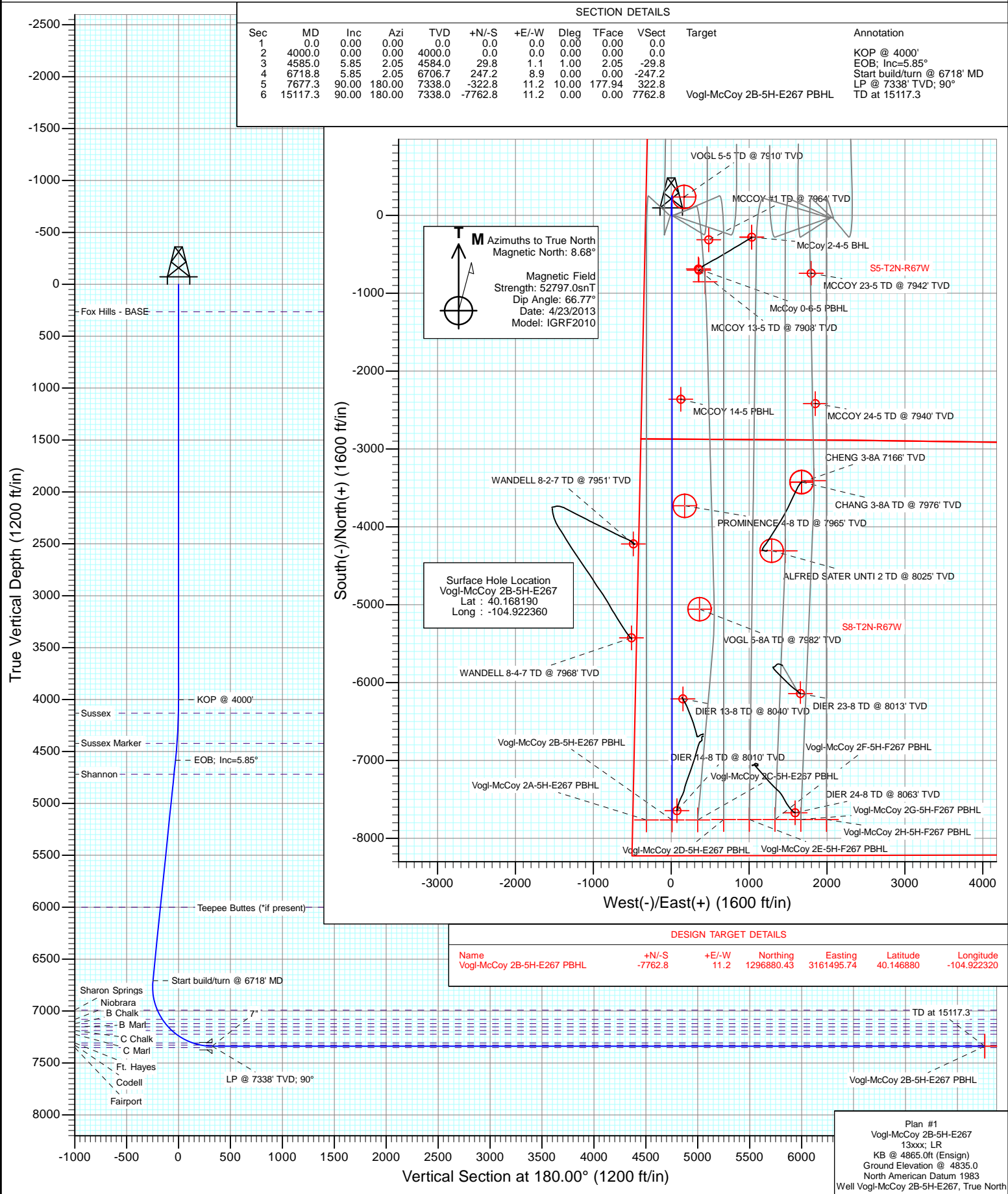




Project: DJ Wattenberg
 Site: S5-T2N-R67W (Vogl-McCoy)
 Well: Vogl-McCoy 2B-5H-E267
 Wellbore: Hz
 Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2B-5H-E267	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 2B-5H-E267					
Well Position	+N/-S	0.0 ft	Northing:	1,304,643.00 ft	Latitude:	40.168190
	+E/-W	0.0 ft	Easting:	3,161,434.00 ft	Longitude:	-104.922360
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,835.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	4/23/2013	(°)	(°)	(nT)
			8.68	66.77	52,797

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

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,585.0	5.85	2.05	4,584.0	29.8	1.1	1.00	1.00	0.00	2.05	
6,718.8	5.85	2.05	6,706.7	247.2	8.9	0.00	0.00	0.00	0.00	
7,677.3	90.00	180.00	7,338.0	-322.8	11.2	10.00	8.78	18.57	177.94	
15,117.3	90.00	180.00	7,338.0	-7,762.8	11.2	0.00	0.00	0.00	0.00	Vogl-McCoy 2B-5H-E:

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2B-5H-E267	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	
265.0	0.00	0.00	265.0	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	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4000'
4,100.0	1.00	2.05	4,100.0	0.9	0.0	-0.9	1.00	1.00	
4,131.0	1.31	2.05	4,131.0	1.5	0.1	-1.5	1.00	1.00	Sussex
4,200.0	2.00	2.05	4,200.0	3.5	0.1	-3.5	1.00	1.00	
4,300.0	3.00	2.05	4,299.9	7.8	0.3	-7.8	1.00	1.00	
4,400.0	4.00	2.05	4,399.7	13.9	0.5	-13.9	1.00	1.00	
4,422.4	4.22	2.05	4,422.0	15.6	0.6	-15.6	1.00	1.00	Sussex Marker
4,500.0	5.00	2.05	4,499.4	21.8	0.8	-21.8	1.00	1.00	
4,585.0	5.85	2.05	4,584.0	29.8	1.1	-29.8	1.00	1.00	EOB; Inc=5.85°
4,600.0	5.85	2.05	4,598.9	31.3	1.1	-31.3	0.00	0.00	
4,700.0	5.85	2.05	4,698.4	41.5	1.5	-41.5	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2B-5H-E267	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
4,720.7	5.85	2.05	4,719.0	43.6	1.6	-43.6	0.00	0.00	Shannon
4,800.0	5.85	2.05	4,797.9	51.7	1.9	-51.7	0.00	0.00	
4,900.0	5.85	2.05	4,897.3	61.9	2.2	-61.9	0.00	0.00	
5,000.0	5.85	2.05	4,996.8	72.1	2.6	-72.1	0.00	0.00	
5,100.0	5.85	2.05	5,096.3	82.3	3.0	-82.3	0.00	0.00	
5,200.0	5.85	2.05	5,195.8	92.5	3.3	-92.5	0.00	0.00	
5,300.0	5.85	2.05	5,295.3	102.6	3.7	-102.6	0.00	0.00	
5,400.0	5.85	2.05	5,394.7	112.8	4.0	-112.8	0.00	0.00	
5,500.0	5.85	2.05	5,494.2	123.0	4.4	-123.0	0.00	0.00	
5,600.0	5.85	2.05	5,593.7	133.2	4.8	-133.2	0.00	0.00	
5,700.0	5.85	2.05	5,693.2	143.4	5.1	-143.4	0.00	0.00	
5,800.0	5.85	2.05	5,792.7	153.6	5.5	-153.6	0.00	0.00	
5,900.0	5.85	2.05	5,892.1	163.8	5.9	-163.8	0.00	0.00	
6,000.0	5.85	2.05	5,991.6	173.9	6.2	-173.9	0.00	0.00	
6,008.4	5.85	2.05	6,000.0	174.8	6.3	-174.8	0.00	0.00	Teepee Buttes (*if present)
6,100.0	5.85	2.05	6,091.1	184.1	6.6	-184.1	0.00	0.00	
6,200.0	5.85	2.05	6,190.6	194.3	7.0	-194.3	0.00	0.00	
6,300.0	5.85	2.05	6,290.1	204.5	7.3	-204.5	0.00	0.00	
6,400.0	5.85	2.05	6,389.5	214.7	7.7	-214.7	0.00	0.00	
6,500.0	5.85	2.05	6,489.0	224.9	8.1	-224.9	0.00	0.00	
6,600.0	5.85	2.05	6,588.5	235.1	8.4	-235.1	0.00	0.00	
6,700.0	5.85	2.05	6,688.0	245.3	8.8	-245.3	0.00	0.00	
6,718.8	5.85	2.05	6,706.7	247.2	8.9	-247.2	0.00	0.00	Start build/turn @ 6718' MD
6,800.0	2.28	174.71	6,787.8	249.7	9.2	-249.7	10.00	-4.39	
6,900.0	12.27	179.03	6,886.8	237.1	9.5	-237.1	10.00	9.99	
7,000.0	22.27	179.49	6,982.2	207.4	9.9	-207.4	10.00	10.00	
7,009.5	23.23	179.51	6,991.0	203.7	9.9	-203.7	10.00	10.00	Sharon Springs
7,100.0	32.27	179.67	7,071.0	161.6	10.2	-161.6	10.00	10.00	
7,110.7	33.35	179.68	7,080.0	155.8	10.2	-155.8	10.00	10.00	Niobrara
7,160.1	38.28	179.73	7,120.0	127.0	10.4	-127.0	10.00	10.00	B Chalk
7,200.0	42.27	179.77	7,150.4	101.2	10.5	-101.2	10.00	10.00	
7,203.5	42.62	179.77	7,153.0	98.8	10.5	-98.8	10.00	10.00	B Marl
7,250.1	47.27	179.81	7,186.0	65.9	10.6	-65.9	9.98	9.98	C Chalk
7,300.0	52.27	179.84	7,218.2	27.8	10.7	-27.8	10.02	10.02	
7,307.9	53.06	179.84	7,223.0	21.5	10.8	-21.5	10.00	10.00	C Marl
7,400.0	62.27	179.89	7,272.2	-56.2	10.9	56.2	10.00	10.00	
7,484.9	70.76	179.93	7,306.0	-134.0	11.1	134.0	10.00	10.00	Ft. Hayes
7,500.0	72.27	179.93	7,310.8	-148.3	11.1	148.3	10.00	10.00	
7,570.1	79.28	179.96	7,328.0	-216.2	11.1	216.2	10.00	10.00	Codell
7,600.0	82.27	179.97	7,332.8	-245.8	11.2	245.8	10.00	10.00	
7,677.3	90.00	180.00	7,338.0	-322.8	11.2	322.8	10.00	10.00	LP @ 7338' TVD; 90° - 7"
7,700.0	90.00	180.00	7,338.0	-345.5	11.2	345.5	0.00	0.00	
7,800.0	90.00	180.00	7,338.0	-445.5	11.2	445.5	0.00	0.00	
7,900.0	90.00	180.00	7,338.0	-545.5	11.2	545.5	0.00	0.00	
8,000.0	90.00	180.00	7,338.0	-645.5	11.2	645.5	0.00	0.00	
8,100.0	90.00	180.00	7,338.0	-745.5	11.2	745.5	0.00	0.00	
8,200.0	90.00	180.00	7,338.0	-845.5	11.2	845.5	0.00	0.00	
8,300.0	90.00	180.00	7,338.0	-945.5	11.2	945.5	0.00	0.00	
8,400.0	90.00	180.00	7,338.0	-1,045.5	11.2	1,045.5	0.00	0.00	
8,500.0	90.00	180.00	7,338.0	-1,145.5	11.2	1,145.5	0.00	0.00	
8,600.0	90.00	180.00	7,338.0	-1,245.5	11.2	1,245.5	0.00	0.00	
8,700.0	90.00	180.00	7,338.0	-1,345.5	11.2	1,345.5	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2B-5H-E267	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	7,338.0	-1,445.5	11.2	1,445.5	0.00	0.00	
8,900.0	90.00	180.00	7,338.0	-1,545.5	11.2	1,545.5	0.00	0.00	
9,000.0	90.00	180.00	7,338.0	-1,645.5	11.2	1,645.5	0.00	0.00	
9,100.0	90.00	180.00	7,338.0	-1,745.5	11.2	1,745.5	0.00	0.00	
9,200.0	90.00	180.00	7,338.0	-1,845.5	11.2	1,845.5	0.00	0.00	
9,300.0	90.00	180.00	7,338.0	-1,945.5	11.2	1,945.5	0.00	0.00	
9,400.0	90.00	180.00	7,338.0	-2,045.5	11.2	2,045.5	0.00	0.00	
9,500.0	90.00	180.00	7,338.0	-2,145.5	11.2	2,145.5	0.00	0.00	
9,600.0	90.00	180.00	7,338.0	-2,245.5	11.2	2,245.5	0.00	0.00	
9,700.0	90.00	180.00	7,338.0	-2,345.5	11.2	2,345.5	0.00	0.00	
9,800.0	90.00	180.00	7,338.0	-2,445.5	11.2	2,445.5	0.00	0.00	
9,900.0	90.00	180.00	7,338.0	-2,545.5	11.2	2,545.5	0.00	0.00	
10,000.0	90.00	180.00	7,338.0	-2,645.5	11.2	2,645.5	0.00	0.00	
10,100.0	90.00	180.00	7,338.0	-2,745.5	11.2	2,745.5	0.00	0.00	
10,200.0	90.00	180.00	7,338.0	-2,845.5	11.2	2,845.5	0.00	0.00	
10,300.0	90.00	180.00	7,338.0	-2,945.5	11.2	2,945.5	0.00	0.00	
10,400.0	90.00	180.00	7,338.0	-3,045.5	11.2	3,045.5	0.00	0.00	
10,500.0	90.00	180.00	7,338.0	-3,145.5	11.2	3,145.5	0.00	0.00	
10,600.0	90.00	180.00	7,338.0	-3,245.5	11.2	3,245.5	0.00	0.00	
10,700.0	90.00	180.00	7,338.0	-3,345.5	11.2	3,345.5	0.00	0.00	
10,800.0	90.00	180.00	7,338.0	-3,445.5	11.2	3,445.5	0.00	0.00	
10,900.0	90.00	180.00	7,338.0	-3,545.5	11.2	3,545.5	0.00	0.00	
11,000.0	90.00	180.00	7,338.0	-3,645.5	11.2	3,645.5	0.00	0.00	
11,100.0	90.00	180.00	7,338.0	-3,745.5	11.2	3,745.5	0.00	0.00	
11,200.0	90.00	180.00	7,338.0	-3,845.5	11.2	3,845.5	0.00	0.00	
11,300.0	90.00	180.00	7,338.0	-3,945.5	11.2	3,945.5	0.00	0.00	
11,400.0	90.00	180.00	7,338.0	-4,045.5	11.2	4,045.5	0.00	0.00	
11,500.0	90.00	180.00	7,338.0	-4,145.5	11.2	4,145.5	0.00	0.00	
11,600.0	90.00	180.00	7,338.0	-4,245.5	11.2	4,245.5	0.00	0.00	
11,700.0	90.00	180.00	7,338.0	-4,345.5	11.2	4,345.5	0.00	0.00	
11,800.0	90.00	180.00	7,338.0	-4,445.5	11.2	4,445.5	0.00	0.00	
11,900.0	90.00	180.00	7,338.0	-4,545.5	11.2	4,545.5	0.00	0.00	
12,000.0	90.00	180.00	7,338.0	-4,645.5	11.2	4,645.5	0.00	0.00	
12,100.0	90.00	180.00	7,338.0	-4,745.5	11.2	4,745.5	0.00	0.00	
12,200.0	90.00	180.00	7,338.0	-4,845.5	11.2	4,845.5	0.00	0.00	
12,300.0	90.00	180.00	7,338.0	-4,945.5	11.2	4,945.5	0.00	0.00	
12,400.0	90.00	180.00	7,338.0	-5,045.5	11.2	5,045.5	0.00	0.00	
12,500.0	90.00	180.00	7,338.0	-5,145.5	11.2	5,145.5	0.00	0.00	
12,600.0	90.00	180.00	7,338.0	-5,245.5	11.2	5,245.5	0.00	0.00	
12,700.0	90.00	180.00	7,338.0	-5,345.5	11.2	5,345.5	0.00	0.00	
12,800.0	90.00	180.00	7,338.0	-5,445.5	11.2	5,445.5	0.00	0.00	
12,900.0	90.00	180.00	7,338.0	-5,545.5	11.2	5,545.5	0.00	0.00	
13,000.0	90.00	180.00	7,338.0	-5,645.5	11.2	5,645.5	0.00	0.00	
13,100.0	90.00	180.00	7,338.0	-5,745.5	11.2	5,745.5	0.00	0.00	
13,200.0	90.00	180.00	7,338.0	-5,845.5	11.2	5,845.5	0.00	0.00	
13,300.0	90.00	180.00	7,338.0	-5,945.5	11.2	5,945.5	0.00	0.00	
13,400.0	90.00	180.00	7,338.0	-6,045.5	11.2	6,045.5	0.00	0.00	
13,500.0	90.00	180.00	7,338.0	-6,145.5	11.2	6,145.5	0.00	0.00	
13,600.0	90.00	180.00	7,338.0	-6,245.5	11.2	6,245.5	0.00	0.00	
13,700.0	90.00	180.00	7,338.0	-6,345.5	11.2	6,345.5	0.00	0.00	
13,800.0	90.00	180.00	7,338.0	-6,445.5	11.2	6,445.5	0.00	0.00	
13,900.0	90.00	180.00	7,338.0	-6,545.5	11.2	6,545.5	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2B-5H-E267	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	7,338.0	-6,645.5	11.2	6,645.5	0.00	0.00	
14,100.0	90.00	180.00	7,338.0	-6,745.5	11.2	6,745.5	0.00	0.00	
14,200.0	90.00	180.00	7,338.0	-6,845.5	11.2	6,845.5	0.00	0.00	
14,300.0	90.00	180.00	7,338.0	-6,945.5	11.2	6,945.5	0.00	0.00	
14,400.0	90.00	180.00	7,338.0	-7,045.5	11.2	7,045.5	0.00	0.00	
14,500.0	90.00	180.00	7,338.0	-7,145.5	11.2	7,145.5	0.00	0.00	
14,600.0	90.00	180.00	7,338.0	-7,245.5	11.2	7,245.5	0.00	0.00	
14,700.0	90.00	180.00	7,338.0	-7,345.5	11.2	7,345.5	0.00	0.00	
14,800.0	90.00	180.00	7,338.0	-7,445.5	11.2	7,445.5	0.00	0.00	
14,900.0	90.00	180.00	7,338.0	-7,545.5	11.2	7,545.5	0.00	0.00	
15,000.0	90.00	180.00	7,338.0	-7,645.5	11.2	7,645.5	0.00	0.00	
15,100.0	90.00	180.00	7,338.0	-7,745.5	11.2	7,745.5	0.00	0.00	
15,117.3	90.00	180.00	7,338.0	-7,762.8	11.2	7,762.8	0.00	0.00	TD at 15117.3 - Vogl-McCoy 2B-5H-E267 PBHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Vogl-McCoy 2B-5H-E267 - hit/miss target - Shape - Point	0.00	0.00	7,338.0	-7,762.8	11.2	1,296,880.43	3,161,495.74	40.146880	-104.922320

