

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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 2C-7H-E168					
Well Position	+N/-S	0.0 ft	Northing:	1,267,517.47 ft	Latitude:	40.066855
	+E/-W	0.0 ft	Easting:	3,124,947.60 ft	Longitude:	-105.053586
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 #2			
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	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
898.2	4.98	25.95	897.5	19.5	9.5	1.00	1.00	0.00	25.95	
7,147.0	4.98	25.95	7,122.8	507.4	246.9	0.00	0.00	0.00	0.00	
8,091.8	90.00	180.00	7,740.0	-63.8	270.4	10.00	9.00	16.31	153.97	
15,952.8	90.00	180.00	7,740.0	-7,924.8	270.4	0.00	0.00	0.00	0.00	Woolley-Sosa 2C-7H-

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Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	North Reference:	True
Well:	Woolley-Sosa 2C-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400' - Fox Hills - BASE
500.0	1.00	25.95	500.0	0.8	0.4	-0.8	1.00	1.00	
600.0	2.00	25.95	600.0	3.1	1.5	-3.1	1.00	1.00	
700.0	3.00	25.95	699.9	7.1	3.4	-7.1	1.00	1.00	
800.0	4.00	25.95	799.7	12.5	6.1	-12.5	1.00	1.00	
898.2	4.98	25.95	897.6	19.5	9.5	-19.5	1.00	1.00	EOB; Inc=4.98°
900.0	4.98	25.95	899.4	19.6	9.5	-19.6	0.00	0.00	
1,000.0	4.98	25.95	999.0	27.4	13.3	-27.4	0.00	0.00	
1,100.0	4.98	25.95	1,098.6	35.2	17.1	-35.2	0.00	0.00	
1,200.0	4.98	25.95	1,198.2	43.0	20.9	-43.0	0.00	0.00	
1,300.0	4.98	25.95	1,297.9	50.8	24.7	-50.8	0.00	0.00	
1,400.0	4.98	25.95	1,397.5	58.6	28.5	-58.6	0.00	0.00	
1,500.0	4.98	25.95	1,497.1	66.5	32.3	-66.5	0.00	0.00	
1,600.0	4.98	25.95	1,596.7	74.3	36.1	-74.3	0.00	0.00	
1,700.0	4.98	25.95	1,696.3	82.1	39.9	-82.1	0.00	0.00	
1,800.0	4.98	25.95	1,796.0	89.9	43.7	-89.9	0.00	0.00	
1,900.0	4.98	25.95	1,895.6	97.7	47.5	-97.7	0.00	0.00	
2,000.0	4.98	25.95	1,995.2	105.5	51.3	-105.5	0.00	0.00	
2,100.0	4.98	25.95	2,094.8	113.3	55.1	-113.3	0.00	0.00	
2,200.0	4.98	25.95	2,194.5	121.1	58.9	-121.1	0.00	0.00	
2,300.0	4.98	25.95	2,294.1	128.9	62.7	-128.9	0.00	0.00	
2,400.0	4.98	25.95	2,393.7	136.7	66.5	-136.7	0.00	0.00	
2,500.0	4.98	25.95	2,493.3	144.5	70.3	-144.5	0.00	0.00	
2,600.0	4.98	25.95	2,592.9	152.3	74.1	-152.3	0.00	0.00	
2,700.0	4.98	25.95	2,692.6	160.2	77.9	-160.2	0.00	0.00	
2,800.0	4.98	25.95	2,792.2	168.0	81.7	-168.0	0.00	0.00	
2,900.0	4.98	25.95	2,891.8	175.8	85.5	-175.8	0.00	0.00	
3,000.0	4.98	25.95	2,991.4	183.6	89.3	-183.6	0.00	0.00	
3,100.0	4.98	25.95	3,091.1	191.4	93.1	-191.4	0.00	0.00	
3,200.0	4.98	25.95	3,190.7	199.2	96.9	-199.2	0.00	0.00	
3,300.0	4.98	25.95	3,290.3	207.0	100.7	-207.0	0.00	0.00	
3,400.0	4.98	25.95	3,389.9	214.8	104.5	-214.8	0.00	0.00	
3,500.0	4.98	25.95	3,489.6	222.6	108.3	-222.6	0.00	0.00	
3,600.0	4.98	25.95	3,589.2	230.4	112.1	-230.4	0.00	0.00	
3,700.0	4.98	25.95	3,688.8	238.2	115.9	-238.2	0.00	0.00	
3,800.0	4.98	25.95	3,788.4	246.0	119.7	-246.0	0.00	0.00	
3,900.0	4.98	25.95	3,888.0	253.8	123.5	-253.8	0.00	0.00	
4,000.0	4.98	25.95	3,987.7	261.7	127.3	-261.7	0.00	0.00	
4,100.0	4.98	25.95	4,087.3	269.5	131.1	-269.5	0.00	0.00	
4,200.0	4.98	25.95	4,186.9	277.3	134.9	-277.3	0.00	0.00	
4,300.0	4.98	25.95	4,286.5	285.1	138.7	-285.1	0.00	0.00	
4,400.0	4.98	25.95	4,386.2	292.9	142.5	-292.9	0.00	0.00	
4,452.1	4.98	25.95	4,438.0	297.0	144.5	-297.0	0.00	0.00	Sussex
4,500.0	4.98	25.95	4,485.8	300.7	146.3	-300.7	0.00	0.00	
4,600.0	4.98	25.95	4,585.4	308.5	150.1	-308.5	0.00	0.00	
4,700.0	4.98	25.95	4,685.0	316.3	153.9	-316.3	0.00	0.00	
4,800.0	4.98	25.95	4,784.6	324.1	157.7	-324.1	0.00	0.00	
4,900.0	4.98	25.95	4,884.3	331.9	161.5	-331.9	0.00	0.00	

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Well:	Woolley-Sosa 2C-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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	4.98	25.95	4,983.9	339.7	165.3	-339.7	0.00	0.00	
5,021.2	4.98	25.95	5,005.0	341.4	166.1	-341.4	0.00	0.00	Shannon
5,100.0	4.98	25.95	5,083.5	347.5	169.1	-347.5	0.00	0.00	
5,200.0	4.98	25.95	5,183.1	355.4	172.9	-355.4	0.00	0.00	
5,300.0	4.98	25.95	5,282.8	363.2	176.7	-363.2	0.00	0.00	
5,400.0	4.98	25.95	5,382.4	371.0	180.5	-371.0	0.00	0.00	
5,500.0	4.98	25.95	5,482.0	378.8	184.3	-378.8	0.00	0.00	
5,600.0	4.98	25.95	5,581.6	386.6	188.1	-386.6	0.00	0.00	
5,700.0	4.98	25.95	5,681.2	394.4	191.9	-394.4	0.00	0.00	
5,800.0	4.98	25.95	5,780.9	402.2	195.7	-402.2	0.00	0.00	
5,900.0	4.98	25.95	5,880.5	410.0	199.5	-410.0	0.00	0.00	
6,000.0	4.98	25.95	5,980.1	417.8	203.3	-417.8	0.00	0.00	
6,100.0	4.98	25.95	6,079.7	425.6	207.1	-425.6	0.00	0.00	
6,200.0	4.98	25.95	6,179.4	433.4	210.9	-433.4	0.00	0.00	
6,300.0	4.98	25.95	6,279.0	441.2	214.7	-441.2	0.00	0.00	
6,400.0	4.98	25.95	6,378.6	449.1	218.5	-449.1	0.00	0.00	
6,500.0	4.98	25.95	6,478.2	456.9	222.3	-456.9	0.00	0.00	
6,550.0	4.98	25.95	6,528.0	460.8	224.2	-460.8	0.00	0.00	Teepee Buttes (*if present)
6,600.0	4.98	25.95	6,577.8	464.7	226.1	-464.7	0.00	0.00	
6,700.0	4.98	25.95	6,677.5	472.5	229.9	-472.5	0.00	0.00	
6,800.0	4.98	25.95	6,777.1	480.3	233.7	-480.3	0.00	0.00	
6,900.0	4.98	25.95	6,876.7	488.1	237.5	-488.1	0.00	0.00	
7,000.0	4.98	25.95	6,976.3	495.9	241.3	-495.9	0.00	0.00	
7,100.0	4.98	25.95	7,076.0	503.7	245.1	-503.7	0.00	0.00	
7,147.0	4.98	25.95	7,122.8	507.4	246.9	-507.4	0.00	0.00	Start build/turn @ 7147' MD
7,200.0	2.33	110.66	7,175.7	509.1	248.9	-509.1	10.00	-4.99	
7,300.0	11.04	168.73	7,275.0	498.9	252.7	-498.9	10.00	8.70	
7,346.3	15.60	172.15	7,320.0	488.4	254.4	-488.4	10.00	9.86	Sharon Springs
7,400.0	20.93	174.28	7,371.0	471.7	256.4	-471.7	10.00	9.92	Niobrara
7,500.0	30.89	176.35	7,460.8	428.2	259.8	-428.2	10.00	9.96	
7,531.0	33.99	176.76	7,487.0	411.6	260.8	-411.6	10.00	9.98	B Chalk
7,565.5	37.43	177.14	7,515.0	391.5	261.9	-391.5	10.00	9.98	B Marl
7,600.0	40.87	177.47	7,541.8	369.7	262.9	-369.7	10.00	9.98	
7,684.0	49.26	178.12	7,601.0	310.4	265.1	-310.4	10.00	9.99	C Chalk
7,700.0	50.86	178.22	7,611.3	298.1	265.5	-298.1	9.99	9.98	
7,722.2	53.08	178.36	7,625.0	280.6	266.1	-280.6	10.01	10.00	C Marl
7,777.5	58.60	178.67	7,656.0	234.9	267.2	-234.9	10.00	9.99	D Chalk
7,800.0	60.85	178.78	7,667.4	215.5	267.7	-215.5	9.99	9.98	
7,900.0	70.84	179.24	7,708.2	124.4	269.2	-124.4	10.00	9.99	
7,908.6	71.70	179.28	7,711.0	116.2	269.3	-116.2	10.02	10.01	Fort Hayes
8,000.0	80.83	179.65	7,732.7	27.5	270.2	-27.5	10.00	9.99	
8,002.1	81.04	179.66	7,733.0	25.5	270.2	-25.5	10.08	10.07	Codell
8,091.8	90.00	180.00	7,740.0	-63.9	270.4	63.9	10.00	9.99	LP @ 7740' TVD; 90°
8,100.0	90.00	180.00	7,740.0	-72.1	270.4	72.1	0.00	0.00	
8,200.0	90.00	180.00	7,740.0	-172.1	270.4	172.1	0.00	0.00	
8,300.0	90.00	180.00	7,740.0	-272.1	270.4	272.1	0.00	0.00	
8,400.0	90.00	180.00	7,740.0	-372.1	270.4	372.1	0.00	0.00	
8,500.0	90.00	180.00	7,740.0	-472.1	270.4	472.1	0.00	0.00	
8,600.0	90.00	180.00	7,740.0	-572.1	270.4	572.1	0.00	0.00	
8,700.0	90.00	180.00	7,740.0	-672.1	270.4	672.1	0.00	0.00	
8,800.0	90.00	180.00	7,740.0	-772.1	270.4	772.1	0.00	0.00	
8,900.0	90.00	180.00	7,740.0	-872.1	270.4	872.1	0.00	0.00	

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Well:	Woolley-Sosa 2C-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,000.0	90.00	180.00	7,740.0	-972.1	270.4	972.1	0.00	0.00	
9,100.0	90.00	180.00	7,740.0	-1,072.1	270.4	1,072.1	0.00	0.00	
9,200.0	90.00	180.00	7,740.0	-1,172.1	270.4	1,172.1	0.00	0.00	
9,300.0	90.00	180.00	7,740.0	-1,272.1	270.4	1,272.1	0.00	0.00	
9,400.0	90.00	180.00	7,740.0	-1,372.1	270.4	1,372.1	0.00	0.00	
9,500.0	90.00	180.00	7,740.0	-1,472.1	270.4	1,472.1	0.00	0.00	
9,600.0	90.00	180.00	7,740.0	-1,572.1	270.4	1,572.1	0.00	0.00	
9,700.0	90.00	180.00	7,740.0	-1,672.1	270.4	1,672.1	0.00	0.00	
9,800.0	90.00	180.00	7,740.0	-1,772.1	270.4	1,772.1	0.00	0.00	
9,900.0	90.00	180.00	7,740.0	-1,872.1	270.4	1,872.1	0.00	0.00	
10,000.0	90.00	180.00	7,740.0	-1,972.1	270.4	1,972.1	0.00	0.00	
10,100.0	90.00	180.00	7,740.0	-2,072.1	270.4	2,072.1	0.00	0.00	
10,200.0	90.00	180.00	7,740.0	-2,172.1	270.4	2,172.1	0.00	0.00	
10,300.0	90.00	180.00	7,740.0	-2,272.1	270.4	2,272.1	0.00	0.00	
10,400.0	90.00	180.00	7,740.0	-2,372.1	270.4	2,372.1	0.00	0.00	
10,500.0	90.00	180.00	7,740.0	-2,472.1	270.4	2,472.1	0.00	0.00	
10,600.0	90.00	180.00	7,740.0	-2,572.1	270.4	2,572.1	0.00	0.00	
10,700.0	90.00	180.00	7,740.0	-2,672.1	270.4	2,672.1	0.00	0.00	
10,800.0	90.00	180.00	7,740.0	-2,772.1	270.4	2,772.1	0.00	0.00	
10,900.0	90.00	180.00	7,740.0	-2,872.1	270.4	2,872.1	0.00	0.00	
11,000.0	90.00	180.00	7,740.0	-2,972.1	270.4	2,972.1	0.00	0.00	
11,100.0	90.00	180.00	7,740.0	-3,072.1	270.4	3,072.1	0.00	0.00	
11,200.0	90.00	180.00	7,740.0	-3,172.1	270.4	3,172.1	0.00	0.00	
11,300.0	90.00	180.00	7,740.0	-3,272.1	270.4	3,272.1	0.00	0.00	
11,400.0	90.00	180.00	7,740.0	-3,372.1	270.4	3,372.1	0.00	0.00	
11,500.0	90.00	180.00	7,740.0	-3,472.1	270.4	3,472.1	0.00	0.00	
11,600.0	90.00	180.00	7,740.0	-3,572.1	270.4	3,572.1	0.00	0.00	
11,700.0	90.00	180.00	7,740.0	-3,672.1	270.4	3,672.1	0.00	0.00	
11,800.0	90.00	180.00	7,740.0	-3,772.1	270.4	3,772.1	0.00	0.00	
11,900.0	90.00	180.00	7,740.0	-3,872.1	270.4	3,872.1	0.00	0.00	
12,000.0	90.00	180.00	7,740.0	-3,972.1	270.4	3,972.1	0.00	0.00	
12,100.0	90.00	180.00	7,740.0	-4,072.1	270.4	4,072.1	0.00	0.00	
12,200.0	90.00	180.00	7,740.0	-4,172.1	270.4	4,172.1	0.00	0.00	
12,300.0	90.00	180.00	7,740.0	-4,272.1	270.4	4,272.1	0.00	0.00	
12,400.0	90.00	180.00	7,740.0	-4,372.1	270.4	4,372.1	0.00	0.00	
12,500.0	90.00	180.00	7,740.0	-4,472.1	270.4	4,472.1	0.00	0.00	
12,600.0	90.00	180.00	7,740.0	-4,572.1	270.4	4,572.1	0.00	0.00	
12,700.0	90.00	180.00	7,740.0	-4,672.1	270.4	4,672.1	0.00	0.00	
12,800.0	90.00	180.00	7,740.0	-4,772.1	270.4	4,772.1	0.00	0.00	
12,900.0	90.00	180.00	7,740.0	-4,872.1	270.4	4,872.1	0.00	0.00	
13,000.0	90.00	180.00	7,740.0	-4,972.1	270.4	4,972.1	0.00	0.00	
13,100.0	90.00	180.00	7,740.0	-5,072.1	270.4	5,072.1	0.00	0.00	
13,200.0	90.00	180.00	7,740.0	-5,172.1	270.4	5,172.1	0.00	0.00	
13,300.0	90.00	180.00	7,740.0	-5,272.1	270.4	5,272.1	0.00	0.00	
13,400.0	90.00	180.00	7,740.0	-5,372.1	270.4	5,372.1	0.00	0.00	
13,500.0	90.00	180.00	7,740.0	-5,472.1	270.4	5,472.1	0.00	0.00	
13,600.0	90.00	180.00	7,740.0	-5,572.1	270.4	5,572.1	0.00	0.00	
13,700.0	90.00	180.00	7,740.0	-5,672.1	270.4	5,672.1	0.00	0.00	
13,800.0	90.00	180.00	7,740.0	-5,772.1	270.4	5,772.1	0.00	0.00	
13,900.0	90.00	180.00	7,740.0	-5,872.1	270.4	5,872.1	0.00	0.00	
14,000.0	90.00	180.00	7,740.0	-5,972.1	270.4	5,972.1	0.00	0.00	
14,100.0	90.00	180.00	7,740.0	-6,072.1	270.4	6,072.1	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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
14,200.0	90.00	180.00	7,740.0	-6,172.1	270.4	6,172.1	0.00	0.00	
14,300.0	90.00	180.00	7,740.0	-6,272.1	270.4	6,272.1	0.00	0.00	
14,400.0	90.00	180.00	7,740.0	-6,372.1	270.4	6,372.1	0.00	0.00	
14,500.0	90.00	180.00	7,740.0	-6,472.1	270.4	6,472.1	0.00	0.00	
14,600.0	90.00	180.00	7,740.0	-6,572.1	270.4	6,572.1	0.00	0.00	
14,700.0	90.00	180.00	7,740.0	-6,672.1	270.4	6,672.1	0.00	0.00	
14,800.0	90.00	180.00	7,740.0	-6,772.1	270.4	6,772.1	0.00	0.00	
14,900.0	90.00	180.00	7,740.0	-6,872.1	270.4	6,872.1	0.00	0.00	
15,000.0	90.00	180.00	7,740.0	-6,972.1	270.4	6,972.1	0.00	0.00	
15,100.0	90.00	180.00	7,740.0	-7,072.1	270.4	7,072.1	0.00	0.00	
15,200.0	90.00	180.00	7,740.0	-7,172.1	270.4	7,172.1	0.00	0.00	
15,300.0	90.00	180.00	7,740.0	-7,272.1	270.4	7,272.1	0.00	0.00	
15,400.0	90.00	180.00	7,740.0	-7,372.1	270.4	7,372.1	0.00	0.00	
15,500.0	90.00	180.00	7,740.0	-7,472.1	270.4	7,472.1	0.00	0.00	
15,600.0	90.00	180.00	7,740.0	-7,572.1	270.4	7,572.1	0.00	0.00	
15,700.0	90.00	180.00	7,740.0	-7,672.1	270.4	7,672.1	0.00	0.00	
15,800.0	90.00	180.00	7,740.0	-7,772.1	270.4	7,772.1	0.00	0.00	
15,900.0	90.00	180.00	7,740.0	-7,872.1	270.4	7,872.1	0.00	0.00	
15,952.8	90.00	180.00	7,740.0	-7,924.8	270.4	7,924.8	0.00	0.00	TD at 15952.8

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Woolley-Sosa 2C-7H-E1	0.00	0.00	7,740.0	-7,924.8	270.4	1,259,594.10	3,125,257.95	40.045100	-105.052620
- plan hits target center									
- Point									
Woolley-Sosa 2C-7H-E1	0.00	0.00	7,747.0	-7,924.8	270.4	1,259,594.10	3,125,257.95	40.045100	-105.052620
- plan misses target center by 7.0ft at 15952.8ft MD (7740.0 TVD, -7924.8 N, 270.4 E)									
- Point									

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
400.0	400.0	Fox Hills - BASE				
4,452.1	4,438.0	Sussex				
5,021.2	5,005.0	Shannon				
6,550.0	6,528.0	Teepee Buttes (*if present)				
7,346.3	7,320.0	Sharon Springs				
7,400.0	7,371.0	Niobrara				
7,531.0	7,487.0	B Chalk				
7,565.5	7,515.0	B Marl				
7,684.0	7,601.0	C Chalk				
7,722.2	7,625.0	C Marl				
7,777.5	7,656.0	D Chalk				
7,908.6	7,711.0	Fort Hayes				
8,002.1	7,733.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
898.2	897.6	19.5	9.5	EOB; Inc=4.98°	
7,147.0	7,122.8	507.4	246.9	Start build/turn @ 7147' MD	
8,091.8	7,740.0	-63.9	270.4	LP @ 7740' TVD; 90°	
15,952.8	7,740.0	-7,924.8	270.4	TD at 15952.8	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

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

Woolley-Sosa 2C-7H-E168

HZ

Plan #2

Anticollision Report

10 December, 2014

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
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	15,952.8	Plan #2 (HZ)	Geolink MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	11,038.0	7,798.0	1,198.6	1,124.0	16.052	CC, ES
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	11,400.0	7,798.0	1,252.1	1,171.3	15.487	SF
Sosa 11-18 - DD - DD	11,632.0	7,834.7	282.0	197.5	3.338	CC, ES, SF
Sosa 11-18 - DD - Plan #1	11,617.9	7,829.3	285.6	201.3	3.387	CC, ES, SF
Sosa 12-18 - DD - DD	13,266.3	7,884.8	279.0	162.4	2.394	CC, ES, SF
Sosa 12-18 - DD - Plan #3	13,238.9	7,873.1	291.2	175.5	2.517	CC, ES, SF
Sosa 21-18 - DD (MWD) - DD	11,634.5	7,931.0	1,270.7	1,186.1	15.022	CC, ES
Sosa 21-18 - DD (MWD) - DD	12,000.0	7,923.9	1,322.2	1,231.3	14.550	SF
Sosa 21-18 - DD (MWD) - Plan #2	11,643.3	7,892.2	1,282.4	1,197.8	15.161	CC, ES
Sosa 21-18 - DD (MWD) - Plan #2	12,000.0	7,892.2	1,331.1	1,240.3	14.673	SF
Sosa 22-18 - DD - DD	13,128.5	7,885.7	1,195.7	1,083.4	10.642	CC, ES
Sosa 22-18 - DD - DD	13,300.0	7,885.8	1,208.0	1,092.6	10.473	SF
Sosa 22-18 - DD - Plan #2	13,111.4	7,886.1	1,178.5	1,066.6	10.533	CC, ES
Sosa 22-18 - DD - Plan #2	13,300.0	7,886.1	1,193.5	1,078.3	10.364	SF
SOSA A UNIT 1 (EXISTING) - EXISTING - EXISTING	12,326.3	7,740.7	217.5	125.6	2.367	CC, ES, SF
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	10,461.8	7,756.4	1,163.5	1,103.2	19.304	CC
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	10,500.0	7,756.3	1,164.1	1,103.2	19.112	ES
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY	10,800.0	7,755.3	1,211.7	1,145.7	18.369	SF
THOMAS 24-7 (Existing) - Existing - NO SURVEYS	10,332.7	7,735.0	908.8	850.9	15.687	CC, ES
THOMAS 24-7 (Existing) - Existing - NO SURVEYS	10,600.0	7,735.0	947.3	884.9	15.179	SF
THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SURVEY	11,036.7	7,813.7	468.5	394.2	6.308	CC, ES
THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SURVEY	11,100.0	7,813.5	472.8	397.4	6.275	SF
Thomas 7-12 (Existing) - Existing - NO SURVEYS	9,011.1	7,728.0	301.2	264.2	8.132	CC, ES, SF
THOMAS E UNIT 1 (EXISTING) - Existing - NO SURVEY	9,227.1	7,734.0	661.0	620.8	16.440	CC, ES
THOMAS E UNIT 1 (EXISTING) - Existing - NO SURVEY	9,400.0	7,734.0	683.3	640.4	15.950	SF
WOOLLEY 11-7 (EXISTING) - ENCANA WELL - SURVE	7,170.8	7,327.7	1,157.6	1,118.4	29.573	CC, ES
WOOLLEY 11-7 (EXISTING) - ENCANA WELL - SURVE	7,200.0	7,357.9	1,158.3	1,119.1	29.551	SF
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	1,788.2	1,872.2	96.4	89.5	14.066	CC
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	1,800.0	1,884.0	96.4	89.5	13.970	ES
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	7,888.1	7,792.2	312.5	285.0	11.371	SF
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVE	7,887.8	7,983.9	1,164.2	1,121.5	27.281	CC, ES, SF
WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SURVE	8,316.2	8,174.9	647.8	596.6	12.656	CC, ES
WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SURVE	8,400.0	8,174.0	653.2	601.3	12.591	SF
WOOLLEY F UNIT 1 (EXISTING) - ENCANA WELL - GY	7,260.2	7,296.2	615.8	589.5	23.380	CC, ES
WOOLLEY F UNIT 1 (EXISTING) - ENCANA WELL - GY	7,300.0	7,344.1	616.4	590.0	23.376	SF
Woolley-Becky 2A-7H-E168 - Hz - Plan #2	798.6	800.0	31.0	28.1	10.825	CC
Woolley-Becky 2A-7H-E168 - Hz - Plan #2	800.0	801.3	31.0	28.1	10.804	ES
Woolley-Becky 2A-7H-E168 - Hz - Plan #2	898.2	898.7	33.8	30.5	10.416	SF
Woolley-Becky 2B-7H-E168 - Hz - Plan #2	770.2	770.2	51.3	48.6	19.023	CC
Woolley-Becky 2B-7H-E168 - Hz - Plan #2	800.0	799.8	51.4	48.6	18.307	ES
Woolley-Becky 2B-7H-E168 - Hz - Plan #2	7,500.0	7,756.6	203.3	172.7	6.645	SF
Woolley-Becky 2C-7H-E168 - Hz - Plan #4	702.4	701.0	68.1	65.7	28.174	CC, ES
Woolley-Becky 2C-7H-E168 - Hz - Plan #4	7,782.3	7,757.8	154.8	126.5	5.475	SF
Woolley-Becky 2D-7H-E168 - Hz - Plan #4	570.6	569.6	79.4	77.5	40.780	CC
Woolley-Becky 2D-7H-E168 - Hz - Plan #4	600.0	598.6	79.5	77.4	38.760	ES
Woolley-Becky 2D-7H-E168 - Hz - Plan #4	7,550.0	7,736.4	439.6	409.4	14.555	SF
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	400.0	400.0	90.1	88.8	66.713	CC, ES
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	7,750.0	7,788.1	640.9	612.7	22.651	SF
Woolley-Becky 2F-7H-E168 - Hz - Plan #3	300.0	300.0	100.2	99.2	100.018	CC, ES
Woolley-Becky 2F-7H-E168 - Hz - Plan #3	1,300.0	1,276.6	164.8	160.0	34.640	SF
Woolley-Becky 2G-7H-E168 - Hz - Plan #2	233.3	233.3	110.0	109.2	143.015	CC
Woolley-Becky 2G-7H-E168 - Hz - Plan #2	300.0	299.1	110.2	109.2	110.182	ES
Woolley-Becky 2G-7H-E168 - Hz - Plan #2	1,300.0	1,270.2	189.9	185.2	40.418	SF

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 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)		Separation Factor	Warning
Offset Well - Wellbore - Design						
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
Woolley-Becky 2H-7H-E168 - Hz - Plan #3	200.0	200.0	120.1	119.4	183.945	CC, ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #3	1,400.0	1,362.1	222.5	217.4	43.483	SF
Woolley-Sosa 2A-7H-E168 - Hz - Plan #2	200.0	200.0	468.0	467.3	716.899	CC
Woolley-Sosa 2A-7H-E168 - Hz - Plan #2	15,952.8	15,936.0	738.6	455.9	2.612	ES, SF
Woolley-Sosa 2B-7H-E168 - HZ - Plan #2	300.0	300.0	9.8	8.8	9.778	CC, ES
Woolley-Sosa 2B-7H-E168 - HZ - Plan #2	15,952.8	15,706.0	435.8	198.0	1.833	SF
Woolley-Sosa 2D-7H-E168 - HZ - Plan #2	591.4	591.3	9.4	7.4	4.661	CC
Woolley-Sosa 2D-7H-E168 - HZ - Plan #2	600.0	599.9	9.4	7.4	4.593	ES
Woolley-Sosa 2D-7H-E168 - HZ - Plan #2	15,952.8	15,802.1	405.2	175.0	1.761	SF
Woolley-Sosa 2E-7H-E168 - HZ - Plan #3	711.9	711.7	18.3	15.8	7.445	CC, ES
Woolley-Sosa 2E-7H-E168 - HZ - Plan #3	15,952.8	16,067.9	676.3	393.4	2.391	SF
Woolley-Sosa 2F-7H-E168 - HZ - Plan #2	300.0	300.0	30.2	29.2	30.174	CC, ES
Woolley-Sosa 2F-7H-E168 - HZ - Plan #2	15,952.8	15,826.2	1,054.1	778.3	3.822	SF
Woolley-Sosa 2G-7H-E168 - HZ - Plan #2	200.0	200.0	40.0	39.4	61.316	CC, ES
Woolley-Sosa 2G-7H-E168 - HZ - Plan #2	15,952.8	16,124.4	1,376.3	1,093.4	4.864	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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				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	152.88	-2,304.0	1,180.1	2,588.7					
100.0	100.0	85.0	85.0	0.2	0.1	152.88	-2,304.0	1,180.1	2,588.6	2,588.4	0.28	9,363.032		
200.0	200.0	185.0	185.0	0.3	0.3	152.88	-2,304.0	1,180.1	2,588.6	2,588.0	0.62	4,166.129		
300.0	300.0	285.0	285.0	0.5	0.5	152.88	-2,304.0	1,180.1	2,588.6	2,587.7	0.97	2,667.549		
400.0	400.0	385.0	385.0	0.7	0.6	152.88	-2,304.0	1,180.1	2,588.6	2,587.3	1.32	1,961.858		
500.0	500.0	485.0	485.0	0.9	0.8	126.94	-2,304.0	1,180.1	2,589.2	2,587.5	1.67	1,551.484		
600.0	600.0	585.0	585.0	1.0	1.0	126.97	-2,304.0	1,180.1	2,590.7	2,588.7	2.02	1,282.618		
700.0	699.9	684.9	684.9	1.2	1.2	127.03	-2,304.0	1,180.1	2,593.4	2,591.0	2.37	1,092.108		
800.0	799.7	784.7	784.7	1.4	1.3	127.11	-2,304.0	1,180.1	2,597.1	2,594.3	2.74	949.480		
898.2	897.5	882.5	882.5	1.6	1.5	127.21	-2,304.0	1,180.1	2,601.7	2,598.6	3.10	840.119		
900.0	899.4	884.4	884.4	1.6	1.5	127.21	-2,304.0	1,180.1	2,601.8	2,598.7	3.10	838.302		
1,000.0	999.0	984.0	984.0	1.8	1.7	127.36	-2,304.0	1,180.1	2,607.1	2,603.6	3.48	749.933		
1,100.0	1,098.6	1,083.6	1,083.6	2.0	1.9	127.51	-2,304.0	1,180.1	2,612.4	2,608.5	3.85	678.247		
1,200.0	1,198.2	1,183.2	1,183.2	2.3	2.0	127.66	-2,304.0	1,180.1	2,617.7	2,613.4	4.23	619.043		
1,300.0	1,297.9	1,282.9	1,282.9	2.5	2.2	127.81	-2,304.0	1,180.1	2,623.0	2,618.4	4.61	569.384		
1,400.0	1,397.5	1,382.5	1,382.5	2.7	2.4	127.96	-2,304.0	1,180.1	2,628.3	2,623.4	4.99	527.173		
1,500.0	1,497.1	1,482.1	1,482.1	2.9	2.6	128.11	-2,304.0	1,180.1	2,633.7	2,628.3	5.37	490.874		
1,600.0	1,596.7	1,542.6	1,542.6	3.2	2.7	128.20	-2,304.3	1,180.2	2,639.7	2,634.0	5.68	464.938		
1,700.0	1,696.3	1,600.0	1,600.0	3.4	2.8	128.29	-2,305.6	1,180.7	2,647.5	2,641.5	5.98	442.376		
1,800.0	1,796.0	1,645.9	1,645.9	3.6	2.8	128.36	-2,307.5	1,181.5	2,657.1	2,650.8	6.27	423.609		
1,900.0	1,895.6	1,700.0	1,699.8	3.8	2.9	128.44	-2,310.5	1,182.7	2,668.4	2,661.9	6.57	405.906		
2,000.0	1,995.2	1,748.5	1,748.2	4.1	3.0	128.52	-2,314.0	1,184.2	2,681.6	2,674.7	6.87	390.527		
2,100.0	2,094.8	1,800.0	1,799.5	4.3	3.1	128.60	-2,318.5	1,186.0	2,696.6	2,689.4	7.16	376.412		
2,200.0	2,194.5	1,850.0	1,849.1	4.5	3.2	128.68	-2,323.8	1,188.2	2,713.3	2,705.8	7.46	363.743		
2,300.0	2,294.1	1,900.0	1,898.7	4.8	3.3	128.76	-2,329.8	1,190.6	2,731.7	2,724.0	7.75	352.309		
2,400.0	2,393.7	1,950.2	1,948.3	5.0	3.5	128.84	-2,336.7	1,193.5	2,751.9	2,743.8	8.05	341.865		
2,500.0	2,493.3	2,000.0	1,997.5	5.2	3.6	128.91	-2,344.3	1,196.6	2,773.8	2,765.4	8.34	332.450		
2,600.0	2,592.9	2,048.9	2,045.5	5.4	3.7	128.99	-2,352.5	1,199.9	2,797.4	2,788.7	8.64	323.893		
2,700.0	2,692.6	2,119.9	2,115.1	5.7	3.9	129.10	-2,365.5	1,205.3	2,822.5	2,813.5	8.97	314.755		
2,800.0	2,792.2	2,216.4	2,209.7	5.9	4.2	129.25	-2,383.3	1,212.5	2,847.8	2,838.4	9.34	304.884		
2,900.0	2,891.8	2,312.8	2,304.2	6.1	4.5	129.40	-2,401.1	1,219.8	2,873.1	2,863.4	9.71	295.781		
3,000.0	2,991.4	2,409.3	2,398.7	6.4	4.8	129.55	-2,418.9	1,227.1	2,898.5	2,888.4	10.09	287.360		
3,100.0	3,091.1	2,505.8	2,493.3	6.6	5.1	129.69	-2,436.7	1,234.4	2,923.9	2,913.4	10.46	279.548		
3,200.0	3,190.7	2,602.2	2,587.8	6.8	5.4	129.83	-2,454.5	1,241.7	2,949.3	2,938.5	10.83	272.281		
3,300.0	3,290.3	2,698.7	2,682.3	7.0	5.8	129.97	-2,472.3	1,249.0	2,974.7	2,963.5	11.20	265.504		
3,400.0	3,389.9	2,795.2	2,776.9	7.3	6.1	130.10	-2,490.1	1,256.3	3,000.1	2,988.6	11.58	259.169		
3,500.0	3,489.5	2,891.6	2,871.4	7.5	6.4	130.24	-2,507.9	1,263.6	3,025.6	3,013.6	11.95	253.234		
3,600.0	3,589.2	2,988.1	2,965.9	7.7	6.8	130.37	-2,525.7	1,270.8	3,051.0	3,038.7	12.32	247.664		
3,700.0	3,688.8	3,084.6	3,060.5	8.0	7.1	130.50	-2,543.5	1,278.1	3,076.5	3,063.8	12.69	242.426		
3,800.0	3,788.4	3,181.0	3,155.0	8.2	7.5	130.62	-2,561.3	1,285.4	3,102.0	3,089.0	13.06	237.490		
3,900.0	3,888.0	3,277.5	3,249.5	8.4	7.8	130.75	-2,579.1	1,292.7	3,127.5	3,114.1	13.43	232.832		
4,000.0	3,987.7	3,374.0	3,344.1	8.7	8.2	130.87	-2,596.9	1,300.0	3,153.0	3,139.2	13.80	228.429		
4,100.0	4,087.3	3,470.4	3,438.6	8.9	8.5	130.99	-2,614.7	1,307.3	3,178.6	3,164.4	14.17	224.260		
4,200.0	4,186.9	3,566.9	3,533.1	9.1	8.9	131.11	-2,632.5	1,314.6	3,204.1	3,189.6	14.54	220.306		
4,300.0	4,286.5	3,663.4	3,627.6	9.4	9.3	131.23	-2,650.3	1,321.8	3,229.7	3,214.8	14.91	216.553		
4,400.0	4,386.1	3,759.9	3,722.2	9.6	9.6	131.34	-2,668.1	1,329.1	3,255.3	3,240.0	15.28	212.984		
4,500.0	4,485.8	3,856.3	3,816.7	9.8	10.0	131.46	-2,685.9	1,336.4	3,280.8	3,265.2	15.65	209.587		
4,600.0	4,585.4	3,952.8	3,911.2	10.0	10.3	131.57	-2,703.7	1,343.7	3,306.4	3,290.4	16.02	206.349		
4,700.0	4,685.0	4,049.3	4,005.8	10.3	10.7	131.68	-2,721.5	1,351.0	3,332.0	3,315.6	16.39	203.260		
4,800.0	4,784.6	4,145.7	4,100.3	10.5	11.1	131.79	-2,739.3	1,358.3	3,357.7	3,340.9	16.76	200.309		
4,900.0	4,884.3	4,242.2	4,194.8	10.7	11.4	131.89	-2,757.1	1,365.6	3,383.3	3,366.2	17.13	197.487		
5,000.0	4,983.9	4,338.7	4,289.4	11.0	11.8	132.00	-2,774.9	1,372.8	3,408.9	3,391.4	17.50	194.787		

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 2C-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 2C-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 #2	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	
5,100.0	5,083.5	4,435.1	4,383.9	11.2	12.2	132.10	-2,792.7	1,380.1	3,434.6	3,416.7	17.87	192.199	
5,200.0	5,183.1	4,531.6	4,478.4	11.4	12.5	132.20	-2,810.5	1,387.4	3,460.2	3,442.0	18.24	189.718	
5,300.0	5,282.7	4,628.1	4,573.0	11.7	12.9	132.30	-2,828.3	1,394.7	3,485.9	3,467.3	18.61	187.337	
5,400.0	5,382.4	4,724.5	4,667.5	11.9	13.3	132.40	-2,846.1	1,402.0	3,511.6	3,492.6	18.98	185.050	
5,500.0	5,482.0	4,821.0	4,762.0	12.1	13.6	132.50	-2,863.9	1,409.3	3,537.3	3,517.9	19.35	182.851	
5,600.0	5,581.6	4,917.5	4,856.6	12.4	14.0	132.60	-2,881.7	1,416.6	3,563.0	3,543.3	19.71	180.735	
5,700.0	5,681.2	5,013.9	4,951.1	12.6	14.4	132.69	-2,899.5	1,423.9	3,588.7	3,568.6	20.08	178.699	
5,800.0	5,780.9	5,110.4	5,045.6	12.8	14.7	132.78	-2,917.3	1,431.1	3,614.4	3,594.0	20.45	176.736	
5,900.0	5,880.5	5,206.9	5,140.2	13.0	15.1	132.88	-2,935.1	1,438.4	3,640.2	3,619.3	20.82	174.844	
6,000.0	5,980.1	6,038.1	5,965.1	13.3	17.0	133.68	-3,010.0	1,469.1	3,654.1	3,631.6	22.43	162.900	
6,100.0	6,079.7	6,137.7	6,064.7	13.5	17.1	133.77	-3,010.0	1,469.1	3,660.1	3,637.3	22.81	160.477	
6,200.0	6,179.3	6,237.3	6,164.4	13.7	17.2	133.87	-3,010.0	1,469.1	3,666.1	3,642.9	23.18	158.135	
6,300.0	6,279.0	6,336.9	6,264.0	14.0	17.3	133.97	-3,010.0	1,469.1	3,672.1	3,648.6	23.56	155.870	
6,400.0	6,378.6	6,436.5	6,363.6	14.2	17.4	134.07	-3,010.0	1,469.1	3,678.2	3,654.3	23.93	153.677	
6,500.0	6,478.2	6,536.2	6,463.2	14.4	17.5	134.16	-3,010.0	1,469.1	3,684.2	3,659.9	24.31	151.553	
6,600.0	6,577.8	6,635.8	6,562.8	14.7	17.7	134.26	-3,010.0	1,469.1	3,690.3	3,665.6	24.69	149.495	
6,700.0	6,677.5	6,735.4	6,662.5	14.9	17.8	134.36	-3,010.0	1,469.1	3,696.4	3,671.3	25.06	147.501	
6,800.0	6,777.1	6,835.0	6,762.1	15.1	17.9	134.45	-3,010.0	1,469.1	3,702.5	3,677.0	25.44	145.566	
6,900.0	6,876.7	6,934.7	6,861.7	15.4	18.0	134.55	-3,010.0	1,469.1	3,708.6	3,682.8	25.81	143.689	
7,000.0	6,976.3	7,034.3	6,961.3	15.6	18.1	134.64	-3,010.0	1,469.1	3,714.7	3,688.5	26.18	141.867	
7,100.0	7,075.9	7,133.9	7,061.0	15.8	18.2	134.74	-3,010.0	1,469.1	3,720.8	3,694.2	26.56	140.098	
7,147.0	7,122.8	7,180.7	7,107.8	15.9	18.3	134.78	-3,010.0	1,469.1	3,723.7	3,696.9	26.73	139.284	
7,150.0	7,125.8	7,183.7	7,110.8	15.9	18.3	133.19	-3,010.0	1,469.1	3,723.9	3,697.1	26.75	139.197	
7,200.0	7,175.7	7,233.6	7,160.7	16.0	18.4	50.24	-3,010.0	1,469.1	3,724.6	3,697.6	26.98	138.053	
7,250.0	7,225.5	7,283.5	7,210.6	16.0	18.4	1.39	-3,010.0	1,469.1	3,721.3	3,694.2	27.08	137.426	
7,300.0	7,275.0	7,332.9	7,260.0	16.0	18.5	-7.99	-3,010.0	1,469.1	3,713.8	3,686.8	27.05	137.302	
7,350.0	7,323.6	7,381.5	7,308.6	16.0	18.5	-11.94	-3,010.0	1,469.1	3,702.3	3,675.4	26.89	137.664	
7,400.0	7,371.0	7,428.9	7,356.0	15.9	18.6	-14.40	-3,010.0	1,469.1	3,686.9	3,660.3	26.62	138.480	
7,450.0	7,416.9	7,474.8	7,401.9	15.8	18.6	-16.34	-3,010.0	1,469.1	3,667.6	3,641.4	26.25	139.699	
7,500.0	7,460.8	7,518.8	7,445.8	15.6	18.7	-18.16	-3,010.0	1,469.1	3,644.7	3,618.9	25.81	141.234	
7,550.0	7,502.6	7,560.5	7,487.6	15.5	18.8	-20.05	-3,010.0	1,469.1	3,618.3	3,592.9	25.31	142.937	
7,600.0	7,541.7	7,599.7	7,526.8	15.3	18.8	-22.16	-3,010.0	1,469.1	3,588.6	3,563.7	24.82	144.567	
7,650.0	7,578.1	7,636.0	7,563.1	15.2	18.8	-24.60	-3,010.0	1,469.1	3,555.8	3,531.4	24.40	145.751	
7,700.0	7,611.3	7,669.2	7,596.3	15.0	18.9	-27.53	-3,010.0	1,469.1	3,520.3	3,496.1	24.12	145.952	
7,750.0	7,641.1	7,699.1	7,626.1	14.9	18.9	-31.12	-3,010.0	1,469.1	3,482.2	3,458.1	24.10	144.498	
7,800.0	7,667.4	7,725.3	7,652.4	14.8	19.0	-35.57	-3,010.0	1,469.1	3,442.0	3,417.5	24.46	140.722	
7,850.0	7,689.8	7,747.7	7,674.8	14.7	19.0	-41.18	-3,010.0	1,469.1	3,399.9	3,374.6	25.32	134.280	
7,900.0	7,708.2	7,766.2	7,693.2	14.7	19.0	-48.24	-3,010.0	1,469.1	3,356.2	3,329.5	26.74	125.532	
7,950.0	7,722.6	7,780.5	7,707.6	14.7	19.0	-57.05	-3,010.0	1,469.1	3,311.3	3,282.7	28.61	115.726	
8,000.0	7,732.7	7,790.6	7,717.7	14.7	19.0	-67.65	-3,010.0	1,469.1	3,265.6	3,235.0	30.60	106.734	
8,050.0	7,738.5	7,796.4	7,723.5	14.8	19.0	-79.64	-3,010.0	1,469.1	3,219.4	3,187.3	32.08	100.353	
8,091.8	7,740.0	7,798.0	7,725.0	15.0	19.0	-90.00	-3,010.0	1,469.1	3,180.7	3,148.2	32.54	97.762	
8,100.0	7,740.0	7,798.0	7,725.0	15.0	19.0	-90.00	-3,010.0	1,469.1	3,173.1	3,140.5	32.57	97.437	
8,200.0	7,740.0	7,798.0	7,725.0	15.4	19.0	-90.00	-3,010.0	1,469.1	3,080.7	3,047.7	33.04	93.236	
8,300.0	7,740.0	7,798.0	7,725.0	16.1	19.0	-90.00	-3,010.0	1,469.1	2,988.8	2,955.1	33.71	88.676	
8,400.0	7,740.0	7,798.0	7,725.0	16.9	19.0	-90.00	-3,010.0	1,469.1	2,897.5	2,863.0	34.53	83.907	
8,500.0	7,740.0	7,798.0	7,725.0	17.8	19.0	-90.00	-3,010.0	1,469.1	2,806.8	2,771.3	35.50	79.065	
8,600.0	7,740.0	7,798.0	7,725.0	18.8	19.0	-90.00	-3,010.0	1,469.1	2,716.7	2,680.1	36.58	74.257	
8,700.0	7,740.0	7,798.0	7,725.0	20.0	19.0	-90.00	-3,010.0	1,469.1	2,627.3	2,589.5	37.77	69.564	
8,800.0	7,740.0	7,798.0	7,725.0	21.2	19.0	-90.00	-3,010.0	1,469.1	2,538.7	2,499.7	39.03	65.042	
8,900.0	7,740.0	7,798.0	7,725.0	22.5	19.0	-90.00	-3,010.0	1,469.1	2,451.0	2,410.7	40.36	60.723	
9,000.0	7,740.0	7,798.0	7,725.0	23.9	19.0	-90.00	-3,010.0	1,469.1	2,364.3	2,322.6	41.75	56.628	

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 2C-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 2C-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 #2	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	25.3	19.0	-90.00	-3,010.0	1,469.1	2,278.7	2,235.5	43.19	52.765	
9,200.0	7,740.0	7,798.0	7,725.0	26.7	19.0	-90.00	-3,010.0	1,469.1	2,194.3	2,149.6	44.66	49.135	
9,300.0	7,740.0	7,798.0	7,725.0	28.2	19.0	-90.00	-3,010.0	1,469.1	2,111.2	2,065.1	46.16	45.733	
9,400.0	7,740.0	7,798.0	7,725.0	29.7	19.0	-90.00	-3,010.0	1,469.1	2,029.7	1,982.0	47.70	42.554	
9,500.0	7,740.0	7,798.0	7,725.0	31.3	19.0	-90.00	-3,010.0	1,469.1	1,949.9	1,900.6	49.25	39.589	
9,600.0	7,740.0	7,798.0	7,725.0	32.8	19.0	-90.00	-3,010.0	1,469.1	1,872.0	1,821.2	50.83	36.829	
9,700.0	7,740.0	7,798.0	7,725.0	34.4	19.0	-90.00	-3,010.0	1,469.1	1,796.4	1,743.9	52.42	34.266	
9,800.0	7,740.0	7,798.0	7,725.0	36.0	19.0	-90.00	-3,010.0	1,469.1	1,723.2	1,669.1	54.03	31.891	
9,900.0	7,740.0	7,798.0	7,725.0	37.6	19.0	-90.00	-3,010.0	1,469.1	1,652.8	1,597.1	55.66	29.697	
10,000.0	7,740.0	7,798.0	7,725.0	39.2	19.0	-90.00	-3,010.0	1,469.1	1,585.6	1,528.3	57.29	27.677	
10,100.0	7,740.0	7,798.0	7,725.0	40.9	19.0	-90.00	-3,010.0	1,469.1	1,522.0	1,463.1	58.93	25.826	
10,200.0	7,740.0	7,798.0	7,725.0	42.5	19.0	-90.00	-3,010.0	1,469.1	1,462.5	1,401.9	60.59	24.140	
10,300.0	7,740.0	7,798.0	7,725.0	44.1	19.0	-90.00	-3,010.0	1,469.1	1,407.6	1,345.4	62.25	22.614	
10,400.0	7,740.0	7,798.0	7,725.0	45.8	19.0	-90.00	-3,010.0	1,469.1	1,357.8	1,293.9	63.91	21.245	
10,500.0	7,740.0	7,798.0	7,725.0	47.5	19.0	-90.00	-3,010.0	1,469.1	1,313.8	1,248.2	65.59	20.032	
10,600.0	7,740.0	7,798.0	7,725.0	49.1	19.0	-90.00	-3,010.0	1,469.1	1,276.2	1,208.9	67.27	18.972	
10,700.0	7,740.0	7,798.0	7,725.0	50.8	19.0	-90.00	-3,010.0	1,469.1	1,245.4	1,176.4	68.95	18.062	
10,800.0	7,740.0	7,798.0	7,725.0	52.5	19.0	-90.00	-3,010.0	1,469.1	1,222.0	1,151.4	70.64	17.300	
10,900.0	7,740.0	7,798.0	7,725.0	54.2	19.0	-90.00	-3,010.0	1,469.1	1,206.6	1,134.2	72.33	16.681	
11,000.0	7,740.0	7,798.0	7,725.0	55.9	19.0	-90.00	-3,010.0	1,469.1	1,199.2	1,125.2	74.03	16.200	
11,038.0	7,740.0	7,798.0	7,725.0	56.5	19.0	-90.00	-3,010.0	1,469.1	1,198.6	1,124.0	74.67	16.052 CC, ES	
11,100.0	7,740.0	7,798.0	7,725.0	57.6	19.0	-90.00	-3,010.0	1,469.1	1,200.3	1,124.5	75.73	15.849	
11,200.0	7,740.0	7,798.0	7,725.0	59.3	19.0	-90.00	-3,010.0	1,469.1	1,209.6	1,132.1	77.43	15.621	
11,300.0	7,740.0	7,798.0	7,725.0	61.0	19.0	-90.00	-3,010.0	1,469.1	1,227.0	1,147.8	79.14	15.504	
11,400.0	7,740.0	7,798.0	7,725.0	62.7	19.0	-90.00	-3,010.0	1,469.1	1,252.1	1,171.3	80.85	15.487 SF	
11,500.0	7,740.0	7,798.0	7,725.0	64.4	19.0	-90.00	-3,010.0	1,469.1	1,284.6	1,202.1	82.56	15.560	
11,600.0	7,740.0	7,798.0	7,725.0	66.1	19.0	-90.00	-3,010.0	1,469.1	1,323.9	1,239.6	84.27	15.709	
11,700.0	7,740.0	7,798.0	7,725.0	67.8	19.0	-90.00	-3,010.0	1,469.1	1,369.3	1,283.3	85.99	15.924	
11,800.0	7,740.0	7,798.0	7,725.0	69.5	19.0	-90.00	-3,010.0	1,469.1	1,420.4	1,332.7	87.71	16.195	
11,900.0	7,740.0	7,798.0	7,725.0	71.2	19.0	-90.00	-3,010.0	1,469.1	1,476.4	1,387.0	89.43	16.510	
12,000.0	7,740.0	7,798.0	7,725.0	72.9	19.0	-90.00	-3,010.0	1,469.1	1,537.0	1,445.8	91.15	16.862	
12,100.0	7,740.0	7,798.0	7,725.0	74.7	19.0	-90.00	-3,010.0	1,469.1	1,601.5	1,508.6	92.87	17.244	
12,200.0	7,740.0	7,798.0	7,725.0	76.4	19.0	-90.00	-3,010.0	1,469.1	1,669.5	1,574.9	94.59	17.649	
12,300.0	7,740.0	7,798.0	7,725.0	78.1	19.0	-90.00	-3,010.0	1,469.1	1,740.5	1,644.2	96.32	18.071	
12,400.0	7,740.0	7,798.0	7,725.0	79.8	19.0	-90.00	-3,010.0	1,469.1	1,814.4	1,716.3	98.05	18.505	
12,500.0	7,740.0	7,798.0	7,725.0	81.6	19.0	-90.00	-3,010.0	1,469.1	1,890.6	1,790.8	99.77	18.949	
12,600.0	7,740.0	7,798.0	7,725.0	83.3	19.0	-90.00	-3,010.0	1,469.1	1,968.9	1,867.4	101.50	19.398	
12,700.0	7,740.0	7,798.0	7,725.0	85.0	19.0	-90.00	-3,010.0	1,469.1	2,049.2	1,945.9	103.23	19.850	
12,800.0	7,740.0	7,798.0	7,725.0	86.7	19.0	-90.00	-3,010.0	1,469.1	2,131.1	2,026.1	104.96	20.303	
12,900.0	7,740.0	7,798.0	7,725.0	88.5	19.0	-90.00	-3,010.0	1,469.1	2,214.5	2,107.8	106.70	20.755	
13,000.0	7,740.0	7,798.0	7,725.0	90.2	19.0	-90.00	-3,010.0	1,469.1	2,299.2	2,190.8	108.43	21.205	
13,100.0	7,740.0	7,798.0	7,725.0	91.9	19.0	-90.00	-3,010.0	1,469.1	2,385.1	2,275.0	110.16	21.651	
13,200.0	7,740.0	7,798.0	7,725.0	93.7	19.0	-90.00	-3,010.0	1,469.1	2,472.1	2,360.2	111.90	22.093	
13,300.0	7,740.0	7,798.0	7,725.0	95.4	19.0	-90.00	-3,010.0	1,469.1	2,560.0	2,446.4	113.63	22.529	
13,400.0	7,740.0	7,798.0	7,725.0	97.1	19.0	-90.00	-3,010.0	1,469.1	2,648.8	2,533.4	115.37	22.960	
13,500.0	7,740.0	7,798.0	7,725.0	98.9	19.0	-90.00	-3,010.0	1,469.1	2,738.3	2,621.2	117.10	23.384	
13,600.0	7,740.0	7,798.0	7,725.0	100.6	19.0	-90.00	-3,010.0	1,469.1	2,828.6	2,709.7	118.84	23.802	
13,700.0	7,740.0	7,798.0	7,725.0	102.3	19.0	-90.00	-3,010.0	1,469.1	2,919.5	2,798.9	120.58	24.212	
13,800.0	7,740.0	7,798.0	7,725.0	104.1	19.0	-90.00	-3,010.0	1,469.1	3,010.9	2,888.6	122.32	24.616	
13,900.0	7,740.0	7,798.0	7,725.0	105.8	19.0	-90.00	-3,010.0	1,469.1	3,102.9	2,978.9	124.05	25.013	
14,000.0	7,740.0	7,798.0	7,725.0	107.5	19.0	-90.00	-3,010.0	1,469.1	3,195.4	3,069.6	125.79	25.402	
14,100.0	7,740.0	7,798.0	7,725.0	109.3	19.0	-90.00	-3,010.0	1,469.1	3,288.3	3,160.8	127.53	25.784	

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 2C-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 2C-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 #2	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	
14,200.0	7,740.0	7,798.0	7,725.0	111.0	19.0	-90.00	-3,010.0	1,469.1	3,381.6	3,252.3	129.27	26.159	
14,300.0	7,740.0	7,798.0	7,725.0	112.8	19.0	-90.00	-3,010.0	1,469.1	3,475.3	3,344.3	131.01	26.526	
14,400.0	7,740.0	7,798.0	7,725.0	114.5	19.0	-90.00	-3,010.0	1,469.1	3,569.3	3,436.6	132.75	26.887	
14,500.0	7,740.0	7,798.0	7,725.0	116.2	19.0	-90.00	-3,010.0	1,469.1	3,663.7	3,529.2	134.50	27.240	
14,600.0	7,740.0	7,798.0	7,725.0	118.0	19.0	-90.00	-3,010.0	1,469.1	3,758.3	3,622.1	136.24	27.587	
14,700.0	7,740.0	7,798.0	7,725.0	119.7	19.0	-90.00	-3,010.0	1,469.1	3,853.2	3,715.2	137.98	27.926	
14,800.0	7,740.0	7,798.0	7,725.0	121.5	19.0	-90.00	-3,010.0	1,469.1	3,948.4	3,808.7	139.72	28.259	
14,900.0	7,740.0	7,798.0	7,725.0	123.2	19.0	-90.00	-3,010.0	1,469.1	4,043.8	3,902.3	141.46	28.585	
15,000.0	7,740.0	7,798.0	7,725.0	124.9	19.0	-90.00	-3,010.0	1,469.1	4,139.4	3,996.2	143.21	28.905	
15,100.0	7,740.0	7,798.0	7,725.0	126.7	19.0	-90.00	-3,010.0	1,469.1	4,235.2	4,090.3	144.95	29.218	
15,200.0	7,740.0	7,798.0	7,725.0	128.4	19.0	-90.00	-3,010.0	1,469.1	4,331.2	4,184.5	146.69	29.525	
15,300.0	7,740.0	7,798.0	7,725.0	130.2	19.0	-90.00	-3,010.0	1,469.1	4,427.4	4,279.0	148.44	29.827	
15,400.0	7,740.0	7,798.0	7,725.0	131.9	19.0	-90.00	-3,010.0	1,469.1	4,523.7	4,373.6	150.18	30.122	
15,500.0	7,740.0	7,798.0	7,725.0	133.7	19.0	-90.00	-3,010.0	1,469.1	4,620.2	4,468.3	151.93	30.411	
15,600.0	7,740.0	7,798.0	7,725.0	135.4	19.0	-90.00	-3,010.0	1,469.1	4,716.9	4,563.2	153.67	30.695	
15,700.0	7,740.0	7,798.0	7,725.0	137.1	19.0	-90.00	-3,010.0	1,469.1	4,813.7	4,658.3	155.42	30.973	
15,800.0	7,740.0	7,798.0	7,725.0	138.9	19.0	-90.00	-3,010.0	1,469.1	4,910.6	4,753.4	157.16	31.246	
15,900.0	7,740.0	7,798.0	7,725.0	140.6	19.0	-90.00	-3,010.0	1,469.1	5,007.6	4,848.7	158.91	31.513	
15,952.8	7,740.0	7,798.0	7,725.0	141.6	19.0	-90.00	-3,010.0	1,469.1	5,058.9	4,899.0	159.83	31.652	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	173.02	-4,267.5	522.3	4,299.4					
100.0	100.0	140.4	140.4	0.2	0.2	173.02	-4,267.3	522.2	4,299.1	4,298.7	0.39	N/A		
200.0	200.0	253.7	253.7	0.3	0.4	173.02	-4,266.7	522.0	4,298.6	4,297.8	0.76	5,644.835		
300.0	300.0	366.9	366.9	0.5	0.6	173.03	-4,265.8	521.7	4,297.8	4,296.6	1.13	3,802.386		
400.0	400.0	480.1	480.1	0.7	0.8	173.03	-4,264.5	521.2	4,296.6	4,295.1	1.50	2,866.248		
500.0	500.0	593.4	593.3	0.9	1.0	147.10	-4,262.9	520.6	4,295.9	4,294.0	1.87	2,299.803		
512.8	512.8	607.9	607.8	0.9	1.1	147.10	-4,262.7	520.5	4,295.9	4,293.9	1.92	2,242.931		
600.0	600.0	706.6	706.5	1.0	1.2	147.12	-4,261.0	519.9	4,296.3	4,294.1	2.24	1,920.435		
700.0	699.9	983.5	983.3	1.2	1.8	147.27	-4,252.4	514.6	4,297.9	4,295.0	2.90	1,481.965		
800.0	799.7	1,490.8	1,485.8	1.4	3.1	148.04	-4,202.0	469.8	4,291.3	4,287.2	4.11	1,043.466		
898.2	897.5	1,604.8	1,597.6	1.6	3.5	148.32	-4,185.6	455.4	4,282.3	4,277.8	4.56	938.624		
900.0	899.4	1,606.7	1,599.5	1.6	3.5	148.32	-4,185.3	455.2	4,282.2	4,277.6	4.57	936.970		
1,000.0	999.0	1,644.0	1,636.1	1.8	3.6	148.40	-4,180.2	450.3	4,274.4	4,269.6	4.84	882.332		
1,100.0	1,098.6	1,844.2	1,833.0	2.0	4.3	148.81	-4,152.9	426.5	4,267.6	4,262.1	5.51	774.796		
1,200.0	1,198.2	1,924.0	1,911.3	2.3	4.6	148.97	-4,140.8	416.8	4,258.7	4,252.8	5.89	722.532		
1,300.0	1,297.9	1,999.9	1,985.8	2.5	4.9	149.13	-4,129.7	407.3	4,250.2	4,243.9	6.27	677.717		
1,400.0	1,397.5	2,116.0	2,099.8	2.7	5.3	149.37	-4,112.7	393.4	4,241.8	4,235.1	6.75	628.785		
1,500.0	1,497.1	2,212.0	2,194.0	2.9	5.6	149.57	-4,098.4	381.7	4,233.3	4,226.1	7.18	589.352		
1,600.0	1,596.7	2,257.8	2,238.9	3.2	5.8	149.67	-4,091.9	375.9	4,225.5	4,218.0	7.49	564.151		
1,700.0	1,696.3	2,364.6	2,344.0	3.4	6.2	149.89	-4,077.6	363.3	4,218.5	4,210.6	7.95	530.883		
1,800.0	1,796.0	2,496.0	2,473.2	3.6	6.7	150.14	-4,058.3	348.6	4,210.3	4,201.8	8.46	497.456		
1,900.0	1,895.6	2,560.0	2,536.1	3.8	6.9	150.27	-4,048.9	341.5	4,202.4	4,193.6	8.81	476.932		
2,000.0	1,995.2	2,719.0	2,692.2	4.1	7.5	150.60	-4,025.8	322.7	4,194.5	4,185.1	9.42	445.404		
2,100.0	2,094.8	2,782.0	2,754.1	4.3	7.7	150.73	-4,016.5	315.3	4,186.4	4,176.7	9.77	428.580		
2,200.0	2,194.5	2,874.9	2,845.5	4.5	8.0	150.92	-4,003.5	304.6	4,179.2	4,169.0	10.20	409.782		
2,300.0	2,294.1	2,974.0	2,942.8	4.8	8.4	151.12	-3,989.2	293.1	4,171.6	4,160.9	10.65	391.794		
2,400.0	2,393.7	3,074.6	3,041.6	5.0	8.8	151.33	-3,974.6	281.2	4,163.9	4,152.8	11.10	375.017		
2,500.0	2,493.3	3,175.6	3,141.0	5.2	9.1	151.54	-3,960.3	269.4	4,156.7	4,145.1	11.56	359.563		
2,600.0	2,592.9	3,275.7	3,239.3	5.4	9.5	151.75	-3,945.8	257.7	4,149.2	4,137.2	12.02	345.286		
2,700.0	2,692.6	3,345.0	3,307.4	5.7	9.7	151.90	-3,936.0	249.7	4,142.2	4,129.8	12.39	334.340		
2,800.0	2,792.2	3,482.0	3,442.2	5.9	10.2	152.19	-3,917.2	233.8	4,135.6	4,122.7	12.95	319.372		
2,900.0	2,891.8	3,563.1	3,521.9	6.1	10.5	152.36	-3,905.5	224.3	4,128.3	4,115.0	13.36	309.096		
3,000.0	2,991.4	3,659.6	3,616.8	6.4	10.9	152.56	-3,891.8	213.2	4,121.4	4,107.6	13.81	298.539		
3,100.0	3,091.1	3,753.7	3,709.4	6.6	11.2	152.76	-3,878.5	202.5	4,114.5	4,100.3	14.25	288.840		
3,200.0	3,190.7	3,874.5	3,828.1	6.8	11.7	153.01	-3,861.3	188.5	4,107.6	4,092.8	14.77	278.113		
3,300.0	3,290.3	3,988.0	3,939.6	7.0	12.1	153.25	-3,844.4	175.6	4,100.0	4,084.8	15.26	268.643		
3,400.0	3,389.9	4,069.1	4,019.3	7.3	12.4	153.41	-3,832.4	166.9	4,092.7	4,077.1	15.66	261.271		
3,500.0	3,489.5	4,161.4	4,110.1	7.5	12.7	153.60	-3,819.1	157.1	4,085.8	4,069.7	16.10	253.782		
3,600.0	3,589.2	4,243.0	4,190.3	7.7	13.0	153.77	-3,807.5	147.7	4,079.1	4,062.6	16.52	246.907		
3,700.0	3,688.8	4,309.5	4,255.7	8.0	13.2	153.92	-3,798.4	139.8	4,073.1	4,056.2	16.89	241.096		
3,800.0	3,788.4	4,408.3	4,353.0	8.2	13.6	154.13	-3,785.6	128.6	4,067.7	4,050.4	17.35	234.411		
3,900.0	3,888.0	4,483.2	4,426.9	8.4	13.8	154.29	-3,775.8	120.4	4,062.4	4,044.7	17.74	228.955		
4,000.0	3,987.7	4,597.2	4,539.3	8.7	14.2	154.52	-3,761.7	108.1	4,057.9	4,039.6	18.25	222.402		
4,100.0	4,087.3	4,687.0	4,627.8	8.9	14.5	154.71	-3,750.0	98.1	4,052.7	4,034.0	18.68	216.934		
4,200.0	4,186.9	4,775.1	4,714.7	9.1	14.8	154.89	-3,739.1	88.8	4,048.1	4,029.0	19.10	211.926		
4,300.0	4,286.5	4,852.4	4,791.0	9.4	15.1	155.04	-3,729.5	81.2	4,043.6	4,024.2	19.49	207.486		
4,400.0	4,386.1	4,920.7	4,858.6	9.6	15.3	155.17	-3,721.6	74.9	4,040.0	4,020.2	19.85	203.557		
4,500.0	4,485.8	5,037.0	4,973.7	9.8	15.6	155.37	-3,708.2	65.0	4,036.5	4,016.2	20.32	198.678		
4,600.0	4,585.4	5,100.0	5,036.1	10.0	15.8	155.48	-3,701.1	60.0	4,033.2	4,012.6	20.65	195.277		
4,700.0	4,685.0	5,180.5	5,115.8	10.3	16.0	155.62	-3,692.8	53.0	4,031.0	4,009.9	21.04	191.543		
4,800.0	4,784.6	5,304.0	5,238.1	10.5	16.4	155.85	-3,679.4	41.9	4,028.1	4,006.6	21.55	186.962		
4,900.0	4,884.3	5,375.3	5,308.7	10.7	16.6	155.98	-3,671.9	35.5	4,025.7	4,003.8	21.91	183.729		

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 2C-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 2C-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 #2	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	4,983.9	5,482.0	5,414.5	11.0	16.9	156.16	-3,660.9	26.3	4,023.6	4,001.3	22.36	179.935				
5,100.0	5,083.5	5,546.0	5,477.9	11.2	17.1	156.27	-3,654.5	21.1	4,021.9	3,999.2	22.70	177.161				
5,200.0	5,183.1	5,659.8	5,590.8	11.4	17.4	156.46	-3,643.3	12.1	4,020.3	3,997.1	23.16	173.593				
5,300.0	5,282.7	5,735.9	5,666.4	11.7	17.6	156.59	-3,636.0	6.6	4,018.9	3,995.4	23.52	170.874				
5,400.0	5,382.4	5,801.0	5,731.0	11.9	17.8	156.69	-3,630.3	2.1	4,018.4	3,994.5	23.85	168.469				
5,404.2	5,386.6	5,801.0	5,731.0	11.9	17.8	156.69	-3,630.3	2.1	4,018.4	3,994.5	23.86	168.414				
5,500.0	5,482.0	5,853.2	5,782.9	12.1	17.9	156.76	-3,626.2	-1.4	4,018.8	3,994.7	24.15	166.407				
5,600.0	5,581.6	5,908.8	5,838.4	12.4	18.0	156.84	-3,622.6	-4.9	4,020.5	3,996.1	24.45	164.409				
5,700.0	5,681.2	5,982.1	5,911.4	12.6	18.2	156.93	-3,618.3	-8.6	4,023.0	3,998.2	24.78	162.335				
5,800.0	5,780.9	6,043.1	5,972.3	12.8	18.3	157.00	-3,615.4	-11.0	4,026.4	4,001.3	25.07	160.589				
5,900.0	5,880.5	6,120.0	6,049.1	13.0	18.4	157.06	-3,612.4	-12.6	4,030.6	4,005.2	25.37	158.871				
6,000.0	5,980.1	6,169.4	6,098.5	13.3	18.5	157.09	-3,611.0	-13.1	4,035.7	4,010.1	25.63	157.482				
6,100.0	6,079.7	6,230.3	6,159.4	13.5	18.5	157.13	-3,609.9	-13.6	4,041.9	4,016.0	25.90	156.060				
6,200.0	6,179.3	6,342.0	6,271.1	13.7	18.7	157.20	-3,608.2	-14.8	4,048.5	4,022.3	26.25	154.245				
6,300.0	6,279.0	6,421.0	6,350.1	14.0	18.8	157.24	-3,607.0	-14.6	4,055.0	4,028.5	26.53	152.848				
6,400.0	6,378.6	6,492.0	6,421.1	14.2	18.8	157.26	-3,606.4	-13.7	4,062.2	4,035.4	26.80	151.570				
6,500.0	6,478.2	6,566.0	6,495.1	14.4	18.9	157.29	-3,606.6	-13.6	4,070.3	4,043.2	27.09	150.240				
6,600.0	6,577.8	6,671.5	6,600.6	14.7	19.0	157.35	-3,607.0	-14.2	4,078.8	4,051.3	27.42	148.745				
6,700.0	6,677.5	6,777.1	6,706.1	14.9	19.2	157.40	-3,606.9	-14.2	4,086.7	4,058.9	27.75	147.278				
6,800.0	6,777.1	6,906.5	6,835.6	15.1	19.3	157.46	-3,606.2	-14.1	4,094.1	4,066.0	28.11	145.663				
6,900.0	6,876.7	7,003.3	6,932.3	15.4	19.4	157.50	-3,605.4	-13.7	4,101.3	4,072.9	28.42	144.317				
7,000.0	6,976.3	7,091.0	7,020.0	15.6	19.5	157.54	-3,604.8	-13.3	4,108.7	4,080.0	28.72	143.061				
7,100.0	7,075.9	7,208.8	7,137.8	15.8	19.6	157.59	-3,604.2	-12.8	4,116.2	4,087.1	29.06	141.636				
7,147.0	7,122.8	7,253.4	7,182.5	15.9	19.7	157.60	-3,603.8	-12.6	4,119.5	4,090.3	29.21	141.035				
7,150.0	7,125.8	7,256.2	7,185.2	15.9	19.7	156.00	-3,603.8	-12.6	4,119.7	4,090.5	29.22	140.980				
7,200.0	7,175.7	7,301.6	7,230.6	16.0	19.8	73.01	-3,603.4	-12.4	4,120.9	4,091.5	29.35	140.399				
7,250.0	7,225.5	7,342.0	7,271.0	16.0	19.8	24.30	-3,603.1	-12.3	4,117.8	4,088.5	29.31	140.474				
7,300.0	7,275.0	7,389.4	7,318.4	16.0	19.8	15.25	-3,602.9	-12.2	4,110.4	4,081.3	29.13	141.117				
7,350.0	7,323.6	7,431.5	7,360.5	16.0	19.9	11.84	-3,602.7	-12.1	4,098.8	4,070.1	28.78	142.414				
7,400.0	7,371.0	7,472.5	7,401.5	15.9	19.9	10.15	-3,602.6	-11.9	4,083.2	4,054.9	28.29	144.344				
7,450.0	7,416.9	7,512.2	7,441.2	15.8	20.0	9.23	-3,602.6	-11.8	4,063.5	4,035.8	27.66	146.921				
7,500.0	7,460.8	7,550.4	7,479.4	15.6	20.0	8.73	-3,602.6	-11.7	4,040.0	4,013.1	26.90	150.158				
7,550.0	7,502.6	7,586.6	7,515.7	15.5	20.1	8.51	-3,602.7	-11.7	4,012.8	3,986.7	26.05	154.061				
7,600.0	7,541.7	7,633.0	7,562.0	15.3	20.1	8.53	-3,602.9	-11.5	3,982.1	3,957.0	25.12	158.509				
7,650.0	7,578.1	7,653.3	7,582.3	15.2	20.1	8.72	-3,603.0	-11.5	3,948.1	3,924.0	24.11	163.743				
7,700.0	7,611.3	7,683.5	7,612.5	15.0	20.2	9.14	-3,603.2	-11.5	3,911.2	3,888.1	23.10	169.319				
7,750.0	7,641.1	7,710.7	7,639.7	14.9	20.2	9.82	-3,603.3	-11.4	3,871.4	3,849.3	22.11	175.078				
7,800.0	7,667.4	7,736.4	7,665.4	14.8	20.2	10.85	-3,603.5	-11.5	3,829.3	3,808.1	21.21	180.501				
7,850.0	7,689.8	7,760.8	7,689.9	14.7	20.3	12.42	-3,603.7	-11.5	3,784.9	3,764.4	20.49	184.697				
7,900.0	7,708.2	7,781.0	7,710.0	14.7	20.3	14.87	-3,603.8	-11.5	3,738.8	3,718.7	20.08	186.222				
7,950.0	7,722.6	7,796.7	7,725.7	14.7	20.3	18.99	-3,603.9	-11.5	3,691.2	3,670.9	20.23	182.453				
8,000.0	7,732.7	7,807.9	7,736.9	14.7	20.3	26.95	-3,603.9	-11.5	3,642.4	3,620.8	21.63	168.433				
8,050.0	7,738.5	7,814.4	7,743.4	14.8	20.3	46.22	-3,604.0	-11.5	3,593.0	3,566.7	26.29	136.686				
8,091.8	7,740.0	7,816.2	7,745.3	15.0	20.3	86.19	-3,604.0	-11.5	3,551.4	3,519.3	32.12	110.553				
8,100.0	7,740.0	7,816.3	7,745.3	15.0	20.3	86.20	-3,604.0	-11.5	3,543.2	3,511.1	32.15	110.192				
8,200.0	7,740.0	7,816.8	7,745.9	15.4	20.3	86.32	-3,604.0	-11.5	3,443.5	3,410.9	32.63	105.518				
8,300.0	7,740.0	7,817.4	7,746.4	16.1	20.3	86.43	-3,604.0	-11.5	3,343.9	3,310.6	33.30	100.414				
8,400.0	7,740.0	7,817.9	7,747.0	16.9	20.3	86.54	-3,604.0	-11.5	3,244.3	3,210.1	34.13	95.054				
8,500.0	7,740.0	7,818.5	7,747.5	17.8	20.3	86.65	-3,604.0	-11.5	3,144.6	3,109.5	35.10	89.590				
8,600.0	7,740.0	7,819.1	7,748.1	18.8	20.3	86.76	-3,604.0	-11.5	3,045.1	3,008.9	36.19	84.146				
8,700.0	7,740.0	7,819.6	7,748.6	20.0	20.3	86.88	-3,604.0	-11.5	2,945.5	2,908.1	37.37	78.814				
8,800.0	7,740.0	7,820.1	7,749.2	21.2	20.3	86.99	-3,604.0	-11.5	2,846.0	2,807.3	38.64	73.655				

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 2C-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 2C-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 #2	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							
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	7,820.7	7,749.7	22.5	20.3	87.10	-3,604.0	-11.5	2,746.5	2,706.5	39.97	68.708	
9,000.0	7,740.0	7,821.2	7,750.2	23.9	20.3	87.21	-3,604.0	-11.5	2,647.0	2,605.7	41.36	63.996	
9,100.0	7,740.0	7,821.8	7,750.8	25.3	20.3	87.31	-3,604.0	-11.5	2,547.6	2,504.8	42.80	59.526	
9,200.0	7,740.0	7,822.3	7,751.3	26.7	20.3	87.42	-3,604.0	-11.5	2,448.3	2,404.0	44.27	55.299	
9,300.0	7,740.0	7,822.8	7,751.9	28.2	20.3	87.53	-3,604.0	-11.5	2,349.0	2,303.2	45.78	51.309	
9,400.0	7,740.0	7,823.4	7,752.4	29.7	20.3	87.64	-3,604.0	-11.5	2,249.7	2,202.4	47.32	47.547	
9,500.0	7,740.0	7,823.9	7,752.9	31.3	20.3	87.75	-3,604.0	-11.5	2,150.6	2,101.7	48.87	44.002	
9,600.0	7,740.0	7,824.4	7,753.4	32.8	20.3	87.85	-3,604.0	-11.5	2,051.5	2,001.0	50.45	40.661	
9,700.0	7,740.0	7,825.0	7,754.0	34.4	20.3	87.96	-3,604.0	-11.5	1,952.5	1,900.4	52.05	37.512	
9,800.0	7,740.0	7,825.5	7,754.5	36.0	20.3	88.07	-3,604.0	-11.5	1,853.6	1,799.9	53.66	34.542	
9,900.0	7,740.0	7,826.0	7,755.0	37.6	20.3	88.17	-3,604.0	-11.5	1,754.8	1,699.5	55.28	31.741	
10,000.0	7,740.0	7,826.5	7,755.5	39.2	20.3	88.28	-3,604.0	-11.5	1,656.2	1,599.3	56.92	29.096	
10,100.0	7,740.0	7,827.0	7,756.1	40.9	20.3	88.38	-3,604.0	-11.5	1,557.7	1,499.2	58.57	26.598	
10,200.0	7,740.0	7,827.6	7,756.6	42.5	20.3	88.49	-3,604.0	-11.5	1,459.5	1,399.3	60.22	24.236	
10,300.0	7,740.0	7,828.1	7,757.1	44.1	20.3	88.59	-3,604.0	-11.5	1,361.5	1,299.6	61.88	22.001	
10,400.0	7,740.0	7,828.6	7,757.6	45.8	20.3	88.70	-3,604.0	-11.5	1,263.9	1,200.3	63.55	19.887	
10,500.0	7,740.0	7,829.1	7,758.1	47.5	20.3	88.80	-3,604.1	-11.5	1,166.6	1,101.4	65.23	17.885	
10,600.0	7,740.0	7,829.6	7,758.6	49.1	20.3	88.90	-3,604.1	-11.5	1,069.8	1,002.9	66.91	15.989	
10,700.0	7,740.0	7,830.1	7,759.1	50.8	20.3	89.01	-3,604.1	-11.5	973.7	905.1	68.60	14.195	
10,800.0	7,740.0	7,830.6	7,759.6	52.5	20.3	89.11	-3,604.1	-11.5	878.5	808.2	70.29	12.499	
10,900.0	7,740.0	7,831.1	7,760.1	54.2	20.3	89.21	-3,604.1	-11.5	784.4	712.5	71.98	10.898	
11,000.0	7,740.0	7,831.6	7,760.6	55.9	20.3	89.31	-3,604.1	-11.5	692.1	618.4	73.68	9.393	
11,100.0	7,740.0	7,832.1	7,761.1	57.6	20.3	89.41	-3,604.1	-11.5	602.1	526.7	75.38	7.988	
11,200.0	7,740.0	7,832.6	7,761.6	59.3	20.3	89.51	-3,604.1	-11.5	515.9	438.8	77.09	6.693	
11,300.0	7,740.0	7,833.1	7,762.1	61.0	20.3	89.61	-3,604.1	-11.5	435.6	356.8	78.79	5.529	
11,400.0	7,740.0	7,833.6	7,762.6	62.7	20.3	89.71	-3,604.1	-11.5	365.2	284.7	80.50	4.536	
11,500.0	7,740.0	7,834.1	7,763.1	64.4	20.3	89.81	-3,604.1	-11.5	311.4	229.1	82.21	3.787	
11,600.0	7,740.0	7,834.6	7,763.6	66.1	20.3	89.91	-3,604.1	-11.5	283.8	199.9	83.93	3.382	
11,632.0	7,740.0	7,834.7	7,763.7	66.6	20.3	89.94	-3,604.1	-11.5	282.0	197.5	84.48	3.338 CC, ES, SF	
11,700.0	7,740.0	7,835.0	7,764.1	67.8	20.3	90.01	-3,604.1	-11.5	290.1	204.4	85.64	3.387	
11,800.0	7,740.0	7,835.5	7,764.5	69.5	20.3	90.11	-3,604.1	-11.5	328.2	240.9	87.36	3.757	
11,900.0	7,740.0	7,836.0	7,765.0	71.2	20.3	90.21	-3,604.1	-11.5	389.0	299.9	89.08	4.367	
12,000.0	7,740.0	7,836.5	7,765.5	72.9	20.3	90.31	-3,604.1	-11.5	463.6	372.8	90.80	5.106	
12,100.0	7,740.0	7,837.0	7,766.0	74.7	20.3	90.40	-3,604.1	-11.5	546.4	453.9	92.52	5.905	
12,200.0	7,740.0	7,837.5	7,766.5	76.4	20.3	90.50	-3,604.1	-11.5	634.1	539.9	94.24	6.729	
12,300.0	7,740.0	7,837.9	7,766.9	78.1	20.3	90.60	-3,604.1	-11.5	725.1	629.1	95.97	7.555	
12,400.0	7,740.0	7,838.4	7,767.4	79.8	20.3	90.69	-3,604.1	-11.5	818.1	720.4	97.69	8.374	
12,500.0	7,740.0	7,838.9	7,767.9	81.6	20.3	90.79	-3,604.1	-11.5	912.6	813.2	99.42	9.180	
12,600.0	7,740.0	7,839.3	7,768.4	83.3	20.3	90.88	-3,604.1	-11.5	1,008.2	907.1	101.15	9.968	
12,700.0	7,740.0	7,839.8	7,768.8	85.0	20.3	90.98	-3,604.1	-11.5	1,104.6	1,001.7	102.87	10.737	
12,800.0	7,740.0	7,840.3	7,769.3	86.7	20.3	91.07	-3,604.1	-11.5	1,201.5	1,096.9	104.60	11.487	
12,900.0	7,740.0	7,840.7	7,769.8	88.5	20.3	91.17	-3,604.1	-11.5	1,298.9	1,192.6	106.33	12.216	
13,000.0	7,740.0	7,841.2	7,770.2	90.2	20.3	91.26	-3,604.1	-11.5	1,396.7	1,288.7	108.06	12.926	
13,100.0	7,740.0	7,841.7	7,770.7	91.9	20.3	91.36	-3,604.1	-11.5	1,494.8	1,385.0	109.79	13.616	
13,200.0	7,740.0	7,842.1	7,771.1	93.7	20.3	91.45	-3,604.1	-11.5	1,593.1	1,481.6	111.52	14.286	
13,300.0	7,740.0	7,842.6	7,771.6	95.4	20.3	91.54	-3,604.1	-11.5	1,691.6	1,578.4	113.25	14.938	
13,400.0	7,740.0	7,843.0	7,772.1	97.1	20.3	91.63	-3,604.1	-11.6	1,790.3	1,675.3	114.98	15.571	
13,500.0	7,740.0	7,843.5	7,772.5	98.9	20.3	91.73	-3,604.1	-11.6	1,889.1	1,772.4	116.71	16.187	
13,600.0	7,740.0	7,843.9	7,773.0	100.6	20.3	91.82	-3,604.1	-11.6	1,988.1	1,869.6	118.44	16.786	
13,700.0	7,740.0	7,844.4	7,773.4	102.3	20.3	91.91	-3,604.1	-11.6	2,087.1	1,966.9	120.17	17.368	
13,800.0	7,740.0	7,844.8	7,773.9	104.1	20.3	92.00	-3,604.1	-11.6	2,186.2	2,064.3	121.90	17.935	
13,900.0	7,740.0	7,845.3	7,774.3	105.8	20.3	92.09	-3,604.1	-11.6	2,285.4	2,161.8	123.63	18.486	

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 2C-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 2C-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 #2	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		
14,000.0	7,740.0	7,845.7	7,774.8	107.5	20.4	92.18	-3,604.1	-11.6	2,384.7	2,259.3	125.36	19.023		
14,100.0	7,740.0	7,846.2	7,775.2	109.3	20.4	92.27	-3,604.1	-11.6	2,484.0	2,356.9	127.09	19.545		
14,200.0	7,740.0	7,846.6	7,775.6	111.0	20.4	92.36	-3,604.1	-11.6	2,583.4	2,454.6	128.82	20.054		
14,300.0	7,740.0	7,847.1	7,776.1	112.8	20.4	92.45	-3,604.1	-11.6	2,682.8	2,552.3	130.55	20.550		
14,400.0	7,740.0	7,847.5	7,776.5	114.5	20.4	92.54	-3,604.1	-11.6	2,782.3	2,650.0	132.28	21.033		
14,500.0	7,740.0	7,847.9	7,777.0	116.2	20.4	92.63	-3,604.1	-11.6	2,881.8	2,747.8	134.01	21.504		
14,600.0	7,740.0	7,848.4	7,777.4	118.0	20.4	92.72	-3,604.1	-11.6	2,981.3	2,845.6	135.74	21.963		
14,700.0	7,740.0	7,848.8	7,777.8	119.7	20.4	92.81	-3,604.1	-11.6	3,080.9	2,943.4	137.48	22.410		
14,800.0	7,740.0	7,849.3	7,778.3	121.5	20.4	92.89	-3,604.1	-11.6	3,180.5	3,041.3	139.21	22.847		
14,900.0	7,740.0	7,849.7	7,778.7	123.2	20.4	92.98	-3,604.1	-11.6	3,280.1	3,139.2	140.94	23.274		
15,000.0	7,740.0	7,850.1	7,779.1	124.9	20.4	93.07	-3,604.2	-11.6	3,379.7	3,237.1	142.67	23.690		
15,100.0	7,740.0	7,850.5	7,779.6	126.7	20.4	93.16	-3,604.2	-11.6	3,479.4	3,335.0	144.39	24.096		
15,200.0	7,740.0	7,851.0	7,780.0	128.4	20.4	93.24	-3,604.2	-11.6	3,579.1	3,432.9	146.12	24.493		
15,300.0	7,740.0	7,851.4	7,780.4	130.2	20.4	93.33	-3,604.2	-11.6	3,678.8	3,530.9	147.85	24.881		
15,400.0	7,740.0	7,851.8	7,780.8	131.9	20.4	93.42	-3,604.2	-11.6	3,778.5	3,628.9	149.58	25.260		
15,500.0	7,740.0	7,852.2	7,781.3	133.7	20.4	93.50	-3,604.2	-11.6	3,878.2	3,726.9	151.31	25.631		
15,600.0	7,740.0	7,852.7	7,781.7	135.4	20.4	93.59	-3,604.2	-11.6	3,977.9	3,824.9	153.04	25.993		
15,700.0	7,740.0	7,853.1	7,782.1	137.1	20.4	93.67	-3,604.2	-11.6	4,077.7	3,922.9	154.77	26.348		
15,800.0	7,740.0	7,853.5	7,782.5	138.9	20.4	93.76	-3,604.2	-11.6	4,177.5	4,021.0	156.49	26.694		
15,900.0	7,740.0	7,853.9	7,782.9	140.6	20.4	93.84	-3,604.2	-11.6	4,277.2	4,119.0	158.22	27.034		
15,952.8	7,740.0	7,854.1	7,783.2	141.6	20.4	93.88	-3,604.2	-11.6	4,329.9	4,170.8	159.13	27.210		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	173.02	-4,267.5	522.3	4,299.4					
100.0	100.0	124.0	124.0	0.2	0.2	173.02	-4,267.5	522.3	4,299.4	4,299.0	0.34	N/A		
200.0	200.0	224.0	224.0	0.3	0.4	173.02	-4,267.5	522.3	4,299.4	4,298.7	0.69	6,220.438		
300.0	300.0	324.0	324.0	0.5	0.5	173.02	-4,267.5	522.3	4,299.4	4,298.3	1.04	4,133.079		
400.0	400.0	424.0	424.0	0.7	0.7	173.02	-4,267.5	522.3	4,299.4	4,298.0	1.39	3,094.630		
500.0	500.0	524.0	524.0	0.9	0.9	147.07	-4,267.5	522.3	4,300.1	4,298.4	1.74	2,473.597		
600.0	600.0	624.0	624.0	1.0	1.1	147.08	-4,267.5	522.3	4,302.3	4,300.2	2.09	2,060.447		
700.0	699.9	723.9	723.9	1.2	1.2	147.09	-4,267.5	522.3	4,306.0	4,303.5	2.44	1,765.413		
800.0	799.7	823.7	823.7	1.4	1.4	147.11	-4,267.5	522.3	4,311.1	4,308.3	2.79	1,543.864		
898.2	897.5	921.5	921.5	1.6	1.6	147.13	-4,267.5	522.3	4,317.6	4,314.4	3.14	1,373.982		
900.0	899.4	923.4	923.4	1.6	1.6	147.13	-4,267.5	522.3	4,317.7	4,314.5	3.15	1,371.143		
1,000.0	999.0	1,023.0	1,023.0	1.8	1.8	147.19	-4,267.5	522.3	4,325.0	4,321.5	3.51	1,232.608		
1,100.0	1,098.6	1,122.6	1,122.6	2.0	1.9	147.26	-4,267.5	522.3	4,332.3	4,328.4	3.87	1,119.492		
1,200.0	1,198.2	1,792.0	1,788.4	2.3	3.3	148.07	-4,222.8	486.8	4,328.3	4,323.1	5.28	819.196		
1,300.0	1,297.9	1,891.0	1,886.3	2.5	3.6	148.24	-4,210.8	477.4	4,322.6	4,316.9	5.67	762.164		
1,400.0	1,397.5	1,990.0	1,984.1	2.7	3.8	148.41	-4,198.9	467.9	4,316.9	4,310.9	6.06	711.994		
1,500.0	1,497.1	2,089.0	2,081.9	2.9	4.1	148.57	-4,186.9	458.4	4,311.3	4,304.8	6.46	667.582		
1,600.0	1,596.7	2,188.0	2,179.8	3.2	4.4	148.74	-4,175.0	448.9	4,305.7	4,298.8	6.86	628.035		
1,700.0	1,696.3	2,287.0	2,277.6	3.4	4.7	148.91	-4,163.0	439.4	4,300.1	4,292.8	7.26	592.627		
1,800.0	1,796.0	2,386.1	2,375.4	3.6	5.0	149.09	-4,151.1	430.0	4,294.6	4,286.9	7.66	560.764		
1,900.0	1,895.6	2,485.1	2,473.2	3.8	5.3	149.26	-4,139.1	420.5	4,289.1	4,281.0	8.06	531.956		
2,000.0	1,995.2	2,584.1	2,571.1	4.1	5.5	149.43	-4,127.2	411.0	4,283.6	4,275.1	8.47	505.797		
2,100.0	2,094.8	2,683.1	2,668.9	4.3	5.8	149.60	-4,115.2	401.5	4,278.2	4,269.3	8.88	481.948		
2,200.0	2,194.5	2,782.1	2,766.7	4.5	6.1	149.77	-4,103.3	392.1	4,272.8	4,263.5	9.29	460.123		
2,300.0	2,294.1	2,881.1	2,864.6	4.8	6.4	149.95	-4,091.3	382.6	4,267.5	4,257.8	9.70	440.081		
2,400.0	2,393.7	2,980.1	2,962.4	5.0	6.8	150.12	-4,079.4	373.1	4,262.2	4,252.1	10.11	421.617		
2,500.0	2,493.3	3,079.1	3,060.2	5.2	7.1	150.29	-4,067.4	363.6	4,256.9	4,246.4	10.52	404.555		
2,600.0	2,592.9	3,178.1	3,158.1	5.4	7.4	150.47	-4,055.5	354.1	4,251.7	4,240.7	10.94	388.745		
2,700.0	2,692.6	3,277.2	3,255.9	5.7	7.7	150.64	-4,043.5	344.7	4,246.5	4,235.2	11.35	374.056		
2,800.0	2,792.2	3,376.2	3,353.7	5.9	8.0	150.82	-4,031.6	335.2	4,241.4	4,229.6	11.77	360.376		
2,900.0	2,891.8	3,475.2	3,451.5	6.1	8.3	150.99	-4,019.6	325.7	4,236.3	4,224.1	12.19	347.605		
3,000.0	2,991.4	3,574.2	3,549.4	6.4	8.6	151.17	-4,007.7	316.2	4,231.2	4,218.6	12.61	335.657		
3,100.0	3,091.1	3,673.2	3,647.2	6.6	8.9	151.34	-3,995.7	306.7	4,226.2	4,213.2	13.03	324.457		
3,200.0	3,190.7	3,772.2	3,745.0	6.8	9.2	151.52	-3,983.8	297.3	4,221.2	4,207.8	13.45	313.937		
3,300.0	3,290.3	3,871.2	3,842.9	7.0	9.5	151.70	-3,971.8	287.8	4,216.3	4,202.4	13.87	304.038		
3,400.0	3,389.9	3,970.2	3,940.7	7.3	9.8	151.87	-3,959.9	278.3	4,211.4	4,197.1	14.29	294.708		
3,500.0	3,489.5	4,069.3	4,038.5	7.5	10.2	152.05	-3,947.9	268.8	4,206.5	4,191.8	14.71	285.900		
3,600.0	3,589.2	4,168.3	4,136.4	7.7	10.5	152.23	-3,936.0	259.3	4,201.7	4,186.6	15.14	277.571		
3,700.0	3,688.8	4,267.3	4,234.2	8.0	10.8	152.41	-3,924.0	249.9	4,196.9	4,181.4	15.56	269.684		
3,800.0	3,788.4	4,366.3	4,332.0	8.2	11.1	152.59	-3,912.1	240.4	4,192.2	4,176.2	15.99	262.206		
3,900.0	3,888.0	4,465.3	4,429.8	8.4	11.4	152.77	-3,900.1	230.9	4,187.5	4,171.1	16.41	255.105		
4,000.0	3,987.7	4,564.3	4,527.7	8.7	11.7	152.95	-3,888.2	221.4	4,182.8	4,166.0	16.84	248.355		
4,100.0	4,087.3	4,663.3	4,625.5	8.9	12.0	153.13	-3,876.2	212.0	4,178.2	4,161.0	17.27	241.931		
4,200.0	4,186.9	4,762.3	4,723.3	9.1	12.3	153.31	-3,864.3	202.5	4,173.7	4,156.0	17.70	235.809		
4,300.0	4,286.5	4,861.3	4,821.2	9.4	12.7	153.49	-3,852.3	193.0	4,169.1	4,151.0	18.13	229.969		
4,400.0	4,386.1	4,960.4	4,919.0	9.6	13.0	153.67	-3,840.4	183.5	4,164.7	4,146.1	18.56	224.392		
4,500.0	4,485.8	5,059.4	5,016.8	9.8	13.3	153.85	-3,828.4	174.0	4,160.2	4,141.2	18.99	219.062		
4,600.0	4,585.4	5,158.4	5,114.7	10.0	13.6	154.03	-3,816.5	164.6	4,155.8	4,136.4	19.42	213.962		
4,700.0	4,685.0	5,257.4	5,212.5	10.3	13.9	154.21	-3,804.5	155.1	4,151.5	4,131.6	19.86	209.078		
4,800.0	4,784.6	5,356.4	5,310.3	10.5	14.2	154.40	-3,792.6	145.6	4,147.2	4,126.9	20.29	204.397		
4,900.0	4,884.3	5,455.4	5,408.1	10.7	14.5	154.58	-3,780.6	136.1	4,142.9	4,122.2	20.72	199.907		
5,000.0	4,983.9	5,554.4	5,506.0	11.0	14.9	154.76	-3,768.7	126.6	4,138.7	4,117.5	21.16	195.596		

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 2C-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 2C-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 #2	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		
5,100.0	5,083.5	5,653.4	5,603.8	11.2	15.2	154.95	-3,756.7	117.2	4,134.5	4,112.9	21.60	191.455		
5,200.0	5,183.1	5,752.4	5,701.6	11.4	15.5	155.13	-3,744.8	107.7	4,130.4	4,108.3	22.03	187.472		
5,300.0	5,282.7	5,851.5	5,799.5	11.7	15.8	155.32	-3,732.8	98.2	4,126.3	4,103.8	22.47	183.641		
5,400.0	5,382.4	5,950.5	5,897.3	11.9	16.1	155.50	-3,720.9	88.7	4,122.2	4,099.3	22.91	179.951		
5,500.0	5,482.0	6,049.5	5,995.1	12.1	16.4	155.69	-3,708.9	79.2	4,118.2	4,094.9	23.35	176.397		
5,600.0	5,581.6	6,148.5	6,093.0	12.4	16.8	155.87	-3,697.0	69.8	4,114.2	4,090.5	23.79	172.970		
5,700.0	5,681.2	6,247.5	6,190.8	12.6	17.1	156.06	-3,685.0	60.3	4,110.3	4,086.1	24.23	169.664		
5,800.0	5,780.9	6,346.5	6,288.6	12.8	17.4	156.25	-3,673.1	50.8	4,106.4	4,081.8	24.67	166.472		
5,900.0	5,880.5	6,445.5	6,386.4	13.0	17.7	156.43	-3,661.1	41.3	4,102.6	4,077.5	25.11	163.390		
6,000.0	5,980.1	6,544.5	6,484.3	13.3	18.0	156.62	-3,649.2	31.9	4,098.8	4,073.3	25.55	160.412		
6,100.0	6,079.7	6,643.6	6,582.1	13.5	18.3	156.81	-3,637.2	22.4	4,095.1	4,069.1	26.00	157.532		
6,200.0	6,179.3	6,742.6	6,679.9	13.7	18.7	156.99	-3,625.3	12.9	4,091.4	4,065.0	26.44	154.746		
6,300.0	6,279.0	6,843.2	6,749.7	14.0	18.9	157.13	-3,616.8	6.1	4,087.8	4,061.0	26.81	152.478		
6,400.0	6,378.6	6,874.7	6,810.5	14.2	19.1	157.24	-3,609.8	0.7	4,085.2	4,058.0	27.14	150.513		
6,500.0	6,478.2	6,900.0	6,835.7	14.4	19.1	157.28	-3,607.3	-1.4	4,083.9	4,056.6	27.39	149.123		
6,572.7	6,550.6	6,957.6	6,892.9	14.6	19.3	157.37	-3,602.2	-5.4	4,083.6	4,056.0	27.64	147.729		
6,600.0	6,577.8	6,970.7	6,905.9	14.7	19.3	157.39	-3,601.1	-6.3	4,083.7	4,056.0	27.72	147.316		
6,700.0	6,677.5	7,000.0	6,935.1	14.9	19.4	157.43	-3,598.9	-8.0	4,085.0	4,057.1	27.97	146.066		
6,800.0	6,777.1	7,067.2	7,002.1	15.1	19.5	157.51	-3,594.9	-11.2	4,087.4	4,059.2	28.28	144.560		
6,900.0	6,876.7	7,100.0	7,034.8	15.4	19.5	157.54	-3,593.3	-12.5	4,091.2	4,062.7	28.52	143.455		
7,000.0	6,976.3	7,163.8	7,098.6	15.6	19.6	157.60	-3,591.1	-14.2	4,096.2	4,067.4	28.80	142.213		
7,100.0	7,075.9	7,200.0	7,134.8	15.8	19.7	157.62	-3,590.4	-14.8	4,102.5	4,073.4	29.04	141.254		
7,147.0	7,122.8	7,234.8	7,169.6	15.9	19.7	157.64	-3,590.0	-15.1	4,105.8	4,076.7	29.18	140.713		
7,150.0	7,125.8	7,236.3	7,171.0	15.9	19.7	156.04	-3,590.0	-15.1	4,106.1	4,076.9	29.19	140.667		
7,200.0	7,175.7	7,264.9	7,199.7	16.0	19.7	73.04	-3,590.0	-15.1	4,107.5	4,078.2	29.29	140.213		
7,250.0	7,225.5	7,314.8	7,249.6	16.0	19.8	24.33	-3,590.0	-15.1	4,104.8	4,075.5	29.27	140.239		
7,300.0	7,275.0	7,364.2	7,299.0	16.0	19.9	15.29	-3,590.0	-15.1	4,097.7	4,068.6	29.09	140.880		
7,350.0	7,323.6	7,412.8	7,347.6	16.0	19.9	11.89	-3,590.0	-15.1	4,086.3	4,057.5	28.75	142.138		
7,400.0	7,371.0	7,460.2	7,395.0	15.9	20.0	10.21	-3,590.0	-15.1	4,070.7	4,042.5	28.26	144.024		
7,450.0	7,416.9	7,506.1	7,440.9	15.8	20.0	9.29	-3,590.0	-15.1	4,051.1	4,023.5	27.64	146.550		
7,500.0	7,460.8	7,550.1	7,484.8	15.6	20.1	8.80	-3,590.0	-15.1	4,027.6	4,000.7	26.90	149.728		
7,550.0	7,502.6	7,591.8	7,526.6	15.5	20.1	8.60	-3,590.0	-15.1	4,000.3	3,974.2	26.05	153.562		
7,600.0	7,541.7	7,631.0	7,565.8	15.3	20.2	8.62	-3,590.0	-15.1	3,969.5	3,944.3	25.12	158.032		
7,650.0	7,578.1	7,667.3	7,602.1	15.2	20.2	8.86	-3,590.0	-15.1	3,935.3	3,911.2	24.13	163.075		
7,700.0	7,611.3	7,700.5	7,635.3	15.0	20.2	9.31	-3,590.0	-15.1	3,898.2	3,875.1	23.13	168.548		
7,750.0	7,641.1	7,730.4	7,665.1	14.9	20.3	10.03	-3,590.0	-15.1	3,858.3	3,836.1	22.15	174.165		
7,800.0	7,667.4	7,756.6	7,691.4	14.8	20.3	11.12	-3,590.0	-15.1	3,815.9	3,794.7	21.27	179.413		
7,850.0	7,689.8	7,779.0	7,713.8	14.7	20.3	12.76	-3,590.0	-15.1	3,771.5	3,750.9	20.56	183.396		
7,900.0	7,708.2	7,797.5	7,732.2	14.7	20.4	15.32	-3,590.0	-15.1	3,725.2	3,705.0	20.18	184.574		
7,950.0	7,722.6	7,811.8	7,746.6	14.7	20.4	19.65	-3,590.0	-15.1	3,677.5	3,657.1	20.41	180.224		
8,000.0	7,732.7	7,821.9	7,756.7	14.7	20.4	28.09	-3,590.0	-15.1	3,628.7	3,606.8	21.96	165.245		
8,050.0	7,738.5	7,827.7	7,762.5	14.8	20.4	48.69	-3,590.0	-15.1	3,579.3	3,552.3	26.95	132.796		
8,091.8	7,740.0	7,829.3	7,764.0	15.0	20.4	90.00	-3,590.0	-15.1	3,537.7	3,505.4	32.25	109.680		
8,100.0	7,740.0	7,829.3	7,764.0	15.0	20.4	90.00	-3,590.0	-15.1	3,529.5	3,497.2	32.28	109.323		
8,200.0	7,740.0	7,829.3	7,764.0	15.4	20.4	90.00	-3,590.0	-15.1	3,429.8	3,397.0	32.76	104.691		
8,300.0	7,740.0	7,829.3	7,764.0	16.1	20.4	90.00	-3,590.0	-15.1	3,330.2	3,296.7	33.42	99.632		
8,400.0	7,740.0	7,829.3	7,764.0	16.9	20.4	90.00	-3,590.0	-15.1	3,230.5	3,196.3	34.25	94.317		
8,500.0	7,740.0	7,829.3	7,764.0	17.8	20.4	90.00	-3,590.0	-15.1	3,131.0	3,095.7	35.22	88.899		
8,600.0	7,740.0	7,829.3	7,764.0	18.8	20.4	90.00	-3,590.0	-15.1	3,031.4	2,995.1	36.30	83.499		
8,700.0	7,740.0	7,829.3	7,764.0	20.0	20.4	90.00	-3,590.0	-15.1	2,931.8	2,894.4	37.49	78.208		
8,800.0	7,740.0	7,829.3	7,764.0	21.2	20.4	90.00	-3,590.0	-15.1	2,832.3	2,793.6	38.75	73.089		
8,900.0	7,740.0	7,829.3	7,764.0	22.5	20.4	90.00	-3,590.0	-15.1	2,732.9	2,692.8	40.08	68.179		

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 2C-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 2C-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 #2	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				
9,000.0	7,740.0	7,829.3	7,764.0	23.9	20.4	90.00	-3,590.0	-15.1	2,633.4	2,592.0	41.47	63.500				
9,100.0	7,740.0	7,829.3	7,764.0	25.3	20.4	90.00	-3,590.0	-15.1	2,534.0	2,491.1	42.91	59.061				
9,200.0	7,740.0	7,829.3	7,764.0	26.7	20.4	90.00	-3,590.0	-15.1	2,434.7	2,390.3	44.38	54.863				
9,300.0	7,740.0	7,829.3	7,764.0	28.2	20.4	90.00	-3,590.0	-15.1	2,335.4	2,289.5	45.88	50.899				
9,400.0	7,740.0	7,829.3	7,764.0	29.7	20.4	90.00	-3,590.0	-15.1	2,236.2	2,188.8	47.42	47.161				
9,500.0	7,740.0	7,829.3	7,764.0	31.3	20.4	90.00	-3,590.0	-15.1	2,137.1	2,088.1	48.97	43.638				
9,600.0	7,740.0	7,829.3	7,764.0	32.8	20.4	90.00	-3,590.0	-15.1	2,038.0	1,987.5	50.55	40.317				
9,700.0	7,740.0	7,829.3	7,764.0	34.4	20.4	90.00	-3,590.0	-15.1	1,939.0	1,886.9	52.14	37.186				
9,800.0	7,740.0	7,829.3	7,764.0	36.0	20.4	90.00	-3,590.0	-15.1	1,840.2	1,786.4	53.75	34.234				
9,900.0	7,740.0	7,829.3	7,764.0	37.6	20.4	90.00	-3,590.0	-15.1	1,741.5	1,686.1	55.37	31.449				
10,000.0	7,740.0	7,829.3	7,764.0	39.2	20.4	90.00	-3,590.0	-15.1	1,642.9	1,585.9	57.01	28.819				
10,100.0	7,740.0	7,829.3	7,764.0	40.9	20.4	90.00	-3,590.0	-15.1	1,544.5	1,485.9	58.65	26.334				
10,200.0	7,740.0	7,829.3	7,764.0	42.5	20.4	90.00	-3,590.0	-15.1	1,446.4	1,386.1	60.30	23.984				
10,300.0	7,740.0	7,829.3	7,764.0	44.1	20.4	90.00	-3,590.0	-15.1	1,348.5	1,286.5	61.97	21.762				
10,400.0	7,740.0	7,829.3	7,764.0	45.8	20.4	90.00	-3,590.0	-15.1	1,250.9	1,187.3	63.63	19.659				
10,500.0	7,740.0	7,829.3	7,764.0	47.5	20.4	90.00	-3,590.0	-15.1	1,153.8	1,088.5	65.31	17.667				
10,600.0	7,740.0	7,829.3	7,764.0	49.1	20.4	90.00	-3,590.0	-15.1	1,057.2	990.2	66.99	15.782				
10,700.0	7,740.0	7,829.3	7,764.0	50.8	20.4	90.00	-3,590.0	-15.1	961.3	892.6	68.67	13.999				
10,800.0	7,740.0	7,829.3	7,764.0	52.5	20.4	90.00	-3,590.0	-15.1	866.3	796.0	70.36	12.313				
10,900.0	7,740.0	7,829.3	7,764.0	54.2	20.4	90.00	-3,590.0	-15.1	772.6	700.6	72.05	10.723				
11,000.0	7,740.0	7,829.3	7,764.0	55.9	20.4	90.00	-3,590.0	-15.1	680.7	606.9	73.75	9.230				
11,100.0	7,740.0	7,829.3	7,764.0	57.6	20.4	90.00	-3,590.0	-15.1	591.4	516.0	75.45	7.839				
11,200.0	7,740.0	7,829.3	7,764.0	59.3	20.4	90.00	-3,590.0	-15.1	506.2	429.0	77.15	6.560				
11,300.0	7,740.0	7,829.3	7,764.0	61.0	20.4	90.00	-3,590.0	-15.1	427.3	348.5	78.86	5.419				
11,400.0	7,740.0	7,829.3	7,764.0	62.7	20.4	90.00	-3,590.0	-15.1	359.2	278.6	80.57	4.458				
11,500.0	7,740.0	7,829.3	7,764.0	64.4	20.4	90.00	-3,590.0	-15.1	308.9	226.7	82.28	3.755				
11,600.0	7,740.0	7,829.3	7,764.0	66.1	20.4	90.00	-3,590.0	-15.1	286.1	202.1	83.99	3.407				
11,617.9	7,740.0	7,829.3	7,764.0	66.4	20.4	90.00	-3,590.0	-15.1	285.6	201.3	84.30	3.387	CC, ES, SF			
11,700.0	7,740.0	7,829.3	7,764.0	67.8	20.4	90.00	-3,590.0	-15.1	297.1	211.4	85.71	3.467				
11,800.0	7,740.0	7,829.3	7,764.0	69.5	20.4	90.00	-3,590.0	-15.1	338.7	251.3	87.43	3.874				
11,900.0	7,740.0	7,829.3	7,764.0	71.2	20.4	90.00	-3,590.0	-15.1	401.4	312.3	89.15	4.503				
12,000.0	7,740.0	7,829.3	7,764.0	72.9	20.4	90.00	-3,590.0	-15.1	477.0	386.2	90.87	5.250				
12,100.0	7,740.0	7,829.3	7,764.0	74.7	20.4	90.00	-3,590.0	-15.1	560.3	467.7	92.59	6.052				
12,200.0	7,740.0	7,829.3	7,764.0	76.4	20.4	90.00	-3,590.0	-15.1	648.4	554.1	94.31	6.875				
12,300.0	7,740.0	7,829.3	7,764.0	78.1	20.4	90.00	-3,590.0	-15.1	739.5	643.4	96.04	7.700				
12,400.0	7,740.0	7,829.3	7,764.0	79.8	20.4	90.00	-3,590.0	-15.1	832.6	734.8	97.77	8.516				
12,500.0	7,740.0	7,829.3	7,764.0	81.6	20.4	90.00	-3,590.0	-15.1	927.2	827.7	99.49	9.319				
12,600.0	7,740.0	7,829.3	7,764.0	83.3	20.4	90.00	-3,590.0	-15.1	1,022.8	921.6	101.22	10.104				
12,700.0	7,740.0	7,829.3	7,764.0	85.0	20.4	90.00	-3,590.0	-15.1	1,119.1	1,016.2	102.95	10.871				
12,800.0	7,740.0	7,829.3	7,764.0	86.7	20.4	90.00	-3,590.0	-15.1	1,216.1	1,111.4	104.68	11.617				
12,900.0	7,740.0	7,829.3	7,764.0	88.5	20.4	90.00	-3,590.0	-15.1	1,313.5	1,207.1	106.42	12.343				
13,000.0	7,740.0	7,829.3	7,764.0	90.2	20.4	90.00	-3,590.0	-15.1	1,411.3	1,303.1	108.15	13.050				
13,100.0	7,740.0	7,829.3	7,764.0	91.9	20.4	90.00	-3,590.0	-15.1	1,509.4	1,399.5	109.88	13.736				
13,200.0	7,740.0	7,829.3	7,764.0	93.7	20.4	90.00	-3,590.0	-15.1	1,607.7	1,496.0	111.62	14.404				
13,300.0	7,740.0	7,829.3	7,764.0	95.4	20.4	90.00	-3,590.0	-15.1	1,706.2	1,592.8	113.35	15.052				
13,400.0	7,740.0	7,829.3	7,764.0	97.1	20.4	90.00	-3,590.0	-15.1	1,804.8	1,689.7	115.09	15.682				
13,500.0	7,740.0	7,829.3	7,764.0	98.9	20.4	90.00	-3,590.0	-15.1	1,903.6	1,786.8	116.82	16.295				
13,600.0	7,740.0	7,829.3	7,764.0	100.6	20.4	90.00	-3,590.0	-15.1	2,002.6	1,884.0	118.56	16.891				
13,700.0	7,740.0	7,829.3	7,764.0	102.3	20.4	90.00	-3,590.0	-15.1	2,101.6	1,981.3	120.30	17.470				
13,800.0	7,740.0	7,829.3	7,764.0	104.1	20.4	90.00	-3,590.0	-15.1	2,200.7	2,078.7	122.03	18.033				
13,900.0	7,740.0	7,829.3	7,764.0	105.8	20.4	90.00	-3,590.0	-15.1	2,299.9	2,176.1	123.77	18.581				
14,000.0	7,740.0	7,829.3	7,764.0	107.5	20.4	90.00	-3,590.0	-15.1	2,399.2	2,273.6	125.51	19.115				

