53.8	95.1	84.3	10.81	8.792		
2,700.0	2,686.3	2,694.5	2,687.1	5.9	5.7	-119.97	160.1	57.6	102.1	90.8	11.27	9.063		
2,800.0	2,785.0	2,794.1	2,786.3	6.2	5.9	-122.62	167.9	61.4	109.4	97.7	11.71	9.341		
2,900.0	2,883.8	2,893.7	2,885.5	6.5	6.1	-124.93	175.6	65.1	116.9	104.7	12.15	9.622		
3,000.0	2,982.5	2,993.3	2,984.8	6.8	6.3	-126.96	183.4	68.9	124.6	112.0	12.58	9.899		
3,100.0	3,081.3	3,092.9	3,084.0	7.2	6.6	-128.76	191.2	72.7	132.4	119.3	13.01	10.172		
3,200.0	3,180.0	3,192.6	3,183.3	7.5	6.8	-130.35	199.0	76.5	140.3	126.8	13.44	10.439		
3,300.0	3,278.7	3,292.2	3,282.5	7.8	7.0	-131.78	206.8	80.3	148.3	134.4	13.86	10.697		
3,400.0	3,377.5	3,391.8	3,381.7	8.1	7.3	-133.05	214.5	84.1	156.4	142.1	14.28	10.948		
3,500.0	3,476.2	3,491.4	3,481.0	8.4	7.5	-134.21	222.3	87.9	164.5	149.8	14.71	11.189		
3,600.0	3,575.0	3,591.0	3,580.2	8.7	7.7	-135.25	230.1	91.6	172.8	157.6	15.13	11.422		
3,700.0	3,673.7	3,690.6	3,679.4	9.1	7.9	-136.19	237.9	95.4	181.0	165.5	15.54	11.646		
3,800.0	3,772.5	3,790.2	3,778.7	9.4	8.2	-137.06	245.6	99.2	189.4	173.4	15.96	11.862		
3,900.0	3,871.2	3,889.9	3,877.9	9.7	8.4	-137.85	253.4	103.0	197.7	181.3	16.38	12.069		
4,000.0	3,970.0	3,989.5	3,977.2	10.0	8.6	-138.58	261.2	106.8	206.1	189.3	16.80	12.269		
4,100.0	4,068.7	4,089.1	4,076.4	10.3	8.9	-139.25	269.0	110.6	214.5	197.3	17.22	12.460		
4,200.0	4,167.5	4,188.7	4,175.6	10.7	9.1	-139.87	276.8	114.4	223.0	205.3	17.63	12.645		
4,300.0	4,266.2	4,288.3	4,274.9	11.0	9.3	-140.44	284.5	118.1	231.5	213.4	18.05	12.822		
4,400.0	4,364.9	4,387.9	4,374.1	11.3	9.6	-140.97	292.3	121.9	240.0	221.5	18.47	12.992		
4,500.0	4,463.7	4,487.5	4,473.4	11.6	9.8	-141.47	300.1	125.7	248.5	229.6	18.89	13.156		
4,600.0	4,562.4	4,587.2	4,572.6	11.9	10.0	-141.94	307.9	129.5	257.0	237.7	19.30	13.314		
4,700.0	4,661.2	4,686.8	4,671.8	12.3	10.2	-142.37	315.6	133.3	265.5	245.8	19.72	13.466		
4,800.0	4,759.9	4,786.4	4,771.1	12.6	10.5	-142.78	323.4	137.1	274.1	254.0	20.14	13.613		
4,900.0	4,858.7	4,886.0	4,870.3	12.9	10.7	-143.16	331.2	140.8	282.7	262.1	20.55	13.754		
5,000.0	4,957.4	4,985.6	4,969.5	13.2	10.9	-143.52	339.0	144.6	291.3	270.3	20.97	13.890		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2C-7H-E168 - HZ - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,056.2	5,085.2	5,068.8	13.6	11.2	-143.86	346.8	148.4	299.9	278.5	21.39	14.021		
5,200.0	5,154.9	5,184.8	5,168.0	13.9	11.4	-144.18	354.5	152.2	308.5	286.7	21.80	14.148		
5,300.0	5,253.7	5,284.5	5,267.3	14.2	11.6	-144.48	362.3	156.0	317.1	294.9	22.22	14.270		
5,400.0	5,352.4	5,384.1	5,366.5	14.5	11.9	-144.77	370.1	159.8	325.7	303.1	22.64	14.388		
5,500.0	5,451.1	5,483.7	5,465.7	14.9	12.1	-145.04	377.9	163.6	334.3	311.3	23.05	14.503		
5,600.0	5,549.9	5,583.3	5,565.0	15.2	12.3	-145.30	385.7	167.3	343.0	319.5	23.47	14.613		
5,700.0	5,648.6	5,682.9	5,664.2	15.5	12.5	-145.54	393.4	171.1	351.6	327.7	23.89	14.720		
5,800.0	5,747.4	5,782.5	5,763.5	15.8	12.8	-145.78	401.2	174.9	360.3	336.0	24.31	14.824		
5,900.0	5,846.1	5,882.1	5,862.7	16.2	13.0	-146.00	409.0	178.7	368.9	344.2	24.72	14.924		
6,000.0	5,944.9	5,981.8	5,961.9	16.5	13.2	-146.21	416.8	182.5	377.6	352.5	25.14	15.021		
6,100.0	6,043.6	6,081.4	6,061.2	16.8	13.5	-146.42	424.5	186.3	386.3	360.7	25.56	15.115		
6,200.0	6,142.4	6,181.0	6,160.4	17.1	13.7	-146.61	432.3	190.1	394.9	369.0	25.97	15.206		
6,300.0	6,241.1	6,280.6	6,259.6	17.5	13.9	-146.80	440.1	193.8	403.6	377.2	26.39	15.295		
6,400.0	6,339.9	6,380.2	6,358.9	17.8	14.2	-146.98	447.9	197.6	412.3	385.5	26.81	15.380		
6,500.0	6,438.6	6,479.8	6,458.1	18.1	14.4	-147.15	455.7	201.4	421.0	393.8	27.22	15.464		
6,600.0	6,537.3	6,579.4	6,557.4	18.4	14.6	-147.31	463.4	205.2	429.7	402.0	27.64	15.545		
6,700.0	6,636.1	6,679.1	6,656.6	18.8	14.8	-147.47	471.2	209.0	438.4	410.3	28.06	15.623		
6,800.0	6,734.8	6,778.7	6,755.8	19.1	15.1	-147.62	479.0	212.8	447.1	418.6	28.48	15.700		
6,900.0	6,833.6	6,878.3	6,855.1	19.4	15.3	-147.76	486.8	216.5	455.8	426.9	28.89	15.774		
7,000.0	6,932.3	6,977.9	6,954.3	19.7	15.5	-147.90	494.5	220.3	464.5	435.2	29.31	15.846		
7,100.0	7,031.1	7,077.5	7,053.5	20.1	15.8	-148.04	502.3	224.1	473.2	443.4	29.73	15.917		
7,190.5	7,120.5	7,165.7	7,141.4	20.4	16.0	-148.19	508.9	227.5	481.1	451.0	30.08	15.993		
7,200.0	7,129.8	7,174.2	7,149.9	20.4	16.0	-153.48	509.2	227.8	482.0	451.9	30.09	16.018		
7,250.0	7,179.4	7,219.1	7,194.7	20.5	16.0	170.64	508.8	229.5	486.7	456.6	30.08	16.181		
7,300.0	7,228.8	7,263.7	7,239.2	20.6	16.0	138.32	505.0	231.2	491.7	461.7	30.01	16.384		
7,350.0	7,277.9	7,308.3	7,283.1	20.7	16.0	120.21	497.7	232.9	496.9	467.0	29.89	16.621		
7,400.0	7,326.1	7,352.7	7,326.2	20.7	16.0	110.34	487.0	234.5	502.2	472.5	29.74	16.890		
7,450.0	7,373.2	7,397.1	7,368.3	20.7	15.9	104.35	473.1	236.1	507.7	478.1	29.54	17.185		
7,500.0	7,418.7	7,441.5	7,409.2	20.7	15.8	100.37	455.9	237.7	513.2	483.9	29.32	17.503		
7,550.0	7,462.4	7,485.9	7,448.6	20.6	15.7	97.54	435.7	239.2	518.8	489.7	29.09	17.836		
7,600.0	7,503.8	7,530.3	7,486.4	20.5	15.6	95.43	412.4	240.6	524.3	495.5	28.84	18.178		
7,650.0	7,542.8	7,574.8	7,522.3	20.5	15.4	93.82	386.2	242.0	529.8	501.2	28.60	18.524		
7,700.0	7,578.8	7,619.4	7,556.2	20.4	15.3	92.56	357.2	243.3	535.3	506.9	28.37	18.865		
7,750.0	7,611.8	7,664.2	7,587.8	20.3	15.1	91.58	325.5	244.5	540.6	512.4	28.16	19.194		
7,800.0	7,641.5	7,709.1	7,617.0	20.2	15.0	90.82	291.4	245.6	545.7	517.8	27.98	19.502		
7,850.0	7,667.6	7,754.3	7,643.5	20.2	14.9	90.24	254.8	246.6	550.7	522.9	27.84	19.781		
7,900.0	7,689.9	7,800.0	7,667.4	20.2	14.8	89.83	215.9	247.5	555.5	527.8	27.75	20.022		
7,950.0	7,708.2	7,845.5	7,687.9	20.1	14.7	89.55	175.3	248.3	560.1	532.3	27.71	20.212		
8,000.0	7,722.5	7,891.5	7,705.4	20.2	14.7	89.40	132.7	249.0	564.3	536.6	27.74	20.346		
8,050.0	7,732.6	7,937.9	7,719.5	20.2	14.7	89.37	88.5	249.5	568.3	540.5	27.83	20.419		
8,100.0	7,738.4	7,984.8	7,730.0	20.3	14.7	89.45	42.9	249.9	572.0	544.0	28.01	20.424		
8,142.5	7,740.0	8,024.9	7,736.1	20.4	14.8	89.61	3.3	250.1	574.9	546.7	28.20	20.383		
8,200.0	7,740.0	8,079.9	7,739.9	20.5	14.9	89.99	-51.5	250.3	578.7	550.1	28.61	20.225		
8,300.0	7,740.0	8,179.1	7,740.0	20.9	15.3	90.00	-150.8	250.3	585.7	556.0	29.64	19.758		
8,400.0	7,740.0	8,278.9	7,740.0	21.4	15.9	90.00	-250.6	250.3	592.7	561.6	31.02	19.103		
8,442.5	7,740.0	8,321.3	7,740.0	21.7	16.2	90.00	-293.0	250.3	595.6	563.9	31.71	18.784		
8,500.0	7,740.0	8,378.7	7,740.0	22.1	16.7	90.00	-350.4	250.3	599.4	566.7	32.64	18.363		
8,600.0	7,740.0	8,478.5	7,740.0	22.8	17.6	90.00	-450.2	250.3	604.5	570.0	34.43	17.558		
8,700.0	7,740.0	8,578.5	7,740.0	23.6	18.6	90.00	-550.2	250.3	607.8	571.4	36.40	16.698		
8,800.0	7,740.0	8,678.5	7,740.0	24.5	19.7	90.00	-650.2	250.3	609.4	570.9	38.53	15.815		
8,842.5	7,740.0	8,720.9	7,740.0	25.0	20.2	90.00	-692.6	250.3	609.6	570.1	39.48	15.440		
8,900.0	7,740.0	8,778.5	7,740.0	25.5	20.9	90.00	-750.2	250.3	609.6	568.7	40.93	14.893		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2C-7H-E168 - HZ - Plan #2												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
9,000.0	7,740.0	8,878.5	7,740.0	26.6	22.2	90.00	-850.2	250.3	609.6	566.0	43.56	13.994	
9,100.0	7,740.0	8,978.5	7,740.0	27.7	23.6	90.00	-950.2	250.3	609.6	563.3	46.30	13.165	
9,200.0	7,740.0	9,078.5	7,740.0	28.9	25.0	90.00	-1,050.2	250.3	609.6	560.4	49.15	12.404	
9,300.0	7,740.0	9,178.5	7,740.0	30.2	26.4	90.00	-1,150.2	250.3	609.6	557.5	52.07	11.707	
9,342.5	7,740.0	9,220.9	7,740.0	30.7	27.0	90.00	-1,192.6	250.3	609.6	556.3	53.33	11.430	
9,399.5	7,740.0	9,278.0	7,740.0	31.5	27.9	90.00	-1,249.7	250.3	609.9	554.7	55.20	11.047	
9,500.0	7,740.0	9,378.5	7,740.0	32.8	29.4	90.00	-1,350.2	250.3	610.9	552.6	58.27	10.483	
9,600.0	7,740.0	9,478.5	7,740.0	34.2	30.9	90.00	-1,450.2	250.3	611.9	550.5	61.37	9.969	
9,700.0	7,740.0	9,578.5	7,740.0	35.6	32.5	90.00	-1,550.2	250.3	612.9	548.3	64.52	9.499	
9,800.0	7,740.0	9,678.5	7,740.0	37.1	34.1	90.00	-1,650.2	250.3	613.9	546.2	67.70	9.068	
9,900.0	7,740.0	9,778.5	7,740.0	38.5	35.6	90.00	-1,750.1	250.3	614.9	543.9	70.91	8.671	
10,000.0	7,740.0	9,878.4	7,740.0	40.0	37.3	90.00	-1,850.1	250.3	615.8	541.7	74.14	8.306	