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
7,677.3	7,338.0	7"	0.000	0.000

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
265.0	265.0	Fox Hills - BASE			
4,131.0	4,131.0	Sussex			
4,422.4	4,422.0	Sussex Marker			
4,720.7	4,719.0	Shannon			
6,008.4	6,000.0	Teepee Buttes (*if present)			
7,009.5	6,991.0	Sharon Springs			
7,110.7	7,080.0	Niobrara			
7,160.1	7,120.0	B Chalk			
7,203.5	7,153.0	B Marl			
7,250.1	7,186.0	C Chalk			
7,307.9	7,223.0	C Marl			
7,484.9	7,306.0	Ft. Hayes			
7,570.1	7,328.0	Codell			

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	North Reference:	True
Well:	Vogl-McCoy 2B-5H-E267	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)	
4,000.0	4,000.0	0.0	0.0	KOP @ 4000'
4,585.0	4,584.0	29.8	1.1	EOB; Inc=5.85°
6,718.8	6,706.7	247.2	8.9	Start build/turn @ 6718' MD
7,677.3	7,338.0	-322.8	11.2	LP @ 7338' TVD; 90°
15,117.3	7,338.0	-7,762.8	11.2	TD at 15117.3

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S5-T2N-R67W (Vogl-McCoy)

Vogl-McCoy 2B-5H-E267

Hz

Plan #1

Anticollision Report

22 May, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	5/22/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	15,117.3	Plan #1 (Hz)	MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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						Out of range
CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS						Out of range
DIER 13-8 (EXISTING) - ENCANA WELL - Plan #1	13,701.0	7,507.3	223.6	97.7	1.776	CC, ES, SF
DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS	13,713.1	7,493.3	214.4	88.0	1.696	CC, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - Plan #1	14,887.7	7,593.1	100.1	-53.3	0.652	Level 1, CC, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - Plan #2	14,992.2	7,602.8	62.3	-95.2	0.395	Level 1, CC, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS	14,967.6	7,559.5	67.6	-89.0	0.432	Level 1, CC, ES, SF
DIER 23-8 (EXISTING) - ENCANA WELL - Plan #1						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 24-8 (EXISTING) - ENCANA WELL - Plan #1						Out of range
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST 0-2-32 (EXISTING) - ENCANA WELL - NO SURV						Out of range
GEIST 11-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 12-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 2-0-32 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST 21-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 22-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 2-4-32 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST 4-2-32 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST A UNIT #1 (EXISTING) - ENCANA WELL - SURV						Out of range
MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEY	7,668.6	7,352.9	470.6	443.2	17.178	CC, ES
MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEY	7,700.0	7,352.0	471.7	444.0	17.055	SF
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	8,042.9	7,431.0	338.2	306.5	10.685	CC, ES
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	8,100.0	7,431.0	342.9	310.5	10.589	SF
MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURV	8,058.3	7,330.0	344.3	312.6	10.871	CC, ES
MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURV	8,100.0	7,330.0	346.8	314.6	10.767	SF
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURV	9,715.7	7,342.0	112.6	54.9	1.952	CC, ES, SF
MCCOY 23-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 24-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1	1,201.0	1,200.0	775.6	771.4	188.614	CC
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1	1,600.0	1,596.4	776.1	770.5	139.463	ES
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1	5,100.0	5,057.8	991.5	970.4	46.945	SF
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	1,022.9	1,022.2	767.3	763.7	218.130	CC
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	1,100.0	1,093.7	767.5	763.7	202.095	ES
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	4,900.0	4,874.2	998.6	977.9	48.358	SF
McCoy 3A-5H - Hz - Plan #1	15,117.3	14,509.6	247.3	83.7	1.512	CC, ES, SF
McCoy 3B-5H - Hz - Plan #1	4,000.0	3,994.0	739.7	725.8	53.306	CC
McCoy 3B-5H - Hz - Plan #1	15,117.3	14,496.3	861.7	603.2	3.334	ES, SF
NELSON 23-32 (EXISTING) - ENCANA WELL - NO SUR						Out of range
NELSON 4-32 (EXISTING) - ENCANA WELL - NO SURV						Out of range
NELSON 4-6-32 (EXISTING) - ENCANA WELL - PLAN O						Out of range
OWNES BROTHERS 13-32 (EXISTING) - ENCANA WE						Out of range
PROMINENCE 4-8 (EXISTING) - KMG WELL - NO SUR	11,084.7	7,363.0	162.1	81.0	1.999	CC, ES, SF
ROBERT NELSON 14-32 (EXISTING) - ENCANA WELL						Out of range
ROBERT NELSON 24-32 (EXISTING) - ENCANA WELL						Out of range
ROBERT NELSON 2-8-32 (EXISTING) - ENCANA WELL						Out of range
VOGL 21-5X (EXISTING) - KMG WELL - NO SURVEYS						Out of range
VOGL 31-5 (EXISTING) - KMG WELL - NO SURVEYS	6,800.0	6,951.9	912.2	882.7	30.866	CC, ES, SF
VOGL 4-5A (EXISTING) - KMG WELL - NO SURVEYS						Out of range
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	6,911.9	6,873.4	155.3	130.7	6.298	CC, ES, SF
VOGL 5-8A (EXISTING) - KMG WELL - NO SURVEYS	12,411.8	7,373.0	352.5	248.4	3.386	CC, ES, SF
Vogl-Geist 2A-5H-E267 - Hz - Plan #1	366.3	367.3	11.2	10.0	9.508	CC

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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
S5-T2N-R67W (Vogl-McCoy)						
Vogl-Geist 2A-5H-E267 - Hz - Plan #1	400.0	401.0	11.2	9.9	8.643	ES
Vogl-Geist 2A-5H-E267 - Hz - Plan #1	7,308.7	7,325.4	99.4	73.9	3.902	SF
Vogl-Geist 2B-5H-E267 - Hz - Plan #1	566.3	567.3	8.4	6.5	4.474	CC
Vogl-Geist 2B-5H-E267 - Hz - Plan #1	600.0	601.0	8.4	6.4	4.210	ES
Vogl-Geist 2B-5H-E267 - Hz - Plan #1	700.0	700.9	9.2	6.8	3.913	SF
Vogl-Geist 2C-5H-E267 - Hz - Plan #1	266.3	267.3	27.9	27.1	33.805	CC
Vogl-Geist 2C-5H-E267 - Hz - Plan #1	300.0	301.0	27.9	27.0	29.597	ES
Vogl-Geist 2C-5H-E267 - Hz - Plan #1	700.0	698.5	41.4	39.1	17.704	SF
Vogl-Geist 2D-5H-F267 - Hz - Plan #1						Out of range
Vogl-Geist 2E-5H-F267 - Hz - Plan #1						Out of range
Vogl-Geist 2F-5H-F267 - Hz - Plan #1						Out of range
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1	200.0	200.0	19.6	19.0	32.966	CC, ES
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1	15,117.3	14,908.6	390.0	154.3	1.655	SF
Vogl-McCoy 2C-5H-E267 - Hz - Plan #1	466.3	467.3	19.6	18.0	12.829	CC
Vogl-McCoy 2C-5H-E267 - Hz - Plan #1	500.0	501.0	19.6	17.9	11.911	ES
Vogl-McCoy 2C-5H-E267 - Hz - Plan #1	15,117.3	14,787.9	390.5	155.1	1.659	SF
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	166.3	167.3	39.1	38.6	81.915	CC
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	200.0	201.0	39.1	38.5	65.740	ES
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	15,117.3	15,135.9	662.5	385.8	2.394	SF
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1						Out of range
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1						Out of range
Vogl-McCoy 2G-5H-F267 - Hz - Plan #1						Out of range
Vogl-McCoy 2H-5H-F267 - Hz - Plan #1						Out of range
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVE	11,574.9	7,529.0	491.0	398.8	5.321	CC, ES
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVE	11,600.0	7,528.8	491.7	399.0	5.303	SF
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVE	12,784.8	7,772.8	523.2	393.0	4.018	CC
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVE	12,800.0	7,772.7	523.5	393.0	4.012	ES, SF