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 2C-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 2C-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 #2	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		
14,100.0	7,740.0	7,829.3	7,764.0	109.3	20.4	90.00	-3,590.0	-15.1	2,498.5	2,371.2	127.25	19.634		
14,200.0	7,740.0	7,829.3	7,764.0	111.0	20.4	90.00	-3,590.0	-15.1	2,597.8	2,468.9	128.99	20.140		
14,300.0	7,740.0	7,829.3	7,764.0	112.8	20.4	90.00	-3,590.0	-15.1	2,697.3	2,566.5	130.73	20.632		
14,400.0	7,740.0	7,829.3	7,764.0	114.5	20.4	90.00	-3,590.0	-15.1	2,796.7	2,664.2	132.47	21.112		
14,500.0	7,740.0	7,829.3	7,764.0	116.2	20.4	90.00	-3,590.0	-15.1	2,896.2	2,762.0	134.21	21.579		
14,600.0	7,740.0	7,829.3	7,764.0	118.0	20.4	90.00	-3,590.0	-15.1	2,995.7	2,859.8	135.96	22.035		
14,700.0	7,740.0	7,829.3	7,764.0	119.7	20.4	90.00	-3,590.0	-15.1	3,095.3	2,957.6	137.70	22.479		
14,800.0	7,740.0	7,829.3	7,764.0	121.5	20.4	90.00	-3,590.0	-15.1	3,194.9	3,055.4	139.44	22.912		
14,900.0	7,740.0	7,829.3	7,764.0	123.2	20.4	90.00	-3,590.0	-15.1	3,294.5	3,153.3	141.18	23.335		
15,000.0	7,740.0	7,829.3	7,764.0	124.9	20.4	90.00	-3,590.0	-15.1	3,394.1	3,251.2	142.93	23.747		
15,100.0	7,740.0	7,829.3	7,764.0	126.7	20.4	90.00	-3,590.0	-15.1	3,493.8	3,349.1	144.67	24.150		
15,200.0	7,740.0	7,829.3	7,764.0	128.4	20.4	90.00	-3,590.0	-15.1	3,593.5	3,447.1	146.41	24.543		
15,300.0	7,740.0	7,829.3	7,764.0	130.2	20.4	90.00	-3,590.0	-15.1	3,693.2	3,545.0	148.16	24.927		
15,400.0	7,740.0	7,829.3	7,764.0	131.9	20.4	90.00	-3,590.0	-15.1	3,792.9	3,643.0	149.90	25.302		
15,500.0	7,740.0	7,829.3	7,764.0	133.7	20.4	90.00	-3,590.0	-15.1	3,892.6	3,740.9	151.65	25.669		
15,600.0	7,740.0	7,829.3	7,764.0	135.4	20.4	90.00	-3,590.0	-15.1	3,992.3	3,838.9	153.39	26.027		
15,700.0	7,740.0	7,829.3	7,764.0	137.1	20.4	90.00	-3,590.0	-15.1	4,092.1	3,936.9	155.14	26.377		
15,800.0	7,740.0	7,829.3	7,764.0	138.9	20.4	90.00	-3,590.0	-15.1	4,191.8	4,035.0	156.88	26.720		
15,900.0	7,740.0	7,829.3	7,764.0	140.6	20.4	90.00	-3,590.0	-15.1	4,291.6	4,133.0	158.63	27.055		
15,952.8	7,740.0	7,829.3	7,764.0	141.6	20.4	90.00	-3,590.0	-15.1	4,344.3	4,184.7	159.55	27.229		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	17.3	17.3	0.0	0.0	172.62	-4,267.5	553.1	4,303.2					
100.0	100.0	99.1	99.1	0.2	0.1	172.63	-4,268.0	552.2	4,303.7	4,303.4	0.30	N/A		
200.0	200.0	196.2	196.1	0.3	0.3	172.65	-4,268.7	550.9	4,304.2	4,303.5	0.65	6,663.301		
300.0	300.0	267.9	267.9	0.5	0.4	172.66	-4,269.5	550.3	4,305.2	4,304.2	0.95	4,546.575		
400.0	400.0	339.4	339.4	0.7	0.6	172.66	-4,270.6	549.8	4,306.7	4,305.5	1.25	3,451.769		
500.0	500.0	396.3	396.3	0.9	0.7	146.71	-4,272.1	549.3	4,309.9	4,308.4	1.52	2,834.791		
600.0	600.0	450.0	449.9	1.0	0.8	146.70	-4,274.1	548.7	4,315.6	4,313.8	1.79	2,410.563		
700.0	699.9	490.5	490.3	1.2	0.9	146.68	-4,276.1	548.2	4,324.0	4,322.0	2.04	2,120.921		
800.0	799.7	547.5	547.2	1.4	1.0	146.66	-4,279.7	547.6	4,335.1	4,332.7	2.32	1,868.674		
898.2	897.5	606.0	605.6	1.6	1.1	146.64	-4,283.7	546.6	4,348.1	4,345.5	2.60	1,669.439		
900.0	899.4	606.0	605.6	1.6	1.1	146.64	-4,283.7	546.6	4,348.3	4,345.7	2.61	1,667.353		
1,000.0	999.0	668.0	667.4	1.8	1.2	146.70	-4,288.5	545.4	4,363.1	4,360.2	2.91	1,501.392		
1,100.0	1,098.6	765.1	764.1	2.0	1.4	146.80	-4,296.8	543.2	4,378.6	4,375.3	3.27	1,339.055		
1,200.0	1,198.2	859.5	858.1	2.3	1.6	146.91	-4,304.6	540.9	4,393.8	4,390.1	3.63	1,210.312		
1,300.0	1,297.9	919.2	917.6	2.5	1.8	146.97	-4,310.1	539.3	4,409.7	4,405.8	3.93	1,122.282		
1,400.0	1,397.5	969.2	967.3	2.7	1.9	147.03	-4,315.1	537.9	4,426.6	4,422.4	4.21	1,051.023		
1,500.0	1,497.1	1,004.0	1,001.9	2.9	2.0	147.07	-4,319.0	536.8	4,444.8	4,440.3	4.47	995.078		
1,600.0	1,596.7	1,068.0	1,065.3	3.2	2.2	147.15	-4,327.0	534.8	4,464.1	4,459.3	4.78	934.462		
1,700.0	1,696.3	1,097.0	1,094.0	3.4	2.3	147.19	-4,331.1	533.8	4,484.6	4,479.6	5.02	892.858		
1,800.0	1,796.0	1,133.0	1,129.6	3.6	2.4	147.23	-4,336.4	532.7	4,506.4	4,501.1	5.28	853.208		
1,900.0	1,895.6	1,197.0	1,192.7	3.8	2.6	147.32	-4,346.8	530.2	4,529.3	4,523.7	5.60	809.205		
2,000.0	1,995.2	1,237.1	1,232.2	4.1	2.7	147.38	-4,353.8	528.2	4,553.3	4,547.4	5.87	775.515		
2,100.0	2,094.8	1,306.3	1,300.0	4.3	3.0	147.50	-4,366.6	523.3	4,578.1	4,571.9	6.21	736.811		
2,200.0	2,194.5	1,420.0	1,411.0	4.5	3.4	147.75	-4,387.9	511.1	4,603.0	4,596.3	6.68	688.821		
2,300.0	2,294.1	1,471.7	1,461.3	4.8	3.6	147.88	-4,397.8	504.7	4,628.2	4,621.2	7.01	660.695		
2,400.0	2,393.7	1,523.4	1,511.6	5.0	3.8	148.00	-4,408.2	498.4	4,654.4	4,647.1	7.33	635.178		
2,500.0	2,493.3	1,638.8	1,623.8	5.2	4.3	148.27	-4,431.4	484.7	4,680.8	4,673.0	7.81	598.958		
2,600.0	2,592.9	1,681.6	1,665.3	5.4	4.5	148.37	-4,440.2	479.7	4,707.6	4,699.5	8.12	579.741		
2,700.0	2,692.6	1,738.0	1,720.0	5.7	4.8	148.50	-4,452.6	472.8	4,735.7	4,727.2	8.46	559.648		
2,800.0	2,792.2	1,802.7	1,782.4	5.9	5.1	148.66	-4,467.3	464.6	4,764.5	4,755.7	8.83	539.527		
2,900.0	2,891.8	1,963.1	1,937.6	6.1	5.8	149.03	-4,502.4	444.7	4,792.8	4,783.3	9.45	507.340		
3,000.0	2,991.4	2,080.8	2,051.9	6.4	6.3	149.29	-4,527.1	430.8	4,820.3	4,810.3	9.95	484.299		
3,100.0	3,091.1	2,161.9	2,130.6	6.6	6.7	149.48	-4,544.0	420.6	4,847.7	4,837.3	10.37	467.670		
3,200.0	3,190.7	2,290.6	2,255.5	6.8	7.2	149.76	-4,570.7	404.9	4,875.1	4,864.2	10.89	447.588		
3,300.0	3,290.3	2,404.8	2,366.5	7.0	7.7	149.99	-4,593.8	392.0	4,902.1	4,890.7	11.38	430.702		
3,400.0	3,389.9	2,570.4	2,527.4	7.3	8.5	150.38	-4,625.5	368.9	4,927.9	4,915.9	12.05	409.101		
3,500.0	3,489.5	2,664.1	2,618.8	7.5	8.9	150.59	-4,642.6	356.8	4,953.0	4,940.6	12.48	396.908		
3,600.0	3,589.2	2,724.0	2,677.2	7.7	9.1	150.71	-4,654.0	349.8	4,979.0	4,966.2	12.82	388.373		
3,700.0	3,688.8	2,767.0	2,719.0	8.0	9.3	150.79	-4,662.6	344.8	5,005.8	4,992.7	13.13	381.349		
3,800.0	3,788.4	2,819.0	2,769.5	8.2	9.5	150.90	-4,673.3	338.3	5,033.5	5,020.0	13.46	374.063		
3,900.0	3,888.0	2,899.1	2,847.1	8.4	9.9	151.07	-4,690.4	327.9	5,061.8	5,047.9	13.86	365.199		
4,000.0	3,987.7	3,035.0	2,978.7	8.7	10.5	151.36	-4,719.1	310.6	5,090.1	5,075.7	14.41	353.230		
4,100.0	4,087.3	3,142.2	3,082.7	8.9	11.0	151.58	-4,741.1	296.5	5,117.7	5,102.8	14.88	343.842		
4,200.0	4,186.9	3,247.2	3,184.7	9.1	11.5	151.80	-4,762.2	283.1	5,145.0	5,129.7	15.35	335.266		
4,300.0	4,286.5	3,360.3	3,294.6	9.4	12.0	152.02	-4,784.8	269.2	5,172.3	5,156.5	15.82	326.932		
4,400.0	4,386.1	3,440.5	3,372.6	9.6	12.4	152.17	-4,800.7	259.5	5,199.5	5,183.3	16.21	320.728		
4,500.0	4,485.8	3,543.6	3,472.7	9.8	12.8	152.37	-4,821.7	246.5	5,227.2	5,210.6	16.66	313.670		
4,600.0	4,585.4	3,639.1	3,565.6	10.0	13.3	152.56	-4,840.5	234.5	5,254.4	5,237.3	17.10	307.361		
8,000.0	7,732.7	7,874.8	7,756.0	14.7	24.0	20.34	-5,238.4	-8.6	5,273.3	5,253.4	19.95	264.376		
8,050.0	7,738.5	7,880.7	7,761.8	14.8	24.0	37.66	-5,238.4	-8.6	5,223.8	5,198.2	25.58	204.177		
8,091.8	7,740.0	7,882.2	7,763.4	15.0	24.0	89.87	-5,238.4	-8.6	5,182.1	5,146.0	36.05	143.762		
8,100.0	7,740.0	7,882.2	7,763.4	15.0	24.0	89.87	-5,238.4	-8.6	5,173.9	5,137.8	36.08	143.414		

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 2C-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 2C-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 #2	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				
8,200.0	7,740.0	7,882.2	7,763.4	15.4	24.0	89.88	-5,238.4	-8.6	5,074.0	5,037.5	36.55	138.812				
8,300.0	7,740.0	7,882.3	7,763.5	16.1	24.0	89.89	-5,238.4	-8.6	4,974.2	4,937.0	37.22	133.655				
8,400.0	7,740.0	7,882.3	7,763.5	16.9	24.0	89.90	-5,238.4	-8.6	4,874.3	4,836.3	38.04	128.124				
8,500.0	7,740.0	7,882.4	7,763.6	17.8	24.0	89.91	-5,238.4	-8.6	4,774.5	4,735.5	39.01	122.388				
8,600.0	7,740.0	7,882.4	7,763.6	18.8	24.0	89.92	-5,238.4	-8.6	4,674.7	4,634.6	40.10	116.586				
8,700.0	7,740.0	7,882.5	7,763.7	20.0	24.0	89.93	-5,238.4	-8.6	4,574.9	4,533.6	41.28	110.826				
8,800.0	7,740.0	7,882.5	7,763.7	21.2	24.0	89.94	-5,238.4	-8.6	4,475.0	4,432.5	42.54	105.186				
8,900.0	7,740.0	7,882.6	7,763.8	22.5	24.0	89.95	-5,238.4	-8.6	4,375.2	4,331.4	43.88	99.718				
9,000.0	7,740.0	7,882.6	7,763.8	23.9	24.0	89.96	-5,238.4	-8.6	4,275.5	4,230.2	45.26	94.457				
9,100.0	7,740.0	7,882.7	7,763.9	25.3	24.0	89.97	-5,238.4	-8.6	4,175.7	4,129.0	46.70	89.420				
9,200.0	7,740.0	7,882.7	7,763.9	26.7	24.0	89.98	-5,238.4	-8.6	4,075.9	4,027.7	48.17	84.614				
9,300.0	7,740.0	7,882.8	7,764.0	28.2	24.0	89.99	-5,238.4	-8.5	3,976.1	3,926.5	49.68	80.042				
9,400.0	7,740.0	7,882.8	7,764.0	29.7	24.0	90.00	-5,238.4	-8.5	3,876.4	3,825.2	51.21	75.698				
9,500.0	7,740.0	7,882.9	7,764.1	31.3	24.0	90.01	-5,238.4	-8.5	3,776.7	3,723.9	52.77	71.575				
9,600.0	7,740.0	7,882.9	7,764.1	32.8	24.0	90.02	-5,238.4	-8.5	3,676.9	3,622.6	54.34	67.663				
9,700.0	7,740.0	7,883.0	7,764.2	34.4	24.0	90.03	-5,238.4	-8.5	3,577.2	3,521.3	55.94	63.952				
9,800.0	7,740.0	7,883.0	7,764.2	36.0	24.0	90.04	-5,238.4	-8.5	3,477.5	3,420.0	57.55	60.432				
9,900.0	7,740.0	7,883.1	7,764.3	37.6	24.0	90.05	-5,238.4	-8.5	3,377.9	3,318.7	59.17	57.090				
10,000.0	7,740.0	7,883.1	7,764.3	39.2	24.0	90.06	-5,238.4	-8.5	3,278.2	3,217.4	60.80	53.918				
10,100.0	7,740.0	7,883.2	7,764.4	40.9	24.0	90.07	-5,238.4	-8.5	3,178.6	3,116.2	62.44	50.903				
10,200.0	7,740.0	7,883.2	7,764.4	42.5	24.0	90.08	-5,238.4	-8.5	3,079.0	3,014.9	64.10	48.037				
10,300.0	7,740.0	7,883.3	7,764.5	44.1	24.0	90.10	-5,238.4	-8.5	2,979.4	2,913.7	65.76	45.309				
10,400.0	7,740.0	7,883.3	7,764.5	45.8	24.0	90.11	-5,238.4	-8.5	2,879.9	2,812.5	67.42	42.713				
10,500.0	7,740.0	7,883.4	7,764.6	47.5	24.0	90.12	-5,238.4	-8.5	2,780.4	2,711.3	69.10	40.238				
10,600.0	7,740.0	7,883.4	7,764.6	49.1	24.0	90.13	-5,238.4	-8.5	2,680.9	2,610.1	70.78	37.878				
10,700.0	7,740.0	7,883.5	7,764.7	50.8	24.0	90.14	-5,238.4	-8.5	2,581.5	2,509.0	72.46	35.625				
10,800.0	7,740.0	7,883.5	7,764.7	52.5	24.0	90.15	-5,238.4	-8.5	2,482.1	2,407.9	74.15	33.473				
10,900.0	7,740.0	7,883.6	7,764.8	54.2	24.0	90.16	-5,238.4	-8.5	2,382.7	2,306.9	75.84	31.416				
11,000.0	7,740.0	7,883.6	7,764.8	55.9	24.0	90.17	-5,238.4	-8.5	2,283.4	2,205.9	77.54	29.448				
11,100.0	7,740.0	7,883.7	7,764.9	57.6	24.0	90.18	-5,238.4	-8.5	2,184.2	2,105.0	79.24	27.564				
11,200.0	7,740.0	7,883.7	7,764.9	59.3	24.0	90.19	-5,238.4	-8.5	2,085.1	2,004.1	80.94	25.759				
11,300.0	7,740.0	7,883.8	7,765.0	61.0	24.0	90.20	-5,238.4	-8.5	1,986.0	1,903.4	82.65	24.029				
11,400.0	7,740.0	7,883.8	7,765.0	62.7	24.0	90.21	-5,238.4	-8.5	1,887.1	1,802.7	84.36	22.369				
11,500.0	7,740.0	7,883.9	7,765.1	64.4	24.0	90.22	-5,238.4	-8.5	1,788.2	1,702.2	86.07	20.776				
11,600.0	7,740.0	7,883.9	7,765.1	66.1	24.0	90.23	-5,238.4	-8.5	1,689.5	1,601.7	87.78	19.246				
11,700.0	7,740.0	7,884.0	7,765.2	67.8	24.0	90.24	-5,238.4	-8.5	1,591.0	1,501.5	89.50	17.776				
11,800.0	7,740.0	7,884.0	7,765.2	69.5	24.0	90.25	-5,238.4	-8.5	1,492.6	1,401.4	91.22	16.364				
11,900.0	7,740.0	7,884.1	7,765.3	71.2	24.0	90.26	-5,238.4	-8.5	1,394.5	1,301.6	92.94	15.005				
12,000.0	7,740.0	7,884.1	7,765.3	72.9	24.0	90.27	-5,238.4	-8.5	1,296.7	1,202.0	94.66	13.699				
12,100.0	7,740.0	7,884.2	7,765.4	74.7	24.0	90.28	-5,238.4	-8.5	1,199.2	1,102.9	96.38	12.443				
12,200.0	7,740.0	7,884.2	7,765.4	76.4	24.0	90.29	-5,238.4	-8.5	1,102.2	1,004.1	98.10	11.235				
12,300.0	7,740.0	7,884.3	7,765.5	78.1	24.0	90.30	-5,238.4	-8.5	1,005.8	906.0	99.83	10.075				
12,400.0	7,740.0	7,884.3	7,765.5	79.8	24.0	90.31	-5,238.4	-8.5	910.2	808.6	101.56	8.962				
12,500.0	7,740.0	7,884.4	7,765.6	81.6	24.0	90.32	-5,238.4	-8.5	815.5	712.3	103.28	7.896				
12,600.0	7,740.0	7,884.4	7,765.6	83.3	24.0	90.33	-5,238.4	-8.5	722.4	617.4	105.01	6.879				
12,700.0	7,740.0	7,884.5	7,765.7	85.0	24.0	90.34	-5,238.4	-8.5	631.3	524.6	106.74	5.915				
12,800.0	7,740.0	7,884.5	7,765.7	86.7	24.0	90.35	-5,238.4	-8.5	543.4	435.0	108.47	5.010				
12,900.0	7,740.0	7,884.6	7,765.8	88.5	24.0	90.36	-5,238.4	-8.5	460.5	350.3	110.21	4.178				
13,000.0	7,740.0	7,884.6	7,765.8	90.2	24.0	90.37	-5,238.4	-8.5	385.7	273.8	111.94	3.446				
13,100.0	7,740.0	7,884.7	7,765.9	91.9	24.0	90.38	-5,238.4	-8.5	324.8	211.1	113.67	2.858				
13,200.0	7,740.0	7,884.7	7,765.9	93.7	24.0	90.39	-5,238.4	-8.5	286.8	171.4	115.40	2.485				
13,266.3	7,740.0	7,884.8	7,766.0	94.8	24.0	90.40	-5,238.4	-8.5	279.0	162.4	116.56	2.394 CC, ES, SF				

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 2C-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 2C-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 #2	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		
13,300.0	7,740.0	7,884.8	7,766.0	95.4	24.0	90.40	-5,238.4	-8.5	281.0	163.9	117.14	2.399		
13,400.0	7,740.0	7,884.8	7,766.0	97.1	24.0	90.41	-5,238.4	-8.5	309.4	190.5	118.88	2.602		
13,500.0	7,740.0	7,884.9	7,766.1	98.9	24.0	90.42	-5,238.4	-8.5	363.9	243.3	120.61	3.017		
13,600.0	7,740.0	7,884.9	7,766.1	100.6	24.0	90.43	-5,238.4	-8.5	434.9	312.6	122.35	3.555		
13,700.0	7,740.0	7,885.0	7,766.2	102.3	24.0	90.44	-5,238.4	-8.5	515.7	391.6	124.09	4.156		
13,800.0	7,740.0	7,885.0	7,766.2	104.1	24.0	90.45	-5,238.4	-8.5	602.2	476.4	125.82	4.786		
13,900.0	7,740.0	7,885.1	7,766.3	105.8	24.0	90.46	-5,238.4	-8.5	692.4	564.8	127.56	5.428		
14,000.0	7,740.0	7,885.1	7,766.3	107.5	24.0	90.47	-5,238.4	-8.5	784.9	655.6	129.30	6.070		
14,100.0	7,740.0	7,885.2	7,766.4	109.3	24.0	90.48	-5,238.4	-8.5	879.1	748.1	131.04	6.709		
14,200.0	7,740.0	7,885.2	7,766.4	111.0	24.0	90.49	-5,238.4	-8.5	974.5	841.7	132.78	7.339		
14,300.0	7,740.0	7,885.3	7,766.5	112.8	24.0	90.50	-5,238.4	-8.5	1,070.6	936.1	134.52	7.959		
14,400.0	7,740.0	7,885.3	7,766.5	114.5	24.0	90.52	-5,238.4	-8.5	1,167.5	1,031.2	136.26	8.568		
14,500.0	7,740.0	7,885.4	7,766.6	116.2	24.0	90.53	-5,238.4	-8.5	1,264.8	1,126.8	138.00	9.165		
14,600.0	7,740.0	7,885.4	7,766.6	118.0	24.0	90.54	-5,238.4	-8.5	1,362.5	1,222.8	139.74	9.750		
14,700.0	7,740.0	7,885.5	7,766.7	119.7	24.0	90.55	-5,238.4	-8.5	1,460.6	1,319.1	141.48	10.323		
14,800.0	7,740.0	7,885.5	7,766.7	121.5	24.0	90.56	-5,238.4	-8.5	1,558.8	1,415.6	143.23	10.884		
14,900.0	7,740.0	7,885.6	7,766.8	123.2	24.0	90.57	-5,238.4	-8.5	1,657.3	1,512.3	144.97	11.432		
15,000.0	7,740.0	7,885.6	7,766.8	124.9	24.0	90.58	-5,238.4	-8.5	1,756.0	1,609.3	146.71	11.969		
15,100.0	7,740.0	7,885.7	7,766.9	126.7	24.0	90.59	-5,238.4	-8.5	1,854.8	1,706.3	148.45	12.494		
15,200.0	7,740.0	7,885.7	7,766.9	128.4	24.0	90.60	-5,238.4	-8.5	1,953.7	1,803.5	150.20	13.007		
15,300.0	7,740.0	7,885.8	7,767.0	130.2	24.0	90.61	-5,238.4	-8.5	2,052.7	1,900.8	151.94	13.510		
15,400.0	7,740.0	7,885.8	7,767.0	131.9	24.0	90.62	-5,238.4	-8.5	2,151.8	1,998.1	153.68	14.002		
15,500.0	7,740.0	7,885.9	7,767.1	133.7	24.0	90.63	-5,238.4	-8.5	2,251.0	2,095.6	155.43	14.483		
15,600.0	7,740.0	7,885.9	7,767.1	135.4	24.0	90.64	-5,238.4	-8.5	2,350.3	2,193.1	157.17	14.953		
15,700.0	7,740.0	7,886.0	7,767.2	137.1	24.0	90.65	-5,238.4	-8.5	2,449.6	2,290.7	158.92	15.414		
15,800.0	7,740.0	7,886.0	7,767.2	138.9	24.0	90.66	-5,238.4	-8.5	2,549.0	2,388.3	160.66	15.865		
15,900.0	7,740.0	7,886.1	7,767.3	140.6	24.0	90.67	-5,238.4	-8.5	2,648.4	2,486.0	162.41	16.307		
15,952.8	7,740.0	7,886.1	7,767.3	141.6	24.0	90.67	-5,238.4	-8.5	2,700.9	2,537.5	163.33	16.537		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	172.61	-4,267.5	553.1	4,303.2					
100.0	100.0	124.0	124.0	0.2	0.2	172.61	-4,267.5	553.1	4,303.2	4,302.9	0.34	N/A		
156.1	156.1	180.1	180.1	0.2	0.3	172.61	-4,267.5	553.1	4,303.2	4,302.7	0.54	7,997.810		
200.0	200.0	200.0	200.0	0.3	0.3	172.61	-4,267.5	553.1	4,303.3	4,302.6	0.65	6,627.949		
300.0	300.0	271.5	271.5	0.5	0.4	172.62	-4,268.0	553.1	4,304.0	4,303.0	0.95	4,535.812		
400.0	400.0	329.2	329.2	0.7	0.5	172.62	-4,269.0	553.0	4,305.7	4,304.5	1.22	3,515.580		
500.0	500.0	400.0	400.0	0.9	0.7	146.66	-4,271.0	552.8	4,309.1	4,307.6	1.52	2,830.786		
600.0	600.0	444.3	444.3	1.0	0.8	146.64	-4,272.7	552.7	4,315.0	4,313.2	1.78	2,430.888		
700.0	699.9	500.0	499.9	1.2	0.9	146.62	-4,275.3	552.5	4,323.3	4,321.2	2.05	2,109.629		
800.0	799.7	558.8	558.6	1.4	1.0	146.60	-4,278.7	552.2	4,334.0	4,331.6	2.33	1,858.550		
898.2	897.5	625.5	625.1	1.6	1.1	146.58	-4,283.2	551.8	4,346.8	4,344.2	2.63	1,653.711		
900.0	899.4	627.3	626.9	1.6	1.1	146.58	-4,283.3	551.8	4,347.1	4,344.4	2.64	1,649.668		
1,000.0	999.0	726.1	725.5	1.8	1.3	146.66	-4,290.2	551.2	4,361.1	4,358.1	2.99	1,456.324		
1,100.0	1,098.6	825.0	824.1	2.0	1.5	146.75	-4,297.1	550.6	4,375.2	4,371.8	3.36	1,303.924		
1,200.0	1,198.2	875.6	874.6	2.3	1.6	146.79	-4,300.9	549.9	4,389.8	4,386.2	3.63	1,207.763		
1,300.0	1,297.9	926.0	924.7	2.5	1.8	146.85	-4,305.3	548.7	4,405.5	4,401.6	3.92	1,125.029		
1,400.0	1,397.5	1,000.0	998.3	2.7	1.9	146.94	-4,313.0	545.7	4,422.4	4,418.2	4.24	1,042.107		
1,500.0	1,497.1	1,025.7	1,023.8	2.9	2.0	146.98	-4,316.0	544.4	4,440.2	4,435.7	4.49	989.974		
1,600.0	1,596.7	1,075.1	1,072.7	3.2	2.2	147.06	-4,322.1	541.4	4,459.2	4,454.4	4.77	934.055		
1,700.0	1,696.3	1,100.0	1,097.3	3.4	2.2	147.10	-4,325.5	539.6	4,479.3	4,474.3	5.01	893.247		
1,800.0	1,796.0	1,172.6	1,168.9	3.6	2.5	147.24	-4,336.1	533.6	4,500.3	4,495.0	5.36	839.092		
1,900.0	1,895.6	1,220.7	1,216.2	3.8	2.6	147.34	-4,343.8	529.0	4,522.6	4,516.9	5.66	798.741		
2,000.0	1,995.2	1,286.3	1,280.4	4.1	2.9	147.49	-4,355.1	521.9	4,545.8	4,539.8	6.01	756.814		
2,100.0	2,094.8	1,382.0	1,374.1	4.3	3.2	147.71	-4,371.7	511.3	4,569.3	4,562.9	6.43	710.901		
2,200.0	2,194.5	1,477.8	1,467.7	4.5	3.6	147.92	-4,388.4	500.8	4,592.8	4,586.0	6.85	670.171		
2,300.0	2,294.1	1,573.5	1,561.4	4.8	3.9	148.13	-4,405.0	490.2	4,616.4	4,609.2	7.28	633.913		
2,400.0	2,393.7	1,669.2	1,655.1	5.0	4.3	148.34	-4,421.6	479.7	4,640.1	4,632.4	7.71	601.519		
2,500.0	2,493.3	1,764.9	1,748.8	5.2	4.6	148.55	-4,438.2	469.2	4,663.9	4,655.7	8.15	572.463		
2,600.0	2,592.9	1,860.6	1,842.4	5.4	5.0	148.75	-4,454.9	458.6	4,687.7	4,679.1	8.58	546.295		
2,700.0	2,692.6	1,956.3	1,936.1	5.7	5.4	148.95	-4,471.5	448.1	4,711.5	4,702.5	9.01	522.631		
2,800.0	2,792.2	2,052.1	2,029.8	5.9	5.8	149.16	-4,488.1	437.5	4,735.4	4,726.0	9.45	501.149		
2,900.0	2,891.8	2,147.8	2,123.4	6.1	6.1	149.35	-4,504.7	427.0	4,759.4	4,749.5	9.88	481.573		
3,000.0	2,991.4	2,243.5	2,217.1	6.4	6.5	149.55	-4,521.4	416.5	4,783.4	4,773.1	10.32	463.671		
3,100.0	3,091.1	2,339.2	2,310.8	6.6	6.9	149.75	-4,538.0	405.9	4,807.5	4,796.7	10.75	447.245		
3,200.0	3,190.7	2,434.9	2,404.5	6.8	7.3	149.94	-4,554.6	395.4	4,831.6	4,820.4	11.18	432.125		
3,300.0	3,290.3	2,530.7	2,498.1	7.0	7.6	150.13	-4,571.3	384.8	4,855.8	4,844.2	11.61	418.166		
3,400.0	3,389.9	2,626.4	2,591.8	7.3	8.0	150.32	-4,587.9	374.3	4,880.0	4,868.0	12.04	405.244		
3,500.0	3,489.5	2,722.1	2,685.5	7.5	8.4	150.51	-4,604.5	363.8	4,904.3	4,891.8	12.47	393.248		
3,600.0	3,589.2	2,817.8	2,779.1	7.7	8.8	150.70	-4,621.1	353.2	4,928.6	4,915.7	12.90	382.087		
3,700.0	3,688.8	2,913.5	2,872.8	8.0	9.2	150.88	-4,637.8	342.7	4,953.0	4,939.7	13.33	371.677		
3,800.0	3,788.4	3,009.2	2,966.5	8.2	9.5	151.06	-4,654.4	332.1	4,977.4	4,963.7	13.75	361.946		
3,900.0	3,888.0	3,105.0	3,060.2	8.4	9.9	151.24	-4,671.0	321.6	5,001.9	4,987.7	14.18	352.832		
4,000.0	3,987.7	3,200.7	3,153.8	8.7	10.3	151.42	-4,687.6	311.0	5,026.5	5,011.9	14.60	344.279		
4,100.0	4,087.3	3,296.4	3,247.5	8.9	10.7	151.60	-4,704.3	300.5	5,051.0	5,036.0	15.02	336.238		
4,200.0	4,186.9	3,392.1	3,341.2	9.1	11.1	151.77	-4,720.9	290.0	5,075.6	5,060.2	15.44	328.665		
4,300.0	4,286.5	3,487.8	3,434.8	9.4	11.4	151.95	-4,737.5	279.4	5,100.3	5,084.5	15.86	321.520		
4,400.0	4,386.1	3,583.5	3,528.5	9.6	11.8	152.12	-4,754.2	268.9	5,125.0	5,108.7	16.28	314.770		
4,500.0	4,485.8	3,679.3	3,622.2	9.8	12.2	152.29	-4,770.8	258.3	5,149.8	5,133.1	16.70	308.383		
4,600.0	4,585.4	3,775.0	3,715.9	10.0	12.6	152.46	-4,787.4	247.8	5,174.6	5,157.5	17.12	302.330		
4,700.0	4,685.0	3,870.7	3,809.5	10.3	13.0	152.63	-4,804.0	237.3	5,199.4	5,181.9	17.53	296.588		
4,800.0	4,784.6	3,966.4	3,903.2	10.5	13.4	152.79	-4,820.7	226.7	5,224.3	5,206.4	17.94	291.133		
4,900.0	4,884.3	4,062.1	3,996.9	10.7	13.7	152.96	-4,837.3	216.2	5,249.2	5,230.9	18.36	285.944		

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 2C-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 #2	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				
5,000.0	4,983.9	4,157.9	4,090.5	11.0	14.1	153.12	-4,853.9	205.6	5,274.2	5,255.4	18.77	281.003				
8,000.0	7,732.7	7,865.8	7,756.7	14.7	23.7	21.17	-5,211.0	-20.7	5,246.6	5,226.6	20.05	261.628				
8,050.0	7,738.5	7,871.6	7,762.5	14.8	23.7	38.98	-5,211.0	-20.7	5,197.1	5,171.3	25.79	201.514				
8,091.8	7,740.0	7,873.1	7,764.0	15.0	23.7	90.00	-5,211.0	-20.7	5,155.4	5,119.7	35.66	144.581				
8,100.0	7,740.0	7,873.1	7,764.0	15.0	23.7	90.00	-5,211.0	-20.7	5,147.2	5,111.5	35.69	144.228				
8,200.0	7,740.0	7,873.1	7,764.0	15.4	23.7	90.00	-5,211.0	-20.7	5,047.3	5,011.2	36.16	139.567				
8,300.0	7,740.0	7,873.1	7,764.0	16.1	23.7	90.00	-5,211.0	-20.7	4,947.5	4,910.7	36.83	134.342				
8,400.0	7,740.0	7,873.1	7,764.0	16.9	23.7	90.00	-5,211.0	-20.7	4,847.7	4,810.0	37.65	128.740				
8,500.0	7,740.0	7,873.1	7,764.0	17.8	23.7	90.00	-5,211.0	-20.7	4,747.9	4,709.2	38.62	122.931				
8,600.0	7,740.0	7,873.1	7,764.0	18.8	23.7	90.00	-5,211.0	-20.7	4,648.1	4,608.4	39.71	117.058				
8,700.0	7,740.0	7,873.1	7,764.0	20.0	23.7	90.00	-5,211.0	-20.7	4,548.3	4,507.4	40.89	111.230				
8,800.0	7,740.0	7,873.1	7,764.0	21.2	23.7	90.00	-5,211.0	-20.7	4,448.5	4,406.3	42.16	105.526				
8,900.0	7,740.0	7,873.1	7,764.0	22.5	23.7	90.00	-5,211.0	-20.7	4,348.7	4,305.2	43.49	100.000				
9,000.0	7,740.0	7,873.1	7,764.0	23.9	23.7	90.00	-5,211.0	-20.7	4,248.9	4,204.0	44.87	94.685				
9,100.0	7,740.0	7,873.1	7,764.0	25.3	23.7	90.00	-5,211.0	-20.7	4,149.2	4,102.9	46.31	89.599				
9,200.0	7,740.0	7,873.1	7,764.0	26.7	23.7	90.00	-5,211.0	-20.7	4,049.4	4,001.6	47.78	84.749				
9,300.0	7,740.0	7,873.1	7,764.0	28.2	23.7	90.00	-5,211.0	-20.7	3,949.7	3,900.4	49.29	80.137				
9,400.0	7,740.0	7,873.1	7,764.0	29.7	23.7	90.00	-5,211.0	-20.7	3,850.0	3,799.1	50.82	75.758				
9,500.0	7,740.0	7,873.1	7,764.0	31.3	23.7	90.00	-5,211.0	-20.7	3,750.3	3,697.9	52.38	71.602				
9,600.0	7,740.0	7,873.1	7,764.0	32.8	23.7	90.00	-5,211.0	-20.7	3,650.6	3,596.6	53.95	67.662				
9,700.0	7,740.0	7,873.1	7,764.0	34.4	23.7	90.00	-5,211.0	-20.7	3,550.9	3,495.3	55.55	63.926				
9,800.0	7,740.0	7,873.1	7,764.0	36.0	23.7	90.00	-5,211.0	-20.7	3,451.2	3,394.1	57.16	60.383				
9,900.0	7,740.0	7,873.1	7,764.0	37.6	23.7	90.00	-5,211.0	-20.7	3,351.6	3,292.8	58.78	57.021				
10,000.0	7,740.0	7,873.1	7,764.0	39.2	23.7	90.00	-5,211.0	-20.7	3,252.0	3,191.6	60.41	53.831				
10,100.0	7,740.0	7,873.1	7,764.0	40.9	23.7	90.00	-5,211.0	-20.7	3,152.4	3,090.4	62.06	50.800				
10,200.0	7,740.0	7,873.1	7,764.0	42.5	23.7	90.00	-5,211.0	-20.7	3,052.8	2,989.1	63.71	47.920				
10,300.0	7,740.0	7,873.1	7,764.0	44.1	23.7	90.00	-5,211.0	-20.7	2,953.3	2,888.0	65.37	45.180				
10,400.0	7,740.0	7,873.1	7,764.0	45.8	23.7	90.00	-5,211.0	-20.7	2,853.8	2,786.8	67.04	42.572				
10,500.0	7,740.0	7,873.1	7,764.0	47.5	23.7	90.00	-5,211.0	-20.7	2,754.4	2,685.7	68.71	40.087				
10,600.0	7,740.0	7,873.1	7,764.0	49.1	23.7	90.00	-5,211.0	-20.7	2,654.9	2,584.6	70.39	37.718				
10,700.0	7,740.0	7,873.1	7,764.0	50.8	23.7	90.00	-5,211.0	-20.7	2,555.6	2,483.5	72.07	35.458				
10,800.0	7,740.0	7,873.1	7,764.0	52.5	23.7	90.00	-5,211.0	-20.7	2,456.3	2,382.5	73.76	33.300				
10,900.0	7,740.0	7,873.1	7,764.0	54.2	23.7	90.00	-5,211.0	-20.7	2,357.0	2,281.5	75.46	31.237				
11,000.0	7,740.0	7,873.1	7,764.0	55.9	23.7	90.00	-5,211.0	-20.7	2,257.8	2,180.6	77.15	29.264				
11,100.0	7,740.0	7,873.1	7,764.0	57.6	23.7	90.00	-5,211.0	-20.7	2,158.7	2,079.8	78.85	27.376				
11,200.0	7,740.0	7,873.1	7,764.0	59.3	23.7	90.00	-5,211.0	-20.7	2,059.6	1,979.1	80.56	25.568				
11,300.0	7,740.0	7,873.1	7,764.0	61.0	23.7	90.00	-5,211.0	-20.7	1,960.7	1,878.4	82.26	23.834				
11,400.0	7,740.0	7,873.1	7,764.0	62.7	23.7	90.00	-5,211.0	-20.7	1,861.8	1,777.9	83.97	22.172				
11,500.0	7,740.0	7,873.1	7,764.0	64.4	23.7	90.00	-5,211.0	-20.7	1,763.1	1,677.5	85.68	20.578				
11,600.0	7,740.0	7,873.1	7,764.0	66.1	23.7	90.00	-5,211.0	-20.7	1,664.6	1,577.2	87.40	19.047				
11,700.0	7,740.0	7,873.1	7,764.0	67.8	23.7	90.00	-5,211.0	-20.7	1,566.2	1,477.1	89.11	17.576				
11,800.0	7,740.0	7,873.1	7,764.0	69.5	23.7	90.00	-5,211.0	-20.7	1,468.1	1,377.3	90.83	16.163				
11,900.0	7,740.0	7,873.1	7,764.0	71.2	23.7	90.00	-5,211.0	-20.7	1,370.2	1,277.7	92.55	14.805				
12,000.0	7,740.0	7,873.1	7,764.0	72.9	23.7	90.00	-5,211.0	-20.7	1,272.7	1,178.4	94.27	13.500				
12,100.0	7,740.0	7,873.1	7,764.0	74.7	23.7	90.00	-5,211.0	-20.7	1,175.6	1,079.6	95.99	12.246				
12,200.0	7,740.0	7,873.1	7,764.0	76.4	23.7	90.00	-5,211.0	-20.7	1,079.0	981.2	97.72	11.042				
12,300.0	7,740.0	7,873.1	7,764.0	78.1	23.7	90.00	-5,211.0	-20.7	983.0	883.6	99.44	9.886				
12,400.0	7,740.0	7,873.1	7,764.0	79.8	23.7	90.00	-5,211.0	-20.7	888.0	786.9	101.17	8.778				
12,500.0	7,740.0	7,873.1	7,764.0	81.6	23.7	90.00	-5,211.0	-20.7	794.2	691.3	102.90	7.719				
12,600.0	7,740.0	7,873.1	7,764.0	83.3	23.7	90.00	-5,211.0	-20.7	702.1	597.5	104.63	6.711				
12,700.0	7,740.0	7,873.1	7,764.0	85.0	23.7	90.00	-5,211.0	-20.7	612.6	506.2	106.36	5.760				
12,800.0	7,740.0	7,873.1	7,764.0	86.7	23.7	90.00	-5,211.0	-20.7	526.7	418.6	108.09	4.873				

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 2C-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 2C-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 #2	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		
12,900.0	7,740.0	7,873.1	7,764.0	88.5	23.7	90.00	-5,211.0	-20.7	446.8	337.0	109.82	4.069	2.517 CC, ES, SF	
13,000.0	7,740.0	7,873.1	7,764.0	90.2	23.7	90.00	-5,211.0	-20.7	376.7	265.1	111.55	3.376		
13,100.0	7,740.0	7,873.1	7,764.0	91.9	23.7	90.00	-5,211.0	-20.7	322.6	209.3	113.28	2.848		
13,200.0	7,740.0	7,873.1	7,764.0	93.7	23.7	90.00	-5,211.0	-20.7	293.8	178.7	115.02	2.554		
13,238.9	7,740.0	7,873.1	7,764.0	94.3	23.7	90.00	-5,211.0	-20.7	291.2	175.5	115.69	2.517		
13,300.0	7,740.0	7,873.1	7,764.0	95.4	23.7	90.00	-5,211.0	-20.7	297.5	180.7	116.75	2.548		
13,400.0	7,740.0	7,873.1	7,764.0	97.1	23.7	90.00	-5,211.0	-20.7	332.7	214.3	118.49	2.808		
13,500.0	7,740.0	7,873.1	7,764.0	98.9	23.7	90.00	-5,211.0	-20.7	391.1	270.8	120.23	3.253		
13,600.0	7,740.0	7,873.1	7,764.0	100.6	23.7	90.00	-5,211.0	-20.7	463.8	341.9	121.96	3.803		
13,700.0	7,740.0	7,873.1	7,764.0	102.3	23.7	90.00	-5,211.0	-20.7	545.3	421.6	123.70	4.408		
13,800.0	7,740.0	7,873.1	7,764.0	104.1	23.7	90.00	-5,211.0	-20.7	632.1	506.7	125.44	5.039		
13,900.0	7,740.0	7,873.1	7,764.0	105.8	23.7	90.00	-5,211.0	-20.7	722.3	595.2	127.18	5.680		
14,000.0	7,740.0	7,873.1	7,764.0	107.5	23.7	90.00	-5,211.0	-20.7	814.9	685.9	128.92	6.321		
14,100.0	7,740.0	7,873.1	7,764.0	109.3	23.7	90.00	-5,211.0	-20.7	909.0	778.3	130.66	6.957		
14,200.0	7,740.0	7,873.1	7,764.0	111.0	23.7	90.00	-5,211.0	-20.7	1,004.2	871.8	132.40	7.585		
14,300.0	7,740.0	7,873.1	7,764.0	112.8	23.7	90.00	-5,211.0	-20.7	1,100.3	966.2	134.14	8.203		
14,400.0	7,740.0	7,873.1	7,764.0	114.5	23.7	90.00	-5,211.0	-20.7	1,197.0	1,061.1	135.88	8.810		
14,500.0	7,740.0	7,873.1	7,764.0	116.2	23.7	90.00	-5,211.0	-20.7	1,294.2	1,156.6	137.62	9.405		
14,600.0	7,740.0	7,873.1	7,764.0	118.0	23.7	90.00	-5,211.0	-20.7	1,391.9	1,252.5	139.36	9.988		
14,700.0	7,740.0	7,873.1	7,764.0	119.7	23.7	90.00	-5,211.0	-20.7	1,489.8	1,348.7	141.10	10.558		
14,800.0	7,740.0	7,873.1	7,764.0	121.5	23.7	90.00	-5,211.0	-20.7	1,588.0	1,445.1	142.84	11.117		
14,900.0	7,740.0	7,873.1	7,764.0	123.2	23.7	90.00	-5,211.0	-20.7	1,686.4	1,541.8	144.59	11.664		
15,000.0	7,740.0	7,873.1	7,764.0	124.9	23.7	90.00	-5,211.0	-20.7	1,785.0	1,638.6	146.33	12.198		
15,100.0	7,740.0	7,873.1	7,764.0	126.7	23.7	90.00	-5,211.0	-20.7	1,883.7	1,735.6	148.07	12.721		
15,200.0	7,740.0	7,873.1	7,764.0	128.4	23.7	90.00	-5,211.0	-20.7	1,982.6	1,832.7	149.82	13.233		
15,300.0	7,740.0	7,873.1	7,764.0	130.2	23.7	90.00	-5,211.0	-20.7	2,081.5	1,930.0	151.56	13.734		
15,400.0	7,740.0	7,873.1	7,764.0	131.9	23.7	90.00	-5,211.0	-20.7	2,180.6	2,027.3	153.30	14.224		
15,500.0	7,740.0	7,873.1	7,764.0	133.7	23.7	90.00	-5,211.0	-20.7	2,279.7	2,124.7	155.05	14.703		
15,600.0	7,740.0	7,873.1	7,764.0	135.4	23.7	90.00	-5,211.0	-20.7	2,379.0	2,222.2	156.79	15.173		
15,700.0	7,740.0	7,873.1	7,764.0	137.1	23.7	90.00	-5,211.0	-20.7	2,478.2	2,319.7	158.54	15.632		
15,800.0	7,740.0	7,873.1	7,764.0	138.9	23.7	90.00	-5,211.0	-20.7	2,577.6	2,417.3	160.28	16.081		
15,900.0	7,740.0	7,873.1	7,764.0	140.6	23.7	90.00	-5,211.0	-20.7	2,677.0	2,514.9	162.03	16.521		
15,952.8	7,740.0	7,873.1	7,764.0	141.6	23.7	90.00	-5,211.0	-20.7	2,729.4	2,566.5	162.95	16.750		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	172.84	-4,267.5	536.3	4,301.1							
100.0	100.0	123.9	123.9	0.2	0.2	172.84	-4,267.5	536.3	4,301.1	4,300.7	0.36	N/A				
200.0	200.0	224.7	224.7	0.3	0.4	172.84	-4,267.5	536.4	4,301.1	4,300.3	0.71	6,046.095				
300.0	300.0	325.5	325.5	0.5	0.6	172.84	-4,267.4	536.4	4,301.0	4,299.9	1.06	4,063.117				
400.0	400.0	426.2	426.2	0.7	0.7	172.84	-4,267.4	536.4	4,300.9	4,299.5	1.41	3,059.601				
405.2	405.2	431.4	431.4	0.7	0.7	146.89	-4,267.4	536.4	4,300.9	4,299.5	1.42	3,021.089				
500.0	500.0	527.0	527.0	0.9	0.9	146.89	-4,267.3	536.5	4,301.6	4,299.8	1.75	2,454.036				
600.0	600.0	627.7	627.7	1.0	1.1	146.89	-4,267.2	536.5	4,303.7	4,301.6	2.10	2,048.780				
700.0	699.9	728.4	728.4	1.2	1.2	146.91	-4,267.0	536.6	4,307.2	4,304.8	2.45	1,758.220				
800.0	799.7	828.7	828.7	1.4	1.4	146.92	-4,266.9	536.7	4,312.2	4,309.4	2.80	1,539.307				
898.2	897.5	1,000.0	999.9	1.6	1.7	146.91	-4,264.9	542.3	4,318.0	4,314.8	3.29	1,314.091				
900.0	899.4	1,096.3	1,095.8	1.6	1.9	146.88	-4,261.2	549.2	4,318.1	4,314.6	3.48	1,242.380				
1,000.0	999.0	1,269.4	1,267.6	1.8	2.3	146.72	-4,249.6	568.0	4,319.8	4,315.8	4.05	1,065.840				
1,100.0	1,098.6	1,535.7	1,528.7	2.0	3.2	146.26	-4,223.4	612.0	4,319.2	4,314.2	5.03	858.469				
1,200.0	1,198.2	1,701.5	1,689.5	2.3	3.8	145.87	-4,202.3	646.4	4,316.6	4,310.8	5.86	736.850				
1,300.0	1,297.9	1,865.0	1,846.9	2.5	4.6	145.45	-4,177.3	683.1	4,311.3	4,304.6	6.73	640.296				
1,400.0	1,397.5	1,929.0	1,908.5	2.7	4.9	145.28	-4,167.6	697.6	4,306.6	4,299.4	7.21	597.667				
1,500.0	1,497.1	2,010.4	1,986.9	2.9	5.3	145.06	-4,155.8	716.1	4,302.6	4,294.9	7.76	554.806				
1,600.0	1,596.7	2,138.7	2,110.6	3.2	5.9	144.73	-4,137.0	744.5	4,298.5	4,290.0	8.52	504.699				
1,700.0	1,696.3	2,216.0	2,185.0	3.4	6.3	144.53	-4,125.6	762.1	4,294.5	4,285.4	9.07	473.489				
1,800.0	1,796.0	2,311.0	2,276.5	3.6	6.7	144.27	-4,111.8	783.5	4,290.7	4,281.0	9.69	442.668				
1,900.0	1,895.6	2,390.3	2,353.0	3.8	7.1	144.07	-4,100.4	801.0	4,287.2	4,277.0	10.25	418.318				
2,000.0	1,995.2	2,479.2	2,438.9	4.1	7.5	143.84	-4,088.2	820.5	4,284.3	4,273.5	10.85	395.008				
2,100.0	2,094.8	2,562.1	2,519.0	4.3	7.9	143.64	-4,076.9	838.5	4,281.6	4,270.2	11.42	374.974				
2,200.0	2,194.5	2,631.8	2,586.4	4.5	8.3	143.46	-4,067.9	853.8	4,279.6	4,267.7	11.93	358.597				
2,300.0	2,294.1	2,792.1	2,741.1	4.8	9.0	143.05	-4,045.8	889.2	4,276.8	4,263.9	12.88	331.998				
2,400.0	2,393.7	2,875.8	2,822.0	5.0	9.4	142.83	-4,034.1	907.7	4,274.1	4,260.6	13.47	317.203				
2,500.0	2,493.3	2,986.1	2,928.4	5.2	10.0	142.54	-4,018.8	932.3	4,271.5	4,257.3	14.20	300.879				
2,600.0	2,592.9	3,136.1	3,072.9	5.4	10.8	142.15	-3,996.6	965.8	4,268.2	4,253.1	15.13	282.102				
2,700.0	2,692.6	3,197.2	3,131.7	5.7	11.1	141.98	-3,987.4	979.8	4,264.8	4,249.2	15.62	272.967				
2,800.0	2,792.2	3,270.2	3,202.1	5.9	11.4	141.78	-3,977.1	996.3	4,262.3	4,246.1	16.18	263.394				
2,900.0	2,891.8	3,359.0	3,287.6	6.1	11.9	141.54	-3,964.7	1,016.6	4,260.2	4,243.4	16.82	253.325				
3,000.0	2,991.4	3,486.0	3,410.3	6.4	12.5	141.22	-3,947.6	1,044.5	4,258.6	4,241.0	17.62	241.664				
3,100.0	3,091.1	3,560.7	3,482.4	6.6	12.9	141.02	-3,937.1	1,060.9	4,256.4	4,238.2	18.19	234.003				
3,200.0	3,190.7	3,652.1	3,570.4	6.8	13.3	140.78	-3,924.5	1,081.9	4,254.7	4,235.8	18.85	225.670				
3,300.0	3,290.3	3,748.0	3,662.7	7.0	13.8	140.51	-3,911.1	1,104.4	4,253.0	4,233.5	19.54	217.709				
3,400.0	3,389.9	3,832.4	3,744.2	7.3	14.2	140.29	-3,899.8	1,123.0	4,251.7	4,231.5	20.14	211.117				
3,500.0	3,489.5	3,908.4	3,817.8	7.5	14.6	140.10	-3,890.0	1,139.3	4,250.8	4,230.2	20.70	205.363				
3,600.0	3,589.2	4,004.9	3,911.3	7.7	15.0	139.86	-3,878.0	1,160.0	4,250.5	4,229.1	21.36	198.963				
3,700.0	3,688.8	4,185.9	4,086.2	8.0	15.9	139.40	-3,853.4	1,199.7	4,249.2	4,226.7	22.46	189.207				
3,800.0	3,788.4	4,293.2	4,189.6	8.2	16.5	139.11	-3,837.4	1,223.2	4,246.8	4,223.6	23.19	183.105				
3,900.0	3,888.0	4,375.0	4,268.6	8.4	16.9	138.90	-3,825.4	1,241.0	4,244.6	4,220.8	23.80	178.338				
4,000.0	3,987.7	4,439.0	4,330.4	8.7	17.2	138.74	-3,816.4	1,254.8	4,243.1	4,218.8	24.31	174.522				
4,100.0	4,087.3	4,503.0	4,392.4	8.9	17.5	138.58	-3,808.1	1,268.4	4,242.6	4,217.8	24.82	170.944				
4,105.9	4,093.2	4,503.0	4,392.4	8.9	17.5	138.58	-3,808.1	1,268.4	4,242.6	4,217.8	24.83	170.862				
4,200.0	4,186.9	4,617.4	4,503.4	9.1	18.0	138.30	-3,793.8	1,292.5	4,242.6	4,217.1	25.57	165.917				
4,300.0	4,286.5	4,724.4	4,607.0	9.4	18.5	138.04	-3,779.7	1,314.9	4,242.0	4,215.7	26.28	161.420				
4,400.0	4,386.1	4,808.6	4,688.8	9.6	18.9	137.85	-3,769.0	1,331.7	4,241.6	4,214.7	26.85	157.965				
4,436.5	4,422.5	4,838.9	4,718.3	9.7	19.0	137.78	-3,765.3	1,337.4	4,241.6	4,214.5	27.05	156.784				
4,500.0	4,485.8	4,892.8	4,771.0	9.8	19.2	137.67	-3,758.9	1,347.2	4,241.6	4,214.2	27.41	154.755				
4,600.0	4,585.4	4,988.0	4,864.0	10.0	19.6	137.49	-3,748.0	1,364.0	4,241.9	4,213.9	28.00	151.477				
4,700.0	4,685.0	5,076.0	4,950.2	10.3	20.0	137.32	-3,738.1	1,379.1	4,242.4	4,213.9	28.56	148.526				

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 2C-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 2C-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 #2	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				Total		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	Separation Factor		
4,800.0	4,784.6	5,171.0	5,043.3	10.5	20.3	137.15	-3,727.9	1,394.8	4,243.2	4,214.0	29.14	145.635		
4,900.0	4,884.3	5,263.4	5,133.8	10.7	20.7	136.99	-3,718.0	1,410.4	4,244.2	4,214.5	29.72	142.827		
5,000.0	4,983.9	5,367.1	5,235.5	11.0	21.1	136.80	-3,706.9	1,427.5	4,245.1	4,214.8	30.32	140.017		
5,100.0	5,083.5	5,445.7	5,312.7	11.2	21.4	136.68	-3,698.9	1,439.6	4,246.3	4,215.5	30.81	137.810		
5,200.0	5,183.1	5,516.0	5,381.9	11.4	21.6	136.57	-3,692.3	1,450.3	4,248.1	4,216.8	31.27	135.835		
5,300.0	5,282.7	5,657.8	5,521.4	11.7	22.1	136.35	-3,679.0	1,472.2	4,250.1	4,218.1	32.01	132.765		
5,400.0	5,382.4	5,734.8	5,597.1	11.9	22.4	136.23	-3,671.3	1,483.9	4,251.5	4,219.0	32.49	130.838		
5,500.0	5,482.0	5,803.2	5,664.6	12.1	22.6	136.13	-3,665.4	1,493.5	4,253.7	4,220.8	32.93	129.176		
5,600.0	5,581.6	5,880.6	5,741.0	12.4	22.9	136.04	-3,659.1	1,504.0	4,256.5	4,223.1	33.40	127.456		
5,700.0	5,681.2	5,974.9	5,834.2	12.6	23.2	135.92	-3,651.9	1,516.8	4,259.6	4,225.7	33.91	125.630		
5,800.0	5,780.9	6,092.9	5,951.1	12.8	23.5	135.81	-3,644.0	1,530.0	4,263.0	4,228.6	34.43	123.808		
5,900.0	5,880.5	6,182.8	6,040.6	13.0	23.7	135.76	-3,638.3	1,537.5	4,265.9	4,231.0	34.84	122.428		
6,000.0	5,980.1	6,256.5	6,113.9	13.3	23.9	135.74	-3,634.3	1,542.8	4,269.2	4,234.0	35.20	121.279		
6,100.0	6,079.7	6,324.8	6,182.0	13.5	24.0	135.73	-3,631.3	1,547.0	4,273.2	4,237.6	35.52	120.301		
6,200.0	6,179.3	6,418.1	6,275.2	13.7	24.1	135.75	-3,628.6	1,550.6	4,277.9	4,242.1	35.83	119.383		
6,300.0	6,279.0	6,528.7	6,385.7	14.0	24.2	135.82	-3,625.8	1,550.9	4,281.7	4,245.6	36.11	118.561		
6,400.0	6,378.6	6,571.0	6,428.1	14.2	24.2	135.86	-3,625.5	1,550.3	4,286.8	4,250.5	36.34	117.969		
6,500.0	6,478.2	6,641.1	6,498.1	14.4	24.3	135.93	-3,625.7	1,549.7	4,293.0	4,256.4	36.59	117.312		
6,600.0	6,577.8	6,750.1	6,607.2	14.7	24.4	136.01	-3,625.6	1,550.0	4,299.2	4,262.3	36.89	116.537		
6,700.0	6,677.5	6,866.5	6,723.6	14.9	24.5	136.10	-3,625.0	1,550.6	4,305.1	4,268.0	37.19	115.749		
6,800.0	6,777.1	6,976.4	6,833.4	15.1	24.6	136.18	-3,624.2	1,551.0	4,310.8	4,273.3	37.49	114.979		
6,900.0	6,876.7	7,100.8	6,957.9	15.4	24.7	136.27	-3,622.8	1,551.2	4,316.0	4,278.2	37.80	114.177		
7,000.0	6,976.3	7,229.8	7,086.9	15.6	24.8	136.37	-3,620.6	1,550.8	4,320.6	4,282.5	38.11	113.369		
7,100.0	7,075.9	7,330.3	7,187.3	15.8	24.9	136.44	-3,618.6	1,550.5	4,325.0	4,286.6	38.40	112.627		
7,147.0	7,122.8	7,392.6	7,249.6	15.9	25.0	136.49	-3,617.2	1,550.2	4,326.9	4,288.3	38.55	112.244		
7,150.0	7,125.8	7,396.6	7,253.6	15.9	25.0	134.89	-3,617.1	1,550.2	4,327.0	4,288.4	38.56	112.208		
7,200.0	7,175.7	7,449.1	7,306.0	16.0	25.1	51.91	-3,615.9	1,549.8	4,326.6	4,287.9	38.66	111.927		
7,250.0	7,225.5	7,500.1	7,357.1	16.0	25.1	3.03	-3,614.8	1,549.2	4,322.0	4,283.4	38.55	112.118		
7,300.0	7,275.0	7,545.4	7,402.3	16.0	25.1	-6.36	-3,613.8	1,548.5	4,313.3	4,275.1	38.24	112.792		
7,350.0	7,323.6	7,591.7	7,448.6	16.0	25.2	-10.30	-3,612.9	1,547.7	4,300.6	4,262.9	37.75	113.926		
7,400.0	7,371.0	7,640.8	7,497.7	15.9	25.2	-12.74	-3,612.0	1,546.8	4,284.0	4,246.9	37.09	115.508		
7,450.0	7,416.9	7,688.3	7,545.2	15.8	25.3	-14.66	-3,611.0	1,545.9	4,263.4	4,227.2	36.27	117.540		
7,500.0	7,460.8	7,728.5	7,585.3	15.6	25.3	-16.43	-3,610.3	1,545.1	4,239.3	4,203.9	35.32	120.025		
7,550.0	7,502.6	7,764.0	7,620.8	15.5	25.3	-18.25	-3,609.6	1,544.4	4,211.7	4,177.4	34.26	122.914		
7,600.0	7,541.7	7,799.0	7,655.9	15.3	25.3	-20.28	-3,609.0	1,543.6	4,180.8	4,147.7	33.15	126.105		
7,650.0	7,578.1	7,842.4	7,699.2	15.2	25.4	-22.69	-3,608.3	1,542.7	4,147.0	4,114.9	32.06	129.359		
7,700.0	7,611.3	7,884.0	7,740.8	15.0	25.4	-25.63	-3,607.5	1,541.8	4,110.3	4,079.2	31.04	132.420		
7,750.0	7,641.1	7,912.7	7,769.5	14.9	25.4	-29.21	-3,606.9	1,541.2	4,071.0	4,040.9	30.17	134.930		
7,800.0	7,667.4	7,935.8	7,792.6	14.8	25.5	-33.72	-3,606.4	1,540.8	4,029.7	4,000.1	29.58	136.231		
7,850.0	7,689.8	7,955.5	7,812.3	14.7	25.5	-39.51	-3,606.0	1,540.4	3,986.5	3,957.1	29.40	135.597		
7,900.0	7,708.2	7,971.5	7,828.3	14.7	25.5	-47.02	-3,605.7	1,540.1	3,941.9	3,912.1	29.74	132.561		
7,950.0	7,722.6	7,987.0	7,843.8	14.7	25.5	-56.77	-3,605.4	1,539.8	3,896.0	3,865.5	30.59	127.366		
8,000.0	7,732.7	7,992.2	7,849.0	14.7	25.5	-68.63	-3,605.3	1,539.8	3,849.4	3,817.8	31.61	121.774		
8,050.0	7,738.5	7,996.8	7,853.5	14.8	25.5	-82.35	-3,605.2	1,539.7	3,802.4	3,770.1	32.29	117.747		
8,091.8	7,740.0	7,997.4	7,854.2	15.0	25.5	-94.11	-3,605.2	1,539.7	3,763.1	3,730.8	32.25	116.690		
8,100.0	7,740.0	7,997.3	7,854.0	15.0	25.5	-94.10	-3,605.2	1,539.7	3,755.3	3,723.0	32.28	116.340		
8,200.0	7,740.0	7,995.4	7,852.2	15.4	25.5	-94.02	-3,605.3	1,539.7	3,661.4	3,628.6	32.76	111.776		
8,300.0	7,740.0	7,993.5	7,850.3	16.1	25.5	-93.93	-3,605.3	1,539.7	3,567.8	3,534.4	33.42	106.754		
8,400.0	7,740.0	7,991.7	7,848.5	16.9	25.5	-93.85	-3,605.3	1,539.8	3,474.5	3,440.3	34.25	101.452		
8,500.0	7,740.0	7,989.8	7,846.6	17.8	25.5	-93.77	-3,605.4	1,539.8	3,381.7	3,346.5	35.22	96.028		
8,600.0	7,740.0	7,987.0	7,843.8	18.8	25.5	-93.64	-3,605.4	1,539.8	3,289.2	3,252.9	36.30	90.610		
8,700.0	7,740.0	7,987.0	7,843.8	20.0	25.5	-93.64	-3,605.4	1,539.8	3,197.3	3,159.8	37.48	85.299		

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 2C-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 2C-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 #2	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		
8,800.0	7,740.0	7,987.0	7,843.8	21.2	25.5	-93.64	-3,605.4	1,539.8	3,105.8	3,067.0	38.75	80.158			
8,900.0	7,740.0	7,982.4	7,839.2	22.5	25.5	-93.44	-3,605.5	1,539.9	3,014.8	2,974.7	40.08	75.222			
9,000.0	7,740.0	7,980.6	7,837.4	23.9	25.5	-93.35	-3,605.5	1,540.0	2,924.5	2,883.0	41.47	70.527			
9,100.0	7,740.0	7,978.8	7,835.6	25.3	25.5	-93.27	-3,605.6	1,540.0	2,834.7	2,791.8	42.90	66.079			
9,200.0	7,740.0	7,976.9	7,833.7	26.7	25.5	-93.19	-3,605.6	1,540.0	2,745.7	2,701.4	44.37	61.880			
9,300.0	7,740.0	7,975.1	7,831.9	28.2	25.5	-93.10	-3,605.7	1,540.1	2,657.5	2,611.6	45.88	57.927			
9,400.0	7,740.0	7,973.3	7,830.0	29.7	25.5	-93.02	-3,605.7	1,540.1	2,570.1	2,522.7	47.41	54.211			
9,500.0	7,740.0	7,971.4	7,828.2	31.3	25.5	-92.94	-3,605.7	1,540.1	2,483.7	2,434.7	48.97	50.723			
9,600.0	7,740.0	7,969.6	7,826.3	32.8	25.5	-92.86	-3,605.8	1,540.2	2,398.4	2,347.8	50.54	47.452			
9,700.0	7,740.0	7,967.7	7,824.5	34.4	25.5	-92.77	-3,605.8	1,540.2	2,314.2	2,262.0	52.14	44.386			
9,800.0	7,740.0	7,965.8	7,822.6	36.0	25.5	-92.69	-3,605.8	1,540.2	2,231.3	2,177.5	53.75	41.515			
9,900.0	7,740.0	7,964.0	7,820.8	37.6	25.5	-92.60	-3,605.9	1,540.3	2,149.8	2,094.5	55.37	38.828			
10,000.0	7,740.0	7,962.1	7,818.9	39.2	25.5	-92.52	-3,605.9	1,540.3	2,070.0	2,013.0	57.00	36.315			
10,100.0	7,740.0	7,960.2	7,817.0	40.9	25.5	-92.44	-3,606.0	1,540.3	1,992.1	1,933.4	58.65	33.968			
10,200.0	7,740.0	7,958.4	7,815.1	42.5	25.5	-92.35	-3,606.0	1,540.4	1,916.1	1,855.8	60.30	31.777			
10,300.0	7,740.0	7,956.5	7,813.3	44.1	25.5	-92.27	-3,606.0	1,540.4	1,842.5	1,780.5	61.96	29.737			
10,400.0	7,740.0	7,954.6	7,811.4	45.8	25.5	-92.18	-3,606.1	1,540.4	1,771.4	1,707.8	63.63	27.840			
10,500.0	7,740.0	7,952.7	7,809.5	47.5	25.5	-92.10	-3,606.1	1,540.5	1,703.3	1,638.0	65.30	26.083			
10,600.0	7,740.0	7,950.8	7,807.6	49.1	25.5	-92.01	-3,606.1	1,540.5	1,638.4	1,571.4	66.98	24.460			
10,700.0	7,740.0	7,948.9	7,805.7	50.8	25.5	-91.93	-3,606.2	1,540.5	1,577.2	1,508.5	68.67	22.968			
10,800.0	7,740.0	7,947.0	7,803.8	52.5	25.5	-91.84	-3,606.2	1,540.6	1,520.1	1,449.7	70.36	21.605			
10,900.0	7,740.0	7,945.1	7,801.9	54.2	25.5	-91.75	-3,606.3	1,540.6	1,467.6	1,395.5	72.05	20.369			
11,000.0	7,740.0	7,943.2	7,800.0	55.9	25.5	-91.67	-3,606.3	1,540.6	1,420.2	1,346.5	73.75	19.257			
11,100.0	7,740.0	7,941.3	7,798.1	57.6	25.5	-91.58	-3,606.3	1,540.7	1,378.5	1,303.0	75.45	18.270			
11,200.0	7,740.0	7,939.4	7,796.2	59.3	25.5	-91.50	-3,606.4	1,540.7	1,342.9	1,265.7	77.15	17.405			
11,300.0	7,740.0	7,937.5	7,794.3	61.0	25.5	-91.41	-3,606.4	1,540.7	1,313.9	1,235.1	78.86	16.661			
11,400.0	7,740.0	7,935.5	7,792.3	62.7	25.5	-91.32	-3,606.5	1,540.8	1,292.1	1,211.5	80.57	16.037			
11,500.0	7,740.0	7,933.6	7,790.4	64.4	25.5	-91.24	-3,606.5	1,540.8	1,277.8	1,195.5	82.28	15.529			
11,600.0	7,740.0	7,931.7	7,788.5	66.1	25.5	-91.15	-3,606.5	1,540.9	1,271.1	1,187.1	84.00	15.133			
11,634.5	7,740.0	7,931.0	7,787.8	66.7	25.5	-91.12	-3,606.5	1,540.9	1,270.7	1,186.1	84.59	15.022 CC, ES			
11,700.0	7,740.0	7,929.8	7,786.6	67.8	25.5	-91.06	-3,606.6	1,540.9	1,272.4	1,186.6	85.71	14.844			
11,800.0	7,740.0	7,927.8	7,784.6	69.5	25.5	-90.97	-3,606.6	1,540.9	1,281.4	1,194.0	87.43	14.656			
11,900.0	7,740.0	7,925.9	7,782.7	71.2	25.5	-90.89	-3,606.6	1,541.0	1,298.1	1,208.9	89.15	14.561			
12,000.0	7,740.0	7,923.9	7,780.7	72.9	25.5	-90.80	-3,606.7	1,541.0	1,322.2	1,231.3	90.87	14.550 SF			
12,100.0	7,740.0	7,922.0	7,778.8	74.7	25.5	-90.71	-3,606.7	1,541.0	1,353.2	1,260.6	92.59	14.615			
12,200.0	7,740.0	7,920.0	7,776.8	76.4	25.5	-90.62	-3,606.8	1,541.1	1,390.8	1,296.5	94.32	14.746			
12,300.0	7,740.0	7,918.1	7,774.9	78.1	25.4	-90.53	-3,606.8	1,541.1	1,434.3	1,338.3	96.04	14.934			
12,400.0	7,740.0	7,916.1	7,772.9	79.8	25.4	-90.45	-3,606.8	1,541.2	1,483.4	1,385.6	97.77	15.172			
12,500.0	7,740.0	7,914.1	7,770.9	81.6	25.4	-90.36	-3,606.9	1,541.2	1,537.3	1,437.8	99.50	15.451			
12,600.0	7,740.0	7,912.2	7,769.0	83.3	25.4	-90.27	-3,606.9	1,541.2	1,595.8	1,494.5	101.22	15.765			
12,700.0	7,740.0	7,910.2	7,767.0	85.0	25.4	-90.18	-3,607.0	1,541.3	1,658.2	1,555.2	102.95	16.106			
12,800.0	7,740.0	7,908.2	7,765.0	86.7	25.4	-90.09	-3,607.0	1,541.3	1,724.1	1,619.4	104.68	16.470			
12,900.0	7,740.0	7,906.2	7,763.0	88.5	25.4	-90.00	-3,607.1	1,541.4	1,793.2	1,686.8	106.41	16.851			
13,000.0	7,740.0	7,904.2	7,761.1	90.2	25.4	-89.91	-3,607.1	1,541.4	1,865.1	1,756.9	108.14	17.246			
13,100.0	7,740.0	7,902.3	7,759.1	91.9	25.4	-89.82	-3,607.1	1,541.5	1,939.5	1,829.6	109.88	17.651			
13,200.0	7,740.0	7,900.3	7,757.1	93.7	25.4	-89.73	-3,607.2	1,541.5	2,016.0	1,904.4	111.61	18.064			
13,300.0	7,740.0	7,898.3	7,755.1	95.4	25.4	-89.64	-3,607.2	1,541.5	2,094.6	1,981.3	113.34	18.481			
13,400.0	7,740.0	7,896.3	7,753.1	97.1	25.4	-89.55	-3,607.3	1,541.6	2,174.9	2,059.9	115.07	18.901			
13,500.0	7,740.0	7,894.2	7,751.1	98.9	25.4	-89.46	-3,607.3	1,541.6	2,256.8	2,140.0	116.81	19.321			
13,600.0	7,740.0	7,892.0	7,748.8	100.6	25.4	-89.36	-3,607.3	1,541.7	2,340.1	2,221.6	118.54	19.742			
13,700.0	7,740.0	7,892.0	7,748.8	102.3	25.4	-89.36	-3,607.3	1,541.7	2,424.7	2,304.4	120.28	20.159			
13,800.0	7,740.0	7,892.0	7,748.8	104.1	25.4	-89.36	-3,607.3	1,541.7	2,510.4	2,388.4	122.01	20.575			

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 2C-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 2C-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 #2	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		
13,900.0	7,740.0	7,886.7	7,743.5	105.8	25.4	-89.12	-3,607.5	1,541.8	2,597.1	2,473.4	123.74	20.988		
14,000.0	7,740.0	7,884.8	7,741.7	107.5	25.4	-89.04	-3,607.5	1,541.8	2,684.8	2,559.3	125.48	21.397		
14,100.0	7,740.0	7,883.0	7,739.9	109.3	25.4	-88.96	-3,607.5	1,541.9	2,773.3	2,646.0	127.21	21.800		
14,200.0	7,740.0	7,881.3	7,738.1	111.0	25.4	-88.88	-3,607.6	1,541.9	2,862.5	2,733.5	128.95	22.199		
14,300.0	7,740.0	7,879.5	7,736.3	112.8	25.4	-88.80	-3,607.6	1,541.9	2,952.4	2,821.7	130.68	22.592		
14,400.0	7,740.0	7,877.8	7,734.6	114.5	25.4	-88.72	-3,607.6	1,542.0	3,043.0	2,910.5	132.42	22.980		
14,500.0	7,740.0	7,876.0	7,732.8	116.2	25.4	-88.64	-3,607.7	1,542.0	3,134.1	2,999.9	134.15	23.362		
14,600.0	7,740.0	7,874.3	7,731.1	118.0	25.4	-88.56	-3,607.7	1,542.0	3,225.7	3,089.8	135.89	23.738		
14,700.0	7,740.0	7,872.6	7,729.4	119.7	25.4	-88.49	-3,607.7	1,542.1	3,317.9	3,180.2	137.62	24.108		
14,800.0	7,740.0	7,870.9	7,727.8	121.5	25.4	-88.41	-3,607.8	1,542.1	3,410.4	3,271.1	139.36	24.472		
14,900.0	7,740.0	7,869.3	7,726.1	123.2	25.4	-88.34	-3,607.8	1,542.1	3,503.4	3,362.3	141.10	24.830		
15,000.0	7,740.0	7,867.6	7,724.4	124.9	25.4	-88.26	-3,607.8	1,542.2	3,596.8	3,453.9	142.83	25.182		
15,100.0	7,740.0	7,866.0	7,722.8	126.7	25.4	-88.19	-3,607.9	1,542.2	3,690.5	3,545.9	144.57	25.528		
15,200.0	7,740.0	7,864.4	7,721.2	128.4	25.4	-88.12	-3,607.9	1,542.2	3,784.5	3,638.2	146.30	25.868		
15,300.0	7,740.0	7,862.8	7,719.6	130.2	25.4	-88.04	-3,607.9	1,542.3	3,878.8	3,730.8	148.04	26.201		
15,400.0	7,740.0	7,861.2	7,718.0	131.9	25.4	-87.97	-3,608.0	1,542.3	3,973.4	3,823.7	149.77	26.529		
15,500.0	7,740.0	7,859.6	7,716.4	133.7	25.4	-87.90	-3,608.0	1,542.3	4,068.3	3,916.8	151.51	26.852		
15,600.0	7,740.0	7,858.0	7,714.9	135.4	25.4	-87.83	-3,608.0	1,542.4	4,163.4	4,010.1	153.25	27.168		
15,700.0	7,740.0	7,856.5	7,713.3	137.1	25.4	-87.76	-3,608.0	1,542.4	4,258.7	4,103.7	154.98	27.479		
15,800.0	7,740.0	7,855.0	7,711.8	138.9	25.4	-87.69	-3,608.1	1,542.4	4,354.2	4,197.5	156.72	27.784		
15,900.0	7,740.0	7,853.4	7,710.3	140.6	25.4	-87.63	-3,608.1	1,542.5	4,450.0	4,291.5	158.45	28.084		
15,952.8	7,740.0	7,852.6	7,709.5	141.6	25.4	-87.59	-3,608.1	1,542.5	4,500.5	4,341.2	159.37	28.240		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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		
0.0	0.0	23.0	23.0	0.0	0.0	172.84	-4,267.5	536.3	4,301.1					
100.0	100.0	123.0	123.0	0.2	0.2	172.84	-4,267.5	536.3	4,301.1	4,300.8	0.34	N/A		
200.0	200.0	223.0	223.0	0.3	0.4	172.84	-4,267.5	536.3	4,301.1	4,300.4	0.69	6,238.697		
300.0	300.0	323.0	323.0	0.5	0.5	172.84	-4,267.5	536.3	4,301.1	4,300.1	1.04	4,141.692		
400.0	400.0	423.0	423.0	0.7	0.7	172.84	-4,267.5	536.3	4,301.1	4,299.7	1.39	3,099.770		
500.0	500.0	523.0	523.0	0.9	0.9	146.89	-4,267.5	536.3	4,301.8	4,300.1	1.74	2,477.075		
600.0	600.0	623.0	623.0	1.0	1.1	146.90	-4,267.5	536.3	4,304.0	4,301.9	2.09	2,062.983		
700.0	699.9	722.9	722.9	1.2	1.2	146.91	-4,267.5	536.3	4,307.7	4,305.2	2.44	1,767.347		
800.0	799.7	822.7	822.7	1.4	1.4	146.92	-4,267.5	536.3	4,312.8	4,310.0	2.79	1,545.379		
898.2	897.5	920.5	920.5	1.6	1.6	146.95	-4,267.5	536.3	4,319.2	4,316.1	3.14	1,375.191		
900.0	899.4	922.4	922.4	1.6	1.6	146.95	-4,267.5	536.3	4,319.4	4,316.2	3.15	1,372.347		
1,000.0	999.0	1,022.0	1,022.0	1.8	1.8	147.01	-4,267.5	536.3	4,326.7	4,323.2	3.51	1,233.583		
1,100.0	1,098.6	1,121.6	1,121.6	2.0	1.9	147.07	-4,267.5	536.3	4,334.0	4,330.1	3.87	1,120.295		
1,200.0	1,198.2	1,262.7	1,262.7	2.3	2.2	147.15	-4,267.2	536.9	4,341.2	4,336.9	4.30	1,008.829		
1,300.0	1,297.9	1,557.5	1,556.5	2.5	2.7	147.08	-4,255.5	555.1	4,345.3	4,340.2	5.05	861.058		
1,400.0	1,397.5	1,840.0	1,834.7	2.7	3.5	146.67	-4,229.1	596.3	4,344.9	4,339.0	5.95	730.495		
1,500.0	1,497.1	1,938.8	1,931.1	2.9	3.8	146.47	-4,217.4	614.6	4,342.7	4,336.2	6.44	674.052		
1,600.0	1,596.7	2,037.6	2,027.5	3.2	4.2	146.27	-4,205.6	632.8	4,340.5	4,333.5	6.95	624.329		
1,700.0	1,696.3	2,136.5	2,123.9	3.4	4.5	146.08	-4,193.9	651.1	4,338.3	4,330.8	7.48	580.361		
1,800.0	1,796.0	2,235.3	2,220.3	3.6	4.9	145.88	-4,182.2	669.4	4,336.2	4,328.2	8.01	541.412		
1,900.0	1,895.6	2,334.1	2,316.7	3.8	5.3	145.68	-4,170.4	687.7	4,334.2	4,325.6	8.55	506.801		
2,000.0	1,995.2	2,432.9	2,413.1	4.1	5.6	145.48	-4,158.7	706.0	4,332.2	4,323.1	9.10	475.931		
2,100.0	2,094.8	2,531.7	2,509.5	4.3	6.0	145.28	-4,147.0	724.3	4,330.2	4,320.6	9.66	448.289		
2,200.0	2,194.5	2,630.5	2,605.9	4.5	6.4	145.08	-4,135.2	742.6	4,328.3	4,318.1	10.22	423.435		
2,300.0	2,294.1	2,729.3	2,702.3	4.8	6.8	144.88	-4,123.5	760.9	4,326.5	4,315.7	10.79	400.999		
2,400.0	2,393.7	2,828.1	2,798.6	5.0	7.2	144.68	-4,111.7	779.2	4,324.7	4,313.4	11.36	380.665		
2,500.0	2,493.3	2,927.0	2,895.0	5.2	7.6	144.48	-4,100.0	797.5	4,323.0	4,311.1	11.94	362.167		
2,600.0	2,592.9	3,025.8	2,991.4	5.4	8.0	144.28	-4,088.3	815.7	4,321.3	4,308.8	12.52	345.280		
2,700.0	2,692.6	3,124.6	3,087.8	5.7	8.4	144.08	-4,076.5	834.0	4,319.7	4,306.6	13.10	329.810		
2,800.0	2,792.2	3,223.4	3,184.2	5.9	8.8	143.88	-4,064.8	852.3	4,318.1	4,304.5	13.68	315.594		
2,900.0	2,891.8	3,322.2	3,280.6	6.1	9.2	143.68	-4,053.1	870.6	4,316.6	4,302.4	14.27	302.491		
3,000.0	2,991.4	3,421.0	3,377.0	6.4	9.7	143.48	-4,041.3	888.9	4,315.2	4,300.3	14.86	290.379		
3,100.0	3,091.1	3,519.8	3,473.4	6.6	10.1	143.28	-4,029.6	907.2	4,313.8	4,298.3	15.45	279.154		
3,200.0	3,190.7	3,618.7	3,569.8	6.8	10.5	143.08	-4,017.9	925.5	4,312.4	4,296.4	16.05	268.724		
3,300.0	3,290.3	3,717.5	3,666.2	7.0	10.9	142.88	-4,006.1	943.8	4,311.1	4,294.5	16.64	259.010		
3,400.0	3,389.9	3,816.3	3,762.6	7.3	11.3	142.68	-3,994.4	962.1	4,309.9	4,292.6	17.24	249.943		
3,500.0	3,489.5	3,915.1	3,859.0	7.5	11.7	142.48	-3,982.7	980.4	4,308.7	4,290.9	17.84	241.462		
3,600.0	3,589.2	4,013.9	3,955.4	7.7	12.1	142.27	-3,970.9	998.6	4,307.6	4,289.1	18.45	233.513		
3,700.0	3,688.8	4,112.7	4,051.8	8.0	12.5	142.07	-3,959.2	1,016.9	4,306.5	4,287.4	19.05	226.049		
3,800.0	3,788.4	4,211.5	4,148.2	8.2	13.0	141.87	-3,947.5	1,035.2	4,305.5	4,285.8	19.66	219.028		
3,900.0	3,888.0	4,310.4	4,244.6	8.4	13.4	141.67	-3,935.7	1,053.5	4,304.5	4,284.2	20.26	212.412		
4,000.0	3,987.7	4,409.2	4,341.0	8.7	13.8	141.47	-3,924.0	1,071.8	4,303.6	4,282.7	20.87	206.169		
4,100.0	4,087.3	4,508.0	4,437.4	8.9	14.2	141.27	-3,912.3	1,090.1	4,302.7	4,281.2	21.48	200.268		
4,200.0	4,186.9	4,606.8	4,533.8	9.1	14.6	141.07	-3,900.5	1,108.4	4,301.9	4,279.8	22.10	194.683		
4,300.0	4,286.5	4,705.6	4,630.2	9.4	15.0	140.86	-3,888.8	1,126.7	4,301.2	4,278.5	22.71	189.389		
4,400.0	4,386.1	4,804.4	4,726.5	9.6	15.5	140.66	-3,877.1	1,145.0	4,300.5	4,277.2	23.33	184.365		
4,500.0	4,485.8	4,903.2	4,822.9	9.8	15.9	140.46	-3,865.3	1,163.3	4,299.8	4,275.9	23.94	179.591		
4,600.0	4,585.4	5,002.1	4,919.3	10.0	16.3	140.26	-3,853.6	1,181.5	4,299.3	4,274.7	24.56	175.049		
4,700.0	4,685.0	5,100.9	5,015.7	10.3	16.7	140.06	-3,841.9	1,199.8	4,298.7	4,273.6	25.18	170.724		
4,800.0	4,784.6	5,199.7	5,112.1	10.5	17.1	139.85	-3,830.1	1,218.1	4,298.3	4,272.5	25.80	166.600		
4,900.0	4,884.3	5,298.5	5,208.5	10.7	17.6	139.65	-3,818.4	1,236.4	4,297.8	4,271.4	26.42	162.664		
5,000.0	4,983.9	5,397.3	5,304.9	11.0	18.0	139.45	-3,806.7	1,254.7	4,297.5	4,270.4	27.04	158.904		

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 2C-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 2C-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 #2	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: 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
5,100.0	5,083.5	5,496.1	5,401.3	11.2	18.4	139.25	-3,794.9	1,273.0	4,297.2	4,269.5	27.67	155.309	
5,200.0	5,183.1	5,594.9	5,497.7	11.4	18.8	139.04	-3,783.2	1,291.3	4,296.9	4,268.6	28.29	151.867	
5,300.0	5,282.7	5,693.8	5,594.1	11.7	19.2	138.84	-3,771.5	1,309.6	4,296.7	4,267.8	28.92	148.571	
5,400.0	5,382.4	5,792.6	5,690.5	11.9	19.7	138.64	-3,759.7	1,327.9	4,296.6	4,267.0	29.55	145.411	
5,500.0	5,482.0	5,891.4	5,786.9	12.1	20.1	138.44	-3,748.0	1,346.2	4,296.5	4,266.3	30.18	142.378	
5,600.0	5,581.6	5,990.2	5,883.3	12.4	20.5	138.23	-3,736.3	1,364.4	4,296.4	4,265.6	30.81	139.467	
5,616.6	5,598.2	6,006.6	5,899.3	12.4	20.6	138.20	-3,734.3	1,367.5	4,296.4	4,265.5	30.91	138.994	
5,700.0	5,681.2	6,089.0	5,979.7	12.6	20.9	138.03	-3,724.5	1,382.7	4,296.4	4,265.0	31.44	136.669	
5,800.0	5,780.9	6,187.8	6,076.1	12.8	21.3	137.83	-3,712.8	1,401.0	4,296.5	4,264.5	32.07	133.978	
5,900.0	5,880.5	6,286.6	6,172.5	13.0	21.8	137.63	-3,701.1	1,419.3	4,296.6	4,263.9	32.70	131.389	
6,000.0	5,980.1	6,385.5	6,268.9	13.3	22.2	137.43	-3,689.3	1,437.6	4,296.8	4,263.5	33.34	128.897	
6,100.0	6,079.7	6,484.3	6,365.3	13.5	22.6	137.22	-3,677.6	1,455.9	4,297.1	4,263.1	33.97	126.495	
6,200.0	6,179.3	6,583.1	6,461.7	13.7	23.0	137.02	-3,665.9	1,474.2	4,297.4	4,262.8	34.61	124.179	
6,300.0	6,279.0	6,681.9	6,558.1	14.0	23.4	136.82	-3,654.1	1,492.5	4,297.7	4,262.5	35.24	121.945	
6,400.0	6,378.6	6,754.4	6,629.0	14.2	23.7	136.68	-3,645.9	1,505.3	4,298.4	4,262.7	35.73	120.296	
6,500.0	6,478.2	6,825.4	6,698.7	14.4	24.0	136.57	-3,638.8	1,516.4	4,299.8	4,263.6	36.19	118.814	
6,600.0	6,577.8	6,900.0	6,772.4	14.7	24.2	136.47	-3,632.3	1,526.4	4,301.8	4,265.2	36.63	117.433	
6,700.0	6,677.5	6,968.2	6,839.9	14.9	24.4	136.41	-3,627.3	1,534.2	4,304.6	4,267.5	37.02	116.286	
6,800.0	6,777.1	7,039.9	6,911.2	15.1	24.5	136.36	-3,623.0	1,541.0	4,307.9	4,270.6	37.39	115.224	
6,900.0	6,876.7	7,100.0	6,971.0	15.4	24.6	136.34	-3,620.1	1,545.4	4,312.0	4,274.3	37.72	114.330	
7,000.0	6,976.3	7,183.5	7,054.4	15.6	24.8	136.34	-3,617.3	1,549.9	4,316.7	4,278.6	38.05	113.459	
7,100.0	7,075.9	7,255.2	7,126.0	15.8	24.9	136.36	-3,615.9	1,552.1	4,322.0	4,283.7	38.33	112.763	
7,147.0	7,122.8	7,300.0	7,170.8	15.9	24.9	136.39	-3,615.5	1,552.7	4,324.8	4,286.3	38.47	112.431	
7,150.0	7,125.8	7,300.0	7,170.8	15.9	24.9	134.79	-3,615.5	1,552.7	4,324.9	4,286.5	38.48	112.406	
7,200.0	7,175.7	7,327.9	7,198.7	16.0	24.9	51.82	-3,615.4	1,552.8	4,325.7	4,287.1	38.55	112.213	
7,250.0	7,225.5	7,377.8	7,248.6	16.0	25.0	2.98	-3,615.4	1,552.8	4,322.3	4,283.9	38.44	112.439	
7,300.0	7,275.0	7,427.2	7,298.0	16.0	25.0	-6.38	-3,615.4	1,552.8	4,314.9	4,276.7	38.14	113.131	
7,350.0	7,323.6	7,475.8	7,346.6	16.0	25.1	-10.29	-3,615.4	1,552.8	4,303.3	4,265.7	37.65	114.289	
7,400.0	7,371.0	7,523.2	7,394.0	15.9	25.1	-12.69	-3,615.4	1,552.8	4,287.8	4,250.8	36.99	115.913	
7,450.0	7,416.9	7,569.1	7,439.9	15.8	25.1	-14.56	-3,615.4	1,552.8	4,268.4	4,232.2	36.17	118.001	
7,500.0	7,460.8	7,613.0	7,483.8	15.6	25.2	-16.29	-3,615.4	1,552.8	4,245.3	4,210.1	35.22	120.539	
7,550.0	7,502.6	7,654.8	7,525.6	15.5	25.2	-18.06	-3,615.4	1,552.8	4,218.7	4,184.5	34.16	123.490	
7,600.0	7,541.7	7,694.0	7,564.8	15.3	25.3	-20.03	-3,615.4	1,552.8	4,188.7	4,155.7	33.04	126.776	
7,650.0	7,578.1	7,730.3	7,601.1	15.2	25.3	-22.30	-3,615.4	1,552.8	4,155.7	4,123.8	31.91	130.242	
7,700.0	7,611.3	7,763.5	7,634.3	15.0	25.3	-25.04	-3,615.4	1,552.8	4,119.8	4,089.0	30.83	133.624	
7,750.0	7,641.1	7,793.3	7,664.1	14.9	25.4	-28.40	-3,615.4	1,552.8	4,081.4	4,051.5	29.90	136.494	
7,800.0	7,667.4	7,819.6	7,690.4	14.8	25.4	-32.63	-3,615.4	1,552.8	4,040.7	4,011.5	29.23	138.233	
7,850.0	7,689.8	7,842.0	7,712.8	14.7	25.4	-38.04	-3,615.4	1,552.8	3,998.1	3,969.2	28.95	138.108	
7,900.0	7,708.2	7,860.4	7,731.2	14.7	25.4	-45.02	-3,615.4	1,552.8	3,953.9	3,924.8	29.17	135.543	
7,950.0	7,722.6	7,874.8	7,745.6	14.7	25.4	-53.99	-3,615.4	1,552.8	3,908.5	3,878.6	29.92	130.639	
8,000.0	7,732.7	7,884.9	7,755.7	14.7	25.4	-65.22	-3,615.4	1,552.8	3,862.2	3,831.2	30.99	124.641	
8,050.0	7,738.5	7,890.7	7,761.5	14.8	25.4	-78.37	-3,615.4	1,552.8	3,815.3	3,783.4	31.88	119.684	
8,091.8	7,740.0	7,892.2	7,763.0	15.0	25.4	-90.00	-3,615.4	1,552.8	3,776.0	3,743.9	32.10	117.621	
8,100.0	7,740.0	7,892.2	7,763.0	15.0	25.4	-90.00	-3,615.4	1,552.8	3,768.3	3,736.1	32.13	117.270	
8,200.0	7,740.0	7,892.2	7,763.0	15.4	25.4	-90.00	-3,615.4	1,552.8	3,674.4	3,641.8	32.61	112.677	
8,300.0	7,740.0	7,892.2	7,763.0	16.1	25.4	-90.00	-3,615.4	1,552.8	3,580.8	3,547.6	33.27	107.619	
8,400.0	7,740.0	7,892.2	7,763.0	16.9	25.4	-90.00	-3,615.4	1,552.8	3,487.7	3,453.6	34.10	102.276	
8,500.0	7,740.0	7,892.2	7,763.0	17.8	25.4	-90.00	-3,615.4	1,552.8	3,394.9	3,359.8	35.07	96.809	
8,600.0	7,740.0	7,892.2	7,763.0	18.8	25.4	-90.00	-3,615.4	1,552.8	3,302.5	3,266.3	36.15	91.348	
8,700.0	7,740.0	7,892.2	7,763.0	20.0	25.4	-90.00	-3,615.4	1,552.8	3,210.6	3,173.2	37.34	85.991	
8,800.0	7,740.0	7,892.2	7,763.0	21.2	25.4	-90.00	-3,615.4	1,552.8	3,119.2	3,080.6	38.60	80.806	
8,900.0	7,740.0	7,892.2	7,763.0	22.5	25.4	-90.00	-3,615.4	1,552.8	3,028.3	2,988.3	39.93	75.835	

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 2C-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 2C-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 #2	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
9,000.0	7,740.0	7,892.2	7,763.0	23.9	25.4	-90.00	-3,615.4	1,552.8	2,938.0	2,896.7	41.32	71.104	
9,100.0	7,740.0	7,892.2	7,763.0	25.3	25.4	-90.00	-3,615.4	1,552.8	2,848.4	2,805.6	42.75	66.622	
9,200.0	7,740.0	7,892.2	7,763.0	26.7	25.4	-90.00	-3,615.4	1,552.8	2,759.4	2,715.2	44.23	62.393	
9,300.0	7,740.0	7,892.2	7,763.0	28.2	25.4	-90.00	-3,615.4	1,552.8	2,671.3	2,625.6	45.73	58.412	
9,400.0	7,740.0	7,892.2	7,763.0	29.7	25.4	-90.00	-3,615.4	1,552.8	2,584.0	2,536.7	47.27	54.671	
9,500.0	7,740.0	7,892.2	7,763.0	31.3	25.4	-90.00	-3,615.4	1,552.8	2,497.7	2,448.9	48.82	51.159	
9,600.0	7,740.0	7,892.2	7,763.0	32.8	25.4	-90.00	-3,615.4	1,552.8	2,412.4	2,362.0	50.40	47.867	
9,700.0	7,740.0	7,892.2	7,763.0	34.4	25.4	-90.00	-3,615.4	1,552.8	2,328.3	2,276.3	51.99	44.782	
9,800.0	7,740.0	7,892.2	7,763.0	36.0	25.4	-90.00	-3,615.4	1,552.8	2,245.5	2,191.9	53.60	41.893	
9,900.0	7,740.0	7,892.2	7,763.0	37.6	25.4	-90.00	-3,615.4	1,552.8	2,164.2	2,109.0	55.22	39.190	
10,000.0	7,740.0	7,892.2	7,763.0	39.2	25.4	-90.00	-3,615.4	1,552.8	2,084.5	2,027.6	56.86	36.662	
10,100.0	7,740.0	7,892.2	7,763.0	40.9	25.4	-90.00	-3,615.4	1,552.8	2,006.6	1,948.1	58.50	34.300	
10,200.0	7,740.0	7,892.2	7,763.0	42.5	25.4	-90.00	-3,615.4	1,552.8	1,930.7	1,870.6	60.15	32.097	
10,300.0	7,740.0	7,892.2	7,763.0	44.1	25.4	-90.00	-3,615.4	1,552.8	1,857.2	1,795.4	61.81	30.045	
10,400.0	7,740.0	7,892.2	7,763.0	45.8	25.4	-90.00	-3,615.4	1,552.8	1,786.2	1,722.7	63.48	28.137	
10,500.0	7,740.0	7,892.2	7,763.0	47.5	25.4	-90.00	-3,615.4	1,552.8	1,718.1	1,652.9	65.15	26.369	
10,600.0	7,740.0	7,892.2	7,763.0	49.1	25.4	-90.00	-3,615.4	1,552.8	1,653.2	1,586.4	66.83	24.736	
10,700.0	7,740.0	7,892.2	7,763.0	50.8	25.4	-90.00	-3,615.4	1,552.8	1,592.0	1,523.5	68.52	23.234	
10,800.0	7,740.0	7,892.2	7,763.0	52.5	25.4	-90.00	-3,615.4	1,552.8	1,534.8	1,464.6	70.21	21.861	
10,900.0	7,740.0	7,892.2	7,763.0	54.2	25.4	-90.00	-3,615.4	1,552.8	1,482.2	1,410.3	71.90	20.615	
11,000.0	7,740.0	7,892.2	7,763.0	55.9	25.4	-90.00	-3,615.4	1,552.8	1,434.7	1,361.1	73.60	19.494	
11,100.0	7,740.0	7,892.2	7,763.0	57.6	25.4	-90.00	-3,615.4	1,552.8	1,392.7	1,317.4	75.30	18.496	
11,200.0	7,740.0	7,892.2	7,763.0	59.3	25.4	-90.00	-3,615.4	1,552.8	1,356.9	1,279.9	77.00	17.621	
11,300.0	7,740.0	7,892.2	7,763.0	61.0	25.4	-90.00	-3,615.4	1,552.8	1,327.5	1,248.8	78.71	16.867	
11,400.0	7,740.0	7,892.2	7,763.0	62.7	25.4	-90.00	-3,615.4	1,552.8	1,305.3	1,224.8	80.42	16.231	
11,500.0	7,740.0	7,892.2	7,763.0	64.4	25.4	-90.00	-3,615.4	1,552.8	1,290.4	1,208.2	82.13	15.712	
11,600.0	7,740.0	7,892.2	7,763.0	66.1	25.4	-90.00	-3,615.4	1,552.8	1,283.1	1,199.3	83.84	15.304	
11,643.3	7,740.0	7,892.2	7,763.0	66.8	25.4	-90.00	-3,615.4	1,552.8	1,282.4	1,197.8	84.59	15.161 CC, ES	
11,700.0	7,740.0	7,892.2	7,763.0	67.8	25.4	-90.00	-3,615.4	1,552.8	1,283.6	1,198.1	85.56	15.003	
11,800.0	7,740.0	7,892.2	7,763.0	69.5	25.4	-90.00	-3,615.4	1,552.8	1,291.9	1,204.6	87.28	14.803	
11,900.0	7,740.0	7,892.2	7,763.0	71.2	25.4	-90.00	-3,615.4	1,552.8	1,307.8	1,218.8	88.99	14.695	
12,000.0	7,740.0	7,892.2	7,763.0	72.9	25.4	-90.00	-3,615.4	1,552.8	1,331.1	1,240.3	90.72	14.673 SF	
12,100.0	7,740.0	7,892.2	7,763.0	74.7	25.4	-90.00	-3,615.4	1,552.8	1,361.3	1,268.8	92.44	14.726	
12,200.0	7,740.0	7,892.2	7,763.0	76.4	25.4	-90.00	-3,615.4	1,552.8	1,398.0	1,303.8	94.16	14.847	
12,300.0	7,740.0	7,892.2	7,763.0	78.1	25.4	-90.00	-3,615.4	1,552.8	1,440.7	1,344.8	95.89	15.025	
12,400.0	7,740.0	7,892.2	7,763.0	79.8	25.4	-90.00	-3,615.4	1,552.8	1,489.0	1,391.4	97.61	15.254	
12,500.0	7,740.0	7,892.2	7,763.0	81.6	25.4	-90.00	-3,615.4	1,552.8	1,542.2	1,442.8	99.34	15.524	
12,600.0	7,740.0	7,892.2	7,763.0	83.3	25.4	-90.00	-3,615.4	1,552.8	1,599.9	1,498.8	101.07	15.829	
12,700.0	7,740.0	7,892.2	7,763.0	85.0	25.4	-90.00	-3,615.4	1,552.8	1,661.6	1,558.8	102.80	16.164	
12,800.0	7,740.0	7,892.2	7,763.0	86.7	25.4	-90.00	-3,615.4	1,552.8	1,726.9	1,622.4	104.53	16.521	
12,900.0	7,740.0	7,892.2	7,763.0	88.5	25.4	-90.00	-3,615.4	1,552.8	1,795.5	1,689.2	106.26	16.896	
13,000.0	7,740.0	7,892.2	7,763.0	90.2	25.4	-90.00	-3,615.4	1,552.8	1,866.8	1,758.8	108.00	17.286	
13,100.0	7,740.0	7,892.2	7,763.0	91.9	25.4	-90.00	-3,615.4	1,552.8	1,940.7	1,831.0	109.73	17.686	
13,200.0	7,740.0	7,892.2	7,763.0	93.7	25.4	-90.00	-3,615.4	1,552.8	2,016.8	1,905.4	111.46	18.094	
13,300.0	7,740.0	7,892.2	7,763.0	95.4	25.4	-90.00	-3,615.4	1,552.8	2,095.0	1,981.8	113.20	18.507	
13,400.0	7,740.0	7,892.2	7,763.0	97.1	25.4	-90.00	-3,615.4	1,552.8	2,174.9	2,060.0	114.93	18.923	
13,500.0	7,740.0	7,892.2	7,763.0	98.9	25.4	-90.00	-3,615.4	1,552.8	2,256.5	2,139.8	116.67	19.340	
13,600.0	7,740.0	7,892.2	7,763.0	100.6	25.4	-90.00	-3,615.4	1,552.8	2,339.4	2,221.0	118.41	19.757	
13,700.0	7,740.0	7,892.2	7,763.0	102.3	25.4	-90.00	-3,615.4	1,552.8	2,423.7	2,303.6	120.15	20.173	
13,800.0	7,740.0	7,892.2	7,763.0	104.1	25.4	-90.00	-3,615.4	1,552.8	2,509.1	2,387.2	121.88	20.586	
13,900.0	7,740.0	7,892.2	7,763.0	105.8	25.4	-90.00	-3,615.4	1,552.8	2,595.6	2,471.9	123.62	20.996	
14,000.0	7,740.0	7,892.2	7,763.0	107.5	25.4	-90.00	-3,615.4	1,552.8	2,683.0	2,557.6	125.36	21.402	

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 2C-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 2C-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 #2	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		
14,100.0	7,740.0	7,892.2	7,763.0	109.3	25.4	-90.00	-3,615.4	1,552.8	2,771.2	2,644.1	127.10	21.803		
14,200.0	7,740.0	7,892.2	7,763.0	111.0	25.4	-90.00	-3,615.4	1,552.8	2,860.2	2,731.4	128.84	22.200		
14,300.0	7,740.0	7,892.2	7,763.0	112.8	25.4	-90.00	-3,615.4	1,552.8	2,950.0	2,819.4	130.58	22.591		
14,400.0	7,740.0	7,892.2	7,763.0	114.5	25.4	-90.00	-3,615.4	1,552.8	3,040.3	2,908.0	132.32	22.977		
14,500.0	7,740.0	7,892.2	7,763.0	116.2	25.4	-90.00	-3,615.4	1,552.8	3,131.3	2,997.2	134.06	23.357		
14,600.0	7,740.0	7,892.2	7,763.0	118.0	25.4	-90.00	-3,615.4	1,552.8	3,222.8	3,087.0	135.81	23.731		
14,700.0	7,740.0	7,892.2	7,763.0	119.7	25.4	-90.00	-3,615.4	1,552.8	3,314.8	3,177.2	137.55	24.099		
14,800.0	7,740.0	7,892.2	7,763.0	121.5	25.4	-90.00	-3,615.4	1,552.8	3,407.2	3,267.9	139.29	24.461		
14,900.0	7,740.0	7,892.2	7,763.0	123.2	25.4	-90.00	-3,615.4	1,552.8	3,500.0	3,359.0	141.03	24.817		
15,000.0	7,740.0	7,892.2	7,763.0	124.9	25.4	-90.00	-3,615.4	1,552.8	3,593.3	3,450.5	142.78	25.167		
15,100.0	7,740.0	7,892.2	7,763.0	126.7	25.4	-90.00	-3,615.4	1,552.8	3,686.9	3,542.3	144.52	25.511		
15,200.0	7,740.0	7,892.2	7,763.0	128.4	25.4	-90.00	-3,615.4	1,552.8	3,780.8	3,634.5	146.26	25.849		
15,300.0	7,740.0	7,892.2	7,763.0	130.2	25.4	-90.00	-3,615.4	1,552.8	3,875.0	3,727.0	148.01	26.181		
15,400.0	7,740.0	7,892.2	7,763.0	131.9	25.4	-90.00	-3,615.4	1,552.8	3,969.5	3,819.7	149.75	26.507		
15,500.0	7,740.0	7,892.2	7,763.0	133.7	25.4	-90.00	-3,615.4	1,552.8	4,064.3	3,912.8	151.49	26.828		
15,600.0	7,740.0	7,892.2	7,763.0	135.4	25.4	-90.00	-3,615.4	1,552.8	4,159.3	4,006.0	153.24	27.142		
15,700.0	7,740.0	7,892.2	7,763.0	137.1	25.4	-90.00	-3,615.4	1,552.8	4,254.5	4,099.5	154.98	27.451		
15,800.0	7,740.0	7,892.2	7,763.0	138.9	25.4	-90.00	-3,615.4	1,552.8	4,350.0	4,193.2	156.73	27.755		
15,900.0	7,740.0	7,892.2	7,763.0	140.6	25.4	-90.00	-3,615.4	1,552.8	4,445.6	4,287.1	158.47	28.053		
15,952.8	7,740.0	7,892.2	7,763.0	141.6	25.4	-90.00	-3,615.4	1,552.8	4,496.2	4,336.8	159.40	28.208		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	172.43	-4,267.5	567.2	4,305.0							
100.0	100.0	118.0	118.0	0.2	0.2	172.43	-4,267.4	567.3	4,304.9	4,304.6	0.33	N/A				
200.0	200.0	178.0	178.0	0.3	0.3	172.42	-4,267.9	568.0	4,305.7	4,305.1	0.61	7,046.013				
300.0	300.0	207.7	207.7	0.5	0.3	172.41	-4,268.5	568.7	4,307.7	4,306.9	0.84	5,137.894				
400.0	400.0	270.0	269.9	0.7	0.5	172.39	-4,270.4	570.8	4,311.1	4,310.0	1.12	3,842.896				
500.0	500.0	298.4	298.2	0.9	0.5	146.40	-4,271.6	572.1	4,316.3	4,315.0	1.36	3,178.943				
600.0	600.0	362.0	361.6	1.0	0.7	146.32	-4,275.0	575.9	4,324.4	4,322.8	1.66	2,610.934				
700.0	699.9	362.0	361.6	1.2	0.7	146.26	-4,275.0	575.9	4,335.2	4,333.4	1.83	2,364.915				
800.0	799.7	425.4	424.7	1.4	0.8	146.16	-4,279.5	580.7	4,348.6	4,346.5	2.15	2,027.318				
898.2	897.5	454.0	453.1	1.6	0.9	146.05	-4,282.0	583.2	4,364.6	4,362.3	2.38	1,830.613				
900.0	899.4	454.0	453.1	1.6	0.9	146.05	-4,282.0	583.2	4,365.0	4,362.6	2.39	1,828.125				
1,000.0	999.0	510.4	509.0	1.8	1.1	146.03	-4,287.4	588.7	4,383.2	4,380.5	2.70	1,622.436				
1,100.0	1,098.6	546.0	544.1	2.0	1.2	146.01	-4,291.3	592.5	4,402.6	4,399.7	2.97	1,482.511				
1,200.0	1,198.2	597.2	594.6	2.3	1.4	145.97	-4,297.4	598.6	4,423.3	4,420.0	3.29	1,344.321				
1,300.0	1,297.9	642.0	638.6	2.5	1.5	145.93	-4,303.2	604.7	4,445.2	4,441.6	3.59	1,236.609				
1,400.0	1,397.5	695.6	691.1	2.7	1.7	145.87	-4,310.7	612.7	4,468.1	4,464.2	3.93	1,135.576				
1,500.0	1,497.1	826.4	818.9	2.9	2.2	145.73	-4,329.1	632.9	4,491.5	4,487.0	4.48	1,002.918				
1,600.0	1,596.7	897.8	889.0	3.2	2.5	145.66	-4,339.0	643.2	4,514.4	4,509.5	4.86	928.256				
1,700.0	1,696.3	940.0	930.2	3.4	2.7	145.61	-4,345.1	649.6	4,538.1	4,532.9	5.17	877.115				
1,800.0	1,796.0	1,004.0	992.6	3.6	3.0	145.54	-4,355.0	660.1	4,562.9	4,557.3	5.55	821.408				
1,900.0	1,895.6	1,042.2	1,029.7	3.8	3.2	145.49	-4,361.3	666.7	4,588.7	4,582.9	5.86	782.427				
2,000.0	1,995.2	1,108.0	1,093.4	4.1	3.5	145.40	-4,372.7	678.6	4,615.5	4,609.2	6.26	736.926				
2,100.0	2,094.8	1,192.0	1,174.5	4.3	3.9	145.28	-4,387.4	694.3	4,642.7	4,635.9	6.72	690.797				
2,200.0	2,194.5	1,355.8	1,333.1	4.5	4.6	145.05	-4,415.6	724.4	4,669.8	4,662.4	7.42	628.999				
2,300.0	2,294.1	1,466.0	1,440.0	4.8	5.1	144.90	-4,433.2	744.5	4,695.4	4,687.5	7.96	589.678				
2,400.0	2,393.7	1,550.3	1,521.8	5.0	5.5	144.79	-4,446.8	759.7	4,721.2	4,712.8	8.42	561.017				
2,500.0	2,493.3	1,625.5	1,594.8	5.2	5.9	144.70	-4,459.1	773.0	4,747.3	4,738.5	8.84	537.069				
2,600.0	2,592.9	1,707.9	1,674.6	5.4	6.3	144.60	-4,473.0	787.9	4,773.8	4,764.5	9.29	513.700				
2,700.0	2,692.6	1,788.6	1,752.7	5.7	6.6	144.49	-4,486.7	803.0	4,800.6	4,790.9	9.74	492.765				
2,800.0	2,792.2	1,925.0	1,884.6	5.9	7.3	144.30	-4,509.7	828.8	4,827.5	4,817.1	10.37	465.348				
2,900.0	2,891.8	2,003.9	1,961.0	6.1	7.7	144.20	-4,522.6	843.8	4,853.8	4,843.0	10.82	448.774				
3,000.0	2,991.4	2,107.0	2,060.9	6.4	8.2	144.06	-4,539.8	862.9	4,880.3	4,869.0	11.33	430.727				
3,100.0	3,091.1	2,171.2	2,123.0	6.6	8.5	143.98	-4,550.6	874.7	4,907.0	4,895.3	11.72	418.586				
3,200.0	3,190.7	2,310.8	2,258.2	6.8	9.1	143.82	-4,574.6	899.7	4,934.2	4,921.9	12.33	400.117				
3,300.0	3,290.3	2,403.0	2,347.8	7.0	9.5	143.71	-4,589.5	916.1	4,960.2	4,947.4	12.81	387.108				
3,400.0	3,389.9	2,475.0	2,417.5	7.3	9.9	143.62	-4,601.2	929.6	4,986.5	4,973.3	13.24	376.686				
3,500.0	3,489.5	2,573.7	2,513.0	7.5	10.4	143.50	-4,617.9	948.0	5,013.5	4,999.8	13.73	365.125				
3,600.0	3,589.2	2,689.0	2,624.9	7.7	10.9	143.38	-4,637.1	968.1	5,039.9	5,025.6	14.26	353.396				
3,700.0	3,688.8	2,784.0	2,717.2	8.0	11.3	143.28	-4,653.0	984.4	5,066.3	5,051.6	14.73	343.898				
3,800.0	3,788.4	2,880.0	2,810.3	8.2	11.8	143.18	-4,668.5	1,001.6	5,092.4	5,077.1	15.22	334.499				
3,900.0	3,888.0	2,948.2	2,876.5	8.4	12.1	143.10	-4,679.6	1,014.2	5,118.8	5,103.2	15.62	327.612				
4,000.0	3,987.7	3,000.5	2,927.1	8.7	12.4	143.04	-4,688.7	1,023.7	5,146.2	5,130.3	15.98	322.127				
4,100.0	4,087.3	3,071.0	2,995.1	8.9	12.7	142.96	-4,701.6	1,036.6	5,174.4	5,158.1	16.38	315.935				
4,200.0	4,186.9	3,175.2	3,095.9	9.1	13.2	142.85	-4,720.6	1,055.2	5,202.5	5,185.7	16.88	308.231				
4,300.0	4,286.5	3,319.3	3,235.2	9.4	13.9	142.70	-4,746.6	1,081.6	5,230.8	5,213.3	17.50	298.830				
4,400.0	4,386.1	3,483.0	3,393.6	9.6	14.7	142.51	-4,773.8	1,112.6	5,257.7	5,239.5	18.21	288.775				
8,000.0	7,732.7	7,875.6	7,739.8	14.7	25.6	-54.38	-5,100.5	1,466.0	5,265.7	5,236.6	29.09	181.026				
8,050.0	7,738.5	7,882.0	7,746.2	14.8	25.6	-71.95	-5,100.5	1,466.1	5,217.3	5,184.3	32.95	158.350				
8,091.8	7,740.0	7,883.7	7,747.8	15.0	25.6	-89.27	-5,100.5	1,466.1	5,176.7	5,142.4	34.25	151.139				
8,100.0	7,740.0	7,883.7	7,747.8	15.0	25.6	-89.27	-5,100.5	1,466.1	5,168.7	5,134.4	34.28	150.772				
8,200.0	7,740.0	7,883.7	7,747.9	15.4	25.6	-89.27	-5,100.5	1,466.1	5,071.4	5,036.7	34.76	145.908				
8,300.0	7,740.0	7,883.8	7,747.9	16.1	25.6	-89.28	-5,100.5	1,466.1	4,974.3	4,938.9	35.42	140.434				