10,100.0	7,740.0	9,978.4	7,740.0	41.6	38.9	90.00	-1,950.1	250.3	616.8	539.4	77.41	7.969	
10,200.0	7,740.0	10,078.4	7,740.0	43.1	40.5	90.00	-2,050.1	250.3	617.8	537.2	80.69	7.657	
10,300.0	7,740.0	10,178.4	7,740.0	44.6	42.1	90.00	-2,150.1	250.3	618.8	534.8	83.99	7.368	
10,400.0	7,740.0	10,278.4	7,740.0	46.2	43.8	90.00	-2,250.1	250.3	619.8	532.5	87.30	7.100	
10,500.0	7,740.0	10,378.4	7,740.0	47.8	45.4	90.00	-2,350.1	250.3	620.8	530.2	90.63	6.850	
10,600.0	7,740.0	10,478.4	7,740.0	49.4	47.1	90.00	-2,450.1	250.3	621.8	527.8	93.98	6.617	
10,700.0	7,740.0	10,578.4	7,740.0	51.0	48.8	90.00	-2,550.1	250.3	622.8	525.5	97.33	6.399	
10,800.0	7,740.0	10,678.4	7,740.0	52.6	50.5	90.00	-2,650.1	250.3	623.8	523.1	100.70	6.195	
10,900.0	7,740.0	10,778.4	7,740.0	54.2	52.1	90.00	-2,750.1	250.3	624.8	520.7	104.07	6.004	
11,000.0	7,740.0	10,878.4	7,740.0	55.8	53.8	90.00	-2,850.1	250.3	625.8	518.3	107.46	5.824	
11,100.0	7,740.0	10,978.4	7,740.0	57.5	55.5	90.00	-2,950.1	250.3	626.8	516.0	110.85	5.655	
11,200.0	7,740.0	11,078.4	7,740.0	59.1	57.2	90.00	-3,050.1	250.3	627.8	513.5	114.25	5.495	
11,300.0	7,740.0	11,178.4	7,740.0	60.8	58.9	90.00	-3,150.1	250.3	628.8	511.1	117.65	5.345	
11,400.0	7,740.0	11,278.4	7,740.0	62.4	60.6	90.00	-3,250.1	250.3	629.8	508.7	121.06	5.202	
11,500.0	7,740.0	11,378.4	7,740.0	64.1	62.3	90.00	-3,350.1	250.3	630.8	506.3	124.48	5.067	
11,600.0	7,740.0	11,478.4	7,740.0	65.7	64.0	90.00	-3,450.1	250.3	631.8	503.9	127.90	4.940	
11,700.0	7,740.0	11,578.4	7,740.0	67.4	65.7	90.00	-3,550.1	250.3	632.8	501.4	131.32	4.818	
11,800.0	7,740.0	11,678.4	7,740.0	69.1	67.4	90.00	-3,650.1	250.3	633.8	499.0	134.75	4.703	
11,900.0	7,740.0	11,778.4	7,740.0	70.8	69.1	90.00	-3,750.0	250.3	634.8	496.6	138.19	4.593	
12,000.0	7,740.0	11,878.3	7,740.0	72.4	70.9	90.00	-3,850.0	250.3	635.8	494.1	141.63	4.489	
12,100.0	7,740.0	11,978.3	7,740.0	74.1	72.6	90.00	-3,950.0	250.3	636.8	491.7	145.07	4.389	
12,200.0	7,740.0	12,078.3	7,740.0	75.8	74.3	90.00	-4,050.0	250.3	637.7	489.2	148.51	4.294	
12,300.0	7,740.0	12,178.3	7,740.0	77.5	76.0	90.00	-4,150.0	250.3	638.7	486.8	151.96	4.203	
12,400.0	7,740.0	12,278.3	7,740.0	79.2	77.7	90.00	-4,250.0	250.3	639.7	484.3	155.41	4.117	
12,500.0	7,740.0	12,378.3	7,740.0	80.9	79.5	90.00	-4,350.0	250.3	640.7	481.9	158.86	4.033	
12,600.0	7,740.0	12,478.3	7,740.0	82.6	81.2	90.00	-4,450.0	250.3	641.7	479.4	162.31	3.954	
12,700.0	7,740.0	12,578.3	7,740.0	84.3	82.9	90.00	-4,550.0	250.3	642.7	477.0	165.77	3.877	
12,800.0	7,740.0	12,678.3	7,740.0	86.0	84.6	90.00	-4,650.0	250.3	643.7	474.5	169.23	3.804	
12,900.0	7,740.0	12,778.3	7,740.0	87.7	86.4	90.00	-4,750.0	250.3	644.7	472.0	172.69	3.733	
13,000.0	7,740.0	12,878.3	7,740.0	89.4	88.1	90.00	-4,850.0	250.3	645.7	469.6	176.15	3.666	
13,100.0	7,740.0	12,978.3	7,740.0	91.1	89.8	90.00	-4,950.0	250.3	646.7	467.1	179.62	3.600	
13,200.0	7,740.0	13,078.3	7,740.0	92.8	91.6	90.00	-5,050.0	250.3	647.7	464.6	183.08	3.538	
13,300.0	7,740.0	13,178.3	7,740.0	94.5	93.3	90.00	-5,150.0	250.3	648.7	462.1	186.55	3.477	
13,400.0	7,740.0	13,278.3	7,740.0	96.2	95.0	90.00	-5,250.0	250.3	649.7	459.7	190.02	3.419	
13,500.0	7,740.0	13,378.3	7,740.0	98.0	96.7	90.00	-5,350.0	250.3	650.7	457.2	193.49	3.363	
13,600.0	7,740.0	13,478.3	7,740.0	99.7	98.5	90.00	-5,450.0	250.3	651.7	454.7	196.96	3.309	
13,700.0	7,740.0	13,578.3	7,740.0	101.4	100.2	90.00	-5,550.0	250.3	652.7	452.2	200.44	3.256	
13,800.0	7,740.0	13,678.3	7,740.0	103.1	102.0	90.00	-5,650.0	250.3	653.7	449.8	203.91	3.206	
13,900.0	7,740.0	13,778.3	7,740.0	104.8	103.7	90.00	-5,749.9	250.3	654.7	447.3	207.39	3.157	
14,000.0	7,740.0	13,878.2	7,740.0	106.5	105.4	90.00	-5,849.9	250.3	655.7	444.8	210.86	3.109	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2C-7H-E168 - HZ - Plan #2													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		
14,100.0	7,740.0	13,978.2	7,740.0	108.3	107.2	90.00	-5,949.9	250.3	656.7	442.3	214.34	3.064		
14,200.0	7,740.0	14,078.2	7,740.0	110.0	108.9	90.00	-6,049.9	250.3	657.7	439.8	217.82	3.019		
14,300.0	7,740.0	14,178.2	7,740.0	111.7	110.6	90.00	-6,149.9	250.3	658.7	437.4	221.30	2.976		
14,400.0	7,740.0	14,278.2	7,740.0	113.4	112.4	90.00	-6,249.9	250.3	659.7	434.9	224.78	2.935		
14,500.0	7,740.0	14,378.2	7,740.0	115.2	114.1	90.00	-6,349.9	250.3	660.6	432.4	228.26	2.894		
14,600.0	7,740.0	14,478.2	7,740.0	116.9	115.9	90.00	-6,449.9	250.3	661.6	429.9	231.74	2.855		
14,700.0	7,740.0	14,578.2	7,740.0	118.6	117.6	90.00	-6,549.9	250.3	662.6	427.4	235.22	2.817		
14,800.0	7,740.0	14,678.2	7,740.0	120.4	119.3	90.00	-6,649.9	250.3	663.6	424.9	238.71	2.780		
14,900.0	7,740.0	14,778.2	7,740.0	122.1	121.1	90.00	-6,749.9	250.3	664.6	422.4	242.19	2.744		
15,000.0	7,740.0	14,878.2	7,740.0	123.8	122.8	90.00	-6,849.9	250.3	665.6	419.9	245.68	2.709		
15,100.0	7,740.0	14,978.2	7,740.0	125.5	124.6	90.00	-6,949.9	250.3	666.6	417.5	249.16	2.675		
15,200.0	7,740.0	15,078.2	7,740.0	127.3	126.3	90.00	-7,049.9	250.3	667.6	415.0	252.65	2.642		
15,300.0	7,740.0	15,178.2	7,740.0	129.0	128.0	90.00	-7,149.9	250.3	668.6	412.5	256.14	2.610		
15,400.0	7,740.0	15,278.2	7,740.0	130.7	129.8	90.00	-7,249.9	250.3	669.6	410.0	259.62	2.579		
15,500.0	7,740.0	15,378.2	7,740.0	132.5	131.5	90.00	-7,349.9	250.3	670.6	407.5	263.11	2.549		
15,600.0	7,740.0	15,478.2	7,740.0	134.2	133.3	90.00	-7,449.9	250.3	671.6	405.0	266.60	2.519		
15,700.0	7,740.0	15,578.2	7,740.0	135.9	135.0	90.00	-7,549.9	250.3	672.6	402.5	270.09	2.490		
15,800.0	7,740.0	15,678.2	7,740.0	137.7	136.8	90.00	-7,649.9	250.3	673.6	400.0	273.58	2.462		
15,900.0	7,740.0	15,778.2	7,740.0	139.4	138.5	90.00	-7,749.8	250.3	674.6	397.5	277.07	2.435		
16,000.0	7,740.0	15,878.1	7,740.0	141.1	140.2	90.00	-7,849.8	250.3	675.6	395.0	280.56	2.408		
16,083.0	7,740.0	15,952.8	7,740.0	142.6	141.6	90.00	-7,924.5	250.3	676.5	393.1	283.31	2.388		
16,083.8	7,740.0	15,952.8	7,740.0	142.6	141.6	90.00	-7,924.5	250.3	676.5	393.2	283.32	2.388 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2D-7H-E168 - HZ - Plan #2														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	-87.91	0.4	-10.1	10.1						
100.0	100.0	100.0	100.0	0.2	0.2	-87.91	0.4	-10.1	10.1	9.8	0.30	33.200			
200.0	200.0	200.0	200.0	0.3	0.3	-87.91	0.4	-10.1	10.1	9.4	0.65	15.446			
300.0	300.0	300.0	300.0	0.5	0.5	-87.91	0.4	-10.1	10.1	9.1	1.00	10.064			
400.0	400.0	400.0	400.0	0.7	0.7	-87.91	0.4	-10.1	10.1	8.7	1.35	7.464			
500.0	500.0	500.0	500.0	0.8	0.8	-87.91	0.4	-10.1	10.1	8.4	1.70	5.931			
600.0	600.0	600.1	600.1	1.0	1.0	-83.75	1.0	-9.5	9.6	7.5	2.05	4.674			
700.0	700.0	700.1	700.1	1.2	1.2	-68.67	3.1	-7.9	8.4	6.0	2.40	3.515			
764.8	764.8	764.9	764.8	1.3	1.3	-50.52	5.1	-6.2	8.0	5.4	2.63	3.048 CC, ES			
800.0	800.0	800.0	799.9	1.4	1.4	-38.32	6.4	-5.1	8.2	5.4	2.75	2.976			
900.0	900.0	899.8	899.5	1.5	1.6	-6.22	11.1	-1.2	11.2	8.1	3.13	3.587			
1,000.0	1,000.0	999.3	998.6	1.7	1.8	12.32	17.1	3.7	17.6	14.1	3.50	5.029			
1,100.0	1,100.0	1,098.5	1,097.5	1.9	2.0	-30.14	24.5	9.8	25.7	21.9	3.80	6.766			
1,200.0	1,200.0	1,197.7	1,195.9	2.1	2.2	-26.29	33.1	16.9	34.3	30.1	4.15	8.252			
1,300.0	1,299.9	1,297.3	1,294.8	2.3	2.5	-24.65	42.5	24.6	42.2	37.7	4.50	9.372			
1,400.0	1,399.7	1,397.1	1,393.9	2.4	2.7	-24.35	51.9	32.4	48.5	43.7	4.85	10.001			
1,500.0	1,499.4	1,497.0	1,493.0	2.6	3.0	-24.89	61.3	40.1	53.3	48.1	5.21	10.232			
1,600.0	1,598.9	1,596.9	1,592.2	2.8	3.2	-26.10	70.7	47.9	56.5	51.0	5.58	10.140			
1,700.0	1,698.3	1,696.9	1,691.4	3.1	3.5	-27.97	80.2	55.6	58.2	52.3	5.95	9.783			
1,800.0	1,797.4	1,796.9	1,790.7	3.3	3.8	-30.59	89.6	63.4	58.5	52.1	6.35	9.211			
1,908.5	1,904.7	1,905.3	1,898.3	3.6	4.1	-34.49	99.8	71.8	57.2	50.4	6.82	8.395			
2,000.0	1,995.0	1,996.7	1,989.0	3.8	4.3	-38.44	108.4	78.9	55.7	48.5	7.26	7.677			
2,100.0	2,093.8	2,096.6	2,088.1	4.1	4.6	-42.98	117.8	86.7	54.4	46.6	7.78	6.991			
2,200.0	2,192.5	2,196.5	2,187.3	4.4	4.8	-47.73	127.2	94.4	53.4	45.1	8.35	6.399			
2,300.0	2,291.3	2,296.4	2,286.4	4.7	5.1	-52.61	136.7	102.2	52.8	43.9	8.96	5.897			
2,400.0	2,390.0	2,396.3	2,385.6	5.0	5.4	-57.56	146.1	109.9	52.6	43.0	9.60	5.478			
2,402.0	2,392.0	2,398.2	2,387.5	5.0	5.4	-57.66	146.3	110.1	52.6	43.0	9.62	5.470			
2,500.0	2,488.8	2,496.2	2,484.7	5.3	5.6	-62.52	155.5	117.7	52.8	42.5	10.28	5.136			
