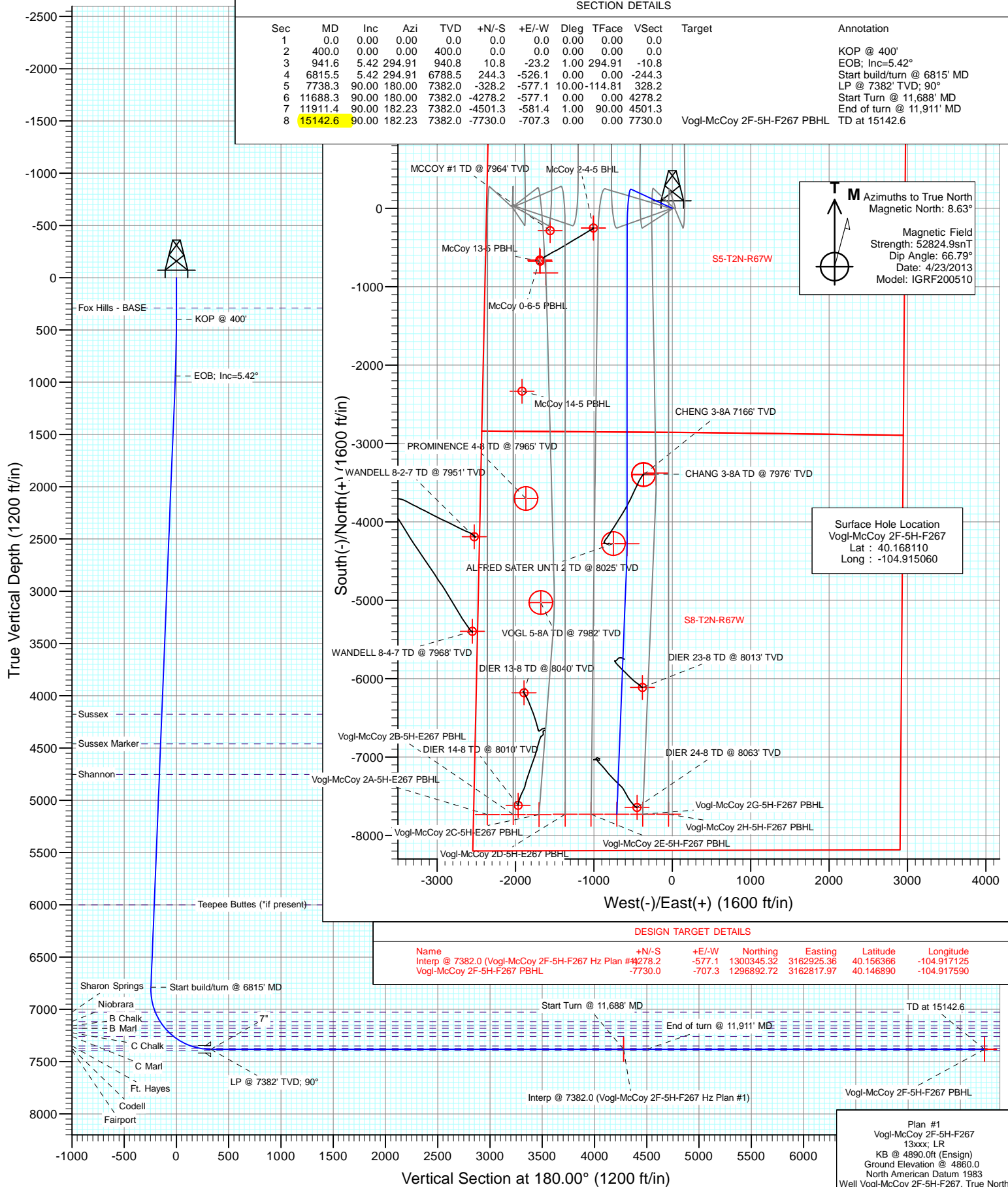




Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2F-5H-F267
Wellbore: Hz
Design: Plan #1



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4890.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4890.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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

Site		S5-T2N-R67W (Vogl-McCoy)			
Site Position:		Northing:	1,303,967.76 ft	Latitude:	40.166330
From:	Lat/Long	Easting:	3,161,787.74 ft	Longitude:	-104.921110
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.37 °

Well	Vogl-McCoy 2F-5H-F267					
Well Position	+N/-S	0.0 ft	Northing:	1,304,627.24 ft	Latitude:	40.168110
	+E/-W	0.0 ft	Easting:	3,163,474.23 ft	Longitude:	-104.915060
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,860.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/23/2013	8.63	66.79	52,825

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	180.00	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
941.6	5.42	294.91	940.8	10.8	-23.2	1.00	1.00	0.00	294.91	
6,815.5	5.42	294.91	6,788.5	244.3	-526.1	0.00	0.00	0.00	0.00	
7,738.3	90.00	180.00	7,382.0	-328.2	-577.1	10.00	9.17	-12.45	-114.81	
11,688.3	90.00	180.00	7,382.0	-4,278.2	-577.1	0.00	0.00	0.00	0.00	Interp @ 7382.0 (Vog
11,911.4	90.00	182.23	7,382.0	-4,501.3	-581.4	1.00	0.00	1.00	90.00	
15,142.6	90.00	182.23	7,382.0	-7,730.0	-707.3	0.00	0.00	0.00	0.00	Vogl-McCoy 2F-5H-F;

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4890.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4890.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
290.0	0.00	0.00	290.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	294.91	500.0	0.4	-0.8	-0.4	1.00	1.00	
600.0	2.00	294.91	600.0	1.5	-3.2	-1.5	1.00	1.00	
700.0	3.00	294.91	699.9	3.3	-7.1	-3.3	1.00	1.00	
800.0	4.00	294.91	799.7	5.9	-12.7	-5.9	1.00	1.00	
900.0	5.00	294.91	899.4	9.2	-19.8	-9.2	1.00	1.00	
941.6	5.42	294.91	940.8	10.8	-23.2	-10.8	1.00	1.00	EOB; Inc=5.42°
1,000.0	5.42	294.91	998.9	13.1	-28.2	-13.1	0.00	0.00	
1,100.0	5.42	294.91	1,098.5	17.1	-36.8	-17.1	0.00	0.00	
1,200.0	5.42	294.91	1,198.0	21.0	-45.3	-21.0	0.00	0.00	
1,300.0	5.42	294.91	1,297.6	25.0	-53.9	-25.0	0.00	0.00	
1,400.0	5.42	294.91	1,397.1	29.0	-62.4	-29.0	0.00	0.00	
1,500.0	5.42	294.91	1,496.7	33.0	-71.0	-33.0	0.00	0.00	
1,600.0	5.42	294.91	1,596.3	37.0	-79.6	-37.0	0.00	0.00	
1,700.0	5.42	294.91	1,695.8	40.9	-88.1	-40.9	0.00	0.00	
1,800.0	5.42	294.91	1,795.4	44.9	-96.7	-44.9	0.00	0.00	
1,900.0	5.42	294.91	1,894.9	48.9	-105.2	-48.9	0.00	0.00	
2,000.0	5.42	294.91	1,994.5	52.9	-113.8	-52.9	0.00	0.00	
2,100.0	5.42	294.91	2,094.0	56.8	-122.4	-56.8	0.00	0.00	
2,200.0	5.42	294.91	2,193.6	60.8	-130.9	-60.8	0.00	0.00	
2,300.0	5.42	294.91	2,293.1	64.8	-139.5	-64.8	0.00	0.00	
2,400.0	5.42	294.91	2,392.7	68.8	-148.1	-68.8	0.00	0.00	
2,500.0	5.42	294.91	2,492.2	72.7	-156.6	-72.7	0.00	0.00	
2,600.0	5.42	294.91	2,591.8	76.7	-165.2	-76.7	0.00	0.00	
2,700.0	5.42	294.91	2,691.3	80.7	-173.7	-80.7	0.00	0.00	
2,800.0	5.42	294.91	2,790.9	84.7	-182.3	-84.7	0.00	0.00	
2,900.0	5.42	294.91	2,890.4	88.6	-190.9	-88.6	0.00	0.00	
3,000.0	5.42	294.91	2,990.0	92.6	-199.4	-92.6	0.00	0.00	
3,100.0	5.42	294.91	3,089.6	96.6	-208.0	-96.6	0.00	0.00	
3,200.0	5.42	294.91	3,189.1	100.6	-216.5	-100.6	0.00	0.00	
3,300.0	5.42	294.91	3,288.7	104.5	-225.1	-104.5	0.00	0.00	
3,400.0	5.42	294.91	3,388.2	108.5	-233.7	-108.5	0.00	0.00	
3,500.0	5.42	294.91	3,487.8	112.5	-242.2	-112.5	0.00	0.00	
3,600.0	5.42	294.91	3,587.3	116.5	-250.8	-116.5	0.00	0.00	
3,700.0	5.42	294.91	3,686.9	120.4	-259.3	-120.4	0.00	0.00	
3,800.0	5.42	294.91	3,786.4	124.4	-267.9	-124.4	0.00	0.00	
3,900.0	5.42	294.91	3,886.0	128.4	-276.5	-128.4	0.00	0.00	
4,000.0	5.42	294.91	3,985.5	132.4	-285.0	-132.4	0.00	0.00	
4,100.0	5.42	294.91	4,085.1	136.3	-293.6	-136.3	0.00	0.00	
4,191.3	5.42	294.91	4,176.0	140.0	-301.4	-140.0	0.00	0.00	Sussex
4,200.0	5.42	294.91	4,184.6	140.3	-302.1	-140.3	0.00	0.00	
4,300.0	5.42	294.91	4,284.2	144.3	-310.7	-144.3	0.00	0.00	
4,400.0	5.42	294.91	4,383.8	148.3	-319.3	-148.3	0.00	0.00	
4,476.6	5.42	294.91	4,460.0	151.3	-325.8	-151.3	0.00	0.00	Sussex Marker
4,500.0	5.42	294.91	4,483.3	152.2	-327.8	-152.2	0.00	0.00	
4,600.0	5.42	294.91	4,582.9	156.2	-336.4	-156.2	0.00	0.00	
4,700.0	5.42	294.91	4,682.4	160.2	-345.0	-160.2	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4890.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4890.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,769.9	5.42	294.91	4,752.0	163.0	-350.9	-163.0	0.00	0.00	Shannon
4,800.0	5.42	294.91	4,782.0	164.2	-353.5	-164.2	0.00	0.00	
4,900.0	5.42	294.91	4,881.5	168.2	-362.1	-168.2	0.00	0.00	
5,000.0	5.42	294.91	4,981.1	172.1	-370.6	-172.1	0.00	0.00	
5,100.0	5.42	294.91	5,080.6	176.1	-379.2	-176.1	0.00	0.00	
5,200.0	5.42	294.91	5,180.2	180.1	-387.8	-180.1	0.00	0.00	
5,300.0	5.42	294.91	5,279.7	184.1	-396.3	-184.1	0.00	0.00	
5,400.0	5.42	294.91	5,379.3	188.0	-404.9	-188.0	0.00	0.00	
5,500.0	5.42	294.91	5,478.8	192.0	-413.4	-192.0	0.00	0.00	
5,600.0	5.42	294.91	5,578.4	196.0	-422.0	-196.0	0.00	0.00	
5,700.0	5.42	294.91	5,677.9	200.0	-430.6	-200.0	0.00	0.00	
5,800.0	5.42	294.91	5,777.5	203.9	-439.1	-203.9	0.00	0.00	
5,900.0	5.42	294.91	5,877.1	207.9	-447.7	-207.9	0.00	0.00	
6,000.0	5.42	294.91	5,976.6	211.9	-456.2	-211.9	0.00	0.00	
6,023.5	5.42	294.91	6,000.0	212.8	-458.3	-212.8	0.00	0.00	Teepee Buttes (*if present)
6,100.0	5.42	294.91	6,076.2	215.9	-464.8	-215.9	0.00	0.00	
6,200.0	5.42	294.91	6,175.7	219.8	-473.4	-219.8	0.00	0.00	
6,300.0	5.42	294.91	6,275.3	223.8	-481.9	-223.8	0.00	0.00	
6,400.0	5.42	294.91	6,374.8	227.8	-490.5	-227.8	0.00	0.00	
6,500.0	5.42	294.91	6,474.4	231.8	-499.1	-231.8	0.00	0.00	
6,600.0	5.42	294.91	6,573.9	235.7	-507.6	-235.7	0.00	0.00	
6,700.0	5.42	294.91	6,673.5	239.7	-516.2	-239.7	0.00	0.00	
6,800.0	5.42	294.91	6,773.0	243.7	-524.7	-243.7	0.00	0.00	
6,815.5	5.42	294.91	6,788.5	244.3	-526.1	-244.3	0.00	0.00	Start build/turn @ 6815' MD
6,900.0	7.88	218.38	6,872.5	241.4	-533.3	-241.4	10.00	2.92	
7,000.0	16.88	196.46	6,970.2	222.1	-541.7	-222.1	10.00	9.00	
7,059.4	22.62	191.91	7,026.0	202.6	-546.5	-202.6	10.00	9.67	Sharon Springs
7,100.0	26.60	189.89	7,062.9	186.0	-549.7	-186.0	10.00	9.78	
7,162.2	32.73	187.69	7,117.0	155.6	-554.3	-155.6	10.00	9.85	Niobrara
7,200.0	36.46	186.68	7,148.1	134.3	-557.0	-134.3	10.00	9.89	
7,209.9	37.44	186.45	7,156.0	128.4	-557.7	-128.4	10.00	9.90	B Chalk
7,240.8	40.50	185.78	7,180.0	109.1	-559.7	-109.1	10.00	9.91	B Marl
7,300.0	46.37	184.70	7,223.0	68.5	-563.4	-68.5	10.00	9.92	C Chalk
7,353.4	51.68	183.90	7,258.0	28.4	-566.4	-28.4	10.01	9.94	C Marl
7,400.0	56.31	183.29	7,285.4	-9.2	-568.8	9.2	10.00	9.94	
7,500.0	66.27	182.17	7,333.3	-96.7	-572.9	96.7	10.00	9.95	
7,545.5	70.80	181.72	7,350.0	-139.1	-574.3	139.1	10.00	9.96	Ft. Hayes
7,600.0	76.22	181.21	7,365.5	-191.3	-575.7	191.3	10.00	9.96	
7,630.9	79.30	180.93	7,372.0	-221.4	-576.2	221.4	10.00	9.96	Codell
7,700.0	86.19	180.33	7,380.7	-290.0	-577.0	290.0	10.00	9.96	
7,738.3	90.00	180.00	7,382.0	-328.2	-577.1	328.2	9.99	9.96	LP @ 7382' TVD; 90° - 7"
7,800.0	90.00	180.00	7,382.0	-389.9	-577.1	389.9	0.00	0.00	
7,900.0	90.00	180.00	7,382.0	-489.9	-577.1	489.9	0.00	0.00	
8,000.0	90.00	180.00	7,382.0	-589.9	-577.1	589.9	0.00	0.00	
8,100.0	90.00	180.00	7,382.0	-689.9	-577.1	689.9	0.00	0.00	
8,200.0	90.00	180.00	7,382.0	-789.9	-577.1	789.9	0.00	0.00	
8,300.0	90.00	180.00	7,382.0	-889.9	-577.1	889.9	0.00	0.00	
8,400.0	90.00	180.00	7,382.0	-989.9	-577.1	989.9	0.00	0.00	
8,500.0	90.00	180.00	7,382.0	-1,089.9	-577.1	1,089.9	0.00	0.00	
8,600.0	90.00	180.00	7,382.0	-1,189.9	-577.1	1,189.9	0.00	0.00	
8,700.0	90.00	180.00	7,382.0	-1,289.9	-577.1	1,289.9	0.00	0.00	
8,800.0	90.00	180.00	7,382.0	-1,389.9	-577.1	1,389.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4890.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4890.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,900.0	90.00	180.00	7,382.0	-1,489.9	-577.1	1,489.9	0.00	0.00	
9,000.0	90.00	180.00	7,382.0	-1,589.9	-577.1	1,589.9	0.00	0.00	
9,100.0	90.00	180.00	7,382.0	-1,689.9	-577.1	1,689.9	0.00	0.00	
9,200.0	90.00	180.00	7,382.0	-1,789.9	-577.1	1,789.9	0.00	0.00	
9,300.0	90.00	180.00	7,382.0	-1,889.9	-577.1	1,889.9	0.00	0.00	
9,400.0	90.00	180.00	7,382.0	-1,989.9	-577.1	1,989.9	0.00	0.00	
9,500.0	90.00	180.00	7,382.0	-2,089.9	-577.1	2,089.9	0.00	0.00	
9,600.0	90.00	180.00	7,382.0	-2,189.9	-577.1	2,189.9	0.00	0.00	
9,700.0	90.00	180.00	7,382.0	-2,289.9	-577.1	2,289.9	0.00	0.00	
9,800.0	90.00	180.00	7,382.0	-2,389.9	-577.1	2,389.9	0.00	0.00	
9,900.0	90.00	180.00	7,382.0	-2,489.9	-577.1	2,489.9	0.00	0.00	
10,000.0	90.00	180.00	7,382.0	-2,589.9	-577.1	2,589.9	0.00	0.00	
10,100.0	90.00	180.00	7,382.0	-2,689.9	-577.1	2,689.9	0.00	0.00	
10,200.0	90.00	180.00	7,382.0	-2,789.9	-577.1	2,789.9	0.00	0.00	
10,300.0	90.00	180.00	7,382.0	-2,889.9	-577.1	2,889.9	0.00	0.00	
10,400.0	90.00	180.00	7,382.0	-2,989.9	-577.1	2,989.9	0.00	0.00	
10,500.0	90.00	180.00	7,382.0	-3,089.9	-577.1	3,089.9	0.00	0.00	
10,600.0	90.00	180.00	7,382.0	-3,189.9	-577.1	3,189.9	0.00	0.00	
10,700.0	90.00	180.00	7,382.0	-3,289.9	-577.1	3,289.9	0.00	0.00	
10,800.0	90.00	180.00	7,382.0	-3,389.9	-577.1	3,389.9	0.00	0.00	
10,900.0	90.00	180.00	7,382.0	-3,489.9	-577.1	3,489.9	0.00	0.00	
11,000.0	90.00	180.00	7,382.0	-3,589.9	-577.1	3,589.9	0.00	0.00	
11,100.0	90.00	180.00	7,382.0	-3,689.9	-577.1	3,689.9	0.00	0.00	
11,200.0	90.00	180.00	7,382.0	-3,789.9	-577.1	3,789.9	0.00	0.00	
11,300.0	90.00	180.00	7,382.0	-3,889.9	-577.1	3,889.9	0.00	0.00	
11,400.0	90.00	180.00	7,382.0	-3,989.9	-577.1	3,989.9	0.00	0.00	
11,500.0	90.00	180.00	7,382.0	-4,089.9	-577.1	4,089.9	0.00	0.00	
11,600.0	90.00	180.00	7,382.0	-4,189.9	-577.1	4,189.9	0.00	0.00	
11,688.3	90.00	180.00	7,382.0	-4,278.2	-577.1	4,278.2	0.00	0.00	Start Turn @ 11,688' MD - Interp @ 7382.0 (Vog)
11,700.0	90.00	180.12	7,382.0	-4,289.9	-577.1	4,289.9	1.00	0.00	
11,800.0	90.00	181.12	7,382.0	-4,389.9	-578.2	4,389.9	1.00	0.00	
11,900.0	90.00	182.12	7,382.0	-4,489.9	-581.0	4,489.9	1.00	0.00	
11,911.4	90.00	182.23	7,382.0	-4,501.3	-581.4	4,501.3	1.00	0.00	End of turn @ 11,911' MD
12,000.0	90.00	182.23	7,382.0	-4,589.8	-584.9	4,589.8	0.00	0.00	
12,100.0	90.00	182.23	7,382.0	-4,689.7	-588.8	4,689.7	0.00	0.00	
12,200.0	90.00	182.23	7,382.0	-4,789.7	-592.7	4,789.7	0.00	0.00	
12,300.0	90.00	182.23	7,382.0	-4,889.6	-596.6	4,889.6	0.00	0.00	
12,400.0	90.00	182.23	7,382.0	-4,989.5	-600.5	4,989.5	0.00	0.00	
12,500.0	90.00	182.23	7,382.0	-5,089.4	-604.4	5,089.4	0.00	0.00	
12,600.0	90.00	182.23	7,382.0	-5,189.3	-608.3	5,189.3	0.00	0.00	
12,700.0	90.00	182.23	7,382.0	-5,289.3	-612.2	5,289.3	0.00	0.00	
12,800.0	90.00	182.23	7,382.0	-5,389.2	-616.0	5,389.2	0.00	0.00	
12,900.0	90.00	182.23	7,382.0	-5,489.1	-619.9	5,489.1	0.00	0.00	
13,000.0	90.00	182.23	7,382.0	-5,589.0	-623.8	5,589.0	0.00	0.00	
13,100.0	90.00	182.23	7,382.0	-5,689.0	-627.7	5,689.0	0.00	0.00	
13,200.0	90.00	182.23	7,382.0	-5,788.9	-631.6	5,788.9	0.00	0.00	
13,300.0	90.00	182.23	7,382.0	-5,888.8	-635.5	5,888.8	0.00	0.00	
13,400.0	90.00	182.23	7,382.0	-5,988.7	-639.4	5,988.7	0.00	0.00	
13,500.0	90.00	182.23	7,382.0	-6,088.7	-643.3	6,088.7	0.00	0.00	
13,600.0	90.00	182.23	7,382.0	-6,188.6	-647.2	6,188.6	0.00	0.00	
13,700.0	90.00	182.23	7,382.0	-6,288.5	-651.1	6,288.5	0.00	0.00	
13,800.0	90.00	182.23	7,382.0	-6,388.4	-655.0	6,388.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4890.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4890.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
13,900.0	90.00	182.23	7,382.0	-6,488.4	-658.9	6,488.4	0.00	0.00	
14,000.0	90.00	182.23	7,382.0	-6,588.3	-662.8	6,588.3	0.00	0.00	
14,100.0	90.00	182.23	7,382.0	-6,688.2	-666.7	6,688.2	0.00	0.00	
14,200.0	90.00	182.23	7,382.0	-6,788.1	-670.6	6,788.1	0.00	0.00	
14,300.0	90.00	182.23	7,382.0	-6,888.1	-674.5	6,888.1	0.00	0.00	
14,400.0	90.00	182.23	7,382.0	-6,988.0	-678.3	6,988.0	0.00	0.00	
14,500.0	90.00	182.23	7,382.0	-7,087.9	-682.2	7,087.9	0.00	0.00	
14,600.0	90.00	182.23	7,382.0	-7,187.8	-686.1	7,187.8	0.00	0.00	
14,700.0	90.00	182.23	7,382.0	-7,287.8	-690.0	7,287.8	0.00	0.00	
14,800.0	90.00	182.23	7,382.0	-7,387.7	-693.9	7,387.7	0.00	0.00	
14,900.0	90.00	182.23	7,382.0	-7,487.6	-697.8	7,487.6	0.00	0.00	
15,000.0	90.00	182.23	7,382.0	-7,587.5	-701.7	7,587.5	0.00	0.00	
15,100.0	90.00	182.23	7,382.0	-7,687.5	-705.6	7,687.5	0.00	0.00	
15,142.6	90.00	182.23	7,382.0	-7,730.0	-707.3	7,730.0	0.00	0.00	TD at 15142.6 - Vogl-McCoy 2F-5H-F267 PBHL

