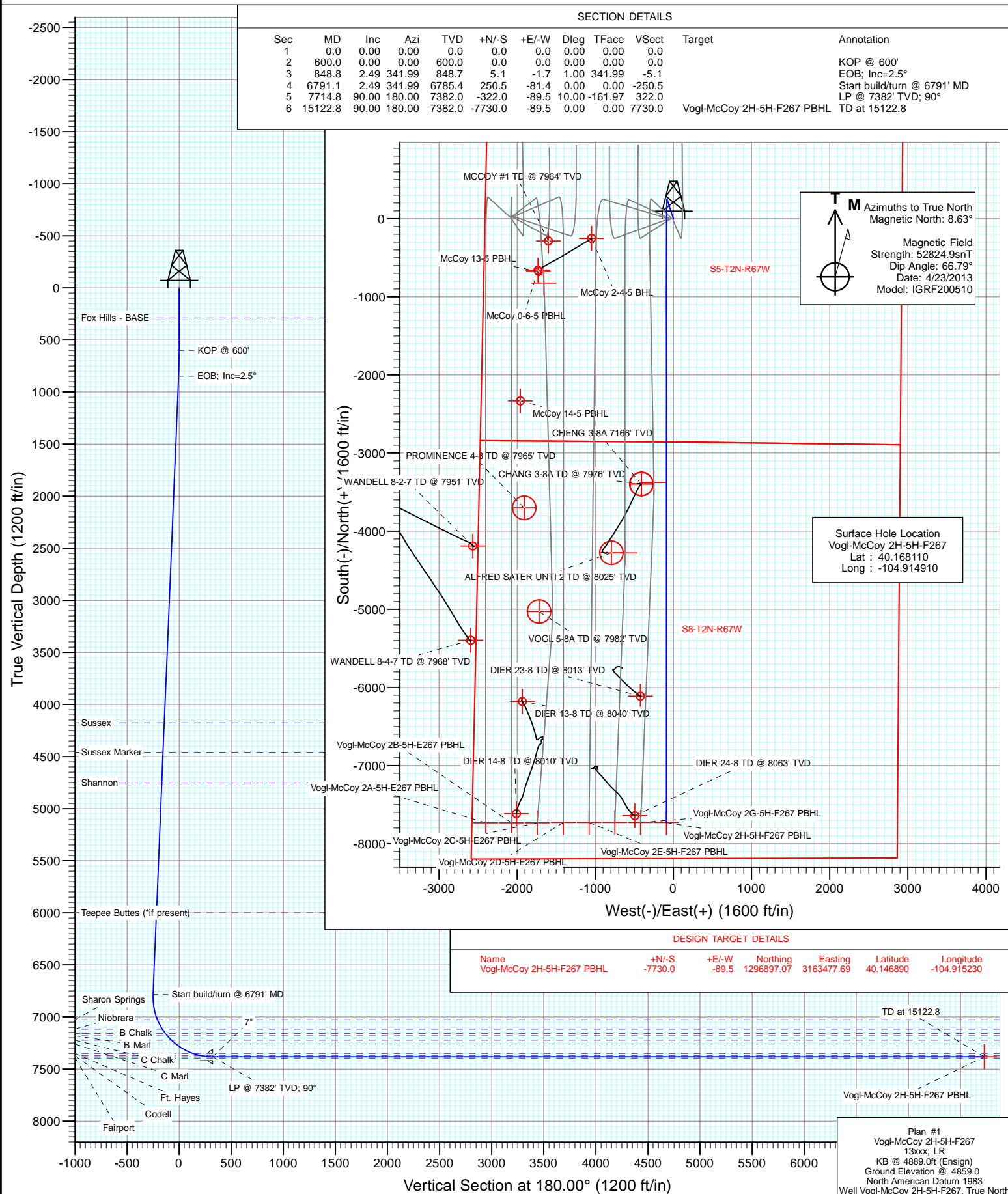




Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2H-5H-F267
Wellbore: Hz
Design: Plan #1



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2H-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 2H-5H-F267					
Well Position	+N/-S	0.0 ft	Northing:	1,304,627.48 ft	Latitude:	40.168110
	+E/-W	0.0 ft	Easting:	3,163,516.14 ft	Longitude:	-104.914910
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,859.0 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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
848.8	2.49	341.99	848.7	5.1	-1.7	1.00	1.00	0.00	341.99	
6,791.1	2.49	341.99	6,785.4	250.5	-81.4	0.00	0.00	0.00	0.00	
7,714.8	90.00	180.00	7,382.0	-322.0	-89.5	10.00	9.47	-17.54	-161.97	
15,122.8	90.00	180.00	7,382.0	-7,730.0	-89.5	0.00	0.00	0.00	0.00	Vogl-McCoy 2H-5H-F:

Cathedral Energy Services

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2H-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	
289.0	0.00	0.00	289.0	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	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	1.00	341.99	700.0	0.8	-0.3	-0.8	1.00	1.00	
800.0	2.00	341.99	800.0	3.3	-1.1	-3.3	1.00	1.00	
848.8	2.49	341.99	848.7	5.1	-1.7	-5.1	1.00	1.00	EOB; Inc=2.5°
900.0	2.49	341.99	899.9	7.3	-2.4	-7.3	0.00	0.00	
1,000.0	2.49	341.99	999.8	11.4	-3.7	-11.4	0.00	0.00	
1,100.0	2.49	341.99	1,099.7	15.5	-5.0	-15.5	0.00	0.00	
1,200.0	2.49	341.99	1,199.6	19.6	-6.4	-19.6	0.00	0.00	
1,300.0	2.49	341.99	1,299.5	23.8	-7.7	-23.8	0.00	0.00	
1,400.0	2.49	341.99	1,399.4	27.9	-9.1	-27.9	0.00	0.00	
1,500.0	2.49	341.99	1,499.3	32.0	-10.4	-32.0	0.00	0.00	
1,600.0	2.49	341.99	1,599.2	36.2	-11.8	-36.2	0.00	0.00	
1,700.0	2.49	341.99	1,699.1	40.3	-13.1	-40.3	0.00	0.00	
1,800.0	2.49	341.99	1,799.0	44.4	-14.4	-44.4	0.00	0.00	
1,900.0	2.49	341.99	1,898.9	48.5	-15.8	-48.5	0.00	0.00	
2,000.0	2.49	341.99	1,998.8	52.7	-17.1	-52.7	0.00	0.00	
2,100.0	2.49	341.99	2,098.7	56.8	-18.5	-56.8	0.00	0.00	
2,200.0	2.49	341.99	2,198.6	60.9	-19.8	-60.9	0.00	0.00	
2,300.0	2.49	341.99	2,298.6	65.1	-21.2	-65.1	0.00	0.00	
2,400.0	2.49	341.99	2,398.5	69.2	-22.5	-69.2	0.00	0.00	
2,500.0	2.49	341.99	2,498.4	73.3	-23.8	-73.3	0.00	0.00	
2,600.0	2.49	341.99	2,598.3	77.4	-25.2	-77.4	0.00	0.00	
2,700.0	2.49	341.99	2,698.2	81.6	-26.5	-81.6	0.00	0.00	
2,800.0	2.49	341.99	2,798.1	85.7	-27.9	-85.7	0.00	0.00	
2,900.0	2.49	341.99	2,898.0	89.8	-29.2	-89.8	0.00	0.00	
3,000.0	2.49	341.99	2,997.9	94.0	-30.5	-94.0	0.00	0.00	
3,100.0	2.49	341.99	3,097.8	98.1	-31.9	-98.1	0.00	0.00	
3,200.0	2.49	341.99	3,197.7	102.2	-33.2	-102.2	0.00	0.00	
3,300.0	2.49	341.99	3,297.6	106.3	-34.6	-106.3	0.00	0.00	
3,400.0	2.49	341.99	3,397.5	110.5	-35.9	-110.5	0.00	0.00	
3,500.0	2.49	341.99	3,497.4	114.6	-37.3	-114.6	0.00	0.00	
3,600.0	2.49	341.99	3,597.3	118.7	-38.6	-118.7	0.00	0.00	
3,700.0	2.49	341.99	3,697.2	122.9	-39.9	-122.9	0.00	0.00	
3,800.0	2.49	341.99	3,797.1	127.0	-41.3	-127.0	0.00	0.00	
3,900.0	2.49	341.99	3,897.0	131.1	-42.6	-131.1	0.00	0.00	
4,000.0	2.49	341.99	3,997.0	135.2	-44.0	-135.2	0.00	0.00	
4,100.0	2.49	341.99	4,096.9	139.4	-45.3	-139.4	0.00	0.00	
4,179.2	2.49	341.99	4,176.0	142.6	-46.4	-142.6	0.00	0.00	Sussex
4,200.0	2.49	341.99	4,196.8	143.5	-46.7	-143.5	0.00	0.00	
4,300.0	2.49	341.99	4,296.7	147.6	-48.0	-147.6	0.00	0.00	
4,400.0	2.49	341.99	4,396.6	151.8	-49.3	-151.8	0.00	0.00	
4,463.5	2.49	341.99	4,460.0	154.4	-50.2	-154.4	0.00	0.00	Sussex Marker
4,500.0	2.49	341.99	4,496.5	155.9	-50.7	-155.9	0.00	0.00	
4,600.0	2.49	341.99	4,596.4	160.0	-52.0	-160.0	0.00	0.00	
4,700.0	2.49	341.99	4,696.3	164.1	-53.4	-164.1	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2H-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
4,755.8	2.49	341.99	4,752.0	166.4	-54.1	-166.4	0.00	0.00	Shannon
4,800.0	2.49	341.99	4,796.2	168.3	-54.7	-168.3	0.00	0.00	
4,900.0	2.49	341.99	4,896.1	172.4	-56.1	-172.4	0.00	0.00	
5,000.0	2.49	341.99	4,996.0	176.5	-57.4	-176.5	0.00	0.00	
5,100.0	2.49	341.99	5,095.9	180.7	-58.7	-180.7	0.00	0.00	
5,200.0	2.49	341.99	5,195.8	184.8	-60.1	-184.8	0.00	0.00	
5,300.0	2.49	341.99	5,295.7	188.9	-61.4	-188.9	0.00	0.00	
5,400.0	2.49	341.99	5,395.6	193.0	-62.8	-193.0	0.00	0.00	
5,500.0	2.49	341.99	5,495.5	197.2	-64.1	-197.2	0.00	0.00	
5,600.0	2.49	341.99	5,595.4	201.3	-65.5	-201.3	0.00	0.00	
5,700.0	2.49	341.99	5,695.3	205.4	-66.8	-205.4	0.00	0.00	
5,800.0	2.49	341.99	5,795.3	209.6	-68.1	-209.6	0.00	0.00	
5,900.0	2.49	341.99	5,895.2	213.7	-69.5	-213.7	0.00	0.00	
6,000.0	2.49	341.99	5,995.1	217.8	-70.8	-217.8	0.00	0.00	
6,004.9	2.49	341.99	6,000.0	218.0	-70.9	-218.0	0.00	0.00	Teepee Buttes (*if present)
6,100.0	2.49	341.99	6,095.0	221.9	-72.2	-221.9	0.00	0.00	
6,200.0	2.49	341.99	6,194.9	226.1	-73.5	-226.1	0.00	0.00	
6,300.0	2.49	341.99	6,294.8	230.2	-74.8	-230.2	0.00	0.00	
6,400.0	2.49	341.99	6,394.7	234.3	-76.2	-234.3	0.00	0.00	
6,500.0	2.49	341.99	6,494.6	238.5	-77.5	-238.5	0.00	0.00	
6,600.0	2.49	341.99	6,594.5	242.6	-78.9	-242.6	0.00	0.00	
6,700.0	2.49	341.99	6,694.4	246.7	-80.2	-246.7	0.00	0.00	
6,791.1	2.49	341.99	6,785.4	250.5	-81.4	-250.5	0.00	0.00	Start build/turn @ 6791' MD
6,800.0	1.67	332.50	6,794.3	250.8	-81.6	-250.8	10.00	-9.25	
6,900.0	8.56	185.12	6,894.0	244.6	-82.9	-244.6	10.00	6.89	
7,000.0	18.54	182.30	6,991.1	221.3	-84.2	-221.3	10.00	9.98	
7,037.3	22.26	181.88	7,026.0	208.3	-84.7	-208.3	10.00	9.99	Sharon Springs
7,100.0	28.53	181.42	7,082.7	181.4	-85.4	-181.4	10.00	10.00	
7,139.9	32.52	181.21	7,117.0	161.2	-85.9	-161.2	10.00	10.00	Niobrara
7,187.4	37.27	181.01	7,156.0	134.0	-86.4	-134.0	10.00	10.00	B Chalk
7,200.0	38.53	180.97	7,165.9	126.3	-86.6	-126.3	10.00	10.00	
7,218.3	40.35	180.91	7,180.0	114.7	-86.7	-114.7	10.00	10.00	B Marl
7,277.4	46.26	180.74	7,223.0	74.2	-87.3	-74.2	10.00	10.00	C Chalk
7,300.0	48.53	180.68	7,238.3	57.5	-87.5	-57.5	10.00	10.00	
7,330.7	51.59	180.61	7,258.0	34.0	-87.8	-34.0	10.00	10.00	C Marl
7,400.0	58.52	180.47	7,297.7	-22.8	-88.3	22.8	10.00	10.00	
7,500.0	68.52	180.30	7,342.2	-112.2	-88.9	112.2	10.00	10.00	
7,522.4	70.76	180.27	7,350.0	-133.2	-89.0	133.2	10.00	10.00	Ft. Hayes
7,600.0	78.52	180.16	7,370.5	-208.0	-89.3	208.0	10.00	10.00	
7,607.6	79.28	180.15	7,372.0	-215.4	-89.3	215.4	10.00	10.00	Codell
7,700.0	88.52	180.02	7,381.8	-307.2	-89.5	307.2	10.00	10.00	
7,714.8	90.00	180.00	7,382.0	-322.0	-89.5	322.0	9.99	9.99	LP @ 7382' TVD; 90° - 7"
7,800.0	90.00	180.00	7,382.0	-407.2	-89.5	407.2	0.00	0.00	
7,900.0	90.00	180.00	7,382.0	-507.2	-89.5	507.2	0.00	0.00	
8,000.0	90.00	180.00	7,382.0	-607.2	-89.5	607.2	0.00	0.00	
8,100.0	90.00	180.00	7,382.0	-707.2	-89.5	707.2	0.00	0.00	
8,200.0	90.00	180.00	7,382.0	-807.2	-89.5	807.2	0.00	0.00	
8,300.0	90.00	180.00	7,382.0	-907.2	-89.5	907.2	0.00	0.00	
8,400.0	90.00	180.00	7,382.0	-1,007.2	-89.5	1,007.2	0.00	0.00	
8,500.0	90.00	180.00	7,382.0	-1,107.2	-89.5	1,107.2	0.00	0.00	
8,600.0	90.00	180.00	7,382.0	-1,207.2	-89.5	1,207.2	0.00	0.00	
8,700.0	90.00	180.00	7,382.0	-1,307.2	-89.5	1,307.2	0.00	0.00	

Cathedral Energy Services

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Project:	DJ Wattenberg	MD Reference:	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2H-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
8,800.0	90.00	180.00	7,382.0	-1,407.2	-89.5	1,407.2	0.00	0.00	