2,600.0	2,587.5	2,596.1	2,583.9	5.6	5.9	-67.41	164.9	125.4	53.4	42.4	10.97	4.865			
2,700.0	2,686.3	2,696.0	2,683.0	5.9	6.2	-72.16	174.3	133.2	54.3	42.7	11.67	4.656			
2,800.0	2,785.0	2,795.9	2,782.2	6.2	6.5	-76.71	183.7	141.0	55.7	43.3	12.37	4.501			
2,900.0	2,883.8	2,895.7	2,881.3	6.5	6.7	-81.03	193.1	148.7	57.3	44.3	13.05	4.393			
3,000.0	2,982.5	2,995.6	2,980.5	6.8	7.0	-85.08	202.6	156.5	59.3	45.6	13.71	4.323			
3,100.0	3,081.3	3,095.5	3,079.6	7.2	7.3	-88.86	212.0	164.2	61.5	47.2	14.35	4.286			
3,200.0	3,180.0	3,195.4	3,178.8	7.5	7.6	-92.35	221.4	172.0	64.0	49.0	14.97	4.274			
3,300.0	3,278.7	3,295.3	3,277.9	7.8	7.8	-95.58	230.8	179.7	66.7	51.1	15.57	4.284			
3,400.0	3,377.5	3,395.2	3,377.1	8.1	8.1	-98.54	240.2	187.5	69.6	53.5	16.15	4.310			
3,500.0	3,476.2	3,495.1	3,476.2	8.4	8.4	-101.27	249.6	195.2	72.7	56.0	16.71	4.350			
3,600.0	3,575.0	3,595.0	3,575.4	8.7	8.6	-103.76	259.0	203.0	75.9	58.7	17.25	4.399			
3,700.0	3,673.7	3,694.9	3,674.5	9.1	8.9	-106.05	268.5	210.7	79.3	61.5	17.78	4.457			
3,800.0	3,772.5	3,794.8	3,773.7	9.4	9.2	-108.15	277.9	218.5	82.7	64.4	18.30	4.521			
3,900.0	3,871.2	3,894.7	3,872.8	9.7	9.5	-110.08	287.3	226.2	86.3	67.5	18.81	4.589			
4,000.0	3,970.0	3,994.6	3,972.0	10.0	9.7	-111.85	296.7	234.0	90.0	70.7	19.31	4.660			
4,100.0	4,068.7	4,094.5	4,071.1	10.3	10.0	-113.49	306.1	241.8	93.7	73.9	19.80	4.733			
4,200.0	4,167.5	4,194.4	4,170.2	10.7	10.3	-115.00	315.5	249.5	97.5	77.2	20.28	4.808			
4,300.0	4,266.2	4,294.3	4,269.4	11.0	10.6	-116.39	324.9	257.3	101.4	80.6	20.76	4.884			
4,400.0	4,364.9	4,394.2	4,368.5	11.3	10.8	-117.68	334.4	265.0	105.3	84.1	21.24	4.960			
4,500.0	4,463.7	4,494.1	4,467.7	11.6	11.1	-118.87	343.8	272.8	109.3	87.6	21.71	5.035			
4,600.0	4,562.4	4,594.0	4,566.8	11.9	11.4	-119.99	353.2	280.5	113.3	91.2	22.18	5.110			
4,700.0	4,661.2	4,693.9	4,666.0	12.3	11.7	-121.02	362.6	288.3	117.4	94.8	22.65	5.184			
4,800.0	4,759.9	4,793.8	4,765.1	12.6	11.9	-121.99	372.0	296.0	121.5	98.4	23.11	5.258			
4,900.0	4,858.7	4,893.7	4,864.3	12.9	12.2	-122.89	381.4	303.8	125.6	102.1	23.57	5.330			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2D-7H-E168 - HZ - Plan #2											Offset Site Error: 0.0 ft		
Survey Program: 0-Geolink MWD											Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,000.0	4,957.4	4,993.6	4,963.4	13.2	12.5	-123.73	390.8	311.5	129.8	105.8	24.03	5.401	
5,100.0	5,056.2	5,093.5	5,062.6	13.6	12.8	-124.53	400.3	319.3	134.0	109.5	24.49	5.471	
5,200.0	5,154.9	5,193.3	5,161.7	13.9	13.0	-125.27	409.7	327.1	138.2	113.3	24.95	5.539	
5,300.0	5,253.7	5,293.2	5,260.9	14.2	13.3	-125.97	419.1	334.8	142.4	117.0	25.41	5.606	
5,400.0	5,352.4	5,393.1	5,360.0	14.5	13.6	-126.63	428.5	342.6	146.7	120.8	25.87	5.671	
5,500.0	5,451.1	5,493.0	5,459.2	14.9	13.9	-127.25	437.9	350.3	151.0	124.6	26.32	5.735	
5,600.0	5,549.9	5,592.9	5,558.3	15.2	14.1	-127.84	447.3	358.1	155.3	128.5	26.78	5.798	
5,700.0	5,648.6	5,692.8	5,657.5	15.5	14.4	-128.39	456.7	365.8	159.6	132.3	27.23	5.859	
5,800.0	5,747.4	5,792.7	5,756.6	15.8	14.7	-128.92	466.2	373.6	163.9	136.2	27.69	5.919	
5,900.0	5,846.1	5,892.6	5,855.8	16.2	15.0	-129.42	475.6	381.3	168.2	140.1	28.14	5.977	
6,000.0	5,944.9	5,992.5	5,954.9	16.5	15.2	-129.90	485.0	389.1	172.6	144.0	28.60	6.034	
6,100.0	6,043.6	6,092.4	6,054.1	16.8	15.5	-130.35	494.4	396.8	176.9	147.9	29.05	6.090	
6,200.0	6,142.4	6,192.3	6,153.2	17.1	15.8	-130.78	503.8	404.6	181.3	151.8	29.51	6.144	
6,300.0	6,241.1	6,292.2	6,252.4	17.5	16.1	-131.19	513.2	412.3	185.7	155.7	29.96	6.197	
6,400.0	6,339.9	6,392.1	6,351.5	17.8	16.3	-131.58	522.6	420.1	190.0	159.6	30.41	6.249	
6,500.0	6,438.6	6,492.0	6,450.7	18.1	16.6	-131.95	532.1	427.9	194.4	163.6	30.87	6.299	
6,600.0	6,537.3	6,591.9	6,549.8	18.4	16.9	-132.31	541.5	435.6	198.8	167.5	31.32	6.348	
6,700.0	6,636.1	6,691.8	6,649.0	18.8	17.2	-132.65	550.9	443.4	203.2	171.5	31.78	6.396	
6,800.0	6,734.8	6,791.7	6,748.1	19.1	17.4	-132.97	560.3	451.1	207.7	175.4	32.23	6.443	
6,900.0	6,833.6	6,891.6	6,847.3	19.4	17.7	-133.29	569.7	458.9	212.1	179.4	32.68	6.489	
7,000.0	6,932.3	6,994.8	6,949.9	19.7	17.9	-134.90	574.5	466.9	215.9	183.2	32.78	6.588	
7,100.0	7,031.1	7,094.5	7,048.4	20.1	17.9	-140.78	562.2	474.6	219.2	187.5	31.69	6.918	
7,190.5	7,120.5	7,176.3	7,126.7	20.4	17.8	-148.58	539.4	480.7	225.6	195.7	29.97	7.530	
7,200.0	7,129.8	7,184.3	7,134.2	20.4	17.8	-154.73	536.6	481.3	226.7	197.0	29.75	7.620	
7,250.0	7,179.4	7,225.9	7,172.3	20.5	17.7	165.05	520.2	484.3	233.5	204.9	28.65	8.152	
7,300.0	7,228.8	7,266.5	7,208.3	20.6	17.6	128.66	501.6	487.1	242.2	214.5	27.71	8.738	
7,350.0	7,277.9	7,306.1	7,242.0	20.7	17.5	106.82	481.1	489.7	252.2	225.2	26.98	9.346	
7,400.0	7,326.1	7,344.9	7,273.6	20.7	17.4	93.56	458.7	492.2	263.2	236.8	26.45	9.950	
7,450.0	7,373.2	7,382.9	7,303.1	20.7	17.3	84.54	434.8	494.5	274.9	248.8	26.09	10.537	
7,500.0	7,418.7	7,420.3	7,330.4	20.7	17.2	77.87	409.4	496.7	286.9	261.1	25.83	11.107	
7,550.0	7,462.4	7,457.2	7,355.7	20.6	17.0	72.66	382.6	498.6	299.0	273.4	25.63	11.665	
7,600.0	7,503.8	7,493.5	7,378.9	20.5	16.9	68.47	354.7	500.5	311.0	285.5	25.45	12.217	
7,650.0	7,542.8	7,529.4	7,400.0	20.5	16.8	65.05	325.8	502.1	322.6	297.3	25.27	12.767	
7,700.0	7,578.8	7,565.0	7,419.1	20.4	16.7	62.22	295.8	503.6	333.7	308.7	25.05	13.319	
7,750.0	7,611.8	7,600.0	7,436.1	20.3	16.6	59.88	265.2	504.9	344.2	319.4	24.81	13.874	
7,800.0	7,641.5	7,635.2	7,451.3	20.2	16.5	57.95	233.5	506.1	354.0	329.4	24.56	14.413	
7,850.0	7,667.6	7,669.9	7,464.3	20.2	16.5	56.38	201.3	507.1	363.0	338.7	24.31	14.934	
7,900.0	7,689.9	7,700.0	7,474.0	20.2	16.4	55.14	172.9	507.9	371.1	347.1	24.05	15.433	
7,950.0	7,708.2	7,738.9	7,484.3	20.1	16.4	54.14	135.4	508.7	378.2	354.3	23.86	15.852	
8,000.0	7,722.5	7,773.2	7,491.3	20.2	16.4	53.42	101.8	509.2	384.3	360.6	23.72	16.205	
8,050.0	7,732.6	7,800.0	7,495.3	20.2	16.4	52.92	75.3	509.6	389.5	365.9	23.61	16.498	
8,100.0	7,738.4	7,841.6	7,499.1	20.3	16.4	52.68	33.9	509.9	393.5	369.8	23.67	16.626	
8,142.5	7,740.0	7,873.6	7,500.0	20.4	16.5	52.66	1.9	509.9	396.1	372.3	23.77	16.666	
8,200.0	7,740.0	7,926.6	7,500.0	20.5	16.6	52.98	-51.1	509.9	399.3	375.0	24.23	16.480	
8,300.0	7,740.0	8,026.4	7,500.0	20.9	17.0	53.58	-150.8	509.9	404.9	379.6	25.28	16.018	
8,400.0	7,740.0	8,126.1	7,500.0	21.4	17.5	54.16	-250.6	509.9	410.5	383.9	26.60	15.432	
8,442.5	7,740.0	8,168.5	7,500.0	21.7	17.8	54.40	-293.0	509.9	412.9	385.7	27.24	15.157	
8,500.0	7,740.0	8,225.9	7,500.0	22.1	18.2	54.71	-350.4	509.9	416.0	387.9	28.09	14.809	
8,600.0	7,740.0	8,325.8	7,500.0	22.8	19.0	55.14	-450.2	509.9	420.1	390.5	29.67	14.161	
8,700.0	7,740.0	8,425.7	7,500.0	23.6	20.0	55.41	-550.2	509.9	422.9	391.5	31.36	13.485	
8,800.0	7,740.0	8,525.7	7,500.0	24.5	21.0	55.55	-650.2	509.9	424.2	391.1	33.14	12.802	
8,842.5	7,740.0	8,568.2	7,500.0	25.0	21.5	55.56	-692.6	509.9	424.3	390.4	33.91	12.512	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2D-7H-E168 - HZ - Plan #2												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
8,900.0	7,740.0	8,625.7	7,500.0	25.5	22.2	55.56	-750.2	509.9	424.3	389.2	35.12	12.084	
9,000.0	7,740.0	8,725.7	7,500.0	26.6	23.4	55.56	-850.2	509.9	424.3	387.1	37.30	11.378	
9,100.0	7,740.0	8,825.7	7,500.0	27.7	24.7	55.56	-950.2	509.9	424.3	384.8	39.57	10.725	
9,200.0	7,740.0	8,925.7	7,500.0	28.9	26.0	55.56	-1,050.2	509.9	424.3	382.4	41.92	10.124	
9,300.0	7,740.0	9,025.7	7,500.0	30.2	27.4	55.56	-1,150.2	509.9	424.3	380.0	44.33	9.572	
9,342.5	7,740.0	9,068.2	7,500.0	30.7	28.0	55.56	-1,192.6	509.9	424.3	379.0	45.38	9.352	
9,399.5	7,740.0	9,125.2	7,500.0	31.5	28.8	55.58	-1,249.7	509.9	424.6	377.6	46.96	9.041	
9,500.0	7,740.0	9,225.7	7,500.0	32.8	30.3	55.65	-1,350.2	509.9	425.4	375.9	49.53	8.589	
9,600.0	7,740.0	9,325.7	7,500.0	34.2	31.7	55.73	-1,450.2	509.9	426.2	374.1	52.13	8.176	
9,700.0	7,740.0	9,425.7	7,500.0	35.6	33.3	55.81	-1,550.2	509.9	427.1	372.3	54.77	7.797	
9,800.0	7,740.0	9,525.7	7,500.0	37.1	34.8	55.88	-1,650.2	509.9	427.9	370.4	57.44	7.449	
9,900.0	7,740.0	9,625.7	7,500.0	38.5	36.4	55.95	-1,750.1	509.9	428.7	368.6	60.15	7.127	
10,000.0	7,740.0	9,725.6	7,500.0	40.0	37.9	56.03	-1,850.1	509.9	429.5	366.6	62.88	6.831	
