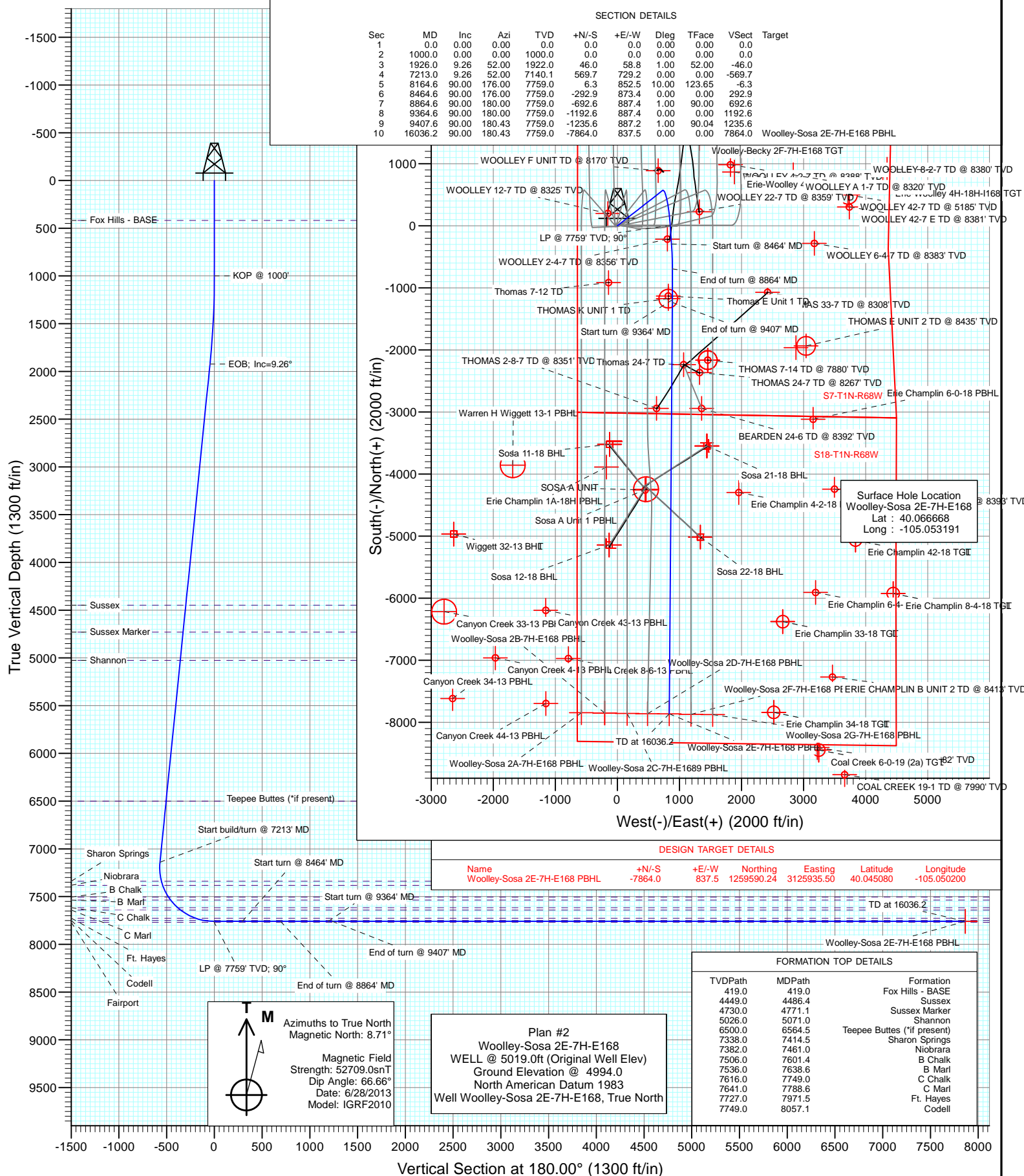




Project: DJ Wattenberg
Site: S7-T1N-R68W (Woolley-Sosa/Becky)
Well: Woolley-Sosa 2E-7H-E168
Wellbore: HZ
Design: Plan #2



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	North Reference:	True
Well:	Woolley-Sosa 2E-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)			
Site Position:		Northing:	1,265,219.42 ft	Latitude:	40.060530
From:	Lat/Long	Easting:	3,126,139.27 ft	Longitude:	-105.049370
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well	Woolley-Sosa 2E-7H-E168					
Well Position	+N/-S	0.0 ft	Northing:	1,267,449.90 ft	Latitude:	40.066668
	+E/-W	0.0 ft	Easting:	3,125,058.39 ft	Longitude:	-105.053191
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	8.71	66.66	52,709

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	180.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,926.0	9.26	52.00	1,922.0	46.0	58.8	1.00	1.00	0.00	52.00	
7,213.0	9.26	52.00	7,140.1	569.7	729.2	0.00	0.00	0.00	0.00	
8,164.6	90.00	176.00	7,759.0	6.3	852.5	10.00	8.48	13.03	123.65	
8,464.6	90.00	176.00	7,759.0	-292.9	873.4	0.00	0.00	0.00	0.00	
8,864.6	90.00	180.00	7,759.0	-692.6	887.4	1.00	0.00	1.00	90.00	
9,364.6	90.00	180.00	7,759.0	-1,192.6	887.4	0.00	0.00	0.00	0.00	
9,407.6	90.00	180.43	7,759.0	-1,235.6	887.2	1.00	0.00	1.00	90.04	
16,036.2	90.00	180.43	7,759.0	-7,864.0	837.5	0.00	0.00	0.00	0.00	Woolley-Sosa 2E-7H-

Cathedral Energy Services

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	North Reference:	True
Well:	Woolley-Sosa 2E-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	
419.0	0.00	0.00	419.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1000'
1,100.0	1.00	52.00	1,100.0	0.5	0.7	-0.5	1.00	1.00	
1,200.0	2.00	52.00	1,200.0	2.1	2.8	-2.1	1.00	1.00	
1,300.0	3.00	52.00	1,299.9	4.8	6.2	-4.8	1.00	1.00	
1,400.0	4.00	52.00	1,399.7	8.6	11.0	-8.6	1.00	1.00	
1,500.0	5.00	52.00	1,499.4	13.4	17.2	-13.4	1.00	1.00	
1,600.0	6.00	52.00	1,598.9	19.3	24.7	-19.3	1.00	1.00	
1,700.0	7.00	52.00	1,698.3	26.3	33.7	-26.3	1.00	1.00	
1,800.0	8.00	52.00	1,797.4	34.3	43.9	-34.3	1.00	1.00	
1,900.0	9.00	52.00	1,896.3	43.4	55.6	-43.4	1.00	1.00	
1,926.0	9.26	52.00	1,922.0	46.0	58.8	-46.0	1.00	1.00	EOB; Inc=9.26°
2,000.0	9.26	52.00	1,995.0	53.3	68.2	-53.3	0.00	0.00	
2,100.0	9.26	52.00	2,093.7	63.2	80.9	-63.2	0.00	0.00	
2,200.0	9.26	52.00	2,192.4	73.1	93.6	-73.1	0.00	0.00	
2,300.0	9.26	52.00	2,291.1	83.0	106.3	-83.0	0.00	0.00	
2,400.0	9.26	52.00	2,389.8	92.9	118.9	-92.9	0.00	0.00	
2,500.0	9.26	52.00	2,488.5	102.8	131.6	-102.8	0.00	0.00	
2,600.0	9.26	52.00	2,587.2	112.7	144.3	-112.7	0.00	0.00	
2,700.0	9.26	52.00	2,685.9	122.6	157.0	-122.6	0.00	0.00	
2,800.0	9.26	52.00	2,784.6	132.6	169.7	-132.6	0.00	0.00	
2,900.0	9.26	52.00	2,883.3	142.5	182.3	-142.5	0.00	0.00	
3,000.0	9.26	52.00	2,982.0	152.4	195.0	-152.4	0.00	0.00	
3,100.0	9.26	52.00	3,080.7	162.3	207.7	-162.3	0.00	0.00	
3,200.0	9.26	52.00	3,179.4	172.2	220.4	-172.2	0.00	0.00	
3,300.0	9.26	52.00	3,278.1	182.1	233.1	-182.1	0.00	0.00	
3,400.0	9.26	52.00	3,376.8	192.0	245.7	-192.0	0.00	0.00	
3,500.0	9.26	52.00	3,475.5	201.9	258.4	-201.9	0.00	0.00	
3,600.0	9.26	52.00	3,574.2	211.8	271.1	-211.8	0.00	0.00	
3,700.0	9.26	52.00	3,672.9	221.7	283.8	-221.7	0.00	0.00	
3,800.0	9.26	52.00	3,771.6	231.6	296.5	-231.6	0.00	0.00	
3,900.0	9.26	52.00	3,870.2	241.5	309.1	-241.5	0.00	0.00	
4,000.0	9.26	52.00	3,968.9	251.4	321.8	-251.4	0.00	0.00	
4,100.0	9.26	52.00	4,067.6	261.3	334.5	-261.3	0.00	0.00	
4,200.0	9.26	52.00	4,166.3	271.3	347.2	-271.3	0.00	0.00	
4,300.0	9.26	52.00	4,265.0	281.2	359.9	-281.2	0.00	0.00	
4,400.0	9.26	52.00	4,363.7	291.1	372.5	-291.1	0.00	0.00	
4,486.4	9.26	52.00	4,449.0	299.6	383.5	-299.6	0.00	0.00	Sussex
4,500.0	9.26	52.00	4,462.4	301.0	385.2	-301.0	0.00	0.00	
4,600.0	9.26	52.00	4,561.1	310.9	397.9	-310.9	0.00	0.00	
4,700.0	9.26	52.00	4,659.8	320.8	410.6	-320.8	0.00	0.00	
4,771.1	9.26	52.00	4,730.0	327.8	419.6	-327.8	0.00	0.00	Sussex Marker

Cathedral Energy Services

Planning Report

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Project:	DJ Wattenberg	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	North Reference:	True
Well:	Woolley-Sosa 2E-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
4,800.0	9.26	52.00	4,758.5	330.7	423.3	-330.7	0.00	0.00	
4,900.0	9.26	52.00	4,857.2	340.6	435.9	-340.6	0.00	0.00	
5,000.0	9.26	52.00	4,955.9	350.5	448.6	-350.5	0.00	0.00	
5,071.0	9.26	52.00	5,026.0	357.5	457.6	-357.5	0.00	0.00	Shannon
5,100.0	9.26	52.00	5,054.6	360.4	461.3	-360.4	0.00	0.00	
5,200.0	9.26	52.00	5,153.3	370.3	474.0	-370.3	0.00	0.00	
5,300.0	9.26	52.00	5,252.0	380.2	486.7	-380.2	0.00	0.00	
5,400.0	9.26	52.00	5,350.7	390.1	499.4	-390.1	0.00	0.00	
5,500.0	9.26	52.00	5,449.4	400.0	512.0	-400.0	0.00	0.00	
5,600.0	9.26	52.00	5,548.1	409.9	524.7	-409.9	0.00	0.00	
5,700.0	9.26	52.00	5,646.8	419.9	537.4	-419.9	0.00	0.00	
5,800.0	9.26	52.00	5,745.5	429.8	550.1	-429.8	0.00	0.00	
5,900.0	9.26	52.00	5,844.2	439.7	562.8	-439.7	0.00	0.00	
6,000.0	9.26	52.00	5,942.9	449.6	575.4	-449.6	0.00	0.00	
6,100.0	9.26	52.00	6,041.6	459.5	588.1	-459.5	0.00	0.00	
6,200.0	9.26	52.00	6,140.3	469.4	600.8	-469.4	0.00	0.00	
6,300.0	9.26	52.00	6,239.0	479.3	613.5	-479.3	0.00	0.00	
6,400.0	9.26	52.00	6,337.7	489.2	626.2	-489.2	0.00	0.00	
6,500.0	9.26	52.00	6,436.4	499.1	638.8	-499.1	0.00	0.00	
6,564.5	9.26	52.00	6,500.0	505.5	647.0	-505.5	0.00	0.00	Teepee Buttes (*if present)
6,600.0	9.26	52.00	6,535.1	509.0	651.5	-509.0	0.00	0.00	
6,700.0	9.26	52.00	6,633.8	518.9	664.2	-518.9	0.00	0.00	
6,800.0	9.26	52.00	6,732.5	528.8	676.9	-528.8	0.00	0.00	
6,900.0	9.26	52.00	6,831.2	538.7	689.6	-538.7	0.00	0.00	
7,000.0	9.26	52.00	6,929.9	548.6	702.2	-548.6	0.00	0.00	
7,100.0	9.26	52.00	7,028.5	558.6	714.9	-558.6	0.00	0.00	
7,200.0	9.26	52.00	7,127.2	568.5	727.6	-568.5	0.00	0.00	
7,213.0	9.26	52.00	7,140.1	569.7	729.2	-569.7	0.00	0.00	Start build/turn @ 7213' MD
7,300.0	8.47	110.77	7,226.2	571.8	740.8	-571.8	10.00	-0.91	
7,400.0	15.54	146.91	7,324.1	557.9	755.0	-557.9	10.00	7.07	
7,414.5	16.81	149.42	7,338.0	554.5	757.1	-554.5	10.00	8.77	Sharon Springs
7,461.0	21.04	155.43	7,382.0	541.1	764.0	-541.1	10.00	9.09	Niobrara
7,500.0	24.70	158.91	7,417.9	527.1	769.9	-527.1	10.00	9.38	
7,600.0	34.31	164.58	7,504.9	480.4	784.9	-480.4	10.00	9.61	
7,601.4	34.44	164.63	7,506.0	479.6	785.1	-479.6	10.00	9.71	B Chalk
7,638.6	38.07	166.06	7,536.0	458.3	790.7	-458.3	10.00	9.74	B Marl
7,700.0	44.08	167.98	7,582.3	419.0	799.7	-419.0	10.00	9.79	
7,749.0	48.89	169.23	7,616.0	384.2	806.7	-384.2	10.00	9.83	C Chalk
7,788.6	52.79	170.11	7,641.0	354.0	812.2	-354.0	10.00	9.85	C Marl
7,800.0	53.92	170.35	7,647.8	345.0	813.8	-345.0	10.00	9.86	
7,900.0	63.79	172.19	7,699.5	260.5	826.7	-260.5	10.00	9.88	
7,971.5	70.87	173.31	7,727.0	195.1	835.0	-195.1	10.00	9.89	Ft. Hayes
8,000.0	73.69	173.73	7,735.7	168.1	838.0	-168.1	10.00	9.90	
8,057.1	79.35	174.54	7,749.0	112.8	843.7	-112.8	10.00	9.90	Codell
8,100.0	83.60	175.13	7,755.4	70.6	847.5	-70.6	10.00	9.91	
8,164.6	90.00	176.00	7,759.0	6.3	852.5	-6.3	10.00	9.91	LP @ 7759' TVD; 90°
8,200.0	90.00	176.00	7,759.0	-28.9	855.0	28.9	0.00	0.00	
8,300.0	90.00	176.00	7,759.0	-128.7	861.9	128.7	0.00	0.00	
8,400.0	90.00	176.00	7,759.0	-228.5	868.9	228.5	0.00	0.00	
8,464.6	90.00	176.00	7,759.0	-292.9	873.4	292.9	0.00	0.00	Start turn @ 8464' MD
8,500.0	90.00	176.35	7,759.0	-328.2	875.8	328.2	1.00	0.00	
8,600.0	90.00	177.35	7,759.0	-428.1	881.3	428.1	1.00	0.00	

Cathedral Energy Services

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Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	North Reference:	True
Well:	Woolley-Sosa 2E-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
8,700.0	90.00	178.35	7,759.0	-528.0	885.0	528.0	1.00	0.00	
8,800.0	90.00	179.35	7,759.0	-628.0	887.0	628.0	1.00	0.00	
8,864.6	90.00	180.00	7,759.0	-692.6	887.4	692.6	1.00	0.00	End of turn @ 8864' MD
8,900.0	90.00	180.00	7,759.0	-728.0	887.4	728.0	0.00	0.00	
9,000.0	90.00	180.00	7,759.0	-828.0	887.4	828.0	0.00	0.00	
9,100.0	90.00	180.00	7,759.0	-928.0	887.4	928.0	0.00	0.00	
9,200.0	90.00	180.00	7,759.0	-1,028.0	887.4	1,028.0	0.00	0.00	
9,300.0	90.00	180.00	7,759.0	-1,128.0	887.4	1,128.0	0.00	0.00	
9,364.6	90.00	180.00	7,759.0	-1,192.6	887.4	1,192.6	0.00	0.00	Start turn @ 9364' MD
9,400.0	90.00	180.35	7,759.0	-1,228.0	887.3	1,228.0	1.00	0.00	
9,407.6	90.00	180.43	7,759.0	-1,235.6	887.2	1,235.6	1.00	0.00	End of turn @ 9407' MD
9,500.0	90.00	180.43	7,759.0	-1,328.0	886.5	1,328.0	0.00	0.00	
9,600.0	90.00	180.43	7,759.0	-1,428.0	885.8	1,428.0	0.00	0.00	
9,700.0	90.00	180.43	7,759.0	-1,528.0	885.0	1,528.0	0.00	0.00	
9,800.0	90.00	180.43	7,759.0	-1,628.0	884.3	1,628.0	0.00	0.00	
9,900.0	90.00	180.43	7,759.0	-1,728.0	883.5	1,728.0	0.00	0.00	
10,000.0	90.00	180.43	7,759.0	-1,828.0	882.8	1,828.0	0.00	0.00	
10,100.0	90.00	180.43	7,759.0	-1,928.0	882.0	1,928.0	0.00	0.00	
10,200.0	90.00	180.43	7,759.0	-2,028.0	881.3	2,028.0	0.00	0.00	
10,300.0	90.00	180.43	7,759.0	-2,128.0	880.5	2,128.0	0.00	0.00	
10,400.0	90.00	180.43	7,759.0	-2,228.0	879.8	2,228.0	0.00	0.00	
10,500.0	90.00	180.43	7,759.0	-2,327.9	879.0	2,327.9	0.00	0.00	
10,600.0	90.00	180.43	7,759.0	-2,427.9	878.3	2,427.9	0.00	0.00	
10,700.0	90.00	180.43	7,759.0	-2,527.9	877.5	2,527.9	0.00	0.00	
10,800.0	90.00	180.43	7,759.0	-2,627.9	876.8	2,627.9	0.00	0.00	
10,900.0	90.00	180.43	7,759.0	-2,727.9	876.0	2,727.9	0.00	0.00	
11,000.0	90.00	180.43	7,759.0	-2,827.9	875.3	2,827.9	0.00	0.00	
11,100.0	90.00	180.43	7,759.0	-2,927.9	874.5	2,927.9	0.00	0.00	
11,200.0	90.00	180.43	7,759.0	-3,027.9	873.8	3,027.9	0.00	0.00	
11,300.0	90.00	180.43	7,759.0	-3,127.9	873.0	3,127.9	0.00	0.00	
11,400.0	90.00	180.43	7,759.0	-3,227.9	872.3	3,227.9	0.00	0.00	
11,500.0	90.00	180.43	7,759.0	-3,327.9	871.5	3,327.9	0.00	0.00	
11,600.0	90.00	180.43	7,759.0	-3,427.9	870.8	3,427.9	0.00	0.00	
11,700.0	90.00	180.43	7,759.0	-3,527.9	870.0	3,527.9	0.00	0.00	
11,800.0	90.00	180.43	7,759.0	-3,627.9	869.3	3,627.9	0.00	0.00	
11,900.0	90.00	180.43	7,759.0	-3,727.9	868.5	3,727.9	0.00	0.00	
12,000.0	90.00	180.43	7,759.0	-3,827.9	867.8	3,827.9	0.00	0.00	
12,100.0	90.00	180.43	7,759.0	-3,927.9	867.0	3,927.9	0.00	0.00	
12,200.0	90.00	180.43	7,759.0	-4,027.9	866.3	4,027.9	0.00	0.00	
12,300.0	90.00	180.43	7,759.0	-4,127.9	865.5	4,127.9	0.00	0.00	
12,400.0	90.00	180.43	7,759.0	-4,227.9	864.8	4,227.9	0.00	0.00	
12,500.0	90.00	180.43	7,759.0	-4,327.9	864.0	4,327.9	0.00	0.00	
12,600.0	90.00	180.43	7,759.0	-4,427.9	863.3	4,427.9	0.00	0.00	
12,700.0	90.00	180.43	7,759.0	-4,527.9	862.5	4,527.9	0.00	0.00	
12,800.0	90.00	180.43	7,759.0	-4,627.9	861.8	4,627.9	0.00	0.00	
12,900.0	90.00	180.43	7,759.0	-4,727.9	861.0	4,727.9	0.00	0.00	
13,000.0	90.00	180.43	7,759.0	-4,827.9	860.3	4,827.9	0.00	0.00	
13,100.0	90.00	180.43	7,759.0	-4,927.9	859.5	4,927.9	0.00	0.00	
13,200.0	90.00	180.43	7,759.0	-5,027.9	858.8	5,027.9	0.00	0.00	
13,300.0	90.00	180.43	7,759.0	-5,127.9	858.0	5,127.9	0.00	0.00	
13,400.0	90.00	180.43	7,759.0	-5,227.9	857.3	5,227.9	0.00	0.00	
13,500.0	90.00	180.43	7,759.0	-5,327.9	856.5	5,327.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	North Reference:	True
Well:	Woolley-Sosa 2E-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
13,600.0	90.00	180.43	7,759.0	-5,427.9	855.8	5,427.9	0.00	0.00	
13,700.0	90.00	180.43	7,759.0	-5,527.9	855.0	5,527.9	0.00	0.00	
13,800.0	90.00	180.43	7,759.0	-5,627.9	854.3	5,627.9	0.00	0.00	
13,900.0	90.00	180.43	7,759.0	-5,727.9	853.5	5,727.9	0.00	0.00	
14,000.0	90.00	180.43	7,759.0	-5,827.8	852.8	5,827.8	0.00	0.00	
14,100.0	90.00	180.43	7,759.0	-5,927.8	852.0	5,927.8	0.00	0.00	
14,200.0	90.00	180.43	7,759.0	-6,027.8	851.3	6,027.8	0.00	0.00	
14,300.0	90.00	180.43	7,759.0	-6,127.8	850.5	6,127.8	0.00	0.00	
14,400.0	90.00	180.43	7,759.0	-6,227.8	849.8	6,227.8	0.00	0.00	
14,500.0	90.00	180.43	7,759.0	-6,327.8	849.0	6,327.8	0.00	0.00	
14,600.0	90.00	180.43	7,759.0	-6,427.8	848.3	6,427.8	0.00	0.00	
14,700.0	90.00	180.43	7,759.0	-6,527.8	847.5	6,527.8	0.00	0.00	
14,800.0	90.00	180.43	7,759.0	-6,627.8	846.8	6,627.8	0.00	0.00	
14,900.0	90.00	180.43	7,759.0	-6,727.8	846.0	6,727.8	0.00	0.00	
15,000.0	90.00	180.43	7,759.0	-6,827.8	845.3	6,827.8	0.00	0.00	
15,100.0	90.00	180.43	7,759.0	-6,927.8	844.5	6,927.8	0.00	0.00	
15,200.0	90.00	180.43	7,759.0	-7,027.8	843.8	7,027.8	0.00	0.00	
15,300.0	90.00	180.43	7,759.0	-7,127.8	843.0	7,127.8	0.00	0.00	
15,400.0	90.00	180.43	7,759.0	-7,227.8	842.3	7,227.8	0.00	0.00	
15,500.0	90.00	180.43	7,759.0	-7,327.8	841.5	7,327.8	0.00	0.00	
15,600.0	90.00	180.43	7,759.0	-7,427.8	840.8	7,427.8	0.00	0.00	
15,700.0	90.00	180.43	7,759.0	-7,527.8	840.0	7,527.8	0.00	0.00	
15,800.0	90.00	180.43	7,759.0	-7,627.8	839.3	7,627.8	0.00	0.00	
15,900.0	90.00	180.43	7,759.0	-7,727.8	838.5	7,727.8	0.00	0.00	
16,000.0	90.00	180.43	7,759.0	-7,827.8	837.8	7,827.8	0.00	0.00	
16,036.2	90.00	180.43	7,759.0	-7,864.0	837.5	7,864.0	0.00	0.00	TD at 16036.2

Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Woolley-Sosa 2E-7H-E1	0.00	0.00	7,759.0	-7,864.0	837.5	1,259,590.24	3,125,935.50	40.045080	-105.050200
- plan hits target center									
- Point									