8,900.0	90.00	180.00	7,382.0	-1,507.2	-89.5	1,507.2	0.00	0.00	
9,000.0	90.00	180.00	7,382.0	-1,607.2	-89.5	1,607.2	0.00	0.00	
9,100.0	90.00	180.00	7,382.0	-1,707.2	-89.5	1,707.2	0.00	0.00	
9,200.0	90.00	180.00	7,382.0	-1,807.2	-89.5	1,807.2	0.00	0.00	
9,300.0	90.00	180.00	7,382.0	-1,907.2	-89.5	1,907.2	0.00	0.00	
9,400.0	90.00	180.00	7,382.0	-2,007.2	-89.5	2,007.2	0.00	0.00	
9,500.0	90.00	180.00	7,382.0	-2,107.2	-89.5	2,107.2	0.00	0.00	
9,600.0	90.00	180.00	7,382.0	-2,207.2	-89.5	2,207.2	0.00	0.00	
9,700.0	90.00	180.00	7,382.0	-2,307.2	-89.5	2,307.2	0.00	0.00	
9,800.0	90.00	180.00	7,382.0	-2,407.2	-89.5	2,407.2	0.00	0.00	
9,900.0	90.00	180.00	7,382.0	-2,507.2	-89.5	2,507.2	0.00	0.00	
10,000.0	90.00	180.00	7,382.0	-2,607.2	-89.5	2,607.2	0.00	0.00	
10,100.0	90.00	180.00	7,382.0	-2,707.2	-89.5	2,707.2	0.00	0.00	
10,200.0	90.00	180.00	7,382.0	-2,807.2	-89.5	2,807.2	0.00	0.00	
10,300.0	90.00	180.00	7,382.0	-2,907.2	-89.5	2,907.2	0.00	0.00	
10,400.0	90.00	180.00	7,382.0	-3,007.2	-89.5	3,007.2	0.00	0.00	
10,500.0	90.00	180.00	7,382.0	-3,107.2	-89.5	3,107.2	0.00	0.00	
10,600.0	90.00	180.00	7,382.0	-3,207.2	-89.5	3,207.2	0.00	0.00	
10,700.0	90.00	180.00	7,382.0	-3,307.2	-89.5	3,307.2	0.00	0.00	
10,800.0	90.00	180.00	7,382.0	-3,407.2	-89.5	3,407.2	0.00	0.00	
10,900.0	90.00	180.00	7,382.0	-3,507.2	-89.5	3,507.2	0.00	0.00	
11,000.0	90.00	180.00	7,382.0	-3,607.2	-89.5	3,607.2	0.00	0.00	
11,100.0	90.00	180.00	7,382.0	-3,707.2	-89.5	3,707.2	0.00	0.00	
11,200.0	90.00	180.00	7,382.0	-3,807.2	-89.5	3,807.2	0.00	0.00	
11,300.0	90.00	180.00	7,382.0	-3,907.2	-89.5	3,907.2	0.00	0.00	
11,400.0	90.00	180.00	7,382.0	-4,007.2	-89.5	4,007.2	0.00	0.00	
11,500.0	90.00	180.00	7,382.0	-4,107.2	-89.5	4,107.2	0.00	0.00	
11,600.0	90.00	180.00	7,382.0	-4,207.2	-89.5	4,207.2	0.00	0.00	
11,700.0	90.00	180.00	7,382.0	-4,307.2	-89.5	4,307.2	0.00	0.00	
11,800.0	90.00	180.00	7,382.0	-4,407.2	-89.5	4,407.2	0.00	0.00	
11,900.0	90.00	180.00	7,382.0	-4,507.2	-89.5	4,507.2	0.00	0.00	
12,000.0	90.00	180.00	7,382.0	-4,607.2	-89.5	4,607.2	0.00	0.00	
12,100.0	90.00	180.00	7,382.0	-4,707.2	-89.5	4,707.2	0.00	0.00	
12,200.0	90.00	180.00	7,382.0	-4,807.2	-89.5	4,807.2	0.00	0.00	
12,300.0	90.00	180.00	7,382.0	-4,907.2	-89.5	4,907.2	0.00	0.00	
12,400.0	90.00	180.00	7,382.0	-5,007.2	-89.5	5,007.2	0.00	0.00	
12,500.0	90.00	180.00	7,382.0	-5,107.2	-89.5	5,107.2	0.00	0.00	
12,600.0	90.00	180.00	7,382.0	-5,207.2	-89.5	5,207.2	0.00	0.00	
12,700.0	90.00	180.00	7,382.0	-5,307.2	-89.5	5,307.2	0.00	0.00	
12,800.0	90.00	180.00	7,382.0	-5,407.2	-89.5	5,407.2	0.00	0.00	
12,900.0	90.00	180.00	7,382.0	-5,507.2	-89.5	5,507.2	0.00	0.00	
13,000.0	90.00	180.00	7,382.0	-5,607.2	-89.5	5,607.2	0.00	0.00	
13,100.0	90.00	180.00	7,382.0	-5,707.2	-89.5	5,707.2	0.00	0.00	
13,200.0	90.00	180.00	7,382.0	-5,807.2	-89.5	5,807.2	0.00	0.00	
13,300.0	90.00	180.00	7,382.0	-5,907.2	-89.5	5,907.2	0.00	0.00	
13,400.0	90.00	180.00	7,382.0	-6,007.2	-89.5	6,007.2	0.00	0.00	
13,500.0	90.00	180.00	7,382.0	-6,107.2	-89.5	6,107.2	0.00	0.00	
13,600.0	90.00	180.00	7,382.0	-6,207.2	-89.5	6,207.2	0.00	0.00	
13,700.0	90.00	180.00	7,382.0	-6,307.2	-89.5	6,307.2	0.00	0.00	
13,800.0	90.00	180.00	7,382.0	-6,407.2	-89.5	6,407.2	0.00	0.00	
13,900.0	90.00	180.00	7,382.0	-6,507.2	-89.5	6,507.2	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2H-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
14,000.0	90.00	180.00	7,382.0	-6,607.2	-89.5	6,607.2	0.00	0.00	
14,100.0	90.00	180.00	7,382.0	-6,707.2	-89.5	6,707.2	0.00	0.00	
14,200.0	90.00	180.00	7,382.0	-6,807.2	-89.5	6,807.2	0.00	0.00	
14,300.0	90.00	180.00	7,382.0	-6,907.2	-89.5	6,907.2	0.00	0.00	
14,400.0	90.00	180.00	7,382.0	-7,007.2	-89.5	7,007.2	0.00	0.00	
14,500.0	90.00	180.00	7,382.0	-7,107.2	-89.5	7,107.2	0.00	0.00	
14,600.0	90.00	180.00	7,382.0	-7,207.2	-89.5	7,207.2	0.00	0.00	
14,700.0	90.00	180.00	7,382.0	-7,307.2	-89.5	7,307.2	0.00	0.00	
14,800.0	90.00	180.00	7,382.0	-7,407.2	-89.5	7,407.2	0.00	0.00	
14,900.0	90.00	180.00	7,382.0	-7,507.2	-89.5	7,507.2	0.00	0.00	
15,000.0	90.00	180.00	7,382.0	-7,607.2	-89.5	7,607.2	0.00	0.00	
15,100.0	90.00	180.00	7,382.0	-7,707.2	-89.5	7,707.2	0.00	0.00	
15,122.8	90.00	180.00	7,382.0	-7,730.0	-89.5	7,730.0	0.00	0.00	TD at 15122.8 - Vogl-McCoy 2H-5H-F267 PBHI

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 2H-5H-F267	0.00	0.00	7,382.0	-7,730.0	-89.5	1,296,897.07	3,163,477.69	40.146890	-104.915230
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
7,714.8	7,382.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
289.0	289.0	Fox Hills - BASE			
4,179.2	4,176.0	Sussex			
4,463.5	4,460.0	Sussex Marker			
4,755.8	4,752.0	Shannon			
6,004.9	6,000.0	Teepee Buttes (*if present)			
7,037.3	7,026.0	Sharon Springs			
7,139.9	7,117.0	Niobrara			
7,187.4	7,156.0	B Chalk			
7,218.3	7,180.0	B Marl			
7,277.4	7,223.0	C Chalk			
7,330.7	7,258.0	C Marl			
7,522.4	7,350.0	Ft. Hayes			
7,607.6	7,372.0	Codell			

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2H-5H-F267	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.0	600.0	0.0	0.0	KOP @ 600'
848.8	848.7	5.1	-1.7	EOB; Inc=2.5°
6,791.1	6,785.4	250.5	-81.4	Start build/turn @ 6791' MD
7,714.8	7,382.0	-322.0	-89.5	LP @ 7382' TVD; 90°
15,122.8	7,382.0	-7,730.0	-89.5	TD at 15122.8

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S5-T2N-R67W (Vogl-McCoy)

Vogl-McCoy 2H-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 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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	15,122.8	Plan #1 (Hz)	MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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 Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
			Between Centres (ft)	Between Ellipses (ft)		
S5-T2N-R67W (Vogl-McCoy)						
ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - NO						Out of range
CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS	10,788.4	7,589.8	316.9	234.0	3.822	CC, ES
CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS	10,800.0	7,589.7	317.1	234.0	3.815	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	13,479.7	7,516.2	366.6	243.6	2.981	CC, ES
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS	13,500.0	7,517.7	367.2	243.9	2.978	SF
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS	15,017.3	7,609.6	434.9	282.5	2.854	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						Out of range
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	266.3	267.3	50.3	49.5	60.849	CC
Vogl-Geist 2D-5H-F267 - Hz - Plan #1	300.0	301.0	50.3	49.4	53.276	ES
Vogl-Geist 2D-5H-F267 - Hz - Plan #1	900.0	893.8	79.3	76.3	26.107	SF
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	466.3	467.3	30.7	29.2	20.160	CC
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	500.0	501.0	30.7	29.1	18.718	ES
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	800.0	799.3	37.1	34.4	13.769	SF
Vogl-Geist 2F-5H-F267 - Hz - Plan #1	799.3	799.2	10.6	7.9	3.954	CC
Vogl-Geist 2F-5H-F267 - Hz - Plan #1	800.0	800.0	10.6	7.9	3.950	ES
Vogl-Geist 2F-5H-F267 - Hz - Plan #1	900.0	899.9	11.4	8.4	3.749	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	166.3	167.3	61.5	61.0	128.724	CC
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	200.0	201.0	61.5	60.9	103.307	ES