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - DIER 13-8 (EXISTING) - ENCANA WELL - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
12,700.0	7,338.0	7,746.5	7,667.0	96.3	15.7	-145.99	-6,278.9	192.3	987.9	920.7	67.22	14.697		
12,800.0	7,338.0	7,727.3	7,648.7	98.0	15.6	-143.69	-6,283.7	195.1	893.8	822.4	71.41	12.516		
12,900.0	7,338.0	7,700.0	7,622.6	99.7	15.5	-140.02	-6,290.7	199.1	800.5	723.0	77.49	10.330		
13,000.0	7,338.0	7,686.4	7,609.6	101.5	15.5	-138.03	-6,294.3	201.1	708.2	626.9	81.31	8.710		
13,100.0	7,338.0	7,664.5	7,588.8	103.2	15.4	-134.56	-6,300.2	204.4	617.4	530.3	87.08	7.090		
13,200.0	7,338.0	7,641.5	7,567.0	105.0	15.3	-130.56	-6,306.5	208.0	528.8	435.4	93.38	5.663		
13,300.0	7,338.0	7,617.4	7,544.1	106.7	15.2	-125.97	-6,313.3	211.9	443.6	343.4	100.14	4.429		
13,400.0	7,338.0	7,592.0	7,520.2	108.4	15.1	-120.72	-6,320.7	216.0	364.0	256.8	107.17	3.396		
13,500.0	7,338.0	7,565.3	7,495.1	110.2	15.0	-114.78	-6,328.6	220.5	294.4	180.3	114.13	2.579		
13,600.0	7,338.0	7,537.2	7,468.8	111.9	14.9	-108.17	-6,337.1	225.4	243.3	122.8	120.56	2.018		
13,700.0	7,338.0	7,507.6	7,441.1	113.7	14.7	-100.99	-6,346.4	230.6	223.6	97.7	125.84	1.776		
13,701.0	7,338.0	7,507.3	7,440.9	113.7	14.7	-100.92	-6,346.5	230.7	223.6	97.7	125.89	1.776	CC, ES, SF	
13,800.0	7,338.0	7,476.3	7,412.0	115.4	14.6	-93.44	-6,356.5	236.3	242.5	113.1	129.42	1.874		
13,900.0	7,338.0	7,443.2	7,381.4	117.1	14.4	-85.78	-6,367.4	242.5	292.5	161.6	130.90	2.234		
14,000.0	7,338.0	7,408.1	7,349.2	118.9	14.3	-78.30	-6,379.3	249.3	360.5	230.3	130.24	2.768		
14,100.0	7,338.0	7,371.0	7,315.2	120.6	14.1	-71.25	-6,392.3	256.6	438.1	310.4	127.73	3.430		
14,200.0	7,338.0	7,331.6	7,279.3	122.4	13.9	-64.82	-6,406.5	264.7	520.8	396.9	123.89	4.203		
14,300.0	7,338.0	7,294.3	7,245.5	124.1	13.8	-59.65	-6,420.3	272.5	606.3	486.4	119.94	5.055		
14,400.0	7,338.0	7,257.5	7,212.2	125.9	13.6	-55.29	-6,433.8	280.1	693.8	577.7	116.03	5.979		
14,500.0	7,338.0	7,220.7	7,178.8	127.6	13.4	-51.55	-6,447.3	287.8	782.5	670.2	112.28	6.969		
14,600.0	7,338.0	7,184.0	7,145.5	129.4	13.3	-48.33	-6,460.8	295.5	872.1	763.3	108.79	8.017		
14,700.0	7,338.0	7,147.2	7,112.2	131.1	13.1	-45.56	-6,474.3	303.1	962.4	856.8	105.61	9.112		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 690-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
12,700.0	7,338.0	7,738.3	7,664.9	96.3	15.6	-146.11	-6,283.2	190.2	991.1	924.1	66.98	14.797		
12,800.0	7,338.0	7,720.0	7,647.3	98.0	15.5	-143.95	-6,287.9	192.3	896.8	825.8	70.97	12.637		
12,900.0	7,338.0	7,697.3	7,625.6	99.7	15.4	-141.00	-6,293.8	195.1	803.3	727.2	76.07	10.560		
13,000.0	7,338.0	7,682.5	7,611.5	101.5	15.3	-138.92	-6,297.8	196.9	710.9	630.8	80.02	8.883		
13,100.0	7,338.0	7,662.8	7,592.8	103.2	15.3	-135.93	-6,303.4	199.3	619.9	534.8	85.19	7.277		
13,200.0	7,338.0	7,637.0	7,568.4	105.0	15.2	-131.60	-6,311.0	202.5	531.1	439.1	91.99	5.774		
13,300.0	7,338.0	7,612.2	7,544.9	106.7	15.1	-126.96	-6,318.4	205.8	445.4	346.5	98.88	4.504		
13,400.0	7,338.0	7,584.1	7,518.3	108.4	14.9	-121.14	-6,327.0	209.5	364.6	258.0	106.60	3.420		
13,500.0	7,338.0	7,558.5	7,494.3	110.2	14.8	-115.40	-6,335.0	213.0	292.9	179.5	113.45	2.582		
13,600.0	7,338.0	7,531.4	7,469.1	111.9	14.7	-108.96	-6,344.3	216.8	238.8	118.9	119.89	1.992		
13,700.0	7,338.0	7,498.2	7,438.8	113.7	14.6	-100.83	-6,356.7	221.8	214.7	89.0	125.72	1.708		
13,713.1	7,338.0	7,493.3	7,434.3	113.9	14.5	-99.61	-6,358.6	222.5	214.4	88.0	126.37	1.696	CC, ES, SF	
13,800.0	7,338.0	7,460.2	7,404.1	115.4	14.4	-91.49	-6,371.3	227.6	228.9	99.6	129.36	1.770		
13,900.0	7,338.0	7,423.0	7,370.2	117.1	14.2	-82.75	-6,385.3	233.4	275.4	145.4	129.98	2.119		
14,000.0	7,338.0	7,380.3	7,331.3	118.9	14.0	-73.62	-6,401.7	239.9	341.0	213.5	127.48	2.675		
14,100.0	7,338.0	7,343.4	7,297.7	120.6	13.9	-66.71	-6,415.9	245.3	416.7	292.8	123.87	3.364		
14,200.0	7,338.0	7,310.6	7,267.6	122.4	13.7	-61.26	-6,428.2	249.9	498.3	378.2	120.08	4.149		
14,300.0	7,338.0	7,281.8	7,241.0	124.1	13.6	-57.01	-6,438.6	253.8	583.7	467.0	116.65	5.004		
14,400.0	7,338.0	7,252.0	7,213.4	125.9	13.5	-53.10	-6,448.9	257.7	671.6	558.6	112.99	5.944		
14,500.0	7,338.0	7,221.9	7,185.3	127.6	13.4	-49.60	-6,459.1	261.7	761.1	651.8	109.34	6.961		
14,600.0	7,338.0	7,191.0	7,156.5	129.4	13.3	-46.45	-6,469.5	265.7	851.8	746.1	105.76	8.054		
14,700.0	7,338.0	7,123.6	7,093.9	131.1	13.0	-40.82	-6,492.8	274.4	943.0	845.4	97.51	9.670		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - DIER 14-8 (EXISTING) - ENCANA WELL - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,900.0	7,338.0	7,202.5	7,051.7	117.1	18.4	-23.58	-7,387.3	162.3	922.7	861.7	60.99	15.129		
14,000.0	7,338.0	7,242.3	7,087.8	118.9	18.6	-25.13	-7,403.2	156.7	831.5	766.9	64.67	12.858		
14,100.0	7,338.0	7,282.2	7,123.9	120.6	18.9	-27.04	-7,419.1	151.1	740.5	671.4	69.11	10.715		
14,200.0	7,338.0	7,322.0	7,160.0	122.4	19.1	-29.43	-7,434.9	145.4	649.7	575.1	74.56	8.713		
14,300.0	7,338.0	7,366.1	7,200.0	124.1	19.4	-32.89	-7,452.4	139.2	559.0	476.9	82.16	6.804		
14,400.0	7,338.0	7,411.4	7,241.3	125.9	19.7	-37.88	-7,469.8	133.1	468.4	375.8	92.58	5.059		
14,500.0	7,338.0	7,453.5	7,280.1	127.6	20.0	-44.62	-7,485.4	127.5	378.1	272.3	105.75	3.575		
14,600.0	7,338.0	7,493.0	7,316.6	129.4	20.2	-53.82	-7,499.5	122.5	289.0	167.3	121.69	2.375		
14,700.0	7,338.0	7,529.9	7,350.9	131.1	20.4	-66.19	-7,512.3	118.0	203.5	64.9	138.61	1.468	Level 3	
14,800.0	7,338.0	7,564.5	7,383.2	132.9	20.6	-81.81	-7,523.9	113.8	130.0	-21.3	151.28	0.859	Level 1	
14,887.7	7,338.0	7,593.1	7,410.1	134.4	20.8	-96.92	-7,533.2	110.5	100.1	-53.3	153.43	0.652	Level 1, CC, ES, SF	
14,900.0	7,338.0	7,597.0	7,413.7	134.6	20.8	-99.03	-7,534.5	110.1	100.8	-52.2	152.92	0.659	Level 1	
15,000.0	7,338.0	7,627.5	7,442.5	136.3	21.0	-115.01	-7,544.1	106.7	146.2	3.5	142.77	1.024	Level 2	
15,100.0	7,338.0	7,656.4	7,469.8	138.1	21.1	-127.86	-7,553.0	103.5	225.3	98.2	127.08	1.773		
15,117.3	7,338.0	7,661.2	7,474.4	138.4	21.2	-129.74	-7,554.4	103.0	240.2	115.9	124.28	1.933		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft		
Survey Program: 0-MWD													S5-T2N-R67W (Vogl-McCoy) - DIER 14-8 (EXISTING) - ENCANA WELL - Plan #2		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	Warning			
14,000.0	7,338.0	7,493.8	7,291.5	118.9	21.9	-31.78	-7,627.1	77.2	989.6	911.2	78.36	12.629				
14,100.0	7,338.0	7,507.8	7,305.4	120.6	21.9	-35.26	-7,628.7	76.6	890.4	804.6	85.77	10.381				
14,200.0	7,338.0	7,521.0	7,318.5	122.4	22.0	-39.27	-7,630.1	76.1	791.2	697.1	94.08	8.410				
14,300.0	7,338.0	7,533.4	7,330.9	124.1	22.0	-43.86	-7,631.3	75.7	692.1	588.8	103.25	6.703				
14,400.0	7,338.0	7,545.2	7,342.5	125.9	22.0	-49.12	-7,632.5	75.3	593.0	479.9	113.13	5.242				
14,500.0	7,338.0	7,556.2	7,353.5	127.6	22.1	-55.08	-7,633.6	74.9	494.2	370.8	123.40	4.005				
14,600.0	7,338.0	7,566.7	7,363.9	129.4	22.1	-61.73	-7,634.5	74.6	395.6	262.1	133.50	2.963				
14,700.0	7,338.0	7,576.6	7,373.8	131.1	22.1	-68.99	-7,635.4	74.2	297.7	155.0	142.70	2.086				
14,800.0	7,338.0	7,586.0	7,383.1	132.9	22.1	-76.68	-7,636.3	73.9	201.4	51.2	150.17	1.341	Level 3			
14,900.0	7,338.0	7,594.9	7,392.0	134.6	22.1	-84.55	-7,637.1	73.7	111.0	-44.3	155.24	0.715	Level 1			
14,992.2	7,338.0	7,602.8	7,399.9	136.2	22.2	-91.71	-7,637.7	73.4	62.3	-95.2	157.50	0.395	Level 1, CC, ES, SF			
15,000.0	7,338.0	7,603.4	7,400.5	136.3	22.2	-92.30	-7,637.8	73.4	62.8	-94.8	157.58	0.398	Level 1			
15,100.0	7,338.0	7,611.5	7,408.6	138.1	22.2	-99.67	-7,638.4	73.2	124.2	-33.1	157.34	0.789	Level 1			
15,117.3	7,338.0	7,612.9	7,409.9	138.4	22.2	-100.89	-7,638.5	73.1	139.4	-17.7	157.07	0.887	Level 1			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 735-MWD														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
14,000.0	7,338.0	7,482.0	7,321.5	118.9	21.5	-41.96	-7,607.5	80.0	967.5	871.4	96.10	10.067		
14,100.0	7,338.0	7,492.3	7,331.7	120.6	21.5	-45.99	-7,608.3	79.8	868.1	764.2	103.91	8.354		
14,200.0	7,338.0	7,502.1	7,341.6	122.4	21.5	-50.49	-7,609.1	79.6	768.7	656.5	112.15	6.854		
14,300.0	7,338.0	7,511.3	7,350.8	124.1	21.6	-55.31	-7,609.8	79.4	669.4	549.0	120.41	5.559		
14,400.0	7,338.0	7,519.6	7,359.0	125.9	21.6	-60.23	-7,610.4	79.3	570.3	442.1	128.20	4.448		
14,500.0	7,338.0	7,527.1	7,366.5	127.6	21.6	-65.12	-7,610.9	79.2	471.4	336.1	135.23	3.486		
14,600.0	7,338.0	7,534.3	7,373.7	129.4	21.6	-70.30	-7,611.4	79.1	372.9	231.2	141.72	2.631		
14,700.0	7,338.0	7,541.4	7,380.7	131.1	21.6	-75.70	-7,611.9	79.0	275.4	128.0	147.37	1.869		
14,800.0	7,338.0	7,548.2	7,387.6	132.9	21.6	-81.24	-7,612.4	78.9	180.3	28.4	151.92	1.187	Level 2	