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	North Reference:	True
Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
419.0	419.0	Fox Hills - BASE			
4,486.4	4,449.0	Sussex			
4,771.1	4,730.0	Sussex Marker			
5,071.0	5,026.0	Shannon			
6,564.5	6,500.0	Teepee Buttes (*if present)			
7,414.5	7,338.0	Sharon Springs			
7,461.0	7,382.0	Niobrara			
7,601.4	7,506.0	B Chalk			
7,638.6	7,536.0	B Marl			
7,749.0	7,616.0	C Chalk			
7,788.6	7,641.0	C Marl			
7,971.5	7,727.0	Ft. Hayes			
8,057.1	7,749.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.0	1,000.0	0.0	0.0	KOP @ 1000'
1,926.0	1,922.0	46.0	58.8	EOB; Inc=9.26°
7,213.0	7,140.1	569.7	729.2	Start build/turn @ 7213' MD
8,164.6	7,759.0	6.3	852.5	LP @ 7759' TVD; 90°
8,464.6	7,759.0	-292.9	873.4	Start turn @ 8464' MD
8,864.6	7,759.0	-692.6	887.4	End of turn @ 8864' MD
9,364.6	7,759.0	-1,192.6	887.4	Start turn @ 9364' MD
9,407.6	7,759.0	-1,235.6	887.2	End of turn @ 9407' MD
16,036.2	7,759.0	-7,864.0	837.5	TD at 16036.2

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

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

Woolley-Sosa 2E-7H-E168

HZ

Plan #2

Anticollision Report

15 July, 2013

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/15/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	16,036.2	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 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S7-T1N-R68W (Woolley-Sosa/Becky)						
BEARDEN 0-6-6 (EXISTING) - ENCANA WELL - SURVE						Out of range
BEARDEN 1 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
BEARDEN 13-6 (EXISTING) - ENCANA WELL - SURVEY						Out of range
BEARDEN 14-6 (EXISTING) - ENCANA WELL - SURVEY						Out of range
BEARDEN 23-6 (EXISTING) - ENCANA WELL - GYRO						Out of range
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN ON	11,110.3	7,804.9	484.2	410.8	6.597	CC, ES
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN ON	11,200.0	7,804.9	492.4	417.5	6.573	SF
BEARDEN 2-4-6 (EXISTING) - ENCANA WELL - PLAN O						Out of range
BEARDEN 2-8-6 (EXISTING) - ENCANA WELL - SURVE						Out of range
BECKY 1 (EXISTING) - FOUNDATION WELL - NO SURV						Out of range
BECKY 2-6 (EXISTING) - NOBLE WELL - NO SURVEYS						Out of range
BECKY 4 (EXISTING) - MARTIN EXP WELL - NO SURVE						Out of range
BECKY 5-6 (EXISTING) - FOUNDATION WELL - NO SUR						Out of range
BECKY 7-6 (EXISTING) - NOBLE WELL - NO SURVEYS						Out of range
BILLINGS 21-7 (EXISTING) - KPK WELL - SURVEYS						Out of range
BULTHAUP 21-6 (EXISTING) - KERR-MCGEE WELL - S						Out of range
BULTHAUP 23-6 (EXISTING) - KERR-MCGEE WELL - S						Out of range
Sosa 11-18 - DD - DD						Out of range
Sosa 11-18 - DD - Plan #1						Out of range
Sosa 12-18 - DD - DD						Out of range
Sosa 12-18 - DD - Plan #3						Out of range
Sosa 21-18 - DD (Gyro) - DD						Out of range
Sosa 21-18 - DD (MWD) - DD						Out of range
Sosa 21-18 - DD (MWD) - Plan #2						Out of range
Sosa 22-18 - DD - DD	13,200.8	7,900.3	497.1	386.1	4.479	CC, ES, SF
Sosa 22-18 - DD - Plan #2	13,183.9	7,893.1	479.6	369.1	4.340	CC
Sosa 22-18 - DD - Plan #2	13,200.0	7,893.1	479.9	369.1	4.332	ES, SF
Sosa A #1 (Existing) - DD - DD	12,419.3	2,740.0	401.5	319.3	4.881	CC, ES, SF
THOMAS 14-7(EXISTING) - EXISTING - NO SURVEY						Out of range
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEYS	10,534.4	7,767.8	444.8	385.7	7.531	CC, ES
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEYS	10,600.0	7,767.6	449.6	389.4	7.474	SF
THOMAS 24-7 (Existing) - Existing - NO SURVEYS	10,407.3	7,742.0	189.1	132.3	3.331	CC, ES, SF
THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SURVEY	11,114.5	7,822.4	245.9	172.8	3.362	CC, ES, SF
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
Thomas 7-12 (Existing) - Existing - NO SURVEYS						Out of range
Thomas 7-14 (Existing) - Existing - NO SURVEYS						Out of range
THOMAS E UNIT 1 (EXISTING) - Existing - NO SURVEY	9,303.1	7,741.0	66.3	27.0	1.687	CC, ES, SF
THOMAS K UNIT 1 (EXISTING) - EXISTING - NO SURVE						Out of range
WOOLLEY 11-7 (EXISTING) - ENCANA WELL - SURVEY						Out of range
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	1,129.4	1,205.4	251.7	247.7	62.429	CC
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	1,400.0	1,475.7	252.0	247.0	50.459	ES
WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SUR	3,000.0	3,058.0	352.0	340.6	30.804	SF
WOOLLEY 21-7 (EXISTING) - ENCANA WELL - NO SUR						Out of range
WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVEY	7,999.4	7,999.9	487.7	444.8	11.367	CC, ES, SF
WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SURVE	8,387.4	8,179.2	60.4	9.6	1.190	Level 2, CC, ES, SF
WOOLLEY 4-0-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WOOLLEY F UNIT 1 (EXISTING) - ENCANA WELL - GYR	7,248.5	7,201.7	352.4	320.2	10.955	CC, ES
WOOLLEY F UNIT 1 (EXISTING) - ENCANA WELL - GYR	7,300.0	7,253.3	353.7	321.4	10.931	SF
Woolley-Becky 2A-7H-E168 - Hz - Plan #1	982.7	984.9	10.3	6.8	2.988	CC
Woolley-Becky 2A-7H-E168 - Hz - Plan #1	1,000.0	1,002.1	10.3	6.8	2.939	ES, SF
Woolley-Becky 2B-7H-E168 - Hz - Plan #1	1,457.1	1,458.0	18.8	13.8	3.723	CC, ES
Woolley-Becky 2B-7H-E168 - Hz - Plan #1	1,500.0	1,500.7	19.3	14.1	3.695	SF
Woolley-Becky 2C-7H-E168 - Hz - Plan #1	566.0	568.0	45.2	43.3	23.879	CC

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #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)						
Woolley-Becky 2C-7H-E168 - Hz - Plan #1	600.0	602.0	45.2	43.2	22.469	ES
Woolley-Becky 2C-7H-E168 - Hz - Plan #1	2,100.0	2,095.5	75.2	67.3	9.547	SF
Woolley-Becky 2D-7H-E168 - Hz - Plan #1	466.0	468.0	51.4	49.9	33.313	CC
Woolley-Becky 2D-7H-E168 - Hz - Plan #1	500.0	502.0	51.4	49.7	30.933	ES
Woolley-Becky 2D-7H-E168 - Hz - Plan #1	7,600.0	7,824.9	176.2	144.3	5.527	SF
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	366.0	368.0	67.6	66.4	56.598	CC
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	400.0	402.0	67.6	66.3	51.480	ES
Woolley-Becky 2E-7H-E168 - Hz - Plan #2	7,963.7	7,826.0	185.1	157.0	6.598	SF
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	265.6	268.6	70.8	70.0	83.783	CC
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	300.0	303.0	70.8	69.8	73.374	ES
Woolley-Becky 2F-7H-E168 - Hz - Plan #2	5,900.0	5,862.4	495.1	464.6	16.185	SF
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	229.1	232.1	76.0	75.2	105.851	CC
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	300.0	302.3	76.2	75.2	79.039	ES
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	1,000.0	989.2	124.1	120.5	34.786	SF
Woolley-Becky 2H-7H-E168 - Hz - Plan #1	165.6	168.6	81.9	81.5	165.167	CC
Woolley-Becky 2H-7H-E168 - Hz - Plan #1	200.0	203.0	81.9	81.3	133.022	ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #1	3,100.0	3,024.2	485.3	472.5	37.964	SF
Woolley-Sosa 2A-7H-E168 - Hz - Plan #1	200.0	200.0	30.0	29.4	49.111	CC, ES
Woolley-Sosa 2A-7H-E168 - Hz - Plan #1	700.0	697.0	47.2	44.8	19.418	SF
Woolley-Sosa 2B-7H-E168 - HZ - Plan #1	300.0	300.0	25.7	24.7	26.783	CC, ES
Woolley-Sosa 2B-7H-E168 - HZ - Plan #1	700.0	698.5	34.8	32.4	14.540	SF
Woolley-Sosa 2C-7H-E168 - HZ - Plan #1	648.6	648.6	19.3	17.1	8.833	CC
Woolley-Sosa 2C-7H-E168 - HZ - Plan #1	700.0	700.0	19.4	17.1	8.215	ES
Woolley-Sosa 2C-7H-E168 - HZ - Plan #1	800.0	799.7	21.1	18.3	7.717	SF
Woolley-Sosa 2D-7H-E168 - HZ - Plan #1	729.5	729.6	15.5	13.0	6.291	CC, ES
Woolley-Sosa 2D-7H-E168 - HZ - Plan #1	16,036.2	15,996.9	350.0	69.3	1.247	Level 2, SF
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1	300.0	300.0	7.8	6.9	8.136	CC, ES
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1	16,036.2	16,080.5	350.0	69.2	1.247	Level 2, SF
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	200.0	200.0	10.0	9.4	16.370	CC, ES
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	400.0	399.6	13.3	12.0	10.137	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN ONLY													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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)				
11,000.0	7,759.0	7,804.9	7,732.0	55.5	19.1	-90.00	-2,941.9	1,358.6	496.6	425.1	71.53	6.943		
11,100.0	7,759.0	7,804.9	7,732.0	57.1	19.1	-90.00	-2,941.9	1,358.6	484.3	411.1	73.22	6.615		
11,110.3	7,759.0	7,804.9	7,732.0	57.3	19.1	-90.00	-2,941.9	1,358.6	484.2	410.8	73.39	6.597 CC, ES		
11,200.0	7,759.0	7,804.9	7,732.0	58.7	19.1	-90.00	-2,941.9	1,358.6	492.4	417.5	74.92	6.573 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty		Separation Factor
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S	+E/-W	(ft)	(ft)	Axis		
							(ft)	(ft)					
13,200.0	7,759.0	7,900.3	7,764.5	92.3	25.7	-89.36	-5,032.4	1,355.8	497.1	386.1	110.97	4.479	
13,200.8	7,759.0	7,900.3	7,764.5	92.3	25.7	-89.36	-5,032.4	1,355.8	497.1	386.1	110.98	4.479	CC, ES, SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design											S7-T1N-R68W (Woolley-Sosa/Becky) - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)						
13,100.0	7,759.0	7,893.1	7,770.0	90.6	25.3	-90.00	-5,015.3	1,338.5	486.9	377.8	109.04	4.465				
13,183.9	7,759.0	7,893.1	7,770.0	92.1	25.3	-90.00	-5,015.3	1,338.5	479.6	369.1	110.50	4.340 CC				
13,200.0	7,759.0	7,893.1	7,770.0	92.3	25.3	-90.00	-5,015.3	1,338.5	479.9	369.1	110.78	4.332 ES, SF				
13,300.0	7,759.0	7,893.1	7,770.0	94.0	25.3	-90.00	-5,015.3	1,338.5	493.5	381.0	112.51	4.386				

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													S7-T1N-R68W (Woolley-Sosa/Becky) - Sosa A #1 (Existing) - DD - DD		Offset Site Error:		0.0 ft
Survey Program: 9000-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)							
12,200.0	7,759.0	2,740.0	2,740.0	75.4	4.8	90.00	-4,244.2	463.1	457.5	379.0	78.48	5.830					
12,300.0	7,759.0	2,740.0	2,740.0	77.0	4.8	90.00	-4,244.2	463.1	418.9	338.7	80.20	5.223					
12,400.0	7,759.0	2,740.0	2,740.0	78.7	4.8	90.00	-4,244.2	463.1	402.0	320.1	81.92	4.907					
12,419.3	7,759.0	2,740.0	2,740.0	79.1	4.8	90.00	-4,244.2	463.1	401.5	319.3	82.26	4.881	CC, ES, SF				
12,500.0	7,759.0	2,740.0	2,740.0	80.4	4.8	90.00	-4,244.2	463.1	409.6	325.9	83.65	4.896					
12,600.0	7,759.0	2,740.0	2,740.0	82.1	4.8	90.00	-4,244.2	463.1	440.3	354.9	85.37	5.157					
12,700.0	7,759.0	2,740.0	2,740.0	83.8	4.8	90.00	-4,244.2	463.1	489.9	402.8	87.10	5.624					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design											S7-T1N-R68W (Woolley-Sosa/Becky) - THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEYS			Offset Site Error:		0.0 ft
Survey Program: 1024-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 +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)						
10,400.0	7,759.0	7,768.3	7,755.7	45.9	14.4	-89.71	-2,365.7	1,323.5	464.7	407.8	56.83	8.177				
10,500.0	7,759.0	7,767.9	7,755.4	47.5	14.4	-89.67	-2,365.7	1,323.5	446.1	387.6	58.49	7.628				
10,534.4	7,759.0	7,767.8	7,755.3	48.0	14.4	-89.65	-2,365.7	1,323.5	444.8	385.7	59.06	7.531 CC, ES				
10,600.0	7,759.0	7,767.6	7,755.1	49.1	14.4	-89.62	-2,365.7	1,323.5	449.6	389.4	60.15	7.474 SF				
10,700.0	7,759.0	7,767.2	7,754.7	50.6	14.4	-89.58	-2,365.7	1,323.5	474.6	412.8	61.83	7.676				