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	1,000.0	988.5	110.8	107.4	32.564	SF
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1	366.3	367.3	41.9	40.7	35.653	CC
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1	400.0	401.0	41.9	40.6	32.413	ES
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1	6,800.0	6,780.9	485.3	460.1	19.260	SF
Vogl-McCoy 2G-5H-F267 - Hz - Plan #1	600.0	600.0	19.6	17.6	9.832	CC, ES
Vogl-McCoy 2G-5H-F267 - Hz - Plan #1	15,122.8	14,907.5	394.1	162.1	1.699	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 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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		
10,500.0	7,382.0	7,591.8	7,392.7	57.6	21.8	90.85	-3,395.6	-406.3	428.4	350.5	77.96	5.495	3.822 CC, ES 3.815 SF	
10,600.0	7,382.0	7,591.1	7,392.0	59.3	21.7	90.73	-3,395.6	-406.3	368.6	289.0	79.68	4.627		
10,700.0	7,382.0	7,590.4	7,391.3	61.1	21.7	90.60	-3,395.6	-406.3	329.0	247.6	81.39	4.042		
10,788.4	7,382.0	7,589.8	7,390.7	62.6	21.7	90.49	-3,395.6	-406.3	316.9	234.0	82.91			
10,800.0	7,382.0	7,589.7	7,390.6	62.8	21.7	90.48	-3,395.6	-406.3	317.1	234.0	83.11			
10,900.0	7,382.0	7,589.0	7,389.9	64.5	21.7	90.35	-3,395.6	-406.3	336.0	251.1	84.82	3.961		
11,000.0	7,382.0	7,588.3	7,389.2	66.2	21.7	90.22	-3,395.6	-406.3	381.0	294.5	86.54	4.403		
11,100.0	7,382.0	7,587.6	7,388.5	67.9	21.7	90.10	-3,395.6	-406.3	444.4	356.2	88.27	5.035		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,200.0	7,382.0	7,493.4	7,422.4	104.3	14.8	92.47	-6,084.8	-456.6	460.5	342.0	118.57	3.884		
13,300.0	7,382.0	7,502.0	7,430.9	106.1	14.8	93.81	-6,085.6	-455.6	408.0	287.8	120.19	3.395		
13,400.0	7,382.0	7,508.6	7,437.4	107.8	14.8	94.84	-6,086.2	-454.9	375.1	253.3	121.80	3.080		
13,479.7	7,382.0	7,516.2	7,444.9	109.2	14.9	96.02	-6,086.9	-454.1	366.6	243.6	122.98	2.981	CC, ES	
13,500.0	7,382.0	7,517.7	7,446.4	109.6	14.9	96.25	-6,087.1	-453.9	367.2	243.9	123.28	2.978	SF	
13,600.0	7,382.0	7,525.2	7,453.8	111.3	14.9	97.42	-6,087.8	-453.2	385.7	261.0	124.75	3.092		
13,700.0	7,382.0	7,532.7	7,461.3	113.0	14.9	98.58	-6,088.5	-452.4	427.3	301.1	126.16	3.387		
13,800.0	7,382.0	7,540.1	7,468.6	114.8	14.9	99.73	-6,089.2	-451.8	486.1	358.5	127.52	3.812		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis						
14,800.0	7,382.0	7,589.8	7,455.0	132.2	18.9	93.42	-7,622.8	-524.0	485.8	336.8	149.09	3.259					
14,900.0	7,382.0	7,600.5	7,465.5	134.0	18.9	94.81	-7,623.8	-522.9	450.3	299.7	150.62	2.990					
15,000.0	7,382.0	7,608.4	7,473.3	135.7	18.9	95.85	-7,624.5	-522.1	435.2	283.1	152.14	2.861					
15,017.3	7,382.0	7,609.6	7,474.6	136.0	18.9	96.01	-7,624.6	-521.9	434.9	282.5	152.40	2.854	CC, ES, SF				
15,100.0	7,382.0	7,615.3	7,480.2	137.5	18.9	96.76	-7,625.0	-521.4	442.6	289.0	153.64	2.881					
15,122.8	7,382.0	7,616.8	7,481.7	137.9	19.0	96.96	-7,625.1	-521.2	447.4	293.4	153.98	2.906					

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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	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	1.0	1.0	0.0	0.0	-89.95	0.0	-50.3	50.3					
100.0	100.0	101.0	101.0	0.1	0.1	-89.95	0.0	-50.3	50.3	50.1	0.25	204.409		
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.0	-50.3	50.3	49.7	0.60	84.521		
266.3	266.3	267.3	267.3	0.4	0.4	-89.95	0.0	-50.3	50.3	49.5	0.83	60.849 CC		
300.0	300.0	301.0	301.0	0.5	0.5	-89.95	0.0	-50.3	50.3	49.4	0.94	53.276 ES		
400.0	400.0	400.0	400.0	0.6	0.6	-90.28	-0.3	-51.1	51.1	49.8	1.29	39.584		
500.0	500.0	499.3	499.2	0.8	0.8	-91.21	-1.1	-53.6	53.6	52.0	1.64	32.664		
600.0	600.0	598.3	598.1	1.0	1.0	-92.56	-2.6	-57.6	57.7	55.7	1.99	28.983		
700.0	700.0	697.1	696.8	1.2	1.2	-76.85	-4.6	-63.2	63.4	61.0	2.34	27.114		
800.0	800.0	795.6	795.0	1.3	1.4	-80.44	-7.2	-70.5	70.4	67.7	2.69	26.221		
900.0	899.9	893.8	892.7	1.5	1.6	-84.62	-10.3	-79.2	79.3	76.3	3.04	26.107 SF		
1,000.0	999.8	991.6	989.9	1.7	1.9	-88.18	-14.0	-89.5	90.2	86.8	3.39	26.610		
1,100.0	1,099.7	1,090.3	1,087.8	1.9	2.1	-91.00	-18.2	-101.1	102.6	98.9	3.74	27.408		
1,200.0	1,199.6	1,189.4	1,186.1	2.1	2.4	-93.21	-22.4	-112.8	115.3	111.2	4.10	28.116		
1,300.0	1,299.5	1,288.5	1,284.5	2.3	2.7	-94.99	-26.6	-124.5	128.2	123.7	4.46	28.729		
1,400.0	1,399.4	1,387.6	1,382.8	2.5	2.9	-96.44	-30.8	-136.2	141.1	136.3	4.82	29.261		
1,500.0	1,499.3	1,486.7	1,481.1	2.6	3.2	-97.65	-35.0	-147.9	154.1	149.0	5.19	29.725		
1,600.0	1,599.2	1,585.8	1,579.4	2.8	3.5	-98.67	-39.2	-159.6	167.2	161.7	5.55	30.132		
1,700.0	1,699.1	1,684.9	1,677.7	3.0	3.7	-99.54	-43.4	-171.3	180.3	174.4	5.91	30.491		
1,800.0	1,799.0	1,784.0	1,776.0	3.2	4.0	-100.29	-47.6	-183.0	193.5	187.2	6.28	30.809		
1,900.0	1,898.9	1,883.1	1,874.4	3.4	4.3	-100.95	-51.7	-194.7	206.7	200.0	6.65	31.093		
2,000.0	1,998.8	1,982.2	1,972.7	3.6	4.6	-101.52	-55.9	-206.4	219.9	212.9	7.01	31.347		
2,100.0	2,098.7	2,081.3	2,071.0	3.8	4.8	-102.04	-60.1	-218.1	233.1	225.7	7.38	31.576		
2,200.0	2,198.6	2,180.4	2,169.3	4.0	5.1	-102.49	-64.3	-229.8	246.4	238.6	7.75	31.783		
2,300.0	2,298.6	2,279.5	2,267.6	4.1	5.4	-102.90	-68.5	-241.5	259.6	251.5	8.12	31.971		
2,400.0	2,398.5	2,378.6	2,366.0	4.3	5.7	-103.27	-72.7	-253.2	272.9	264.4	8.49	32.142		
2,500.0	2,498.4	2,477.7	2,464.3	4.5	5.9	-103.61	-76.9	-264.9	286.2	277.3	8.86	32.299		
2,600.0	2,598.3	2,576.8	2,562.6	4.7	6.2	-103.92	-81.1	-276.6	299.5	290.2	9.23	32.443		
2,700.0	2,698.2	2,675.9	2,660.9	4.9	6.5	-104.20	-85.3	-288.3	312.8	303.2	9.60	32.576		
2,800.0	2,798.1	2,775.0	2,759.2	5.1	6.8	-104.46	-89.5	-300.0	326.1	316.1	9.97	32.699		
2,900.0	2,898.0	2,874.1	2,857.6	5.3	7.0	-104.69	-93.7	-311.7	339.4	329.0	10.34	32.812		
3,000.0	2,997.9	2,973.2	2,955.9	5.5	7.3	-104.91	-97.9	-323.3	352.7	342.0	10.71	32.918		
3,100.0	3,097.8	3,072.3	3,054.2	5.7	7.6	-105.12	-102.1	-335.0	366.0	354.9	11.09	33.016		
3,200.0	3,197.7	3,171.4	3,152.5	5.9	7.9	-105.31	-106.3	-346.7	379.3	367.9	11.46	33.108		
3,300.0	3,297.6	3,270.5	3,250.8	6.0	8.1	-105.48	-110.5	-358.4	392.7	380.8	11.83	33.194		
3,400.0	3,397.5	3,369.6	3,349.2	6.2	8.4	-105.65	-114.7	-370.1	406.0	393.8	12.20	33.275		
3,500.0	3,497.4	3,468.7	3,447.5	6.4	8.7	-105.80	-118.9	-381.8	419.3	406.7	12.57	33.351		
3,600.0	3,597.3	3,567.8	3,545.8	6.6	9.0	-105.95	-123.1	-393.5	432.7	419.7	12.95	33.422		
3,700.0	3,697.2	3,666.9	3,644.1	6.8	9.3	-106.08	-127.3	-405.2	446.0	432.7	13.32	33.489		
3,800.0	3,797.1	3,766.0	3,742.4	7.0	9.5	-106.21	-131.5	-416.9	459.3	445.6	13.69	33.552		
3,900.0	3,897.0	3,865.1	3,840.7	7.2	9.8	-106.33	-135.6	-428.6	472.7	458.6	14.06	33.612		
4,000.0	3,997.0	3,964.2	3,939.1	7.4	10.1	-106.45	-139.8	-440.3	486.0	471.6	14.44	33.669		
4,100.0	4,096.9	4,063.3	4,037.4	7.6	10.4	-106.55	-144.0	-452.0	499.4	484.6	14.81	33.723		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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	1.0	1.0	0.0	0.0	-89.95	0.0	-30.7	30.7					
100.0	100.0	101.0	101.0	0.1	0.1	-89.95	0.0	-30.7	30.7	30.5	0.25	124.917		
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.0	-30.7	30.7	30.1	0.60	51.652		
300.0	300.0	301.0	301.0	0.5	0.5	-89.95	0.0	-30.7	30.7	29.8	0.94	32.557		
400.0	400.0	401.0	401.0	0.6	0.6	-89.95	0.0	-30.7	30.7	29.4	1.29	23.770		
466.3	466.3	467.3	467.3	0.8	0.8	-89.95	0.0	-30.7	30.7	29.2	1.52	20.160 CC		
500.0	500.0	501.0	501.0	0.8	0.8	-89.95	0.0	-30.7	30.7	29.1	1.64	18.718 ES		