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Vogl-McCoy 2F-5H-F267 - plan hits target center - Point	0.00	0.00	7,382.0	-7,730.0	-707.3	1,296,892.72	3,162,817.97	40.146890	-104.917590
Interp @ 7382.0 (Vogl-M - plan hits target center - Point	0.00	0.00	7,382.0	-4,278.2	-577.1	1,300,345.32	3,162,925.36	40.156366	-104.917125

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
7,738.3	7,382.0	7"	0.000	0.000

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4890.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4890.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
290.0	290.0	Fox Hills - BASE			
4,191.3	4,176.0	Sussex			
4,476.6	4,460.0	Sussex Marker			
4,769.9	4,752.0	Shannon			
6,023.5	6,000.0	Teepee Buttes (*if present)			
7,059.4	7,026.0	Sharon Springs			
7,162.2	7,117.0	Niobrara			
7,209.9	7,156.0	B Chalk			
7,240.8	7,180.0	B Marl			
7,300.0	7,223.0	C Chalk			
7,353.4	7,258.0	C Marl			
7,545.5	7,350.0	Ft. Hayes			
7,630.9	7,372.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP @ 400'
941.6	940.8	10.8	-23.2	EOB; Inc=5.42°
6,815.5	6,788.5	244.3	-526.1	Start build/turn @ 6815' MD
7,738.3	7,382.0	-328.2	-577.1	LP @ 7382' TVD; 90°
11,688.3	7,382.0	-4,278.2	-577.1	Start Turn @ 11,688' MD
11,911.4	7,382.0	-4,501.3	-581.4	End of turn @ 11,911' MD
15,142.6	7,382.0	-7,730.0	-707.3	TD at 15142.6

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S5-T2N-R67W (Vogl-McCoy)

Vogl-McCoy 2F-5H-F267

Hz

Plan #1

Anticollision Report

10 May, 2013

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	5/10/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	15,142.6	Plan #1 (Hz)	MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S5-T2N-R67W (Vogl-McCoy)						
ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - NO	11,687.0	7,363.0	174.2	83.5	1.922	CC, ES, SF
CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS	10,805.7	7,584.2	212.7	129.8	2.565	CC, ES, SF
DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS	13,483.0	7,447.5	224.4	101.9	1.831	CC, ES
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS	13,500.0	7,449.1	225.1	102.1	1.830	SF
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS	15,020.8	7,536.4	216.3	64.4	1.424	Level 3, CC, ES, SF
DIER 4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEY						Out of range
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	7,666.9	7,400.8	431.2	402.4	14.953	CC, ES
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	7,700.0	7,403.9	432.6	403.5	14.890	SF
PROMINENCE 4-8 (EXISTING) - KMG WELL - NO SUR						Out of range
VOGL 5-8A (EXISTING) - KMG WELL - NO SURVEYS						Out of range
Vogl-Geist 2A-5H-E267 - Hz - Plan #1						Out of range
Vogl-Geist 2B-5H-E267 - Hz - Plan #1						Out of range
Vogl-Geist 2C-5H-E267 - Hz - Plan #1						Out of range
Vogl-Geist 2D-5H-F267 - Hz - Plan #1	300.0	300.0	8.4	7.4	8.896	CC, ES
Vogl-Geist 2D-5H-F267 - Hz - Plan #1	600.0	599.4	13.3	11.3	6.657	SF
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	400.0	400.0	11.2	9.9	8.655	CC, ES
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	7,334.2	7,382.9	154.2	128.6	6.009	SF
Vogl-Geist 2F-5H-F267 - Hz - Plan #1	400.0	399.0	30.7	29.5	23.834	CC, ES
Vogl-Geist 2F-5H-F267 - Hz - Plan #1	700.0	698.9	38.0	35.7	16.265	SF
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2B-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2C-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	200.0	200.0	19.6	19.0	32.966	CC, ES
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	15,142.6	14,929.4	415.1	193.1	1.870	SF
Vogl-McCoy 2G-5H-F267 - Hz - Plan #1	400.0	399.0	22.4	21.1	17.334	CC, ES
Vogl-McCoy 2G-5H-F267 - Hz - Plan #1	15,142.6	14,921.1	393.8	160.8	1.690	SF
Vogl-McCoy 2H-5H-F267 - Hz - Plan #1	400.0	399.0	41.9	40.6	32.501	CC, ES
Vogl-McCoy 2H-5H-F267 - Hz - Plan #1	6,800.0	6,784.0	485.4	460.2	19.267	SF
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVE						Out of range