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 2C-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 2C-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 #2	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		
8,400.0	7,740.0	7,883.8	7,748.0	16.9	25.6	-89.28	-5,100.5	1,466.1	4,877.3	4,841.0	36.25	134.554		
8,500.0	7,740.0	7,883.9	7,748.0	17.8	25.6	-89.28	-5,100.5	1,466.1	4,780.4	4,743.2	37.22	128.454		
8,600.0	7,740.0	7,883.9	7,748.1	18.8	25.6	-89.28	-5,100.5	1,466.1	4,683.7	4,645.4	38.30	122.289		
8,700.0	7,740.0	7,883.9	7,748.1	20.0	25.6	-89.29	-5,100.5	1,466.1	4,587.0	4,547.6	39.48	116.178		
8,800.0	7,740.0	7,884.0	7,748.1	21.2	25.6	-89.29	-5,100.5	1,466.1	4,490.6	4,449.8	40.75	110.206		
8,900.0	7,740.0	7,884.0	7,748.2	22.5	25.6	-89.29	-5,100.5	1,466.1	4,394.3	4,352.2	42.08	104.430		
9,000.0	7,740.0	7,884.1	7,748.2	23.9	25.6	-89.29	-5,100.5	1,466.1	4,298.1	4,254.7	43.47	98.885		
9,100.0	7,740.0	7,884.1	7,748.3	25.3	25.6	-89.29	-5,100.5	1,466.1	4,202.2	4,157.3	44.90	93.590		
9,200.0	7,740.0	7,884.1	7,748.3	26.7	25.6	-89.30	-5,100.5	1,466.1	4,106.4	4,060.0	46.37	88.553		
9,300.0	7,740.0	7,884.2	7,748.3	28.2	25.6	-89.30	-5,100.5	1,466.1	4,010.8	3,963.0	47.88	83.773		
9,400.0	7,740.0	7,884.2	7,748.4	29.7	25.6	-89.30	-5,100.5	1,466.1	3,915.5	3,866.1	49.41	79.244		
9,500.0	7,740.0	7,884.3	7,748.4	31.3	25.6	-89.30	-5,100.5	1,466.1	3,820.4	3,769.4	50.97	74.959		
9,600.0	7,740.0	7,884.3	7,748.5	32.8	25.6	-89.30	-5,100.5	1,466.1	3,725.6	3,673.0	52.54	70.904		
9,700.0	7,740.0	7,884.4	7,748.5	34.4	25.6	-89.31	-5,100.5	1,466.1	3,631.0	3,576.8	54.14	67.070		
9,800.0	7,740.0	7,884.4	7,748.6	36.0	25.6	-89.31	-5,100.5	1,466.1	3,536.7	3,481.0	55.75	63.443		
9,900.0	7,740.0	7,884.4	7,748.6	37.6	25.6	-89.31	-5,100.5	1,466.1	3,442.8	3,385.4	57.37	60.012		
10,000.0	7,740.0	7,884.5	7,748.6	39.2	25.6	-89.31	-5,100.5	1,466.1	3,349.2	3,290.2	59.00	56.764		
10,100.0	7,740.0	7,884.5	7,748.7	40.9	25.6	-89.31	-5,100.5	1,466.1	3,256.0	3,195.3	60.65	53.689		
10,200.0	7,740.0	7,884.6	7,748.7	42.5	25.6	-89.32	-5,100.5	1,466.1	3,163.2	3,100.9	62.30	50.775		
10,300.0	7,740.0	7,884.6	7,748.8	44.1	25.6	-89.32	-5,100.5	1,466.1	3,070.8	3,006.9	63.96	48.013		
10,400.0	7,740.0	7,884.6	7,748.8	45.8	25.6	-89.32	-5,100.5	1,466.1	2,979.0	2,913.3	65.62	45.394		
10,500.0	7,740.0	7,884.7	7,748.8	47.5	25.6	-89.32	-5,100.5	1,466.1	2,887.7	2,820.4	67.30	42.908		
10,600.0	7,740.0	7,884.7	7,748.9	49.1	25.6	-89.32	-5,100.5	1,466.1	2,796.9	2,728.0	68.98	40.548		
10,700.0	7,740.0	7,884.8	7,748.9	50.8	25.6	-89.32	-5,100.5	1,466.1	2,706.9	2,636.2	70.66	38.307		
10,800.0	7,740.0	7,884.8	7,749.0	52.5	25.6	-89.33	-5,100.5	1,466.1	2,617.5	2,545.2	72.35	36.178		
10,900.0	7,740.0	7,884.8	7,749.0	54.2	25.6	-89.33	-5,100.5	1,466.1	2,529.0	2,454.9	74.04	34.155		
11,000.0	7,740.0	7,884.9	7,749.0	55.9	25.6	-89.33	-5,100.5	1,466.1	2,441.3	2,365.6	75.74	32.233		
11,100.0	7,740.0	7,884.9	7,749.1	57.6	25.6	-89.33	-5,100.5	1,466.1	2,354.7	2,277.2	77.44	30.406		
11,200.0	7,740.0	7,885.0	7,749.1	59.3	25.6	-89.33	-5,100.5	1,466.1	2,269.1	2,189.9	79.14	28.670		
11,300.0	7,740.0	7,885.0	7,749.2	61.0	25.6	-89.34	-5,100.5	1,466.1	2,184.7	2,103.9	80.85	27.022		
11,400.0	7,740.0	7,885.0	7,749.2	62.7	25.6	-89.34	-5,100.5	1,466.1	2,101.7	2,019.2	82.56	25.457		
11,500.0	7,740.0	7,885.1	7,749.2	64.4	25.6	-89.34	-5,100.5	1,466.1	2,020.3	1,936.0	84.27	23.974		
11,600.0	7,740.0	7,885.1	7,749.3	66.1	25.6	-89.34	-5,100.5	1,466.1	1,940.6	1,854.6	85.98	22.569		
11,700.0	7,740.0	7,885.2	7,749.3	67.8	25.6	-89.34	-5,100.5	1,466.1	1,862.9	1,775.2	87.70	21.241		
11,800.0	7,740.0	7,885.2	7,749.4	69.5	25.6	-89.35	-5,100.5	1,466.1	1,787.3	1,697.9	89.42	19.989		
11,900.0	7,740.0	7,885.2	7,749.4	71.2	25.6	-89.35	-5,100.5	1,466.1	1,714.3	1,623.2	91.14	18.810		
12,000.0	7,740.0	7,885.3	7,749.4	72.9	25.6	-89.35	-5,100.5	1,466.1	1,644.1	1,551.3	92.86	17.706		
12,100.0	7,740.0	7,885.3	7,749.5	74.7	25.6	-89.35	-5,100.5	1,466.1	1,577.2	1,482.6	94.58	16.676		
12,200.0	7,740.0	7,885.3	7,749.5	76.4	25.6	-89.35	-5,100.5	1,466.1	1,513.9	1,417.6	96.30	15.720		
12,300.0	7,740.0	7,885.4	7,749.5	78.1	25.6	-89.35	-5,100.5	1,466.1	1,454.7	1,356.7	98.03	14.839		
12,400.0	7,740.0	7,885.4	7,749.6	79.8	25.6	-89.36	-5,100.5	1,466.1	1,400.2	1,300.4	99.76	14.036		
12,500.0	7,740.0	7,885.5	7,749.6	81.6	25.6	-89.36	-5,100.5	1,466.1	1,350.8	1,249.3	101.48	13.311		
12,600.0	7,740.0	7,885.5	7,749.7	83.3	25.6	-89.36	-5,100.5	1,466.1	1,307.3	1,204.1	103.21	12.666		
12,700.0	7,740.0	7,885.5	7,749.7	85.0	25.6	-89.36	-5,100.5	1,466.1	1,270.2	1,165.2	104.94	12.104		
12,800.0	7,740.0	7,885.6	7,749.7	86.7	25.6	-89.36	-5,100.5	1,466.1	1,240.0	1,133.4	106.67	11.624		
12,900.0	7,740.0	7,885.6	7,749.8	88.5	25.6	-89.37	-5,100.5	1,466.1	1,217.4	1,109.0	108.41	11.230		
13,000.0	7,740.0	7,885.6	7,749.8	90.2	25.6	-89.37	-5,100.5	1,466.1	1,202.6	1,092.5	110.14	10.919		
13,100.0	7,740.0	7,885.7	7,749.8	91.9	25.6	-89.37	-5,100.5	1,466.1	1,196.1	1,084.2	111.87	10.692		
13,128.5	7,740.0	7,885.7	7,749.8	92.4	25.6	-89.37	-5,100.5	1,466.1	1,195.7	1,083.4	112.36	10.642 CC, ES		
13,200.0	7,740.0	7,885.7	7,749.9	93.7	25.6	-89.37	-5,100.5	1,466.1	1,197.9	1,084.3	113.61	10.544		
13,300.0	7,740.0	7,885.8	7,749.9	95.4	25.6	-89.37	-5,100.5	1,466.1	1,208.0	1,092.6	115.34	10.473 SF		
13,400.0	7,740.0	7,885.8	7,749.9	97.1	25.6	-89.37	-5,100.5	1,466.1	1,226.2	1,109.1	117.08	10.473		

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 2C-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 2C-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 #2	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	
13,500.0	7,740.0	7,885.8	7,750.0	98.9	25.6	-89.38	-5,100.5	1,466.1	1,252.1	1,133.3	118.81	10.539	
13,600.0	7,740.0	7,885.9	7,750.0	100.6	25.6	-89.38	-5,100.5	1,466.1	1,285.4	1,164.8	120.55	10.662	
13,700.0	7,740.0	7,885.9	7,750.1	102.3	25.6	-89.38	-5,100.5	1,466.1	1,325.3	1,203.0	122.29	10.838	
13,800.0	7,740.0	7,885.9	7,750.1	104.1	25.6	-89.38	-5,100.5	1,466.1	1,371.4	1,247.4	124.02	11.058	
13,900.0	7,740.0	7,886.0	7,750.1	105.8	25.6	-89.38	-5,100.5	1,466.1	1,423.0	1,297.3	125.76	11.315	
14,000.0	7,740.0	7,886.0	7,750.2	107.5	25.6	-89.38	-5,100.5	1,466.1	1,479.7	1,352.2	127.50	11.605	
14,100.0	7,740.0	7,886.0	7,750.2	109.3	25.6	-89.39	-5,100.5	1,466.1	1,540.7	1,411.4	129.24	11.921	
14,200.0	7,740.0	7,886.1	7,750.2	111.0	25.6	-89.39	-5,100.5	1,466.1	1,605.6	1,474.6	130.98	12.258	
14,300.0	7,740.0	7,886.1	7,750.3	112.8	25.6	-89.39	-5,100.5	1,466.1	1,674.0	1,541.3	132.72	12.613	
14,400.0	7,740.0	7,886.1	7,750.3	114.5	25.6	-89.39	-5,100.5	1,466.1	1,745.5	1,611.0	134.46	12.981	
14,500.0	7,740.0	7,886.2	7,750.3	116.2	25.6	-89.39	-5,100.5	1,466.1	1,819.6	1,683.4	136.20	13.359	
14,600.0	7,740.0	7,886.2	7,750.4	118.0	25.6	-89.39	-5,100.5	1,466.1	1,896.1	1,758.2	137.95	13.745	
14,700.0	7,740.0	7,886.2	7,750.4	119.7	25.6	-89.40	-5,100.5	1,466.1	1,974.7	1,835.0	139.69	14.137	
14,800.0	7,740.0	7,886.3	7,750.4	121.5	25.6	-89.40	-5,100.5	1,466.1	2,055.2	1,913.8	141.43	14.532	
14,900.0	7,740.0	7,886.3	7,750.5	123.2	25.6	-89.40	-5,100.5	1,466.1	2,137.3	1,994.2	143.17	14.928	
15,000.0	7,740.0	7,886.3	7,750.5	124.9	25.6	-89.40	-5,100.5	1,466.1	2,220.9	2,076.0	144.92	15.326	
15,100.0	7,740.0	7,886.4	7,750.5	126.7	25.6	-89.40	-5,100.5	1,466.1	2,305.8	2,159.2	146.66	15.722	
15,200.0	7,740.0	7,886.4	7,750.6	128.4	25.6	-89.40	-5,100.5	1,466.1	2,391.9	2,243.5	148.40	16.118	
15,300.0	7,740.0	7,886.4	7,750.6	130.2	25.6	-89.41	-5,100.5	1,466.1	2,479.0	2,328.8	150.15	16.510	
15,400.0	7,740.0	7,886.5	7,750.6	131.9	25.6	-89.41	-5,100.5	1,466.1	2,567.0	2,415.2	151.89	16.901	
15,500.0	7,740.0	7,886.5	7,750.7	133.7	25.6	-89.41	-5,100.5	1,466.1	2,655.9	2,502.3	153.63	17.287	
15,600.0	7,740.0	7,886.6	7,750.7	135.4	25.6	-89.41	-5,100.5	1,466.1	2,745.6	2,590.2	155.38	17.670	
15,700.0	7,740.0	7,886.6	7,750.7	137.1	25.6	-89.41	-5,100.5	1,466.1	2,836.0	2,678.8	157.12	18.049	
15,800.0	7,740.0	7,886.6	7,750.8	138.9	25.6	-89.41	-5,100.5	1,466.1	2,926.9	2,768.1	158.87	18.424	
15,900.0	7,740.0	7,886.7	7,750.8	140.6	25.6	-89.42	-5,100.5	1,466.1	3,018.5	2,857.9	160.61	18.793	
15,952.8	7,740.0	7,886.7	7,750.8	141.6	25.6	-89.42	-5,100.5	1,466.1	3,067.0	2,905.5	161.54	18.987	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	172.43	-4,267.5	567.1	4,305.1					
100.0	100.0	123.0	123.0	0.2	0.2	172.43	-4,267.5	567.1	4,305.1	4,304.7	0.34	N/A		
156.7	156.7	179.7	179.7	0.3	0.3	172.43	-4,267.5	567.1	4,305.1	4,304.5	0.54	7,997.599		
200.0	200.0	200.0	200.0	0.3	0.3	172.43	-4,267.5	567.1	4,305.1	4,304.5	0.65	6,630.765		
300.0	300.0	257.0	257.0	0.5	0.4	172.43	-4,267.9	567.5	4,306.0	4,305.1	0.92	4,661.374		
400.0	400.0	300.0	300.0	0.7	0.5	172.42	-4,268.7	568.4	4,308.2	4,307.0	1.17	3,672.505		
500.0	500.0	349.6	349.5	0.9	0.6	146.43	-4,270.2	570.0	4,312.3	4,310.8	1.44	2,994.723		
600.0	600.0	400.0	399.8	1.0	0.7	146.37	-4,272.3	572.3	4,319.1	4,317.4	1.71	2,529.955		
700.0	699.9	441.7	441.5	1.2	0.8	146.31	-4,274.5	574.6	4,328.6	4,326.6	1.97	2,201.740		
800.0	799.7	500.0	499.5	1.4	0.9	146.22	-4,278.2	578.7	4,340.8	4,338.6	2.26	1,921.512		
898.2	897.5	532.2	531.5	1.6	1.0	146.13	-4,280.6	581.3	4,355.3	4,352.8	2.51	1,736.609		
900.0	899.4	533.0	532.3	1.6	1.0	146.13	-4,280.7	581.3	4,355.6	4,353.1	2.51	1,733.132		
1,000.0	999.0	600.0	598.7	1.8	1.2	146.10	-4,286.5	587.6	4,372.5	4,369.6	2.84	1,538.405		
1,100.0	1,098.6	600.0	598.7	2.0	1.2	146.10	-4,286.5	587.6	4,390.4	4,387.4	3.03	1,448.688		
1,200.0	1,198.2	668.2	666.1	2.3	1.4	146.05	-4,293.5	595.2	4,409.4	4,406.0	3.38	1,304.321		
1,300.0	1,297.9	700.0	697.5	2.5	1.5	146.03	-4,297.1	599.1	4,429.8	4,426.1	3.65	1,215.194		
1,400.0	1,397.5	757.0	753.5	2.7	1.7	145.98	-4,304.2	606.7	4,451.2	4,447.3	3.99	1,116.658		
1,500.0	1,497.1	806.3	801.8	2.9	1.9	145.93	-4,310.9	614.1	4,473.9	4,469.6	4.31	1,038.831		
1,600.0	1,596.7	891.3	884.8	3.2	2.2	145.83	-4,323.1	627.1	4,497.3	4,492.6	4.73	951.284		
1,700.0	1,696.3	988.1	979.6	3.4	2.6	145.73	-4,336.9	642.1	4,520.7	4,515.5	5.18	871.936		
1,800.0	1,796.0	1,085.0	1,074.3	3.6	3.0	145.62	-4,350.7	657.0	4,544.2	4,538.5	5.64	805.036		
1,900.0	1,895.6	1,181.9	1,169.0	3.8	3.4	145.51	-4,364.5	672.0	4,567.6	4,561.5	6.11	747.991		
2,000.0	1,995.2	1,278.7	1,263.7	4.1	3.8	145.41	-4,378.3	686.9	4,591.1	4,584.5	6.57	698.841		
2,100.0	2,094.8	1,375.6	1,358.4	4.3	4.2	145.31	-4,392.2	701.8	4,614.6	4,607.5	7.03	656.094		
2,200.0	2,194.5	1,472.5	1,453.1	4.5	4.6	145.21	-4,406.0	716.8	4,638.1	4,630.6	7.50	618.600		
2,300.0	2,294.1	1,569.4	1,547.8	4.8	4.9	145.11	-4,419.8	731.7	4,661.6	4,653.6	7.96	585.461		
2,400.0	2,393.7	1,666.2	1,642.5	5.0	5.3	145.01	-4,433.6	746.6	4,685.1	4,676.7	8.43	555.972		
2,500.0	2,493.3	1,763.1	1,737.2	5.2	5.7	144.91	-4,447.4	761.6	4,708.6	4,699.7	8.89	529.567		
2,600.0	2,592.9	1,860.0	1,831.9	5.4	6.1	144.81	-4,461.3	776.5	4,732.2	4,722.8	9.36	505.791		
2,700.0	2,692.6	1,956.8	1,926.7	5.7	6.5	144.71	-4,475.1	791.5	4,755.7	4,745.9	9.82	484.274		
2,800.0	2,792.2	2,053.7	2,021.4	5.9	6.9	144.62	-4,488.9	806.4	4,779.3	4,769.0	10.28	464.712		
2,900.0	2,891.8	2,150.6	2,116.1	6.1	7.3	144.52	-4,502.7	821.3	4,802.9	4,792.1	10.75	446.851		
3,000.0	2,991.4	2,247.5	2,210.8	6.4	7.7	144.43	-4,516.6	836.3	4,826.5	4,815.3	11.21	430.479		
3,100.0	3,091.1	2,344.3	2,305.5	6.6	8.1	144.34	-4,530.4	851.2	4,850.1	4,838.4	11.68	415.420		
3,200.0	3,190.7	2,441.2	2,400.2	6.8	8.5	144.24	-4,544.2	866.1	4,873.7	4,861.6	12.14	401.523		
3,300.0	3,290.3	2,538.1	2,494.9	7.0	8.9	144.15	-4,558.0	881.1	4,897.4	4,884.8	12.60	388.658		
3,400.0	3,389.9	2,634.9	2,589.6	7.3	9.3	144.06	-4,571.8	896.0	4,921.0	4,907.9	13.06	376.715		
3,500.0	3,489.5	2,731.8	2,684.3	7.5	9.7	143.97	-4,585.7	910.9	4,944.7	4,931.1	13.52	365.599		
3,600.0	3,589.2	2,828.7	2,779.0	7.7	10.1	143.88	-4,599.5	925.9	4,968.3	4,954.3	13.99	355.228		
3,700.0	3,688.8	2,925.6	2,873.7	8.0	10.5	143.80	-4,613.3	940.8	4,992.0	4,977.6	14.45	345.529		
3,800.0	3,788.4	3,022.4	2,968.5	8.2	10.9	143.71	-4,627.1	955.8	5,015.7	5,000.8	14.91	336.440		
3,900.0	3,888.0	3,119.3	3,063.2	8.4	11.3	143.62	-4,640.9	970.7	5,039.4	5,024.0	15.37	327.904		
4,000.0	3,987.7	3,216.2	3,157.9	8.7	11.7	143.54	-4,654.8	985.6	5,063.1	5,047.3	15.83	319.873		
4,100.0	4,087.3	3,313.0	3,252.6	8.9	12.1	143.45	-4,668.6	1,000.6	5,086.8	5,070.5	16.29	312.303		
4,200.0	4,186.9	3,409.9	3,347.3	9.1	12.5	143.37	-4,682.4	1,015.5	5,110.6	5,093.8	16.75	305.157		
4,300.0	4,286.5	3,506.8	3,442.0	9.4	12.9	143.29	-4,696.2	1,030.4	5,134.3	5,117.1	17.21	298.399		
4,400.0	4,386.1	3,603.7	3,536.7	9.6	13.3	143.21	-4,710.0	1,045.4	5,158.1	5,140.4	17.66	292.000		
4,500.0	4,485.8	3,700.5	3,631.4	9.8	13.7	143.12	-4,723.9	1,060.3	5,181.8	5,163.7	18.12	285.930		
4,600.0	4,585.4	3,797.4	3,726.1	10.0	14.1	143.04	-4,737.7	1,075.2	5,205.6	5,187.0	18.58	280.166		
4,700.0	4,685.0	3,894.3	3,820.8	10.3	14.4	142.96	-4,751.5	1,090.2	5,229.4	5,210.3	19.04	274.685		
4,800.0	4,784.6	3,991.1	3,915.6	10.5	14.8	142.88	-4,765.3	1,105.1	5,253.2	5,233.7	19.49	269.467		
4,900.0	4,884.3	4,088.0	4,010.3	10.7	15.2	142.81	-4,779.1	1,120.1	5,277.0	5,257.0	19.95	264.493		

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 2C-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 2C-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 #2	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		
8,000.0	7,732.7	7,878.7	7,755.7	14.7	25.3	-54.59	-5,083.5	1,449.0	5,245.2	5,216.2	29.02	180.749		
8,050.0	7,738.5	7,884.6	7,761.5	14.8	25.3	-72.43	-5,083.5	1,449.0	5,196.8	5,163.9	32.84	158.224		
8,091.8	7,740.0	7,886.1	7,763.0	15.0	25.3	-90.00	-5,083.5	1,449.0	5,156.1	5,122.1	34.06	151.391		
8,100.0	7,740.0	7,886.1	7,763.0	15.0	25.3	-90.00	-5,083.5	1,449.0	5,148.1	5,114.0	34.09	151.022		
8,200.0	7,740.0	7,886.1	7,763.0	15.4	25.3	-90.00	-5,083.5	1,449.0	5,050.8	5,016.2	34.57	146.125		
8,300.0	7,740.0	7,886.1	7,763.0	16.1	25.3	-90.00	-5,083.5	1,449.0	4,953.6	4,918.4	35.23	140.615		
8,400.0	7,740.0	7,886.1	7,763.0	16.9	25.3	-90.00	-5,083.5	1,449.0	4,856.6	4,820.5	36.06	134.696		
8,500.0	7,740.0	7,886.1	7,763.0	17.8	25.3	-90.00	-5,083.5	1,449.0	4,759.6	4,722.6	37.02	128.558		
8,600.0	7,740.0	7,886.1	7,763.0	18.8	25.3	-90.00	-5,083.5	1,449.0	4,662.8	4,624.7	38.11	122.357		
8,700.0	7,740.0	7,886.1	7,763.0	20.0	25.3	-90.00	-5,083.5	1,449.0	4,566.1	4,526.8	39.29	116.212		
8,800.0	7,740.0	7,886.1	7,763.0	21.2	25.3	-90.00	-5,083.5	1,449.0	4,469.6	4,429.0	40.56	110.208		
8,900.0	7,740.0	7,886.1	7,763.0	22.5	25.3	-90.00	-5,083.5	1,449.0	4,373.2	4,331.3	41.89	104.403		
9,000.0	7,740.0	7,886.1	7,763.0	23.9	25.3	-90.00	-5,083.5	1,449.0	4,277.0	4,233.7	43.28	98.832		
9,100.0	7,740.0	7,886.1	7,763.0	25.3	25.3	-90.00	-5,083.5	1,449.0	4,180.9	4,136.2	44.71	93.514		
9,200.0	7,740.0	7,886.1	7,763.0	26.7	25.3	-90.00	-5,083.5	1,449.0	4,085.1	4,038.9	46.18	88.457		
9,300.0	7,740.0	7,886.1	7,763.0	28.2	25.3	-90.00	-5,083.5	1,449.0	3,989.4	3,941.8	47.69	83.659		
9,400.0	7,740.0	7,886.1	7,763.0	29.7	25.3	-90.00	-5,083.5	1,449.0	3,894.0	3,844.8	49.22	79.114		
9,500.0	7,740.0	7,886.1	7,763.0	31.3	25.3	-90.00	-5,083.5	1,449.0	3,798.8	3,748.0	50.78	74.814		
9,600.0	7,740.0	7,886.1	7,763.0	32.8	25.3	-90.00	-5,083.5	1,449.0	3,703.9	3,651.5	52.35	70.748		
9,700.0	7,740.0	7,886.1	7,763.0	34.4	25.3	-90.00	-5,083.5	1,449.0	3,609.2	3,555.3	53.95	66.903		
9,800.0	7,740.0	7,886.1	7,763.0	36.0	25.3	-90.00	-5,083.5	1,449.0	3,514.9	3,459.3	55.56	63.266		
9,900.0	7,740.0	7,886.1	7,763.0	37.6	25.3	-90.00	-5,083.5	1,449.0	3,420.8	3,363.6	57.18	59.827		
10,000.0	7,740.0	7,886.1	7,763.0	39.2	25.3	-90.00	-5,083.5	1,449.0	3,327.1	3,268.3	58.81	56.572		
10,100.0	7,740.0	7,886.1	7,763.0	40.9	25.3	-90.00	-5,083.5	1,449.0	3,233.8	3,173.3	60.46	53.490		
10,200.0	7,740.0	7,886.1	7,763.0	42.5	25.3	-90.00	-5,083.5	1,449.0	3,140.9	3,078.8	62.11	50.571		
10,300.0	7,740.0	7,886.1	7,763.0	44.1	25.3	-90.00	-5,083.5	1,449.0	3,048.4	2,984.6	63.77	47.804		
10,400.0	7,740.0	7,886.1	7,763.0	45.8	25.3	-90.00	-5,083.5	1,449.0	2,956.4	2,891.0	65.44	45.180		
10,500.0	7,740.0	7,886.1	7,763.0	47.5	25.3	-90.00	-5,083.5	1,449.0	2,865.0	2,797.9	67.11	42.691		
10,600.0	7,740.0	7,886.1	7,763.0	49.1	25.3	-90.00	-5,083.5	1,449.0	2,774.2	2,705.4	68.79	40.328		
10,700.0	7,740.0	7,886.1	7,763.0	50.8	25.3	-90.00	-5,083.5	1,449.0	2,684.0	2,613.5	70.47	38.085		
10,800.0	7,740.0	7,886.1	7,763.0	52.5	25.3	-90.00	-5,083.5	1,449.0	2,594.5	2,522.3	72.16	35.954		
10,900.0	7,740.0	7,886.1	7,763.0	54.2	25.3	-90.00	-5,083.5	1,449.0	2,505.8	2,432.0	73.86	33.929		
11,000.0	7,740.0	7,886.1	7,763.0	55.9	25.3	-90.00	-5,083.5	1,449.0	2,418.0	2,342.5	75.55	32.005		
11,100.0	7,740.0	7,886.1	7,763.0	57.6	25.3	-90.00	-5,083.5	1,449.0	2,331.2	2,254.0	77.25	30.176		
11,200.0	7,740.0	7,886.1	7,763.0	59.3	25.3	-90.00	-5,083.5	1,449.0	2,245.5	2,166.6	78.96	28.440		
11,300.0	7,740.0	7,886.1	7,763.0	61.0	25.3	-90.00	-5,083.5	1,449.0	2,161.0	2,080.4	80.66	26.791		
11,400.0	7,740.0	7,886.1	7,763.0	62.7	25.3	-90.00	-5,083.5	1,449.0	2,077.9	1,995.5	82.37	25.226		
11,500.0	7,740.0	7,886.1	7,763.0	64.4	25.3	-90.00	-5,083.5	1,449.0	1,996.4	1,912.3	84.08	23.743		
11,600.0	7,740.0	7,886.1	7,763.0	66.1	25.3	-90.00	-5,083.5	1,449.0	1,916.6	1,830.8	85.80	22.338		
11,700.0	7,740.0	7,886.1	7,763.0	67.8	25.3	-90.00	-5,083.5	1,449.0	1,838.7	1,751.2	87.51	21.011		
11,800.0	7,740.0	7,886.1	7,763.0	69.5	25.3	-90.00	-5,083.5	1,449.0	1,763.1	1,673.9	89.23	19.759		
11,900.0	7,740.0	7,886.1	7,763.0	71.2	25.3	-90.00	-5,083.5	1,449.0	1,690.1	1,599.1	90.95	18.583		
12,000.0	7,740.0	7,886.1	7,763.0	72.9	25.3	-90.00	-5,083.5	1,449.0	1,619.9	1,527.2	92.67	17.480		
12,100.0	7,740.0	7,886.1	7,763.0	74.7	25.3	-90.00	-5,083.5	1,449.0	1,553.0	1,458.6	94.39	16.452		
12,200.0	7,740.0	7,886.1	7,763.0	76.4	25.3	-90.00	-5,083.5	1,449.0	1,489.8	1,393.7	96.12	15.500		
12,300.0	7,740.0	7,886.1	7,763.0	78.1	25.3	-90.00	-5,083.5	1,449.0	1,430.8	1,333.0	97.84	14.624		
12,400.0	7,740.0	7,886.1	7,763.0	79.8	25.3	-90.00	-5,083.5	1,449.0	1,376.6	1,277.0	99.57	13.825		
12,500.0	7,740.0	7,886.1	7,763.0	81.6	25.3	-90.00	-5,083.5	1,449.0	1,327.7	1,226.4	101.30	13.107		
12,600.0	7,740.0	7,886.1	7,763.0	83.3	25.3	-90.00	-5,083.5	1,449.0	1,284.7	1,181.7	103.03	12.469		
12,700.0	7,740.0	7,886.1	7,763.0	85.0	25.3	-90.00	-5,083.5	1,449.0	1,248.2	1,143.5	104.76	11.916		
12,800.0	7,740.0	7,886.1	7,763.0	86.7	25.3	-90.00	-5,083.5	1,449.0	1,218.9	1,112.5	106.49	11.447		
12,900.0	7,740.0	7,886.1	7,763.0	88.5	25.3	-90.00	-5,083.5	1,449.0	1,197.3	1,089.1	108.22	11.064		

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 2C-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 2C-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 #2	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				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)				
13,000.0	7,740.0	7,886.1	7,763.0	90.2	25.3	-90.00	-5,083.5	1,449.0	1,183.8	1,073.8	109.95	10.766		
13,100.0	7,740.0	7,886.1	7,763.0	91.9	25.3	-90.00	-5,083.5	1,449.0	1,178.6	1,066.9	111.68	10.553		
13,111.4	7,740.0	7,886.1	7,763.0	92.1	25.3	-90.00	-5,083.5	1,449.0	1,178.5	1,066.6	111.88	10.533 CC, ES		
13,200.0	7,740.0	7,886.1	7,763.0	93.7	25.3	-90.00	-5,083.5	1,449.0	1,181.8	1,068.4	113.42	10.420		
13,300.0	7,740.0	7,886.1	7,763.0	95.4	25.3	-90.00	-5,083.5	1,449.0	1,193.5	1,078.3	115.15	10.364 SF		
13,400.0	7,740.0	7,886.1	7,763.0	97.1	25.3	-90.00	-5,083.5	1,449.0	1,213.3	1,096.4	116.89	10.380		
13,500.0	7,740.0	7,886.1	7,763.0	98.9	25.3	-90.00	-5,083.5	1,449.0	1,240.9	1,122.3	118.63	10.461		
13,600.0	7,740.0	7,886.1	7,763.0	100.6	25.3	-90.00	-5,083.5	1,449.0	1,275.8	1,155.4	120.36	10.599		
13,700.0	7,740.0	7,886.1	7,763.0	102.3	25.3	-90.00	-5,083.5	1,449.0	1,317.3	1,195.2	122.10	10.789		
13,800.0	7,740.0	7,886.1	7,763.0	104.1	25.3	-90.00	-5,083.5	1,449.0	1,364.9	1,241.1	123.84	11.022		
13,900.0	7,740.0	7,886.1	7,763.0	105.8	25.3	-90.00	-5,083.5	1,449.0	1,418.0	1,292.4	125.58	11.292		
14,000.0	7,740.0	7,886.1	7,763.0	107.5	25.3	-90.00	-5,083.5	1,449.0	1,476.0	1,348.7	127.32	11.593		
14,100.0	7,740.0	7,886.1	7,763.0	109.3	25.3	-90.00	-5,083.5	1,449.0	1,538.2	1,409.2	129.06	11.919		
14,200.0	7,740.0	7,886.1	7,763.0	111.0	25.3	-90.00	-5,083.5	1,449.0	1,604.3	1,473.6	130.80	12.266		
14,300.0	7,740.0	7,886.1	7,763.0	112.8	25.3	-90.00	-5,083.5	1,449.0	1,673.8	1,541.3	132.54	12.629		
14,400.0	7,740.0	7,886.1	7,763.0	114.5	25.3	-90.00	-5,083.5	1,449.0	1,746.2	1,612.0	134.28	13.005		
14,500.0	7,740.0	7,886.1	7,763.0	116.2	25.3	-90.00	-5,083.5	1,449.0	1,821.3	1,685.3	136.02	13.390		
14,600.0	7,740.0	7,886.1	7,763.0	118.0	25.3	-90.00	-5,083.5	1,449.0	1,898.6	1,760.9	137.76	13.782		
14,700.0	7,740.0	7,886.1	7,763.0	119.7	25.3	-90.00	-5,083.5	1,449.0	1,978.0	1,838.5	139.50	14.179		
14,800.0	7,740.0	7,886.1	7,763.0	121.5	25.3	-90.00	-5,083.5	1,449.0	2,059.2	1,917.9	141.24	14.579		
14,900.0	7,740.0	7,886.1	7,763.0	123.2	25.3	-90.00	-5,083.5	1,449.0	2,142.0	1,999.0	142.99	14.980		
15,000.0	7,740.0	7,886.1	7,763.0	124.9	25.3	-90.00	-5,083.5	1,449.0	2,226.1	2,081.4	144.73	15.381		
15,100.0	7,740.0	7,886.1	7,763.0	126.7	25.3	-90.00	-5,083.5	1,449.0	2,311.6	2,165.1	146.47	15.782		
15,200.0	7,740.0	7,886.1	7,763.0	128.4	25.3	-90.00	-5,083.5	1,449.0	2,398.2	2,249.9	148.22	16.180		
15,300.0	7,740.0	7,886.1	7,763.0	130.2	25.3	-90.00	-5,083.5	1,449.0	2,485.7	2,335.8	149.96	16.576		
15,400.0	7,740.0	7,886.1	7,763.0	131.9	25.3	-90.00	-5,083.5	1,449.0	2,574.2	2,422.5	151.71	16.969		
15,500.0	7,740.0	7,886.1	7,763.0	133.7	25.3	-90.00	-5,083.5	1,449.0	2,663.5	2,510.1	153.45	17.358		
15,600.0	7,740.0	7,886.1	7,763.0	135.4	25.3	-90.00	-5,083.5	1,449.0	2,753.5	2,598.4	155.19	17.743		
15,700.0	7,740.0	7,886.1	7,763.0	137.1	25.3	-90.00	-5,083.5	1,449.0	2,844.2	2,687.3	156.94	18.123		
15,800.0	7,740.0	7,886.1	7,763.0	138.9	25.3	-90.00	-5,083.5	1,449.0	2,935.6	2,776.9	158.68	18.499		
15,900.0	7,740.0	7,886.1	7,763.0	140.6	25.3	-90.00	-5,083.5	1,449.0	3,027.4	2,867.0	160.43	18.871		
15,952.8	7,740.0	7,886.1	7,763.0	141.6	25.3	-90.00	-5,083.5	1,449.0	3,076.1	2,914.7	161.35	19.065		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	
0.0	0.0	0.0	0.0	0.0	0.0	172.64	-4,325.8	558.7	4,361.7					
100.0	100.0	83.1	83.1	0.2	0.1	172.64	-4,326.0	558.9	4,362.0	4,361.7	0.30	N/A		
200.0	200.0	163.6	163.6	0.3	0.3	172.63	-4,326.5	559.3	4,362.7	4,362.1	0.61	7,128.369		
300.0	300.0	270.7	270.7	0.5	0.5	172.64	-4,327.6	559.2	4,363.7	4,362.7	0.97	4,481.442		
400.0	400.0	368.9	368.8	0.7	0.6	172.64	-4,328.4	558.8	4,364.4	4,363.1	1.32	3,306.917		
500.0	500.0	475.4	475.4	0.9	0.8	146.69	-4,329.3	558.8	4,366.0	4,364.3	1.68	2,599.168		
600.0	600.0	599.7	599.7	1.0	1.0	146.71	-4,329.9	558.1	4,368.6	4,366.5	2.07	2,108.283		
700.0	699.9	690.8	690.8	1.2	1.2	146.73	-4,330.1	557.7	4,372.5	4,370.1	2.41	1,815.934		
800.0	799.7	800.0	800.0	1.4	1.4	146.76	-4,330.5	556.9	4,377.8	4,375.0	2.78	1,575.740		
898.2	897.5	896.2	896.1	1.6	1.6	146.79	-4,330.7	555.8	4,384.4	4,381.2	3.13	1,402.653		
900.0	899.4	898.0	897.9	1.6	1.6	146.79	-4,330.7	555.8	4,384.5	4,381.4	3.13	1,399.767		
1,000.0	999.0	988.7	988.7	1.8	1.7	146.86	-4,331.1	554.8	4,392.0	4,388.5	3.48	1,262.806		
1,100.0	1,098.6	1,104.5	1,104.4	2.0	1.9	146.96	-4,331.5	553.0	4,399.5	4,395.6	3.87	1,137.160		
1,200.0	1,198.2	1,205.7	1,205.6	2.3	2.1	147.04	-4,331.7	551.4	4,406.7	4,402.5	4.24	1,040.484		
1,300.0	1,297.9	1,303.0	1,302.9	2.5	2.3	147.13	-4,331.9	549.4	4,414.0	4,409.4	4.60	960.266		
1,400.0	1,397.5	1,415.8	1,415.7	2.7	2.5	147.23	-4,332.0	546.6	4,421.1	4,416.1	4.99	886.683		
1,500.0	1,497.1	1,505.5	1,505.3	2.9	2.6	147.31	-4,332.1	544.9	4,428.3	4,422.9	5.33	830.225		
1,600.0	1,596.7	1,626.7	1,626.5	3.2	2.9	147.41	-4,331.8	542.5	4,435.1	4,429.4	5.74	772.883		
1,700.0	1,696.3	1,715.8	1,715.6	3.4	3.0	147.49	-4,331.7	540.7	4,442.1	4,436.0	6.09	729.815		
1,800.0	1,796.0	1,840.1	1,839.8	3.6	3.2	147.60	-4,331.1	537.5	4,448.7	4,442.2	6.50	684.572		
1,900.0	1,895.6	1,928.9	1,928.6	3.8	3.4	147.69	-4,330.7	535.2	4,455.2	4,448.4	6.85	650.639		
2,000.0	1,995.2	2,017.2	2,016.9	4.1	3.6	147.77	-4,330.6	532.8	4,462.2	4,455.0	7.20	620.116		
2,100.0	2,094.8	2,126.2	2,125.9	4.3	3.7	147.87	-4,330.2	529.9	4,468.9	4,461.3	7.58	589.507		
2,200.0	2,194.5	2,200.0	2,199.6	4.5	3.9	147.94	-4,330.2	528.1	4,476.0	4,468.1	7.90	566.366		
2,300.0	2,294.1	2,326.0	2,325.6	4.8	4.1	148.06	-4,330.2	524.2	4,483.0	4,474.7	8.32	538.770		
2,400.0	2,393.7	2,436.9	2,436.4	5.0	4.3	148.17	-4,329.9	520.5	4,489.8	4,481.1	8.71	515.394		
2,500.0	2,493.3	2,559.4	2,558.9	5.2	4.5	148.30	-4,328.8	516.3	4,495.9	4,486.8	9.12	492.797		
2,600.0	2,592.9	2,645.2	2,644.6	5.4	4.7	148.38	-4,328.0	513.6	4,502.1	4,492.6	9.47	475.554		
2,700.0	2,692.6	2,729.7	2,729.0	5.7	4.8	148.45	-4,327.5	511.6	4,508.6	4,498.8	9.81	459.720		
2,800.0	2,792.2	2,827.7	2,827.0	5.9	5.0	148.54	-4,327.0	509.5	4,515.4	4,505.2	10.17	443.941		
2,900.0	2,891.8	2,935.4	2,934.7	6.1	5.2	148.62	-4,326.4	507.8	4,522.1	4,511.5	10.55	428.627		
3,000.0	2,991.4	3,035.0	3,034.3	6.4	5.4	148.69	-4,325.6	506.2	4,528.6	4,517.7	10.92	414.868		
3,100.0	3,091.1	3,126.9	3,126.2	6.6	5.5	148.77	-4,325.1	504.5	4,535.3	4,524.0	11.27	402.491		
3,200.0	3,190.7	3,219.9	3,219.2	6.8	5.7	148.84	-4,324.7	502.9	4,542.1	4,530.5	11.62	390.831		
3,300.0	3,290.3	3,300.0	3,299.3	7.0	5.8	148.90	-4,324.6	501.8	4,549.3	4,537.3	11.95	380.642		
3,400.0	3,389.9	3,400.0	3,399.3	7.3	6.0	148.97	-4,324.6	500.9	4,556.7	4,544.4	12.31	370.020		
3,500.0	3,489.5	3,488.6	3,487.9	7.5	6.2	149.03	-4,324.7	500.2	4,564.2	4,551.5	12.66	360.548		
3,600.0	3,589.2	3,588.3	3,587.6	7.7	6.3	149.09	-4,324.9	499.3	4,571.8	4,558.8	13.02	351.072		
3,700.0	3,688.8	3,698.4	3,697.6	8.0	6.5	149.17	-4,325.0	498.4	4,579.3	4,565.9	13.40	341.670		
3,800.0	3,788.4	3,792.4	3,791.7	8.2	6.7	149.23	-4,325.1	497.9	4,586.7	4,573.0	13.76	333.458		
3,900.0	3,888.0	3,895.0	3,894.3	8.4	6.9	149.29	-4,325.1	497.0	4,594.2	4,580.1	14.12	325.276		
4,000.0	3,987.7	3,989.9	3,989.1	8.7	7.1	149.36	-4,325.3	495.6	4,601.7	4,587.2	14.48	317.790		
4,100.0	4,087.3	4,098.2	4,097.4	8.9	7.2	149.45	-4,325.4	493.6	4,609.2	4,594.3	14.86	310.149		
4,200.0	4,186.9	4,216.3	4,215.6	9.1	7.5	149.54	-4,325.2	491.3	4,616.3	4,601.1	15.26	302.537		
4,300.0	4,286.5	4,319.4	4,318.6	9.4	7.6	149.63	-4,324.8	488.7	4,623.3	4,607.6	15.63	295.758		
4,400.0	4,386.1	4,412.9	4,412.0	9.6	7.8	149.71	-4,324.5	486.1	4,630.2	4,614.3	15.99	289.617		
4,500.0	4,485.8	4,500.0	4,499.1	9.8	8.0	149.78	-4,324.4	484.2	4,637.4	4,621.1	16.33	283.986		
4,600.0	4,585.4	4,593.3	4,592.4	10.0	8.1	149.85	-4,324.4	482.5	4,644.8	4,628.1	16.68	278.410		
4,700.0	4,685.0	4,725.6	4,724.7	10.3	8.4	149.95	-4,323.9	480.1	4,651.8	4,634.7	17.10	271.963		
4,800.0	4,784.6	4,805.6	4,804.6	10.5	8.5	150.02	-4,323.6	478.5	4,658.8	4,641.3	17.43	267.210		
4,900.0	4,884.3	4,929.7	4,928.7	10.7	8.7	150.12	-4,323.0	475.8	4,665.7	4,647.9	17.84	261.509		
5,000.0	4,983.9	5,041.2	5,040.2	11.0	8.9	150.19	-4,322.0	474.3	4,672.2	4,654.0	18.22	256.376		

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 2C-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 2C-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 #2	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		
5,100.0	5,083.5	5,148.3	5,147.3	11.2	9.1	150.26	-4,320.9	473.1	4,678.7	4,660.1	18.60	251.556		
5,200.0	5,183.1	5,270.0	5,269.0	11.4	9.3	150.34	-4,319.1	471.7	4,684.7	4,665.7	19.00	246.587		
5,300.0	5,282.7	5,365.0	5,364.0	11.7	9.5	150.40	-4,317.5	471.0	4,690.5	4,671.2	19.35	242.391		
5,400.0	5,382.4	5,452.9	5,451.8	11.9	9.6	150.45	-4,316.2	470.3	4,696.6	4,676.9	19.69	238.499		
5,500.0	5,482.0	5,557.8	5,556.8	12.1	9.8	150.52	-4,314.9	469.2	4,702.8	4,682.8	20.06	234.411		
5,600.0	5,581.6	5,651.3	5,650.3	12.4	10.0	150.58	-4,313.5	468.6	4,708.9	4,688.4	20.41	230.690		
5,700.0	5,681.2	5,744.0	5,742.9	12.6	10.2	150.63	-4,312.4	468.1	4,715.3	4,694.5	20.76	227.128		
5,800.0	5,780.9	5,865.2	5,864.1	12.8	10.4	150.70	-4,310.7	467.4	4,721.4	4,700.3	21.16	223.163		
5,900.0	5,880.5	5,951.7	5,950.6	13.0	10.5	150.74	-4,309.3	467.3	4,727.4	4,705.9	21.49	219.941		
6,000.0	5,980.1	6,025.4	6,024.3	13.3	10.6	150.78	-4,308.5	467.1	4,733.9	4,712.1	21.81	217.057		
6,100.0	6,079.7	6,100.0	6,098.9	13.5	10.8	150.83	-4,308.1	466.8	4,740.9	4,718.7	22.13	214.261		
6,200.0	6,179.3	6,174.0	6,172.9	13.7	10.9	150.87	-4,308.1	466.2	4,748.4	4,726.0	22.44	211.566		
6,300.0	6,279.0	6,268.8	6,267.7	14.0	11.1	150.93	-4,308.5	465.2	4,756.4	4,733.6	22.80	208.651		
6,400.0	6,378.6	6,418.9	6,417.8	14.2	11.3	151.02	-4,308.3	464.4	4,763.8	4,740.6	23.24	204.968		
6,500.0	6,478.2	6,520.0	6,518.9	14.4	11.5	151.08	-4,307.6	463.8	4,770.7	4,747.1	23.60	202.109		
6,600.0	6,577.8	6,616.5	6,615.4	14.7	11.7	151.13	-4,307.0	463.0	4,777.6	4,753.6	23.96	199.405		
6,700.0	6,677.5	6,736.5	6,735.3	14.9	11.9	151.20	-4,306.0	462.2	4,784.4	4,760.0	24.35	196.452		
6,800.0	6,777.1	6,856.9	6,855.7	15.1	12.1	151.27	-4,304.3	461.2	4,790.6	4,765.8	24.75	193.565		
6,900.0	6,876.7	6,953.1	6,951.9	15.4	12.3	151.33	-4,302.9	460.7	4,796.7	4,771.6	25.10	191.086		
7,000.0	6,976.3	7,040.4	7,039.2	15.6	12.4	151.37	-4,301.7	460.8	4,803.0	4,777.5	25.44	188.803		
7,100.0	7,075.9	7,131.4	7,130.2	15.8	12.6	151.41	-4,300.7	461.3	4,809.5	4,783.7	25.78	186.554		
7,147.0	7,122.8	7,181.3	7,180.1	15.9	12.7	151.42	-4,300.1	462.1	4,812.6	4,786.7	25.95	185.441		
7,150.0	7,125.8	7,184.5	7,183.3	15.9	12.7	149.82	-4,300.1	462.1	4,812.8	4,786.8	25.97	185.346		
7,200.0	7,175.7	7,243.7	7,242.4	16.0	12.8	66.83	-4,299.3	463.8	4,813.6	4,787.5	26.14	184.161		
7,250.0	7,225.5	7,300.0	7,298.7	16.0	12.8	18.05	-4,298.4	466.4	4,809.9	4,783.8	26.17	183.812		
7,300.0	7,275.0	7,334.0	7,332.7	16.0	12.9	8.88	-4,297.9	468.3	4,802.0	4,775.9	26.03	184.510		
7,350.0	7,323.6	7,364.9	7,363.4	16.0	12.9	5.29	-4,297.5	470.2	4,789.9	4,764.2	25.75	186.043		
7,400.0	7,371.0	7,400.0	7,398.5	15.9	13.0	3.35	-4,297.3	472.5	4,773.9	4,748.6	25.35	188.336		
7,450.0	7,416.9	7,427.5	7,425.9	15.8	13.1	2.11	-4,297.1	474.3	4,753.9	4,729.1	24.82	191.535		
7,500.0	7,460.8	7,459.3	7,457.7	15.6	13.1	1.20	-4,297.0	476.3	4,730.2	4,706.0	24.19	195.526		
7,550.0	7,502.6	7,500.0	7,498.3	15.5	13.2	0.46	-4,297.1	478.6	4,702.8	4,679.4	23.48	200.265		
7,600.0	7,541.7	7,522.7	7,521.0	15.3	13.2	-0.18	-4,297.1	479.8	4,672.0	4,649.3	22.67	206.079		
7,650.0	7,578.1	7,555.6	7,553.8	15.2	13.3	-0.80	-4,297.3	481.4	4,637.9	4,616.1	21.82	212.580		
7,700.0	7,611.3	7,585.7	7,584.0	15.0	13.3	-1.45	-4,297.4	482.7	4,600.8	4,579.8	20.93	219.840		
7,750.0	7,641.1	7,613.4	7,611.6	14.9	13.4	-2.19	-4,297.5	483.8	4,560.9	4,540.8	20.03	227.658		
7,800.0	7,667.4	7,638.2	7,636.4	14.8	13.4	-3.10	-4,297.7	484.7	4,518.5	4,499.4	19.17	235.678		
7,850.0	7,689.8	7,659.5	7,657.7	14.7	13.4	-4.31	-4,297.8	485.4	4,474.1	4,455.7	18.39	243.290		
7,900.0	7,708.2	7,677.2	7,675.3	14.7	13.5	-6.06	-4,298.0	486.0	4,427.8	4,410.0	17.75	249.440		
7,950.0	7,722.6	7,691.0	7,689.1	14.7	13.5	-8.95	-4,298.1	486.4	4,380.1	4,362.7	17.37	252.170		
8,000.0	7,732.7	7,701.3	7,699.4	14.7	13.5	-14.63	-4,298.1	486.7	4,331.3	4,313.7	17.56	246.593		
8,050.0	7,738.5	7,710.1	7,708.3	14.8	13.5	-30.58	-4,298.2	487.0	4,281.7	4,261.7	20.02	213.903		
8,091.8	7,740.0	7,712.7	7,710.8	15.0	13.5	-81.04	-4,298.2	487.1	4,240.1	4,212.6	27.46	154.382		
8,100.0	7,740.0	7,712.8	7,710.9	15.0	13.5	-81.06	-4,298.2	487.1	4,231.8	4,204.3	27.50	153.909		
8,200.0	7,740.0	7,713.7	7,711.8	15.4	13.5	-81.30	-4,298.2	487.1	4,132.0	4,104.0	27.98	147.678		
8,300.0	7,740.0	7,714.6	7,712.8	16.1	13.5	-81.53	-4,298.2	487.1	4,032.1	4,003.5	28.65	140.752		
8,400.0	7,740.0	7,715.5	7,713.6	16.9	13.5	-81.77	-4,298.2	487.1	3,932.3	3,902.8	29.48	133.407		
8,500.0	7,740.0	7,716.4	7,714.5	17.8	13.5	-81.99	-4,298.2	487.2	3,832.4	3,802.0	30.44	125.888		
8,600.0	7,740.0	7,717.2	7,715.4	18.8	13.5	-82.22	-4,298.2	487.2	3,732.6	3,701.1	31.53	118.391		
8,700.0	7,740.0	7,718.1	7,716.2	20.0	13.5	-82.44	-4,298.2	487.2	3,632.8	3,600.1	32.71	111.059		
8,800.0	7,740.0	7,718.9	7,717.0	21.2	13.5	-82.65	-4,298.2	487.2	3,533.0	3,499.0	33.97	103.990		
8,900.0	7,740.0	7,719.7	7,717.9	22.5	13.5	-82.86	-4,298.3	487.3	3,433.1	3,397.8	35.31	97.241		
9,000.0	7,740.0	7,720.5	7,718.7	23.9	13.5	-83.07	-4,298.3	487.3	3,333.4	3,296.7	36.69	90.844		

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 2C-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 2C-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 #2	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	7,721.3	7,719.4	25.3	13.5	-83.28	-4,298.3	487.3	3,233.6	3,195.5	38.13	84.809	
9,200.0	7,740.0	7,722.1	7,720.2	26.7	13.5	-83.48	-4,298.3	487.3	3,133.8	3,094.2	39.60	79.132	
9,300.0	7,740.0	7,722.8	7,721.0	28.2	13.5	-83.67	-4,298.3	487.4	3,034.1	2,993.0	41.11	73.804	
9,400.0	7,740.0	7,723.6	7,721.7	29.7	13.5	-83.87	-4,298.3	487.4	2,934.3	2,891.7	42.65	68.808	
9,500.0	7,740.0	7,724.3	7,722.4	31.3	13.5	-84.06	-4,298.3	487.4	2,834.6	2,790.4	44.21	64.124	
9,600.0	7,740.0	7,725.0	7,723.1	32.8	13.5	-84.25	-4,298.3	487.4	2,734.9	2,689.1	45.79	59.733	
9,700.0	7,740.0	7,725.7	7,723.8	34.4	13.5	-84.43	-4,298.3	487.4	2,635.3	2,587.9	47.38	55.615	
9,800.0	7,740.0	7,726.4	7,724.5	36.0	13.5	-84.61	-4,298.3	487.5	2,535.6	2,486.6	49.00	51.749	
9,900.0	7,740.0	7,727.1	7,725.2	37.6	13.5	-84.79	-4,298.3	487.5	2,436.0	2,385.4	50.63	48.118	
10,000.0	7,740.0	7,727.7	7,725.9	39.2	13.6	-84.97	-4,298.3	487.5	2,336.4	2,284.2	52.26	44.704	
10,100.0	7,740.0	7,728.4	7,726.5	40.9	13.6	-85.14	-4,298.3	487.5	2,236.9	2,183.0	53.91	41.490	
10,200.0	7,740.0	7,729.0	7,727.2	42.5	13.6	-85.31	-4,298.3	487.5	2,137.4	2,081.8	55.57	38.461	
10,300.0	7,740.0	7,729.7	7,727.8	44.1	13.6	-85.48	-4,298.3	487.6	2,037.9	1,980.7	57.24	35.603	
10,400.0	7,740.0	7,730.3	7,728.5	45.8	13.6	-85.64	-4,298.3	487.6	1,938.5	1,879.6	58.91	32.905	
10,500.0	7,740.0	7,730.9	7,729.1	47.5	13.6	-85.80	-4,298.3	487.6	1,839.2	1,778.6	60.59	30.353	
10,600.0	7,740.0	7,731.5	7,729.7	49.1	13.6	-85.96	-4,298.3	487.6	1,739.9	1,677.6	62.28	27.937	
10,700.0	7,740.0	7,732.1	7,730.3	50.8	13.6	-86.12	-4,298.3	487.6	1,640.8	1,576.8	63.97	25.648	
10,800.0	7,740.0	7,732.7	7,730.9	52.5	13.6	-86.28	-4,298.3	487.6	1,541.7	1,476.0	65.67	23.477	
10,900.0	7,740.0	7,733.3	7,731.4	54.2	13.6	-86.43	-4,298.3	487.7	1,442.8	1,375.4	67.37	21.416	
11,000.0	7,740.0	7,733.9	7,732.0	55.9	13.6	-86.58	-4,298.3	487.7	1,344.0	1,274.9	69.07	19.458	
11,100.0	7,740.0	7,734.4	7,732.6	57.6	13.6	-86.73	-4,298.3	487.7	1,245.4	1,174.6	70.78	17.596	
11,200.0	7,740.0	7,735.0	7,733.1	59.3	13.6	-86.87	-4,298.3	487.7	1,147.1	1,074.6	72.49	15.824	
11,300.0	7,740.0	7,735.5	7,733.7	61.0	13.6	-87.01	-4,298.3	487.7	1,049.1	974.9	74.20	14.138	
11,400.0	7,740.0	7,736.1	7,734.2	62.7	13.6	-87.16	-4,298.3	487.7	951.5	875.6	75.92	12.533	
11,500.0	7,740.0	7,736.6	7,734.7	64.4	13.6	-87.29	-4,298.3	487.8	854.4	776.8	77.64	11.006	
11,600.0	7,740.0	7,737.1	7,735.3	66.1	13.6	-87.43	-4,298.3	487.8	758.2	678.8	79.36	9.554	
11,700.0	7,740.0	7,737.6	7,735.8	67.8	13.6	-87.57	-4,298.3	487.8	663.0	581.9	81.08	8.177	
11,800.0	7,740.0	7,738.1	7,736.3	69.5	13.6	-87.70	-4,298.4	487.8	569.5	486.7	82.80	6.877	
11,900.0	7,740.0	7,738.6	7,736.8	71.2	13.6	-87.83	-4,298.4	487.8	478.6	394.1	84.53	5.662	
12,000.0	7,740.0	7,739.1	7,737.3	72.9	13.6	-87.96	-4,298.4	487.8	392.2	305.9	86.26	4.546	
12,100.0	7,740.0	7,739.6	7,737.7	74.7	13.6	-88.09	-4,298.4	487.8	313.9	225.9	87.98	3.567	
12,200.0	7,740.0	7,740.1	7,738.2	76.4	13.6	-88.21	-4,298.4	487.9	251.5	161.8	89.71	2.804	
12,300.0	7,740.0	7,740.6	7,738.7	78.1	13.6	-88.34	-4,298.4	487.9	219.1	127.7	91.45	2.396	
12,326.3	7,740.0	7,740.7	7,738.8	78.6	13.6	-88.37	-4,298.4	487.9	217.5	125.6	91.90	2.367	CC, ES, SF
12,400.0	7,740.0	7,741.0	7,739.2	79.8	13.6	-88.46	-4,298.4	487.9	229.7	136.5	93.18	2.465	
12,500.0	7,740.0	7,741.5	7,739.6	81.6	13.6	-88.58	-4,298.4	487.9	278.4	183.4	94.91	2.933	
12,600.0	7,740.0	7,741.9	7,740.1	83.3	13.6	-88.70	-4,298.4	487.9	349.6	253.0	96.64	3.617	
12,700.0	7,740.0	7,742.4	7,740.5	85.0	13.6	-88.82	-4,298.4	487.9	432.4	334.0	98.38	4.395	
12,800.0	7,740.0	7,742.8	7,740.9	86.7	13.6	-88.93	-4,298.4	487.9	521.2	421.1	100.11	5.207	
12,900.0	7,740.0	7,743.2	7,741.4	88.5	13.6	-89.05	-4,298.4	487.9	613.5	511.7	101.85	6.024	
13,000.0	7,740.0	7,743.7	7,741.8	90.2	13.6	-89.16	-4,298.4	488.0	707.9	604.4	103.58	6.834	
13,100.0	7,740.0	7,744.1	7,742.2	91.9	13.6	-89.27	-4,298.4	488.0	803.7	698.4	105.32	7.631	
13,200.0	7,740.0	7,744.5	7,742.6	93.7	13.6	-89.38	-4,298.4	488.0	900.4	793.3	107.06	8.410	
13,300.0	7,740.0	7,744.9	7,743.1	95.4	13.6	-89.49	-4,298.4	488.0	997.7	888.9	108.80	9.170	
13,400.0	7,740.0	7,745.3	7,743.5	97.1	13.6	-89.60	-4,298.4	488.0	1,095.5	985.0	110.53	9.911	
13,500.0	7,740.0	7,745.7	7,743.9	98.9	13.6	-89.70	-4,298.4	488.0	1,193.7	1,081.4	112.27	10.632	
13,600.0	7,740.0	7,746.1	7,744.3	100.6	13.6	-89.81	-4,298.4	488.0	1,292.1	1,178.1	114.01	11.333	
13,700.0	7,740.0	7,746.5	7,744.7	102.3	13.6	-89.91	-4,298.4	488.0	1,390.8	1,275.1	115.75	12.016	
13,800.0	7,740.0	7,746.9	7,745.0	104.1	13.6	-90.01	-4,298.4	488.1	1,489.7	1,372.2	117.49	12.679	
13,900.0	7,740.0	7,747.3	7,745.4	105.8	13.6	-90.11	-4,298.4	488.1	1,588.6	1,469.4	119.23	13.325	
14,000.0	7,740.0	7,747.7	7,745.8	107.5	13.6	-90.21	-4,298.4	488.1	1,687.8	1,566.8	120.97	13.952	
14,100.0	7,740.0	7,748.0	7,746.2	109.3	13.6	-90.31	-4,298.4	488.1	1,787.0	1,664.3	122.71	14.563	

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 2C-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 2C-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 #2	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	
14,200.0	7,740.0	7,748.4	7,746.5	111.0	13.6	-90.40	-4,298.4	488.1	1,886.3	1,761.8	124.44	15.157	
14,300.0	7,740.0	7,748.8	7,746.9	112.8	13.6	-90.50	-4,298.4	488.1	1,985.6	1,859.4	126.18	15.736	
14,400.0	7,740.0	7,749.1	7,747.2	114.5	13.6	-90.59	-4,298.4	488.1	2,085.1	1,957.1	127.92	16.299	
14,500.0	7,740.0	7,749.5	7,747.6	116.2	13.6	-90.68	-4,298.4	488.1	2,184.5	2,054.9	129.66	16.848	
14,600.0	7,740.0	7,749.8	7,748.0	118.0	13.6	-90.78	-4,298.4	488.1	2,284.1	2,152.7	131.40	17.382	
14,700.0	7,740.0	7,750.2	7,748.3	119.7	13.6	-90.87	-4,298.4	488.1	2,383.6	2,250.5	133.14	17.903	
14,800.0	7,740.0	7,750.5	7,748.6	121.5	13.6	-90.96	-4,298.4	488.2	2,483.2	2,348.3	134.88	18.410	
14,900.0	7,740.0	7,750.8	7,749.0	123.2	13.6	-91.05	-4,298.4	488.2	2,582.9	2,446.2	136.62	18.905	
15,000.0	7,740.0	7,751.2	7,749.3	124.9	13.6	-91.13	-4,298.4	488.2	2,682.5	2,544.1	138.36	19.388	
15,100.0	7,740.0	7,751.5	7,749.6	126.7	13.6	-91.22	-4,298.4	488.2	2,782.2	2,642.1	140.10	19.858	
15,200.0	7,740.0	7,751.8	7,750.0	128.4	13.6	-91.30	-4,298.4	488.2	2,881.9	2,740.1	141.84	20.318	
15,300.0	7,740.0	7,752.1	7,750.3	130.2	13.6	-91.39	-4,298.4	488.2	2,981.6	2,838.0	143.58	20.766	
15,400.0	7,740.0	7,752.5	7,750.6	131.9	13.6	-91.47	-4,298.4	488.2	3,081.4	2,936.0	145.32	21.204	
15,500.0	7,740.0	7,752.8	7,750.9	133.7	13.6	-91.56	-4,298.4	488.2	3,181.1	3,034.1	147.06	21.632	
15,600.0	7,740.0	7,753.1	7,751.2	135.4	13.6	-91.64	-4,298.4	488.2	3,280.9	3,132.1	148.80	22.049	
15,700.0	7,740.0	7,753.4	7,751.5	137.1	13.6	-91.72	-4,298.4	488.2	3,380.7	3,230.1	150.54	22.457	
15,800.0	7,740.0	7,753.7	7,751.8	138.9	13.6	-91.80	-4,298.4	488.2	3,480.5	3,328.2	152.28	22.856	
15,900.0	7,740.0	7,754.0	7,752.1	140.6	13.6	-91.88	-4,298.4	488.3	3,580.3	3,426.3	154.01	23.246	
15,952.8	7,740.0	7,754.2	7,752.3	141.6	13.6	-91.92	-4,298.4	488.3	3,633.0	3,478.0	154.93	23.449	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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		
0.0	0.0	11.3	11.3	0.0	0.0	152.88	-2,304.0	1,180.1	2,588.7						
100.0	100.0	114.1	114.1	0.2	0.2	152.88	-2,304.0	1,180.1	2,588.6	2,588.2	0.35	7,419.960			
200.0	200.0	216.9	216.9	0.3	0.4	152.88	-2,303.8	1,180.1	2,588.4	2,587.7	0.70	3,693.071			
300.0	300.0	319.7	319.7	0.5	0.6	152.87	-2,303.4	1,180.1	2,588.1	2,587.1	1.05	2,458.101			
400.0	400.0	422.5	422.5	0.7	0.7	152.87	-2,303.0	1,180.1	2,587.7	2,586.3	1.40	1,841.923			
447.3	447.3	471.2	471.2	0.8	0.8	126.92	-2,302.7	1,180.1	2,587.6	2,586.1	1.57	1,649.195			
500.0	500.0	525.3	525.3	0.9	0.9	126.93	-2,302.4	1,180.1	2,587.8	2,586.0	1.75	1,475.112			
600.0	600.0	628.1	628.1	1.0	1.1	126.96	-2,301.7	1,180.1	2,588.7	2,586.6	2.11	1,228.233			
700.0	699.9	730.8	730.8	1.2	1.3	127.02	-2,300.8	1,180.1	2,590.6	2,588.2	2.46	1,051.053			
800.0	799.7	833.5	833.5	1.4	1.4	127.09	-2,299.9	1,180.1	2,593.5	2,590.7	2.83	917.153			
898.2	897.5	934.2	934.2	1.6	1.6	127.19	-2,298.8	1,180.2	2,597.2	2,594.0	3.19	813.741			
900.0	899.4	936.1	936.1	1.6	1.6	127.20	-2,298.8	1,180.2	2,597.3	2,594.1	3.20	812.017			
1,000.0	999.0	1,034.2	1,034.2	1.8	1.8	127.33	-2,297.7	1,180.2	2,601.6	2,598.0	3.57	729.424			
1,100.0	1,098.6	1,104.9	1,104.9	2.0	1.9	127.43	-2,297.2	1,180.5	2,606.5	2,602.6	3.89	669.699			
1,200.0	1,198.2	1,183.0	1,183.0	2.3	2.0	127.53	-2,297.5	1,181.4	2,612.6	2,608.3	4.23	617.303			
1,300.0	1,297.9	1,243.9	1,243.8	2.5	2.2	127.61	-2,298.3	1,182.6	2,619.8	2,615.2	4.54	576.605			
1,400.0	1,397.5	1,322.7	1,322.6	2.7	2.3	127.71	-2,300.1	1,184.2	2,628.0	2,623.1	4.89	537.779			
1,500.0	1,497.1	1,408.1	1,407.9	2.9	2.4	127.82	-2,302.4	1,186.3	2,636.9	2,631.6	5.24	502.961			
1,600.0	1,596.7	1,490.6	1,490.4	3.2	2.6	127.92	-2,304.9	1,188.9	2,646.3	2,640.7	5.59	472.986			
1,700.0	1,696.3	1,564.0	1,563.7	3.4	2.7	127.99	-2,307.3	1,192.1	2,656.5	2,650.6	5.93	447.772			
1,800.0	1,796.0	1,641.8	1,641.2	3.6	2.9	128.04	-2,310.0	1,196.6	2,667.6	2,661.3	6.28	424.636			
1,900.0	1,895.6	1,724.2	1,723.4	3.8	3.0	128.08	-2,313.2	1,202.5	2,679.5	2,672.9	6.64	403.489			
2,000.0	1,995.2	1,819.9	1,818.8	4.1	3.2	128.11	-2,317.1	1,209.8	2,691.8	2,684.8	7.03	383.155			
2,100.0	2,094.8	1,916.9	1,915.4	4.3	3.4	128.15	-2,321.0	1,217.2	2,704.2	2,696.8	7.41	364.726			
2,200.0	2,194.5	2,024.9	2,023.0	4.5	3.6	128.19	-2,325.4	1,225.5	2,716.5	2,708.7	7.82	347.211			
2,300.0	2,294.1	2,103.8	2,101.6	4.8	3.8	128.22	-2,328.7	1,231.4	2,728.9	2,720.7	8.18	333.574			
2,400.0	2,393.7	2,187.8	2,185.3	5.0	4.0	128.25	-2,332.7	1,238.1	2,742.1	2,733.5	8.55	320.791			
2,500.0	2,493.3	2,273.3	2,270.3	5.2	4.2	128.28	-2,337.1	1,245.1	2,755.7	2,746.7	8.92	308.952			
2,600.0	2,592.9	2,381.1	2,377.5	5.4	4.4	128.31	-2,343.0	1,254.4	2,769.7	2,760.3	9.33	296.833			
2,700.0	2,692.6	2,528.9	2,524.9	5.7	4.7	128.39	-2,350.0	1,264.7	2,782.3	2,772.5	9.81	283.502			
2,800.0	2,792.2	2,627.6	2,623.2	5.9	4.9	128.43	-2,353.7	1,271.6	2,794.0	2,783.8	10.21	273.627			
2,900.0	2,891.8	2,708.1	2,703.4	6.1	5.1	128.46	-2,356.8	1,277.6	2,806.2	2,795.6	10.57	265.417			
3,000.0	2,991.4	2,808.9	2,803.8	6.4	5.3	128.50	-2,361.4	1,285.0	2,818.8	2,807.9	10.97	256.900			
3,100.0	3,091.1	2,928.0	2,922.6	6.6	5.6	128.56	-2,366.3	1,293.2	2,830.9	2,819.5	11.41	248.211			
3,200.0	3,190.7	3,023.0	3,017.3	6.8	5.8	128.60	-2,369.9	1,299.7	2,842.7	2,830.9	11.80	240.996			
3,300.0	3,290.3	3,118.0	3,112.0	7.0	6.0	128.65	-2,373.6	1,306.3	2,854.6	2,842.4	12.18	234.295			
3,400.0	3,389.9	3,206.6	3,200.3	7.3	6.2	128.68	-2,377.3	1,312.7	2,866.9	2,854.3	12.56	228.191			
3,500.0	3,489.5	3,328.1	3,321.4	7.5	6.4	128.73	-2,381.9	1,321.5	2,878.8	2,865.8	13.00	221.363			
3,600.0	3,589.2	3,410.2	3,403.2	7.7	6.6	128.75	-2,384.9	1,327.9	2,890.8	2,877.4	13.38	216.120			
3,700.0	3,688.8	3,509.0	3,501.6	8.0	6.8	128.78	-2,388.8	1,335.5	2,903.0	2,889.3	13.77	210.761			
3,800.0	3,788.4	3,605.2	3,597.4	8.2	7.1	128.82	-2,392.9	1,342.4	2,915.4	2,901.2	14.17	205.784			
3,900.0	3,888.0	3,712.7	3,704.6	8.4	7.3	128.84	-2,396.9	1,350.9	2,927.6	2,913.0	14.59	200.665			
4,000.0	3,987.7	3,813.4	3,804.8	8.7	7.5	128.86	-2,400.4	1,359.1	2,939.6	2,924.6	15.00	196.021			
4,100.0	4,087.3	3,899.0	3,890.1	8.9	7.7	128.88	-2,403.8	1,365.6	2,951.9	2,936.5	15.37	192.036			
4,200.0	4,186.9	3,990.1	3,980.8	9.1	7.9	128.91	-2,407.7	1,373.0	2,964.6	2,948.8	15.76	188.093			
4,300.0	4,286.5	4,090.6	4,081.0	9.4	8.2	128.92	-2,411.8	1,381.3	2,977.3	2,961.1	16.17	184.136			
4,400.0	4,386.1	4,180.4	4,170.3	9.6	8.4	128.94	-2,415.7	1,388.8	2,990.2	2,973.6	16.56	180.612			
4,500.0	4,485.8	4,263.9	4,253.4	9.8	8.6	128.96	-2,419.6	1,396.0	3,003.5	2,986.6	16.93	177.390			
4,600.0	4,585.4	4,390.6	4,379.5	10.0	8.9	128.99	-2,425.5	1,406.2	3,016.6	2,999.2	17.39	173.508			
4,700.0	4,685.0	4,510.9	4,499.4	10.3	9.1	129.02	-2,430.3	1,415.7	3,028.9	3,011.1	17.83	169.848			
4,800.0	4,784.6	4,642.2	4,630.3	10.5	9.4	129.05	-2,434.5	1,425.4	3,040.5	3,022.2	18.30	166.162			
4,900.0	4,884.3	4,752.8	4,740.6	10.7	9.7	129.10	-2,437.7	1,432.5	3,051.2	3,032.5	18.72	163.016			

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 2C-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 2C-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 #2	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	
5,000.0	4,983.9	4,910.4	4,898.0	11.0	10.0	129.22	-2,442.0	1,439.2	3,061.1	3,041.9	19.20	159.448	
5,100.0	5,083.5	5,090.7	5,078.2	11.2	10.2	129.45	-2,444.6	1,440.3	3,067.9	3,048.2	19.70	155.750	
5,200.0	5,183.1	5,193.3	5,180.9	11.4	10.4	129.58	-2,445.2	1,440.3	3,074.0	3,054.0	20.07	153.150	
5,300.0	5,282.7	5,317.7	5,305.2	11.7	10.6	129.75	-2,445.6	1,439.8	3,079.7	3,059.2	20.48	150.370	
5,400.0	5,382.4	5,417.2	5,404.8	11.9	10.7	129.88	-2,445.4	1,439.2	3,084.8	3,064.0	20.85	147.958	
5,500.0	5,482.0	5,521.3	5,508.9	12.1	10.9	130.02	-2,445.2	1,438.4	3,090.0	3,068.8	21.22	145.587	
5,600.0	5,581.6	5,624.6	5,612.1	12.4	11.0	130.16	-2,445.0	1,437.5	3,095.0	3,073.4	21.60	143.297	
5,700.0	5,681.2	5,721.0	5,708.5	12.6	11.2	130.29	-2,444.7	1,436.8	3,100.1	3,078.1	21.96	141.155	
5,800.0	5,780.9	5,826.5	5,814.0	12.8	11.3	130.43	-2,444.4	1,436.0	3,105.2	3,082.8	22.34	138.993	
5,900.0	5,880.5	5,937.3	5,924.8	13.0	11.5	130.57	-2,443.7	1,435.0	3,109.9	3,087.2	22.73	136.839	
6,000.0	5,980.1	6,040.1	6,027.6	13.3	11.6	130.71	-2,443.0	1,433.8	3,114.4	3,091.3	23.10	134.831	
6,100.0	6,079.7	6,127.5	6,115.1	13.5	11.8	130.83	-2,442.4	1,432.9	3,119.1	3,095.6	23.45	133.007	
6,200.0	6,179.3	6,221.7	6,209.2	13.7	11.9	130.94	-2,441.8	1,433.0	3,124.2	3,100.4	23.81	131.186	
6,300.0	6,279.0	6,326.8	6,314.3	14.0	12.1	131.06	-2,441.0	1,432.9	3,129.2	3,105.0	24.20	129.322	
6,400.0	6,378.6	6,423.6	6,411.1	14.2	12.2	131.17	-2,440.2	1,432.9	3,134.2	3,109.6	24.57	127.583	
6,500.0	6,478.2	6,523.1	6,510.6	14.4	12.4	131.29	-2,439.5	1,432.8	3,139.2	3,114.3	24.94	125.884	
6,600.0	6,577.8	6,619.0	6,606.5	14.7	12.5	131.40	-2,438.9	1,432.6	3,144.3	3,119.0	25.30	124.269	
6,700.0	6,677.5	6,709.3	6,696.8	14.9	12.7	131.51	-2,438.6	1,432.4	3,149.7	3,124.0	25.66	122.754	
6,800.0	6,777.1	6,806.2	6,793.7	15.1	12.8	131.63	-2,438.5	1,432.2	3,155.3	3,129.2	26.02	121.244	
6,900.0	6,876.7	6,901.8	6,889.2	15.4	13.0	131.74	-2,438.4	1,432.0	3,160.9	3,134.5	26.39	119.786	
7,000.0	6,976.3	7,000.0	6,987.5	15.6	13.2	131.86	-2,438.5	1,431.9	3,166.7	3,139.9	26.76	118.354	
7,100.0	7,075.9	7,101.3	7,088.8	15.8	13.3	131.98	-2,438.5	1,431.9	3,172.5	3,145.4	27.13	116.936	
7,147.0	7,122.8	7,156.9	7,144.4	15.9	13.4	132.04	-2,438.3	1,431.9	3,175.1	3,147.8	27.32	116.222	
7,150.0	7,125.8	7,160.7	7,148.2	15.9	13.4	130.45	-2,438.3	1,431.9	3,175.3	3,148.0	27.34	116.158	
7,200.0	7,175.7	7,223.4	7,210.9	16.0	13.5	47.51	-2,437.9	1,432.1	3,175.7	3,148.1	27.53	115.349	
7,250.0	7,225.5	7,282.7	7,270.2	16.0	13.6	-1.39	-2,437.2	1,432.2	3,171.8	3,144.2	27.59	114.961	
7,300.0	7,275.0	7,330.6	7,318.1	16.0	13.7	-10.83	-2,436.6	1,432.3	3,163.9	3,136.4	27.50	115.045	
7,350.0	7,323.6	7,369.8	7,357.3	16.0	13.8	-14.86	-2,436.2	1,432.4	3,152.1	3,124.8	27.27	115.575	
7,400.0	7,371.0	7,412.9	7,400.4	15.9	13.8	-17.42	-2,435.9	1,432.4	3,136.5	3,109.6	26.94	116.437	
7,450.0	7,416.9	7,460.0	7,447.4	15.8	13.9	-19.51	-2,435.6	1,432.5	3,117.2	3,090.7	26.51	117.586	
7,500.0	7,460.8	7,502.1	7,489.6	15.6	14.0	-21.50	-2,435.3	1,432.5	3,094.4	3,068.4	26.00	119.025	
7,550.0	7,502.6	7,538.1	7,525.6	15.5	14.0	-23.58	-2,435.1	1,432.6	3,068.2	3,042.7	25.43	120.672	
7,600.0	7,541.7	7,575.5	7,563.0	15.3	14.1	-25.91	-2,434.9	1,432.7	3,038.8	3,014.0	24.85	122.297	
7,650.0	7,578.1	7,611.5	7,598.9	15.2	14.1	-28.64	-2,434.7	1,432.9	3,006.6	2,982.2	24.31	123.664	
7,700.0	7,611.3	7,644.8	7,632.3	15.0	14.2	-31.89	-2,434.5	1,433.1	2,971.6	2,947.7	23.88	124.413	
7,750.0	7,641.1	7,674.6	7,662.1	14.9	14.3	-35.82	-2,434.3	1,433.3	2,934.2	2,910.6	23.65	124.086	
7,800.0	7,667.4	7,697.9	7,685.4	14.8	14.3	-40.55	-2,434.1	1,433.5	2,894.7	2,871.1	23.67	122.277	
7,850.0	7,689.8	7,717.7	7,705.1	14.7	14.3	-46.32	-2,434.0	1,433.7	2,853.5	2,829.5	24.05	118.663	
7,900.0	7,708.2	7,733.9	7,721.4	14.7	14.4	-53.30	-2,433.9	1,433.8	2,810.9	2,786.1	24.78	113.413	
7,950.0	7,722.6	7,747.4	7,734.9	14.7	14.4	-61.62	-2,433.9	1,433.9	2,767.1	2,741.3	25.80	107.262	
8,000.0	7,732.7	7,757.5	7,744.9	14.7	14.4	-71.15	-2,433.8	1,433.9	2,722.6	2,695.8	26.85	101.402	
8,050.0	7,738.5	7,763.1	7,750.6	14.8	14.4	-81.41	-2,433.8	1,434.0	2,677.7	2,650.1	27.62	96.950	
8,091.8	7,740.0	7,764.5	7,752.0	15.0	14.4	-90.05	-2,433.8	1,434.0	2,640.2	2,612.3	27.87	94.726	
8,100.0	7,740.0	7,764.5	7,752.0	15.0	14.4	-90.05	-2,433.8	1,434.0	2,632.8	2,604.9	27.90	94.358	
8,200.0	7,740.0	7,764.2	7,751.6	15.4	14.4	-90.03	-2,433.8	1,434.0	2,543.5	2,515.1	28.38	89.628	
8,300.0	7,740.0	7,763.8	7,751.3	16.1	14.4	-90.01	-2,433.8	1,434.0	2,455.0	2,425.9	29.04	84.534	
8,400.0	7,740.0	7,763.5	7,750.9	16.9	14.4	-90.00	-2,433.8	1,434.0	2,367.4	2,337.5	29.87	79.262	
8,500.0	7,740.0	7,763.1	7,750.6	17.8	14.4	-89.98	-2,433.8	1,434.0	2,280.8	2,250.0	30.83	73.969	
8,600.0	7,740.0	7,762.8	7,750.3	18.8	14.4	-89.96	-2,433.8	1,434.0	2,195.4	2,163.5	31.92	68.780	
8,700.0	7,740.0	7,762.4	7,749.9	20.0	14.4	-89.95	-2,433.8	1,434.0	2,111.3	2,078.2	33.10	63.780	
8,800.0	7,740.0	7,762.1	7,749.6	21.2	14.4	-89.93	-2,433.8	1,434.0	2,028.6	1,994.2	34.37	59.028	
8,900.0	7,740.0	7,761.8	7,749.2	22.5	14.4	-89.91	-2,433.8	1,434.0	1,947.5	1,911.8	35.70	54.556	

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 2C-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 2C-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 #2	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	7,761.4	7,748.9	23.9	14.4	-89.90	-2,433.8	1,434.0	1,868.3	1,831.2	37.08	50.379	
9,100.0	7,740.0	7,761.1	7,748.5	25.3	14.4	-89.88	-2,433.8	1,434.0	1,791.1	1,752.6	38.52	46.501	
9,200.0	7,740.0	7,760.7	7,748.2	26.7	14.4	-89.86	-2,433.8	1,433.9	1,716.3	1,676.3	39.99	42.918	
9,300.0	7,740.0	7,760.4	7,747.9	28.2	14.4	-89.85	-2,433.8	1,433.9	1,644.2	1,602.7	41.50	39.624	
9,400.0	7,740.0	7,760.1	7,747.5	29.7	14.4	-89.83	-2,433.8	1,433.9	1,575.1	1,532.1	43.03	36.607	
9,500.0	7,740.0	7,759.7	7,747.2	31.3	14.4	-89.81	-2,433.8	1,433.9	1,509.5	1,465.0	44.58	33.858	
9,600.0	7,740.0	7,759.4	7,746.8	32.8	14.4	-89.79	-2,433.8	1,433.9	1,447.9	1,401.7	46.16	31.367	
9,700.0	7,740.0	7,759.0	7,746.5	34.4	14.4	-89.78	-2,433.8	1,433.9	1,390.7	1,342.9	47.75	29.122	
9,800.0	7,740.0	7,758.7	7,746.2	36.0	14.4	-89.76	-2,433.8	1,433.9	1,338.5	1,289.2	49.36	27.117	
9,900.0	7,740.0	7,758.3	7,745.8	37.6	14.4	-89.74	-2,433.8	1,433.9	1,292.0	1,241.0	50.98	25.342	
10,000.0	7,740.0	7,758.0	7,745.5	39.2	14.4	-89.73	-2,433.8	1,433.9	1,251.8	1,199.2	52.62	23.791	
10,100.0	7,740.0	7,757.7	7,745.1	40.9	14.4	-89.71	-2,433.8	1,433.9	1,218.4	1,164.2	54.26	22.456	
10,200.0	7,740.0	7,757.3	7,744.8	42.5	14.4	-89.69	-2,433.8	1,433.9	1,192.6	1,136.7	55.91	21.330	
10,300.0	7,740.0	7,757.0	7,744.5	44.1	14.4	-89.68	-2,433.8	1,433.9	1,174.7	1,117.1	57.57	20.404	
10,400.0	7,740.0	7,756.6	7,744.1	45.8	14.4	-89.66	-2,433.8	1,433.9	1,165.1	1,105.9	59.24	19.669	
10,461.8	7,740.0	7,756.4	7,743.9	46.8	14.4	-89.65	-2,433.8	1,433.9	1,163.5	1,103.2	60.27	19.304 CC	
10,500.0	7,740.0	7,756.3	7,743.8	47.5	14.4	-89.64	-2,433.8	1,433.9	1,164.1	1,103.2	60.91	19.112 ES	
10,600.0	7,740.0	7,756.0	7,743.4	49.1	14.4	-89.63	-2,433.8	1,433.9	1,171.7	1,109.1	62.59	18.720	
10,700.0	7,740.0	7,755.6	7,743.1	50.8	14.4	-89.61	-2,433.8	1,433.9	1,187.6	1,123.4	64.27	18.478	
10,800.0	7,740.0	7,755.3	7,742.8	52.5	14.4	-89.59	-2,433.8	1,433.9	1,211.7	1,145.7	65.96	18.369 SF	
10,900.0	7,740.0	7,755.0	7,742.4	54.2	14.4	-89.58	-2,433.8	1,433.9	1,243.3	1,175.6	67.65	18.377	
11,000.0	7,740.0	7,754.6	7,742.1	55.9	14.4	-89.56	-2,433.8	1,433.9	1,282.0	1,212.6	69.35	18.485	
11,100.0	7,740.0	7,754.3	7,741.7	57.6	14.4	-89.54	-2,433.9	1,433.9	1,327.0	1,256.0	71.05	18.677	
11,200.0	7,740.0	7,753.9	7,741.4	59.3	14.4	-89.53	-2,433.9	1,433.9	1,377.9	1,305.2	72.75	18.940	
11,300.0	7,740.0	7,753.6	7,741.1	61.0	14.4	-89.51	-2,433.9	1,433.9	1,434.0	1,359.5	74.46	19.259	
11,400.0	7,740.0	7,753.3	7,740.7	62.7	14.4	-89.49	-2,433.9	1,433.9	1,494.6	1,418.5	76.17	19.623	
11,500.0	7,740.0	7,752.9	7,740.4	64.4	14.4	-89.48	-2,433.9	1,433.9	1,559.4	1,481.5	77.88	20.023	
11,600.0	7,740.0	7,752.6	7,740.1	66.1	14.4	-89.46	-2,433.9	1,433.9	1,627.7	1,548.1	79.59	20.450	
11,700.0	7,740.0	7,752.2	7,739.7	67.8	14.4	-89.44	-2,433.9	1,433.9	1,699.1	1,617.8	81.31	20.897	
11,800.0	7,740.0	7,751.9	7,739.4	69.5	14.4	-89.43	-2,433.9	1,433.9	1,773.3	1,690.3	83.02	21.359	
11,900.0	7,740.0	7,751.6	7,739.0	71.2	14.4	-89.41	-2,433.9	1,433.9	1,849.9	1,765.2	84.74	21.830	
12,000.0	7,740.0	7,751.2	7,738.7	72.9	14.4	-89.39	-2,433.9	1,433.9	1,928.7	1,842.2	86.46	22.307	
12,100.0	7,740.0	7,750.9	7,738.4	74.7	14.4	-89.38	-2,433.9	1,433.9	2,009.3	1,921.2	88.18	22.786	
12,200.0	7,740.0	7,750.6	7,738.0	76.4	14.4	-89.36	-2,433.9	1,433.9	2,091.7	2,001.8	89.91	23.265	
12,300.0	7,740.0	7,750.2	7,737.7	78.1	14.4	-89.34	-2,433.9	1,433.9	2,175.5	2,083.9	91.63	23.742	
12,400.0	7,740.0	7,749.9	7,737.4	79.8	14.4	-89.33	-2,433.9	1,433.9	2,260.6	2,167.3	93.36	24.215	
12,500.0	7,740.0	7,749.6	7,737.0	81.6	14.4	-89.31	-2,433.9	1,433.9	2,346.9	2,251.8	95.08	24.683	
12,600.0	7,740.0	7,749.2	7,736.7	83.3	14.4	-89.29	-2,433.9	1,433.9	2,434.3	2,337.5	96.81	25.144	
12,700.0	7,740.0	7,748.9	7,736.4	85.0	14.4	-89.28	-2,433.9	1,433.9	2,522.6	2,424.0	98.54	25.599	
12,800.0	7,740.0	7,748.5	7,736.0	86.7	14.4	-89.26	-2,433.9	1,433.9	2,611.7	2,511.4	100.27	26.046	
12,900.0	7,740.0	7,748.2	7,735.7	88.5	14.4	-89.25	-2,433.9	1,433.9	2,701.6	2,599.6	102.00	26.486	
13,000.0	7,740.0	7,747.9	7,735.3	90.2	14.4	-89.23	-2,433.9	1,433.9	2,792.2	2,688.4	103.73	26.917	
13,100.0	7,740.0	7,747.5	7,735.0	91.9	14.4	-89.21	-2,433.9	1,433.9	2,883.4	2,777.9	105.47	27.339	
13,200.0	7,740.0	7,747.2	7,734.7	93.7	14.4	-89.20	-2,433.9	1,433.9	2,975.1	2,867.9	107.20	27.753	
13,300.0	7,740.0	7,746.9	7,734.3	95.4	14.4	-89.18	-2,433.9	1,433.9	3,067.4	2,958.5	108.93	28.159	
13,400.0	7,740.0	7,746.5	7,734.0	97.1	14.4	-89.16	-2,433.9	1,433.9	3,160.2	3,049.5	110.67	28.556	
13,500.0	7,740.0	7,746.2	7,733.7	98.9	14.4	-89.15	-2,433.9	1,433.9	3,253.4	3,141.0	112.40	28.944	
13,600.0	7,740.0	7,745.9	7,733.3	100.6	14.4	-89.13	-2,433.9	1,433.9	3,346.9	3,232.8	114.14	29.324	
13,700.0	7,740.0	7,745.5	7,733.0	102.3	14.4	-89.11	-2,433.9	1,433.9	3,440.9	3,325.0	115.87	29.695	
13,800.0	7,740.0	7,745.2	7,732.7	104.1	14.4	-89.10	-2,433.9	1,433.9	3,535.2	3,417.5	117.61	30.058	
13,900.0	7,740.0	7,744.9	7,732.3	105.8	14.4	-89.08	-2,433.9	1,433.9	3,629.7	3,510.4	119.35	30.413	
14,000.0	7,740.0	7,744.5	7,732.0	107.5	14.4	-89.06	-2,433.9	1,433.9	3,724.6	3,603.5	121.09	30.760	

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 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 24-7 (EXISTING) - ENCANA WELL - SUR												Offset Well Error:	0.0 ft
Survey Program: 1024-MWD													
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	7,744.2	7,731.7	109.3	14.4	-89.05	-2,433.9	1,433.8	3,819.7	3,696.9	122.83	31.099	
14,200.0	7,740.0	7,743.9	7,731.3	111.0	14.4	-89.03	-2,433.9	1,433.8	3,915.1	3,790.5	124.56	31.430	
14,300.0	7,740.0	7,743.5	7,731.0	112.8	14.4	-89.01	-2,433.9	1,433.8	4,010.7	3,884.4	126.30	31.754	
14,400.0	7,740.0	7,743.2	7,730.7	114.5	14.4	-89.00	-2,433.9	1,433.8	4,106.5	3,978.4	128.04	32.071	
14,500.0	7,740.0	7,742.9	7,730.3	116.2	14.4	-88.98	-2,433.9	1,433.8	4,202.5	4,072.7	129.78	32.381	
14,600.0	7,740.0	7,742.5	7,730.0	118.0	14.4	-88.96	-2,433.9	1,433.8	4,298.6	4,167.1	131.52	32.684	
14,700.0	7,740.0	7,742.2	7,729.7	119.7	14.4	-88.95	-2,433.9	1,433.8	4,395.0	4,261.7	133.26	32.980	
14,800.0	7,740.0	7,741.9	7,729.3	121.5	14.4	-88.93	-2,433.9	1,433.8	4,491.5	4,356.5	135.00	33.269	
14,900.0	7,740.0	7,741.5	7,729.0	123.2	14.4	-88.92	-2,433.9	1,433.8	4,588.2	4,451.4	136.75	33.553	
15,000.0	7,740.0	7,741.2	7,728.7	124.9	14.4	-88.90	-2,433.9	1,433.8	4,685.0	4,546.5	138.49	33.830	
15,100.0	7,740.0	7,740.9	7,728.3	126.7	14.4	-88.88	-2,433.9	1,433.8	4,781.9	4,641.7	140.23	34.101	
15,200.0	7,740.0	7,740.0	7,727.5	128.4	14.4	-88.84	-2,433.9	1,433.8	4,879.0	4,737.0	141.97	34.366	
15,300.0	7,740.0	7,740.0	7,727.5	130.2	14.4	-88.84	-2,433.9	1,433.8	4,976.1	4,832.4	143.71	34.626	
15,400.0	7,740.0	7,739.8	7,727.2	131.9	14.4	-88.83	-2,433.9	1,433.8	5,073.4	4,928.0	145.46	34.879	
15,500.0	7,740.0	7,739.2	7,726.7	133.7	14.4	-88.80	-2,433.9	1,433.8	5,170.8	5,023.6	147.20	35.128	
15,600.0	7,740.0	7,738.6	7,726.1	135.4	14.4	-88.77	-2,433.9	1,433.8	5,268.3	5,119.3	148.94	35.372	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	152.90	-2,304.8	1,179.2	2,588.9					
100.0	100.0	95.0	95.0	0.2	0.2	152.90	-2,304.8	1,179.2	2,588.9	2,588.6	0.32	8,145.150		
200.0	200.0	195.0	195.0	0.3	0.3	152.90	-2,304.8	1,179.2	2,588.9	2,588.3	0.67	3,881.953		
300.0	300.0	295.0	295.0	0.5	0.5	152.90	-2,304.8	1,179.2	2,588.9	2,587.9	1.02	2,548.211		
400.0	400.0	395.0	395.0	0.7	0.7	152.90	-2,304.8	1,179.2	2,588.9	2,587.6	1.37	1,896.590		
500.0	500.0	495.0	495.0	0.9	0.9	126.97	-2,304.8	1,179.2	2,589.4	2,587.7	1.71	1,510.424		
600.0	600.0	595.0	595.0	1.0	1.0	127.00	-2,304.8	1,179.2	2,591.0	2,589.0	2.07	1,254.472		
700.0	699.9	694.9	694.9	1.2	1.2	127.05	-2,304.8	1,179.2	2,593.6	2,591.2	2.42	1,071.680		
800.0	799.7	794.7	794.7	1.4	1.4	127.13	-2,304.8	1,179.2	2,597.3	2,594.6	2.78	934.044		
898.2	897.5	892.5	892.5	1.6	1.6	127.23	-2,304.8	1,179.2	2,602.0	2,598.8	3.14	828.052		
900.0	899.4	894.4	894.4	1.6	1.6	127.23	-2,304.8	1,179.2	2,602.1	2,598.9	3.15	826.288		
1,000.0	999.0	994.0	994.0	1.8	1.7	127.38	-2,304.8	1,179.2	2,607.4	2,603.8	3.52	740.335		
1,100.0	1,098.6	1,093.6	1,093.6	2.0	1.9	127.54	-2,304.8	1,179.2	2,612.7	2,608.8	3.90	670.414		
1,200.0	1,198.2	1,193.2	1,193.2	2.3	2.1	127.69	-2,304.8	1,179.2	2,618.0	2,613.7	4.27	612.533		
1,300.0	1,297.9	1,292.9	1,292.9	2.5	2.3	127.84	-2,304.8	1,179.2	2,623.3	2,618.6	4.65	563.892		
1,400.0	1,397.5	1,392.5	1,392.5	2.7	2.4	127.98	-2,304.8	1,179.2	2,628.6	2,623.6	5.03	522.478		
1,500.0	1,497.1	1,492.1	1,492.1	2.9	2.6	128.13	-2,304.8	1,179.2	2,634.0	2,628.6	5.41	486.815		
1,600.0	1,596.7	1,591.7	1,591.7	3.2	2.8	128.28	-2,304.8	1,179.2	2,639.4	2,633.6	5.79	455.798		
1,700.0	1,696.3	1,691.3	1,691.3	3.4	3.0	128.43	-2,304.8	1,179.2	2,644.8	2,638.6	6.17	428.583		
1,800.0	1,796.0	1,791.0	1,791.0	3.6	3.1	128.58	-2,304.8	1,179.2	2,650.2	2,643.7	6.55	404.520		
1,900.0	1,895.6	1,890.6	1,890.6	3.8	3.3	128.72	-2,304.8	1,179.2	2,655.6	2,648.7	6.93	383.094		
2,000.0	1,995.2	1,990.2	1,990.2	4.1	3.5	128.87	-2,304.8	1,179.2	2,661.1	2,653.8	7.31	363.898		
2,100.0	2,094.8	2,089.8	2,089.8	4.3	3.6	129.01	-2,304.8	1,179.2	2,666.6	2,658.9	7.69	346.604		
2,200.0	2,194.5	2,189.5	2,189.5	4.5	3.8	129.16	-2,304.8	1,179.2	2,672.1	2,664.0	8.07	330.945		
2,300.0	2,294.1	2,289.1	2,289.1	4.8	4.0	129.30	-2,304.8	1,179.2	2,677.6	2,669.1	8.45	316.699		
2,400.0	2,393.7	2,388.7	2,388.7	5.0	4.2	129.44	-2,304.8	1,179.2	2,683.1	2,674.2	8.84	303.687		
2,500.0	2,493.3	2,488.3	2,488.3	5.2	4.3	129.59	-2,304.8	1,179.2	2,688.6	2,679.4	9.22	291.754		
2,600.0	2,592.9	2,587.9	2,587.9	5.4	4.5	129.73	-2,304.8	1,179.2	2,694.2	2,684.6	9.60	280.772		
2,700.0	2,692.6	2,687.6	2,687.6	5.7	4.7	129.87	-2,304.8	1,179.2	2,699.7	2,689.8	9.98	270.634		
2,800.0	2,792.2	2,787.2	2,787.2	5.9	4.9	130.01	-2,304.8	1,179.2	2,705.3	2,695.0	10.36	261.245		
2,900.0	2,891.8	2,886.8	2,886.8	6.1	5.0	130.15	-2,304.8	1,179.2	2,710.9	2,700.2	10.74	252.526		
3,000.0	2,991.4	2,986.4	2,986.4	6.4	5.2	130.29	-2,304.8	1,179.2	2,716.6	2,705.4	11.11	244.408		
3,100.0	3,091.1	3,086.1	3,086.1	6.6	5.4	130.43	-2,304.8	1,179.2	2,722.2	2,710.7	11.49	236.832		
3,200.0	3,190.7	3,185.7	3,185.7	6.8	5.6	130.57	-2,304.8	1,179.2	2,727.8	2,716.0	11.87	229.744		
3,300.0	3,290.3	3,285.3	3,285.3	7.0	5.7	130.71	-2,304.8	1,179.2	2,733.5	2,721.3	12.25	223.100		
3,400.0	3,389.9	3,384.9	3,384.9	7.3	5.9	130.84	-2,304.8	1,179.2	2,739.2	2,726.6	12.63	216.860		
3,500.0	3,489.5	3,484.5	3,484.5	7.5	6.1	130.98	-2,304.8	1,179.2	2,744.9	2,731.9	13.01	210.988		
3,600.0	3,589.2	3,584.2	3,584.2	7.7	6.3	131.12	-2,304.8	1,179.2	2,750.6	2,737.2	13.39	205.452		
3,700.0	3,688.8	3,683.8	3,683.8	8.0	6.4	131.25	-2,304.8	1,179.2	2,756.3	2,742.6	13.77	200.224		
3,800.0	3,788.4	3,783.4	3,783.4	8.2	6.6	131.39	-2,304.8	1,179.2	2,762.1	2,747.9	14.14	195.280		
3,900.0	3,888.0	3,883.0	3,883.0	8.4	6.8	131.52	-2,304.8	1,179.2	2,767.8	2,753.3	14.52	190.597		
4,000.0	3,987.7	3,982.7	3,982.7	8.7	7.0	131.66	-2,304.8	1,179.2	2,773.6	2,758.7	14.90	186.155		
4,100.0	4,087.3	4,082.3	4,082.3	8.9	7.1	131.79	-2,304.8	1,179.2	2,779.4	2,764.1	15.28	181.937		
4,200.0	4,186.9	4,181.9	4,181.9	9.1	7.3	131.92	-2,304.8	1,179.2	2,785.2	2,769.6	15.65	177.925		
4,300.0	4,286.5	4,281.5	4,281.5	9.4	7.5	132.05	-2,304.8	1,179.2	2,791.0	2,775.0	16.03	174.105		
4,400.0	4,386.1	4,381.1	4,381.1	9.6	7.6	132.19	-2,304.8	1,179.2	2,796.9	2,780.5	16.41	170.464		
4,500.0	4,485.8	4,480.8	4,480.8	9.8	7.8	132.32	-2,304.8	1,179.2	2,802.7	2,785.9	16.78	166.990		
4,600.0	4,585.4	4,580.4	4,580.4	10.0	8.0	132.45	-2,304.8	1,179.2	2,808.6	2,791.4	17.16	163.670		
4,700.0	4,685.0	4,680.0	4,680.0	10.3	8.2	132.58	-2,304.8	1,179.2	2,814.5	2,796.9	17.54	160.496		
4,800.0	4,784.6	4,779.6	4,779.6	10.5	8.3	132.71	-2,304.8	1,179.2	2,820.4	2,802.5	17.91	157.458		
4,900.0	4,884.3	4,879.3	4,879.3	10.7	8.5	132.84	-2,304.8	1,179.2	2,826.3	2,808.0	18.29	154.548		
5,000.0	4,983.9	4,978.9	4,978.9	11.0	8.7	132.97	-2,304.8	1,179.2	2,832.2	2,813.5	18.66	151.757		

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 2C-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 2C-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 #2	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	
5,100.0	5,083.5	5,078.5	5,078.5	11.2	8.9	133.09	-2,304.8	1,179.2	2,838.1	2,819.1	19.04	149.079	
5,200.0	5,183.1	5,178.1	5,178.1	11.4	9.0	133.22	-2,304.8	1,179.2	2,844.1	2,824.7	19.41	146.506	
5,300.0	5,282.7	5,277.7	5,277.7	11.7	9.2	133.35	-2,304.8	1,179.2	2,850.1	2,830.3	19.79	144.033	
5,400.0	5,382.4	5,377.4	5,377.4	11.9	9.4	133.47	-2,304.8	1,179.2	2,856.0	2,835.9	20.16	141.655	
5,500.0	5,482.0	5,477.0	5,477.0	12.1	9.6	133.60	-2,304.8	1,179.2	2,862.0	2,841.5	20.54	139.365	
5,600.0	5,581.6	5,576.6	5,576.6	12.4	9.7	133.73	-2,304.8	1,179.2	2,868.0	2,847.1	20.91	137.159	
5,700.0	5,681.2	5,676.2	5,676.2	12.6	9.9	133.85	-2,304.8	1,179.2	2,874.1	2,852.8	21.28	135.033	
5,800.0	5,780.9	5,775.9	5,775.9	12.8	10.1	133.97	-2,304.8	1,179.2	2,880.1	2,858.4	21.66	132.983	
5,900.0	5,880.5	5,875.5	5,875.5	13.0	10.3	134.10	-2,304.8	1,179.2	2,886.1	2,864.1	22.03	131.003	
6,000.0	5,980.1	5,975.1	5,975.1	13.3	10.4	134.22	-2,304.8	1,179.2	2,892.2	2,869.8	22.40	129.092	
6,100.0	6,079.7	6,074.7	6,074.7	13.5	10.6	134.34	-2,304.8	1,179.2	2,898.3	2,875.5	22.78	127.244	
6,200.0	6,179.3	6,174.3	6,174.3	13.7	10.8	134.47	-2,304.8	1,179.2	2,904.4	2,881.2	23.15	125.459	
6,300.0	6,279.0	6,274.0	6,274.0	14.0	11.0	134.59	-2,304.8	1,179.2	2,910.5	2,886.9	23.52	123.731	
6,400.0	6,378.6	6,373.6	6,373.6	14.2	11.1	134.71	-2,304.8	1,179.2	2,916.6	2,892.7	23.89	122.059	
6,500.0	6,478.2	6,473.2	6,473.2	14.4	11.3	134.83	-2,304.8	1,179.2	2,922.7	2,898.4	24.27	120.439	
6,600.0	6,577.8	6,572.8	6,572.8	14.7	11.5	134.95	-2,304.8	1,179.2	2,928.8	2,904.2	24.64	118.871	
6,700.0	6,677.5	6,672.5	6,672.5	14.9	11.6	135.07	-2,304.8	1,179.2	2,935.0	2,910.0	25.01	117.350	
6,800.0	6,777.1	6,772.1	6,772.1	15.1	11.8	135.19	-2,304.8	1,179.2	2,941.2	2,915.8	25.38	115.875	
6,900.0	6,876.7	6,871.7	6,871.7	15.4	12.0	135.31	-2,304.8	1,179.2	2,947.3	2,921.6	25.75	114.444	
7,000.0	6,976.3	6,971.3	6,971.3	15.6	12.2	135.43	-2,304.8	1,179.2	2,953.5	2,927.4	26.12	113.056	
7,100.0	7,075.9	7,070.9	7,070.9	15.8	12.3	135.54	-2,304.8	1,179.2	2,959.7	2,933.2	26.50	111.707	
7,147.0	7,122.8	7,117.8	7,117.8	15.9	12.4	135.60	-2,304.8	1,179.2	2,962.7	2,936.0	26.67	111.087	
7,150.0	7,125.8	7,120.8	7,120.8	15.9	12.4	134.00	-2,304.8	1,179.2	2,962.8	2,936.2	26.68	111.038	
7,200.0	7,175.7	7,170.7	7,170.7	16.0	12.5	51.07	-2,304.8	1,179.2	2,963.6	2,936.8	26.83	110.446	
7,250.0	7,225.5	7,220.5	7,220.5	16.0	12.6	2.23	-2,304.8	1,179.2	2,960.3	2,933.4	26.86	110.219	
7,300.0	7,275.0	7,270.0	7,270.0	16.0	12.7	-7.14	-2,304.8	1,179.2	2,952.8	2,926.1	26.76	110.351	
7,350.0	7,323.6	7,318.6	7,318.6	16.0	12.8	-11.08	-2,304.8	1,179.2	2,941.3	2,914.8	26.54	110.833	
7,400.0	7,371.0	7,366.0	7,366.0	15.9	12.9	-13.53	-2,304.8	1,179.2	2,925.8	2,899.6	26.20	111.652	
7,450.0	7,416.9	7,411.9	7,411.9	15.8	12.9	-15.46	-2,304.8	1,179.2	2,906.5	2,880.7	25.77	112.784	
7,500.0	7,460.8	7,455.8	7,455.8	15.6	13.0	-17.27	-2,304.8	1,179.2	2,883.5	2,858.2	25.25	114.186	
7,550.0	7,502.6	7,497.6	7,497.6	15.5	13.1	-19.15	-2,304.8	1,179.2	2,856.9	2,832.3	24.68	115.781	
7,600.0	7,541.7	7,536.7	7,536.7	15.3	13.2	-21.25	-2,304.8	1,179.2	2,827.1	2,803.1	24.07	117.439	
7,650.0	7,578.1	7,573.1	7,573.1	15.2	13.2	-23.69	-2,304.8	1,179.2	2,794.2	2,770.8	23.49	118.945	
7,700.0	7,611.3	7,606.3	7,606.3	15.0	13.3	-26.63	-2,304.8	1,179.2	2,758.6	2,735.6	22.99	119.967	
7,750.0	7,641.1	7,636.1	7,636.1	14.9	13.3	-30.24	-2,304.8	1,179.2	2,720.4	2,697.7	22.66	120.036	
7,800.0	7,667.4	7,662.4	7,662.4	14.8	13.4	-34.74	-2,304.8	1,179.2	2,680.0	2,657.4	22.60	118.587	
7,850.0	7,689.8	7,684.8	7,684.8	14.7	13.4	-40.42	-2,304.8	1,179.2	2,637.8	2,614.9	22.91	115.119	
7,900.0	7,708.2	7,703.2	7,703.2	14.7	13.4	-47.61	-2,304.8	1,179.2	2,594.0	2,570.3	23.68	109.537	
7,950.0	7,722.6	7,717.6	7,717.6	14.7	13.5	-56.58	-2,304.8	1,179.2	2,549.0	2,524.1	24.87	102.500	
8,000.0	7,732.7	7,727.7	7,727.7	14.7	13.5	-67.39	-2,304.8	1,179.2	2,503.2	2,477.0	26.23	95.441	
8,050.0	7,738.5	7,733.5	7,733.5	14.8	13.5	-79.56	-2,304.8	1,179.2	2,456.9	2,429.6	27.30	89.983	
8,091.8	7,740.0	7,735.0	7,735.0	15.0	13.5	-90.00	-2,304.8	1,179.2	2,418.2	2,390.5	27.68	87.368	
8,100.0	7,740.0	7,735.0	7,735.0	15.0	13.5	-90.00	-2,304.8	1,179.2	2,410.6	2,382.9	27.71	86.998	
8,200.0	7,740.0	7,735.0	7,735.0	15.4	13.5	-90.00	-2,304.8	1,179.2	2,318.2	2,290.1	28.18	82.251	
8,300.0	7,740.0	7,735.0	7,735.0	16.1	13.5	-90.00	-2,304.8	1,179.2	2,226.6	2,197.7	28.85	77.183	
8,400.0	7,740.0	7,735.0	7,735.0	16.9	13.5	-90.00	-2,304.8	1,179.2	2,135.7	2,106.0	29.68	71.969	
8,500.0	7,740.0	7,735.0	7,735.0	17.8	13.5	-90.00	-2,304.8	1,179.2	2,045.6	2,015.0	30.64	66.758	
8,600.0	7,740.0	7,735.0	7,735.0	18.8	13.5	-90.00	-2,304.8	1,179.2	1,956.6	1,924.8	31.73	61.667	
8,700.0	7,740.0	7,735.0	7,735.0	20.0	13.5	-90.00	-2,304.8	1,179.2	1,868.6	1,835.7	32.91	56.776	
8,800.0	7,740.0	7,735.0	7,735.0	21.2	13.5	-90.00	-2,304.8	1,179.2	1,781.9	1,747.7	34.18	52.139	
8,900.0	7,740.0	7,735.0	7,735.0	22.5	13.5	-90.00	-2,304.8	1,179.2	1,696.6	1,661.1	35.51	47.782	
9,000.0	7,740.0	7,735.0	7,735.0	23.9	13.5	-90.00	-2,304.8	1,179.2	1,613.1	1,576.2	36.89	43.721	