14,900.0	7,338.0	7,555.0	7,394.3	134.6	21.6	-86.89	-7,612.8	78.8	95.5	-59.7	155.19	0.615	Level 1	
14,967.6	7,338.0	7,559.5	7,398.8	135.8	21.7	-90.66	-7,613.1	78.8	67.6	-89.0	156.60	0.432	Level 1, CC, ES, SF	
15,000.0	7,338.0	7,561.6	7,400.9	136.3	21.7	-92.44	-7,613.2	78.7	74.9	-82.1	157.05	0.477	Level 1	
15,100.0	7,338.0	7,567.9	7,407.2	138.1	21.7	-97.76	-7,613.6	78.7	148.4	-9.1	157.58	0.942	Level 1	
15,117.3	7,338.0	7,569.0	7,408.3	138.4	21.7	-98.66	-7,613.7	78.6	164.0	6.4	157.55	1.041	Level 2	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													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		
0.0	0.0	14.0	14.0	0.0	0.0	123.09	-314.0	481.8	575.1						
100.0	100.0	114.0	114.0	0.1	0.2	123.09	-314.0	481.8	575.1	574.8	0.30	1,893.684			
200.0	200.0	214.0	214.0	0.3	0.4	123.09	-314.0	481.8	575.1	574.4	0.65	881.019			
300.0	300.0	314.0	314.0	0.5	0.5	123.09	-314.0	481.8	575.1	574.1	1.00	574.044			
400.0	400.0	414.0	414.0	0.6	0.7	123.09	-314.0	481.8	575.1	573.7	1.35	425.712			
500.0	500.0	514.0	514.0	0.8	0.9	123.09	-314.0	481.8	575.1	573.4	1.70	338.297			
600.0	600.0	614.0	614.0	1.0	1.1	123.09	-314.0	481.8	575.1	573.0	2.05	280.666			
700.0	700.0	714.0	714.0	1.2	1.2	123.09	-314.0	481.8	575.1	572.7	2.40	239.812			
800.0	800.0	814.0	814.0	1.3	1.4	123.09	-314.0	481.8	575.1	572.3	2.75	209.340			
900.0	900.0	914.0	914.0	1.5	1.6	123.09	-314.0	481.8	575.1	572.0	3.10	185.739			
1,000.0	1,000.0	1,014.0	1,014.0	1.7	1.8	123.09	-314.0	481.8	575.1	571.6	3.45	166.921			
1,100.0	1,100.0	1,114.0	1,114.0	1.9	1.9	123.09	-314.0	481.8	575.1	571.3	3.79	151.565			
1,200.0	1,200.0	1,214.0	1,214.0	2.0	2.1	123.09	-314.0	481.8	575.1	570.9	4.14	138.796			
1,300.0	1,300.0	1,314.0	1,314.0	2.2	2.3	123.09	-314.0	481.8	575.1	570.6	4.49	128.011			
1,400.0	1,400.0	1,414.0	1,414.0	2.4	2.5	123.09	-314.0	481.8	575.1	570.2	4.84	118.782			
1,500.0	1,500.0	1,514.0	1,514.0	2.6	2.6	123.09	-314.0	481.8	575.1	569.9	5.19	110.794			
1,600.0	1,600.0	1,614.0	1,614.0	2.7	2.8	123.09	-314.0	481.8	575.1	569.5	5.54	103.813			
1,700.0	1,700.0	1,714.0	1,714.0	2.9	3.0	123.09	-314.0	481.8	575.1	569.2	5.89	97.659			
1,800.0	1,800.0	1,814.0	1,814.0	3.1	3.1	123.09	-314.0	481.8	575.1	568.9	6.24	92.194			
1,900.0	1,900.0	1,914.0	1,914.0	3.3	3.3	123.09	-314.0	481.8	575.1	568.5	6.59	87.308			
2,000.0	2,000.0	2,014.0	2,014.0	3.4	3.5	123.09	-314.0	481.8	575.1	568.2	6.94	82.914			
2,100.0	2,100.0	2,114.0	2,114.0	3.6	3.7	123.09	-314.0	481.8	575.1	567.8	7.29	78.941			
2,200.0	2,200.0	2,214.0	2,214.0	3.8	3.8	123.09	-314.0	481.8	575.1	567.5	7.63	75.332			
2,300.0	2,300.0	2,314.0	2,314.0	4.0	4.0	123.09	-314.0	481.8	575.1	567.1	7.98	72.038			
2,400.0	2,400.0	2,414.0	2,414.0	4.1	4.2	123.09	-314.0	481.8	575.1	566.8	8.33	69.020			
2,500.0	2,500.0	2,514.0	2,514.0	4.3	4.4	123.09	-314.0	481.8	575.1	566.4	8.68	66.245			
2,600.0	2,600.0	2,614.0	2,614.0	4.5	4.5	123.09	-314.0	481.8	575.1	566.1	9.03	63.684			
2,700.0	2,700.0	2,714.0	2,714.0	4.7	4.7	123.09	-314.0	481.8	575.1	565.7	9.38	61.314			
2,800.0	2,800.0	2,814.0	2,814.0	4.8	4.9	123.09	-314.0	481.8	575.1	565.4	9.73	59.114			
2,900.0	2,900.0	2,914.0	2,914.0	5.0	5.1	123.09	-314.0	481.8	575.1	565.0	10.08	57.066			
3,000.0	3,000.0	3,014.0	3,014.0	5.2	5.2	123.09	-314.0	481.8	575.1	564.7	10.43	55.156			
3,100.0	3,100.0	3,114.0	3,114.0	5.4	5.4	123.09	-314.0	481.8	575.1	564.3	10.78	53.369			
3,200.0	3,200.0	3,214.0	3,214.0	5.5	5.6	123.09	-314.0	481.8	575.1	564.0	11.12	51.695			
3,300.0	3,300.0	3,314.0	3,314.0	5.7	5.8	123.09	-314.0	481.8	575.1	563.6	11.47	50.122			
3,400.0	3,400.0	3,414.0	3,414.0	5.9	5.9	123.09	-314.0	481.8	575.1	563.3	11.82	48.642			
3,500.0	3,500.0	3,514.0	3,514.0	6.1	6.1	123.09	-314.0	481.8	575.1	562.9	12.17	47.247			
3,600.0	3,600.0	3,614.0	3,614.0	6.2	6.3	123.09	-314.0	481.8	575.1	562.6	12.52	45.930			
3,700.0	3,700.0	3,714.0	3,714.0	6.4	6.5	123.09	-314.0	481.8	575.1	562.2	12.87	44.684			
3,800.0	3,800.0	3,814.0	3,814.0	6.6	6.6	123.09	-314.0	481.8	575.1	561.9	13.22	43.504			
3,900.0	3,900.0	3,914.0	3,914.0	6.8	6.8	123.09	-314.0	481.8	575.1	561.5	13.57	42.385			
4,000.0	4,000.0	4,014.0	4,014.0	6.9	7.0	123.09	-314.0	481.8	575.1	561.2	13.92	41.322			
4,100.0	4,100.0	4,114.0	4,114.0	7.1	7.2	121.11	-314.0	481.8	575.5	561.3	14.27	40.343			
4,200.0	4,200.0	4,214.0	4,214.0	7.3	7.3	121.32	-314.0	481.8	576.9	562.3	14.61	39.475			
4,300.0	4,299.9	4,313.9	4,313.9	7.5	7.5	121.67	-314.0	481.8	579.2	564.2	14.96	38.709			
4,400.0	4,399.7	4,413.7	4,413.7	7.6	7.7	122.15	-314.0	481.8	582.4	567.1	15.31	38.040			
4,500.0	4,499.4	4,513.4	4,513.4	7.8	7.9	122.76	-314.0	481.8	586.6	571.0	15.66	37.461			
4,600.0	4,598.9	4,612.9	4,612.9	8.0	8.0	123.50	-314.0	481.8	591.9	575.9	16.01	36.966			
4,700.0	4,698.4	4,712.4	4,712.4	8.2	8.2	124.32	-314.0	481.8	597.6	581.2	16.37	36.507			
4,800.0	4,797.9	4,811.9	4,811.9	8.4	8.4	125.11	-314.0	481.8	603.4	586.7	16.73	36.072			
4,900.0	4,897.3	4,911.3	4,911.3	8.6	8.6	125.89	-314.0	481.8	609.3	592.3	17.09	35.658			
5,000.0	4,996.8	5,010.8	5,010.8	8.8	8.7	126.66	-314.0	481.8	615.4	597.9	17.45	35.265			
5,100.0	5,096.3	5,110.3	5,110.3	9.0	8.9	127.41	-314.0	481.8	621.6	603.7	17.81	34.892			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft			
Survey Program: 0-MWD													Offset Well Error:		0.0 ft		
Reference													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	5,195.8	5,209.8	5,209.8	9.2	9.1	128.15	-314.0	481.8	627.8	609.6	18.18	34.539					
5,300.0	5,295.3	5,309.3	5,309.3	9.4	9.2	128.87	-314.0	481.8	634.2	615.6	18.54	34.203					
5,400.0	5,394.7	5,408.7	5,408.7	9.6	9.4	129.58	-314.0	481.8	640.7	621.7	18.91	33.885					
5,500.0	5,494.2	5,508.2	5,508.2	9.8	9.6	130.27	-314.0	481.8	647.2	627.9	19.27	33.583					
5,600.0	5,593.7	5,607.7	5,607.7	10.0	9.8	130.95	-314.0	481.8	653.9	634.2	19.64	33.296					
5,700.0	5,693.2	5,707.2	5,707.2	10.2	9.9	131.62	-314.0	481.8	660.6	640.6	20.00	33.024					
5,800.0	5,792.7	5,806.7	5,806.7	10.4	10.1	132.27	-314.0	481.8	667.4	647.1	20.37	32.766					
5,900.0	5,892.1	5,906.1	5,906.1	10.7	10.3	132.91	-314.0	481.8	674.4	653.6	20.74	32.521					
6,000.0	5,991.6	6,005.6	6,005.6	10.9	10.5	133.53	-314.0	481.8	681.4	660.3	21.10	32.289					
6,100.0	6,091.1	6,105.1	6,105.1	11.1	10.6	134.15	-314.0	481.8	688.4	667.0	21.47	32.068					
6,200.0	6,190.6	6,204.6	6,204.6	11.3	10.8	134.75	-314.0	481.8	695.6	673.8	21.83	31.859					
6,300.0	6,290.1	6,304.1	6,304.1	11.5	11.0	135.34	-314.0	481.8	702.8	680.6	22.20	31.660					
6,400.0	6,389.5	6,403.5	6,403.5	11.8	11.2	135.91	-314.0	481.8	710.1	687.6	22.56	31.471					
6,500.0	6,489.0	6,503.0	6,503.0	12.0	11.3	136.48	-314.0	481.8	717.5	694.6	22.93	31.292					
6,600.0	6,588.5	6,602.5	6,602.5	12.2	11.5	137.03	-314.0	481.8	724.9	701.7	23.29	31.121					
6,700.0	6,688.0	6,702.0	6,702.0	12.4	11.7	137.57	-314.0	481.8	732.5	708.8	23.66	30.959					
6,800.0	6,787.8	6,801.8	6,801.8	12.6	11.9	-34.71	-314.0	481.8	735.6	711.6	24.01	30.632					
6,900.0	6,886.8	6,900.8	6,900.8	12.7	12.0	-40.28	-314.0	481.8	725.7	701.6	24.10	30.111					
7,000.0	6,982.2	6,996.2	6,996.2	12.7	12.2	-43.85	-314.0	481.8	703.3	679.3	23.97	29.337					
7,100.0	7,071.0	7,085.0	7,085.0	12.6	12.3	-49.21	-314.0	481.8	669.8	646.0	23.81	28.129					
7,200.0	7,150.4	7,164.4	7,164.4	12.6	12.5	-56.69	-314.0	481.8	628.1	604.2	23.90	26.284					
7,300.0	7,218.2	7,232.2	7,232.2	12.7	12.6	-65.93	-314.0	481.8	582.0	557.6	24.41	23.846					
7,400.0	7,272.2	7,286.2	7,286.2	12.9	12.7	-75.65	-314.0	481.8	536.8	511.6	25.22	21.286					
7,500.0	7,310.8	7,324.8	7,324.8	13.4	12.8	-83.86	-314.0	481.8	499.0	473.0	26.04	19.161					
7,600.0	7,332.8	7,346.8	7,346.8	14.0	12.8	-88.88	-314.0	481.8	475.6	448.7	26.81	17.736					
7,668.6	7,338.9	7,352.9	7,352.9	14.6	12.8	-90.00	-314.0	481.8	470.6	443.2	27.40	17.178	CC, ES				
7,700.0	7,338.0	7,352.0	7,352.0	14.8	12.8	-90.00	-314.0	481.8	471.7	444.0	27.66	17.055	SF				
7,800.0	7,338.0	7,352.0	7,352.0	15.8	12.8	-90.00	-314.0	481.8	488.7	460.0	28.64	17.063					
7,900.0	7,338.0	7,352.0	7,352.0	16.9	12.8	-90.00	-314.0	481.8	524.5	494.7	29.75	17.632					
8,000.0	7,338.0	7,352.0	7,352.0	18.1	12.8	-90.00	-314.0	481.8	575.7	544.7	30.96	18.597					
8,100.0	7,338.0	7,352.0	7,352.0	19.4	12.8	-90.00	-314.0	481.8	638.5	606.3	32.25	19.800					
8,200.0	7,338.0	7,352.0	7,352.0	20.8	12.8	-90.00	-314.0	481.8	709.9	676.3	33.61	21.123					
8,300.0	7,338.0	7,352.0	7,352.0	22.2	12.8	-90.00	-314.0	481.8	787.6	752.6	35.02	22.487					
8,400.0	7,338.0	7,352.0	7,352.0	23.7	12.8	-90.00	-314.0	481.8	869.8	833.4	36.49	23.840					
8,500.0	7,338.0	7,352.0	7,352.0	25.2	12.8	-90.00	-314.0	481.8	955.5	917.5	37.98	25.154					