600.0	600.0	600.5	600.5	1.0	1.0	-90.82	-0.5	-31.5	31.5	29.5	1.99	15.817		
700.0	700.0	700.0	700.0	1.2	1.2	-76.56	-1.9	-33.7	33.5	31.2	2.34	14.331		
800.0	800.0	799.3	799.2	1.3	1.4	-83.61	-4.2	-37.3	37.1	34.4	2.69	13.769 SF		
900.0	899.9	898.3	898.0	1.5	1.5	-91.97	-7.4	-42.4	42.7	39.7	3.04	14.040		
1,000.0	999.8	997.5	996.9	1.7	1.7	-98.73	-11.5	-48.7	50.6	47.2	3.40	14.891		
1,100.0	1,099.7	1,097.0	1,096.1	1.9	1.9	-103.64	-15.6	-55.1	59.2	55.4	3.75	15.758		
1,200.0	1,199.6	1,196.5	1,195.4	2.1	2.2	-107.29	-19.8	-61.6	68.0	63.9	4.11	16.548		
1,300.0	1,299.5	1,296.1	1,294.6	2.3	2.4	-110.10	-23.9	-68.1	77.1	72.7	4.47	17.255		
1,400.0	1,399.4	1,395.6	1,393.8	2.5	2.6	-112.31	-28.0	-74.5	86.4	81.5	4.83	17.883		
1,500.0	1,499.3	1,495.1	1,493.0	2.6	2.8	-114.09	-32.2	-81.0	95.7	90.5	5.19	18.441		
1,600.0	1,599.2	1,594.6	1,592.3	2.8	3.0	-115.55	-36.3	-87.5	105.1	99.6	5.55	18.938		
1,700.0	1,699.1	1,694.2	1,691.5	3.0	3.2	-116.78	-40.5	-93.9	114.6	108.7	5.91	19.382		
1,800.0	1,799.0	1,793.7	1,790.7	3.2	3.4	-117.81	-44.6	-100.4	124.1	117.8	6.27	19.779		
1,900.0	1,898.9	1,893.2	1,889.9	3.4	3.6	-118.70	-48.8	-106.8	133.6	127.0	6.64	20.138		
2,000.0	1,998.8	1,992.7	1,989.2	3.6	3.9	-119.47	-52.9	-113.3	143.2	136.2	7.00	20.461		
2,100.0	2,098.7	2,092.3	2,088.4	3.8	4.1	-120.14	-57.0	-119.8	152.8	145.4	7.36	20.755		
2,200.0	2,198.6	2,191.8	2,187.6	4.0	4.3	-120.74	-61.2	-126.2	162.4	154.7	7.72	21.023		
2,300.0	2,298.6	2,291.3	2,286.9	4.1	4.5	-121.26	-65.3	-132.7	172.0	163.9	8.09	21.268		
2,400.0	2,398.5	2,390.8	2,386.1	4.3	4.7	-121.73	-69.5	-139.1	181.7	173.2	8.45	21.493		
2,500.0	2,498.4	2,490.4	2,485.3	4.5	4.9	-122.16	-73.6	-145.6	191.3	182.5	8.82	21.700		
2,600.0	2,598.3	2,589.9	2,584.5	4.7	5.2	-122.54	-77.7	-152.1	201.0	191.8	9.18	21.891		
2,700.0	2,698.2	2,689.4	2,683.8	4.9	5.4	-122.89	-81.9	-158.5	210.7	201.1	9.55	22.068		
2,800.0	2,798.1	2,788.9	2,783.0	5.1	5.6	-123.21	-86.0	-165.0	220.3	210.4	9.91	22.233		
2,900.0	2,898.0	2,888.4	2,882.2	5.3	5.8	-123.50	-90.2	-171.4	230.0	219.7	10.27	22.386		
3,000.0	2,997.9	2,988.0	2,981.4	5.5	6.0	-123.76	-94.3	-177.9	239.7	229.1	10.64	22.529		
3,100.0	3,097.8	3,087.5	3,080.7	5.7	6.3	-124.01	-98.4	-184.4	249.4	238.4	11.00	22.662		
3,200.0	3,197.7	3,187.0	3,179.9	5.9	6.5	-124.24	-102.6	-190.8	259.1	247.7	11.37	22.787		
3,300.0	3,297.6	3,286.5	3,279.1	6.0	6.7	-124.45	-106.7	-197.3	268.8	257.1	11.74	22.905		
3,400.0	3,397.5	3,386.1	3,378.4	6.2	6.9	-124.65	-110.9	-203.7	278.5	266.4	12.10	23.015		
3,500.0	3,497.4	3,485.6	3,477.6	6.4	7.1	-124.83	-115.0	-210.2	288.2	275.7	12.47	23.120		
3,600.0	3,597.3	3,585.1	3,576.8	6.6	7.3	-125.00	-119.2	-216.7	297.9	285.1	12.83	23.218		
3,700.0	3,697.2	3,684.6	3,676.0	6.8	7.6	-125.16	-123.3	-223.1	307.6	294.4	13.20	23.311		
3,800.0	3,797.1	3,784.2	3,775.3	7.0	7.8	-125.31	-127.4	-229.6	317.3	303.8	13.56	23.399		
3,900.0	3,897.0	3,883.7	3,874.5	7.2	8.0	-125.45	-131.6	-236.0	327.1	313.1	13.93	23.483		
4,000.0	3,997.0	3,983.2	3,973.7	7.4	8.2	-125.59	-135.7	-242.5	336.8	322.5	14.29	23.562		
4,100.0	4,096.9	4,082.7	4,072.9	7.6	8.4	-125.71	-139.9	-249.0	346.5	331.8	14.66	23.637		
4,200.0	4,196.8	4,182.3	4,172.2	7.8	8.7	-125.83	-144.0	-255.4	356.2	341.2	15.02	23.709		
4,300.0	4,296.7	4,281.8	4,271.4	7.9	8.9	-125.95	-148.1	-261.9	365.9	350.5	15.39	23.777		
4,400.0	4,396.6	4,381.3	4,370.6	8.1	9.1	-126.05	-152.3	-268.3	375.7	359.9	15.76	23.843		
4,500.0	4,496.5	4,480.8	4,469.9	8.3	9.3	-126.16	-156.4	-274.8	385.4	369.3	16.12	23.905		
4,600.0	4,596.4	4,580.4	4,569.1	8.5	9.5	-126.25	-160.6	-281.3	395.1	378.6	16.49	23.964		
4,700.0	4,696.3	4,679.9	4,668.3	8.7	9.7	-126.34	-164.7	-287.7	404.8	388.0	16.85	24.021		
4,800.0	4,796.2	4,779.4	4,767.5	8.9	10.0	-126.43	-168.8	-294.2	414.6	397.4	17.22	24.076		
4,900.0	4,896.1	4,878.9	4,866.8	9.1	10.2	-126.52	-173.0	-300.6	424.3	406.7	17.59	24.128		
5,000.0	4,996.0	4,978.4	4,966.0	9.3	10.4	-126.60	-177.1	-307.1	434.0	416.1	17.95	24.179		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
5,100.0	5,095.9	5,078.0	5,065.2	9.5	10.6	-126.67	-181.3	-313.6	443.8	425.4	18.32	24.227	
5,200.0	5,195.8	5,177.5	5,164.4	9.7	10.8	-126.75	-185.4	-320.0	453.5	434.8	18.68	24.273	
5,300.0	5,295.7	5,277.0	5,263.7	9.8	11.1	-126.82	-189.6	-326.5	463.2	444.2	19.05	24.318	
5,400.0	5,395.6	5,376.5	5,362.9	10.0	11.3	-126.88	-193.7	-332.9	473.0	453.5	19.42	24.361	
5,500.0	5,495.5	5,476.1	5,462.1	10.2	11.5	-126.95	-197.8	-339.4	482.7	462.9	19.78	24.402	
5,600.0	5,595.4	5,575.6	5,561.4	10.4	11.7	-127.01	-202.0	-345.9	492.4	472.3	20.15	24.442	
7,000.0	6,991.1	7,429.2	7,277.7	12.8	15.0	81.46	82.5	-454.5	487.8	461.9	25.93	18.810	
7,100.0	7,082.7	7,432.5	7,279.1	12.8	15.0	90.19	85.6	-454.6	428.5	402.8	25.71	16.671	
7,200.0	7,165.9	7,411.3	7,270.1	12.8	15.0	91.97	66.4	-454.1	386.4	360.9	25.57	15.112	
7,300.0	7,238.3	7,379.4	7,255.1	12.8	14.9	89.41	38.3	-453.4	366.7	341.2	25.57	14.340	
7,332.1	7,258.9	7,367.9	7,249.3	12.8	14.8	87.87	28.3	-453.1	365.5	339.9	25.61	14.271	
7,400.0	7,297.7	7,342.0	7,235.6	13.0	14.8	83.71	6.4	-452.4	370.7	345.0	25.64	14.457	
7,500.0	7,342.2	7,300.0	7,211.2	13.3	14.7	75.67	-27.8	-451.2	394.7	369.1	25.59	15.421	
7,600.0	7,370.5	7,258.7	7,184.9	13.9	14.6	66.95	-59.6	-449.7	432.1	406.8	25.30	17.083	
7,700.0	7,381.8	7,214.7	7,154.5	14.7	14.6	58.17	-91.3	-448.0	476.8	452.0	24.78	19.239	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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: 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	-89.96	0.0	-11.2	11.2					
100.0	100.0	100.0	100.0	0.1	0.1	-89.96	0.0	-11.2	11.2	10.9	0.24	45.749		
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.6	0.59	18.838		
300.0	300.0	300.0	300.0	0.5	0.5	-89.96	0.0	-11.2	11.2	10.2	0.94	11.861		
400.0	400.0	400.0	400.0	0.6	0.6	-89.96	0.0	-11.2	11.2	9.9	1.29	8.655		
500.0	500.0	500.0	500.0	0.8	0.8	-89.96	0.0	-11.2	11.2	9.5	1.64	6.814		
600.0	600.0	600.0	600.0	1.0	1.0	-89.96	0.0	-11.2	11.2	9.2	1.99	5.618		
700.0	700.0	700.0	700.0	1.2	1.2	-76.30	0.0	-11.2	10.9	8.6	2.34	4.677		
799.3	799.2	799.2	799.2	1.3	1.3	-90.00	0.0	-11.2	10.6	7.9	2.69	3.954 CC		
800.0	800.0	800.0	800.0	1.3	1.3	-90.14	0.0	-11.2	10.6	7.9	2.69	3.950 ES		
900.0	899.9	899.9	899.9	1.5	1.5	-111.36	0.0	-11.2	11.4	8.4	3.04	3.749 SF		
1,000.0	999.8	999.8	999.8	1.7	1.7	-128.63	0.0	-11.2	13.6	10.2	3.40	4.008		
1,100.0	1,099.7	1,099.7	1,099.7	1.9	1.9	-140.36	0.0	-11.2	16.7	12.9	3.74	4.452		
1,200.0	1,199.6	1,199.6	1,199.6	2.1	2.0	-148.24	0.0	-11.2	20.2	16.1	4.09	4.937		
1,300.0	1,299.5	1,299.5	1,299.5	2.3	2.2	-153.70	0.0	-11.2	24.0	19.6	4.44	5.406		
1,400.0	1,399.4	1,399.4	1,399.4	2.5	2.4	-157.64	0.0	-11.2	28.0	23.2	4.79	5.840		
1,500.0	1,499.3	1,499.3	1,499.3	2.6	2.6	-160.60	0.0	-11.2	32.0	26.9	5.14	6.234		
1,600.0	1,599.2	1,599.2	1,599.2	2.8	2.7	-162.89	0.0	-11.2	36.1	30.7	5.48	6.590		
1,700.0	1,699.1	1,699.1	1,699.1	3.0	2.9	-164.70	0.0	-11.2	40.3	34.5	5.83	6.912		
1,800.0	1,799.0	1,799.0	1,799.0	3.2	3.1	-166.18	0.0	-11.2	44.5	38.3	6.18	7.202		
1,900.0	1,898.9	1,898.9	1,898.9	3.4	3.3	-167.40	0.0	-11.2	48.7	42.2	6.53	7.465		
2,000.0	1,998.8	1,998.8	1,998.8	3.6	3.4	-168.42	0.0	-11.2	53.0	46.1	6.88	7.704		
2,100.0	2,098.7	2,098.7	2,098.7	3.8	3.6	-169.29	0.0	-11.2	57.3	50.0	7.23	7.922		
2,200.0	2,198.6	2,198.6	2,198.6	4.0	3.8	-170.04	0.0	-11.2	61.5	53.9	7.58	8.121		
2,300.0	2,298.6	2,298.6	2,298.6	4.1	4.0	-170.70	0.0	-11.2	65.8	57.9	7.92	8.304		