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 2C-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 2C-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 #2	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		
9,100.0	7,740.0	7,735.0	7,735.0	25.3	13.5	-90.00	-2,304.8	1,179.2	1,531.5	1,493.2	38.33	39.956		
9,200.0	7,740.0	7,735.0	7,735.0	26.7	13.5	-90.00	-2,304.8	1,179.2	1,452.2	1,412.4	39.80	36.486		
9,300.0	7,740.0	7,735.0	7,735.0	28.2	13.5	-90.00	-2,304.8	1,179.2	1,375.6	1,334.3	41.31	33.303		
9,400.0	7,740.0	7,735.0	7,735.0	29.7	13.5	-90.00	-2,304.8	1,179.2	1,302.2	1,259.4	42.84	30.398		
9,500.0	7,740.0	7,735.0	7,735.0	31.3	13.5	-90.00	-2,304.8	1,179.2	1,232.6	1,188.2	44.40	27.763		
9,600.0	7,740.0	7,735.0	7,735.0	32.8	13.5	-90.00	-2,304.8	1,179.2	1,167.4	1,121.4	45.97	25.392		
9,700.0	7,740.0	7,735.0	7,735.0	34.4	13.5	-90.00	-2,304.8	1,179.2	1,107.3	1,059.8	47.57	23.279		
9,800.0	7,740.0	7,735.0	7,735.0	36.0	13.5	-90.00	-2,304.8	1,179.2	1,053.4	1,004.2	49.18	21.421		
9,900.0	7,740.0	7,735.0	7,735.0	37.6	13.5	-90.00	-2,304.8	1,179.2	1,006.5	955.7	50.80	19.814		
10,000.0	7,740.0	7,735.0	7,735.0	39.2	13.5	-90.00	-2,304.8	1,179.2	967.8	915.3	52.43	18.458		
10,100.0	7,740.0	7,735.0	7,735.0	40.9	13.5	-90.00	-2,304.8	1,179.2	938.1	884.0	54.08	17.348		
10,200.0	7,740.0	7,735.0	7,735.0	42.5	13.5	-90.00	-2,304.8	1,179.2	918.4	862.7	55.73	16.480		
10,300.0	7,740.0	7,735.0	7,735.0	44.1	13.5	-90.00	-2,304.8	1,179.2	909.4	852.0	57.39	15.846		
10,332.7	7,740.0	7,735.0	7,735.0	44.7	13.5	-90.00	-2,304.8	1,179.2	908.8	850.9	57.93	15.687 CC, ES		
10,400.0	7,740.0	7,735.0	7,735.0	45.8	13.5	-90.00	-2,304.8	1,179.2	911.3	852.2	59.06	15.431		
10,500.0	7,740.0	7,735.0	7,735.0	47.5	13.5	-90.00	-2,304.8	1,179.2	924.1	863.3	60.73	15.216		
10,600.0	7,740.0	7,735.0	7,735.0	49.1	13.5	-90.00	-2,304.8	1,179.2	947.3	884.9	62.41	15.179 SF		
10,700.0	7,740.0	7,735.0	7,735.0	50.8	13.5	-90.00	-2,304.8	1,179.2	980.2	916.1	64.09	15.294		
10,800.0	7,740.0	7,735.0	7,735.0	52.5	13.5	-90.00	-2,304.8	1,179.2	1,021.9	956.1	65.78	15.535		
10,900.0	7,740.0	7,735.0	7,735.0	54.2	13.5	-90.00	-2,304.8	1,179.2	1,071.3	1,003.9	67.48	15.877		
11,000.0	7,740.0	7,735.0	7,735.0	55.9	13.5	-90.00	-2,304.8	1,179.2	1,127.5	1,058.3	69.17	16.300		
11,100.0	7,740.0	7,735.0	7,735.0	57.6	13.5	-90.00	-2,304.8	1,179.2	1,189.4	1,118.5	70.87	16.782		
11,200.0	7,740.0	7,735.0	7,735.0	59.3	13.5	-90.00	-2,304.8	1,179.2	1,256.2	1,183.7	72.58	17.309		
11,300.0	7,740.0	7,735.0	7,735.0	61.0	13.5	-90.00	-2,304.8	1,179.2	1,327.2	1,253.0	74.28	17.868		
11,400.0	7,740.0	7,735.0	7,735.0	62.7	13.5	-90.00	-2,304.8	1,179.2	1,401.8	1,325.8	75.99	18.447		
11,500.0	7,740.0	7,735.0	7,735.0	64.4	13.5	-90.00	-2,304.8	1,179.2	1,479.4	1,401.7	77.70	19.039		
11,600.0	7,740.0	7,735.0	7,735.0	66.1	13.5	-90.00	-2,304.8	1,179.2	1,559.5	1,480.1	79.42	19.637		
11,700.0	7,740.0	7,735.0	7,735.0	67.8	13.5	-90.00	-2,304.8	1,179.2	1,641.8	1,560.6	81.13	20.236		
11,800.0	7,740.0	7,735.0	7,735.0	69.5	13.5	-90.00	-2,304.8	1,179.2	1,725.9	1,643.1	82.85	20.832		
11,900.0	7,740.0	7,735.0	7,735.0	71.2	13.5	-90.00	-2,304.8	1,179.2	1,811.7	1,727.2	84.57	21.423		
12,000.0	7,740.0	7,735.0	7,735.0	72.9	13.5	-90.00	-2,304.8	1,179.2	1,898.9	1,812.6	86.29	22.006		
12,100.0	7,740.0	7,735.0	7,735.0	74.7	13.5	-90.00	-2,304.8	1,179.2	1,987.3	1,899.3	88.01	22.579		
12,200.0	7,740.0	7,735.0	7,735.0	76.4	13.5	-90.00	-2,304.8	1,179.2	2,076.7	1,987.0	89.74	23.142		
12,300.0	7,740.0	7,735.0	7,735.0	78.1	13.5	-90.00	-2,304.8	1,179.2	2,167.1	2,075.6	91.46	23.694		
12,400.0	7,740.0	7,735.0	7,735.0	79.8	13.5	-90.00	-2,304.8	1,179.2	2,258.2	2,165.1	93.19	24.233		
12,500.0	7,740.0	7,735.0	7,735.0	81.6	13.5	-90.00	-2,304.8	1,179.2	2,350.1	2,255.2	94.92	24.760		
12,600.0	7,740.0	7,735.0	7,735.0	83.3	13.5	-90.00	-2,304.8	1,179.2	2,442.7	2,346.0	96.65	25.274		
12,700.0	7,740.0	7,735.0	7,735.0	85.0	13.5	-90.00	-2,304.8	1,179.2	2,535.8	2,437.4	98.38	25.776		
12,800.0	7,740.0	7,735.0	7,735.0	86.7	13.5	-90.00	-2,304.8	1,179.2	2,629.4	2,529.3	100.11	26.266		
12,900.0	7,740.0	7,735.0	7,735.0	88.5	13.5	-90.00	-2,304.8	1,179.2	2,723.4	2,621.6	101.84	26.742		
13,000.0	7,740.0	7,735.0	7,735.0	90.2	13.5	-90.00	-2,304.8	1,179.2	2,817.9	2,714.3	103.57	27.207		
13,100.0	7,740.0	7,735.0	7,735.0	91.9	13.5	-90.00	-2,304.8	1,179.2	2,912.7	2,807.4	105.30	27.660		
13,200.0	7,740.0	7,735.0	7,735.0	93.7	13.5	-90.00	-2,304.8	1,179.2	3,007.9	2,900.8	107.04	28.101		
13,300.0	7,740.0	7,735.0	7,735.0	95.4	13.5	-90.00	-2,304.8	1,179.2	3,103.4	2,994.6	108.77	28.530		
13,400.0	7,740.0	7,735.0	7,735.0	97.1	13.5	-90.00	-2,304.8	1,179.2	3,199.1	3,088.6	110.51	28.949		
13,500.0	7,740.0	7,735.0	7,735.0	98.9	13.5	-90.00	-2,304.8	1,179.2	3,295.1	3,182.9	112.25	29.356		
13,600.0	7,740.0	7,735.0	7,735.0	100.6	13.5	-90.00	-2,304.8	1,179.2	3,391.3	3,277.4	113.98	29.753		
13,700.0	7,740.0	7,735.0	7,735.0	102.3	13.5	-90.00	-2,304.8	1,179.2	3,487.8	3,372.1	115.72	30.140		
13,800.0	7,740.0	7,735.0	7,735.0	104.1	13.5	-90.00	-2,304.8	1,179.2	3,584.4	3,467.0	117.46	30.517		
13,900.0	7,740.0	7,735.0	7,735.0	105.8	13.5	-90.00	-2,304.8	1,179.2	3,681.2	3,562.1	119.20	30.884		
14,000.0	7,740.0	7,735.0	7,735.0	107.5	13.5	-90.00	-2,304.8	1,179.2	3,778.2	3,657.3	120.94	31.242		
14,100.0	7,740.0	7,735.0	7,735.0	109.3	13.5	-90.00	-2,304.8	1,179.2	3,875.4	3,752.7	122.68	31.590		

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 2C-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 2C-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 #2	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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
14,200.0	7,740.0	7,735.0	7,735.0	111.0	13.5	-90.00	-2,304.8	1,179.2	3,972.7	3,848.2	124.42	31.930	
14,300.0	7,740.0	7,735.0	7,735.0	112.8	13.5	-90.00	-2,304.8	1,179.2	4,070.1	3,943.9	126.16	32.262	
14,400.0	7,740.0	7,735.0	7,735.0	114.5	13.5	-90.00	-2,304.8	1,179.2	4,167.6	4,039.7	127.90	32.586	
14,500.0	7,740.0	7,735.0	7,735.0	116.2	13.5	-90.00	-2,304.8	1,179.2	4,265.3	4,135.6	129.64	32.901	
14,600.0	7,740.0	7,735.0	7,735.0	118.0	13.5	-90.00	-2,304.8	1,179.2	4,363.0	4,231.6	131.38	33.209	
14,700.0	7,740.0	7,735.0	7,735.0	119.7	13.5	-90.00	-2,304.8	1,179.2	4,460.9	4,327.7	133.12	33.510	
14,800.0	7,740.0	7,735.0	7,735.0	121.5	13.5	-90.00	-2,304.8	1,179.2	4,558.8	4,423.9	134.86	33.803	
14,900.0	7,740.0	7,735.0	7,735.0	123.2	13.5	-90.00	-2,304.8	1,179.2	4,656.8	4,520.2	136.61	34.089	
15,000.0	7,740.0	7,735.0	7,735.0	124.9	13.5	-90.00	-2,304.8	1,179.2	4,755.0	4,616.6	138.35	34.369	
15,100.0	7,740.0	7,735.0	7,735.0	126.7	13.5	-90.00	-2,304.8	1,179.2	4,853.2	4,713.1	140.09	34.642	
15,200.0	7,740.0	7,735.0	7,735.0	128.4	13.5	-90.00	-2,304.8	1,179.2	4,951.4	4,809.6	141.84	34.909	
15,300.0	7,740.0	7,735.0	7,735.0	130.2	13.5	-90.00	-2,304.8	1,179.2	5,049.8	4,906.2	143.58	35.170	
15,400.0	7,740.0	7,735.0	7,735.0	131.9	13.5	-90.00	-2,304.8	1,179.2	5,148.2	5,002.8	145.33	35.425	
15,500.0	7,740.0	7,735.0	7,735.0	133.7	13.5	-90.00	-2,304.8	1,179.2	5,246.6	5,099.5	147.07	35.674	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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				
0.0	0.0	11.7	11.7	0.0	0.0	153.17	-2,333.2	1,180.1	2,614.6							
100.0	100.0	118.2	118.2	0.2	0.2	153.17	-2,333.1	1,179.9	2,614.5	2,614.1	0.35	7,369.420				
200.0	200.0	224.8	224.8	0.3	0.4	153.18	-2,332.8	1,179.4	2,614.1	2,613.4	0.71	3,670.905				
300.0	300.0	331.3	331.3	0.5	0.6	153.19	-2,332.5	1,178.7	2,613.4	2,612.4	1.07	2,443.748				
400.0	400.0	437.8	437.8	0.7	0.8	153.21	-2,331.9	1,177.6	2,612.5	2,611.1	1.43	1,831.103				
500.0	500.0	544.3	544.3	0.9	1.0	127.30	-2,331.2	1,176.2	2,611.9	2,610.1	1.79	1,456.620				
526.6	526.6	572.6	572.6	0.9	1.0	127.31	-2,331.0	1,175.8	2,611.9	2,610.0	1.89	1,382.615				
600.0	600.0	650.7	650.7	1.0	1.1	127.37	-2,330.4	1,174.6	2,612.1	2,609.9	2.15	1,212.655				
700.0	699.9	757.1	757.1	1.2	1.3	127.47	-2,329.4	1,172.6	2,613.1	2,610.6	2.52	1,037.547				
800.0	799.7	854.6	854.5	1.4	1.5	127.59	-2,328.4	1,170.6	2,615.0	2,612.1	2.87	909.887				
898.2	897.5	907.4	907.3	1.6	1.6	127.64	-2,328.2	1,170.0	2,618.8	2,615.7	3.16	829.684				
900.0	899.4	908.8	908.7	1.6	1.6	127.64	-2,328.2	1,170.0	2,618.9	2,615.8	3.16	828.116				
1,000.0	999.0	985.2	985.1	1.8	1.7	127.77	-2,328.9	1,169.5	2,624.8	2,621.3	3.50	750.718				
1,100.0	1,098.6	1,060.0	1,059.9	2.0	1.9	127.93	-2,330.9	1,168.2	2,631.7	2,627.9	3.83	686.556				
1,200.0	1,198.2	1,113.0	1,112.7	2.3	2.0	128.06	-2,333.3	1,166.9	2,640.0	2,635.8	4.14	637.859				
1,300.0	1,297.9	1,179.9	1,179.5	2.5	2.1	128.24	-2,337.6	1,164.7	2,649.7	2,645.2	4.47	592.978				
1,400.0	1,397.5	1,265.9	1,265.2	2.7	2.2	128.49	-2,344.2	1,161.3	2,660.4	2,655.5	4.84	549.252				
1,500.0	1,497.1	1,372.2	1,371.1	2.9	2.5	128.81	-2,352.1	1,156.8	2,670.7	2,665.5	5.26	507.555				
1,600.0	1,596.7	1,469.0	1,467.4	3.2	2.7	129.11	-2,359.9	1,152.2	2,681.5	2,675.8	5.66	473.378				
1,700.0	1,696.3	1,558.8	1,556.9	3.4	2.9	129.38	-2,367.1	1,148.1	2,692.4	2,686.3	6.05	444.675				
1,800.0	1,796.0	1,637.0	1,634.7	3.6	3.0	129.63	-2,373.9	1,144.3	2,703.9	2,697.5	6.43	420.648				
1,900.0	1,895.6	1,711.8	1,709.1	3.8	3.2	129.88	-2,381.2	1,140.2	2,716.3	2,709.5	6.80	399.604				
2,000.0	1,995.2	1,794.0	1,790.6	4.1	3.4	130.16	-2,390.2	1,135.6	2,729.5	2,722.3	7.19	379.676				
2,100.0	2,094.8	1,880.5	1,876.3	4.3	3.6	130.48	-2,400.2	1,129.6	2,743.1	2,735.5	7.60	360.980				
2,200.0	2,194.5	1,952.0	1,947.0	4.5	3.8	130.75	-2,409.4	1,124.4	2,757.8	2,749.8	7.98	345.665				
2,300.0	2,294.1	2,028.8	2,022.9	4.8	4.1	131.06	-2,420.1	1,118.4	2,773.4	2,765.0	8.38	330.959				
2,400.0	2,393.7	2,099.9	2,092.9	5.0	4.3	131.36	-2,430.7	1,112.3	2,789.7	2,781.0	8.77	317.986				
2,500.0	2,493.3	2,191.1	2,182.6	5.2	4.6	131.75	-2,445.3	1,104.2	2,807.1	2,797.8	9.22	304.508				
2,600.0	2,592.9	2,296.7	2,286.5	5.4	4.9	132.19	-2,461.5	1,095.3	2,824.1	2,814.4	9.70	291.226				
2,700.0	2,692.6	2,409.7	2,397.8	5.7	5.3	132.64	-2,478.4	1,085.6	2,841.0	2,830.8	10.20	278.566				
2,800.0	2,792.2	2,510.0	2,496.5	5.9	5.6	133.06	-2,493.3	1,076.4	2,857.6	2,846.9	10.67	267.745				
2,900.0	2,891.8	2,608.1	2,593.0	6.1	5.9	133.47	-2,508.1	1,066.6	2,874.2	2,863.1	11.15	257.824				
3,000.0	2,991.4	2,693.8	2,677.4	6.4	6.2	133.83	-2,521.0	1,058.2	2,891.2	2,879.6	11.58	249.664				
3,100.0	3,091.1	2,780.0	2,762.2	6.6	6.5	134.17	-2,534.2	1,050.6	2,908.8	2,896.8	12.01	242.224				
3,200.0	3,190.7	2,889.0	2,869.6	6.8	6.9	134.58	-2,550.7	1,041.4	2,926.5	2,914.0	12.49	234.267				
3,300.0	3,290.3	2,981.0	2,960.2	7.0	7.2	134.93	-2,564.4	1,033.6	2,944.0	2,931.1	12.93	227.676				
3,400.0	3,389.9	3,089.4	3,067.0	7.3	7.5	135.33	-2,580.4	1,024.2	2,961.5	2,948.1	13.41	220.803				
3,500.0	3,489.5	3,175.5	3,151.8	7.5	7.8	135.65	-2,593.2	1,016.8	2,979.2	2,965.4	13.83	215.349				
3,600.0	3,589.2	3,298.0	3,272.6	7.7	8.2	136.09	-2,610.7	1,006.2	2,996.5	2,982.1	14.34	208.952				
3,700.0	3,688.8	3,384.8	3,358.3	8.0	8.5	136.39	-2,622.9	999.3	3,013.8	2,999.1	14.76	204.236				
3,800.0	3,788.4	3,466.8	3,439.1	8.2	8.8	136.69	-2,635.0	992.2	3,031.7	3,016.5	15.17	199.863				
3,900.0	3,888.0	3,547.2	3,518.1	8.4	9.1	136.98	-2,647.4	984.6	3,050.2	3,034.6	15.58	195.759				
4,000.0	3,987.7	3,670.7	3,639.6	8.7	9.5	137.43	-2,666.1	973.2	3,068.6	3,052.5	16.09	190.709				
4,100.0	4,087.3	3,779.2	3,746.6	8.9	9.8	137.81	-2,681.7	963.6	3,086.5	3,069.9	16.55	186.469				
4,200.0	4,186.9	3,888.2	3,854.2	9.1	10.2	138.16	-2,696.9	954.9	3,104.2	3,087.2	17.01	182.449				
4,300.0	4,286.5	3,982.2	3,946.9	9.4	10.5	138.48	-2,709.8	946.4	3,121.7	3,104.2	17.44	178.964				
4,400.0	4,386.1	4,067.6	4,031.1	9.6	10.8	138.77	-2,722.0	938.6	3,139.6	3,121.7	17.86	175.803				
4,500.0	4,485.8	4,146.7	4,108.9	9.8	11.1	139.05	-2,733.7	930.6	3,158.0	3,139.8	18.26	172.948				
4,600.0	4,585.4	4,230.5	4,191.3	10.0	11.4	139.34	-2,746.6	922.5	3,177.2	3,158.5	18.67	170.218				
4,700.0	4,685.0	4,405.0	4,363.2	10.3	12.0	139.92	-2,771.9	906.4	3,196.0	3,176.7	19.28	165.769				
4,800.0	4,784.6	4,487.5	4,444.7	10.5	12.2	140.17	-2,782.6	899.0	3,213.2	3,193.5	19.67	163.329				
4,900.0	4,884.3	4,560.0	4,516.1	10.7	12.5	140.41	-2,792.7	892.3	3,231.2	3,211.2	20.05	161.195				

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 2C-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 2C-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 #2	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				
5,000.0	4,983.9	4,666.0	4,620.8	11.0	12.8	140.73	-2,807.1	882.8	3,249.2	3,228.7	20.49	158.603				
5,100.0	5,083.5	4,729.7	4,683.5	11.2	13.1	140.93	-2,816.2	877.1	3,267.9	3,247.1	20.84	156.821				
5,200.0	5,183.1	4,861.4	4,813.1	11.4	13.5	141.36	-2,836.0	864.4	3,287.6	3,266.3	21.34	154.023				
5,300.0	5,282.7	4,974.6	4,924.8	11.7	13.9	141.70	-2,851.1	854.1	3,305.5	3,283.7	21.80	151.639				
5,400.0	5,382.4	5,071.5	5,020.4	11.9	14.2	141.99	-2,864.0	845.2	3,323.5	3,301.3	22.22	149.581				
5,500.0	5,482.0	5,163.0	5,110.8	12.1	14.5	142.26	-2,876.1	837.1	3,341.6	3,319.0	22.61	147.769				
5,600.0	5,581.6	5,243.1	5,189.9	12.4	14.8	142.47	-2,886.9	830.8	3,360.2	3,337.2	22.98	146.247				
5,700.0	5,681.2	5,387.3	5,332.5	12.6	15.2	142.85	-2,905.6	819.9	3,378.4	3,354.9	23.48	143.910				
5,800.0	5,780.9	5,481.8	5,425.9	12.8	15.5	143.11	-2,917.1	811.8	3,395.8	3,371.9	23.88	142.226				
5,900.0	5,880.5	5,552.5	5,495.7	13.0	15.7	143.30	-2,926.3	805.9	3,413.9	3,389.7	24.22	140.933				
6,000.0	5,980.1	5,647.3	5,589.3	13.3	16.1	143.56	-2,938.9	797.5	3,432.5	3,407.9	24.63	139.374				
6,100.0	6,079.7	5,786.5	5,726.8	13.5	16.5	143.93	-2,956.8	785.7	3,450.8	3,425.7	25.11	137.429				
6,200.0	6,179.3	5,905.3	5,844.5	13.7	16.8	144.23	-2,970.3	776.2	3,467.7	3,442.1	25.55	135.745				
6,300.0	6,279.0	5,992.0	5,930.3	14.0	17.1	144.44	-2,980.4	769.4	3,485.0	3,459.0	25.91	134.495				
6,400.0	6,378.6	6,161.4	6,098.4	14.2	17.6	144.81	-2,998.4	758.6	3,501.6	3,475.2	26.41	132.580				
6,500.0	6,478.2	6,514.6	6,450.9	14.4	18.1	145.31	-3,015.4	748.0	3,512.0	3,484.9	27.10	129.594				
6,600.0	6,577.8	6,666.0	6,602.3	14.7	18.3	145.44	-3,016.0	747.4	3,519.5	3,492.0	27.48	128.087				
6,700.0	6,677.5	6,776.3	6,712.6	14.9	18.4	145.53	-3,015.4	747.1	3,526.1	3,498.3	27.81	126.801				
6,800.0	6,777.1	6,890.3	6,826.6	15.1	18.5	145.63	-3,014.5	746.9	3,532.4	3,504.3	28.14	125.515				
6,900.0	6,876.7	6,993.7	6,930.0	15.4	18.7	145.71	-3,013.3	746.5	3,538.4	3,510.0	28.47	124.294				
7,000.0	6,976.3	7,090.6	7,026.9	15.6	18.8	145.79	-3,012.2	746.0	3,544.5	3,515.7	28.79	123.122				
7,100.0	7,075.9	7,181.0	7,117.3	15.8	18.9	145.88	-3,011.4	745.3	3,550.6	3,521.5	29.10	122.006				
7,147.0	7,122.8	7,220.9	7,157.1	15.9	18.9	145.91	-3,011.1	744.9	3,553.6	3,524.4	29.25	121.505				
7,150.0	7,125.8	7,223.4	7,159.7	15.9	18.9	144.31	-3,011.1	744.9	3,553.8	3,524.6	29.26	121.450				
7,200.0	7,175.7	7,283.8	7,220.1	16.0	19.0	61.38	-3,010.8	744.1	3,554.6	3,525.2	29.46	120.678				
7,250.0	7,225.5	7,340.0	7,276.3	16.0	19.1	12.61	-3,010.3	743.1	3,551.0	3,521.5	29.50	120.387				
7,300.0	7,275.0	7,380.6	7,316.8	16.0	19.1	3.40	-3,010.0	742.4	3,543.0	3,513.7	29.37	120.651				
7,350.0	7,323.6	7,423.0	7,359.2	16.0	19.2	-0.28	-3,009.7	741.8	3,531.0	3,501.9	29.09	121.365				
7,400.0	7,371.0	7,465.3	7,401.5	15.9	19.2	-2.37	-3,009.6	741.1	3,514.9	3,486.2	28.68	122.544				
7,450.0	7,416.9	7,509.0	7,445.2	15.8	19.3	-3.82	-3,009.4	740.5	3,494.8	3,466.7	28.14	124.176				
7,500.0	7,460.8	7,550.1	7,486.3	15.6	19.3	-5.02	-3,009.3	740.0	3,470.9	3,443.4	27.48	126.294				
7,550.0	7,502.6	7,588.8	7,525.0	15.5	19.4	-6.13	-3,009.2	739.5	3,443.4	3,416.6	26.72	128.879				
7,600.0	7,541.7	7,625.2	7,561.4	15.3	19.4	-7.27	-3,009.2	739.2	3,412.3	3,386.5	25.87	131.896				
7,650.0	7,578.1	7,660.4	7,596.6	15.2	19.4	-8.54	-3,009.1	739.0	3,378.1	3,353.1	24.97	135.263				
7,700.0	7,611.3	7,694.4	7,630.6	15.0	19.5	-10.05	-3,009.1	738.8	3,340.9	3,316.8	24.07	138.813				
7,750.0	7,641.1	7,725.0	7,661.2	14.9	19.5	-11.94	-3,009.0	738.8	3,301.0	3,277.8	23.21	142.249				
7,800.0	7,667.4	7,751.2	7,687.4	14.8	19.6	-14.40	-3,008.9	738.8	3,258.7	3,236.2	22.47	145.010				
7,850.0	7,689.8	7,772.6	7,708.8	14.7	19.6	-17.78	-3,008.9	738.9	3,214.3	3,192.3	22.00	146.088				
7,900.0	7,708.2	7,790.2	7,726.4	14.7	19.6	-22.70	-3,008.8	738.9	3,168.2	3,146.2	22.04	143.746				
7,950.0	7,722.6	7,803.9	7,740.1	14.7	19.6	-30.37	-3,008.8	738.9	3,120.7	3,097.7	23.03	135.512				
8,000.0	7,732.7	7,813.5	7,749.7	14.7	19.6	-43.26	-3,008.7	739.0	3,072.3	3,046.6	25.68	119.626				
8,050.0	7,738.5	7,819.0	7,755.2	14.8	19.6	-65.29	-3,008.7	739.0	3,023.2	2,993.1	30.05	100.596				
8,091.8	7,740.0	7,820.4	7,756.6	15.0	19.6	-90.68	-3,008.7	739.0	2,981.9	2,949.8	32.16	92.719				
8,100.0	7,740.0	7,820.4	7,756.6	15.0	19.6	-90.68	-3,008.7	739.0	2,973.8	2,941.6	32.19	92.379				
8,200.0	7,740.0	7,820.1	7,756.3	15.4	19.6	-90.65	-3,008.7	739.0	2,875.1	2,842.4	32.67	88.010				
8,300.0	7,740.0	7,819.9	7,756.1	16.1	19.6	-90.63	-3,008.7	739.0	2,776.5	2,743.2	33.33	83.300				
8,400.0	7,740.0	7,819.7	7,755.9	16.9	19.6	-90.60	-3,008.7	739.0	2,678.0	2,643.8	34.16	78.399				
8,500.0	7,740.0	7,819.5	7,755.7	17.8	19.6	-90.57	-3,008.7	739.0	2,579.6	2,544.5	35.13	73.439				
8,600.0	7,740.0	7,819.3	7,755.5	18.8	19.6	-90.54	-3,008.7	739.0	2,481.3	2,445.1	36.21	68.525				
8,700.0	7,740.0	7,819.0	7,755.2	20.0	19.6	-90.52	-3,008.7	739.0	2,383.2	2,345.8	37.39	63.733				
8,800.0	7,740.0	7,818.8	7,755.0	21.2	19.6	-90.49	-3,008.7	739.0	2,285.2	2,246.6	38.66	59.114				
8,900.0	7,740.0	7,818.6	7,754.8	22.5	19.6	-90.46	-3,008.7	739.0	2,187.4	2,147.4	39.99	54.701				

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 2C-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 2C-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 #2	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							
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	7,818.4	7,754.6	23.9	19.6	-90.43	-3,008.7	739.0	2,089.9	2,048.5	41.38	50.508	
9,100.0	7,740.0	7,818.1	7,754.3	25.3	19.6	-90.41	-3,008.7	739.0	1,992.5	1,949.7	42.81	46.543	
9,200.0	7,740.0	7,817.9	7,754.1	26.7	19.6	-90.38	-3,008.7	739.0	1,895.5	1,851.2	44.28	42.804	
9,300.0	7,740.0	7,817.7	7,753.9	28.2	19.6	-90.35	-3,008.7	739.0	1,798.8	1,753.0	45.79	39.285	
9,400.0	7,740.0	7,817.4	7,753.6	29.7	19.6	-90.32	-3,008.7	739.0	1,702.4	1,655.1	47.32	35.976	
9,500.0	7,740.0	7,817.2	7,753.4	31.3	19.6	-90.29	-3,008.7	739.0	1,606.5	1,557.6	48.88	32.868	
9,600.0	7,740.0	7,817.0	7,753.2	32.8	19.6	-90.27	-3,008.7	739.0	1,511.1	1,460.7	50.45	29.951	
9,700.0	7,740.0	7,816.8	7,753.0	34.4	19.6	-90.24	-3,008.7	739.0	1,416.4	1,364.4	52.05	27.214	
9,800.0	7,740.0	7,816.5	7,752.7	36.0	19.6	-90.21	-3,008.7	739.0	1,322.4	1,268.8	53.66	24.647	
9,900.0	7,740.0	7,816.3	7,752.5	37.6	19.6	-90.18	-3,008.7	739.0	1,229.4	1,174.2	55.28	22.241	
10,000.0	7,740.0	7,816.1	7,752.3	39.2	19.6	-90.15	-3,008.7	739.0	1,137.6	1,080.7	56.91	19.990	
10,100.0	7,740.0	7,815.8	7,752.0	40.9	19.6	-90.13	-3,008.7	739.0	1,047.3	988.8	58.55	17.886	
10,200.0	7,740.0	7,815.6	7,751.8	42.5	19.6	-90.10	-3,008.7	739.0	958.9	898.7	60.21	15.927	
10,300.0	7,740.0	7,815.4	7,751.6	44.1	19.6	-90.07	-3,008.7	739.0	873.0	811.2	61.87	14.112	
10,400.0	7,740.0	7,815.1	7,751.3	45.8	19.6	-90.04	-3,008.7	739.0	790.5	726.9	63.53	12.442	
10,500.0	7,740.0	7,814.9	7,751.1	47.5	19.6	-90.01	-3,008.7	739.0	712.4	647.2	65.21	10.925	
10,600.0	7,740.0	7,814.7	7,750.9	49.1	19.6	-89.98	-3,008.7	739.0	640.5	573.6	66.89	9.575	
10,700.0	7,740.0	7,814.4	7,750.6	50.8	19.6	-89.96	-3,008.7	739.0	576.9	508.4	68.57	8.414	
10,800.0	7,740.0	7,814.2	7,750.4	52.5	19.6	-89.93	-3,008.7	739.0	524.9	454.6	70.26	7.471	
10,900.0	7,740.0	7,814.0	7,750.2	54.2	19.6	-89.90	-3,008.7	739.0	488.0	416.1	71.95	6.783	
11,000.0	7,740.0	7,813.7	7,749.9	55.9	19.6	-89.87	-3,008.7	739.0	469.9	396.3	73.65	6.381	
11,036.7	7,740.0	7,813.7	7,749.9	56.5	19.6	-89.86	-3,008.7	739.0	468.5	394.2	74.27	6.308 CC, ES	
11,100.0	7,740.0	7,813.5	7,749.7	57.6	19.6	-89.84	-3,008.7	739.0	472.8	397.4	75.35	6.275 SF	
11,200.0	7,740.0	7,813.3	7,749.5	59.3	19.6	-89.81	-3,008.7	739.0	496.2	419.1	77.05	6.439	
11,300.0	7,740.0	7,813.0	7,749.2	61.0	19.6	-89.78	-3,008.7	739.0	537.4	458.7	78.76	6.824	
11,400.0	7,740.0	7,812.8	7,749.0	62.7	19.6	-89.75	-3,008.7	739.0	592.9	512.4	80.46	7.368	
11,500.0	7,740.0	7,812.6	7,748.8	64.4	19.6	-89.72	-3,008.7	739.0	658.9	576.7	82.17	8.018	
11,600.0	7,740.0	7,812.3	7,748.5	66.1	19.6	-89.70	-3,008.7	739.0	732.7	648.8	83.89	8.734	
11,700.0	7,740.0	7,812.1	7,748.3	67.8	19.6	-89.67	-3,008.7	739.0	812.1	726.5	85.60	9.487	
11,800.0	7,740.0	7,811.8	7,748.0	69.5	19.6	-89.64	-3,008.7	738.9	895.6	808.3	87.32	10.257	
11,900.0	7,740.0	7,811.6	7,747.8	71.2	19.6	-89.61	-3,008.7	738.9	982.2	893.2	89.04	11.032	
12,000.0	7,740.0	7,811.4	7,747.6	72.9	19.6	-89.58	-3,008.7	738.9	1,071.2	980.4	90.76	11.803	
12,100.0	7,740.0	7,811.1	7,747.3	74.7	19.6	-89.55	-3,008.8	738.9	1,162.0	1,069.5	92.48	12.564	
12,200.0	7,740.0	7,810.9	7,747.1	76.4	19.6	-89.52	-3,008.8	738.9	1,254.1	1,159.9	94.20	13.313	
12,300.0	7,740.0	7,810.6	7,746.8	78.1	19.6	-89.49	-3,008.8	738.9	1,347.4	1,251.5	95.93	14.046	
12,400.0	7,740.0	7,810.4	7,746.6	79.8	19.6	-89.46	-3,008.8	738.9	1,441.6	1,343.9	97.65	14.762	
12,500.0	7,740.0	7,810.1	7,746.3	81.6	19.6	-89.43	-3,008.8	738.9	1,536.5	1,437.1	99.38	15.461	
12,600.0	7,740.0	7,809.9	7,746.1	83.3	19.6	-89.40	-3,008.8	738.9	1,632.0	1,530.9	101.11	16.141	
12,700.0	7,740.0	7,809.7	7,745.9	85.0	19.6	-89.37	-3,008.8	738.9	1,728.0	1,625.2	102.84	16.804	
12,800.0	7,740.0	7,809.4	7,745.6	86.7	19.6	-89.34	-3,008.8	738.9	1,824.5	1,719.9	104.57	17.448	
12,900.0	7,740.0	7,809.2	7,745.4	88.5	19.6	-89.31	-3,008.8	738.9	1,921.3	1,815.0	106.30	18.075	
13,000.0	7,740.0	7,808.9	7,745.1	90.2	19.6	-89.28	-3,008.8	738.9	2,018.4	1,910.4	108.03	18.684	
13,100.0	7,740.0	7,808.7	7,744.9	91.9	19.6	-89.25	-3,008.8	738.9	2,115.8	2,006.1	109.76	19.277	
13,200.0	7,740.0	7,808.4	7,744.6	93.7	19.6	-89.22	-3,008.8	738.9	2,213.5	2,102.0	111.49	19.853	
13,300.0	7,740.0	7,808.2	7,744.4	95.4	19.6	-89.19	-3,008.8	738.9	2,311.3	2,198.1	113.23	20.413	
13,400.0	7,740.0	7,807.9	7,744.1	97.1	19.6	-89.16	-3,008.8	738.9	2,409.3	2,294.3	114.96	20.958	
13,500.0	7,740.0	7,807.7	7,743.9	98.9	19.6	-89.13	-3,008.8	738.9	2,507.5	2,390.8	116.70	21.487	
13,600.0	7,740.0	7,807.4	7,743.6	100.6	19.6	-89.10	-3,008.8	738.9	2,605.8	2,487.3	118.43	22.002	
13,700.0	7,740.0	7,807.2	7,743.4	102.3	19.6	-89.07	-3,008.8	738.9	2,704.2	2,584.0	120.17	22.504	
13,800.0	7,740.0	7,806.9	7,743.1	104.1	19.6	-89.04	-3,008.8	738.9	2,802.7	2,680.8	121.90	22.992	
13,900.0	7,740.0	7,806.7	7,742.9	105.8	19.6	-89.01	-3,008.8	738.9	2,901.4	2,777.7	123.64	23.466	
14,000.0	7,740.0	7,806.4	7,742.6	107.5	19.6	-88.98	-3,008.8	738.9	3,000.1	2,874.7	125.38	23.929	

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 2C-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 2C-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 #2	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	
14,100.0	7,740.0	7,806.2	7,742.4	109.3	19.6	-88.95	-3,008.8	738.9	3,098.9	2,971.8	127.12	24.379	
14,200.0	7,740.0	7,805.9	7,742.1	111.0	19.6	-88.92	-3,008.8	738.9	3,197.8	3,069.0	128.85	24.818	
14,300.0	7,740.0	7,805.7	7,741.9	112.8	19.6	-88.88	-3,008.8	738.9	3,296.8	3,166.2	130.59	25.245	
14,400.0	7,740.0	7,805.4	7,741.6	114.5	19.6	-88.85	-3,008.8	738.9	3,395.8	3,263.5	132.33	25.661	
14,500.0	7,740.0	7,805.2	7,741.4	116.2	19.6	-88.82	-3,008.8	738.9	3,494.9	3,360.8	134.07	26.068	
14,600.0	7,740.0	7,804.9	7,741.1	118.0	19.6	-88.79	-3,008.8	738.9	3,594.0	3,458.2	135.81	26.464	
14,700.0	7,740.0	7,804.7	7,740.9	119.7	19.6	-88.76	-3,008.8	738.9	3,693.1	3,555.6	137.55	26.850	
14,800.0	7,740.0	7,804.4	7,740.6	121.5	19.6	-88.73	-3,008.8	738.9	3,792.4	3,653.1	139.29	27.227	
14,900.0	7,740.0	7,804.2	7,740.4	123.2	19.6	-88.70	-3,008.8	738.9	3,891.6	3,750.6	141.03	27.595	
15,000.0	7,740.0	7,803.9	7,740.1	124.9	19.6	-88.67	-3,008.8	738.9	3,990.9	3,848.1	142.77	27.954	
15,100.0	7,740.0	7,803.6	7,739.8	126.7	19.6	-88.63	-3,008.8	738.9	4,090.2	3,945.7	144.51	28.304	
15,200.0	7,740.0	7,803.4	7,739.6	128.4	19.6	-88.60	-3,008.8	738.9	4,189.6	4,043.3	146.25	28.647	
15,300.0	7,740.0	7,803.1	7,739.3	130.2	19.6	-88.57	-3,008.8	738.9	4,289.0	4,141.0	147.99	28.981	
15,400.0	7,740.0	7,802.9	7,739.1	131.9	19.6	-88.54	-3,008.8	738.9	4,388.4	4,238.7	149.73	29.308	
15,500.0	7,740.0	7,802.6	7,738.8	133.7	19.6	-88.51	-3,008.8	738.9	4,487.8	4,336.4	151.47	29.628	
15,600.0	7,740.0	7,802.4	7,738.6	135.4	19.6	-88.48	-3,008.8	738.9	4,587.3	4,434.1	153.21	29.940	
15,700.0	7,740.0	7,802.1	7,738.3	137.1	19.6	-88.44	-3,008.8	738.9	4,686.8	4,531.8	154.96	30.246	
15,800.0	7,740.0	7,801.8	7,738.0	138.9	19.6	-88.41	-3,008.8	738.9	4,786.3	4,629.6	156.70	30.545	
15,900.0	7,740.0	7,801.6	7,737.8	140.6	19.6	-88.38	-3,008.8	738.9	4,885.8	4,727.4	158.44	30.837	
15,952.8	7,740.0	7,801.4	7,737.6	141.6	19.6	-88.36	-3,008.8	738.9	4,938.3	4,779.0	159.36	30.989	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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							
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	-178.21	-983.2	-30.8	983.7					
100.0	100.0	88.0	88.0	0.2	0.2	-178.21	-983.2	-30.8	983.7	983.4	0.31	3,218.480		
200.0	200.0	188.0	188.0	0.3	0.3	-178.21	-983.2	-30.8	983.7	983.0	0.65	1,502.482		
300.0	300.0	288.0	288.0	0.5	0.5	-178.21	-983.2	-30.8	983.7	982.7	1.00	979.984		
400.0	400.0	388.0	388.0	0.7	0.7	-178.21	-983.2	-30.8	983.7	982.3	1.35	727.122		
500.0	500.0	488.0	488.0	0.9	0.9	155.86	-983.2	-30.8	984.5	982.8	1.70	578.473		
600.0	600.0	588.0	588.0	1.0	1.0	155.91	-983.2	-30.8	986.9	984.8	2.05	481.168		
700.0	699.9	687.9	687.9	1.2	1.2	156.00	-983.2	-30.8	990.8	988.4	2.40	412.750		
800.0	799.7	787.7	787.7	1.4	1.4	156.12	-983.2	-30.8	996.4	993.7	2.75	362.189		
898.2	897.5	885.5	885.5	1.6	1.5	156.27	-983.2	-30.8	1,003.5	1,000.4	3.10	324.070		
900.0	899.4	887.4	887.4	1.6	1.5	156.27	-983.2	-30.8	1,003.6	1,000.5	3.10	323.437		
1,000.0	999.0	987.0	987.0	1.8	1.7	156.47	-983.2	-30.8	1,011.6	1,008.1	3.46	292.581		
1,100.0	1,098.6	1,086.6	1,086.6	2.0	1.9	156.67	-983.2	-30.8	1,019.5	1,015.7	3.81	267.430		
1,200.0	1,198.2	1,186.2	1,186.2	2.3	2.1	156.86	-983.2	-30.8	1,027.5	1,023.3	4.17	246.549		
1,300.0	1,297.9	1,285.9	1,285.9	2.5	2.2	157.05	-983.2	-30.8	1,035.5	1,031.0	4.52	228.942		
1,400.0	1,397.5	1,385.5	1,385.5	2.7	2.4	157.23	-983.2	-30.8	1,043.5	1,038.6	4.88	213.900		
1,500.0	1,497.1	1,485.1	1,485.1	2.9	2.6	157.42	-983.2	-30.8	1,051.5	1,046.3	5.23	200.903		
1,600.0	1,596.7	1,584.7	1,584.7	3.2	2.8	157.60	-983.2	-30.8	1,059.6	1,054.0	5.59	189.563		
1,700.0	1,696.3	1,684.3	1,684.3	3.4	2.9	157.77	-983.2	-30.8	1,067.6	1,061.7	5.94	179.583		
1,800.0	1,796.0	1,784.0	1,784.0	3.6	3.1	157.95	-983.2	-30.8	1,075.6	1,069.3	6.30	170.733		
1,900.0	1,895.6	1,883.6	1,883.6	3.8	3.3	158.12	-983.2	-30.8	1,083.7	1,077.0	6.66	162.832		
2,000.0	1,995.2	1,983.2	1,983.2	4.1	3.5	158.29	-983.2	-30.8	1,091.8	1,084.8	7.01	155.736		
2,100.0	2,094.8	2,082.8	2,082.8	4.3	3.6	158.46	-983.2	-30.8	1,099.8	1,092.5	7.37	149.329		
2,200.0	2,194.5	2,182.5	2,182.5	4.5	3.8	158.62	-983.2	-30.8	1,107.9	1,100.2	7.72	143.514		
2,300.0	2,294.1	2,282.1	2,282.1	4.8	4.0	158.78	-983.2	-30.8	1,116.0	1,108.0	8.07	138.214		
2,400.0	2,393.7	2,381.7	2,381.7	5.0	4.2	158.94	-983.2	-30.8	1,124.1	1,115.7	8.43	133.363		
2,500.0	2,493.3	2,481.3	2,481.3	5.2	4.3	159.10	-983.2	-30.8	1,132.2	1,123.5	8.78	128.907		
2,600.0	2,592.9	2,580.9	2,580.9	5.4	4.5	159.26	-983.2	-30.8	1,140.4	1,131.2	9.14	124.799		
2,700.0	2,692.6	2,680.6	2,680.6	5.7	4.7	159.41	-983.2	-30.8	1,148.5	1,139.0	9.49	121.001		
2,800.0	2,792.2	2,780.2	2,780.2	5.9	4.9	159.56	-983.2	-30.8	1,156.6	1,146.8	9.85	117.479		
2,900.0	2,891.8	2,879.8	2,879.8	6.1	5.0	159.71	-983.2	-30.8	1,164.8	1,154.6	10.20	114.203		
3,000.0	2,991.4	2,979.4	2,979.4	6.4	5.2	159.86	-983.2	-30.8	1,172.9	1,162.4	10.55	111.149		
3,100.0	3,091.1	3,079.1	3,079.1	6.6	5.4	160.00	-983.2	-30.8	1,181.1	1,170.2	10.91	108.296		
3,200.0	3,190.7	3,178.7	3,178.7	6.8	5.5	160.15	-983.2	-30.8	1,189.3	1,178.0	11.26	105.623		
3,300.0	3,290.3	3,278.3	3,278.3	7.0	5.7	160.29	-983.2	-30.8	1,197.4	1,185.8	11.61	103.115		
3,400.0	3,389.9	3,377.9	3,377.9	7.3	5.9	160.43	-983.2	-30.8	1,205.6	1,193.6	11.97	100.757		
3,500.0	3,489.5	3,477.5	3,477.5	7.5	6.1	160.56	-983.2	-30.8	1,213.8	1,201.5	12.32	98.535		
3,600.0	3,589.2	3,577.2	3,577.2	7.7	6.2	160.70	-983.2	-30.8	1,222.0	1,209.3	12.67	96.439		
3,700.0	3,688.8	3,676.8	3,676.8	8.0	6.4	160.83	-983.2	-30.8	1,230.2	1,217.2	13.02	94.458		
3,800.0	3,788.4	3,776.4	3,776.4	8.2	6.6	160.97	-983.2	-30.8	1,238.4	1,225.0	13.38	92.583		
3,900.0	3,888.0	3,876.0	3,876.0	8.4	6.8	161.10	-983.2	-30.8	1,246.6	1,232.9	13.73	90.805		
4,000.0	3,987.7	3,975.7	3,975.7	8.7	6.9	161.22	-983.2	-30.8	1,254.8	1,240.8	14.08	89.117		
4,100.0	4,087.3	4,075.3	4,075.3	8.9	7.1	161.35	-983.2	-30.8	1,263.1	1,248.6	14.43	87.513		
4,200.0	4,186.9	4,174.9	4,174.9	9.1	7.3	161.48	-983.2	-30.8	1,271.3	1,256.5	14.78	85.986		
4,300.0	4,286.5	4,274.5	4,274.5	9.4	7.5	161.60	-983.2	-30.8	1,279.5	1,264.4	15.14	84.532		
4,400.0	4,386.1	4,374.1	4,374.1	9.6	7.6	161.72	-983.2	-30.8	1,287.8	1,272.3	15.49	83.144		
4,500.0	4,485.8	4,473.8	4,473.8	9.8	7.8	161.84	-983.2	-30.8	1,296.0	1,280.2	15.84	81.819		
4,600.0	4,585.4	4,573.4	4,573.4	10.0	8.0	161.96	-983.2	-30.8	1,304.3	1,288.1	16.19	80.552		
4,700.0	4,685.0	4,673.0	4,673.0	10.3	8.2	162.08	-983.2	-30.8	1,312.6	1,296.0	16.54	79.340		
4,800.0	4,784.6	4,772.6	4,772.6	10.5	8.3	162.19	-983.2	-30.8	1,320.8	1,303.9	16.89	78.180		
4,900.0	4,884.3	4,872.3	4,872.3	10.7	8.5	162.31	-983.2	-30.8	1,329.1	1,311.9	17.25	77.067		
5,000.0	4,983.9	4,971.9	4,971.9	11.0	8.7	162.42	-983.2	-30.8	1,337.4	1,319.8	17.60	75.999		

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 2C-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 2C-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 #2	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		
5,100.0	5,083.5	5,071.5	5,071.5	11.2	8.9	162.53	-983.2	-30.8	1,345.7	1,327.7	17.95	74.974		
5,200.0	5,183.1	5,171.1	5,171.1	11.4	9.0	162.64	-983.2	-30.8	1,354.0	1,335.7	18.30	73.989		
5,300.0	5,282.7	5,270.7	5,270.7	11.7	9.2	162.75	-983.2	-30.8	1,362.2	1,343.6	18.65	73.041		
5,400.0	5,382.4	5,370.4	5,370.4	11.9	9.4	162.86	-983.2	-30.8	1,370.5	1,351.5	19.00	72.129		
5,500.0	5,482.0	5,470.0	5,470.0	12.1	9.5	162.97	-983.2	-30.8	1,378.8	1,359.5	19.35	71.251		
5,600.0	5,581.6	5,569.6	5,569.6	12.4	9.7	163.07	-983.2	-30.8	1,387.2	1,367.5	19.70	70.404		
5,700.0	5,681.2	5,669.2	5,669.2	12.6	9.9	163.17	-983.2	-30.8	1,395.5	1,375.4	20.05	69.588		
5,800.0	5,780.9	5,768.9	5,768.9	12.8	10.1	163.28	-983.2	-30.8	1,403.8	1,383.4	20.40	68.800		
5,900.0	5,880.5	5,868.5	5,868.5	13.0	10.2	163.38	-983.2	-30.8	1,412.1	1,391.3	20.75	68.039		
6,000.0	5,980.1	5,968.1	5,968.1	13.3	10.4	163.48	-983.2	-30.8	1,420.4	1,399.3	21.10	67.304		
6,100.0	6,079.7	6,067.7	6,067.7	13.5	10.6	163.58	-983.2	-30.8	1,428.8	1,407.3	21.46	66.593		
6,200.0	6,179.3	6,167.3	6,167.3	13.7	10.8	163.68	-983.2	-30.8	1,437.1	1,415.3	21.81	65.906		
6,300.0	6,279.0	6,267.0	6,267.0	14.0	10.9	163.77	-983.2	-30.8	1,445.4	1,423.3	22.16	65.240		
6,400.0	6,378.6	6,366.6	6,366.6	14.2	11.1	163.87	-983.2	-30.8	1,453.8	1,431.3	22.51	64.596		
6,500.0	6,478.2	6,466.2	6,466.2	14.4	11.3	163.96	-983.2	-30.8	1,462.1	1,439.3	22.86	63.972		
6,600.0	6,577.8	6,565.8	6,565.8	14.7	11.5	164.06	-983.2	-30.8	1,470.5	1,447.3	23.21	63.367		
6,700.0	6,677.5	6,665.5	6,665.5	14.9	11.6	164.15	-983.2	-30.8	1,478.8	1,455.3	23.56	62.780		
6,800.0	6,777.1	6,765.1	6,765.1	15.1	11.8	164.24	-983.2	-30.8	1,487.2	1,463.3	23.91	62.211		
6,900.0	6,876.7	6,864.7	6,864.7	15.4	12.0	164.33	-983.2	-30.8	1,495.5	1,471.3	24.26	61.658		
7,000.0	6,976.3	6,964.3	6,964.3	15.6	12.2	164.42	-983.2	-30.8	1,503.9	1,479.3	24.61	61.121		
7,100.0	7,075.9	7,063.9	7,063.9	15.8	12.3	164.51	-983.2	-30.8	1,512.3	1,487.3	24.95	60.600		
7,147.0	7,122.8	7,110.8	7,110.8	15.9	12.4	164.55	-983.2	-30.8	1,516.2	1,491.1	25.12	60.360		
7,150.0	7,125.8	7,113.8	7,113.8	15.9	12.4	162.94	-983.2	-30.8	1,516.5	1,491.3	25.13	60.335		
7,200.0	7,175.7	7,163.7	7,163.7	16.0	12.5	79.97	-983.2	-30.8	1,518.2	1,492.9	25.31	59.996		
7,250.0	7,225.5	7,213.5	7,213.5	16.0	12.6	31.35	-983.2	-30.8	1,515.7	1,490.4	25.35	59.796		
7,300.0	7,275.0	7,263.0	7,263.0	16.0	12.7	22.48	-983.2	-30.8	1,509.0	1,483.7	25.26	59.730		
7,350.0	7,323.6	7,311.6	7,311.6	16.0	12.8	19.33	-983.2	-30.8	1,498.0	1,473.0	25.05	59.791		
7,400.0	7,371.0	7,359.0	7,359.0	15.9	12.8	18.01	-983.2	-30.8	1,483.0	1,458.2	24.73	59.969		
7,450.0	7,416.9	7,404.9	7,404.9	15.8	12.9	17.56	-983.2	-30.8	1,463.9	1,439.6	24.30	60.246		
7,500.0	7,460.8	7,448.8	7,448.8	15.6	13.0	17.67	-983.2	-30.8	1,441.0	1,417.2	23.78	60.597		
7,550.0	7,502.6	7,490.6	7,490.6	15.5	13.1	18.23	-983.2	-30.8	1,414.4	1,391.2	23.20	60.980		
7,600.0	7,541.7	7,529.7	7,529.7	15.3	13.1	19.23	-983.2	-30.8	1,384.4	1,361.9	22.58	61.323		
7,650.0	7,578.1	7,566.1	7,566.1	15.2	13.2	20.69	-983.2	-30.8	1,351.2	1,329.3	21.97	61.516		
7,700.0	7,611.3	7,599.3	7,599.3	15.0	13.3	22.71	-983.2	-30.8	1,315.1	1,293.7	21.42	61.390		
7,750.0	7,641.1	7,629.1	7,629.1	14.9	13.3	25.45	-983.2	-30.8	1,276.4	1,255.3	21.03	60.697		
7,800.0	7,667.4	7,655.4	7,655.4	14.8	13.4	29.15	-983.2	-30.8	1,235.3	1,214.4	20.89	59.119		
7,850.0	7,689.8	7,677.8	7,677.8	14.7	13.4	34.16	-983.2	-30.8	1,192.2	1,171.0	21.16	56.333		
7,900.0	7,708.2	7,696.2	7,696.2	14.7	13.4	40.98	-983.2	-30.8	1,147.5	1,125.5	21.99	52.188		
7,950.0	7,722.6	7,710.6	7,710.6	14.7	13.5	50.23	-983.2	-30.8	1,101.5	1,078.0	23.45	46.980		
8,000.0	7,732.7	7,720.7	7,720.7	14.7	13.5	62.37	-983.2	-30.8	1,054.6	1,029.2	25.34	41.613		
8,050.0	7,738.5	7,726.5	7,726.5	14.8	13.5	77.05	-983.2	-30.8	1,007.2	980.2	27.02	37.276		
8,091.8	7,740.0	7,728.0	7,728.0	15.0	13.5	90.00	-983.2	-30.8	967.4	939.8	27.67	34.969		
8,100.0	7,740.0	7,728.0	7,728.0	15.0	13.5	90.00	-983.2	-30.8	959.6	931.9	27.70	34.649		
8,200.0	7,740.0	7,728.0	7,728.0	15.4	13.5	90.00	-983.2	-30.8	865.3	837.1	28.17	30.713		
8,300.0	7,740.0	7,728.0	7,728.0	16.1	13.5	90.00	-983.2	-30.8	772.3	743.5	28.84	26.782		
8,400.0	7,740.0	7,728.0	7,728.0	16.9	13.5	90.00	-983.2	-30.8	681.3	651.7	29.66	22.969		
8,500.0	7,740.0	7,728.0	7,728.0	17.8	13.5	90.00	-983.2	-30.8	593.3	562.7	30.63	19.369		
8,600.0	7,740.0	7,728.0	7,728.0	18.8	13.5	90.00	-983.2	-30.8	509.7	478.0	31.72	16.070		
8,700.0	7,740.0	7,728.0	7,728.0	20.0	13.5	90.00	-983.2	-30.8	433.1	400.2	32.90	13.163		
8,800.0	7,740.0	7,728.0	7,728.0	21.2	13.5	90.00	-983.2	-30.8	367.9	333.7	34.16	10.767		
8,900.0	7,740.0	7,728.0	7,728.0	22.5	13.5	90.00	-983.2	-30.8	321.1	285.6	35.50	9.046		
9,000.0	7,740.0	7,728.0	7,728.0	23.9	13.5	90.00	-983.2	-30.8	301.4	264.6	36.88	8.173		

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 2C-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 2C-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 #2	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		
9,011.1	7,740.0	7,728.0	7,728.0	24.0	13.5	90.00	-983.2	-30.8	301.2	264.2	37.04	8.132	CC, ES, SF	
9,100.0	7,740.0	7,728.0	7,728.0	25.3	13.5	90.00	-983.2	-30.8	314.1	275.8	38.32	8.197		
9,200.0	7,740.0	7,728.0	7,728.0	26.7	13.5	90.00	-983.2	-30.8	355.6	315.8	39.79	8.936		
9,300.0	7,740.0	7,728.0	7,728.0	28.2	13.5	90.00	-983.2	-30.8	417.4	376.1	41.29	10.107		
9,400.0	7,740.0	7,728.0	7,728.0	29.7	13.5	90.00	-983.2	-30.8	491.9	449.1	42.83	11.486		
9,500.0	7,740.0	7,728.0	7,728.0	31.3	13.5	90.00	-983.2	-30.8	574.2	529.9	44.38	12.938		
9,600.0	7,740.0	7,728.0	7,728.0	32.8	13.5	90.00	-983.2	-30.8	661.5	615.5	45.96	14.392		
9,700.0	7,740.0	7,728.0	7,728.0	34.4	13.5	90.00	-983.2	-30.8	751.9	704.3	47.56	15.810		
9,800.0	7,740.0	7,728.0	7,728.0	36.0	13.5	90.00	-983.2	-30.8	844.4	795.3	49.16	17.176		
9,900.0	7,740.0	7,728.0	7,728.0	37.6	13.5	90.00	-983.2	-30.8	938.5	887.7	50.79	18.480		
10,000.0	7,740.0	7,728.0	7,728.0	39.2	13.5	90.00	-983.2	-30.8	1,033.7	981.3	52.42	19.720		
10,100.0	7,740.0	7,728.0	7,728.0	40.9	13.5	90.00	-983.2	-30.8	1,129.8	1,075.7	54.06	20.897		
10,200.0	7,740.0	7,728.0	7,728.0	42.5	13.5	90.00	-983.2	-30.8	1,226.4	1,170.7	55.72	22.013		
10,300.0	7,740.0	7,728.0	7,728.0	44.1	13.5	90.00	-983.2	-30.8	1,323.6	1,266.2	57.38	23.069		
10,400.0	7,740.0	7,728.0	7,728.0	45.8	13.5	90.00	-983.2	-30.8	1,421.2	1,362.1	59.04	24.070		
10,500.0	7,740.0	7,728.0	7,728.0	47.5	13.5	90.00	-983.2	-30.8	1,519.0	1,458.3	60.72	25.018		
10,600.0	7,740.0	7,728.0	7,728.0	49.1	13.5	90.00	-983.2	-30.8	1,617.2	1,554.8	62.40	25.918		
10,700.0	7,740.0	7,728.0	7,728.0	50.8	13.5	90.00	-983.2	-30.8	1,715.5	1,651.5	64.08	26.771		
10,800.0	7,740.0	7,728.0	7,728.0	52.5	13.5	90.00	-983.2	-30.8	1,814.1	1,748.3	65.77	27.582		
10,900.0	7,740.0	7,728.0	7,728.0	54.2	13.5	90.00	-983.2	-30.8	1,912.7	1,845.3	67.46	28.352		
11,000.0	7,740.0	7,728.0	7,728.0	55.9	13.5	90.00	-983.2	-30.8	2,011.6	1,942.4	69.16	29.086		
11,100.0	7,740.0	7,728.0	7,728.0	57.6	13.5	90.00	-983.2	-30.8	2,110.5	2,039.6	70.86	29.784		
11,200.0	7,740.0	7,728.0	7,728.0	59.3	13.5	90.00	-983.2	-30.8	2,209.5	2,136.9	72.56	30.449		
11,300.0	7,740.0	7,728.0	7,728.0	61.0	13.5	90.00	-983.2	-30.8	2,308.6	2,234.3	74.27	31.084		
11,400.0	7,740.0	7,728.0	7,728.0	62.7	13.5	90.00	-983.2	-30.8	2,407.8	2,331.8	75.98	31.690		
11,500.0	7,740.0	7,728.0	7,728.0	64.4	13.5	90.00	-983.2	-30.8	2,507.0	2,429.4	77.69	32.270		
11,600.0	7,740.0	7,728.0	7,728.0	66.1	13.5	90.00	-983.2	-30.8	2,606.3	2,526.9	79.40	32.824		
11,700.0	7,740.0	7,728.0	7,728.0	67.8	13.5	90.00	-983.2	-30.8	2,705.7	2,624.6	81.12	33.354		
11,800.0	7,740.0	7,728.0	7,728.0	69.5	13.5	90.00	-983.2	-30.8	2,805.1	2,722.3	82.84	33.863		
11,900.0	7,740.0	7,728.0	7,728.0	71.2	13.5	90.00	-983.2	-30.8	2,904.5	2,820.0	84.56	34.350		
12,000.0	7,740.0	7,728.0	7,728.0	72.9	13.5	90.00	-983.2	-30.8	3,004.0	2,917.7	86.28	34.818		
12,100.0	7,740.0	7,728.0	7,728.0	74.7	13.5	90.00	-983.2	-30.8	3,103.5	3,015.5	88.00	35.267		
12,200.0	7,740.0	7,728.0	7,728.0	76.4	13.5	90.00	-983.2	-30.8	3,203.1	3,113.4	89.72	35.699		
12,300.0	7,740.0	7,728.0	7,728.0	78.1	13.5	90.00	-983.2	-30.8	3,302.6	3,211.2	91.45	36.114		
12,400.0	7,740.0	7,728.0	7,728.0	79.8	13.5	90.00	-983.2	-30.8	3,402.2	3,309.1	93.18	36.514		
12,500.0	7,740.0	7,728.0	7,728.0	81.6	13.5	90.00	-983.2	-30.8	3,501.9	3,407.0	94.90	36.899		
12,600.0	7,740.0	7,728.0	7,728.0	83.3	13.5	90.00	-983.2	-30.8	3,601.5	3,504.9	96.63	37.270		
12,700.0	7,740.0	7,728.0	7,728.0	85.0	13.5	90.00	-983.2	-30.8	3,701.2	3,602.8	98.36	37.627		
12,800.0	7,740.0	7,728.0	7,728.0	86.7	13.5	90.00	-983.2	-30.8	3,800.8	3,700.7	100.09	37.972		
12,900.0	7,740.0	7,728.0	7,728.0	88.5	13.5	90.00	-983.2	-30.8	3,900.5	3,798.7	101.83	38.306		
13,000.0	7,740.0	7,728.0	7,728.0	90.2	13.5	90.00	-983.2	-30.8	4,000.2	3,896.7	103.56	38.628		
13,100.0	7,740.0	7,728.0	7,728.0	91.9	13.5	90.00	-983.2	-30.8	4,100.0	3,994.7	105.29	38.939		
13,200.0	7,740.0	7,728.0	7,728.0	93.7	13.5	90.00	-983.2	-30.8	4,199.7	4,092.7	107.03	39.240		
13,300.0	7,740.0	7,728.0	7,728.0	95.4	13.5	90.00	-983.2	-30.8	4,299.4	4,190.7	108.76	39.531		
13,400.0	7,740.0	7,728.0	7,728.0	97.1	13.5	90.00	-983.2	-30.8	4,399.2	4,288.7	110.50	39.813		
13,500.0	7,740.0	7,728.0	7,728.0	98.9	13.5	90.00	-983.2	-30.8	4,499.0	4,386.7	112.23	40.086		
13,600.0	7,740.0	7,728.0	7,728.0	100.6	13.5	90.00	-983.2	-30.8	4,598.8	4,484.8	113.97	40.350		
13,700.0	7,740.0	7,728.0	7,728.0	102.3	13.5	90.00	-983.2	-30.8	4,698.5	4,582.8	115.71	40.607		
13,800.0	7,740.0	7,728.0	7,728.0	104.1	13.5	90.00	-983.2	-30.8	4,798.3	4,680.9	117.45	40.856		
13,900.0	7,740.0	7,728.0	7,728.0	105.8	13.5	90.00	-983.2	-30.8	4,898.2	4,779.0	119.18	41.097		
14,000.0	7,740.0	7,728.0	7,728.0	107.5	13.5	90.00	-983.2	-30.8	4,998.0	4,877.0	120.92	41.331		
14,100.0	7,740.0	7,728.0	7,728.0	109.3	13.5	90.00	-983.2	-30.8	5,097.8	4,975.1	122.66	41.559		

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 2C-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 2C-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 #2	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																					
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			Warning														
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)																			
14,200.0	7,740.0	7,728.0	7,728.0	111.0	13.5	90.00	-983.2	-30.8	5,197.6	5,073.2	124.40	41.780																	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	142.16	-1,199.2	931.5	1,518.5				
100.0	100.0	94.0	94.0	0.2	0.2	142.16	-1,199.2	931.5	1,518.5	1,518.1	0.32	4,803.686	
200.0	200.0	194.0	194.0	0.3	0.3	142.16	-1,199.2	931.5	1,518.5	1,517.8	0.67	2,282.825	
300.0	300.0	294.0	294.0	0.5	0.5	142.16	-1,199.2	931.5	1,518.5	1,517.4	1.01	1,497.154	
400.0	400.0	394.0	394.0	0.7	0.7	142.16	-1,199.2	931.5	1,518.5	1,517.1	1.36	1,113.816	
500.0	500.0	494.0	494.0	0.9	0.9	116.24	-1,199.2	931.5	1,518.8	1,517.1	1.71	886.784	
600.0	600.0	594.0	594.0	1.0	1.0	116.32	-1,199.2	931.5	1,520.0	1,517.9	2.06	736.266	
700.0	699.9	693.9	693.9	1.2	1.2	116.45	-1,199.2	931.5	1,521.9	1,519.5	2.42	628.642	
800.0	799.7	793.7	793.7	1.4	1.4	116.63	-1,199.2	931.5	1,524.7	1,521.9	2.78	547.460	
898.2	897.5	891.5	891.5	1.6	1.6	116.85	-1,199.2	931.5	1,528.1	1,525.0	3.15	484.820	
900.0	899.4	893.4	893.4	1.6	1.6	116.86	-1,199.2	931.5	1,528.2	1,525.1	3.16	483.779	
1,000.0	999.0	993.0	993.0	1.8	1.7	117.15	-1,199.2	931.5	1,532.2	1,528.6	3.54	433.111	
1,100.0	1,098.6	1,092.6	1,092.6	2.0	1.9	117.43	-1,199.2	931.5	1,536.2	1,532.2	3.92	391.956	
1,200.0	1,198.2	1,192.2	1,192.2	2.3	2.1	117.72	-1,199.2	931.5	1,540.2	1,535.9	4.30	357.948	
1,300.0	1,297.9	1,291.9	1,291.9	2.5	2.3	118.00	-1,199.2	931.5	1,544.3	1,539.6	4.69	329.420	
1,400.0	1,397.5	1,391.5	1,391.5	2.7	2.4	118.29	-1,199.2	931.5	1,548.4	1,543.3	5.07	305.174	
1,500.0	1,497.1	1,491.1	1,491.1	2.9	2.6	118.57	-1,199.2	931.5	1,552.5	1,547.1	5.46	284.330	
1,600.0	1,596.7	1,590.7	1,590.7	3.2	2.8	118.85	-1,199.2	931.5	1,556.7	1,550.9	5.85	266.230	
1,700.0	1,696.3	1,690.3	1,690.3	3.4	3.0	119.13	-1,199.2	931.5	1,560.9	1,554.7	6.23	250.374	
1,800.0	1,796.0	1,790.0	1,790.0	3.6	3.1	119.40	-1,199.2	931.5	1,565.2	1,558.6	6.62	236.373	
1,900.0	1,895.6	1,889.6	1,889.6	3.8	3.3	119.68	-1,199.2	931.5	1,569.5	1,562.5	7.01	223.925	
2,000.0	1,995.2	1,989.2	1,989.2	4.1	3.5	119.95	-1,199.2	931.5	1,573.8	1,566.4	7.40	212.787	
2,100.0	2,094.8	2,088.8	2,088.8	4.3	3.6	120.23	-1,199.2	931.5	1,578.2	1,570.4	7.78	202.765	
2,200.0	2,194.5	2,188.5	2,188.5	4.5	3.8	120.50	-1,199.2	931.5	1,582.6	1,574.4	8.17	193.701	
2,300.0	2,294.1	2,288.1	2,288.1	4.8	4.0	120.77	-1,199.2	931.5	1,587.0	1,578.4	8.56	185.465	
2,400.0	2,393.7	2,387.7	2,387.7	5.0	4.2	121.03	-1,199.2	931.5	1,591.5	1,582.5	8.94	177.950	
2,500.0	2,493.3	2,487.3	2,487.3	5.2	4.3	121.30	-1,199.2	931.5	1,596.0	1,586.7	9.33	171.066	
2,600.0	2,592.9	2,586.9	2,586.9	5.4	4.5	121.56	-1,199.2	931.5	1,600.5	1,590.8	9.72	164.738	
2,700.0	2,692.6	2,686.6	2,686.6	5.7	4.7	121.83	-1,199.2	931.5	1,605.1	1,595.0	10.10	158.902	
2,800.0	2,792.2	2,786.2	2,786.2	5.9	4.9	122.09	-1,199.2	931.5	1,609.7	1,599.2	10.49	153.503	
2,900.0	2,891.8	2,885.8	2,885.8	6.1	5.0	122.35	-1,199.2	931.5	1,614.4	1,603.5	10.87	148.494	
3,000.0	2,991.4	2,985.4	2,985.4	6.4	5.2	122.61	-1,199.2	931.5	1,619.0	1,607.8	11.26	143.835	
3,100.0	3,091.1	3,085.1	3,085.1	6.6	5.4	122.87	-1,199.2	931.5	1,623.7	1,612.1	11.64	139.491	
3,200.0	3,190.7	3,184.7	3,184.7	6.8	5.6	123.12	-1,199.2	931.5	1,628.5	1,616.5	12.02	135.431	
3,300.0	3,290.3	3,284.3	3,284.3	7.0	5.7	123.38	-1,199.2	931.5	1,633.3	1,620.8	12.41	131.629	
3,400.0	3,389.9	3,383.9	3,383.9	7.3	5.9	123.63	-1,199.2	931.5	1,638.1	1,625.3	12.79	128.062	
3,500.0	3,489.5	3,483.5	3,483.5	7.5	6.1	123.88	-1,199.2	931.5	1,642.9	1,629.7	13.17	124.707	
3,600.0	3,589.2	3,583.2	3,583.2	7.7	6.3	124.13	-1,199.2	931.5	1,647.8	1,634.2	13.56	121.548	
3,700.0	3,688.8	3,682.8	3,682.8	8.0	6.4	124.38	-1,199.2	931.5	1,652.7	1,638.7	13.94	118.568	
3,800.0	3,788.4	3,782.4	3,782.4	8.2	6.6	124.63	-1,199.2	931.5	1,657.6	1,643.3	14.32	115.752	
3,900.0	3,888.0	3,882.0	3,882.0	8.4	6.8	124.87	-1,199.2	931.5	1,662.6	1,647.9	14.70	113.087	
4,000.0	3,987.7	3,981.7	3,981.7	8.7	6.9	125.12	-1,199.2	931.5	1,667.6	1,652.5	15.08	110.562	
4,100.0	4,087.3	4,081.3	4,081.3	8.9	7.1	125.36	-1,199.2	931.5	1,672.6	1,657.1	15.46	108.166	
4,200.0	4,186.9	4,180.9	4,180.9	9.1	7.3	125.60	-1,199.2	931.5	1,677.6	1,661.8	15.84	105.889	
4,300.0	4,286.5	4,280.5	4,280.5	9.4	7.5	125.84	-1,199.2	931.5	1,682.7	1,666.5	16.22	103.724	
4,400.0	4,386.1	4,380.1	4,380.1	9.6	7.6	126.08	-1,199.2	931.5	1,687.8	1,671.2	16.60	101.661	
4,500.0	4,485.8	4,479.8	4,479.8	9.8	7.8	126.32	-1,199.2	931.5	1,693.0	1,676.0	16.98	99.695	
4,600.0	4,585.4	4,579.4	4,579.4	10.0	8.0	126.55	-1,199.2	931.5	1,698.1	1,680.8	17.36	97.818	
4,700.0	4,685.0	4,679.0	4,679.0	10.3	8.2	126.79	-1,199.2	931.5	1,703.3	1,685.6	17.74	96.026	
4,800.0	4,784.6	4,778.6	4,778.6	10.5	8.3	127.02	-1,199.2	931.5	1,708.6	1,690.4	18.12	94.311	
4,900.0	4,884.3	4,878.3	4,878.3	10.7	8.5	127.25	-1,199.2	931.5	1,713.8	1,695.3	18.49	92.670	
5,000.0	4,983.9	4,977.9	4,977.9	11.0	8.7	127.48	-1,199.2	931.5	1,719.1	1,700.2	18.87	91.098	

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 2C-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 2C-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 #2	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
5,100.0	5,083.5	5,077.5	5,077.5	11.2	8.9	127.71	-1,199.2	931.5	1,724.4	1,705.2	19.25	89.591	
5,200.0	5,183.1	5,177.1	5,177.1	11.4	9.0	127.94	-1,199.2	931.5	1,729.7	1,710.1	19.62	88.145	
5,300.0	5,282.7	5,276.7	5,276.7	11.7	9.2	128.16	-1,199.2	931.5	1,735.1	1,715.1	20.00	86.756	
5,400.0	5,382.4	5,376.4	5,376.4	11.9	9.4	128.38	-1,199.2	931.5	1,740.5	1,720.1	20.38	85.421	
5,500.0	5,482.0	5,476.0	5,476.0	12.1	9.6	128.61	-1,199.2	931.5	1,745.9	1,725.2	20.75	84.138	
5,600.0	5,581.6	5,575.6	5,575.6	12.4	9.7	128.83	-1,199.2	931.5	1,751.4	1,730.2	21.13	82.902	
5,700.0	5,681.2	5,675.2	5,675.2	12.6	9.9	129.05	-1,199.2	931.5	1,756.8	1,735.3	21.50	81.713	
5,800.0	5,780.9	5,774.9	5,774.9	12.8	10.1	129.27	-1,199.2	931.5	1,762.3	1,740.5	21.87	80.566	
5,900.0	5,880.5	5,874.5	5,874.5	13.0	10.3	129.49	-1,199.2	931.5	1,767.8	1,745.6	22.25	79.461	
6,000.0	5,980.1	5,974.1	5,974.1	13.3	10.4	129.70	-1,199.2	931.5	1,773.4	1,750.8	22.62	78.395	
6,100.0	6,079.7	6,073.7	6,073.7	13.5	10.6	129.92	-1,199.2	931.5	1,779.0	1,756.0	22.99	77.365	
6,200.0	6,179.3	6,173.3	6,173.3	13.7	10.8	130.13	-1,199.2	931.5	1,784.6	1,761.2	23.37	76.371	
6,300.0	6,279.0	6,273.0	6,273.0	14.0	10.9	130.34	-1,199.2	931.5	1,790.2	1,766.4	23.74	75.409	
6,400.0	6,378.6	6,372.6	6,372.6	14.2	11.1	130.55	-1,199.2	931.5	1,795.8	1,771.7	24.11	74.480	
6,500.0	6,478.2	6,472.2	6,472.2	14.4	11.3	130.76	-1,199.2	931.5	1,801.5	1,777.0	24.48	73.581	
6,600.0	6,577.8	6,571.8	6,571.8	14.7	11.5	130.97	-1,199.2	931.5	1,807.2	1,782.3	24.85	72.711	
6,700.0	6,677.5	6,671.5	6,671.5	14.9	11.6	131.18	-1,199.2	931.5	1,812.9	1,787.7	25.23	71.868	
6,800.0	6,777.1	6,771.1	6,771.1	15.1	11.8	131.38	-1,199.2	931.5	1,818.7	1,793.1	25.60	71.052	
6,900.0	6,876.7	6,870.7	6,870.7	15.4	12.0	131.59	-1,199.2	931.5	1,824.4	1,798.4	25.97	70.261	
7,000.0	6,976.3	6,970.3	6,970.3	15.6	12.2	131.79	-1,199.2	931.5	1,830.2	1,803.9	26.34	69.493	
7,100.0	7,075.9	7,069.9	7,069.9	15.8	12.3	131.99	-1,199.2	931.5	1,836.0	1,809.3	26.71	68.749	
7,147.0	7,122.8	7,116.8	7,116.8	15.9	12.4	132.09	-1,199.2	931.5	1,838.8	1,811.9	26.88	68.407	
7,150.0	7,125.8	7,119.8	7,119.8	15.9	12.4	130.49	-1,199.2	931.5	1,838.9	1,812.0	26.89	68.380	
7,200.0	7,175.7	7,169.7	7,169.7	16.0	12.5	47.59	-1,199.2	931.5	1,839.6	1,812.5	27.04	68.034	
7,250.0	7,225.5	7,219.5	7,219.5	16.0	12.6	-1.27	-1,199.2	931.5	1,836.2	1,809.1	27.07	67.843	
7,300.0	7,275.0	7,269.0	7,269.0	16.0	12.7	-10.71	-1,199.2	931.5	1,828.8	1,801.8	26.97	67.803	
7,350.0	7,323.6	7,317.6	7,317.6	16.0	12.8	-14.75	-1,199.2	931.5	1,817.4	1,790.6	26.76	67.906	
7,400.0	7,371.0	7,365.0	7,365.0	15.9	12.9	-17.36	-1,199.2	931.5	1,802.1	1,775.7	26.45	68.135	
7,450.0	7,416.9	7,410.9	7,410.9	15.8	12.9	-19.52	-1,199.2	931.5	1,783.1	1,757.1	26.04	68.466	
7,500.0	7,460.8	7,454.8	7,454.8	15.6	13.0	-21.61	-1,199.2	931.5	1,760.6	1,735.0	25.57	68.857	
7,550.0	7,502.6	7,496.6	7,496.6	15.5	13.1	-23.84	-1,199.2	931.5	1,734.6	1,709.5	25.05	69.242	
7,600.0	7,541.7	7,535.7	7,535.7	15.3	13.2	-26.38	-1,199.2	931.5	1,705.5	1,680.9	24.53	69.519	
7,650.0	7,578.1	7,572.1	7,572.1	15.2	13.2	-29.34	-1,199.2	931.5	1,673.4	1,649.3	24.06	69.538	
7,700.0	7,611.3	7,605.3	7,605.3	15.0	13.3	-32.88	-1,199.2	931.5	1,638.7	1,615.0	23.72	69.100	
7,750.0	7,641.1	7,635.1	7,635.1	14.9	13.3	-37.15	-1,199.2	931.5	1,601.7	1,578.1	23.56	67.972	
7,800.0	7,667.4	7,661.4	7,661.4	14.8	13.4	-42.32	-1,199.2	931.5	1,562.7	1,539.0	23.69	65.961	
7,850.0	7,689.8	7,683.8	7,683.8	14.7	13.4	-48.52	-1,199.2	931.5	1,522.0	1,497.8	24.15	63.030	
7,900.0	7,708.2	7,702.2	7,702.2	14.7	13.4	-55.85	-1,199.2	931.5	1,480.0	1,455.1	24.92	59.400	
7,950.0	7,722.6	7,716.6	7,716.6	14.7	13.5	-64.21	-1,199.2	931.5	1,437.1	1,411.2	25.87	55.551	
8,000.0	7,732.7	7,726.7	7,726.7	14.7	13.5	-73.30	-1,199.2	931.5	1,393.6	1,366.8	26.79	52.030	
8,050.0	7,738.5	7,732.5	7,732.5	14.8	13.5	-82.57	-1,199.2	931.5	1,350.0	1,322.6	27.43	49.214	
8,091.8	7,740.0	7,734.0	7,734.0	15.0	13.5	-90.00	-1,199.2	931.5	1,313.8	1,286.1	27.68	47.469	
8,100.0	7,740.0	7,734.0	7,734.0	15.0	13.5	-90.00	-1,199.2	931.5	1,306.7	1,279.0	27.71	47.161	
8,200.0	7,740.0	7,734.0	7,734.0	15.4	13.5	-90.00	-1,199.2	931.5	1,221.5	1,193.3	28.18	43.340	
8,300.0	7,740.0	7,734.0	7,734.0	16.1	13.5	-90.00	-1,199.2	931.5	1,138.7	1,109.8	28.85	39.473	
8,400.0	7,740.0	7,734.0	7,734.0	16.9	13.5	-90.00	-1,199.2	931.5	1,058.8	1,029.1	29.67	35.682	
8,500.0	7,740.0	7,734.0	7,734.0	17.8	13.5	-90.00	-1,199.2	931.5	982.7	952.0	30.64	32.071	
8,600.0	7,740.0	7,734.0	7,734.0	18.8	13.5	-90.00	-1,199.2	931.5	911.2	879.5	31.73	28.720	
8,700.0	7,740.0	7,734.0	7,734.0	20.0	13.5	-90.00	-1,199.2	931.5	845.5	812.6	32.91	25.691	
8,800.0	7,740.0	7,734.0	7,734.0	21.2	13.5	-90.00	-1,199.2	931.5	787.0	752.8	34.17	23.030	
8,900.0	7,740.0	7,734.0	7,734.0	22.5	13.5	-90.00	-1,199.2	931.5	737.5	702.0	35.51	20.773	
9,000.0	7,740.0	7,734.0	7,734.0	23.9	13.5	-90.00	-1,199.2	931.5	699.0	662.1	36.89	18.946	

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 2C-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 2C-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 #2	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	25.3	13.5	-90.00	-1,199.2	931.5	673.1	634.8	38.33	17.563	
9,200.0	7,740.0	7,734.0	7,734.0	26.7	13.5	-90.00	-1,199.2	931.5	661.6	621.8	39.80	16.623	
9,227.1	7,740.0	7,734.0	7,734.0	27.1	13.5	-90.00	-1,199.2	931.5	661.0	620.8	40.21	16.440	CC, ES
9,300.0	7,740.0	7,734.0	7,734.0	28.2	13.5	-90.00	-1,199.2	931.5	665.0	623.7	41.31	16.101	
9,400.0	7,740.0	7,734.0	7,734.0	29.7	13.5	-90.00	-1,199.2	931.5	683.3	640.4	42.84	15.950	SF
9,500.0	7,740.0	7,734.0	7,734.0	31.3	13.5	-90.00	-1,199.2	931.5	715.1	670.7	44.39	16.109	
9,600.0	7,740.0	7,734.0	7,734.0	32.8	13.5	-90.00	-1,199.2	931.5	758.9	713.0	45.97	16.509	
9,700.0	7,740.0	7,734.0	7,734.0	34.4	13.5	-90.00	-1,199.2	931.5	812.8	765.2	47.57	17.087	
9,800.0	7,740.0	7,734.0	7,734.0	36.0	13.5	-90.00	-1,199.2	931.5	874.7	825.6	49.17	17.788	
9,900.0	7,740.0	7,734.0	7,734.0	37.6	13.5	-90.00	-1,199.2	931.5	943.3	892.5	50.80	18.569	
10,000.0	7,740.0	7,734.0	7,734.0	39.2	13.5	-90.00	-1,199.2	931.5	1,017.0	964.6	52.43	19.397	
10,100.0	7,740.0	7,734.0	7,734.0	40.9	13.5	-90.00	-1,199.2	931.5	1,094.9	1,040.9	54.07	20.249	
10,200.0	7,740.0	7,734.0	7,734.0	42.5	13.5	-90.00	-1,199.2	931.5	1,176.2	1,120.5	55.73	21.107	
10,300.0	7,740.0	7,734.0	7,734.0	44.1	13.5	-90.00	-1,199.2	931.5	1,260.2	1,202.8	57.39	21.959	
10,400.0	7,740.0	7,734.0	7,734.0	45.8	13.5	-90.00	-1,199.2	931.5	1,346.3	1,287.3	59.05	22.798	
10,500.0	7,740.0	7,734.0	7,734.0	47.5	13.5	-90.00	-1,199.2	931.5	1,434.3	1,373.6	60.73	23.618	
10,600.0	7,740.0	7,734.0	7,734.0	49.1	13.5	-90.00	-1,199.2	931.5	1,523.7	1,461.3	62.41	24.416	
10,700.0	7,740.0	7,734.0	7,734.0	50.8	13.5	-90.00	-1,199.2	931.5	1,614.4	1,550.3	64.09	25.189	
10,800.0	7,740.0	7,734.0	7,734.0	52.5	13.5	-90.00	-1,199.2	931.5	1,706.1	1,640.4	65.78	25.937	
10,900.0	7,740.0	7,734.0	7,734.0	54.2	13.5	-90.00	-1,199.2	931.5	1,798.7	1,731.3	67.47	26.658	
11,000.0	7,740.0	7,734.0	7,734.0	55.9	13.5	-90.00	-1,199.2	931.5	1,892.1	1,822.9	69.17	27.354	
11,100.0	7,740.0	7,734.0	7,734.0	57.6	13.5	-90.00	-1,199.2	931.5	1,986.1	1,915.2	70.87	28.024	
11,200.0	7,740.0	7,734.0	7,734.0	59.3	13.5	-90.00	-1,199.2	931.5	2,080.7	2,008.1	72.57	28.669	
11,300.0	7,740.0	7,734.0	7,734.0	61.0	13.5	-90.00	-1,199.2	931.5	2,175.7	2,101.4	74.28	29.291	
11,400.0	7,740.0	7,734.0	7,734.0	62.7	13.5	-90.00	-1,199.2	931.5	2,271.2	2,195.2	75.99	29.888	
11,500.0	7,740.0	7,734.0	7,734.0	64.4	13.5	-90.00	-1,199.2	931.5	2,367.1	2,289.3	77.70	30.463	
11,600.0	7,740.0	7,734.0	7,734.0	66.1	13.5	-90.00	-1,199.2	931.5	2,463.2	2,383.8	79.41	31.017	
11,700.0	7,740.0	7,734.0	7,734.0	67.8	13.5	-90.00	-1,199.2	931.5	2,559.7	2,478.6	81.13	31.550	
11,800.0	7,740.0	7,734.0	7,734.0	69.5	13.5	-90.00	-1,199.2	931.5	2,656.4	2,573.6	82.85	32.064	
11,900.0	7,740.0	7,734.0	7,734.0	71.2	13.5	-90.00	-1,199.2	931.5	2,753.4	2,668.8	84.57	32.559	
12,000.0	7,740.0	7,734.0	7,734.0	72.9	13.5	-90.00	-1,199.2	931.5	2,850.6	2,764.3	86.29	33.035	
12,100.0	7,740.0	7,734.0	7,734.0	74.7	13.5	-90.00	-1,199.2	931.5	2,947.9	2,859.9	88.01	33.495	
12,200.0	7,740.0	7,734.0	7,734.0	76.4	13.5	-90.00	-1,199.2	931.5	3,045.5	2,955.7	89.74	33.938	
12,300.0	7,740.0	7,734.0	7,734.0	78.1	13.5	-90.00	-1,199.2	931.5	3,143.2	3,051.7	91.46	34.366	
12,400.0	7,740.0	7,734.0	7,734.0	79.8	13.5	-90.00	-1,199.2	931.5	3,241.0	3,147.8	93.19	34.779	
12,500.0	7,740.0	7,734.0	7,734.0	81.6	13.5	-90.00	-1,199.2	931.5	3,339.0	3,244.0	94.92	35.178	
12,600.0	7,740.0	7,734.0	7,734.0	83.3	13.5	-90.00	-1,199.2	931.5	3,437.0	3,340.4	96.64	35.564	
12,700.0	7,740.0	7,734.0	7,734.0	85.0	13.5	-90.00	-1,199.2	931.5	3,535.2	3,436.9	98.37	35.937	
12,800.0	7,740.0	7,734.0	7,734.0	86.7	13.5	-90.00	-1,199.2	931.5	3,633.5	3,533.4	100.11	36.297	
12,900.0	7,740.0	7,734.0	7,734.0	88.5	13.5	-90.00	-1,199.2	931.5	3,731.9	3,630.1	101.84	36.646	
13,000.0	7,740.0	7,734.0	7,734.0	90.2	13.5	-90.00	-1,199.2	931.5	3,830.3	3,726.8	103.57	36.983	
13,100.0	7,740.0	7,734.0	7,734.0	91.9	13.5	-90.00	-1,199.2	931.5	3,928.9	3,823.6	105.30	37.310	
13,200.0	7,740.0	7,734.0	7,734.0	93.7	13.5	-90.00	-1,199.2	931.5	4,027.5	3,920.5	107.04	37.627	
13,300.0	7,740.0	7,734.0	7,734.0	95.4	13.5	-90.00	-1,199.2	931.5	4,126.2	4,017.4	108.77	37.934	
13,400.0	7,740.0	7,734.0	7,734.0	97.1	13.5	-90.00	-1,199.2	931.5	4,224.9	4,114.4	110.51	38.232	
13,500.0	7,740.0	7,734.0	7,734.0	98.9	13.5	-90.00	-1,199.2	931.5	4,323.7	4,211.5	112.24	38.521	
13,600.0	7,740.0	7,734.0	7,734.0	100.6	13.5	-90.00	-1,199.2	931.5	4,422.6	4,308.6	113.98	38.801	
13,700.0	7,740.0	7,734.0	7,734.0	102.3	13.5	-90.00	-1,199.2	931.5	4,521.5	4,405.7	115.72	39.073	
13,800.0	7,740.0	7,734.0	7,734.0	104.1	13.5	-90.00	-1,199.2	931.5	4,620.4	4,503.0	117.46	39.337	
13,900.0	7,740.0	7,734.0	7,734.0	105.8	13.5	-90.00	-1,199.2	931.5	4,719.4	4,600.2	119.20	39.594	
14,000.0	7,740.0	7,734.0	7,734.0	107.5	13.5	-90.00	-1,199.2	931.5	4,818.4	4,697.5	120.93	39.843	
14,100.0	7,740.0	7,734.0	7,734.0	109.3	13.5	-90.00	-1,199.2	931.5	4,917.5	4,794.8	122.67	40.086	

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 2C-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 2C-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 #2	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							
14,200.0	7,740.0	7,734.0	7,734.0	111.0	13.5	-90.00	-1,199.2	931.5	5,016.6	4,892.2	124.41	40.322							
14,300.0	7,740.0	7,734.0	7,734.0	112.8	13.5	-90.00	-1,199.2	931.5	5,115.8	4,989.6	126.15	40.552							
14,400.0	7,740.0	7,734.0	7,734.0	114.5	13.5	-90.00	-1,199.2	931.5	5,214.9	5,087.0	127.90	40.775							

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 11-7 (EXISTING) - ENCANA WELL - SU														Offset Site Error:	0.0 ft
Survey Program: 132-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	65.3	65.3	0.0	0.1	37.24	1,606.8	1,221.6	2,018.5						
100.0	100.0	192.2	192.1	0.2	0.3	37.20	1,606.5	1,219.3	2,017.2	2,016.7	0.49	4,078.896			
200.0	200.0	329.6	329.5	0.3	0.6	37.12	1,605.0	1,214.6	2,014.3	2,013.4	0.92	2,180.240			
300.0	300.0	438.0	437.6	0.5	0.8	36.99	1,603.9	1,208.2	2,009.9	2,008.6	1.32	1,524.081			
400.0	400.0	533.3	532.6	0.7	1.0	36.79	1,605.2	1,200.6	2,006.2	2,004.5	1.71	1,170.509			
500.0	500.0	804.6	799.9	0.9	2.0	9.73	1,610.9	1,155.3	1,997.0	1,994.3	2.66	750.615			
600.0	600.0	920.6	913.2	1.0	2.4	9.18	1,610.3	1,130.2	1,981.2	1,977.9	3.22	614.754			
700.0	699.9	1,052.6	1,042.0	1.2	3.0	8.57	1,608.4	1,101.6	1,963.3	1,959.4	3.85	509.718			
800.0	799.7	1,200.0	1,184.8	1.4	3.7	7.79	1,605.2	1,065.4	1,941.6	1,937.0	4.60	421.973			
898.2	897.5	1,287.9	1,269.4	1.6	4.1	7.27	1,603.4	1,041.6	1,917.4	1,912.3	5.15	372.529			
900.0	899.4	1,289.5	1,270.9	1.6	4.1	7.26	1,603.4	1,041.2	1,917.0	1,911.8	5.16	371.706			
1,000.0	999.0	1,408.1	1,385.0	1.8	4.7	6.50	1,600.6	1,008.6	1,891.3	1,885.4	5.84	323.686			
1,100.0	1,098.6	1,498.0	1,471.3	2.0	5.2	5.89	1,598.1	983.6	1,865.3	1,858.9	6.43	290.270			
1,200.0	1,198.2	1,575.8	1,545.9	2.3	5.6	5.34	1,596.7	961.7	1,840.2	1,833.2	6.96	264.256			
1,300.0	1,297.9	1,660.1	1,627.0	2.5	6.0	4.74	1,595.7	938.7	1,816.2	1,808.7	7.53	241.320			
1,400.0	1,397.5	1,768.1	1,730.9	2.7	6.6	3.96	1,593.7	909.3	1,792.0	1,783.8	8.22	218.101			
1,500.0	1,497.1	1,869.4	1,827.9	2.9	7.2	3.15	1,592.8	879.8	1,767.9	1,759.0	8.92	198.273			
1,600.0	1,596.7	1,966.3	1,920.4	3.2	7.7	2.33	1,591.6	851.0	1,743.6	1,734.0	9.61	181.522			
1,700.0	1,696.3	2,080.0	2,029.1	3.4	8.3	1.38	1,589.3	817.9	1,719.3	1,708.9	10.35	166.067			
1,800.0	1,796.0	2,144.3	2,090.9	3.6	8.7	0.86	1,587.6	800.2	1,695.4	1,684.5	10.85	156.320			
1,900.0	1,895.6	2,259.3	2,201.2	3.8	9.3	-0.13	1,585.9	767.7	1,672.6	1,661.0	11.65	143.584			
2,000.0	1,995.2	2,368.5	2,305.0	4.1	9.9	-1.17	1,583.2	734.2	1,648.2	1,635.7	12.45	132.384			
2,100.0	2,094.8	2,430.0	2,363.6	4.3	10.3	-1.78	1,582.4	715.3	1,625.1	1,612.1	12.99	125.096			
2,200.0	2,194.5	2,499.1	2,429.5	4.5	10.7	-2.49	1,582.6	694.4	1,604.1	1,590.6	13.58	118.161			
2,300.0	2,294.1	2,588.0	2,514.4	4.8	11.2	-3.39	1,583.6	668.3	1,584.7	1,570.4	14.27	111.049			
2,400.0	2,393.7	2,674.0	2,596.8	5.0	11.7	-4.27	1,584.6	643.6	1,565.9	1,551.0	14.95	104.714			
2,500.0	2,493.3	2,778.2	2,696.5	5.2	12.2	-5.37	1,586.0	613.3	1,547.8	1,532.0	15.76	98.236			
2,600.0	2,592.9	2,888.9	2,802.5	5.4	12.8	-6.55	1,586.3	581.5	1,529.2	1,512.6	16.58	92.257			
2,700.0	2,692.6	2,990.2	2,899.9	5.7	13.4	-7.58	1,585.0	553.6	1,510.2	1,492.8	17.32	87.209			
2,800.0	2,792.2	3,114.3	3,019.3	5.9	14.0	-8.86	1,582.7	520.0	1,491.4	1,473.2	18.19	81.992			
2,900.0	2,891.8	3,191.9	3,093.8	6.1	14.4	-9.69	1,580.4	498.3	1,471.7	1,452.8	18.82	78.179			
3,000.0	2,991.4	3,284.4	3,182.4	6.4	14.9	-10.75	1,579.0	471.9	1,453.6	1,434.0	19.56	74.315			
3,100.0	3,091.1	3,363.2	3,258.0	6.6	15.4	-11.66	1,577.9	449.4	1,436.2	1,416.0	20.22	71.043			
3,200.0	3,190.7	3,460.8	3,351.7	6.8	15.9	-12.80	1,577.3	422.3	1,420.2	1,399.2	20.97	67.735			
3,300.0	3,290.3	3,541.2	3,429.2	7.0	16.3	-13.71	1,576.5	400.9	1,404.7	1,383.1	21.60	65.027			
3,400.0	3,389.9	3,613.1	3,498.6	7.3	16.6	-14.54	1,576.8	382.1	1,391.1	1,368.9	22.21	62.631			
3,500.0	3,489.5	3,694.3	3,576.5	7.5	17.1	-15.55	1,578.8	359.4	1,379.7	1,356.8	22.90	60.248			
3,600.0	3,589.2	3,832.9	3,709.5	7.7	17.8	-17.32	1,581.0	320.4	1,368.2	1,344.3	23.93	57.186			
3,700.0	3,688.8	3,928.3	3,801.2	8.0	18.3	-18.53	1,580.3	293.9	1,355.2	1,330.5	24.69	54.890			
3,800.0	3,788.4	4,015.4	3,884.7	8.2	18.8	-19.68	1,580.2	269.3	1,343.2	1,317.8	25.41	52.858			
3,900.0	3,888.0	4,127.3	3,991.6	8.4	19.4	-21.24	1,579.6	236.2	1,331.6	1,305.3	26.31	50.607			
4,000.0	3,987.7	4,247.8	4,106.8	8.7	20.1	-22.92	1,577.0	201.0	1,319.1	1,291.8	27.24	48.426			
4,100.0	4,087.3	4,315.2	4,171.4	8.9	20.5	-23.86	1,575.2	181.6	1,307.1	1,279.3	27.84	46.951			
4,200.0	4,186.9	4,388.8	4,241.9	9.1	20.9	-24.91	1,575.2	160.5	1,298.1	1,269.7	28.46	45.613			
4,300.0	4,286.5	4,478.6	4,328.5	9.4	21.3	-26.10	1,575.5	136.9	1,290.5	1,261.4	29.12	44.322			
4,400.0	4,386.1	4,566.8	4,414.4	9.6	21.7	-27.13	1,576.5	117.2	1,284.1	1,254.4	29.69	43.243			
4,500.0	4,485.8	4,660.8	4,506.7	9.8	22.0	-28.09	1,578.1	99.4	1,278.6	1,248.4	30.24	42.278			
4,600.0	4,585.4	4,759.9	4,604.5	10.0	22.3	-28.99	1,579.8	83.2	1,273.5	1,242.7	30.76	41.396			
4,700.0	4,685.0	4,858.4	4,701.9	10.3	22.6	-29.81	1,581.6	69.2	1,268.6	1,237.3	31.25	40.596			
4,800.0	4,784.6	4,953.3	4,796.0	10.5	22.8	-30.53	1,583.5	57.2	1,264.0	1,232.3	31.69	39.885			
4,900.0	4,884.3	5,060.0	4,902.1	10.7	23.1	-31.26	1,585.7	45.5	1,259.6	1,227.4	32.14	39.195			
5,000.0	4,983.9	5,165.4	5,007.0	11.0	23.3	-31.94	1,587.2	35.2	1,254.6	1,222.1	32.56	38.535			

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 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 11-7 (EXISTING) - ENCANA WELL - SU													Offset Site Error:	0.0 ft
Survey Program: 132-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	5,083.5	5,261.8	5,103.0	11.2	23.5	-32.51	1,588.6	27.1	1,249.6	1,216.7	32.93	37.949		
5,200.0	5,183.1	5,358.2	5,199.2	11.4	23.6	-32.98	1,590.7	20.9	1,245.2	1,211.9	33.27	37.422		
5,300.0	5,282.7	5,465.0	5,305.8	11.7	23.8	-33.45	1,592.9	15.6	1,240.6	1,207.0	33.61	36.910		
5,400.0	5,382.4	5,567.3	5,408.1	11.9	23.9	-33.85	1,594.6	11.7	1,235.5	1,201.6	33.93	36.417		
5,500.0	5,482.0	5,667.5	5,508.1	12.1	24.0	-34.22	1,596.2	8.3	1,230.4	1,196.1	34.24	35.936		
5,600.0	5,581.6	5,759.7	5,600.3	12.4	24.1	-34.55	1,598.1	5.4	1,225.6	1,191.1	34.53	35.496		
5,700.0	5,681.2	5,854.1	5,694.7	12.6	24.2	-34.87	1,600.5	2.9	1,221.5	1,186.7	34.82	35.079		
5,800.0	5,780.9	5,957.2	5,797.7	12.8	24.3	-35.21	1,603.3	0.4	1,217.4	1,182.3	35.12	34.663		
5,900.0	5,880.5	6,061.7	5,902.2	13.0	24.4	-35.54	1,605.8	-1.9	1,213.0	1,177.6	35.41	34.258		
6,000.0	5,980.1	6,167.7	6,008.1	13.3	24.5	-35.84	1,608.0	-3.2	1,208.2	1,172.5	35.69	33.854		
6,100.0	6,079.7	6,268.0	6,108.4	13.5	24.6	-36.10	1,609.8	-4.0	1,203.1	1,167.1	35.97	33.443		
6,200.0	6,179.3	6,366.9	6,207.3	13.7	24.7	-36.39	1,611.6	-5.2	1,198.0	1,161.8	36.26	33.038		
6,300.0	6,279.0	6,463.2	6,303.5	14.0	24.8	-36.69	1,613.4	-6.8	1,193.2	1,156.6	36.56	32.641		
6,400.0	6,378.6	6,560.8	6,401.0	14.2	25.0	-37.00	1,615.4	-8.7	1,188.7	1,151.8	36.85	32.256		
6,500.0	6,478.2	6,662.0	6,502.2	14.4	25.1	-37.35	1,617.5	-11.0	1,184.2	1,147.0	37.16	31.867		
6,600.0	6,577.8	6,760.7	6,600.8	14.7	25.2	-37.70	1,619.4	-13.4	1,179.6	1,142.2	37.46	31.491		
6,700.0	6,677.5	6,857.3	6,697.5	14.9	25.3	-38.03	1,621.5	-15.5	1,175.4	1,137.6	37.75	31.133		
6,800.0	6,777.1	6,955.3	6,795.4	15.1	25.4	-38.35	1,623.9	-17.5	1,171.3	1,133.3	38.04	30.789		
6,900.0	6,876.7	7,053.8	6,893.9	15.4	25.5	-38.67	1,626.5	-19.2	1,167.5	1,129.1	38.33	30.455		
7,000.0	6,976.3	7,153.8	6,993.8	15.6	25.6	-38.97	1,629.2	-20.6	1,163.7	1,125.1	38.62	30.133		
7,100.0	7,075.9	7,254.5	7,094.5	15.8	25.7	-39.27	1,632.0	-21.6	1,159.9	1,121.0	38.90	29.815		
7,147.0	7,122.8	7,303.1	7,143.0	15.9	25.8	-39.40	1,633.3	-22.1	1,158.0	1,119.0	39.04	29.665		
7,150.0	7,125.8	7,306.2	7,146.1	15.9	25.8	-41.02	1,633.4	-22.1	1,157.9	1,118.9	39.05	29.649		
7,170.8	7,146.5	7,327.7	7,167.7	16.0	25.8	-59.64	1,633.9	-22.3	1,157.6	1,118.4	39.14	29.573	CC, ES	
7,200.0	7,175.7	7,357.9	7,197.8	16.0	25.8	-124.14	1,634.7	-22.5	1,158.3	1,119.1	39.20	29.551	SF	
7,250.0	7,225.5	7,409.3	7,249.2	16.0	25.9	-173.07	1,635.9	-22.9	1,162.8	1,123.7	39.09	29.750		
7,300.0	7,275.0	7,457.9	7,297.7	16.0	25.9	177.59	1,637.1	-23.2	1,171.5	1,132.8	38.72	30.257		
7,350.0	7,323.6	7,505.5	7,345.4	16.0	25.9	173.80	1,638.3	-23.4	1,184.3	1,146.2	38.11	31.079		
7,400.0	7,371.0	7,551.8	7,391.7	15.9	26.0	171.63	1,639.5	-23.4	1,201.2	1,164.0	37.26	32.240		
7,450.0	7,416.9	7,596.4	7,436.2	15.8	26.0	170.09	1,640.7	-23.3	1,222.1	1,185.9	36.19	33.771		
7,500.0	7,460.8	7,638.8	7,478.7	15.6	26.1	168.82	1,641.9	-23.2	1,246.8	1,211.9	34.91	35.717		
7,550.0	7,502.6	7,678.9	7,518.7	15.5	26.1	167.63	1,643.1	-23.0	1,275.0	1,241.6	33.44	38.132		
7,600.0	7,541.7	7,716.4	7,556.2	15.3	26.1	166.40	1,644.2	-22.9	1,306.7	1,274.9	31.80	41.086		
7,650.0	7,578.1	7,750.9	7,590.7	15.2	26.1	165.02	1,645.3	-22.7	1,341.5	1,311.5	30.04	44.656		
7,700.0	7,611.3	7,777.1	7,616.9	15.0	26.2	163.29	1,646.2	-22.6	1,379.3	1,351.1	28.19	48.932		
7,750.0	7,641.1	7,799.6	7,639.3	14.9	26.2	161.09	1,647.0	-22.5	1,419.8	1,393.5	26.32	53.952		
7,800.0	7,667.4	7,818.8	7,658.5	14.8	26.2	158.15	1,647.8	-22.4	1,462.7	1,438.1	24.53	59.631		
7,850.0	7,689.8	7,834.7	7,674.4	14.7	26.2	154.03	1,648.5	-22.4	1,507.6	1,484.5	23.01	65.531		
7,900.0	7,708.2	7,847.3	7,687.0	14.7	26.2	147.90	1,649.1	-22.3	1,554.1	1,532.0	22.08	70.387		
7,950.0	7,722.6	7,856.5	7,696.2	14.7	26.2	138.20	1,649.6	-22.3	1,601.9	1,579.5	22.36	71.638		
8,000.0	7,732.7	7,862.4	7,702.0	14.7	26.2	122.11	1,649.9	-22.3	1,650.5	1,626.0	24.53	67.274		
8,050.0	7,738.5	7,864.8	7,704.5	14.8	26.2	97.12	1,650.0	-22.3	1,699.7	1,672.2	27.44	61.947		
8,091.8	7,740.0	7,864.3	7,704.0	15.0	26.2	73.27	1,650.0	-22.3	1,740.8	1,713.4	27.44	63.452		
8,100.0	7,740.0	7,864.0	7,703.7	15.0	26.2	73.21	1,649.9	-22.3	1,748.9	1,721.5	27.46	63.689		
8,200.0	7,740.0	7,860.2	7,699.8	15.4	26.2	72.52	1,649.7	-22.3	1,847.5	1,819.6	27.87	66.289		
8,300.0	7,740.0	7,856.4	7,696.1	16.1	26.2	71.86	1,649.6	-22.3	1,946.2	1,917.7	28.45	68.402		
8,400.0	7,740.0	7,852.8	7,692.5	16.9	26.2	71.22	1,649.4	-22.3	2,045.0	2,015.8	29.18	70.076		
8,500.0	7,740.0	7,849.3	7,688.9	17.8	26.2	70.61	1,649.2	-22.3	2,143.9	2,113.8	30.04	71.375		
8,600.0	7,740.0	7,845.8	7,685.5	18.8	26.2	70.01	1,649.0	-22.3	2,242.8	2,211.8	30.99	72.364		
8,700.0	7,740.0	7,842.5	7,682.2	20.0	26.2	69.44	1,648.9	-22.4	2,341.9	2,309.9	32.03	73.107		
8,800.0	7,740.0	7,839.2	7,678.9	21.2	26.2	68.88	1,648.7	-22.4	2,441.0	2,407.9	33.14	73.657		
8,900.0	7,740.0	7,836.0	7,675.7	22.5	26.2	68.34	1,648.6	-22.4	2,540.2	2,505.9	34.30	74.057		