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 0-6-5 (EXISTING) - ENCANA 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 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	93.0	93.0	0.0	0.1	153.10	-688.5	349.3	772.0					
100.0	100.0	193.0	193.0	0.1	0.3	153.10	-688.5	349.3	772.0	771.6	0.44	1,748.403		
200.0	200.0	293.0	293.0	0.3	0.5	153.10	-688.5	349.3	772.0	771.2	0.79	976.481		
300.0	300.0	393.0	393.0	0.5	0.7	153.10	-688.5	349.3	772.0	770.9	1.14	677.406		
400.0	400.0	493.0	493.0	0.6	0.8	153.10	-688.5	349.3	772.0	770.6	1.49	518.577		
500.0	500.0	593.0	593.0	0.8	1.0	153.10	-688.5	349.3	772.0	770.2	1.84	420.082		
600.0	600.0	693.0	693.0	1.0	1.2	153.10	-688.5	349.3	772.0	769.9	2.19	353.030		
700.0	700.0	793.0	793.0	1.2	1.4	153.10	-688.5	349.3	772.0	769.5	2.54	304.436		
800.0	800.0	893.0	893.0	1.3	1.5	153.10	-688.5	349.3	772.0	769.2	2.89	267.602		
900.0	900.0	993.0	993.0	1.5	1.7	153.10	-688.5	349.3	772.0	768.8	3.23	238.719		
1,000.0	1,000.0	1,093.0	1,093.0	1.7	1.9	153.10	-688.5	349.3	772.0	768.5	3.58	215.463		
1,100.0	1,100.0	1,193.0	1,193.0	1.9	2.1	153.10	-688.5	349.3	772.0	768.1	3.93	196.337		
1,200.0	1,200.0	1,293.0	1,293.0	2.0	2.2	153.10	-688.5	349.3	772.0	767.8	4.28	180.329		
1,300.0	1,300.0	1,393.0	1,393.0	2.2	2.4	153.10	-688.5	349.3	772.0	767.4	4.63	166.734		
1,400.0	1,400.0	1,493.0	1,493.0	2.4	2.6	153.10	-688.5	349.3	772.0	767.1	4.98	155.046		
1,500.0	1,500.0	1,593.0	1,593.0	2.6	2.8	153.10	-688.5	349.3	772.0	766.7	5.33	144.889		
1,600.0	1,600.0	1,693.0	1,693.0	2.7	2.9	153.10	-688.5	349.3	772.0	766.4	5.68	135.981		
1,700.0	1,700.0	1,793.0	1,793.0	2.9	3.1	153.10	-688.5	349.3	772.0	766.0	6.03	128.105		
1,800.0	1,800.0	1,893.0	1,893.0	3.1	3.3	153.10	-688.5	349.3	772.0	765.7	6.38	121.091		
1,900.0	1,900.0	1,993.0	1,993.0	3.3	3.5	153.10	-688.5	349.3	772.0	765.3	6.72	114.806		
2,000.0	2,000.0	2,093.0	2,093.0	3.4	3.6	153.10	-688.5	349.3	772.0	765.0	7.07	109.140		
2,100.0	2,100.0	2,193.0	2,193.0	3.6	3.8	153.10	-688.5	349.3	772.0	764.6	7.42	104.008		
2,200.0	2,200.0	2,293.0	2,293.0	3.8	4.0	153.10	-688.5	349.3	772.0	764.3	7.77	99.337		
2,300.0	2,300.0	2,393.0	2,393.0	4.0	4.2	153.10	-688.5	349.3	772.0	763.9	8.12	95.067		
2,400.0	2,400.0	2,493.0	2,493.0	4.1	4.3	153.10	-688.5	349.3	772.0	763.6	8.47	91.149		
2,500.0	2,500.0	2,593.0	2,593.0	4.3	4.5	153.10	-688.5	349.3	772.0	763.2	8.82	87.541		
2,600.0	2,600.0	2,693.0	2,693.0	4.5	4.7	153.10	-688.5	349.3	772.0	762.9	9.17	84.208		
2,700.0	2,700.0	2,793.0	2,793.0	4.7	4.9	153.10	-688.5	349.3	772.0	762.5	9.52	81.120		
2,800.0	2,800.0	2,893.0	2,893.0	4.8	5.0	153.10	-688.5	349.3	772.0	762.2	9.87	78.250		
2,900.0	2,900.0	2,993.0	2,993.0	5.0	5.2	153.10	-688.5	349.3	772.0	761.8	10.22	75.576		
3,000.0	3,000.0	3,093.0	3,093.0	5.2	5.4	153.10	-688.5	349.3	772.0	761.5	10.56	73.079		
3,100.0	3,100.0	3,193.0	3,193.0	5.4	5.6	153.10	-688.5	349.3	772.0	761.1	10.91	70.741		
3,200.0	3,200.0	3,293.0	3,293.0	5.5	5.7	153.10	-688.5	349.3	772.0	760.8	11.26	68.549		
3,300.0	3,300.0	3,393.0	3,393.0	5.7	5.9	153.10	-688.5	349.3	772.0	760.4	11.61	66.488		
3,400.0	3,400.0	3,493.0	3,493.0	5.9	6.1	153.10	-688.5	349.3	772.0	760.1	11.96	64.548		
3,500.0	3,500.0	3,593.0	3,593.0	6.1	6.3	153.10	-688.5	349.3	772.0	759.7	12.31	62.717		
3,600.0	3,600.0	3,693.0	3,693.0	6.2	6.4	153.10	-688.5	349.3	772.0	759.4	12.66	60.988		
3,700.0	3,700.0	3,793.0	3,793.0	6.4	6.6	153.10	-688.5	349.3	772.0	759.0	13.01	59.351		
3,800.0	3,800.0	3,893.0	3,893.0	6.6	6.8	153.10	-688.5	349.3	772.0	758.7	13.36	57.800		
3,900.0	3,900.0	3,993.0	3,993.0	6.8	7.0	153.10	-688.5	349.3	772.0	758.3	13.71	56.328		
4,000.0	4,000.0	4,093.0	4,093.0	6.9	7.1	153.10	-688.5	349.3	772.0	758.0	14.06	54.929		
4,100.0	4,100.0	4,193.0	4,193.0	7.1	7.3	151.07	-688.5	349.3	772.8	758.4	14.40	53.655		
4,200.0	4,200.0	4,293.0	4,293.0	7.3	7.5	151.15	-688.5	349.3	775.1	760.3	14.75	52.553		
4,300.0	4,299.9	4,392.9	4,392.9	7.5	7.6	151.29	-688.5	349.3	778.9	763.8	15.09	51.611		
4,400.0	4,399.7	4,492.7	4,492.7	7.6	7.8	151.48	-688.5	349.3	784.3	768.8	15.43	50.817		
4,500.0	4,499.4	4,592.4	4,592.4	7.8	8.0	151.72	-688.5	349.3	791.2	775.4	15.77	50.162		
4,600.0	4,598.9	4,691.9	4,691.9	8.0	8.2	152.01	-688.5	349.3	799.6	783.5	16.11	49.630		
4,700.0	4,698.4	4,791.4	4,791.4	8.2	8.3	152.35	-688.5	349.3	808.7	792.2	16.46	49.120		
4,800.0	4,797.9	4,890.9	4,890.9	8.4	8.5	152.68	-688.5	349.3	817.7	800.9	16.81	48.631		
4,900.0	4,897.3	4,990.3	4,990.3	8.6	8.7	153.00	-688.5	349.3	826.8	809.6	17.17	48.163		
5,000.0	4,996.8	5,089.8	5,089.8	8.8	8.9	153.32	-688.5	349.3	835.9	818.4	17.52	47.714		
5,100.0	5,096.3	5,189.3	5,189.3	9.0	9.0	153.63	-688.5	349.3	845.0	827.1	17.87	47.283		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft		
Survey Program: 0-MWD													S5-T2N-R67W (Vogl-McCoy) - MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURVEYS		Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)						
5,200.0	5,195.8	5,288.8	5,288.8	9.2	9.2	153.93	-688.5	349.3	854.2	835.9	18.22	46.870				
5,300.0	5,295.3	5,388.3	5,388.3	9.4	9.4	154.23	-688.5	349.3	863.3	844.8	18.58	46.472				
5,400.0	5,394.7	5,487.7	5,487.7	9.6	9.6	154.52	-688.5	349.3	872.5	853.6	18.93	46.091				
5,500.0	5,494.2	5,587.2	5,587.2	9.8	9.7	154.80	-688.5	349.3	881.8	862.5	19.28	45.724				
5,600.0	5,593.7	5,686.7	5,686.7	10.0	9.9	155.08	-688.5	349.3	891.0	871.4	19.64	45.372				
5,700.0	5,693.2	5,786.2	5,786.2	10.2	10.1	155.36	-688.5	349.3	900.3	880.3	19.99	45.033				
5,800.0	5,792.7	5,885.7	5,885.7	10.4	10.3	155.62	-688.5	349.3	909.6	889.2	20.35	44.706				
5,900.0	5,892.1	5,985.1	5,985.1	10.7	10.4	155.88	-688.5	349.3	918.9	898.2	20.70	44.391				
6,000.0	5,991.6	6,084.6	6,084.6	10.9	10.6	156.14	-688.5	349.3	928.2	907.1	21.05	44.088				
6,100.0	6,091.1	6,184.1	6,184.1	11.1	10.8	156.39	-688.5	349.3	937.5	916.1	21.41	43.796				
6,200.0	6,190.6	6,283.6	6,283.6	11.3	10.9	156.64	-688.5	349.3	946.9	925.1	21.76	43.514				
6,300.0	6,290.1	6,383.1	6,383.1	11.5	11.1	156.88	-688.5	349.3	956.2	934.1	22.11	43.242				
6,400.0	6,389.5	6,482.5	6,482.5	11.8	11.3	157.12	-688.5	349.3	965.6	943.2	22.47	42.980				
6,500.0	6,489.0	6,582.0	6,582.0	12.0	11.5	157.35	-688.5	349.3	975.0	952.2	22.82	42.726				
6,600.0	6,588.5	6,681.5	6,681.5	12.2	11.6	157.58	-688.5	349.3	984.5	961.3	23.17	42.481				
6,700.0	6,688.0	6,781.0	6,781.0	12.4	11.8	157.80	-688.5	349.3	993.9	970.4	23.53	42.244				
6,800.0	6,787.8	6,880.8	6,880.8	12.6	12.0	-14.65	-688.5	349.3	997.9	974.1	23.90	41.760				
6,900.0	6,886.8	6,979.8	6,979.8	12.7	12.2	-19.61	-688.5	349.3	985.9	962.1	23.88	41.285				
7,000.0	6,982.2	7,075.2	7,075.2	12.7	12.3	-21.72	-688.5	349.3	958.0	934.6	23.47	40.817				
7,100.0	7,071.0	7,164.0	7,164.0	12.6	12.5	-24.88	-688.5	349.3	915.3	892.5	22.79	40.167				
7,200.0	7,150.4	7,243.4	7,243.4	12.6	12.6	-29.83	-688.5	349.3	859.3	837.2	22.08	38.909				
7,300.0	7,218.2	7,311.2	7,311.2	12.7	12.7	-37.48	-688.5	349.3	792.3	770.4	21.84	36.271				
7,400.0	7,272.2	7,365.2	7,365.2	12.9	12.8	-48.87	-688.5	349.3	717.1	694.4	22.70	31.598				
7,500.0	7,310.8	7,403.8	7,403.8	13.4	12.9	-64.01	-688.5	349.3	637.3	612.6	24.71	25.794				
7,600.0	7,332.8	7,425.8	7,425.8	14.0	12.9	-80.01	-688.5	349.3	557.1	530.4	26.69	20.875				
7,700.0	7,338.0	7,431.0	7,431.0	14.8	13.0	-90.00	-688.5	349.3	481.6	453.8	27.79	17.328				
7,800.0	7,338.0	7,431.0	7,431.0	15.8	13.0	-90.00	-688.5	349.3	416.4	387.6	28.78	14.470				
7,900.0	7,338.0	7,431.0	7,431.0	16.9	13.0	-90.00	-688.5	349.3	367.1	337.2	29.88	12.285				
8,000.0	7,338.0	7,431.0	7,431.0	18.1	13.0	-90.00	-688.5	349.3	340.9	309.8	31.09	10.963				
8,042.9	7,338.0	7,431.0	7,431.0	18.7	13.0	-90.00	-688.5	349.3	338.2	306.5	31.65	10.685 CC, ES				
8,100.0	7,338.0	7,431.0	7,431.0	19.4	13.0	-90.00	-688.5	349.3	342.9	310.5	32.39	10.589 SF				
8,200.0	7,338.0	7,431.0	7,431.0	20.8	13.0	-90.00	-688.5	349.3	372.8	339.1	33.75	11.048				
8,300.0	7,338.0	7,431.0	7,431.0	22.2	13.0	-90.00	-688.5	349.3	424.8	389.6	35.16	12.080				
8,400.0	7,338.0	7,431.0	7,431.0	23.7	13.0	-90.00	-688.5	349.3	491.8	455.1	36.62	13.428				
8,500.0	7,338.0	7,431.0	7,431.0	25.2	13.0	-90.00	-688.5	349.3	568.5	530.4	38.12	14.914				
8,600.0	7,338.0	7,431.0	7,431.0	26.7	13.0	-90.00	-688.5	349.3	651.7	612.0	39.65	16.434				
8,700.0	7,338.0	7,431.0	7,431.0	28.3	13.0	-90.00	-688.5	349.3	739.0	697.8	41.21	17.933				
8,800.0	7,338.0	7,431.0	7,431.0	29.8	13.0	-90.00	-688.5	349.3	829.1	786.4	42.79	19.379				
8,900.0	7,338.0	7,431.0	7,431.0	31.4	13.0	-90.00	-688.5	349.3	921.4	877.0	44.38	20.759				