2,400.0	2,398.5	2,398.5	2,398.5	4.3	4.1	-171.27	0.0	-11.2	70.1	61.8	8.27	8.473		
2,500.0	2,498.4	2,498.4	2,498.4	4.5	4.3	-171.78	0.0	-11.2	74.4	65.8	8.62	8.628		
2,600.0	2,598.3	2,598.3	2,598.3	4.7	4.5	-172.23	0.0	-11.2	78.7	69.7	8.97	8.772		
2,700.0	2,698.2	2,698.2	2,698.2	4.9	4.7	-172.64	0.0	-11.2	83.0	73.7	9.32	8.906		
2,800.0	2,798.1	2,798.1	2,798.1	5.1	4.8	-173.00	0.0	-11.2	87.3	77.6	9.67	9.030		
2,900.0	2,898.0	2,898.0	2,898.0	5.3	5.0	-173.33	0.0	-11.2	91.6	81.6	10.02	9.146		
3,000.0	2,997.9	2,997.9	2,997.9	5.5	5.2	-173.63	0.0	-11.2	95.9	85.6	10.36	9.255		
3,100.0	3,097.8	3,097.8	3,097.8	5.7	5.4	-173.91	0.0	-11.2	100.2	89.5	10.71	9.356		
3,200.0	3,197.7	3,197.7	3,197.7	5.9	5.5	-174.16	0.0	-11.2	104.6	93.5	11.06	9.452		
3,300.0	3,297.6	3,297.6	3,297.6	6.0	5.7	-174.39	0.0	-11.2	108.9	97.5	11.41	9.541		
3,400.0	3,397.5	3,397.5	3,397.5	6.2	5.9	-174.61	0.0	-11.2	113.2	101.4	11.76	9.626		
3,500.0	3,497.4	3,497.4	3,497.4	6.4	6.1	-174.81	0.0	-11.2	117.5	105.4	12.11	9.706		
3,600.0	3,597.3	3,597.3	3,597.3	6.6	6.2	-174.99	0.0	-11.2	121.8	109.4	12.46	9.781		
3,700.0	3,697.2	3,697.2	3,697.2	6.8	6.4	-175.16	0.0	-11.2	126.2	113.4	12.81	9.853		
3,800.0	3,797.1	3,797.1	3,797.1	7.0	6.6	-175.32	0.0	-11.2	130.5	117.3	13.15	9.920		
3,900.0	3,897.0	3,897.0	3,897.0	7.2	6.7	-175.47	0.0	-11.2	134.8	121.3	13.50	9.985		
4,000.0	3,997.0	3,997.0	3,997.0	7.4	6.9	-175.62	0.0	-11.2	139.2	125.3	13.85	10.046		
4,100.0	4,096.9	4,094.5	4,094.5	7.6	7.1	-175.79	-0.7	-10.9	144.3	130.1	14.20	10.162		
4,200.0	4,196.8	4,191.8	4,191.8	7.8	7.3	-176.05	-3.0	-9.9	151.1	136.5	14.54	10.389		
4,300.0	4,296.7	4,288.8	4,288.7	7.9	7.4	-176.38	-6.7	-8.4	159.5	144.7	14.88	10.719		
4,400.0	4,396.6	4,385.6	4,385.3	8.1	7.6	-176.75	-12.0	-6.2	169.7	154.5	15.23	11.144		
4,500.0	4,496.5	4,481.9	4,481.4	8.3	7.8	-177.14	-18.7	-3.4	181.5	165.9	15.57	11.658		
4,600.0	4,596.4	4,577.9	4,576.9	8.5	8.0	-177.55	-26.9	0.1	195.0	179.1	15.91	12.254		
4,700.0	4,696.3	4,673.4	4,671.8	8.7	8.1	-177.95	-36.5	4.1	210.1	193.8	16.25	12.928		
4,800.0	4,796.2	4,770.2	4,767.9	8.9	8.3	-178.35	-47.5	8.7	226.6	210.0	16.59	13.659		
4,900.0	4,896.1	4,868.8	4,865.7	9.1	8.5	-178.71	-58.9	13.4	243.4	226.5	16.94	14.369		
5,000.0	4,996.0	4,967.4	4,963.5	9.3	8.7	-179.01	-70.3	18.2	260.2	242.9	17.29	15.052		

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 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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: 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		
5,100.0	5,095.9	5,066.0	5,061.3	9.5	8.9	-179.29	-81.7	23.0	277.0	259.3	17.63	15.708		
5,200.0	5,195.8	5,164.5	5,159.1	9.7	9.2	-179.53	-93.1	27.8	293.7	275.8	17.98	16.339		
5,300.0	5,295.7	5,263.1	5,256.9	9.8	9.4	-179.74	-104.5	32.5	310.5	292.2	18.32	16.947		
5,400.0	5,395.6	5,361.7	5,354.7	10.0	9.6	-179.93	-115.9	37.3	327.3	308.6	18.67	17.533		
5,500.0	5,495.5	5,460.3	5,452.5	10.2	9.8	-179.89	-127.3	42.1	344.1	325.1	19.01	18.097		
5,600.0	5,595.4	5,558.8	5,550.3	10.4	10.0	-179.74	-138.7	46.8	360.9	341.5	19.36	18.641		
5,700.0	5,695.3	5,657.4	5,648.1	10.6	10.3	-179.59	-150.1	51.6	377.7	358.0	19.71	19.166		
5,800.0	5,795.3	5,756.0	5,745.9	10.8	10.5	-179.46	-161.5	56.4	394.5	374.4	20.05	19.674		
5,900.0	5,895.2	5,854.6	5,843.7	11.0	10.7	-179.34	-172.9	61.1	411.3	390.9	20.40	20.164		
6,000.0	5,995.1	5,953.1	5,941.5	11.2	10.9	-179.23	-184.3	65.9	428.1	407.4	20.74	20.638		
6,100.0	6,095.0	6,051.7	6,039.3	11.4	11.2	-179.13	-195.7	70.7	444.9	423.8	21.09	21.096		
6,200.0	6,194.9	6,150.3	6,137.1	11.6	11.4	-179.03	-207.1	75.4	461.7	440.3	21.44	21.540		
6,300.0	6,294.8	6,248.9	6,234.9	11.7	11.7	-178.94	-218.5	80.2	478.5	456.7	21.78	21.970		
6,400.0	6,394.7	6,347.4	6,332.7	11.9	11.9	-178.86	-229.9	85.0	495.3	473.2	22.13	22.386		
6,700.0	6,694.4	7,184.0	7,052.5	12.5	12.8	-153.75	54.2	116.9	451.8	427.3	24.54	18.410		
6,800.0	6,794.3	7,300.4	7,096.1	12.7	13.3	-142.89	161.9	118.0	372.6	347.0	25.55	14.585		
6,900.0	6,894.0	7,336.6	7,105.2	12.8	13.5	-90.64	197.0	118.1	295.4	269.4	26.03	11.348		
7,000.0	6,991.1	7,334.6	7,104.7	12.8	13.5	-95.32	195.0	118.1	233.5	207.5	26.01	8.980		
7,100.0	7,082.7	7,315.1	7,100.1	12.8	13.4	-92.26	176.1	118.1	204.3	178.4	25.86	7.900		
7,116.5	7,097.0	7,310.8	7,099.0	12.8	13.3	-91.08	172.0	118.0	203.7	177.8	25.84	7.883		
7,200.0	7,165.9	7,286.3	7,092.0	12.8	13.2	-82.75	148.4	117.9	218.5	192.9	25.65	8.519		
7,300.0	7,238.3	7,250.0	7,080.0	12.8	13.0	-68.76	114.2	117.6	265.3	240.3	24.98	10.621		
7,400.0	7,297.7	7,214.5	7,066.1	13.0	12.9	-55.22	81.5	117.3	326.8	303.2	23.62	13.834		
7,500.0	7,342.2	7,174.5	7,048.1	13.3	12.7	-43.55	45.9	116.7	392.2	370.4	21.75	18.032		
7,600.0	7,370.5	7,133.0	7,026.8	13.9	12.6	-34.91	10.3	116.0	456.0	436.0	19.99	22.808		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	1.0	1.0	0.0	0.0	-89.95	0.1	-61.5	61.5					
100.0	100.0	101.0	101.0	0.1	0.1	-89.95	0.1	-61.5	61.5	61.2	0.25	249.834		
166.3	166.3	167.3	167.3	0.2	0.2	-89.95	0.1	-61.5	61.5	61.0	0.48	128.724 CC		
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.1	-61.5	61.5	60.9	0.60	103.307 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-89.73	0.3	-62.3	62.3	61.4	0.94	66.131		
400.0	400.0	398.9	398.8	0.6	0.7	-89.09	1.0	-64.8	64.8	63.5	1.29	50.275		
500.0	500.0	497.7	497.5	0.8	0.8	-88.13	2.3	-68.9	69.0	67.4	1.64	42.170		
600.0	600.0	596.3	596.0	1.0	1.0	-86.96	4.0	-74.6	74.9	72.9	1.98	37.755		
700.0	700.0	694.7	694.1	1.2	1.2	-68.20	6.1	-81.9	82.1	79.8	2.33	35.188		
800.0	800.0	792.9	791.9	1.3	1.5	-68.32	8.8	-90.9	90.4	87.7	2.69	33.664		
900.0	899.9	890.9	889.2	1.5	1.7	-69.04	11.9	-101.4	99.8	96.8	3.04	32.806		
1,000.0	999.8	988.5	986.1	1.7	2.0	-69.54	15.5	-113.4	110.8	107.4	3.40	32.564 SF		
1,100.0	1,099.7	1,086.8	1,083.3	1.9	2.3	-69.79	19.5	-126.9	123.2	119.4	3.76	32.724		
1,200.0	1,199.6	1,186.0	1,181.4	2.1	2.6	-69.96	23.7	-140.8	135.8	131.7	4.13	32.880		
1,300.0	1,299.5	1,285.2	1,279.6	2.3	2.9	-70.11	27.8	-154.7	148.5	144.0	4.50	33.001		
1,400.0	1,399.4	1,384.4	1,377.7	2.5	3.2	-70.23	31.9	-168.5	161.1	156.3	4.87	33.097		
1,500.0	1,499.3	1,483.6	1,475.8	2.6	3.5	-70.34	36.0	-182.4	173.8	168.5	5.24	33.173		
1,600.0	1,599.2	1,582.8	1,574.0	2.8	3.8	-70.43	40.2	-196.3	186.4	180.8	5.61	33.235		
1,700.0	1,699.1	1,682.0	1,672.1	3.0	4.1	-70.51	44.3	-210.1	199.1	193.1	5.98	33.287		
1,800.0	1,799.0	1,781.2	1,770.2	3.2	4.4	-70.58	48.4	-224.0	211.7	205.3	6.35	33.330		
1,900.0	1,898.9	1,880.4	1,868.4	3.4	4.7	-70.64	52.5	-237.9	224.3	217.6	6.72	33.366		
2,000.0	1,998.8	1,979.6	1,966.5	3.6	5.0	-70.70	56.7	-251.7	237.0	229.9	7.10	33.396		
2,100.0	2,098.7	2,078.8	2,064.7	3.8	5.3	-70.75	60.8	-265.6	249.6	242.2	7.47	33.423		
2,200.0	2,198.6	2,178.0	2,162.8	4.0	5.6	-70.79	64.9	-279.5	262.3	254.4	7.84	33.445		
2,300.0	2,298.6	2,277.2	2,260.9	4.1	5.9	-70.83	69.0	-293.3	274.9	266.7	8.22	33.465		
2,400.0	2,398.5	2,376.4	2,359.1	4.3	6.2	-70.87	73.2	-307.2	287.6	279.0	8.59	33.482		
2,500.0	2,498.4	2,475.6	2,457.2	4.5	6.5	-70.91	77.3	-321.1	300.2	291.3	8.96	33.497		
2,600.0	2,598.3	2,574.8	2,555.3	4.7	6.8	-70.94	81.4	-334.9	312.9	303.5	9.34	33.511		
2,700.0	2,698.2	2,674.0	2,653.5	4.9	7.1	-70.97	85.5	-348.8	325.5	315.8	9.71	33.523		
2,800.0	2,798.1	2,773.1	2,751.6	5.1	7.4	-70.99	89.7	-362.6	338.2	328.1	10.08	33.533		