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 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 11-7 (EXISTING) - ENCANA WELL - SU													Offset Site Error:	0.0 ft
Survey Program: 132-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	7,832.9	7,672.6	23.9	26.2	67.82	1,648.4	-22.4	2,639.5	2,604.0	35.50	74.343		
9,100.0	7,740.0	7,829.9	7,669.6	25.3	26.2	67.32	1,648.3	-22.4	2,738.8	2,702.1	36.74	74.543		
9,200.0	7,740.0	7,826.9	7,666.7	26.7	26.2	66.83	1,648.2	-22.4	2,838.2	2,800.1	38.00	74.680		
9,300.0	7,740.0	7,824.1	7,663.8	28.2	26.2	66.36	1,648.0	-22.4	2,937.5	2,898.3	39.29	74.768		
9,400.0	7,740.0	7,821.3	7,661.0	29.7	26.2	65.90	1,647.9	-22.4	3,037.0	2,996.4	40.59	74.821		
9,500.0	7,740.0	7,818.5	7,658.2	31.3	26.2	65.46	1,647.8	-22.5	3,136.4	3,094.5	41.90	74.849		
9,600.0	7,740.0	7,815.9	7,655.6	32.8	26.2	65.03	1,647.7	-22.5	3,235.9	3,192.7	43.23	74.859		
9,700.0	7,740.0	7,813.2	7,653.0	34.4	26.2	64.61	1,647.6	-22.5	3,335.4	3,290.9	44.56	74.857		
9,800.0	7,740.0	7,810.7	7,650.4	36.0	26.2	64.20	1,647.5	-22.5	3,435.0	3,389.1	45.89	74.847		
9,900.0	7,740.0	7,808.2	7,647.9	37.6	26.2	63.81	1,647.3	-22.5	3,534.5	3,487.3	47.23	74.832		
10,000.0	7,740.0	7,805.8	7,645.5	39.2	26.2	63.43	1,647.2	-22.5	3,634.1	3,585.5	48.58	74.814		
10,100.0	7,740.0	7,803.4	7,643.1	40.9	26.2	63.06	1,647.2	-22.5	3,733.7	3,683.8	49.92	74.796		
10,200.0	7,740.0	7,801.0	7,640.8	42.5	26.2	62.70	1,647.1	-22.5	3,833.3	3,782.1	51.26	74.778		
10,300.0	7,740.0	7,798.8	7,638.5	44.1	26.2	62.35	1,647.0	-22.5	3,933.0	3,880.4	52.61	74.762		
10,400.0	7,740.0	7,796.5	7,636.3	45.8	26.2	62.01	1,646.9	-22.5	4,032.6	3,978.7	53.95	74.748		
10,500.0	7,740.0	7,794.4	7,634.1	47.5	26.2	61.68	1,646.8	-22.6	4,132.3	4,077.0	55.29	74.737		
10,600.0	7,740.0	7,755.0	7,594.8	49.1	26.2	56.07	1,645.4	-22.7	4,232.3	4,178.1	54.17	78.126		
10,700.0	7,740.0	7,755.0	7,594.8	50.8	26.2	56.07	1,645.4	-22.7	4,331.9	4,276.4	55.57	77.956		
10,800.0	7,740.0	7,755.0	7,594.8	52.5	26.2	56.07	1,645.4	-22.7	4,431.6	4,374.6	56.97	77.789		
10,900.0	7,740.0	7,755.0	7,594.8	54.2	26.2	56.07	1,645.4	-22.7	4,531.3	4,472.9	58.37	77.626		
11,000.0	7,740.0	7,755.0	7,594.8	55.9	26.2	56.07	1,645.4	-22.7	4,631.0	4,571.2	59.78	77.466		
11,100.0	7,740.0	7,755.0	7,594.8	57.6	26.2	56.07	1,645.4	-22.7	4,730.7	4,669.5	61.19	77.310		
11,200.0	7,740.0	7,755.0	7,594.8	59.3	26.2	56.07	1,645.4	-22.7	4,830.4	4,767.8	62.61	77.157		
11,300.0	7,740.0	7,755.0	7,594.8	61.0	26.2	56.07	1,645.4	-22.7	4,930.2	4,866.1	64.02	77.009		
11,400.0	7,740.0	7,755.0	7,594.8	62.7	26.2	56.07	1,645.4	-22.7	5,029.9	4,964.5	65.44	76.864		
11,500.0	7,740.0	7,755.0	7,594.8	64.4	26.2	56.07	1,645.4	-22.7	5,129.7	5,062.8	66.86	76.723		
11,600.0	7,740.0	7,755.0	7,594.8	66.1	26.2	56.07	1,645.4	-22.7	5,229.4	5,161.2	68.28	76.585		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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						
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	88.0	88.0	0.0	0.2	-18.30	131.1	-43.4	138.1				
100.0	100.0	188.0	188.0	0.2	0.3	-18.30	131.1	-43.4	138.1	137.6	0.48	287.664	
200.0	200.0	288.0	288.0	0.3	0.5	-18.30	131.1	-43.4	138.1	137.3	0.83	166.571	
300.0	300.0	388.0	388.0	0.5	0.7	-18.30	131.1	-43.4	138.1	136.9	1.18	117.225	
400.0	400.0	488.0	488.0	0.7	0.9	-18.30	131.1	-43.4	138.1	136.6	1.53	90.434	
500.0	500.0	588.0	588.0	0.9	1.0	-44.51	131.1	-43.4	137.5	135.6	1.88	73.272	
600.0	600.0	688.0	688.0	1.0	1.2	-45.30	131.1	-43.4	135.6	133.4	2.23	60.908	
700.0	699.9	787.9	787.9	1.2	1.4	-46.66	131.1	-43.4	132.6	130.0	2.58	51.386	
800.0	799.7	887.7	887.7	1.4	1.5	-48.67	131.1	-43.4	128.5	125.6	2.94	43.702	
898.2	897.5	985.5	985.5	1.6	1.7	-51.38	131.1	-43.4	123.5	120.2	3.30	37.408	
900.0	899.4	987.4	987.4	1.6	1.7	-51.44	131.1	-43.4	123.4	120.1	3.31	37.300	
1,000.0	999.0	1,087.0	1,087.0	1.8	1.9	-54.72	131.1	-43.4	118.2	114.5	3.69	32.056	
1,100.0	1,098.6	1,186.6	1,186.6	2.0	2.1	-58.30	131.1	-43.4	113.4	109.3	4.07	27.841	
1,200.0	1,198.2	1,286.2	1,286.2	2.3	2.2	-62.17	131.1	-43.4	109.1	104.6	4.47	24.423	
1,300.0	1,297.9	1,385.9	1,385.9	2.5	2.4	-66.34	131.1	-43.4	105.3	100.4	4.87	21.640	
1,400.0	1,397.5	1,485.5	1,485.5	2.7	2.6	-70.79	131.1	-43.4	102.1	96.8	5.27	19.374	
1,500.0	1,497.1	1,585.1	1,585.1	2.9	2.8	-75.50	131.1	-43.4	99.6	93.9	5.68	17.535	
1,600.0	1,596.7	1,684.7	1,684.7	3.2	2.9	-80.41	131.1	-43.4	97.8	91.7	6.09	16.057	
1,700.0	1,696.3	1,784.3	1,784.3	3.4	3.1	-85.47	131.1	-43.4	96.7	90.2	6.50	14.884	
1,788.2	1,784.2	1,872.2	1,872.2	3.6	3.3	-90.00	131.1	-43.4	96.4	89.5	6.85	14.066 CC	
1,800.0	1,796.0	1,884.0	1,884.0	3.6	3.3	-90.61	131.1	-43.4	96.4	89.5	6.90	13.970 ES	
1,900.0	1,895.6	1,983.6	1,983.6	3.8	3.5	-95.73	131.1	-43.4	96.9	89.6	7.30	13.278	
2,000.0	1,995.2	2,083.2	2,083.2	4.1	3.6	-100.76	131.1	-43.4	98.1	90.4	7.68	12.771	
2,100.0	2,094.8	2,182.8	2,182.8	4.3	3.8	-105.63	131.1	-43.4	100.1	92.1	8.06	12.421	
2,200.0	2,194.5	2,282.5	2,282.5	4.5	4.0	-110.28	131.1	-43.4	102.8	94.4	8.43	12.199	
2,300.0	2,294.1	2,382.1	2,382.1	4.8	4.2	-114.67	131.1	-43.4	106.1	97.4	8.78	12.082	
2,400.0	2,393.7	2,481.7	2,481.7	5.0	4.3	-118.77	131.1	-43.4	110.1	100.9	9.13	12.049	
2,500.0	2,493.3	2,581.3	2,581.3	5.2	4.5	-122.57	131.1	-43.4	114.5	105.0	9.48	12.083	
2,600.0	2,592.9	2,680.9	2,680.9	5.4	4.7	-126.08	131.1	-43.4	119.4	109.6	9.81	12.168	
2,700.0	2,692.6	2,780.6	2,780.6	5.7	4.9	-129.29	131.1	-43.4	124.7	114.6	10.15	12.293	
2,800.0	2,792.2	2,880.2	2,880.2	5.9	5.0	-132.24	131.1	-43.4	130.4	119.9	10.48	12.447	
2,900.0	2,891.8	2,979.8	2,979.8	6.1	5.2	-134.94	131.1	-43.4	136.4	125.6	10.81	12.624	
3,000.0	2,991.4	3,079.4	3,079.4	6.4	5.4	-137.40	131.1	-43.4	142.7	131.6	11.14	12.815	
3,100.0	3,091.1	3,179.1	3,179.1	6.6	5.5	-139.66	131.1	-43.4	149.2	137.8	11.46	13.018	
3,200.0	3,190.7	3,278.7	3,278.7	6.8	5.7	-141.72	131.1	-43.4	155.9	144.2	11.79	13.226	
3,300.0	3,290.3	3,378.3	3,378.3	7.0	5.9	-143.61	131.1	-43.4	162.9	150.7	12.12	13.439	
3,400.0	3,389.9	3,477.9	3,477.9	7.3	6.1	-145.34	131.1	-43.4	169.9	157.5	12.45	13.652	
3,500.0	3,489.5	3,577.5	3,577.5	7.5	6.2	-146.94	131.1	-43.4	177.2	164.4	12.78	13.865	
3,600.0	3,589.2	3,677.2	3,677.2	7.7	6.4	-148.41	131.1	-43.4	184.5	171.4	13.11	14.076	
3,700.0	3,688.8	3,776.8	3,776.8	8.0	6.6	-149.77	131.1	-43.4	192.0	178.5	13.44	14.284	
3,800.0	3,788.4	3,876.4	3,876.4	8.2	6.8	-151.02	131.1	-43.4	199.5	185.8	13.77	14.489	
3,900.0	3,888.0	3,976.0	3,976.0	8.4	6.9	-152.18	131.1	-43.4	207.2	193.1	14.10	14.689	
4,000.0	3,987.7	4,075.7	4,075.7	8.7	7.1	-153.26	131.1	-43.4	214.9	200.5	14.44	14.884	
4,100.0	4,087.3	4,175.3	4,175.3	8.9	7.3	-154.27	131.1	-43.4	222.7	207.9	14.77	15.075	
4,200.0	4,186.9	4,274.9	4,274.9	9.1	7.5	-155.20	131.1	-43.4	230.5	215.4	15.11	15.260	
4,300.0	4,286.5	4,374.5	4,374.5	9.4	7.6	-156.08	131.1	-43.4	238.5	223.0	15.44	15.441	
4,400.0	4,386.1	4,474.1	4,474.1	9.6	7.8	-156.90	131.1	-43.4	246.4	230.6	15.78	15.616	
4,500.0	4,485.8	4,573.8	4,573.8	9.8	8.0	-157.66	131.1	-43.4	254.4	238.3	16.12	15.787	
4,600.0	4,585.4	4,673.4	4,673.4	10.0	8.2	-158.38	131.1	-43.4	262.5	246.0	16.46	15.952	
4,700.0	4,685.0	4,773.0	4,773.0	10.3	8.3	-159.06	131.1	-43.4	270.6	253.8	16.79	16.113	
4,800.0	4,784.6	4,872.6	4,872.6	10.5	8.5	-159.70	131.1	-43.4	278.7	261.6	17.13	16.269	
4,900.0	4,884.3	4,972.3	4,972.3	10.7	8.7	-160.30	131.1	-43.4	286.9	269.4	17.47	16.420	

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 2C-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 2C-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 #2	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
5,000.0	4,983.9	5,071.9	5,071.9	11.0	8.9	-160.87	131.1	-43.4	295.1	277.3	17.81	16.567	
5,100.0	5,083.5	5,171.5	5,171.5	11.2	9.0	-161.40	131.1	-43.4	303.3	285.2	18.15	16.709	
5,200.0	5,183.1	5,271.1	5,271.1	11.4	9.2	-161.91	131.1	-43.4	311.6	293.1	18.49	16.847	
5,300.0	5,282.7	5,370.7	5,370.7	11.7	9.4	-162.40	131.1	-43.4	319.8	301.0	18.83	16.981	
5,400.0	5,382.4	5,470.4	5,470.4	11.9	9.5	-162.86	131.1	-43.4	328.1	308.9	19.18	17.111	
5,500.0	5,482.0	5,570.0	5,570.0	12.1	9.7	-163.29	131.1	-43.4	336.4	316.9	19.52	17.237	
5,600.0	5,581.6	5,669.6	5,669.6	12.4	9.9	-163.71	131.1	-43.4	344.7	324.9	19.86	17.360	
5,700.0	5,681.2	5,769.2	5,769.2	12.6	10.1	-164.10	131.1	-43.4	353.1	332.9	20.20	17.479	
5,800.0	5,780.9	5,868.9	5,868.9	12.8	10.2	-164.48	131.1	-43.4	361.5	340.9	20.54	17.594	
5,900.0	5,880.5	5,968.5	5,968.5	13.0	10.4	-164.84	131.1	-43.4	369.8	348.9	20.89	17.706	
6,000.0	5,980.1	6,068.1	6,068.1	13.3	10.6	-165.18	131.1	-43.4	378.2	357.0	21.23	17.815	
6,100.0	6,079.7	6,167.7	6,167.7	13.5	10.8	-165.51	131.1	-43.4	386.6	365.1	21.57	17.921	
6,200.0	6,179.3	6,267.3	6,267.3	13.7	10.9	-165.83	131.1	-43.4	395.0	373.1	21.92	18.025	
6,300.0	6,279.0	6,367.0	6,367.0	14.0	11.1	-166.13	131.1	-43.4	403.5	381.2	22.26	18.125	
6,400.0	6,378.6	6,466.6	6,466.6	14.2	11.3	-166.42	131.1	-43.4	411.9	389.3	22.60	18.222	
6,500.0	6,478.2	6,566.2	6,566.2	14.4	11.5	-166.70	131.1	-43.4	420.4	397.4	22.95	18.317	
6,600.0	6,577.8	6,665.8	6,665.8	14.7	11.6	-166.96	131.1	-43.4	428.8	405.5	23.29	18.410	
6,700.0	6,677.5	6,765.5	6,765.5	14.9	11.8	-167.22	131.1	-43.4	437.3	413.6	23.64	18.500	
6,800.0	6,777.1	6,865.1	6,865.1	15.1	12.0	-167.47	131.1	-43.4	445.7	421.8	23.98	18.587	
6,900.0	6,876.7	6,964.7	6,964.7	15.4	12.2	-167.70	131.1	-43.4	454.2	429.9	24.33	18.673	
7,000.0	6,976.3	7,064.3	7,064.3	15.6	12.3	-167.93	131.1	-43.4	462.7	438.0	24.67	18.756	
7,100.0	7,075.9	7,163.9	7,163.9	15.8	12.5	-168.15	131.1	-43.4	471.2	446.2	25.02	18.837	
7,147.0	7,122.8	7,210.8	7,210.8	15.9	12.6	-168.25	131.1	-43.4	475.2	450.0	25.18	18.874	
7,150.0	7,125.8	7,213.8	7,213.8	15.9	12.6	-169.88	131.1	-43.4	475.5	450.3	25.19	18.874	
7,200.0	7,175.7	7,263.7	7,263.7	16.0	12.7	107.05	131.1	-43.4	477.8	452.4	25.37	18.833	
7,250.0	7,225.5	7,313.5	7,313.5	16.0	12.8	58.76	131.1	-43.4	476.7	451.2	25.48	18.708	
7,300.0	7,275.0	7,363.0	7,363.0	16.0	12.9	50.64	131.1	-43.4	472.2	446.6	25.53	18.495	
7,350.0	7,323.6	7,411.6	7,411.6	16.0	12.9	48.68	131.1	-43.4	464.4	438.9	25.54	18.188	
7,400.0	7,371.0	7,459.0	7,459.0	15.9	13.0	49.02	131.1	-43.4	453.7	428.2	25.53	17.773	
7,450.0	7,416.9	7,504.9	7,504.9	15.8	13.1	50.73	131.1	-43.4	440.2	414.7	25.54	17.239	
7,500.0	7,460.8	7,548.8	7,548.8	15.6	13.2	53.51	131.1	-43.4	424.5	398.9	25.61	16.577	
7,550.0	7,502.6	7,590.6	7,590.6	15.5	13.2	57.22	131.1	-43.4	406.9	381.1	25.76	15.793	
7,600.0	7,541.7	7,629.7	7,629.7	15.3	13.3	61.75	131.1	-43.4	388.2	362.2	26.03	14.915	
7,650.0	7,578.1	7,666.1	7,666.1	15.2	13.4	66.92	131.1	-43.4	369.3	342.9	26.38	13.999	
7,700.0	7,611.3	7,699.3	7,699.3	15.0	13.4	72.45	131.1	-43.4	351.2	324.4	26.76	13.123	
7,750.0	7,641.1	7,729.1	7,729.1	14.9	13.5	77.98	131.1	-43.4	335.0	307.9	27.09	12.366	
7,800.0	7,667.4	7,755.4	7,755.4	14.8	13.5	83.10	131.1	-43.4	322.3	295.0	27.32	11.796	
7,850.0	7,689.8	7,777.8	7,777.8	14.7	13.6	87.42	131.1	-43.4	314.4	287.0	27.44	11.459	
7,888.1	7,704.2	7,792.2	7,792.2	14.7	13.6	90.00	131.1	-43.4	312.5	285.0	27.48	11.371 SF	
7,900.0	7,708.2	7,796.2	7,796.2	14.7	13.6	90.66	131.1	-43.4	312.7	285.2	27.48	11.377	
7,950.0	7,722.6	7,810.6	7,810.6	14.7	13.6	92.58	131.1	-43.4	317.9	290.4	27.51	11.555	
8,000.0	7,732.7	7,820.7	7,820.7	14.7	13.6	93.08	131.1	-43.4	330.2	302.6	27.58	11.974	
8,050.0	7,738.5	7,826.5	7,826.5	14.8	13.7	92.05	131.1	-43.4	349.2	321.5	27.71	12.604	
8,091.8	7,740.0	7,828.0	7,828.0	15.0	13.7	90.00	131.1	-43.4	369.5	341.6	27.84	13.271	
8,100.0	7,740.0	7,828.0	7,828.0	15.0	13.7	90.00	131.1	-43.4	373.9	346.0	27.87	13.415	
8,200.0	7,740.0	7,828.0	7,828.0	15.4	13.7	90.00	131.1	-43.4	436.4	408.0	28.35	15.394	
8,300.0	7,740.0	7,828.0	7,828.0	16.1	13.7	90.00	131.1	-43.4	510.9	481.9	29.01	17.612	
8,400.0	7,740.0	7,828.0	7,828.0	16.9	13.7	90.00	131.1	-43.4	593.0	563.2	29.84	19.876	
8,500.0	7,740.0	7,828.0	7,828.0	17.8	13.7	90.00	131.1	-43.4	680.0	649.1	30.81	22.073	
8,600.0	7,740.0	7,828.0	7,828.0	18.8	13.7	90.00	131.1	-43.4	770.1	738.2	31.89	24.147	
8,700.0	7,740.0	7,828.0	7,828.0	20.0	13.7	90.00	131.1	-43.4	862.3	829.3	33.07	26.073	
8,800.0	7,740.0	7,828.0	7,828.0	21.2	13.7	90.00	131.1	-43.4	956.2	921.8	34.34	27.846	

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 2C-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 2C-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 #2	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	22.5	13.7	90.00	131.1	-43.4	1,051.1	1,015.5	35.67	29.469	
9,000.0	7,740.0	7,828.0	7,828.0	23.9	13.7	90.00	131.1	-43.4	1,147.0	1,109.9	37.06	30.951	
9,100.0	7,740.0	7,828.0	7,828.0	25.3	13.7	90.00	131.1	-43.4	1,243.5	1,205.0	38.49	32.305	
9,200.0	7,740.0	7,828.0	7,828.0	26.7	13.7	90.00	131.1	-43.4	1,340.5	1,300.5	39.96	33.542	
9,300.0	7,740.0	7,828.0	7,828.0	28.2	13.7	90.00	131.1	-43.4	1,437.9	1,396.4	41.47	34.673	
9,400.0	7,740.0	7,828.0	7,828.0	29.7	13.7	90.00	131.1	-43.4	1,535.6	1,492.6	43.00	35.710	
9,500.0	7,740.0	7,828.0	7,828.0	31.3	13.7	90.00	131.1	-43.4	1,633.6	1,589.1	44.56	36.662	
9,600.0	7,740.0	7,828.0	7,828.0	32.8	13.7	90.00	131.1	-43.4	1,731.9	1,685.7	46.14	37.539	
9,700.0	7,740.0	7,828.0	7,828.0	34.4	13.7	90.00	131.1	-43.4	1,830.3	1,782.6	47.73	38.347	
9,800.0	7,740.0	7,828.0	7,828.0	36.0	13.7	90.00	131.1	-43.4	1,928.9	1,879.6	49.34	39.095	
9,900.0	7,740.0	7,828.0	7,828.0	37.6	13.7	90.00	131.1	-43.4	2,027.6	1,976.7	50.96	39.788	
10,000.0	7,740.0	7,828.0	7,828.0	39.2	13.7	90.00	131.1	-43.4	2,126.5	2,073.9	52.59	40.432	
10,100.0	7,740.0	7,828.0	7,828.0	40.9	13.7	90.00	131.1	-43.4	2,225.4	2,171.2	54.24	41.031	
10,200.0	7,740.0	7,828.0	7,828.0	42.5	13.7	90.00	131.1	-43.4	2,324.5	2,268.6	55.89	41.590	
10,300.0	7,740.0	7,828.0	7,828.0	44.1	13.7	90.00	131.1	-43.4	2,423.6	2,366.1	57.55	42.112	
10,400.0	7,740.0	7,828.0	7,828.0	45.8	13.7	90.00	131.1	-43.4	2,522.8	2,463.6	59.22	42.602	
10,500.0	7,740.0	7,828.0	7,828.0	47.5	13.7	90.00	131.1	-43.4	2,622.0	2,561.2	60.89	43.061	
10,600.0	7,740.0	7,828.0	7,828.0	49.1	13.7	90.00	131.1	-43.4	2,721.4	2,658.8	62.57	43.492	
10,700.0	7,740.0	7,828.0	7,828.0	50.8	13.7	90.00	131.1	-43.4	2,820.7	2,756.5	64.26	43.898	
10,800.0	7,740.0	7,828.0	7,828.0	52.5	13.7	90.00	131.1	-43.4	2,920.1	2,854.2	65.94	44.281	
10,900.0	7,740.0	7,828.0	7,828.0	54.2	13.7	90.00	131.1	-43.4	3,019.6	2,951.9	67.64	44.643	
11,000.0	7,740.0	7,828.0	7,828.0	55.9	13.7	90.00	131.1	-43.4	3,119.0	3,049.7	69.33	44.985	
11,100.0	7,740.0	7,828.0	7,828.0	57.6	13.7	90.00	131.1	-43.4	3,218.5	3,147.5	71.04	45.309	
11,200.0	7,740.0	7,828.0	7,828.0	59.3	13.7	90.00	131.1	-43.4	3,318.1	3,245.3	72.74	45.616	
11,300.0	7,740.0	7,828.0	7,828.0	61.0	13.7	90.00	131.1	-43.4	3,417.6	3,343.2	74.44	45.908	
11,400.0	7,740.0	7,828.0	7,828.0	62.7	13.7	90.00	131.1	-43.4	3,517.2	3,441.1	76.15	46.186	
11,500.0	7,740.0	7,828.0	7,828.0	64.4	13.7	90.00	131.1	-43.4	3,616.8	3,539.0	77.87	46.450	
11,600.0	7,740.0	7,828.0	7,828.0	66.1	13.7	90.00	131.1	-43.4	3,716.5	3,636.9	79.58	46.702	
11,700.0	7,740.0	7,828.0	7,828.0	67.8	13.7	90.00	131.1	-43.4	3,816.1	3,734.8	81.29	46.942	
11,800.0	7,740.0	7,828.0	7,828.0	69.5	13.7	90.00	131.1	-43.4	3,915.8	3,832.8	83.01	47.171	
11,900.0	7,740.0	7,828.0	7,828.0	71.2	13.7	90.00	131.1	-43.4	4,015.5	3,930.7	84.73	47.391	
12,000.0	7,740.0	7,828.0	7,828.0	72.9	13.7	90.00	131.1	-43.4	4,115.2	4,028.7	86.45	47.600	
12,100.0	7,740.0	7,828.0	7,828.0	74.7	13.7	90.00	131.1	-43.4	4,214.9	4,126.7	88.18	47.801	
12,200.0	7,740.0	7,828.0	7,828.0	76.4	13.7	90.00	131.1	-43.4	4,314.6	4,224.7	89.90	47.994	
12,300.0	7,740.0	7,828.0	7,828.0	78.1	13.7	90.00	131.1	-43.4	4,414.4	4,322.7	91.62	48.179	
12,400.0	7,740.0	7,828.0	7,828.0	79.8	13.7	90.00	131.1	-43.4	4,514.1	4,420.8	93.35	48.356	
12,500.0	7,740.0	7,828.0	7,828.0	81.6	13.7	90.00	131.1	-43.4	4,613.9	4,518.8	95.08	48.527	
12,600.0	7,740.0	7,828.0	7,828.0	83.3	13.7	90.00	131.1	-43.4	4,713.7	4,616.8	96.81	48.691	
12,700.0	7,740.0	7,828.0	7,828.0	85.0	13.7	90.00	131.1	-43.4	4,813.4	4,714.9	98.54	48.848	
12,800.0	7,740.0	7,828.0	7,828.0	86.7	13.7	90.00	131.1	-43.4	4,913.2	4,813.0	100.27	49.000	
12,900.0	7,740.0	7,828.0	7,828.0	88.5	13.7	90.00	131.1	-43.4	5,013.0	4,911.0	102.00	49.147	
13,000.0	7,740.0	7,828.0	7,828.0	90.2	13.7	90.00	131.1	-43.4	5,112.8	5,009.1	103.73	49.288	
13,100.0	7,740.0	7,828.0	7,828.0	91.9	13.7	90.00	131.1	-43.4	5,212.7	5,107.2	105.47	49.424	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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				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	52.2	52.2	0.0	0.1	37.43	1,594.1	1,220.2	2,007.5					
100.0	100.0	151.2	151.2	0.2	0.3	37.43	1,594.1	1,220.3	2,007.5	2,007.1	0.42	4,829.245		
200.0	200.0	246.4	246.4	0.3	0.4	37.42	1,594.4	1,220.0	2,007.7	2,006.9	0.76	2,653.587		
300.0	300.0	383.3	383.3	0.5	0.7	37.39	1,594.7	1,218.8	2,007.4	2,006.2	1.17	1,714.821		
400.0	400.0	525.6	525.4	0.7	0.9	37.51	1,589.0	1,219.5	2,004.4	2,002.8	1.59	1,257.619		
500.0	500.0	811.0	807.6	0.9	1.7	12.56	1,548.8	1,230.9	1,993.9	1,991.5	2.46	811.718		
600.0	600.0	902.0	896.6	1.0	2.0	13.04	1,530.8	1,235.4	1,978.9	1,976.0	2.91	680.594		
700.0	699.9	1,114.4	1,103.5	1.2	2.9	14.25	1,483.7	1,244.7	1,960.8	1,957.0	3.79	516.837		
800.0	799.7	1,287.5	1,269.1	1.4	3.8	15.53	1,433.7	1,250.4	1,934.5	1,929.8	4.68	413.676		
898.2	897.5	1,388.2	1,364.6	1.6	4.4	16.42	1,401.8	1,254.1	1,905.8	1,900.5	5.30	359.261		
900.0	899.4	1,389.8	1,366.1	1.6	4.4	16.44	1,401.3	1,254.1	1,905.3	1,900.0	5.32	358.421		
1,000.0	999.0	1,486.9	1,457.8	1.8	5.0	17.29	1,369.8	1,258.4	1,875.6	1,869.6	5.97	314.344		
1,100.0	1,098.6	1,570.1	1,536.3	2.0	5.4	18.05	1,342.5	1,262.4	1,846.2	1,839.6	6.56	281.363		
1,200.0	1,198.2	1,647.9	1,609.9	2.3	5.9	18.78	1,317.5	1,266.3	1,817.8	1,810.7	7.14	254.533		
1,300.0	1,297.9	1,740.7	1,697.6	2.5	6.4	19.69	1,287.6	1,271.7	1,790.4	1,782.6	7.82	228.867		
1,400.0	1,397.5	1,827.8	1,779.7	2.7	7.0	20.58	1,259.0	1,277.2	1,763.2	1,754.7	8.49	207.595		
1,500.0	1,497.1	1,949.0	1,894.0	2.9	7.7	21.85	1,219.5	1,284.1	1,736.4	1,727.1	9.34	185.819		
1,600.0	1,596.7	2,025.7	1,966.6	3.2	8.1	22.64	1,194.8	1,287.2	1,709.3	1,699.4	9.95	171.753		
1,700.0	1,696.3	2,089.0	2,026.6	3.4	8.5	23.30	1,175.0	1,290.3	1,683.9	1,673.4	10.49	160.523		
1,800.0	1,796.0	2,178.2	2,111.4	3.6	9.0	24.26	1,147.9	1,295.8	1,660.3	1,649.1	11.19	148.400		
1,900.0	1,895.6	2,286.3	2,213.7	3.8	9.6	25.49	1,113.7	1,302.4	1,636.4	1,624.3	12.03	135.991		
2,000.0	1,995.2	2,381.5	2,303.6	4.1	10.2	26.63	1,082.7	1,308.3	1,612.6	1,599.8	12.81	125.865		
2,100.0	2,094.8	2,478.3	2,395.1	4.3	10.8	27.79	1,051.8	1,313.4	1,589.2	1,575.6	13.59	116.967		
2,200.0	2,194.5	2,570.7	2,482.8	4.5	11.3	28.90	1,022.7	1,317.8	1,566.4	1,552.0	14.35	109.191		
2,300.0	2,294.1	2,665.3	2,572.6	4.8	11.8	30.05	993.2	1,321.9	1,544.0	1,528.9	15.12	102.136		
2,400.0	2,393.7	2,773.9	2,675.5	5.0	12.5	31.42	959.0	1,326.8	1,522.3	1,506.3	16.01	95.111		
2,500.0	2,493.3	2,910.0	2,803.4	5.2	13.3	33.26	912.7	1,330.5	1,498.3	1,481.1	17.12	87.518		
2,600.0	2,592.9	2,997.0	2,884.7	5.4	13.9	34.52	881.8	1,332.8	1,474.4	1,456.4	17.94	82.201		
2,700.0	2,692.6	3,082.4	2,964.6	5.7	14.4	35.79	851.6	1,335.4	1,451.8	1,433.0	18.74	77.475		
2,800.0	2,792.2	3,158.3	3,035.6	5.9	14.9	36.94	825.1	1,337.9	1,430.6	1,411.1	19.49	73.404		
2,900.0	2,891.8	3,263.6	3,134.2	6.1	15.6	38.59	788.2	1,341.8	1,410.5	1,390.1	20.46	68.937		
3,000.0	2,991.4	3,368.8	3,232.7	6.4	16.2	40.25	751.4	1,343.8	1,390.0	1,368.5	21.42	64.895		
3,100.0	3,091.1	3,433.0	3,293.0	6.6	16.6	41.27	729.4	1,345.2	1,371.0	1,348.9	22.08	62.077		
3,200.0	3,190.7	3,499.3	3,355.5	6.8	17.0	42.32	707.6	1,347.5	1,354.7	1,331.9	22.74	59.564		
3,300.0	3,290.3	3,574.7	3,427.2	7.0	17.5	43.49	684.3	1,351.2	1,341.2	1,317.7	23.46	57.167		
3,400.0	3,389.9	3,650.1	3,499.0	7.3	17.9	44.66	661.5	1,355.4	1,329.5	1,305.3	24.18	54.993		
3,500.0	3,489.5	3,729.3	3,574.4	7.5	18.3	45.89	638.2	1,361.0	1,320.2	1,295.3	24.90	53.028		
3,600.0	3,589.2	3,851.4	3,692.0	7.7	18.9	47.64	606.2	1,367.7	1,311.6	1,285.8	25.80	50.844		
3,700.0	3,688.8	3,995.0	3,830.8	8.0	19.6	49.62	569.6	1,369.7	1,300.0	1,273.1	26.83	48.455		
3,800.0	3,788.4	4,074.4	3,906.8	8.2	20.0	50.85	546.5	1,370.4	1,287.9	1,260.4	27.54	46.772		
3,900.0	3,888.0	4,132.0	3,961.8	8.4	20.3	51.78	529.4	1,372.4	1,279.1	1,251.0	28.11	45.497		
4,000.0	3,987.7	4,222.6	4,047.8	8.7	20.9	53.33	501.3	1,377.2	1,272.7	1,243.8	28.94	43.979		
4,100.0	4,087.3	4,335.0	4,153.4	8.9	21.6	55.40	463.1	1,382.8	1,266.7	1,236.7	29.94	42.300		
4,200.0	4,186.9	4,427.7	4,240.1	9.1	22.2	57.18	430.5	1,386.6	1,261.0	1,230.2	30.80	40.941		
4,300.0	4,286.5	4,507.3	4,314.5	9.4	22.7	58.70	402.6	1,390.3	1,257.3	1,225.8	31.54	39.868		
4,400.0	4,386.1	4,592.8	4,395.3	9.6	23.2	60.25	374.8	1,394.7	1,255.6	1,223.3	32.25	38.928		
4,454.9	4,440.8	4,639.9	4,440.1	9.7	23.4	61.06	360.6	1,397.2	1,255.3	1,222.7	32.62	38.478		
4,500.0	4,485.8	4,680.8	4,479.2	9.8	23.7	61.74	348.8	1,399.5	1,255.5	1,222.5	32.94	38.118		
4,600.0	4,585.4	4,781.9	4,576.0	10.0	24.2	63.39	320.1	1,405.0	1,256.4	1,222.8	33.66	37.332		
4,700.0	4,685.0	4,905.6	4,695.0	10.3	24.8	65.33	286.7	1,409.8	1,256.9	1,222.5	34.44	36.500		
4,737.6	4,722.5	4,941.9	4,729.9	10.4	25.0	65.89	277.1	1,410.7	1,256.8	1,222.1	34.67	36.252		
4,800.0	4,784.6	4,995.4	4,781.6	10.5	25.2	66.69	263.5	1,412.2	1,257.1	1,222.1	35.02	35.899		

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 2C-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 2C-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 #2	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				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)				
4,900.0	4,884.3	5,085.0	4,868.8	10.7	25.6	67.95	242.7	1,415.2	1,258.7	1,223.1	35.55	35.408		
5,000.0	4,983.9	5,197.5	4,979.0	11.0	26.0	69.35	220.5	1,418.9	1,260.5	1,224.4	36.08	34.936		
5,100.0	5,083.5	5,304.9	5,084.9	11.2	26.4	70.51	203.1	1,421.5	1,261.7	1,225.2	36.55	34.525		
5,200.0	5,183.1	5,414.7	5,193.6	11.4	26.7	71.59	187.8	1,423.7	1,262.7	1,225.7	36.98	34.145		
5,300.0	5,282.7	5,528.9	5,307.1	11.7	26.9	72.59	174.7	1,425.0	1,262.7	1,225.4	37.38	33.783		
5,400.0	5,382.4	5,640.2	5,417.9	11.9	27.1	73.43	165.4	1,425.3	1,261.8	1,224.1	37.72	33.450		
5,500.0	5,482.0	5,734.0	5,511.6	12.1	27.2	74.03	159.8	1,425.9	1,260.9	1,222.9	38.01	33.171		
5,600.0	5,581.6	5,878.0	5,655.5	12.4	27.4	74.68	157.3	1,426.5	1,259.7	1,221.4	38.28	32.902		
5,700.0	5,681.2	5,962.8	5,740.4	12.6	27.4	75.01	157.3	1,425.5	1,256.2	1,217.6	38.54	32.595		
5,800.0	5,780.9	6,052.0	5,829.5	12.8	27.5	75.37	157.0	1,425.5	1,254.0	1,215.2	38.79	32.327		
5,900.0	5,880.5	6,147.2	5,924.8	13.0	27.5	75.73	156.8	1,426.2	1,252.6	1,213.5	39.03	32.089		
6,000.0	5,980.1	6,248.0	6,025.5	13.3	27.6	76.10	157.3	1,426.8	1,251.0	1,211.7	39.28	31.847		
6,100.0	6,079.7	6,342.1	6,119.7	13.5	27.7	76.43	157.8	1,427.7	1,249.6	1,210.1	39.53	31.614		
6,200.0	6,179.3	6,440.3	6,217.8	13.7	27.7	76.78	158.2	1,428.9	1,248.7	1,209.0	39.78	31.393		
6,300.0	6,279.0	6,545.5	6,323.0	14.0	27.8	77.16	158.5	1,429.9	1,247.6	1,207.6	40.03	31.167		
6,400.0	6,378.6	6,646.1	6,423.6	14.2	27.9	77.53	158.9	1,430.5	1,246.3	1,206.0	40.28	30.937		
6,500.0	6,478.2	6,744.8	6,522.3	14.4	27.9	77.90	159.1	1,431.2	1,245.0	1,204.5	40.54	30.713		
6,600.0	6,577.8	6,842.9	6,620.4	14.7	28.0	78.28	159.1	1,431.9	1,243.9	1,203.1	40.79	30.493		
6,700.0	6,677.5	6,940.9	6,718.4	14.9	28.1	78.66	159.0	1,432.7	1,243.0	1,202.0	41.05	30.281		
6,800.0	6,777.1	7,039.3	6,816.8	15.1	28.2	79.04	158.8	1,433.6	1,242.3	1,201.0	41.31	30.074		
6,900.0	6,876.7	7,135.8	6,913.3	15.4	28.3	79.42	158.5	1,434.6	1,241.7	1,200.1	41.57	29.871		
6,962.2	6,938.7	7,193.8	6,971.3	15.5	28.3	79.66	158.1	1,435.3	1,241.6	1,199.9	41.74	29.749		
7,000.0	6,976.3	7,229.1	7,006.6	15.6	28.4	79.81	157.7	1,435.8	1,241.6	1,199.8	41.84	29.679		
7,100.0	7,075.9	7,331.8	7,109.3	15.8	28.5	80.26	156.2	1,437.3	1,241.9	1,199.8	42.10	29.501		
7,147.0	7,122.8	7,384.5	7,161.9	15.9	28.5	80.49	155.6	1,437.8	1,241.9	1,199.6	42.22	29.412		
7,150.0	7,125.8	7,387.9	7,165.3	15.9	28.5	78.90	155.6	1,437.9	1,241.8	1,199.6	42.23	29.407		
7,200.0	7,175.7	7,444.1	7,221.5	16.0	28.6	-4.09	155.2	1,438.2	1,240.8	1,198.5	42.32	29.317		
7,250.0	7,225.5	7,502.9	7,280.4	16.0	28.6	-53.20	154.8	1,438.2	1,238.2	1,195.8	42.43	29.184		
7,300.0	7,275.0	7,561.5	7,339.0	16.0	28.7	-63.05	154.5	1,437.7	1,234.1	1,191.6	42.54	29.011		
7,350.0	7,323.6	7,619.1	7,396.5	16.0	28.7	-67.67	154.4	1,436.9	1,228.5	1,185.8	42.65	28.802		
7,400.0	7,371.0	7,664.4	7,441.9	15.9	28.7	-70.78	154.3	1,436.1	1,221.8	1,179.1	42.73	28.591		
7,450.0	7,416.9	7,707.3	7,484.8	15.8	28.8	-73.39	154.2	1,435.4	1,214.4	1,171.6	42.80	28.376		
7,500.0	7,460.8	7,748.5	7,525.9	15.6	28.8	-75.80	154.1	1,434.9	1,206.7	1,163.8	42.85	28.163		
7,550.0	7,502.6	7,787.5	7,564.9	15.5	28.8	-78.12	154.0	1,434.5	1,198.8	1,155.9	42.88	27.959		
7,600.0	7,541.7	7,825.5	7,603.0	15.3	28.9	-80.41	154.0	1,434.1	1,191.0	1,148.1	42.89	27.770		
7,650.0	7,578.1	7,861.2	7,638.7	15.2	28.9	-82.63	154.0	1,433.9	1,183.6	1,140.7	42.88	27.605		
7,700.0	7,611.3	7,893.8	7,671.2	15.0	28.9	-84.71	154.0	1,433.6	1,177.0	1,134.1	42.85	27.471		
7,750.0	7,641.1	7,922.9	7,700.3	14.9	28.9	-86.59	154.1	1,433.5	1,171.4	1,128.6	42.80	27.371		
7,800.0	7,667.4	7,948.4	7,725.8	14.8	29.0	-88.21	154.2	1,433.3	1,167.3	1,124.5	42.74	27.308		
7,850.0	7,689.8	7,970.1	7,747.5	14.7	29.0	-89.52	154.3	1,433.2	1,164.8	1,122.1	42.70	27.282		
7,887.8	7,704.1	7,983.9	7,761.4	14.7	29.0	-90.28	154.4	1,433.1	1,164.2	1,121.5	42.68	27.281 CC, ES, SF		
7,900.0	7,708.2	7,987.9	7,765.3	14.7	29.0	-90.47	154.4	1,433.1	1,164.3	1,121.6	42.67	27.288		
7,950.0	7,722.6	8,001.7	7,779.1	14.7	29.0	-91.02	154.4	1,433.1	1,165.9	1,123.2	42.67	27.323		
8,000.0	7,732.7	8,011.3	7,788.8	14.7	29.0	-91.14	154.5	1,433.0	1,169.8	1,127.1	42.72	27.382		
8,050.0	7,738.5	8,016.8	7,794.2	14.8	29.0	-90.80	154.5	1,433.0	1,176.0	1,133.1	42.82	27.461		
8,091.8	7,740.0	8,018.0	7,795.4	15.0	29.0	-90.17	154.5	1,433.0	1,182.9	1,139.9	42.95	27.541		
8,100.0	7,740.0	8,018.0	7,795.4	15.0	29.0	-90.17	154.5	1,433.0	1,184.4	1,141.5	42.98	27.558		
8,200.0	7,740.0	8,017.4	7,794.8	15.4	29.0	-90.14	154.5	1,433.0	1,207.6	1,164.1	43.46	27.788		
8,300.0	7,740.0	8,016.9	7,794.3	16.1	29.0	-90.11	154.5	1,433.0	1,238.4	1,194.2	44.12	28.068		
8,400.0	7,740.0	8,016.4	7,793.8	16.9	29.0	-90.09	154.5	1,433.0	1,276.3	1,231.3	44.95	28.395		
8,500.0	7,740.0	8,015.8	7,793.2	17.8	29.0	-90.06	154.5	1,433.0	1,320.7	1,274.7	45.91	28.764		
8,600.0	7,740.0	8,015.3	7,792.7	18.8	29.0	-90.03	154.5	1,433.0	1,370.9	1,323.9	47.00	29.170		

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 2C-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 2C-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 #2	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				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)				
8,700.0	7,740.0	8,014.8	7,792.2	20.0	29.0	-90.01	154.5	1,433.0	1,426.5	1,378.3	48.18	29.606		
8,800.0	7,740.0	8,014.2	7,791.6	21.2	29.0	-89.98	154.5	1,433.0	1,486.6	1,437.2	49.45	30.066		
8,900.0	7,740.0	8,013.7	7,791.1	22.5	29.0	-89.96	154.5	1,433.0	1,550.9	1,500.2	50.78	30.544		
9,000.0	7,740.0	8,013.2	7,790.6	23.9	29.0	-89.93	154.5	1,433.0	1,618.9	1,566.7	52.16	31.034		
9,100.0	7,740.0	8,012.6	7,790.1	25.3	29.0	-89.90	154.5	1,433.0	1,690.0	1,636.4	53.60	31.530		
9,200.0	7,740.0	8,012.1	7,789.5	26.7	29.0	-89.88	154.5	1,433.0	1,763.9	1,708.8	55.07	32.030		
9,300.0	7,740.0	8,011.6	7,789.0	28.2	29.0	-89.85	154.5	1,433.0	1,840.3	1,783.7	56.58	32.528		
9,400.0	7,740.0	8,011.1	7,788.5	29.7	29.0	-89.83	154.5	1,433.0	1,918.8	1,860.7	58.11	33.022		
9,500.0	7,740.0	8,010.5	7,788.0	31.3	29.0	-89.80	154.5	1,433.0	1,999.3	1,939.7	59.66	33.509		
9,600.0	7,740.0	8,010.0	7,787.4	32.8	29.0	-89.77	154.5	1,433.0	2,081.5	2,020.2	61.24	33.988		
9,700.0	7,740.0	8,009.5	7,786.9	34.4	29.0	-89.75	154.5	1,433.0	2,165.2	2,102.3	62.83	34.458		
9,800.0	7,740.0	8,009.0	7,786.4	36.0	29.0	-89.72	154.5	1,433.0	2,250.2	2,185.7	64.44	34.917		
9,900.0	7,740.0	8,008.5	7,785.9	37.6	29.0	-89.70	154.5	1,433.0	2,336.3	2,270.3	66.07	35.364		
10,000.0	7,740.0	8,007.9	7,785.3	39.2	29.0	-89.67	154.5	1,433.0	2,423.6	2,355.9	67.70	35.800		
10,100.0	7,740.0	8,007.4	7,784.8	40.9	29.0	-89.65	154.5	1,433.0	2,511.8	2,442.5	69.34	36.224		
10,200.0	7,740.0	8,006.9	7,784.3	42.5	29.0	-89.62	154.5	1,433.0	2,600.9	2,529.9	70.99	36.635		
10,300.0	7,740.0	8,006.4	7,783.8	44.1	29.0	-89.60	154.5	1,433.0	2,690.7	2,618.0	72.65	37.035		
10,400.0	7,740.0	8,005.9	7,783.3	45.8	29.0	-89.57	154.5	1,433.1	2,781.2	2,706.9	74.32	37.422		
10,500.0	7,740.0	8,005.3	7,782.8	47.5	29.0	-89.54	154.5	1,433.1	2,872.3	2,796.4	75.99	37.797		
10,600.0	7,740.0	8,004.8	7,782.2	49.1	29.0	-89.52	154.5	1,433.1	2,964.1	2,886.4	77.67	38.161		
10,700.0	7,740.0	8,004.3	7,781.7	50.8	29.0	-89.49	154.5	1,433.1	3,056.3	2,976.9	79.36	38.514		
10,800.0	7,740.0	8,003.8	7,781.2	52.5	29.0	-89.47	154.5	1,433.1	3,149.0	3,068.0	81.04	38.856		
10,900.0	7,740.0	8,003.3	7,780.7	54.2	29.0	-89.44	154.5	1,433.1	3,242.2	3,159.4	82.74	39.187		
11,000.0	7,740.0	8,002.8	7,780.2	55.9	29.0	-89.42	154.4	1,433.1	3,335.7	3,251.3	84.43	39.507		
11,100.0	7,740.0	8,002.3	7,779.7	57.6	29.0	-89.39	154.4	1,433.1	3,429.6	3,343.5	86.13	39.818		
11,200.0	7,740.0	8,001.8	7,779.2	59.3	29.0	-89.37	154.4	1,433.1	3,523.8	3,436.0	87.83	40.119		
11,300.0	7,740.0	8,001.3	7,778.7	61.0	29.0	-89.34	154.4	1,433.1	3,618.4	3,528.9	89.54	40.411		
11,400.0	7,740.0	8,000.8	7,778.2	62.7	29.0	-89.32	154.4	1,433.1	3,713.2	3,622.0	91.25	40.694		
11,500.0	7,740.0	8,000.3	7,777.7	64.4	29.0	-89.29	154.4	1,433.1	3,808.3	3,715.4	92.96	40.968		
11,600.0	7,740.0	7,999.8	7,777.2	66.1	29.0	-89.27	154.4	1,433.1	3,903.7	3,809.0	94.67	41.234		
11,700.0	7,740.0	7,999.2	7,776.7	67.8	29.0	-89.24	154.4	1,433.1	3,999.2	3,902.9	96.39	41.492		
11,800.0	7,740.0	7,998.7	7,776.2	69.5	29.0	-89.22	154.4	1,433.1	4,095.0	3,996.9	98.10	41.742		
11,900.0	7,740.0	7,998.2	7,775.7	71.2	29.0	-89.19	154.4	1,433.1	4,191.0	4,091.2	99.82	41.985		
12,000.0	7,740.0	7,997.7	7,775.2	72.9	29.0	-89.17	154.4	1,433.1	4,287.2	4,185.6	101.54	42.221		
12,100.0	7,740.0	7,997.2	7,774.7	74.7	29.0	-89.15	154.4	1,433.1	4,383.5	4,280.2	103.26	42.450		
12,200.0	7,740.0	7,996.7	7,774.2	76.4	29.0	-89.12	154.4	1,433.1	4,480.0	4,375.0	104.99	42.672		
12,300.0	7,740.0	7,996.2	7,773.7	78.1	29.0	-89.10	154.4	1,433.1	4,576.7	4,469.9	106.71	42.889		
12,400.0	7,740.0	7,995.8	7,773.2	79.8	29.0	-89.07	154.4	1,433.1	4,673.4	4,565.0	108.44	43.099		
12,500.0	7,740.0	7,995.3	7,772.7	81.6	29.0	-89.05	154.4	1,433.1	4,770.4	4,660.2	110.16	43.303		
12,600.0	7,740.0	7,994.8	7,772.2	83.3	29.0	-89.02	154.4	1,433.1	4,867.4	4,755.5	111.89	43.502		
12,700.0	7,740.0	7,994.3	7,771.7	85.0	29.0	-89.00	154.4	1,433.1	4,964.6	4,851.0	113.62	43.695		
12,800.0	7,740.0	7,993.8	7,771.2	86.7	29.0	-88.97	154.4	1,433.1	5,061.8	4,946.5	115.35	43.883		
12,900.0	7,740.0	7,993.3	7,770.7	88.5	29.0	-88.95	154.4	1,433.1	5,159.2	5,042.1	117.08	44.066		
13,000.0	7,740.0	7,992.8	7,770.2	90.2	29.0	-88.93	154.4	1,433.1	5,256.7	5,137.9	118.81	44.245		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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					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			
0.0	0.0	106.2	106.2	0.0	0.2	37.58	1,583.8	1,219.0	1,999.3					
100.0	100.0	307.4	307.1	0.2	0.6	37.65	1,574.1	1,214.3	1,994.1	1,993.4	0.69	2,880.765		
200.0	200.0	503.6	502.1	0.3	1.1	37.88	1,553.3	1,208.4	1,983.8	1,982.6	1.21	1,641.357		
300.0	300.0	617.7	614.9	0.5	1.5	38.11	1,537.1	1,205.8	1,971.2	1,969.6	1.58	1,248.165		
400.0	400.0	755.6	750.7	0.7	1.9	38.49	1,513.2	1,203.3	1,956.3	1,954.3	1.99	981.798		
500.0	500.0	868.4	861.4	0.9	2.4	12.96	1,491.6	1,201.9	1,939.5	1,936.9	2.59	747.669		
600.0	600.0	940.5	932.3	1.0	2.6	13.25	1,478.2	1,201.4	1,922.0	1,919.1	2.95	651.404		
700.0	699.9	1,082.9	1,072.0	1.2	3.2	13.85	1,450.9	1,200.5	1,902.7	1,899.2	3.50	542.976		
800.0	799.7	1,307.4	1,289.9	1.4	4.2	14.99	1,397.2	1,195.1	1,877.0	1,872.6	4.35	431.012		
898.2	897.5	1,439.8	1,416.6	1.6	4.9	15.85	1,359.2	1,190.0	1,845.7	1,840.8	4.98	370.722		
900.0	899.4	1,442.1	1,418.8	1.6	4.9	15.86	1,358.5	1,189.9	1,845.1	1,840.1	4.99	369.728		
1,000.0	999.0	1,563.4	1,534.1	1.8	5.6	16.68	1,321.0	1,185.2	1,811.1	1,805.5	5.63	321.811		
1,100.0	1,098.6	1,686.0	1,649.8	2.0	6.3	17.59	1,280.9	1,180.3	1,775.9	1,769.6	6.31	281.427		
1,200.0	1,198.2	1,877.8	1,827.8	2.3	7.7	19.28	1,210.1	1,170.9	1,737.3	1,729.9	7.41	234.410		
1,300.0	1,297.9	1,972.6	1,914.3	2.5	8.3	20.26	1,171.7	1,166.4	1,696.5	1,688.4	8.12	208.964		
1,400.0	1,397.5	2,080.1	2,011.9	2.7	9.1	21.45	1,127.0	1,160.8	1,655.2	1,646.3	8.93	185.356		
1,500.0	1,497.1	2,184.4	2,105.9	2.9	10.0	22.72	1,082.2	1,155.7	1,613.6	1,603.8	9.79	164.801		
1,600.0	1,596.7	2,315.1	2,222.0	3.2	11.0	24.52	1,022.4	1,149.4	1,570.6	1,559.7	10.92	143.856		
1,700.0	1,696.3	2,396.9	2,294.4	3.4	11.7	25.71	984.5	1,144.4	1,527.2	1,515.5	11.71	130.406		
1,800.0	1,796.0	2,473.0	2,361.9	3.6	12.3	26.85	949.9	1,139.7	1,484.9	1,472.4	12.48	118.965		
1,900.0	1,895.6	2,538.4	2,420.3	3.8	12.8	27.86	920.5	1,135.9	1,444.0	1,430.8	13.18	109.525		
2,000.0	1,995.2	2,624.0	2,497.2	4.1	13.5	29.20	883.1	1,131.1	1,404.6	1,390.6	14.05	99.995		
2,100.0	2,094.8	2,712.0	2,576.3	4.3	14.2	30.62	845.2	1,125.3	1,365.7	1,350.8	14.96	91.286		
2,200.0	2,194.5	2,778.8	2,636.2	4.5	14.7	31.77	816.0	1,121.5	1,328.2	1,312.4	15.73	84.437		
2,300.0	2,294.1	2,882.8	2,730.1	4.8	15.5	33.64	771.4	1,116.7	1,292.7	1,275.9	16.85	76.707		
2,400.0	2,393.7	2,980.1	2,817.2	5.0	16.3	35.49	728.5	1,110.0	1,255.8	1,237.8	17.95	69.955		
2,500.0	2,493.3	3,077.2	2,904.2	5.2	17.0	37.41	686.1	1,102.7	1,219.7	1,200.7	19.07	63.977		
2,600.0	2,592.9	3,156.2	2,975.2	5.4	17.7	39.01	652.1	1,096.0	1,184.5	1,164.5	20.02	59.157		
2,700.0	2,692.6	3,258.3	3,066.9	5.7	18.5	41.20	607.9	1,087.4	1,150.4	1,129.1	21.26	54.116		
2,800.0	2,792.2	3,324.6	3,126.1	5.9	19.0	42.72	578.6	1,082.1	1,117.5	1,095.3	22.16	50.420		
2,900.0	2,891.8	3,426.6	3,217.3	6.1	19.8	45.19	533.6	1,074.5	1,086.7	1,063.2	23.48	46.287		
3,000.0	2,991.4	3,498.7	3,281.6	6.4	20.4	47.01	501.6	1,068.6	1,056.8	1,032.4	24.49	43.154		
3,100.0	3,091.1	3,574.5	3,349.4	6.6	21.0	49.02	467.9	1,063.6	1,029.9	1,004.4	25.56	40.289		
3,200.0	3,190.7	3,668.5	3,433.3	6.8	21.8	51.61	426.2	1,057.5	1,005.2	978.4	26.85	37.440		
3,300.0	3,290.3	3,764.3	3,519.1	7.0	22.5	54.32	384.2	1,049.7	981.5	953.3	28.13	34.886		
3,400.0	3,389.9	3,854.0	3,600.1	7.3	23.2	56.85	346.5	1,041.5	959.3	930.0	29.30	32.743		
3,500.0	3,489.5	3,936.0	3,674.7	7.5	23.8	59.15	313.4	1,033.7	939.3	909.0	30.36	30.943		
3,600.0	3,589.2	4,011.1	3,743.2	7.7	24.4	61.33	283.2	1,027.3	922.3	891.0	31.34	29.430		
3,700.0	3,688.8	4,093.2	3,817.8	8.0	25.0	63.80	249.6	1,021.3	908.7	876.3	32.39	28.059		
3,800.0	3,788.4	4,167.3	3,885.0	8.2	25.5	66.11	218.7	1,016.2	898.0	864.6	33.34	26.934		
3,900.0	3,888.0	4,234.7	3,946.0	8.4	26.1	68.26	190.0	1,013.2	892.0	857.8	34.20	26.077		
4,000.0	3,987.7	4,323.8	4,026.4	8.7	26.7	71.13	152.0	1,009.7	889.3	854.1	35.22	25.250		
4,042.8	4,030.3	4,359.6	4,058.8	8.8	27.0	72.28	136.9	1,008.4	889.0	853.4	35.61	24.966		
4,100.0	4,087.3	4,408.4	4,103.1	8.9	27.4	73.83	116.4	1,006.6	889.5	853.4	36.13	24.619		
4,200.0	4,186.9	4,496.2	4,181.5	9.1	28.1	76.77	77.2	1,002.9	892.6	855.5	37.06	24.086		
4,300.0	4,286.5	4,588.2	4,262.6	9.4	28.9	79.97	33.9	997.7	898.2	860.3	37.94	23.673		
4,400.0	4,386.1	4,673.2	4,337.5	9.6	29.6	82.89	-5.9	992.7	906.7	868.0	38.67	23.450		
4,500.0	4,485.8	4,760.4	4,415.6	9.8	30.3	85.68	-44.3	988.5	918.3	879.0	39.27	23.382		
4,600.0	4,585.4	4,865.4	4,511.9	10.0	31.0	88.69	-86.1	984.3	931.3	891.5	39.81	23.391		
4,700.0	4,685.0	4,985.9	4,624.5	10.3	31.7	91.77	-128.7	979.3	944.4	904.2	40.27	23.451		
4,800.0	4,784.6	5,085.3	4,718.6	10.5	32.3	94.10	-160.4	974.3	956.8	916.2	40.61	23.561		
4,900.0	4,884.3	5,198.8	4,827.3	10.7	32.9	96.47	-192.8	969.5	969.6	928.7	40.86	23.727		

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 2C-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 2C-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 #2	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
5,000.0	4,983.9	5,317.0	4,941.9	11.0	33.4	98.58	-221.0	965.1	981.2	940.2	41.05	23.905	
5,100.0	5,083.5	5,431.7	5,054.5	11.2	33.7	100.27	-242.4	961.8	991.4	950.2	41.20	24.063	
5,200.0	5,183.1	5,546.5	5,167.9	11.4	34.1	101.77	-260.6	958.8	1,000.7	959.4	41.34	24.210	
5,300.0	5,282.7	5,676.8	5,297.3	11.7	34.4	103.19	-275.5	955.1	1,007.5	966.1	41.43	24.318	
5,400.0	5,382.4	5,795.9	5,415.9	11.9	34.6	104.28	-284.7	951.7	1,012.4	970.9	41.53	24.379	
5,500.0	5,482.0	5,904.1	5,524.0	12.1	34.7	105.07	-289.5	949.7	1,016.1	974.5	41.63	24.407	
5,600.0	5,581.6	6,024.5	5,644.4	12.4	34.8	105.81	-291.8	947.6	1,018.4	976.7	41.74	24.401	
5,700.0	5,681.2	6,127.7	5,747.5	12.6	34.8	106.37	-291.7	945.7	1,019.4	977.5	41.87	24.349	
5,800.0	5,780.9	6,226.1	5,845.9	12.8	34.9	106.89	-291.6	944.0	1,020.5	978.5	42.00	24.296	
5,900.0	5,880.5	6,324.5	5,944.3	13.0	35.0	107.42	-291.7	942.3	1,021.9	979.8	42.14	24.250	
6,000.0	5,980.1	6,423.4	6,043.1	13.3	35.0	107.94	-291.8	940.6	1,023.4	981.1	42.27	24.210	
6,100.0	6,079.7	6,522.1	6,141.9	13.5	35.1	108.46	-292.0	939.1	1,025.1	982.7	42.40	24.177	
6,200.0	6,179.3	6,620.8	6,240.6	13.7	35.1	108.95	-291.7	938.1	1,027.0	984.4	42.53	24.149	
6,300.0	6,279.0	6,719.2	6,338.9	14.0	35.2	109.40	-291.1	937.5	1,029.0	986.3	42.67	24.117	
6,400.0	6,378.6	6,817.2	6,436.9	14.2	35.2	109.85	-290.7	936.9	1,031.2	988.4	42.81	24.090	
6,500.0	6,478.2	6,916.3	6,536.0	14.4	35.3	110.33	-290.6	936.2	1,033.6	990.7	42.95	24.068	
6,600.0	6,577.8	7,015.6	6,635.4	14.7	35.4	110.81	-290.7	935.3	1,036.1	993.0	43.08	24.050	
6,700.0	6,677.5	7,116.3	6,736.1	14.9	35.4	111.30	-290.8	934.3	1,038.7	995.4	43.22	24.032	
6,800.0	6,777.1	7,216.8	6,836.5	15.1	35.5	111.81	-291.1	933.0	1,041.2	997.8	43.35	24.016	
6,900.0	6,876.7	7,317.0	6,936.7	15.4	35.6	112.33	-291.4	931.6	1,043.7	1,000.2	43.49	24.000	
7,000.0	6,976.3	7,418.3	7,038.0	15.6	35.6	112.85	-291.7	930.0	1,046.2	1,002.6	43.62	23.986	
7,100.0	7,075.9	7,520.6	7,140.3	15.8	35.7	113.38	-291.8	928.2	1,048.6	1,004.8	43.75	23.969	
7,147.0	7,122.8	7,568.1	7,187.8	15.9	35.7	113.62	-291.8	927.3	1,049.7	1,005.8	43.81	23.959	
7,150.0	7,125.8	7,571.1	7,190.8	15.9	35.7	112.03	-291.8	927.2	1,049.7	1,005.9	43.81	23.959	
7,200.0	7,175.7	7,621.4	7,241.1	16.0	35.8	29.16	-291.8	926.2	1,049.0	1,005.1	43.85	23.920	
7,250.0	7,225.5	7,671.6	7,291.3	16.0	35.8	-19.85	-291.8	925.3	1,044.9	1,001.0	43.92	23.791	
7,300.0	7,275.0	7,721.6	7,341.3	16.0	35.8	-29.60	-291.7	924.3	1,037.5	993.5	44.01	23.573	
7,350.0	7,323.6	7,771.5	7,391.2	16.0	35.9	-34.16	-291.6	923.4	1,026.8	982.7	44.14	23.262	
7,400.0	7,371.0	7,820.2	7,439.8	15.9	35.9	-37.48	-291.4	922.4	1,013.0	968.7	44.32	22.856	
7,450.0	7,416.9	7,867.1	7,486.8	15.8	35.9	-40.53	-291.1	921.5	996.2	951.7	44.56	22.355	
7,500.0	7,460.8	7,910.5	7,530.1	15.6	36.0	-43.66	-290.8	920.7	976.7	931.8	44.87	21.768	
7,550.0	7,502.6	7,950.5	7,570.1	15.5	36.0	-47.05	-290.5	920.0	954.9	909.6	45.25	21.101	
7,600.0	7,541.7	7,988.0	7,607.6	15.3	36.0	-50.80	-290.1	919.5	931.0	885.3	45.73	20.358	
7,650.0	7,578.1	8,022.7	7,642.3	15.2	36.0	-54.93	-289.8	919.1	905.5	859.2	46.30	19.559	
7,700.0	7,611.3	8,054.3	7,673.9	15.0	36.0	-59.40	-289.5	918.9	878.8	831.9	46.92	18.729	
7,750.0	7,641.1	8,083.1	7,702.7	14.9	36.0	-64.17	-289.2	918.7	851.3	803.7	47.57	17.897	
7,800.0	7,667.4	8,108.5	7,728.1	14.8	36.1	-69.07	-288.9	918.5	823.5	775.3	48.17	17.095	
7,850.0	7,689.8	8,130.1	7,749.7	14.7	36.1	-73.89	-288.7	918.4	796.0	747.3	48.69	16.348	
7,900.0	7,708.2	8,147.8	7,767.4	14.7	36.1	-78.44	-288.5	918.4	769.4	720.3	49.09	15.672	
7,950.0	7,722.6	8,161.4	7,781.0	14.7	36.1	-82.53	-288.4	918.3	744.2	694.8	49.37	15.072	
8,000.0	7,732.7	8,170.8	7,790.4	14.7	36.1	-85.99	-288.3	918.3	721.0	671.4	49.58	14.543	
8,050.0	7,738.5	8,176.1	7,795.7	14.8	36.1	-88.73	-288.3	918.2	700.4	650.7	49.74	14.082	
8,091.8	7,740.0	8,177.1	7,796.7	15.0	36.1	-90.42	-288.2	918.2	685.6	635.7	49.88	13.744	
8,100.0	7,740.0	8,177.1	7,796.6	15.0	36.1	-90.41	-288.2	918.2	682.9	633.0	49.91	13.683	
8,200.0	7,740.0	8,176.0	7,795.6	15.4	36.1	-90.32	-288.3	918.2	658.1	607.7	50.39	13.061	
8,300.0	7,740.0	8,175.0	7,794.6	16.1	36.1	-90.23	-288.3	918.2	648.0	596.9	51.05	12.693	
8,316.2	7,740.0	8,174.9	7,794.5	16.2	36.1	-90.22	-288.3	918.2	647.8	596.6	51.19	12.656 CC, ES	
8,400.0	7,740.0	8,174.0	7,793.6	16.9	36.1	-90.14	-288.3	918.2	653.2	601.3	51.88	12.591 SF	
8,500.0	7,740.0	8,173.0	7,792.6	17.8	36.1	-90.05	-288.3	918.2	673.4	620.5	52.85	12.742	
8,600.0	7,740.0	8,172.0	7,791.6	18.8	36.1	-89.97	-288.3	918.3	707.2	653.3	53.93	13.114	
8,700.0	7,740.0	8,171.0	7,790.6	20.0	36.1	-89.88	-288.3	918.3	752.9	697.8	55.11	13.662	
8,800.0	7,740.0	8,170.0	7,789.6	21.2	36.1	-89.79	-288.3	918.3	808.5	752.1	56.38	14.341	

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 2C-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 2C-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 #2	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		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	Separation Factor		
8,900.0	7,740.0	8,169.0	7,788.6	22.5	36.1	-89.70	-288.3	918.3	872.0	814.3	57.71	15.111		
9,000.0	7,740.0	8,168.0	7,787.6	23.9	36.1	-89.61	-288.3	918.3	941.9	882.8	59.09	15.939		
9,100.0	7,740.0	8,167.0	7,786.6	25.3	36.1	-89.52	-288.3	918.3	1,016.8	956.3	60.53	16.799		
9,200.0	7,740.0	8,166.0	7,785.6	26.7	36.1	-89.43	-288.4	918.3	1,095.7	1,033.7	62.00	17.674		
9,300.0	7,740.0	8,165.0	7,784.6	28.2	36.1	-89.34	-288.4	918.3	1,177.9	1,114.4	63.50	18.548		
9,400.0	7,740.0	8,164.0	7,783.6	29.7	36.1	-89.25	-288.4	918.3	1,262.6	1,197.6	65.03	19.414		
9,500.0	7,740.0	8,162.9	7,782.5	31.3	36.1	-89.16	-288.4	918.3	1,349.4	1,282.8	66.59	20.265		
9,600.0	7,740.0	8,161.9	7,781.5	32.8	36.1	-89.07	-288.4	918.3	1,437.9	1,369.8	68.16	21.095		
9,700.0	7,740.0	8,160.9	7,780.5	34.4	36.1	-88.99	-288.4	918.3	1,527.9	1,458.1	69.75	21.903		
9,800.0	7,740.0	8,159.9	7,779.5	36.0	36.1	-88.90	-288.4	918.3	1,619.0	1,547.6	71.36	22.687		
9,900.0	7,740.0	8,158.9	7,778.5	37.6	36.1	-88.81	-288.4	918.3	1,711.1	1,638.1	72.98	23.446		
10,000.0	7,740.0	8,157.9	7,777.5	39.2	36.1	-88.72	-288.4	918.3	1,804.0	1,729.4	74.61	24.179		
10,100.0	7,740.0	8,156.9	7,776.5	40.9	36.1	-88.63	-288.5	918.3	1,897.7	1,821.4	76.25	24.888		
10,200.0	7,740.0	8,155.9	7,775.5	42.5	36.1	-88.54	-288.5	918.3	1,992.0	1,914.1	77.90	25.571		
10,300.0	7,740.0	8,154.9	7,774.5	44.1	36.1	-88.45	-288.5	918.3	2,086.8	2,007.2	79.56	26.231		
10,400.0	7,740.0	8,153.9	7,773.5	45.8	36.1	-88.36	-288.5	918.3	2,182.1	2,100.8	81.22	26.867		
10,500.0	7,740.0	8,152.9	7,772.5	47.5	36.1	-88.27	-288.5	918.3	2,277.7	2,194.9	82.89	27.480		
10,600.0	7,740.0	8,151.9	7,771.5	49.1	36.1	-88.18	-288.5	918.3	2,373.8	2,289.2	84.56	28.072		
10,700.0	7,740.0	8,150.9	7,770.4	50.8	36.1	-88.09	-288.5	918.3	2,470.1	2,383.9	86.24	28.643		
10,800.0	7,740.0	8,149.8	7,769.4	52.5	36.1	-88.01	-288.5	918.3	2,566.8	2,478.8	87.92	29.193		
10,900.0	7,740.0	8,148.8	7,768.4	54.2	36.1	-87.92	-288.5	918.3	2,663.6	2,574.0	89.61	29.725		
11,000.0	7,740.0	8,147.8	7,767.4	55.9	36.1	-87.83	-288.5	918.4	2,760.7	2,669.4	91.30	30.238		
11,100.0	7,740.0	8,146.8	7,766.4	57.6	36.1	-87.74	-288.6	918.4	2,858.0	2,765.0	92.99	30.734		
11,200.0	7,740.0	8,145.8	7,765.4	59.3	36.1	-87.65	-288.6	918.4	2,955.5	2,860.8	94.69	31.213		
11,300.0	7,740.0	8,144.8	7,764.4	61.0	36.1	-87.56	-288.6	918.4	3,053.2	2,956.8	96.39	31.676		
11,400.0	7,740.0	8,143.8	7,763.4	62.7	36.1	-87.47	-288.6	918.4	3,150.9	3,052.9	98.09	32.124		
11,500.0	7,740.0	8,142.8	7,762.4	64.4	36.1	-87.38	-288.6	918.4	3,248.9	3,149.1	99.79	32.557		
11,600.0	7,740.0	8,141.8	7,761.4	66.1	36.1	-87.29	-288.6	918.4	3,346.9	3,245.4	101.49	32.976		
11,700.0	7,740.0	8,140.8	7,760.4	67.8	36.1	-87.20	-288.6	918.4	3,445.1	3,341.9	103.20	33.382		
11,800.0	7,740.0	8,139.8	7,759.3	69.5	36.1	-87.12	-288.6	918.4	3,543.3	3,438.4	104.91	33.776		
11,900.0	7,740.0	8,138.7	7,758.3	71.2	36.1	-87.03	-288.6	918.4	3,641.7	3,535.1	106.62	34.157		
12,000.0	7,740.0	8,137.7	7,757.3	72.9	36.1	-86.94	-288.6	918.4	3,740.1	3,631.8	108.33	34.527		
12,100.0	7,740.0	8,136.7	7,756.3	74.7	36.1	-86.85	-288.7	918.4	3,838.7	3,728.6	110.04	34.885		
12,200.0	7,740.0	8,135.7	7,755.3	76.4	36.1	-86.76	-288.7	918.4	3,937.3	3,825.5	111.75	35.233		
12,300.0	7,740.0	8,134.7	7,754.3	78.1	36.1	-86.67	-288.7	918.4	4,035.9	3,922.5	113.46	35.571		
12,400.0	7,740.0	8,133.7	7,753.3	79.8	36.1	-86.58	-288.7	918.4	4,134.6	4,019.5	115.17	35.899		
12,500.0	7,740.0	8,132.7	7,752.3	81.6	36.1	-86.49	-288.7	918.4	4,233.4	4,116.5	116.89	36.218		
12,600.0	7,740.0	8,131.7	7,751.3	83.3	36.1	-86.40	-288.7	918.4	4,332.3	4,213.7	118.60	36.528		
12,700.0	7,740.0	8,130.7	7,750.3	85.0	36.1	-86.31	-288.7	918.4	4,431.2	4,310.9	120.32	36.829		
12,800.0	7,740.0	8,129.7	7,749.3	86.7	36.1	-86.23	-288.7	918.4	4,530.1	4,408.1	122.03	37.123		
12,900.0	7,740.0	8,128.6	7,748.2	88.5	36.1	-86.14	-288.7	918.4	4,629.1	4,505.4	123.75	37.408		
13,000.0	7,740.0	8,127.6	7,747.2	90.2	36.1	-86.05	-288.8	918.4	4,728.1	4,602.7	125.46	37.686		
13,100.0	7,740.0	8,126.6	7,746.2	91.9	36.1	-85.96	-288.8	918.5	4,827.2	4,700.0	127.18	37.956		
13,200.0	7,740.0	8,125.6	7,745.2	93.7	36.1	-85.87	-288.8	918.5	4,926.3	4,797.4	128.89	38.220		
13,300.0	7,740.0	8,124.6	7,744.2	95.4	36.1	-85.78	-288.8	918.5	5,025.5	4,894.9	130.61	38.477		
13,400.0	7,740.0	8,123.6	7,743.2	97.1	36.1	-85.69	-288.8	918.5	5,124.6	4,992.3	132.33	38.728		
13,500.0	7,740.0	8,122.6	7,742.2	98.9	36.1	-85.60	-288.8	918.5	5,223.8	5,089.8	134.04	38.972		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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									
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	33.0	33.0	0.0	0.1	46.76	801.1	852.0	1,169.5						
100.0	100.0	121.5	121.5	0.2	0.2	46.79	801.3	853.0	1,170.4	1,170.1	0.37	3,197.698			
200.0	200.0	219.5	219.4	0.3	0.4	46.85	801.5	854.9	1,172.1	1,171.4	0.71	1,641.410			
300.0	300.0	332.6	332.6	0.5	0.6	46.88	801.7	856.3	1,173.0	1,171.9	1.09	1,080.477			
400.0	400.0	436.3	436.2	0.7	0.8	46.89	801.8	856.5	1,173.2	1,171.8	1.44	814.769			
500.0	500.0	535.9	535.9	0.9	0.9	20.94	802.3	856.4	1,172.7	1,170.9	1.79	656.576			
600.0	600.0	639.7	639.6	1.0	1.1	20.99	802.3	856.3	1,170.2	1,168.0	2.14	546.424			
700.0	699.9	744.7	744.7	1.2	1.3	21.07	802.3	856.0	1,165.9	1,163.4	2.50	466.429			
800.0	799.7	848.9	848.8	1.4	1.5	21.17	802.2	854.7	1,159.2	1,156.4	2.86	405.804			
898.2	897.5	946.7	946.6	1.6	1.7	21.29	802.3	853.4	1,151.2	1,148.0	3.20	359.659			
900.0	899.4	948.6	948.6	1.6	1.7	21.29	802.3	853.4	1,151.0	1,147.8	3.21	358.862			
1,000.0	999.0	1,050.0	1,049.9	1.8	1.8	21.42	802.0	852.1	1,141.8	1,138.3	3.56	320.365			
1,100.0	1,098.6	1,151.2	1,151.2	2.0	2.0	21.56	801.6	850.9	1,132.6	1,128.7	3.92	288.818			
1,200.0	1,198.2	1,253.0	1,253.0	2.3	2.2	21.68	801.3	849.2	1,123.1	1,118.8	4.28	262.378			
1,300.0	1,297.9	1,349.1	1,349.0	2.5	2.4	21.78	801.2	847.5	1,113.6	1,109.0	4.63	240.518			
1,400.0	1,397.5	1,444.3	1,444.2	2.7	2.5	21.87	801.6	846.0	1,104.6	1,099.6	4.98	221.870			
1,500.0	1,497.1	1,545.0	1,544.8	2.9	2.7	21.97	802.1	844.4	1,095.8	1,090.4	5.34	205.306			
1,600.0	1,596.7	1,643.4	1,643.3	3.2	2.9	22.07	802.5	842.8	1,086.8	1,081.1	5.69	190.910			
1,700.0	1,696.3	1,738.4	1,738.3	3.4	3.0	22.16	803.2	841.5	1,078.2	1,072.2	6.04	178.446			
1,800.0	1,796.0	1,837.9	1,837.8	3.6	3.2	22.25	804.1	840.2	1,069.8	1,063.4	6.40	167.152			
1,900.0	1,895.6	1,936.7	1,936.5	3.8	3.4	22.33	805.2	838.8	1,061.4	1,054.7	6.76	157.071			
2,000.0	1,995.2	2,031.0	2,030.8	4.1	3.6	22.40	806.6	837.5	1,053.3	1,046.2	7.11	148.200			
2,100.0	2,094.8	2,123.6	2,123.4	4.3	3.7	22.46	808.3	836.6	1,045.9	1,038.4	7.45	140.301			
2,200.0	2,194.5	2,219.5	2,219.3	4.5	3.9	22.53	810.5	836.1	1,039.0	1,031.1	7.81	133.063			
2,300.0	2,294.1	2,318.5	2,318.2	4.8	4.1	22.61	812.8	835.8	1,032.3	1,024.1	8.17	126.401			
2,400.0	2,393.7	2,422.9	2,422.6	5.0	4.2	22.71	814.9	835.6	1,025.4	1,016.8	8.53	120.140			
2,500.0	2,493.3	2,525.8	2,525.5	5.2	4.4	22.84	816.2	835.4	1,018.1	1,009.2	8.90	114.386			
2,600.0	2,592.9	2,627.6	2,627.3	5.4	4.6	22.98	817.2	835.1	1,010.5	1,001.3	9.26	109.084			
2,700.0	2,692.6	2,728.9	2,728.6	5.7	4.8	23.12	818.1	834.7	1,002.8	993.1	9.63	104.163			
2,800.0	2,792.2	2,828.1	2,827.8	5.9	5.0	23.27	818.9	834.4	995.1	985.1	9.99	99.640			
2,900.0	2,891.8	2,931.4	2,931.0	6.1	5.1	23.42	819.7	833.7	987.1	976.8	10.35	95.337			
3,000.0	2,991.4	3,032.9	3,032.6	6.4	5.3	23.53	820.7	832.5	978.9	968.2	10.72	91.325			
3,100.0	3,091.1	3,133.8	3,133.4	6.6	5.5	23.65	821.5	831.4	970.6	959.5	11.08	87.578			
3,200.0	3,190.7	3,235.7	3,235.3	6.8	5.7	23.78	822.3	829.9	962.0	950.6	11.45	84.028			
3,300.0	3,290.3	3,333.5	3,333.2	7.0	5.8	23.88	823.2	828.3	953.4	941.6	11.81	80.744			
3,400.0	3,389.9	3,428.7	3,428.3	7.3	6.0	23.97	824.4	826.9	945.2	933.1	12.16	77.715			
3,500.0	3,489.5	3,522.8	3,522.4	7.5	6.2	24.09	825.7	826.1	937.5	925.0	12.52	74.909			
3,600.0	3,589.2	3,615.3	3,614.9	7.7	6.3	24.19	827.4	825.8	930.5	917.6	12.87	72.324			
3,700.0	3,688.8	3,709.3	3,708.9	8.0	6.5	24.29	829.8	825.9	924.3	911.1	13.22	69.918			
3,800.0	3,788.4	3,818.4	3,817.9	8.2	6.7	24.39	832.6	825.5	917.8	904.2	13.60	67.481			
3,900.0	3,888.0	3,923.9	3,923.4	8.4	6.9	24.52	834.3	825.0	910.5	896.5	13.97	65.153			
4,000.0	3,987.7	4,031.6	4,031.1	8.7	7.1	24.68	835.3	824.1	902.5	888.1	14.35	62.881			
4,100.0	4,087.3	4,139.0	4,138.5	8.9	7.3	24.84	835.5	822.2	893.4	878.6	14.73	60.646			
4,200.0	4,186.9	4,237.2	4,236.7	9.1	7.4	24.97	835.9	820.1	884.1	869.0	15.09	58.577			
4,300.0	4,286.5	4,335.1	4,334.6	9.4	7.6	25.13	836.0	818.4	875.0	859.5	15.45	56.618			
4,400.0	4,386.1	4,435.3	4,434.7	9.6	7.8	25.32	836.0	817.0	866.0	850.2	15.82	54.740			
4,500.0	4,485.8	4,535.8	4,535.1	9.8	8.0	25.43	836.7	814.6	856.7	840.5	16.19	52.920			
4,600.0	4,585.4	4,630.7	4,630.0	10.0	8.1	25.49	838.2	812.2	847.9	831.4	16.55	51.246			
4,700.0	4,685.0	4,732.1	4,731.4	10.3	8.3	25.60	839.3	810.2	839.2	822.3	16.92	49.614			
4,800.0	4,784.6	4,832.8	4,832.1	10.5	8.5	25.74	840.1	808.1	830.3	813.0	17.28	48.040			
4,900.0	4,884.3	4,931.5	4,930.8	10.7	8.7	25.95	840.0	806.9	821.4	803.8	17.65	46.547			
5,000.0	4,983.9	5,032.7	5,032.0	11.0	8.8	26.19	839.6	805.7	812.4	794.4	18.02	45.087			

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 2C-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 2C-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 #2	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	
5,100.0	5,083.5	5,130.7	5,129.9	11.2	9.0	26.38	839.8	804.2	803.5	785.1	18.38	43.708	
5,200.0	5,183.1	5,232.5	5,231.8	11.4	9.2	26.55	840.3	802.3	794.6	775.8	18.76	42.362	
5,300.0	5,282.7	5,330.7	5,329.9	11.7	9.4	26.72	840.6	800.2	785.4	766.2	19.12	41.071	
5,400.0	5,382.4	5,423.8	5,423.1	11.9	9.5	26.90	841.3	799.0	777.0	757.5	19.48	39.889	
5,500.0	5,482.0	5,526.2	5,525.4	12.1	9.7	27.12	841.7	798.0	768.7	748.8	19.85	38.715	
5,600.0	5,581.6	5,626.2	5,625.4	12.4	9.9	27.34	842.2	796.7	760.3	740.1	20.23	37.589	
5,700.0	5,681.2	5,729.8	5,729.0	12.6	10.1	27.53	842.8	794.9	751.5	730.9	20.60	36.474	
5,800.0	5,780.9	5,831.0	5,830.1	12.8	10.3	27.72	843.2	792.8	742.4	721.4	20.98	35.387	
5,900.0	5,880.5	5,929.0	5,928.1	13.0	10.4	27.90	843.7	790.7	733.3	711.9	21.35	34.349	
6,000.0	5,980.1	6,029.4	6,028.5	13.3	10.6	28.11	844.2	788.8	724.3	702.6	21.72	33.348	
6,100.0	6,079.7	6,133.9	6,133.0	13.5	10.8	28.33	844.2	786.3	714.8	692.7	22.10	32.339	
6,200.0	6,179.3	6,232.8	6,231.9	13.7	11.0	28.56	844.1	783.8	705.0	682.5	22.48	31.369	
6,300.0	6,279.0	6,330.1	6,329.1	14.0	11.1	28.79	844.0	781.6	695.5	672.6	22.85	30.443	
6,400.0	6,378.6	6,426.5	6,425.5	14.2	11.3	29.03	844.1	779.7	686.4	663.1	23.22	29.565	
6,500.0	6,478.2	6,523.5	6,522.4	14.4	11.5	29.22	845.0	777.8	677.6	654.1	23.59	28.731	
6,600.0	6,577.8	6,620.8	6,619.8	14.7	11.7	29.46	845.7	776.4	669.4	645.4	23.96	27.940	
6,700.0	6,677.5	6,721.8	6,720.8	14.9	11.8	29.71	846.5	775.1	661.1	636.8	24.34	27.164	
6,800.0	6,777.1	6,822.7	6,821.6	15.1	12.0	30.01	846.8	773.8	652.7	628.0	24.72	26.406	
6,900.0	6,876.7	6,926.3	6,925.2	15.4	12.2	30.31	847.0	772.0	643.8	618.7	25.11	25.644	
7,000.0	6,976.3	7,025.7	7,024.6	15.6	12.4	30.55	847.4	769.7	634.7	609.2	25.49	24.904	
7,100.0	7,075.9	7,125.0	7,123.9	15.8	12.5	30.88	847.3	768.0	625.7	599.9	25.87	24.191	
7,147.0	7,122.8	7,175.4	7,174.3	15.9	12.6	31.05	847.1	767.0	621.4	595.3	26.05	23.849	
7,150.0	7,125.8	7,178.6	7,177.5	15.9	12.6	29.43	847.1	766.9	621.1	595.0	26.07	23.826	
7,200.0	7,175.7	7,232.1	7,231.0	16.0	12.7	-53.91	846.8	765.5	617.4	591.2	26.23	23.539	
7,250.0	7,225.5	7,285.4	7,284.3	16.0	12.8	-103.19	846.4	763.8	615.9	589.6	26.33	23.391	
7,260.2	7,235.6	7,296.2	7,295.1	16.0	12.9	-106.17	846.3	763.4	615.8	589.5	26.34	23.380 CC, ES	
7,300.0	7,275.0	7,344.1	7,342.9	16.0	12.9	-113.08	845.4	761.6	616.4	590.0	26.37	23.376 SF	
7,350.0	7,323.6	7,400.0	7,398.7	16.0	13.0	-117.46	843.2	759.3	618.6	592.3	26.34	23.485	
7,400.0	7,371.0	7,447.6	7,446.1	15.9	13.1	-119.99	840.3	757.7	623.4	597.1	26.25	23.748	
7,450.0	7,416.9	7,491.4	7,489.8	15.8	13.2	-121.60	836.4	757.5	631.2	605.1	26.11	24.171	
7,500.0	7,460.8	7,527.6	7,525.8	15.6	13.2	-122.50	832.9	758.0	642.4	616.4	25.95	24.753	
7,550.0	7,502.6	7,560.1	7,558.2	15.5	13.3	-122.95	830.3	758.7	657.4	631.6	25.77	25.506	
7,600.0	7,541.7	7,600.0	7,598.0	15.3	13.4	-123.44	827.7	760.0	676.2	650.6	25.57	26.443	
7,650.0	7,578.1	7,623.8	7,621.7	15.2	13.4	-122.92	826.6	760.9	698.5	673.1	25.43	27.466	
7,700.0	7,611.3	7,656.7	7,654.6	15.0	13.5	-122.54	825.3	761.9	724.1	698.8	25.30	28.623	
7,750.0	7,641.1	7,685.8	7,683.7	14.9	13.5	-121.63	824.4	762.5	752.8	727.5	25.24	29.826	
7,800.0	7,667.4	7,710.9	7,708.8	14.8	13.6	-120.07	823.9	763.0	784.5	759.2	25.29	31.015	
7,850.0	7,689.8	7,732.2	7,730.1	14.7	13.6	-117.71	823.5	763.3	819.0	793.5	25.49	32.130	
7,900.0	7,708.2	7,749.8	7,747.7	14.7	13.6	-114.41	823.2	763.7	856.0	830.2	25.85	33.122	
7,950.0	7,722.6	7,763.6	7,761.4	14.7	13.6	-109.99	823.0	763.9	895.2	868.9	26.34	33.982	
8,000.0	7,732.7	7,773.4	7,771.2	14.7	13.7	-104.26	822.9	764.1	936.2	909.3	26.93	34.769	
8,050.0	7,738.5	7,779.2	7,777.1	14.8	13.7	-97.12	822.8	764.2	978.6	951.2	27.47	35.626	
8,091.8	7,740.0	7,781.1	7,778.9	15.0	13.7	-90.11	822.8	764.3	1,014.8	987.1	27.76	36.554	
8,100.0	7,740.0	7,781.1	7,779.0	15.0	13.7	-90.12	822.8	764.3	1,022.0	994.2	27.79	36.773	
8,200.0	7,740.0	7,782.3	7,780.1	15.4	13.7	-90.25	822.7	764.3	1,110.6	1,082.4	28.27	39.286	
8,300.0	7,740.0	7,783.4	7,781.2	16.1	13.7	-90.37	822.7	764.3	1,201.0	1,172.1	28.94	41.507	
8,400.0	7,740.0	7,784.4	7,782.3	16.9	13.7	-90.50	822.7	764.3	1,292.8	1,263.1	29.76	43.436	
8,500.0	7,740.0	7,785.5	7,783.4	17.8	13.7	-90.62	822.7	764.4	1,385.8	1,355.0	30.73	45.092	
8,600.0	7,740.0	7,786.6	7,784.4	18.8	13.7	-90.74	822.7	764.4	1,479.6	1,447.8	31.82	46.502	
8,700.0	7,740.0	7,787.6	7,785.5	20.0	13.7	-90.86	822.7	764.4	1,574.3	1,541.3	33.00	47.701	
8,800.0	7,740.0	7,788.6	7,786.5	21.2	13.7	-90.98	822.7	764.4	1,669.5	1,635.2	34.27	48.719	
8,900.0	7,740.0	7,789.6	7,787.5	22.5	13.7	-91.10	822.6	764.5	1,765.3	1,729.7	35.60	49.586	

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 2C-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 2C-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 #2	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	7,790.6	7,788.4	23.9	13.7	-91.21	822.6	764.5	1,861.5	1,824.5	36.99	50.326		
9,100.0	7,740.0	7,800.0	7,797.9	25.3	13.7	-92.30	822.5	764.7	1,958.1	1,919.7	38.42	50.965		
9,200.0	7,740.0	7,800.0	7,797.9	26.7	13.7	-92.30	822.5	764.7	2,055.0	2,015.1	39.89	51.514		
9,300.0	7,740.0	7,800.0	7,797.9	28.2	13.7	-92.30	822.5	764.7	2,152.2	2,110.8	41.40	51.990		
9,400.0	7,740.0	7,800.0	7,797.9	29.7	13.7	-92.30	822.5	764.7	2,249.6	2,206.7	42.93	52.404		
9,500.0	7,740.0	7,800.0	7,797.9	31.3	13.7	-92.30	822.5	764.7	2,347.3	2,302.8	44.48	52.767		
9,600.0	7,740.0	7,800.0	7,797.9	32.8	13.7	-92.30	822.5	764.7	2,445.1	2,399.1	46.06	53.086		
9,700.0	7,740.0	7,800.0	7,797.9	34.4	13.7	-92.30	822.5	764.7	2,543.2	2,495.5	47.65	53.368		
9,800.0	7,740.0	7,800.0	7,797.9	36.0	13.7	-92.30	822.5	764.7	2,641.3	2,592.1	49.26	53.619		
9,900.0	7,740.0	7,800.0	7,797.9	37.6	13.7	-92.30	822.5	764.7	2,739.6	2,688.7	50.88	53.843		
10,000.0	7,740.0	7,800.0	7,797.9	39.2	13.7	-92.30	822.5	764.7	2,838.0	2,785.5	52.51	54.043		
10,100.0	7,740.0	7,800.0	7,797.9	40.9	13.7	-92.30	822.5	764.7	2,936.6	2,882.4	54.16	54.223		
10,200.0	7,740.0	7,800.0	7,797.9	42.5	13.7	-92.30	822.5	764.7	3,035.2	2,979.4	55.81	54.386		
10,300.0	7,740.0	7,800.0	7,797.9	44.1	13.7	-92.30	822.5	764.7	3,133.9	3,076.4	57.47	54.533		
10,400.0	7,740.0	7,800.0	7,797.9	45.8	13.7	-92.30	822.5	764.7	3,232.7	3,173.5	59.13	54.667		
10,500.0	7,740.0	7,800.0	7,797.9	47.5	13.7	-92.30	822.5	764.7	3,331.5	3,270.7	60.81	54.789		
10,600.0	7,740.0	7,800.0	7,797.9	49.1	13.7	-92.30	822.5	764.7	3,430.4	3,368.0	62.48	54.901		
10,700.0	7,740.0	7,800.0	7,797.9	50.8	13.7	-92.30	822.5	764.7	3,529.4	3,465.3	64.17	55.004		
10,800.0	7,740.0	7,800.0	7,797.9	52.5	13.7	-92.30	822.5	764.7	3,628.5	3,562.6	65.85	55.098		
10,900.0	7,740.0	7,800.0	7,797.9	54.2	13.7	-92.30	822.5	764.7	3,727.6	3,660.0	67.55	55.185		
11,000.0	7,740.0	7,800.0	7,797.9	55.9	13.7	-92.30	822.5	764.7	3,826.7	3,757.5	69.24	55.265		
11,100.0	7,740.0	7,800.0	7,797.9	57.6	13.7	-92.30	822.5	764.7	3,925.9	3,854.9	70.94	55.340		
11,200.0	7,740.0	7,800.0	7,797.9	59.3	13.7	-92.30	822.5	764.7	4,025.1	3,952.5	72.64	55.409		
11,300.0	7,740.0	7,800.0	7,797.9	61.0	13.7	-92.30	822.5	764.7	4,124.4	4,050.0	74.35	55.473		
11,400.0	7,740.0	7,800.0	7,797.9	62.7	13.7	-92.30	822.5	764.7	4,223.7	4,147.6	76.06	55.533		
11,500.0	7,740.0	7,812.0	7,809.8	64.4	13.7	-93.68	822.4	764.9	4,323.0	4,245.3	77.70	55.636		
11,600.0	7,740.0	7,812.7	7,810.6	66.1	13.7	-93.77	822.4	765.0	4,422.3	4,342.9	79.41	55.693		
11,700.0	7,740.0	7,813.5	7,811.3	67.8	13.7	-93.85	822.4	765.0	4,521.7	4,440.6	81.11	55.746		
11,800.0	7,740.0	7,814.2	7,812.1	69.5	13.7	-93.94	822.4	765.0	4,621.1	4,538.3	82.82	55.797		
11,900.0	7,740.0	7,814.9	7,812.8	71.2	13.7	-94.02	822.4	765.0	4,720.5	4,636.0	84.53	55.845		
12,000.0	7,740.0	7,815.6	7,813.5	72.9	13.7	-94.11	822.4	765.0	4,820.0	4,733.8	86.24	55.891		
12,100.0	7,740.0	7,816.4	7,814.2	74.7	13.7	-94.19	822.4	765.0	4,919.5	4,831.5	87.95	55.935		
12,200.0	7,740.0	7,817.1	7,814.9	76.4	13.7	-94.27	822.4	765.0	5,019.0	4,929.3	89.66	55.976		
12,300.0	7,740.0	7,817.8	7,815.6	78.1	13.7	-94.35	822.4	765.1	5,118.5	5,027.1	91.38	56.016		
12,400.0	7,740.0	7,818.4	7,816.3	79.8	13.7	-94.43	822.3	765.1	5,218.0	5,125.0	93.09	56.053		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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		
0.0	0.0	0.0	0.0	0.0	0.0	90.42	-0.4	50.1	50.1						
100.0	100.0	100.0	100.0	0.2	0.2	90.42	-0.4	50.1	50.1	49.8	0.30	164.971			
200.0	200.0	200.0	200.0	0.3	0.3	90.42	-0.4	50.1	50.1	49.4	0.65	76.751			
300.0	300.0	300.7	300.7	0.5	0.5	90.94	-0.8	49.3	49.3	48.3	1.00	49.189			
400.0	400.0	401.4	401.4	0.7	0.7	92.60	-2.1	47.0	47.1	45.7	1.35	34.800			
500.0	500.0	502.0	501.8	0.9	0.9	70.92	-4.3	43.2	43.2	41.5	1.71	25.231			
600.0	600.0	602.1	601.8	1.0	1.1	80.34	-7.4	37.9	37.9	35.8	2.08	18.220			
700.0	699.9	701.9	701.3	1.2	1.3	95.17	-10.0	31.8	33.1	30.7	2.46	13.448			
798.6	798.3	800.0	799.2	1.4	1.5	114.43	-11.4	25.8	31.0	28.1	2.86	10.825 CC			
800.0	799.7	801.3	800.6	1.4	1.5	114.73	-11.4	25.7	31.0	28.1	2.87	10.804 ES			
898.2	897.5	898.7	897.7	1.6	1.7	136.18	-12.7	19.8	33.8	30.5	3.24	10.416 SF			
900.0	899.4	900.5	899.6	1.6	1.7	136.56	-12.7	19.7	33.9	30.6	3.25	10.428			
1,000.0	999.0	999.6	998.4	1.8	1.9	153.58	-14.0	13.6	41.5	37.9	3.59	11.537			
1,100.0	1,098.6	1,098.7	1,097.3	2.0	2.1	164.71	-15.4	7.5	51.5	47.6	3.93	13.106			
1,200.0	1,198.2	1,197.8	1,196.2	2.3	2.3	172.05	-16.7	1.5	62.9	58.6	4.27	14.720			
1,300.0	1,297.9	1,296.8	1,295.1	2.5	2.5	177.10	-18.0	-4.6	74.9	70.3	4.62	16.231			
1,400.0	1,397.5	1,395.9	1,394.0	2.7	2.7	-179.27	-19.4	-10.7	87.4	82.4	4.96	17.602			
1,500.0	1,497.1	1,495.0	1,492.9	2.9	2.9	-176.55	-20.7	-16.7	100.1	94.8	5.32	18.832			
1,600.0	1,596.7	1,594.1	1,591.8	3.2	3.1	-174.45	-22.1	-22.8	113.0	107.4	5.67	19.931			
1,700.0	1,696.3	1,693.2	1,690.7	3.4	3.3	-172.78	-23.4	-28.9	126.0	120.0	6.03	20.915			
1,800.0	1,796.0	1,792.3	1,789.6	3.6	3.5	-171.42	-24.7	-34.9	139.2	132.8	6.38	21.799			
1,900.0	1,895.6	1,891.4	1,888.5	3.8	3.7	-170.29	-26.1	-41.0	152.3	145.6	6.74	22.595			
2,000.0	1,995.2	1,990.5	1,987.4	4.1	3.9	-169.35	-27.4	-47.1	165.5	158.4	7.10	23.315			
2,100.0	2,094.8	2,089.6	2,086.3	4.3	4.1	-168.55	-28.7	-53.1	178.8	171.3	7.46	23.969			
2,200.0	2,194.5	2,188.6	2,185.2	4.5	4.3	-167.85	-30.1	-59.2	192.1	184.3	7.82	24.566			
2,300.0	2,294.1	2,287.7	2,284.1	4.8	4.5	-167.25	-31.4	-65.3	205.4	197.2	8.18	25.111			
2,400.0	2,393.7	2,386.8	2,383.0	5.0	4.7	-166.72	-32.7	-71.3	218.7	210.2	8.54	25.611			
2,500.0	2,493.3	2,485.9	2,481.8	5.2	4.9	-166.25	-34.1	-77.4	232.1	223.2	8.90	26.072			
2,600.0	2,592.9	2,585.0	2,580.7	5.4	5.1	-165.83	-35.4	-83.5	245.4	236.2	9.26	26.498			
2,700.0	2,692.6	2,684.1	2,679.6	5.7	5.3	-165.45	-36.7	-89.5	258.8	249.2	9.62	26.893			
2,800.0	2,792.2	2,783.2	2,778.5	5.9	5.5	-165.12	-38.1	-95.6	272.2	262.2	9.99	27.259			
2,900.0	2,891.8	2,882.3	2,877.4	6.1	5.7	-164.81	-39.4	-101.6	285.6	275.2	10.35	27.600			
3,000.0	2,991.4	2,981.3	2,976.3	6.4	5.9	-164.53	-40.8	-107.7	299.0	288.3	10.71	27.918			
3,100.0	3,091.1	3,080.4	3,075.2	6.6	6.1	-164.28	-42.1	-113.8	312.4	301.3	11.07	28.216			
3,200.0	3,190.7	3,179.5	3,174.1	6.8	6.3	-164.04	-43.4	-119.8	325.8	314.3	11.43	28.495			
3,300.0	3,290.3	3,278.6	3,273.0	7.0	6.6	-163.83	-44.8	-125.9	339.2	327.4	11.79	28.758			
3,400.0	3,389.9	3,377.7	3,371.9	7.3	6.8	-163.63	-46.1	-132.0	352.6	340.5	12.16	29.004			
3,500.0	3,489.5	3,476.8	3,470.8	7.5	7.0	-163.44	-47.4	-138.0	366.0	353.5	12.52	29.237			
3,600.0	3,589.2	3,575.9	3,569.7	7.7	7.2	-163.27	-48.8	-144.1	379.5	366.6	12.88	29.456			
3,700.0	3,688.8	3,675.0	3,668.6	8.0	7.4	-163.11	-50.1	-150.2	392.9	379.6	13.24	29.664			
3,800.0	3,788.4	3,774.1	3,767.5	8.2	7.6	-162.96	-51.4	-156.2	406.3	392.7	13.61	29.860			
3,900.0	3,888.0	3,873.1	3,866.4	8.4	7.8	-162.82	-52.8	-162.3	419.8	405.8	13.97	30.047			
4,000.0	3,987.7	3,972.2	3,965.3	8.7	8.0	-162.69	-54.1	-168.4	433.2	418.9	14.33	30.224			
4,100.0	4,087.3	4,071.3	4,064.1	8.9	8.2	-162.57	-55.5	-174.4	446.6	431.9	14.70	30.392			
4,200.0	4,186.9	4,170.4	4,163.0	9.1	8.4	-162.45	-56.8	-180.5	460.1	445.0	15.06	30.553			
4,300.0	4,286.5	4,269.5	4,261.9	9.4	8.6	-162.34	-58.1	-186.6	473.5	458.1	15.42	30.705			
4,400.0	4,386.1	4,368.6	4,360.8	9.6	8.8	-162.24	-59.5	-192.6	487.0	471.2	15.78	30.851			
4,500.0	4,485.8	4,467.7	4,459.7	9.8	9.0	-162.14	-60.8	-198.7	500.4	484.3	16.15	30.991			
4,600.0	4,585.4	4,566.8	4,558.6	10.0	9.2	-162.05	-62.1	-204.8	513.8	497.3	16.51	31.124			
4,700.0	4,685.0	4,665.9	4,657.5	10.3	9.4	-161.96	-63.5	-210.8	527.3	510.4	16.87	31.251			
4,800.0	4,784.6	4,764.9	4,756.4	10.5	9.6	-161.88	-64.8	-216.9	540.7	523.5	17.24	31.373			
4,900.0	4,884.3	4,864.0	4,855.3	10.7	9.8	-161.80	-66.1	-223.0	554.2	536.6	17.60	31.490			

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 2C-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 2C-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 #2	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
5,000.0	4,983.9	4,963.1	4,954.2	11.0	10.0	-161.72	-67.5	-229.0	567.6	549.7	17.96	31.603	
5,100.0	5,083.5	5,062.2	5,053.1	11.2	10.2	-161.65	-68.8	-235.1	581.1	562.8	18.32	31.711	
5,200.0	5,183.1	5,161.3	5,152.0	11.4	10.4	-161.58	-70.1	-241.2	594.5	575.9	18.69	31.814	
5,300.0	5,282.7	5,260.4	5,250.9	11.7	10.6	-161.51	-71.5	-247.2	608.0	589.0	19.05	31.914	
5,400.0	5,382.4	5,359.5	5,349.8	11.9	10.8	-161.45	-72.8	-253.3	621.5	602.0	19.41	32.010	
5,500.0	5,482.0	5,458.6	5,448.7	12.1	11.0	-161.39	-74.2	-259.4	634.9	615.1	19.78	32.103	
5,600.0	5,581.6	5,557.6	5,547.6	12.4	11.2	-161.33	-75.5	-265.4	648.4	628.2	20.14	32.192	
5,700.0	5,681.2	5,656.7	5,646.4	12.6	11.4	-161.28	-76.8	-271.5	661.8	641.3	20.50	32.278	
5,800.0	5,780.9	5,755.8	5,745.3	12.8	11.7	-161.22	-78.2	-277.6	675.3	654.4	20.87	32.361	
5,900.0	5,880.5	5,854.9	5,844.2	13.0	11.9	-161.17	-79.5	-283.6	688.7	667.5	21.23	32.441	
6,000.0	5,980.1	5,954.0	5,943.1	13.3	12.1	-161.12	-80.8	-289.7	702.2	680.6	21.59	32.519	
6,100.0	6,079.7	6,053.1	6,042.0	13.5	12.3	-161.08	-82.2	-295.8	715.7	693.7	21.96	32.594	
6,200.0	6,179.3	6,152.2	6,140.9	13.7	12.5	-161.03	-83.5	-301.8	729.1	706.8	22.32	32.667	
6,300.0	6,279.0	6,251.3	6,239.8	14.0	12.7	-160.99	-84.8	-307.9	742.6	719.9	22.68	32.737	
6,400.0	6,378.6	6,350.4	6,338.7	14.2	12.9	-160.94	-86.2	-314.0	756.0	733.0	23.05	32.805	
6,500.0	6,478.2	6,449.4	6,437.6	14.4	13.1	-160.90	-87.5	-320.0	769.5	746.1	23.41	32.871	
6,600.0	6,577.8	6,548.5	6,536.5	14.7	13.3	-160.86	-88.8	-326.1	783.0	759.2	23.77	32.935	
6,700.0	6,677.5	6,647.6	6,635.4	14.9	13.5	-160.83	-90.2	-332.1	796.4	772.3	24.14	32.997	
6,800.0	6,777.1	6,746.7	6,734.3	15.1	13.7	-160.79	-91.5	-338.2	809.9	785.4	24.50	33.057	
6,900.0	6,876.7	6,845.8	6,833.2	15.4	13.9	-160.75	-92.9	-344.3	823.3	798.5	24.86	33.115	
7,000.0	6,976.3	6,944.9	6,932.1	15.6	14.1	-160.72	-94.2	-350.3	836.8	811.6	25.23	33.172	
7,100.0	7,075.9	7,044.0	7,031.0	15.8	14.3	-160.68	-95.5	-356.4	850.3	824.7	25.59	33.227	
7,147.0	7,122.8	7,090.5	7,077.4	15.9	14.4	-160.67	-96.1	-359.3	856.6	830.8	25.76	33.252	
7,150.0	7,125.8	7,093.5	7,080.4	15.9	14.4	-162.30	-96.2	-359.4	857.0	831.2	25.78	33.248	
7,200.0	7,175.7	7,141.8	7,128.0	16.0	14.7	-160.02	509.1	-399.9	859.9	827.6	32.27	26.648	
7,250.0	7,225.5	7,191.9	7,178.0	16.0	14.6	114.84	506.2	-399.9	829.5	797.4	32.12	25.829	
7,300.0	7,275.0	7,241.0	7,227.0	16.0	14.6	108.51	498.9	-399.9	801.3	769.5	31.88	25.140	
7,350.0	7,323.6	7,289.2	7,275.0	16.0	14.5	107.01	487.4	-399.9	775.7	744.1	31.57	24.568	
7,400.0	7,371.0	7,336.7	7,322.0	15.9	14.2	105.70	461.9	-399.9	752.9	721.7	31.18	24.143	
7,450.0	7,416.9	7,382.0	7,367.0	15.8	13.8	102.80	411.4	-399.7	732.4	701.8	30.67	23.883	
7,500.0	7,460.8	7,425.6	7,410.0	15.6	13.4	100.69	370.4	-399.3	714.4	684.2	30.20	23.653	
7,550.0	7,502.6	7,467.2	7,451.0	15.5	13.1	98.90	334.9	-398.8	699.0	669.2	29.77	23.477	
7,600.0	7,541.7	7,506.2	7,490.0	15.3	12.7	97.19	302.7	-398.3	686.3	657.0	29.38	23.364	
7,650.0	7,578.1	7,542.2	7,525.0	15.2	12.4	95.44	273.0	-397.6	676.5	647.5	29.01	23.316	
7,700.0	7,611.3	7,574.1	7,556.0	15.0	12.0	93.60	245.0	-396.9	669.4	640.8	28.68	23.345	
7,750.0	7,641.1	7,603.8	7,585.0	14.9	11.7	91.64	218.6	-396.2	665.1	636.7	28.38	23.439	
7,800.0	7,667.4	7,629.3	7,610.0	14.8	11.4	89.55	193.4	-395.4	663.4	635.3	28.11	23.603	
7,809.7	7,672.0	7,633.8	7,614.0	14.8	11.3	89.13	188.6	-395.2	663.4	635.3	28.06	23.639	
7,850.0	7,689.8	7,651.3	7,631.0	14.7	11.0	87.33	169.4	-394.5	664.1	636.2	27.87	23.832	
7,900.0	7,708.2	7,669.0	7,648.0	14.7	10.8	85.00	146.4	-393.5	667.0	639.4	27.65	24.120	
7,950.0	7,722.6	7,682.0	7,660.0	14.7	10.6	82.58	124.5	-392.5	671.9	644.5	27.46	24.469	
8,000.0	7,732.7	7,692.0	7,670.0	14.7	10.4	80.11	103.5	-391.5	678.5	651.2	27.29	24.860	
8,050.0	7,738.5	7,697.0	7,675.0	14.8	10.5	77.63	83.9	-390.4	686.5	659.4	27.14	25.294	
8,091.8	7,740.0	7,697.4	7,674.0	15.0	10.4	75.52	67.6	-389.5	694.1	667.1	27.04	25.674	
8,100.0	7,740.0	7,697.0	7,674.0	15.0	10.4	75.27	64.6	-389.3	695.7	668.7	27.03	25.735	
8,200.0	7,740.0	7,697.0	7,674.0	15.4	10.3	72.37	32.9	-387.1	719.7	692.6	27.13	26.526	
8,300.0	7,740.0	7,697.0	7,674.0	16.1	10.2	69.87	8.8	-385.2	752.6	725.2	27.44	27.432	
8,400.0	7,740.0	7,697.0	7,674.0	16.9	10.1	67.56	-11.0	-383.3	794.2	766.3	27.89	28.479	
8,500.0	7,740.0	7,697.0	7,674.0	17.8	10.0	65.89	-24.0	-382.0	843.6	815.1	28.53	29.574	
8,600.0	7,740.0	7,697.0	7,674.0	18.8	9.9	64.29	-35.5	-380.7	900.1	870.8	29.24	30.779	
8,700.0	7,740.0	7,697.0	7,674.0	20.0	9.8	62.99	-44.2	-379.6	962.6	932.5	30.07	32.014	
8,800.0	7,740.0	7,697.0	7,674.0	21.2	9.7	61.03	-56.1	-377.9	1,030.4	999.6	30.79	33.464	