10,100.0	7,740.0	9,825.6	7,500.0	41.6	39.5	56.10	-1,950.1	509.9	430.4	364.7	65.63	6.557	
10,200.0	7,740.0	9,925.6	7,500.0	43.1	41.1	56.18	-2,050.1	509.9	431.2	362.8	68.41	6.303	
10,300.0	7,740.0	10,025.6	7,500.0	44.6	42.7	56.25	-2,150.1	509.9	432.0	360.8	71.21	6.067	
10,400.0	7,740.0	10,125.6	7,500.0	46.2	44.4	56.32	-2,250.1	509.9	432.8	358.8	74.02	5.847	
10,500.0	7,740.0	10,225.6	7,500.0	47.8	46.0	56.40	-2,350.1	509.9	433.7	356.8	76.85	5.643	
10,600.0	7,740.0	10,325.6	7,500.0	49.4	47.6	56.47	-2,450.1	509.9	434.5	354.8	79.70	5.452	
10,700.0	7,740.0	10,425.6	7,500.0	51.0	49.3	56.54	-2,550.1	509.9	435.3	352.8	82.56	5.273	
10,800.0	7,740.0	10,525.6	7,500.0	52.6	50.9	56.61	-2,650.1	509.9	436.2	350.7	85.44	5.105	
10,900.0	7,740.0	10,625.6	7,500.0	54.2	52.6	56.69	-2,750.1	509.9	437.0	348.7	88.32	4.948	
11,000.0	7,740.0	10,725.6	7,500.0	55.8	54.3	56.76	-2,850.1	509.9	437.8	346.6	91.22	4.800	
11,100.0	7,740.0	10,825.6	7,500.0	57.5	56.0	56.83	-2,950.1	509.9	438.7	344.5	94.13	4.660	
11,200.0	7,740.0	10,925.6	7,500.0	59.1	57.6	56.90	-3,050.1	509.9	439.5	342.4	97.05	4.528	
11,300.0	7,740.0	11,025.6	7,500.0	60.8	59.3	56.97	-3,150.1	509.9	440.3	340.3	99.98	4.404	
11,400.0	7,740.0	11,125.6	7,500.0	62.4	61.0	57.04	-3,250.1	509.9	441.2	338.2	102.92	4.287	
11,500.0	7,740.0	11,225.6	7,500.0	64.1	62.7	57.11	-3,350.1	509.9	442.0	336.1	105.86	4.175	
11,600.0	7,740.0	11,327.7	7,500.0	65.7	64.6	57.08	-3,462.2	511.5	441.7	332.8	108.88	4.057	
11,700.0	7,740.0	11,451.3	7,500.0	67.4	66.5	56.74	-3,575.6	517.4	438.1	326.6	111.56	3.927	
11,800.0	7,740.0	11,551.1	7,500.0	69.1	68.3	56.30	-3,675.2	524.4	433.1	319.2	113.91	3.803	
11,900.0	7,740.0	11,651.0	7,500.0	70.8	70.0	55.86	-3,774.8	531.3	428.2	312.0	116.21	3.684	
12,000.0	7,740.0	11,750.8	7,500.0	72.4	71.7	55.41	-3,874.4	538.3	423.2	304.8	118.47	3.573	
12,100.0	7,740.0	11,850.6	7,500.0	74.1	73.4	54.94	-3,973.9	545.3	418.3	297.6	120.68	3.466	
12,200.0	7,740.0	11,950.4	7,500.0	75.8	75.1	54.47	-4,073.5	552.2	413.4	290.6	122.84	3.366	
12,300.0	7,740.0	12,050.2	7,500.0	77.5	76.8	53.98	-4,173.1	559.2	408.6	283.6	124.94	3.270	
12,400.0	7,740.0	12,150.1	7,500.0	79.2	78.6	53.48	-4,272.7	566.1	403.8	276.8	126.98	3.180	
12,500.0	7,740.0	12,244.3	7,500.0	80.9	80.2	53.04	-4,366.7	572.3	399.4	270.4	129.00	3.096	
12,600.0	7,740.0	12,334.3	7,500.0	82.6	81.7	52.83	-4,456.6	575.6	397.2	265.9	131.29	3.025	
12,634.8	7,740.0	12,365.6	7,500.0	83.2	82.3	52.81	-4,488.0	576.1	397.1	264.9	132.18	3.004	
12,700.0	7,740.0	12,427.7	7,500.0	84.3	83.3	52.85	-4,550.1	576.2	397.5	263.5	134.01	2.966	
12,800.0	7,740.0	12,527.7	7,500.0	86.0	85.0	52.94	-4,650.1	576.2	398.2	261.3	136.91	2.909	
12,900.0	7,740.0	12,627.7	7,500.0	87.7	86.8	53.02	-4,750.0	576.2	399.0	259.2	139.83	2.854	
13,000.0	7,740.0	12,727.7	7,500.0	89.4	88.5	53.11	-4,850.0	576.2	399.8	257.1	142.75	2.801	
13,100.0	7,740.0	12,827.7	7,500.0	91.1	90.2	53.19	-4,950.0	576.3	400.6	254.9	145.67	2.750	
13,200.0	7,740.0	12,927.7	7,500.0	92.8	91.9	53.28	-5,050.0	576.3	401.4	252.8	148.60	2.701	
13,300.0	7,740.0	13,027.7	7,500.0	94.5	93.7	53.36	-5,150.0	576.3	402.2	250.6	151.54	2.654	
13,400.0	7,740.0	13,127.7	7,500.0	96.2	95.4	53.44	-5,250.0	576.3	402.9	248.5	154.49	2.608	
13,500.0	7,740.0	13,227.7	7,500.0	98.0	97.1	53.53	-5,350.0	576.3	403.7	246.3	157.44	2.564	
13,600.0	7,740.0	13,327.7	7,500.0	99.7	98.8	53.61	-5,450.0	576.3	404.5	244.1	160.40	2.522	
13,700.0	7,740.0	13,427.7	7,500.0	101.4	100.6	53.69	-5,550.0	576.4	405.3	241.9	163.36	2.481	
13,800.0	7,740.0	13,527.7	7,500.0	103.1	102.3	53.77	-5,650.0	576.4	406.1	239.8	166.33	2.441	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2D-7H-E168 - HZ - Plan #2													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)				
13,900.0	7,740.0	13,627.7	7,500.0	104.8	104.0	53.85	-5,750.0	576.4	406.9	237.6	169.31	2.403		
14,000.0	7,740.0	13,727.7	7,500.0	106.5	105.7	53.93	-5,850.0	576.4	407.7	235.4	172.29	2.366		
14,100.0	7,740.0	13,827.6	7,500.0	108.3	107.5	54.02	-5,950.0	576.4	408.5	233.2	175.28	2.330		
14,200.0	7,740.0	13,927.6	7,500.0	110.0	109.2	54.10	-6,050.0	576.4	409.3	231.0	178.27	2.296		
14,300.0	7,740.0	14,027.6	7,500.0	111.7	110.9	54.18	-6,150.0	576.5	410.1	228.8	181.27	2.262		
14,400.0	7,740.0	14,127.6	7,500.0	113.4	112.7	54.26	-6,250.0	576.5	410.9	226.6	184.27	2.230		
14,500.0	7,740.0	14,227.6	7,500.0	115.2	114.4	54.34	-6,350.0	576.5	411.7	224.4	187.28	2.198		
14,600.0	7,740.0	14,327.6	7,500.0	116.9	116.1	54.42	-6,450.0	576.5	412.5	222.2	190.30	2.167		
14,700.0	7,740.0	14,427.6	7,500.0	118.6	117.9	54.49	-6,550.0	576.5	413.2	219.9	193.32	2.138		
14,800.0	7,740.0	14,527.6	7,500.0	120.4	119.6	54.57	-6,650.0	576.5	414.0	217.7	196.34	2.109		
14,900.0	7,740.0	14,627.6	7,500.0	122.1	121.4	54.65	-6,750.0	576.5	414.8	215.5	199.37	2.081		
15,000.0	7,740.0	14,727.6	7,500.0	123.8	123.1	54.73	-6,849.9	576.6	415.6	213.2	202.40	2.054		
15,100.0	7,740.0	14,827.6	7,500.0	125.5	124.8	54.81	-6,949.9	576.6	416.4	211.0	205.44	2.027		
15,200.0	7,740.0	14,927.6	7,500.0	127.3	126.6	54.88	-7,049.9	576.6	417.2	208.8	208.49	2.001		
15,300.0	7,740.0	15,027.6	7,500.0	129.0	128.3	54.96	-7,149.9	576.6	418.0	206.5	211.54	1.976		
15,400.0	7,740.0	15,127.6	7,500.0	130.7	130.0	55.04	-7,249.9	576.6	418.8	204.3	214.59	1.952		
15,500.0	7,740.0	15,227.6	7,500.0	132.5	131.8	55.12	-7,349.9	576.6	419.7	202.0	217.65	1.928		
15,600.0	7,740.0	15,327.6	7,500.0	134.2	133.5	55.19	-7,449.9	576.7	420.5	199.7	220.71	1.905		
15,700.0	7,740.0	15,427.6	7,500.0	135.9	135.3	55.27	-7,549.9	576.7	421.3	197.5	223.78	1.882		
15,800.0	7,740.0	15,527.6	7,500.0	137.7	137.0	55.34	-7,649.9	576.7	422.1	195.2	226.85	1.861		
15,900.0	7,740.0	15,627.6	7,500.0	139.4	138.7	55.42	-7,749.9	576.7	422.9	192.9	229.93	1.839		
16,000.0	7,740.0	15,727.6	7,500.0	141.1	140.5	55.49	-7,849.9	576.7	423.7	190.7	233.01	1.818		
16,083.0	7,740.0	15,805.8	7,500.0	142.6	141.8	55.55	-7,928.1	576.7	424.4	188.9	235.49	1.802		
16,083.8	7,740.0	15,805.8	7,500.0	142.6	141.8	55.55	-7,928.1	576.7	424.4	188.9	235.50	1.802 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #2												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	89.98	0.0	10.1	10.1				
100.0	100.0	100.0	100.0	0.2	0.2	89.98	0.0	10.1	10.1	9.8	0.30	33.178	
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	10.1	10.1	9.4	0.65	15.436	
300.0	300.0	300.0	300.0	0.5	0.5	89.98	0.0	10.1	10.1	9.1	1.00	10.057	CC, ES
400.0	400.0	399.8	399.8	0.7	0.7	88.12	0.4	10.9	10.9	9.5	1.35	8.054	
500.0	500.0	499.6	499.6	0.8	0.9	83.93	1.4	13.3	13.3	11.6	1.70	7.842	
600.0	600.0	599.2	599.1	1.0	1.0	79.59	3.2	17.2	17.5	15.5	2.05	8.537	
700.0	700.0	698.7	698.4	1.2	1.2	76.15	5.6	22.8	23.5	21.1	2.41	9.740	
800.0	800.0	797.9	797.3	1.4	1.4	73.66	8.7	29.9	31.2	28.4	2.78	11.236	
900.0	900.0	896.9	895.8	1.5	1.7	71.92	12.6	38.5	40.7	37.5	3.16	12.899	
1,000.0	1,000.0	995.4	993.7	1.7	1.9	70.68	17.1	48.6	51.9	48.4	3.54	14.650	
1,100.0	1,100.0	1,093.7	1,091.2	1.9	2.2	18.97	22.2	60.3	64.0	60.2	3.78	16.914	
1,200.0	1,200.0	1,191.8	1,188.2	2.1	2.5	18.83	28.0	73.4	76.2	72.1	4.13	18.442	
1,300.0	1,299.9	1,289.6	1,284.7	2.3	2.8	19.01	34.5	88.0	88.4	83.9	4.48	19.744	
1,400.0	1,399.7	1,387.3	1,380.7	2.4	3.1	19.39	41.6	104.1	100.7	95.9	4.83	20.867	
1,500.0	1,499.4	1,484.7	1,476.3	2.6	3.5	19.90	49.4	121.7	113.0	107.9	5.17	21.843	
1,600.0	1,598.9	1,584.0	1,573.5	2.8	3.8	20.56	57.6	140.3	124.6	119.0	5.53	22.526	
1,700.0	1,698.3	1,683.5	1,670.8	3.1	4.2	21.37	65.9	159.0	134.5	128.6	5.89	22.835	
1,800.0	1,797.4	1,783.1	1,768.3	3.3	4.6	22.34	74.1	177.7	142.9	136.6	6.26	22.826	
1,908.5	1,904.7	1,891.3	1,874.2	3.6	5.0	23.56	83.1	198.0	150.2	143.5	6.67	22.509	
2,000.0	1,995.0	1,982.6	1,963.6	3.8	5.4	24.66	90.7	215.1	155.6	148.6	7.04	22.120	
2,100.0	2,093.8	2,082.4	2,061.2	4.1	5.8	25.78	99.0	233.9	161.6	154.2	7.44	21.719	
2,200.0	2,192.5	2,182.1	2,158.9	4.4	6.2	26.82	107.2	252.6	167.7	159.8	7.86	21.343	
2,300.0	2,291.3	2,281.9	2,256.5	4.7	6.6	27.78	115.5	271.3	173.8	165.5	8.28	20.987	
2,400.0	2,390.0	2,381.7	2,354.2	5.0	7.0	28.68	123.8	290.0	180.0	171.2	8.71	20.651	
2,500.0	2,488.8	2,481.5	2,451.8	5.3	7.4	29.52	132.1	308.7	186.1	177.0	9.15	20.333	