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 0-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			
11,300.0	7,382.0	7,363.0	7,363.0	71.8	12.8	90.00	-4,276.6	-751.3	424.2	340.3	83.90	5.055		
11,400.0	7,382.0	7,363.0	7,363.0	73.5	12.8	90.00	-4,276.6	-751.3	335.5	249.9	85.63	3.918		
11,500.0	7,382.0	7,363.0	7,363.0	75.2	12.8	90.00	-4,276.6	-751.3	255.4	168.0	87.36	2.923		
11,600.0	7,382.0	7,363.0	7,363.0	76.9	12.8	90.00	-4,276.6	-751.3	194.6	105.5	89.09	2.185		
11,687.0	7,382.0	7,363.0	7,363.0	78.4	12.8	90.00	-4,276.6	-751.3	174.2	83.5	90.61	1.922 CC, ES, SF		
11,700.0	7,382.0	7,363.0	7,363.0	78.6	12.8	90.00	-4,276.6	-751.3	174.7	83.9	90.84	1.923		
11,800.0	7,382.0	7,363.0	7,363.0	80.4	12.8	90.00	-4,276.6	-751.3	206.9	114.2	92.73	2.231		
11,900.0	7,382.0	7,363.0	7,363.0	82.1	12.8	90.00	-4,276.6	-751.3	272.9	178.3	94.59	2.885		
12,000.0	7,382.0	7,363.0	7,363.0	83.8	12.8	90.00	-4,276.6	-751.3	354.6	258.3	96.34	3.681		
12,100.0	7,382.0	7,363.0	7,363.0	85.5	12.8	90.00	-4,276.6	-751.3	443.9	345.8	98.07	4.526		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 783-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,400.0	7,382.0	7,587.1	7,388.0	56.5	21.7	-90.28	-3,395.6	-364.4	458.1	382.1	75.96	6.031		
10,500.0	7,382.0	7,586.4	7,387.3	58.2	21.7	-90.09	-3,395.6	-364.4	372.4	294.8	77.67	4.795		
10,600.0	7,382.0	7,585.7	7,386.6	59.9	21.7	-89.89	-3,395.6	-364.4	295.9	216.5	79.38	3.728		
10,700.0	7,382.0	7,585.0	7,385.9	61.6	21.7	-89.70	-3,395.7	-364.4	237.5	156.4	81.09	2.929		
10,800.0	7,382.0	7,584.3	7,385.2	63.3	21.7	-89.51	-3,395.7	-364.4	212.8	129.9	82.80	2.569		
10,805.7	7,382.0	7,584.2	7,385.1	63.4	21.7	-89.50	-3,395.7	-364.4	212.7	129.8	82.90	2.565 CC, ES, SF		
10,900.0	7,382.0	7,583.5	7,384.5	65.0	21.7	-89.31	-3,395.7	-364.4	232.6	148.1	84.52	2.752		
11,000.0	7,382.0	7,582.8	7,383.7	66.7	21.7	-89.12	-3,395.7	-364.4	288.0	201.8	86.23	3.340		
11,100.0	7,382.0	7,582.1	7,383.0	68.4	21.7	-88.92	-3,395.7	-364.5	363.1	275.1	87.95	4.128		
11,200.0	7,382.0	7,581.3	7,382.3	70.1	21.7	-88.73	-3,395.7	-364.5	448.0	358.3	89.67	4.996		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error: 0.0 ft
Survey Program: 738-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
13,100.0	7,382.0	7,410.4	7,340.4	102.9	14.6	-73.37	-6,076.8	-424.9	442.5	330.2	112.22	3.943	
13,200.0	7,382.0	7,420.5	7,350.3	104.6	14.6	-75.87	-6,077.7	-423.6	360.2	245.0	115.18	3.127	
13,300.0	7,382.0	7,429.9	7,359.7	106.3	14.6	-78.26	-6,078.6	-422.4	289.1	171.1	117.93	2.451	
13,400.0	7,382.0	7,439.5	7,369.2	108.1	14.6	-80.69	-6,079.6	-421.2	239.2	118.6	120.53	1.984	
13,483.0	7,382.0	7,447.5	7,377.1	109.5	14.7	-82.72	-6,080.3	-420.2	224.4	101.9	122.56	1.831 CC, ES	
13,500.0	7,382.0	7,449.1	7,378.6	109.8	14.7	-83.12	-6,080.5	-420.0	225.1	102.1	122.96	1.830 SF	
13,600.0	7,382.0	7,458.4	7,387.9	111.6	14.7	-85.50	-6,081.4	-418.9	252.9	127.7	125.18	2.020	
13,700.0	7,382.0	7,467.9	7,397.2	113.3	14.7	-87.88	-6,082.3	-417.7	311.5	184.3	127.22	2.449	
13,800.0	7,382.0	7,477.4	7,406.6	115.0	14.8	-90.28	-6,083.3	-416.5	387.3	258.2	129.06	3.001	
13,900.0	7,382.0	7,487.1	7,416.2	116.8	14.8	-92.68	-6,084.2	-415.4	472.0	341.3	130.69	3.611	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 740-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
14,600.0	7,382.0	7,466.7	7,333.8	129.0	18.5	-65.39	-7,606.9	-496.7	469.4	336.4	133.05	3.528		
14,700.0	7,382.0	7,486.4	7,353.1	130.7	18.5	-70.22	-7,609.9	-494.1	384.5	245.4	139.08	2.764		
14,800.0	7,382.0	7,504.5	7,370.8	132.5	18.6	-74.83	-7,612.5	-491.8	307.7	163.6	144.14	2.135		
14,900.0	7,382.0	7,519.6	7,385.7	134.2	18.7	-78.74	-7,614.5	-489.9	247.2	99.2	148.06	1.670		
15,000.0	7,382.0	7,533.5	7,399.4	136.0	18.7	-82.40	-7,616.3	-488.3	217.3	66.0	151.30	1.436	Level 3	
15,020.8	7,382.0	7,536.4	7,402.2	136.3	18.7	-83.15	-7,616.7	-487.9	216.3	64.4	151.90	1.424	Level 3, CC, ES, SF	
15,100.0	7,382.0	7,546.4	7,412.1	137.7	18.7	-85.80	-7,618.0	-486.8	230.1	76.2	153.94	1.495	Level 3	
15,142.6	7,382.0	7,551.5	7,417.1	138.4	18.8	-87.11	-7,618.6	-486.3	247.7	92.9	154.89	1.599		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S5-T2N-R67W (Vogl-McCoy) - MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS		Offset Site Error:		0.0 ft
Survey Program:													718-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)							
7,500.0	7,333.3	7,357.3	7,305.3	16.6	18.2	80.55	-252.8	-1,007.6	461.9	434.7	27.26	16.947					
7,600.0	7,365.5	7,388.9	7,336.9	17.1	18.3	87.43	-252.7	-1,007.8	436.5	408.2	28.31	15.419					
7,666.9	7,377.6	7,400.8	7,348.8	17.4	18.3	89.63	-252.7	-1,007.9	431.2	402.4	28.84	14.953 CC, ES					
7,700.0	7,380.7	7,403.9	7,351.9	17.7	18.3	89.93	-252.7	-1,007.9	432.6	403.5	29.05	14.890 SF					
7,800.0	7,382.0	7,404.9	7,352.9	18.4	18.3	89.59	-252.7	-1,007.9	452.2	422.3	29.90	15.122					
7,900.0	7,382.0	7,404.7	7,352.7	19.3	18.3	89.55	-252.7	-1,007.9	491.8	460.9	30.94	15.897					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2D-5H-F267 - Hz - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-89.94	0.0	-8.4	8.4						
100.0	100.0	100.0	100.0	0.1	0.1	-89.94	0.0	-8.4	8.4	8.1	0.24	34.312			
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.8	0.59	14.128			
300.0	300.0	300.0	300.0	0.5	0.5	-89.94	0.0	-8.4	8.4	7.4	0.94	8.896 CC, ES			
400.0	400.0	399.9	399.8	0.6	0.6	-91.78	-0.3	-9.2	9.2	7.9	1.29	7.127			
500.0	500.0	499.7	499.6	0.8	0.8	-32.93	-1.2	-11.7	11.0	9.3	1.64	6.694			
600.0	600.0	599.4	599.3	1.0	1.0	-42.92	-2.6	-15.7	13.3	11.3	1.99	6.657 SF			
700.0	699.9	699.1	698.7	1.2	1.2	-53.91	-4.7	-21.5	16.5	14.1	2.35	7.009			
800.0	799.7	798.6	798.0	1.4	1.4	-63.94	-7.3	-28.8	20.9	18.2	2.72	7.683			
900.0	899.4	898.0	896.9	1.6	1.6	-72.19	-10.5	-37.7	26.8	23.6	3.12	8.571			
1,000.0	998.9	997.2	995.5	1.8	1.9	-78.20	-14.3	-48.3	34.1	30.6	3.55	9.609			
1,100.0	1,098.5	1,096.7	1,094.2	2.0	2.1	-81.28	-18.5	-60.0	42.7	38.7	3.99	10.693			
1,200.0	1,198.0	1,196.3	1,193.0	2.3	2.4	-83.31	-22.7	-71.7	51.3	46.9	4.44	11.566			
1,300.0	1,297.6	1,295.9	1,291.9	2.5	2.7	-84.74	-26.9	-83.5	60.1	55.2	4.89	12.273			
1,400.0	1,397.1	1,395.5	1,390.7	2.7	2.9	-85.82	-31.1	-95.2	68.8	63.5	5.35	12.855			
1,500.0	1,496.7	1,495.1	1,489.5	2.9	3.2	-86.65	-35.4	-107.0	77.6	71.7	5.81	13.340			
1,600.0	1,596.3	1,594.8	1,588.3	3.2	3.5	-87.31	-39.6	-118.7	86.3	80.1	6.28	13.750			
1,700.0	1,695.8	1,694.4	1,687.2	3.4	3.8	-87.85	-43.8	-130.5	95.1	88.4	6.75	14.101			
1,800.0	1,795.4	1,794.0	1,786.0	3.7	4.0	-88.30	-48.0	-142.3	103.9	96.7	7.21	14.404			
1,900.0	1,894.9	1,893.6	1,884.8	3.9	4.3	-88.68	-52.2	-154.0	112.7	105.0	7.68	14.668			
2,000.0	1,994.5	1,993.2	1,983.6	4.1	4.6	-89.00	-56.4	-165.8	121.5	113.3	8.15	14.900			
2,100.0	2,094.0	2,092.8	2,082.4	4.4	4.9	-89.28	-60.7	-177.5	130.3	121.7	8.63	15.106			
2,200.0	2,193.6	2,192.4	2,181.3	4.6	5.1	-89.53	-64.9	-189.3	139.1	130.0	9.10	15.289			
2,300.0	2,293.1	2,292.0	2,280.1	4.8	5.4	-89.74	-69.1	-201.0	147.9	138.3	9.57	15.453			
2,400.0	2,392.7	2,391.6	2,378.9	5.1	5.7	-89.93	-73.3	-212.8	156.7	146.7	10.05	15.601			
2,500.0	2,492.2	2,491.2	2,477.7	5.3	6.0	-90.10	-77.5	-224.6	165.5	155.0	10.52	15.735			
2,600.0	2,591.8	2,590.9	2,576.6	5.5	6.2	-90.26	-81.7	-236.3	174.3	163.4	10.99	15.857			
2,700.0	2,691.3	2,690.5	2,675.4	5.8	6.5	-90.40	-86.0	-248.1	183.2	171.7	11.47	15.969			
2,800.0	2,790.9	2,790.1	2,774.2	6.0	6.8	-90.52	-90.2	-259.8	192.0	180.0	11.95	16.071			
2,900.0	2,890.4	2,889.7	2,873.0	6.3	7.1	-90.64	-94.4	-271.6	200.8	188.4	12.42	16.165			
3,000.0	2,990.0	2,989.3	2,971.9	6.5	7.4	-90.74	-98.6	-283.3	209.6	196.7	12.90	16.252			
3,100.0	3,089.6	3,088.9	3,070.7	6.7	7.6	-90.84	-102.8	-295.1	218.4	205.0	13.37	16.333			
3,200.0	3,189.1	3,188.5	3,169.5	7.0	7.9	-90.93	-107.0	-306.8	227.2	213.4	13.85	16.408			
3,300.0	3,288.7	3,288.1	3,268.3	7.2	8.2	-91.01	-111.3	-318.6	236.1	221.7	14.33	16.477			
3,400.0	3,388.2	3,387.7	3,367.2	7.5	8.5	-91.09	-115.5	-330.4	244.9	230.1	14.80	16.542			
3,500.0	3,487.8	3,487.3	3,466.0	7.7	8.7	-91.16	-119.7	-342.1	253.7	238.4	15.28	16.603			
3,600.0	3,587.3	3,587.0	3,564.8	7.9	9.0	-91.23	-123.9	-353.9	262.5	246.8	15.76	16.660			
3,700.0	3,686.9	3,686.6	3,663.6	8.2	9.3	-91.29	-128.1	-365.6	271.3	255.1	16.23	16.713			
3,800.0	3,786.4	3,786.2	3,762.5	8.4	9.6	-91.35	-132.3	-377.4	280.1	263.4	16.71	16.764			
3,900.0	3,886.0	3,885.8	3,861.3	8.7	9.9	-91.40	-136.6	-389.1	289.0	271.8	17.19	16.811			
4,000.0	3,985.5	3,985.4	3,960.1	8.9	10.1	-91.45	-140.8	-400.9	297.8	280.1	17.67	16.856			
4,100.0	4,085.1	4,085.0	4,058.9	9.1	10.4	-91.50	-145.0	-412.6	306.6	288.5	18.14	16.898			
4,200.0	4,184.6	4,184.6	4,157.7	9.4	10.7	-91.55	-149.2	-424.4	315.4	296.8	18.62	16.938			
4,300.0	4,284.2	4,284.2	4,256.6	9.6	11.0	-91.59	-153.4	-436.2	324.2	305.1	19.10	16.977			
4,400.0	4,383.8	4,383.8	4,355.4	9.9	11.3	-91.63	-157.6	-447.9	333.1	313.5	19.58	17.013			
4,500.0	4,483.3	4,483.4	4,454.2	10.1	11.5	-91.67	-161.9	-459.7	341.9	321.8	20.06	17.047			
4,600.0	4,582.9	4,583.1	4,553.0	10.3	11.8	-91.71	-166.1	-471.4	350.7	330.2	20.53	17.080			
4,700.0	4,682.4	4,682.7	4,651.9	10.6	12.1	-91.74	-170.3	-483.2	359.5	338.5	21.01	17.111			
4,800.0	4,782.0	4,782.3	4,750.7	10.8	12.4	-91.78	-174.5	-494.9	368.4	346.9	21.49	17.141			
4,900.0	4,881.5	4,881.9	4,849.5	11.1	12.7	-91.81	-178.7	-506.7	377.2	355.2	21.97	17.169			
5,000.0	4,981.1	4,981.5	4,948.3	11.3	12.9	-91.84	-182.9	-518.5	386.0	363.5	22.45	17.197			
5,100.0	5,080.6	5,081.1	5,047.2	11.5	13.2	-91.87	-187.2	-530.2	394.8	371.9	22.92	17.223			