2,900.0	2,898.0	2,872.3	2,849.8	5.3	7.7	-71.02	93.8	-376.5	350.8	340.3	10.46	33.543		
3,000.0	2,997.9	2,971.5	2,947.9	5.5	8.0	-71.04	97.9	-390.4	363.4	352.6	10.83	33.551		
3,100.0	3,097.8	3,070.7	3,046.0	5.7	8.3	-71.06	102.0	-404.2	376.1	364.9	11.21	33.559		
3,200.0	3,197.7	3,169.9	3,144.2	5.9	8.6	-71.08	106.2	-418.1	388.7	377.2	11.58	33.566		
3,300.0	3,297.6	3,269.1	3,242.3	6.0	8.9	-71.10	110.3	-432.0	401.4	389.4	11.96	33.573		
3,400.0	3,397.5	3,368.3	3,340.4	6.2	9.3	-71.12	114.4	-445.8	414.0	401.7	12.33	33.578		
3,500.0	3,497.4	3,467.5	3,438.6	6.4	9.6	-71.14	118.5	-459.7	426.7	414.0	12.71	33.584		
3,600.0	3,597.3	3,566.7	3,536.7	6.6	9.9	-71.15	122.7	-473.6	439.3	426.3	13.08	33.589		
3,700.0	3,697.2	3,665.9	3,634.8	6.8	10.2	-71.17	126.8	-487.4	452.0	438.5	13.45	33.593		
3,800.0	3,797.1	3,765.1	3,733.0	7.0	10.5	-71.18	130.9	-501.3	464.6	450.8	13.83	33.597		
3,900.0	3,897.0	3,864.3	3,831.1	7.2	10.8	-71.20	135.0	-515.2	477.3	463.1	14.20	33.601		
4,000.0	3,997.0	3,963.5	3,929.3	7.4	11.1	-71.21	139.2	-529.0	489.9	475.3	14.58	33.605		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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 2F-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	1.0	1.0	0.0	0.0	-89.95	0.0	-41.9	41.9					
100.0	100.0	101.0	101.0	0.1	0.1	-89.95	0.0	-41.9	41.9	41.7	0.25	170.341		
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.0	-41.9	41.9	41.3	0.60	70.434		
300.0	300.0	301.0	301.0	0.5	0.5	-89.95	0.0	-41.9	41.9	41.0	0.94	44.396		
366.3	366.3	367.3	367.3	0.6	0.6	-89.95	0.0	-41.9	41.9	40.7	1.18	35.653 CC		
400.0	400.0	401.0	401.0	0.6	0.6	-89.95	0.0	-41.9	41.9	40.6	1.29	32.413 ES		
500.0	500.0	500.0	500.0	0.8	0.8	-89.46	0.4	-42.7	42.7	41.1	1.64	26.042		
600.0	600.0	599.6	599.6	1.0	1.0	-88.10	1.5	-45.1	45.1	43.1	1.99	22.685		
700.0	700.0	698.8	698.6	1.2	1.2	-69.03	3.3	-49.0	48.8	46.5	2.34	20.878		
800.0	800.0	797.8	797.5	1.3	1.4	-69.17	5.8	-54.4	53.5	50.8	2.69	19.889		
900.0	899.9	896.8	896.1	1.5	1.6	-70.03	9.1	-61.4	59.3	56.2	3.05	19.444		
1,000.0	999.8	996.1	995.0	1.7	1.8	-70.42	13.0	-69.8	66.4	62.9	3.41	19.445		
1,100.0	1,099.7	1,095.8	1,094.3	1.9	2.0	-70.68	16.9	-78.3	73.6	69.8	3.78	19.473		
1,200.0	1,199.6	1,195.6	1,193.6	2.1	2.2	-70.90	20.9	-86.9	80.8	76.6	4.15	19.487		
1,300.0	1,299.5	1,295.3	1,292.9	2.3	2.5	-71.08	24.9	-95.4	88.0	83.5	4.51	19.492		
1,400.0	1,399.4	1,395.0	1,392.2	2.5	2.7	-71.23	28.8	-103.9	95.2	90.3	4.89	19.492		
1,500.0	1,499.3	1,494.8	1,491.5	2.6	2.9	-71.36	32.8	-112.5	102.4	97.2	5.26	19.489		
1,600.0	1,599.2	1,594.5	1,590.8	2.8	3.2	-71.48	36.8	-121.0	109.7	104.0	5.63	19.483		
1,700.0	1,699.1	1,694.3	1,690.1	3.0	3.4	-71.58	40.7	-129.6	116.9	110.9	6.00	19.477		
1,800.0	1,799.0	1,794.0	1,789.4	3.2	3.6	-71.67	44.7	-138.1	124.1	117.7	6.37	19.469		
1,900.0	1,898.9	1,893.7	1,888.7	3.4	3.9	-71.75	48.7	-146.6	131.3	124.6	6.75	19.461		
2,000.0	1,998.8	1,993.5	1,988.0	3.6	4.1	-71.82	52.6	-155.2	138.6	131.4	7.12	19.453		
2,100.0	2,098.7	2,093.2	2,087.3	3.8	4.3	-71.88	56.6	-163.7	145.8	138.3	7.50	19.445		
2,200.0	2,198.6	2,192.9	2,186.6	4.0	4.6	-71.94	60.6	-172.2	153.0	145.1	7.87	19.437		
2,300.0	2,298.6	2,292.7	2,285.8	4.1	4.8	-71.99	64.5	-180.8	160.2	152.0	8.25	19.429		
2,400.0	2,398.5	2,392.4	2,385.1	4.3	5.1	-72.04	68.5	-189.3	167.4	158.8	8.62	19.422		
2,500.0	2,498.4	2,492.2	2,484.4	4.5	5.3	-72.08	72.5	-197.9	174.7	165.7	9.00	19.414		
2,600.0	2,598.3	2,591.9	2,583.7	4.7	5.5	-72.12	76.4	-206.4	181.9	172.5	9.37	19.407		
2,700.0	2,698.2	2,691.6	2,683.0	4.9	5.8	-72.16	80.4	-214.9	189.1	179.4	9.75	19.400		
2,800.0	2,798.1	2,791.4	2,782.3	5.1	6.0	-72.20	84.4	-223.5	196.3	186.2	10.12	19.394		
2,900.0	2,898.0	2,891.1	2,881.6	5.3	6.2	-72.23	88.3	-232.0	203.6	193.1	10.50	19.388		
3,000.0	2,997.9	2,990.9	2,980.9	5.5	6.5	-72.26	92.3	-240.6	210.8	199.9	10.88	19.382		
3,100.0	3,097.8	3,090.6	3,080.2	5.7	6.7	-72.29	96.2	-249.1	218.0	206.8	11.25	19.376		
3,200.0	3,197.7	3,190.3	3,179.5	5.9	7.0	-72.31	100.2	-257.6	225.2	213.6	11.63	19.370		
3,300.0	3,297.6	3,290.1	3,278.8	6.0	7.2	-72.34	104.2	-266.2	232.5	220.4	12.00	19.365		
3,400.0	3,397.5	3,389.8	3,378.1	6.2	7.4	-72.36	108.1	-274.7	239.7	227.3	12.38	19.360		
3,500.0	3,497.4	3,489.6	3,477.4	6.4	7.7	-72.38	112.1	-283.2	246.9	234.1	12.76	19.355		
3,600.0	3,597.3	3,589.3	3,576.7	6.6	7.9	-72.40	116.1	-291.8	254.1	241.0	13.13	19.350		
3,700.0	3,697.2	3,689.0	3,676.0	6.8	8.2	-72.42	120.0	-300.3	261.3	247.8	13.51	19.346		
3,800.0	3,797.1	3,788.8	3,775.2	7.0	8.4	-72.44	124.0	-308.9	268.6	254.7	13.89	19.341		
3,900.0	3,897.0	3,888.5	3,874.5	7.2	8.6	-72.46	128.0	-317.4	275.8	261.5	14.26	19.337		
4,000.0	3,997.0	3,988.2	3,973.8	7.4	8.9	-72.47	131.9	-325.9	283.0	268.4	14.64	19.333		
4,100.0	4,096.9	4,088.0	4,073.1	7.6	9.1	-72.49	135.9	-334.5	290.2	275.2	15.02	19.329		
4,200.0	4,196.8	4,187.7	4,172.4	7.8	9.3	-72.50	139.9	-343.0	297.5	282.1	15.39	19.326		
4,300.0	4,296.7	4,287.5	4,271.7	7.9	9.6	-72.52	143.8	-351.6	304.7	288.9	15.77	19.322		
4,400.0	4,396.6	4,387.2	4,371.0	8.1	9.8	-72.53	147.8	-360.1	311.9	295.8	16.15	19.319		
4,500.0	4,496.5	4,486.9	4,470.3	8.3	10.1	-72.54	151.8	-368.6	319.1	302.6	16.52	19.315		
4,600.0	4,596.4	4,586.7	4,569.6	8.5	10.3	-72.56	155.7	-377.2	326.4	309.5	16.90	19.312		
4,700.0	4,696.3	4,686.4	4,668.9	8.7	10.5	-72.57	159.7	-385.7	333.6	316.3	17.28	19.309		
4,800.0	4,796.2	4,786.2	4,768.2	8.9	10.8	-72.58	163.7	-394.2	340.8	323.2	17.65	19.306		
4,900.0	4,896.1	4,885.9	4,867.5	9.1	11.0	-72.59	167.6	-402.8	348.0	330.0	18.03	19.303		
5,000.0	4,996.0	4,985.6	4,966.8	9.3	11.3	-72.60	171.6	-411.3	355.3	336.8	18.41	19.300		

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 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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 2F-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		
5,100.0	5,095.9	5,085.4	5,066.1	9.5	11.5	-72.61	175.6	-419.9	362.5	343.7	18.78	19.298		
5,200.0	5,195.8	5,185.1	5,165.4	9.7	11.7	-72.62	179.5	-428.4	369.7	350.5	19.16	19.295		
5,300.0	5,295.7	5,284.8	5,264.6	9.8	12.0	-72.63	183.5	-436.9	376.9	357.4	19.54	19.293		
5,400.0	5,395.6	5,384.6	5,363.9	10.0	12.2	-72.64	187.5	-445.5	384.1	364.2	19.91	19.290		
5,500.0	5,495.5	5,484.3	5,463.2	10.2	12.5	-72.65	191.4	-454.0	391.4	371.1	20.29	19.288		
5,600.0	5,595.4	5,584.1	5,562.5	10.4	12.7	-72.65	195.4	-462.6	398.6	377.9	20.67	19.285		
5,700.0	5,695.3	5,683.8	5,661.8	10.6	12.9	-72.66	199.3	-471.1	405.8	384.8	21.05	19.283		
5,800.0	5,795.3	5,783.5	5,761.1	10.8	13.2	-72.67	203.3	-479.6	413.0	391.6	21.42	19.281		
5,900.0	5,895.2	5,883.3	5,860.4	11.0	13.4	-72.68	207.3	-488.2	420.3	398.5	21.80	19.279		
6,000.0	5,995.1	5,983.0	5,959.7	11.2	13.7	-72.68	211.2	-496.7	427.5	405.3	22.18	19.277		
6,100.0	6,095.0	6,082.8	6,059.0	11.4	13.9	-72.69	215.2	-505.2	434.7	412.2	22.55	19.275		
6,200.0	6,194.9	6,182.5	6,158.3	11.6	14.1	-72.70	219.2	-513.8	441.9	419.0	22.93	19.273		
6,300.0	6,294.8	6,282.2	6,257.6	11.7	14.4	-72.70	223.1	-522.3	449.2	425.9	23.31	19.271		
6,400.0	6,394.7	6,382.0	6,356.9	11.9	14.6	-72.71	227.1	-530.9	456.4	432.7	23.68	19.269		
6,500.0	6,494.6	6,481.7	6,456.2	12.1	14.9	-72.72	231.1	-539.4	463.6	439.5	24.06	19.268		
6,600.0	6,594.5	6,581.5	6,555.5	12.3	15.1	-72.72	235.0	-547.9	470.8	446.4	24.44	19.266		
6,700.0	6,694.4	6,681.2	6,654.8	12.5	15.3	-72.73	239.0	-556.5	478.1	453.2	24.82	19.264		