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design												S7-T1N-R68W (Woolley-Sosa/Becky) - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor					
10,000.0	7,759.0	7,742.0	7,742.0	39.8	13.5	-90.00	-2,236.6	1,068.8	449.0	398.9	50.08	8.966					
10,100.0	7,759.0	7,742.0	7,742.0	41.3	13.5	-90.00	-2,236.6	1,068.8	360.8	309.1	51.70	6.978					
10,200.0	7,759.0	7,742.0	7,742.0	42.8	13.5	-90.00	-2,236.6	1,068.8	280.5	227.2	53.34	5.260					
10,300.0	7,759.0	7,742.0	7,742.0	44.4	13.5	-90.00	-2,236.6	1,068.8	217.4	162.4	54.99	3.953					
10,400.0	7,759.0	7,742.0	7,742.0	45.9	13.5	-90.00	-2,236.6	1,068.8	189.2	132.6	56.64	3.341					
10,407.3	7,759.0	7,742.0	7,742.0	46.0	13.5	-90.00	-2,236.6	1,068.8	189.1	132.3	56.76	3.331	CC, ES, SF				
10,500.0	7,759.0	7,742.0	7,742.0	47.5	13.5	-90.00	-2,236.6	1,068.8	210.6	152.3	58.30	3.612					
10,600.0	7,759.0	7,742.0	7,742.0	49.1	13.5	-90.00	-2,236.6	1,068.8	270.0	210.0	59.97	4.502					
10,700.0	7,759.0	7,742.0	7,742.0	50.6	13.5	-90.00	-2,236.6	1,068.8	348.5	286.8	61.64	5.653					
10,800.0	7,759.0	7,742.0	7,742.0	52.2	13.5	-90.00	-2,236.6	1,068.8	435.9	372.6	63.32	6.883					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - THOMAS 2-8-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 838-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)				
10,700.0	7,759.0	7,823.4	7,759.6	50.6	19.6	90.37	-2,940.6	628.5	482.0	415.8	66.16	7.285		
10,800.0	7,759.0	7,823.1	7,759.3	52.2	19.6	90.31	-2,940.6	628.5	399.2	331.4	67.84	5.885		
10,900.0	7,759.0	7,822.9	7,759.1	53.9	19.6	90.26	-2,940.6	628.5	326.3	256.8	69.52	4.694		
11,000.0	7,759.0	7,822.7	7,758.9	55.5	19.6	90.21	-2,940.6	628.5	271.3	200.1	71.21	3.809		
11,100.0	7,759.0	7,822.4	7,758.6	57.1	19.6	90.15	-2,940.6	628.5	246.3	173.4	72.90	3.379		
11,114.5	7,759.0	7,822.4	7,758.6	57.3	19.6	90.15	-2,940.6	628.5	245.9	172.8	73.15	3.362	CC, ES, SF	
11,200.0	7,759.0	7,822.2	7,758.4	58.7	19.6	90.10	-2,940.6	628.5	260.3	185.7	74.60	3.490		
11,300.0	7,759.0	7,822.0	7,758.2	60.4	19.6	90.05	-2,940.6	628.5	308.0	231.7	76.30	4.037		
11,400.0	7,759.0	7,821.8	7,758.0	62.0	19.6	89.99	-2,940.6	628.5	376.8	298.8	78.00	4.830		
11,500.0	7,759.0	7,821.5	7,757.7	63.7	19.6	89.94	-2,940.6	628.5	457.2	377.5	79.71	5.736		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - THOMAS E UNIT 1 (EXISTING) - Existing - NO SURVEYS													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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
8,900.0	7,759.0	7,741.0	7,741.0	25.6	13.5	90.00	-1,131.1	821.0	408.5	374.7	33.77	12.097		
9,000.0	7,759.0	7,741.0	7,741.0	26.6	13.5	90.00	-1,131.1	821.0	310.3	275.2	35.06	8.848		
9,100.0	7,759.0	7,741.0	7,741.0	27.7	13.5	90.00	-1,131.1	821.0	213.7	177.2	36.42	5.866		
9,200.0	7,759.0	7,741.0	7,741.0	28.9	13.5	90.00	-1,131.1	821.0	122.6	84.8	37.83	3.241		
9,300.0	7,759.0	7,741.0	7,741.0	30.1	13.5	90.00	-1,131.1	821.0	66.4	27.1	39.28	1.691		
9,303.1	7,759.0	7,741.0	7,741.0	30.2	13.5	90.00	-1,131.1	821.0	66.3	27.0	39.32	1.687	CC, ES, SF	
9,400.0	7,759.0	7,741.0	7,741.0	31.4	13.5	90.00	-1,131.1	821.0	117.4	76.7	40.69	2.885		
9,500.0	7,759.0	7,741.0	7,741.0	32.7	13.5	90.00	-1,131.1	821.0	207.5	165.3	42.18	4.919		
9,600.0	7,759.0	7,741.0	7,741.0	34.1	13.5	90.00	-1,131.1	821.0	303.9	260.2	43.72	6.950		
9,700.0	7,759.0	7,741.0	7,741.0	35.5	13.5	90.00	-1,131.1	821.0	402.0	356.7	45.29	8.877		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - WOOLLEY 12-7 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8325-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	76.0	76.0	0.0	0.1	-37.67	199.3	-153.8	251.7					
100.0	100.0	176.0	176.0	0.1	0.3	-37.67	199.3	-153.8	251.7	251.3	0.44	574.356		
200.0	200.0	276.0	276.0	0.3	0.5	-37.67	199.3	-153.8	251.7	250.9	0.79	319.717		
300.0	300.0	376.0	376.0	0.5	0.7	-37.67	199.3	-153.8	251.7	250.6	1.14	221.511		
400.0	400.0	476.0	476.0	0.7	0.8	-37.67	199.3	-153.8	251.7	250.2	1.49	169.459		
500.0	500.0	576.0	576.0	0.8	1.0	-37.67	199.3	-153.8	251.7	249.9	1.83	137.215		
600.0	600.0	676.0	676.0	1.0	1.2	-37.67	199.3	-153.8	251.7	249.5	2.18	115.280		
700.0	700.0	776.0	776.0	1.2	1.4	-37.67	199.3	-153.8	251.7	249.2	2.53	99.392		
800.0	800.0	876.0	876.0	1.4	1.5	-37.67	199.3	-153.8	251.7	248.8	2.88	87.352		
900.0	900.0	976.0	976.0	1.5	1.7	-37.67	199.3	-153.8	251.7	248.5	3.23	77.915		
1,000.0	1,000.0	1,076.0	1,076.0	1.7	1.9	-37.67	199.3	-153.8	251.7	248.1	3.58	70.317		
1,100.0	1,100.0	1,176.0	1,176.0	1.9	2.1	-89.87	199.3	-153.8	251.7	247.8	3.93	64.065		
1,129.4	1,129.4	1,205.4	1,205.4	1.9	2.1	-90.00	199.3	-153.8	251.7	247.7	4.03	62.429 CC		
1,200.0	1,200.0	1,276.0	1,276.0	2.1	2.2	-90.46	199.3	-153.8	251.7	247.4	4.28	58.816		
1,300.0	1,299.9	1,375.9	1,375.9	2.2	2.4	-91.45	199.3	-153.8	251.8	247.2	4.63	54.335		
1,400.0	1,399.7	1,475.7	1,475.7	2.4	2.6	-92.84	199.3	-153.8	252.0	247.0	4.99	50.459 ES		
1,500.0	1,499.4	1,575.4	1,575.4	2.6	2.7	-94.60	199.3	-153.8	252.5	247.2	5.36	47.081		
1,600.0	1,598.9	1,674.9	1,674.9	2.8	2.9	-96.74	199.3	-153.8	253.5	247.7	5.74	44.127		
1,700.0	1,698.3	1,774.3	1,774.3	3.0	3.1	-99.24	199.3	-153.8	255.1	248.9	6.14	41.553		
1,800.0	1,797.4	1,873.4	1,873.4	3.3	3.3	-102.06	199.3	-153.8	257.5	251.0	6.55	39.332		
1,900.0	1,896.3	1,972.3	1,972.3	3.5	3.4	-105.17	199.3	-153.8	261.0	254.1	6.97	37.450		
2,000.0	1,995.0	2,071.0	2,071.0	3.8	3.6	-108.45	199.3	-153.8	265.7	258.3	7.40	35.917		
2,100.0	2,093.7	2,169.7	2,169.7	4.1	3.8	-111.64	199.3	-153.8	271.3	263.5	7.83	34.668		
2,200.0	2,192.4	2,268.4	2,268.4	4.4	4.0	-114.70	199.3	-153.8	277.7	269.5	8.25	33.659		
2,300.0	2,291.1	2,367.1	2,367.1	4.7	4.1	-117.61	199.3	-153.8	284.9	276.2	8.67	32.857		
2,400.0	2,389.8	2,465.8	2,465.8	5.0	4.3	-120.37	199.3	-153.8	292.8	283.7	9.08	32.228		
2,500.0	2,488.5	2,564.5	2,564.5	5.3	4.5	-122.99	199.3	-153.8	301.3	291.8	9.49	31.745		
2,600.0	2,587.2	2,663.2	2,663.2	5.6	4.6	-125.46	199.3	-153.8	310.4	300.5	9.89	31.384		
2,700.0	2,685.9	2,761.9	2,761.9	5.9	4.8	-127.79	199.3	-153.8	320.1	309.8	10.28	31.125		
2,800.0	2,784.6	2,860.6	2,860.6	6.2	5.0	-129.98	199.3	-153.8	330.3	319.6	10.67	30.952		
2,900.0	2,883.3	2,959.3	2,959.3	6.5	5.2	-132.04	199.3	-153.8	340.9	329.9	11.05	30.848		
3,000.0	2,982.0	3,058.0	3,058.0	6.9	5.3	-133.97	199.3	-153.8	352.0	340.6	11.43	30.804 SF		
3,100.0	3,080.7	3,156.7	3,156.7	7.2	5.5	-135.78	199.3	-153.8	363.4	351.6	11.80	30.807		
3,200.0	3,179.4	3,255.4	3,255.4	7.5	5.7	-137.49	199.3	-153.8	375.2	363.0	12.16	30.850		
3,300.0	3,278.1	3,354.1	3,354.1	7.8	5.9	-139.09	199.3	-153.8	387.3	374.7	12.52	30.926		
3,400.0	3,376.8	3,452.8	3,452.8	8.1	6.0	-140.59	199.3	-153.8	399.6	386.8	12.88	31.028		
3,500.0	3,475.5	3,551.5	3,551.5	8.5	6.2	-142.00	199.3	-153.8	412.3	399.0	13.23	31.152		
3,600.0	3,574.2	3,650.2	3,650.2	8.8	6.4	-143.33	199.3	-153.8	425.1	411.5	13.58	31.293		
3,700.0	3,672.9	3,748.9	3,748.9	9.1	6.5	-144.58	199.3	-153.8	438.2	424.3	13.93	31.448		
3,800.0	3,771.6	3,847.6	3,847.6	9.4	6.7	-145.76	199.3	-153.8	451.5	437.2	14.28	31.614		
3,900.0	3,870.2	3,946.2	3,946.2	9.8	6.9	-146.87	199.3	-153.8	464.9	450.3	14.63	31.788		
4,000.0	3,968.9	4,044.9	4,044.9	10.1	7.1	-147.92	199.3	-153.8	478.5	463.5	14.97	31.968		
4,100.0	4,067.6	4,143.6	4,143.6	10.4	7.2	-148.91	199.3	-153.8	492.3	477.0	15.31	32.153		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - WOOLLEY 22-7 (EXISTING) - ENCANA WELL - SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 71-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
7,900.0	7,699.5	7,964.7	7,742.1	20.5	29.0	-84.82	222.4	1,322.8	497.6	454.7	42.91	11.598	
7,999.4	7,735.5	7,999.9	7,777.3	20.5	29.0	-90.22	222.6	1,322.6	487.7	444.8	42.90	11.367	CC, ES, SF
8,000.0	7,735.7	8,000.1	7,777.5	20.5	29.0	-90.24	222.6	1,322.6	487.7	444.8	42.90	11.368	
8,100.0	7,755.4	8,019.0	7,796.4	20.6	29.0	-91.58	222.7	1,322.6	498.8	455.8	43.00	11.599	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - WOOLLEY 2-4-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error: 0.0 ft
Survey Program: 41-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor	
7,900.0	7,699.5	8,124.7	7,744.3	20.5	36.1	22.25	-220.7	808.0	481.5	456.0	25.49	18.894	
8,000.0	7,735.7	8,159.9	7,779.5	20.5	36.1	34.89	-220.3	807.9	389.6	358.7	30.86	12.623	
8,100.0	7,755.4	8,178.6	7,798.2	20.6	36.1	65.62	-220.1	807.8	293.5	248.5	45.00	6.522	
8,200.0	7,759.0	8,181.1	7,800.7	20.8	36.1	91.69	-220.1	807.8	196.9	147.2	49.67	3.964	
8,300.0	7,759.0	8,180.1	7,799.7	21.2	36.1	90.70	-220.1	807.8	106.2	56.1	50.18	2.117	
8,387.4	7,759.0	8,179.2	7,798.8	21.6	36.1	89.83	-220.1	807.8	60.4	9.6	50.77	1.190	Level 2, CC, ES, SF
8,400.0	7,759.0	8,179.1	7,798.6	21.7	36.1	89.70	-220.1	807.8	61.7	10.8	50.86	1.213	Level 2
8,500.0	7,759.0	8,178.0	7,797.6	22.3	36.1	88.72	-220.1	807.8	127.7	76.0	51.69	2.471	
8,600.0	7,759.0	8,177.0	7,796.6	23.0	36.1	87.84	-220.1	807.8	220.6	167.9	52.61	4.192	
8,700.0	7,759.0	8,175.9	7,795.5	23.8	36.1	87.12	-220.1	807.8	317.4	263.8	53.61	5.921	
8,800.0	7,759.0	8,174.9	7,794.5	24.7	36.1	86.57	-220.1	807.8	415.5	360.8	54.67	7.600	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - WOOLLEY F UNIT 1 (EXISTING) - ENCANA WELL - GYRO														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			
5,800.0	5,745.5	5,773.2	5,772.4	16.0	10.2	-36.87	911.1	683.6	499.6	476.9	22.63	22.074			
5,900.0	5,844.2	5,871.3	5,870.4	16.3	10.3	-38.25	911.5	681.5	486.6	463.4	23.19	20.979			
6,000.0	5,942.9	5,969.2	5,968.4	16.6	10.5	-39.69	912.1	679.5	474.0	450.3	23.77	19.945			
6,100.0	6,041.6	6,070.3	6,069.4	17.0	10.7	-41.24	912.4	677.4	461.7	437.3	24.37	18.945			
6,200.0	6,140.3	6,169.8	6,168.8	17.3	10.9	-42.91	912.3	674.9	449.1	424.1	24.99	17.972			
6,300.0	6,239.0	6,267.7	6,266.8	17.6	11.0	-44.63	912.2	672.5	436.9	411.3	25.62	17.054			
6,400.0	6,337.7	6,365.4	6,364.4	18.0	11.2	-46.41	912.1	670.4	425.2	399.0	26.26	16.193			
6,500.0	6,436.4	6,460.7	6,459.7	18.3	11.4	-48.21	912.4	668.6	414.4	387.5	26.91	15.402			
6,600.0	6,535.1	6,558.9	6,557.9	18.6	11.5	-50.16	913.4	666.7	404.7	377.2	27.58	14.676			
6,700.0	6,633.8	6,658.0	6,657.0	19.0	11.7	-52.12	914.1	665.5	395.2	366.9	28.26	13.986			
6,800.0	6,732.5	6,757.7	6,756.7	19.3	11.9	-54.21	914.8	664.1	386.1	357.2	28.95	13.337			
6,900.0	6,831.2	6,857.2	6,856.2	19.6	12.1	-56.39	915.0	662.9	377.2	347.5	29.66	12.717			
7,000.0	6,929.9	6,954.6	6,953.5	20.0	12.2	-58.72	915.2	660.9	368.9	338.5	30.38	12.143			
7,100.0	7,028.5	7,054.4	7,053.3	20.3	12.4	-61.24	915.6	658.7	361.4	330.3	31.11	11.616			
7,200.0	7,127.2	7,154.2	7,153.1	20.6	12.6	-63.80	915.3	657.0	353.9	322.1	31.85	11.115			
7,248.5	7,175.3	7,201.7	7,200.5	20.7	12.7	-91.76	915.1	655.9	352.4	320.2	32.16	10.955 CC, ES			
7,300.0	7,226.2	7,253.3	7,252.1	20.9	12.8	-124.61	914.8	654.4	353.7	321.4	32.36	10.931 SF			
7,400.0	7,324.1	7,359.0	7,357.8	21.0	13.0	-162.80	913.1	650.6	370.3	338.1	32.11	11.532			
7,500.0	7,417.9	7,481.0	7,479.4	21.0	13.2	-176.72	905.6	647.0	399.5	368.4	31.10	12.846			
7,600.0	7,504.9	7,566.1	7,564.2	20.9	13.3	176.92	897.9	648.4	440.6	411.3	29.27	15.054			
7,700.0	7,582.3	7,634.7	7,632.7	20.8	13.4	172.88	894.2	650.8	498.6	471.7	26.90	18.538			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2A-7H-E168 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	1.0	1.0	0.0	0.0	88.86	0.7	36.8	36.8					
100.0	100.0	101.0	101.0	0.1	0.1	88.86	0.7	36.8	36.8	36.5	0.26	139.561		
200.0	200.0	201.0	201.0	0.3	0.3	88.86	0.7	36.8	36.8	36.2	0.61	60.038		
300.0	300.0	301.6	301.6	0.5	0.5	89.55	0.3	36.0	36.0	35.0	0.96	37.389		
400.0	400.0	402.1	402.0	0.7	0.7	91.79	-1.1	33.7	33.7	32.4	1.31	25.674		
500.0	500.0	502.4	502.3	0.8	0.9	96.23	-3.3	29.9	30.1	28.4	1.66	18.071		
600.0	600.0	602.6	602.3	1.0	1.1	104.49	-6.3	24.5	25.4	23.4	2.01	12.605		
700.0	700.0	702.6	702.0	1.2	1.3	115.85	-8.9	18.4	20.5	18.1	2.36	8.669		
800.0	800.0	802.5	801.7	1.4	1.5	129.00	-9.8	12.1	15.6	12.8	2.71	5.737		
900.0	900.0	902.3	901.3	1.5	1.7	150.42	-10.0	5.7	11.6	8.5	3.08	3.748		
982.7	982.7	984.9	983.7	1.7	1.8	177.61	-10.3	0.4	10.3	6.8	3.44	2.988 CC		
1,000.0	1,000.0	1,002.1	1,000.9	1.7	1.9	-176.28	-10.3	-0.7	10.3	6.8	3.52	2.939 ES, SF		
1,100.0	1,100.0	1,101.8	1,100.5	1.9	2.1	162.80	-10.6	-7.0	13.5	9.7	3.84	3.531		
1,200.0	1,200.0	1,201.5	1,199.9	2.1	2.3	179.19	-10.8	-13.4	20.8	16.6	4.14	5.009		
1,300.0	1,299.9	1,300.9	1,299.2	2.2	2.5	-173.54	-11.1	-19.8	30.5	26.0	4.47	6.815		
1,400.0	1,399.7	1,400.2	1,398.2	2.4	2.7	-170.23	-11.4	-26.1	42.2	37.4	4.81	8.764		
1,500.0	1,499.4	1,499.3	1,497.1	2.6	2.9	-168.71	-11.6	-32.4	55.7	50.5	5.16	10.794		
1,600.0	1,598.9	1,598.1	1,595.8	2.8	3.1	-168.06	-11.9	-38.7	70.9	65.3	5.50	12.880		
1,700.0	1,698.3	1,696.7	1,694.1	3.0	3.3	-167.87	-12.2	-45.0	87.7	81.9	5.84	15.009		
1,800.0	1,797.4	1,795.0	1,792.2	3.3	3.5	-167.94	-12.4	-51.3	106.3	100.1	6.19	17.176		
1,900.0	1,896.3	1,892.9	1,889.9	3.5	3.7	-168.13	-12.7	-57.6	126.5	120.0	6.53	19.374		
2,000.0	1,995.0	1,990.6	1,987.4	3.8	3.9	-168.39	-12.9	-63.8	148.0	141.1	6.88	21.505		
2,100.0	2,093.7	2,088.2	2,084.8	4.1	4.1	-168.60	-13.2	-70.0	169.5	162.2	7.23	23.426		
2,200.0	2,192.4	2,185.9	2,182.3	4.4	4.3	-168.76	-13.5	-76.3	191.0	183.4	7.59	25.168		
2,300.0	2,291.1	2,283.6	2,279.8	4.7	4.5	-168.89	-13.7	-82.5	212.5	204.5	7.94	26.754		
2,400.0	2,389.8	2,381.2	2,377.2	5.0	4.7	-169.00	-14.0	-88.7	234.0	225.7	8.30	28.205		
2,500.0	2,488.5	2,478.9	2,474.7	5.3	4.9	-169.09	-14.2	-95.0	255.5	246.8	8.65	29.536		
2,600.0	2,587.2	2,576.5	2,572.1	5.6	5.1	-169.16	-14.5	-101.2	277.0	268.0	9.00	30.762		
2,700.0	2,685.9	2,674.2	2,669.6	5.9	5.3	-169.22	-14.8	-107.4	298.5	289.1	9.36	31.895		
2,800.0	2,784.6	2,771.8	2,767.1	6.2	5.5	-169.28	-15.0	-113.7	320.0	310.3	9.71	32.945		
2,900.0	2,883.3	2,869.5	2,864.5	6.5	5.7	-169.33	-15.3	-119.9	341.5	331.5	10.07	33.921		
3,000.0	2,982.0	2,967.2	2,962.0	6.9	5.9	-169.37	-15.6	-126.1	363.0	352.6	10.42	34.830		
3,100.0	3,080.7	3,064.8	3,059.4	7.2	6.1	-169.41	-15.8	-132.4	384.5	373.8	10.78	35.679		
3,200.0	3,179.4	3,162.5	3,156.9	7.5	6.3	-169.44	-16.1	-138.6	406.0	394.9	11.13	36.474		
3,300.0	3,278.1	3,260.1	3,254.4	7.8	6.5	-169.47	-16.3	-144.9	427.6	416.1	11.49	37.219		
3,400.0	3,376.8	3,357.8	3,351.8	8.1	6.7	-169.50	-16.6	-151.1	449.1	437.2	11.84	37.920		
3,500.0	3,475.5	3,455.5	3,449.3	8.5	6.9	-169.52	-16.9	-157.3	470.6	458.4	12.20	38.579		
3,600.0	3,574.2	3,553.1	3,546.7	8.8	7.1	-169.54	-17.1	-163.6	492.1	479.5	12.55	39.201		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2B-7H-E168 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	1.0	1.0	0.0	0.0	79.29	8.0	42.4	43.1					
100.0	100.0	101.0	101.0	0.1	0.1	79.29	8.0	42.4	43.1	42.9	0.26	163.625		
200.0	200.0	201.0	201.0	0.3	0.3	79.29	8.0	42.4	43.1	42.5	0.61	70.392		
300.0	300.0	301.0	301.0	0.5	0.5	79.29	8.0	42.4	43.1	42.2	0.96	44.840		
400.0	400.0	401.6	401.6	0.7	0.7	80.06	7.3	41.8	42.4	41.1	1.31	32.347		
500.0	500.0	502.1	502.1	0.8	0.8	82.49	5.3	40.1	40.4	38.8	1.66	24.334		
600.0	600.0	602.5	602.3	1.0	1.0	87.08	1.9	37.2	37.3	35.3	2.01	18.549		
700.0	700.0	702.0	701.8	1.2	1.2	92.18	-1.3	34.4	34.4	32.0	2.36	14.572		
800.0	800.0	801.8	801.5	1.4	1.4	95.35	-3.0	32.3	32.5	29.8	2.71	11.995		
900.0	900.0	901.6	901.3	1.5	1.6	96.26	-3.4	31.1	31.3	28.2	3.06	10.240		
1,000.0	1,000.0	1,001.6	1,001.3	1.7	1.7	96.79	-3.6	30.0	30.2	26.8	3.41	8.877		
1,100.0	1,100.0	1,101.6	1,101.3	1.9	1.9	46.61	-3.7	28.9	28.6	24.8	3.77	7.575		
1,200.0	1,200.0	1,201.5	1,201.2	2.1	2.1	51.58	-3.9	27.8	25.8	21.7	4.12	6.261		
1,300.0	1,299.9	1,301.4	1,301.1	2.2	2.3	61.44	-4.1	26.7	22.4	17.9	4.48	5.001		
1,400.0	1,399.7	1,401.1	1,400.8	2.4	2.4	79.21	-4.2	25.7	19.5	14.6	4.85	4.016		
1,457.1	1,456.6	1,458.0	1,457.7	2.5	2.5	93.50	-4.3	25.0	18.8	13.8	5.06	3.723 CC, ES		
1,500.0	1,499.4	1,500.7	1,500.4	2.6	2.6	105.43	-4.4	24.6	19.3	14.1	5.21	3.695 SF		
1,600.0	1,598.9	1,600.2	1,599.9	2.8	2.8	130.85	-4.5	23.5	23.9	18.3	5.55	4.304		
1,700.0	1,698.3	1,699.4	1,699.1	3.0	3.0	147.76	-4.7	22.4	33.0	27.1	5.87	5.614		
1,800.0	1,797.4	1,798.4	1,798.1	3.3	3.1	157.79	-4.9	21.3	45.3	39.1	6.20	7.301		
1,900.0	1,896.3	1,897.2	1,896.8	3.5	3.3	163.92	-5.0	20.2	60.0	53.5	6.52	9.193		
2,000.0	1,995.0	1,995.7	1,995.4	3.8	3.5	167.83	-5.2	19.2	76.3	69.5	6.86	11.127		
2,100.0	2,093.7	2,094.3	2,093.9	4.1	3.6	170.37	-5.3	18.1	93.0	85.8	7.20	12.911		
2,200.0	2,192.4	2,192.8	2,192.4	4.4	3.8	172.14	-5.5	17.0	109.7	102.2	7.54	14.547		
2,300.0	2,291.1	2,291.3	2,291.0	4.7	4.0	173.44	-5.6	15.9	126.6	118.7	7.89	16.048		
2,400.0	2,389.8	2,389.9	2,389.5	5.0	4.2	174.43	-5.8	14.8	143.5	135.2	8.23	17.430		
2,500.0	2,488.5	2,488.4	2,488.0	5.3	4.3	175.22	-6.0	13.8	160.4	151.8	8.58	18.703		
2,600.0	2,587.2	2,586.9	2,586.6	5.6	4.5	175.85	-6.1	12.7	177.4	168.4	8.92	19.880		
2,700.0	2,685.9	2,685.5	2,685.1	5.9	4.7	176.38	-6.3	11.6	194.3	185.1	9.27	20.971		
2,800.0	2,784.6	2,784.0	2,783.6	6.2	4.9	176.82	-6.4	10.5	211.3	201.7	9.61	21.985		
2,900.0	2,883.3	2,882.6	2,882.2	6.5	5.0	177.19	-6.6	9.5	228.3	218.3	9.96	22.930		
3,000.0	2,982.0	2,981.1	2,980.7	6.9	5.2	177.51	-6.8	8.4	245.3	235.0	10.30	23.811		
3,100.0	3,080.7	3,079.6	3,079.2	7.2	5.4	177.80	-6.9	7.3	262.3	251.6	10.65	24.636		
3,200.0	3,179.4	3,178.2	3,177.7	7.5	5.5	178.04	-7.1	6.2	279.3	268.3	10.99	25.410		
3,300.0	3,278.1	3,276.7	3,276.3	7.8	5.7	178.26	-7.2	5.1	296.3	285.0	11.34	26.136		
3,400.0	3,376.8	3,375.2	3,374.8	8.1	5.9	178.45	-7.4	4.1	313.3	301.6	11.68	26.820		
3,500.0	3,475.5	3,473.8	3,473.3	8.5	6.1	178.63	-7.5	3.0	330.3	318.3	12.03	27.465		
3,600.0	3,574.2	3,572.3	3,571.9	8.8	6.2	178.79	-7.7	1.9	347.4	335.0	12.37	28.074		
3,700.0	3,672.9	3,670.8	3,670.4	9.1	6.4	178.93	-7.9	0.8	364.4	351.7	12.72	28.650		
3,800.0	3,771.6	3,769.4	3,768.9	9.4	6.6	179.06	-8.0	-0.2	381.4	368.4	13.06	29.196		
3,900.0	3,870.2	3,867.9	3,867.5	9.8	6.8	179.18	-8.2	-1.3	398.4	385.0	13.41	29.713		
4,000.0	3,968.9	3,966.5	3,966.0	10.1	6.9	179.29	-8.3	-2.4	415.5	401.7	13.76	30.205		
4,100.0	4,067.6	4,065.0	4,064.5	10.4	7.1	179.39	-8.5	-3.5	432.5	418.4	14.10	30.673		
4,200.0	4,166.3	4,163.5	4,163.0	10.7	7.3	179.48	-8.7	-4.6	449.5	435.1	14.45	31.118		
4,300.0	4,265.0	4,262.1	4,261.6	11.1	7.4	179.57	-8.8	-5.6	466.6	451.8	14.79	31.542		
4,400.0	4,363.7	4,360.6	4,360.1	11.4	7.6	179.65	-9.0	-6.7	483.6	468.5	15.14	31.948		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2C-7H-E168 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	2.0	2.0	0.0	0.0	89.07	0.7	45.2	45.2					
100.0	100.0	102.0	102.0	0.1	0.1	89.07	0.7	45.2	45.2	44.9	0.27	170.288		