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 Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2D-5H-F267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		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		
5,200.0	5,180.2	5,180.7	5,146.0	11.8	13.5	-91.89	-191.4	-542.0	403.6	380.2	23.40	17.248		
5,300.0	5,279.7	5,280.3	5,244.8	12.0	13.8	-91.92	-195.6	-553.7	412.5	388.6	23.88	17.271		
5,400.0	5,379.3	5,379.9	5,343.6	12.3	14.1	-91.95	-199.8	-565.5	421.3	396.9	24.36	17.294		
5,500.0	5,478.8	5,479.5	5,442.5	12.5	14.3	-91.97	-204.0	-577.2	430.1	405.3	24.84	17.317		
5,600.0	5,578.4	5,579.2	5,541.3	12.7	14.6	-91.99	-208.2	-589.0	438.9	413.6	25.32	17.338		
5,700.0	5,677.9	5,678.8	5,640.1	13.0	14.9	-92.02	-212.5	-600.7	447.7	422.0	25.79	17.358		
5,800.0	5,777.5	5,778.4	5,738.9	13.2	15.2	-92.04	-216.7	-612.5	456.6	430.3	26.27	17.378		
5,900.0	5,877.1	5,878.0	5,837.8	13.5	15.5	-92.06	-220.9	-624.3	465.4	438.6	26.75	17.397		
6,000.0	5,976.6	5,977.6	5,936.6	13.7	15.7	-92.08	-225.1	-636.0	474.2	447.0	27.23	17.415		
6,100.0	6,076.2	6,077.2	6,035.4	13.9	16.0	-92.10	-229.3	-647.8	483.0	455.3	27.71	17.433		
6,200.0	6,175.7	6,176.8	6,134.2	14.2	16.3	-92.12	-233.5	-659.5	491.9	463.7	28.19	17.450		
6,700.0	6,673.5	7,100.2	6,988.6	15.4	18.2	-78.52	-42.8	-761.2	489.0	457.6	31.42	15.566		
6,800.0	6,773.0	7,281.3	7,079.5	15.6	18.6	-58.02	112.5	-772.0	415.1	384.7	30.38	13.664		
6,900.0	6,872.5	7,345.0	7,099.4	15.8	18.9	40.70	173.0	-774.3	338.0	310.6	27.38	12.343		
7,000.0	6,970.2	7,354.5	7,101.8	15.9	18.9	73.83	182.2	-774.6	270.5	244.6	25.93	10.432		
7,100.0	7,062.9	7,340.8	7,098.3	16.0	18.9	81.21	168.9	-774.2	228.0	202.2	25.74	8.856		
7,159.1	7,114.4	7,326.7	7,094.4	16.0	18.8	80.24	155.4	-773.7	220.6	194.7	25.88	8.523		
7,200.0	7,148.1	7,315.3	7,090.9	16.0	18.8	77.96	144.5	-773.3	224.0	198.0	26.02	8.609		
7,300.0	7,223.0	7,283.1	7,080.2	16.1	18.6	68.41	114.2	-772.1	256.9	230.7	26.20	9.804		
7,400.0	7,285.4	7,250.0	7,067.4	16.3	18.5	56.60	83.7	-770.5	311.2	285.8	25.46	12.224		
7,500.0	7,333.3	7,200.0	7,044.8	16.6	18.4	43.26	39.2	-767.8	373.8	350.6	23.29	16.051		
7,600.0	7,365.5	7,167.0	7,027.8	17.1	18.3	34.70	11.0	-765.8	437.2	416.1	21.05	20.769		
7,700.0	7,380.7	7,124.9	7,003.8	17.7	18.2	27.62	-23.5	-763.0	497.7	478.3	19.42	25.631		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2E-5H-F267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	11.2	11.2	10.9	0.24	45.749		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.6	0.59	18.838		
300.0	300.0	300.0	300.0	0.5	0.5	90.04	0.0	11.2	11.2	10.2	0.94	11.861		
400.0	400.0	400.0	400.0	0.6	0.6	90.04	0.0	11.2	11.2	9.9	1.29	8.655 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	156.88	0.0	11.2	12.0	10.3	1.64	7.300		
600.0	600.0	600.1	600.1	1.0	1.0	163.25	-0.5	10.4	13.7	11.8	1.99	6.909		
700.0	699.9	700.3	700.2	1.2	1.2	173.81	-1.9	8.2	16.2	13.9	2.34	6.930		
800.0	799.7	800.3	800.1	1.4	1.4	-174.42	-4.3	4.6	20.0	17.3	2.70	7.413		
900.0	899.4	900.2	899.9	1.6	1.5	-163.80	-7.5	-0.6	25.5	22.4	3.07	8.308		
1,000.0	998.9	999.9	999.3	1.8	1.7	-155.56	-11.6	-6.9	32.6	29.2	3.45	9.439		
1,100.0	1,098.5	1,099.5	1,098.6	2.0	2.0	-150.25	-15.8	-13.4	40.3	36.4	3.85	10.453		
1,200.0	1,198.0	1,199.2	1,198.0	2.3	2.2	-146.66	-19.9	-19.9	48.2	44.0	4.26	11.313		
1,300.0	1,297.6	1,298.8	1,297.3	2.5	2.4	-144.08	-24.1	-26.3	56.3	51.6	4.67	12.040		
1,400.0	1,397.1	1,398.5	1,396.7	2.7	2.6	-142.16	-28.2	-32.8	64.4	59.3	5.09	12.657		
1,500.0	1,496.7	1,498.1	1,496.0	2.9	2.8	-140.67	-32.3	-39.3	72.6	67.1	5.51	13.184		
1,600.0	1,596.3	1,597.8	1,595.4	3.2	3.0	-139.48	-36.5	-45.7	80.9	74.9	5.93	13.639		
1,700.0	1,695.8	1,697.4	1,694.7	3.4	3.2	-138.51	-40.6	-52.2	89.1	82.8	6.35	14.035		
1,800.0	1,795.4	1,797.1	1,794.1	3.7	3.4	-137.71	-44.8	-58.7	97.4	90.6	6.77	14.382		
1,900.0	1,894.9	1,896.7	1,893.4	3.9	3.7	-137.03	-48.9	-65.1	105.7	98.5	7.20	14.688		
2,000.0	1,994.5	1,996.4	1,992.8	4.1	3.9	-136.45	-53.1	-71.6	114.0	106.4	7.62	14.960		
2,100.0	2,094.0	2,096.0	2,092.1	4.4	4.1	-135.95	-57.2	-78.1	122.4	114.3	8.05	15.203		
2,200.0	2,193.6	2,195.7	2,191.5	4.6	4.3	-135.51	-61.4	-84.5	130.7	122.2	8.48	15.421		
2,300.0	2,293.1	2,295.3	2,290.8	4.8	4.5	-135.13	-65.5	-91.0	139.0	130.1	8.90	15.619		
2,400.0	2,392.7	2,395.0	2,390.2	5.1	4.7	-134.79	-69.7	-97.5	147.4	138.1	9.33	15.798		
2,500.0	2,492.2	2,494.6	2,489.5	5.3	5.0	-134.48	-73.8	-103.9	155.7	146.0	9.76	15.961		
2,600.0	2,591.8	2,594.3	2,588.9	5.5	5.2	-134.21	-78.0	-110.4	164.1	153.9	10.19	16.110		
2,700.0	2,691.3	2,693.9	2,688.3	5.8	5.4	-133.96	-82.1	-116.9	172.5	161.8	10.61	16.248		
2,800.0	2,790.9	2,793.6	2,787.6	6.0	5.6	-133.74	-86.2	-123.4	180.8	169.8	11.04	16.374		
2,900.0	2,890.4	2,893.2	2,887.0	6.3	5.8	-133.54	-90.4	-129.8	189.2	177.7	11.47	16.491		
3,000.0	2,990.0	2,992.8	2,986.3	6.5	6.0	-133.35	-94.5	-136.3	197.5	185.6	11.90	16.599		
3,100.0	3,089.6	3,092.5	3,085.7	6.7	6.3	-133.18	-98.7	-142.8	205.9	193.6	12.33	16.700		
3,200.0	3,189.1	3,192.1	3,185.0	7.0	6.5	-133.02	-102.8	-149.2	214.3	201.5	12.76	16.794		
3,300.0	3,288.7	3,291.8	3,284.4	7.2	6.7	-132.87	-107.0	-155.7	222.7	209.5	13.19	16.882		
3,400.0	3,388.2	3,391.4	3,383.7	7.5	6.9	-132.74	-111.1	-162.2	231.0	217.4	13.62	16.964		
3,500.0	3,487.8	3,491.1	3,483.1	7.7	7.1	-132.61	-115.3	-168.6	239.4	225.4	14.05	17.041		
3,600.0	3,587.3	3,590.7	3,582.4	7.9	7.4	-132.49	-119.4	-175.1	247.8	233.3	14.48	17.113		
3,700.0	3,686.9	3,690.4	3,681.8	8.2	7.6	-132.38	-123.6	-181.6	256.2	241.2	14.91	17.181		
3,800.0	3,786.4	3,790.0	3,781.1	8.4	7.8	-132.28	-127.7	-188.0	264.5	249.2	15.34	17.245		
3,900.0	3,886.0	3,889.7	3,880.5	8.7	8.0	-132.18	-131.9	-194.5	272.9	257.1	15.77	17.306		
4,000.0	3,985.5	3,989.3	3,979.8	8.9	8.2	-132.09	-136.0	-201.0	281.3	265.1	16.20	17.363		
4,100.0	4,085.1	4,089.0	4,079.2	9.1	8.4	-132.01	-140.2	-207.4	289.7	273.0	16.63	17.418		
4,200.0	4,184.6	4,188.6	4,178.5	9.4	8.7	-131.93	-144.3	-213.9	298.0	281.0	17.06	17.469		
4,300.0	4,284.2	4,288.3	4,277.9	9.6	8.9	-131.85	-148.4	-220.4	306.4	288.9	17.49	17.519		
4,400.0	4,383.8	4,387.9	4,377.2	9.9	9.1	-131.78	-152.6	-226.8	314.8	296.9	17.92	17.565		
4,500.0	4,483.3	4,487.6	4,476.6	10.1	9.3	-131.71	-156.7	-233.3	323.2	304.8	18.35	17.610		
4,600.0	4,582.9	4,587.2	4,575.9	10.3	9.5	-131.64	-160.9	-239.8	331.6	312.8	18.78	17.652		
4,700.0	4,682.4	4,686.9	4,675.3	10.6	9.8	-131.58	-165.0	-246.2	340.0	320.7	19.21	17.693		
4,800.0	4,782.0	4,786.5	4,774.6	10.8	10.0	-131.52	-169.2	-252.7	348.3	328.7	19.65	17.731		
4,900.0	4,881.5	4,886.1	4,874.0	11.1	10.2	-131.47	-173.3	-259.2	356.7	336.6	20.08	17.768		
5,000.0	4,981.1	4,985.8	4,973.3	11.3	10.4	-131.41	-177.5	-265.7	365.1	344.6	20.51	17.804		
5,100.0	5,080.6	5,085.4	5,072.7	11.5	10.6	-131.36	-181.6	-272.1	373.5	352.5	20.94	17.838		

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 Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2E-5H-F267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,180.2	5,185.1	5,172.0	11.8	10.9	-131.31	-185.8	-278.6	381.9	360.5	21.37	17.870		
5,300.0	5,279.7	5,284.7	5,271.4	12.0	11.1	-131.26	-189.9	-285.1	390.3	368.5	21.80	17.902		
5,400.0	5,379.3	5,384.4	5,370.7	12.3	11.3	-131.22	-194.1	-291.5	398.6	376.4	22.23	17.932		
5,500.0	5,478.8	5,484.0	5,470.1	12.5	11.5	-131.18	-198.2	-298.0	407.0	384.4	22.66	17.960		
5,600.0	5,578.4	5,583.7	5,569.4	12.7	11.7	-131.14	-202.3	-304.5	415.4	392.3	23.09	17.988		
5,700.0	5,677.9	5,683.3	5,668.8	13.0	12.0	-131.10	-206.5	-310.9	423.8	400.3	23.52	18.015		
5,800.0	5,777.5	5,783.0	5,768.1	13.2	12.2	-131.06	-210.6	-317.4	432.2	408.2	23.96	18.041		
5,900.0	5,877.1	5,882.6	5,867.5	13.5	12.4	-131.02	-214.8	-323.9	440.6	416.2	24.39	18.066		
6,000.0	5,976.6	5,982.3	5,966.8	13.7	12.6	-130.99	-218.9	-330.3	448.9	424.1	24.82	18.090		
6,100.0	6,076.2	6,081.9	6,066.2	13.9	12.8	-130.95	-223.1	-336.8	457.3	432.1	25.25	18.113		
6,200.0	6,175.7	6,181.6	6,165.5	14.2	13.1	-130.92	-227.2	-343.3	465.7	440.0	25.68	18.135		
6,300.0	6,275.3	6,281.2	6,264.9	14.4	13.3	-130.89	-231.4	-349.7	474.1	448.0	26.11	18.157		
6,400.0	6,374.8	6,380.9	6,364.2	14.7	13.5	-130.86	-235.5	-356.2	482.5	455.9	26.54	18.178		
6,500.0	6,474.4	6,480.5	6,463.6	14.9	13.7	-130.83	-239.7	-362.7	490.9	463.9	26.97	18.198		
6,600.0	6,573.9	6,580.2	6,562.9	15.1	13.9	-130.80	-243.8	-369.1	499.3	471.9	27.41	18.218		
6,900.0	6,872.5	7,343.4	7,236.3	15.8	14.8	-76.89	7.5	-410.5	449.6	422.8	26.76	16.799		
7,000.0	6,970.2	7,431.8	7,278.8	15.9	15.0	-89.56	84.9	-412.6	361.6	336.5	25.10	14.408		
7,100.0	7,062.9	7,441.1	7,282.6	16.0	15.1	-104.08	93.4	-412.8	274.9	248.9	25.98	10.579		
7,200.0	7,148.1	7,423.7	7,275.5	16.0	15.0	-106.30	77.6	-412.5	200.8	174.8	26.00	7.725		
7,300.0	7,223.0	7,394.5	7,262.4	16.1	14.9	-99.43	51.5	-411.8	157.5	131.9	25.68	6.134		
7,334.2	7,245.8	7,382.9	7,256.8	16.2	14.9	-95.35	41.3	-411.6	154.2	128.6	25.66	6.009 SF		
7,400.0	7,285.4	7,359.1	7,244.7	16.3	14.8	-85.52	20.7	-411.0	165.7	140.1	25.61	6.470		
7,500.0	7,333.3	7,319.9	7,223.1	16.6	14.7	-68.07	-11.8	-409.9	214.4	189.3	25.01	8.570		
7,600.0	7,365.5	7,278.5	7,197.8	17.1	14.7	-52.24	-44.7	-408.5	278.5	255.4	23.12	12.045		
7,700.0	7,380.7	7,235.5	7,169.2	17.7	14.6	-40.62	-76.7	-406.9	345.2	324.4	20.80	16.597		
7,800.0	7,382.0	7,200.0	7,143.8	18.4	14.6	-35.76	-101.4	-405.5	411.6	391.6	20.09	20.492		
7,900.0	7,382.0	7,150.0	7,105.5	19.3	14.6	-32.15	-133.5	-403.3	483.4	463.5	19.89	24.307		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2F-5H-F267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-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	90.05	0.0	30.7	30.8					
100.0	100.0	99.0	99.0	0.1	0.1	90.05	0.0	30.7	30.7	30.5	0.24	126.441		
200.0	200.0	199.0	199.0	0.3	0.3	90.05	0.0	30.7	30.7	30.1	0.59	51.957		
300.0	300.0	299.0	299.0	0.5	0.5	90.05	0.0	30.7	30.7	29.8	0.94	32.678		
400.0	400.0	399.0	399.0	0.6	0.6	90.05	0.0	30.7	30.7	29.5	1.29	23.834 CC, ES		
500.0	500.0	499.0	499.0	0.8	0.8	155.80	0.0	30.7	31.5	29.9	1.64	19.242		
600.0	600.0	599.0	599.0	1.0	1.0	157.60	0.0	30.7	33.9	32.0	1.99	17.073		
700.0	699.9	698.9	698.9	1.2	1.2	160.09	0.0	30.7	38.0	35.7	2.34	16.265 SF		
800.0	799.7	798.7	798.7	1.4	1.3	162.80	0.0	30.7	43.8	41.1	2.69	16.310		
900.0	899.4	898.4	898.4	1.6	1.5	165.37	0.0	30.7	51.3	48.3	3.03	16.930		
1,000.0	998.9	997.9	997.9	1.8	1.7	167.59	0.0	30.7	60.4	57.0	3.38	17.860		
1,100.0	1,098.5	1,097.5	1,097.5	2.0	1.9	169.26	0.0	30.7	69.6	65.9	3.73	18.671		
1,200.0	1,198.0	1,197.0	1,197.0	2.3	2.0	170.53	0.0	30.7	78.9	74.8	4.08	19.356		
1,300.0	1,297.6	1,296.6	1,296.6	2.5	2.2	171.54	0.0	30.7	88.3	83.8	4.43	19.941		
1,400.0	1,397.1	1,396.1	1,396.1	2.7	2.4	172.36	0.0	30.7	97.6	92.8	4.77	20.445		
1,500.0	1,496.7	1,495.7	1,495.7	2.9	2.6	173.03	0.0	30.7	107.0	101.8	5.12	20.884		
1,600.0	1,596.3	1,595.3	1,595.3	3.2	2.7	173.59	0.0	30.7	116.3	110.9	5.47	21.270		
1,700.0	1,695.8	1,694.8	1,694.8	3.4	2.9	174.07	0.0	30.7	125.7	119.9	5.82	21.611		
1,800.0	1,795.4	1,794.4	1,794.4	3.7	3.1	174.49	0.0	30.7	135.1	128.9	6.17	21.915		
1,900.0	1,894.9	1,893.9	1,893.9	3.9	3.3	174.85	0.0	30.7	144.5	138.0	6.51	22.188		
2,000.0	1,994.5	1,993.5	1,993.5	4.1	3.4	175.16	0.0	30.7	153.9	147.1	6.86	22.434		
2,100.0	2,094.0	2,093.0	2,093.0	4.4	3.6	175.44	0.0	30.7	163.3	156.1	7.21	22.656		
2,200.0	2,193.6	2,192.6	2,192.6	4.6	3.8	175.69	0.0	30.7	172.7	165.2	7.56	22.859		
2,300.0	2,293.1	2,292.1	2,292.1	4.8	3.9	175.91	0.0	30.7	182.2	174.2	7.90	23.044		
2,400.0	2,392.7	2,391.7	2,391.7	5.1	4.1	176.11	0.0	30.7	191.6	183.3	8.25	23.213		
2,500.0	2,492.2	2,491.2	2,491.2	5.3	4.3	176.30	0.0	30.7	201.0	192.4	8.60	23.370		
2,600.0	2,591.8	2,590.8	2,590.8	5.5	4.5	176.46	0.0	30.7	210.4	201.5	8.95	23.514		
2,700.0	2,691.3	2,690.3	2,690.3	5.8	4.6	176.61	0.0	30.7	219.8	210.5	9.30	23.648		
2,800.0	2,790.9	2,789.9	2,789.9	6.0	4.8	176.75	0.0	30.7	229.3	219.6	9.64	23.772		
2,900.0	2,890.4	2,889.4	2,889.4	6.3	5.0	176.88	0.0	30.7	238.7	228.7	9.99	23.887		
3,000.0	2,990.0	2,989.0	2,989.0	6.5	5.2	177.00	0.0	30.7	248.1	237.8	10.34	23.995		
3,100.0	3,089.6	3,088.6	3,088.6	6.7	5.3	177.11	0.0	30.7	257.5	246.8	10.69	24.096		
3,200.0	3,189.1	3,188.1	3,188.1	7.0	5.5	177.21	0.0	30.7	267.0	255.9	11.04	24.191		
3,300.0	3,288.7	3,287.7	3,287.7	7.2	5.7	177.31	0.0	30.7	276.4	265.0	11.38	24.280		
3,400.0	3,388.2	3,387.2	3,387.2	7.5	5.9	177.40	0.0	30.7	285.8	274.1	11.73	24.364		
3,500.0	3,487.8	3,486.8	3,486.8	7.7	6.0	177.48	0.0	30.7	295.2	283.2	12.08	24.443		
3,600.0	3,587.3	3,586.3	3,586.3	7.9	6.2	177.56	0.0	30.7	304.7	292.2	12.43	24.517		
3,700.0	3,686.9	3,685.9	3,685.9	8.2	6.4	177.63	0.0	30.7	314.1	301.3	12.77	24.588		
3,800.0	3,786.4	3,785.4	3,785.4	8.4	6.6	177.70	0.0	30.7	323.5	310.4	13.12	24.655		
3,900.0	3,886.0	3,885.0	3,885.0	8.7	6.7	177.77	0.0	30.7	333.0	319.5	13.47	24.718		
4,000.0	3,985.5	3,984.5	3,984.5	8.9	6.9	177.83	0.0	30.7	342.4	328.6	13.82	24.778		
4,100.0	4,085.1	4,080.6	4,080.6	9.1	7.1	177.95	-0.5	31.0	352.3	338.1	14.16	24.877		
4,200.0	4,184.6	4,175.7	4,175.7	9.4	7.2	178.24	-2.5	31.8	363.3	348.8	14.50	25.054		
4,300.0	4,284.2	4,270.5	4,270.4	9.6	7.4	178.67	-5.9	33.2	375.5	360.7	14.84	25.306		
4,400.0	4,383.8	4,364.9	4,364.7	9.9	7.6	179.24	-10.7	35.2	388.9	373.8	15.18	25.626		
4,500.0	4,483.3	4,458.9	4,458.5	10.1	7.7	179.92	-17.0	37.8	403.6	388.1	15.52	26.010		
4,600.0	4,582.9	4,552.5	4,551.6	10.3	7.9	-179.30	-24.6	41.0	419.6	403.7	15.86	26.456		
4,700.0	4,682.4	4,645.5	4,644.2	10.6	8.1	-178.46	-33.5	44.8	436.8	420.6	16.20	26.959		
4,800.0	4,782.0	4,739.1	4,737.1	10.8	8.3	-177.54	-43.9	49.1	455.3	438.8	16.55	27.513		
4,900.0	4,881.5	4,837.0	4,834.2	11.1	8.5	-176.62	-55.2	53.8	474.4	457.5	16.91	28.056		
5,000.0	4,981.1	4,934.9	4,931.3	11.3	8.7	-175.77	-66.6	58.6	493.5	476.3	17.27	28.580		