6,800.0	6,794.3	6,780.9	6,754.1	12.7	15.6	-63.31	243.0	-565.0	485.3	460.1	25.20	19.260 SF		
6,900.0	6,894.0	6,880.0	6,852.7	12.8	15.8	84.04	243.3	-573.5	492.4	467.0	25.44	19.355		
7,000.0	6,991.1	6,979.9	6,950.8	12.8	15.9	86.98	227.4	-581.9	499.5	474.0	25.49	19.591		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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 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	-89.95	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		
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-19.6	19.6	18.6	0.94	20.756		
400.0	400.0	400.0	400.0	0.6	0.6	-89.95	0.0	-19.6	19.6	18.3	1.29	15.147		
500.0	500.0	500.0	500.0	0.8	0.8	-89.95	0.0	-19.6	19.6	17.9	1.64	11.924		
600.0	600.0	600.0	600.0	1.0	1.0	-89.95	0.0	-19.6	19.6	17.6	1.99	9.832 CC, ES		
700.0	700.0	699.8	699.7	1.2	1.2	-72.59	0.6	-20.2	19.9	17.6	2.34	8.518		
800.0	800.0	799.5	799.5	1.3	1.3	-74.41	2.4	-22.1	21.0	18.3	2.69	7.810		
900.0	899.9	899.2	899.1	1.5	1.5	-76.51	5.4	-25.2	22.9	19.9	3.05	7.520		
1,000.0	999.8	999.0	998.7	1.7	1.7	-75.97	9.5	-29.5	25.9	22.5	3.41	7.590		
1,100.0	1,099.7	1,098.9	1,098.4	1.9	1.9	-75.00	13.9	-34.1	29.1	25.4	3.78	7.707		
1,200.0	1,199.6	1,198.9	1,198.2	2.1	2.1	-74.22	18.3	-38.7	32.4	28.2	4.15	7.802		
1,300.0	1,299.5	1,298.8	1,297.9	2.3	2.3	-73.59	22.7	-43.3	35.6	31.1	4.52	7.880		
1,400.0	1,399.4	1,398.8	1,397.6	2.5	2.5	-73.06	27.1	-47.9	38.9	34.0	4.89	7.945		
1,500.0	1,499.3	1,498.7	1,497.4	2.6	2.7	-72.62	31.5	-52.5	42.1	36.9	5.26	8.000		
1,600.0	1,599.2	1,598.7	1,597.1	2.8	2.9	-72.23	35.9	-57.1	45.4	39.7	5.64	8.048		
1,700.0	1,699.1	1,698.6	1,696.9	3.0	3.1	-71.90	40.3	-61.7	48.6	42.6	6.01	8.089		
1,800.0	1,799.0	1,798.6	1,796.6	3.2	3.3	-71.61	44.7	-66.3	51.9	45.5	6.38	8.125		
1,900.0	1,898.9	1,898.5	1,896.4	3.4	3.5	-71.36	49.1	-70.8	55.1	48.4	6.76	8.157		
2,000.0	1,998.8	1,998.5	1,996.1	3.6	3.7	-71.13	53.4	-75.4	58.4	51.3	7.13	8.186		
2,100.0	2,098.7	2,098.4	2,095.9	3.8	3.9	-70.93	57.8	-80.0	61.6	54.1	7.51	8.212		
2,200.0	2,198.6	2,198.3	2,195.6	4.0	4.1	-70.74	62.2	-84.6	64.9	57.0	7.88	8.235		
2,300.0	2,298.6	2,298.3	2,295.4	4.1	4.3	-70.58	66.6	-89.2	68.2	59.9	8.26	8.256		
2,400.0	2,398.5	2,398.2	2,395.1	4.3	4.5	-70.43	71.0	-93.8	71.4	62.8	8.63	8.275		
2,500.0	2,498.4	2,498.2	2,494.8	4.5	4.7	-70.29	75.4	-98.4	74.7	65.7	9.01	8.292		
2,600.0	2,598.3	2,598.1	2,594.6	4.7	4.9	-70.16	79.8	-103.0	77.9	68.6	9.38	8.308		
2,700.0	2,698.2	2,698.1	2,694.3	4.9	5.1	-70.05	84.2	-107.6	81.2	71.4	9.76	8.323		
2,800.0	2,798.1	2,798.0	2,794.1	5.1	5.3	-69.94	88.6	-112.2	84.5	74.3	10.13	8.336		
2,900.0	2,898.0	2,898.0	2,893.8	5.3	5.6	-69.84	93.0	-116.8	87.7	77.2	10.51	8.349		
3,000.0	2,997.9	2,997.9	2,993.6	5.5	5.8	-69.75	97.4	-121.4	91.0	80.1	10.88	8.361		
3,100.0	3,097.8	3,097.9	3,093.3	5.7	6.0	-69.67	101.7	-125.9	94.2	83.0	11.26	8.372		
3,200.0	3,197.7	3,197.8	3,193.1	5.9	6.2	-69.59	106.1	-130.5	97.5	85.9	11.63	8.382		
3,300.0	3,297.6	3,297.8	3,292.8	6.0	6.4	-69.51	110.5	-135.1	100.8	88.7	12.01	8.391		
3,400.0	3,397.5	3,397.7	3,392.5	6.2	6.6	-69.44	114.9	-139.7	104.0	91.6	12.38	8.400		
3,500.0	3,497.4	3,497.7	3,492.3	6.4	6.8	-69.38	119.3	-144.3	107.3	94.5	12.76	8.409		
3,600.0	3,597.3	3,597.6	3,592.0	6.6	7.0	-69.32	123.7	-148.9	110.5	97.4	13.13	8.417		
3,700.0	3,697.2	3,697.5	3,691.8	6.8	7.2	-69.26	128.1	-153.5	113.8	100.3	13.51	8.424		
3,800.0	3,797.1	3,797.5	3,791.5	7.0	7.4	-69.20	132.5	-158.1	117.1	103.2	13.88	8.431		
3,900.0	3,897.0	3,897.4	3,891.3	7.2	7.6	-69.15	136.9	-162.7	120.3	106.1	14.26	8.438		
4,000.0	3,997.0	3,997.4	3,991.0	7.4	7.8	-69.10	141.3	-167.3	123.6	109.0	14.64	8.444		
4,100.0	4,096.9	4,097.3	4,090.8	7.6	8.0	-69.06	145.6	-171.9	126.8	111.8	15.01	8.450		
4,200.0	4,196.8	4,197.3	4,190.5	7.8	8.2	-69.01	150.0	-176.5	130.1	114.7	15.39	8.456		
4,300.0	4,296.7	4,297.2	4,290.2	7.9	8.4	-68.97	154.4	-181.0	133.4	117.6	15.76	8.462		
4,400.0	4,396.6	4,397.2	4,390.0	8.1	8.6	-68.93	158.8	-185.6	136.6	120.5	16.14	8.467		
4,500.0	4,496.5	4,497.1	4,489.7	8.3	8.8	-68.89	163.2	-190.2	139.9	123.4	16.51	8.472		
4,600.0	4,596.4	4,597.1	4,589.5	8.5	9.1	-68.85	167.6	-194.8	143.2	126.3	16.89	8.476		
4,700.0	4,696.3	4,697.0	4,689.2	8.7	9.3	-68.82	172.0	-199.4	146.4	129.2	17.27	8.481		
4,800.0	4,796.2	4,797.0	4,789.0	8.9	9.5	-68.79	176.4	-204.0	149.7	132.0	17.64	8.485		
4,900.0	4,896.1	4,896.9	4,888.7	9.1	9.7	-68.75	180.8	-208.6	152.9	134.9	18.02	8.489		
5,000.0	4,996.0	4,996.9	4,988.5	9.3	9.9	-68.72	185.2	-213.2	156.2	137.8	18.39	8.493		
5,100.0	5,095.9	5,096.8	5,088.2	9.5	10.1	-68.69	189.5	-217.8	159.5	140.7	18.77	8.497		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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	5,195.8	5,196.7	5,187.9	9.7	10.3	-68.67	193.9	-222.4	162.7	143.6	19.14	8.501	
5,300.0	5,295.7	5,296.7	5,287.7	9.8	10.5	-68.64	198.3	-227.0	166.0	146.5	19.52	8.504	
5,400.0	5,395.6	5,396.6	5,387.4	10.0	10.7	-68.61	202.7	-231.6	169.3	149.4	19.90	8.508	
5,500.0	5,495.5	5,496.6	5,487.2	10.2	10.9	-68.59	207.1	-236.1	172.5	152.3	20.27	8.511	
5,600.0	5,595.4	5,596.5	5,586.9	10.4	11.1	-68.56	211.5	-240.7	175.8	155.1	20.65	8.514	
5,700.0	5,695.3	5,696.5	5,686.7	10.6	11.3	-68.54	215.9	-245.3	179.0	158.0	21.02	8.517	
5,800.0	5,795.3	5,796.4	5,786.4	10.8	11.5	-68.52	220.3	-249.9	182.3	160.9	21.40	8.520	
5,900.0	5,895.2	5,896.4	5,886.2	11.0	11.7	-68.50	224.7	-254.5	185.6	163.8	21.77	8.523	
6,000.0	5,995.1	5,996.3	5,985.9	11.2	11.9	-68.48	229.1	-259.1	188.8	166.7	22.15	8.526	
6,100.0	6,095.0	6,096.3	6,085.6	11.4	12.1	-68.46	233.5	-263.7	192.1	169.6	22.53	8.528	
6,200.0	6,194.9	6,196.2	6,185.4	11.6	12.4	-68.44	237.8	-268.3	195.4	172.5	22.90	8.531	
6,300.0	6,294.8	6,296.2	6,285.1	11.7	12.6	-68.42	242.2	-272.9	198.6	175.4	23.28	8.533	
6,400.0	6,394.7	6,396.1	6,384.9	11.9	12.8	-68.40	246.6	-277.5	201.9	178.2	23.65	8.536	
6,500.0	6,494.6	6,496.1	6,484.6	12.1	13.0	-68.38	251.0	-282.1	205.2	181.1	24.03	8.538	
6,600.0	6,594.5	6,596.5	6,584.9	12.3	13.2	-68.43	255.2	-286.7	208.4	184.0	24.40	8.539	
6,700.0	6,694.4	6,697.8	6,685.6	12.5	13.3	-71.63	247.7	-291.1	211.1	186.3	24.81	8.507	
6,800.0	6,794.3	6,792.2	6,777.1	12.7	13.3	-69.31	224.9	-294.8	215.5	190.3	25.24	8.539	
6,900.0	6,894.0	6,880.2	6,857.9	12.8	13.3	69.59	190.3	-297.9	224.7	199.2	25.49	8.815	
7,000.0	6,991.1	6,964.5	6,929.4	12.8	13.3	65.04	146.0	-300.4	237.0	211.6	25.42	9.326	
7,100.0	7,082.7	7,045.8	6,991.6	12.8	13.3	59.75	93.8	-302.3	251.0	225.9	25.03	10.028	
7,200.0	7,165.9	7,124.7	7,044.3	12.8	13.3	55.18	35.1	-303.6	265.0	240.6	24.35	10.880	
7,300.0	7,238.3	7,200.0	7,086.7	12.8	13.5	51.57	-27.0	-304.5	277.9	254.2	23.63	11.757	
7,400.0	7,297.7	7,277.6	7,121.4	13.0	13.8	48.70	-96.4	-304.8	288.7	265.7	22.97	12.569	
7,500.0	7,342.2	7,350.0	7,145.1	13.3	14.1	46.70	-164.7	-304.7	296.9	274.3	22.61	13.132	
7,600.0	7,370.5	7,426.4	7,160.6	13.9	14.6	45.34	-239.4	-304.1	302.0	279.2	22.79	13.251	
7,700.0	7,381.8	7,500.0	7,166.0	14.7	15.1	44.69	-312.8	-303.1	303.7	280.1	23.61	12.861	
7,800.0	7,382.0	7,598.1	7,166.0	15.6	16.0	44.45	-410.9	-301.3	302.6	277.7	24.91	12.148	
7,900.0	7,382.0	7,698.1	7,166.0	16.6	17.0	44.21	-510.9	-299.6	301.4	275.0	26.34	11.441	
8,000.0	7,382.0	7,798.1	7,166.0	17.8	18.2	43.97	-610.8	-297.9	300.2	272.3	27.90	10.759	
8,100.0	7,382.0	7,898.1	7,166.0	19.1	19.4	43.73	-710.8	-296.1	299.0	269.4	29.56	10.115	