200.0	200.0	202.0	202.0	0.3	0.3	89.07	0.7	45.2	45.2	44.6	0.61	73.533		
300.0	300.0	302.0	302.0	0.5	0.5	89.07	0.7	45.2	45.2	44.2	0.96	46.891		
400.0	400.0	402.0	402.0	0.7	0.7	89.07	0.7	45.2	45.2	43.9	1.31	34.420		
500.0	500.0	502.0	502.0	0.8	0.8	89.07	0.7	45.2	45.2	43.5	1.66	27.189		
566.0	566.0	568.0	568.0	0.9	0.9	89.07	0.7	45.2	45.2	43.3	1.89	23.879 CC		
600.0	600.0	602.0	602.0	1.0	1.0	89.07	0.7	45.2	45.2	43.2	2.01	22.469 ES		
700.0	700.0	701.2	701.2	1.2	1.2	89.14	0.7	46.1	46.1	43.7	2.36	19.535		
800.0	800.0	800.0	800.0	1.4	1.4	89.32	0.6	48.7	48.7	46.0	2.71	17.989		
900.0	900.0	899.4	899.2	1.5	1.5	89.58	0.4	53.0	53.1	50.0	3.06	17.333		
1,000.0	1,000.0	999.1	998.8	1.7	1.7	89.85	0.2	58.4	58.4	55.0	3.42	17.104		
1,100.0	1,100.0	1,099.0	1,098.6	1.9	1.9	38.53	-0.1	63.8	63.2	59.4	3.75	16.839		
1,200.0	1,200.0	1,198.9	1,198.4	2.1	2.1	40.07	-0.3	69.1	66.5	62.4	4.10	16.229		
1,300.0	1,299.9	1,298.9	1,298.2	2.2	2.3	42.43	-0.5	74.5	68.7	64.2	4.45	15.427		
1,400.0	1,399.7	1,398.8	1,397.9	2.4	2.5	45.66	-0.8	79.9	69.7	64.9	4.81	14.497		
1,500.0	1,499.4	1,498.7	1,497.6	2.6	2.7	49.86	-1.0	85.3	69.8	64.6	5.17	13.493		
1,600.0	1,598.9	1,598.4	1,597.3	2.8	2.9	55.20	-1.2	90.7	69.2	63.7	5.55	12.470		
1,700.0	1,698.3	1,698.1	1,696.8	3.0	3.1	61.84	-1.5	96.1	68.4	62.5	5.96	11.489		
1,800.0	1,797.4	1,797.7	1,796.2	3.3	3.3	69.89	-1.7	101.5	68.0	61.6	6.40	10.622		
1,808.1	1,805.4	1,805.7	1,804.2	3.3	3.3	70.60	-1.7	101.9	68.0	61.5	6.44	10.559		
1,900.0	1,896.3	1,897.0	1,895.4	3.5	3.5	79.27	-1.9	106.8	68.5	61.6	6.88	9.956		
2,000.0	1,995.0	1,996.2	1,994.5	3.8	3.7	89.27	-2.2	112.2	70.8	63.5	7.38	9.593		
2,100.0	2,093.7	2,095.5	2,093.6	4.1	3.8	98.44	-2.4	117.6	75.2	67.3	7.88	9.547 SF		
2,200.0	2,192.4	2,194.7	2,192.6	4.4	4.0	106.43	-2.6	122.9	81.3	72.9	8.35	9.736		
2,300.0	2,291.1	2,293.9	2,291.7	4.7	4.2	113.22	-2.9	128.3	88.7	79.9	8.79	10.088		
2,400.0	2,389.8	2,393.1	2,390.8	5.0	4.4	118.90	-3.1	133.6	97.2	87.9	9.22	10.544		
2,500.0	2,488.5	2,492.3	2,489.8	5.3	4.6	123.63	-3.3	139.0	106.4	96.8	9.62	11.060		
2,600.0	2,587.2	2,591.5	2,588.9	5.6	4.8	127.59	-3.6	144.4	116.3	106.3	10.02	11.607		
2,700.0	2,685.9	2,690.7	2,688.0	5.9	5.0	130.92	-3.8	149.7	126.7	116.3	10.41	12.166		
2,800.0	2,784.6	2,790.0	2,787.1	6.2	5.2	133.75	-4.0	155.1	137.4	126.6	10.80	12.724		
2,900.0	2,883.3	2,889.2	2,886.1	6.5	5.4	136.16	-4.3	160.4	148.4	137.2	11.18	13.273		
3,000.0	2,982.0	2,988.4	2,985.2	6.9	5.6	138.23	-4.5	165.8	159.6	148.0	11.56	13.807		
3,100.0	3,080.7	3,087.6	3,084.3	7.2	5.8	140.03	-4.7	171.1	171.0	159.0	11.94	14.323		
3,200.0	3,179.4	3,186.8	3,183.3	7.5	6.0	141.61	-5.0	176.5	182.5	170.2	12.32	14.821		
3,300.0	3,278.1	3,286.0	3,282.4	7.8	6.2	143.00	-5.2	181.9	194.2	181.5	12.69	15.299		
3,400.0	3,376.8	3,385.2	3,381.5	8.1	6.4	144.23	-5.4	187.2	205.9	192.9	13.07	15.758		
3,500.0	3,475.5	3,484.5	3,480.5	8.5	6.6	145.32	-5.7	192.6	217.8	204.3	13.45	16.197		
3,600.0	3,574.2	3,583.7	3,579.6	8.8	6.8	146.31	-5.9	197.9	229.7	215.9	13.82	16.617		
3,700.0	3,672.9	3,682.9	3,678.7	9.1	7.0	147.20	-6.1	203.3	241.7	227.5	14.20	17.019		
3,800.0	3,771.6	3,782.1	3,777.7	9.4	7.2	148.00	-6.4	208.6	253.7	239.1	14.58	17.404		
3,900.0	3,870.2	3,881.3	3,876.8	9.8	7.4	148.73	-6.6	214.0	265.8	250.8	14.96	17.772		
4,000.0	3,968.9	3,980.5	3,975.9	10.1	7.6	149.40	-6.8	219.4	277.9	262.6	15.33	18.124		
4,100.0	4,067.6	4,079.7	4,074.9	10.4	7.8	150.01	-7.1	224.7	290.0	274.3	15.71	18.462		
4,200.0	4,166.3	4,178.9	4,174.0	10.7	8.0	150.57	-7.3	230.1	302.2	286.1	16.09	18.785		
4,300.0	4,265.0	4,278.2	4,273.1	11.1	8.2	151.09	-7.5	235.4	314.4	298.0	16.47	19.095		
4,400.0	4,363.7	4,377.4	4,372.2	11.4	8.4	151.57	-7.8	240.8	326.7	309.8	16.84	19.392		
4,500.0	4,462.4	4,476.6	4,471.2	11.7	8.5	152.01	-8.0	246.1	338.9	321.7	17.22	19.677		
4,600.0	4,561.1	4,575.8	4,570.3	12.0	8.7	152.42	-8.2	251.5	351.2	333.6	17.60	19.951		
4,700.0	4,659.8	4,675.0	4,669.4	12.4	8.9	152.81	-8.5	256.9	363.4	345.5	17.98	20.214		
4,800.0	4,758.5	4,774.2	4,768.4	12.7	9.1	153.17	-8.7	262.2	375.7	357.4	18.36	20.467		
4,900.0	4,857.2	4,873.4	4,867.5	13.0	9.3	153.51	-8.9	267.6	388.1	369.3	18.74	20.710		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2C-7H-E168 - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,000.0	4,955.9	4,972.7	4,966.6	13.4	9.5	153.83	-9.2	272.9	400.4	381.3	19.12	20.945	
5,100.0	5,054.6	5,071.9	5,065.6	13.7	9.7	154.12	-9.4	278.3	412.7	393.2	19.50	21.170	
5,200.0	5,153.3	5,171.1	5,164.7	14.0	9.9	154.41	-9.6	283.7	425.1	405.2	19.87	21.388	
5,300.0	5,252.0	5,270.3	5,263.8	14.3	10.1	154.67	-9.9	289.0	437.4	417.2	20.25	21.597	
5,400.0	5,350.7	5,369.5	5,362.8	14.7	10.3	154.92	-10.1	294.4	449.8	429.2	20.63	21.800	
5,500.0	5,449.4	5,468.7	5,461.9	15.0	10.5	155.16	-10.3	299.7	462.2	441.1	21.01	21.995	
5,600.0	5,548.1	5,567.9	5,561.0	15.3	10.7	155.38	-10.6	305.1	474.5	453.1	21.39	22.183	
5,700.0	5,646.8	5,667.2	5,660.1	15.7	10.9	155.60	-10.8	310.4	486.9	465.1	21.77	22.366	
5,800.0	5,745.5	5,766.4	5,759.1	16.0	11.1	155.80	-11.0	315.8	499.3	477.2	22.15	22.542	
7,600.0	7,504.9	7,974.6	7,789.1	20.9	16.8	112.91	382.4	411.7	478.1	446.6	31.48	15.185	
7,700.0	7,582.3	7,923.8	7,771.3	20.8	16.4	108.03	334.9	412.4	438.3	408.1	30.19	14.515	
7,800.0	7,647.8	7,873.3	7,749.6	20.6	16.1	102.26	289.3	412.8	416.9	387.9	29.04	14.354	
7,862.0	7,681.6	7,842.0	7,734.1	20.5	15.9	98.11	262.1	412.9	413.3	384.8	28.51	14.496	
7,900.0	7,699.5	7,822.9	7,723.9	20.5	15.8	95.36	245.9	412.9	414.6	386.4	28.24	14.684	
8,000.0	7,735.7	7,772.5	7,694.6	20.5	15.5	87.54	205.0	412.8	429.0	401.3	27.70	15.487	
8,100.0	7,755.4	7,722.3	7,661.9	20.6	15.2	79.35	166.9	412.3	455.8	428.6	27.18	16.769	
8,200.0	7,759.0	7,672.6	7,626.4	20.8	15.0	72.66	132.1	411.6	490.5	463.8	26.66	18.395	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2D-7H-E168 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	2.0	2.0	0.0	0.0	81.03	8.0	50.8	51.4					
100.0	100.0	102.0	102.0	0.1	0.1	81.03	8.0	50.8	51.4	51.1	0.27	193.736		
200.0	200.0	202.0	202.0	0.3	0.3	81.03	8.0	50.8	51.4	50.8	0.61	83.659		
300.0	300.0	302.0	302.0	0.5	0.5	81.03	8.0	50.8	51.4	50.4	0.96	53.348		
400.0	400.0	402.0	402.0	0.7	0.7	81.03	8.0	50.8	51.4	50.1	1.31	39.160		
466.0	466.0	468.0	468.0	0.8	0.8	81.03	8.0	50.8	51.4	49.9	1.54	33.313 CC		
500.0	500.0	502.0	502.0	0.8	0.8	81.03	8.0	50.8	51.4	49.7	1.66	30.933 ES		
600.0	600.0	601.1	601.1	1.0	1.0	81.19	8.0	51.7	52.3	50.3	2.01	26.020		
700.0	700.0	700.0	700.0	1.2	1.2	81.62	8.0	54.3	54.9	52.5	2.36	23.265		
800.0	800.0	799.1	798.9	1.4	1.4	82.27	8.0	58.6	59.2	56.5	2.71	21.817		
900.0	900.0	897.8	897.5	1.5	1.6	83.02	7.9	64.6	65.2	62.1	3.07	21.223		
1,000.0	1,000.0	996.5	995.9	1.7	1.8	83.80	7.8	72.3	72.9	69.5	3.44	21.204		
1,100.0	1,100.0	1,096.2	1,095.2	1.9	2.0	32.79	7.8	80.7	80.6	76.9	3.75	21.519		
1,200.0	1,200.0	1,196.0	1,194.6	2.1	2.2	34.24	7.7	89.2	86.9	82.8	4.10	21.216		
1,300.0	1,299.9	1,295.8	1,294.1	2.2	2.4	36.13	7.6	97.6	91.8	87.4	4.45	20.650		
1,400.0	1,399.7	1,395.6	1,393.6	2.4	2.6	38.47	7.6	106.1	95.4	90.6	4.80	19.888		
1,500.0	1,499.4	1,495.5	1,493.1	2.6	2.8	41.30	7.5	114.5	97.9	92.7	5.16	18.981		
1,600.0	1,598.9	1,595.3	1,592.5	2.8	3.0	44.69	7.4	123.0	99.3	93.8	5.53	17.971		
1,700.0	1,698.3	1,695.1	1,691.9	3.0	3.3	48.72	7.4	131.4	99.9	94.0	5.92	16.894		
1,800.0	1,797.4	1,794.7	1,791.2	3.3	3.5	53.47	7.3	139.9	100.0	93.7	6.34	15.787		
1,900.0	1,896.3	1,894.2	1,890.4	3.5	3.7	59.01	7.2	148.3	99.9	93.1	6.80	14.691		
1,919.4	1,915.5	1,913.5	1,909.6	3.6	3.8	60.18	7.2	150.0	99.8	93.0	6.89	14.486		
2,000.0	1,995.0	1,993.7	1,989.5	3.8	3.9	65.17	7.2	156.7	100.1	92.8	7.30	13.706		
2,100.0	2,093.7	2,093.1	2,088.5	4.1	4.2	71.25	7.1	165.2	101.5	93.6	7.84	12.941		
2,200.0	2,192.4	2,192.5	2,187.6	4.4	4.4	77.11	7.0	173.6	104.0	95.6	8.40	12.376		
2,300.0	2,291.1	2,291.9	2,286.6	4.7	4.6	82.65	7.0	182.0	107.5	98.6	8.97	11.984		
2,400.0	2,389.8	2,391.3	2,385.7	5.0	4.8	87.79	6.9	190.4	112.0	102.5	9.54	11.736		
2,500.0	2,488.5	2,490.7	2,484.7	5.3	5.1	92.50	6.8	198.9	117.3	107.2	10.11	11.605		
2,600.0	2,587.2	2,590.1	2,583.8	5.6	5.3	96.78	6.8	207.3	123.4	112.7	10.67	11.567		
2,700.0	2,685.9	2,689.5	2,682.8	5.9	5.5	100.65	6.7	215.7	130.1	118.8	11.21	11.601		
2,800.0	2,784.6	2,788.9	2,781.9	6.2	5.7	104.12	6.6	224.1	137.3	125.5	11.74	11.690		
2,900.0	2,883.3	2,888.3	2,880.9	6.5	6.0	107.24	6.6	232.5	144.9	132.7	12.26	11.819		
3,000.0	2,982.0	2,987.8	2,980.0	6.9	6.2	110.04	6.5	241.0	153.0	140.2	12.77	11.979		
3,100.0	3,080.7	3,087.2	3,079.0	7.2	6.4	112.56	6.4	249.4	161.3	148.1	13.27	12.160		
3,200.0	3,179.4	3,186.6	3,178.1	7.5	6.6	114.83	6.4	257.8	170.0	156.2	13.76	12.355		
3,300.0	3,278.1	3,286.0	3,277.1	7.8	6.9	116.87	6.3	266.2	178.9	164.7	14.24	12.560		
3,400.0	3,376.8	3,385.4	3,376.2	8.1	7.1	118.72	6.2	274.7	188.0	173.3	14.72	12.771		
3,500.0	3,475.5	3,484.8	3,475.2	8.5	7.3	120.40	6.2	283.1	197.3	182.1	15.19	12.985		
3,600.0	3,574.2	3,584.2	3,574.3	8.8	7.5	121.93	6.1	291.5	206.7	191.1	15.66	13.199		
3,700.0	3,672.9	3,683.6	3,673.3	9.1	7.8	123.32	6.0	299.9	216.3	200.2	16.13	13.412		
3,800.0	3,771.6	3,783.0	3,772.4	9.4	8.0	124.60	6.0	308.3	226.0	209.4	16.59	13.623		
3,900.0	3,870.2	3,882.4	3,871.4	9.8	8.2	125.76	5.9	316.8	235.7	218.7	17.04	13.831		
4,000.0	3,968.9	3,981.9	3,970.5	10.1	8.5	126.84	5.8	325.2	245.6	228.1	17.50	14.034		
4,100.0	4,067.6	4,081.3	4,069.5	10.4	8.7	127.83	5.8	333.6	255.6	237.6	17.96	14.233		
4,200.0	4,166.3	4,180.7	4,168.6	10.7	8.9	128.75	5.7	342.0	265.6	247.2	18.41	14.428		
4,300.0	4,265.0	4,280.1	4,267.7	11.1	9.1	129.60	5.6	350.5	275.7	256.8	18.86	14.617		
4,400.0	4,363.7	4,379.5	4,366.7	11.4	9.4	130.39	5.6	358.9	285.8	266.5	19.31	14.801		
4,500.0	4,462.4	4,478.9	4,465.8	11.7	9.6	131.13	5.5	367.3	296.0	276.2	19.76	14.981		
4,600.0	4,561.1	4,578.3	4,564.8	12.0	9.8	131.82	5.4	375.7	306.2	286.0	20.21	15.155		
4,700.0	4,659.8	4,677.7	4,663.9	12.4	10.0	132.46	5.4	384.1	316.5	295.9	20.65	15.324		
4,800.0	4,758.5	4,777.1	4,762.9	12.7	10.3	133.06	5.3	392.6	326.8	305.7	21.10	15.488		
4,900.0	4,857.2	4,876.5	4,862.0	13.0	10.5	133.63	5.3	401.0	337.2	315.6	21.55	15.648		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2D-7H-E168 - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
5,000.0	4,955.9	4,975.9	4,961.0	13.4	10.7	134.16	5.2	409.4	347.6	325.6	21.99	15.803	
5,100.0	5,054.6	5,075.4	5,060.1	13.7	11.0	134.66	5.1	417.8	358.0	335.5	22.44	15.953	
5,200.0	5,153.3	5,174.8	5,159.1	14.0	11.2	135.14	5.1	426.3	368.4	345.5	22.88	16.098	
5,300.0	5,252.0	5,274.2	5,258.2	14.3	11.4	135.58	5.0	434.7	378.9	355.5	23.33	16.240	
5,400.0	5,350.7	5,373.6	5,357.2	14.7	11.6	136.01	4.9	443.1	389.3	365.6	23.77	16.377	
5,500.0	5,449.4	5,473.0	5,456.3	15.0	11.9	136.41	4.9	451.5	399.8	375.6	24.22	16.510	
5,600.0	5,548.1	5,572.4	5,555.3	15.3	12.1	136.79	4.8	459.9	410.3	385.7	24.66	16.639	
5,700.0	5,646.8	5,671.8	5,654.4	15.7	12.3	137.15	4.7	468.4	420.9	395.8	25.10	16.765	
5,800.0	5,745.5	5,771.2	5,753.4	16.0	12.5	137.49	4.7	476.8	431.4	405.9	25.55	16.887	
5,900.0	5,844.2	5,870.6	5,852.5	16.3	12.8	137.82	4.6	485.2	442.0	416.0	25.99	17.005	
6,000.0	5,942.9	5,970.0	5,951.5	16.6	13.0	138.13	4.5	493.6	452.6	426.1	26.43	17.120	
6,100.0	6,041.6	6,069.5	6,050.6	17.0	13.2	138.43	4.5	502.1	463.1	436.3	26.88	17.232	
6,200.0	6,140.3	6,168.9	6,149.6	17.3	13.5	138.71	4.4	510.5	473.8	446.4	27.32	17.341	
6,300.0	6,239.0	6,268.3	6,248.7	17.6	13.7	138.99	4.3	518.9	484.4	456.6	27.76	17.447	
6,400.0	6,337.7	6,367.7	6,347.7	18.0	13.9	139.25	4.3	527.3	495.0	466.8	28.21	17.549	
7,200.0	7,127.2	7,886.5	7,582.8	20.6	19.5	-169.67	527.7	622.3	467.4	440.3	27.11	17.244	
7,300.0	7,226.2	7,916.1	7,584.6	20.9	19.8	160.48	557.2	621.9	376.0	342.7	33.38	11.265	
7,400.0	7,324.1	7,897.5	7,583.7	21.0	19.6	135.35	538.6	622.1	290.5	255.2	35.24	8.243	
7,500.0	7,417.9	7,864.3	7,580.5	21.0	19.3	123.75	505.6	622.5	219.0	184.8	34.19	6.404	
7,600.0	7,504.9	7,824.9	7,574.2	20.9	18.9	111.41	466.7	622.7	176.2	144.3	31.87	5.527 SF	
7,645.0	7,541.0	7,806.0	7,570.3	20.8	18.7	104.74	448.2	622.7	171.2	140.5	30.67	5.582	
7,700.0	7,582.3	7,782.2	7,564.4	20.8	18.5	95.66	425.2	622.7	178.2	149.0	29.25	6.094	
7,800.0	7,647.8	7,737.7	7,551.0	20.6	18.2	77.92	382.7	622.4	218.7	191.7	27.00	8.101	
7,900.0	7,699.5	7,691.9	7,533.8	20.5	17.8	61.77	340.4	621.7	276.6	251.7	24.95	11.088	
8,000.0	7,735.7	7,650.0	7,515.1	20.5	17.6	49.92	302.9	620.8	338.9	316.0	22.92	14.786	
8,100.0	7,755.4	7,600.0	7,489.4	20.6	17.3	40.98	260.1	619.5	399.6	378.6	21.06	18.977	
8,200.0	7,759.0	7,550.0	7,460.0	20.8	17.0	36.08	219.7	617.8	456.8	436.5	20.24	22.574	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - 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							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	2.0	2.0	0.0	0.0	89.38	0.7	67.6	67.6					
100.0	100.0	102.0	102.0	0.1	0.1	89.38	0.7	67.6	67.6	67.3	0.27	254.680		
200.0	200.0	202.0	202.0	0.3	0.3	89.38	0.7	67.6	67.6	66.9	0.61	109.976		
300.0	300.0	302.0	302.0	0.5	0.5	89.38	0.7	67.6	67.6	66.6	0.96	70.129		
366.0	366.0	368.0	368.0	0.6	0.6	89.38	0.7	67.6	67.6	66.4	1.19	56.598 CC		
400.0	400.0	402.0	402.0	0.7	0.7	89.38	0.7	67.6	67.6	66.3	1.31	51.480 ES		
500.0	500.0	500.8	500.8	0.8	0.8	89.39	0.7	68.4	68.5	66.8	1.66	41.246		
600.0	600.0	600.0	600.0	1.0	1.0	89.43	0.7	71.1	71.1	69.1	2.01	35.369		
700.0	700.0	698.2	698.1	1.2	1.2	89.49	0.7	75.3	75.4	73.1	2.36	31.933		
800.0	800.0	796.7	796.4	1.4	1.4	89.56	0.6	81.3	81.5	78.8	2.72	29.949		
900.0	900.0	894.9	894.3	1.5	1.6	89.64	0.6	88.9	89.3	86.2	3.09	28.911		
1,000.0	1,000.0	992.9	991.8	1.7	1.8	89.72	0.5	98.2	98.7	95.3	3.46	28.508		
1,100.0	1,100.0	1,090.5	1,088.9	1.9	2.0	38.00	0.4	109.1	109.2	105.5	3.74	29.235		
1,200.0	1,200.0	1,188.0	1,185.5	2.1	2.3	38.74	0.3	121.7	120.1	116.0	4.08	29.415		
1,300.0	1,299.9	1,287.4	1,284.0	2.2	2.6	39.84	0.2	135.3	130.4	126.0	4.43	29.425		
1,400.0	1,399.7	1,386.9	1,382.6	2.4	2.8	41.24	0.1	148.9	139.5	134.7	4.79	29.146		
1,500.0	1,499.4	1,486.5	1,481.2	2.6	3.1	42.93	0.0	162.6	147.4	142.2	5.15	28.634		
1,600.0	1,598.9	1,586.2	1,579.9	2.8	3.4	44.90	-0.1	176.2	154.2	148.6	5.52	27.932		
1,700.0	1,698.3	1,685.8	1,678.6	3.0	3.7	47.16	-0.3	189.9	159.9	154.0	5.91	27.071		
1,800.0	1,797.4	1,785.4	1,777.3	3.3	4.0	49.72	-0.4	203.5	164.8	158.5	6.32	26.077		
1,900.0	1,896.3	1,885.0	1,875.9	3.5	4.3	52.59	-0.5	217.1	168.9	162.1	6.76	24.973		
2,000.0	1,995.0	1,984.5	1,974.5	3.8	4.5	55.68	-0.6	230.8	172.7	165.5	7.24	23.850		
2,100.0	2,093.7	2,084.0	2,073.0	4.1	4.8	58.65	-0.7	244.4	177.0	169.3	7.75	22.846		
2,200.0	2,192.4	2,183.4	2,171.6	4.4	5.1	61.48	-0.8	258.0	181.7	173.5	8.28	21.956		
2,300.0	2,291.1	2,282.9	2,270.1	4.7	5.4	64.16	-0.9	271.7	186.9	178.1	8.83	21.170		
2,400.0	2,389.8	2,382.4	2,368.7	5.0	5.7	66.69	-1.0	285.3	192.4	183.0	9.40	20.478		
2,500.0	2,488.5	2,481.9	2,467.2	5.3	6.0	69.08	-1.1	298.9	198.3	188.4	9.98	19.871		
2,600.0	2,587.2	2,581.4	2,565.8	5.6	6.3	71.33	-1.2	312.6	204.6	194.0	10.58	19.338		
2,700.0	2,685.9	2,680.9	2,664.3	5.9	6.6	73.44	-1.4	326.2	211.1	199.9	11.19	18.871		
2,800.0	2,784.6	2,780.4	2,762.9	6.2	6.9	75.42	-1.5	339.8	217.9	206.1	11.80	18.463		
2,900.0	2,883.3	2,879.9	2,861.5	6.5	7.2	77.28	-1.6	353.5	224.9	212.5	12.42	18.106		
3,000.0	2,982.0	2,979.4	2,960.0	6.9	7.5	79.03	-1.7	367.1	232.2	219.1	13.05	17.794		
3,100.0	3,080.7	3,078.9	3,058.6	7.2	7.8	80.67	-1.8	380.7	239.7	226.0	13.68	17.521		
3,200.0	3,179.4	3,178.4	3,157.1	7.5	8.0	82.21	-1.9	394.3	247.3	233.0	14.31	17.283		
3,300.0	3,278.1	3,277.9	3,255.7	7.8	8.3	83.66	-2.0	408.0	255.1	240.2	14.94	17.074		
3,400.0	3,376.8	3,377.4	3,354.2	8.1	8.6	85.02	-2.1	421.6	263.1	247.5	15.58	16.890		
3,500.0	3,475.5	3,476.8	3,452.8	8.5	8.9	86.30	-2.2	435.2	271.2	255.0	16.21	16.730		
3,600.0	3,574.2	3,576.3	3,551.3	8.8	9.2	87.51	-2.3	448.9	279.4	262.6	16.84	16.589		
3,700.0	3,672.9	3,675.8	3,649.9	9.1	9.5	88.64	-2.5	462.5	287.8	270.3	17.48	16.466		
3,800.0	3,771.6	3,775.3	3,748.4	9.4	9.8	89.71	-2.6	476.1	296.2	278.1	18.11	16.358		
3,900.0	3,870.2	3,874.8	3,847.0	9.8	10.1	90.73	-2.7	489.8	304.8	286.0	18.74	16.263		
4,000.0	3,968.9	3,974.3	3,945.6	10.1	10.4	91.68	-2.8	503.4	313.4	294.1	19.37	16.179		
4,100.0	4,067.6	4,073.8	4,044.1	10.4	10.7	92.59	-2.9	517.0	322.2	302.2	20.00	16.106		
4,200.0	4,166.3	4,173.3	4,142.7	10.7	11.0	93.45	-3.0	530.7	331.0	310.3	20.63	16.042		
4,300.0	4,265.0	4,272.8	4,241.2	11.1	11.3	94.26	-3.1	544.3	339.8	318.6	21.26	15.986		
4,400.0	4,363.7	4,372.3	4,339.8	11.4	11.6	95.03	-3.2	557.9	348.8	326.9	21.88	15.937		
4,500.0	4,462.4	4,471.8	4,438.3	11.7	11.9	95.77	-3.3	571.5	357.8	335.3	22.51	15.894		
4,600.0	4,561.1	4,571.3	4,536.9	12.0	12.2	96.46	-3.4	585.2	366.8	343.7	23.13	15.857		
4,700.0	4,659.8	4,670.8	4,635.4	12.4	12.5	97.13	-3.6	598.8	375.9	352.2	23.76	15.825		
4,800.0	4,758.5	4,770.2	4,734.0	12.7	12.8	97.76	-3.7	612.4	385.1	360.7	24.38	15.797		
4,900.0	4,857.2	4,869.7	4,832.5	13.0	13.1	98.36	-3.8	626.1	394.3	369.3	25.00	15.772		
5,000.0	4,955.9	4,969.2	4,931.1	13.4	13.4	98.94	-3.9	639.7	403.5	377.9	25.62	15.752		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - 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				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			
5,100.0	5,054.6	5,068.7	5,029.6	13.7	13.7	99.49	-4.0	653.3	412.8	386.5	26.23	15.734			
5,200.0	5,153.3	5,168.2	5,128.2	14.0	13.9	100.01	-4.1	667.0	422.1	395.2	26.85	15.719			
5,300.0	5,252.0	5,267.7	5,226.8	14.3	14.2	100.52	-4.2	680.6	431.4	404.0	27.47	15.707			
5,400.0	5,350.7	5,367.2	5,325.3	14.7	14.5	101.00	-4.3	694.2	440.8	412.7	28.08	15.696			
5,500.0	5,449.4	5,466.7	5,423.9	15.0	14.8	101.46	-4.4	707.9	450.2	421.5	28.70	15.688			
5,600.0	5,548.1	5,566.2	5,522.4	15.3	15.1	101.90	-4.5	721.5	459.7	430.3	29.31	15.681			
5,700.0	5,646.8	5,665.7	5,621.0	15.7	15.4	102.33	-4.6	735.1	469.1	439.2	29.93	15.676			
5,800.0	5,745.5	5,765.2	5,719.5	16.0	15.7	102.73	-4.8	748.7	478.6	448.1	30.54	15.673			
5,900.0	5,844.2	5,864.7	5,818.1	16.3	16.0	103.13	-4.9	762.4	488.1	457.0	31.15	15.670			
6,000.0	5,942.9	5,964.2	5,916.6	16.6	16.3	103.50	-5.0	776.0	497.6	465.9	31.76	15.669			
7,500.0	7,417.9	8,075.3	7,801.5	21.0	23.4	-89.46	435.2	1,025.1	468.2	440.5	27.64	16.937			
7,600.0	7,504.9	8,016.2	7,784.9	20.9	23.0	-96.45	378.5	1,024.3	380.8	353.6	27.21	13.994			
7,700.0	7,582.3	7,962.2	7,764.9	20.8	22.7	-98.17	328.4	1,022.8	301.0	273.9	27.09	11.110			
7,800.0	7,647.8	7,910.0	7,741.1	20.6	22.4	-94.96	282.0	1,020.8	234.9	207.5	27.37	8.582			
7,900.0	7,699.5	7,858.6	7,713.7	20.5	22.1	-86.91	238.6	1,018.1	193.1	165.2	27.90	6.920			