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 2C-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 2C-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 #2	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						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	7,400.0	7,381.0	22.5	15.0	61.03	-56.1	-377.9	1,102.2	1,070.3	31.95	34.496	
9,000.0	7,740.0	7,383.2	7,365.3	23.9	14.9	59.94	-62.2	-376.9	1,177.9	1,145.0	32.91	35.796	
9,100.0	7,740.0	7,371.1	7,354.0	25.3	14.9	59.17	-66.2	-376.2	1,256.6	1,222.6	33.94	37.019	
9,200.0	7,740.0	7,350.0	7,334.0	26.7	14.9	57.83	-72.7	-375.0	1,337.9	1,303.1	34.83	38.410	
9,300.0	7,740.0	7,350.0	7,334.0	28.2	14.9	57.83	-72.7	-375.0	1,421.2	1,385.1	36.10	39.368	
9,400.0	7,740.0	7,350.0	7,334.0	29.7	14.9	57.83	-72.7	-375.0	1,506.6	1,469.2	37.39	40.290	
9,500.0	7,740.0	7,350.0	7,334.0	31.3	14.9	57.83	-72.7	-375.0	1,593.6	1,554.9	38.71	41.173	
9,600.0	7,740.0	7,327.0	7,311.9	32.8	14.8	56.39	-78.9	-373.6	1,681.5	1,642.0	39.54	42.529	
9,700.0	7,740.0	7,320.5	7,305.6	34.4	14.8	55.99	-80.5	-373.3	1,770.9	1,730.2	40.71	43.497	
9,800.0	7,740.0	7,300.0	7,285.6	36.0	14.8	54.73	-85.1	-372.0	1,861.5	1,819.9	41.55	44.801	
9,900.0	7,740.0	7,300.0	7,285.6	37.6	14.8	54.73	-85.1	-372.0	1,952.6	1,909.7	42.87	45.546	
10,000.0	7,740.0	7,300.0	7,285.6	39.2	14.8	54.73	-85.1	-372.0	2,044.5	2,000.3	44.20	46.256	
10,100.0	7,740.0	7,300.0	7,285.6	40.9	14.8	54.73	-85.1	-372.0	2,137.1	2,091.6	45.54	46.931	
10,200.0	7,740.0	7,300.0	7,285.6	42.5	14.8	54.73	-85.1	-372.0	2,230.4	2,183.5	46.88	47.573	
10,300.0	7,740.0	7,300.0	7,285.6	44.1	14.8	54.73	-85.1	-372.0	2,324.2	2,276.0	48.24	48.184	
10,400.0	7,740.0	7,300.0	7,285.6	45.8	14.8	54.73	-85.1	-372.0	2,418.6	2,369.0	49.60	48.765	
10,500.0	7,740.0	7,300.0	7,285.6	47.5	14.8	54.73	-85.1	-372.0	2,513.3	2,462.4	50.96	49.319	
10,600.0	7,740.0	7,300.0	7,285.6	49.1	14.8	54.73	-85.1	-372.0	2,608.5	2,556.2	52.33	49.847	
10,700.0	7,740.0	7,277.3	7,263.4	50.8	14.8	53.37	-89.3	-370.7	2,703.5	2,650.5	52.94	51.063	
10,800.0	7,740.0	7,274.4	7,260.6	52.5	14.8	53.20	-89.8	-370.5	2,799.2	2,745.0	54.20	51.647	
10,900.0	7,740.0	7,271.7	7,257.9	54.2	14.8	53.04	-90.2	-370.3	2,895.1	2,839.7	55.46	52.206	
11,000.0	7,740.0	7,250.0	7,236.4	55.9	14.7	51.78	-93.2	-369.0	2,991.7	2,935.7	56.01	53.412	
11,100.0	7,740.0	7,250.0	7,236.4	57.6	14.7	51.78	-93.2	-369.0	3,088.0	3,030.7	57.35	53.848	
11,200.0	7,740.0	7,250.0	7,236.4	59.3	14.7	51.78	-93.2	-369.0	3,184.6	3,125.9	58.69	54.266	
11,300.0	7,740.0	7,250.0	7,236.4	61.0	14.7	51.78	-93.2	-369.0	3,281.4	3,221.4	60.03	54.666	
11,400.0	7,740.0	7,250.0	7,236.4	62.7	14.7	51.78	-93.2	-369.0	3,378.4	3,317.0	61.37	55.050	
11,500.0	7,740.0	7,250.0	7,236.4	64.4	14.7	51.78	-93.2	-369.0	3,475.5	3,412.8	62.71	55.418	
11,600.0	7,740.0	7,250.0	7,236.4	66.1	14.7	51.78	-93.2	-369.0	3,572.8	3,508.7	64.06	55.771	
11,700.0	7,740.0	7,250.0	7,236.4	67.8	14.7	51.78	-93.2	-369.0	3,670.2	3,604.8	65.41	56.111	
11,800.0	7,740.0	7,250.0	7,236.4	69.5	14.7	51.78	-93.2	-369.0	3,767.8	3,701.0	66.76	56.437	
11,900.0	7,740.0	7,250.0	7,236.4	71.2	14.7	51.78	-93.2	-369.0	3,865.5	3,797.4	68.11	56.751	
12,000.0	7,740.0	7,250.0	7,236.4	72.9	14.7	51.78	-93.2	-369.0	3,963.3	3,893.9	69.47	57.053	
12,100.0	7,740.0	7,250.0	7,236.4	74.7	14.7	51.78	-93.2	-369.0	4,061.2	3,990.4	70.82	57.344	
12,200.0	7,740.0	7,250.0	7,236.4	76.4	14.7	51.78	-93.2	-369.0	4,159.3	4,087.1	72.18	57.625	
12,300.0	7,740.0	7,250.0	7,236.4	78.1	14.7	51.78	-93.2	-369.0	4,257.4	4,183.8	73.54	57.895	
12,400.0	7,740.0	7,250.0	7,236.4	79.8	14.7	51.78	-93.2	-369.0	4,355.6	4,280.7	74.89	58.156	
12,500.0	7,740.0	7,250.0	7,236.4	81.6	14.7	51.78	-93.2	-369.0	4,453.8	4,377.6	76.25	58.408	
12,600.0	7,740.0	7,250.0	7,236.4	83.3	14.7	51.78	-93.2	-369.0	4,552.2	4,474.6	77.62	58.651	
12,700.0	7,740.0	7,250.0	7,236.4	85.0	14.7	51.78	-93.2	-369.0	4,650.6	4,571.6	78.98	58.886	
12,800.0	7,740.0	7,250.0	7,236.4	86.7	14.7	51.78	-93.2	-369.0	4,749.1	4,668.8	80.34	59.113	
12,900.0	7,740.0	7,250.0	7,236.4	88.5	14.7	51.78	-93.2	-369.0	4,847.7	4,766.0	81.70	59.333	
13,000.0	7,740.0	7,250.0	7,236.4	90.2	14.7	51.78	-93.2	-369.0	4,946.3	4,863.2	83.07	59.546	
13,100.0	7,740.0	7,250.0	7,236.4	91.9	14.7	51.78	-93.2	-369.0	5,044.9	4,960.5	84.43	59.752	
13,200.0	7,740.0	7,250.0	7,236.4	93.7	14.7	51.78	-93.2	-369.0	5,143.6	5,057.9	85.80	59.952	
13,300.0	7,740.0	7,250.0	7,236.4	95.4	14.7	51.78	-93.2	-369.0	5,242.4	5,155.3	87.16	60.145	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	90.35	-0.4	60.2	60.2				
100.0	100.0	100.0	100.0	0.2	0.2	90.35	-0.4	60.2	60.2	59.9	0.30	198.148	
200.0	200.0	200.0	200.0	0.3	0.3	90.35	-0.4	60.2	60.2	59.5	0.65	92.187	
300.0	300.0	300.0	300.0	0.5	0.5	90.35	-0.4	60.2	60.2	59.2	1.00	60.066	
400.0	400.0	400.7	400.7	0.7	0.7	91.00	-1.0	59.6	59.6	58.3	1.35	44.091	
500.0	500.0	501.2	501.2	0.9	0.9	67.91	-3.1	57.9	57.7	56.0	1.71	33.803	
600.0	600.0	601.5	601.4	1.0	1.0	74.25	-6.4	55.1	54.4	52.3	2.07	26.318	
700.0	699.9	700.6	700.3	1.2	1.2	83.14	-9.9	52.4	51.8	49.4	2.43	21.293	
770.2	769.9	770.2	769.9	1.3	1.3	89.92	-11.6	51.4	51.3	48.6	2.70	19.023 CC	
800.0	799.7	799.8	799.5	1.4	1.4	92.85	-12.2	51.1	51.4	48.6	2.81	18.307 ES	
898.2	897.5	897.3	897.1	1.6	1.6	102.39	-13.6	51.1	53.1	50.0	3.18	16.724	
900.0	899.4	899.2	898.9	1.6	1.6	102.57	-13.6	51.1	53.2	50.0	3.18	16.704	
1,000.0	999.0	998.7	998.4	1.8	1.7	111.85	-14.7	51.4	56.7	53.2	3.56	15.955	
1,100.0	1,098.6	1,098.2	1,097.9	2.0	1.9	119.87	-15.8	51.6	61.6	57.7	3.92	15.710	
1,200.0	1,198.2	1,197.8	1,197.5	2.3	2.1	126.61	-16.9	51.9	67.5	63.2	4.28	15.772	
1,300.0	1,297.9	1,297.3	1,297.0	2.5	2.3	132.21	-18.1	52.2	74.2	69.5	4.63	16.012	
1,400.0	1,397.5	1,396.9	1,396.5	2.7	2.4	136.85	-19.2	52.4	81.4	76.4	4.98	16.347	
1,500.0	1,497.1	1,496.4	1,496.1	2.9	2.6	140.71	-20.3	52.7	89.1	83.8	5.33	16.728	
1,600.0	1,596.7	1,595.9	1,595.6	3.2	2.8	143.95	-21.4	52.9	97.2	91.5	5.67	17.127	
1,700.0	1,696.3	1,695.5	1,695.1	3.4	3.0	146.69	-22.6	53.2	105.5	99.5	6.02	17.525	
1,800.0	1,796.0	1,795.0	1,794.7	3.6	3.1	149.03	-23.7	53.5	114.0	107.6	6.36	17.913	
1,900.0	1,895.6	1,894.5	1,894.2	3.8	3.3	151.04	-24.8	53.7	122.7	115.9	6.71	18.285	
2,000.0	1,995.2	1,994.1	1,993.7	4.1	3.5	152.78	-25.9	54.0	131.5	124.4	7.05	18.639	
2,100.0	2,094.8	2,093.6	2,093.3	4.3	3.7	154.30	-27.0	54.3	140.4	133.0	7.40	18.974	
2,200.0	2,194.5	2,193.2	2,192.8	4.5	3.8	155.64	-28.2	54.5	149.4	141.6	7.74	19.290	
2,300.0	2,294.1	2,292.7	2,292.3	4.8	4.0	156.83	-29.3	54.8	158.4	150.3	8.09	19.587	
2,400.0	2,393.7	2,392.2	2,391.8	5.0	4.2	157.89	-30.4	55.0	167.5	159.1	8.43	19.867	
2,500.0	2,493.3	2,491.8	2,491.4	5.2	4.4	158.84	-31.5	55.3	176.7	167.9	8.78	20.130	
2,600.0	2,592.9	2,591.3	2,590.9	5.4	4.5	159.69	-32.7	55.6	185.9	176.8	9.12	20.377	
2,700.0	2,692.6	2,690.8	2,690.4	5.7	4.7	160.46	-33.8	55.8	195.2	185.7	9.47	20.610	
2,800.0	2,792.2	2,790.4	2,790.0	5.9	4.9	161.17	-34.9	56.1	204.5	194.7	9.82	20.829	
2,900.0	2,891.8	2,889.9	2,889.5	6.1	5.1	161.81	-36.0	56.4	213.8	203.6	10.16	21.036	
3,000.0	2,991.4	2,989.5	2,989.0	6.4	5.2	162.40	-37.1	56.6	223.1	212.6	10.51	21.231	
3,100.0	3,091.1	3,089.0	3,088.6	6.6	5.4	162.94	-38.3	56.9	232.5	221.6	10.86	21.416	
3,200.0	3,190.7	3,188.5	3,188.1	6.8	5.6	163.44	-39.4	57.2	241.9	230.7	11.20	21.591	
3,300.0	3,290.3	3,288.1	3,287.6	7.0	5.8	163.90	-40.5	57.4	251.3	239.7	11.55	21.756	
3,400.0	3,389.9	3,387.6	3,387.2	7.3	5.9	164.33	-41.6	57.7	260.7	248.8	11.90	21.913	
3,500.0	3,489.5	3,487.1	3,486.7	7.5	6.1	164.73	-42.8	57.9	270.1	257.9	12.24	22.061	
3,600.0	3,589.2	3,586.7	3,586.2	7.7	6.3	165.11	-43.9	58.2	279.6	267.0	12.59	22.203	
3,700.0	3,688.8	3,686.2	3,685.7	8.0	6.5	165.45	-45.0	58.5	289.0	276.1	12.94	22.337	
3,800.0	3,788.4	3,785.8	3,785.3	8.2	6.6	165.78	-46.1	58.7	298.5	285.2	13.29	22.466	
3,900.0	3,888.0	3,885.3	3,884.8	8.4	6.8	166.09	-47.2	59.0	307.9	294.3	13.63	22.588	
4,000.0	3,987.7	3,984.8	3,984.3	8.7	7.0	166.37	-48.4	59.3	317.4	303.4	13.98	22.704	
4,100.0	4,087.3	4,084.4	4,083.9	8.9	7.2	166.64	-49.5	59.5	326.9	312.6	14.33	22.816	
4,200.0	4,186.9	4,183.9	4,183.4	9.1	7.3	166.90	-50.6	59.8	336.4	321.7	14.68	22.922	
4,300.0	4,286.5	4,283.4	4,282.9	9.4	7.5	167.14	-51.7	60.1	345.9	330.9	15.02	23.024	
4,400.0	4,386.1	4,383.0	4,382.5	9.6	7.7	167.37	-52.8	60.3	355.4	340.0	15.37	23.121	
4,500.0	4,485.8	4,482.5	4,482.0	9.8	7.9	167.59	-54.0	60.6	364.9	349.2	15.72	23.215	
4,600.0	4,585.4	4,582.1	4,581.5	10.0	8.0	167.79	-55.1	60.8	374.4	358.4	16.07	23.305	
4,700.0	4,685.0	4,681.6	4,681.1	10.3	8.2	167.99	-56.2	61.1	383.9	367.5	16.41	23.391	
4,800.0	4,784.6	4,781.1	4,780.6	10.5	8.4	168.17	-57.3	61.4	393.5	376.7	16.76	23.473	
4,900.0	4,884.3	4,880.7	4,880.1	10.7	8.6	168.35	-58.5	61.6	403.0	385.9	17.11	23.553	

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 2C-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 2C-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 #2	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	4,983.9	4,980.2	4,979.7	11.0	8.7	168.52	-59.6	61.9	412.5	395.1	17.46	23.630	
5,100.0	5,083.5	5,079.7	5,079.2	11.2	8.9	168.68	-60.7	62.2	422.1	404.2	17.81	23.703	
5,200.0	5,183.1	5,179.3	5,178.7	11.4	9.1	168.84	-61.8	62.4	431.6	413.4	18.15	23.774	
5,300.0	5,282.7	5,278.8	5,278.2	11.7	9.3	168.98	-62.9	62.7	441.1	422.6	18.50	23.843	
5,400.0	5,382.4	5,378.4	5,377.8	11.9	9.4	169.13	-64.1	62.9	450.7	431.8	18.85	23.909	
5,500.0	5,482.0	5,477.9	5,477.3	12.1	9.6	169.26	-65.2	63.2	460.2	441.0	19.20	23.973	
5,600.0	5,581.6	5,577.4	5,576.8	12.4	9.8	169.39	-66.3	63.5	469.8	450.2	19.55	24.034	
5,700.0	5,681.2	5,677.0	5,676.4	12.6	10.0	169.52	-67.4	63.7	479.3	459.4	19.89	24.094	
5,800.0	5,780.9	5,776.5	5,775.9	12.8	10.1	169.64	-68.6	64.0	488.9	468.6	20.24	24.151	
5,900.0	5,880.5	5,876.0	5,875.4	13.0	10.3	169.75	-69.7	64.3	498.4	477.8	20.59	24.207	
6,000.0	5,980.1	5,975.6	5,975.0	13.3	10.5	169.86	-70.8	64.5	508.0	487.0	20.94	24.261	
6,100.0	6,079.7	6,075.1	6,074.5	13.5	10.7	169.97	-71.9	64.8	517.5	496.2	21.29	24.313	
6,200.0	6,179.3	6,174.7	6,174.0	13.7	10.8	170.07	-73.0	65.1	527.1	505.5	21.63	24.364	
6,300.0	6,279.0	6,274.2	6,273.6	14.0	11.0	170.17	-74.2	65.3	536.7	514.7	21.98	24.413	
6,400.0	6,378.6	6,373.7	6,373.1	14.2	11.2	170.27	-75.3	65.6	546.2	523.9	22.33	24.461	
6,500.0	6,478.2	6,473.3	6,472.6	14.4	11.4	170.36	-76.4	65.8	555.8	533.1	22.68	24.507	
6,600.0	6,577.8	6,572.8	6,572.1	14.7	11.5	170.45	-77.5	66.1	565.3	542.3	23.03	24.551	
6,700.0	6,677.5	6,672.3	6,671.7	14.9	11.7	170.54	-78.7	66.4	574.9	551.5	23.38	24.595	
6,800.0	6,777.1	6,771.9	6,771.2	15.1	11.9	170.62	-79.8	66.6	584.5	560.8	23.72	24.637	
6,900.0	6,876.7	6,871.4	6,870.7	15.4	12.1	170.70	-80.9	66.9	594.1	570.0	24.07	24.678	
7,000.0	6,976.3	6,971.0	6,970.3	15.6	12.3	170.78	-82.0	67.2	603.7	579.8	24.41	24.719	
7,100.0	7,075.9	7,070.6	7,070.0	15.8	12.5	170.86	-83.1	67.5	613.3	589.4	24.75	24.760	
7,200.0	7,175.5	7,170.2	7,169.6	16.0	12.7	170.94	-84.2	67.8	622.9	599.0	25.09	24.801	
7,300.0	7,275.1	7,269.8	7,269.2	16.2	12.9	171.02	-85.3	68.1	632.5	608.6	25.43	24.842	
7,400.0	7,374.7	7,369.4	7,368.8	16.4	13.1	171.10	-86.4	68.4	642.1	618.2	25.77	24.883	
7,500.0	7,474.3	7,469.0	7,468.4	16.6	13.3	171.18	-87.5	68.7	651.7	627.8	26.11	24.924	
7,600.0	7,573.9	7,568.6	7,568.0	16.8	13.5	171.26	-88.6	69.0	661.3	637.4	26.45	24.965	
7,700.0	7,673.5	7,668.2	7,667.6	17.0	13.7	171.34	-89.7	69.3	670.9	647.0	26.79	25.006	
7,800.0	7,773.1	7,767.8	7,767.2	17.2	13.9	171.42	-90.8	69.6	680.5	656.6	27.13	25.047	
7,900.0	7,872.7	7,867.4	7,866.8	17.4	14.1	171.50	-91.9	69.9	690.1	666.2	27.47	25.088	
8,000.0	7,972.3	7,967.0	7,966.4	17.6	14.3	171.58	-93.0	70.2	700.0	675.8	27.81	25.129	
8,100.0	8,071.9	8,066.6	8,066.0	17.8	14.5	171.66	-94.1	70.5	709.6	685.4	28.15	25.170	
8,200.0	8,171.5	8,166.2	8,165.6	18.0	14.7	171.74	-95.2	70.8	719.2	695.0	28.49	25.211	
8,300.0	8,271.1	8,265.8	8,265.2	18.2	14.9	171.82	-96.3	71.1	728.8	704.6	28.83	25.252	
8,400.0	8,370.7	8,365.4	8,364.8	18.4	15.1	171.90	-97.4	71.4	738.4	714.2	29.17	25.293	
8,500.0	8,470.3	8,465.0	8,464.4	18.6	15.3	171.98	-98.5	71.7	748.0	723.8	29.51	25.334	
8,600.0	8,569.9	8,564.6	8,564.0	18.8	15.5	172.06	-99.6	72.0	757.6	733.4	29.85	25.375	
8,700.0	8,669.5	8,664.2	8,663.6	19.0	15.7	172.14	-100.7	72.3	767.2	743.0	30.19	25.416	
8,800.0	8,769.1	8,763.8	8,763.2	19.2	15.9	172.22	-101.8	72.6	776.8	752.6	30.53	25.457	
8,900.0	8,868.7	8,863.4	8,862.8	19.4	16.1	172.30	-102.9	72.9	786.4	762.2	30.87	25.498	
9,000.0	8,968.3	8,963.0	8,962.4	19.6	16.3	172.38	-104.0	73.2	796.0	771.8	31.21	25.539	
9,100.0	9,067.9	9,062.6	9,062.0	19.8	16.5	172.46	-105.1	73.5	805.6	781.4	31.55	25.580	
9,200.0	9,167.5	9,162.2	9,161.6	20.0	16.7	172.54	-106.2	73.8	815.2	791.0	31.89	25.621	
9,300.0	9,267.1	9,261.8	9,261.2	20.2	16.9	172.62	-107.3	74.1	824.8	800.6	32.23	25.662	
9,400.0	9,366.7	9,361.4	9,360.8	20.4	17.1	172.70	-108.4	74.4	834.4	810.2	32.57	25.703	
9,500.0	9,466.3	9,461.0	9,460.4	20.6	17.3	172.78	-109.5	74.7	844.0	819.8	32.91	25.744	
9,600.0	9,565.9	9,560.6	9,560.0	20.8	17.5	172.86	-110.6	75.0	853.6	829.4	33.25	25.785	
9,700.0	9,665.5	9,660.2	9,659.6	21.0	17.7	172.94	-111.7	75.3	863.2	839.0	33.59	25.826	
9,800.0	9,765.1	9,759.8	9,759.2	21.2	17.9	173.02	-112.8	75.6	872.8	848.6	33.93	25.867	
9,900.0	9,864.7	9,859.4	9,858.8	21.4	18.1	173.10	-113.9	75.9	882.4	858.2	34.27	25.908	
10,000.0	9,964.3	9,959.0	9,958.4	21.6	18.3	173.18	-115.0	76.2	892.0	867.8	34.61	25.949	
10,100.0	10,063.9	10,058.6	10,058.0	21.8	18.5	173.26	-116.1	76.5	901.6	877.4	34.95	25.990	
10,200.0	10,163.5	10,158.2	10,157.6	22.0	18.7	173.34	-117.2	76.8	911.2	887.0	35.29	26.031	
10,300.0	10,263.1	10,257.8	10,257.2	22.2	18.9	173.42	-118.3	77.1	920.8	896.6	35.63	26.072	
10,400.0	10,362.7	10,357.4	10,356.8	22.4	19.1	173.50	-119.4	77.4	930.4	906.2	35.97	26.113	
10,500.0	10,462.3	10,457.0	10,456.4	22.6	19.3	173.58	-120.5	77.7	940.0	915.8	36.31	26.154	
10,600.0	10,561.9	10,556.6	10,556.0	22.8	19.5	173.66	-121.6	78.0	949.6	925.4	36.65	26.195	
10,700.0	10,661.5	10,656.2	10,655.6	23.0	19.7	173.74	-122.7	78.3	959.2	935.0	36.99	26.236	
10,800.0	10,761.1	10,755.8	10,755.2	23.2	19.9	173.82	-123.8	78.6	968.8	944.6	37.33	26.277	
10,900.0	10,860.7	10,855.4	10,854.8	23.4	20.1	173.90	-124.9	78.9	978.4	954.2	37.67	26.318	
11,000.0	10,960.3	10,955.0	10,954.4	23.6	20.3	173.98	-126.0	79.2	988.0	963.8	38.01	26.359	
11,100.0	11,059.9	11,054.6	11,054.0	23.8	20.5	174.06	-127.1	79.5	997.6	973.4	38.35	26.400	
11,200.0	11,159.5	11,154.2	11,153.6	24.0	20.7	174.14	-128.2	79.8	1,007.2	983.0	38.69	26.441	
11,300.0	11,259.1	11,253.8	11,253.2	24.2	20.9	174.22	-129.3	80.1	1,016.8	992.6	39.03	26.482	
11,400.0	11,358.7	11,353.4	11,352.8	24.4	21.1	174.30	-130.4	80.4	1,026.4	1,002.2	39.37	26.523	
11,500.0	11,458.3	11,453.0	11,452.4	24.6	21.3	174.38	-131.5	80.7	1,036.0	1,011.8	39.71	26.564	
11,600.0	11,557.9	11,552.6	11,552.0	24.8	21.5	174.46	-132.6	81.0	1,045.6	1,021.4	40.05	26.605	
11,700.0	11,657.5	11,652.2	11,651.6	25.0	21.7	174.54	-133.7	81.3	1,055.2	1,031.0	40.39	26.646	
11,800.0	11,757.1	11,751.8	11,751.2	25.2	21.9	174.62	-134.8	81.6	1,064.8	1,040.6	40.73	26.687	
11,900.0	11,856.7	11,851.4	11,850.8	25.4	22.1	174.70	-135.9	81.9	1,074.4	1,050.2	41.07	26.728	
12,000.0	11,956.3	11,951.0	11,950.4	25.6	22.3	174.78	-137.0	82.2	1,084.0	1,059.8	41.41	26.769	
12,100.0	12,055.9	12,050.6	12,050.0	25.8	22.5	174.86	-138.1	82.5	1,093.6	1,069.4	41.75	26.810	
12,200.0	12,155.5	12,150.2	12,149.6	26.0	22.7	174.1							

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	
8,900.0	7,740.0	7,250.0	7,232.6	22.5	12.6	21.92	6.8	66.3	1,035.1	1,014.0	21.15	48.939	
9,000.0	7,740.0	7,217.8	7,204.9	23.9	12.6	20.87	-9.6	66.5	1,119.9	1,098.6	21.35	52.453	
9,100.0	7,740.0	7,200.0	7,189.2	25.3	12.5	20.31	-18.0	66.6	1,206.6	1,185.0	21.68	55.645	
9,200.0	7,740.0	7,200.0	7,189.2	26.7	12.5	20.31	-18.0	66.6	1,294.9	1,272.7	22.19	58.345	
9,300.0	7,740.0	7,174.9	7,166.6	28.2	12.5	19.56	-29.0	66.7	1,384.0	1,361.6	22.45	61.648	
9,400.0	7,740.0	7,150.0	7,143.8	29.7	12.5	18.86	-38.9	66.8	1,474.5	1,451.8	22.70	64.953	
9,500.0	7,740.0	7,150.0	7,143.8	31.3	12.5	18.86	-38.9	66.8	1,565.5	1,542.3	23.20	67.466	
9,600.0	7,740.0	7,150.0	7,143.8	32.8	12.5	18.86	-38.9	66.8	1,657.6	1,633.8	23.71	69.896	
9,700.0	7,740.0	7,150.0	7,143.8	34.4	12.5	18.86	-38.9	66.8	1,750.5	1,726.2	24.23	72.243	
9,800.0	7,740.0	7,125.1	7,120.6	36.0	12.4	18.19	-47.8	66.9	1,843.4	1,819.0	24.45	75.398	
9,900.0	7,740.0	7,100.0	7,096.7	37.6	12.4	17.55	-55.8	67.0	1,937.5	1,912.9	24.66	78.574	
10,000.0	7,740.0	7,100.0	7,096.7	39.2	12.4	17.55	-55.8	67.0	2,031.6	2,006.4	25.16	80.754	
10,100.0	7,740.0	7,100.0	7,096.7	40.9	12.4	17.55	-55.8	67.0	2,126.2	2,100.5	25.66	82.859	
10,200.0	7,740.0	7,100.0	7,096.7	42.5	12.4	17.55	-55.8	67.0	2,221.2	2,195.1	26.17	84.890	
10,300.0	7,740.0	7,100.0	7,096.7	44.1	12.4	17.55	-55.8	67.0	2,316.7	2,290.0	26.67	86.850	
10,400.0	7,740.0	7,100.0	7,096.7	45.8	12.4	17.55	-55.8	67.0	2,412.5	2,385.3	27.19	88.740	
10,500.0	7,740.0	7,100.0	7,096.7	47.5	12.4	17.55	-55.8	67.0	2,508.7	2,481.0	27.70	90.564	
10,600.0	7,740.0	7,076.3	7,073.9	49.1	12.4	16.98	-62.3	67.1	2,604.6	2,576.7	27.86	93.501	
10,700.0	7,740.0	7,071.8	7,069.6	50.8	12.4	16.87	-63.5	67.1	2,701.0	2,672.7	28.29	95.469	
10,800.0	7,740.0	7,050.0	7,048.4	52.5	12.3	16.38	-68.5	67.1	2,798.0	2,769.6	28.46	98.302	
10,900.0	7,740.0	7,050.0	7,048.4	54.2	12.3	16.38	-68.5	67.1	2,894.8	2,865.8	28.96	99.968	
11,000.0	7,740.0	7,050.0	7,048.4	55.9	12.3	16.38	-68.5	67.1	2,991.7	2,962.3	29.45	101.579	
11,100.0	7,740.0	7,050.0	7,048.4	57.6	12.3	16.38	-68.5	67.1	3,088.9	3,058.9	29.95	103.138	
11,200.0	7,740.0	7,050.0	7,048.4	59.3	12.3	16.38	-68.5	67.1	3,186.2	3,155.7	30.45	104.648	
11,300.0	7,740.0	7,050.0	7,048.4	61.0	12.3	16.38	-68.5	67.1	3,283.7	3,252.7	30.95	106.109	
11,400.0	7,740.0	7,050.0	7,048.4	62.7	12.3	16.38	-68.5	67.1	3,381.3	3,349.9	31.45	107.524	
11,500.0	7,740.0	7,050.0	7,048.4	64.4	12.3	16.38	-68.5	67.1	3,479.1	3,447.1	31.95	108.895	
11,600.0	7,740.0	7,050.0	7,048.4	66.1	12.3	16.38	-68.5	67.1	3,577.0	3,544.5	32.45	110.223	
11,700.0	7,740.0	7,050.0	7,048.4	67.8	12.3	16.38	-68.5	67.1	3,675.0	3,642.0	32.96	111.511	
11,800.0	7,740.0	7,050.0	7,048.4	69.5	12.3	16.38	-68.5	67.1	3,773.1	3,739.6	33.46	112.760	
11,900.0	7,740.0	7,050.0	7,048.4	71.2	12.3	16.38	-68.5	67.1	3,871.3	3,837.3	33.97	113.971	
12,000.0	7,740.0	7,050.0	7,048.4	72.9	12.3	16.38	-68.5	67.1	3,969.6	3,935.1	34.47	115.147	
12,100.0	7,740.0	7,050.0	7,048.4	74.7	12.3	16.38	-68.5	67.1	4,068.0	4,033.0	34.98	116.288	
12,200.0	7,740.0	7,026.6	7,025.4	76.4	12.3	15.88	-73.0	67.1	4,165.9	4,130.9	34.97	119.112	
12,300.0	7,740.0	7,024.6	7,023.4	78.1	12.3	15.84	-73.3	67.1	4,264.3	4,228.9	35.43	120.372	
12,400.0	7,740.0	7,022.6	7,021.5	79.8	12.3	15.80	-73.7	67.1	4,362.8	4,326.9	35.88	121.600	
12,500.0	7,740.0	7,000.0	6,999.1	81.6	12.3	15.34	-76.9	67.1	4,461.8	4,425.9	35.88	124.369	
12,600.0	7,740.0	7,000.0	6,999.1	83.3	12.3	15.34	-76.9	67.1	4,560.3	4,523.9	36.36	125.424	
12,700.0	7,740.0	7,000.0	6,999.1	85.0	12.3	15.34	-76.9	67.1	4,658.9	4,622.1	36.84	126.451	
12,800.0	7,740.0	7,000.0	6,999.1	86.7	12.3	15.34	-76.9	67.1	4,757.6	4,720.2	37.33	127.450	
12,900.0	7,740.0	7,000.0	6,999.1	88.5	12.3	15.34	-76.9	67.1	4,856.3	4,818.5	37.81	128.424	
13,000.0	7,740.0	7,000.0	6,999.1	90.2	12.3	15.34	-76.9	67.1	4,955.0	4,916.7	38.30	129.373	
13,100.0	7,740.0	7,000.0	6,999.1	91.9	12.3	15.34	-76.9	67.1	5,053.9	5,015.1	38.79	130.298	
13,200.0	7,740.0	7,000.0	6,999.1	93.7	12.3	15.34	-76.9	67.1	5,152.7	5,113.4	39.27	131.199	
13,300.0	7,740.0	7,000.0	6,999.1	95.4	12.3	15.34	-76.9	67.1	5,251.6	5,211.9	39.76	132.078	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	90.30	-0.4	70.2	70.3						
100.0	100.0	100.0	100.0	0.2	0.2	90.30	-0.4	70.2	70.3	69.9	0.30	231.326			
200.0	200.0	200.0	200.0	0.3	0.3	90.30	-0.4	70.2	70.3	69.6	0.65	107.622			
300.0	300.0	300.0	300.0	0.5	0.5	90.30	-0.4	70.2	70.3	69.2	1.00	70.123			
400.0	400.0	400.0	400.0	0.7	0.7	90.30	-0.4	70.2	70.3	68.9	1.35	52.003			
500.0	500.0	500.0	500.0	0.9	0.8	65.00	-0.4	70.2	69.9	68.2	1.70	41.096			
600.0	600.0	600.0	600.0	1.0	1.0	66.98	-0.4	70.2	68.8	66.8	2.05	33.529			
700.0	699.9	698.7	698.7	1.2	1.2	70.37	-0.5	71.1	68.1	65.7	2.41	28.276			
702.4	702.2	701.0	701.0	1.2	1.2	70.47	-0.5	71.1	68.1	65.7	2.42	28.174 CC, ES			
800.0	799.7	797.3	797.3	1.4	1.4	75.11	-0.8	73.6	68.9	66.1	2.77	24.827			
898.2	897.5	894.1	893.9	1.6	1.5	80.71	-1.2	77.7	71.4	68.3	3.15	22.704			
900.0	899.4	895.9	895.7	1.6	1.6	80.82	-1.3	77.8	71.5	68.3	3.15	22.674			
1,000.0	999.0	995.5	995.2	1.8	1.7	86.62	-1.9	83.0	75.6	72.1	3.54	21.348			
1,100.0	1,098.6	1,095.1	1,094.7	2.0	1.9	91.77	-2.5	88.1	80.5	76.5	3.94	20.438			
1,200.0	1,198.2	1,194.8	1,194.2	2.3	2.1	96.32	-3.1	93.2	85.8	81.5	4.33	19.816			
1,300.0	1,297.9	1,294.4	1,293.7	2.5	2.3	100.30	-3.7	98.4	91.7	87.0	4.73	19.395			
1,400.0	1,397.5	1,394.0	1,393.2	2.7	2.5	103.79	-4.3	103.5	98.0	92.9	5.13	19.114			
1,500.0	1,497.1	1,493.7	1,492.7	2.9	2.7	106.86	-4.9	108.7	104.6	99.0	5.52	18.933			
1,600.0	1,596.7	1,593.3	1,592.2	3.2	2.9	109.55	-5.5	113.8	111.4	105.5	5.92	18.821			
1,700.0	1,696.3	1,692.9	1,691.7	3.4	3.1	111.93	-6.1	118.9	118.5	112.2	6.32	18.760			
1,800.0	1,796.0	1,792.6	1,791.2	3.6	3.3	114.04	-6.7	124.1	125.7	119.0	6.71	18.734			
1,900.0	1,895.6	1,892.2	1,890.7	3.8	3.5	115.92	-7.3	129.2	133.1	126.0	7.11	18.734			
2,000.0	1,995.2	1,991.8	1,990.2	4.1	3.6	117.60	-7.9	134.4	140.6	133.1	7.50	18.752			
2,100.0	2,094.8	2,091.5	2,089.7	4.3	3.8	119.11	-8.5	139.5	148.3	140.4	7.89	18.784			
2,200.0	2,194.5	2,191.1	2,189.2	4.5	4.0	120.47	-9.1	144.6	156.0	147.7	8.29	18.824			
2,300.0	2,294.1	2,290.8	2,288.7	4.8	4.2	121.70	-9.7	149.8	163.8	155.1	8.68	18.871			
2,400.0	2,393.7	2,390.4	2,388.2	5.0	4.4	122.82	-10.3	154.9	171.7	162.6	9.07	18.922			
2,500.0	2,493.3	2,490.0	2,487.7	5.2	4.6	123.84	-10.9	160.0	179.6	170.1	9.46	18.975			
2,600.0	2,592.9	2,589.7	2,587.2	5.4	4.8	124.77	-11.5	165.2	187.6	177.7	9.86	19.030			
2,700.0	2,692.6	2,689.3	2,686.7	5.7	5.0	125.63	-12.2	170.3	195.6	185.3	10.25	19.086			
2,800.0	2,792.2	2,788.9	2,786.2	5.9	5.2	126.42	-12.8	175.5	203.7	193.0	10.64	19.142			
2,900.0	2,891.8	2,888.6	2,885.8	6.1	5.4	127.15	-13.4	180.6	211.8	200.7	11.03	19.197			
3,000.0	2,991.4	2,988.2	2,985.3	6.4	5.6	127.82	-14.0	185.7	219.9	208.5	11.42	19.252			
3,100.0	3,091.1	3,087.8	3,084.8	6.6	5.8	128.45	-14.6	190.9	228.1	216.2	11.81	19.306			
3,200.0	3,190.7	3,187.5	3,184.3	6.8	6.0	129.03	-15.2	196.0	236.2	224.0	12.20	19.358			
3,300.0	3,290.3	3,287.1	3,283.8	7.0	6.2	129.58	-15.8	201.2	244.5	231.9	12.59	19.410			
3,400.0	3,389.9	3,386.8	3,383.3	7.3	6.4	130.09	-16.4	206.3	252.7	239.7	12.99	19.460			
3,500.0	3,489.5	3,486.4	3,482.8	7.5	6.6	130.56	-17.0	211.4	260.9	247.6	13.38	19.508			
3,600.0	3,589.2	3,586.0	3,582.3	7.7	6.8	131.01	-17.6	216.6	269.2	255.4	13.77	19.555			
3,700.0	3,688.8	3,685.7	3,681.8	8.0	7.0	131.43	-18.2	221.7	277.5	263.3	14.16	19.601			
3,800.0	3,788.4	3,785.3	3,781.3	8.2	7.2	131.83	-18.8	226.8	285.8	271.2	14.55	19.646			
3,900.0	3,888.0	3,884.9	3,880.8	8.4	7.4	132.21	-19.4	232.0	294.1	279.2	14.94	19.689			
4,000.0	3,987.7	3,984.6	3,980.3	8.7	7.5	132.56	-20.0	237.1	302.4	287.1	15.33	19.730			
4,100.0	4,087.3	4,084.2	4,079.8	8.9	7.7	132.89	-20.6	242.3	310.7	295.0	15.72	19.771			
4,200.0	4,186.9	4,183.8	4,179.3	9.1	7.9	133.21	-21.2	247.4	319.1	303.0	16.11	19.810			
4,300.0	4,286.5	4,283.5	4,278.8	9.4	8.1	133.51	-21.8	252.5	327.4	310.9	16.50	19.848			
4,400.0	4,386.1	4,383.1	4,378.3	9.6	8.3	133.80	-22.4	257.7	335.8	318.9	16.89	19.884			
4,500.0	4,485.8	4,482.8	4,477.8	9.8	8.5	134.07	-23.1	262.8	344.2	326.9	17.28	19.920			
4,600.0	4,585.4	4,582.4	4,577.3	10.0	8.7	134.33	-23.7	268.0	352.5	334.9	17.67	19.954			
4,700.0	4,685.0	4,682.0	4,676.8	10.3	8.9	134.58	-24.3	273.1	360.9	342.9	18.06	19.988			
4,800.0	4,784.6	4,781.7	4,776.3	10.5	9.1	134.81	-24.9	278.2	369.3	350.9	18.45	20.020			
4,900.0	4,884.3	4,881.3	4,875.8	10.7	9.3	135.04	-25.5	283.4	377.7	358.9	18.84	20.051			

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 2C-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 2C-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 #2	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	
5,000.0	4,983.9	4,980.9	4,975.3	11.0	9.5	135.26	-26.1	288.5	386.1	366.9	19.23	20.082	
5,100.0	5,083.5	5,080.6	5,074.8	11.2	9.7	135.46	-26.7	293.6	394.5	374.9	19.62	20.111	
5,200.0	5,183.1	5,180.2	5,174.3	11.4	9.9	135.66	-27.3	298.8	402.9	382.9	20.01	20.140	
5,300.0	5,282.7	5,279.8	5,273.8	11.7	10.1	135.85	-27.9	303.9	411.3	390.9	20.39	20.168	
5,400.0	5,382.4	5,379.5	5,373.3	11.9	10.3	136.03	-28.5	309.1	419.7	399.0	20.78	20.195	
5,500.0	5,482.0	5,479.1	5,472.8	12.1	10.5	136.21	-29.1	314.2	428.2	407.0	21.17	20.221	
5,600.0	5,581.6	5,578.8	5,572.3	12.4	10.7	136.38	-29.7	319.3	436.6	415.0	21.56	20.246	
5,700.0	5,681.2	5,678.4	5,671.8	12.6	10.9	136.54	-30.3	324.5	445.0	423.1	21.95	20.271	
5,800.0	5,780.9	5,778.0	5,771.3	12.8	11.1	136.69	-30.9	329.6	453.4	431.1	22.34	20.295	
5,900.0	5,880.5	5,877.7	5,870.8	13.0	11.3	136.84	-31.5	334.7	461.9	439.1	22.73	20.318	
6,000.0	5,980.1	5,977.3	5,970.3	13.3	11.5	136.99	-32.1	339.9	470.3	447.2	23.12	20.341	
6,100.0	6,079.7	6,076.9	6,069.8	13.5	11.7	137.13	-32.7	345.0	478.8	455.2	23.51	20.363	
6,200.0	6,179.3	6,176.6	6,169.3	13.7	11.9	137.26	-33.3	350.2	487.2	463.3	23.90	20.384	
6,300.0	6,279.0	6,276.2	6,268.8	14.0	12.0	137.39	-33.9	355.3	495.7	471.4	24.29	20.405	
6,400.0	6,378.6	6,375.8	6,368.3	14.2	12.2	137.52	-34.6	360.4	504.1	479.4	24.68	20.426	
6,500.0	6,478.2	6,475.5	6,467.8	14.4	12.4	137.64	-35.2	365.6	512.6	487.5	25.07	20.446	
6,600.0	6,577.8	6,575.1	6,567.3	14.7	12.6	137.76	-35.8	370.7	521.0	495.5	25.46	20.465	
6,700.0	6,677.5	6,674.8	6,666.8	14.9	12.8	137.87	-36.4	375.9	529.5	503.6	25.85	20.484	
6,800.0	6,777.1	6,774.4	6,766.3	15.1	13.0	137.98	-37.0	381.0	537.9	511.7	26.24	20.502	
6,900.0	6,876.7	6,874.0	6,865.8	15.4	13.2	138.09	-37.6	386.1	546.4	519.8	26.63	20.520	
7,000.0	6,976.3	6,973.7	6,965.3	15.6	13.4	138.19	-38.2	391.3	554.8	527.8	27.02	20.537	
7,100.0	7,075.9	7,073.3	7,064.8	15.8	13.6	138.30	-38.8	396.4	563.3	535.9	27.41	20.554	
7,147.0	7,122.8	7,120.1	7,111.6	15.9	13.7	138.34	-39.1	398.8	567.3	539.7	27.59	20.562	
7,150.0	7,125.8	7,123.1	7,114.6	15.9	13.7	136.75	-39.1	399.0	567.5	539.9	27.60	20.560	
7,200.0	7,175.7	7,189.6	7,180.9	16.0	13.8	53.75	-39.2	402.4	569.4	541.6	27.82	20.467	
7,250.0	7,225.5	7,814.1	7,681.1	16.0	15.9	-20.40	280.7	422.6	536.5	505.2	31.30	17.141	
7,300.0	7,275.0	7,898.2	7,712.5	16.0	16.5	-58.95	358.6	422.8	490.0	458.0	31.96	15.331	
7,350.0	7,323.6	7,912.6	7,716.8	16.0	16.6	-81.36	372.4	422.8	442.9	412.1	30.81	14.373	
7,400.0	7,371.0	7,907.7	7,715.4	15.9	16.6	-94.03	367.7	422.8	396.4	366.7	29.68	13.355	
7,450.0	7,416.9	7,895.0	7,711.6	15.8	16.5	-101.11	355.6	422.9	351.1	322.2	28.88	12.156	
7,500.0	7,460.8	7,878.3	7,706.1	15.6	16.3	-104.73	339.8	422.8	307.5	279.2	28.36	10.844	
7,550.0	7,502.6	7,859.2	7,699.4	15.5	16.2	-105.90	322.0	422.8	266.5	238.4	28.05	9.501	
7,600.0	7,541.7	7,838.8	7,691.5	15.3	16.0	-105.10	303.1	422.7	228.9	201.0	27.92	8.201	
7,650.0	7,578.1	7,817.3	7,682.5	15.2	15.9	-102.55	283.6	422.6	196.6	168.7	27.95	7.035	
7,700.0	7,611.3	7,795.2	7,672.5	15.0	15.7	-98.32	263.9	422.4	171.8	143.8	28.08	6.118	
7,750.0	7,641.1	7,772.6	7,661.4	14.9	15.6	-92.50	244.2	422.2	157.5	129.2	28.24	5.576	
7,782.3	7,658.5	7,757.8	7,653.8	14.8	15.5	-87.95	231.5	422.0	154.8	126.5	28.27	5.475 SF	
7,800.0	7,667.4	7,750.0	7,649.6	14.8	15.5	-85.38	224.9	421.9	155.6	127.3	28.23	5.511	
7,850.0	7,689.8	7,726.3	7,636.5	14.7	15.3	-76.95	205.2	421.6	165.7	137.8	27.89	5.942	
7,900.0	7,708.2	7,700.0	7,620.9	14.7	15.2	-67.40	184.0	421.2	185.1	158.1	27.00	6.855	
7,950.0	7,722.6	7,679.2	7,607.9	14.7	15.1	-59.58	167.8	420.8	210.4	184.5	25.89	8.127	
8,000.0	7,732.7	7,650.0	7,588.7	14.7	15.0	-50.69	145.8	420.2	239.2	214.9	24.31	9.841	
8,050.0	7,738.5	7,631.4	7,575.9	14.8	14.9	-44.79	132.3	419.8	269.4	246.3	23.14	11.641	
8,091.8	7,740.0	7,611.4	7,561.7	15.0	14.8	-39.84	118.3	419.3	295.1	273.0	22.19	13.299	
8,100.0	7,740.0	7,600.0	7,553.3	15.0	14.8	-38.51	110.5	419.0	300.4	278.5	21.93	13.699	
8,200.0	7,740.0	7,564.0	7,526.0	15.4	14.6	-34.58	87.0	418.0	367.0	345.6	21.43	17.126	
8,300.0	7,740.0	7,527.4	7,496.8	16.1	14.5	-31.05	65.0	416.9	440.7	419.6	21.07	20.920	
8,400.0	7,740.0	7,500.0	7,474.1	16.9	14.5	-28.68	49.8	416.0	519.5	498.5	20.99	24.755	
8,500.0	7,740.0	7,470.0	7,448.3	17.8	14.4	-26.34	34.4	414.9	602.0	581.1	20.92	28.779	
8,600.0	7,740.0	7,450.0	7,430.8	18.8	14.3	-24.92	24.9	414.2	687.5	666.4	21.06	32.639	
8,700.0	7,740.0	7,427.6	7,410.7	20.0	14.3	-23.45	15.0	413.3	775.2	754.0	21.19	36.584	
8,800.0	7,740.0	7,400.0	7,385.5	21.2	14.2	-21.79	3.9	412.2	864.8	843.5	21.25	40.699	

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Cathedral Energy Services

Anticollision Report

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Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	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	7,400.0	7,385.5	22.5	14.2	-21.79	3.9	412.2	955.5	933.8	21.74	43.955		
9,000.0	7,740.0	7,382.0	7,368.8	23.9	14.2	-20.80	-2.7	411.4	1,047.5	1,025.6	21.95	47.720		
9,100.0	7,740.0	7,370.1	7,357.6	25.3	14.2	-20.17	-6.8	410.9	1,140.5	1,118.2	22.26	51.238		
9,200.0	7,740.0	7,350.0	7,338.5	26.7	14.1	-19.18	-13.2	410.1	1,234.4	1,212.0	22.43	55.024		
9,300.0	7,740.0	7,350.0	7,338.5	28.2	14.1	-19.18	-13.2	410.1	1,328.7	1,305.8	22.92	57.965		
9,400.0	7,740.0	7,350.0	7,338.5	29.7	14.1	-19.18	-13.2	410.1	1,423.8	1,400.4	23.42	60.795		
9,500.0	7,740.0	7,350.0	7,338.5	31.3	14.1	-19.18	-13.2	410.1	1,519.6	1,495.6	23.93	63.513		
9,600.0	7,740.0	7,326.4	7,315.8	32.8	14.1	-18.09	-19.8	409.0	1,615.2	1,591.2	24.00	67.300		
9,700.0	7,740.0	7,319.8	7,309.5	34.4	14.1	-17.81	-21.4	408.7	1,711.4	1,687.1	24.37	70.218		
9,800.0	7,740.0	7,300.0	7,290.3	36.0	14.0	-16.98	-26.0	407.8	1,808.3	1,783.8	24.50	73.792		
9,900.0	7,740.0	7,300.0	7,290.3	37.6	14.0	-16.98	-26.0	407.8	1,905.0	1,880.0	24.98	76.253		
10,000.0	7,740.0	7,300.0	7,290.3	39.2	14.0	-16.98	-26.0	407.8	2,002.1	1,976.6	25.46	78.622		
10,100.0	7,740.0	7,300.0	7,290.3	40.9	14.0	-16.98	-26.0	407.8	2,099.4	2,073.4	25.95	80.903		
10,200.0	7,740.0	7,300.0	7,290.3	42.5	14.0	-16.98	-26.0	407.8	2,197.0	2,170.5	26.44	83.098		
10,300.0	7,740.0	7,300.0	7,290.3	44.1	14.0	-16.98	-26.0	407.8	2,294.7	2,267.8	26.93	85.211		
10,400.0	7,740.0	7,300.0	7,290.3	45.8	14.0	-16.98	-26.0	407.8	2,392.7	2,365.3	27.42	87.247		
10,500.0	7,740.0	7,300.0	7,290.3	47.5	14.0	-16.98	-26.0	407.8	2,490.8	2,462.9	27.92	89.207		
10,600.0	7,740.0	7,279.1	7,269.9	49.1	14.0	-16.18	-30.1	406.8	2,588.6	2,560.7	27.92	92.712		
10,700.0	7,740.0	7,276.0	7,266.7	50.8	14.0	-16.06	-30.7	406.7	2,686.9	2,658.6	28.33	94.848		
10,800.0	7,740.0	7,273.0	7,263.8	52.5	14.0	-15.95	-31.2	406.5	2,785.3	2,756.5	28.74	96.921		
10,900.0	7,740.0	7,250.0	7,241.1	54.2	14.0	-15.14	-34.6	405.4	2,884.1	2,855.5	28.67	100.603		
11,000.0	7,740.0	7,250.0	7,241.1	55.9	14.0	-15.14	-34.6	405.4	2,982.6	2,953.4	29.13	102.387		
11,100.0	7,740.0	7,250.0	7,241.1	57.6	14.0	-15.14	-34.6	405.4	3,081.1	3,051.5	29.59	104.115		
11,200.0	7,740.0	7,250.0	7,241.1	59.3	14.0	-15.14	-34.6	405.4	3,179.7	3,149.7	30.06	105.787		
11,300.0	7,740.0	7,250.0	7,241.1	61.0	14.0	-15.14	-34.6	405.4	3,278.4	3,247.9	30.52	107.406		
11,400.0	7,740.0	7,250.0	7,241.1	62.7	14.0	-15.14	-34.6	405.4	3,377.2	3,346.2	30.99	108.975		
11,500.0	7,740.0	7,250.0	7,241.1	64.4	14.0	-15.14	-34.6	405.4	3,476.1	3,444.6	31.46	110.496		
11,600.0	7,740.0	7,250.0	7,241.1	66.1	14.0	-15.14	-34.6	405.4	3,575.0	3,543.1	31.93	111.970		
11,700.0	7,740.0	7,250.0	7,241.1	67.8	14.0	-15.14	-34.6	405.4	3,674.0	3,641.6	32.40	113.399		
11,800.0	7,740.0	7,250.0	7,241.1	69.5	14.0	-15.14	-34.6	405.4	3,773.0	3,740.1	32.87	114.786		
11,900.0	7,740.0	7,250.0	7,241.1	71.2	14.0	-15.14	-34.6	405.4	3,872.1	3,838.8	33.34	116.132		
12,000.0	7,740.0	7,250.0	7,241.1	72.9	14.0	-15.14	-34.6	405.4	3,971.2	3,937.4	33.82	117.439		
12,100.0	7,740.0	7,250.0	7,241.1	74.7	14.0	-15.14	-34.6	405.4	4,070.4	4,036.1	34.29	118.708		
12,200.0	7,740.0	7,250.0	7,241.1	76.4	14.0	-15.14	-34.6	405.4	4,169.6	4,134.8	34.76	119.941		
12,300.0	7,740.0	7,250.0	7,241.1	78.1	14.0	-15.14	-34.6	405.4	4,268.8	4,233.6	35.24	121.140		
12,400.0	7,740.0	7,250.0	7,241.1	79.8	14.0	-15.14	-34.6	405.4	4,368.1	4,332.4	35.72	122.305		
12,500.0	7,740.0	7,250.0	7,241.1	81.6	14.0	-15.14	-34.6	405.4	4,467.4	4,431.3	36.19	123.438		
12,600.0	7,740.0	7,250.0	7,241.1	83.3	14.0	-15.14	-34.6	405.4	4,566.8	4,530.1	36.67	124.540		
12,700.0	7,740.0	7,250.0	7,241.1	85.0	14.0	-15.14	-34.6	405.4	4,666.2	4,629.0	37.15	125.613		
12,800.0	7,740.0	7,250.0	7,241.1	86.7	14.0	-15.14	-34.6	405.4	4,765.6	4,727.9	37.63	126.657		
12,900.0	7,740.0	7,250.0	7,241.1	88.5	14.0	-15.14	-34.6	405.4	4,865.0	4,826.9	38.10	127.674		
13,000.0	7,740.0	7,250.0	7,241.1	90.2	14.0	-15.14	-34.6	405.4	4,964.4	4,925.8	38.58	128.664		
13,100.0	7,740.0	7,250.0	7,241.1	91.9	14.0	-15.14	-34.6	405.4	5,063.9	5,024.8	39.06	129.630		
13,200.0	7,740.0	7,250.0	7,241.1	93.7	14.0	-15.14	-34.6	405.4	5,163.4	5,123.8	39.54	130.570		
13,300.0	7,740.0	7,250.0	7,241.1	95.4	14.0	-15.14	-34.6	405.4	5,262.9	5,222.9	40.03	131.487		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	90.26	-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	
400.0	400.0	400.0	400.0	0.7	0.7	90.26	-0.4	80.0	80.0	78.7	1.35	59.255	
500.0	500.0	500.0	500.0	0.9	0.8	64.88	-0.4	80.0	79.7	78.0	1.70	46.856	
570.6	570.6	569.6	569.6	1.0	1.0	65.99	-0.4	80.5	79.4	77.5	1.95	40.780 CC	
600.0	600.0	598.6	598.6	1.0	1.0	66.63	-0.5	80.9	79.5	77.4	2.05	38.760 ES	
700.0	699.9	697.1	697.1	1.2	1.2	69.55	-0.7	83.4	80.4	78.0	2.41	33.432	
800.0	799.7	795.5	795.4	1.4	1.4	73.47	-1.2	87.6	82.8	80.0	2.77	29.883	
898.2	897.5	892.0	891.7	1.6	1.6	78.02	-1.9	93.4	86.8	83.6	3.14	27.614	
900.0	899.4	893.8	893.5	1.6	1.6	78.11	-1.9	93.5	86.9	83.7	3.15	27.581	
1,000.0	999.0	991.8	991.2	1.8	1.8	82.63	-2.7	101.0	93.0	89.5	3.54	26.308	
1,100.0	1,098.6	1,090.7	1,089.7	2.0	2.0	86.39	-3.7	109.9	101.0	97.1	3.93	25.695	
1,200.0	1,198.2	1,190.2	1,188.8	2.3	2.2	89.59	-4.7	119.0	109.5	105.1	4.33	25.268	
1,300.0	1,297.9	1,289.7	1,287.8	2.5	2.4	92.32	-5.7	128.1	118.2	113.5	4.74	24.951	
1,400.0	1,397.5	1,389.1	1,386.9	2.7	2.6	94.68	-6.8	137.1	127.2	122.1	5.15	24.712	
1,500.0	1,497.1	1,488.6	1,485.9	2.9	2.9	96.72	-7.8	146.2	136.4	130.8	5.56	24.528	
1,600.0	1,596.7	1,588.1	1,585.0	3.2	3.1	98.50	-8.8	155.3	145.7	139.7	5.98	24.384	
1,700.0	1,696.3	1,687.5	1,684.0	3.4	3.3	100.07	-9.8	164.3	155.2	148.8	6.39	24.271	
1,800.0	1,796.0	1,787.0	1,783.1	3.6	3.5	101.46	-10.8	173.4	164.7	157.9	6.81	24.180	
1,900.0	1,895.6	1,886.5	1,882.1	3.8	3.8	102.69	-11.8	182.5	174.3	167.1	7.23	24.107	
2,000.0	1,995.2	1,985.9	1,981.2	4.1	4.0	103.80	-12.9	191.6	184.0	176.4	7.65	24.048	
2,100.0	2,094.8	2,085.4	2,080.2	4.3	4.2	104.79	-13.9	200.6	193.8	185.7	8.08	23.999	
2,200.0	2,194.5	2,184.9	2,179.3	4.5	4.5	105.69	-14.9	209.7	203.6	195.1	8.50	23.959	
2,300.0	2,294.1	2,284.3	2,278.3	4.8	4.7	106.50	-15.9	218.8	213.5	204.6	8.92	23.925	
2,400.0	2,393.7	2,383.8	2,377.4	5.0	4.9	107.25	-16.9	227.8	223.4	214.0	9.35	23.897	
2,500.0	2,493.3	2,483.3	2,476.4	5.2	5.2	107.93	-17.9	236.9	233.3	223.5	9.77	23.874	
2,600.0	2,592.9	2,582.8	2,575.4	5.4	5.4	108.55	-19.0	246.0	243.3	233.1	10.20	23.854	
2,700.0	2,692.6	2,682.2	2,674.5	5.7	5.6	109.13	-20.0	255.1	253.3	242.6	10.62	23.838	
2,800.0	2,792.2	2,781.7	2,773.5	5.9	5.9	109.66	-21.0	264.1	263.3	252.2	11.05	23.824	
2,900.0	2,891.8	2,881.2	2,872.6	6.1	6.1	110.15	-22.0	273.2	273.3	261.8	11.48	23.812	
3,000.0	2,991.4	2,980.6	2,971.6	6.4	6.3	110.61	-23.0	282.3	283.4	271.5	11.91	23.802	
3,100.0	3,091.1	3,080.1	3,070.7	6.6	6.6	111.04	-24.0	291.3	293.4	281.1	12.33	23.794	
3,200.0	3,190.7	3,179.6	3,169.7	6.8	6.8	111.44	-25.1	300.4	303.5	290.8	12.76	23.787	
3,300.0	3,290.3	3,279.0	3,268.8	7.0	7.0	111.81	-26.1	309.5	313.6	300.4	13.19	23.781	
3,400.0	3,389.9	3,378.5	3,367.8	7.3	7.3	112.16	-27.1	318.5	323.7	310.1	13.62	23.776	
3,500.0	3,489.5	3,478.0	3,466.9	7.5	7.5	112.49	-28.1	327.6	333.9	319.8	14.04	23.771	
3,600.0	3,589.2	3,577.4	3,565.9	7.7	7.7	112.80	-29.1	336.7	344.0	329.5	14.47	23.768	
3,700.0	3,688.8	3,676.9	3,665.0	8.0	8.0	113.09	-30.1	345.8	354.1	339.2	14.90	23.765	
3,800.0	3,788.4	3,776.4	3,764.0	8.2	8.2	113.36	-31.2	354.8	364.3	349.0	15.33	23.763	
3,900.0	3,888.0	3,875.8	3,863.1	8.4	8.4	113.62	-32.2	363.9	374.4	358.7	15.76	23.761	
4,000.0	3,987.7	3,975.3	3,962.1	8.7	8.7	113.87	-33.2	373.0	384.6	368.4	16.19	23.759	
4,100.0	4,087.3	4,074.8	4,061.2	8.9	8.9	114.10	-34.2	382.0	394.8	378.2	16.62	23.758	
4,200.0	4,186.9	4,174.3	4,160.2	9.1	9.1	114.33	-35.2	391.1	405.0	387.9	17.05	23.757	
4,300.0	4,286.5	4,273.7	4,259.3	9.4	9.4	114.54	-36.2	400.2	415.1	397.7	17.47	23.757	
4,400.0	4,386.1	4,373.2	4,358.3	9.6	9.6	114.74	-37.3	409.2	425.3	407.4	17.90	23.756	
4,500.0	4,485.8	4,472.7	4,457.4	9.8	9.9	114.93	-38.3	418.3	435.5	417.2	18.33	23.756	
4,600.0	4,585.4	4,572.1	4,556.4	10.0	10.1	115.11	-39.3	427.4	445.7	427.0	18.76	23.756	
4,700.0	4,685.0	4,671.6	4,655.5	10.3	10.3	115.29	-40.3	436.5	455.9	436.7	19.19	23.756	
4,800.0	4,784.6	4,771.1	4,754.5	10.5	10.6	115.45	-41.3	445.5	466.1	446.5	19.62	23.757	
4,900.0	4,884.3	4,870.5	4,853.6	10.7	10.8	115.61	-42.3	454.6	476.4	456.3	20.05	23.757	

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 2C-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 2C-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 #2	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	
5,000.0	4,983.9	4,970.0	4,952.6	11.0	11.0	115.77	-43.4	463.7	486.6	466.1	20.48	23.758	
5,100.0	5,083.5	5,069.5	5,051.7	11.2	11.3	115.91	-44.4	472.7	496.8	475.9	20.91	23.758	
5,200.0	5,183.1	5,168.9	5,150.7	11.4	11.5	116.05	-45.4	481.8	507.0	485.7	21.34	23.759	
5,300.0	5,282.7	5,268.4	5,249.8	11.7	11.7	116.19	-46.4	490.9	517.2	495.5	21.77	23.760	
5,400.0	5,382.4	5,367.9	5,348.8	11.9	12.0	116.32	-47.4	500.0	527.5	505.3	22.20	23.760	
5,500.0	5,482.0	5,467.3	5,447.9	12.1	12.2	116.44	-48.4	509.0	537.7	515.1	22.63	23.761	
5,600.0	5,581.6	5,566.8	5,546.9	12.4	12.4	116.56	-49.5	518.1	547.9	524.9	23.06	23.762	
5,700.0	5,681.2	5,666.3	5,646.0	12.6	12.7	116.68	-50.5	527.2	558.2	534.7	23.49	23.763	
5,800.0	5,780.9	5,765.8	5,745.0	12.8	12.9	116.79	-51.5	536.2	568.4	544.5	23.92	23.764	
5,900.0	5,880.5	5,865.2	5,844.1	13.0	13.1	116.90	-52.5	545.3	578.6	554.3	24.35	23.765	
6,000.0	5,980.1	5,964.7	5,943.1	13.3	13.4	117.00	-53.5	554.4	588.9	564.1	24.78	23.766	
6,100.0	6,079.7	6,064.2	6,042.2	13.5	13.6	117.11	-54.5	563.4	599.1	573.9	25.21	23.767	
6,200.0	6,179.3	6,163.6	6,141.2	13.7	13.9	117.20	-55.6	572.5	609.4	583.7	25.64	23.768	
6,300.0	6,279.0	6,263.1	6,240.3	14.0	14.1	117.30	-56.6	581.6	619.6	593.5	26.07	23.769	
6,400.0	6,378.6	6,362.6	6,339.3	14.2	14.3	117.39	-57.6	590.7	629.8	603.4	26.50	23.770	
6,500.0	6,478.2	6,462.0	6,438.4	14.4	14.6	117.48	-58.6	599.7	640.1	613.2	26.93	23.771	
6,600.0	6,577.8	6,561.5	6,537.4	14.7	14.8	117.56	-59.6	608.8	650.3	623.0	27.36	23.772	
6,700.0	6,677.5	6,661.0	6,636.5	14.9	15.0	117.64	-60.6	617.9	660.6	632.8	27.79	23.773	
6,800.0	6,777.1	6,760.4	6,735.5	15.1	15.3	117.72	-61.7	626.9	670.9	642.6	28.22	23.775	
6,900.0	6,876.7	6,859.9	6,834.6	15.4	15.5	117.80	-62.7	636.0	681.1	652.5	28.65	23.776	
7,000.0	6,976.3	7,250.0	7,210.2	15.6	16.4	114.10	10.3	671.2	689.4	659.3	30.13	22.881	
7,100.0	7,075.9	7,803.5	7,497.7	15.8	19.4	74.34	457.2	702.2	623.7	591.1	32.62	19.121	
7,147.0	7,122.8	7,832.5	7,499.6	15.9	19.6	70.68	486.1	702.7	591.8	559.2	32.59	18.158	
7,150.0	7,125.8	7,833.8	7,499.6	15.9	19.7	68.65	487.4	702.7	589.8	557.2	32.55	18.117	
7,200.0	7,175.7	7,843.0	7,499.9	16.0	19.7	-19.65	496.6	702.9	558.0	526.0	31.96	17.457	
7,250.0	7,225.5	7,839.0	7,499.8	16.0	19.7	-71.47	492.5	702.8	528.8	497.4	31.48	16.800	
7,300.0	7,275.0	7,828.1	7,499.4	16.0	19.6	-82.21	481.7	702.7	503.1	472.0	31.11	16.172	
7,350.0	7,323.6	7,813.4	7,498.5	16.0	19.5	-86.28	467.0	702.4	481.2	450.4	30.83	15.610	
7,400.0	7,371.0	7,796.2	7,497.0	15.9	19.3	-87.82	449.9	702.1	463.7	433.1	30.62	15.145	
7,450.0	7,416.9	7,777.3	7,494.7	15.8	19.1	-87.93	431.1	701.7	450.8	420.4	30.46	14.800	
7,500.0	7,460.8	7,757.3	7,491.7	15.6	19.0	-87.03	411.3	701.2	442.8	412.5	30.33	14.600	
7,550.0	7,502.6	7,736.4	7,487.8	15.5	18.8	-85.37	390.8	700.6	439.6	409.4	30.20	14.555 SF	
7,559.1	7,509.9	7,732.5	7,487.0	15.5	18.8	-85.00	387.0	700.5	439.5	409.4	30.18	14.565	
7,600.0	7,541.7	7,714.8	7,483.0	15.3	18.6	-83.08	369.8	700.0	441.0	411.0	30.05	14.678	
7,650.0	7,578.1	7,692.8	7,477.2	15.2	18.5	-80.29	348.6	699.2	446.7	416.9	29.83	14.977	
7,700.0	7,611.3	7,670.4	7,470.6	15.0	18.3	-77.11	327.2	698.4	456.1	426.6	29.51	15.454	
7,750.0	7,641.1	7,650.0	7,463.8	14.9	18.2	-73.87	308.0	697.6	468.6	439.5	29.09	16.108	
7,800.0	7,667.4	7,624.8	7,454.5	14.8	18.0	-69.98	284.6	696.5	483.7	455.2	28.51	16.964	
7,850.0	7,689.8	7,600.0	7,444.3	14.7	17.8	-66.12	262.0	695.3	500.7	472.9	27.80	18.011	
7,900.0	7,708.2	7,578.3	7,434.7	14.7	17.7	-62.56	242.6	694.2	519.1	492.0	27.04	19.193	
7,950.0	7,722.6	7,550.0	7,421.0	14.7	17.5	-58.61	217.9	692.7	538.4	512.2	26.14	20.595	
8,000.0	7,732.7	7,531.3	7,411.2	14.7	17.4	-55.54	201.9	691.6	558.0	532.6	25.41	21.963	
8,050.0	7,738.5	7,500.0	7,393.8	14.8	17.3	-51.89	176.0	689.8	577.9	553.3	24.57	23.521	
8,091.8	7,740.0	7,487.8	7,386.6	15.0	17.2	-49.83	166.1	689.0	594.1	569.9	24.18	24.571	
8,100.0	7,740.0	7,483.9	7,384.3	15.0	17.2	-49.63	163.0	688.8	597.3	573.1	24.16	24.728	
8,200.0	7,740.0	7,450.0	7,363.2	15.4	17.0	-47.84	136.7	686.6	640.7	616.6	24.11	26.572	
8,300.0	7,740.0	7,400.0	7,329.2	16.1	16.8	-45.13	100.2	683.1	691.0	667.1	23.96	28.841	
8,400.0	7,740.0	7,366.6	7,304.8	16.9	16.7	-43.30	77.5	680.6	748.1	724.0	24.10	31.038	
8,500.0	7,740.0	7,350.0	7,292.2	17.8	16.7	-42.40	66.8	679.3	811.2	786.7	24.53	33.071	
8,600.0	7,740.0	7,300.0	7,252.5	18.8	16.5	-39.71	36.7	675.4	878.8	854.3	24.52	35.837	
8,700.0	7,740.0	7,300.0	7,252.5	20.0	16.5	-39.71	36.7	675.4	950.8	925.6	25.26	37.643	
8,800.0	7,740.0	7,265.7	7,223.7	21.2	16.4	-37.91	18.2	672.5	1,026.0	1,000.5	25.50	40.231	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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				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	7,250.0	7,210.2	22.5	16.4	-37.11	10.3	671.2	1,104.5	1,078.4	26.04	42.418	
9,000.0	7,740.0	7,230.4	7,193.1	23.9	16.3	-36.12	1.0	669.5	1,185.4	1,158.9	26.51	44.709	
9,100.0	7,740.0	7,200.0	7,165.9	25.3	16.3	-34.63	-12.3	666.9	1,268.8	1,242.0	26.80	47.348	
9,200.0	7,740.0	7,200.0	7,165.9	26.7	16.3	-34.63	-12.3	666.9	1,353.4	1,325.8	27.60	49.028	
9,300.0	7,740.0	7,200.0	7,165.9	28.2	16.3	-34.63	-12.3	666.9	1,440.0	1,411.6	28.43	50.647	
9,400.0	7,740.0	7,178.5	7,146.2	29.7	16.2	-33.60	-20.9	665.0	1,527.7	1,498.9	28.85	52.961	
9,500.0	7,740.0	7,150.0	7,119.7	31.3	16.2	-32.29	-31.0	662.5	1,617.1	1,588.0	29.10	55.570	
9,600.0	7,740.0	7,150.0	7,119.7	32.8	16.2	-32.29	-31.0	662.5	1,706.8	1,676.9	29.92	57.047	
9,700.0	7,740.0	7,150.0	7,119.7	34.4	16.2	-32.29	-31.0	662.5	1,797.6	1,766.9	30.75	58.459	
9,800.0	7,740.0	7,150.0	7,119.7	36.0	16.2	-32.29	-31.0	662.5	1,889.4	1,857.8	31.59	59.809	
9,900.0	7,740.0	7,150.0	7,119.7	37.6	16.2	-32.29	-31.0	662.5	1,981.9	1,949.5	32.44	61.096	
10,000.0	7,740.0	7,128.4	7,099.3	39.2	16.1	-31.33	-37.8	660.5	2,074.6	2,041.9	32.76	63.337	
10,100.0	7,740.0	7,122.1	7,093.3	40.9	16.1	-31.06	-39.7	660.0	2,168.1	2,134.7	33.43	64.847	
10,200.0	7,740.0	7,100.0	7,072.1	42.5	16.0	-30.12	-45.6	658.0	2,262.4	2,228.7	33.70	67.133	
10,300.0	7,740.0	7,100.0	7,072.1	44.1	16.0	-30.12	-45.6	658.0	2,356.6	2,322.1	34.52	68.265	
10,400.0	7,740.0	7,100.0	7,072.1	45.8	16.0	-30.12	-45.6	658.0	2,451.3	2,416.0	35.35	69.348	
10,500.0	7,740.0	7,100.0	7,072.1	47.5	16.0	-30.12	-45.6	658.0	2,546.4	2,510.2	36.18	70.383	
10,600.0	7,740.0	7,100.0	7,072.1	49.1	16.0	-30.12	-45.6	658.0	2,641.9	2,604.9	37.01	71.374	
10,700.0	7,740.0	7,100.0	7,072.1	50.8	16.0	-30.12	-45.6	658.0	2,737.7	2,699.8	37.85	72.323	
10,800.0	7,740.0	7,100.0	7,072.1	52.5	16.0	-30.12	-45.6	658.0	2,833.7	2,795.0	38.70	73.232	
10,900.0	7,740.0	7,100.0	7,072.1	54.2	16.0	-30.12	-45.6	658.0	2,930.1	2,890.5	39.54	74.103	
11,000.0	7,740.0	7,100.0	7,072.1	55.9	16.0	-30.12	-45.6	658.0	3,026.7	2,986.3	40.39	74.938	
11,100.0	7,740.0	7,077.3	7,050.1	57.6	16.0	-29.19	-50.8	655.9	3,122.9	3,082.5	40.46	77.188	
11,200.0	7,740.0	7,074.1	7,047.0	59.3	16.0	-29.06	-51.4	655.6	3,219.8	3,178.6	41.18	78.193	
11,300.0	7,740.0	7,050.0	7,023.4	61.0	15.9	-28.12	-55.9	653.4	3,317.2	3,276.1	41.16	80.588	
11,400.0	7,740.0	7,050.0	7,023.4	62.7	15.9	-28.12	-55.9	653.4	3,414.3	3,372.3	41.97	81.352	
11,500.0	7,740.0	7,050.0	7,023.4	64.4	15.9	-28.12	-55.9	653.4	3,511.5	3,468.7	42.78	82.088	
11,600.0	7,740.0	7,050.0	7,023.4	66.1	15.9	-28.12	-55.9	653.4	3,608.8	3,565.2	43.59	82.796	
11,700.0	7,740.0	7,050.0	7,023.4	67.8	15.9	-28.12	-55.9	653.4	3,706.3	3,661.9	44.40	83.479	
11,800.0	7,740.0	7,050.0	7,023.4	69.5	15.9	-28.12	-55.9	653.4	3,804.0	3,758.7	45.21	84.138	
11,900.0	7,740.0	7,050.0	7,023.4	71.2	15.9	-28.12	-55.9	653.4	3,901.7	3,855.7	46.03	84.773	
12,000.0	7,740.0	7,050.0	7,023.4	72.9	15.9	-28.12	-55.9	653.4	3,999.6	3,952.7	46.84	85.386	
12,100.0	7,740.0	7,050.0	7,023.4	74.7	15.9	-28.12	-55.9	653.4	4,097.5	4,049.9	47.66	85.978	
12,200.0	7,740.0	7,050.0	7,023.4	76.4	15.9	-28.12	-55.9	653.4	4,195.6	4,147.1	48.48	86.550	
12,300.0	7,740.0	7,050.0	7,023.4	78.1	15.9	-28.12	-55.9	653.4	4,293.8	4,244.5	49.29	87.103	
12,400.0	7,740.0	7,050.0	7,023.4	79.8	15.9	-28.12	-55.9	653.4	4,392.0	4,341.9	50.12	87.638	
12,500.0	7,740.0	7,050.0	7,023.4	81.6	15.9	-28.12	-55.9	653.4	4,490.3	4,439.4	50.94	88.155	
12,600.0	7,740.0	7,050.0	7,023.4	83.3	15.9	-28.12	-55.9	653.4	4,588.7	4,536.9	51.76	88.656	
12,700.0	7,740.0	7,050.0	7,023.4	85.0	15.9	-28.12	-55.9	653.4	4,687.1	4,634.6	52.58	89.141	
12,800.0	7,740.0	7,050.0	7,023.4	86.7	15.9	-28.12	-55.9	653.4	4,785.7	4,732.2	53.40	89.611	
12,900.0	7,740.0	7,050.0	7,023.4	88.5	15.9	-28.12	-55.9	653.4	4,884.2	4,830.0	54.23	90.067	
13,000.0	7,740.0	7,050.0	7,023.4	90.2	15.9	-28.12	-55.9	653.4	4,982.9	4,927.8	55.05	90.508	
13,100.0	7,740.0	7,050.0	7,023.4	91.9	15.9	-28.12	-55.9	653.4	5,081.6	5,025.7	55.88	90.937	
13,200.0	7,740.0	7,050.0	7,023.4	93.7	15.9	-28.12	-55.9	653.4	5,180.3	5,123.6	56.71	91.353	
13,300.0	7,740.0	7,050.0	7,023.4	95.4	15.9	-28.12	-55.9	653.4	5,279.1	5,221.5	57.53	91.756	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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: 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	90.23	-0.4	90.1	90.1						
100.0	100.0	100.0	100.0	0.2	0.2	90.23	-0.4	90.1	90.1	89.8	0.30	296.759			
200.0	200.0	200.0	200.0	0.3	0.3	90.23	-0.4	90.1	90.1	89.5	0.65	138.064			
300.0	300.0	300.0	300.0	0.5	0.5	90.23	-0.4	90.1	90.1	89.1	1.00	89.958			
400.0	400.0	400.0	400.0	0.7	0.7	90.23	-0.4	90.1	90.1	88.8	1.35	66.713 CC, ES			
500.0	500.0	498.4	498.4	0.9	0.8	64.80	-0.4	91.0	90.6	88.9	1.70	53.370			
600.0	600.0	596.8	596.8	1.0	1.0	66.33	-0.6	93.5	92.1	90.0	2.05	44.995			
700.0	699.9	695.1	695.0	1.2	1.2	68.76	-0.9	97.7	94.7	92.3	2.40	39.444			
800.0	799.7	793.2	792.9	1.4	1.4	71.92	-1.3	103.6	98.7	95.9	2.77	35.681			
898.2	897.5	889.3	888.7	1.6	1.6	75.54	-1.8	111.0	104.1	100.9	3.14	33.176			
900.0	899.4	891.1	890.5	1.6	1.6	75.61	-1.8	111.1	104.2	101.0	3.14	33.139			
1,000.0	999.0	988.8	987.8	1.8	1.8	79.21	-2.5	120.3	111.6	108.1	3.53	31.608			
1,100.0	1,098.6	1,086.4	1,084.8	2.0	2.0	82.16	-3.2	131.1	121.0	117.1	3.93	30.839			
1,200.0	1,198.2	1,185.8	1,183.4	2.3	2.3	84.64	-4.1	142.8	131.4	127.1	4.33	30.361			
1,300.0	1,297.9	1,285.1	1,282.0	2.5	2.5	86.75	-4.9	154.4	142.0	137.3	4.74	29.972			
1,400.0	1,397.5	1,384.4	1,380.7	2.7	2.8	88.57	-5.7	166.1	152.8	147.6	5.15	29.650			
1,500.0	1,497.1	1,483.7	1,479.3	2.9	3.0	90.15	-6.5	177.8	163.7	158.1	5.57	29.379			
1,600.0	1,596.7	1,583.0	1,577.9	3.2	3.3	91.53	-7.3	189.4	174.7	168.7	5.99	29.146			
1,700.0	1,696.3	1,682.3	1,676.5	3.4	3.6	92.74	-8.2	201.1	185.8	179.4	6.42	28.944			
1,800.0	1,796.0	1,781.6	1,775.1	3.6	3.8	93.82	-9.0	212.8	196.9	190.1	6.85	28.768			
1,900.0	1,895.6	1,880.9	1,873.8	3.8	4.1	94.79	-9.8	224.5	208.2	200.9	7.28	28.612			
2,000.0	1,995.2	1,980.2	1,972.4	4.1	4.3	95.65	-10.6	236.1	219.4	211.7	7.71	28.473			
2,100.0	2,094.8	2,079.5	2,071.0	4.3	4.6	96.43	-11.4	247.8	230.8	222.6	8.14	28.350			
2,200.0	2,194.5	2,178.9	2,169.6	4.5	4.9	97.14	-12.2	259.5	242.1	233.5	8.57	28.238			
2,300.0	2,294.1	2,278.2	2,268.2	4.8	5.1	97.78	-13.1	271.2	253.5	244.5	9.01	28.137			
2,400.0	2,393.7	2,377.5	2,366.8	5.0	5.4	98.37	-13.9	282.8	264.9	255.5	9.45	28.046			
2,500.0	2,493.3	2,476.8	2,465.5	5.2	5.7	98.91	-14.7	294.5	276.4	266.5	9.88	27.963			
2,600.0	2,592.9	2,576.1	2,564.1	5.4	5.9	99.40	-15.5	306.2	287.8	277.5	10.32	27.886			
2,700.0	2,692.6	2,675.4	2,662.7	5.7	6.2	99.86	-16.3	317.8	299.3	288.6	10.76	27.816			
2,800.0	2,792.2	2,774.7	2,761.3	5.9	6.5	100.29	-17.2	329.5	310.8	299.6	11.20	27.751			
2,900.0	2,891.8	2,874.0	2,859.9	6.1	6.7	100.68	-18.0	341.2	322.4	310.7	11.64	27.691			
3,000.0	2,991.4	2,973.3	2,958.6	6.4	7.0	101.05	-18.8	352.9	333.9	321.8	12.08	27.636			
3,100.0	3,091.1	3,072.7	3,057.2	6.6	7.3	101.39	-19.6	364.5	345.4	332.9	12.52	27.584			
3,200.0	3,190.7	3,172.0	3,155.8	6.8	7.5	101.71	-20.4	376.2	357.0	344.0	12.96	27.536			
3,300.0	3,290.3	3,271.3	3,254.4	7.0	7.8	102.01	-21.3	387.9	368.6	355.2	13.41	27.491			
3,400.0	3,389.9	3,370.6	3,353.0	7.3	8.1	102.29	-22.1	399.6	380.1	366.3	13.85	27.449			
3,500.0	3,489.5	3,469.9	3,451.7	7.5	8.3	102.56	-22.9	411.2	391.7	377.4	14.29	27.410			
3,600.0	3,589.2	3,569.2	3,550.3	7.7	8.6	102.81	-23.7	422.9	403.3	388.6	14.73	27.373			
3,700.0	3,688.8	3,668.5	3,648.9	8.0	8.9	103.04	-24.5	434.6	414.9	399.8	15.18	27.338			
3,800.0	3,788.4	3,767.8	3,747.5	8.2	9.1	103.27	-25.4	446.2	426.5	410.9	15.62	27.305			
3,900.0	3,888.0	3,867.1	3,846.1	8.4	9.4	103.48	-26.2	457.9	438.2	422.1	16.06	27.274			
4,000.0	3,987.7	3,966.5	3,944.7	8.7	9.7	103.68	-27.0	469.6	449.8	433.3	16.51	27.245			
4,100.0	4,087.3	4,065.8	4,043.4	8.9	9.9	103.87	-27.8	481.3	461.4	444.4	16.95	27.217			
4,200.0	4,186.9	4,165.1	4,142.0	9.1	10.2	104.05	-28.6	492.9	473.0	455.6	17.40	27.191			
4,300.0	4,286.5	4,264.4	4,240.6	9.4	10.5	104.22	-29.4	504.6	484.7	466.8	17.84	27.166			
4,400.0	4,386.1	4,363.7	4,339.2	9.6	10.7	104.39	-30.3	516.3	496.3	478.0	18.29	27.142			
4,500.0	4,485.8	4,463.0	4,437.8	9.8	11.0	104.54	-31.1	527.9	507.9	489.2	18.73	27.119			
4,600.0	4,585.4	4,562.3	4,536.5	10.0	11.3	104.69	-31.9	539.6	519.6	500.4	19.17	27.098			
4,700.0	4,685.0	4,661.6	4,635.1	10.3	11.6	104.84	-32.7	551.3	531.2	511.6	19.62	27.077			
4,800.0	4,784.6	4,760.9	4,733.7	10.5	11.8	104.97	-33.5	563.0	542.9	522.8	20.06	27.057			
4,900.0	4,884.3	4,860.2	4,832.3	10.7	12.1	105.11	-34.4	574.6	554.6	534.0	20.51	27.038			
5,000.0	4,983.9	4,959.6	4,930.9	11.0	12.4	105.23	-35.2	586.3	566.2	545.3	20.95	27.020			

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 2C-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 2C-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 #2	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: 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	5,083.5	5,058.9	5,029.6	11.2	12.6	105.35	-36.0	598.0	577.9	556.5	21.40	27.003	
5,200.0	5,183.1	5,158.2	5,128.2	11.4	12.9	105.47	-36.8	609.7	589.5	567.7	21.85	26.987	
5,300.0	5,282.7	5,257.5	5,226.8	11.7	13.2	105.58	-37.6	621.3	601.2	578.9	22.29	26.971	
5,400.0	5,382.4	5,356.8	5,325.4	11.9	13.4	105.69	-38.5	633.0	612.9	590.1	22.74	26.956	
5,500.0	5,482.0	5,456.1	5,424.0	12.1	13.7	105.79	-39.3	644.7	624.5	601.4	23.18	26.941	
5,600.0	5,581.6	5,555.4	5,522.7	12.4	14.0	105.89	-40.1	656.3	636.2	612.6	23.63	26.927	
5,700.0	5,681.2	5,654.7	5,621.3	12.6	14.2	105.99	-40.9	668.0	647.9	623.8	24.07	26.913	
5,800.0	5,780.9	5,754.0	5,719.9	12.8	14.5	106.08	-41.7	679.7	659.6	635.0	24.52	26.900	
5,900.0	5,880.5	5,853.4	5,818.5	13.0	14.8	106.17	-42.6	691.4	671.2	646.3	24.96	26.888	
6,000.0	5,980.1	5,952.7	5,917.1	13.3	15.0	106.25	-43.4	703.0	682.9	657.5	25.41	26.876	
6,100.0	6,079.7	6,052.0	6,015.7	13.5	15.3	106.34	-44.2	714.7	694.6	668.7	25.86	26.864	
6,200.0	6,179.3	6,151.3	6,114.4	13.7	15.6	106.42	-45.0	726.4	706.3	680.0	26.30	26.853	
6,300.0	6,279.0	6,250.6	6,213.0	14.0	15.8	106.49	-45.8	738.1	718.0	691.2	26.75	26.842	
6,400.0	6,378.6	6,349.9	6,311.6	14.2	16.1	106.57	-46.6	749.7	729.6	702.5	27.19	26.831	
6,500.0	6,478.2	6,449.2	6,410.2	14.4	16.4	106.64	-47.5	761.4	741.3	713.7	27.64	26.821	
6,600.0	6,577.8	6,548.5	6,508.8	14.7	16.7	106.71	-48.3	773.1	753.0	724.9	28.09	26.811	
6,700.0	6,677.5	6,647.8	6,607.5	14.9	16.9	106.78	-49.1	784.7	764.7	736.2	28.53	26.802	
6,800.0	6,777.1	6,747.1	6,706.1	15.1	17.2	106.85	-49.9	796.4	776.4	747.4	28.98	26.792	
6,900.0	6,876.7	6,846.5	6,804.7	15.4	17.5	106.91	-50.7	808.1	788.1	758.7	29.42	26.783	
7,000.0	6,976.3	6,945.8	6,903.3	15.6	17.7	106.98	-51.6	819.8	799.8	769.9	29.87	26.775	
7,100.0	7,075.9	7,045.1	7,001.9	15.8	18.0	107.04	-52.4	831.4	811.5	781.1	30.32	26.766	
7,147.0	7,122.8	7,091.7	7,048.3	15.9	18.1	107.07	-52.8	836.9	817.0	786.4	30.53	26.762	
7,150.0	7,125.8	7,094.7	7,051.2	15.9	18.1	105.49	-52.8	837.3	817.3	786.8	30.55	26.756	
7,200.0	7,175.7	7,144.5	7,100.7	16.0	18.3	22.70	-53.2	843.1	821.5	790.7	30.77	26.696	
7,250.0	7,225.5	7,194.3	7,150.1	16.0	18.4	-26.29	-53.6	849.0	822.7	791.9	30.83	26.683	
7,300.0	7,275.0	7,873.2	7,689.9	16.0	20.6	-67.24	284.7	909.9	806.2	774.5	31.68	25.445	
7,350.0	7,323.6	7,935.6	7,712.2	16.0	21.0	-79.69	342.9	912.0	777.3	746.4	30.91	25.146	
7,400.0	7,371.0	7,934.0	7,711.7	15.9	21.0	-84.60	341.4	912.0	750.2	719.9	30.36	24.712	
7,450.0	7,416.9	7,919.9	7,707.2	15.8	20.9	-87.29	328.0	911.5	725.7	695.8	29.92	24.256	
7,500.0	7,460.8	7,901.1	7,700.7	15.6	20.8	-88.81	310.5	910.9	703.8	674.3	29.54	23.827	
7,550.0	7,502.6	7,880.2	7,692.7	15.5	20.7	-89.56	291.1	910.1	684.9	655.7	29.22	23.435	
7,600.0	7,541.7	7,858.0	7,683.6	15.3	20.6	-89.70	271.0	909.2	669.1	640.1	28.95	23.115	
7,650.0	7,578.1	7,835.1	7,673.3	15.2	20.4	-89.34	250.5	908.2	656.4	627.7	28.71	22.868	
7,700.0	7,611.3	7,811.8	7,662.0	15.0	20.3	-88.55	230.1	907.0	647.1	618.6	28.49	22.712	
7,750.0	7,641.1	7,788.1	7,649.7	14.9	20.2	-87.38	209.9	905.8	640.9	612.7	28.30	22.651 SF	
7,800.0	7,667.4	7,764.2	7,636.4	14.8	20.1	-85.86	190.1	904.4	637.9	609.8	28.11	22.691	
7,825.5	7,679.3	7,751.9	7,629.3	14.7	20.0	-84.97	180.1	903.6	637.6	609.5	28.02	22.750	
7,850.0	7,689.8	7,740.1	7,622.3	14.7	20.0	-84.05	170.6	902.9	637.9	610.0	27.94	22.835	
7,900.0	7,708.2	7,715.8	7,607.2	14.7	19.9	-81.97	151.7	901.2	640.6	612.9	27.76	23.080	
7,950.0	7,722.6	7,691.5	7,591.3	14.7	19.8	-79.67	133.4	899.5	645.8	618.2	27.57	23.423	
8,000.0	7,732.7	7,667.1	7,574.6	14.7	19.7	-77.20	115.7	897.7	653.1	625.7	27.39	23.846	
8,050.0	7,738.5	7,642.6	7,557.1	14.8	19.6	-74.61	98.7	895.8	662.3	635.1	27.21	24.335	
8,091.8	7,740.0	7,622.2	7,541.9	15.0	19.5	-72.38	85.1	894.1	671.1	644.0	27.09	24.769	
8,100.0	7,740.0	7,618.2	7,538.9	15.0	19.5	-72.12	82.5	893.8	672.9	645.9	27.09	24.839	
8,200.0	7,740.0	7,574.3	7,504.6	15.4	19.4	-69.20	55.4	890.0	700.7	673.5	27.18	25.775	
8,300.0	7,740.0	7,538.1	7,474.9	16.1	19.3	-66.72	35.1	886.6	737.8	710.3	27.47	26.857	
8,400.0	7,740.0	7,500.0	7,442.2	16.9	19.2	-64.07	15.8	882.9	783.7	755.9	27.83	28.157	
8,500.0	7,740.0	7,482.5	7,426.8	17.8	19.1	-62.85	7.7	881.2	837.4	808.9	28.50	29.381	
8,600.0	7,740.0	7,450.0	7,397.6	18.8	19.0	-60.59	-6.1	877.8	898.0	869.0	29.05	30.911	
8,700.0	7,740.0	7,450.0	7,397.6	20.0	19.0	-60.59	-6.1	877.8	964.2	934.1	30.07	32.066	
8,800.0	7,740.0	7,426.3	7,375.8	21.2	19.0	-58.95	-15.2	875.3	1,035.1	1,004.3	30.81	33.593	
8,900.0	7,740.0	7,400.0	7,351.2	22.5	18.9	-57.15	-24.1	872.5	1,110.3	1,078.7	31.52	35.222	

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 2C-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 2C-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 #2	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	7,400.0	7,351.2	23.9	18.9	-57.15	-24.1	872.5	1,188.4	1,155.7	32.67	36.376	
9,100.0	7,740.0	7,400.0	7,351.2	25.3	18.9	-57.15	-24.1	872.5	1,269.6	1,235.7	33.86	37.498	
9,200.0	7,740.0	7,379.2	7,331.5	26.7	18.9	-55.74	-30.3	870.2	1,352.8	1,318.2	34.68	39.007	
9,300.0	7,740.0	7,370.4	7,323.1	28.2	18.8	-55.16	-32.7	869.3	1,438.1	1,402.4	35.73	40.248	
9,400.0	7,740.0	7,350.0	7,303.5	29.7	18.8	-53.81	-37.9	867.0	1,525.3	1,488.7	36.53	41.750	
9,500.0	7,740.0	7,350.0	7,303.5	31.3	18.8	-53.81	-37.9	867.0	1,613.5	1,575.7	37.77	42.713	
9,600.0	7,740.0	7,350.0	7,303.5	32.8	18.8	-53.81	-37.9	867.0	1,703.0	1,663.9	39.03	43.629	
9,700.0	7,740.0	7,350.0	7,303.5	34.4	18.8	-53.81	-37.9	867.0	1,793.6	1,753.3	40.31	44.499	
9,800.0	7,740.0	7,350.0	7,303.5	36.0	18.8	-53.81	-37.9	867.0	1,885.1	1,843.6	41.59	45.323	
9,900.0	7,740.0	7,350.0	7,303.5	37.6	18.8	-53.81	-37.9	867.0	1,977.5	1,934.6	42.89	46.105	
10,000.0	7,740.0	7,327.9	7,282.1	39.2	18.7	-52.37	-42.6	864.5	2,070.1	2,026.5	43.57	47.512	
10,100.0	7,740.0	7,323.6	7,277.9	40.9	18.7	-52.10	-43.4	864.0	2,163.6	2,118.9	44.73	48.365	
10,200.0	7,740.0	7,300.0	7,254.8	42.5	18.7	-50.61	-47.4	861.3	2,258.0	2,212.7	45.30	49.851	
10,300.0	7,740.0	7,300.0	7,254.8	44.1	18.7	-50.61	-47.4	861.3	2,352.3	2,305.8	46.57	50.512	
10,400.0	7,740.0	7,300.0	7,254.8	45.8	18.7	-50.61	-47.4	861.3	2,447.1	2,399.3	47.85	51.140	
10,500.0	7,740.0	7,300.0	7,254.8	47.5	18.7	-50.61	-47.4	861.3	2,542.3	2,493.2	49.14	51.738	
10,600.0	7,740.0	7,300.0	7,254.8	49.1	18.7	-50.61	-47.4	861.3	2,637.9	2,587.4	50.43	52.307	
10,700.0	7,740.0	7,300.0	7,254.8	50.8	18.7	-50.61	-47.4	861.3	2,733.7	2,682.0	51.73	52.850	
10,800.0	7,740.0	7,300.0	7,254.8	52.5	18.7	-50.61	-47.4	861.3	2,829.9	2,776.8	53.03	53.367	
10,900.0	7,740.0	7,300.0	7,254.8	54.2	18.7	-50.61	-47.4	861.3	2,926.3	2,871.9	54.33	53.860	
11,000.0	7,740.0	7,300.0	7,254.8	55.9	18.7	-50.61	-47.4	861.3	3,022.9	2,967.3	55.64	54.331	
11,100.0	7,740.0	7,300.0	7,254.8	57.6	18.7	-50.61	-47.4	861.3	3,119.8	3,062.8	56.95	54.781	
11,200.0	7,740.0	7,300.0	7,254.8	59.3	18.7	-50.61	-47.4	861.3	3,216.8	3,158.5	58.26	55.211	
11,300.0	7,740.0	7,300.0	7,254.8	61.0	18.7	-50.61	-47.4	861.3	3,314.0	3,254.5	59.58	55.623	
11,400.0	7,740.0	7,300.0	7,254.8	62.7	18.7	-50.61	-47.4	861.3	3,411.4	3,350.5	60.90	56.018	
11,500.0	7,740.0	7,300.0	7,254.8	64.4	18.7	-50.61	-47.4	861.3	3,508.9	3,446.7	62.22	56.396	
11,600.0	7,740.0	7,300.0	7,254.8	66.1	18.7	-50.61	-47.4	861.3	3,606.6	3,543.1	63.54	56.759	
11,700.0	7,740.0	7,300.0	7,254.8	67.8	18.7	-50.61	-47.4	861.3	3,704.4	3,639.5	64.87	57.107	
11,800.0	7,740.0	7,300.0	7,254.8	69.5	18.7	-50.61	-47.4	861.3	3,802.3	3,736.1	66.19	57.441	
11,900.0	7,740.0	7,300.0	7,254.8	71.2	18.7	-50.61	-47.4	861.3	3,900.3	3,832.8	67.52	57.762	
12,000.0	7,740.0	7,278.0	7,233.1	72.9	18.6	-49.25	-50.3	858.8	3,997.9	3,930.2	67.70	59.052	
12,100.0	7,740.0	7,276.7	7,231.8	74.7	18.6	-49.17	-50.4	858.6	4,096.1	4,027.1	68.93	59.421	
12,200.0	7,740.0	7,275.3	7,230.5	76.4	18.6	-49.09	-50.6	858.5	4,194.3	4,124.1	70.17	59.776	
12,300.0	7,740.0	7,274.1	7,229.3	78.1	18.6	-49.01	-50.7	858.3	4,292.6	4,221.2	71.40	60.120	
12,400.0	7,740.0	7,272.9	7,228.1	79.8	18.6	-48.94	-50.8	858.2	4,391.0	4,318.3	72.64	60.451	
12,500.0	7,740.0	7,250.0	7,205.4	81.6	18.5	-47.58	-52.7	855.5	4,489.9	4,417.3	72.61	61.836	
12,600.0	7,740.0	7,250.0	7,205.4	83.3	18.5	-47.58	-52.7	855.5	4,588.3	4,514.5	73.89	62.099	
12,700.0	7,740.0	7,250.0	7,205.4	85.0	18.5	-47.58	-52.7	855.5	4,686.9	4,611.7	75.17	62.354	
12,800.0	7,740.0	7,250.0	7,205.4	86.7	18.5	-47.58	-52.7	855.5	4,785.5	4,709.0	76.45	62.600	
12,900.0	7,740.0	7,250.0	7,205.4	88.5	18.5	-47.58	-52.7	855.5	4,884.1	4,806.4	77.73	62.837	
13,000.0	7,740.0	7,250.0	7,205.4	90.2	18.5	-47.58	-52.7	855.5	4,982.8	4,903.8	79.01	63.068	
13,100.0	7,740.0	7,250.0	7,205.4	91.9	18.5	-47.58	-52.7	855.5	5,081.6	5,001.3	80.29	63.290	
13,200.0	7,740.0	7,250.0	7,205.4	93.7	18.5	-47.58	-52.7	855.5	5,180.4	5,098.8	81.57	63.506	
13,300.0	7,740.0	7,250.0	7,205.4	95.4	18.5	-47.58	-52.7	855.5	5,279.2	5,196.4	82.86	63.716	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.42	-0.7	100.2	100.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.42	-0.7	100.2	100.2	99.9	0.30	329.943		
200.0	200.0	200.0	200.0	0.3	0.3	90.42	-0.7	100.2	100.2	99.5	0.65	153.503		
300.0	300.0	300.0	300.0	0.5	0.5	90.42	-0.7	100.2	100.2	99.2	1.00	100.018 CC, ES		
400.0	400.0	398.3	398.3	0.7	0.7	90.35	-0.6	101.0	101.0	99.7	1.35	74.964		
500.0	500.0	496.5	496.5	0.9	0.8	64.61	-0.3	103.5	103.2	101.5	1.69	60.916		
600.0	600.0	594.7	594.6	1.0	1.0	65.50	0.3	107.7	106.3	104.3	2.04	52.042		
700.0	699.9	692.7	692.4	1.2	1.2	66.98	1.1	113.5	110.5	108.1	2.40	46.072		
800.0	799.7	790.6	790.0	1.4	1.4	68.96	2.1	121.0	115.8	113.0	2.76	41.889		
898.2	897.5	886.5	885.5	1.6	1.6	71.25	3.4	129.9	122.1	119.0	3.14	38.928		
900.0	899.4	888.3	887.3	1.6	1.6	71.30	3.4	130.1	122.2	119.1	3.14	38.882		
1,000.0	999.0	985.8	984.2	1.8	1.9	73.58	4.9	140.8	130.3	126.8	3.53	36.859		
1,100.0	1,098.6	1,083.1	1,080.6	2.0	2.1	75.37	6.6	153.1	140.1	136.2	3.93	35.612		
1,200.0	1,198.2	1,180.0	1,176.6	2.3	2.4	76.69	8.5	167.0	151.7	147.3	4.34	34.921		
1,300.0	1,297.9	1,276.6	1,271.9	2.5	2.7	77.62	10.6	182.4	164.8	160.0	4.76	34.640 SF		
1,400.0	1,397.5	1,372.9	1,366.6	2.7	3.1	78.20	13.0	199.4	179.5	174.4	5.18	34.670		
1,500.0	1,497.1	1,470.2	1,462.1	2.9	3.4	78.54	15.5	217.9	195.6	190.0	5.61	34.896		
1,600.0	1,596.7	1,568.8	1,558.9	3.2	3.8	78.81	18.2	236.9	211.9	205.8	6.04	35.083		
1,700.0	1,696.3	1,667.5	1,655.7	3.4	4.1	79.05	20.8	255.9	228.1	221.6	6.48	35.229		
1,800.0	1,796.0	1,766.2	1,752.5	3.6	4.5	79.25	23.4	274.8	244.4	237.5	6.91	35.344		
1,900.0	1,895.6	1,864.8	1,849.3	3.8	4.9	79.43	26.0	293.8	260.6	253.3	7.35	35.436		
2,000.0	1,995.2	1,963.5	1,946.1	4.1	5.2	79.58	28.7	312.8	276.9	269.1	7.80	35.510		
2,100.0	2,094.8	2,062.2	2,042.9	4.3	5.6	79.72	31.3	331.7	293.1	284.9	8.24	35.570		
2,200.0	2,194.5	2,160.8	2,139.6	4.5	6.0	79.84	33.9	350.7	309.4	300.7	8.69	35.618		
2,300.0	2,294.1	2,259.5	2,236.4	4.8	6.3	79.96	36.5	369.7	325.7	316.5	9.13	35.658		
2,400.0	2,393.7	2,358.2	2,333.2	5.0	6.7	80.06	39.1	388.6	341.9	332.4	9.58	35.690		
2,500.0	2,493.3	2,456.8	2,430.0	5.2	7.1	80.15	41.8	407.6	358.2	348.2	10.03	35.717		
2,600.0	2,592.9	2,555.5	2,526.8	5.4	7.5	80.23	44.4	426.6	374.5	364.0	10.48	35.739		
2,700.0	2,692.6	2,654.2	2,623.6	5.7	7.8	80.31	47.0	445.5	390.8	379.8	10.93	35.757		
2,800.0	2,792.2	2,752.8	2,720.4	5.9	8.2	80.38	49.6	464.5	407.0	395.6	11.38	35.772		
2,900.0	2,891.8	2,851.5	2,817.2	6.1	8.6	80.45	52.3	483.5	423.3	411.5	11.83	35.784		
3,000.0	2,991.4	2,950.2	2,914.0	6.4	9.0	80.51	54.9	502.4	439.6	427.3	12.28	35.794		
3,100.0	3,091.1	3,048.8	3,010.8	6.6	9.4	80.56	57.5	521.4	455.8	443.1	12.73	35.802		
3,200.0	3,190.7	3,147.5	3,107.6	6.8	9.7	80.62	60.1	540.4	472.1	458.9	13.18	35.809		
3,300.0	3,290.3	3,246.2	3,204.3	7.0	10.1	80.67	62.7	559.3	488.4	474.7	13.64	35.814		
3,400.0	3,389.9	3,344.8	3,301.1	7.3	10.5	80.71	65.4	578.3	504.7	490.6	14.09	35.818		
3,500.0	3,489.5	3,443.5	3,397.9	7.5	10.9	80.75	68.0	597.3	520.9	506.4	14.54	35.822		
3,600.0	3,589.2	3,542.2	3,494.7	7.7	11.2	80.79	70.6	616.2	537.2	522.2	15.00	35.824		
3,700.0	3,688.8	3,640.8	3,591.5	8.0	11.6	80.83	73.2	635.2	553.5	538.0	15.45	35.826		
3,800.0	3,788.4	3,739.5	3,688.3	8.2	12.0	80.87	75.9	654.2	569.7	553.8	15.90	35.828		
3,900.0	3,888.0	3,838.2	3,785.1	8.4	12.4	80.90	78.5	673.1	586.0	569.7	16.36	35.829		
4,000.0	3,987.7	3,936.8	3,881.9	8.7	12.8	80.93	81.1	692.1	602.3	585.5	16.81	35.829		
4,100.0	4,087.3	4,035.5	3,978.7	8.9	13.1	80.96	83.7	711.1	618.6	601.3	17.26	35.829		
4,200.0	4,186.9	4,134.2	4,075.5	9.1	13.5	80.99	86.3	730.0	634.8	617.1	17.72	35.829		
4,300.0	4,286.5	4,232.8	4,172.2	9.4	13.9	81.02	89.0	749.0	651.1	632.9	18.17	35.829		
4,400.0	4,386.1	4,331.5	4,269.0	9.6	14.3	81.05	91.6	768.0	667.4	648.8	18.63	35.828		
4,500.0	4,485.8	4,430.2	4,365.8	9.8	14.7	81.07	94.2	786.9	683.7	664.6	19.08	35.827		
4,600.0	4,585.4	4,528.8	4,462.6	10.0	15.0	81.09	96.8	805.9	699.9	680.4	19.54	35.826		
4,700.0	4,685.0	4,627.5	4,559.4	10.3	15.4	81.12	99.5	824.9	716.2	696.2	19.99	35.825		
4,800.0	4,784.6	4,726.2	4,656.2	10.5	15.8	81.14	102.1	843.8	732.5	712.0	20.45	35.823		
4,900.0	4,884.3	4,824.8	4,753.0	10.7	16.2	81.16	104.7	862.8	748.8	727.9	20.90	35.822		
5,000.0	4,983.9	4,923.5	4,849.8	11.0	16.6	81.18	107.3	881.8	765.0	743.7	21.36	35.821		