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 7908-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	153.20	-703.8	355.5	788.5					
100.0	100.0	92.0	92.0	0.1	0.2	153.20	-703.8	355.5	788.5	788.2	0.28	2,790.634		
200.0	200.0	192.0	192.0	0.3	0.3	153.20	-703.8	355.5	788.5	787.8	0.63	1,248.789		
300.0	300.0	292.0	292.0	0.5	0.5	153.20	-703.8	355.5	788.5	787.5	0.98	804.369		
400.0	400.0	392.0	392.0	0.6	0.7	153.20	-703.8	355.5	788.5	787.1	1.33	593.245		
500.0	500.0	492.0	492.0	0.8	0.9	153.20	-703.8	355.5	788.5	786.8	1.68	469.907		
600.0	600.0	592.0	592.0	1.0	1.0	153.20	-703.8	355.5	788.5	786.4	2.03	389.027		
700.0	700.0	692.0	692.0	1.2	1.2	153.20	-703.8	355.5	788.5	786.1	2.38	331.901		
800.0	800.0	792.0	792.0	1.3	1.4	153.20	-703.8	355.5	788.5	785.7	2.72	289.403		
900.0	900.0	892.0	892.0	1.5	1.6	153.20	-703.8	355.5	788.5	785.4	3.07	256.554		
1,000.0	1,000.0	992.0	992.0	1.7	1.7	153.20	-703.8	355.5	788.5	785.0	3.42	230.401		
1,100.0	1,100.0	1,092.0	1,092.0	1.9	1.9	153.20	-703.8	355.5	788.5	784.7	3.77	209.087		
1,200.0	1,200.0	1,192.0	1,192.0	2.0	2.1	153.20	-703.8	355.5	788.5	784.3	4.12	191.383		
1,300.0	1,300.0	1,292.0	1,292.0	2.2	2.3	153.20	-703.8	355.5	788.5	784.0	4.47	176.443		
1,400.0	1,400.0	1,392.0	1,392.0	2.4	2.4	153.20	-703.8	355.5	788.5	783.6	4.82	163.666		
1,500.0	1,500.0	1,492.0	1,492.0	2.6	2.6	153.20	-703.8	355.5	788.5	783.3	5.17	152.615		
1,600.0	1,600.0	1,592.0	1,592.0	2.7	2.8	153.20	-703.8	355.5	788.5	783.0	5.52	142.962		
1,700.0	1,700.0	1,692.0	1,692.0	2.9	2.9	153.20	-703.8	355.5	788.5	782.6	5.86	134.457		
1,800.0	1,800.0	1,792.0	1,792.0	3.1	3.1	153.20	-703.8	355.5	788.5	782.3	6.21	126.908		
1,900.0	1,900.0	1,892.0	1,892.0	3.3	3.3	153.20	-703.8	355.5	788.5	781.9	6.56	120.161		
2,000.0	2,000.0	1,992.0	1,992.0	3.4	3.5	153.20	-703.8	355.5	788.5	781.6	6.91	114.095		
2,100.0	2,100.0	2,092.0	2,092.0	3.6	3.6	153.20	-703.8	355.5	788.5	781.2	7.26	108.613		
2,200.0	2,200.0	2,192.0	2,192.0	3.8	3.8	153.20	-703.8	355.5	788.5	780.9	7.61	103.633		
2,300.0	2,300.0	2,292.0	2,292.0	4.0	4.0	153.20	-703.8	355.5	788.5	780.5	7.96	99.089		
2,400.0	2,400.0	2,392.0	2,392.0	4.1	4.2	153.20	-703.8	355.5	788.5	780.2	8.31	94.928		
2,500.0	2,500.0	2,492.0	2,492.0	4.3	4.3	153.20	-703.8	355.5	788.5	779.8	8.65	91.101		
2,600.0	2,600.0	2,592.0	2,592.0	4.5	4.5	153.20	-703.8	355.5	788.5	779.5	9.00	87.572		
2,700.0	2,700.0	2,692.0	2,692.0	4.7	4.7	153.20	-703.8	355.5	788.5	779.1	9.35	84.305		
2,800.0	2,800.0	2,792.0	2,792.0	4.8	4.9	153.20	-703.8	355.5	788.5	778.8	9.70	81.274		
2,900.0	2,900.0	2,892.0	2,892.0	5.0	5.0	153.20	-703.8	355.5	788.5	778.4	10.05	78.453		
3,000.0	3,000.0	2,992.0	2,992.0	5.2	5.2	153.20	-703.8	355.5	788.5	778.1	10.40	75.821		
3,100.0	3,100.0	3,092.0	3,092.0	5.4	5.4	153.20	-703.8	355.5	788.5	777.7	10.75	73.360		
3,200.0	3,200.0	3,192.0	3,192.0	5.5	5.6	153.20	-703.8	355.5	788.5	777.4	11.10	71.054		
3,300.0	3,300.0	3,292.0	3,292.0	5.7	5.7	153.20	-703.8	355.5	788.5	777.0	11.45	68.888		
3,400.0	3,400.0	3,392.0	3,392.0	5.9	5.9	153.20	-703.8	355.5	788.5	776.7	11.79	66.851		
3,500.0	3,500.0	3,492.0	3,492.0	6.1	6.1	153.20	-703.8	355.5	788.5	776.3	12.14	64.930		
3,600.0	3,600.0	3,592.0	3,592.0	6.2	6.3	153.20	-703.8	355.5	788.5	776.0	12.49	63.117		
3,700.0	3,700.0	3,692.0	3,692.0	6.4	6.4	153.20	-703.8	355.5	788.5	775.6	12.84	61.402		
3,800.0	3,800.0	3,792.0	3,792.0	6.6	6.6	153.20	-703.8	355.5	788.5	775.3	13.19	59.779		
3,900.0	3,900.0	3,892.0	3,892.0	6.8	6.8	153.20	-703.8	355.5	788.5	774.9	13.54	58.238		
4,000.0	4,000.0	3,992.0	3,992.0	6.9	7.0	153.20	-703.8	355.5	788.5	774.6	13.89	56.775		
4,100.0	4,100.0	4,092.0	4,092.0	7.1	7.1	151.17	-703.8	355.5	789.2	775.0	14.24	55.442		
4,200.0	4,200.0	4,192.0	4,192.0	7.3	7.3	151.25	-703.8	355.5	791.5	776.9	14.58	54.286		
4,300.0	4,299.9	4,291.9	4,291.9	7.5	7.5	151.39	-703.8	355.5	795.4	780.4	14.92	53.293		
4,400.0	4,399.7	4,391.7	4,391.7	7.6	7.7	151.57	-703.8	355.5	800.7	785.5	15.27	52.454		
4,500.0	4,499.4	4,491.4	4,491.4	7.8	7.8	151.80	-703.8	355.5	807.6	792.0	15.60	51.757		
4,600.0	4,598.9	4,590.9	4,590.9	8.0	8.0	152.09	-703.8	355.5	816.1	800.1	15.94	51.187		
4,700.0	4,698.4	4,690.4	4,690.4	8.2	8.2	152.42	-703.8	355.5	825.1	808.8	16.29	50.639		
4,800.0	4,797.9	4,789.9	4,789.9	8.4	8.3	152.74	-703.8	355.5	834.2	817.5	16.65	50.114		
4,900.0	4,897.3	4,889.3	4,889.3	8.6	8.5	153.06	-703.8	355.5	843.3	826.3	17.00	49.611		
5,000.0	4,996.8	4,988.8	4,988.8	8.8	8.7	153.37	-703.8	355.5	852.4	835.0	17.35	49.129		
5,100.0	5,096.3	5,088.3	5,088.3	9.0	8.9	153.67	-703.8	355.5	861.5	843.8	17.70	48.667		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 7908-MWD														
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	5,195.8	5,187.8	5,187.8	9.2	9.0	153.97	-703.8	355.5	870.6	852.6	18.05	48.223		
5,300.0	5,295.3	5,287.3	5,287.3	9.4	9.2	154.26	-703.8	355.5	879.8	861.4	18.41	47.797		
5,400.0	5,394.7	5,386.7	5,386.7	9.6	9.4	154.55	-703.8	355.5	889.0	870.3	18.76	47.388		
5,500.0	5,494.2	5,486.2	5,486.2	9.8	9.6	154.82	-703.8	355.5	898.3	879.1	19.11	46.995		
5,600.0	5,593.7	5,585.7	5,585.7	10.0	9.7	155.10	-703.8	355.5	907.5	888.0	19.47	46.617		
5,700.0	5,693.2	5,685.2	5,685.2	10.2	9.9	155.37	-703.8	355.5	916.8	896.9	19.82	46.253		
5,800.0	5,792.7	5,784.7	5,784.7	10.4	10.1	155.63	-703.8	355.5	926.0	905.9	20.17	45.902		
5,900.0	5,892.1	5,884.1	5,884.1	10.7	10.3	155.89	-703.8	355.5	935.3	914.8	20.53	45.565		
6,000.0	5,991.6	5,983.6	5,983.6	10.9	10.4	156.14	-703.8	355.5	944.7	923.8	20.88	45.240		
6,100.0	6,091.1	6,083.1	6,083.1	11.1	10.6	156.39	-703.8	355.5	954.0	932.8	21.23	44.927		
6,200.0	6,190.6	6,182.6	6,182.6	11.3	10.8	156.63	-703.8	355.5	963.4	941.8	21.59	44.624		
6,300.0	6,290.1	6,282.1	6,282.1	11.5	11.0	156.87	-703.8	355.5	972.7	950.8	21.94	44.333		
6,400.0	6,389.5	6,381.5	6,381.5	11.8	11.1	157.10	-703.8	355.5	982.1	959.8	22.29	44.051		
6,500.0	6,489.0	6,481.0	6,481.0	12.0	11.3	157.33	-703.8	355.5	991.5	968.9	22.65	43.779		
7,000.0	6,982.2	6,974.2	6,974.2	12.7	12.2	-21.74	-703.8	355.5	974.5	951.2	23.31	41.815		
7,100.0	7,071.0	7,063.0	7,063.0	12.6	12.3	-24.89	-703.8	355.5	931.8	909.1	22.63	41.179		
7,200.0	7,150.4	7,142.4	7,142.4	12.6	12.5	-29.80	-703.8	355.5	875.8	853.8	21.93	39.936		
7,300.0	7,218.2	7,210.2	7,210.2	12.7	12.6	-37.40	-703.8	355.5	808.7	787.0	21.68	37.296		
7,400.0	7,272.2	7,264.2	7,264.2	12.9	12.7	-48.70	-703.8	355.5	733.5	711.0	22.52	32.572		
7,500.0	7,310.8	7,302.8	7,302.8	13.4	12.7	-63.79	-703.8	355.5	653.5	629.0	24.52	26.656		
7,600.0	7,332.8	7,324.8	7,324.8	14.0	12.8	-79.85	-703.8	355.5	573.0	546.5	26.51	21.618		
7,700.0	7,338.0	7,330.0	7,330.0	14.8	12.8	-90.00	-703.8	355.5	496.9	469.3	27.62	17.990		
7,800.0	7,338.0	7,330.0	7,330.0	15.8	12.8	-90.00	-703.8	355.5	430.4	401.8	28.60	15.048		
7,900.0	7,338.0	7,330.0	7,330.0	16.9	12.8	-90.00	-703.8	355.5	378.9	349.2	29.71	12.755		
8,000.0	7,338.0	7,330.0	7,330.0	18.1	12.8	-90.00	-703.8	355.5	349.2	318.3	30.92	11.294		
8,058.3	7,338.0	7,330.0	7,330.0	18.9	12.8	-90.00	-703.8	355.5	344.3	312.6	31.67	10.871	CC, ES	
8,100.0	7,338.0	7,330.0	7,330.0	19.4	12.8	-90.00	-703.8	355.5	346.8	314.6	32.21	10.767	SF	
8,200.0	7,338.0	7,330.0	7,330.0	20.8	12.8	-90.00	-703.8	355.5	372.3	338.8	33.57	11.091		
8,300.0	7,338.0	7,330.0	7,330.0	22.2	12.8	-90.00	-703.8	355.5	420.7	385.7	34.99	12.024		
8,400.0	7,338.0	7,330.0	7,330.0	23.7	12.8	-90.00	-703.8	355.5	485.1	448.7	36.45	13.310		
8,500.0	7,338.0	7,330.0	7,330.0	25.2	12.8	-90.00	-703.8	355.5	560.1	522.1	37.95	14.759		
8,600.0	7,338.0	7,330.0	7,330.0	26.7	12.8	-90.00	-703.8	355.5	641.9	602.4	39.48	16.260		