7,963.7	7,724.4	7,826.0	7,694.5	20.5	22.0	-79.42	212.4	1,016.1	185.1	157.0	28.05	6.598 SF			
8,000.0	7,735.7	7,807.5	7,682.9	20.5	21.9	-74.50	198.1	1,014.9	187.6	159.7	27.88	6.728			
8,100.0	7,755.4	7,756.7	7,648.7	20.6	21.7	-59.77	160.7	1,011.2	216.1	189.7	26.44	8.173			
8,200.0	7,759.0	7,706.7	7,612.0	20.8	21.5	-47.50	127.0	1,007.0	263.8	239.2	24.65	10.705			
8,300.0	7,759.0	7,664.0	7,578.5	21.2	21.4	-40.66	100.8	1,003.0	325.4	301.7	23.72	13.719			
8,400.0	7,759.0	7,628.7	7,549.4	21.7	21.2	-35.68	81.2	999.5	397.1	374.0	23.12	17.171			
8,500.0	7,759.0	7,600.0	7,524.9	22.3	21.2	-31.67	66.5	996.5	475.5	452.8	22.71	20.941			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	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	3.0	3.0	0.0	0.0	83.50	8.0	70.4	70.8						
100.0	100.0	103.0	103.0	0.1	0.1	83.50	8.0	70.4	70.8	70.5	0.27	265.186			
200.0	200.0	203.0	203.0	0.3	0.3	83.50	8.0	70.4	70.8	70.2	0.62	114.939			
265.6	265.6	268.6	268.6	0.4	0.4	83.50	8.0	70.4	70.8	70.0	0.85	83.783 CC			
300.0	300.0	303.0	303.0	0.5	0.5	83.50	8.0	70.4	70.8	69.8	0.97	73.374 ES			
400.0	400.0	401.7	401.7	0.7	0.7	83.44	8.2	71.2	71.7	70.4	1.31	54.650			
500.0	500.0	500.0	500.0	0.8	0.8	83.28	8.7	73.8	74.4	72.7	1.66	44.771			
600.0	600.0	599.0	598.9	1.0	1.0	83.04	9.5	78.0	78.7	76.7	2.01	39.067			
700.0	700.0	697.5	697.1	1.2	1.2	82.74	10.7	83.9	84.8	82.4	2.37	35.717			
800.0	800.0	795.6	795.0	1.4	1.4	82.42	12.2	91.4	92.5	89.8	2.74	33.778			
900.0	900.0	893.5	892.5	1.5	1.6	82.10	14.0	100.5	102.0	98.9	3.12	32.744			
1,000.0	1,000.0	991.1	989.4	1.7	1.9	81.78	16.1	111.2	113.2	109.7	3.50	32.315			
1,100.0	1,100.0	1,088.3	1,085.8	1.9	2.1	29.62	18.5	123.5	125.3	121.5	3.73	33.562			
1,200.0	1,200.0	1,185.3	1,181.8	2.1	2.4	29.80	21.2	137.3	137.6	133.5	4.08	33.735			
1,300.0	1,299.9	1,282.1	1,277.3	2.2	2.7	30.23	24.2	152.7	150.0	145.6	4.42	33.916			
1,400.0	1,399.7	1,379.0	1,372.7	2.4	3.1	30.85	27.6	169.7	162.7	157.9	4.77	34.089			
1,500.0	1,499.4	1,478.3	1,470.2	2.6	3.4	31.68	31.1	187.8	174.5	169.4	5.13	34.022			
1,600.0	1,598.9	1,577.7	1,567.9	2.8	3.8	32.69	34.7	205.8	184.9	179.4	5.49	33.661			
1,700.0	1,698.3	1,677.2	1,665.7	3.0	4.1	33.87	38.2	223.9	193.9	188.0	5.87	33.052			
1,800.0	1,797.4	1,776.8	1,763.6	3.3	4.5	35.24	41.8	241.9	201.5	195.3	6.25	32.227			
1,900.0	1,896.3	1,876.4	1,861.5	3.5	4.8	36.80	45.4	260.0	207.9	201.3	6.66	31.213			
2,000.0	1,995.0	1,976.1	1,959.4	3.8	5.2	38.50	48.9	278.1	213.5	206.4	7.09	30.097			
2,100.0	2,093.7	2,075.7	2,057.3	4.1	5.5	40.13	52.5	296.2	219.1	211.6	7.54	29.056			
2,200.0	2,192.4	2,175.4	2,155.3	4.4	5.9	41.68	56.1	314.3	225.0	217.0	8.01	28.094			
2,300.0	2,291.1	2,275.0	2,253.2	4.7	6.3	43.14	59.6	332.4	231.0	222.5	8.49	27.205			
2,400.0	2,389.8	2,374.7	2,351.1	5.0	6.6	44.54	63.2	350.5	237.1	228.1	8.99	26.382			
2,500.0	2,488.5	2,474.3	2,449.0	5.3	7.0	45.86	66.7	368.6	243.4	233.9	9.50	25.621			
2,600.0	2,587.2	2,574.0	2,547.0	5.6	7.4	47.11	70.3	386.6	249.8	239.8	10.03	24.916			
2,700.0	2,685.9	2,673.6	2,644.9	5.9	7.7	48.31	73.9	404.7	256.3	245.7	10.56	24.265			
2,800.0	2,784.6	2,773.3	2,742.8	6.2	8.1	49.44	77.4	422.8	262.9	251.8	11.11	23.661			
2,900.0	2,883.3	2,872.9	2,840.8	6.5	8.5	50.52	81.0	440.9	269.6	258.0	11.67	23.102			
3,000.0	2,982.0	2,972.6	2,938.7	6.9	8.8	51.54	84.5	459.0	276.4	264.2	12.24	22.585			
3,100.0	3,080.7	3,072.2	3,036.6	7.2	9.2	52.51	88.1	477.1	283.3	270.5	12.82	22.104			
3,200.0	3,179.4	3,171.9	3,134.5	7.5	9.6	53.44	91.7	495.2	290.3	276.9	13.40	21.659			
3,300.0	3,278.1	3,271.5	3,232.5	7.8	9.9	54.33	95.2	513.3	297.3	283.3	14.00	21.245			
3,400.0	3,376.8	3,371.2	3,330.4	8.1	10.3	55.17	98.8	531.3	304.4	289.9	14.59	20.860			
3,500.0	3,475.5	3,470.8	3,428.3	8.5	10.7	55.98	102.4	549.4	311.6	296.4	15.20	20.501			
3,600.0	3,574.2	3,570.5	3,526.3	8.8	11.0	56.75	105.9	567.5	318.8	303.0	15.81	20.167			
3,700.0	3,672.9	3,670.1	3,624.2	9.1	11.4	57.48	109.5	585.6	326.1	309.7	16.42	19.856			
3,800.0	3,771.6	3,769.8	3,722.1	9.4	11.8	58.18	113.0	603.7	333.5	316.4	17.04	19.564			
3,900.0	3,870.2	3,869.4	3,820.0	9.8	12.1	58.86	116.6	621.8	340.8	323.2	17.67	19.292			
4,000.0	3,968.9	3,969.1	3,918.0	10.1	12.5	59.50	120.2	639.9	348.3	330.0	18.29	19.037			
4,100.0	4,067.6	4,068.7	4,015.9	10.4	12.9	60.12	123.7	658.0	355.7	336.8	18.92	18.797			
4,200.0	4,166.3	4,168.3	4,113.8	10.7	13.2	60.71	127.3	676.0	363.2	343.7	19.56	18.573			
4,300.0	4,265.0	4,268.0	4,211.8	11.1	13.6	61.28	130.9	694.1	370.8	350.6	20.19	18.361			
4,400.0	4,363.7	4,367.6	4,309.7	11.4	14.0	61.82	134.4	712.2	378.4	357.5	20.83	18.163			
4,500.0	4,462.4	4,467.3	4,407.6	11.7	14.3	62.34	138.0	730.3	386.0	364.5	21.47	17.975			
4,600.0	4,561.1	4,566.9	4,505.6	12.0	14.7	62.85	141.5	748.4	393.6	371.5	22.12	17.799			
4,700.0	4,659.8	4,666.6	4,603.5	12.4	15.1	63.33	145.1	766.5	401.3	378.5	22.76	17.632			
4,800.0	4,758.5	4,766.2	4,701.4	12.7	15.5	63.80	148.7	784.6	409.0	385.6	23.41	17.474			
4,900.0	4,857.2	4,865.9	4,799.3	13.0	15.8	64.25	152.2	802.7	416.7	392.7	24.05	17.324			
5,000.0	4,955.9	4,965.5	4,897.3	13.4	16.2	64.68	155.8	820.7	424.5	399.8	24.70	17.183			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2F-7H-E168 - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,054.6	5,065.2	4,995.2	13.7	16.6	65.09	159.4	838.8	432.3	406.9	25.35	17.049		
5,200.0	5,153.3	5,164.8	5,093.1	14.0	16.9	65.50	162.9	856.9	440.0	414.0	26.01	16.921		
5,300.0	5,252.0	5,264.5	5,191.1	14.3	17.3	65.88	166.5	875.0	447.9	421.2	26.66	16.800		
5,400.0	5,350.7	5,364.1	5,289.0	14.7	17.7	66.26	170.0	893.1	455.7	428.4	27.31	16.685		
5,500.0	5,449.4	5,463.8	5,386.9	15.0	18.0	66.62	173.6	911.2	463.6	435.6	27.97	16.575		
5,600.0	5,548.1	5,563.4	5,484.8	15.3	18.4	66.97	177.2	929.3	471.4	442.8	28.62	16.470		
5,700.0	5,646.8	5,663.1	5,582.8	15.7	18.8	67.31	180.7	947.4	479.3	450.0	29.28	16.371		
5,800.0	5,745.5	5,762.7	5,680.7	16.0	19.2	67.64	184.3	965.4	487.2	457.3	29.94	16.275		
5,900.0	5,844.2	5,862.4	5,778.6	16.3	19.5	67.95	187.8	983.5	495.1	464.6	30.59	16.185 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2G-7H-E168 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	3.0	3.0	0.0	0.0	89.45	0.7	76.0	76.0					
100.0	100.0	103.0	103.0	0.1	0.1	89.45	0.7	76.0	76.0	75.7	0.27	284.457		
200.0	200.0	203.0	203.0	0.3	0.3	89.45	0.7	76.0	76.0	75.3	0.62	123.292		
229.1	229.1	232.1	232.1	0.4	0.4	89.45	0.7	76.0	76.0	75.2	0.72	105.851	CC	
300.0	300.0	302.3	302.3	0.5	0.5	89.48	0.7	76.2	76.2	75.2	0.96	79.039	ES	
400.0	400.0	401.0	401.0	0.7	0.7	89.72	0.4	77.9	77.9	76.6	1.31	59.385		
500.0	500.0	500.0	499.9	0.8	0.8	90.15	-0.2	81.3	81.4	79.7	1.67	48.854		
600.0	600.0	598.0	597.8	1.0	1.0	90.73	-1.1	86.4	86.5	84.5	2.02	42.738		
700.0	700.0	696.3	695.8	1.2	1.2	91.41	-2.3	93.1	93.4	91.0	2.39	39.019		
800.0	800.0	794.2	793.4	1.4	1.4	92.12	-3.8	101.4	101.9	99.1	2.77	36.767		
900.0	900.0	891.9	890.6	1.5	1.7	92.83	-5.5	111.3	112.2	109.0	3.16	35.459		
1,000.0	1,000.0	989.2	987.1	1.7	1.9	93.51	-7.5	122.8	124.1	120.5	3.57	34.786	SF	
1,100.0	1,100.0	1,086.1	1,083.2	1.9	2.2	42.30	-9.8	135.9	137.1	133.4	3.73	36.733		
1,200.0	1,200.0	1,182.7	1,178.6	2.1	2.5	43.42	-12.4	150.6	150.5	146.4	4.08	36.927		
1,300.0	1,299.9	1,279.0	1,273.5	2.2	2.8	44.80	-15.3	166.7	164.4	160.0	4.42	37.199		
1,400.0	1,399.7	1,375.0	1,367.8	2.4	3.2	46.34	-18.4	184.4	178.9	174.1	4.77	37.528		
1,500.0	1,499.4	1,470.6	1,461.4	2.6	3.5	48.00	-21.8	203.5	194.0	188.9	5.12	37.891		
1,600.0	1,598.9	1,565.7	1,554.2	2.8	3.9	49.73	-25.4	224.1	209.8	204.3	5.48	38.263		
1,700.0	1,698.3	1,660.5	1,646.3	3.0	4.3	51.49	-29.3	246.1	226.3	220.5	5.86	38.615		
1,800.0	1,797.4	1,754.8	1,737.5	3.3	4.8	53.27	-33.4	269.4	243.7	237.4	6.26	38.922		
1,900.0	1,896.3	1,848.6	1,828.0	3.5	5.2	55.03	-37.7	294.2	261.9	255.2	6.69	39.161		
2,000.0	1,995.0	1,947.7	1,923.2	3.8	5.7	56.77	-41.7	321.1	280.3	273.1	7.16	39.157		
2,100.0	2,093.7	2,047.3	2,019.0	4.1	6.2	58.03	-43.9	348.4	298.4	290.7	7.65	38.994		
2,200.0	2,192.4	2,147.3	2,115.1	4.4	6.7	58.84	-44.3	375.8	316.0	307.9	8.16	38.717		
2,300.0	2,291.1	2,246.3	2,210.3	4.7	7.3	59.34	-43.5	403.1	333.3	324.7	8.68	38.396		
2,400.0	2,389.8	2,344.8	2,305.0	5.0	7.8	59.77	-42.5	430.2	350.6	341.4	9.21	38.070		
2,500.0	2,488.5	2,443.2	2,399.6	5.3	8.3	60.16	-41.6	457.3	367.9	358.2	9.75	37.740		
2,600.0	2,587.2	2,541.7	2,494.3	5.6	8.8	60.51	-40.6	484.4	385.3	375.0	10.30	37.414		
2,700.0	2,685.9	2,640.1	2,588.9	5.9	9.3	60.84	-39.7	511.6	402.6	391.7	10.85	37.096		
2,800.0	2,784.6	2,738.6	2,683.5	6.2	9.8	61.14	-38.8	538.7	419.9	408.5	11.42	36.788		
2,900.0	2,883.3	2,837.1	2,778.2	6.5	10.3	61.41	-37.8	565.8	437.3	425.3	11.98	36.492		
3,000.0	2,982.0	2,935.5	2,872.8	6.9	10.8	61.66	-36.9	592.9	454.7	442.1	12.56	36.208		
3,100.0	3,080.7	3,034.0	2,967.5	7.2	11.3	61.90	-35.9	620.1	472.0	458.9	13.13	35.937		
3,200.0	3,179.4	3,132.4	3,062.1	7.5	11.8	62.12	-35.0	647.2	489.4	475.7	13.72	35.680		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Becky 2H-7H-E168 - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
0.0	0.0	3.0	3.0	0.0	0.0	84.39	8.0	81.6	81.9				
100.0	100.0	103.0	103.0	0.1	0.1	84.39	8.0	81.6	81.9	81.7	0.27	306.877	
165.6	165.6	168.6	168.6	0.2	0.3	84.39	8.0	81.6	81.9	81.5	0.50	165.167 CC	
200.0	200.0	203.0	203.0	0.3	0.3	84.39	8.0	81.6	81.9	81.3	0.62	133.022 ES	
300.0	300.0	301.5	301.5	0.5	0.5	84.45	8.0	82.5	82.9	81.9	0.96	86.006	
400.0	400.0	400.0	400.0	0.7	0.7	84.61	8.0	85.0	85.5	84.2	1.31	65.075	
500.0	500.0	498.5	498.3	0.8	0.8	84.87	8.0	89.3	89.8	88.1	1.67	53.798	
600.0	600.0	596.7	596.4	1.0	1.0	85.18	8.0	95.3	95.8	93.8	2.03	47.154	
700.0	700.0	694.7	694.1	1.2	1.3	85.53	8.0	102.9	103.6	101.2	2.41	43.065	
800.0	800.0	792.4	791.4	1.4	1.5	85.90	8.0	112.2	113.0	110.3	2.79	40.524	
900.0	900.0	889.8	888.1	1.5	1.7	86.25	8.1	123.0	124.2	121.0	3.19	38.977	
1,000.0	1,000.0	986.7	984.3	1.7	2.0	86.59	8.1	135.5	137.0	133.4	3.60	38.099	
1,100.0	1,100.0	1,083.4	1,079.9	1.9	2.3	35.01	8.1	149.5	150.8	147.1	3.72	40.490	
1,200.0	1,200.0	1,179.7	1,174.9	2.1	2.6	35.72	8.1	165.1	164.9	160.8	4.07	40.530	
1,300.0	1,299.9	1,275.7	1,269.4	2.2	2.9	36.63	8.1	182.2	179.2	174.8	4.41	40.629	
1,400.0	1,399.7	1,371.4	1,363.3	2.4	3.3	37.70	8.1	200.9	193.9	189.2	4.76	40.766	
1,500.0	1,499.4	1,466.8	1,456.5	2.6	3.7	38.88	8.1	221.0	209.0	203.9	5.11	40.923	
1,600.0	1,598.9	1,561.9	1,549.1	2.8	4.1	40.15	8.2	242.7	224.5	219.0	5.46	41.080	
1,700.0	1,698.3	1,656.6	1,641.0	3.0	4.5	41.47	8.2	265.7	240.4	234.6	5.83	41.214	
1,800.0	1,797.4	1,750.9	1,732.1	3.3	5.0	42.83	8.2	290.2	256.9	250.7	6.22	41.305	
1,900.0	1,896.3	1,845.1	1,822.6	3.5	5.4	44.21	8.2	316.1	273.9	267.2	6.63	41.331	
2,000.0	1,995.0	1,943.3	1,916.8	3.8	6.0	45.72	8.3	343.9	290.9	283.8	7.07	41.169	
2,100.0	2,093.7	2,041.6	2,011.1	4.1	6.5	47.10	8.3	371.6	308.0	300.5	7.52	40.941	
2,200.0	2,192.4	2,139.9	2,105.3	4.4	7.0	48.34	8.3	399.4	325.3	317.3	8.00	40.675	
2,300.0	2,291.1	2,238.1	2,199.6	4.7	7.5	49.45	8.3	427.2	342.8	334.3	8.49	40.383	
2,400.0	2,389.8	2,336.4	2,293.9	5.0	8.0	50.45	8.4	454.9	360.3	351.3	8.99	40.076	
2,500.0	2,488.5	2,434.6	2,388.1	5.3	8.5	51.36	8.4	482.7	378.0	368.4	9.51	39.761	
2,600.0	2,587.2	2,532.9	2,482.4	5.6	9.1	52.19	8.4	510.4	395.7	385.7	10.03	39.445	
2,700.0	2,685.9	2,631.2	2,576.6	5.9	9.6	52.95	8.4	538.2	413.5	402.9	10.57	39.132	
2,800.0	2,784.6	2,729.4	2,670.9	6.2	10.1	53.64	8.5	566.0	431.4	420.3	11.11	38.826	
2,900.0	2,883.3	2,827.7	2,765.1	6.5	10.6	54.28	8.5	593.7	449.3	437.6	11.66	38.528	
3,000.0	2,982.0	2,926.0	2,859.4	6.9	11.2	54.87	8.5	621.5	467.3	455.1	12.22	38.240	
3,100.0	3,080.7	3,024.2	2,953.7	7.2	11.7	55.42	8.5	649.3	485.3	472.5	12.78	37.964 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2A-7H-E168 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.71	0.2	-30.0	30.0					
100.0	100.0	100.0	100.0	0.1	0.1	-89.71	0.2	-30.0	30.0	29.7	0.26	114.591		
200.0	200.0	200.0	200.0	0.3	0.3	-89.71	0.2	-30.0	30.0	29.4	0.61	49.111	CC, ES	
300.0	300.0	299.6	299.6	0.5	0.5	-88.49	0.8	-30.6	30.6	29.6	0.96	31.848		
400.0	400.0	399.2	399.2	0.7	0.7	-85.11	2.8	-32.3	32.4	31.1	1.31	24.664		
500.0	500.0	498.7	498.6	0.8	0.8	-80.28	6.0	-35.1	35.7	34.0	1.68	21.283		
600.0	600.0	598.0	597.7	1.0	1.0	-74.88	10.6	-39.1	40.6	38.5	2.05	19.802		
700.0	700.0	697.0	696.4	1.2	1.3	-69.65	16.4	-44.2	47.2	44.8	2.43	19.418	SF	
800.0	800.0	795.8	794.7	1.4	1.5	-65.02	23.5	-50.4	55.8	53.0	2.83	19.712		
900.0	900.0	894.6	892.9	1.5	1.7	-61.14	31.7	-57.6	66.1	62.9	3.24	20.427		
1,000.0	1,000.0	993.9	991.5	1.7	2.0	-58.22	40.3	-65.1	77.0	73.4	3.65	21.120		
1,100.0	1,100.0	1,093.2	1,090.2	1.9	2.2	-108.46	48.9	-72.6	88.3	84.6	3.77	23.445		
1,200.0	1,200.0	1,192.5	1,188.9	2.1	2.5	-108.03	57.5	-80.1	100.2	96.1	4.12	24.321		
1,300.0	1,299.9	1,291.7	1,287.4	2.2	2.7	-108.51	66.1	-87.6	112.7	108.2	4.48	25.141		
1,400.0	1,399.7	1,390.8	1,385.9	2.4	3.0	-109.62	74.6	-95.0	125.7	120.8	4.85	25.906		
1,500.0	1,499.4	1,489.8	1,484.2	2.6	3.3	-111.18	83.2	-102.5	139.4	134.1	5.23	26.625		
1,600.0	1,598.9	1,588.6	1,582.4	2.8	3.5	-113.03	91.7	-110.0	153.8	148.2	5.63	27.310		
1,700.0	1,698.3	1,687.3	1,680.4	3.0	3.8	-115.07	100.2	-117.4	169.1	163.1	6.05	27.971		
1,800.0	1,797.4	1,785.7	1,778.1	3.3	4.0	-117.23	108.7	-124.8	185.5	179.0	6.48	28.621		
1,900.0	1,896.3	1,883.8	1,875.6	3.5	4.3	-119.44	117.2	-132.2	202.9	195.9	6.93	29.273		
2,000.0	1,995.0	1,981.8	1,972.9	3.8	4.6	-121.66	125.7	-139.6	221.2	213.8	7.39	29.915		
2,100.0	2,093.7	2,079.7	2,070.2	4.1	4.8	-123.60	134.2	-147.0	239.9	232.0	7.86	30.503		
2,200.0	2,192.4	2,177.7	2,167.5	4.4	5.1	-125.25	142.6	-154.4	258.7	250.4	8.33	31.046		
2,300.0	2,291.1	2,275.6	2,264.8	4.7	5.3	-126.68	151.1	-161.8	277.8	269.0	8.81	31.548		
2,400.0	2,389.8	2,373.6	2,362.1	5.0	5.6	-127.93	159.6	-169.2	297.0	287.7	9.28	32.013		
2,500.0	2,488.5	2,471.5	2,459.4	5.3	5.8	-129.02	168.0	-176.6	316.4	306.6	9.75	32.446		
2,600.0	2,587.2	2,569.5	2,556.7	5.6	6.1	-129.99	176.5	-184.0	335.8	325.6	10.22	32.848		
2,700.0	2,685.9	2,667.4	2,654.0	5.9	6.4	-130.86	184.9	-191.4	355.3	344.6	10.69	33.223		
2,800.0	2,784.6	2,765.3	2,751.3	6.2	6.6	-131.63	193.4	-198.7	374.9	363.7	11.17	33.574		
2,900.0	2,883.3	2,863.3	2,848.6	6.5	6.9	-132.33	201.9	-206.1	394.5	382.9	11.64	33.902		
3,000.0	2,982.0	2,961.2	2,945.9	6.9	7.1	-132.96	210.3	-213.5	414.2	402.1	12.11	34.210		
3,100.0	3,080.7	3,059.2	3,043.2	7.2	7.4	-133.53	218.8	-220.9	434.0	421.4	12.58	34.499		
3,200.0	3,179.4	3,157.1	3,140.5	7.5	7.7	-134.05	227.3	-228.3	453.7	440.7	13.05	34.770		
3,300.0	3,278.1	3,255.1	3,237.8	7.8	7.9	-134.53	235.7	-235.7	473.5	460.0	13.52	35.026		
3,400.0	3,376.8	3,353.0	3,335.1	8.1	8.2	-134.97	244.2	-243.1	493.4	479.4	13.99	35.268		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2B-7H-E168 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-76.22	6.1	-25.0	25.7					
100.0	100.0	100.0	100.0	0.1	0.1	-76.22	6.1	-25.0	25.7	25.4	0.26	98.205		
200.0	200.0	200.0	200.0	0.3	0.3	-76.22	6.1	-25.0	25.7	25.1	0.61	42.088		
300.0	300.0	300.0	300.0	0.5	0.5	-76.22	6.1	-25.0	25.7	24.7	0.96	26.783 CC, ES		
400.0	400.0	399.8	399.8	0.7	0.7	-74.56	7.0	-25.2	26.2	24.8	1.31	19.976		
500.0	500.0	499.5	499.4	0.8	0.8	-69.94	9.5	-25.9	27.6	25.9	1.66	16.611		
600.0	600.0	599.1	598.9	1.0	1.0	-63.31	13.6	-27.1	30.4	28.3	2.02	15.021		
700.0	700.0	698.5	698.1	1.2	1.2	-55.95	19.4	-28.8	34.8	32.4	2.39	14.540 SF		
800.0	800.0	797.6	797.0	1.4	1.4	-48.97	26.9	-30.9	41.1	38.3	2.77	14.803		
900.0	900.0	897.1	896.1	1.5	1.6	-43.23	35.5	-33.4	48.9	45.7	3.16	15.447		
1,000.0	1,000.0	996.7	995.3	1.7	1.9	-39.08	44.1	-35.8	57.0	53.5	3.55	16.052		
1,100.0	1,100.0	1,096.3	1,094.5	1.9	2.1	-88.66	52.7	-38.3	65.4	61.6	3.77	17.324		
1,200.0	1,200.0	1,196.0	1,193.7	2.1	2.3	-88.13	61.4	-40.8	73.8	69.6	4.13	17.859		
1,300.0	1,299.9	1,295.6	1,293.0	2.2	2.5	-88.92	70.0	-43.2	82.1	77.6	4.49	18.266		
1,400.0	1,399.7	1,395.2	1,392.2	2.4	2.8	-90.65	78.6	-45.7	90.4	85.6	4.87	18.570		
1,500.0	1,499.4	1,494.8	1,491.3	2.6	3.0	-93.08	87.3	-48.2	98.9	93.7	5.26	18.803		
1,600.0	1,598.9	1,594.2	1,590.4	2.8	3.2	-96.04	95.9	-50.6	107.8	102.1	5.67	18.994		
1,700.0	1,698.3	1,693.6	1,689.3	3.0	3.5	-99.36	104.5	-53.1	117.1	111.0	6.11	19.176		
1,800.0	1,797.4	1,792.8	1,788.1	3.3	3.7	-102.93	113.1	-55.5	127.2	120.6	6.57	19.377		
1,900.0	1,896.3	1,891.7	1,886.7	3.5	3.9	-106.64	121.7	-58.0	138.2	131.2	7.05	19.622		
2,000.0	1,995.0	1,990.6	1,985.1	3.8	4.1	-110.30	130.2	-60.4	150.2	142.7	7.54	19.931		
2,100.0	2,093.7	2,089.4	2,083.6	4.1	4.4	-113.46	138.8	-62.9	162.8	154.7	8.03	20.266		
2,200.0	2,192.4	2,188.3	2,182.0	4.4	4.6	-116.17	147.3	-65.3	175.7	167.2	8.52	20.614		
2,300.0	2,291.1	2,287.1	2,280.4	4.7	4.8	-118.50	155.9	-67.8	189.0	180.0	9.01	20.966		
2,400.0	2,389.8	2,386.0	2,378.9	5.0	5.1	-120.52	164.5	-70.2	202.5	193.0	9.50	21.315		
2,500.0	2,488.5	2,484.8	2,477.3	5.3	5.3	-122.29	173.0	-72.7	216.3	206.3	9.99	21.656		
2,600.0	2,587.2	2,583.6	2,575.7	5.6	5.5	-123.84	181.6	-75.1	230.3	219.8	10.47	21.987		
2,700.0	2,685.9	2,682.5	2,674.2	5.9	5.8	-125.22	190.2	-77.6	244.4	233.4	10.95	22.307		
2,800.0	2,784.6	2,781.3	2,772.6	6.2	6.0	-126.45	198.7	-80.0	258.6	247.1	11.43	22.614		
2,900.0	2,883.3	2,880.2	2,871.1	6.5	6.2	-127.55	207.3	-82.5	272.9	261.0	11.91	22.908		
3,000.0	2,982.0	2,979.0	2,969.5	6.9	6.5	-128.54	215.9	-84.9	287.3	274.9	12.39	23.189		
3,100.0	3,080.7	3,077.8	3,067.9	7.2	6.7	-129.43	224.4	-87.4	301.8	288.9	12.87	23.458		
3,200.0	3,179.4	3,176.7	3,166.4	7.5	6.9	-130.25	233.0	-89.8	316.4	303.0	13.34	23.715		
3,300.0	3,278.1	3,275.5	3,264.8	7.8	7.1	-130.99	241.5	-92.2	331.0	317.2	13.81	23.959		
3,400.0	3,376.8	3,374.4	3,363.2	8.1	7.4	-131.67	250.1	-94.7	345.6	331.3	14.29	24.193		
3,500.0	3,475.5	3,473.2	3,461.7	8.5	7.6	-132.29	258.7	-97.1	360.3	345.6	14.76	24.416		
3,600.0	3,574.2	3,572.0	3,560.1	8.8	7.8	-132.87	267.2	-99.6	375.1	359.8	15.23	24.629		
3,700.0	3,672.9	3,670.9	3,658.6	9.1	8.1	-133.40	275.8	-102.0	389.9	374.2	15.70	24.832		
3,800.0	3,771.6	3,769.7	3,757.0	9.4	8.3	-133.89	284.4	-104.5	404.7	388.5	16.17	25.026		
3,900.0	3,870.2	3,868.5	3,855.4	9.8	8.5	-134.35	292.9	-106.9	419.5	402.9	16.64	25.212		
4,000.0	3,968.9	3,967.4	3,953.9	10.1	8.8	-134.77	301.5	-109.4	434.4	417.3	17.11	25.390		
4,100.0	4,067.6	4,066.2	4,052.3	10.4	9.0	-135.17	310.1	-111.8	449.2	431.7	17.58	25.560		
4,200.0	4,166.3	4,165.1	4,150.7	10.7	9.2	-135.54	318.6	-114.3	464.1	446.1	18.04	25.722		
4,300.0	4,265.0	4,263.9	4,249.2	11.1	9.5	-135.89	327.2	-116.7	479.1	460.6	18.51	25.879		
4,400.0	4,363.7	4,362.7	4,347.6	11.4	9.7	-136.22	335.7	-119.2	494.0	475.0	18.98	26.028		