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 Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2E-5H-F267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-19.6	19.6					
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-19.6	19.6	19.3	0.24	80.060		
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.59	32.966 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	-89.26	0.3	-20.4	20.4	19.5	0.94	21.643		
400.0	400.0	399.3	399.2	0.6	0.7	-87.49	1.0	-22.9	22.9	21.6	1.29	17.709		
500.0	500.0	498.8	498.7	0.8	0.8	-20.82	2.2	-27.0	26.3	24.7	1.64	16.064		
600.0	600.0	598.3	597.9	1.0	1.0	-20.07	4.0	-32.8	29.8	27.8	1.99	14.999		
700.0	699.9	697.7	697.0	1.2	1.3	-19.90	6.2	-40.3	33.4	31.0	2.34	14.272		
800.0	799.7	797.0	795.9	1.4	1.5	-20.14	8.9	-49.3	37.0	34.3	2.69	13.746		
900.0	899.4	896.3	894.5	1.6	1.7	-20.68	12.1	-60.1	40.7	37.6	3.05	13.345		
1,000.0	998.9	995.5	992.9	1.8	2.0	-21.31	15.7	-72.4	44.7	41.3	3.41	13.109		
1,100.0	1,098.5	1,095.0	1,091.4	2.0	2.3	-21.52	19.8	-86.2	50.0	46.2	3.77	13.248		
1,200.0	1,198.0	1,194.8	1,190.2	2.3	2.6	-21.64	24.0	-100.1	55.4	51.3	4.14	13.396		
1,300.0	1,297.6	1,294.7	1,289.0	2.5	2.9	-21.75	28.1	-114.1	60.9	56.4	4.50	13.516		
1,400.0	1,397.1	1,394.5	1,387.7	2.7	3.2	-21.84	32.3	-128.0	66.3	61.5	4.87	13.617		
1,500.0	1,496.7	1,494.4	1,486.5	2.9	3.5	-21.91	36.4	-142.0	71.8	66.6	5.24	13.701		
1,600.0	1,596.3	1,594.2	1,585.3	3.2	3.8	-21.98	40.6	-155.9	77.2	71.6	5.61	13.773		
1,700.0	1,695.8	1,694.1	1,684.1	3.4	4.1	-22.03	44.7	-169.9	82.7	76.7	5.98	13.836		
1,800.0	1,795.4	1,793.9	1,782.9	3.7	4.4	-22.08	48.9	-183.9	88.2	81.8	6.35	13.890		
1,900.0	1,894.9	1,893.8	1,881.7	3.9	4.7	-22.13	53.1	-197.8	93.6	86.9	6.72	13.938		
2,000.0	1,994.5	1,993.6	1,980.4	4.1	5.0	-22.16	57.2	-211.8	99.1	92.0	7.09	13.980		
2,100.0	2,094.0	2,093.5	2,079.2	4.4	5.3	-22.20	61.4	-225.7	104.5	97.1	7.46	14.017		
2,200.0	2,193.6	2,193.3	2,178.0	4.6	5.6	-22.23	65.5	-239.7	110.0	102.1	7.83	14.051		
2,300.0	2,293.1	2,293.2	2,276.8	4.8	5.9	-22.26	69.7	-253.6	115.4	107.2	8.20	14.081		
2,400.0	2,392.7	2,393.1	2,375.6	5.1	6.2	-22.28	73.8	-267.6	120.9	112.3	8.57	14.109		
2,500.0	2,492.2	2,492.9	2,474.4	5.3	6.5	-22.31	78.0	-281.6	126.3	117.4	8.94	14.134		
2,600.0	2,591.8	2,592.8	2,573.1	5.5	6.9	-22.33	82.1	-295.5	131.8	122.5	9.31	14.157		
2,700.0	2,691.3	2,692.6	2,671.9	5.8	7.2	-22.35	86.3	-309.5	137.2	127.6	9.68	14.178		
2,800.0	2,790.9	2,792.5	2,770.7	6.0	7.5	-22.37	90.4	-323.4	142.7	132.6	10.05	14.197		
2,900.0	2,890.4	2,892.3	2,869.5	6.3	7.8	-22.38	94.6	-337.4	148.1	137.7	10.42	14.215		
3,000.0	2,990.0	2,992.2	2,968.3	6.5	8.1	-22.40	98.7	-351.3	153.6	142.8	10.79	14.231		
3,100.0	3,089.6	3,092.0	3,067.1	6.7	8.4	-22.41	102.9	-365.3	159.0	147.9	11.16	14.247		
3,200.0	3,189.1	3,191.9	3,165.8	7.0	8.7	-22.43	107.0	-379.3	164.5	153.0	11.53	14.261		
3,300.0	3,288.7	3,291.7	3,264.6	7.2	9.0	-22.44	111.2	-393.2	170.0	158.0	11.91	14.274		
3,400.0	3,388.2	3,391.6	3,363.4	7.5	9.3	-22.45	115.3	-407.2	175.4	163.1	12.28	14.287		
3,500.0	3,487.8	3,491.4	3,462.2	7.7	9.6	-22.46	119.5	-421.1	180.9	168.2	12.65	14.298		
3,600.0	3,587.3	3,591.3	3,561.0	7.9	9.9	-22.47	123.6	-435.1	186.3	173.3	13.02	14.309		
3,700.0	3,686.9	3,691.1	3,659.8	8.2	10.3	-22.48	127.8	-449.0	191.8	178.4	13.39	14.320		
3,800.0	3,786.4	3,791.0	3,758.6	8.4	10.6	-22.49	132.0	-463.0	197.2	183.5	13.76	14.329		
3,900.0	3,886.0	3,890.8	3,857.3	8.7	10.9	-22.50	136.1	-477.0	202.7	188.5	14.13	14.339		
4,000.0	3,985.5	3,990.7	3,956.1	8.9	11.2	-22.51	140.3	-490.9	208.1	193.6	14.51	14.347		
4,100.0	4,085.1	4,090.5	4,054.9	9.1	11.5	-22.52	144.4	-504.9	213.6	198.7	14.88	14.355		
4,200.0	4,184.6	4,190.4	4,153.7	9.4	11.8	-22.53	148.6	-518.8	219.0	203.8	15.25	14.363		
4,300.0	4,284.2	4,290.2	4,252.5	9.6	12.1	-22.53	152.7	-532.8	224.5	208.9	15.62	14.371		
4,400.0	4,383.8	4,390.1	4,351.3	9.9	12.4	-22.54	156.9	-546.7	229.9	213.9	15.99	14.378		
4,500.0	4,483.3	4,489.9	4,450.0	10.1	12.7	-22.55	161.0	-560.7	235.4	219.0	16.36	14.384		
4,600.0	4,582.9	4,589.8	4,548.8	10.3	13.0	-22.55	165.2	-574.7	240.8	224.1	16.74	14.391		
4,700.0	4,682.4	4,689.6	4,647.6	10.6	13.3	-22.56	169.3	-588.6	246.3	229.2	17.11	14.397		
4,800.0	4,782.0	4,789.5	4,746.4	10.8	13.7	-22.57	173.5	-602.6	251.8	234.3	17.48	14.403		
4,900.0	4,881.5	4,889.3	4,845.2	11.1	14.0	-22.57	177.6	-616.5	257.2	239.4	17.85	14.408		
5,000.0	4,981.1	4,989.2	4,944.0	11.3	14.3	-22.58	181.8	-630.5	262.7	244.4	18.22	14.414		
5,100.0	5,080.6	5,089.0	5,042.7	11.5	14.6	-22.58	185.9	-644.4	268.1	249.5	18.59	14.419		

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 Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2E-5H-F267 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,180.2	5,188.9	5,141.5	11.8	14.9	-22.59	190.1	-658.4	273.6	254.6	18.97	14.424		
5,300.0	5,279.7	5,288.7	5,240.3	12.0	15.2	-22.59	194.2	-672.3	279.0	259.7	19.34	14.428		
5,400.0	5,379.3	5,388.6	5,339.1	12.3	15.5	-22.60	198.4	-686.3	284.5	264.8	19.71	14.433		
5,500.0	5,478.8	5,488.4	5,437.9	12.5	15.8	-22.60	202.5	-700.3	289.9	269.8	20.08	14.437		
5,600.0	5,578.4	5,588.3	5,536.7	12.7	16.1	-22.60	206.7	-714.2	295.4	274.9	20.45	14.441		
5,700.0	5,677.9	5,688.1	5,635.4	13.0	16.4	-22.61	210.9	-728.2	300.8	280.0	20.83	14.445		
5,800.0	5,777.5	5,788.0	5,734.2	13.2	16.8	-22.61	215.0	-742.1	306.3	285.1	21.20	14.449		
5,900.0	5,877.1	5,887.8	5,833.0	13.5	17.1	-22.62	219.2	-756.1	311.7	290.2	21.57	14.453		
6,000.0	5,976.6	5,987.7	5,931.8	13.7	17.4	-22.62	223.3	-770.0	317.2	295.3	21.94	14.456		
6,100.0	6,076.2	6,087.5	6,030.6	13.9	17.7	-22.62	227.5	-784.0	322.6	300.3	22.31	14.460		
6,200.0	6,175.7	6,187.4	6,129.4	14.2	18.0	-22.63	231.6	-798.0	328.1	305.4	22.68	14.463		
6,300.0	6,275.3	6,287.2	6,228.1	14.4	18.3	-22.63	235.8	-811.9	333.6	310.5	23.06	14.467		
6,400.0	6,374.8	6,387.1	6,326.9	14.7	18.6	-22.63	239.9	-825.9	339.0	315.6	23.43	14.470		
6,500.0	6,474.4	6,486.9	6,425.7	14.9	18.9	-22.64	244.1	-839.8	344.5	320.7	23.80	14.473		
6,600.0	6,573.9	6,586.8	6,524.5	15.1	19.2	-22.64	248.2	-853.8	349.9	325.7	24.17	14.476		
6,700.0	6,673.5	6,687.3	6,623.8	15.4	19.5	-23.65	246.1	-867.9	355.3	330.6	24.63	14.427		
6,800.0	6,773.0	6,783.1	6,716.8	15.6	19.7	-27.13	228.1	-881.3	361.3	336.0	25.34	14.256		
6,900.0	6,872.5	6,871.8	6,799.2	15.8	19.8	43.84	197.6	-893.4	370.1	343.8	26.22	14.114		
7,000.0	6,970.2	6,956.8	6,872.8	15.9	20.0	60.46	156.7	-904.3	381.1	354.3	26.77	14.234		
7,100.0	7,062.9	7,038.9	6,937.4	16.0	20.1	62.28	107.2	-914.1	393.4	366.5	26.86	14.648		
7,200.0	7,148.1	7,118.6	6,992.9	16.0	20.2	61.33	50.7	-922.6	405.9	379.5	26.44	15.350		
7,300.0	7,223.0	7,200.0	7,040.9	16.1	20.4	59.70	-14.5	-930.2	417.8	392.1	25.72	16.245		
7,400.0	7,285.4	7,273.0	7,075.8	16.3	20.6	58.26	-78.3	-936.0	428.4	403.4	24.94	17.175		
7,500.0	7,333.3	7,350.0	7,103.6	16.6	20.9	57.01	-149.9	-940.8	436.9	412.5	24.46	17.863		
7,600.0	7,365.5	7,423.3	7,121.0	17.1	21.3	56.18	-221.0	-944.1	443.1	418.4	24.72	17.930		
7,700.0	7,380.7	7,500.0	7,129.4	17.7	21.7	55.75	-297.1	-946.2	446.7	420.8	25.94	17.222		
7,800.0	7,382.0	7,588.3	7,130.0	18.4	22.2	55.76	-385.4	-947.4	447.9	420.3	27.60	16.228		
7,900.0	7,382.0	7,688.3	7,130.0	19.3	23.0	55.85	-485.4	-948.6	448.9	419.6	29.31	15.319		
8,000.0	7,382.0	7,788.3	7,130.0	20.3	23.8	55.94	-585.4	-949.8	450.0	418.8	31.20	14.424		
8,100.0	7,382.0	7,888.3	7,130.0	21.4	24.7	56.02	-685.4	-951.1	451.0	417.7	33.24	13.568		
8,200.0	7,382.0	7,988.2	7,130.0	22.5	25.7	56.11	-785.3	-952.3	452.0	416.6	35.41	12.764		
8,300.0	7,382.0	8,088.2	7,130.0	23.8	26.8	56.20	-885.3	-953.5	453.0	415.3	37.69	12.018		
8,400.0	7,382.0	8,188.2	7,130.0	25.1	28.0	56.28	-985.3	-954.7	454.0	413.9	40.06	11.332		
8,500.0	7,382.0	8,288.2	7,130.0	26.4	29.2	56.37	-1,085.3	-955.9	455.0	412.5	42.51	10.703		
8,600.0	7,382.0	8,388.2	7,130.0	27.8	30.5	56.45	-1,185.3	-957.2	456.0	411.0	45.03	10.128		
8,700.0	7,382.0	8,488.2	7,130.0	29.3	31.8	56.54	-1,285.3	-958.4	457.1	409.5	47.60	9.603		
8,800.0	7,382.0	8,588.2	7,130.0	30.7	33.2	56.62	-1,385.3	-959.6	458.1	407.9	50.22	9.122		
8,900.0	7,382.0	8,688.2	7,130.0	32.2	34.6	56.71	-1,485.2	-960.8	459.1	406.2	52.88	8.683		
9,000.0	7,382.0	8,788.2	7,130.0	33.8	36.0	56.79	-1,585.2	-962.1	460.1	404.6	55.57	8.280		
9,100.0	7,382.0	8,888.2	7,130.0	35.3	37.5	56.87	-1,685.2	-963.3	461.1	402.8	58.30	7.909		
9,200.0	7,382.0	8,988.2	7,130.0	36.9	39.0	56.96	-1,785.2	-964.5	462.2	401.1	61.06	7.569		
9,300.0	7,382.0	9,088.2	7,130.0	38.5	40.5	57.04	-1,885.2	-965.7	463.2	399.3	63.85	7.255		
9,400.0	7,382.0	9,188.2	7,130.0	40.1	42.0	57.12	-1,985.2	-966.9	464.2	397.6	66.65	6.965		
9,500.0	7,382.0	9,288.1	7,130.0	41.7	43.5	57.20	-2,085.1	-968.2	465.2	395.8	69.48	6.696		
9,600.0	7,382.0	9,388.1	7,130.0	43.3	45.1	57.28	-2,185.1	-969.4	466.3	393.9	72.33	6.446		
9,700.0	7,382.0	9,488.1	7,130.0	44.9	46.7	57.36	-2,285.1	-970.6	467.3	392.1	75.20	6.214		
9,800.0	7,382.0	9,588.1	7,130.0	46.6	48.2	57.45	-2,385.1	-971.8	468.3	390.3	78.08	5.998		
9,900.0	7,382.0	9,688.1	7,130.0	48.2	49.8	57.53	-2,485.1	-973.0	469.4	388.4	80.97	5.796		
10,000.0	7,382.0	9,788.1	7,130.0	49.9	51.4	57.61	-2,585.1	-974.3	470.4	386.5	83.88	5.608		
10,100.0	7,382.0	9,888.1	7,130.0	51.5	53.0	57.68	-2,685.1	-975.5	471.4	384.6	86.81	5.431		
10,200.0	7,382.0	9,988.1	7,130.0	53.2	54.7	57.76	-2,785.0	-976.7	472.5	382.7	89.74	5.265		
10,300.0	7,382.0	10,088.1	7,130.0	54.9	56.3	57.84	-2,885.0	-977.9	473.5	380.8	92.69	5.108		