8,700.0	7,338.0	7,330.0	7,330.0	28.3	12.8	-90.00	-703.8	355.5	728.3	687.2	41.03	17.749		
8,800.0	7,338.0	7,330.0	7,330.0	29.8	12.8	-90.00	-703.8	355.5	817.8	775.2	42.61	19.192		
8,900.0	7,338.0	7,330.0	7,330.0	31.4	12.8	-90.00	-703.8	355.5	909.4	865.2	44.21	20.572		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 7950-MWD														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,800.0	7,338.0	7,342.0	7,342.0	29.8	12.8	-90.00	-2,361.3	123.8	922.6	880.0	42.63	21.642		
8,900.0	7,338.0	7,342.0	7,342.0	31.4	12.8	-90.00	-2,361.3	123.8	823.5	779.2	44.23	18.619		
9,000.0	7,338.0	7,342.0	7,342.0	33.0	12.8	-90.00	-2,361.3	123.8	724.5	678.7	45.84	15.806		
9,100.0	7,338.0	7,342.0	7,342.0	34.7	12.8	-90.00	-2,361.3	123.8	625.9	578.5	47.47	13.187		
9,200.0	7,338.0	7,342.0	7,342.0	36.3	12.8	-90.00	-2,361.3	123.8	527.9	478.8	49.11	10.750		
9,300.0	7,338.0	7,342.0	7,342.0	38.0	12.8	-90.00	-2,361.3	123.8	430.7	380.0	50.75	8.486		
9,400.0	7,338.0	7,342.0	7,342.0	39.6	12.8	-90.00	-2,361.3	123.8	335.2	282.8	52.41	6.396		
9,500.0	7,338.0	7,342.0	7,342.0	41.3	12.8	-90.00	-2,361.3	123.8	243.4	189.3	54.08	4.500		
9,600.0	7,338.0	7,342.0	7,342.0	43.0	12.8	-90.00	-2,361.3	123.8	161.5	105.7	55.75	2.897		
9,700.0	7,338.0	7,342.0	7,342.0	44.6	12.8	-90.00	-2,361.3	123.8	113.7	56.3	57.43	1.980		
9,715.7	7,338.0	7,342.0	7,342.0	44.9	12.8	-90.00	-2,361.3	123.8	112.6	54.9	57.69	1.952	CC, ES, SF	
9,800.0	7,338.0	7,342.0	7,342.0	46.3	12.8	-90.00	-2,361.3	123.8	140.7	81.6	59.11	2.380		
9,900.0	7,338.0	7,342.0	7,342.0	48.0	12.8	-90.00	-2,361.3	123.8	216.0	155.2	60.80	3.552		
10,000.0	7,338.0	7,342.0	7,342.0	49.7	12.8	-90.00	-2,361.3	123.8	305.8	243.3	62.50	4.893		
10,100.0	7,338.0	7,342.0	7,342.0	51.4	12.8	-90.00	-2,361.3	123.8	400.4	336.2	64.19	6.238		
10,200.0	7,338.0	7,342.0	7,342.0	53.1	12.8	-90.00	-2,361.3	123.8	497.2	431.3	65.90	7.545		
10,300.0	7,338.0	7,342.0	7,342.0	54.8	12.8	-90.00	-2,361.3	123.8	595.0	527.4	67.60	8.802		
10,400.0	7,338.0	7,342.0	7,342.0	56.5	12.8	-90.00	-2,361.3	123.8	693.5	624.2	69.31	10.006		
10,500.0	7,338.0	7,342.0	7,342.0	58.2	12.8	-90.00	-2,361.3	123.8	792.3	721.3	71.02	11.156		
10,600.0	7,338.0	7,342.0	7,342.0	59.9	12.8	-90.00	-2,361.3	123.8	891.4	818.7	72.73	12.256		
10,700.0	7,338.0	7,342.0	7,342.0	61.6	12.8	-90.00	-2,361.3	123.8	990.7	916.2	74.45	13.307		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 - 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	148.74	-663.0	402.4	775.6					
100.0	100.0	99.0	99.0	0.1	0.1	148.74	-663.0	402.4	775.6	775.3	0.27	2,882.515		
200.0	200.0	199.0	199.0	0.3	0.3	148.74	-663.0	402.4	775.6	774.9	0.62	1,255.230		
300.0	300.0	299.0	299.0	0.5	0.5	148.74	-663.0	402.4	775.6	774.6	0.97	802.087		
400.0	400.0	399.0	399.0	0.6	0.7	148.74	-663.0	402.4	775.6	774.2	1.32	589.334		
500.0	500.0	499.0	499.0	0.8	0.8	148.74	-663.0	402.4	775.6	773.9	1.67	465.785		
600.0	600.0	599.0	599.0	1.0	1.0	148.74	-663.0	402.4	775.6	773.5	2.01	385.061		
700.0	700.0	699.0	699.0	1.2	1.2	148.74	-663.0	402.4	775.6	773.2	2.36	328.184		
800.0	800.0	799.0	799.0	1.3	1.4	148.74	-663.0	402.4	775.6	772.8	2.71	285.947		
900.0	900.0	899.0	899.0	1.5	1.5	148.74	-663.0	402.4	775.6	772.5	3.06	253.342		
1,000.0	1,000.0	999.0	999.0	1.7	1.7	148.74	-663.0	402.4	775.6	772.2	3.41	227.411		
1,100.0	1,100.0	1,099.0	1,099.0	1.9	1.9	148.74	-663.0	402.4	775.6	771.8	3.76	206.296		
1,200.0	1,200.0	1,199.0	1,199.0	2.0	2.1	148.74	-663.0	402.4	775.6	771.5	4.11	188.769		
1,201.0	1,201.0	1,200.0	1,200.0	2.0	2.1	148.74	-663.0	402.4	775.6	771.4	4.11	188.614	CC	
1,300.0	1,300.0	1,298.9	1,298.9	2.2	2.2	148.62	-662.1	403.9	775.6	771.1	4.46	173.960		
1,400.0	1,400.0	1,398.6	1,398.5	2.4	2.4	148.23	-659.4	408.3	775.6	770.8	4.81	161.153		
1,500.0	1,500.0	1,497.9	1,497.3	2.6	2.6	147.60	-655.0	415.7	775.7	770.6	5.18	149.788		
1,600.0	1,600.0	1,596.4	1,595.1	2.7	2.8	146.72	-648.8	425.9	776.1	770.5	5.56	139.463	ES	
1,700.0	1,700.0	1,694.7	1,692.4	2.9	3.1	145.63	-641.2	438.5	776.8	770.8	5.97	130.097		
1,800.0	1,800.0	1,793.6	1,790.0	3.1	3.3	144.52	-633.3	451.4	777.8	771.4	6.39	121.691		
1,900.0	1,900.0	1,892.4	1,887.7	3.3	3.6	143.41	-625.5	464.4	779.1	772.3	6.82	114.198		
2,000.0	2,000.0	1,991.2	1,985.3	3.4	3.8	142.30	-617.6	477.3	780.7	773.4	7.26	107.521		
2,100.0	2,100.0	2,090.0	2,083.0	3.6	4.1	141.20	-609.8	490.3	782.6	774.9	7.71	101.568		
2,200.0	2,200.0	2,188.8	2,180.6	3.8	4.4	140.10	-601.9	503.3	784.8	776.6	8.15	96.250		
2,300.0	2,300.0	2,287.6	2,278.2	4.0	4.7	139.01	-594.1	516.2	787.3	778.7	8.61	91.490		
2,400.0	2,400.0	2,386.5	2,375.9	4.1	5.0	137.93	-586.2	529.2	790.1	781.0	9.06	87.219		
2,500.0	2,500.0	2,485.3	2,473.5	4.3	5.3	136.85	-578.3	542.2	793.1	783.6	9.51	83.375		
2,600.0	2,600.0	2,584.1	2,571.2	4.5	5.5	135.78	-570.5	555.1	796.5	786.5	9.97	79.908		
2,700.0	2,700.0	2,682.9	2,668.8	4.7	5.8	134.72	-562.6	568.1	800.1	789.7	10.42	76.773		
2,800.0	2,800.0	2,781.7	2,766.5	4.8	6.1	133.68	-554.8	581.0	804.0	793.2	10.88	73.929		
2,900.0	2,900.0	2,880.5	2,864.1	5.0	6.4	132.64	-546.9	594.0	808.2	796.9	11.33	71.345		
3,000.0	3,000.0	2,979.4	2,961.8	5.2	6.7	131.61	-539.1	607.0	812.7	800.9	11.78	68.991		
3,100.0	3,100.0	3,078.2	3,059.4	5.4	7.1	130.59	-531.2	619.9	817.4	805.1	12.23	66.842		
3,200.0	3,200.0	3,177.0	3,157.1	5.5	7.4	129.59	-523.4	632.9	822.3	809.7	12.68	64.877		
3,300.0	3,300.0	3,275.8	3,254.7	5.7	7.7	128.60	-515.5	645.9	827.6	814.4	13.12	63.076		
3,400.0	3,400.0	3,374.6	3,352.4	5.9	8.0	127.62	-507.7	658.8	833.0	819.5	13.56	61.423		
3,500.0	3,500.0	3,473.4	3,450.0	6.1	8.3	126.65	-499.8	671.8	838.8	824.8	14.00	59.902		
3,600.0	3,600.0	3,572.3	3,547.7	6.2	8.6	125.70	-492.0	684.7	844.7	830.3	14.44	58.503		
3,700.0	3,700.0	3,671.1	3,645.3	6.4	8.9	124.76	-484.1	697.7	850.9	836.0	14.87	57.212		
3,800.0	3,800.0	3,769.9	3,743.0	6.6	9.2	123.83	-476.3	710.7	857.3	842.0	15.30	56.020		
3,900.0	3,900.0	3,868.7	3,840.6	6.8	9.5	122.92	-468.4	723.6	864.0	848.3	15.73	54.918		
4,000.0	4,000.0	3,967.5	3,938.3	6.9	9.8	122.02	-460.6	736.6	870.9	854.7	16.16	53.899		
4,100.0	4,100.0	4,066.4	4,036.0	7.1	10.1	119.06	-452.7	749.6	878.4	861.7	16.66	52.720		
4,200.0	4,200.0	4,165.4	4,133.8	7.3	10.5	118.26	-444.9	762.5	886.9	869.8	17.09	51.906		
4,300.0	4,299.9	4,264.5	4,231.7	7.5	10.8	117.56	-437.0	775.5	896.3	878.8	17.51	51.183		
4,400.0	4,399.7	4,363.6	4,329.7	7.6	11.1	116.96	-429.1	788.5	906.7	888.7	17.94	50.535		
4,500.0	4,499.4	4,462.8	4,427.7	7.8	11.4	116.47	-421.2	801.6	917.9	899.5	18.38	49.952		
4,600.0	4,598.9	4,562.0	4,525.7	8.0	11.7	116.08	-413.4	814.6	929.9	911.1	18.82	49.418		
4,700.0	4,698.4	4,661.1	4,623.7	8.2	12.0	115.83	-405.5	827.6	942.2	922.9	19.27	48.885		
4,800.0	4,797.9	4,760.3	4,721.7	8.4	12.3	115.59	-397.6	840.6	954.5	934.7	19.73	48.372		
4,900.0	4,897.3	4,859.5	4,819.7	8.6	12.6	115.35	-389.7	853.6	966.8	946.6	20.19	47.878		
5,000.0	4,996.8	4,958.6	4,917.6	8.8	13.0	115.12	-381.8	866.6	979.1	958.5	20.66	47.403		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 - 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	5,096.3	5,057.8	5,015.6	9.0	13.3	114.90	-374.0	879.6	991.5	970.4	21.12	46.945 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 718-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	148.74	-663.0	402.4	775.6					
100.0	100.0	100.8	100.8	0.1	0.2	148.74	-662.9	402.4	775.4	775.1	0.29	2,630.837		
200.0	200.0	202.7	202.7	0.3	0.4	148.73	-662.5	402.3	775.1	774.4	0.64	1,204.325		
300.0	300.0	304.5	304.5	0.5	0.5	148.72	-661.9	402.1	774.5	773.5	0.99	780.411		
400.0	400.0	406.4	406.4	0.6	0.7	148.70	-661.0	401.9	773.7	772.3	1.34	576.824		