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 2C-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 2C-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 #2	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
5,100.0	5,083.5	5,022.2	4,946.6	11.2	16.9	81.20	109.9	900.7	781.3	759.5	21.81	35.819	
5,200.0	5,183.1	5,120.8	5,043.4	11.4	17.3	81.22	112.6	919.7	797.6	775.3	22.27	35.817	
5,300.0	5,282.7	5,219.5	5,140.2	11.7	17.7	81.23	115.2	938.7	813.9	791.1	22.72	35.816	
5,400.0	5,382.4	5,318.2	5,236.9	11.9	18.1	81.25	117.8	957.6	830.1	807.0	23.18	35.814	
5,500.0	5,482.0	5,416.8	5,333.7	12.1	18.5	81.27	120.4	976.6	846.4	822.8	23.63	35.812	
5,600.0	5,581.6	5,515.5	5,430.5	12.4	18.8	81.28	123.1	995.6	862.7	838.6	24.09	35.811	
5,700.0	5,681.2	5,614.2	5,527.3	12.6	19.2	81.30	125.7	1,014.5	879.0	854.4	24.55	35.809	
5,800.0	5,780.9	5,712.8	5,624.1	12.8	19.6	81.31	128.3	1,033.5	895.2	870.2	25.00	35.807	
5,900.0	5,880.5	5,811.5	5,720.9	13.0	20.0	81.32	130.9	1,052.5	911.5	886.1	25.46	35.805	
6,000.0	5,980.1	5,910.2	5,817.7	13.3	20.4	81.34	133.5	1,071.4	927.8	901.9	25.91	35.804	
6,100.0	6,079.7	6,008.8	5,914.5	13.5	20.7	81.35	136.2	1,090.4	944.1	917.7	26.37	35.802	
6,200.0	6,179.3	6,107.5	6,011.3	13.7	21.1	81.36	138.8	1,109.4	960.4	933.5	26.83	35.800	
6,300.0	6,279.0	6,206.2	6,108.1	14.0	21.5	81.37	141.4	1,128.3	976.6	949.3	27.28	35.798	
6,400.0	6,378.6	6,304.8	6,204.9	14.2	21.9	81.39	144.0	1,147.3	992.9	965.2	27.74	35.797	
6,500.0	6,478.2	6,403.5	6,301.6	14.4	22.3	81.40	146.7	1,166.3	1,009.2	981.0	28.19	35.795	
6,600.0	6,577.8	6,502.2	6,398.4	14.7	22.7	81.41	149.3	1,185.2	1,025.5	996.8	28.65	35.793	
6,700.0	6,677.5	6,600.8	6,495.2	14.9	23.0	81.42	151.9	1,204.2	1,041.7	1,012.6	29.11	35.791	
6,800.0	6,777.1	6,699.5	6,592.0	15.1	23.4	81.43	154.5	1,223.2	1,058.0	1,028.4	29.56	35.790	
6,900.0	6,876.7	6,798.2	6,688.8	15.4	23.8	81.44	157.1	1,242.1	1,074.3	1,044.3	30.02	35.788	
7,000.0	6,976.3	6,896.8	6,785.6	15.6	24.2	81.45	159.8	1,261.1	1,090.6	1,060.1	30.47	35.786	
7,100.0	7,075.9	6,995.5	6,882.4	15.8	24.6	81.46	162.4	1,280.1	1,106.8	1,075.9	30.93	35.785	
7,147.0	7,122.8	7,041.9	6,927.9	15.9	24.7	81.46	163.6	1,289.0	1,114.5	1,083.3	31.14	35.784	
7,150.0	7,125.8	7,044.8	6,930.8	15.9	24.7	79.90	163.7	1,289.6	1,115.0	1,083.8	31.17	35.769	
7,200.0	7,175.7	7,130.7	7,014.8	16.0	25.1	-2.83	169.4	1,306.1	1,122.0	1,090.4	31.58	35.526	
7,250.0	7,225.5	7,240.8	7,119.8	16.0	25.6	-53.06	194.7	1,326.8	1,125.2	1,093.4	31.77	35.410	
7,300.0	7,275.0	7,331.1	7,201.0	16.0	26.0	-64.64	230.4	1,343.0	1,125.3	1,093.6	31.71	35.491	
7,350.0	7,323.6	7,398.8	7,257.8	16.0	26.3	-70.74	265.4	1,354.4	1,124.0	1,092.5	31.48	35.708	
7,400.0	7,371.0	7,446.6	7,295.2	15.9	26.6	-74.75	294.2	1,362.0	1,122.4	1,091.2	31.19	35.979	
7,450.0	7,416.9	7,478.8	7,319.0	15.8	26.8	-77.45	315.3	1,366.9	1,121.4	1,090.5	30.92	36.272	
7,466.2	7,431.3	7,486.5	7,324.5	15.7	26.8	-78.10	320.5	1,368.0	1,121.3	1,090.5	30.83	36.376	
7,500.0	7,460.8	7,499.2	7,333.4	15.6	26.9	-79.17	329.3	1,369.8	1,121.7	1,091.0	30.65	36.591	
7,550.0	7,502.6	7,510.8	7,341.4	15.5	27.0	-80.10	337.6	1,371.4	1,123.5	1,093.0	30.43	36.921	
7,600.0	7,541.7	7,515.8	7,344.8	15.3	27.0	-80.39	341.2	1,372.1	1,127.0	1,096.7	30.22	37.290	
7,650.0	7,578.1	7,515.8	7,344.8	15.2	27.0	-80.16	341.2	1,372.1	1,132.2	1,102.2	30.02	37.711	
7,700.0	7,611.3	7,511.9	7,342.2	15.0	27.0	-79.51	338.4	1,371.6	1,139.0	1,109.2	29.81	38.204	
7,750.0	7,641.1	7,505.1	7,337.5	14.9	26.9	-78.50	333.5	1,370.6	1,147.4	1,117.9	29.58	38.786	
7,800.0	7,667.4	7,500.0	7,334.0	14.8	26.9	-77.40	329.9	1,369.9	1,157.2	1,127.9	29.34	39.444	
7,850.0	7,689.8	7,484.7	7,323.2	14.7	26.8	-75.67	319.3	1,367.7	1,168.2	1,139.2	29.02	40.261	
7,900.0	7,708.2	7,472.1	7,314.1	14.7	26.7	-73.96	310.7	1,365.9	1,180.1	1,151.5	28.66	41.171	
7,950.0	7,722.6	7,450.0	7,297.7	14.7	26.6	-71.76	296.3	1,362.5	1,192.9	1,164.7	28.20	42.294	
8,000.0	7,732.7	7,450.0	7,297.7	14.7	26.6	-70.49	296.3	1,362.5	1,206.1	1,178.2	27.92	43.198	
8,050.0	7,738.5	7,427.3	7,280.3	14.8	26.5	-68.23	282.2	1,359.0	1,219.7	1,192.2	27.46	44.414	
8,091.8	7,740.0	7,413.5	7,269.5	15.0	26.4	-66.58	273.9	1,356.8	1,231.1	1,204.0	27.15	45.338	
8,100.0	7,740.0	7,400.0	7,258.7	15.0	26.3	-66.06	266.1	1,354.6	1,233.5	1,206.4	27.06	45.584	
8,200.0	7,740.0	7,380.0	7,242.4	15.4	26.2	-65.28	255.0	1,351.3	1,264.2	1,236.9	27.33	46.256	
8,300.0	7,740.0	7,350.0	7,217.2	16.1	26.1	-64.08	239.5	1,346.3	1,300.9	1,273.2	27.67	47.023	
8,400.0	7,740.0	7,331.0	7,200.9	16.9	26.0	-63.32	230.3	1,343.0	1,343.1	1,314.8	28.24	47.565	
8,500.0	7,740.0	7,300.0	7,173.7	17.8	25.8	-62.04	216.6	1,337.6	1,390.6	1,361.8	28.80	48.286	
8,600.0	7,740.0	7,300.0	7,173.7	18.8	25.8	-62.04	216.6	1,337.6	1,442.7	1,413.0	29.75	48.500	
8,700.0	7,740.0	7,278.8	7,154.6	20.0	25.7	-61.16	208.1	1,333.7	1,499.3	1,468.8	30.57	49.053	
8,800.0	7,740.0	7,250.0	7,128.3	21.2	25.6	-59.97	197.7	1,328.5	1,560.2	1,528.8	31.35	49.768	
8,900.0	7,740.0	7,250.0	7,128.3	22.5	25.6	-59.97	197.7	1,328.5	1,624.2	1,591.7	32.49	49.997	

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 2C-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 2C-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 #2	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	7,250.0	7,128.3	23.9	25.6	-59.97	197.7	1,328.5	1,691.8	1,658.1	33.67	50.242		
9,100.0	7,740.0	7,250.0	7,128.3	25.3	25.6	-59.97	197.7	1,328.5	1,762.4	1,727.5	34.90	50.500		
9,200.0	7,740.0	7,223.9	7,104.0	26.7	25.5	-58.87	189.4	1,323.7	1,835.1	1,799.3	35.82	51.224		
9,300.0	7,740.0	7,200.0	7,081.4	28.2	25.4	-57.87	182.9	1,319.2	1,910.6	1,873.9	36.77	51.957		
9,400.0	7,740.0	7,200.0	7,081.4	29.7	25.4	-57.87	182.9	1,319.2	1,987.8	1,949.8	38.06	52.232		
9,500.0	7,740.0	7,200.0	7,081.4	31.3	25.4	-57.87	182.9	1,319.2	2,067.0	2,027.6	39.36	52.510		
9,600.0	7,740.0	7,200.0	7,081.4	32.8	25.4	-57.87	182.9	1,319.2	2,147.9	2,107.2	40.69	52.790		
9,700.0	7,740.0	7,200.0	7,081.4	34.4	25.4	-57.87	182.9	1,319.2	2,230.4	2,188.3	42.03	53.070		
9,800.0	7,740.0	7,200.0	7,081.4	36.0	25.4	-57.87	182.9	1,319.2	2,314.2	2,270.8	43.38	53.347		
9,900.0	7,740.0	7,179.9	7,062.3	37.6	25.3	-57.03	178.1	1,315.4	2,398.9	2,354.5	44.40	54.035		
10,000.0	7,740.0	7,175.4	7,057.9	39.2	25.3	-56.85	177.2	1,314.6	2,484.9	2,439.2	45.68	54.403		
10,100.0	7,740.0	7,171.1	7,053.9	40.9	25.3	-56.67	176.3	1,313.8	2,571.8	2,524.9	46.96	54.762		
10,200.0	7,740.0	7,150.0	7,033.5	42.5	25.2	-55.79	172.3	1,309.7	2,660.0	2,612.1	47.92	55.509		
10,300.0	7,740.0	7,150.0	7,033.5	44.1	25.2	-55.79	172.3	1,309.7	2,748.5	2,699.2	49.29	55.767		
10,400.0	7,740.0	7,150.0	7,033.5	45.8	25.2	-55.79	172.3	1,309.7	2,837.8	2,787.2	50.66	56.018		
10,500.0	7,740.0	7,150.0	7,033.5	47.5	25.2	-55.79	172.3	1,309.7	2,927.8	2,875.8	52.04	56.263		
10,600.0	7,740.0	7,150.0	7,033.5	49.1	25.2	-55.79	172.3	1,309.7	3,018.4	2,965.0	53.42	56.502		
10,700.0	7,740.0	7,150.0	7,033.5	50.8	25.2	-55.79	172.3	1,309.7	3,109.6	3,054.8	54.81	56.734		
10,800.0	7,740.0	7,150.0	7,033.5	52.5	25.2	-55.79	172.3	1,309.7	3,201.4	3,145.2	56.20	56.960		
10,900.0	7,740.0	7,150.0	7,033.5	54.2	25.2	-55.79	172.3	1,309.7	3,293.6	3,236.0	57.60	57.180		
11,000.0	7,740.0	7,150.0	7,033.5	55.9	25.2	-55.79	172.3	1,309.7	3,386.2	3,327.2	59.00	57.393		
11,100.0	7,740.0	7,150.0	7,033.5	57.6	25.2	-55.79	172.3	1,309.7	3,479.3	3,418.9	60.40	57.600		
11,200.0	7,740.0	7,150.0	7,033.5	59.3	25.2	-55.79	172.3	1,309.7	3,572.7	3,510.9	61.81	57.801		
11,300.0	7,740.0	7,150.0	7,033.5	61.0	25.2	-55.79	172.3	1,309.7	3,666.5	3,603.3	63.22	57.996		
11,400.0	7,740.0	7,150.0	7,033.5	62.7	25.2	-55.79	172.3	1,309.7	3,760.6	3,696.0	64.63	58.185		
11,500.0	7,740.0	7,150.0	7,033.5	64.4	25.2	-55.79	172.3	1,309.7	3,855.0	3,788.9	66.05	58.369		
11,600.0	7,740.0	7,150.0	7,033.5	66.1	25.2	-55.79	172.3	1,309.7	3,949.7	3,882.2	67.46	58.547		
11,700.0	7,740.0	7,150.0	7,033.5	67.8	25.2	-55.79	172.3	1,309.7	4,044.6	3,975.7	68.88	58.720		
11,800.0	7,740.0	7,127.3	7,011.5	69.5	25.1	-54.86	168.9	1,305.4	4,139.3	4,069.7	69.60	59.474		
11,900.0	7,740.0	7,125.7	7,009.9	71.2	25.1	-54.79	168.7	1,305.1	4,234.6	4,163.6	70.95	59.681		
12,000.0	7,740.0	7,124.2	7,008.4	72.9	25.1	-54.73	168.6	1,304.8	4,330.1	4,257.8	72.31	59.883		
12,100.0	7,740.0	7,122.7	7,007.0	74.7	25.1	-54.67	168.4	1,304.5	4,425.8	4,352.1	73.67	60.079		
12,200.0	7,740.0	7,100.0	6,984.9	76.4	25.0	-53.75	166.1	1,300.2	4,522.1	4,447.8	74.30	60.865		
12,300.0	7,740.0	7,100.0	6,984.9	78.1	25.0	-53.75	166.1	1,300.2	4,618.2	4,542.5	75.69	61.014		
12,400.0	7,740.0	7,100.0	6,984.9	79.8	25.0	-53.75	166.1	1,300.2	4,714.3	4,637.3	77.08	61.159		
12,500.0	7,740.0	7,100.0	6,984.9	81.6	25.0	-53.75	166.1	1,300.2	4,810.7	4,732.2	78.48	61.301		
12,600.0	7,740.0	7,100.0	6,984.9	83.3	25.0	-53.75	166.1	1,300.2	4,907.2	4,827.3	79.87	61.438		
12,700.0	7,740.0	7,100.0	6,984.9	85.0	25.0	-53.75	166.1	1,300.2	5,003.8	4,922.5	81.27	61.572		
12,800.0	7,740.0	7,100.0	6,984.9	86.7	25.0	-53.75	166.1	1,300.2	5,100.5	5,017.9	82.66	61.701		
12,900.0	7,740.0	7,100.0	6,984.9	88.5	25.0	-53.75	166.1	1,300.2	5,197.4	5,113.4	84.06	61.828		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
0.0	0.0	0.0	0.0	0.0	0.0	90.38	-0.7	110.0	110.0				
100.0	100.0	100.0	100.0	0.2	0.2	90.38	-0.7	110.0	110.0	109.7	0.30	362.198	
200.0	200.0	200.0	200.0	0.3	0.3	90.38	-0.7	110.0	110.0	109.3	0.65	168.509	
233.3	233.3	233.3	233.3	0.4	0.4	90.38	-0.7	110.0	110.0	109.2	0.77	143.015 CC	
300.0	300.0	299.1	299.1	0.5	0.5	90.40	-0.8	110.2	110.2	109.2	1.00	110.182 ES	
400.0	400.0	397.2	397.2	0.7	0.7	90.54	-1.1	111.9	111.9	110.5	1.35	83.091	
500.0	500.0	495.2	495.1	0.9	0.9	65.23	-1.6	115.2	114.9	113.2	1.69	67.900	
600.0	600.0	593.1	592.9	1.0	1.0	66.68	-2.5	120.1	118.9	116.9	2.04	58.271	
700.0	699.9	690.8	690.4	1.2	1.2	68.84	-3.7	126.7	124.1	121.7	2.39	51.816	
800.0	799.7	788.2	787.4	1.4	1.5	71.55	-5.1	134.9	130.5	127.8	2.76	47.351	
898.2	897.5	883.6	882.3	1.6	1.7	74.59	-6.8	144.5	138.4	135.2	3.13	44.273	
900.0	899.4	885.3	884.0	1.6	1.7	74.65	-6.8	144.6	138.5	135.4	3.13	44.226	
1,000.0	999.0	982.1	980.1	1.8	1.9	77.73	-8.8	156.0	148.4	144.9	3.51	42.218	
1,100.0	1,098.6	1,078.6	1,075.7	2.0	2.2	80.36	-11.1	168.9	160.3	156.4	3.90	41.065	
1,200.0	1,198.2	1,174.6	1,170.6	2.3	2.5	82.53	-13.7	183.3	174.2	169.9	4.30	40.521	
1,300.0	1,297.9	1,270.2	1,264.8	2.5	2.8	84.29	-16.5	199.2	189.9	185.2	4.70	40.418 SF	
1,400.0	1,397.5	1,365.3	1,358.3	2.7	3.1	85.68	-19.5	216.6	207.4	202.3	5.10	40.638	
1,500.0	1,497.1	1,459.9	1,450.9	2.9	3.5	86.77	-22.8	235.3	226.5	221.0	5.51	41.102	
1,600.0	1,596.7	1,553.9	1,542.7	3.2	3.9	87.59	-26.4	255.5	247.3	241.4	5.92	41.751	
1,700.0	1,696.3	1,647.2	1,633.4	3.4	4.3	88.20	-30.2	276.9	269.7	263.3	6.34	42.545	
1,800.0	1,796.0	1,739.9	1,723.2	3.6	4.7	88.64	-34.2	299.7	293.6	286.8	6.76	43.459	
1,900.0	1,895.6	1,837.9	1,817.9	3.8	5.2	88.86	-37.9	324.7	318.2	311.0	7.19	44.245	
2,000.0	1,995.2	1,936.9	1,913.5	4.1	5.7	88.79	-40.0	350.2	342.3	334.7	7.64	44.824	
2,100.0	2,094.8	2,038.3	2,011.5	4.3	6.1	88.51	-40.7	376.2	365.6	357.6	8.09	45.220	
2,200.0	2,194.5	2,142.1	2,112.3	4.5	6.6	88.34	-41.1	401.1	387.5	378.9	8.54	45.375	
2,300.0	2,294.1	2,242.5	2,210.0	4.8	7.0	88.28	-41.5	423.8	408.0	399.0	8.99	45.394	
2,400.0	2,393.7	2,340.4	2,305.4	5.0	7.4	88.23	-41.9	445.8	428.4	419.0	9.43	45.417	
2,500.0	2,493.3	2,438.3	2,400.8	5.2	7.9	88.19	-42.3	467.8	448.9	439.0	9.88	45.433	
2,600.0	2,592.9	2,536.2	2,496.2	5.4	8.3	88.15	-42.8	489.8	469.3	459.0	10.33	45.443	
2,700.0	2,692.6	2,634.0	2,591.6	5.7	8.7	88.11	-43.2	511.8	489.7	478.9	10.77	45.449	
2,800.0	2,792.2	2,731.9	2,687.0	5.9	9.1	88.08	-43.6	533.8	510.1	498.9	11.22	45.452	
2,900.0	2,891.8	2,829.8	2,782.3	6.1	9.5	88.05	-44.0	555.9	530.5	518.9	11.67	45.452	
3,000.0	2,991.4	2,927.7	2,877.7	6.4	10.0	88.02	-44.4	577.9	551.0	538.8	12.12	45.450	
3,100.0	3,091.1	3,025.6	2,973.1	6.6	10.4	87.99	-44.8	599.9	571.4	558.8	12.57	45.446	
3,200.0	3,190.7	3,123.5	3,068.5	6.8	10.8	87.97	-45.2	621.9	591.8	578.8	13.02	45.441	
3,300.0	3,290.3	3,221.4	3,163.9	7.0	11.2	87.95	-45.6	643.9	612.2	598.8	13.47	45.435	
3,400.0	3,389.9	3,319.3	3,259.3	7.3	11.7	87.93	-46.0	665.9	632.7	618.7	13.93	45.428	
3,500.0	3,489.5	3,417.2	3,354.6	7.5	12.1	87.91	-46.4	687.9	653.1	638.7	14.38	45.421	
3,600.0	3,589.2	3,515.1	3,450.0	7.7	12.5	87.89	-46.8	709.9	673.5	658.7	14.83	45.413	
3,700.0	3,688.8	3,613.0	3,545.4	8.0	13.0	87.87	-47.2	731.9	693.9	678.6	15.28	45.405	
3,800.0	3,788.4	3,710.9	3,640.8	8.2	13.4	87.85	-47.6	754.0	714.3	698.6	15.74	45.396	
3,900.0	3,888.0	3,808.8	3,736.2	8.4	13.8	87.84	-48.1	776.0	734.8	718.6	16.19	45.388	
4,000.0	3,987.7	3,906.6	3,831.6	8.7	14.2	87.82	-48.5	798.0	755.2	738.5	16.64	45.379	
4,100.0	4,087.3	4,004.5	3,927.0	8.9	14.7	87.81	-48.9	820.0	775.6	758.5	17.10	45.370	
4,200.0	4,186.9	4,102.4	4,022.3	9.1	15.1	87.79	-49.3	842.0	796.0	778.5	17.55	45.362	
4,300.0	4,286.5	4,200.3	4,117.7	9.4	15.5	87.78	-49.7	864.0	816.5	798.5	18.00	45.353	
4,400.0	4,386.1	4,298.2	4,213.1	9.6	15.9	87.77	-50.1	886.0	836.9	818.4	18.46	45.345	
4,500.0	4,485.8	4,396.1	4,308.5	9.8	16.4	87.76	-50.5	908.0	857.3	838.4	18.91	45.336	
4,600.0	4,585.4	4,494.0	4,403.9	10.0	16.8	87.75	-50.9	930.0	877.7	858.4	19.36	45.328	
4,700.0	4,685.0	4,591.9	4,499.3	10.3	17.2	87.74	-51.3	952.1	898.1	878.3	19.82	45.320	
4,800.0	4,784.6	4,689.8	4,594.6	10.5	17.7	87.73	-51.7	974.1	918.6	898.3	20.27	45.312	
4,900.0	4,884.3	4,787.7	4,690.0	10.7	18.1	87.72	-52.1	996.1	939.0	918.3	20.73	45.304	

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 2C-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 2C-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 #2	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: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,983.9	4,885.6	4,785.4	11.0	18.5	87.71	-52.5	1,018.1	959.4	938.2	21.18	45.296		
5,100.0	5,083.5	4,983.5	4,880.8	11.2	18.9	87.70	-52.9	1,040.1	979.8	958.2	21.64	45.288		
5,200.0	5,183.1	5,081.3	4,976.2	11.4	19.4	87.69	-53.4	1,062.1	1,000.3	978.2	22.09	45.281		
5,300.0	5,282.7	5,179.2	5,071.6	11.7	19.8	87.68	-53.8	1,084.1	1,020.7	998.1	22.54	45.273		
5,400.0	5,382.4	5,277.1	5,167.0	11.9	20.2	87.67	-54.2	1,106.1	1,041.1	1,018.1	23.00	45.266		
5,500.0	5,482.0	5,375.0	5,262.3	12.1	20.7	87.67	-54.6	1,128.1	1,061.5	1,038.1	23.45	45.259		
5,600.0	5,581.6	5,472.9	5,357.7	12.4	21.1	87.66	-55.0	1,150.2	1,081.9	1,058.0	23.91	45.252		
5,700.0	5,681.2	5,570.8	5,453.1	12.6	21.5	87.65	-55.4	1,172.2	1,102.4	1,078.0	24.36	45.245		
5,800.0	5,780.9	5,668.7	5,548.5	12.8	21.9	87.65	-55.8	1,194.2	1,122.8	1,098.0	24.82	45.239		
5,900.0	5,880.5	5,766.6	5,643.9	13.0	22.4	87.64	-56.2	1,216.2	1,143.2	1,117.9	25.27	45.232		
6,000.0	5,980.1	5,864.5	5,739.3	13.3	22.8	87.63	-56.6	1,238.2	1,163.6	1,137.9	25.73	45.226		
6,100.0	6,079.7	5,962.4	5,834.6	13.5	23.2	87.63	-57.0	1,260.2	1,184.1	1,157.9	26.18	45.220		
6,200.0	6,179.3	6,060.3	5,930.0	13.7	23.6	87.62	-57.4	1,282.2	1,204.5	1,177.8	26.64	45.214		
6,300.0	6,279.0	6,158.2	6,025.4	14.0	24.1	87.62	-57.8	1,304.2	1,224.9	1,197.8	27.10	45.208		
6,400.0	6,378.6	6,256.1	6,120.8	14.2	24.5	87.61	-58.2	1,326.2	1,245.3	1,217.8	27.55	45.202		
6,500.0	6,478.2	6,353.9	6,216.2	14.4	24.9	87.60	-58.7	1,348.3	1,265.8	1,237.7	28.01	45.196		
6,600.0	6,577.8	6,451.8	6,311.6	14.7	25.4	87.60	-59.1	1,370.3	1,286.2	1,257.7	28.46	45.191		
6,700.0	6,677.5	6,549.7	6,407.0	14.9	25.8	87.59	-59.5	1,392.3	1,306.6	1,277.7	28.92	45.185		
6,800.0	6,777.1	6,647.6	6,502.3	15.1	26.2	87.59	-59.9	1,414.3	1,327.0	1,297.7	29.37	45.180		
6,900.0	6,876.7	6,745.5	6,597.7	15.4	26.6	87.59	-60.3	1,436.3	1,347.4	1,317.6	29.83	45.175		
7,000.0	6,976.3	6,843.4	6,693.1	15.6	27.1	87.58	-60.7	1,458.3	1,367.9	1,337.6	30.28	45.170		
7,100.0	7,075.9	6,941.3	6,788.5	15.8	27.5	87.58	-61.1	1,480.3	1,388.3	1,357.6	30.74	45.165		
7,147.0	7,122.8	6,987.3	6,833.3	15.9	27.7	87.57	-61.3	1,490.7	1,397.9	1,366.9	30.95	45.162		
7,150.0	7,125.8	6,990.2	6,836.2	15.9	27.7	86.03	-61.3	1,491.3	1,398.5	1,367.5	30.98	45.135		
7,200.0	7,175.7	7,039.3	6,884.0	16.0	27.9	3.79	-61.5	1,502.4	1,407.7	1,376.3	31.40	44.828		
7,250.0	7,225.5	7,088.3	6,931.8	16.0	28.2	-44.53	-61.7	1,513.4	1,415.2	1,383.6	31.63	44.748		
7,300.0	7,275.0	7,137.0	6,979.1	16.0	28.4	-53.54	-61.9	1,524.3	1,420.9	1,389.3	31.65	44.890		
7,350.0	7,323.6	7,184.8	7,025.7	16.0	28.6	-57.23	-62.1	1,535.1	1,424.9	1,393.4	31.49	45.244		
7,400.0	7,371.0	7,231.5	7,071.2	15.9	28.8	-59.53	-62.3	1,545.6	1,427.2	1,396.1	31.17	45.788		
7,450.0	7,416.9	7,276.6	7,115.2	15.8	29.0	-61.35	-62.5	1,555.7	1,428.1	1,397.3	30.72	46.493		
7,500.0	7,460.8	7,319.9	7,157.4	15.6	29.2	-63.01	-62.7	1,565.5	1,427.5	1,397.3	30.17	47.319		
7,550.0	7,502.6	7,448.3	7,282.0	15.5	29.7	-67.04	-53.3	1,594.2	1,425.2	1,395.7	29.50	48.313		
7,600.0	7,541.7	7,576.7	7,401.5	15.3	30.2	-72.27	-16.2	1,621.5	1,419.4	1,390.4	29.00	48.940		
7,650.0	7,578.1	7,634.4	7,452.0	15.2	30.5	-75.41	9.2	1,633.0	1,412.8	1,384.2	28.56	49.467		
7,700.0	7,611.3	7,659.3	7,473.0	15.0	30.6	-77.24	21.7	1,637.8	1,406.7	1,378.4	28.23	49.822		
7,750.0	7,641.1	7,667.3	7,479.6	14.9	30.6	-78.26	26.0	1,639.3	1,401.5	1,373.5	27.95	50.148		
7,800.0	7,667.4	7,665.7	7,478.3	14.8	30.6	-78.74	25.1	1,639.0	1,397.4	1,369.7	27.70	50.444		
7,850.0	7,689.8	7,658.2	7,472.1	14.7	30.6	-78.84	21.2	1,637.6	1,394.3	1,366.8	27.50	50.709		
7,900.0	7,708.2	7,646.9	7,462.5	14.7	30.5	-78.65	15.3	1,635.5	1,392.4	1,365.1	27.34	50.935		
7,950.0	7,722.6	7,632.8	7,450.6	14.7	30.5	-78.24	8.4	1,632.7	1,391.5	1,364.3	27.23	51.103		
7,974.0	7,727.9	7,625.3	7,444.2	14.7	30.4	-77.98	4.8	1,631.3	1,391.4	1,364.2	27.20	51.148		
8,000.0	7,732.7	7,616.8	7,436.9	14.7	30.4	-77.65	0.9	1,629.6	1,391.5	1,364.3	27.18	51.194		
8,050.0	7,738.5	7,599.4	7,421.7	14.8	30.3	-76.91	-6.9	1,626.1	1,392.4	1,365.2	27.20	51.190		
8,091.8	7,740.0	7,584.1	7,408.1	15.0	30.3	-76.21	-13.3	1,623.0	1,393.6	1,366.4	27.27	51.097		
8,100.0	7,740.0	7,581.0	7,405.4	15.0	30.2	-76.10	-14.5	1,622.4	1,394.0	1,366.7	27.29	51.071		
8,200.0	7,740.0	7,550.0	7,377.4	15.4	30.1	-74.92	-26.2	1,616.0	1,401.2	1,373.5	27.66	50.663		
8,300.0	7,740.0	7,524.4	7,353.9	16.1	30.0	-73.93	-34.6	1,610.6	1,414.8	1,386.6	28.21	50.155		
8,400.0	7,740.0	7,500.0	7,331.0	16.9	29.9	-72.97	-41.7	1,605.4	1,434.7	1,405.8	28.90	49.637		
8,500.0	7,740.0	7,489.2	7,320.9	17.8	29.9	-72.54	-44.5	1,603.1	1,460.9	1,431.2	29.78	49.059		
8,600.0	7,740.0	7,476.2	7,308.6	18.8	29.8	-72.03	-47.6	1,600.3	1,493.2	1,462.4	30.75	48.561		
8,700.0	7,740.0	7,465.3	7,298.2	20.0	29.8	-71.59	-50.0	1,597.9	1,531.1	1,499.3	31.81	48.129		
8,800.0	7,740.0	7,450.0	7,283.6	21.2	29.7	-70.98	-53.0	1,594.5	1,574.3	1,541.4	32.92	47.823		

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 2C-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 2C-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 #2	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		
8,900.0	7,740.0	7,450.0	7,283.6	22.5	29.7	-70.98	-53.0	1,594.5	1,622.4	1,588.3	34.17	47.481		
9,000.0	7,740.0	7,450.0	7,283.6	23.9	29.7	-70.98	-53.0	1,594.5	1,639.7	1,639.7	35.47	47.221		
9,100.0	7,740.0	7,450.0	7,283.6	25.3	29.7	-70.98	-53.0	1,594.5	1,732.0	1,695.2	36.82	47.037		
9,200.0	7,740.0	7,429.8	7,264.2	26.7	29.6	-70.17	-56.4	1,590.1	1,792.3	1,754.3	38.06	47.088		
9,300.0	7,740.0	7,425.1	7,259.6	28.2	29.6	-69.98	-57.1	1,589.0	1,856.2	1,816.8	39.44	47.068		
9,400.0	7,740.0	7,420.8	7,255.5	29.7	29.6	-69.81	-57.7	1,588.1	1,923.2	1,882.3	40.84	47.094		
9,500.0	7,740.0	7,400.0	7,235.4	31.3	29.5	-68.98	-60.1	1,583.4	1,993.1	1,951.0	42.11	47.331		
9,600.0	7,740.0	7,400.0	7,235.4	32.8	29.5	-68.98	-60.1	1,583.4	2,065.1	2,021.5	43.58	47.392		
9,700.0	7,740.0	7,400.0	7,235.4	34.4	29.5	-68.98	-60.1	1,583.4	2,139.4	2,094.4	45.06	47.482		
9,800.0	7,740.0	7,400.0	7,235.4	36.0	29.5	-68.98	-60.1	1,583.4	2,215.7	2,169.2	46.55	47.595		
9,900.0	7,740.0	7,400.0	7,235.4	37.6	29.5	-68.98	-60.1	1,583.4	2,293.9	2,245.8	48.06	47.726		
10,000.0	7,740.0	7,400.0	7,235.4	39.2	29.5	-68.98	-60.1	1,583.4	2,373.7	2,324.1	49.58	47.871		
10,100.0	7,740.0	7,400.0	7,235.4	40.9	29.5	-68.98	-60.1	1,583.4	2,454.9	2,403.8	51.12	48.028		
10,200.0	7,740.0	7,400.0	7,235.4	42.5	29.5	-68.98	-60.1	1,583.4	2,537.5	2,484.9	52.65	48.193		
10,300.0	7,740.0	7,400.0	7,235.4	44.1	29.5	-68.98	-60.1	1,583.4	2,621.4	2,567.2	54.20	48.364		
10,400.0	7,740.0	7,400.0	7,235.4	45.8	29.5	-68.98	-60.1	1,583.4	2,706.3	2,650.5	55.75	48.539		
10,500.0	7,740.0	7,400.0	7,235.4	47.5	29.5	-68.98	-60.1	1,583.4	2,792.2	2,734.9	57.31	48.717		
10,600.0	7,740.0	7,400.0	7,235.4	49.1	29.5	-68.98	-60.1	1,583.4	2,879.0	2,820.1	58.88	48.897		
10,700.0	7,740.0	7,400.0	7,235.4	50.8	29.5	-68.98	-60.1	1,583.4	2,966.7	2,906.2	60.45	49.077		
10,800.0	7,740.0	7,400.0	7,235.4	52.5	29.5	-68.98	-60.1	1,583.4	3,055.1	2,993.1	62.02	49.256		
10,900.0	7,740.0	7,400.0	7,235.4	54.2	29.5	-68.98	-60.1	1,583.4	3,144.2	3,080.6	63.60	49.435		
11,000.0	7,740.0	7,400.0	7,235.4	55.9	29.5	-68.98	-60.1	1,583.4	3,233.9	3,168.8	65.19	49.611		
11,100.0	7,740.0	7,400.0	7,235.4	57.6	29.5	-68.98	-60.1	1,583.4	3,324.3	3,257.5	66.77	49.786		
11,200.0	7,740.0	7,400.0	7,235.4	59.3	29.5	-68.98	-60.1	1,583.4	3,415.1	3,346.8	68.36	49.958		
11,300.0	7,740.0	7,400.0	7,235.4	61.0	29.5	-68.98	-60.1	1,583.4	3,506.5	3,436.6	69.95	50.128		
11,400.0	7,740.0	7,400.0	7,235.4	62.7	29.5	-68.98	-60.1	1,583.4	3,598.3	3,526.8	71.55	50.294		
11,500.0	7,740.0	7,400.0	7,235.4	64.4	29.5	-68.98	-60.1	1,583.4	3,690.6	3,617.4	73.14	50.457		
11,600.0	7,740.0	7,400.0	7,235.4	66.1	29.5	-68.98	-60.1	1,583.4	3,783.2	3,708.5	74.74	50.618		
11,700.0	7,740.0	7,400.0	7,235.4	67.8	29.5	-68.98	-60.1	1,583.4	3,876.2	3,799.9	76.34	50.774		
11,800.0	7,740.0	7,377.9	7,213.9	69.5	29.4	-68.09	-61.8	1,578.5	3,969.1	3,891.6	77.52	51.200		
11,900.0	7,740.0	7,377.2	7,213.2	71.2	29.4	-68.06	-61.8	1,578.3	4,062.8	3,983.7	79.10	51.361		
12,000.0	7,740.0	7,376.4	7,212.5	72.9	29.4	-68.03	-61.9	1,578.2	4,156.7	4,076.0	80.68	51.519		
12,100.0	7,740.0	7,375.7	7,211.8	74.7	29.4	-68.00	-61.9	1,578.0	4,250.9	4,168.6	82.27	51.673		
12,200.0	7,740.0	7,375.1	7,211.1	76.4	29.4	-67.98	-61.9	1,577.8	4,345.4	4,261.5	83.85	51.823		
12,300.0	7,740.0	7,374.4	7,210.5	78.1	29.4	-67.95	-62.0	1,577.7	4,440.1	4,354.6	85.43	51.970		
12,400.0	7,740.0	7,373.8	7,209.9	79.8	29.4	-67.93	-62.0	1,577.6	4,535.0	4,448.0	87.02	52.114		
12,500.0	7,740.0	7,373.2	7,209.3	81.6	29.4	-67.90	-62.0	1,577.4	4,630.1	4,541.5	88.61	52.254		
12,600.0	7,740.0	7,372.6	7,208.8	83.3	29.4	-67.88	-62.1	1,577.3	4,725.5	4,635.3	90.20	52.390		
12,700.0	7,740.0	7,350.0	7,186.7	85.0	29.3	-66.97	-62.7	1,572.2	4,821.5	4,730.2	91.25	52.836		
12,800.0	7,740.0	7,350.0	7,186.7	86.7	29.3	-66.97	-62.7	1,572.2	4,917.2	4,824.3	92.85	52.960		
12,900.0	7,740.0	7,350.0	7,186.7	88.5	29.3	-66.97	-62.7	1,572.2	5,013.0	4,918.6	94.44	53.081		
13,000.0	7,740.0	7,350.0	7,186.7	90.2	29.3	-66.97	-62.7	1,572.2	5,109.0	5,013.0	96.04	53.199		
13,100.0	7,740.0	7,350.0	7,186.7	91.9	29.3	-66.97	-62.7	1,572.2	5,205.2	5,107.6	97.63	53.315		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	
0.0	0.0	0.0	0.0	0.0	0.0	90.35	-0.7	120.1	120.1				
100.0	100.0	100.0	100.0	0.2	0.2	90.35	-0.7	120.1	120.1	119.8	0.30	395.375	
200.0	200.0	200.0	200.0	0.3	0.3	90.35	-0.7	120.1	120.1	119.4	0.65	183.945 CC, ES	
300.0	300.0	297.9	297.9	0.5	0.5	90.36	-0.8	120.9	120.9	119.9	1.00	121.117	
400.0	400.0	395.8	395.8	0.7	0.7	90.39	-0.8	123.4	123.5	122.1	1.34	91.822	
500.0	500.0	493.6	493.5	0.9	0.9	64.80	-1.0	127.6	127.4	125.7	1.69	75.407	
600.0	600.0	591.2	590.9	1.0	1.1	65.80	-1.1	133.4	132.3	130.2	2.04	64.926	
700.0	699.9	688.7	688.1	1.2	1.3	67.36	-1.4	140.9	138.2	135.8	2.39	57.822	
800.0	799.7	785.9	784.9	1.4	1.5	69.36	-1.7	150.0	145.3	142.6	2.75	52.801	
898.2	897.5	881.0	879.4	1.6	1.7	71.64	-2.0	160.5	153.6	150.5	3.12	49.209	
900.0	899.4	882.8	881.2	1.6	1.7	71.69	-2.0	160.7	153.8	150.6	3.13	49.153	
1,000.0	999.0	979.4	977.0	1.8	2.0	74.03	-2.4	173.0	163.9	160.4	3.51	46.650	
1,100.0	1,098.6	1,075.7	1,072.3	2.0	2.3	76.01	-2.8	186.8	175.9	172.0	3.90	45.043	
1,200.0	1,198.2	1,171.6	1,167.0	2.3	2.6	77.62	-3.3	202.2	189.7	185.4	4.30	44.083	
1,300.0	1,297.9	1,267.1	1,260.9	2.5	2.9	78.91	-3.8	219.1	205.3	200.5	4.71	43.603	
1,400.0	1,397.5	1,362.1	1,354.1	2.7	3.3	79.91	-4.4	237.5	222.5	217.4	5.12	43.483 SF	
1,500.0	1,497.1	1,456.5	1,446.5	2.9	3.6	80.66	-5.0	257.2	241.3	235.8	5.53	43.641	
1,600.0	1,596.7	1,550.4	1,538.0	3.2	4.0	81.21	-5.7	278.4	261.8	255.8	5.95	44.017	
1,700.0	1,696.3	1,643.7	1,628.5	3.4	4.5	81.59	-6.4	300.9	283.8	277.4	6.37	44.567	
1,800.0	1,796.0	1,736.3	1,718.0	3.6	4.9	81.84	-7.2	324.7	307.3	300.5	6.79	45.259	
1,900.0	1,895.6	1,828.2	1,806.4	3.8	5.4	81.97	-7.9	349.8	332.3	325.1	7.21	46.068	
2,000.0	1,995.2	1,919.4	1,893.7	4.1	5.9	82.01	-8.8	376.0	358.8	351.2	7.64	46.974	
2,100.0	2,094.8	2,009.8	1,979.8	4.3	6.4	81.98	-9.6	403.4	386.8	378.7	8.06	47.966	
2,200.0	2,194.5	2,104.7	2,070.0	4.5	6.9	81.92	-10.6	433.0	415.7	407.2	8.50	48.907	
2,300.0	2,294.1	2,200.4	2,160.9	4.8	7.5	81.86	-11.5	463.0	444.6	435.6	8.94	49.742	
2,400.0	2,393.7	2,296.1	2,251.8	5.0	8.0	81.81	-12.4	492.9	473.5	464.1	9.38	50.494	
2,500.0	2,493.3	2,391.9	2,342.8	5.2	8.6	81.77	-13.4	522.8	502.3	492.5	9.82	51.174	
2,600.0	2,592.9	2,487.6	2,433.7	5.4	9.1	81.73	-14.3	552.8	531.2	521.0	10.26	51.791	
2,700.0	2,692.6	2,583.3	2,524.6	5.7	9.7	81.69	-15.2	582.7	560.1	549.4	10.70	52.355	
2,800.0	2,792.2	2,679.1	2,615.5	5.9	10.3	81.66	-16.2	612.6	589.0	577.9	11.14	52.872	
2,900.0	2,891.8	2,774.8	2,706.5	6.1	10.8	81.63	-17.1	642.5	617.9	606.3	11.58	53.347	
3,000.0	2,991.4	2,870.5	2,797.4	6.4	11.4	81.60	-18.1	672.5	646.8	634.8	12.03	53.785	
3,100.0	3,091.1	2,966.3	2,888.3	6.6	12.0	81.58	-19.0	702.4	675.7	663.2	12.47	54.190	
3,200.0	3,190.7	3,062.0	2,979.3	6.8	12.5	81.56	-19.9	732.3	704.6	691.7	12.91	54.565	
3,300.0	3,290.3	3,157.7	3,070.2	7.0	13.1	81.54	-20.9	762.3	733.5	720.1	13.36	54.915	
3,400.0	3,389.9	3,253.5	3,161.1	7.3	13.7	81.52	-21.8	792.2	762.4	748.6	13.80	55.241	
3,500.0	3,489.5	3,349.2	3,252.1	7.5	14.2	81.50	-22.8	822.1	791.3	777.0	14.25	55.546	
3,600.0	3,589.2	3,444.9	3,343.0	7.7	14.8	81.48	-23.7	852.1	820.2	805.5	14.69	55.831	
3,700.0	3,688.8	3,540.7	3,433.9	8.0	15.4	81.47	-24.6	882.0	849.1	833.9	15.14	56.099	
3,800.0	3,788.4	3,636.4	3,524.9	8.2	15.9	81.45	-25.6	911.9	878.0	862.4	15.58	56.351	
3,900.0	3,888.0	3,732.1	3,615.8	8.4	16.5	81.44	-26.5	941.8	906.8	890.8	16.03	56.588	
4,000.0	3,987.7	3,827.9	3,706.7	8.7	17.1	81.43	-27.5	971.8	935.7	919.3	16.47	56.812	
4,100.0	4,087.3	3,923.6	3,797.6	8.9	17.6	81.42	-28.4	1,001.7	964.6	947.7	16.92	57.023	
4,200.0	4,186.9	4,019.4	3,888.6	9.1	18.2	81.41	-29.3	1,031.6	993.5	976.2	17.36	57.224	
4,300.0	4,286.5	4,115.1	3,979.5	9.4	18.8	81.40	-30.3	1,061.6	1,022.4	1,004.6	17.81	57.413	
4,400.0	4,386.1	4,210.8	4,070.4	9.6	19.3	81.39	-31.2	1,091.5	1,051.3	1,033.1	18.25	57.594	
4,500.0	4,485.8	4,306.6	4,161.4	9.8	19.9	81.38	-32.2	1,121.4	1,080.2	1,061.5	18.70	57.765	
4,600.0	4,585.4	4,402.3	4,252.3	10.0	20.5	81.37	-33.1	1,151.4	1,109.1	1,090.0	19.15	57.928	
4,700.0	4,685.0	4,498.0	4,343.2	10.3	21.1	81.36	-34.0	1,181.3	1,138.0	1,118.4	19.59	58.083	
4,800.0	4,784.6	4,593.8	4,434.2	10.5	21.6	81.35	-35.0	1,211.2	1,166.9	1,146.9	20.04	58.231	
4,900.0	4,884.3	4,689.5	4,525.1	10.7	22.2	81.34	-35.9	1,241.2	1,195.8	1,175.3	20.49	58.373	
5,000.0	4,983.9	4,785.2	4,616.0	11.0	22.8	81.34	-36.9	1,271.1	1,224.7	1,203.7	20.93	58.508	

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 2C-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 2C-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 #2	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	
5,100.0	5,083.5	4,881.0	4,707.0	11.2	23.3	81.33	-37.8	1,301.0	1,253.6	1,232.2	21.38	58.637	
5,200.0	5,183.1	4,976.7	4,797.9	11.4	23.9	81.32	-38.7	1,330.9	1,282.5	1,260.6	21.83	58.761	
5,300.0	5,282.7	5,072.4	4,888.8	11.7	24.5	81.32	-39.7	1,360.9	1,311.4	1,289.1	22.27	58.880	
5,400.0	5,382.4	5,168.2	4,979.7	11.9	25.1	81.31	-40.6	1,390.8	1,340.3	1,317.5	22.72	58.994	
5,500.0	5,482.0	5,263.9	5,070.7	12.1	25.6	81.30	-41.6	1,420.7	1,369.1	1,346.0	23.17	59.103	
5,600.0	5,581.6	5,359.6	5,161.6	12.4	26.2	81.30	-42.5	1,450.7	1,398.0	1,374.4	23.61	59.208	
5,700.0	5,681.2	5,455.4	5,252.5	12.6	26.8	81.29	-43.4	1,480.6	1,426.9	1,402.9	24.06	59.309	
5,800.0	5,780.9	5,551.1	5,343.5	12.8	27.3	81.29	-44.4	1,510.5	1,455.8	1,431.3	24.51	59.407	
5,900.0	5,880.5	5,646.8	5,434.4	13.0	27.9	81.28	-45.3	1,540.5	1,484.7	1,459.8	24.95	59.500	
6,000.0	5,980.1	5,742.6	5,525.3	13.3	28.5	81.28	-46.3	1,570.4	1,513.6	1,488.2	25.40	59.591	
6,100.0	6,079.7	5,838.3	5,616.3	13.5	29.1	81.27	-47.2	1,600.3	1,542.5	1,516.7	25.85	59.678	
6,200.0	6,179.3	5,934.0	5,707.2	13.7	29.6	81.27	-48.1	1,630.2	1,571.4	1,545.1	26.29	59.762	
6,300.0	6,279.0	6,029.8	5,798.1	14.0	30.2	81.27	-49.1	1,660.2	1,600.3	1,573.6	26.74	59.843	
6,400.0	6,378.6	6,125.5	5,889.1	14.2	30.8	81.26	-50.0	1,690.1	1,629.2	1,602.0	27.19	59.921	
6,500.0	6,478.2	6,221.3	5,980.0	14.4	31.3	81.26	-50.9	1,720.0	1,658.1	1,630.4	27.64	59.997	
6,600.0	6,577.8	6,317.0	6,070.9	14.7	31.9	81.25	-51.9	1,750.0	1,687.0	1,658.9	28.08	60.070	
6,700.0	6,677.5	6,412.7	6,161.8	14.9	32.5	81.25	-52.8	1,779.9	1,715.9	1,687.3	28.53	60.141	
6,800.0	6,777.1	6,508.5	6,252.8	15.1	33.1	81.25	-53.8	1,809.8	1,744.8	1,715.8	28.98	60.210	
6,900.0	6,876.7	6,604.2	6,343.7	15.4	33.6	81.24	-54.7	1,839.8	1,773.7	1,744.2	29.43	60.277	
7,000.0	6,976.3	6,699.9	6,434.6	15.6	34.2	81.24	-55.6	1,869.7	1,802.6	1,772.7	29.87	60.341	
7,100.0	7,075.9	6,795.7	6,525.6	15.8	34.8	81.24	-56.6	1,899.6	1,831.4	1,801.1	30.32	60.404	
7,147.0	7,122.8	6,840.6	6,568.3	15.9	35.0	81.24	-57.0	1,913.7	1,845.0	1,814.5	30.53	60.432	
7,150.0	7,125.8	6,843.5	6,571.0	15.9	35.1	79.72	-57.1	1,914.6	1,845.9	1,815.3	30.58	60.366	
7,200.0	7,175.7	6,891.5	6,616.6	16.0	35.3	-2.00	-57.5	1,929.6	1,859.6	1,828.4	31.26	59.484	
7,250.0	7,225.5	6,939.5	6,662.2	16.0	35.6	-49.75	-58.0	1,944.6	1,872.0	1,840.3	31.75	58.954	
7,300.0	7,275.0	6,987.1	6,707.4	16.0	35.9	-58.13	-58.5	1,959.5	1,883.0	1,851.0	32.03	58.784	
7,350.0	7,323.6	7,034.0	6,751.9	16.0	36.2	-61.16	-58.9	1,974.1	1,892.7	1,860.6	32.10	58.969	
7,400.0	7,371.0	7,079.7	6,795.4	15.9	36.5	-62.75	-59.4	1,988.4	1,900.9	1,868.9	31.95	59.491	
7,450.0	7,416.9	8,256.2	7,500.0	15.8	41.4	-91.99	634.4	2,152.9	1,905.3	1,874.4	30.87	61.726	
7,500.0	7,460.8	8,232.4	7,500.0	15.6	41.3	-92.19	610.7	2,155.1	1,904.5	1,873.8	30.75	61.939	
7,501.9	7,462.5	8,231.4	7,500.0	15.6	41.3	-92.19	609.7	2,155.2	1,904.5	1,873.8	30.74	61.948	
7,550.0	7,502.6	8,205.0	7,500.0	15.5	41.2	-91.96	583.3	2,157.8	1,905.1	1,874.5	30.63	62.197	
7,600.0	7,541.7	8,174.0	7,500.0	15.3	41.1	-91.43	552.5	2,160.7	1,907.1	1,876.6	30.52	62.485	
7,650.0	7,578.1	8,060.1	7,493.6	15.2	40.7	-88.87	439.3	2,169.5	1,910.0	1,879.9	30.07	63.512	
7,700.0	7,611.3	7,866.5	7,435.5	15.0	40.1	-83.98	255.6	2,168.2	1,911.2	1,881.9	29.33	65.159	
7,750.0	7,641.1	7,776.1	7,389.1	14.9	39.8	-81.56	178.5	2,160.4	1,912.0	1,883.2	28.85	66.269	
7,800.0	7,667.4	7,717.0	7,352.9	14.8	39.6	-79.92	132.4	2,152.9	1,913.1	1,884.7	28.43	67.295	
7,850.0	7,689.8	7,671.1	7,321.9	14.7	39.5	-78.61	99.4	2,145.9	1,914.4	1,886.4	28.04	68.279	
7,900.0	7,708.2	7,632.0	7,293.6	14.7	39.3	-77.44	73.3	2,139.1	1,916.0	1,888.3	27.69	69.195	
7,950.0	7,722.6	7,596.9	7,266.8	14.7	39.2	-76.35	51.6	2,132.4	1,917.8	1,890.4	27.40	69.991	
8,000.0	7,732.7	7,564.3	7,240.8	14.7	39.0	-75.31	33.0	2,125.7	1,919.6	1,892.4	27.19	70.589	
8,050.0	7,738.5	7,533.3	7,215.4	14.8	38.9	-74.31	16.8	2,118.9	1,921.5	1,894.4	27.09	70.922	
8,091.8	7,740.0	7,508.4	7,194.4	15.0	38.8	-73.51	4.8	2,113.2	1,923.0	1,895.9	27.11	70.943	
8,100.0	7,740.0	7,503.7	7,190.3	15.0	38.8	-73.38	2.6	2,112.1	1,923.3	1,896.2	27.12	70.916	
8,200.0	7,740.0	7,456.1	7,148.7	15.4	38.6	-72.09	-17.4	2,100.3	1,929.3	1,901.8	27.44	70.313	
8,300.0	7,740.0	7,422.1	7,118.2	16.1	38.4	-71.15	-29.4	2,091.5	1,939.5	1,911.5	27.96	69.360	
8,400.0	7,740.0	7,400.0	7,098.0	16.9	38.3	-70.52	-36.2	2,085.5	1,954.3	1,925.7	28.67	68.171	
8,500.0	7,740.0	7,377.3	7,077.1	17.8	38.2	-69.87	-42.3	2,079.2	1,973.8	1,944.3	29.49	66.926	
8,600.0	7,740.0	7,361.8	7,062.7	18.8	38.1	-69.43	-46.0	2,074.9	1,997.8	1,967.4	30.44	65.626	
8,700.0	7,740.0	7,350.0	7,051.7	20.0	38.0	-69.08	-48.6	2,071.5	2,026.4	1,994.9	31.49	64.347	
8,800.0	7,740.0	7,350.0	7,051.7	21.2	38.0	-69.08	-48.6	2,071.5	2,059.4	2,026.7	32.66	63.048	
8,900.0	7,740.0	7,330.1	7,033.0	22.5	37.9	-68.51	-52.3	2,065.7	2,096.4	2,062.6	33.80	62.021	

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 2C-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 2C-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 #2	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				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	7,322.7	7,026.0	23.9	37.9	-68.29	-53.5	2,063.6	2,137.4	2,102.4	35.04	60.994		
9,100.0	7,740.0	7,316.3	7,020.0	25.3	37.8	-68.10	-54.5	2,061.7	2,182.3	2,145.9	36.33	60.066		
9,200.0	7,740.0	7,300.0	7,004.6	26.7	37.8	-67.62	-56.7	2,056.8	2,230.7	2,193.1	37.59	59.341		
9,300.0	7,740.0	7,300.0	7,004.6	28.2	37.8	-67.62	-56.7	2,056.8	2,282.3	2,243.4	38.97	58.559		
9,400.0	7,740.0	7,300.0	7,004.6	29.7	37.8	-67.62	-56.7	2,056.8	2,337.1	2,296.7	40.38	57.871		
9,500.0	7,740.0	7,300.0	7,004.6	31.3	37.8	-67.62	-56.7	2,056.8	2,394.8	2,353.0	41.82	57.269		
9,600.0	7,740.0	7,300.0	7,004.6	32.8	37.8	-67.62	-56.7	2,056.8	2,455.3	2,412.0	43.27	56.745		
9,700.0	7,740.0	7,300.0	7,004.6	34.4	37.8	-67.62	-56.7	2,056.8	2,518.2	2,473.5	44.74	56.290		
9,800.0	7,740.0	7,300.0	7,004.6	36.0	37.8	-67.62	-56.7	2,056.8	2,583.5	2,537.3	46.22	55.897		
9,900.0	7,740.0	7,300.0	7,004.6	37.6	37.8	-67.62	-56.7	2,056.8	2,650.9	2,603.2	47.71	55.559		
10,000.0	7,740.0	7,300.0	7,004.6	39.2	37.8	-67.62	-56.7	2,056.8	2,720.4	2,671.2	49.22	55.270		
10,100.0	7,740.0	7,300.0	7,004.6	40.9	37.8	-67.62	-56.7	2,056.8	2,791.7	2,741.0	50.74	55.025		
10,200.0	7,740.0	7,279.2	6,984.8	42.5	37.6	-67.01	-58.8	2,050.5	2,864.4	2,812.3	52.06	55.018		
10,300.0	7,740.0	7,277.3	6,983.1	44.1	37.6	-66.96	-59.0	2,050.0	2,939.0	2,885.4	53.57	54.863		
10,400.0	7,740.0	7,275.6	6,981.5	45.8	37.6	-66.91	-59.1	2,049.5	3,015.0	2,959.9	55.08	54.735		
10,500.0	7,740.0	7,274.0	6,980.0	47.5	37.6	-66.86	-59.2	2,049.0	3,092.4	3,035.8	56.60	54.633		
10,600.0	7,740.0	7,272.6	6,978.6	49.1	37.6	-66.82	-59.3	2,048.5	3,171.0	3,112.9	58.13	54.552		
10,700.0	7,740.0	7,271.2	6,977.3	50.8	37.6	-66.78	-59.4	2,048.1	3,250.8	3,191.1	59.66	54.490		
10,800.0	7,740.0	7,250.0	6,957.1	52.5	37.5	-66.15	-60.5	2,041.6	3,332.0	3,271.1	60.96	54.663		
10,900.0	7,740.0	7,250.0	6,957.1	54.2	37.5	-66.15	-60.5	2,041.6	3,413.9	3,351.4	62.50	54.620		
11,000.0	7,740.0	7,250.0	6,957.1	55.9	37.5	-66.15	-60.5	2,041.6	3,496.7	3,432.7	64.05	54.591		
11,100.0	7,740.0	7,250.0	6,957.1	57.6	37.5	-66.15	-60.5	2,041.6	3,580.4	3,514.8	65.61	54.574		
11,200.0	7,740.0	7,250.0	6,957.1	59.3	37.5	-66.15	-60.5	2,041.6	3,664.9	3,597.8	67.16	54.568		
11,300.0	7,740.0	7,250.0	6,957.1	61.0	37.5	-66.15	-60.5	2,041.6	3,750.2	3,681.5	68.72	54.570		
11,400.0	7,740.0	7,250.0	6,957.1	62.7	37.5	-66.15	-60.5	2,041.6	3,836.2	3,765.9	70.28	54.581		
11,500.0	7,740.0	7,250.0	6,957.1	64.4	37.5	-66.15	-60.5	2,041.6	3,922.8	3,851.0	71.85	54.598		
11,600.0	7,740.0	7,250.0	6,957.1	66.1	37.5	-66.15	-60.5	2,041.6	4,010.1	3,936.7	73.42	54.622		
11,700.0	7,740.0	7,250.0	6,957.1	67.8	37.5	-66.15	-60.5	2,041.6	4,097.9	4,023.0	74.98	54.651		
11,800.0	7,740.0	7,250.0	6,957.1	69.5	37.5	-66.15	-60.5	2,041.6	4,186.3	4,109.8	76.55	54.685		
11,900.0	7,740.0	7,250.0	6,957.1	71.2	37.5	-66.15	-60.5	2,041.6	4,275.3	4,197.1	78.13	54.722		
12,000.0	7,740.0	7,250.0	6,957.1	72.9	37.5	-66.15	-60.5	2,041.6	4,364.6	4,284.9	79.70	54.763		
12,100.0	7,740.0	7,250.0	6,957.1	74.7	37.5	-66.15	-60.5	2,041.6	4,454.5	4,373.2	81.28	54.807		
12,200.0	7,740.0	7,250.0	6,957.1	76.4	37.5	-66.15	-60.5	2,041.6	4,544.7	4,461.9	82.85	54.854		
12,300.0	7,740.0	7,250.0	6,957.1	78.1	37.5	-66.15	-60.5	2,041.6	4,635.4	4,551.0	84.43	54.902		
12,400.0	7,740.0	7,250.0	6,957.1	79.8	37.5	-66.15	-60.5	2,041.6	4,726.5	4,640.4	86.01	54.953		
12,500.0	7,740.0	7,250.0	6,957.1	81.6	37.5	-66.15	-60.5	2,041.6	4,817.8	4,730.3	87.59	55.005		
12,600.0	7,740.0	7,250.0	6,957.1	83.3	37.5	-66.15	-60.5	2,041.6	4,909.6	4,820.4	89.17	55.058		
12,700.0	7,740.0	7,250.0	6,957.1	85.0	37.5	-66.15	-60.5	2,041.6	5,001.6	4,910.9	90.75	55.112		
12,800.0	7,740.0	7,250.0	6,957.1	86.7	37.5	-66.15	-60.5	2,041.6	5,094.0	5,001.6	92.34	55.167		
12,900.0	7,740.0	7,250.0	6,957.1	88.5	37.5	-66.15	-60.5	2,041.6	5,186.6	5,092.7	93.92	55.223		
13,000.0	7,740.0	7,250.0	6,957.1	90.2	37.5	-66.15	-60.5	2,041.6	5,279.5	5,184.0	95.51	55.279		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	-90.00	0.0	-468.0	468.0					
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-468.0	468.0	467.7	0.30	1,540.921		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-468.0	468.0	467.3	0.65	716.899	CC	
228.4	228.4	228.4	228.4	0.4	0.4	-89.99	0.1	-468.0	468.0	467.2	0.75	622.113		
300.0	300.0	300.0	300.0	0.5	0.5	-89.89	0.9	-468.0	468.0	467.0	1.00	466.768		
400.0	400.0	399.9	399.9	0.7	0.7	-89.57	3.5	-468.0	468.0	466.6	1.36	345.174		
500.0	500.0	499.8	499.6	0.9	0.9	-115.08	7.8	-468.0	468.4	466.7	1.72	272.427		
600.0	600.0	599.5	599.2	1.0	1.1	-114.62	13.9	-468.0	469.6	467.5	2.10	224.097		
700.0	699.9	699.4	698.8	1.2	1.3	-114.18	21.4	-468.0	471.6	469.1	2.48	189.801		
800.0	799.7	799.3	798.4	1.4	1.5	-113.91	28.9	-468.0	474.3	471.5	2.89	164.386		
898.2	897.5	897.4	896.3	1.6	1.7	-113.84	36.3	-468.0	477.7	474.4	3.29	145.136		
900.0	899.4	899.3	898.1	1.6	1.7	-113.84	36.4	-468.0	477.8	474.5	3.30	144.820		
1,000.0	999.0	999.2	997.7	1.8	1.9	-113.89	44.0	-468.0	481.6	477.9	3.72	129.473		
1,100.0	1,098.6	1,099.1	1,097.4	2.0	2.1	-113.93	51.5	-468.0	485.4	481.2	4.14	117.120		
1,200.0	1,198.2	1,199.0	1,197.0	2.3	2.3	-113.98	59.1	-468.0	489.2	484.6	4.57	106.990		
1,300.0	1,297.9	1,299.0	1,296.7	2.5	2.6	-114.03	66.6	-468.0	492.9	487.9	5.00	98.548		
1,400.0	1,397.5	1,398.9	1,396.3	2.7	2.8	-114.07	74.1	-468.0	496.7	491.3	5.43	91.414		
1,500.0	1,497.1	1,498.8	1,495.9	2.9	3.0	-114.12	81.7	-468.0	500.5	494.7	5.87	85.311		
1,600.0	1,596.7	1,598.8	1,595.6	3.2	3.2	-114.16	89.2	-468.0	504.3	498.0	6.30	80.034		
1,700.0	1,696.3	1,698.7	1,695.2	3.4	3.4	-114.20	96.7	-468.0	508.1	501.4	6.74	75.428		
1,800.0	1,796.0	1,798.6	1,794.9	3.6	3.6	-114.25	104.3	-468.0	511.9	504.7	7.17	71.374		
1,900.0	1,895.6	1,898.5	1,894.5	3.8	3.9	-114.29	111.8	-468.0	515.7	508.1	7.61	67.780		
2,000.0	1,995.2	1,998.5	1,994.2	4.1	4.1	-114.33	119.4	-468.0	519.5	511.4	8.04	64.572		
2,100.0	2,094.8	2,098.4	2,093.8	4.3	4.3	-114.37	126.9	-468.0	523.3	514.8	8.48	61.692		
2,200.0	2,194.5	2,198.3	2,193.4	4.5	4.5	-114.41	134.4	-468.0	527.1	518.1	8.92	59.091		
2,300.0	2,294.1	2,298.2	2,293.1	4.8	4.7	-114.45	142.0	-468.0	530.9	521.5	9.36	56.733		
2,400.0	2,393.7	2,398.2	2,392.7	5.0	4.9	-114.49	149.5	-468.0	534.6	524.9	9.79	54.584		
2,500.0	2,493.3	2,498.1	2,492.4	5.2	5.2	-114.53	157.0	-468.0	538.4	528.2	10.23	52.618		
2,600.0	2,592.9	2,598.0	2,592.0	5.4	5.4	-114.57	164.6	-468.0	542.2	531.6	10.67	50.813		
2,700.0	2,692.6	2,698.0	2,691.7	5.7	5.6	-114.60	172.1	-468.0	546.0	534.9	11.11	49.149		
2,800.0	2,792.2	2,797.9	2,791.3	5.9	5.8	-114.64	179.7	-468.0	549.8	538.3	11.55	47.612		
2,900.0	2,891.8	2,897.8	2,890.9	6.1	6.0	-114.68	187.2	-468.0	553.6	541.6	11.99	46.186		
3,000.0	2,991.4	2,997.7	2,990.6	6.4	6.3	-114.71	194.7	-468.0	557.4	545.0	12.43	44.861		
3,100.0	3,091.1	3,097.7	3,090.2	6.6	6.5	-114.75	202.3	-468.0	561.2	548.3	12.86	43.626		
3,200.0	3,190.7	3,197.6	3,189.9	6.8	6.7	-114.78	209.8	-468.0	565.0	551.7	13.30	42.472		
3,300.0	3,290.3	3,297.5	3,289.5	7.0	6.9	-114.82	217.4	-468.0	568.8	555.0	13.74	41.392		
3,400.0	3,389.9	3,397.4	3,389.2	7.3	7.1	-114.85	224.9	-468.0	572.6	558.4	14.18	40.379		
3,500.0	3,489.5	3,497.4	3,488.8	7.5	7.3	-114.88	232.4	-468.0	576.4	561.8	14.62	39.426		
3,600.0	3,589.2	3,597.3	3,588.4	7.7	7.6	-114.92	240.0	-468.0	580.2	565.1	15.06	38.529		
3,700.0	3,688.8	3,697.2	3,688.1	8.0	7.8	-114.95	247.5	-468.0	584.0	568.5	15.50	37.682		
3,800.0	3,788.4	3,797.2	3,787.7	8.2	8.0	-114.98	255.0	-468.0	587.8	571.8	15.94	36.883		
3,900.0	3,888.0	3,897.1	3,887.4	8.4	8.2	-115.02	262.6	-468.0	591.5	575.2	16.37	36.126		
4,000.0	3,987.7	3,997.0	3,987.0	8.7	8.4	-115.05	270.1	-468.0	595.3	578.5	16.81	35.408		
4,100.0	4,087.3	4,096.9	4,086.7	8.9	8.7	-115.08	277.7	-468.0	599.1	581.9	17.25	34.727		
4,200.0	4,186.9	4,196.9	4,186.3	9.1	8.9	-115.11	285.2	-468.0	602.9	585.2	17.69	34.080		
4,300.0	4,286.5	4,296.8	4,285.9	9.4	9.1	-115.14	292.7	-468.0	606.7	588.6	18.13	33.464		
4,400.0	4,386.1	4,396.7	4,385.6	9.6	9.3	-115.17	300.3	-468.0	610.5	592.0	18.57	32.877		
4,500.0	4,485.8	4,496.7	4,485.2	9.8	9.5	-115.20	307.8	-468.0	614.3	595.3	19.01	32.318		
4,600.0	4,585.4	4,596.6	4,584.9	10.0	9.7	-115.23	315.3	-468.0	618.1	598.7	19.45	31.783		
4,700.0	4,685.0	4,696.5	4,684.5	10.3	10.0	-115.26	322.9	-468.0	621.9	602.0	19.89	31.273		
4,800.0	4,784.6	4,796.4	4,784.2	10.5	10.2	-115.28	330.4	-468.0	625.7	605.4	20.33	30.784		
4,900.0	4,884.3	4,896.4	4,883.8	10.7	10.4	-115.31	338.0	-468.0	629.5	608.7	20.76	30.316		

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 2C-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 2C-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 #2	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						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	4,983.9	4,996.3	4,983.4	11.0	10.6	-115.34	345.5	-468.0	633.3	612.1	21.20	29.867	
5,100.0	5,083.5	5,096.2	5,083.1	11.2	10.8	-115.37	353.0	-468.0	637.1	615.5	21.64	29.437	
5,200.0	5,183.1	5,196.1	5,182.7	11.4	11.1	-115.40	360.6	-468.0	640.9	618.8	22.08	29.024	
5,300.0	5,282.7	5,296.1	5,282.4	11.7	11.3	-115.42	368.1	-468.0	644.7	622.2	22.52	28.627	
5,400.0	5,382.4	5,396.0	5,382.0	11.9	11.5	-115.45	375.7	-468.0	648.5	625.5	22.96	28.245	
5,500.0	5,482.0	5,495.9	5,481.7	12.1	11.7	-115.48	383.2	-468.0	652.3	628.9	23.40	27.877	
5,600.0	5,581.6	5,595.9	5,581.3	12.4	11.9	-115.50	390.7	-468.0	656.1	632.3	23.84	27.523	
5,700.0	5,681.2	5,695.8	5,680.9	12.6	12.1	-115.53	398.3	-468.0	659.9	635.6	24.28	27.182	
5,800.0	5,780.9	5,795.7	5,780.6	12.8	12.4	-115.55	405.8	-468.0	663.7	639.0	24.72	26.853	
5,900.0	5,880.5	5,895.6	5,880.2	13.0	12.6	-115.58	413.3	-468.0	667.5	642.3	25.15	26.536	
6,000.0	5,980.1	5,995.6	5,979.9	13.3	12.8	-115.60	420.9	-468.0	671.3	645.7	25.59	26.229	
6,100.0	6,079.7	6,095.5	6,079.5	13.5	13.0	-115.63	428.4	-468.0	675.1	649.0	26.03	25.933	
6,200.0	6,179.3	6,195.4	6,179.2	13.7	13.2	-115.65	436.0	-468.0	678.9	652.4	26.47	25.646	
6,300.0	6,279.0	6,295.3	6,278.8	14.0	13.5	-115.67	443.5	-468.0	682.7	655.8	26.91	25.369	
6,400.0	6,378.6	6,395.3	6,378.4	14.2	13.7	-115.70	451.0	-468.0	686.5	659.1	27.35	25.101	
6,500.0	6,478.2	6,495.2	6,478.1	14.4	13.9	-115.72	458.6	-467.9	690.3	662.5	27.79	24.841	
6,600.0	6,577.8	6,595.1	6,577.7	14.7	14.1	-115.74	466.1	-467.9	694.1	665.8	28.23	24.590	
6,700.0	6,677.5	6,695.1	6,677.4	14.9	14.3	-115.77	473.6	-467.9	697.9	669.2	28.67	24.346	
6,800.0	6,777.1	6,795.0	6,777.0	15.1	14.5	-115.79	481.2	-467.9	701.7	672.6	29.10	24.109	
6,900.0	6,876.7	6,894.9	6,876.7	15.4	14.8	-115.81	488.7	-467.9	705.5	675.9	29.54	23.880	
7,000.0	6,976.3	6,994.8	6,976.3	15.6	15.0	-115.83	496.3	-467.9	709.3	679.3	29.98	23.657	
7,100.0	7,075.9	7,094.8	7,075.9	15.8	15.2	-115.86	503.8	-467.9	713.1	682.7	30.42	23.441	
7,147.0	7,122.8	7,141.7	7,122.8	15.9	15.3	-115.87	507.3	-467.9	714.9	684.2	30.63	23.341	
7,150.0	7,125.8	7,144.7	7,125.8	15.9	15.3	-117.48	507.6	-467.9	715.0	684.3	30.64	23.336	
7,200.0	7,175.7	7,194.7	7,175.7	16.0	15.4	159.32	509.0	-467.9	716.9	686.1	30.76	23.308	
7,250.0	7,225.5	7,244.6	7,225.5	16.0	15.4	110.37	506.1	-467.9	718.8	688.0	30.79	23.345	
7,300.0	7,275.0	7,294.6	7,274.9	16.0	15.4	101.06	498.8	-467.9	720.7	689.9	30.74	23.444	
7,350.0	7,323.6	7,344.5	7,323.5	16.0	15.3	97.35	487.3	-467.9	722.5	691.9	30.61	23.601	
7,400.0	7,371.0	7,394.5	7,370.9	15.9	15.2	95.33	471.6	-467.9	724.3	693.9	30.42	23.811	
7,450.0	7,416.9	7,444.4	7,416.8	15.8	15.1	94.04	451.8	-468.0	726.1	695.9	30.17	24.067	
7,500.0	7,460.8	7,494.4	7,460.7	15.6	15.0	93.12	428.1	-468.0	727.8	697.9	29.87	24.363	
7,550.0	7,502.6	7,544.4	7,502.5	15.5	14.8	92.44	400.6	-468.0	729.3	699.8	29.54	24.687	
7,600.0	7,541.7	7,594.3	7,541.6	15.3	14.6	91.90	369.6	-468.0	730.8	701.6	29.20	25.030	
7,650.0	7,578.1	7,644.3	7,578.0	15.2	14.4	91.47	335.4	-468.0	732.2	703.4	28.86	25.376	
7,700.0	7,611.3	7,694.3	7,611.2	15.0	14.3	91.11	298.0	-468.0	733.5	705.0	28.53	25.710	
7,750.0	7,641.1	7,744.2	7,641.0	14.9	14.1	90.82	258.0	-468.0	734.6	706.4	28.24	26.015	
7,800.0	7,667.4	7,794.2	7,667.3	14.8	14.0	90.59	215.5	-468.0	735.6	707.6	28.00	26.271	
7,850.0	7,689.8	7,844.2	7,689.7	14.7	13.9	90.40	170.8	-468.0	736.5	708.7	27.83	26.461	
7,900.0	7,708.2	7,894.2	7,708.2	14.7	13.9	90.25	124.4	-468.0	737.2	709.4	27.75	26.567	
7,950.0	7,722.6	7,944.2	7,722.5	14.7	13.9	90.13	76.5	-468.0	737.7	710.0	27.76	26.577	
8,000.0	7,732.7	7,994.2	7,732.7	14.7	13.9	90.05	27.6	-468.0	738.1	710.3	27.87	26.484	
8,050.0	7,738.5	8,044.2	7,738.5	14.8	14.0	90.01	-22.1	-468.0	738.4	710.3	28.09	26.287	
8,091.8	7,740.0	8,086.0	7,740.0	15.0	14.2	90.00	-63.8	-468.0	738.4	710.1	28.35	26.048	
8,100.0	7,740.0	8,094.2	7,740.0	15.0	14.2	90.00	-72.0	-468.0	738.4	710.0	28.41	25.992	
8,200.0	7,740.0	8,194.2	7,740.0	15.4	14.7	90.00	-172.0	-468.0	738.4	709.0	29.37	25.144	
8,300.0	7,740.0	8,294.2	7,740.0	16.1	15.3	90.00	-272.0	-468.0	738.4	707.7	30.69	24.057	
8,400.0	7,740.0	8,394.2	7,740.0	16.9	16.2	90.00	-372.0	-468.0	738.4	706.1	32.35	22.827	
8,500.0	7,740.0	8,494.2	7,740.0	17.8	17.1	90.00	-472.0	-468.0	738.4	704.1	34.28	21.539	
8,600.0	7,740.0	8,594.2	7,740.0	18.8	18.2	90.00	-572.0	-468.0	738.4	702.0	36.45	20.257	
8,700.0	7,740.0	8,694.2	7,740.0	20.0	19.4	90.00	-672.0	-468.0	738.4	699.6	38.82	19.022	
8,800.0	7,740.0	8,794.2	7,740.0	21.2	20.7	90.00	-772.0	-468.0	738.4	697.1	41.35	17.859	
8,900.0	7,740.0	8,894.2	7,740.0	22.5	22.0	90.00	-872.0	-468.0	738.4	694.4	44.01	16.778	

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 2C-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 2C-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 #2	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							
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	8,994.2	7,740.0	23.9	23.4	90.00	-972.0	-468.0	738.4	691.6	46.79	15.783	
9,100.0	7,740.0	9,094.2	7,740.0	25.3	24.8	90.00	-1,072.0	-468.0	738.4	688.8	49.65	14.871	
9,200.0	7,740.0	9,194.2	7,740.0	26.7	26.3	90.00	-1,172.0	-468.0	738.4	685.8	52.60	14.039	
9,300.0	7,740.0	9,294.2	7,740.0	28.2	27.8	90.00	-1,272.0	-468.0	738.4	682.8	55.61	13.279	
9,400.0	7,740.0	9,394.2	7,740.0	29.7	29.3	90.00	-1,372.0	-468.0	738.4	679.8	58.68	12.585	
9,500.0	7,740.0	9,494.2	7,740.0	31.3	30.9	90.00	-1,472.0	-468.0	738.4	676.6	61.79	11.951	
9,600.0	7,740.0	9,594.2	7,740.0	32.8	32.5	90.00	-1,572.0	-468.0	738.4	673.5	64.94	11.370	
9,700.0	7,740.0	9,694.2	7,740.0	34.4	34.1	90.00	-1,672.0	-468.0	738.4	670.3	68.13	10.838	
9,800.0	7,740.0	9,794.2	7,740.0	36.0	35.7	90.00	-1,772.0	-468.0	738.4	667.1	71.35	10.350	
9,900.0	7,740.0	9,894.2	7,740.0	37.6	37.3	90.00	-1,872.0	-468.0	738.4	663.8	74.59	9.899	
10,000.0	7,740.0	9,994.2	7,740.0	39.2	38.9	90.00	-1,972.0	-468.0	738.4	660.6	77.86	9.484	
10,100.0	7,740.0	10,094.2	7,740.0	40.9	40.6	90.00	-2,072.0	-468.0	738.4	657.3	81.15	9.100	
10,200.0	7,740.0	10,194.2	7,740.0	42.5	42.2	90.00	-2,172.0	-468.0	738.4	654.0	84.45	8.744	
10,300.0	7,740.0	10,294.2	7,740.0	44.1	43.9	90.00	-2,272.0	-468.0	738.5	650.7	87.78	8.413	
10,400.0	7,740.0	10,394.2	7,740.0	45.8	45.6	90.00	-2,372.0	-468.0	738.5	647.3	91.11	8.105	
10,500.0	7,740.0	10,494.2	7,740.0	47.5	47.2	90.00	-2,472.0	-468.0	738.5	644.0	94.46	7.818	
10,600.0	7,740.0	10,594.2	7,740.0	49.1	48.9	90.00	-2,572.0	-468.0	738.5	640.6	97.82	7.549	
10,700.0	7,740.0	10,694.2	7,740.0	50.8	50.6	90.00	-2,672.0	-468.0	738.5	637.3	101.19	7.298	
10,800.0	7,740.0	10,794.2	7,740.0	52.5	52.3	90.00	-2,772.0	-468.0	738.5	633.9	104.56	7.062	
10,900.0	7,740.0	10,894.2	7,740.0	54.2	54.0	90.00	-2,872.0	-468.0	738.5	630.5	107.95	6.841	
11,000.0	7,740.0	10,994.2	7,740.0	55.9	55.7	90.00	-2,972.0	-468.0	738.5	627.1	111.34	6.632	
11,100.0	7,740.0	11,094.2	7,740.0	57.6	57.4	90.00	-3,072.0	-468.0	738.5	623.7	114.74	6.436	
11,200.0	7,740.0	11,194.2	7,740.0	59.3	59.1	90.00	-3,172.0	-468.0	738.5	620.3	118.15	6.250	
11,300.0	7,740.0	11,294.2	7,740.0	61.0	60.8	90.00	-3,272.0	-468.0	738.5	616.9	121.56	6.075	
11,400.0	7,740.0	11,394.2	7,740.0	62.7	62.5	90.00	-3,372.0	-468.0	738.5	613.5	124.98	5.909	
11,500.0	7,740.0	11,494.2	7,740.0	64.4	64.2	90.00	-3,472.0	-468.0	738.5	610.1	128.40	5.751	
11,600.0	7,740.0	11,594.2	7,740.0	66.1	65.9	90.00	-3,572.0	-468.0	738.5	606.6	131.83	5.602	
11,700.0	7,740.0	11,694.2	7,740.0	67.8	67.6	90.00	-3,672.0	-468.0	738.5	603.2	135.26	5.460	
11,800.0	7,740.0	11,794.2	7,740.0	69.5	69.3	90.00	-3,772.0	-468.0	738.5	599.8	138.70	5.324	
11,900.0	7,740.0	11,894.2	7,740.0	71.2	71.1	90.00	-3,872.0	-468.0	738.5	596.3	142.14	5.196	
12,000.0	7,740.0	11,994.2	7,740.0	72.9	72.8	90.00	-3,972.0	-468.0	738.5	592.9	145.58	5.073	
12,100.0	7,740.0	12,094.2	7,740.0	74.7	74.5	90.00	-4,072.0	-468.0	738.5	589.5	149.03	4.955	
12,200.0	7,740.0	12,194.2	7,740.0	76.4	76.2	90.00	-4,172.0	-468.0	738.5	586.0	152.47	4.843	
12,300.0	7,740.0	12,294.2	7,740.0	78.1	78.0	90.00	-4,272.0	-468.0	738.5	582.6	155.92	4.736	
12,400.0	7,740.0	12,394.2	7,740.0	79.8	79.7	90.00	-4,372.0	-468.0	738.5	579.1	159.38	4.634	
12,500.0	7,740.0	12,494.2	7,740.0	81.6	81.4	90.00	-4,472.0	-468.0	738.5	575.7	162.83	4.535	
12,600.0	7,740.0	12,594.2	7,740.0	83.3	83.1	90.00	-4,572.0	-468.0	738.5	572.2	166.29	4.441	
12,700.0	7,740.0	12,694.2	7,740.0	85.0	84.9	90.00	-4,672.0	-468.0	738.5	568.7	169.75	4.350	
12,800.0	7,740.0	12,794.2	7,740.0	86.7	86.6	90.00	-4,772.0	-468.0	738.5	565.3	173.21	4.264	
12,900.0	7,740.0	12,894.2	7,740.0	88.5	88.3	90.00	-4,872.0	-468.1	738.5	561.8	176.68	4.180	
13,000.0	7,740.0	12,994.2	7,740.0	90.2	90.1	90.00	-4,972.0	-468.1	738.5	558.4	180.14	4.100	
13,100.0	7,740.0	13,094.2	7,740.0	91.9	91.8	90.00	-5,072.0	-468.1	738.5	554.9	183.61	4.022	
13,200.0	7,740.0	13,194.2	7,740.0	93.7	93.5	90.00	-5,172.0	-468.1	738.5	551.4	187.08	3.948	
13,300.0	7,740.0	13,294.2	7,740.0	95.4	95.3	90.00	-5,272.0	-468.1	738.5	548.0	190.55	3.876	
13,400.0	7,740.0	13,394.2	7,740.0	97.1	97.0	90.00	-5,372.0	-468.1	738.5	544.5	194.02	3.806	
13,500.0	7,740.0	13,494.2	7,740.0	98.9	98.7	90.00	-5,472.0	-468.1	738.5	541.0	197.49	3.739	
13,600.0	7,740.0	13,594.2	7,740.0	100.6	100.5	90.00	-5,572.0	-468.1	738.5	537.5	200.96	3.675	
13,700.0	7,740.0	13,694.2	7,740.0	102.3	102.2	90.00	-5,672.0	-468.1	738.5	534.1	204.44	3.612	
13,800.0	7,740.0	13,794.2	7,740.0	104.1	104.0	90.00	-5,772.0	-468.1	738.5	530.6	207.92	3.552	
13,900.0	7,740.0	13,894.2	7,740.0	105.8	105.7	90.00	-5,872.0	-468.1	738.5	527.1	211.39	3.494	
14,000.0	7,740.0	13,994.2	7,740.0	107.5	107.4	90.00	-5,972.0	-468.1	738.5	523.6	214.87	3.437	
14,100.0	7,740.0	14,094.2	7,740.0	109.3	109.2	90.00	-6,072.0	-468.1	738.5	520.2	218.35	3.382	

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 2C-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 2C-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 #2	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						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	14,194.2	7,740.0	111.0	110.9	90.00	-6,172.0	-468.1	738.5	516.7	221.83	3.329	
14,300.0	7,740.0	14,294.2	7,740.0	112.8	112.7	90.00	-6,272.0	-468.1	738.5	513.2	225.31	3.278	
14,400.0	7,740.0	14,394.2	7,740.0	114.5	114.4	90.00	-6,372.0	-468.1	738.5	509.7	228.79	3.228	
14,500.0	7,740.0	14,494.2	7,740.0	116.2	116.1	90.00	-6,472.0	-468.1	738.5	506.3	232.28	3.180	
14,600.0	7,740.0	14,594.2	7,740.0	118.0	117.9	90.00	-6,572.0	-468.1	738.5	502.8	235.76	3.133	
14,700.0	7,740.0	14,694.2	7,740.0	119.7	119.6	90.00	-6,672.0	-468.1	738.5	499.3	239.24	3.087	
14,800.0	7,740.0	14,794.2	7,740.0	121.5	121.4	90.00	-6,772.0	-468.1	738.5	495.8	242.73	3.043	
14,900.0	7,740.0	14,894.2	7,740.0	123.2	123.1	90.00	-6,872.0	-468.1	738.5	492.3	246.21	3.000	
15,000.0	7,740.0	14,994.2	7,740.0	124.9	124.8	90.00	-6,972.0	-468.1	738.5	488.8	249.70	2.958	
15,100.0	7,740.0	15,094.2	7,740.0	126.7	126.6	90.00	-7,072.0	-468.1	738.5	485.4	253.19	2.917	
15,200.0	7,740.0	15,194.2	7,740.0	128.4	128.3	90.00	-7,172.0	-468.1	738.5	481.9	256.67	2.877	
15,300.0	7,740.0	15,294.2	7,740.0	130.2	130.1	90.00	-7,272.0	-468.1	738.5	478.4	260.16	2.839	
15,400.0	7,740.0	15,394.2	7,740.0	131.9	131.8	90.00	-7,372.0	-468.1	738.5	474.9	263.65	2.801	
15,500.0	7,740.0	15,494.2	7,740.0	133.7	133.6	90.00	-7,472.0	-468.1	738.5	471.4	267.14	2.765	
15,600.0	7,740.0	15,594.2	7,740.0	135.4	135.3	90.00	-7,572.0	-468.1	738.6	467.9	270.63	2.729	
15,700.0	7,740.0	15,694.2	7,740.0	137.1	137.1	90.00	-7,672.0	-468.1	738.6	464.4	274.12	2.694	
15,800.0	7,740.0	15,794.2	7,740.0	138.9	138.8	90.00	-7,772.0	-468.1	738.6	460.9	277.61	2.660	
15,900.0	7,740.0	15,894.2	7,740.0	140.6	140.5	90.00	-7,872.0	-468.1	738.6	457.5	281.10	2.627	
15,925.0	7,740.0	15,919.2	7,740.0	141.1	141.0	90.00	-7,897.0	-468.1	738.6	456.6	281.97	2.619	
15,952.8	7,740.0	15,936.0	7,740.0	141.6	141.3	90.00	-7,913.9	-468.1	738.6	455.9	282.75	2.612 ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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						
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	-9.8	9.8				
100.0	100.0	100.0	100.0	0.2	0.2	-90.00	0.0	-9.8	9.8	9.5	0.30	32.256	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-9.8	9.8	9.1	0.65	15.007	
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-9.8	9.8	8.8	1.00	9.778	CC, ES
400.0	400.0	399.9	399.9	0.7	0.7	-86.32	0.7	-10.4	10.4	9.0	1.35	7.680	
500.0	500.0	499.7	499.7	0.9	0.9	-107.30	2.7	-12.0	12.6	10.9	1.70	7.380	
600.0	600.0	599.4	599.3	1.0	1.0	-105.96	6.0	-14.8	16.6	14.6	2.06	8.070	
700.0	699.9	699.0	698.7	1.2	1.2	-106.60	10.6	-18.7	22.5	20.1	2.42	9.269	
800.0	799.7	798.7	798.2	1.4	1.4	-109.06	16.0	-23.2	29.5	26.7	2.80	10.533	
898.2	897.5	896.6	895.8	1.6	1.6	-112.97	21.2	-27.6	37.1	33.9	3.19	11.636	
900.0	899.4	898.4	897.6	1.6	1.6	-113.05	21.3	-27.7	37.3	34.1	3.20	11.657	
1,000.0	999.0	998.0	997.0	1.8	1.8	-116.67	26.6	-32.1	45.5	41.9	3.60	12.648	
1,100.0	1,098.6	1,097.7	1,096.4	2.0	2.1	-119.17	31.9	-36.6	53.9	49.9	4.00	13.463	
1,200.0	1,198.2	1,197.3	1,195.8	2.3	2.3	-120.99	37.3	-41.1	62.3	57.9	4.41	14.138	
1,300.0	1,297.9	1,297.9	1,296.1	2.5	2.5	-121.99	43.2	-45.0	70.1	65.3	4.82	14.542	
1,400.0	1,397.5	1,398.7	1,396.6	2.7	2.7	-122.00	50.4	-47.6	76.6	71.3	5.25	14.589	
1,500.0	1,497.1	1,499.1	1,496.7	2.9	2.9	-121.35	58.6	-49.1	81.8	76.1	5.68	14.396	
1,600.0	1,596.7	1,599.0	1,596.2	3.2	3.1	-120.68	66.9	-50.3	86.8	80.7	6.11	14.198	
1,700.0	1,696.3	1,698.9	1,695.7	3.4	3.3	-120.09	75.2	-51.6	91.8	85.3	6.55	14.023	
1,800.0	1,796.0	1,798.7	1,795.2	3.6	3.6	-119.55	83.6	-52.9	96.9	89.9	6.99	13.867	
1,900.0	1,895.6	1,898.6	1,894.8	3.8	3.8	-119.07	91.9	-54.2	101.9	94.5	7.42	13.728	
2,000.0	1,995.2	1,998.5	1,994.3	4.1	4.0	-118.64	100.2	-55.5	107.0	99.1	7.86	13.603	
2,100.0	2,094.8	2,098.3	2,093.8	4.3	4.2	-118.25	108.6	-56.8	112.0	103.7	8.30	13.490	
2,200.0	2,194.5	2,198.2	2,193.3	4.5	4.4	-117.89	116.9	-58.1	117.1	108.3	8.75	13.388	
2,300.0	2,294.1	2,298.1	2,292.8	4.8	4.7	-117.56	125.2	-59.4	122.2	113.0	9.19	13.295	
2,400.0	2,393.7	2,398.0	2,392.3	5.0	4.9	-117.25	133.5	-60.7	127.2	117.6	9.63	13.210	
2,500.0	2,493.3	2,497.8	2,491.8	5.2	5.1	-116.97	141.9	-61.9	132.3	122.2	10.08	13.132	
2,600.0	2,592.9	2,597.7	2,591.3	5.4	5.3	-116.71	150.2	-63.2	137.4	126.9	10.52	13.060	
2,700.0	2,692.6	2,697.6	2,690.9	5.7	5.6	-116.47	158.5	-64.5	142.5	131.5	10.97	12.993	
2,800.0	2,792.2	2,797.4	2,790.4	5.9	5.8	-116.24	166.8	-65.8	147.6	136.1	11.41	12.932	
2,900.0	2,891.8	2,897.3	2,889.9	6.1	6.0	-116.03	175.2	-67.1	152.6	140.8	11.86	12.875	
3,000.0	2,991.4	2,997.2	2,989.4	6.4	6.2	-115.84	183.5	-68.4	157.7	145.4	12.30	12.822	
3,100.0	3,091.1	3,097.0	3,088.9	6.6	6.5	-115.65	191.8	-69.7	162.8	150.1	12.75	12.772	
3,200.0	3,190.7	3,196.9	3,188.4	6.8	6.7	-115.48	200.1	-71.0	167.9	154.7	13.19	12.726	
3,300.0	3,290.3	3,296.8	3,287.9	7.0	6.9	-115.32	208.5	-72.2	173.0	159.4	13.64	12.682	
3,400.0	3,389.9	3,396.6	3,387.4	7.3	7.1	-115.16	216.8	-73.5	178.1	164.0	14.09	12.642	
3,500.0	3,489.5	3,496.5	3,487.0	7.5	7.4	-115.02	225.1	-74.8	183.2	168.7	14.54	12.603	
3,600.0	3,589.2	3,596.4	3,586.5	7.7	7.6	-114.88	233.4	-76.1	188.3	173.3	14.98	12.567	
3,700.0	3,688.8	3,696.2	3,686.0	8.0	7.8	-114.75	241.8	-77.4	193.4	178.0	15.43	12.533	
3,800.0	3,788.4	3,796.1	3,785.5	8.2	8.0	-114.63	250.1	-78.7	198.5	182.6	15.88	12.501	
3,900.0	3,888.0	3,896.0	3,885.0	8.4	8.3	-114.51	258.4	-80.0	203.6	187.3	16.33	12.470	
4,000.0	3,987.7	3,995.9	3,984.5	8.7	8.5	-114.40	266.8	-81.3	208.7	191.9	16.77	12.441	
4,100.0	4,087.3	4,095.7	4,084.0	8.9	8.7	-114.29	275.1	-82.6	213.8	196.6	17.22	12.414	
4,200.0	4,186.9	4,195.6	4,183.6	9.1	9.0	-114.19	283.4	-83.8	218.9	201.2	17.67	12.388	
4,300.0	4,286.5	4,295.5	4,283.1	9.4	9.2	-114.10	291.7	-85.1	224.0	205.9	18.12	12.363	
4,400.0	4,386.1	4,395.3	4,382.6	9.6	9.4	-114.00	300.1	-86.4	229.1	210.5	18.57	12.339	
4,500.0	4,485.8	4,495.2	4,482.1	9.8	9.6	-113.92	308.4	-87.7	234.2	215.2	19.01	12.317	
4,600.0	4,585.4	4,595.1	4,581.6	10.0	9.9	-113.83	316.7	-89.0	239.3	219.8	19.46	12.295	
4,700.0	4,685.0	4,694.9	4,681.1	10.3	10.1	-113.75	325.0	-90.3	244.4	224.5	19.91	12.274	
4,800.0	4,784.6	4,794.8	4,780.6	10.5	10.3	-113.67	333.4	-91.6	249.5	229.2	20.36	12.255	
4,900.0	4,884.3	4,894.7	4,880.1	10.7	10.5	-113.60	341.7	-92.9	254.6	233.8	20.81	12.236	
5,000.0	4,983.9	4,994.5	4,979.7	11.0	10.8	-113.53	350.0	-94.2	259.7	238.5	21.26	12.218	

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 2C-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 2C-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 #2	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
5,100.0	5,083.5	5,094.4	5,079.2	11.2	11.0	-113.46	358.3	-95.4	264.8	243.1	21.71	12.200	
5,200.0	5,183.1	5,194.3	5,178.7	11.4	11.2	-113.39	366.7	-96.7	269.9	247.8	22.16	12.184	
5,300.0	5,282.7	5,294.2	5,278.2	11.7	11.5	-113.33	375.0	-98.0	275.0	252.4	22.60	12.168	
5,400.0	5,382.4	5,394.0	5,377.7	11.9	11.7	-113.27	383.3	-99.3	280.2	257.1	23.05	12.152	
5,500.0	5,482.0	5,493.9	5,477.2	12.1	11.9	-113.21	391.6	-100.6	285.3	261.8	23.50	12.137	
5,600.0	5,581.6	5,593.8	5,576.7	12.4	12.1	-113.15	400.0	-101.9	290.4	266.4	23.95	12.123	
5,700.0	5,681.2	5,693.6	5,676.2	12.6	12.4	-113.10	408.3	-103.2	295.5	271.1	24.40	12.109	
5,800.0	5,780.9	5,793.5	5,775.8	12.8	12.6	-113.04	416.6	-104.5	300.6	275.7	24.85	12.096	
5,900.0	5,880.5	5,893.4	5,875.3	13.0	12.8	-112.99	425.0	-105.8	305.7	280.4	25.30	12.083	
6,000.0	5,980.1	5,993.2	5,974.8	13.3	13.0	-112.94	433.3	-107.0	310.8	285.1	25.75	12.071	
6,100.0	6,079.7	6,093.1	6,074.3	13.5	13.3	-112.89	441.6	-108.3	315.9	289.7	26.20	12.059	
6,200.0	6,179.3	6,193.0	6,173.8	13.7	13.5	-112.85	449.9	-109.6	321.0	294.4	26.65	12.047	
6,300.0	6,279.0	6,292.8	6,273.3	14.0	13.7	-112.80	458.3	-110.9	326.1	299.0	27.10	12.036	
6,400.0	6,378.6	6,392.7	6,372.8	14.2	14.0	-112.76	466.6	-112.2	331.2	303.7	27.55	12.025	
6,500.0	6,478.2	6,492.6	6,472.4	14.4	14.2	-112.71	474.9	-113.5	336.3	308.4	27.99	12.015	
6,600.0	6,577.8	6,592.5	6,571.9	14.7	14.4	-112.67	483.2	-114.8	341.5	313.0	28.44	12.004	
6,700.0	6,677.5	6,692.3	6,671.4	14.9	14.6	-112.63	491.6	-116.1	346.6	317.7	28.89	11.995	
6,800.0	6,777.1	6,792.2	6,770.9	15.1	14.9	-112.59	499.9	-117.4	351.7	322.3	29.34	11.985	
6,900.0	6,876.7	6,892.1	6,870.4	15.4	15.1	-112.56	508.2	-118.6	356.8	327.0	29.79	11.976	
7,000.0	6,976.3	6,991.5	6,972.7	15.6	15.2	-113.72	509.1	-120.0	361.6	331.4	30.11	12.008	
7,100.0	7,075.9	7,091.8	7,068.5	15.8	15.1	-117.41	493.2	-121.2	366.6	336.4	30.18	12.145	
7,147.0	7,122.8	7,134.2	7,109.2	15.9	15.1	-119.75	481.2	-121.7	369.8	339.7	30.13	12.273	
7,150.0	7,125.8	7,136.8	7,111.7	15.9	15.1	-121.54	480.4	-121.8	370.1	339.9	30.13	12.283	
7,200.0	7,175.7	7,180.0	7,152.0	16.0	15.0	152.48	464.9	-122.3	374.6	344.6	29.98	12.495	
7,250.0	7,225.5	7,222.1	7,190.1	16.0	14.8	100.86	447.0	-122.8	379.9	350.2	29.76	12.765	
7,300.0	7,275.0	7,263.3	7,226.0	16.0	14.7	89.00	426.8	-123.2	385.9	356.5	29.49	13.088	
7,350.0	7,323.6	7,300.0	7,256.7	16.0	14.6	83.07	406.7	-123.6	392.5	363.3	29.19	13.446	
7,400.0	7,371.0	7,343.2	7,291.0	15.9	14.4	78.64	380.5	-124.1	399.3	370.5	28.81	13.863	
7,450.0	7,416.9	7,382.2	7,320.2	15.8	14.3	75.27	354.8	-124.5	406.4	378.0	28.42	14.302	
7,500.0	7,460.8	7,420.5	7,347.2	15.6	14.2	72.44	327.5	-124.8	413.5	385.5	28.00	14.766	
7,550.0	7,502.6	7,458.4	7,372.0	15.5	14.0	70.01	298.9	-125.1	420.5	392.9	27.58	15.249	
7,600.0	7,541.7	7,500.0	7,397.1	15.3	13.9	67.78	265.7	-125.5	427.3	400.2	27.12	15.755	
7,650.0	7,578.1	7,532.8	7,415.0	15.2	13.8	66.06	238.2	-125.7	433.7	407.0	26.72	16.231	
7,700.0	7,611.3	7,569.5	7,433.2	15.0	13.7	64.47	206.4	-125.9	439.7	413.4	26.32	16.708	
7,750.0	7,641.1	7,600.0	7,446.8	14.9	13.7	63.20	179.1	-126.1	445.3	419.3	25.96	17.150	
7,800.0	7,667.4	7,642.1	7,463.1	14.8	13.6	61.93	140.3	-126.3	450.1	424.5	25.63	17.565	
7,850.0	7,689.8	7,678.0	7,474.7	14.7	13.6	60.96	106.3	-126.5	454.4	429.0	25.37	17.909	
7,900.0	7,708.2	7,713.8	7,484.2	14.7	13.6	60.19	71.8	-126.6	457.9	432.7	25.19	18.176	
7,950.0	7,722.6	7,750.0	7,491.5	14.7	13.7	59.59	36.3	-126.7	460.6	435.5	25.10	18.350	
8,000.0	7,732.7	7,785.0	7,496.4	14.7	13.7	59.18	1.7	-126.7	462.6	437.5	25.13	18.411	
8,050.0	7,738.5	7,820.5	7,499.3	14.8	13.8	58.93	-33.7	-126.8	463.8	438.5	25.25	18.368	
8,091.8	7,740.0	7,850.7	7,500.0	15.0	13.9	58.86	-63.8	-126.8	464.1	438.7	25.44	18.246	
8,100.0	7,740.0	7,858.9	7,500.0	15.0	13.9	58.86	-72.1	-126.8	464.1	438.6	25.50	18.202	
8,200.0	7,740.0	7,958.9	7,500.0	15.4	14.4	58.86	-172.1	-126.8	464.1	437.7	26.39	17.588	
8,300.0	7,740.0	8,058.9	7,500.0	16.1	15.1	58.86	-272.1	-126.8	464.1	436.6	27.57	16.837	
8,400.0	7,740.0	8,158.9	7,500.0	16.9	15.9	58.86	-372.1	-126.8	464.1	435.1	29.01	16.000	
8,500.0	7,740.0	8,258.9	7,500.0	17.8	16.9	58.86	-472.1	-126.8	464.1	433.4	30.68	15.129	
8,600.0	7,740.0	8,358.9	7,500.0	18.8	18.0	58.86	-572.1	-126.8	464.1	431.6	32.54	14.263	
8,700.0	7,740.0	8,458.9	7,500.0	20.0	19.2	58.86	-672.1	-126.8	464.1	429.6	34.57	13.427	
8,800.0	7,740.0	8,558.9	7,500.0	21.2	20.5	58.86	-772.1	-126.8	464.1	427.4	36.73	12.637	
8,900.0	7,740.0	8,658.9	7,500.0	22.5	21.8	58.86	-872.1	-126.8	464.1	425.1	39.00	11.900	
9,000.0	7,740.0	8,758.9	7,500.0	23.9	23.2	58.86	-972.1	-126.8	464.1	422.7	41.37	11.219	

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 2C-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 2C-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 #2	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
9,100.0	7,740.0	8,858.9	7,500.0	25.3	24.7	58.86	-1,072.1	-126.8	464.1	420.3	43.82	10.593	
9,200.0	7,740.0	8,958.9	7,500.0	26.7	26.1	58.86	-1,172.1	-126.8	464.1	417.8	46.33	10.018	
9,300.0	7,740.0	9,058.9	7,500.0	28.2	27.6	58.86	-1,272.1	-126.8	464.1	415.2	48.90	9.492	
9,400.0	7,740.0	9,158.9	7,500.0	29.7	29.2	58.86	-1,372.1	-126.8	464.1	412.6	51.51	9.009	
9,500.0	7,740.0	9,258.9	7,500.0	31.3	30.7	58.86	-1,472.1	-126.8	464.1	409.9	54.17	8.567	
9,600.0	7,740.0	9,358.9	7,500.0	32.8	32.3	58.86	-1,572.1	-126.8	464.1	407.3	56.86	8.162	
9,700.0	7,740.0	9,458.9	7,500.0	34.4	33.9	58.86	-1,672.1	-126.8	464.1	404.5	59.59	7.789	
9,800.0	7,740.0	9,558.9	7,500.0	36.0	35.5	58.86	-1,772.1	-126.8	464.1	401.8	62.34	7.445	
9,900.0	7,740.0	9,658.9	7,500.0	37.6	37.2	58.86	-1,872.1	-126.8	464.1	399.0	65.11	7.128	
10,000.0	7,740.0	9,758.9	7,500.0	39.2	38.8	58.86	-1,972.1	-126.8	464.1	396.2	67.90	6.835	
10,100.0	7,740.0	9,858.9	7,500.0	40.9	40.5	58.86	-2,072.1	-126.8	464.1	393.4	70.71	6.563	
10,200.0	7,740.0	9,958.9	7,500.0	42.5	42.1	58.86	-2,172.1	-126.8	464.1	390.6	73.54	6.311	
10,300.0	7,740.0	10,058.9	7,500.0	44.1	43.8	58.86	-2,272.1	-126.8	464.1	387.7	76.38	6.076	
10,400.0	7,740.0	10,158.9	7,500.0	45.8	45.4	58.86	-2,372.1	-126.8	464.1	384.9	79.23	5.858	
10,500.0	7,740.0	10,258.9	7,500.0	47.5	47.1	58.86	-2,472.1	-126.8	464.1	382.0	82.10	5.653	
10,600.0	7,740.0	10,358.9	7,500.0	49.1	48.8	58.86	-2,572.1	-126.8	464.1	379.1	84.97	5.462	
10,700.0	7,740.0	10,458.9	7,500.0	50.8	50.5	58.86	-2,672.1	-126.8	464.1	376.3	87.85	5.283	
10,800.0	7,740.0	10,558.9	7,500.0	52.5	52.2	58.86	-2,772.1	-126.8	464.1	373.4	90.74	5.115	
10,900.0	7,740.0	10,658.9	7,500.0	54.2	53.9	58.86	-2,872.1	-126.8	464.1	370.5	93.64	4.956	
11,000.0	7,740.0	10,758.9	7,500.0	55.9	55.6	58.86	-2,972.1	-126.8	464.1	367.6	96.55	4.807	
11,100.0	7,740.0	10,858.9	7,500.0	57.6	57.3	58.86	-3,072.1	-126.8	464.1	364.7	99.46	4.666	
11,200.0	7,740.0	10,958.9	7,500.0	59.3	59.0	58.86	-3,172.1	-126.8	464.1	361.7	102.38	4.533	
11,300.0	7,740.0	11,058.9	7,500.0	61.0	60.7	58.86	-3,272.1	-126.8	464.1	358.8	105.30	4.408	
11,400.0	7,740.0	11,158.9	7,500.0	62.7	62.4	58.86	-3,372.1	-126.8	464.1	355.9	108.23	4.288	
11,500.0	7,740.0	11,258.9	7,500.0	64.4	64.1	58.86	-3,472.1	-126.8	464.1	353.0	111.16	4.175	
11,600.0	7,740.0	11,358.9	7,500.0	66.1	65.8	58.86	-3,572.1	-126.8	464.1	350.0	114.09	4.068	
11,700.0	7,740.0	11,458.9	7,500.0	67.8	67.5	58.86	-3,672.1	-126.8	464.1	347.1	117.03	3.966	
11,800.0	7,740.0	11,558.9	7,500.0	69.5	69.3	58.86	-3,772.1	-126.8	464.1	344.1	119.98	3.868	
11,900.0	7,740.0	11,658.9	7,500.0	71.2	71.0	58.86	-3,872.1	-126.8	464.1	341.2	122.92	3.776	
12,000.0	7,740.0	11,758.9	7,500.0	72.9	72.7	58.86	-3,972.1	-126.8	464.1	338.2	125.87	3.687	
12,100.0	7,740.0	11,858.9	7,500.0	74.7	74.4	58.86	-4,072.1	-126.8	464.1	335.3	128.82	3.603	
12,200.0	7,740.0	11,958.9	7,500.0	76.4	76.2	58.86	-4,172.1	-126.8	464.1	332.3	131.78	3.522	
12,300.0	7,740.0	12,058.9	7,500.0	78.1	77.9	58.86	-4,272.1	-126.8	464.1	329.4	134.74	3.445	
12,400.0	7,740.0	12,158.9	7,500.0	79.8	79.6	58.86	-4,372.1	-126.8	464.1	326.4	137.69	3.371	
12,500.0	7,740.0	12,258.9	7,500.0	81.6	81.3	58.86	-4,472.1	-126.8	464.1	323.5	140.66	3.300	
12,600.0	7,740.0	12,358.9	7,500.0	83.3	83.1	58.86	-4,572.1	-126.8	464.1	320.5	143.62	3.232	
12,700.0	7,740.0	12,458.9	7,500.0	85.0	84.8	58.86	-4,672.1	-126.8	464.1	317.5	146.58	3.166	
12,800.0	7,740.0	12,558.9	7,500.0	86.7	86.5	58.86	-4,772.1	-126.8	464.1	314.6	149.55	3.103	
12,900.0	7,740.0	12,658.9	7,500.0	88.5	88.3	58.86	-4,872.1	-126.8	464.1	311.6	152.52	3.043	
13,000.0	7,740.0	12,758.9	7,500.0	90.2	90.0	58.86	-4,972.1	-126.8	464.1	308.6	155.49	2.985	
13,100.0	7,740.0	12,858.9	7,500.0	91.9	91.7	58.86	-5,072.1	-126.8	464.1	305.7	158.46	2.929	
13,200.0	7,740.0	12,958.9	7,500.0	93.7	93.5	58.86	-5,172.1	-126.8	464.1	302.7	161.44	2.875	
13,300.0	7,740.0	13,063.9	7,500.0	95.4	95.3	58.83	-5,277.0	-126.3	463.7	299.3	164.43	2.820	
13,400.0	7,740.0	13,163.9	7,500.0	97.1	97.0	58.75	-5,377.0	-125.0	462.6	295.4	167.27	2.766	
13,500.0	7,740.0	13,263.8	7,500.0	98.9	98.8	58.67	-5,477.0	-123.8	461.6	291.5	170.11	2.713	
13,600.0	7,740.0	13,363.8	7,500.0	100.6	100.5	58.59	-5,577.0	-122.5	460.5	287.6	172.94	2.663	
13,700.0	7,740.0	13,463.8	7,500.0	102.3	102.2	58.51	-5,677.0	-121.3	459.4	283.7	175.77	2.614	
13,800.0	7,740.0	13,563.8	7,500.0	104.1	104.0	58.42	-5,776.9	-120.0	458.4	279.8	178.59	2.567	
13,900.0	7,740.0	13,663.8	7,500.0	105.8	105.7	58.34	-5,876.9	-118.8	457.3	275.9	181.40	2.521	
14,000.0	7,740.0	13,763.8	7,500.0	107.5	107.4	58.26	-5,976.9	-117.5	456.2	272.0	184.22	2.477	
14,100.0	7,740.0	13,863.8	7,500.0	109.3	109.2	58.18	-6,076.9	-116.3	455.2	268.1	187.02	2.434	
14,200.0	7,740.0	13,963.8	7,500.0	111.0	110.9	58.09	-6,176.9	-115.0	454.1	264.3	189.82	2.392	