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 Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2E-5H-F267 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
10,400.0	7,382.0	10,188.1	7,130.0	56.5	57.9	57.92	-2,985.0	-979.2	474.5	378.9	95.64	4.961		
10,500.0	7,382.0	10,288.1	7,130.0	58.2	59.6	58.00	-3,085.0	-980.4	475.6	377.0	98.61	4.823		
10,600.0	7,382.0	10,388.1	7,130.0	59.9	61.2	58.08	-3,185.0	-981.6	476.6	375.0	101.59	4.691		
10,700.0	7,382.0	10,488.1	7,130.0	61.6	62.9	58.15	-3,285.0	-982.8	477.6	373.1	104.57	4.567		
10,800.0	7,382.0	10,588.0	7,130.0	63.3	64.5	58.23	-3,385.0	-984.0	478.7	371.1	107.57	4.450		
10,900.0	7,382.0	10,688.0	7,130.0	65.0	66.2	58.31	-3,484.9	-985.3	479.7	369.1	110.57	4.339		
11,000.0	7,382.0	10,788.0	7,130.0	66.7	67.9	58.39	-3,584.9	-986.5	480.8	367.2	113.58	4.233		
11,100.0	7,382.0	10,888.0	7,130.0	68.4	69.6	58.46	-3,684.9	-987.7	481.8	365.2	116.60	4.132		
11,200.0	7,382.0	10,988.0	7,130.0	70.1	71.2	58.54	-3,784.9	-988.9	482.8	363.2	119.63	4.036		
11,300.0	7,382.0	11,088.0	7,130.0	71.8	72.9	58.61	-3,884.9	-990.2	483.9	361.2	122.66	3.945		
11,400.0	7,382.0	11,188.0	7,130.0	73.5	74.6	58.69	-3,984.9	-991.4	484.9	359.2	125.70	3.858		
11,500.0	7,382.0	11,288.0	7,130.0	75.2	76.3	58.76	-4,084.9	-992.6	486.0	357.2	128.74	3.775		
11,600.0	7,382.0	11,388.0	7,130.0	76.9	78.0	58.84	-4,184.8	-993.8	487.0	355.2	131.80	3.695		
11,700.0	7,382.0	11,488.0	7,130.0	78.6	79.7	58.91	-4,284.8	-995.0	488.0	353.2	134.90	3.618		
11,800.0	7,382.0	11,588.0	7,130.0	80.4	81.4	58.92	-4,384.8	-996.3	488.2	349.9	138.23	3.532		
11,900.0	7,382.0	11,688.0	7,130.0	82.1	83.1	58.82	-4,484.8	-997.5	486.8	345.4	141.37	3.443		
12,000.0	7,382.0	11,787.9	7,130.0	83.8	84.8	58.65	-4,584.7	-998.7	484.5	340.4	144.14	3.362		
12,100.0	7,382.0	11,887.9	7,130.0	85.5	86.5	58.49	-4,684.7	-999.9	482.2	335.4	146.86	3.284		
12,200.0	7,382.0	11,987.9	7,130.0	87.3	88.2	58.32	-4,784.7	-1,001.1	480.0	330.4	149.57	3.209		
12,300.0	7,382.0	12,087.8	7,130.0	89.0	89.9	58.15	-4,884.6	-1,002.4	477.7	325.4	152.27	3.137		
12,400.0	7,382.0	12,187.8	7,130.0	90.7	91.6	57.98	-4,984.6	-1,003.6	475.4	320.5	154.95	3.068		
12,500.0	7,382.0	12,287.8	7,130.0	92.5	93.3	57.81	-5,084.5	-1,004.8	473.2	315.5	157.62	3.002		
12,600.0	7,382.0	12,387.7	7,130.0	94.2	95.0	57.64	-5,184.5	-1,006.0	470.9	310.6	160.28	2.938		
12,700.0	7,382.0	12,487.7	7,130.0	95.9	96.7	57.46	-5,284.4	-1,007.3	468.6	305.7	162.92	2.877		
12,800.0	7,382.0	12,587.6	7,130.0	97.7	98.5	57.29	-5,384.4	-1,008.5	466.4	300.9	165.55	2.817		
12,900.0	7,382.0	12,687.6	7,130.0	99.4	100.2	57.11	-5,484.4	-1,009.7	464.2	296.0	168.16	2.760		
13,000.0	7,382.0	12,787.6	7,130.0	101.1	101.9	56.93	-5,584.3	-1,010.9	461.9	291.2	170.76	2.705		
13,100.0	7,382.0	12,887.5	7,130.0	102.9	103.6	56.75	-5,684.3	-1,012.1	459.7	286.3	173.34	2.652		
13,200.0	7,382.0	12,987.5	7,130.0	104.6	105.3	56.56	-5,784.2	-1,013.4	457.4	281.5	175.91	2.600		
13,300.0	7,382.0	13,087.5	7,130.0	106.3	107.0	56.38	-5,884.2	-1,014.6	455.2	276.8	178.46	2.551		
13,400.0	7,382.0	13,187.4	7,130.0	108.1	108.8	56.19	-5,984.1	-1,015.8	453.0	272.0	180.99	2.503		
13,500.0	7,382.0	13,287.4	7,130.0	109.8	110.5	56.00	-6,084.1	-1,017.0	450.8	267.3	183.50	2.456		
13,600.0	7,382.0	13,387.4	7,130.0	111.6	112.2	55.81	-6,184.1	-1,018.2	448.6	262.6	186.00	2.412		
13,700.0	7,382.0	13,487.3	7,130.0	113.3	113.9	55.62	-6,284.0	-1,019.5	446.3	257.9	188.48	2.368		
13,800.0	7,382.0	13,587.3	7,130.0	115.0	115.7	55.42	-6,384.0	-1,020.7	444.1	253.2	190.94	2.326		
13,900.0	7,382.0	13,687.3	7,130.0	116.8	117.4	55.23	-6,483.9	-1,021.9	441.9	248.6	193.38	2.285		
14,000.0	7,382.0	13,787.2	7,130.0	118.5	119.1	55.03	-6,583.9	-1,023.1	439.8	243.9	195.81	2.246		
14,100.0	7,382.0	13,887.2	7,130.0	120.3	120.8	54.83	-6,683.8	-1,024.4	437.6	239.4	198.21	2.208		
14,200.0	7,382.0	13,987.1	7,130.0	122.0	122.6	54.62	-6,783.8	-1,025.6	435.4	234.8	200.59	2.170		
14,300.0	7,382.0	14,087.1	7,130.0	123.8	124.3	54.42	-6,883.8	-1,026.8	433.2	230.3	202.95	2.135		
14,400.0	7,382.0	14,187.1	7,130.0	125.5	126.0	54.21	-6,983.7	-1,028.0	431.0	225.7	205.29	2.100		
14,500.0	7,382.0	14,287.0	7,130.0	127.2	127.8	54.00	-7,083.7	-1,029.2	428.9	221.3	207.61	2.066		
14,600.0	7,382.0	14,387.0	7,130.0	129.0	129.5	53.79	-7,183.6	-1,030.5	426.7	216.8	209.91	2.033		
14,700.0	7,382.0	14,487.0	7,130.0	130.7	131.2	53.58	-7,283.6	-1,031.7	424.6	212.4	212.18	2.001		
14,800.0	7,382.0	14,586.9	7,130.0	132.5	133.0	53.36	-7,383.5	-1,032.9	422.4	208.0	214.43	1.970		
14,900.0	7,382.0	14,686.9	7,130.0	134.2	134.7	53.15	-7,483.5	-1,034.1	420.3	203.6	216.66	1.940		
15,000.0	7,382.0	14,786.9	7,130.0	136.0	136.4	52.93	-7,583.5	-1,035.3	418.1	199.3	218.86	1.910		
15,100.0	7,382.0	14,886.8	7,130.0	137.7	138.2	52.71	-7,683.4	-1,036.6	416.0	195.0	221.04	1.882		
15,142.6	7,382.0	14,929.4	7,130.0	138.4	138.9	52.61	-7,726.0	-1,037.1	415.1	193.1	221.96	1.870 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2G-5H-F267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	22.4	22.4					
100.0	100.0	99.0	99.0	0.1	0.1	90.04	0.0	22.4	22.4	22.1	0.24	91.957		
200.0	200.0	199.0	199.0	0.3	0.3	90.04	0.0	22.4	22.4	21.8	0.59	37.787		
300.0	300.0	299.0	299.0	0.5	0.5	90.04	0.0	22.4	22.4	21.4	0.94	23.766		
400.0	400.0	399.0	399.0	0.6	0.6	90.04	0.0	22.4	22.4	21.1	1.29	17.334 CC, ES		
500.0	500.0	499.0	499.0	0.8	0.8	156.04	0.0	22.4	23.2	21.5	1.64	14.127		
600.0	600.0	599.0	599.0	1.0	1.0	158.41	0.0	22.4	25.6	23.6	1.99	12.861		
700.0	699.9	699.3	699.3	1.2	1.2	160.48	0.6	21.7	29.0	26.7	2.34	12.401		
800.0	799.7	799.6	799.6	1.4	1.3	161.22	2.4	19.8	32.7	30.0	2.69	12.162		
900.0	899.4	900.0	899.9	1.6	1.5	161.00	5.4	16.7	36.7	33.6	3.04	12.052		
1,000.0	998.9	1,000.3	1,000.0	1.8	1.7	160.08	9.6	12.3	40.7	37.3	3.40	11.967		
1,100.0	1,098.5	1,100.2	1,099.7	2.0	1.9	159.11	14.0	7.7	44.7	40.9	3.77	11.851		
1,200.0	1,198.0	1,200.1	1,199.4	2.3	2.1	158.29	18.3	3.2	48.6	44.5	4.14	11.749		
1,300.0	1,297.6	1,300.0	1,299.1	2.5	2.3	157.60	22.7	-1.4	52.6	48.0	4.51	11.660		
1,400.0	1,397.1	1,400.0	1,398.8	2.7	2.5	157.00	27.1	-6.0	56.5	51.6	4.88	11.580		
1,500.0	1,496.7	1,499.9	1,498.5	2.9	2.7	156.49	31.5	-10.6	60.5	55.2	5.25	11.509		
1,600.0	1,596.3	1,599.8	1,598.3	3.2	2.9	156.03	35.9	-15.2	64.4	58.8	5.63	11.445		
1,700.0	1,695.8	1,699.7	1,698.0	3.4	3.1	155.63	40.3	-19.8	68.4	62.4	6.01	11.388		
1,800.0	1,795.4	1,799.6	1,797.7	3.7	3.3	155.27	44.7	-24.4	72.4	66.0	6.39	11.335		
1,900.0	1,894.9	1,899.6	1,897.4	3.9	3.5	154.95	49.1	-29.0	76.4	69.6	6.76	11.288		
2,000.0	1,994.5	1,999.5	1,997.1	4.1	3.7	154.67	53.5	-33.6	80.3	73.2	7.14	11.244		
2,100.0	2,094.0	2,099.4	2,096.9	4.4	3.9	154.40	57.8	-38.2	84.3	76.8	7.52	11.204		
2,200.0	2,193.6	2,199.3	2,196.6	4.6	4.1	154.17	62.2	-42.7	88.3	80.4	7.91	11.167		
2,300.0	2,293.1	2,299.2	2,296.3	4.8	4.3	153.95	66.6	-47.3	92.3	84.0	8.29	11.133		
2,400.0	2,392.7	2,399.2	2,396.0	5.1	4.5	153.75	71.0	-51.9	96.2	87.6	8.67	11.102		
2,500.0	2,492.2	2,499.1	2,495.7	5.3	4.7	153.57	75.4	-56.5	100.2	91.2	9.05	11.073		
2,600.0	2,591.8	2,599.0	2,595.4	5.5	4.9	153.40	79.8	-61.1	104.2	94.8	9.44	11.045		
2,700.0	2,691.3	2,698.9	2,695.2	5.8	5.1	153.24	84.2	-65.7	108.2	98.4	9.82	11.020		
2,800.0	2,790.9	2,798.8	2,794.9	6.0	5.3	153.09	88.6	-70.3	112.2	102.0	10.20	10.996		
2,900.0	2,890.4	2,898.8	2,894.6	6.3	5.6	152.96	93.0	-74.9	116.2	105.6	10.59	10.974		
3,000.0	2,990.0	2,998.7	2,994.3	6.5	5.8	152.83	97.4	-79.5	120.2	109.2	10.97	10.953		
3,100.0	3,089.6	3,098.6	3,094.0	6.7	6.0	152.71	101.7	-84.1	124.1	112.8	11.35	10.933		
3,200.0	3,189.1	3,198.5	3,193.8	7.0	6.2	152.60	106.1	-88.7	128.1	116.4	11.74	10.915		
3,300.0	3,288.7	3,298.4	3,293.5	7.2	6.4	152.50	110.5	-93.2	132.1	120.0	12.12	10.898		
3,400.0	3,388.2	3,398.4	3,393.2	7.5	6.6	152.40	114.9	-97.8	136.1	123.6	12.51	10.881		
3,500.0	3,487.8	3,498.3	3,492.9	7.7	6.8	152.31	119.3	-102.4	140.1	127.2	12.89	10.865		
3,600.0	3,587.3	3,598.2	3,592.6	7.9	7.0	152.22	123.7	-107.0	144.1	130.8	13.28	10.851		
3,700.0	3,686.9	3,698.1	3,692.3	8.2	7.2	152.14	128.1	-111.6	148.1	134.4	13.66	10.837		
3,800.0	3,786.4	3,798.0	3,792.1	8.4	7.4	152.06	132.5	-116.2	152.1	138.0	14.05	10.823		
3,900.0	3,886.0	3,898.0	3,891.8	8.7	7.6	151.98	136.9	-120.8	156.1	141.6	14.44	10.810		
4,000.0	3,985.5	3,997.9	3,991.5	8.9	7.8	151.91	141.2	-125.4	160.1	145.2	14.82	10.798		
4,100.0	4,085.1	4,097.8	4,091.2	9.1	8.0	151.85	145.6	-130.0	164.0	148.8	15.21	10.787		
4,200.0	4,184.6	4,197.7	4,190.9	9.4	8.2	151.78	150.0	-134.6	168.0	152.4	15.59	10.776		
4,300.0	4,284.2	4,297.6	4,290.7	9.6	8.4	151.72	154.4	-139.1	172.0	156.0	15.98	10.765		
4,400.0	4,383.8	4,397.6	4,390.4	9.9	8.6	151.66	158.8	-143.7	176.0	159.7	16.37	10.755		
4,500.0	4,483.3	4,497.5	4,490.1	10.1	8.8	151.61	163.2	-148.3	180.0	163.3	16.75	10.745		
4,600.0	4,582.9	4,597.4	4,589.8	10.3	9.1	151.55	167.6	-152.9	184.0	166.9	17.14	10.736		
4,700.0	4,682.4	4,697.3	4,689.5	10.6	9.3	151.50	172.0	-157.5	188.0	170.5	17.52	10.727		
4,800.0	4,782.0	4,797.2	4,789.2	10.8	9.5	151.45	176.4	-162.1	192.0	174.1	17.91	10.719		
4,900.0	4,881.5	4,897.2	4,889.0	11.1	9.7	151.41	180.7	-166.7	196.0	177.7	18.30	10.710		
5,000.0	4,981.1	4,997.1	4,988.7	11.3	9.9	151.36	185.1	-171.3	200.0	181.3	18.68	10.703		
5,100.0	5,080.6	5,097.0	5,088.4	11.5	10.1	151.32	189.5	-175.9	204.0	184.9	19.07	10.695		