2,600.0	2,587.5	2,581.2	2,549.5	5.6	7.7	30.30	140.4	327.5	192.4	182.8	9.60	20.033	
2,700.0	2,686.3	2,681.0	2,647.1	5.9	8.1	31.04	148.6	346.2	198.6	188.6	10.06	19.749	
2,800.0	2,785.0	2,780.8	2,744.8	6.2	8.5	31.73	156.9	364.9	204.9	194.4	10.52	19.480	
2,900.0	2,883.8	2,880.6	2,842.4	6.5	8.9	32.38	165.2	383.6	211.3	200.3	10.99	19.225	
3,000.0	2,982.5	2,980.3	2,940.1	6.8	9.3	32.99	173.5	402.4	217.6	206.1	11.46	18.984	
3,100.0	3,081.3	3,080.1	3,037.7	7.2	9.7	33.57	181.8	421.1	224.0	212.0	11.94	18.756	
3,200.0	3,180.0	3,179.9	3,135.4	7.5	10.1	34.11	190.0	439.8	230.4	217.9	12.43	18.539	
3,300.0	3,278.7	3,279.6	3,233.0	7.8	10.5	34.63	198.3	458.5	236.8	223.9	12.91	18.334	
3,400.0	3,377.5	3,379.4	3,330.7	8.1	10.9	35.11	206.6	477.2	243.2	229.8	13.41	18.140	
3,500.0	3,476.2	3,479.2	3,428.3	8.4	11.3	35.58	214.9	496.0	249.7	235.8	13.90	17.955	
3,600.0	3,575.0	3,579.0	3,526.0	8.7	11.7	36.02	223.2	514.7	256.1	241.7	14.41	17.780	
3,700.0	3,673.7	3,678.7	3,623.6	9.1	12.1	36.43	231.4	533.4	262.6	247.7	14.91	17.613	
3,800.0	3,772.5	3,778.5	3,721.3	9.4	12.5	36.83	239.7	552.1	269.1	253.7	15.42	17.455	
3,900.0	3,871.2	3,878.3	3,818.9	9.7	12.9	37.21	248.0	570.9	275.6	259.7	15.93	17.304	
4,000.0	3,970.0	3,978.0	3,916.6	10.0	13.3	37.57	256.3	589.6	282.1	265.7	16.44	17.161	
4,100.0	4,068.7	4,077.8	4,014.2	10.3	13.7	37.92	264.6	608.3	288.6	271.7	16.95	17.024	
4,200.0	4,167.5	4,177.6	4,111.9	10.7	14.1	38.25	272.8	627.0	295.2	277.7	17.47	16.894	
4,300.0	4,266.2	4,277.4	4,209.5	11.0	14.5	38.56	281.1	645.8	301.7	283.7	17.99	16.769	
4,400.0	4,364.9	4,377.1	4,307.2	11.3	14.9	38.87	289.4	664.5	308.3	289.7	18.51	16.650	
4,500.0	4,463.7	4,476.9	4,404.8	11.6	15.4	39.16	297.7	683.2	314.8	295.8	19.04	16.537	
4,600.0	4,562.4	4,576.7	4,502.5	11.9	15.8	39.43	306.0	701.9	321.4	301.8	19.56	16.428	
4,700.0	4,661.2	4,676.5	4,600.1	12.3	16.2	39.70	314.2	720.6	328.0	307.9	20.09	16.324	
4,800.0	4,759.9	4,776.2	4,697.8	12.6	16.6	39.96	322.5	739.4	334.5	313.9	20.62	16.225	
4,900.0	4,858.7	4,876.0	4,795.4	12.9	17.0	40.20	330.8	758.1	341.1	320.0	21.15	16.129	
5,000.0	4,957.4	4,975.8	4,893.1	13.2	17.4	40.44	339.1	776.8	347.7	326.0	21.68	16.038	
5,100.0	5,056.2	5,075.5	4,990.7	13.6	17.8	40.67	347.3	795.5	354.3	332.1	22.21	15.950	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #2													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	5,154.9	5,175.3	5,088.4	13.9	18.2	40.89	355.6	814.3	360.9	338.2	22.75	15.866		
5,300.0	5,253.7	5,275.1	5,186.0	14.2	18.6	41.10	363.9	833.0	367.5	344.3	23.28	15.785		
5,400.0	5,352.4	5,374.9	5,283.7	14.5	19.0	41.30	372.2	851.7	374.2	350.3	23.82	15.707		
5,500.0	5,451.1	5,474.6	5,381.3	14.9	19.4	41.50	380.5	870.4	380.8	356.4	24.36	15.632		
5,600.0	5,549.9	5,574.4	5,479.0	15.2	19.8	41.69	388.7	889.1	387.4	362.5	24.90	15.560		
5,700.0	5,648.6	5,674.2	5,576.6	15.5	20.2	41.88	397.0	907.9	394.0	368.6	25.44	15.491		
5,800.0	5,747.4	5,773.9	5,674.3	15.8	20.6	42.06	405.3	926.6	400.7	374.7	25.98	15.424		
5,900.0	5,846.1	5,873.7	5,771.9	16.2	21.0	42.23	413.6	945.3	407.3	380.8	26.52	15.359		
6,000.0	5,944.9	5,973.5	5,869.6	16.5	21.4	42.39	421.9	964.0	413.9	386.9	27.06	15.297		
6,100.0	6,043.6	6,073.3	5,967.2	16.8	21.8	42.56	430.1	982.8	420.6	393.0	27.60	15.237		
6,200.0	6,142.4	6,173.0	6,064.9	17.1	22.2	42.71	438.4	1,001.5	427.2	399.1	28.15	15.179		
6,300.0	6,241.1	6,272.8	6,162.5	17.5	22.6	42.86	446.7	1,020.2	433.9	405.2	28.69	15.123		
6,400.0	6,339.9	6,372.6	6,260.2	17.8	23.0	43.01	455.0	1,038.9	440.5	411.3	29.24	15.068		
6,500.0	6,438.6	6,472.3	6,357.8	18.1	23.4	43.15	463.3	1,057.7	447.2	417.4	29.78	15.016		
6,600.0	6,537.3	6,572.1	6,455.5	18.4	23.8	43.29	471.5	1,076.4	453.9	423.5	30.33	14.965		
6,700.0	6,636.1	6,671.9	6,553.1	18.8	24.2	43.43	479.8	1,095.1	460.5	429.6	30.87	14.916		
6,800.0	6,734.8	6,771.7	6,650.8	19.1	24.6	43.56	488.1	1,113.8	467.2	435.8	31.42	14.868		
6,900.0	6,833.6	6,871.4	6,748.4	19.4	25.0	43.68	496.4	1,132.5	473.8	441.9	31.97	14.822		
7,000.0	6,932.3	6,971.2	6,846.1	19.7	25.4	43.81	504.7	1,151.3	480.5	448.0	32.52	14.777		
7,100.0	7,031.1	7,066.7	6,939.6	20.1	25.8	44.18	510.4	1,169.2	487.4	454.3	33.09	14.728		
7,190.5	7,120.5	7,150.0	7,021.1	20.4	26.0	45.80	504.0	1,184.8	495.2	461.2	33.94	14.591		
7,200.0	7,129.8	7,155.7	7,026.6	20.4	26.0	40.88	503.1	1,185.9	496.1	462.0	34.04	14.573		
7,250.0	7,179.4	7,200.0	7,069.3	20.5	26.1	7.29	494.4	1,194.1	500.9	466.2	34.63	14.462		
7,300.0	7,228.8	7,241.0	7,108.0	20.6	26.2	-22.97	483.4	1,201.5	505.5	470.5	35.02	14.433		
7,350.0	7,277.9	7,282.8	7,146.7	20.7	26.2	-39.12	469.3	1,208.9	509.9	474.6	35.23	14.473		
7,400.0	7,326.1	7,324.1	7,183.8	20.7	26.2	-47.20	452.5	1,216.0	513.9	478.7	35.24	14.586		
7,450.0	7,373.2	7,365.0	7,219.2	20.7	26.3	-51.55	433.3	1,222.8	517.7	482.6	35.04	14.772		
7,500.0	7,418.7	7,405.5	7,252.9	20.7	26.3	-54.07	411.8	1,229.3	521.0	486.3	34.66	15.031		
7,550.0	7,462.4	7,450.0	7,288.1	20.6	26.3	-55.54	385.4	1,236.0	523.8	489.7	34.08	15.368		
7,600.0	7,503.8	7,485.6	7,314.7	20.5	26.3	-56.59	362.4	1,241.1	526.1	492.7	33.36	15.769		
7,650.0	7,542.8	7,525.2	7,342.7	20.5	26.3	-57.25	334.8	1,246.5	527.8	495.3	32.51	16.239		
7,700.0	7,578.8	7,564.6	7,368.5	20.4	26.3	-57.73	305.5	1,251.4	529.0	497.5	31.56	16.764		
7,750.0	7,611.8	7,600.0	7,390.0	20.3	26.3	-58.14	277.7	1,255.6	529.6	499.0	30.58	17.319		
7,800.0	7,641.5	7,643.0	7,413.8	20.2	26.3	-58.46	242.2	1,260.1	529.5	500.0	29.57	17.907		
7,850.0	7,667.6	7,682.0	7,433.0	20.2	26.3	-58.79	208.5	1,263.8	528.9	500.2	28.64	18.464		
7,900.0	7,689.9	7,720.9	7,450.0	20.2	26.3	-59.15	173.6	1,267.1	527.5	499.7	27.83	18.953		
7,950.0	7,708.2	7,759.8	7,464.5	20.1	26.3	-59.55	137.6	1,269.9	525.6	498.4	27.20	19.322		
8,000.0	7,722.5	7,800.0	7,477.0	20.2	26.3	-60.00	99.5	1,272.2	523.0	496.2	26.80	19.517		
8,050.0	7,732.6	7,837.7	7,486.3	20.2	26.3	-60.50	63.0	1,274.0	519.8	493.2	26.66	19.496		
8,100.0	7,738.4	7,876.7	7,493.4	20.3	26.4	-61.08	24.7	1,275.4	516.1	489.2	26.81	19.247		
8,142.5	7,740.0	7,910.0	7,497.5	20.4	26.4	-61.63	-8.3	1,276.2	512.4	485.3	27.13	18.886		
8,200.0	7,740.0	7,955.3	7,499.9	20.5	26.5	-61.73	-53.5	1,276.6	507.9	480.4	27.54	18.441		
8,300.0	7,740.0	8,052.6	7,500.0	20.9	26.7	-61.37	-150.8	1,276.7	501.8	473.3	28.52	17.593		
8,400.0	7,740.0	8,152.4	7,500.0	21.4	27.0	-60.98	-250.6	1,276.7	495.7	465.9	29.77	16.650		
8,442.5	7,740.0	8,194.7	7,500.0	21.7	27.2	-60.81	-293.0	1,276.7	493.1	462.7	30.36	16.239		
8,500.0	7,740.0	8,252.2	7,500.0	22.1	27.5	-60.62	-350.4	1,276.7	489.8	458.7	31.12	15.738		
8,600.0	7,740.0	8,352.0	7,500.0	22.8	28.0	-60.34	-450.2	1,276.7	485.4	452.8	32.54	14.916		
8,700.0	7,740.0	8,452.0	7,500.0	23.6	28.6	-60.16	-550.2	1,276.7	482.5	448.4	34.09	14.154		
8,800.0	7,740.0	8,552.0	7,500.0	24.5	29.4	-60.07	-650.2	1,276.7	481.1	445.3	35.75	13.456		
8,842.5	7,740.0	8,594.4	7,500.0	25.0	29.7	-60.06	-692.6	1,276.7	480.9	444.5	36.48	13.182		
8,842.5	7,740.0	8,594.4	7,500.0	25.0	29.7	-60.06	-692.6	1,276.7	480.9	444.5	36.48	13.182		
8,900.0	7,740.0	8,652.0	7,500.0	25.5	30.2	-60.06	-750.2	1,276.7	480.9	443.2	37.71	12.753		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #2												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	
9,000.0	7,740.0	8,752.0	7,500.0	26.6	31.1	-60.06	-850.2	1,276.7	480.9	441.0	39.93	12.044	
9,100.0	7,740.0	8,852.0	7,500.0	27.7	32.0	-60.06	-950.2	1,276.7	480.9	438.7	42.26	11.382	
9,200.0	7,740.0	8,952.0	7,500.0	28.9	33.1	-60.06	-1,050.2	1,276.7	480.9	436.3	44.67	10.767	
9,300.0	7,740.0	9,052.0	7,500.0	30.2	34.2	-60.06	-1,150.2	1,276.7	480.9	433.8	47.15	10.200	
9,342.5	7,740.0	9,094.4	7,500.0	30.7	34.6	-60.06	-1,192.6	1,276.7	480.9	432.7	48.22	9.973	
9,399.5	7,740.0	9,151.5	7,500.0	31.5	35.3	-60.05	-1,249.7	1,276.7	480.7	430.8	49.92	9.629	
9,500.0	7,740.0	9,251.9	7,500.0	32.8	36.5	-59.99	-1,350.2	1,276.7	479.8	427.3	52.52	9.137	
9,600.0	7,740.0	9,351.9	7,500.0	34.2	37.7	-59.93	-1,450.2	1,276.7	479.0	423.8	55.14	8.686	
9,700.0	7,740.0	9,451.9	7,500.0	35.6	39.0	-59.87	-1,550.2	1,276.7	478.1	420.3	57.80	8.272	
9,800.0	7,740.0	9,551.9	7,500.0	37.1	40.3	-59.81	-1,650.2	1,276.7	477.2	416.8	60.49	7.890	
9,900.0	7,740.0	9,651.9	7,500.0	38.5	41.7	-59.75	-1,750.1	1,276.7	476.4	413.2	63.20	7.537	