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2C-7H-E168 - HZ - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.71	0.1	-20.0	20.0					
100.0	100.0	100.0	100.0	0.1	0.1	-89.71	0.1	-20.0	20.0	19.7	0.26	76.394		
200.0	200.0	200.0	200.0	0.3	0.3	-89.71	0.1	-20.0	20.0	19.4	0.61	32.740		
300.0	300.0	300.0	300.0	0.5	0.5	-89.71	0.1	-20.0	20.0	19.0	0.96	20.835		
400.0	400.0	400.0	400.0	0.7	0.7	-89.71	0.1	-20.0	20.0	18.7	1.31	15.279		
500.0	500.0	500.1	500.1	0.8	0.8	-87.27	0.9	-19.8	19.8	18.1	1.66	11.929		
600.0	600.0	600.1	600.1	1.0	1.0	-79.70	3.5	-19.0	19.4	17.3	2.01	9.635		
648.6	648.6	648.6	648.6	1.1	1.1	-74.06	5.3	-18.5	19.3	17.1	2.18	8.833 CC		
700.0	700.0	700.0	699.9	1.2	1.2	-66.79	7.7	-17.8	19.4	17.1	2.36	8.215 ES		
800.0	800.0	799.7	799.4	1.4	1.4	-50.14	13.5	-16.2	21.1	18.3	2.73	7.717 SF		
900.0	900.0	899.2	898.6	1.5	1.6	-33.75	21.0	-14.0	25.3	22.2	3.12	8.116		
1,000.0	1,000.0	998.7	997.7	1.7	1.8	-21.21	29.7	-11.5	32.0	28.5	3.51	9.113		
1,100.0	1,100.0	1,098.3	1,096.9	1.9	2.0	-66.26	38.5	-9.0	39.4	35.6	3.79	10.384		
1,200.0	1,200.0	1,198.1	1,196.2	2.1	2.3	-63.43	47.4	-6.5	46.3	42.2	4.14	11.174		
1,300.0	1,299.9	1,297.9	1,295.6	2.2	2.5	-63.01	56.2	-4.0	52.5	48.0	4.51	11.655		
1,400.0	1,399.7	1,397.7	1,395.0	2.4	2.7	-64.21	65.0	-1.5	58.0	53.1	4.88	11.873		
1,500.0	1,499.4	1,497.6	1,494.4	2.6	2.9	-66.65	73.9	1.1	62.7	57.5	5.28	11.889		
1,600.0	1,598.9	1,597.4	1,593.8	2.8	3.2	-70.13	82.7	3.6	67.0	61.3	5.70	11.759		
1,700.0	1,698.3	1,697.2	1,693.2	3.0	3.4	-74.52	91.5	6.1	71.0	64.8	6.15	11.543		
1,800.0	1,797.4	1,796.9	1,792.4	3.3	3.6	-79.72	100.3	8.6	75.0	68.4	6.64	11.299		
1,900.0	1,896.3	1,896.4	1,891.6	3.5	3.9	-85.59	109.1	11.1	79.5	72.3	7.17	11.086		
2,000.0	1,995.0	1,995.9	1,990.7	3.8	4.1	-91.67	117.9	13.7	84.7	77.0	7.72	10.975		
2,100.0	2,093.7	2,095.4	2,089.7	4.1	4.3	-97.03	126.7	16.2	90.8	82.5	8.27	10.985		
2,200.0	2,192.4	2,194.9	2,188.8	4.4	4.6	-101.70	135.5	18.7	97.6	88.8	8.81	11.082		
2,300.0	2,291.1	2,294.4	2,287.8	4.7	4.8	-105.74	144.3	21.2	104.9	95.6	9.34	11.239		
2,400.0	2,389.8	2,393.8	2,386.9	5.0	5.0	-109.23	153.1	23.7	112.7	102.9	9.86	11.437		
2,500.0	2,488.5	2,493.3	2,485.9	5.3	5.3	-112.27	161.9	26.2	120.9	110.5	10.37	11.660		
2,600.0	2,587.2	2,592.8	2,585.0	5.6	5.5	-114.92	170.7	28.7	129.3	118.5	10.87	11.898		
2,700.0	2,685.9	2,692.3	2,684.0	5.9	5.7	-117.24	179.5	31.2	138.0	126.7	11.37	12.144		
2,800.0	2,784.6	2,791.7	2,783.1	6.2	6.0	-119.28	188.3	33.8	146.9	135.1	11.86	12.392		
2,900.0	2,883.3	2,891.2	2,882.1	6.5	6.2	-121.09	197.1	36.3	156.0	143.6	12.34	12.639		
3,000.0	2,982.0	2,990.7	2,981.2	6.9	6.4	-122.69	205.9	38.8	165.2	152.4	12.82	12.881		
3,100.0	3,080.7	3,090.2	3,080.2	7.2	6.7	-124.13	214.7	41.3	174.5	161.2	13.30	13.118		
3,200.0	3,179.4	3,189.6	3,179.3	7.5	6.9	-125.42	223.5	43.8	183.9	170.1	13.78	13.348		
3,300.0	3,278.1	3,289.1	3,278.3	7.8	7.1	-126.59	232.3	46.3	193.4	179.1	14.25	13.571		
3,400.0	3,376.8	3,388.6	3,377.4	8.1	7.4	-127.65	241.1	48.8	203.0	188.2	14.72	13.787		
3,500.0	3,475.5	3,488.1	3,476.4	8.5	7.6	-128.61	249.9	51.3	212.6	197.4	15.19	13.994		
3,600.0	3,574.2	3,587.5	3,575.5	8.8	7.8	-129.48	258.7	53.9	222.3	206.6	15.66	14.194		
3,700.0	3,672.9	3,687.0	3,674.6	9.1	8.1	-130.29	267.5	56.4	232.0	215.9	16.13	14.387		
3,800.0	3,771.6	3,786.5	3,773.6	9.4	8.3	-131.03	276.3	58.9	241.8	225.2	16.59	14.572		
3,900.0	3,870.2	3,886.0	3,872.7	9.8	8.5	-131.71	285.1	61.4	251.6	234.5	17.06	14.749		
4,000.0	3,968.9	3,985.4	3,971.7	10.1	8.8	-132.34	293.9	63.9	261.4	243.9	17.52	14.920		
4,100.0	4,067.6	4,084.9	4,070.8	10.4	9.0	-132.93	302.7	66.4	271.3	253.3	17.98	15.085		
4,200.0	4,166.3	4,184.4	4,169.8	10.7	9.2	-133.47	311.5	68.9	281.2	262.7	18.45	15.242		
4,300.0	4,265.0	4,283.9	4,268.9	11.1	9.5	-133.98	320.3	71.4	291.1	272.2	18.91	15.394		
4,400.0	4,363.7	4,383.3	4,367.9	11.4	9.7	-134.45	329.1	74.0	301.0	281.7	19.37	15.540		
4,500.0	4,462.4	4,482.8	4,467.0	11.7	10.0	-134.89	337.9	76.5	311.0	291.2	19.83	15.681		
4,600.0	4,561.1	4,582.3	4,566.0	12.0	10.2	-135.31	346.7	79.0	321.0	300.7	20.29	15.816		
4,700.0	4,659.8	4,681.8	4,665.1	12.4	10.4	-135.70	355.5	81.5	331.0	310.2	20.76	15.946		
4,800.0	4,758.5	4,781.2	4,764.1	12.7	10.7	-136.07	364.3	84.0	341.0	319.8	21.22	16.072		
4,900.0	4,857.2	4,880.7	4,863.2	13.0	10.9	-136.41	373.1	86.5	351.0	329.3	21.68	16.193		
5,000.0	4,955.9	4,980.2	4,962.2	13.4	11.1	-136.74	381.9	89.0	361.0	338.9	22.14	16.309		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2C-7H-E168 - HZ - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,054.6	5,079.7	5,061.3	13.7	11.4	-137.05	390.7	91.5	371.1	348.5	22.60	16.422		
5,200.0	5,153.3	5,179.1	5,160.4	14.0	11.6	-137.35	399.5	94.1	381.1	358.1	23.06	16.530		
5,300.0	5,252.0	5,278.6	5,259.4	14.3	11.8	-137.62	408.3	96.6	391.2	367.7	23.52	16.635		
5,400.0	5,350.7	5,378.1	5,358.5	14.7	12.1	-137.89	417.1	99.1	401.3	377.3	23.97	16.736		
5,500.0	5,449.4	5,477.6	5,457.5	15.0	12.3	-138.14	425.9	101.6	411.3	386.9	24.43	16.834		
5,600.0	5,548.1	5,577.0	5,556.6	15.3	12.5	-138.38	434.7	104.1	421.4	396.5	24.89	16.929		
5,700.0	5,646.8	5,676.5	5,655.6	15.7	12.8	-138.61	443.5	106.6	431.5	406.2	25.35	17.020		
5,800.0	5,745.5	5,776.0	5,754.7	16.0	13.0	-138.83	452.3	109.1	441.6	415.8	25.81	17.109		
5,900.0	5,844.2	5,875.5	5,853.7	16.3	13.3	-139.03	461.1	111.6	451.7	425.4	26.27	17.195		
6,000.0	5,942.9	5,974.9	5,952.8	16.6	13.5	-139.23	469.9	114.2	461.8	435.1	26.73	17.278		
6,100.0	6,041.6	6,074.4	6,051.8	17.0	13.7	-139.42	478.7	116.7	471.9	444.8	27.19	17.359		
6,200.0	6,140.3	6,173.9	6,150.9	17.3	14.0	-139.61	487.5	119.2	482.1	454.4	27.65	17.437		
6,300.0	6,239.0	6,273.3	6,249.9	17.6	14.2	-139.78	496.3	121.7	492.2	464.1	28.11	17.513		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2D-7H-E168 - HZ - Plan #1												Offset Site Error: 0.0 ft		
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-67.91	6.1	-15.0	16.2					
100.0	100.0	100.0	100.0	0.1	0.1	-67.91	6.1	-15.0	16.2	15.9	0.26	61.709		
200.0	200.0	200.0	200.0	0.3	0.3	-67.91	6.1	-15.0	16.2	15.5	0.61	26.447		
300.0	300.0	300.0	300.0	0.5	0.5	-67.91	6.1	-15.0	16.2	15.2	0.96	16.830		
400.0	400.0	400.0	400.0	0.7	0.7	-67.91	6.1	-15.0	16.2	14.8	1.31	12.342		
500.0	500.0	500.0	500.0	0.8	0.8	-67.91	6.1	-15.0	16.2	14.5	1.66	9.744		
600.0	600.0	600.1	600.1	1.0	1.0	-64.90	6.8	-14.4	15.9	13.9	2.01	7.935		
700.0	700.0	700.1	700.0	1.2	1.2	-55.46	8.8	-12.8	15.5	13.2	2.36	6.586		
729.5	729.5	729.6	729.5	1.2	1.2	-51.37	9.7	-12.1	15.5	13.0	2.46	6.291	CC, ES	
800.0	800.0	800.0	799.8	1.4	1.4	-39.51	12.2	-10.1	15.8	13.1	2.71	5.834		
900.0	900.0	899.7	899.3	1.5	1.6	-20.29	17.0	-6.3	18.1	15.0	3.08	5.875		
1,000.0	1,000.0	999.1	998.5	1.7	1.8	-3.49	23.0	-1.4	23.1	19.7	3.46	6.685		
1,100.0	1,100.0	1,098.4	1,097.3	1.9	2.0	-44.64	30.5	4.5	30.3	26.5	3.78	8.016		
1,200.0	1,200.0	1,197.7	1,196.0	2.1	2.2	-38.65	39.1	11.5	38.2	34.1	4.13	9.252		
1,300.0	1,299.9	1,297.4	1,295.0	2.2	2.5	-35.80	48.1	18.6	45.3	40.8	4.48	10.105		
1,400.0	1,399.7	1,397.2	1,394.2	2.4	2.7	-34.82	57.1	25.8	51.0	46.2	4.84	10.541		
1,500.0	1,499.4	1,497.1	1,493.4	2.6	2.9	-35.06	66.1	33.0	55.4	50.2	5.21	10.627		
1,600.0	1,598.9	1,597.1	1,592.7	2.8	3.2	-36.25	75.1	40.2	58.3	52.7	5.59	10.426		
1,700.0	1,698.3	1,697.1	1,692.0	3.0	3.5	-38.36	84.2	47.4	59.8	53.8	5.99	9.991		
1,800.0	1,797.4	1,797.0	1,791.3	3.3	3.7	-41.43	93.2	54.6	60.1	53.7	6.41	9.372		
1,900.0	1,896.3	1,896.9	1,890.5	3.5	4.0	-45.65	102.2	61.8	59.4	52.5	6.89	8.615		
2,000.0	1,995.0	1,996.7	1,989.7	3.8	4.2	-50.91	111.2	69.0	58.1	50.7	7.42	7.828		
2,100.0	2,093.7	2,096.6	2,088.9	4.1	4.5	-56.39	120.2	76.2	57.4	49.4	8.01	7.166		
2,190.6	2,183.2	2,187.1	2,178.8	4.4	4.7	-61.44	128.3	82.7	57.1	48.6	8.57	6.671		
2,200.0	2,192.4	2,196.4	2,188.1	4.4	4.7	-61.96	129.2	83.4	57.1	48.5	8.62	6.626		
2,300.0	2,291.1	2,296.3	2,287.2	4.7	5.0	-67.52	138.2	90.6	57.5	48.2	9.27	6.199		
2,400.0	2,389.8	2,396.1	2,386.4	5.0	5.3	-72.98	147.2	97.8	58.3	48.4	9.93	5.873		
2,500.0	2,488.5	2,496.0	2,485.6	5.3	5.5	-78.22	156.2	105.0	59.7	49.1	10.59	5.635		
2,600.0	2,587.2	2,595.8	2,584.8	5.6	5.8	-83.20	165.2	112.2	61.5	50.3	11.25	5.472		
2,700.0	2,685.9	2,695.7	2,683.9	5.9	6.1	-87.85	174.2	119.4	63.8	51.9	11.88	5.372		
2,800.0	2,784.6	2,795.5	2,783.1	6.2	6.3	-92.16	183.2	126.6	66.5	54.0	12.50	5.322		
2,900.0	2,883.3	2,895.3	2,882.3	6.5	6.6	-96.11	192.2	133.8	69.5	56.4	13.09	5.312		
3,000.0	2,982.0	2,995.2	2,981.5	6.9	6.8	-99.72	201.2	141.0	72.8	59.2	13.65	5.335		
3,100.0	3,080.7	3,095.0	3,080.6	7.2	7.1	-103.00	210.2	148.2	76.4	62.2	14.20	5.381		
3,200.0	3,179.4	3,194.9	3,179.8	7.5	7.4	-105.98	219.2	155.4	80.2	65.5	14.73	5.447		
3,300.0	3,278.1	3,294.7	3,279.0	7.8	7.6	-108.69	228.2	162.6	84.3	69.0	15.24	5.527		
3,400.0	3,376.8	3,394.6	3,378.2	8.1	7.9	-111.14	237.2	169.8	88.4	72.7	15.74	5.617		
3,500.0	3,475.5	3,494.4	3,477.4	8.5	8.2	-113.37	246.2	176.9	92.8	76.5	16.23	5.715		
3,600.0	3,574.2	3,594.3	3,576.5	8.8	8.4	-115.40	255.2	184.1	97.2	80.5	16.71	5.818		
3,700.0	3,672.9	3,694.1	3,675.7	9.1	8.7	-117.24	264.2	191.3	101.8	84.6	17.18	5.924		
3,800.0	3,771.6	3,793.9	3,774.9	9.4	9.0	-118.93	273.2	198.5	106.5	88.8	17.65	6.032		
3,900.0	3,870.2	3,893.8	3,874.1	9.8	9.2	-120.48	282.2	205.7	111.2	93.1	18.11	6.141		
4,000.0	3,968.9	3,993.6	3,973.2	10.1	9.5	-121.89	291.2	212.9	116.0	97.5	18.56	6.250		
4,100.0	4,067.6	4,093.5	4,072.4	10.4	9.8	-123.20	300.2	220.1	120.9	101.9	19.01	6.359		
4,200.0	4,166.3	4,193.3	4,171.6	10.7	10.0	-124.40	309.2	227.3	125.9	106.4	19.46	6.466		
4,300.0	4,265.0	4,293.2	4,270.8	11.1	10.3	-125.51	318.2	234.5	130.9	110.9	19.91	6.572		
4,400.0	4,363.7	4,393.0	4,369.9	11.4	10.5	-126.54	327.2	241.7	135.9	115.5	20.35	6.676		
4,500.0	4,462.4	4,492.9	4,469.1	11.7	10.8	-127.49	336.2	248.9	141.0	120.2	20.80	6.779		
4,600.0	4,561.1	4,592.7	4,568.3	12.0	11.1	-128.38	345.2	256.1	146.1	124.9	21.24	6.879		
4,700.0	4,659.8	4,692.5	4,667.5	12.4	11.3	-129.21	354.2	263.3	151.3	129.6	21.68	6.976		
4,800.0	4,758.5	4,792.4	4,766.7	12.7	11.6	-129.98	363.2	270.5	156.4	134.3	22.12	7.072		
4,900.0	4,857.2	4,892.2	4,865.8	13.0	11.9	-130.71	372.2	277.7	161.6	139.1	22.56	7.165		