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 2C-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 2C-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 #2	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		
14,300.0	7,740.0	14,063.8	7,500.0	112.8	112.7	58.01	-6,276.9	-113.8	453.0	260.4	192.62	2.352		
14,400.0	7,740.0	14,163.8	7,500.0	114.5	114.4	57.93	-6,376.9	-112.5	452.0	256.6	195.41	2.313		
14,500.0	7,740.0	14,263.8	7,500.0	116.2	116.1	57.84	-6,476.8	-111.3	450.9	252.7	198.19	2.275		
14,600.0	7,740.0	14,363.8	7,500.0	118.0	117.9	57.76	-6,576.8	-110.0	449.9	248.9	200.97	2.239		
14,700.0	7,740.0	14,463.8	7,500.0	119.7	119.6	57.67	-6,676.8	-108.8	448.8	245.1	203.74	2.203		
14,800.0	7,740.0	14,563.7	7,500.0	121.5	121.4	57.59	-6,776.8	-107.5	447.8	241.3	206.50	2.168		
14,900.0	7,740.0	14,663.7	7,500.0	123.2	123.1	57.50	-6,876.8	-106.3	446.7	237.4	209.26	2.135		
15,000.0	7,740.0	14,763.7	7,500.0	124.9	124.9	57.41	-6,976.8	-105.0	445.6	233.6	212.01	2.102		
15,100.0	7,740.0	14,863.7	7,500.0	126.7	126.6	57.33	-7,076.7	-103.8	444.6	229.8	214.76	2.070		
15,200.0	7,740.0	14,963.7	7,500.0	128.4	128.3	57.24	-7,176.7	-102.5	443.5	226.0	217.50	2.039		
15,300.0	7,740.0	15,063.7	7,500.0	130.2	130.1	57.15	-7,276.7	-101.3	442.5	222.3	220.23	2.009		
15,400.0	7,740.0	15,163.7	7,500.0	131.9	131.8	57.06	-7,376.7	-100.0	441.4	218.5	222.96	1.980		
15,500.0	7,740.0	15,263.7	7,500.0	133.7	133.6	56.97	-7,476.7	-98.8	440.4	214.7	225.67	1.951		
15,600.0	7,740.0	15,363.7	7,500.0	135.4	135.3	56.89	-7,576.7	-97.5	439.3	211.0	228.39	1.924		
15,700.0	7,740.0	15,463.7	7,500.0	137.1	137.1	56.80	-7,676.7	-96.3	438.3	207.2	231.09	1.897		
15,800.0	7,740.0	15,563.7	7,500.0	138.9	138.8	56.71	-7,776.6	-95.0	437.2	203.5	233.79	1.870		
15,900.0	7,740.0	15,663.7	7,500.0	140.6	140.6	56.62	-7,876.6	-93.8	436.2	199.7	236.48	1.845		
15,946.9	7,740.0	15,706.0	7,500.0	141.4	141.3	56.58	-7,919.0	-93.2	435.7	198.0	237.69	1.833		
15,952.8	7,740.0	15,706.0	7,500.0	141.6	141.3	56.58	-7,919.0	-93.2	435.8	198.0	237.77	1.833 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	10.1	10.1				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	10.1	10.1	9.8	0.30	33.178	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	10.1	10.1	9.4	0.65	15.436	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	10.1	10.1	9.1	1.00	10.057	
400.0	400.0	400.0	400.0	0.7	0.7	90.00	0.0	10.1	10.1	8.7	1.35	7.459	
500.0	500.0	500.0	500.0	0.9	0.8	68.68	0.0	10.1	9.7	8.0	1.70	5.720	
591.4	591.4	591.3	591.3	1.0	1.0	78.24	0.6	10.5	9.4	7.4	2.02	4.661 CC	
600.0	600.0	599.9	599.9	1.0	1.0	79.20	0.7	10.6	9.4	7.4	2.05	4.593 ES	
700.0	699.9	699.8	699.8	1.2	1.2	90.30	2.7	12.3	9.9	7.5	2.41	4.089	
800.0	799.7	799.8	799.6	1.4	1.4	99.99	6.1	15.1	11.1	8.3	2.79	3.964	
898.2	897.5	897.9	897.6	1.6	1.6	107.16	10.7	18.9	12.9	9.7	3.18	4.049	
900.0	899.4	899.7	899.4	1.6	1.6	107.28	10.8	18.9	12.9	9.7	3.18	4.052	
1,000.0	999.0	999.7	999.1	1.8	1.8	109.07	16.8	23.9	15.0	11.4	3.60	4.165	
1,100.0	1,098.6	1,099.7	1,098.6	2.0	2.0	104.56	24.2	30.0	16.9	12.9	4.04	4.198	
1,200.0	1,198.2	1,199.7	1,197.9	2.3	2.2	95.78	32.9	37.2	19.1	14.6	4.50	4.256	
1,300.0	1,297.9	1,299.6	1,297.1	2.5	2.5	86.66	42.3	45.0	21.9	17.0	4.95	4.432	
1,400.0	1,397.5	1,399.5	1,396.2	2.7	2.7	79.74	51.8	52.7	25.2	19.8	5.39	4.670	
1,500.0	1,497.1	1,499.4	1,495.4	2.9	3.0	74.44	61.2	60.5	28.7	22.9	5.81	4.931	
1,600.0	1,596.7	1,599.3	1,594.6	3.2	3.3	70.32	70.6	68.2	32.4	26.1	6.23	5.193	
1,700.0	1,696.3	1,699.2	1,693.7	3.4	3.5	67.06	80.0	76.0	36.2	29.5	6.65	5.446	
1,800.0	1,796.0	1,799.1	1,792.9	3.6	3.8	64.43	89.4	83.7	40.1	33.1	7.06	5.685	
1,900.0	1,895.6	1,899.0	1,892.0	3.8	4.0	62.28	98.8	91.5	44.1	36.6	7.46	5.909	
2,000.0	1,995.2	1,998.9	1,991.2	4.1	4.3	60.48	108.3	99.2	48.2	40.3	7.87	6.118	
2,100.0	2,094.8	2,098.8	2,090.4	4.3	4.6	58.96	117.7	107.0	52.2	44.0	8.28	6.312	
2,200.0	2,194.5	2,198.7	2,189.5	4.5	4.8	57.67	127.1	114.8	56.4	47.7	8.68	6.491	
2,300.0	2,294.1	2,298.6	2,288.7	4.8	5.1	56.55	136.5	122.5	60.5	51.4	9.09	6.658	
2,400.0	2,393.7	2,398.5	2,387.8	5.0	5.4	55.57	145.9	130.3	64.7	55.2	9.49	6.813	
2,500.0	2,493.3	2,498.5	2,487.0	5.2	5.7	54.71	155.3	138.0	68.8	58.9	9.89	6.957	
2,600.0	2,592.9	2,598.4	2,586.2	5.4	5.9	53.95	164.8	145.8	73.0	62.7	10.30	7.092	
2,700.0	2,692.6	2,698.3	2,685.3	5.7	6.2	53.27	174.2	153.5	77.2	66.5	10.70	7.217	
2,800.0	2,792.2	2,798.2	2,784.5	5.9	6.5	52.67	183.6	161.3	81.4	70.3	11.10	7.334	
2,900.0	2,891.8	2,898.1	2,883.6	6.1	6.7	52.12	193.0	169.0	85.7	74.1	11.51	7.444	
3,000.0	2,991.4	2,998.0	2,982.8	6.4	7.0	51.62	202.4	176.8	89.9	78.0	11.91	7.547	
3,100.0	3,091.1	3,097.9	3,082.0	6.6	7.3	51.17	211.8	184.5	94.1	81.8	12.31	7.644	
3,200.0	3,190.7	3,197.8	3,181.1	6.8	7.6	50.76	221.2	192.3	98.4	85.6	12.72	7.735	
3,300.0	3,290.3	3,297.7	3,280.3	7.0	7.8	50.38	230.7	200.1	102.6	89.5	13.12	7.820	
3,400.0	3,389.9	3,397.6	3,379.4	7.3	8.1	50.03	240.1	207.8	106.8	93.3	13.52	7.901	
3,500.0	3,489.5	3,497.5	3,478.6	7.5	8.4	49.71	249.5	215.6	111.1	97.2	13.93	7.978	
3,600.0	3,589.2	3,597.4	3,577.8	7.7	8.7	49.41	258.9	223.3	115.3	101.0	14.33	8.050	
3,700.0	3,688.8	3,697.4	3,676.9	8.0	8.9	49.14	268.3	231.1	119.6	104.9	14.73	8.119	
3,800.0	3,788.4	3,797.3	3,776.1	8.2	9.2	48.88	277.7	238.8	123.9	108.7	15.13	8.184	
3,900.0	3,888.0	3,897.2	3,875.2	8.4	9.5	48.64	287.2	246.6	128.1	112.6	15.54	8.246	
4,000.0	3,987.7	3,997.1	3,974.4	8.7	9.7	48.41	296.6	254.3	132.4	116.4	15.94	8.305	
4,100.0	4,087.3	4,097.0	4,073.6	8.9	10.0	48.20	306.0	262.1	136.7	120.3	16.34	8.362	
4,200.0	4,186.9	4,196.9	4,172.7	9.1	10.3	48.01	315.4	269.9	140.9	124.2	16.75	8.415	
4,300.0	4,286.5	4,296.8	4,271.9	9.4	10.6	47.82	324.8	277.6	145.2	128.0	17.15	8.466	
4,400.0	4,386.1	4,396.7	4,371.0	9.6	10.8	47.64	334.2	285.4	149.5	131.9	17.55	8.515	
4,500.0	4,485.8	4,496.6	4,470.2	9.8	11.1	47.48	343.6	293.1	153.7	135.8	17.96	8.562	
4,600.0	4,585.4	4,596.5	4,569.4	10.0	11.4	47.32	353.1	300.9	158.0	139.6	18.36	8.607	
4,700.0	4,685.0	4,696.4	4,668.5	10.3	11.7	47.17	362.5	308.6	162.3	143.5	18.76	8.650	
4,800.0	4,784.6	4,796.3	4,767.7	10.5	11.9	47.03	371.9	316.4	166.6	147.4	19.16	8.691	
4,900.0	4,884.3	4,896.2	4,866.8	10.7	12.2	46.89	381.3	324.1	170.8	151.3	19.57	8.730	

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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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 2C-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 #2	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				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,000.0	4,983.9	4,996.2	4,966.0	11.0	12.5	46.77	390.7	331.9	175.1	155.1	19.97	8.768	
5,100.0	5,083.5	5,096.1	5,065.2	11.2	12.8	46.65	400.1	339.7	179.4	159.0	20.37	8.805	
5,200.0	5,183.1	5,196.0	5,164.3	11.4	13.0	46.53	409.6	347.4	183.7	162.9	20.78	8.840	
5,300.0	5,282.7	5,295.9	5,263.5	11.7	13.3	46.42	419.0	355.2	187.9	166.8	21.18	8.874	
5,400.0	5,382.4	5,395.8	5,362.7	11.9	13.6	46.31	428.4	362.9	192.2	170.6	21.58	8.906	
5,500.0	5,482.0	5,495.7	5,461.8	12.1	13.9	46.21	437.8	370.7	196.5	174.5	21.99	8.938	
5,600.0	5,581.6	5,595.6	5,561.0	12.4	14.1	46.12	447.2	378.4	200.8	178.4	22.39	8.968	
5,700.0	5,681.2	5,695.5	5,660.1	12.6	14.4	46.02	456.6	386.2	205.1	182.3	22.79	8.997	
5,800.0	5,780.9	5,795.4	5,759.3	12.8	14.7	45.93	466.0	393.9	209.4	186.2	23.20	9.026	
5,900.0	5,880.5	5,895.3	5,858.5	13.0	15.0	45.85	475.5	401.7	213.6	190.0	23.60	9.053	
6,000.0	5,980.1	5,995.2	5,957.6	13.3	15.2	45.77	484.9	409.4	217.9	193.9	24.00	9.079	
6,100.0	6,079.7	6,095.1	6,056.8	13.5	15.5	45.69	494.3	417.2	222.2	197.8	24.40	9.105	
6,200.0	6,179.3	6,195.0	6,155.9	13.7	15.8	45.61	503.7	425.0	226.5	201.7	24.81	9.130	
6,300.0	6,279.0	6,295.0	6,255.1	14.0	16.1	45.54	513.1	432.7	230.8	205.6	25.21	9.154	
6,400.0	6,378.6	6,394.9	6,354.3	14.2	16.3	45.47	522.5	440.5	235.1	209.4	25.61	9.177	
6,500.0	6,478.2	6,494.8	6,453.4	14.4	16.6	45.40	532.0	448.2	239.3	213.3	26.02	9.199	
6,600.0	6,577.8	6,594.7	6,552.6	14.7	16.9	45.34	541.4	456.0	243.6	217.2	26.42	9.221	
6,700.0	6,677.5	6,694.6	6,651.7	14.9	17.2	45.27	550.8	463.7	247.9	221.1	26.82	9.242	
6,800.0	6,777.1	6,794.5	6,750.9	15.1	17.4	45.21	560.2	471.5	252.2	225.0	27.23	9.263	
6,900.0	6,876.7	6,894.4	6,850.1	15.4	17.7	45.15	569.6	479.2	256.5	228.9	27.63	9.283	
7,000.0	6,976.3	7,006.4	6,961.5	15.6	17.9	46.47	573.6	488.0	259.0	230.8	28.19	9.189	
7,100.0	7,075.9	7,116.5	7,069.9	15.8	17.9	52.14	556.8	496.4	256.9	227.7	29.22	8.792	
7,147.0	7,122.8	7,164.2	7,115.3	15.9	17.9	55.99	543.1	500.0	255.7	225.9	29.82	8.575	
7,150.0	7,125.8	7,167.1	7,118.1	15.9	17.9	54.65	542.1	500.2	255.6	225.8	29.86	8.562	
7,177.9	7,153.6	7,194.1	7,143.3	16.0	17.8	27.14	532.6	502.2	255.4	225.2	30.18	8.464	
7,200.0	7,175.7	7,215.2	7,162.6	16.0	17.8	-24.05	524.3	503.7	255.6	225.1	30.41	8.403	
7,250.0	7,225.5	7,261.7	7,204.1	16.0	17.7	-68.56	503.6	506.9	257.0	226.2	30.84	8.333	
7,300.0	7,275.0	7,306.8	7,242.6	16.0	17.5	-73.54	480.3	509.9	259.9	228.8	31.13	8.349	
7,350.0	7,323.6	7,350.0	7,277.7	16.0	17.4	-73.11	455.3	512.7	264.1	232.9	31.26	8.449	
7,400.0	7,371.0	7,393.4	7,310.9	15.9	17.3	-71.10	427.5	515.3	269.4	238.2	31.22	8.629	
7,450.0	7,416.9	7,435.1	7,340.8	15.8	17.1	-68.65	398.5	517.6	275.7	244.6	31.01	8.888	
7,500.0	7,460.8	7,476.0	7,367.9	15.6	17.0	-66.06	368.0	519.7	282.5	251.9	30.64	9.221	
7,550.0	7,502.6	7,516.1	7,392.4	15.5	16.8	-63.51	336.3	521.7	289.9	259.8	30.12	9.623	
7,600.0	7,541.7	7,555.5	7,414.2	15.3	16.7	-61.08	303.5	523.4	297.5	268.0	29.48	10.091	
7,650.0	7,578.1	7,594.4	7,433.5	15.2	16.6	-58.82	269.8	524.9	305.1	276.4	28.74	10.617	
7,700.0	7,611.3	7,632.7	7,450.3	15.0	16.5	-56.75	235.4	526.2	312.7	284.8	27.94	11.191	
7,750.0	7,641.1	7,670.5	7,464.5	14.9	16.5	-54.87	200.4	527.3	320.1	292.9	27.12	11.800	
7,800.0	7,667.4	7,708.0	7,476.3	14.8	16.4	-53.18	164.9	528.2	327.0	300.7	26.32	12.424	
7,850.0	7,689.8	7,750.0	7,486.8	14.7	16.4	-51.56	124.2	529.0	333.5	308.0	25.56	13.049	
7,900.0	7,708.2	7,781.8	7,492.7	14.7	16.4	-50.39	92.9	529.5	339.4	314.4	24.96	13.597	
7,950.0	7,722.6	7,818.3	7,497.3	14.7	16.4	-49.26	56.7	529.9	344.6	320.1	24.48	14.079	
8,000.0	7,732.7	7,854.6	7,499.7	14.7	16.5	-48.32	20.5	530.1	349.1	324.9	24.19	14.430	
8,050.0	7,738.5	7,897.2	7,500.0	14.8	16.5	-47.51	-22.1	530.1	352.6	328.4	24.12	14.615	
8,091.8	7,740.0	7,939.0	7,500.0	15.0	16.6	-47.25	-63.8	530.1	353.6	329.2	24.34	14.528	
8,100.0	7,740.0	7,947.2	7,500.0	15.0	16.7	-47.25	-72.1	530.1	353.6	329.2	24.39	14.496	
8,200.0	7,740.0	8,047.2	7,500.0	15.4	17.1	-47.25	-172.1	530.1	353.6	328.4	25.17	14.045	
8,300.0	7,740.0	8,147.2	7,500.0	16.1	17.6	-47.25	-272.1	530.1	353.6	327.4	26.19	13.499	
8,400.0	7,740.0	8,247.2	7,500.0	16.9	18.4	-47.25	-372.1	530.1	353.6	326.1	27.42	12.896	
8,500.0	7,740.0	8,347.2	7,500.0	17.8	19.2	-47.25	-472.1	530.1	353.6	324.7	28.82	12.267	
8,600.0	7,740.0	8,447.2	7,500.0	18.8	20.2	-47.25	-572.1	530.1	353.6	323.2	30.38	11.637	
8,700.0	7,740.0	8,547.2	7,500.0	20.0	21.3	-47.25	-672.1	530.1	353.6	321.5	32.08	11.022	
8,800.0	7,740.0	8,647.2	7,500.0	21.2	22.4	-47.25	-772.1	530.1	353.6	319.7	33.89	10.433	

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 2C-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 2C-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 #2	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		
8,900.0	7,740.0	8,747.2	7,500.0	22.5	23.6	-47.25	-872.1	530.1	353.6	317.8	35.79	9.878		
9,000.0	7,740.0	8,847.2	7,500.0	23.9	24.9	-47.25	-972.1	530.1	353.6	315.8	37.78	9.359		
9,100.0	7,740.0	8,947.2	7,500.0	25.3	26.3	-47.25	-1,072.1	530.1	353.6	313.7	39.83	8.876		
9,200.0	7,740.0	9,047.2	7,500.0	26.7	27.7	-47.25	-1,172.1	530.1	353.6	311.6	41.95	8.428		
9,300.0	7,740.0	9,147.2	7,500.0	28.2	29.1	-47.25	-1,272.1	530.1	353.6	309.4	44.12	8.014		
9,400.0	7,740.0	9,247.2	7,500.0	29.7	30.6	-47.25	-1,372.1	530.1	353.6	307.2	46.33	7.632		
9,500.0	7,740.0	9,347.2	7,500.0	31.3	32.1	-47.25	-1,472.1	530.1	353.6	305.0	48.57	7.279		
9,600.0	7,740.0	9,447.2	7,500.0	32.8	33.6	-47.25	-1,572.1	530.1	353.6	302.7	50.85	6.953		
9,700.0	7,740.0	9,547.2	7,500.0	34.4	35.1	-47.25	-1,672.1	530.1	353.6	300.4	53.16	6.651		
9,800.0	7,740.0	9,647.2	7,500.0	36.0	36.7	-47.25	-1,772.1	530.1	353.6	298.1	55.49	6.371		
9,900.0	7,740.0	9,747.2	7,500.0	37.6	38.3	-47.25	-1,872.1	530.1	353.6	295.7	57.85	6.112		
10,000.0	7,740.0	9,847.2	7,500.0	39.2	39.9	-47.25	-1,972.1	530.1	353.6	293.3	60.22	5.871		
10,100.0	7,740.0	9,947.2	7,500.0	40.9	41.5	-47.25	-2,072.1	530.1	353.6	290.9	62.61	5.647		
10,200.0	7,740.0	10,047.2	7,500.0	42.5	43.1	-47.25	-2,172.1	530.1	353.6	288.5	65.02	5.438		
10,300.0	7,740.0	10,147.2	7,500.0	44.1	44.7	-47.25	-2,272.1	530.1	353.6	286.1	67.44	5.243		
10,400.0	7,740.0	10,247.2	7,500.0	45.8	46.3	-47.25	-2,372.1	530.1	353.6	283.7	69.87	5.060		
10,500.0	7,740.0	10,347.2	7,500.0	47.5	48.0	-47.25	-2,472.1	530.1	353.6	281.2	72.31	4.889		
10,600.0	7,740.0	10,447.2	7,500.0	49.1	49.6	-47.25	-2,572.1	530.1	353.6	278.8	74.77	4.729		
10,700.0	7,740.0	10,547.2	7,500.0	50.8	51.3	-47.25	-2,672.1	530.1	353.6	276.3	77.23	4.578		
10,800.0	7,740.0	10,647.2	7,500.0	52.5	53.0	-47.25	-2,772.1	530.1	353.6	273.9	79.70	4.436		
10,900.0	7,740.0	10,747.2	7,500.0	54.2	54.6	-47.25	-2,872.1	530.1	353.6	271.4	82.18	4.302		
11,000.0	7,740.0	10,847.2	7,500.0	55.9	56.3	-47.25	-2,972.1	530.1	353.6	268.9	84.66	4.176		
11,100.0	7,740.0	10,947.2	7,500.0	57.6	58.0	-47.25	-3,072.1	530.1	353.6	266.4	87.15	4.057		
11,200.0	7,740.0	11,047.2	7,500.0	59.3	59.7	-47.25	-3,172.1	530.1	353.6	263.9	89.65	3.944		
11,300.0	7,740.0	11,147.2	7,500.0	61.0	61.4	-47.25	-3,272.1	530.1	353.6	261.4	92.15	3.837		
11,360.0	7,740.0	11,207.2	7,500.0	62.0	62.4	-47.25	-3,332.1	530.1	353.6	259.9	93.65	3.775		
11,400.0	7,740.0	11,246.9	7,500.0	62.7	63.1	-47.25	-3,371.8	530.1	353.6	258.9	94.65	3.735		
11,500.0	7,740.0	11,338.6	7,500.0	64.4	64.6	-47.42	-3,463.4	531.6	354.8	257.5	97.29	3.647		
11,600.0	7,740.0	11,430.1	7,500.0	66.1	66.2	-47.90	-3,554.8	536.1	358.4	258.1	100.38	3.571		
11,700.0	7,740.0	11,528.5	7,500.0	67.8	67.9	-48.63	-3,653.0	542.9	363.6	259.7	103.93	3.499		
11,800.0	7,740.0	11,628.3	7,500.0	69.5	69.6	-49.34	-3,752.5	549.9	368.9	261.4	107.53	3.431		
11,900.0	7,740.0	11,728.0	7,500.0	71.2	71.3	-50.04	-3,852.0	556.9	374.2	263.1	111.15	3.367		
12,000.0	7,740.0	11,827.8	7,500.0	72.9	73.0	-50.71	-3,951.5	563.8	379.6	264.8	114.78	3.307		
12,100.0	7,740.0	11,927.5	7,500.0	74.7	74.7	-51.37	-4,051.1	570.8	385.0	266.6	118.43	3.251		
12,200.0	7,740.0	12,027.3	7,500.0	76.4	76.4	-52.01	-4,150.6	577.7	390.5	268.4	122.08	3.199		
12,300.0	7,740.0	12,127.1	7,500.0	78.1	78.2	-52.63	-4,250.1	584.7	396.0	270.3	125.75	3.149		
12,400.0	7,740.0	12,230.9	7,500.0	79.8	79.9	-53.24	-4,353.7	591.7	401.4	271.9	129.49	3.100		
12,500.0	7,740.0	12,343.6	7,500.0	81.6	81.9	-53.59	-4,466.3	595.9	404.4	271.4	133.00	3.041		
12,600.0	7,740.0	12,449.3	7,500.0	83.3	83.7	-53.63	-4,572.0	596.4	404.7	268.8	135.92	2.978		
12,700.0	7,740.0	12,549.3	7,500.0	85.0	85.4	-53.63	-4,672.0	596.4	404.8	266.0	138.71	2.918		
12,800.0	7,740.0	12,649.3	7,500.0	86.7	87.1	-53.63	-4,772.0	596.4	404.8	263.3	141.50	2.861		
12,900.0	7,740.0	12,749.3	7,500.0	88.5	88.9	-53.64	-4,872.0	596.4	404.8	260.5	144.30	2.805		
13,000.0	7,740.0	12,849.3	7,500.0	90.2	90.6	-53.64	-4,972.0	596.4	404.8	257.7	147.09	2.752		
13,100.0	7,740.0	12,949.3	7,500.0	91.9	92.3	-53.64	-5,072.0	596.4	404.8	254.9	149.89	2.701		
13,200.0	7,740.0	13,049.3	7,500.0	93.7	94.0	-53.64	-5,172.0	596.5	404.8	252.1	152.69	2.651		
13,300.0	7,740.0	13,149.3	7,500.0	95.4	95.8	-53.64	-5,272.0	596.5	404.8	249.3	155.49	2.604		
13,400.0	7,740.0	13,249.3	7,500.0	97.1	97.5	-53.64	-5,372.0	596.5	404.8	246.6	158.29	2.558		
13,500.0	7,740.0	13,349.3	7,500.0	98.9	99.2	-53.64	-5,472.0	596.5	404.9	243.8	161.09	2.513		
13,600.0	7,740.0	13,449.3	7,500.0	100.6	100.9	-53.65	-5,572.0	596.5	404.9	241.0	163.90	2.470		
13,700.0	7,740.0	13,549.3	7,500.0	102.3	102.7	-53.65	-5,672.0	596.5	404.9	238.2	166.70	2.429		
13,800.0	7,740.0	13,649.3	7,500.0	104.1	104.4	-53.65	-5,772.0	596.6	404.9	235.4	169.51	2.389		
13,900.0	7,740.0	13,749.3	7,500.0	105.8	106.1	-53.65	-5,872.0	596.6	404.9	232.6	172.32	2.350		

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 2C-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 2C-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 #2	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		
14,000.0	7,740.0	13,849.3	7,500.0	107.5	107.9	-53.65	-5,972.0	596.6	404.9	229.8	175.13	2.312		
14,100.0	7,740.0	13,949.3	7,500.0	109.3	109.6	-53.65	-6,072.0	596.6	404.9	227.0	177.94	2.276		
14,200.0	7,740.0	14,049.3	7,500.0	111.0	111.3	-53.65	-6,172.0	596.6	404.9	224.2	180.75	2.240		
14,300.0	7,740.0	14,149.3	7,500.0	112.8	113.1	-53.65	-6,272.0	596.6	405.0	221.4	183.56	2.206		
14,400.0	7,740.0	14,249.3	7,500.0	114.5	114.8	-53.66	-6,372.0	596.6	405.0	218.6	186.37	2.173		
14,500.0	7,740.0	14,349.3	7,500.0	116.2	116.5	-53.66	-6,472.0	596.7	405.0	215.8	189.18	2.141		
14,600.0	7,740.0	14,449.3	7,500.0	118.0	118.3	-53.66	-6,572.0	596.7	405.0	213.0	192.00	2.109		
14,700.0	7,740.0	14,549.3	7,500.0	119.7	120.0	-53.66	-6,672.0	596.7	405.0	210.2	194.81	2.079		
14,800.0	7,740.0	14,649.3	7,500.0	121.5	121.7	-53.66	-6,772.0	596.7	405.0	207.4	197.63	2.049		
14,900.0	7,740.0	14,749.3	7,500.0	123.2	123.5	-53.66	-6,872.0	596.7	405.0	204.6	200.45	2.021		
15,000.0	7,740.0	14,849.3	7,500.0	124.9	125.2	-53.66	-6,972.0	596.7	405.1	201.8	203.26	1.993		
15,100.0	7,740.0	14,949.3	7,500.0	126.7	126.9	-53.67	-7,072.0	596.8	405.1	199.0	206.08	1.966		
15,200.0	7,740.0	15,049.3	7,500.0	128.4	128.7	-53.67	-7,172.0	596.8	405.1	196.2	208.90	1.939		
15,300.0	7,740.0	15,149.3	7,500.0	130.2	130.4	-53.67	-7,272.0	596.8	405.1	193.4	211.72	1.913		
15,400.0	7,740.0	15,249.3	7,500.0	131.9	132.2	-53.67	-7,372.0	596.8	405.1	190.6	214.54	1.888		
15,500.0	7,740.0	15,349.3	7,500.0	133.7	133.9	-53.67	-7,472.0	596.8	405.1	187.8	217.36	1.864		
15,600.0	7,740.0	15,449.3	7,500.0	135.4	135.6	-53.67	-7,572.0	596.8	405.1	184.9	220.18	1.840		
15,700.0	7,740.0	15,549.3	7,500.0	137.1	137.4	-53.67	-7,672.0	596.9	405.1	182.1	223.00	1.817		
15,800.0	7,740.0	15,649.3	7,500.0	138.9	139.1	-53.67	-7,772.0	596.9	405.2	179.3	225.82	1.794		
15,900.0	7,740.0	15,749.3	7,500.0	140.6	140.9	-53.68	-7,872.0	596.9	405.2	176.5	228.65	1.772		
15,952.8	7,740.0	15,802.1	7,500.0	141.6	141.8	-53.68	-7,924.8	596.9	405.2	175.0	230.14	1.761 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2E-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		
0.0	0.0	0.0	0.0	0.0	0.0	91.05	-0.4	20.2	20.2					
100.0	100.0	100.0	100.0	0.2	0.2	91.05	-0.4	20.2	20.2	19.9	0.30	66.367		
200.0	200.0	200.0	200.0	0.3	0.3	91.05	-0.4	20.2	20.2	19.5	0.65	30.876		
300.0	300.0	300.0	300.0	0.5	0.5	91.05	-0.4	20.2	20.2	19.2	1.00	20.118		
400.0	400.0	400.0	400.0	0.7	0.7	91.05	-0.4	20.2	20.2	18.8	1.35	14.920		
500.0	500.0	500.0	500.0	0.9	0.8	67.39	-0.4	20.2	19.8	18.1	1.70	11.646		
600.0	600.0	600.0	600.0	1.0	1.0	74.72	-0.4	20.2	19.0	16.9	2.05	9.232		
700.0	699.9	699.9	699.9	1.2	1.2	88.02	-0.4	20.2	18.3	15.9	2.41	7.585		
711.9	711.7	711.7	711.7	1.2	1.2	90.00	-0.4	20.2	18.3	15.8	2.46	7.445 CC, ES		
800.0	799.7	799.7	799.7	1.4	1.4	106.62	-0.4	20.2	19.1	16.3	2.78	6.872		
898.2	897.5	897.5	897.5	1.6	1.5	125.64	-0.4	20.2	22.5	19.4	3.13	7.196		
900.0	899.4	899.4	899.4	1.6	1.5	125.97	-0.4	20.2	22.6	19.5	3.14	7.211		
1,000.0	999.0	999.0	999.0	1.8	1.7	140.17	-0.4	20.2	28.6	25.1	3.48	8.211		
1,100.0	1,098.6	1,098.9	1,098.9	2.0	1.9	147.99	0.2	20.8	35.2	31.4	3.83	9.201		
1,200.0	1,198.2	1,199.1	1,199.1	2.3	2.1	151.37	1.8	22.8	41.3	37.1	4.18	9.865		
1,300.0	1,297.9	1,299.5	1,299.3	2.5	2.3	152.19	4.6	26.2	46.3	41.8	4.55	10.193		
1,400.0	1,397.5	1,399.9	1,399.6	2.7	2.4	151.26	8.4	31.0	50.3	45.4	4.92	10.235		
1,500.0	1,497.1	1,500.3	1,499.7	2.9	2.6	148.93	13.4	37.1	53.4	48.1	5.31	10.053		
1,600.0	1,596.7	1,600.8	1,599.7	3.2	2.8	145.31	19.4	44.6	55.6	49.8	5.72	9.708		
1,700.0	1,696.3	1,701.1	1,699.3	3.4	3.1	140.42	26.6	53.5	57.2	51.0	6.17	9.264		
1,800.0	1,796.0	1,801.3	1,798.7	3.6	3.3	134.24	34.8	63.6	58.6	51.9	6.67	8.789		
1,900.0	1,895.6	1,901.2	1,897.5	3.8	3.6	126.81	44.1	75.1	60.3	53.1	7.21	8.359		
2,000.0	1,995.2	2,000.9	1,995.9	4.1	3.8	119.02	54.0	87.4	62.8	55.1	7.77	8.082		
2,100.0	2,094.8	2,100.5	2,094.3	4.3	4.1	111.95	63.9	99.6	66.5	58.1	8.33	7.977		
2,200.0	2,194.5	2,200.1	2,192.6	4.5	4.4	105.68	73.8	111.8	71.0	62.1	8.87	8.002		
2,300.0	2,294.1	2,299.7	2,291.0	4.8	4.7	100.22	83.7	124.0	76.2	66.9	9.39	8.122		
2,400.0	2,393.7	2,399.3	2,389.4	5.0	5.0	95.50	93.6	136.3	82.1	72.2	9.88	8.307		
2,500.0	2,493.3	2,498.9	2,487.7	5.2	5.3	91.43	103.5	148.5	88.5	78.1	10.36	8.535		
2,600.0	2,592.9	2,598.6	2,586.1	5.4	5.6	87.92	113.4	160.7	95.2	84.4	10.83	8.791		
2,700.0	2,692.6	2,698.2	2,684.5	5.7	5.9	84.88	123.3	173.0	102.2	91.0	11.28	9.061		
2,800.0	2,792.2	2,797.8	2,782.8	5.9	6.2	82.24	133.2	185.2	109.5	97.8	11.73	9.339		
2,900.0	2,891.8	2,897.4	2,881.2	6.1	6.5	79.93	143.1	197.4	117.0	104.9	12.17	9.619		
3,000.0	2,991.4	2,997.0	2,979.6	6.4	6.8	77.91	153.0	209.6	124.7	112.1	12.60	9.896		
3,100.0	3,091.1	3,096.6	3,077.9	6.6	7.1	76.11	162.9	221.9	132.5	119.5	13.03	10.168		
3,200.0	3,190.7	3,196.2	3,176.3	6.8	7.5	74.52	172.8	234.1	140.4	127.0	13.46	10.434		
3,300.0	3,290.3	3,295.9	3,274.7	7.0	7.8	73.10	182.6	246.3	148.4	134.6	13.88	10.692		
3,400.0	3,389.9	3,395.5	3,373.0	7.3	8.1	71.83	192.5	258.5	156.5	142.2	14.31	10.942		
3,500.0	3,489.5	3,495.1	3,471.4	7.5	8.4	70.68	202.4	270.8	164.7	150.0	14.73	11.183		
3,600.0	3,589.2	3,594.7	3,569.7	7.7	8.7	69.64	212.3	283.0	172.9	157.8	15.15	11.415		
3,700.0	3,688.8	3,694.3	3,668.1	8.0	9.0	68.69	222.2	295.2	181.2	165.6	15.57	11.639		
3,800.0	3,788.4	3,793.9	3,766.5	8.2	9.4	67.83	232.1	307.5	189.5	173.5	15.99	11.855		
3,900.0	3,888.0	3,893.5	3,864.8	8.4	9.7	67.04	242.0	319.7	197.9	181.5	16.40	12.062		
4,000.0	3,987.7	3,993.2	3,963.2	8.7	10.0	66.31	251.9	331.9	206.3	189.4	16.82	12.261		
4,100.0	4,087.3	4,092.8	4,061.6	8.9	10.3	65.65	261.8	344.1	214.7	197.4	17.24	12.452		
4,200.0	4,186.9	4,192.4	4,159.9	9.1	10.6	65.03	271.7	356.4	223.1	205.5	17.66	12.636		
4,300.0	4,286.5	4,292.0	4,258.3	9.4	11.0	64.45	281.6	368.6	231.6	213.5	18.08	12.814		
4,400.0	4,386.1	4,391.6	4,356.7	9.6	11.3	63.92	291.5	380.8	240.1	221.6	18.49	12.984		
4,500.0	4,485.8	4,491.2	4,455.0	9.8	11.6	63.42	301.4	393.0	248.6	229.7	18.91	13.148		
4,600.0	4,585.4	4,590.8	4,553.4	10.0	11.9	62.96	311.3	405.3	257.2	237.8	19.33	13.305		
4,700.0	4,685.0	4,690.5	4,651.8	10.3	12.2	62.53	321.2	417.5	265.7	246.0	19.74	13.457		
4,800.0	4,784.6	4,790.1	4,750.1	10.5	12.6	62.12	331.1	429.7	274.3	254.1	20.16	13.604		
4,900.0	4,884.3	4,889.7	4,848.5	10.7	12.9	61.74	341.0	442.0	282.8	262.3	20.58	13.745		

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 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2E-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	
5,000.0	4,983.9	4,989.3	4,946.9	11.0	13.2	61.38	350.8	454.2	291.4	270.4	21.00	13.881	
5,100.0	5,083.5	5,088.9	5,045.2	11.2	13.5	61.04	360.7	466.4	300.0	278.6	21.41	14.012	
5,200.0	5,183.1	5,188.5	5,143.6	11.4	13.9	60.72	370.6	478.6	308.6	286.8	21.83	14.139	
5,300.0	5,282.7	5,288.1	5,241.9	11.7	14.2	60.42	380.5	490.9	317.3	295.0	22.25	14.261	
5,400.0	5,382.4	5,387.8	5,340.3	11.9	14.5	60.13	390.4	503.1	325.9	303.2	22.66	14.379	
5,500.0	5,482.0	5,487.4	5,438.7	12.1	14.8	59.86	400.3	515.3	334.5	311.4	23.08	14.494	
5,600.0	5,581.6	5,587.0	5,537.0	12.4	15.1	59.60	410.2	527.5	343.1	319.7	23.50	14.604	
5,700.0	5,681.2	5,686.6	5,635.4	12.6	15.5	59.35	420.1	539.8	351.8	327.9	23.91	14.711	
5,800.0	5,780.9	5,786.2	5,733.8	12.8	15.8	59.12	430.0	552.0	360.4	336.1	24.33	14.814	
5,900.0	5,880.5	5,885.8	5,832.1	13.0	16.1	58.90	439.9	564.2	369.1	344.4	24.75	14.915	
6,000.0	5,980.1	5,985.4	5,930.5	13.3	16.4	58.69	449.8	576.5	377.8	352.6	25.16	15.012	
6,100.0	6,079.7	6,085.1	6,028.9	13.5	16.8	58.48	459.7	588.7	386.4	360.9	25.58	15.106	
6,200.0	6,179.3	6,184.7	6,127.2	13.7	17.1	58.29	469.6	600.9	395.1	369.1	26.00	15.197	
6,300.0	6,279.0	6,284.3	6,225.6	14.0	17.4	58.10	479.5	613.1	403.8	377.4	26.42	15.285	
6,400.0	6,378.6	6,383.9	6,324.0	14.2	17.7	57.92	489.4	625.4	412.5	385.6	26.83	15.371	
6,500.0	6,478.2	6,483.5	6,422.3	14.4	18.1	57.75	499.3	637.6	421.2	393.9	27.25	15.455	
6,600.0	6,577.8	6,583.1	6,520.7	14.7	18.4	57.59	509.2	649.8	429.8	402.2	27.67	15.536	
6,700.0	6,677.5	6,682.8	6,619.1	14.9	18.7	57.43	519.0	662.0	438.5	410.4	28.09	15.614	
6,800.0	6,777.1	6,782.4	6,717.4	15.1	19.0	57.28	528.9	674.3	447.2	418.7	28.50	15.691	
6,900.0	6,876.7	6,882.0	6,815.8	15.4	19.4	57.14	538.8	686.5	455.9	427.0	28.92	15.765	
7,000.0	6,976.3	6,981.6	6,914.2	15.6	19.7	57.00	548.7	698.7	464.6	435.3	29.34	15.838	
7,100.0	7,075.9	7,081.2	7,012.5	15.8	20.0	56.86	558.6	711.0	473.3	443.6	29.75	15.908	
7,147.0	7,122.8	7,128.0	7,058.7	15.9	20.2	56.80	563.3	716.7	477.4	447.5	29.95	15.940	
7,150.0	7,125.8	7,131.0	7,061.7	15.9	20.2	55.22	563.6	717.1	477.7	447.7	29.97	15.940	
7,200.0	7,175.7	7,180.7	7,110.8	16.0	20.3	-27.67	568.5	723.2	482.3	452.2	30.16	15.993	
7,250.0	7,225.5	7,232.3	7,161.8	16.0	20.5	-76.63	572.1	729.6	487.5	457.3	30.23	16.125	
7,300.0	7,275.0	7,284.9	7,213.9	16.0	20.6	-85.90	571.1	736.5	493.0	462.7	30.23	16.305	
7,350.0	7,323.6	7,338.1	7,266.3	16.0	20.7	-89.50	565.2	743.8	498.7	468.5	30.18	16.527	
7,400.0	7,371.0	7,391.9	7,318.4	15.9	20.7	-91.36	554.3	751.4	504.6	474.6	30.06	16.788	
7,450.0	7,416.9	7,446.3	7,369.8	15.8	20.7	-92.43	538.3	759.3	510.7	480.8	29.89	17.086	
7,500.0	7,460.8	7,501.2	7,419.8	15.6	20.7	-93.07	517.3	767.3	516.9	487.2	29.68	17.416	
7,550.0	7,502.6	7,556.7	7,468.0	15.5	20.6	-93.42	491.2	775.5	523.1	493.7	29.43	17.773	
7,600.0	7,541.7	7,612.6	7,513.9	15.3	20.5	-93.58	460.3	783.7	529.3	500.2	29.17	18.149	
7,650.0	7,578.1	7,669.0	7,556.8	15.2	20.4	-93.58	424.6	791.8	535.4	506.6	28.89	18.536	
7,700.0	7,611.3	7,725.7	7,596.2	15.0	20.4	-93.46	384.6	799.8	541.4	512.8	28.61	18.922	
7,750.0	7,641.1	7,782.9	7,631.7	14.9	20.3	-93.24	340.6	807.5	547.2	518.8	28.36	19.295	
7,800.0	7,667.4	7,840.2	7,662.8	14.8	20.2	-92.93	292.9	814.9	552.7	524.6	28.14	19.641	
7,850.0	7,689.8	7,897.8	7,689.0	14.7	20.2	-92.54	242.2	821.9	558.0	530.0	27.98	19.944	
7,900.0	7,708.2	7,955.5	7,710.0	14.7	20.1	-92.09	188.9	828.4	562.9	535.0	27.89	20.185	
7,950.0	7,722.6	8,013.3	7,725.6	14.7	20.2	-91.58	133.6	834.3	567.4	539.6	27.88	20.351	
8,000.0	7,732.7	8,070.9	7,735.6	14.7	20.2	-91.03	77.1	839.6	571.6	543.6	27.98	20.430	
8,050.0	7,738.5	8,128.5	7,739.8	14.8	20.3	-90.43	19.9	844.2	575.3	547.1	28.17	20.420	
8,091.8	7,740.0	8,172.0	7,740.0	15.0	20.4	-90.00	-23.5	847.2	578.2	549.8	28.42	20.347	
8,100.0	7,740.0	8,180.2	7,740.0	15.0	20.4	-90.00	-31.7	847.8	578.7	550.3	28.47	20.329	
8,200.0	7,740.0	8,279.9	7,740.0	15.4	20.8	-90.00	-131.2	854.7	585.7	556.4	29.34	19.962	
8,300.0	7,740.0	8,379.7	7,740.0	16.1	21.3	-90.00	-230.7	861.7	592.7	562.1	30.58	19.379	
8,400.0	7,740.0	8,483.8	7,740.0	16.9	22.0	-90.00	-334.6	868.8	599.5	567.3	32.19	18.624	
8,500.0	7,740.0	8,595.4	7,740.0	17.8	22.8	-90.00	-446.0	874.7	604.8	570.6	34.18	17.696	
8,600.0	7,740.0	8,707.1	7,740.0	18.8	23.7	-90.00	-557.7	878.4	608.2	571.7	36.44	16.688	
8,700.0	7,740.0	8,819.0	7,740.0	20.0	24.7	-90.00	-669.6	880.0	609.5	570.6	38.93	15.657	
8,800.0	7,740.0	8,921.5	7,740.0	21.2	25.7	-90.00	-772.1	880.0	609.6	568.1	41.49	14.694	
8,900.0	7,740.0	9,021.5	7,740.0	22.5	26.8	-90.00	-872.1	880.0	609.6	565.4	44.14	13.810	

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 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2E-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	
9,000.0	7,740.0	9,121.5	7,740.0	23.9	28.0	-90.00	-972.1	880.0	609.6	562.7	46.91	12.995	
9,100.0	7,740.0	9,221.5	7,740.0	25.3	29.2	-90.00	-1,072.1	880.0	609.6	559.8	49.77	12.248	
9,200.0	7,740.0	9,321.5	7,740.0	26.7	30.4	-90.00	-1,172.1	880.0	609.6	556.9	52.71	11.566	
9,300.0	7,740.0	9,415.5	7,740.0	28.2	31.7	-90.00	-1,266.0	880.5	610.1	554.4	55.62	10.968	
9,400.0	7,740.0	9,515.4	7,740.0	29.7	33.0	-90.00	-1,366.0	881.5	611.1	552.4	58.68	10.413	
9,500.0	7,740.0	9,615.4	7,740.0	31.3	34.4	-90.00	-1,466.0	882.5	612.1	550.3	61.79	9.906	
9,600.0	7,740.0	9,715.4	7,740.0	32.8	35.8	-90.00	-1,566.0	883.5	613.0	548.1	64.93	9.441	
9,700.0	7,740.0	9,815.4	7,740.0	34.4	37.3	-90.00	-1,665.9	884.5	614.0	545.9	68.12	9.014	
9,800.0	7,740.0	9,915.4	7,740.0	36.0	38.8	-90.00	-1,765.9	885.5	615.0	543.7	71.33	8.622	
9,900.0	7,740.0	10,015.4	7,740.0	37.6	40.3	-90.00	-1,865.9	886.5	616.0	541.5	74.57	8.261	
10,000.0	7,740.0	10,115.4	7,740.0	39.2	41.8	-90.00	-1,965.9	887.4	617.0	539.2	77.84	7.927	
10,100.0	7,740.0	10,215.4	7,740.0	40.9	43.3	-90.00	-2,065.9	888.4	618.0	536.9	81.12	7.619	
10,200.0	7,740.0	10,315.4	7,740.0	42.5	44.9	-90.00	-2,165.9	889.4	619.0	534.6	84.42	7.333	
10,300.0	7,740.0	10,415.4	7,740.0	44.1	46.4	-90.00	-2,265.9	890.4	620.0	532.3	87.74	7.067	
10,400.0	7,740.0	10,515.4	7,740.0	45.8	48.0	-90.00	-2,365.9	891.4	621.0	529.9	91.07	6.819	
10,500.0	7,740.0	10,615.4	7,740.0	47.5	49.6	-90.00	-2,465.9	892.4	622.0	527.6	94.42	6.588	
10,600.0	7,740.0	10,715.4	7,740.0	49.1	51.2	-90.00	-2,565.9	893.4	623.0	525.2	97.77	6.372	
10,700.0	7,740.0	10,815.4	7,740.0	50.8	52.8	-90.00	-2,665.9	894.4	624.0	522.9	101.14	6.170	
10,800.0	7,740.0	10,915.4	7,740.0	52.5	54.5	-90.00	-2,765.8	895.4	625.0	520.5	104.51	5.980	
10,900.0	7,740.0	11,015.4	7,740.0	54.2	56.1	-90.00	-2,865.8	896.4	626.0	518.1	107.90	5.802	
11,000.0	7,740.0	11,115.4	7,740.0	55.9	57.7	-90.00	-2,965.8	897.4	627.0	515.7	111.29	5.634	
11,100.0	7,740.0	11,215.4	7,740.0	57.6	59.4	-90.00	-3,065.8	898.4	628.0	513.3	114.69	5.475	
11,200.0	7,740.0	11,315.4	7,740.0	59.3	61.0	-90.00	-3,165.8	899.4	629.0	510.9	118.10	5.326	
11,300.0	7,740.0	11,415.4	7,740.0	61.0	62.7	-90.00	-3,265.8	900.4	630.0	508.5	121.51	5.185	
11,400.0	7,740.0	11,515.3	7,740.0	62.7	64.3	-90.00	-3,365.8	901.4	631.0	506.0	124.92	5.051	
11,500.0	7,740.0	11,615.3	7,740.0	64.4	66.0	-90.00	-3,465.8	902.4	632.0	503.6	128.35	4.924	
11,600.0	7,740.0	11,715.3	7,740.0	66.1	67.7	-90.00	-3,565.8	903.4	633.0	501.2	131.77	4.803	
11,700.0	7,740.0	11,815.3	7,740.0	67.8	69.3	-90.00	-3,665.8	904.4	634.0	498.8	135.20	4.689	
11,800.0	7,740.0	11,915.3	7,740.0	69.5	71.0	-90.00	-3,765.7	905.4	634.9	496.3	138.64	4.580	
11,900.0	7,740.0	12,015.3	7,740.0	71.2	72.7	-90.00	-3,865.7	906.4	635.9	493.9	142.07	4.476	
12,000.0	7,740.0	12,115.3	7,740.0	72.9	74.4	-90.00	-3,965.7	907.4	636.9	491.4	145.51	4.377	
12,100.0	7,740.0	12,215.3	7,740.0	74.7	76.1	-90.00	-4,065.7	908.4	637.9	489.0	148.96	4.283	
12,200.0	7,740.0	12,315.3	7,740.0	76.4	77.8	-90.00	-4,165.7	909.3	638.9	486.5	152.41	4.192	
12,300.0	7,740.0	12,415.3	7,740.0	78.1	79.5	-90.00	-4,265.7	910.3	639.9	484.1	155.86	4.106	
12,400.0	7,740.0	12,515.3	7,740.0	79.8	81.1	-90.00	-4,365.7	911.3	640.9	481.6	159.31	4.023	
12,500.0	7,740.0	12,615.3	7,740.0	81.6	82.8	-90.00	-4,465.7	912.3	641.9	479.2	162.76	3.944	
12,600.0	7,740.0	12,715.3	7,740.0	83.3	84.5	-90.00	-4,565.7	913.3	642.9	476.7	166.22	3.868	
12,700.0	7,740.0	12,815.3	7,740.0	85.0	86.2	-90.00	-4,665.7	914.3	643.9	474.2	169.68	3.795	
12,800.0	7,740.0	12,915.3	7,740.0	86.7	88.0	-90.00	-4,765.6	915.3	644.9	471.8	173.14	3.725	
12,900.0	7,740.0	13,015.3	7,740.0	88.5	89.7	-90.00	-4,865.6	916.3	645.9	469.3	176.60	3.657	
13,000.0	7,740.0	13,115.3	7,740.0	90.2	91.4	-90.00	-4,965.6	917.3	646.9	466.8	180.07	3.593	
13,100.0	7,740.0	13,215.3	7,740.0	91.9	93.1	-90.00	-5,065.6	918.3	647.9	464.4	183.53	3.530	
13,200.0	7,740.0	13,315.3	7,740.0	93.7	94.8	-90.00	-5,165.6	919.3	648.9	461.9	187.00	3.470	
13,300.0	7,740.0	13,415.3	7,740.0	95.4	96.5	-90.00	-5,265.6	920.3	649.9	459.4	190.47	3.412	
13,400.0	7,740.0	13,515.2	7,740.0	97.1	98.2	-90.00	-5,365.6	921.3	650.9	456.9	193.94	3.356	
13,500.0	7,740.0	13,615.2	7,740.0	98.9	99.9	-90.00	-5,465.6	922.3	651.9	454.5	197.41	3.302	
13,600.0	7,740.0	13,715.2	7,740.0	100.6	101.7	-90.00	-5,565.6	923.3	652.9	452.0	200.89	3.250	
13,700.0	7,740.0	13,815.2	7,740.0	102.3	103.4	-90.00	-5,665.6	924.3	653.9	449.5	204.36	3.200	
13,800.0	7,740.0	13,915.2	7,740.0	104.1	105.1	-90.00	-5,765.5	925.3	654.9	447.0	207.84	3.151	
13,900.0	7,740.0	14,015.2	7,740.0	105.8	106.8	-90.00	-5,865.5	926.3	655.9	444.5	211.31	3.104	
14,000.0	7,740.0	14,115.2	7,740.0	107.5	108.5	-90.00	-5,965.5	927.3	656.8	442.1	214.79	3.058	
14,100.0	7,740.0	14,215.2	7,740.0	109.3	110.3	-90.00	-6,065.5	928.3	657.8	439.6	218.27	3.014	

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 2C-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 2C-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 #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2E-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						
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
14,200.0	7,740.0	14,315.2	7,740.0	111.0	112.0	-90.00	-6,165.5	929.3	658.8	437.1	221.75	2.971	
14,300.0	7,740.0	14,415.2	7,740.0	112.8	113.7	-90.00	-6,265.5	930.3	659.8	434.6	225.23	2.930	
14,400.0	7,740.0	14,515.2	7,740.0	114.5	115.4	-90.00	-6,365.5	931.2	660.8	432.1	228.71	2.889	
14,500.0	7,740.0	14,615.2	7,740.0	116.2	117.2	-90.00	-6,465.5	932.2	661.8	429.6	232.19	2.850	
14,600.0	7,740.0	14,715.2	7,740.0	118.0	118.9	-90.00	-6,565.5	933.2	662.8	427.1	235.68	2.812	
14,700.0	7,740.0	14,815.2	7,740.0	119.7	120.6	-90.00	-6,665.5	934.2	663.8	424.7	239.16	2.776	
14,800.0	7,740.0	14,915.2	7,740.0	121.5	122.3	-90.00	-6,765.4	935.2	664.8	422.2	242.64	2.740	
14,900.0	7,740.0	15,015.2	7,740.0	123.2	124.1	-90.00	-6,865.4	936.2	665.8	419.7	246.13	2.705	
15,000.0	7,740.0	15,115.2	7,740.0	124.9	125.8	-90.00	-6,965.4	937.2	666.8	417.2	249.61	2.671	
15,100.0	7,740.0	15,215.2	7,740.0	126.7	127.5	-90.00	-7,065.4	938.2	667.8	414.7	253.10	2.638	
15,200.0	7,740.0	15,315.2	7,740.0	128.4	129.3	-90.00	-7,165.4	939.2	668.8	412.2	256.59	2.606	
15,300.0	7,740.0	15,415.2	7,740.0	130.2	131.0	-90.00	-7,265.4	940.2	669.8	409.7	260.08	2.575	
15,400.0	7,740.0	15,515.1	7,740.0	131.9	132.7	-90.00	-7,365.4	941.2	670.8	407.2	263.56	2.545	
15,500.0	7,740.0	15,615.1	7,740.0	133.7	134.5	-90.00	-7,465.4	942.2	671.8	404.7	267.05	2.516	
15,600.0	7,740.0	15,715.1	7,740.0	135.4	136.2	-90.00	-7,565.4	943.2	672.8	402.2	270.54	2.487	
15,700.0	7,740.0	15,815.1	7,740.0	137.1	137.9	-90.00	-7,665.4	944.2	673.8	399.7	274.03	2.459	
15,800.0	7,740.0	15,915.1	7,740.0	138.9	139.7	-90.00	-7,765.3	945.2	674.8	397.2	277.52	2.431	
15,900.0	7,740.0	16,015.1	7,740.0	140.6	141.4	-90.00	-7,865.3	946.2	675.8	394.8	281.01	2.405	
15,952.8	7,740.0	16,067.9	7,740.0	141.6	142.3	-90.00	-7,918.1	946.7	676.3	393.4	282.85	2.391 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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						
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	90.69	-0.4	30.2	30.2				
100.0	100.0	100.0	100.0	0.2	0.2	90.69	-0.4	30.2	30.2	29.9	0.30	99.540	
200.0	200.0	200.0	200.0	0.3	0.3	90.69	-0.4	30.2	30.2	29.6	0.65	46.310	
300.0	300.0	300.0	300.0	0.5	0.5	90.69	-0.4	30.2	30.2	29.2	1.00	30.174	CC, ES
400.0	400.0	399.5	399.5	0.7	0.7	90.03	0.0	31.0	31.0	29.7	1.35	22.978	
500.0	500.0	499.0	498.9	0.9	0.9	63.59	1.0	33.4	33.0	31.3	1.70	19.432	
600.0	600.0	598.4	598.3	1.0	1.0	64.56	2.8	37.3	35.8	33.8	2.05	17.467	
700.0	699.9	697.7	697.4	1.2	1.2	66.59	5.2	42.8	39.5	37.1	2.41	16.380	
800.0	799.7	797.0	796.3	1.4	1.4	69.29	8.3	49.9	44.1	41.4	2.79	15.830	
898.2	897.5	894.3	893.2	1.6	1.7	72.27	12.1	58.4	49.7	46.5	3.18	15.624	
900.0	899.4	896.1	895.0	1.6	1.7	72.33	12.2	58.6	49.8	46.6	3.19	15.623	
1,000.0	999.0	995.0	993.3	1.8	1.9	74.60	16.7	68.7	56.7	53.1	3.60	15.757	
1,100.0	1,098.6	1,093.8	1,091.3	2.0	2.2	75.49	21.8	80.4	65.1	61.1	4.02	16.186	
1,200.0	1,198.2	1,192.4	1,188.8	2.3	2.5	75.40	27.7	93.7	74.9	70.5	4.45	16.822	
1,300.0	1,297.9	1,290.6	1,285.7	2.5	2.8	74.68	34.2	108.4	86.1	81.2	4.89	17.618	
1,400.0	1,397.5	1,388.5	1,381.9	2.7	3.1	73.58	41.3	124.5	98.7	93.4	5.32	18.548	
1,500.0	1,497.1	1,486.0	1,477.5	2.9	3.5	72.26	49.1	142.1	112.8	107.1	5.76	19.595	
1,600.0	1,596.7	1,584.8	1,574.3	3.2	3.8	71.03	57.3	160.6	127.6	121.4	6.19	20.614	
1,700.0	1,696.3	1,683.7	1,671.0	3.4	4.2	70.06	65.5	179.2	142.5	135.9	6.63	21.506	
1,800.0	1,796.0	1,782.6	1,767.8	3.6	4.6	69.27	73.7	197.7	157.4	150.3	7.06	22.292	
1,900.0	1,895.6	1,881.4	1,864.6	3.8	5.0	68.61	81.9	216.3	172.3	164.8	7.49	22.990	
2,000.0	1,995.2	1,980.3	1,961.3	4.1	5.4	68.06	90.1	234.8	187.2	179.3	7.93	23.613	
2,100.0	2,094.8	2,079.2	2,058.1	4.3	5.8	67.59	98.3	253.4	202.2	193.8	8.36	24.172	
2,200.0	2,194.5	2,178.0	2,154.8	4.5	6.1	67.19	106.5	272.0	217.2	208.4	8.80	24.677	
2,300.0	2,294.1	2,276.9	2,251.6	4.8	6.5	66.84	114.7	290.5	232.1	222.9	9.24	25.135	
2,400.0	2,393.7	2,375.8	2,348.4	5.0	6.9	66.53	122.9	309.1	247.1	237.4	9.67	25.552	
2,500.0	2,493.3	2,474.6	2,445.1	5.2	7.3	66.26	131.1	327.6	262.1	252.0	10.11	25.933	
2,600.0	2,592.9	2,573.5	2,541.9	5.4	7.7	66.01	139.3	346.2	277.1	266.5	10.54	26.283	
2,700.0	2,692.6	2,672.3	2,638.6	5.7	8.1	65.79	147.6	364.7	292.1	281.1	10.98	26.606	
2,800.0	2,792.2	2,771.2	2,735.4	5.9	8.5	65.60	155.8	383.3	307.1	295.7	11.41	26.904	
2,900.0	2,891.8	2,870.1	2,832.2	6.1	8.9	65.42	164.0	401.8	322.1	310.2	11.85	27.180	
3,000.0	2,991.4	2,968.9	2,928.9	6.4	9.3	65.25	172.2	420.4	337.1	324.8	12.29	27.437	
3,100.0	3,091.1	3,067.8	3,025.7	6.6	9.7	65.10	180.4	438.9	352.1	339.4	12.72	27.676	
3,200.0	3,190.7	3,166.7	3,122.4	6.8	10.1	64.97	188.6	457.5	367.1	353.9	13.16	27.899	
3,300.0	3,290.3	3,265.5	3,219.2	7.0	10.5	64.84	196.8	476.0	382.1	368.5	13.59	28.108	
3,400.0	3,389.9	3,364.4	3,316.0	7.3	10.9	64.72	205.0	494.6	397.1	383.1	14.03	28.304	
3,500.0	3,489.5	3,463.3	3,412.7	7.5	11.3	64.61	213.2	513.1	412.1	397.7	14.47	28.488	
3,600.0	3,589.2	3,562.1	3,509.5	7.7	11.7	64.51	221.4	531.7	427.1	412.2	14.90	28.661	
3,700.0	3,688.8	3,661.0	3,606.3	8.0	12.1	64.42	229.6	550.2	442.2	426.8	15.34	28.825	
3,800.0	3,788.4	3,759.8	3,703.0	8.2	12.5	64.33	237.8	568.8	457.2	441.4	15.78	28.979	
3,900.0	3,888.0	3,858.7	3,799.8	8.4	12.9	64.25	246.0	587.3	472.2	456.0	16.21	29.125	
4,000.0	3,987.7	3,957.6	3,896.5	8.7	13.3	64.17	254.2	605.9	487.2	470.6	16.65	29.264	
4,100.0	4,087.3	4,056.4	3,993.3	8.9	13.7	64.10	262.4	624.4	502.2	485.2	17.09	29.395	
4,200.0	4,186.9	4,155.3	4,090.1	9.1	14.1	64.03	270.6	643.0	517.3	499.7	17.52	29.520	
4,300.0	4,286.5	4,254.2	4,186.8	9.4	14.5	63.97	278.8	661.5	532.3	514.3	17.96	29.639	
4,400.0	4,386.1	4,353.0	4,283.6	9.6	14.9	63.91	287.0	680.1	547.3	528.9	18.40	29.752	
4,500.0	4,485.8	4,451.9	4,380.3	9.8	15.2	63.85	295.2	698.7	562.3	543.5	18.83	29.860	
4,600.0	4,585.4	4,550.8	4,477.1	10.0	15.6	63.79	303.4	717.2	577.3	558.1	19.27	29.963	
4,700.0	4,685.0	4,649.6	4,573.9	10.3	16.0	63.74	311.6	735.8	592.4	572.7	19.71	30.061	
4,800.0	4,784.6	4,748.5	4,670.6	10.5	16.4	63.69	319.8	754.3	607.4	587.3	20.14	30.156	
4,900.0	4,884.3	4,847.3	4,767.4	10.7	16.8	63.65	328.0	772.9	622.4	601.8	20.58	30.246	
5,000.0	4,983.9	4,946.2	4,864.1	11.0	17.2	63.60	336.2	791.4	637.4	616.4	21.02	30.332	

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 2C-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 2C-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 #2	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		
5,100.0	5,083.5	5,045.1	4,960.9	11.2	17.6	63.56	344.5	810.0	652.5	631.0	21.45	30.415		
5,200.0	5,183.1	5,143.9	5,057.7	11.4	18.0	63.52	352.7	828.5	667.5	645.6	21.89	30.495		
5,300.0	5,282.7	5,242.8	5,154.4	11.7	18.4	63.48	360.9	847.1	682.5	660.2	22.33	30.571		
5,400.0	5,382.4	5,341.7	5,251.2	11.9	18.8	63.44	369.1	865.6	697.6	674.8	22.76	30.645		
5,500.0	5,482.0	5,440.5	5,347.9	12.1	19.2	63.41	377.3	884.2	712.6	689.4	23.20	30.715		
5,600.0	5,581.6	5,539.4	5,444.7	12.4	19.6	63.37	385.5	902.7	727.6	704.0	23.64	30.784		
5,700.0	5,681.2	5,638.3	5,541.5	12.6	20.0	63.34	393.7	921.3	742.6	718.6	24.07	30.849		
5,800.0	5,780.9	5,737.1	5,638.2	12.8	20.4	63.31	401.9	939.8	757.7	733.1	24.51	30.912		
5,900.0	5,880.5	5,836.0	5,735.0	13.0	20.8	63.28	410.1	958.4	772.7	747.7	24.95	30.974		
6,000.0	5,980.1	5,934.8	5,831.7	13.3	21.2	63.25	418.3	976.9	787.7	762.3	25.38	31.033		
6,100.0	6,079.7	6,033.7	5,928.5	13.5	21.6	63.22	426.5	995.5	802.7	776.9	25.82	31.090		
6,200.0	6,179.3	6,132.6	6,025.3	13.7	22.0	63.19	434.7	1,014.0	817.8	791.5	26.26	31.145		
6,300.0	6,279.0	6,231.4	6,122.0	14.0	22.4	63.17	442.9	1,032.6	832.8	806.1	26.69	31.198		
6,400.0	6,378.6	6,330.3	6,218.8	14.2	22.8	63.14	451.1	1,051.1	847.8	820.7	27.13	31.249		
6,500.0	6,478.2	6,429.2	6,315.5	14.4	23.2	63.12	459.3	1,069.7	862.9	835.3	27.57	31.299		
6,600.0	6,577.8	6,528.0	6,412.3	14.7	23.6	63.09	467.5	1,088.3	877.9	849.9	28.00	31.348		
6,700.0	6,677.5	6,626.9	6,509.1	14.9	24.0	63.07	475.7	1,106.8	892.9	864.5	28.44	31.395		
6,800.0	6,777.1	6,725.7	6,605.8	15.1	24.4	63.05	483.9	1,125.4	907.9	879.1	28.88	31.440		
6,900.0	6,876.7	6,824.6	6,702.6	15.4	24.8	63.03	492.1	1,143.9	923.0	893.7	29.32	31.484		
7,000.0	6,976.3	6,923.5	6,799.3	15.6	25.2	63.01	500.3	1,162.5	938.0	908.2	29.75	31.527		
7,100.0	7,075.9	7,022.4	6,896.1	15.8	25.6	62.99	508.5	1,181.0	953.0	922.8	30.19	31.571		
7,147.0	7,122.8	7,069.1	6,942.0	15.9	25.8	63.12	510.0	1,189.8	960.1	929.7	30.38	31.598		
7,150.0	7,125.8	7,072.1	6,944.9	15.9	25.8	61.58	510.0	1,190.4	960.5	930.1	30.41	31.588		
7,200.0	7,175.7	7,121.4	6,993.2	16.0	25.9	-20.40	507.2	1,199.6	968.1	937.3	30.75	31.480		
7,250.0	7,225.5	7,170.3	7,040.8	16.0	26.0	-68.16	500.3	1,208.8	975.6	944.6	31.01	31.464		
7,300.0	7,275.0	7,218.9	7,087.2	16.0	26.1	-76.29	489.3	1,217.7	983.1	951.9	31.17	31.542		
7,350.0	7,323.6	7,267.2	7,132.4	16.0	26.2	-78.85	474.5	1,226.3	990.5	959.2	31.23	31.717		
7,400.0	7,371.0	7,315.2	7,175.9	15.9	26.2	-79.77	456.0	1,234.7	997.7	966.5	31.19	31.989		
7,450.0	7,416.9	7,363.1	7,217.6	15.8	26.3	-80.00	433.9	1,242.7	1,004.7	973.6	31.05	32.358		
7,500.0	7,460.8	7,410.7	7,257.1	15.6	26.3	-79.91	408.5	1,250.2	1,011.4	980.5	30.82	32.820		
7,550.0	7,502.6	7,458.1	7,294.3	15.5	26.3	-79.65	380.0	1,257.4	1,017.7	987.2	30.50	33.368		
7,600.0	7,541.7	7,505.3	7,328.9	15.3	26.3	-79.31	348.5	1,264.0	1,023.7	993.6	30.12	33.992		
7,650.0	7,578.1	7,552.4	7,360.7	15.2	26.3	-78.93	314.4	1,270.1	1,029.3	999.6	29.68	34.675		
7,700.0	7,611.3	7,600.0	7,390.0	15.0	26.3	-78.54	277.4	1,275.7	1,034.3	1,005.1	29.22	35.396		
7,750.0	7,641.1	7,646.3	7,415.5	14.9	26.3	-78.18	239.0	1,280.6	1,038.9	1,010.1	28.77	36.112		
7,800.0	7,667.4	7,693.1	7,438.1	14.8	26.3	-77.84	198.3	1,284.9	1,042.9	1,014.6	28.35	36.792		
7,850.0	7,689.8	7,739.8	7,457.4	14.7	26.3	-77.54	155.9	1,288.6	1,046.3	1,018.4	27.99	37.385		
7,900.0	7,708.2	7,786.5	7,473.1	14.7	26.3	-77.29	112.1	1,291.7	1,049.2	1,021.4	27.73	37.840		
7,950.0	7,722.6	7,833.1	7,485.3	14.7	26.3	-77.09	67.1	1,294.0	1,051.4	1,023.8	27.59	38.110		
8,000.0	7,732.7	7,879.7	7,493.9	14.7	26.4	-76.95	21.4	1,295.6	1,052.9	1,025.3	27.59	38.159		
8,050.0	7,738.5	7,926.3	7,498.8	14.8	26.4	-76.86	-24.9	1,296.6	1,053.8	1,026.0	27.77	37.952		
8,091.8	7,740.0	7,965.2	7,500.0	15.0	26.5	-76.84	-63.8	1,296.8	1,054.0	1,026.0	28.02	37.613		
8,100.0	7,740.0	7,973.5	7,500.0	15.0	26.5	-76.84	-72.1	1,296.8	1,054.0	1,026.0	28.08	37.531		
8,200.0	7,740.0	8,073.5	7,500.0	15.4	26.8	-76.84	-172.1	1,296.8	1,054.0	1,025.0	29.03	36.308		
8,300.0	7,740.0	8,173.5	7,500.0	16.1	27.1	-76.84	-272.1	1,296.8	1,054.0	1,023.7	30.32	34.767		
8,400.0	7,740.0	8,273.5	7,500.0	16.9	27.6	-76.84	-372.1	1,296.8	1,054.0	1,022.1	31.92	33.021		
8,500.0	7,740.0	8,373.5	7,500.0	17.8	28.1	-76.84	-472.1	1,296.8	1,054.0	1,020.3	33.79	31.191		
8,600.0	7,740.0	8,473.5	7,500.0	18.8	28.8	-76.84	-572.1	1,296.8	1,054.0	1,018.1	35.89	29.365		
8,700.0	7,740.0	8,573.5	7,500.0	20.0	29.5	-76.84	-672.1	1,296.8	1,054.0	1,015.9	38.19	27.602		
8,800.0	7,740.0	8,673.5	7,500.0	21.2	30.4	-76.84	-772.1	1,296.8	1,054.0	1,013.4	40.64	25.938		
8,900.0	7,740.0	8,773.5	7,500.0	22.5	31.3	-76.84	-872.1	1,296.8	1,054.0	1,010.8	43.22	24.388		
9,000.0	7,740.0	8,873.5	7,500.0	23.9	32.3	-76.84	-972.1	1,296.8	1,054.0	1,008.1	45.91	22.958		

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 2C-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 2C-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 #2	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				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)			
9,100.0	7,740.0	8,973.5	7,500.0	25.3	33.3	-76.84	-1,072.1	1,296.8	1,054.0	1,005.4	48.69	21.646	
9,200.0	7,740.0	9,073.5	7,500.0	26.7	34.4	-76.84	-1,172.1	1,296.8	1,054.0	1,002.5	51.55	20.446	
9,300.0	7,740.0	9,173.5	7,500.0	28.2	35.5	-76.84	-1,272.1	1,296.8	1,054.0	999.6	54.48	19.349	
9,400.0	7,740.0	9,273.5	7,500.0	29.7	36.8	-76.84	-1,372.1	1,296.8	1,054.0	996.6	57.45	18.346	
9,500.0	7,740.0	9,373.5	7,500.0	31.3	38.0	-76.84	-1,472.1	1,296.8	1,054.0	993.6	60.48	17.428	
9,600.0	7,740.0	9,473.5	7,500.0	32.8	39.3	-76.84	-1,572.1	1,296.8	1,054.0	990.5	63.54	16.588	
9,700.0	7,740.0	9,573.5	7,500.0	34.4	40.6	-76.84	-1,672.1	1,296.8	1,054.0	987.4	66.64	15.817	
9,800.0	7,740.0	9,673.5	7,500.0	36.0	42.0	-76.84	-1,772.1	1,296.8	1,054.0	984.3	69.77	15.107	
9,900.0	7,740.0	9,773.5	7,500.0	37.6	43.3	-76.84	-1,872.1	1,296.8	1,054.0	981.1	72.92	14.454	
10,000.0	7,740.0	9,873.5	7,500.0	39.2	44.8	-76.84	-1,972.1	1,296.8	1,054.0	977.9	76.10	13.851	
10,100.0	7,740.0	9,973.5	7,500.0	40.9	46.2	-76.84	-2,072.1	1,296.8	1,054.0	974.7	79.30	13.292	
10,200.0	7,740.0	10,073.5	7,500.0	42.5	47.6	-76.84	-2,172.1	1,296.8	1,054.0	971.5	82.51	12.774	
10,300.0	7,740.0	10,173.5	7,500.0	44.1	49.1	-76.84	-2,272.1	1,296.8	1,054.0	968.3	85.74	12.293	
10,400.0	7,740.0	10,273.5	7,500.0	45.8	50.6	-76.84	-2,372.1	1,296.8	1,054.0	965.1	88.99	11.845	
10,500.0	7,740.0	10,373.5	7,500.0	47.5	52.1	-76.84	-2,472.1	1,296.8	1,054.0	961.8	92.24	11.427	
10,600.0	7,740.0	10,473.5	7,500.0	49.1	53.6	-76.84	-2,572.1	1,296.8	1,054.0	958.5	95.51	11.036	
10,700.0	7,740.0	10,573.5	7,500.0	50.8	55.2	-76.84	-2,672.1	1,296.8	1,054.0	955.3	98.79	10.670	
10,800.0	7,740.0	10,673.5	7,500.0	52.5	56.7	-76.84	-2,772.1	1,296.8	1,054.0	952.0	102.08	10.326	
10,900.0	7,740.0	10,773.5	7,500.0	54.2	58.3	-76.84	-2,872.1	1,296.8	1,054.0	948.7	105.37	10.003	
11,000.0	7,740.0	10,873.5	7,500.0	55.9	59.9	-76.84	-2,972.1	1,296.8	1,054.0	945.4	108.68	9.699	
11,100.0	7,740.0	10,973.5	7,500.0	57.6	61.4	-76.84	-3,072.1	1,296.8	1,054.0	942.1	111.99	9.412	
11,200.0	7,740.0	11,073.5	7,500.0	59.3	63.0	-76.84	-3,172.1	1,296.8	1,054.0	938.7	115.30	9.142	
11,300.0	7,740.0	11,173.5	7,500.0	61.0	64.6	-76.84	-3,272.1	1,296.8	1,054.0	935.4	118.62	8.886	
11,400.0	7,740.0	11,273.5	7,500.0	62.7	66.2	-76.84	-3,372.1	1,296.8	1,054.0	932.1	121.95	8.643	
11,500.0	7,740.0	11,373.5	7,500.0	64.4	67.9	-76.84	-3,472.1	1,296.8	1,054.0	928.8	125.28	8.413	
11,600.0	7,740.0	11,473.5	7,500.0	66.1	69.5	-76.84	-3,572.1	1,296.8	1,054.0	925.4	128.62	8.195	
11,700.0	7,740.0	11,573.5	7,500.0	67.8	71.1	-76.84	-3,672.1	1,296.8	1,054.0	922.1	131.96	7.988	
11,800.0	7,740.0	11,673.5	7,500.0	69.5	72.7	-76.84	-3,772.1	1,296.8	1,054.0	918.7	135.30	7.790	
11,900.0	7,740.0	11,773.5	7,500.0	71.2	74.4	-76.84	-3,872.1	1,296.8	1,054.0	915.4	138.65	7.602	
12,000.0	7,740.0	11,873.5	7,500.0	72.9	76.0	-76.84	-3,972.1	1,296.8	1,054.0	912.0	142.00	7.423	
12,100.0	7,740.0	11,973.5	7,500.0	74.7	77.7	-76.84	-4,072.1	1,296.8	1,054.0	908.7	145.36	7.251	
12,200.0	7,740.0	12,073.5	7,500.0	76.4	79.3	-76.84	-4,172.1	1,296.8	1,054.0	905.3	148.71	7.088	
12,300.0	7,740.0	12,173.5	7,500.0	78.1	81.0	-76.84	-4,272.1	1,296.8	1,054.0	902.0	152.07	6.931	
12,400.0	7,740.0	12,273.5	7,500.0	79.8	82.7	-76.84	-4,372.1	1,296.8	1,054.0	898.6	155.44	6.781	
12,500.0	7,740.0	12,373.5	7,500.0	81.6	84.3	-76.84	-4,472.1	1,296.8	1,054.0	895.2	158.80	6.638	
12,600.0	7,740.0	12,473.5	7,500.0	83.3	86.0	-76.84	-4,572.1	1,296.8	1,054.0	891.9	162.17	6.500	
12,700.0	7,740.0	12,573.5	7,500.0	85.0	87.7	-76.84	-4,672.1	1,296.8	1,054.0	888.5	165.54	6.367	
12,800.0	7,740.0	12,673.5	7,500.0	86.7	89.3	-76.84	-4,772.1	1,296.8	1,054.0	885.1	168.91	6.240	
12,900.0	7,740.0	12,773.5	7,500.0	88.5	91.0	-76.84	-4,872.1	1,296.8	1,054.0	881.8	172.28	6.118	
13,000.0	7,740.0	12,873.5	7,500.0	90.2	92.7	-76.84	-4,972.1	1,296.8	1,054.0	878.4	175.65	6.001	
13,100.0	7,740.0	12,973.5	7,500.0	91.9	94.4	-76.84	-5,072.1	1,296.8	1,054.0	875.0	179.03	5.888	
13,200.0	7,740.0	13,073.5	7,500.0	93.7	96.1	-76.84	-5,172.1	1,296.8	1,054.1	871.6	182.41	5.779	
13,300.0	7,740.0	13,173.5	7,500.0	95.4	97.8	-76.84	-5,272.1	1,296.8	1,054.1	868.3	185.79	5.673	
13,400.0	7,740.0	13,273.5	7,500.0	97.1	99.5	-76.84	-5,372.1	1,296.8	1,054.1	864.9	189.17	5.572	
13,500.0	7,740.0	13,373.5	7,500.0	98.9	101.1	-76.84	-5,472.1	1,296.8	1,054.1	861.5	192.55	5.474	
13,600.0	7,740.0	13,473.5	7,500.0	100.6	102.8	-76.84	-5,572.1	1,296.8	1,054.1	858.1	195.93	5.380	
13,700.0	7,740.0	13,573.5	7,500.0	102.3	104.5	-76.84	-5,672.1	1,296.8	1,054.1	854.7	199.32	5.288	
13,800.0	7,740.0	13,673.5	7,500.0	104.1	106.2	-76.84	-5,772.1	1,296.8	1,054.1	851.3	202.70	5.200	
13,900.0	7,740.0	13,773.5	7,500.0	105.8	107.9	-76.84	-5,872.1	1,296.8	1,054.1	848.0	206.09	5.115	
14,000.0	7,740.0	13,873.5	7,500.0	107.5	109.6	-76.84	-5,972.1	1,296.8	1,054.1	844.6	209.47	5.032	
14,100.0	7,740.0	13,973.5	7,500.0	109.3	111.4	-76.84	-6,072.1	1,296.8	1,054.1	841.2	212.86	4.952	
14,200.0	7,740.0	14,073.5	7,500.0	111.0	113.1	-76.84	-6,172.1	1,296.8	1,054.1	837.8	216.25	4.874	

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 2C-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 2C-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 #2	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		
14,300.0	7,740.0	14,173.5	7,500.0	112.8	114.8	-76.84	-6,272.1	1,296.8	1,054.1	834.4	219.64	4.799		
14,400.0	7,740.0	14,273.5	7,500.0	114.5	116.5	-76.84	-6,372.1	1,296.8	1,054.1	831.0	223.03	4.726		
14,500.0	7,740.0	14,373.5	7,500.0	116.2	118.2	-76.84	-6,472.1	1,296.8	1,054.1	827.6	226.42	4.655		
14,600.0	7,740.0	14,473.5	7,500.0	118.0	119.9	-76.84	-6,572.1	1,296.8	1,054.1	824.2	229.82	4.586		
14,700.0	7,740.0	14,573.5	7,500.0	119.7	121.6	-76.84	-6,672.1	1,296.8	1,054.1	820.8	233.21	4.520		
14,800.0	7,740.0	14,673.5	7,500.0	121.5	123.3	-76.84	-6,772.1	1,296.8	1,054.1	817.4	236.60	4.455		
14,900.0	7,740.0	14,773.5	7,500.0	123.2	125.0	-76.84	-6,872.1	1,296.8	1,054.1	814.1	240.00	4.392		
15,000.0	7,740.0	14,873.5	7,500.0	124.9	126.8	-76.84	-6,972.1	1,296.8	1,054.1	810.7	243.39	4.331		
15,100.0	7,740.0	14,973.5	7,500.0	126.7	128.5	-76.84	-7,072.1	1,296.8	1,054.1	807.3	246.79	4.271		
15,200.0	7,740.0	15,073.5	7,500.0	128.4	130.2	-76.84	-7,172.1	1,296.8	1,054.1	803.9	250.18	4.213		
15,300.0	7,740.0	15,173.5	7,500.0	130.2	131.9	-76.84	-7,272.1	1,296.8	1,054.1	800.5	253.58	4.157		
15,400.0	7,740.0	15,273.5	7,500.0	131.9	133.6	-76.84	-7,372.1	1,296.8	1,054.1	797.1	256.98	4.102		
15,500.0	7,740.0	15,373.5	7,500.0	133.7	135.3	-76.84	-7,472.1	1,296.8	1,054.1	793.7	260.38	4.048		
15,600.0	7,740.0	15,473.5	7,500.0	135.4	137.1	-76.84	-7,572.1	1,296.8	1,054.1	790.3	263.77	3.996		
15,700.0	7,740.0	15,573.5	7,500.0	137.1	138.8	-76.84	-7,672.1	1,296.8	1,054.1	786.9	267.17	3.945		
15,800.0	7,740.0	15,673.5	7,500.0	138.9	140.5	-76.84	-7,772.1	1,296.8	1,054.1	783.5	270.57	3.896		
15,900.0	7,740.0	15,773.5	7,500.0	140.6	142.2	-76.84	-7,872.1	1,296.8	1,054.1	780.1	273.97	3.847		
15,952.8	7,740.0	15,826.2	7,500.0	141.6	143.1	-76.84	-7,924.8	1,296.8	1,054.1	778.3	275.77	3.822 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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	90.52	-0.4	40.0	40.0					
100.0	100.0	100.0	100.0	0.2	0.2	90.52	-0.4	40.0	40.0	39.7	0.30	131.795		
200.0	200.0	200.0	200.0	0.3	0.3	90.52	-0.4	40.0	40.0	39.4	0.65	61.316	CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	90.11	-0.1	40.8	40.8	39.8	1.00	40.815		
400.0	400.0	398.6	398.6	0.7	0.7	88.99	0.8	43.3	43.3	42.0	1.35	32.113		
500.0	500.0	497.8	497.7	0.9	0.9	62.33	2.2	47.3	47.0	45.3	1.70	27.695		
600.0	600.0	596.9	596.6	1.0	1.1	62.86	4.1	53.0	51.6	49.6	2.05	25.162		
700.0	699.9	695.8	695.2	1.2	1.3	64.30	6.6	60.3	57.0	54.6	2.41	23.658		
800.0	799.7	794.6	793.6	1.4	1.5	66.35	9.7	69.2	63.4	60.6	2.79	22.772		
898.2	897.5	891.4	889.8	1.6	1.7	68.71	13.2	79.4	70.7	67.5	3.17	22.279		
900.0	899.4	893.2	891.6	1.6	1.8	68.76	13.3	79.6	70.8	67.6	3.18	22.273		
1,000.0	999.0	991.7	989.1	1.8	2.0	70.80	17.4	91.6	79.6	76.0	3.59	22.175		
1,100.0	1,098.6	1,089.8	1,086.2	2.0	2.3	71.93	22.1	105.2	89.9	85.9	4.01	22.441		
1,200.0	1,198.2	1,187.7	1,182.8	2.3	2.6	72.38	27.3	120.3	101.8	97.4	4.43	22.966		
1,300.0	1,297.9	1,285.1	1,278.6	2.5	3.0	72.34	33.0	136.9	115.2	110.3	4.86	23.687		
1,400.0	1,397.5	1,382.2	1,373.8	2.7	3.3	71.97	39.2	154.9	130.0	124.7	5.29	24.562		
1,500.0	1,497.1	1,478.7	1,468.1	2.9	3.7	71.38	45.9	174.4	146.4	140.7	5.73	25.563		
1,600.0	1,596.7	1,574.8	1,561.6	3.2	4.1	70.66	53.1	195.2	164.3	158.1	6.16	26.671		
1,700.0	1,696.3	1,672.4	1,656.4	3.4	4.6	69.92	60.8	217.4	183.2	176.6	6.59	27.789		
1,800.0	1,796.0	1,770.6	1,751.6	3.6	5.0	69.30	68.5	239.8	202.2	195.1	7.03	28.773		
1,900.0	1,895.6	1,868.7	1,846.9	3.8	5.4	68.79	76.2	262.2	221.2	213.7	7.46	29.643		
2,000.0	1,995.2	1,966.9	1,942.2	4.1	5.9	68.36	83.9	284.6	240.2	232.3	7.90	30.418		
2,100.0	2,094.8	2,065.0	2,037.4	4.3	6.3	68.00	91.6	307.0	259.2	250.9	8.33	31.113		
2,200.0	2,194.5	2,163.2	2,132.7	4.5	6.8	67.68	99.3	329.3	278.2	269.5	8.77	31.738		
2,300.0	2,294.1	2,261.4	2,228.0	4.8	7.2	67.41	107.0	351.7	297.3	288.1	9.20	32.305		
2,400.0	2,393.7	2,359.5	2,323.2	5.0	7.7	67.16	114.8	374.1	316.3	306.7	9.64	32.820		
2,500.0	2,493.3	2,457.7	2,418.5	5.2	8.1	66.95	122.5	396.5	335.4	325.3	10.07	33.291		
2,600.0	2,592.9	2,555.8	2,513.7	5.4	8.6	66.76	130.2	418.9	354.4	343.9	10.51	33.723		
2,700.0	2,692.6	2,654.0	2,609.0	5.7	9.0	66.59	137.9	441.3	373.5	362.5	10.95	34.120		
2,800.0	2,792.2	2,752.2	2,704.3	5.9	9.5	66.43	145.6	463.6	392.5	381.1	11.38	34.487		
2,900.0	2,891.8	2,850.3	2,799.5	6.1	9.9	66.29	153.3	486.0	411.6	399.8	11.82	34.826		
3,000.0	2,991.4	2,948.5	2,894.8	6.4	10.4	66.16	161.0	508.4	430.7	418.4	12.25	35.141		
3,100.0	3,091.1	3,046.7	2,990.1	6.6	10.8	66.04	168.7	530.8	449.7	437.0	12.69	35.435		
3,200.0	3,190.7	3,144.8	3,085.3	6.8	11.3	65.93	176.4	553.2	468.8	455.7	13.13	35.709		
3,300.0	3,290.3	3,243.0	3,180.6	7.0	11.7	65.83	184.2	575.5	487.9	474.3	13.56	35.965		
3,400.0	3,389.9	3,341.1	3,275.9	7.3	12.2	65.74	191.9	597.9	506.9	492.9	14.00	36.205		
3,500.0	3,489.5	3,439.3	3,371.1	7.5	12.7	65.66	199.6	620.3	526.0	511.6	14.44	36.431		
3,600.0	3,589.2	3,537.5	3,466.4	7.7	13.1	65.58	207.3	642.7	545.1	530.2	14.88	36.643		
3,700.0	3,688.8	3,635.6	3,561.6	8.0	13.6	65.50	215.0	665.1	564.1	548.8	15.31	36.843		
3,800.0	3,788.4	3,733.8	3,656.9	8.2	14.0	65.43	222.7	687.5	583.2	567.5	15.75	37.032		
3,900.0	3,888.0	3,831.9	3,752.2	8.4	14.5	65.37	230.4	709.8	602.3	586.1	16.19	37.211		
4,000.0	3,987.7	3,930.1	3,847.4	8.7	14.9	65.31	238.1	732.2	621.4	604.8	16.62	37.380		
4,100.0	4,087.3	4,028.3	3,942.7	8.9	15.4	65.25	245.9	754.6	640.5	623.4	17.06	37.541		
4,200.0	4,186.9	4,126.4	4,038.0	9.1	15.8	65.20	253.6	777.0	659.5	642.0	17.50	37.693		
4,300.0	4,286.5	4,224.6	4,133.2	9.4	16.3	65.15	261.3	799.4	678.6	660.7	17.93	37.838		
4,400.0	4,386.1	4,322.8	4,228.5	9.6	16.8	65.10	269.0	821.8	697.7	679.3	18.37	37.977		
4,500.0	4,485.8	4,420.9	4,323.8	9.8	17.2	65.05	276.7	844.1	716.8	698.0	18.81	38.108		
4,600.0	4,585.4	4,519.1	4,419.0	10.0	17.7	65.01	284.4	866.5	735.8	716.6	19.25	38.234		
4,700.0	4,685.0	4,617.2	4,514.3	10.3	18.1	64.97	292.1	888.9	754.9	735.2	19.68	38.354		
4,800.0	4,784.6	4,715.4	4,609.6	10.5	18.6	64.93	299.8	911.3	774.0	753.9	20.12	38.469		
4,900.0	4,884.3	4,813.6	4,704.8	10.7	19.0	64.89	307.5	933.7	793.1	772.5	20.56	38.579		
5,000.0	4,983.9	4,911.7	4,800.1	11.0	19.5	64.86	315.3	956.0	812.2	791.2	20.99	38.684		

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 2C-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 2C-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 #2	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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
5,100.0	5,083.5	5,009.9	4,895.3	11.2	19.9	64.82	323.0	978.4	831.2	809.8	21.43	38.785		
5,200.0	5,183.1	5,108.0	4,990.6	11.4	20.4	64.79	330.7	1,000.8	850.3	828.5	21.87	38.882		
5,300.0	5,282.7	5,206.2	5,085.9	11.7	20.9	64.76	338.4	1,023.2	869.4	847.1	22.31	38.975		
5,400.0	5,382.4	5,304.4	5,181.1	11.9	21.3	64.73	346.1	1,045.6	888.5	865.7	22.74	39.065		
5,500.0	5,482.0	5,402.5	5,276.4	12.1	21.8	64.70	353.8	1,068.0	907.6	884.4	23.18	39.151		
5,600.0	5,581.6	5,500.7	5,371.7	12.4	22.2	64.68	361.5	1,090.3	926.7	903.0	23.62	39.234		
5,700.0	5,681.2	5,598.9	5,466.9	12.6	22.7	64.65	369.2	1,112.7	945.7	921.7	24.06	39.314		
5,800.0	5,780.9	5,697.0	5,562.2	12.8	23.1	64.63	377.0	1,135.1	964.8	940.3	24.49	39.391		
5,900.0	5,880.5	5,795.2	5,657.5	13.0	23.6	64.60	384.7	1,157.5	983.9	959.0	24.93	39.465		
6,000.0	5,980.1	5,893.3	5,752.7	13.3	24.0	64.58	392.4	1,179.9	1,003.0	977.6	25.37	39.537		
6,100.0	6,079.7	5,991.5	5,848.0	13.5	24.5	64.56	400.1	1,202.2	1,022.1	996.3	25.81	39.606		
6,200.0	6,179.3	6,089.7	5,943.3	13.7	25.0	64.53	407.8	1,224.6	1,041.1	1,014.9	26.24	39.673		
6,300.0	6,279.0	6,187.8	6,038.5	14.0	25.4	64.51	415.5	1,247.0	1,060.2	1,033.5	26.68	39.738		
6,400.0	6,378.6	6,286.0	6,133.8	14.2	25.9	64.49	423.2	1,269.4	1,079.3	1,052.2	27.12	39.801		
6,500.0	6,478.2	6,384.1	6,229.0	14.4	26.3	64.47	430.9	1,291.8	1,098.4	1,070.8	27.56	39.861		
6,600.0	6,577.8	6,482.3	6,324.3	14.7	26.8	64.46	438.7	1,314.2	1,117.5	1,089.5	27.99	39.920		
6,700.0	6,677.5	6,580.5	6,419.6	14.9	27.2	64.44	446.4	1,336.5	1,136.6	1,108.1	28.43	39.977		
6,800.0	6,777.1	6,678.6	6,514.8	15.1	27.7	64.42	454.1	1,358.9	1,155.6	1,126.8	28.87	40.033		
6,900.0	6,876.7	6,776.8	6,610.1	15.4	28.2	64.40	461.8	1,381.3	1,174.7	1,145.4	29.31	40.086		
7,000.0	6,976.3	6,875.0	6,705.4	15.6	28.6	64.39	469.5	1,403.7	1,193.8	1,164.1	29.74	40.138		
7,100.0	7,075.9	6,973.1	6,800.6	15.8	29.1	64.37	477.2	1,426.1	1,212.9	1,182.7	30.18	40.189		
7,147.0	7,122.8	7,019.2	6,845.4	15.9	29.3	64.36	480.8	1,436.6	1,221.9	1,191.5	30.39	40.212		
7,150.0	7,125.8	7,022.2	6,848.3	15.9	29.3	62.82	481.1	1,437.3	1,222.4	1,192.0	30.42	40.190		
7,200.0	7,175.7	7,071.2	6,895.8	16.0	29.5	-19.34	484.9	1,448.4	1,232.0	1,201.1	30.85	39.933		
7,250.0	7,225.5	7,119.8	6,943.0	16.0	29.8	-67.46	488.7	1,459.5	1,241.4	1,210.2	31.18	39.814		
7,300.0	7,275.0	7,167.6	6,989.4	16.0	30.0	-76.13	492.5	1,470.4	1,250.8	1,219.4	31.40	39.831		
7,350.0	7,323.6	7,214.3	7,034.7	16.0	30.2	-79.37	496.2	1,481.1	1,260.1	1,228.6	31.52	39.976		
7,400.0	7,371.0	7,259.5	7,078.6	15.9	30.4	-81.07	499.7	1,491.4	1,269.4	1,237.9	31.55	40.236		
7,450.0	7,416.9	7,302.9	7,120.6	15.8	30.6	-82.15	503.1	1,501.2	1,279.0	1,247.4	31.51	40.595		
7,500.0	7,460.8	7,347.7	7,164.2	15.6	30.8	-82.99	506.0	1,511.5	1,288.7	1,257.3	31.38	41.065		
7,550.0	7,502.6	7,396.8	7,212.0	15.5	31.0	-83.71	505.5	1,522.7	1,298.6	1,267.4	31.17	41.667		
7,600.0	7,541.7	7,448.9	7,262.5	15.3	31.2	-84.34	500.4	1,534.6	1,308.5	1,277.6	30.88	42.368		
7,650.0	7,578.1	7,504.7	7,315.7	15.2	31.3	-84.94	489.7	1,547.1	1,318.4	1,287.9	30.54	43.168		
7,700.0	7,611.3	7,564.8	7,371.7	15.0	31.5	-85.54	472.2	1,560.2	1,328.1	1,298.0	30.15	44.056		
7,750.0	7,641.1	7,630.1	7,430.1	14.9	31.6	-86.17	446.6	1,574.0	1,337.6	1,307.8	29.71	45.013		
7,800.0	7,667.4	7,701.3	7,490.2	14.8	31.7	-86.84	411.1	1,588.1	1,346.5	1,317.2	29.27	46.010		
7,850.0	7,689.8	7,779.5	7,550.6	14.7	31.8	-87.54	363.6	1,602.3	1,354.8	1,325.9	28.82	47.007		
7,900.0	7,708.2	7,865.4	7,609.0	14.7	31.9	-88.25	302.3	1,616.0	1,362.1	1,333.6	28.43	47.917		
7,950.0	7,722.6	7,959.2	7,661.8	14.7	31.9	-88.92	225.9	1,628.4	1,368.2	1,340.0	28.14	48.622		
8,000.0	7,732.7	8,060.5	7,704.4	14.7	32.0	-89.49	134.7	1,638.4	1,372.7	1,344.7	28.04	48.962		
8,050.0	7,738.5	8,167.8	7,731.8	14.8	32.1	-89.87	31.3	1,644.8	1,375.5	1,347.3	28.19	48.787		
8,091.8	7,740.0	8,260.0	7,740.0	15.0	32.2	-90.00	-60.4	1,646.8	1,376.3	1,347.8	28.55	48.213		
8,100.0	7,740.0	8,271.7	7,740.0	15.0	32.2	-90.00	-72.1	1,646.8	1,376.3	1,347.7	28.62	48.090		
8,200.0	7,740.0	8,371.7	7,740.0	15.4	32.4	-90.00	-172.1	1,646.8	1,376.3	1,346.7	29.59	46.519		
8,300.0	7,740.0	8,471.7	7,740.0	16.1	32.7	-90.00	-272.1	1,646.8	1,376.3	1,345.4	30.90	44.536		
8,400.0	7,740.0	8,571.7	7,740.0	16.9	33.1	-90.00	-372.1	1,646.8	1,376.3	1,343.8	32.55	42.286		
8,500.0	7,740.0	8,671.7	7,740.0	17.8	33.6	-90.00	-472.1	1,646.8	1,376.3	1,341.8	34.47	39.926		
8,600.0	7,740.0	8,771.7	7,740.0	18.8	34.1	-90.00	-572.1	1,646.8	1,376.3	1,339.7	36.63	37.572		
8,700.0	7,740.0	8,871.7	7,740.0	20.0	34.7	-90.00	-672.1	1,646.8	1,376.3	1,337.3	38.99	35.301		
8,800.0	7,740.0	8,971.7	7,740.0	21.2	35.4	-90.00	-772.1	1,646.8	1,376.3	1,334.8	41.51	33.159		
8,900.0	7,740.0	9,071.7	7,740.0	22.5	36.2	-90.00	-872.1	1,646.8	1,376.3	1,332.2	44.16	31.166		
9,000.0	7,740.0	9,171.7	7,740.0	23.9	37.0	-90.00	-972.1	1,646.8	1,376.3	1,329.4	46.93	29.328		

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 2C-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 2C-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 #2	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					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	9,271.7	7,740.0	25.3	37.9	-90.00	-1,072.1	1,646.8	1,376.3	1,326.5	49.79	27.643		
9,200.0	7,740.0	9,371.7	7,740.0	26.7	38.9	-90.00	-1,172.1	1,646.8	1,376.3	1,323.6	52.73	26.102		
9,300.0	7,740.0	9,471.7	7,740.0	28.2	39.9	-90.00	-1,272.1	1,646.8	1,376.3	1,320.6	55.73	24.695		
9,400.0	7,740.0	9,571.7	7,740.0	29.7	41.0	-90.00	-1,372.1	1,646.8	1,376.3	1,317.5	58.79	23.410		
9,500.0	7,740.0	9,671.7	7,740.0	31.3	42.1	-90.00	-1,472.1	1,646.8	1,376.3	1,314.4	61.90	22.234		
9,600.0	7,740.0	9,771.7	7,740.0	32.8	43.3	-90.00	-1,572.1	1,646.8	1,376.3	1,311.3	65.05	21.158		
9,700.0	7,740.0	9,871.7	7,740.0	34.4	44.5	-90.00	-1,672.1	1,646.8	1,376.3	1,308.1	68.23	20.171		
9,800.0	7,740.0	9,971.7	7,740.0	36.0	45.7	-90.00	-1,772.1	1,646.8	1,376.3	1,304.9	71.45	19.263		
9,900.0	7,740.0	10,071.7	7,740.0	37.6	47.0	-90.00	-1,872.1	1,646.8	1,376.3	1,301.6	74.69	18.427		
10,000.0	7,740.0	10,171.7	7,740.0	39.2	48.3	-90.00	-1,972.1	1,646.8	1,376.3	1,298.4	77.95	17.656		
10,100.0	7,740.0	10,271.7	7,740.0	40.9	49.6	-90.00	-2,072.1	1,646.8	1,376.3	1,295.1	81.24	16.942		
10,200.0	7,740.0	10,371.7	7,740.0	42.5	50.9	-90.00	-2,172.1	1,646.8	1,376.3	1,291.8	84.54	16.280		
10,300.0	7,740.0	10,471.7	7,740.0	44.1	52.3	-90.00	-2,272.1	1,646.8	1,376.3	1,288.5	87.86	15.665		
10,400.0	7,740.0	10,571.7	7,740.0	45.8	53.7	-90.00	-2,372.1	1,646.8	1,376.3	1,285.1	91.19	15.093		
10,500.0	7,740.0	10,671.7	7,740.0	47.5	55.1	-90.00	-2,472.1	1,646.8	1,376.3	1,281.8	94.54	14.559		
10,600.0	7,740.0	10,771.7	7,740.0	49.1	56.6	-90.00	-2,572.1	1,646.8	1,376.3	1,278.4	97.89	14.060		
10,700.0	7,740.0	10,871.7	7,740.0	50.8	58.0	-90.00	-2,672.1	1,646.8	1,376.3	1,275.1	101.26	13.592		
10,800.0	7,740.0	10,971.7	7,740.0	52.5	59.5	-90.00	-2,772.1	1,646.8	1,376.3	1,271.7	104.63	13.154		
10,900.0	7,740.0	11,071.7	7,740.0	54.2	61.0	-90.00	-2,872.1	1,646.8	1,376.3	1,268.3	108.02	12.741		
11,000.0	7,740.0	11,171.7	7,740.0	55.9	62.5	-90.00	-2,972.1	1,646.8	1,376.3	1,264.9	111.41	12.353		
11,100.0	7,740.0	11,271.7	7,740.0	57.6	64.0	-90.00	-3,072.1	1,646.8	1,376.3	1,261.5	114.81	11.988		
11,200.0	7,740.0	11,371.7	7,740.0	59.3	65.6	-90.00	-3,172.1	1,646.8	1,376.3	1,258.1	118.22	11.642		
11,300.0	7,740.0	11,471.7	7,740.0	61.0	67.1	-90.00	-3,272.1	1,646.8	1,376.3	1,254.7	121.63	11.316		
11,400.0	7,740.0	11,571.7	7,740.0	62.7	68.7	-90.00	-3,372.1	1,646.8	1,376.3	1,251.3	125.04	11.007		
11,500.0	7,740.0	11,671.7	7,740.0	64.4	70.2	-90.00	-3,472.1	1,646.8	1,376.3	1,247.9	128.47	10.713		
11,600.0	7,740.0	11,771.7	7,740.0	66.1	71.8	-90.00	-3,572.1	1,646.8	1,376.3	1,244.4	131.89	10.435		
11,700.0	7,740.0	11,871.7	7,740.0	67.8	73.4	-90.00	-3,672.1	1,646.8	1,376.3	1,241.0	135.32	10.171		
11,800.0	7,740.0	11,971.7	7,740.0	69.5	74.9	-90.00	-3,772.1	1,646.8	1,376.3	1,237.6	138.76	9.919		
11,900.0	7,740.0	12,071.7	7,740.0	71.2	76.5	-90.00	-3,872.1	1,646.8	1,376.3	1,234.1	142.19	9.679		
12,000.0	7,740.0	12,171.7	7,740.0	72.9	78.1	-90.00	-3,972.1	1,646.8	1,376.3	1,230.7	145.64	9.450		
12,100.0	7,740.0	12,271.7	7,740.0	74.7	79.7	-90.00	-4,072.1	1,646.8	1,376.3	1,227.2	149.08	9.232		
12,200.0	7,740.0	12,371.7	7,740.0	76.4	81.4	-90.00	-4,172.1	1,646.8	1,376.3	1,223.8	152.53	9.023		
12,300.0	7,740.0	12,471.7	7,740.0	78.1	83.0	-90.00	-4,272.1	1,646.8	1,376.3	1,220.3	155.98	8.824		
12,400.0	7,740.0	12,571.7	7,740.0	79.8	84.6	-90.00	-4,372.1	1,646.8	1,376.3	1,216.9	159.43	8.633		
12,500.0	7,740.0	12,671.7	7,740.0	81.6	86.2	-90.00	-4,472.1	1,646.8	1,376.3	1,213.4	162.88	8.450		
12,600.0	7,740.0	12,771.7	7,740.0	83.3	87.9	-90.00	-4,572.1	1,646.8	1,376.3	1,210.0	166.34	8.274		
12,700.0	7,740.0	12,871.7	7,740.0	85.0	89.5	-90.00	-4,672.1	1,646.8	1,376.3	1,206.5	169.80	8.106		
12,800.0	7,740.0	12,971.7	7,740.0	86.7	91.1	-90.00	-4,772.1	1,646.8	1,376.3	1,203.1	173.26	7.944		
12,900.0	7,740.0	13,071.7	7,740.0	88.5	92.8	-90.00	-4,872.1	1,646.8	1,376.3	1,199.6	176.73	7.788		
13,000.0	7,740.0	13,171.7	7,740.0	90.2	94.4	-90.00	-4,972.1	1,646.8	1,376.3	1,196.1	180.19	7.638		
13,100.0	7,740.0	13,271.7	7,740.0	91.9	96.1	-90.00	-5,072.1	1,646.8	1,376.3	1,192.7	183.66	7.494		
13,200.0	7,740.0	13,371.7	7,740.0	93.7	97.8	-90.00	-5,172.1	1,646.8	1,376.3	1,189.2	187.12	7.355		
13,300.0	7,740.0	13,471.7	7,740.0	95.4	99.4	-90.00	-5,272.1	1,646.8	1,376.3	1,185.7	190.59	7.221		
13,400.0	7,740.0	13,571.7	7,740.0	97.1	101.1	-90.00	-5,372.1	1,646.8	1,376.3	1,182.3	194.06	7.092		
13,500.0	7,740.0	13,671.7	7,740.0	98.9	102.7	-90.00	-5,472.1	1,646.8	1,376.3	1,178.8	197.54	6.967		
13,600.0	7,740.0	13,771.7	7,740.0	100.6	104.4	-90.00	-5,572.1	1,646.8	1,376.3	1,175.3	201.01	6.847		
13,700.0	7,740.0	13,871.7	7,740.0	102.3	106.1	-90.00	-5,672.1	1,646.8	1,376.3	1,171.8	204.48	6.731		
13,800.0	7,740.0	13,971.7	7,740.0	104.1	107.8	-90.00	-5,772.1	1,646.8	1,376.3	1,168.4	207.96	6.618		
13,900.0	7,740.0	14,071.7	7,740.0	105.8	109.4	-90.00	-5,872.1	1,646.8	1,376.3	1,164.9	211.44	6.509		
14,000.0	7,740.0	14,171.7	7,740.0	107.5	111.1	-90.00	-5,972.1	1,646.8	1,376.3	1,161.4	214.91	6.404		
14,100.0	7,740.0	14,271.7	7,740.0	109.3	112.8	-90.00	-6,072.1	1,646.8	1,376.3	1,157.9	218.39	6.302		
14,200.0	7,740.0	14,371.7	7,740.0	111.0	114.5	-90.00	-6,172.1	1,646.8	1,376.3	1,154.5	221.87	6.203		

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 2C-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 2C-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 #2	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										
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				
14,300.0	7,740.0	14,471.7	7,740.0	112.8	116.2	-90.00	-6,272.1	1,646.8	1,376.3	1,151.0	225.35	6.107					
14,400.0	7,740.0	14,571.7	7,740.0	114.5	117.9	-90.00	-6,372.1	1,646.8	1,376.3	1,147.5	228.83	6.014					
14,500.0	7,740.0	14,671.7	7,740.0	116.2	119.6	-90.00	-6,472.1	1,646.8	1,376.3	1,144.0	232.32	5.924					
14,600.0	7,740.0	14,771.7	7,740.0	118.0	121.3	-90.00	-6,572.1	1,646.8	1,376.3	1,140.5	235.80	5.837					
14,700.0	7,740.0	14,871.7	7,740.0	119.7	122.9	-90.00	-6,672.1	1,646.8	1,376.3	1,137.0	239.28	5.752					
14,800.0	7,740.0	14,971.7	7,740.0	121.5	124.6	-90.00	-6,772.1	1,646.8	1,376.3	1,133.6	242.77	5.669					
14,900.0	7,740.0	15,071.7	7,740.0	123.2	126.3	-90.00	-6,872.1	1,646.8	1,376.3	1,130.1	246.25	5.589					
15,000.0	7,740.0	15,171.7	7,740.0	124.9	128.0	-90.00	-6,972.1	1,646.8	1,376.3	1,126.6	249.74	5.511					
15,100.0	7,740.0	15,271.7	7,740.0	126.7	129.7	-90.00	-7,072.1	1,646.8	1,376.3	1,123.1	253.23	5.435					
15,200.0	7,740.0	15,371.7	7,740.0	128.4	131.4	-90.00	-7,172.1	1,646.8	1,376.3	1,119.6	256.71	5.361					
15,300.0	7,740.0	15,471.7	7,740.0	130.2	133.1	-90.00	-7,272.1	1,646.8	1,376.3	1,116.1	260.20	5.290					
15,400.0	7,740.0	15,571.7	7,740.0	131.9	134.9	-90.00	-7,372.1	1,646.8	1,376.3	1,112.6	263.69	5.220					
15,500.0	7,740.0	15,671.7	7,740.0	133.7	136.6	-90.00	-7,472.1	1,646.8	1,376.3	1,109.2	267.18	5.151					
15,600.0	7,740.0	15,771.7	7,740.0	135.4	138.3	-90.00	-7,572.1	1,646.8	1,376.3	1,105.7	270.67	5.085					
15,700.0	7,740.0	15,871.7	7,740.0	137.1	140.0	-90.00	-7,672.1	1,646.8	1,376.3	1,102.2	274.15	5.020					
15,800.0	7,740.0	15,971.7	7,740.0	138.9	141.7	-90.00	-7,772.1	1,646.8	1,376.3	1,098.7	277.64	4.957					
15,900.0	7,740.0	16,071.7	7,740.0	140.6	143.4	-90.00	-7,872.1	1,646.8	1,376.3	1,095.2	281.14	4.896					
15,952.8	7,740.0	16,124.4	7,740.0	141.6	144.3	-90.00	-7,924.8	1,646.8	1,376.3	1,093.4	282.98	4.864 SF					

Cathedral Energy Services

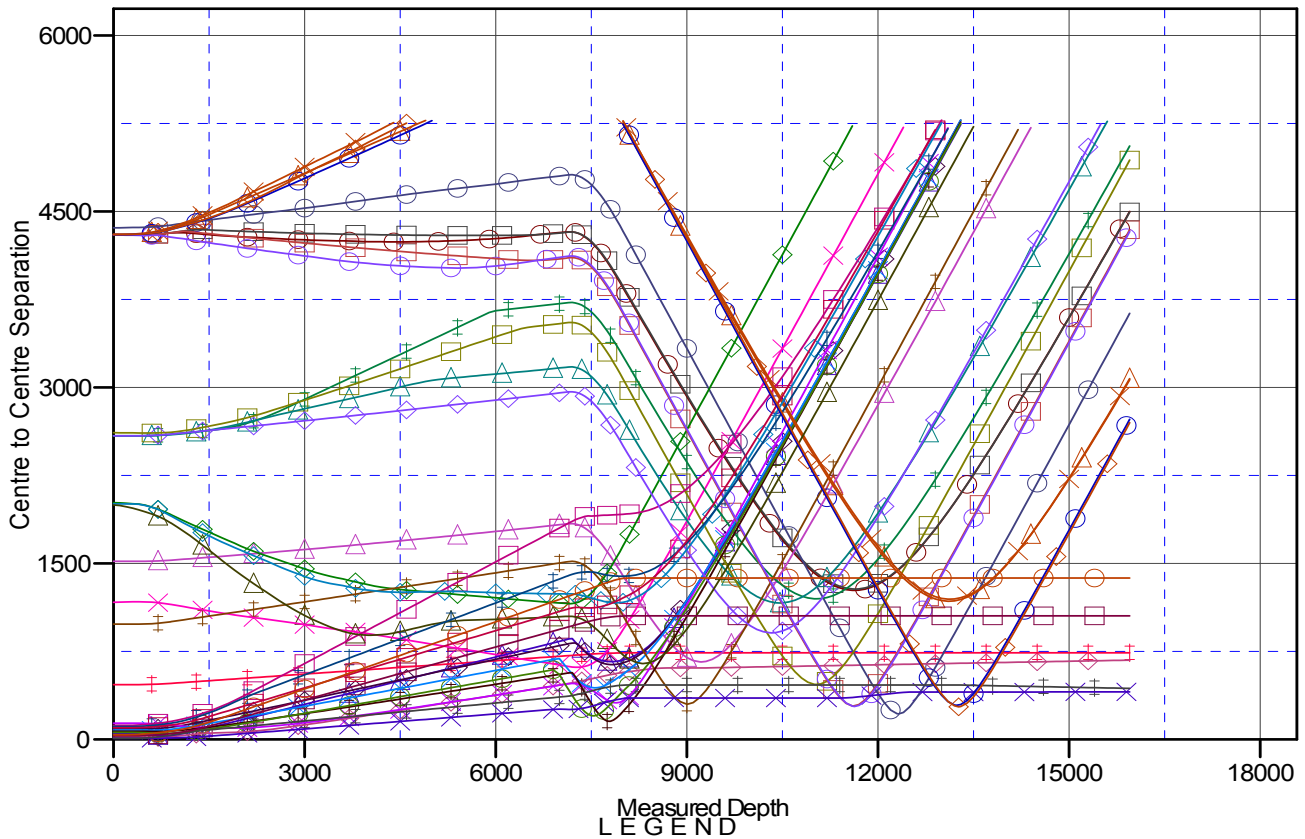
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2C-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 2C-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 #2	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 2C-7H-E168
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.29°

Ladder Plot



1-E168, Hz, Plan #2 V0	Woolley-Becky 2D-7H-E168, Hz, Plan #4 V0	WOOLLEY 22-7 (EXISTING), ENCAN
WD), DD V0	THOMAS 24-7 (EXISTING), ENCAN WELLS, SURVEYS V0	Woolley-Sosa 2D-7H-E168, HZ, Plan #2
WD), Plan #2 V0	Thomas 7-12 (Existing), Existing, NO SURVEYS V0	WOOLLEY 2-4-7 (EXISTING), ENCAN
1-E168, HZ, Plan #3 V0	THOMAS 2-8-7 (EXISTING), ENCAN WELLS, SURVEYS V0	Woolley-Sosa 2B-7H-E168, HZ, Plan #2
1 (EXISTING), ENCAN WELLS, GYRO V0	Sosa 11-18, DD, Plan #1 V0	Woolley-Becky 2G-7H-E168, Hz, Plan #2
H-E168, Hz, Plan #2 V0	Sosa 11-18, DD, DD V0	Woolley-Sosa 2F-7H-E168, HZ, Plan #2
(EXISTING), EXISTING, EXISTING V0	Woolley-Becky 2C-7H-E168, Hz, Plan #4 V0	Woolley-Becky 2F-7H-E168, Hz, Plan #3
(EXISTING), Existing, NO SURVEYS V0	Woolley-Becky 2H-7H-E168, Hz, Plan #3 V0	Woolley-Sosa 2G-7H-E168, HZ, Plan #2
(EXISTING), ENCAN WELLS, PLAN ONLY V0	Woolley-Becky 2B-7H-E168, Hz, Plan #2 V0	Sosa 12-18, DD, Plan #3 V0
H-E168, Hz, Plan #2 V0	THOMAS 24-7 (Existing), Existing, NO SURVEYS V0	Sosa 12-18, DD, DD V0

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