10,000.0	7,740.0	9,751.9	7,500.0	40.0	43.0	-59.69	-1,850.1	1,276.7	475.5	409.6	65.94	7.211	
10,100.0	7,740.0	9,851.9	7,500.0	41.6	44.4	-59.63	-1,950.1	1,276.7	474.7	406.0	68.70	6.909	
10,200.0	7,740.0	9,951.9	7,500.0	43.1	45.9	-59.57	-2,050.1	1,276.7	473.8	402.3	71.47	6.629	
10,300.0	7,740.0	10,051.9	7,500.0	44.6	47.3	-59.50	-2,150.1	1,276.7	472.9	398.7	74.25	6.369	
10,400.0	7,740.0	10,151.9	7,500.0	46.2	48.8	-59.44	-2,250.1	1,276.7	472.1	395.0	77.05	6.127	
10,500.0	7,740.0	10,251.9	7,500.0	47.8	50.3	-59.38	-2,350.1	1,276.7	471.2	391.4	79.86	5.901	
10,600.0	7,740.0	10,351.9	7,500.0	49.4	51.8	-59.32	-2,450.1	1,276.7	470.4	387.7	82.68	5.689	
10,700.0	7,740.0	10,451.9	7,500.0	51.0	53.3	-59.26	-2,550.1	1,276.7	469.5	384.0	85.50	5.492	
10,800.0	7,740.0	10,551.9	7,500.0	52.6	54.8	-59.20	-2,650.1	1,276.7	468.7	380.3	88.33	5.306	
10,900.0	7,740.0	10,651.9	7,500.0	54.2	56.4	-59.13	-2,750.1	1,276.7	467.8	376.6	91.16	5.132	
11,000.0	7,740.0	10,751.9	7,500.0	55.8	58.0	-59.07	-2,850.1	1,276.7	467.0	373.0	94.00	4.967	
11,100.0	7,740.0	10,851.9	7,500.0	57.5	59.5	-59.01	-2,950.1	1,276.7	466.1	369.3	96.84	4.813	
11,200.0	7,740.0	10,951.9	7,500.0	59.1	61.1	-58.94	-3,050.1	1,276.7	465.2	365.6	99.69	4.667	
11,300.0	7,740.0	11,051.9	7,500.0	60.8	62.7	-58.88	-3,150.1	1,276.7	464.4	361.9	102.54	4.529	
11,400.0	7,740.0	11,151.9	7,500.0	62.4	64.3	-58.82	-3,250.1	1,276.7	463.5	358.2	105.39	4.399	
11,500.0	7,740.0	11,251.8	7,500.0	64.1	65.9	-58.75	-3,350.1	1,276.7	462.7	354.5	108.24	4.275	
11,600.0	7,740.0	11,351.8	7,500.0	65.7	67.5	-58.69	-3,450.1	1,276.7	461.8	350.8	111.09	4.158	
11,700.0	7,740.0	11,451.8	7,500.0	67.4	69.1	-58.63	-3,550.1	1,276.7	461.0	347.1	113.94	4.046	
11,800.0	7,740.0	11,551.8	7,500.0	69.1	70.8	-58.56	-3,650.1	1,276.7	460.1	343.4	116.79	3.940	
11,900.0	7,740.0	11,651.8	7,500.0	70.8	72.4	-58.50	-3,750.0	1,276.7	459.3	339.7	119.64	3.839	
12,000.0	7,740.0	11,751.8	7,500.0	72.4	74.0	-58.43	-3,850.0	1,276.7	458.4	336.0	122.49	3.743	
12,100.0	7,740.0	11,851.8	7,500.0	74.1	75.7	-58.37	-3,950.0	1,276.7	457.6	332.3	125.33	3.651	
12,200.0	7,740.0	11,951.8	7,500.0	75.8	77.3	-58.30	-4,050.0	1,276.7	456.7	328.6	128.18	3.563	
12,300.0	7,740.0	12,051.8	7,500.0	77.5	79.0	-58.23	-4,150.0	1,276.7	455.9	324.9	131.02	3.480	
12,400.0	7,740.0	12,151.8	7,500.0	79.2	80.6	-58.17	-4,250.0	1,276.7	455.1	321.2	133.87	3.399	
12,500.0	7,740.0	12,251.8	7,500.0	80.9	82.3	-58.10	-4,350.0	1,276.7	454.2	317.5	136.71	3.322	
12,600.0	7,740.0	12,351.8	7,500.0	82.6	84.0	-58.04	-4,450.0	1,276.7	453.4	313.8	139.55	3.249	
12,700.0	7,740.0	12,451.8	7,500.0	84.3	85.6	-57.97	-4,550.0	1,276.7	452.5	310.1	142.38	3.178	
12,800.0	7,740.0	12,551.8	7,500.0	86.0	87.3	-57.90	-4,650.0	1,276.7	451.7	306.5	145.22	3.110	
12,900.0	7,740.0	12,651.8	7,500.0	87.7	89.0	-57.83	-4,750.0	1,276.7	450.8	302.8	148.05	3.045	
13,000.0	7,740.0	12,751.8	7,500.0	89.4	90.7	-57.77	-4,850.0	1,276.7	450.0	299.1	150.87	2.983	
13,100.0	7,740.0	12,851.8	7,500.0	91.1	92.3	-57.70	-4,950.0	1,276.7	449.2	295.5	153.70	2.922	
13,200.0	7,740.0	12,951.8	7,500.0	92.8	94.0	-57.63	-5,050.0	1,276.7	448.3	291.8	156.52	2.864	
13,300.0	7,740.0	13,051.8	7,500.0	94.5	95.7	-57.56	-5,150.0	1,276.7	447.5	288.1	159.34	2.808	
13,400.0	7,740.0	13,151.8	7,500.0	96.2	97.4	-57.49	-5,250.0	1,276.7	446.6	284.5	162.15	2.754	
13,500.0	7,740.0	13,251.7	7,500.0	98.0	99.1	-57.43	-5,350.0	1,276.7	445.8	280.8	164.96	2.702	
13,600.0	7,740.0	13,351.7	7,500.0	99.7	100.8	-57.36	-5,450.0	1,276.7	445.0	277.2	167.77	2.652	
13,700.0	7,740.0	13,451.7	7,500.0	101.4	102.5	-57.29	-5,550.0	1,276.7	444.1	273.5	170.57	2.604	
13,800.0	7,740.0	13,551.7	7,500.0	103.1	104.2	-57.22	-5,650.0	1,276.7	443.3	269.9	173.37	2.557	
13,900.0	7,740.0	13,651.7	7,500.0	104.8	105.9	-57.15	-5,749.9	1,276.7	442.4	266.3	176.16	2.512	
14,000.0	7,740.0	13,751.7	7,500.0	106.5	107.6	-57.08	-5,849.9	1,276.7	441.6	262.7	178.95	2.468	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #2													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		
14,100.0	7,740.0	13,851.7	7,500.0	108.3	109.3	-57.01	-5,949.9	1,276.7	440.8	259.0	181.74	2.425		
14,200.0	7,740.0	13,951.7	7,500.0	110.0	111.0	-56.94	-6,049.9	1,276.7	439.9	255.4	184.52	2.384		
14,300.0	7,740.0	14,051.7	7,500.0	111.7	112.7	-56.87	-6,149.9	1,276.7	439.1	251.8	187.30	2.344		
14,400.0	7,740.0	14,151.7	7,500.0	113.4	114.4	-56.80	-6,249.9	1,276.7	438.3	248.2	190.07	2.306		
14,500.0	7,740.0	14,251.7	7,500.0	115.2	116.1	-56.72	-6,349.9	1,276.7	437.4	244.6	192.84	2.268		
14,600.0	7,740.0	14,351.7	7,500.0	116.9	117.8	-56.65	-6,449.9	1,276.7	436.6	241.0	195.60	2.232		
14,700.0	7,740.0	14,451.7	7,500.0	118.6	119.5	-56.58	-6,549.9	1,276.7	435.8	237.4	198.36	2.197		
14,800.0	7,740.0	14,551.7	7,500.0	120.4	121.2	-56.51	-6,649.9	1,276.7	434.9	233.8	201.11	2.163		
14,900.0	7,740.0	14,651.7	7,500.0	122.1	122.9	-56.44	-6,749.9	1,276.7	434.1	230.3	203.86	2.129		
15,000.0	7,740.0	14,751.7	7,500.0	123.8	124.7	-56.36	-6,849.9	1,276.7	433.3	226.7	206.60	2.097		
15,100.0	7,740.0	14,851.7	7,500.0	125.5	126.4	-56.29	-6,949.9	1,276.7	432.5	223.1	209.34	2.066		
15,200.0	7,740.0	14,951.7	7,500.0	127.3	128.1	-56.22	-7,049.9	1,276.7	431.6	219.6	212.07	2.035		
15,300.0	7,740.0	15,051.7	7,500.0	129.0	129.8	-56.14	-7,149.9	1,276.7	430.8	216.0	214.80	2.006		
15,400.0	7,740.0	15,151.7	7,500.0	130.7	131.5	-56.07	-7,249.9	1,276.7	430.0	212.4	217.52	1.977		
15,500.0	7,740.0	15,251.6	7,500.0	132.5	133.3	-55.99	-7,349.9	1,276.7	429.1	208.9	220.24	1.949		
15,600.0	7,740.0	15,351.6	7,500.0	134.2	135.0	-55.92	-7,449.9	1,276.7	428.3	205.4	222.95	1.921		
15,700.0	7,740.0	15,451.6	7,500.0	135.9	136.7	-55.85	-7,549.9	1,276.7	427.5	201.8	225.66	1.894		
15,800.0	7,740.0	15,551.6	7,500.0	137.7	138.4	-55.77	-7,649.9	1,276.7	426.7	198.3	228.36	1.868		
15,900.0	7,740.0	15,651.6	7,500.0	139.4	140.1	-55.70	-7,749.8	1,276.7	425.9	194.8	231.05	1.843		
16,000.0	7,740.0	15,751.6	7,500.0	141.1	141.9	-55.62	-7,849.8	1,276.7	425.0	191.3	233.74	1.818		
16,083.0	7,740.0	15,834.6	7,500.0	142.6	143.3	-55.56	-7,932.8	1,276.7	424.4	188.4	235.97	1.798		
16,083.8	7,740.0	15,835.5	7,500.0	142.6	143.3	-55.56	-7,933.7	1,276.7	424.3	188.4	235.99	1.798 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #2												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	89.98	0.0	19.9	19.9				
100.0	100.0	100.0	100.0	0.2	0.2	89.98	0.0	19.9	19.9	19.6	0.30	65.434	
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	19.9	19.9	19.2	0.65	30.442	CC, ES
300.0	300.0	299.7	299.7	0.5	0.5	89.19	0.3	20.7	20.7	19.7	1.00	20.665	
400.0	400.0	399.3	399.2	0.7	0.7	87.19	1.1	23.1	23.2	21.8	1.35	17.156	
500.0	500.0	498.7	498.6	0.8	0.9	84.66	2.5	27.2	27.4	25.7	1.70	16.064	
600.0	600.0	598.1	597.7	1.0	1.1	82.20	4.5	32.9	33.3	31.3	2.06	16.146	
700.0	700.0	697.1	696.5	1.2	1.3	80.09	7.0	40.2	41.0	38.6	2.43	16.870	
800.0	800.0	795.9	794.8	1.4	1.5	78.39	10.1	49.1	50.4	47.6	2.81	17.961	
900.0	900.0	894.3	892.6	1.5	1.8	77.06	13.7	59.6	61.6	58.4	3.20	19.264	
1,000.0	1,000.0	992.3	989.8	1.7	2.0	76.02	17.8	71.6	74.5	70.9	3.60	20.686	
1,100.0	1,100.0	1,090.0	1,086.4	1.9	2.3	24.35	22.5	85.1	88.3	84.5	3.78	23.354	
1,200.0	1,200.0	1,187.4	1,182.5	2.1	2.6	24.20	27.7	100.1	102.2	98.0	4.13	24.766	
1,300.0	1,299.9	1,284.5	1,278.1	2.3	3.0	24.36	33.3	116.6	116.2	111.7	4.47	25.978	
1,400.0	1,399.7	1,381.5	1,373.1	2.4	3.3	24.72	39.5	134.6	130.3	125.5	4.82	27.027	
1,500.0	1,499.4	1,478.1	1,467.5	2.6	3.7	25.23	46.3	154.1	144.5	139.3	5.17	27.941	
1,600.0	1,598.9	1,574.5	1,561.4	2.8	4.1	25.85	53.5	175.0	158.8	153.3	5.53	28.735	
1,700.0	1,698.3	1,672.9	1,656.9	3.1	4.6	26.58	61.2	197.4	172.8	166.9	5.89	29.317	
1,800.0	1,797.4	1,772.1	1,753.1	3.3	5.0	27.44	69.0	220.0	185.3	179.0	6.27	29.541	
1,908.5	1,904.7	1,879.9	1,857.7	3.6	5.5	28.53	77.4	244.6	197.1	190.4	6.70	29.433	
2,000.0	1,995.0	1,970.9	1,946.0	3.8	5.9	29.51	84.6	265.3	206.4	199.4	7.07	29.190	
2,100.0	2,093.8	2,070.3	2,042.5	4.1	6.4	30.49	92.4	288.0	216.7	209.2	7.49	28.922	
2,200.0	2,192.5	2,169.7	2,139.0	4.4	6.8	31.37	100.2	310.7	227.0	219.1	7.92	28.655	
2,300.0	2,291.3	2,269.1	2,235.5	4.7	7.3	32.18	108.0	333.3	237.3	229.0	8.36	28.392	