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

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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	4,955.9	4,992.1	4,965.0	13.4	12.1	-131.38	381.2	284.9	166.9	143.9	23.00	7.256		
5,100.0	5,054.6	5,091.9	5,064.2	13.7	12.4	-132.02	390.2	292.1	172.1	148.7	23.44	7.344		
5,200.0	5,153.3	5,191.8	5,163.4	14.0	12.7	-132.62	399.2	299.2	177.4	153.5	23.88	7.430		
5,300.0	5,252.0	5,291.6	5,262.5	14.3	12.9	-133.18	408.2	306.4	182.7	158.4	24.31	7.514		
5,400.0	5,350.7	5,391.4	5,361.7	14.7	13.2	-133.72	417.2	313.6	188.0	163.2	24.75	7.596		
5,500.0	5,449.4	5,491.3	5,460.9	15.0	13.5	-134.22	426.2	320.8	193.3	168.1	25.19	7.675		
5,600.0	5,548.1	5,591.1	5,560.1	15.3	13.7	-134.70	435.2	328.0	198.7	173.0	25.63	7.752		
5,700.0	5,646.8	5,691.0	5,659.2	15.7	14.0	-135.15	444.2	335.2	204.0	178.0	26.06	7.828		
5,800.0	5,745.5	5,790.8	5,758.4	16.0	14.3	-135.58	453.2	342.4	209.4	182.9	26.50	7.901		
5,900.0	5,844.2	5,890.7	5,857.6	16.3	14.5	-135.98	462.2	349.6	214.8	187.8	26.94	7.972		
6,000.0	5,942.9	5,990.5	5,956.8	16.6	14.8	-136.37	471.2	356.8	220.1	192.8	27.37	8.042		
6,100.0	6,041.6	6,090.4	6,056.0	17.0	15.1	-136.74	480.2	364.0	225.5	197.7	27.81	8.109		
6,200.0	6,140.3	6,190.2	6,155.1	17.3	15.3	-137.09	489.2	371.2	230.9	202.7	28.25	8.175		
6,300.0	6,239.0	6,290.0	6,254.3	17.6	15.6	-137.42	498.2	378.4	236.3	207.7	28.69	8.239		
6,400.0	6,337.7	6,389.9	6,353.5	18.0	15.9	-137.75	507.2	385.6	241.8	212.6	29.12	8.301		
6,500.0	6,436.4	6,489.7	6,452.7	18.3	16.1	-138.05	516.3	392.8	247.2	217.6	29.56	8.362		
6,600.0	6,535.1	6,589.6	6,551.8	18.6	16.4	-138.34	525.3	400.0	252.6	222.6	30.00	8.421		
6,700.0	6,633.8	6,689.4	6,651.0	19.0	16.7	-138.62	534.3	407.2	258.1	227.6	30.43	8.479		
6,800.0	6,732.5	6,789.3	6,750.2	19.3	16.9	-138.89	543.3	414.4	263.5	232.6	30.87	8.535		
6,900.0	6,831.2	6,889.1	6,849.4	19.6	17.2	-139.15	552.3	421.6	269.0	237.6	31.31	8.590		
7,000.0	6,929.9	6,989.0	6,948.5	20.0	17.5	-139.40	561.3	428.7	274.4	242.7	31.75	8.644		
7,100.0	7,028.5	7,088.8	7,047.7	20.3	17.7	-139.64	570.3	435.9	279.9	247.7	32.18	8.696		
7,200.0	7,127.2	7,188.9	7,147.1	20.6	18.0	-139.89	579.2	443.2	285.3	252.7	32.61	8.749		
7,300.0	7,226.2	7,290.0	7,247.9	20.9	18.1	-140.35	577.4	450.5	291.2	258.7	32.44	8.976		
7,400.0	7,324.1	7,390.1	7,345.7	21.0	18.1	-123.12	558.2	457.6	298.2	266.4	31.84	9.366		
7,500.0	7,417.9	7,489.3	7,437.9	21.0	17.9	-110.03	522.7	464.2	306.3	275.3	31.00	9.881		
7,600.0	7,504.9	7,587.5	7,521.9	20.9	17.6	-103.32	472.3	470.3	315.1	285.1	30.06	10.483		
7,700.0	7,582.3	7,684.9	7,595.5	20.8	17.3	-99.01	408.9	475.7	324.4	295.3	29.18	11.120		
7,800.0	7,647.8	7,781.6	7,656.9	20.6	17.0	-95.91	334.5	480.1	333.9	305.4	28.47	11.727		
7,900.0	7,699.5	7,877.8	7,704.8	20.5	16.7	-93.58	251.3	483.6	343.2	315.2	28.04	12.242		
8,000.0	7,735.7	7,973.5	7,738.0	20.5	16.6	-91.83	161.6	486.0	352.1	324.2	27.91	12.613		
8,100.0	7,755.4	8,069.0	7,755.8	20.6	16.6	-90.57	67.9	487.3	360.2	332.1	28.12	12.809		
8,200.0	7,759.0	8,166.0	7,759.0	20.8	16.7	-90.01	-28.9	487.5	367.4	338.8	28.67	12.818		
8,300.0	7,759.0	8,265.8	7,759.0	21.2	17.1	-90.01	-128.7	487.5	374.4	344.7	29.65	12.626		
8,400.0	7,759.0	8,365.5	7,759.0	21.7	17.6	-90.01	-228.5	487.5	381.4	350.4	30.99	12.305		
8,500.0	7,759.0	8,465.3	7,759.0	22.3	18.3	-90.01	-328.2	487.5	388.2	355.6	32.60	11.911		
8,600.0	7,759.0	8,565.1	7,759.0	23.0	19.1	-90.01	-428.1	487.5	393.7	359.4	34.32	11.473		
8,700.0	7,759.0	8,665.1	7,759.0	23.8	20.0	-90.01	-528.0	487.5	397.5	361.3	36.22	10.973		
8,800.0	7,759.0	8,765.1	7,759.0	24.7	21.0	-90.01	-628.0	487.5	399.5	361.2	38.28	10.436		
8,900.0	7,759.0	8,865.1	7,759.0	25.6	22.1	-90.01	-728.0	487.5	399.8	359.3	40.56	9.857		
9,000.0	7,759.0	8,965.1	7,759.0	26.6	23.3	-90.01	-828.0	487.5	399.8	356.7	43.16	9.264		
9,100.0	7,759.0	9,065.1	7,759.0	27.7	24.6	-90.01	-928.0	487.5	399.8	354.0	45.88	8.716		
9,200.0	7,759.0	9,165.1	7,759.0	28.9	25.9	-90.01	-1,028.0	487.5	399.8	351.1	48.70	8.211		
9,300.0	7,759.0	9,265.1	7,759.0	30.1	27.3	-90.01	-1,128.0	487.5	399.8	348.2	51.60	7.749		
9,400.0	7,759.0	9,365.1	7,759.0	31.4	28.7	-90.01	-1,228.0	487.5	399.7	345.3	54.45	7.341		
9,500.0	7,759.0	9,465.0	7,759.0	32.7	30.2	-90.01	-1,328.0	487.5	399.0	341.5	57.46	6.944		
9,600.0	7,759.0	9,565.0	7,759.0	34.1	31.6	-90.01	-1,428.0	487.5	398.2	337.7	60.54	6.578		
9,700.0	7,759.0	9,665.0	7,759.0	35.5	33.1	-90.01	-1,528.0	487.5	397.5	333.8	63.67	6.243		
9,800.0	7,759.0	9,765.0	7,759.0	36.9	34.7	-90.01	-1,628.0	487.5	396.7	329.9	66.83	5.936		
9,900.0	7,759.0	9,865.0	7,759.0	38.4	36.2	-90.01	-1,728.0	487.5	396.0	326.0	70.03	5.655		
10,000.0	7,759.0	9,965.0	7,759.0	39.8	37.8	-90.01	-1,828.0	487.5	395.2	322.0	73.25	5.395		
10,100.0	7,759.0	10,065.0	7,759.0	41.3	39.4	-90.00	-1,928.0	487.5	394.5	318.0	76.50	5.156		