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 Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2G-5H-F267 - Hz - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,180.2	5,196.9	5,188.1	11.8	10.3	151.28	193.9	-180.5	208.0	188.5	19.46	10.688	
5,300.0	5,279.7	5,296.8	5,287.8	12.0	10.5	151.24	198.3	-185.0	211.9	192.1	19.84	10.681	
5,400.0	5,379.3	5,396.8	5,387.6	12.3	10.7	151.20	202.7	-189.6	215.9	195.7	20.23	10.674	
5,500.0	5,478.8	5,496.7	5,487.3	12.5	10.9	151.16	207.1	-194.2	219.9	199.3	20.62	10.667	
5,600.0	5,578.4	5,596.6	5,587.0	12.7	11.1	151.12	211.5	-198.8	223.9	202.9	21.00	10.661	
5,700.0	5,677.9	5,696.5	5,686.7	13.0	11.3	151.09	215.9	-203.4	227.9	206.5	21.39	10.655	
5,800.0	5,777.5	5,796.4	5,786.4	13.2	11.5	151.06	220.2	-208.0	231.9	210.1	21.78	10.649	
5,900.0	5,877.1	5,896.4	5,886.1	13.5	11.7	151.02	224.6	-212.6	235.9	213.7	22.17	10.643	
6,000.0	5,976.6	5,996.3	5,985.9	13.7	11.9	150.99	229.0	-217.2	239.9	217.3	22.55	10.638	
6,100.0	6,076.2	6,096.2	6,085.6	13.9	12.1	150.96	233.4	-221.8	243.9	221.0	22.94	10.632	
6,200.0	6,175.7	6,196.1	6,185.3	14.2	12.4	150.93	237.8	-226.4	247.9	224.6	23.33	10.627	
6,300.0	6,275.3	6,296.0	6,285.0	14.4	12.6	150.90	242.2	-231.0	251.9	228.2	23.71	10.622	
6,400.0	6,374.8	6,396.0	6,384.7	14.7	12.8	150.88	246.6	-235.5	255.9	231.8	24.10	10.617	
6,500.0	6,474.4	6,495.9	6,484.4	14.9	13.0	150.85	251.0	-240.1	259.9	235.4	24.49	10.612	
6,600.0	6,573.9	6,596.2	6,584.6	15.1	13.2	150.88	255.1	-244.7	263.8	239.0	24.87	10.611	
6,700.0	6,673.5	6,697.2	6,685.1	15.4	13.3	153.37	247.8	-249.2	267.4	242.5	24.93	10.727	
6,800.0	6,773.0	6,791.5	6,776.4	15.6	13.3	158.96	225.1	-252.9	272.5	247.8	24.68	11.043	
6,900.0	6,872.5	6,877.8	6,855.7	15.8	13.3	-117.54	191.4	-255.9	282.3	257.9	24.37	11.584	
7,000.0	6,970.2	6,960.1	6,925.9	15.9	13.3	-89.37	148.5	-258.3	295.9	271.6	24.29	12.182	
7,100.0	7,062.9	7,039.4	6,987.0	16.0	13.3	-77.51	98.2	-260.2	311.6	287.2	24.40	12.771	
7,200.0	7,148.1	7,116.3	7,039.1	16.0	13.3	-70.03	41.7	-261.6	327.9	303.3	24.59	13.335	
7,300.0	7,223.0	7,191.3	7,082.2	16.1	13.5	-64.76	-19.6	-262.5	343.4	318.7	24.65	13.927	
7,400.0	7,285.4	7,265.0	7,116.4	16.3	13.7	-60.97	-84.8	-262.9	357.1	332.4	24.69	14.460	
7,500.0	7,333.3	7,337.7	7,141.7	16.6	14.0	-58.34	-152.9	-262.8	368.3	343.6	24.72	14.902	
7,600.0	7,365.5	7,409.6	7,158.0	17.1	14.5	-56.67	-222.9	-262.3	376.5	351.7	24.83	15.164	
7,700.0	7,380.7	7,481.2	7,165.5	17.7	15.0	-55.87	-294.0	-261.4	381.4	356.3	25.15	15.165	
7,800.0	7,382.0	7,571.5	7,166.0	18.4	15.8	-55.87	-384.4	-259.9	383.2	356.9	26.36	14.539	
7,900.0	7,382.0	7,671.5	7,166.0	19.3	16.8	-56.02	-484.4	-258.1	384.7	356.5	28.15	13.667	
8,000.0	7,382.0	7,771.5	7,166.0	20.3	17.9	-56.16	-584.3	-256.4	386.1	356.0	30.12	12.819	
8,100.0	7,382.0	7,871.5	7,166.0	21.4	19.1	-56.31	-684.3	-254.7	387.6	355.3	32.25	12.018	
8,200.0	7,382.0	7,971.5	7,166.0	22.5	20.4	-56.45	-784.3	-252.9	389.0	354.5	34.51	11.274	
8,300.0	7,382.0	8,071.5	7,166.0	23.8	21.7	-56.59	-884.2	-251.2	390.5	353.6	36.87	10.591	
8,400.0	7,382.0	8,171.5	7,166.0	25.1	23.1	-56.73	-984.2	-249.4	392.0	352.6	39.33	9.967	
8,500.0	7,382.0	8,271.4	7,166.0	26.4	24.6	-56.87	-1,084.2	-247.7	393.4	351.6	41.85	9.400	
8,600.0	7,382.0	8,371.4	7,166.0	27.8	26.0	-57.01	-1,184.1	-245.9	394.9	350.4	44.45	8.884	
8,700.0	7,382.0	8,471.4	7,166.0	29.3	27.6	-57.15	-1,284.1	-244.2	396.3	349.3	47.10	8.416	
8,800.0	7,382.0	8,571.4	7,166.0	30.7	29.1	-57.28	-1,384.1	-242.4	397.8	348.0	49.79	7.989	
8,900.0	7,382.0	8,671.4	7,166.0	32.2	30.7	-57.42	-1,484.1	-240.7	399.3	346.8	52.53	7.601	
9,000.0	7,382.0	8,771.4	7,166.0	33.8	32.3	-57.55	-1,584.0	-238.9	400.8	345.4	55.31	7.246	
9,100.0	7,382.0	8,871.3	7,166.0	35.3	33.9	-57.68	-1,684.0	-237.2	402.2	344.1	58.12	6.921	
9,200.0	7,382.0	8,971.3	7,166.0	36.9	35.5	-57.82	-1,784.0	-235.5	403.7	342.8	60.95	6.623	
9,300.0	7,382.0	9,071.3	7,166.0	38.5	37.1	-57.95	-1,883.9	-233.7	405.2	341.4	63.82	6.349	
9,400.0	7,382.0	9,171.3	7,166.0	40.1	38.8	-58.08	-1,983.9	-232.0	406.7	340.0	66.70	6.097	
9,500.0	7,382.0	9,271.3	7,166.0	41.7	40.4	-58.21	-2,083.9	-230.2	408.1	338.5	69.61	5.863	
9,600.0	7,382.0	9,371.3	7,166.0	43.3	42.1	-58.34	-2,183.8	-228.5	409.6	337.1	72.54	5.647	
9,700.0	7,382.0	9,471.3	7,166.0	44.9	43.7	-58.46	-2,283.8	-226.7	411.1	335.6	75.49	5.446	
9,800.0	7,382.0	9,571.2	7,166.0	46.6	45.4	-58.59	-2,383.8	-225.0	412.6	334.2	78.45	5.259	
9,900.0	7,382.0	9,671.2	7,166.0	48.2	47.1	-58.72	-2,483.8	-223.2	414.1	332.7	81.43	5.085	
10,000.0	7,382.0	9,771.2	7,166.0	49.9	48.8	-58.84	-2,583.7	-221.5	415.6	331.2	84.43	4.922	
10,100.0	7,382.0	9,871.2	7,166.0	51.5	50.5	-58.97	-2,683.7	-219.8	417.1	329.6	87.44	4.770	
10,200.0	7,382.0	9,971.2	7,166.0	53.2	52.1	-59.09	-2,783.7	-218.0	418.6	328.1	90.46	4.627	
10,300.0	7,382.0	10,071.2	7,166.0	54.9	53.8	-59.21	-2,883.6	-216.3	420.1	326.6	93.49	4.493	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2G-5H-F267 - Hz - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
10,400.0	7,382.0	10,171.2	7,166.0	56.5	55.5	-59.33	-2,983.6	-214.5	421.6	325.0	96.54	4.367		
10,500.0	7,382.0	10,271.1	7,166.0	58.2	57.2	-59.45	-3,083.6	-212.8	423.1	323.5	99.60	4.248		
10,600.0	7,382.0	10,371.1	7,166.0	59.9	59.0	-59.57	-3,183.5	-211.0	424.6	321.9	102.67	4.136		
10,700.0	7,382.0	10,471.1	7,166.0	61.6	60.7	-59.69	-3,283.5	-209.3	426.1	320.3	105.75	4.029		
10,800.0	7,382.0	10,571.5	7,166.0	63.3	62.4	-59.81	-3,383.9	-207.5	427.6	318.8	108.84	3.929		
10,900.0	7,382.0	10,678.4	7,166.0	65.0	64.2	-59.86	-3,490.8	-206.8	428.2	316.2	111.97	3.824		
11,000.0	7,382.0	10,785.3	7,166.0	66.7	66.1	-59.78	-3,597.7	-208.0	427.2	312.2	114.97	3.716		
11,100.0	7,382.0	10,892.1	7,166.0	68.4	67.9	-59.56	-3,704.4	-211.3	424.6	306.8	117.80	3.604		
11,200.0	7,382.0	10,992.6	7,166.0	70.1	69.6	-59.27	-3,804.9	-215.4	421.0	300.6	120.46	3.495		
11,300.0	7,382.0	11,092.5	7,166.0	71.8	71.4	-58.98	-3,904.7	-219.5	417.5	294.4	123.08	3.392		
11,400.0	7,382.0	11,192.4	7,166.0	73.5	73.1	-58.69	-4,004.5	-223.6	414.0	288.3	125.68	3.294		
11,500.0	7,382.0	11,292.4	7,166.0	75.2	74.8	-58.39	-4,104.3	-227.8	410.5	282.2	128.25	3.200		
11,600.0	7,382.0	11,392.3	7,166.0	76.9	76.5	-58.09	-4,204.2	-231.9	407.0	276.1	130.80	3.111		
11,700.0	7,382.0	11,492.2	7,166.0	78.6	78.3	-57.78	-4,304.0	-236.0	403.5	270.1	133.35	3.026		
11,800.0	7,382.0	11,592.1	7,166.0	80.4	80.0	-57.56	-4,403.9	-240.1	400.9	264.7	136.18	2.944		
11,900.0	7,382.0	11,692.1	7,166.0	82.1	81.7	-57.47	-4,503.8	-244.2	399.8	260.7	139.14	2.873		
12,000.0	7,382.0	11,792.1	7,166.0	83.8	83.5	-57.45	-4,603.7	-248.4	399.6	257.5	142.06	2.813		
12,100.0	7,382.0	11,892.1	7,166.0	85.5	85.2	-57.43	-4,703.6	-252.5	399.4	254.4	144.96	2.755		
12,200.0	7,382.0	11,992.1	7,166.0	87.3	86.9	-57.41	-4,803.5	-256.6	399.2	251.3	147.86	2.700		
12,300.0	7,382.0	12,092.1	7,166.0	89.0	88.7	-57.40	-4,903.4	-260.7	399.0	248.2	150.77	2.647		
12,400.0	7,382.0	12,192.1	7,166.0	90.7	90.4	-57.38	-5,003.4	-264.9	398.8	245.1	153.67	2.595		
12,500.0	7,382.0	12,292.1	7,166.0	92.5	92.2	-57.36	-5,103.3	-269.0	398.6	242.0	156.57	2.546		
12,600.0	7,382.0	12,392.1	7,166.0	94.2	93.9	-57.34	-5,203.2	-273.1	398.4	238.9	159.48	2.498		
12,700.0	7,382.0	12,492.1	7,166.0	95.9	95.6	-57.32	-5,303.1	-277.2	398.2	235.9	162.38	2.452		
12,800.0	7,382.0	12,592.1	7,166.0	97.7	97.4	-57.31	-5,403.0	-281.4	398.0	232.8	165.29	2.408		
12,900.0	7,382.0	12,692.1	7,166.0	99.4	99.1	-57.29	-5,502.9	-285.5	397.8	229.7	168.19	2.365		
13,000.0	7,382.0	12,792.1	7,166.0	101.1	100.9	-57.27	-5,602.8	-289.6	397.7	226.6	171.09	2.324		
13,100.0	7,382.0	12,892.1	7,166.0	102.9	102.6	-57.25	-5,702.8	-293.7	397.5	223.5	173.99	2.284		
13,200.0	7,382.0	12,992.1	7,166.0	104.6	104.3	-57.23	-5,802.7	-297.8	397.3	220.4	176.90	2.246		
13,300.0	7,382.0	13,092.1	7,166.0	106.3	106.1	-57.22	-5,902.6	-302.0	397.1	217.3	179.80	2.208		
13,400.0	7,382.0	13,192.1	7,166.0	108.1	107.8	-57.20	-6,002.5	-306.1	396.9	214.2	182.70	2.172		
13,500.0	7,382.0	13,292.1	7,166.0	109.8	109.6	-57.18	-6,102.4	-310.2	396.7	211.1	185.60	2.137		
13,600.0	7,382.0	13,392.1	7,166.0	111.6	111.3	-57.16	-6,202.3	-314.3	396.5	208.0	188.50	2.103		
13,700.0	7,382.0	13,492.1	7,166.0	113.3	113.1	-57.14	-6,302.2	-318.5	396.3	204.9	191.40	2.071		
13,800.0	7,382.0	13,592.1	7,166.0	115.0	114.8	-57.13	-6,402.2	-322.6	396.1	201.8	194.30	2.039		
13,900.0	7,382.0	13,692.1	7,166.0	116.8	116.6	-57.11	-6,502.1	-326.7	395.9	198.7	197.20	2.008		
14,000.0	7,382.0	13,792.1	7,166.0	118.5	118.3	-57.09	-6,602.0	-330.8	395.7	195.6	200.10	1.978		
14,100.0	7,382.0	13,892.1	7,166.0	120.3	120.0	-57.07	-6,701.9	-335.0	395.5	192.5	202.99	1.948		
14,200.0	7,382.0	13,992.1	7,166.0	122.0	121.8	-57.05	-6,801.8	-339.1	395.3	189.4	205.89	1.920		
14,300.0	7,382.0	14,092.1	7,166.0	123.8	123.5	-57.04	-6,901.7	-343.2	395.1	186.4	208.79	1.893		
14,400.0	7,382.0	14,192.1	7,166.0	125.5	125.3	-57.02	-7,001.6	-347.3	394.9	183.3	211.68	1.866		
14,500.0	7,382.0	14,292.1	7,166.0	127.2	127.0	-57.00	-7,101.6	-351.5	394.8	180.2	214.57	1.840		
14,600.0	7,382.0	14,392.1	7,166.0	129.0	128.8	-56.98	-7,201.5	-355.6	394.6	177.1	217.47	1.814		
14,700.0	7,382.0	14,492.1	7,166.0	130.7	130.5	-56.96	-7,301.4	-359.7	394.4	174.0	220.36	1.790		
14,800.0	7,382.0	14,592.1	7,166.0	132.5	132.3	-56.95	-7,401.3	-363.8	394.2	170.9	223.25	1.766		
14,900.0	7,382.0	14,692.1	7,166.0	134.2	134.0	-56.93	-7,501.2	-368.0	394.0	167.8	226.14	1.742		
15,000.0	7,382.0	14,792.1	7,166.0	136.0	135.8	-56.91	-7,601.1	-372.1	393.8	164.8	229.03	1.719		
15,100.0	7,382.0	14,892.1	7,166.0	137.7	137.5	-56.89	-7,701.0	-376.2	393.6	161.7	231.92	1.697		
15,128.8	7,382.0	14,920.9	7,166.0	138.2	138.0	-56.88	-7,729.8	-377.4	393.5	160.8	232.75	1.691		
15,142.6	7,382.0	14,921.1	7,166.0	138.4	138.0	-56.88	-7,730.0	-377.4	393.8	160.8	232.96	1.690 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2H-5H-F267 - Hz - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	41.9	41.9						
100.0	100.0	99.0	99.0	0.1	0.1	90.05	0.0	41.9	41.9	41.7	0.24	172.420			
200.0	200.0	199.0	199.0	0.3	0.3	90.05	0.0	41.9	41.9	41.3	0.59	70.850			
300.0	300.0	299.0	299.0	0.5	0.5	90.05	0.0	41.9	41.9	41.0	0.94	44.561			
400.0	400.0	399.0	399.0	0.6	0.6	90.05	0.0	41.9	41.9	40.6	1.29	32.501 CC, ES			
500.0	500.0	499.0	499.0	0.8	0.8	155.62	0.0	41.9	42.7	41.1	1.64	26.063			
600.0	600.0	599.0	599.0	1.0	1.0	156.99	0.0	41.9	45.1	43.1	1.99	22.692			
700.0	699.9	699.2	699.2	1.2	1.2	158.03	0.8	41.7	48.8	46.5	2.34	20.889			
800.0	799.7	799.4	799.3	1.4	1.3	157.86	3.3	40.8	53.6	50.9	2.69	19.905			
900.0	899.4	899.4	899.2	1.6	1.5	156.96	7.2	39.6	59.4	56.3	3.05	19.473			
1,000.0	998.9	999.1	998.9	1.8	1.7	156.57	11.3	38.2	66.5	63.0	3.41	19.478			
1,100.0	1,098.5	1,098.9	1,098.5	2.0	1.9	156.31	15.4	36.9	73.7	69.9	3.78	19.502			
1,200.0	1,198.0	1,198.6	1,198.2	2.3	2.1	156.09	19.5	35.6	80.9	76.8	4.15	19.513			
1,300.0	1,297.6	1,298.3	1,297.8	2.5	2.3	155.91	23.7	34.2	88.1	83.6	4.51	19.516			
1,400.0	1,397.1	1,398.1	1,397.5	2.7	2.4	155.76	27.8	32.9	95.3	90.5	4.89	19.514			
1,500.0	1,496.7	1,497.8	1,497.1	2.9	2.6	155.63	31.9	31.5	102.6	97.3	5.26	19.509			
1,600.0	1,596.3	1,597.6	1,596.8	3.2	2.8	155.51	36.0	30.2	109.8	104.1	5.63	19.502			
1,700.0	1,695.8	1,697.3	1,696.4	3.4	3.0	155.41	40.1	28.9	117.0	111.0	6.00	19.494			
1,800.0	1,795.4	1,797.0	1,796.1	3.7	3.2	155.32	44.3	27.5	124.2	117.8	6.37	19.486			
1,900.0	1,894.9	1,896.8	1,895.7	3.9	3.4	155.24	48.4	26.2	131.4	124.7	6.75	19.477			
2,000.0	1,994.5	1,996.5	1,995.3	4.1	3.6	155.17	52.5	24.8	138.7	131.5	7.12	19.468			
2,100.0	2,094.0	2,096.2	2,095.0	4.4	3.8	155.11	56.6	23.5	145.9	138.4	7.50	19.459			
2,200.0	2,193.6	2,196.0	2,194.6	4.6	4.0	155.05	60.7	22.2	153.1	145.2	7.87	19.450			
2,300.0	2,293.1	2,295.7	2,294.3	4.8	4.1	155.00	64.8	20.8	160.3	152.1	8.25	19.442			
2,400.0	2,392.7	2,395.5	2,393.9	5.1	4.3	154.95	69.0	19.5	167.6	158.9	8.62	19.434			
2,500.0	2,492.2	2,495.2	2,493.6	5.3	4.5	154.91	73.1	18.1	174.8	165.8	9.00	19.426			
2,600.0	2,591.8	2,594.9	2,593.2	5.5	4.7	154.87	77.2	16.8	182.0	172.6	9.37	19.418			
2,700.0	2,691.3	2,694.7	2,692.9	5.8	4.9	154.83	81.3	15.5	189.2	179.5	9.75	19.411			
2,800.0	2,790.9	2,794.4	2,792.5	6.0	5.1	154.80	85.4	14.1	196.4	186.3	10.12	19.404			
2,900.0	2,890.4	2,894.2	2,892.1	6.3	5.3	154.76	89.5	12.8	203.7	193.2	10.50	19.397			
3,000.0	2,990.0	2,993.9	2,991.8	6.5	5.5	154.73	93.7	11.5	210.9	200.0	10.88	19.391			
3,100.0	3,089.6	3,093.6	3,091.4	6.7	5.7	154.71	97.8	10.1	218.1	206.9	11.25	19.385			
3,200.0	3,189.1	3,193.4	3,191.1	7.0	5.8	154.68	101.9	8.8	225.3	213.7	11.63	19.379			
3,300.0	3,288.7	3,293.1	3,290.7	7.2	6.0	154.66	106.0	7.4	232.6	220.6	12.00	19.373			
3,400.0	3,388.2	3,392.8	3,390.4	7.5	6.2	154.63	110.1	6.1	239.8	227.4	12.38	19.368			
3,500.0	3,487.8	3,492.6	3,490.0	7.7	6.4	154.61	114.3	4.8	247.0	234.3	12.76	19.363			
3,600.0	3,587.3	3,592.3	3,589.7	7.9	6.6	154.59	118.4	3.4	254.2	241.1	13.13	19.358			
3,700.0	3,686.9	3,692.1	3,689.3	8.2	6.8	154.57	122.5	2.1	261.5	247.9	13.51	19.353			
3,800.0	3,786.4	3,791.8	3,789.0	8.4	7.0	154.55	126.6	0.7	268.7	254.8	13.89	19.349			
3,900.0	3,886.0	3,891.5	3,888.6	8.7	7.2	154.54	130.7	-0.6	275.9	261.6	14.26	19.344			
4,000.0	3,985.5	3,991.3	3,988.2	8.9	7.4	154.52	134.8	-1.9	283.1	268.5	14.64	19.340			
4,100.0	4,085.1	4,091.0	4,087.9	9.1	7.5	154.50	139.0	-3.3	290.3	275.3	15.02	19.336			
4,200.0	4,184.6	4,190.8	4,187.5	9.4	7.7	154.49	143.1	-4.6	297.6	282.2	15.39	19.332			
4,300.0	4,284.2	4,290.5	4,287.2	9.6	7.9	154.47	147.2	-6.0	304.8	289.0	15.77	19.328			
4,400.0	4,383.8	4,390.2	4,386.8	9.9	8.1	154.46	151.3	-7.3	312.0	295.9	16.15	19.325			
4,500.0	4,483.3	4,490.0	4,486.5	10.1	8.3	154.45	155.4	-8.6	319.2	302.7	16.52	19.321			
4,600.0	4,582.9	4,589.7	4,586.1	10.3	8.5	154.44	159.6	-10.0	326.5	309.6	16.90	19.318			
4,700.0	4,682.4	4,689.5	4,685.8	10.6	8.7	154.42	163.7	-11.3	333.7	316.4	17.28	19.315			
4,800.0	4,782.0	4,789.2	4,785.4	10.8	8.9	154.41	167.8	-12.6	340.9	323.3	17.65	19.312			
4,900.0	4,881.5	4,888.9	4,885.0	11.1	9.1	154.40	171.9	-14.0	348.1	330.1	18.03	19.309			
5,000.0	4,981.1	4,988.7	4,984.7	11.3	9.3	154.39	176.0	-15.3	355.4	337.0	18.41	19.306			
5,100.0	5,080.6	5,088.4	5,084.3	11.5	9.4	154.38	180.1	-16.7	362.6	343.8	18.78	19.303			