2,400.0	2,390.0	2,368.5	2,331.9	5.0	7.7	32.92	115.8	356.0	247.7	238.9	8.80	28.134	
2,500.0	2,488.8	2,467.9	2,428.4	5.3	8.2	33.61	123.6	378.7	258.1	248.9	9.26	27.882	
2,600.0	2,587.5	2,567.3	2,524.9	5.6	8.6	34.24	131.4	401.3	268.6	258.9	9.72	27.637	
2,700.0	2,686.3	2,666.7	2,621.4	5.9	9.1	34.82	139.3	424.0	279.1	268.9	10.18	27.401	
2,800.0	2,785.0	2,766.1	2,717.8	6.2	9.5	35.36	147.1	446.7	289.6	278.9	10.66	27.173	
2,900.0	2,883.8	2,865.5	2,814.3	6.5	10.0	35.86	154.9	469.3	300.1	289.0	11.13	26.955	
3,000.0	2,982.5	2,965.0	2,910.8	6.8	10.5	36.33	162.7	492.0	310.7	299.1	11.62	26.745	
3,100.0	3,081.3	3,064.4	3,007.3	7.2	10.9	36.77	170.5	514.7	321.3	309.2	12.10	26.544	
3,200.0	3,180.0	3,163.8	3,103.7	7.5	11.4	37.18	178.3	537.3	331.9	319.3	12.59	26.351	
3,300.0	3,278.7	3,263.2	3,200.2	7.8	11.8	37.56	186.1	560.0	342.5	329.4	13.09	26.167	
3,400.0	3,377.5	3,362.6	3,296.7	8.1	12.3	37.92	193.9	582.7	353.1	339.5	13.58	25.991	
3,500.0	3,476.2	3,462.0	3,393.2	8.4	12.8	38.26	201.7	605.3	363.7	349.6	14.09	25.823	
3,600.0	3,575.0	3,561.4	3,489.6	8.7	13.2	38.58	209.5	628.0	374.4	359.8	14.59	25.663	
3,700.0	3,673.7	3,660.8	3,586.1	9.1	13.7	38.89	217.4	650.7	385.0	369.9	15.09	25.509	
3,800.0	3,772.5	3,760.2	3,682.6	9.4	14.1	39.17	225.2	673.3	395.7	380.1	15.60	25.362	
3,900.0	3,871.2	3,859.6	3,779.1	9.7	14.6	39.44	233.0	696.0	406.4	390.3	16.11	25.222	
4,000.0	3,970.0	3,959.1	3,875.5	10.0	15.1	39.70	240.8	718.7	417.1	400.5	16.63	25.088	
4,100.0	4,068.7	4,058.5	3,972.0	10.3	15.5	39.95	248.6	741.3	427.8	410.6	17.14	24.959	
4,200.0	4,167.5	4,157.9	4,068.5	10.7	16.0	40.18	256.4	764.0	438.5	420.8	17.66	24.836	
4,300.0	4,266.2	4,257.3	4,165.0	11.0	16.4	40.40	264.2	786.7	449.2	431.0	18.17	24.718	
4,400.0	4,364.9	4,356.7	4,261.4	11.3	16.9	40.61	272.0	809.3	459.9	441.2	18.69	24.605	
4,500.0	4,463.7	4,456.1	4,357.9	11.6	17.4	40.81	279.8	832.0	470.6	451.4	19.21	24.497	
4,600.0	4,562.4	4,555.5	4,454.4	11.9	17.8	41.01	287.6	854.7	481.4	461.6	19.73	24.393	
4,700.0	4,661.2	4,654.9	4,550.9	12.3	18.3	41.19	295.5	877.3	492.1	471.8	20.26	24.293	
4,800.0	4,759.9	4,754.3	4,647.3	12.6	18.8	41.37	303.3	900.0	502.8	482.1	20.78	24.197	
4,900.0	4,858.7	4,853.7	4,743.8	12.9	19.2	41.54	311.1	922.7	513.6	492.3	21.31	24.105	
5,000.0	4,957.4	4,953.2	4,840.3	13.2	19.7	41.70	318.9	945.3	524.3	502.5	21.83	24.017	
5,100.0	5,056.2	5,052.6	4,936.8	13.6	20.1	41.85	326.7	968.0	535.1	512.7	22.36	23.931	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #2												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	5,154.9	5,152.0	5,033.2	13.9	20.6	42.00	334.5	990.7	545.8	523.0	22.89	23.849	
5,300.0	5,253.7	5,251.4	5,129.7	14.2	21.1	42.15	342.3	1,013.3	556.6	533.2	23.42	23.770	
5,400.0	5,352.4	5,350.8	5,226.2	14.5	21.5	42.29	350.1	1,036.0	567.4	543.4	23.95	23.694	
5,500.0	5,451.1	5,450.2	5,322.7	14.9	22.0	42.42	357.9	1,058.7	578.1	553.7	24.48	23.621	
5,600.0	5,549.9	5,549.6	5,419.2	15.2	22.5	42.55	365.7	1,081.3	588.9	563.9	25.01	23.550	
5,700.0	5,648.6	5,649.0	5,515.6	15.5	22.9	42.67	373.6	1,104.0	599.7	574.1	25.54	23.481	
5,800.0	5,747.4	5,748.4	5,612.1	15.8	23.4	42.79	381.4	1,126.7	610.4	584.4	26.07	23.415	
5,900.0	5,846.1	5,847.8	5,708.6	16.2	23.8	42.90	389.2	1,149.3	621.2	594.6	26.60	23.352	
6,000.0	5,944.9	5,947.3	5,805.1	16.5	24.3	43.02	397.0	1,172.0	632.0	604.9	27.14	23.290	
6,100.0	6,043.6	6,046.7	5,901.5	16.8	24.8	43.12	404.8	1,194.7	642.8	615.1	27.67	23.230	
6,200.0	6,142.4	6,146.1	5,998.0	17.1	25.2	43.23	412.6	1,217.3	653.6	625.4	28.20	23.172	
6,300.0	6,241.1	6,245.5	6,094.5	17.5	25.7	43.33	420.4	1,240.0	664.3	635.6	28.74	23.116	
6,400.0	6,339.9	6,344.9	6,191.0	17.8	26.1	43.43	428.2	1,262.7	675.1	645.9	29.27	23.062	
6,500.0	6,438.6	6,444.3	6,287.4	18.1	26.6	43.52	436.0	1,285.3	685.9	656.1	29.81	23.010	
6,600.0	6,537.3	6,543.7	6,383.9	18.4	27.1	43.61	443.8	1,308.0	696.7	666.4	30.35	22.959	
6,700.0	6,636.1	6,643.1	6,480.4	18.8	27.5	43.70	451.7	1,330.7	707.5	676.6	30.88	22.910	
6,800.0	6,734.8	6,742.5	6,576.9	19.1	28.0	43.79	459.5	1,353.3	718.3	686.9	31.42	22.862	
6,900.0	6,833.6	6,841.9	6,673.3	19.4	28.5	43.87	467.3	1,376.0	729.1	697.1	31.96	22.815	
7,000.0	6,932.3	6,941.4	6,769.8	19.7	28.9	43.95	475.1	1,398.7	739.9	707.4	32.49	22.770	
7,100.0	7,031.1	7,040.8	6,866.3	20.1	29.4	44.03	482.9	1,421.3	750.7	717.7	33.03	22.726	
7,190.5	7,120.5	7,130.8	6,953.6	20.4	29.8	44.10	490.0	1,441.9	760.5	727.0	33.52	22.688	
7,200.0	7,129.8	7,140.2	6,962.8	20.4	29.8	39.04	490.7	1,444.0	761.5	727.9	33.61	22.656	
7,250.0	7,179.4	7,189.9	7,011.0	20.5	30.1	4.13	494.6	1,455.3	766.4	732.5	33.93	22.589	
7,300.0	7,228.8	7,239.2	7,058.9	20.6	30.3	-27.64	498.5	1,466.6	770.6	736.6	33.99	22.668	
7,350.0	7,277.9	7,287.9	7,106.1	20.7	30.5	-45.58	502.3	1,477.7	774.1	740.3	33.83	22.884	
7,400.0	7,326.1	7,334.4	7,151.2	20.7	30.7	-55.62	505.8	1,488.3	777.2	743.8	33.47	23.221	
7,450.0	7,373.2	7,378.6	7,194.3	20.7	30.9	-61.86	506.6	1,498.4	780.1	747.1	32.99	23.644	
7,500.0	7,418.7	7,423.9	7,238.3	20.7	31.1	-66.19	503.8	1,508.7	782.9	750.5	32.44	24.138	
7,550.0	7,462.4	7,470.4	7,283.1	20.6	31.2	-69.48	497.2	1,519.3	785.6	753.8	31.82	24.690	
7,600.0	7,503.8	7,518.3	7,328.5	20.5	31.4	-72.14	486.6	1,529.9	788.2	757.0	31.17	25.287	
7,650.0	7,542.8	7,567.7	7,374.3	20.5	31.5	-74.40	471.6	1,540.7	790.7	760.1	30.52	25.908	
7,700.0	7,578.8	7,618.6	7,420.1	20.4	31.6	-76.41	452.0	1,551.5	793.0	763.1	29.89	26.530	
7,750.0	7,611.8	7,671.4	7,465.5	20.3	31.7	-78.24	427.3	1,562.1	795.1	765.8	29.31	27.125	
7,800.0	7,641.5	7,726.1	7,510.0	20.2	31.8	-79.94	397.3	1,572.6	797.0	768.2	28.81	27.663	
7,850.0	7,667.6	7,782.9	7,553.0	20.2	31.8	-81.54	361.8	1,582.7	798.7	770.3	28.41	28.114	
7,900.0	7,689.9	7,841.8	7,593.9	20.2	31.9	-83.06	320.4	1,592.3	800.0	771.9	28.12	28.453	
7,950.0	7,708.2	7,903.1	7,631.7	20.1	31.9	-84.51	273.0	1,601.2	801.0	773.1	27.95	28.659	
8,000.0	7,722.5	7,966.8	7,665.5	20.2	31.9	-85.89	219.8	1,609.1	801.6	773.7	27.92	28.714	
8,050.0	7,732.6	8,032.8	7,694.3	20.2	32.0	-87.18	160.8	1,615.9	801.6	773.6	28.00	28.627	
8,100.0	7,738.4	8,101.0	7,717.0	20.3	32.0	-88.39	96.6	1,621.2	801.1	772.9	28.20	28.409	
8,142.5	7,740.0	8,160.7	7,730.6	20.4	32.1	-89.32	38.6	1,624.4	800.1	771.6	28.48	28.093	
8,200.0	7,740.0	8,244.0	7,739.6	20.5	32.2	-89.97	-44.0	1,626.5	797.5	768.5	29.03	27.474	
8,300.0	7,740.0	8,350.8	7,740.0	20.9	32.4	-90.00	-150.8	1,626.6	790.6	760.3	30.28	26.113	
8,400.0	7,740.0	8,450.6	7,740.0	21.4	32.6	-90.00	-250.6	1,626.6	783.6	751.8	31.81	24.632	
8,442.5	7,740.0	8,492.9	7,740.0	21.7	32.8	-90.00	-293.0	1,626.6	780.7	748.1	32.55	23.985	
8,500.0	7,740.0	8,550.3	7,740.0	22.1	33.0	-90.00	-350.4	1,626.6	777.0	743.5	33.44	23.231	
8,600.0	7,740.0	8,650.2	7,740.0	22.8	33.5	-90.00	-450.2	1,626.6	771.9	736.8	35.10	21.988	
8,700.0	7,740.0	8,750.1	7,740.0	23.6	34.0	-90.00	-550.2	1,626.6	768.5	731.6	36.90	20.829	
8,800.0	7,740.0	8,850.1	7,740.0	24.5	34.6	-90.00	-650.2	1,626.6	766.9	728.1	38.80	19.765	
8,842.5	7,740.0	8,892.6	7,740.0	25.0	34.9	-90.00	-692.6	1,626.6	766.7	727.1	39.63	19.346	
8,842.5	7,740.0	8,892.6	7,740.0	25.0	34.9	-90.00	-692.6	1,626.6	766.7	727.1	39.63	19.346	
8,900.0	7,740.0	8,950.1	7,740.0	25.5	35.3	-90.00	-750.2	1,626.6	766.7	725.6	41.08	18.662	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #2												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
9,000.0	7,740.0	9,050.1	7,740.0	26.6	36.0	-90.00	-850.2	1,626.6	766.7	723.0	43.70	17.544	
9,100.0	7,740.0	9,150.1	7,740.0	27.7	36.9	-90.00	-950.2	1,626.6	766.7	720.3	46.44	16.510	
9,200.0	7,740.0	9,250.1	7,740.0	28.9	37.7	-90.00	-1,050.2	1,626.6	766.7	717.5	49.28	15.560	
9,300.0	7,740.0	9,350.1	7,740.0	30.2	38.7	-90.00	-1,150.2	1,626.6	766.7	714.5	52.19	14.690	
9,342.5	7,740.0	9,392.6	7,740.0	30.7	39.1	-90.00	-1,192.6	1,626.6	766.7	713.3	53.45	14.345	
9,399.5	7,740.0	9,449.6	7,740.0	31.5	39.7	-90.00	-1,249.7	1,626.6	766.4	710.9	55.51	13.807	
9,500.0	7,740.0	9,550.1	7,740.0	32.8	40.8	-90.00	-1,350.2	1,626.6	765.4	706.9	58.58	13.067	
9,600.0	7,740.0	9,650.1	7,740.0	34.2	41.9	-90.00	-1,450.2	1,626.6	764.5	702.8	61.68	12.394	
9,700.0	7,740.0	9,750.1	7,740.0	35.6	43.0	-90.00	-1,550.2	1,626.6	763.5	698.6	64.82	11.778	