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
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Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
10,200.0	7,759.0	10,165.0	7,759.0	42.8	41.0	90.00	-2,028.0	487.5	393.7	314.0	79.78	4.935		
10,300.0	7,759.0	10,265.0	7,759.0	44.4	42.6	90.00	-2,128.0	487.5	393.0	309.9	83.07	4.731		
10,400.0	7,759.0	10,365.0	7,759.0	45.9	44.2	90.00	-2,228.0	487.5	392.2	305.9	86.38	4.541		
10,500.0	7,759.0	10,465.0	7,759.0	47.5	45.8	90.00	-2,327.9	487.5	391.5	301.8	89.70	4.364		
10,600.0	7,759.0	10,565.0	7,759.0	49.1	47.5	90.00	-2,427.9	487.5	390.7	297.7	93.04	4.200		
10,700.0	7,759.0	10,665.0	7,759.0	50.6	49.1	90.00	-2,527.9	487.5	390.0	293.6	96.39	4.046		
10,800.0	7,759.0	10,765.0	7,759.0	52.2	50.8	90.00	-2,627.9	487.5	389.2	289.5	99.75	3.902		
10,900.0	7,759.0	10,865.0	7,759.0	53.9	52.4	90.00	-2,727.9	487.5	388.5	285.4	103.12	3.767		
11,000.0	7,759.0	10,965.0	7,759.0	55.5	54.1	90.00	-2,827.9	487.5	387.7	281.2	106.50	3.641		
11,100.0	7,759.0	11,065.0	7,759.0	57.1	55.8	90.00	-2,927.9	487.5	387.0	277.1	109.89	3.522		
11,200.0	7,759.0	11,165.0	7,759.0	58.7	57.5	90.00	-3,027.9	487.5	386.2	273.0	113.28	3.410		
11,300.0	7,759.0	11,265.0	7,759.0	60.4	59.1	90.00	-3,127.9	487.5	385.5	268.8	116.68	3.304		
11,400.0	7,759.0	11,365.0	7,759.0	62.0	60.8	90.00	-3,227.9	487.5	384.7	264.6	120.09	3.204		
11,500.0	7,759.0	11,465.0	7,759.0	63.7	62.5	90.00	-3,327.9	487.5	384.0	260.5	123.50	3.109		
11,600.0	7,759.0	11,575.0	7,759.0	65.3	64.4	90.00	-3,437.9	488.5	382.4	255.3	127.09	3.009		
11,700.0	7,759.0	11,690.1	7,759.0	67.0	66.3	90.00	-3,552.9	493.8	377.0	246.2	130.77	2.883		
11,800.0	7,759.0	11,791.1	7,759.0	68.7	68.1	90.00	-3,653.7	500.9	369.3	235.1	134.21	2.752		
11,900.0	7,759.0	11,890.8	7,759.0	70.3	69.8	90.00	-3,753.1	507.8	361.6	223.9	137.63	2.627		
12,000.0	7,759.0	11,990.5	7,759.0	72.0	71.5	90.00	-3,852.6	514.8	353.9	212.8	141.06	2.509		
12,100.0	7,759.0	12,090.2	7,759.0	73.7	73.2	90.00	-3,952.0	521.7	346.1	201.6	144.49	2.396		
12,200.0	7,759.0	12,189.9	7,759.0	75.4	74.9	90.00	-4,051.5	528.7	338.4	190.5	147.92	2.288		
12,300.0	7,759.0	12,289.6	7,759.0	77.0	76.6	90.00	-4,151.0	535.6	330.7	179.3	151.36	2.185		
12,400.0	7,759.0	12,389.3	7,759.0	78.7	78.4	90.00	-4,250.4	542.6	323.0	168.2	154.79	2.086		
12,500.0	7,759.0	12,485.2	7,759.0	80.4	80.0	90.00	-4,346.0	549.1	315.5	157.3	158.17	1.995		
12,600.0	7,759.0	12,575.2	7,759.0	82.1	81.5	90.00	-4,436.0	552.8	310.5	149.1	161.45	1.923		
12,700.0	7,759.0	12,665.4	7,759.0	83.8	83.1	90.00	-4,526.2	553.8	308.8	144.0	164.74	1.874		
12,706.6	7,759.0	12,671.4	7,759.0	83.9	83.2	90.00	-4,532.2	553.7	308.8	143.8	164.96	1.872		
12,800.0	7,759.0	12,760.9	7,759.0	85.5	84.7	90.00	-4,621.7	552.2	309.7	141.5	168.12	1.842		
12,900.0	7,759.0	12,860.9	7,759.0	87.2	86.4	90.00	-4,721.7	550.2	310.9	139.3	171.58	1.812		
13,000.0	7,759.0	12,960.9	7,759.0	88.9	88.2	90.00	-4,821.6	548.2	312.2	137.1	175.04	1.783		
13,100.0	7,759.0	13,060.9	7,759.0	90.6	89.9	90.00	-4,921.6	546.2	313.4	134.9	178.50	1.756		
13,200.0	7,759.0	13,160.9	7,759.0	92.3	91.6	90.00	-5,021.6	544.2	314.6	132.7	181.97	1.729		
13,300.0	7,759.0	13,260.9	7,759.0	94.0	93.3	90.00	-5,121.6	542.2	315.9	130.5	185.43	1.704		
13,400.0	7,759.0	13,360.9	7,759.0	95.7	95.0	90.00	-5,221.5	540.2	317.1	128.2	188.90	1.679		
13,500.0	7,759.0	13,460.9	7,759.0	97.5	96.8	90.00	-5,321.5	538.2	318.4	126.0	192.37	1.655		
13,600.0	7,759.0	13,560.9	7,759.0	99.2	98.5	90.00	-5,421.5	536.2	319.6	123.8	195.84	1.632		
13,700.0	7,759.0	13,660.9	7,759.0	100.9	100.2	90.00	-5,521.5	534.2	320.9	121.6	199.32	1.610		
13,800.0	7,759.0	13,760.9	7,759.0	102.6	101.9	90.00	-5,621.4	532.2	322.1	119.3	202.79	1.588		
13,900.0	7,759.0	13,860.9	7,759.0	104.3	103.7	90.00	-5,721.4	530.2	323.4	117.1	206.26	1.568		
14,000.0	7,759.0	13,960.9	7,759.0	106.0	105.4	90.00	-5,821.4	528.2	324.6	114.9	209.74	1.548		
14,100.0	7,759.0	14,060.8	7,759.0	107.8	107.1	90.00	-5,921.3	526.2	325.9	112.6	213.22	1.528		
14,200.0	7,759.0	14,160.8	7,759.0	109.5	108.8	90.00	-6,021.3	524.2	327.1	110.4	216.70	1.509		
14,300.0	7,759.0	14,260.8	7,759.0	111.2	110.6	90.00	-6,121.3	522.2	328.3	108.2	220.17	1.491 Level 3		
14,400.0	7,759.0	14,360.8	7,759.0	112.9	112.3	90.00	-6,221.3	520.2	329.6	105.9	223.65	1.474 Level 3		
14,500.0	7,759.0	14,460.8	7,759.0	114.6	114.0	90.00	-6,321.2	518.3	330.8	103.7	227.14	1.457 Level 3		
14,600.0	7,759.0	14,560.8	7,759.0	116.4	115.8	90.00	-6,421.2	516.3	332.1	101.5	230.62	1.440 Level 3		
14,700.0	7,759.0	14,660.8	7,759.0	118.1	117.5	90.00	-6,521.2	514.3	333.3	99.2	234.10	1.424 Level 3		
14,800.0	7,759.0	14,760.8	7,759.0	119.8	119.2	90.00	-6,621.2	512.3	334.6	97.0	237.58	1.408 Level 3		
14,900.0	7,759.0	14,860.8	7,759.0	121.5	121.0	90.00	-6,721.1	510.3	335.8	94.7	241.07	1.393 Level 3		
15,000.0	7,759.0	14,960.8	7,759.0	123.3	122.7	90.00	-6,821.1	508.3	337.1	92.5	244.55	1.378 Level 3		
15,100.0	7,759.0	15,060.8	7,759.0	125.0	124.4	90.00	-6,921.1	506.3	338.3	90.3	248.04	1.364 Level 3		
15,200.0	7,759.0	15,160.8	7,759.0	126.7	126.2	90.00	-7,021.0	504.3	339.6	88.0	251.52	1.350 Level 3		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2D-7H-E168 - HZ - Plan #1		Offset Site Error:		0.0 ft	
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft	
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	Separation			Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor						
15,300.0	7,759.0	15,260.8	7,759.0	128.5	127.9	90.00	-7,121.0	502.3	340.8	85.8	255.01	1.336	Level 3					
15,400.0	7,759.0	15,360.7	7,759.0	130.2	129.6	90.00	-7,221.0	500.3	342.0	83.5	258.50	1.323	Level 3					
15,500.0	7,759.0	15,460.7	7,759.0	131.9	131.4	90.00	-7,321.0	498.3	343.3	81.3	261.98	1.310	Level 3					
15,600.0	7,759.0	15,560.7	7,759.0	133.7	133.1	90.00	-7,420.9	496.3	344.5	79.1	265.47	1.298	Level 3					
15,700.0	7,759.0	15,660.7	7,759.0	135.4	134.9	90.00	-7,520.9	494.3	345.8	76.8	268.96	1.286	Level 3					
15,800.0	7,759.0	15,760.7	7,759.0	137.1	136.6	90.00	-7,620.9	492.3	347.0	74.6	272.45	1.274	Level 3					
15,900.0	7,759.0	15,860.7	7,759.0	138.9	138.3	90.00	-7,720.8	490.3	348.3	72.3	275.94	1.262	Level 3					
16,000.0	7,759.0	15,960.7	7,759.0	140.6	140.1	90.00	-7,820.8	488.3	349.5	70.1	279.43	1.251	Level 3					
16,036.2	7,759.0	15,996.9	7,759.0	141.2	140.7	90.00	-7,857.0	487.6	350.0	69.3	280.69	1.247	Level 2, SF					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #1														Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	40.09	6.0	5.0	7.8						
100.0	100.0	100.0	100.0	0.1	0.1	40.09	6.0	5.0	7.8	7.5	0.26	29.833			
200.0	200.0	200.0	200.0	0.3	0.3	40.09	6.0	5.0	7.8	7.2	0.61	12.786			
300.0	300.0	300.0	300.0	0.5	0.5	40.09	6.0	5.0	7.8	6.9	0.96	8.136 CC, ES			
400.0	400.0	399.9	399.9	0.7	0.7	42.25	6.4	5.8	8.6	7.3	1.31	6.587			
500.0	500.0	499.7	499.6	0.8	0.8	46.80	7.6	8.1	11.1	9.5	1.66	6.692			
600.0	600.0	599.3	599.2	1.0	1.0	51.06	9.6	11.9	15.4	13.3	2.02	7.609			
700.0	700.0	698.8	698.5	1.2	1.2	54.15	12.5	17.3	21.4	19.0	2.38	8.969			
800.0	800.0	798.1	797.5	1.4	1.4	56.25	16.1	24.1	29.1	26.4	2.76	10.575			
900.0	900.0	897.1	896.0	1.5	1.6	57.66	20.6	32.5	38.6	35.5	3.14	12.314			
1,000.0	1,000.0	995.7	994.0	1.7	1.9	58.64	25.8	42.3	49.9	46.3	3.53	14.118			
1,100.0	1,100.0	1,094.0	1,091.4	1.9	2.2	7.41	31.8	53.5	62.0	58.2	3.74	16.557			
1,200.0	1,200.0	1,192.1	1,188.5	2.1	2.4	8.16	38.5	66.2	74.0	70.0	4.09	18.111			
1,300.0	1,299.9	1,290.0	1,285.1	2.2	2.8	8.90	46.0	80.4	86.1	81.7	4.43	19.425			
1,400.0	1,399.7	1,387.7	1,381.1	2.4	3.1	9.62	54.3	95.9	98.2	93.4	4.78	20.551			
1,500.0	1,499.4	1,486.8	1,478.5	2.6	3.4	10.34	63.1	112.6	109.6	104.4	5.13	21.378			
1,600.0	1,598.9	1,586.4	1,576.2	2.8	3.8	11.09	72.0	129.3	119.3	113.8	5.47	21.789			
1,700.0	1,698.3	1,686.0	1,674.1	3.0	4.2	11.89	80.9	146.0	127.3	121.5	5.82	21.855			
1,800.0	1,797.4	1,785.8	1,772.0	3.3	4.5	12.75	89.8	162.8	133.6	127.4	6.18	21.633			
1,900.0	1,896.3	1,885.7	1,870.1	3.5	4.9	13.71	98.7	179.6	138.3	131.8	6.53	21.168			
2,000.0	1,995.0	1,985.6	1,968.1	3.8	5.3	14.74	107.7	196.4	141.8	134.9	6.90	20.548			
2,100.0	2,093.7	2,085.5	2,066.2	4.1	5.6	15.73	116.6	213.2	145.2	138.0	7.27	19.970			
2,200.0	2,192.4	2,185.4	2,164.3	4.4	6.0	16.68	125.5	229.9	148.8	141.1	7.65	19.439			
2,300.0	2,291.1	2,285.3	2,262.4	4.7	6.4	17.58	134.4	246.7	152.3	144.3	8.04	18.949			
2,400.0	2,389.8	2,385.2	2,360.5	5.0	6.7	18.44	143.3	263.5	155.9	147.5	8.43	18.494			
2,500.0	2,488.5	2,485.1	2,458.6	5.3	7.1	19.26	152.3	280.3	159.5	150.7	8.83	18.072			
2,600.0	2,587.2	2,585.0	2,556.6	5.6	7.5	20.04	161.2	297.1	163.2	153.9	9.23	17.677			
2,700.0	2,685.9	2,684.9	2,654.7	5.9	7.9	20.79	170.1	313.9	166.9	157.2	9.64	17.307			
2,800.0	2,784.6	2,784.8	2,752.8	6.2	8.2	21.51	179.0	330.7	170.6	160.5	10.06	16.960			
2,900.0	2,883.3	2,884.8	2,850.9	6.5	8.6	22.20	188.0	347.5	174.3	163.8	10.48	16.634			
3,000.0	2,982.0	2,984.7	2,949.0	6.9	9.0	22.86	196.9	364.2	178.1	167.2	10.91	16.327			
3,100.0	3,080.7	3,084.6	3,047.1	7.2	9.4	23.49	205.8	381.0	181.8	170.5	11.34	16.037			
3,200.0	3,179.4	3,184.5	3,145.1	7.5	9.7	24.09	214.7	397.8	185.6	173.9	11.78	15.763			
3,300.0	3,278.1	3,284.4	3,243.2	7.8	10.1	24.67	223.6	414.6	189.5	177.2	12.22	15.504			
3,400.0	3,376.8	3,384.3	3,341.3	8.1	10.5	25.23	232.6	431.4	193.3	180.6	12.67	15.259			
3,500.0	3,475.5	3,484.2	3,439.4	8.5	10.9	25.76	241.5	448.2	197.2	184.0	13.12	15.026			
3,600.0	3,574.2	3,584.1	3,537.5	8.8	11.2	26.28	250.4	465.0	201.0	187.5	13.58	14.806			
3,700.0	3,672.9	3,684.0	3,635.6	9.1	11.6	26.77	259.3	481.7	204.9	190.9	14.04	14.596			
3,800.0	3,771.6	3,783.9	3,733.6	9.4	12.0	27.25	268.2	498.5	208.8	194.3	14.51	14.396			
3,900.0	3,870.2	3,883.8	3,831.7	9.8	12.4	27.71	277.2	515.3	212.7	197.8	14.98	14.207			
4,000.0	3,968.9	3,983.8	3,929.8	10.1	12.7	28.15	286.1	532.1	216.7	201.2	15.45	14.026			
4,100.0	4,067.6	4,083.7	4,027.9	10.4	13.1	28.58	295.0	548.9	220.6	204.7	15.93	13.854			
4,200.0	4,166.3	4,183.6	4,126.0	10.7	13.5	28.99	303.9	565.7	224.6	208.2	16.41	13.689			
4,300.0	4,265.0	4,283.5	4,224.1	11.1	13.9	29.39	312.8	582.5	228.5	211.7	16.89	13.532			
4,400.0	4,363.7	4,383.4	4,322.1	11.4	14.3	29.77	321.8	599.3	232.5	215.1	17.38	13.382			
4,500.0	4,462.4	4,483.3	4,420.2	11.7	14.6	30.15	330.7	616.0	236.5	218.6	17.87	13.239			
4,600.0	4,561.1	4,583.2	4,518.3	12.0	15.0	30.50	339.6	632.8	240.5	222.2	18.36	13.102			
4,700.0	4,659.8	4,683.1	4,616.4	12.4	15.4	30.85	348.5	649.6	244.5	225.7	18.85	12.970			
4,800.0	4,758.5	4,783.0	4,714.5	12.7	15.8	31.19	357.5	666.4	248.5	229.2	19.35	12.844			
4,900.0	4,857.2	4,882.9	4,812.6	13.0	16.1	31.51	366.4	683.2	252.6	232.7	19.85	12.724			
5,000.0	4,955.9	4,982.8	4,910.6	13.4	16.5	31.83	375.3	700.0	256.6	236.2	20.35	12.608			
5,100.0	5,054.6	5,082.8	5,008.7	13.7	16.9	32.13	384.2	716.8	260.6	239.8	20.86	12.497			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,200.0	5,153.3	5,182.7	5,106.8	14.0	17.3	32.43	393.1	733.5	264.7	243.3	21.36	12.390	
5,300.0	5,252.0	5,282.6	5,204.9	14.3	17.7	32.72	402.1	750.3	268.7	246.9	21.87	12.288	
5,400.0	5,350.7	5,382.5	5,303.0	14.7	18.0	32.99	411.0	767.1	272.8	250.4	22.38	12.189	
5,500.0	5,449.4	5,482.4	5,401.1	15.0	18.4	33.27	419.9	783.9	276.9	254.0	22.89	12.094	
5,600.0	5,548.1	5,582.3	5,499.1	15.3	18.8	33.53	428.8	800.7	280.9	257.5	23.40	12.003	
5,700.0	5,646.8	5,682.2	5,597.2	15.7	19.2	33.78	437.7	817.5	285.0	261.1	23.92	11.915	
5,800.0	5,745.5	5,782.1	5,695.3	16.0	19.6	34.03	446.7	834.3	289.1	264.6	24.44	11.830	
5,900.0	5,844.2	5,882.0	5,793.4	16.3	19.9	34.27	455.6	851.1	293.2	268.2	24.95	11.748	
6,000.0	5,942.9	5,981.9	5,891.5	16.6	20.3	34.51	464.5	867.8	297.3	271.8	25.47	11.669	
6,100.0	6,041.6	6,081.8	5,989.6	17.0	20.7	34.73	473.4	884.6	301.4	275.4	26.00	11.593	
6,200.0	6,140.3	6,181.7	6,087.6	17.3	21.1	34.96	482.4	901.4	305.5	278.9	26.52	11.519	
6,300.0	6,239.0	6,281.7	6,185.7	17.6	21.4	35.17	491.3	918.2	309.6	282.5	27.04	11.448	
6,400.0	6,337.7	6,381.6	6,283.8	18.0	21.8	35.38	500.2	935.0	313.7	286.1	27.57	11.380	
6,500.0	6,436.4	6,481.5	6,381.9	18.3	22.2	35.59	509.1	951.8	317.8	289.7	28.09	11.313	
6,600.0	6,535.1	6,581.4	6,480.0	18.6	22.6	35.79	518.0	968.6	321.9	293.3	28.62	11.249	
6,700.0	6,633.8	6,681.3	6,578.1	19.0	23.0	35.98	527.0	985.3	326.0	296.9	29.15	11.186	
6,800.0	6,732.5	6,781.2	6,676.2	19.3	23.3	36.17	535.9	1,002.1	330.2	300.5	29.68	11.126	
6,900.0	6,831.2	6,881.1	6,774.2	19.6	23.7	36.36	544.8	1,018.9	334.3	304.1	30.21	11.068	
7,000.0	6,929.9	6,981.0	6,872.3	20.0	24.1	36.54	553.7	1,035.7	338.4	307.7	30.74	11.011	
7,100.0	7,028.5	7,080.9	6,970.4	20.3	24.5	36.71	562.6	1,052.5	342.6	311.3	31.27	10.956	
7,200.0	7,127.2	7,180.8	7,068.5	20.6	24.8	36.88	571.6	1,069.3	346.7	314.9	31.80	10.903	
7,300.0	7,226.2	7,280.8	7,166.7	20.9	25.2	-21.81	580.0	1,086.1	350.5	318.5	31.96	10.966	
7,400.0	7,324.1	7,382.7	7,266.9	21.0	25.5	-58.62	576.0	1,103.2	353.4	321.9	31.48	11.223	
7,500.0	7,417.9	7,486.4	7,366.5	21.0	25.6	-71.31	553.4	1,120.3	355.1	324.4	30.73	11.555	
7,600.0	7,504.9	7,591.9	7,462.1	20.9	25.6	-77.66	512.2	1,136.6	355.7	325.9	29.86	11.914	
7,700.0	7,582.3	7,699.1	7,549.9	20.8	25.6	-81.67	452.8	1,151.7	355.1	326.1	29.01	12.238	
7,800.0	7,647.8	7,807.7	7,626.2	20.6	25.5	-84.53	376.9	1,164.7	353.1	324.7	28.34	12.457	
7,900.0	7,699.5	7,917.5	7,687.5	20.5	25.4	-86.69	286.7	1,175.2	349.8	321.8	27.96	12.509	
8,000.0	7,735.7	8,028.0	7,731.1	20.5	25.3	-88.32	185.6	1,182.7	345.1	317.2	27.92	12.360	
8,100.0	7,755.4	8,138.8	7,754.8	20.6	25.3	-89.49	77.6	1,186.7	339.3	311.1	28.23	12.020	
8,200.0	7,759.0	8,245.5	7,759.0	20.8	25.4	-90.01	-28.9	1,187.5	332.5	303.6	28.87	11.517	
8,300.0	7,759.0	8,345.3	7,759.0	21.2	25.6	-90.01	-128.7	1,187.5	325.5	295.6	29.95	10.868	
8,400.0	7,759.0	8,445.0	7,759.0	21.7	26.0	-90.01	-228.5	1,187.5	318.5	287.2	31.38	10.152	
8,500.0	7,759.0	8,544.8	7,759.0	22.3	26.4	-90.01	-328.2	1,187.5	311.7	278.7	33.01	9.441	
8,600.0	7,759.0	8,644.6	7,759.0	23.0	27.0	-90.01	-428.1	1,187.5	306.2	271.5	34.68	8.829	
8,700.0	7,759.0	8,744.6	7,759.0	23.8	27.6	-90.01	-528.0	1,187.5	302.4	265.9	36.50	8.286	
8,800.0	7,759.0	8,844.5	7,759.0	24.7	28.3	-90.01	-628.0	1,187.5	300.4	262.0	38.45	7.815	
8,899.2	7,759.0	8,943.7	7,759.0	25.6	29.2	-90.01	-727.2	1,187.5	299.9	259.2	40.63	7.381	
8,900.0	7,759.0	8,944.5	7,759.0	25.6	29.2	-90.01	-728.0	1,187.5	300.1	259.4	40.65	7.383	
9,000.0	7,759.0	9,044.5	7,759.0	26.6	30.1	-90.01	-828.0	1,187.5	300.1	256.8	43.24	6.940	
9,100.0	7,759.0	9,144.5	7,759.0	27.7	31.1	-90.01	-928.0	1,187.5	300.1	254.1	45.95	6.530	
9,200.0	7,759.0	9,244.5	7,759.0	28.9	32.1	-90.01	-1,028.0	1,187.5	300.1	251.3	48.77	6.153	
9,300.0	7,759.0	9,344.5	7,759.0	30.1	33.2	-90.01	-1,128.0	1,187.5	300.1	248.4	51.67	5.808	
9,342.9	7,759.0	9,387.4	7,759.0	30.7	33.7	-90.01	-1,170.8	1,187.5	300.1	247.3	52.86	5.678	
9,400.0	7,759.0	9,444.5	7,759.0	31.4	34.4	-90.01	-1,228.0	1,187.5	300.2	245.7	54.46	5.512	
9,500.0	7,759.0	9,544.5	7,759.0	32.7	35.6	-90.01	-1,328.0	1,187.5	300.9	243.5	57.45	5.239	
9,600.0	7,759.0	9,644.5	7,759.0	34.1	36.9	-90.01	-1,428.0	1,187.5	301.7	241.2	60.52	4.984	
9,700.0	7,759.0	9,744.5	7,759.0	35.5	38.2	-90.01	-1,528.0	1,187.5	302.4	238.8	63.65	4.752	
9,800.0	7,759.0	9,844.5	7,759.0	36.9	39.5	-90.01	-1,628.0	1,187.5	303.2	236.4	66.81	4.538	
9,900.0	7,759.0	9,944.5	7,759.0	38.4	40.9	-90.01	-1,728.0	1,187.5	303.9	233.9	70.00	4.342	
10,000.0	7,759.0	10,044.5	7,759.0	39.8	42.3	-90.01	-1,828.0	1,187.5	304.7	231.5	73.23	4.161	
10,100.0	7,759.0	10,144.5	7,759.0	41.3	43.7	-90.01	-1,928.0	1,187.5	305.4	229.0	76.48	3.994	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,200.0	7,759.0	10,244.5	7,759.0	42.8	45.1	-90.01	-2,028.0	1,187.5	306.2	226.4	79.75	3.839	
10,300.0	7,759.0	10,344.5	7,759.0	44.4	46.6	-90.01	-2,128.0	1,187.5	306.9	223.9	83.04	3.696	
10,400.0	7,759.0	10,444.5	7,759.0	45.9	48.1	-90.01	-2,228.0	1,187.5	307.7	221.3	86.34	3.563	
10,500.0	7,759.0	10,544.5	7,759.0	47.5	49.6	-90.01	-2,327.9	1,187.5	308.4	218.8	89.67	3.440	
10,600.0	7,759.0	10,644.5	7,759.0	49.1	51.1	-90.01	-2,427.9	1,187.5	309.2	216.2	93.00	3.324	
10,700.0	7,759.0	10,744.5	7,759.0	50.6	52.6	-90.01	-2,527.9	1,187.5	309.9	213.6	96.35	3.217	
10,800.0	7,759.0	10,844.5	7,759.0	52.2	54.2	-90.01	-2,627.9	1,187.5	310.7	211.0	99.71	3.116	
10,900.0	7,759.0	10,944.5	7,759.0	53.9	55.7	-90.01	-2,727.9	1,187.5	311.4	208.4	103.08	3.021	
11,000.0	7,759.0	11,044.5	7,759.0	55.5	57.3	-90.01	-2,827.9	1,187.5	312.2	205.7	106.46	2.932	
11,100.0	7,759.0	11,144.5	7,759.0	57.1	58.9	-90.01	-2,927.9	1,187.5	312.9	203.1	109.84	2.849	
11,200.0	7,759.0	11,244.5	7,759.0	58.7	60.5	-90.01	-3,027.9	1,187.5	313.7	200.4	113.24	2.770	
11,300.0	7,759.0	11,344.5	7,759.0	60.4	62.1	-90.01	-3,127.9	1,187.5	314.4	197.8	116.64	2.696	
11,400.0	7,759.0	11,444.5	7,759.0	62.0	63.7	-90.00	-3,227.9	1,187.5	315.2	195.1	120.04	2.626	
11,500.0	7,759.0	11,544.5	7,759.0	63.7	65.3	-90.00	-3,327.9	1,187.5	315.9	192.5	123.46	2.559	
11,600.0	7,759.0	11,644.5	7,759.0	65.3	66.9	-90.00	-3,427.9	1,187.5	316.7	189.8	126.87	2.496	
11,700.0	7,759.0	11,744.5	7,759.0	67.0	68.6	-90.00	-3,527.9	1,187.5	317.4	187.1	130.30	2.436	
11,800.0	7,759.0	11,844.5	7,759.0	68.7	70.2	-90.00	-3,627.9	1,187.5	318.2	184.5	133.72	2.379	
11,900.0	7,759.0	11,944.5	7,759.0	70.3	71.8	-90.00	-3,727.9	1,187.5	318.9	181.8	137.15	2.325	
12,000.0	7,759.0	12,044.5	7,759.0	72.0	73.5	-90.00	-3,827.9	1,187.5	319.7	179.1	140.59	2.274	
12,100.0	7,759.0	12,144.5	7,759.0	73.7	75.1	-90.00	-3,927.9	1,187.5	320.4	176.4	144.03	2.225	
12,200.0	7,759.0	12,244.5	7,759.0	75.4	76.8	-90.00	-4,027.9	1,187.5	321.2	173.7	147.47	2.178	
12,300.0	7,759.0	12,344.5	7,759.0	77.0	78.4	-90.00	-4,127.9	1,187.5	321.9	171.0	150.91	2.133	
12,400.0	7,759.0	12,444.5	7,759.0	78.7	80.1	-90.00	-4,227.9	1,187.5	322.7	168.3	154.36	2.090	
12,500.0	7,759.0	12,544.4	7,759.0	80.4	81.8	-90.00	-4,327.9	1,187.5	323.4	165.6	157.81	2.050	
12,600.0	7,759.0	12,644.4	7,759.0	82.1	83.4	-90.00	-4,427.9	1,187.5	324.2	162.9	161.26	2.010	
12,700.0	7,759.0	12,744.4	7,759.0	83.8	85.1	-90.00	-4,527.9	1,187.5	324.9	160.2	164.72	1.973	
12,800.0	7,759.0	12,844.4	7,759.0	85.5	86.8	-90.00	-4,627.9	1,187.5	325.7	157.5	168.18	1.937	
12,900.0	7,759.0	12,944.4	7,759.0	87.2	88.5	-90.00	-4,727.9	1,187.5	326.4	154.8	171.63	1.902	
13,000.0	7,759.0	13,044.4	7,759.0	88.9	90.2	-90.00	-4,827.9	1,187.5	327.2	152.1	175.10	1.869	
13,100.0	7,759.0	13,144.4	7,759.0	90.6	91.8	-90.00	-4,927.9	1,187.5	327.9	149.4	178.56	1.837	
13,200.0	7,759.0	13,244.4	7,759.0	92.3	93.5	-90.00	-5,027.9	1,187.5	328.7	146.7	182.02	1.806	
13,300.0	7,759.0	13,344.4	7,759.0	94.0	95.2	-90.00	-5,127.9	1,187.5	329.4	143.9	185.49	1.776	
13,400.0	7,759.0	13,444.4	7,759.0	95.7	96.9	-90.00	-5,227.9	1,187.5	330.2	141.2	188.96	1.747	
13,500.0	7,759.0	13,544.4	7,759.0	97.5	98.6	-90.00	-5,327.9	1,187.5	330.9	138.5	192.43	1.720	
13,600.0	7,759.0	13,644.4	7,759.0	99.2	100.3	-90.00	-5,427.9	1,187.5	331.7	135.8	195.90	1.693	
13,700.0	7,759.0	13,744.4	7,759.0	100.9	102.0	-90.00	-5,527.9	1,187.5	332.4	133.1	199.37	1.667	
13,800.0	7,759.0	13,844.4	7,759.0	102.6	103.7	-90.00	-5,627.9	1,187.5	333.2	130.3	202.84	1.643	
13,900.0	7,759.0	13,944.4	7,759.0	104.3	105.4	-90.00	-5,727.9	1,187.5	333.9	127.6	206.32	1.619	
14,000.0	7,759.0	14,044.4	7,759.0	106.0	107.1	-90.00	-5,827.8	1,187.5	334.7	124.9	209.79	1.595	
14,100.0	7,759.0	14,144.4	7,759.0	107.8	108.8	-90.00	-5,927.8	1,187.5	335.4	122.2	213.27	1.573	
14,200.0	7,759.0	14,244.4	7,759.0	109.5	110.5	-90.00	-6,027.8	1,187.5	336.2	119.4	216.75	1.551	
14,300.0	7,759.0	14,344.4	7,759.0	111.2	112.2	-90.00	-6,127.8	1,187.5	336.9	116.7	220.23	1.530	
14,400.0	7,759.0	14,444.4	7,759.0	112.9	114.0	-90.00	-6,227.8	1,187.5	337.7	114.0	223.71	1.510	
14,500.0	7,759.0	14,544.4	7,759.0	114.6	115.7	-90.00	-6,327.8	1,187.5	338.4	111.3	227.19	1.490 Level 3	
14,600.0	7,759.0	14,644.4	7,759.0	116.4	117.4	-90.00	-6,427.8	1,187.5	339.2	108.5	230.67	1.470 Level 3	
14,700.0	7,759.0	14,744.4	7,759.0	118.1	119.1	-90.00	-6,527.8	1,187.5	339.9	105.8	234.15	1.452 Level 3	
14,800.0	7,759.0	14,844.4	7,759.0	119.8	120.8	-90.00	-6,627.8	1,187.5	340.7	103.1	237.63	1.434 Level 3	
14,900.0	7,759.0	14,944.4	7,759.0	121.5	122.5	-90.00	-6,727.8	1,187.5	341.4	100.3	241.12	1.416 Level 3	
15,000.0	7,759.0	15,044.4	7,759.0	123.3	124.2	-90.00	-6,827.8	1,187.5	342.2	97.6	244.60	1.399 Level 3	
15,100.0	7,759.0	15,144.4	7,759.0	125.0	126.0	-90.00	-6,927.8	1,187.5	342.9	94.9	248.08	1.382 Level 3	
15,200.0	7,759.0	15,244.4	7,759.0	126.7	127.7	-90.00	-7,027.8	1,187.5	343.7	92.1	251.57	1.366 Level 3	
15,300.0	7,759.0	15,344.4	7,759.0	128.5	129.4	-90.00	-7,127.8	1,187.5	344.4	89.4	255.06	1.350 Level 3	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design											S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2F-7H-E168 - HZ - Plan #1			Offset Site Error:		0.0 ft
Survey Program:											0-Geolink MWD			Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)						
15,400.0	7,759.0	15,444.4	7,759.0	130.2	131.1	-90.00	-7,227.8	1,187.5	345.2	86.6	258.54	1.335	Level 3			
15,500.0	7,759.0	15,544.4	7,759.0	131.9	132.8	-90.00	-7,327.8	1,187.5	345.9	83.9	262.03	1.320	Level 3			
15,600.0	7,759.0	15,644.4	7,759.0	133.7	134.6	-90.00	-7,427.8	1,187.5	346.7	81.2	265.52	1.306	Level 3			
15,700.0	7,759.0	15,744.4	7,759.0	135.4	136.3	-90.00	-7,527.8	1,187.5	347.4	78.4	269.01	1.292	Level 3			
15,800.0	7,759.0	15,844.4	7,759.0	137.1	138.0	-90.00	-7,627.8	1,187.5	348.2	75.7	272.50	1.278	Level 3			
15,900.0	7,759.0	15,944.4	7,759.0	138.9	139.7	-90.00	-7,727.8	1,187.5	348.9	73.0	275.98	1.264	Level 3			
16,000.0	7,759.0	16,044.4	7,759.0	140.6	141.5	-90.00	-7,827.8	1,187.5	349.7	70.2	279.47	1.251	Level 3			
16,036.2	7,759.0	16,080.5	7,759.0	141.2	142.1	-90.00	-7,864.0	1,187.5	350.0	69.2	280.74	1.247	Level 2, SF			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.29	-0.1	10.0	10.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.29	-0.1	10.0	10.0	9.7	0.26	38.197		
200.0	200.0	200.0	200.0	0.3	0.3	90.29	-0.1	10.0	10.0	9.4	0.61	16.370 CC, ES		
300.0	300.0	299.8	299.8	0.5	0.5	88.52	0.3	10.8	10.8	9.8	0.96	11.261		
400.0	400.0	399.6	399.6	0.7	0.7	84.51	1.3	13.2	13.3	12.0	1.31	10.137 SF		
500.0	500.0	499.2	499.1	0.8	0.8	80.39	2.9	17.2	17.5	15.8	1.66	10.509		
600.0	600.0	598.7	598.4	1.0	1.0	77.12	5.2	22.8	23.5	21.4	2.03	11.587		
700.0	700.0	697.9	697.3	1.2	1.3	74.77	8.2	30.0	31.2	28.8	2.40	13.028		
800.0	800.0	796.9	795.8	1.4	1.5	73.12	11.8	38.7	40.7	37.9	2.78	14.657		
900.0	900.0	895.4	893.7	1.5	1.7	71.95	16.0	49.0	51.9	48.7	3.17	16.375		
1,000.0	1,000.0	993.6	991.1	1.7	2.0	71.10	20.8	60.8	64.8	61.3	3.58	18.125		
1,100.0	1,100.0	1,091.4	1,087.8	1.9	2.3	18.63	26.2	74.0	78.6	74.9	3.74	21.037		
1,200.0	1,200.0	1,189.0	1,184.1	2.1	2.6	18.58	32.3	88.8	92.5	88.4	4.08	22.650		
1,300.0	1,299.9	1,286.3	1,279.8	2.2	3.0	18.78	39.0	105.0	106.4	102.0	4.43	24.020		
1,400.0	1,399.7	1,383.4	1,375.0	2.4	3.3	19.14	46.2	122.7	120.4	115.6	4.78	25.197		
1,500.0	1,499.4	1,480.3	1,469.7	2.6	3.7	19.62	54.1	141.8	134.4	129.2	5.13	26.217		
1,600.0	1,598.9	1,577.6	1,564.4	2.8	4.1	20.18	62.5	162.4	148.4	142.9	5.48	27.085		
1,700.0	1,698.3	1,676.8	1,660.8	3.0	4.6	20.85	71.3	183.8	161.2	155.3	5.84	27.608		
1,800.0	1,797.4	1,776.1	1,757.4	3.3	5.0	21.63	80.1	205.2	172.4	166.2	6.20	27.783		
1,900.0	1,896.3	1,875.6	1,854.2	3.5	5.4	22.53	89.0	226.7	182.0	175.4	6.58	27.657		
2,000.0	1,995.0	1,975.2	1,951.0	3.8	5.9	23.51	97.8	248.2	190.6	183.6	6.97	27.330		
2,100.0	2,093.7	2,074.8	2,047.8	4.1	6.3	24.43	106.6	269.7	199.1	191.7	7.37	27.002		
2,200.0	2,192.4	2,174.4	2,144.7	4.4	6.7	25.26	115.5	291.2	207.7	199.9	7.78	26.687		
2,300.0	2,291.1	2,274.0	2,241.5	4.7	7.2	26.04	124.3	312.7	216.3	208.1	8.20	26.384		
2,400.0	2,389.8	2,373.5	2,338.4	5.0	7.6	26.75	133.1	334.2	224.9	216.3	8.62	26.094		
2,500.0	2,488.5	2,473.1	2,435.2	5.3	8.1	27.41	141.9	355.7	233.6	224.6	9.05	25.815		
2,600.0	2,587.2	2,572.7	2,532.0	5.6	8.5	28.02	150.8	377.2	242.3	232.8	9.49	25.548		
2,700.0	2,685.9	2,672.3	2,628.9	5.9	9.0	28.59	159.6	398.7	251.1	241.1	9.93	25.293		
2,800.0	2,784.6	2,771.9	2,725.7	6.2	9.4	29.12	168.4	420.2	259.8	249.5	10.37	25.049		
2,900.0	2,883.3	2,871.5	2,822.5	6.5	9.8	29.62	177.3	441.7	268.6	257.8	10.82	24.815		
3,000.0	2,982.0	2,971.1	2,919.4	6.9	10.3	30.08	186.1	463.2	277.4	266.1	11.28	24.592		
3,100.0	3,080.7	3,070.7	3,016.2	7.2	10.7	30.52	194.9	484.7	286.2	274.5	11.74	24.379		
3,200.0	3,179.4	3,170.2	3,113.1	7.5	11.2	30.93	203.7	506.2	295.1	282.9	12.20	24.176		
3,300.0	3,278.1	3,269.8	3,209.9	7.8	11.6	31.32	212.6	527.7	303.9	291.2	12.67	23.982		
3,400.0	3,376.8	3,369.4	3,306.7	8.1	12.1	31.68	221.4	549.1	312.8	299.6	13.14	23.797		
3,500.0	3,475.5	3,469.0	3,403.6	8.5	12.5	32.03	230.2	570.6	321.6	308.0	13.62	23.620		
3,600.0	3,574.2	3,568.6	3,500.4	8.8	13.0	32.35	239.1	592.1	330.5	316.4	14.09	23.452		
3,700.0	3,672.9	3,668.2	3,597.3	9.1	13.4	32.66	247.9	613.6	339.4	324.8	14.57	23.290		
3,800.0	3,771.6	3,767.8	3,694.1	9.4	13.9	32.95	256.7	635.1	348.3	333.3	15.05	23.136		
3,900.0	3,870.2	3,867.4	3,790.9	9.8	14.3	33.23	265.6	656.6	357.2	341.7	15.54	22.989		
4,000.0	3,968.9	3,966.9	3,887.8	10.1	14.8	33.50	274.4	678.1	366.1	350.1	16.03	22.848		
4,100.0	4,067.6	4,066.5	3,984.6	10.4	15.2	33.75	283.2	699.6	375.1	358.6	16.51	22.713		
4,200.0	4,166.3	4,166.1	4,081.4	10.7	15.7	33.99	292.0	721.1	384.0	367.0	17.00	22.583		
4,300.0	4,265.0	4,265.7	4,178.3	11.1	16.1	34.22	300.9	742.6	392.9	375.4	17.50	22.460		
4,400.0	4,363.7	4,365.3	4,275.1	11.4	16.6	34.44	309.7	764.1	401.9	383.9	17.99	22.341		
4,500.0	4,462.4	4,464.9	4,372.0	11.7	17.0	34.65	318.5	785.6	410.8	392.4	18.48	22.227		
4,600.0	4,561.1	4,564.5	4,468.8	12.0	17.5	34.85	327.4	807.1	419.8	400.8	18.98	22.118		
4,700.0	4,659.8	4,664.1	4,565.6	12.4	17.9	35.05	336.2	828.6	428.8	409.3	19.48	22.013		
4,800.0	4,758.5	4,763.6	4,662.5	12.7	18.3	35.23	345.0	850.1	437.7	417.7	19.98	21.912		
4,900.0	4,857.2	4,863.2	4,759.3	13.0	18.8	35.41	353.8	871.6	446.7	426.2	20.48	21.815		
5,000.0	4,955.9	4,962.8	4,856.2	13.4	19.2	35.58	362.7	893.1	455.7	434.7	20.98	21.721		
5,100.0	5,054.6	5,062.4	4,953.0	13.7	19.7	35.74	371.5	914.6	464.6	443.2	21.48	21.631		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Woolley-Sosa 2E-7H-E168
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5019.0ft (Original Well Elev)
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky)	MD Reference:	WELL @ 5019.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Woolley-Sosa 2E-7H-E168	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,153.3	5,162.0	5,049.8	14.0	20.1	35.90	380.3	936.1	473.6	451.6	21.98	21.545		
5,300.0	5,252.0	5,261.6	5,146.7	14.3	20.6	36.05	389.2	957.6	482.6	460.1	22.49	21.461		
5,400.0	5,350.7	5,361.2	5,243.5	14.7	21.0	36.20	398.0	979.1	491.6	468.6	22.99	21.381		

Cathedral Energy Services

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: DJ Wattenberg
Reference Site: S7-T1N-R68W (Woolley-Sosa/Becky)
Site Error: 0.0ft
Reference Well: Woolley-Sosa 2E-7H-E168
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #2

Local Co-ordinate Reference: Well Woolley-Sosa 2E-7H-E168
TVD Reference: WELL @ 5019.0ft (Original Well Elev)
MD Reference: WELL @ 5019.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 5019.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

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