8,200.0	7,382.0	7,998.0	7,166.0	20.4	20.7	43.49	-810.8	-294.4	297.8	266.5	31.29	9.515	
8,300.0	7,382.0	8,098.0	7,166.0	21.8	22.1	43.25	-910.8	-292.6	296.6	263.5	33.09	8.963	
8,400.0	7,382.0	8,198.0	7,166.0	23.2	23.5	43.00	-1,010.7	-290.9	295.4	260.4	34.93	8.456	
8,500.0	7,382.0	8,298.0	7,166.0	24.7	24.9	42.75	-1,110.7	-289.1	294.2	257.4	36.81	7.992	
8,600.0	7,382.0	8,398.0	7,166.0	26.2	26.4	42.50	-1,210.7	-287.4	293.0	254.3	38.71	7.568	
8,700.0	7,382.0	8,498.0	7,166.0	27.8	28.0	42.25	-1,310.6	-285.6	291.8	251.2	40.63	7.182	
8,800.0	7,382.0	8,597.9	7,166.0	29.3	29.5	41.99	-1,410.6	-283.9	290.6	248.1	42.57	6.828	
8,900.0	7,382.0	8,697.9	7,166.0	30.9	31.1	41.74	-1,510.6	-282.2	289.5	245.0	44.51	6.504	
9,000.0	7,382.0	8,797.9	7,166.0	32.5	32.7	41.48	-1,610.5	-280.4	288.3	241.9	46.45	6.208	
9,100.0	7,382.0	8,897.9	7,166.0	34.1	34.3	41.22	-1,710.5	-278.7	287.2	238.8	48.38	5.935	
9,200.0	7,382.0	8,997.9	7,166.0	35.8	35.9	40.95	-1,810.5	-276.9	286.0	235.7	50.32	5.684	
9,300.0	7,382.0	9,097.9	7,166.0	37.4	37.5	40.69	-1,910.4	-275.2	284.9	232.6	52.24	5.453	
9,400.0	7,382.0	9,197.9	7,166.0	39.1	39.2	40.42	-2,010.4	-273.4	283.7	229.6	54.15	5.240	
9,500.0	7,382.0	9,297.8	7,166.0	40.7	40.8	40.15	-2,110.4	-271.7	282.6	226.6	56.05	5.042	
9,600.0	7,382.0	9,397.8	7,166.0	42.4	42.5	39.88	-2,210.4	-269.9	281.5	223.6	57.93	4.859	
9,700.0	7,382.0	9,497.8	7,166.0	44.1	44.2	39.61	-2,310.3	-268.2	280.4	220.6	59.80	4.689	
9,800.0	7,382.0	9,597.8	7,166.0	45.7	45.8	39.33	-2,410.3	-266.4	279.3	217.6	61.65	4.530	
9,900.0	7,382.0	9,697.8	7,166.0	47.4	47.5	39.05	-2,510.3	-264.7	278.2	214.7	63.47	4.383	
10,000.0	7,382.0	9,797.8	7,166.0	49.1	49.2	38.77	-2,610.2	-263.0	277.1	211.8	65.28	4.245	
10,100.0	7,382.0	9,897.8	7,166.0	50.8	50.9	38.49	-2,710.2	-261.2	276.0	208.9	67.06	4.116	
10,200.0	7,382.0	9,997.7	7,166.0	52.5	52.6	38.21	-2,810.2	-259.5	274.9	206.1	68.82	3.995	
10,300.0	7,382.0	10,097.7	7,166.0	54.2	54.3	37.92	-2,910.1	-257.7	273.8	203.3	70.55	3.881	

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 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre	Between	Between	Total	Separation				
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Uncertainty Axis	Factor			
10,400.0	7,382.0	10,197.7	7,166.0	55.9	56.0	37.63	-3,010.1	-256.0	272.8	200.5	72.26	3.775			
10,500.0	7,382.0	10,297.7	7,166.0	57.6	57.7	37.34	-3,110.1	-254.2	271.7	197.8	73.94	3.675			
10,600.0	7,382.0	10,397.7	7,166.0	59.3	59.4	37.04	-3,210.1	-252.5	270.6	195.0	75.59	3.580			
10,700.0	7,382.0	10,497.7	7,166.0	61.1	61.1	36.75	-3,310.0	-250.7	269.6	192.4	77.21	3.491			
10,800.0	7,382.0	10,596.8	7,166.0	62.8	62.8	36.47	-3,409.1	-249.1	268.6	189.8	78.83	3.407			
10,870.4	7,382.0	10,665.3	7,166.0	64.0	64.0	36.40	-3,477.6	-248.7	268.4	188.2	80.14	3.349			
10,900.0	7,382.0	10,694.1	7,166.0	64.5	64.5	36.41	-3,506.4	-248.8	268.4	187.6	80.76	3.324			
11,000.0	7,382.0	10,791.3	7,166.0	66.2	66.2	36.64	-3,603.7	-250.1	269.2	186.0	83.15	3.238			
11,100.0	7,382.0	10,888.5	7,166.0	67.9	67.8	37.14	-3,700.8	-253.0	271.0	185.0	86.04	3.150			
11,200.0	7,382.0	10,988.1	7,166.0	69.7	69.6	37.82	-3,800.3	-257.1	273.5	184.2	89.31	3.063			
11,300.0	7,382.0	11,088.0	7,166.0	71.4	71.3	38.50	-3,900.1	-261.3	276.1	183.5	92.62	2.981			
11,400.0	7,382.0	11,187.9	7,166.0	73.1	73.0	39.16	-3,999.9	-265.4	278.7	182.7	95.98	2.904			
11,500.0	7,382.0	11,287.8	7,166.0	74.8	74.7	39.81	-4,099.8	-269.5	281.3	181.9	99.36	2.831			
11,600.0	7,382.0	11,387.7	7,166.0	76.6	76.5	40.45	-4,199.6	-273.6	284.0	181.2	102.77	2.763			
11,700.0	7,382.0	11,487.7	7,166.0	78.3	78.2	41.08	-4,299.4	-277.7	286.6	180.4	106.21	2.699			
11,800.0	7,382.0	11,587.6	7,166.0	80.0	79.9	41.69	-4,399.3	-281.9	289.4	179.7	109.68	2.638			
11,900.0	7,382.0	11,687.5	7,166.0	81.8	81.7	42.30	-4,499.1	-286.0	292.1	179.0	113.17	2.581			
12,000.0	7,382.0	11,787.4	7,166.0	83.5	83.4	42.89	-4,598.9	-290.1	294.9	178.2	116.69	2.527			
12,100.0	7,382.0	11,887.3	7,166.0	85.2	85.1	43.47	-4,698.8	-294.2	297.7	177.5	120.22	2.477			
12,200.0	7,382.0	11,987.2	7,166.0	87.0	86.9	44.04	-4,798.6	-298.3	300.6	176.8	123.78	2.429			
12,300.0	7,382.0	12,087.1	7,166.0	88.7	88.6	44.60	-4,898.4	-302.5	303.5	176.1	127.35	2.383			
12,400.0	7,382.0	12,187.1	7,166.0	90.4	90.3	45.15	-4,998.2	-306.6	306.4	175.5	130.94	2.340			
12,500.0	7,382.0	12,287.0	7,166.0	92.2	92.1	45.69	-5,098.1	-310.7	309.3	174.8	134.55	2.299			
12,600.0	7,382.0	12,386.9	7,166.0	93.9	93.8	46.22	-5,197.9	-314.8	312.3	174.1	138.17	2.260			
12,700.0	7,382.0	12,486.8	7,166.0	95.6	95.5	46.73	-5,297.7	-318.9	315.3	173.5	141.80	2.223			
12,800.0	7,382.0	12,586.7	7,166.0	97.4	97.3	47.24	-5,397.6	-323.1	318.3	172.9	145.45	2.188			
12,900.0	7,382.0	12,686.6	7,166.0	99.1	99.0	47.74	-5,497.4	-327.2	321.3	172.2	149.11	2.155			
13,000.0	7,382.0	12,786.5	7,166.0	100.9	100.8	48.23	-5,597.2	-331.3	324.4	171.6	152.78	2.123			
13,100.0	7,382.0	12,886.5	7,166.0	102.6	102.5	48.71	-5,697.1	-335.4	327.5	171.0	156.46	2.093			
13,200.0	7,382.0	12,986.4	7,166.0	104.3	104.2	49.18	-5,796.9	-339.5	330.6	170.5	160.14	2.064			
13,300.0	7,382.0	13,086.3	7,166.0	106.1	106.0	49.65	-5,896.7	-343.7	333.7	169.9	163.84	2.037			
13,400.0	7,382.0	13,186.2	7,166.0	107.8	107.7	50.10	-5,996.5	-347.8	336.9	169.4	167.54	2.011			
13,500.0	7,382.0	13,286.1	7,166.0	109.6	109.5	50.54	-6,096.4	-351.9	340.1	168.8	171.25	1.986			
13,600.0	7,382.0	13,386.0	7,166.0	111.3	111.2	50.98	-6,196.2	-356.0	343.3	168.3	174.97	1.962			
13,700.0	7,382.0	13,486.0	7,166.0	113.0	113.0	51.41	-6,296.0	-360.1	346.5	167.8	178.69	1.939			
13,800.0	7,382.0	13,585.9	7,166.0	114.8	114.7	51.83	-6,395.9	-364.3	349.7	167.3	182.42	1.917			
13,900.0	7,382.0	13,685.8	7,166.0	116.5	116.4	52.25	-6,495.7	-368.4	353.0	166.8	186.15	1.896			
14,000.0	7,382.0	13,785.7	7,166.0	118.3	118.2	52.65	-6,595.5	-372.5	356.2	166.4	189.89	1.876			
14,100.0	7,382.0	13,885.6	7,166.0	120.0	119.9	53.05	-6,695.4	-376.6	359.5	165.9	193.63	1.857			
14,200.0	7,382.0	13,985.5	7,166.0	121.8	121.7	53.44	-6,795.2	-380.7	362.8	165.5	197.37	1.838			
14,300.0	7,382.0	14,085.4	7,166.0	123.5	123.4	53.83	-6,895.0	-384.9	366.2	165.0	201.11	1.821			
14,400.0	7,382.0	14,185.4	7,166.0	125.3	125.2	54.20	-6,994.8	-389.0	369.5	164.6	204.86	1.804			
14,500.0	7,382.0	14,285.3	7,166.0	127.0	126.9	54.57	-7,094.7	-393.1	372.8	164.2	208.61	1.787			
14,600.0	7,382.0	14,385.2	7,166.0	128.7	128.7	54.94	-7,194.5	-397.2	376.2	163.9	212.37	1.772			
14,700.0	7,382.0	14,485.1	7,166.0	130.5	130.4	55.30	-7,294.3	-401.3	379.6	163.5	216.12	1.756			
14,800.0	7,382.0	14,585.0	7,166.0	132.2	132.2	55.65	-7,394.2	-405.5	383.0	163.1	219.87	1.742			
14,900.0	7,382.0	14,684.9	7,166.0	134.0	133.9	55.99	-7,494.0	-409.6	386.4	162.8	223.63	1.728			
15,000.0	7,382.0	14,784.8	7,166.0	135.7	135.6	56.33	-7,593.8	-413.7	389.8	162.4	227.39	1.714			
15,100.0	7,382.0	14,884.8	7,166.0	137.5	137.4	56.66	-7,693.7	-417.8	393.3	162.1	231.15	1.701			
15,122.8	7,382.0	14,907.5	7,166.0	137.9	137.8	56.74	-7,716.4	-418.8	394.1	162.1	232.00	1.699 SF			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2H-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2H-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 @ 4889.0ft (Ensign)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Vogl-McCoy 2H-5H-F267
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.38°