9,800.0	7,740.0	9,850.1	7,740.0	37.1	44.2	-90.00	-1,650.2	1,626.6	762.5	694.5	68.00	11.213	
9,900.0	7,740.0	9,950.1	7,740.0	38.5	45.4	-90.00	-1,750.1	1,626.6	761.5	690.3	71.21	10.694	
10,000.0	7,740.0	10,050.1	7,740.0	40.0	46.7	-90.00	-1,850.1	1,626.6	760.5	686.0	74.44	10.216	
10,100.0	7,740.0	10,150.1	7,740.0	41.6	48.0	-90.00	-1,950.1	1,626.6	759.5	681.8	77.70	9.774	
10,200.0	7,740.0	10,250.1	7,740.0	43.1	49.3	-90.00	-2,050.1	1,626.6	758.5	677.5	80.98	9.366	
10,300.0	7,740.0	10,350.1	7,740.0	44.6	50.6	-90.00	-2,150.1	1,626.6	757.5	673.2	84.28	8.988	
10,400.0	7,740.0	10,450.1	7,740.0	46.2	52.0	-90.00	-2,250.1	1,626.6	756.5	668.9	87.60	8.636	
10,500.0	7,740.0	10,550.1	7,740.0	47.8	53.4	-90.00	-2,350.1	1,626.6	755.5	664.6	90.93	8.309	
10,600.0	7,740.0	10,650.1	7,740.0	49.4	54.8	-90.00	-2,450.1	1,626.6	754.5	660.2	94.27	8.004	
10,700.0	7,740.0	10,750.1	7,740.0	51.0	56.3	-90.00	-2,550.1	1,626.6	753.5	655.9	97.62	7.719	
10,800.0	7,740.0	10,850.1	7,740.0	52.6	57.7	-90.00	-2,650.1	1,626.6	752.5	651.5	100.99	7.452	
10,900.0	7,740.0	10,950.1	7,740.0	54.2	59.2	-90.00	-2,750.1	1,626.6	751.5	647.2	104.36	7.201	
11,000.0	7,740.0	11,050.1	7,740.0	55.8	60.7	-90.00	-2,850.1	1,626.6	750.5	642.8	107.74	6.966	
11,100.0	7,740.0	11,150.0	7,740.0	57.5	62.2	-90.00	-2,950.1	1,626.6	749.5	638.4	111.13	6.744	
11,200.0	7,740.0	11,250.0	7,740.0	59.1	63.7	-90.00	-3,050.1	1,626.6	748.5	634.0	114.53	6.536	
11,300.0	7,740.0	11,350.0	7,740.0	60.8	65.2	-90.00	-3,150.1	1,626.6	747.5	629.6	117.94	6.338	
11,400.0	7,740.0	11,450.0	7,740.0	62.4	66.8	-90.00	-3,250.1	1,626.6	746.5	625.2	121.35	6.152	
11,500.0	7,740.0	11,550.0	7,740.0	64.1	68.3	-90.00	-3,350.1	1,626.6	745.5	620.8	124.76	5.976	
11,600.0	7,740.0	11,650.0	7,740.0	65.7	69.9	-90.00	-3,450.1	1,626.6	744.5	616.4	128.18	5.809	
11,700.0	7,740.0	11,750.0	7,740.0	67.4	71.4	-90.00	-3,550.1	1,626.6	743.5	611.9	131.61	5.650	
11,800.0	7,740.0	11,850.0	7,740.0	69.1	73.0	-90.00	-3,650.1	1,626.6	742.6	607.5	135.03	5.499	
11,900.0	7,740.0	11,950.0	7,740.0	70.8	74.6	-90.00	-3,750.0	1,626.6	741.6	603.1	138.47	5.355	
12,000.0	7,740.0	12,050.0	7,740.0	72.4	76.2	-90.00	-3,850.0	1,626.6	740.6	598.7	141.90	5.219	
12,100.0	7,740.0	12,150.0	7,740.0	74.1	77.8	-90.00	-3,950.0	1,626.6	739.6	594.2	145.34	5.088	
12,200.0	7,740.0	12,250.0	7,740.0	75.8	79.4	-90.00	-4,050.0	1,626.6	738.6	589.8	148.79	4.964	
12,300.0	7,740.0	12,350.0	7,740.0	77.5	81.0	-90.00	-4,150.0	1,626.6	737.6	585.3	152.23	4.845	
12,400.0	7,740.0	12,450.0	7,740.0	79.2	82.6	-90.00	-4,250.0	1,626.6	736.6	580.9	155.68	4.731	
12,500.0	7,740.0	12,550.0	7,740.0	80.9	84.2	-90.00	-4,350.0	1,626.6	735.6	576.5	159.14	4.622	
12,600.0	7,740.0	12,650.0	7,740.0	82.6	85.9	-90.00	-4,450.0	1,626.6	734.6	572.0	162.59	4.518	
12,700.0	7,740.0	12,750.0	7,740.0	84.3	87.5	-90.00	-4,550.0	1,626.6	733.6	567.6	166.05	4.418	
12,800.0	7,740.0	12,850.0	7,740.0	86.0	89.1	-90.00	-4,650.0	1,626.6	732.6	563.1	169.50	4.322	
12,900.0	7,740.0	12,950.0	7,740.0	87.7	90.8	-90.00	-4,750.0	1,626.6	731.6	558.6	172.96	4.230	
13,000.0	7,740.0	13,050.0	7,740.0	89.4	92.4	-90.00	-4,850.0	1,626.6	730.6	554.2	176.43	4.141	
13,100.0	7,740.0	13,149.9	7,740.0	91.1	94.1	-90.00	-4,950.0	1,626.6	729.6	549.7	179.89	4.056	
13,200.0	7,740.0	13,249.9	7,740.0	92.8	95.7	-90.00	-5,050.0	1,626.6	728.6	545.3	183.36	3.974	
13,300.0	7,740.0	13,349.9	7,740.0	94.5	97.4	-90.00	-5,150.0	1,626.6	727.6	540.8	186.82	3.895	
13,400.0	7,740.0	13,449.9	7,740.0	96.2	99.1	-90.00	-5,250.0	1,626.6	726.6	536.3	190.29	3.818	
13,500.0	7,740.0	13,549.9	7,740.0	98.0	100.7	-90.00	-5,350.0	1,626.6	725.6	531.9	193.76	3.745	
13,600.0	7,740.0	13,649.9	7,740.0	99.7	102.4	-90.00	-5,450.0	1,626.6	724.6	527.4	197.23	3.674	
13,700.0	7,740.0	13,749.9	7,740.0	101.4	104.1	-90.00	-5,550.0	1,626.6	723.6	522.9	200.71	3.605	
13,800.0	7,740.0	13,849.9	7,740.0	103.1	105.7	-90.00	-5,650.0	1,626.6	722.6	518.5	204.18	3.539	
13,900.0	7,740.0	13,949.9	7,740.0	104.8	107.4	-90.00	-5,749.9	1,626.6	721.7	514.0	207.66	3.475	
14,000.0	7,740.0	14,049.9	7,740.0	106.5	109.1	-90.00	-5,849.9	1,626.6	720.7	509.5	211.13	3.413	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #2												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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)			
14,100.0	7,740.0	14,149.9	7,740.0	108.3	110.8	-90.00	-5,949.9	1,626.6	719.7	505.1	214.61	3.353	
14,200.0	7,740.0	14,249.9	7,740.0	110.0	112.4	-90.00	-6,049.9	1,626.6	718.7	500.6	218.09	3.295	
14,300.0	7,740.0	14,349.9	7,740.0	111.7	114.1	-90.00	-6,149.9	1,626.6	717.7	496.1	221.57	3.239	
14,400.0	7,740.0	14,449.9	7,740.0	113.4	115.8	-90.00	-6,249.9	1,626.6	716.7	491.6	225.05	3.185	
14,500.0	7,740.0	14,549.9	7,740.0	115.2	117.5	-90.00	-6,349.9	1,626.6	715.7	487.2	228.53	3.132	
14,600.0	7,740.0	14,649.9	7,740.0	116.9	119.2	-90.00	-6,449.9	1,626.6	714.7	482.7	232.01	3.080	
14,700.0	7,740.0	14,749.9	7,740.0	118.6	120.9	-90.00	-6,549.9	1,626.6	713.7	478.2	235.49	3.031	
14,800.0	7,740.0	14,849.9	7,740.0	120.4	122.6	-90.00	-6,649.9	1,626.6	712.7	473.7	238.98	2.982	
14,900.0	7,740.0	14,949.9	7,740.0	122.1	124.3	-90.00	-6,749.9	1,626.6	711.7	469.2	242.46	2.935	
15,000.0	7,740.0	15,049.9	7,740.0	123.8	126.0	-90.00	-6,849.9	1,626.6	710.7	464.8	245.94	2.890	
15,100.0	7,740.0	15,149.9	7,740.0	125.5	127.7	-90.00	-6,949.9	1,626.6	709.7	460.3	249.43	2.845	
15,200.0	7,740.0	15,249.9	7,740.0	127.3	129.4	-90.00	-7,049.9	1,626.6	708.7	455.8	252.92	2.802	
15,300.0	7,740.0	15,349.9	7,740.0	129.0	131.1	-90.00	-7,149.9	1,626.6	707.7	451.3	256.40	2.760	
15,400.0	7,740.0	15,449.9	7,740.0	130.7	132.8	-90.00	-7,249.9	1,626.6	706.7	446.8	259.89	2.719	
15,500.0	7,740.0	15,549.9	7,740.0	132.5	134.5	-90.00	-7,349.9	1,626.6	705.7	442.3	263.38	2.680	
15,600.0	7,740.0	15,649.9	7,740.0	134.2	136.2	-90.00	-7,449.9	1,626.6	704.7	437.9	266.87	2.641	
15,700.0	7,740.0	15,749.9	7,740.0	135.9	137.9	-90.00	-7,549.9	1,626.6	703.7	433.4	270.35	2.603	
15,800.0	7,740.0	15,849.9	7,740.0	137.7	139.6	-90.00	-7,649.9	1,626.6	702.7	428.9	273.84	2.566	
15,900.0	7,740.0	15,949.9	7,740.0	139.4	141.3	-90.00	-7,749.9	1,626.6	701.7	424.4	277.33	2.530	
16,000.0	7,740.0	16,049.9	7,740.0	141.1	143.0	-90.00	-7,849.9	1,626.6	700.7	419.9	280.82	2.495	
16,083.0	7,740.0	16,132.8	7,740.0	142.6	144.4	-90.00	-7,932.8	1,626.6	699.9	416.2	283.72	2.467	
16,083.8	7,740.0	16,133.6	7,740.0	142.6	144.5	-90.00	-7,933.7	1,626.6	699.9	416.2	283.75	2.467 SF	

Cathedral Energy Services

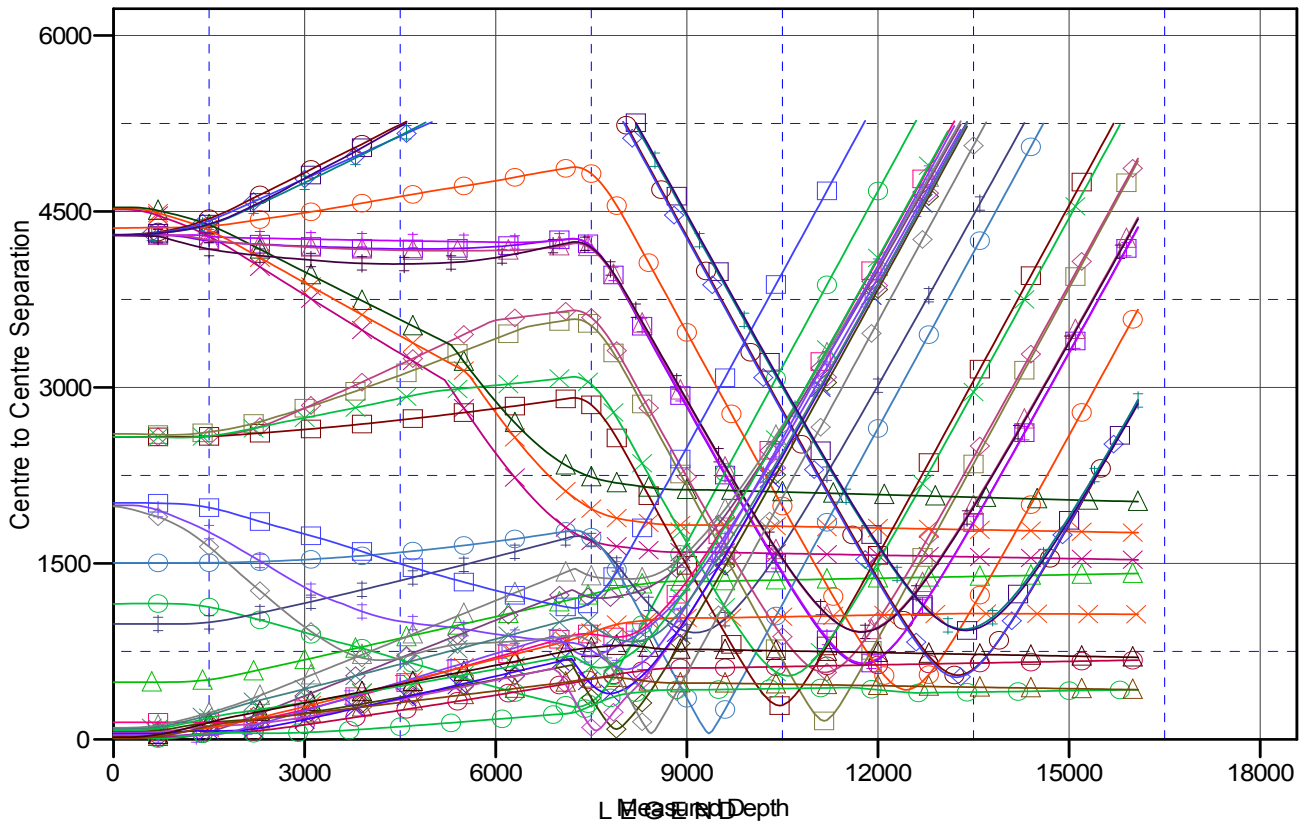
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	KB @ 5007.0ft (Unassigned)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	MD Reference:	KB @ 5007.0ft (Unassigned)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	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 #3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 5007.0ft (Unassigned)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Woolley-Sosa 2E-7H-E168
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.29°

Ladder Plot



-A168, HZ, Plan #2 V0	THOMAS 24-7 (Existing), Existing, NO SURVEYS V0	Sosa 22-18, DD, Plan #2 V0
-E168, HZ, Plan #2 V0	Woolley-Sosa 2C-7H-E168, HZ, Plan #2 V0	WOOLLEY 22-7 (EXISTING), ENCANA
WD), DD V0	WOOLLEY 12-7 (EXISTING), ENCANA WELL, NO SURVEYS V0	WOOLLEY 21-7 (EXISTING), ENCANA
MD), Plan #2 V0	Woolley-Becky 2D-7H-E168, HZ, Plan #4 V0	Woolley-Sosa 2D-7H-E168, HZ, Plan #2
1 (EXISTING), ENCANA WELL, GYRO V0	THOMAS 24-7 (EXISTING), ENCANA WELL, SURVEYS V0	WOOLLEY 2-4-7 (EXISTING), ENCANA
H-E168, HZ, Plan #2 V0	Morgan Hills 1C-7H-A168, HZ, Plan #2 V0	Woolley-Becky 2G-7H-E168, HZ, Plan #2
-A168, HZ, Plan #2 V0	Woolley-Sosa 2B-7H-E168, HZ, Plan #2 V0	Woolley-Sosa 2F-7H-E168, HZ, Plan #2
ng), Existing, NO SURVEYS V0	Sosa 11-18, DD, Plan #1 V0	Woolley-Becky 2F-7H-E168, HZ, Plan #3
(ISTING), ENCANA WELL, SURVEYS V0	Sosa 11-18, DD, DD V0	Woolley-Sosa 2G-7H-E168, HZ, Plan #2
(ISTING), EXISTING, EXISTING V0	Woolley-Becky 2C-7H-E168, HZ, Plan #4 V0	Sosa 12-18, DD, Plan #3 V0
(EXISTING), Existing, NO SURVEYS V0	Woolley-Becky 2H-7H-E168, HZ, Plan #3 V0	Sosa 12-18, DD, DD V0

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