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 Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2H-5H-F267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,180.2	5,188.1	5,184.0	11.8	9.6	154.37	184.3	-18.0	369.8	350.6	19.16	19.300		
5,300.0	5,279.7	5,287.9	5,283.6	12.0	9.8	154.36	188.4	-19.3	377.0	357.5	19.54	19.298		
5,400.0	5,379.3	5,387.6	5,383.3	12.3	10.0	154.35	192.5	-20.7	384.3	364.3	19.91	19.295		
5,500.0	5,478.8	5,487.4	5,482.9	12.5	10.2	154.35	196.6	-22.0	391.5	371.2	20.29	19.293		
5,600.0	5,578.4	5,587.1	5,582.6	12.7	10.4	154.34	200.7	-23.4	398.7	378.0	20.67	19.290		
5,700.0	5,677.9	5,686.8	5,682.2	13.0	10.6	154.33	204.8	-24.7	405.9	384.9	21.05	19.288		
5,800.0	5,777.5	5,786.6	5,781.8	13.2	10.8	154.32	209.0	-26.0	413.2	391.7	21.42	19.286		
5,900.0	5,877.1	5,886.3	5,881.5	13.5	11.0	154.31	213.1	-27.4	420.4	398.6	21.80	19.284		
6,000.0	5,976.6	5,986.1	5,981.1	13.7	11.1	154.31	217.2	-28.7	427.6	405.4	22.18	19.281		
6,100.0	6,076.2	6,085.8	6,080.8	13.9	11.3	154.30	221.3	-30.1	434.8	412.3	22.55	19.279		
6,200.0	6,175.7	6,185.5	6,180.4	14.2	11.5	154.29	225.4	-31.4	442.0	419.1	22.93	19.277		
6,300.0	6,275.3	6,285.3	6,280.1	14.4	11.7	154.29	229.6	-32.7	449.3	426.0	23.31	19.275		
6,400.0	6,374.8	6,385.0	6,379.7	14.7	11.9	154.28	233.7	-34.1	456.5	432.8	23.69	19.274		
6,500.0	6,474.4	6,484.7	6,479.4	14.9	12.1	154.27	237.8	-35.4	463.7	439.7	24.06	19.272		
6,600.0	6,573.9	6,584.5	6,579.0	15.1	12.3	154.27	241.9	-36.7	470.9	446.5	24.44	19.270		
6,700.0	6,673.5	6,684.2	6,678.6	15.4	12.5	154.26	246.0	-38.1	478.2	453.4	24.82	19.268		
6,800.0	6,773.0	6,784.0	6,778.3	15.6	12.7	154.26	250.1	-39.4	485.4	460.2	25.19	19.267 SF		
6,900.0	6,872.5	6,884.7	6,878.8	15.8	12.8	-128.82	246.7	-40.8	492.6	467.2	25.40	19.397		
7,000.0	6,970.2	6,985.2	6,977.0	15.9	12.8	-106.44	225.8	-42.1	499.7	474.2	25.41	19.661		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2F-5H-F267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4890.0ft (Ensign)

Offset Depths are relative to Offset Datum

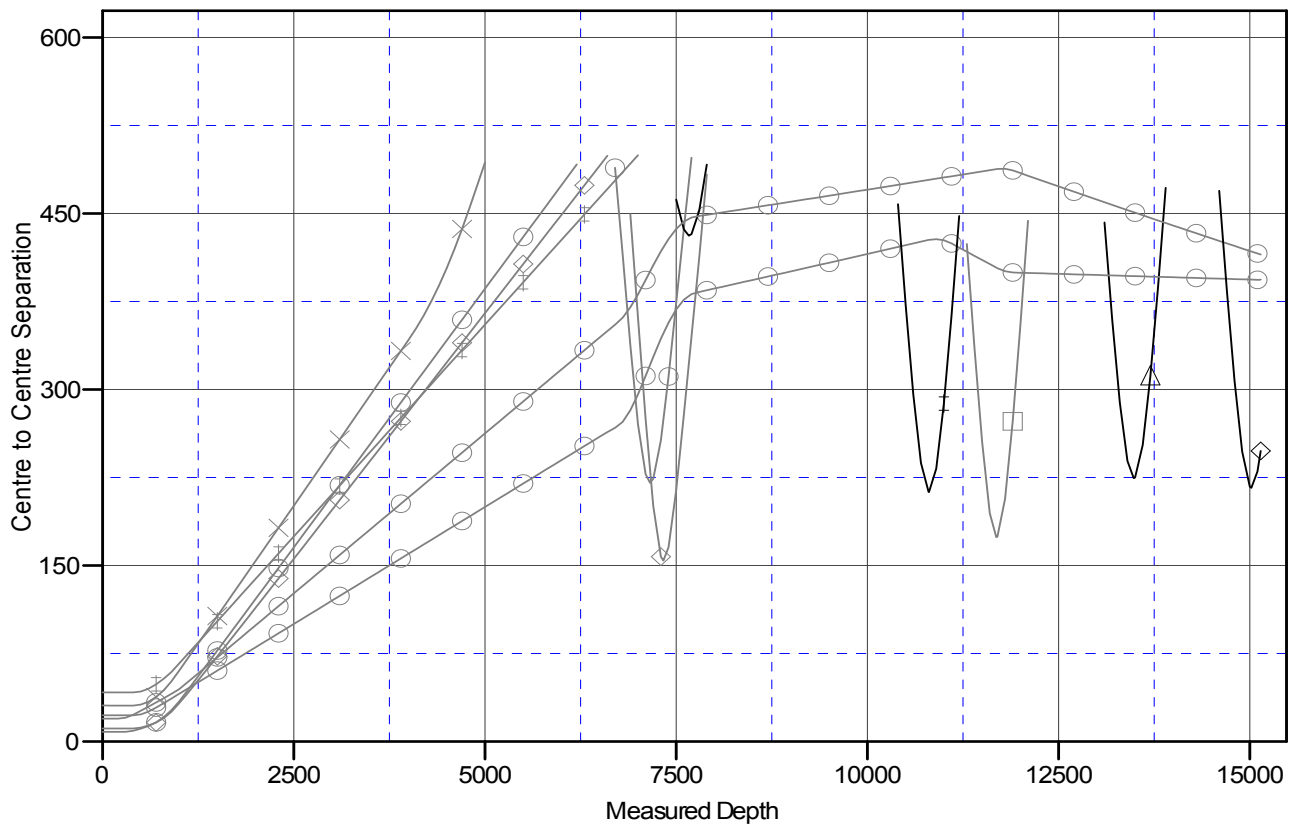
Central Meridian is -105.500000 °

Coordinates are relative to: Vogl-McCoy 2F-5H-F267

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.38°

Ladder Plot



LEGEND

Plan #1 V0	Vogl-Geist2F-5H-F267, Hz, Plan #1 V0	Vogl-Geist2E-5H-F267, Hz, Plan #1 V0
EXISTING), KMG WELL, NO SURVEYS V0	MCCOY 2-4-5 (EXISTING), ENCANA WELL, SURVEYS V0	DIER 24-8 (EXISTING), ENCANA WELL, SURVEYS V0
Plan #1 V0	Vogl-McCoy 2E-5H-F267, Hz, Plan #1 V0	CHENG 3-8A (EXISTING), KMG WELL, SURVEYS V0
ENCANA WELL, SURVEYS V0	Vogl-McCoy 2G-5H-F267, Hz, Plan #1 V0	