500.0	500.0	508.2	508.2	0.8	0.9	148.68	-660.0	401.6	772.6	770.9	1.69	457.137		
600.0	600.0	610.0	610.0	1.0	1.1	148.65	-658.6	401.2	771.3	769.2	2.04	378.289		
700.0	700.0	711.9	711.8	1.2	1.2	148.62	-657.0	400.8	769.7	767.4	2.39	322.379		
800.0	800.0	806.0	805.9	1.3	1.4	148.53	-655.5	401.2	768.5	765.8	2.73	281.730		
900.0	900.0	904.2	904.1	1.5	1.6	148.32	-653.3	403.2	767.7	764.6	3.08	249.344		
1,000.0	1,000.0	1,000.3	1,000.1	1.7	1.8	147.93	-650.2	407.4	767.3	763.8	3.44	223.359		
1,022.9	1,022.9	1,022.2	1,021.9	1.7	1.8	147.82	-649.4	408.7	767.3	763.7	3.52	218.130	CC	
1,100.0	1,100.0	1,093.7	1,093.2	1.9	1.9	147.40	-646.6	413.6	767.5	763.7	3.80	202.095	ES	
1,200.0	1,200.0	1,193.3	1,192.2	2.0	2.2	146.65	-642.0	422.5	768.5	764.4	4.19	183.390		
1,300.0	1,300.0	1,290.1	1,288.3	2.2	2.4	145.77	-636.1	432.9	769.5	764.9	4.60	167.343		
1,400.0	1,400.0	1,387.7	1,385.0	2.4	2.6	144.75	-629.7	445.1	771.2	766.2	5.03	153.390		
1,500.0	1,500.0	1,487.3	1,483.3	2.6	2.9	143.62	-622.3	458.5	773.1	767.7	5.48	141.016		
1,600.0	1,600.0	1,588.8	1,583.5	2.7	3.2	142.37	-613.8	473.2	775.2	769.2	5.96	130.052		
1,700.0	1,700.0	1,691.8	1,685.0	2.9	3.5	141.09	-604.6	488.0	777.1	770.7	6.45	120.547		
1,800.0	1,800.0	1,787.7	1,779.6	3.1	3.8	139.96	-596.4	501.1	779.2	772.3	6.90	112.865		
1,900.0	1,900.0	1,881.9	1,872.7	3.3	4.1	138.91	-589.1	513.8	782.1	774.8	7.35	106.365		
2,000.0	2,000.0	1,973.8	1,963.5	3.4	4.4	137.91	-582.7	526.4	786.0	778.2	7.80	100.755		
2,100.0	2,100.0	2,068.9	2,057.3	3.6	4.7	136.82	-576.1	540.5	791.1	782.8	8.26	95.772		
2,200.0	2,200.0	2,171.9	2,158.9	3.8	5.0	135.71	-569.2	555.4	796.3	787.6	8.73	91.190		
2,300.0	2,300.0	2,280.0	2,265.8	4.0	5.3	134.59	-561.7	569.9	800.9	791.7	9.22	86.898		
2,400.0	2,400.0	2,374.4	2,359.0	4.1	5.6	133.58	-554.7	582.9	805.6	795.9	9.67	83.323		
2,500.0	2,500.0	2,480.9	2,464.1	4.3	6.0	132.41	-546.0	597.7	810.3	800.1	10.16	79.762		
2,600.0	2,600.0	2,584.8	2,566.7	4.5	6.3	131.27	-536.8	611.6	814.4	803.8	10.64	76.540		
2,700.0	2,700.0	2,680.1	2,660.9	4.7	6.6	130.26	-528.5	624.0	818.7	807.6	11.08	73.869		
2,800.0	2,800.0	2,778.3	2,757.9	4.8	6.9	129.30	-521.0	636.5	823.5	812.0	11.52	71.468		
2,900.0	2,900.0	2,871.0	2,849.7	5.0	7.2	128.42	-514.2	648.2	828.9	816.9	11.96	69.315		
3,000.0	3,000.0	2,967.3	2,944.7	5.2	7.5	127.41	-506.4	662.1	835.3	822.9	12.41	67.325		
3,100.0	3,100.0	3,070.0	3,046.0	5.4	7.9	126.37	-498.1	676.4	841.6	828.8	12.86	65.435		
3,200.0	3,200.0	3,166.0	3,140.8	5.5	8.2	125.43	-490.5	689.5	848.1	834.8	13.30	63.783		
3,300.0	3,300.0	3,264.9	3,238.4	5.7	8.5	124.46	-482.7	703.3	855.1	841.4	13.74	62.252		
3,400.0	3,400.0	3,369.4	3,341.6	5.9	8.8	123.46	-474.1	717.5	861.9	847.7	14.19	60.746		
3,500.0	3,500.0	3,465.8	3,436.8	6.1	9.1	122.55	-466.3	730.5	868.9	854.3	14.61	59.462		
3,600.0	3,600.0	3,569.5	3,539.3	6.2	9.5	121.62	-458.0	744.0	875.8	860.7	15.05	58.196		
3,700.0	3,700.0	3,664.9	3,633.5	6.4	9.8	120.76	-450.4	756.6	883.0	867.5	15.47	57.088		
3,800.0	3,800.0	3,763.7	3,731.0	6.6	10.1	119.84	-441.8	770.1	890.4	874.5	15.90	56.011		
3,900.0	3,900.0	3,857.6	3,823.6	6.8	10.4	118.96	-433.5	783.3	898.4	882.1	16.31	55.078		
4,000.0	4,000.0	3,956.6	3,921.2	6.9	10.8	118.04	-424.7	797.5	906.9	890.2	16.74	54.191		
4,100.0	4,100.0	4,049.4	4,012.7	7.1	11.1	115.12	-417.1	810.9	916.3	899.1	17.24	53.139		
4,200.0	4,200.0	4,162.1	4,124.1	7.3	11.4	114.33	-409.1	825.9	926.2	908.5	17.67	52.414		
4,300.0	4,299.9	4,266.7	4,227.7	7.5	11.7	113.77	-402.1	838.5	935.8	917.8	18.08	51.751		
4,400.0	4,399.7	4,368.6	4,328.7	7.6	12.0	113.33	-395.0	850.2	945.6	927.1	18.50	51.121		
4,500.0	4,499.4	4,472.1	4,431.3	7.8	12.3	112.98	-387.9	862.0	956.0	937.1	18.92	50.541		
4,600.0	4,598.9	4,576.5	4,534.9	8.0	12.6	112.81	-381.2	872.9	966.5	947.2	19.34	49.970		
4,700.0	4,698.4	4,672.4	4,630.0	8.2	12.9	112.75	-374.8	882.9	977.2	957.4	19.77	49.429		
4,800.0	4,797.9	4,774.3	4,731.2	8.4	13.2	112.69	-368.2	893.8	988.0	967.8	20.21	48.891		
4,900.0	4,897.3	4,874.2	4,830.4	8.6	13.4	112.65	-361.8	904.0	998.6	977.9	20.65	48.358	SF	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 3A-5H - 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	152.72	-677.5	349.3	762.3					
100.0	100.0	95.0	95.0	0.1	0.1	152.72	-677.5	349.3	762.3	762.0	0.27	2,861.188		
200.0	200.0	195.0	195.0	0.3	0.3	152.72	-677.5	349.3	762.3	761.7	0.61	1,240.797		
300.0	300.0	295.0	295.0	0.5	0.5	152.72	-677.5	349.3	762.3	761.3	0.96	791.233		
400.0	400.0	395.0	395.0	0.6	0.7	152.72	-677.5	349.3	762.3	761.0	1.31	580.799		
500.0	500.0	495.0	495.0	0.8	0.8	152.72	-677.5	349.3	762.3	760.6	1.66	458.782		
600.0	600.0	595.0	595.0	1.0	1.0	152.72	-677.5	349.3	762.3	760.3	2.01	379.133		
700.0	700.0	695.0	695.0	1.2	1.2	152.72	-677.5	349.3	762.3	759.9	2.36	323.048		
800.0	800.0	795.0	795.0	1.3	1.4	152.72	-677.5	349.3	762.3	759.6	2.71	281.418		
900.0	900.0	895.0	895.0	1.5	1.5	152.72	-677.5	349.3	762.3	759.2	3.06	249.293		
1,000.0	1,000.0	995.0	995.0	1.7	1.7	152.72	-677.5	349.3	762.3	758.9	3.41	223.750		
1,100.0	1,100.0	1,095.0	1,095.0	1.9	1.9	152.72	-677.5	349.3	762.3	758.5	3.76	202.956		
1,200.0	1,200.0	1,195.0	1,195.0	2.0	2.1	152.72	-677.5	349.3	762.3	758.2	4.11	185.698		
1,300.0	1,300.0	1,295.0	1,295.0	2.2	2.2	152.72	-677.5	349.3	762.3	757.8	4.45	171.145		
1,400.0	1,400.0	1,395.0	1,395.0	2.4	2.4	152.72	-677.5	349.3	762.3	757.5	4.80	158.707		
1,500.0	1,500.0	1,495.0	1,495.0	2.6	2.6	152.72	-677.5	349.3	762.3	757.1	5.15	147.954		
1,600.0	1,600.0	1,595.0	1,595.0	2.7	2.8	152.72	-677.5	349.3	762.3	756.8	5.50	138.566		
1,700.0	1,700.0	1,695.0	1,695.0	2.9	2.9	152.72	-677.5	349.3	762.3	756.4	5.85	130.299		
1,800.0	1,800.0	1,795.0	1,795.0	3.1	3.1	152.72	-677.5	349.3	762.3	756.1	6.20	122.962		
1,900.0	1,900.0	1,895.0	1,895.0	3.3	3.3	152.72	-677.5	349.3	762.3	755.7	6.55	116.407		
2,000.0	2,000.0	1,995.0	1,995.0	3.4	3.5	152.72	-677.5	349.3	762.3	755.4	6.90	110.516		
2,100.0	2,100.0	2,095.0	2,095.0	3.6	3.6	152.72	-677.5	349.3	762.3	755.0	7.25	105.193		
2,200.0	2,200.0	2,195.0	2,195.0	3.8	3.8	152.72	-677.5	349.3	762.3	754.7	7.60	100.359		
2,300.0	2,300.0	2,295.0	2,295.0	4.0	4.0	152.72	-677.5	349.3	762.3	754.3	7.94	95.949		
2,400.0	2,400.0	2,395.0	2,395.0	4.1	4.2	152.72	-677.5	349.3	762.3	754.0	8.29	91.911		
2,500.0	2,500.0	2,495.0	2,495.0	4.3	4.3	152.72	-677.5	349.3	762.3	753.6	8.64	88.199		
2,600.0	2,600.0	2,595.0	2,595.0	4.5	4.5	152.72	-677.5	349.3	762.3	753.3	8.99	84.775		
2,700.0	2,700.0	2,695.0	2,695.0	4.7	4.7	152.72	-677.5	349.3	762.3	753.0	9.34	81.607		
2,800.0	2,800.0	2,795.0	2,795.0	4.8	4.9	152.72	-677.5	349.3	762.3	752.6	9.69	78.667		
2,900.0	2,900.0	2,895.0	2,895.0	5.0	5.0	152.72	-677.5	349.3	762.3	752.3	10.04	75.932		
3,000.0	3,000.0	2,995.0	2,995.0	5.2	5.2	152.72	-677.5	349.3	762.3	751.9	10.39	73.381		
3,100.0	3,100.0	3,095.0	3,095.0	5.4	5.4	152.72	-677.5	349.3	762.3	751.6	10.74	70.995		
3,200.0	3,200.0	3,195.0	3,195.0	5.5	5.6	152.72	-677.5	349.3	762.3	751.2	11.09	68.760		
3,300.0	3,300.0	3,295.0	3,295.0	5.7	5.7	152.72	-677.5	349.3	762.3	750.9	11.44	66.661		
3,400.0	3,400.0	3,395.0	3,395.0	5.9	5.9	152.72	-677.5	349.3	762.3	750.5	11.78	64.686		
3,500.0	3,500.0	3,495.0	3,495.0	6.1	6.1	152.72	-677.5	349.3	762.3	750.2	12.13	62.825		
3,600.0	3,600.0	3,595.0	3,595.0	6.2	6.3	152.72	-677.5	349.3	762.3	749.8	12.48	61.068		
3,700.0	3,700.0	3,695.0	3,695.0	6.4	6.4	152.72	-677.5	349.3	762.3	749.5	12.83	59.407		
3,800.0	3,800.0	3,795.0	3,795.0	6.6	6.6	152.72	-677.5	349.3	762.3	749.1	13.18	57.834		
3,900.0	3,900.0	3,895.0	3,895.0	6.8	6.8	152.72	-677.5	349.3	762.3	748.8	13.53	56.342		
4,000.0	4,000.0	3,995.0	3,995.0	6.9	6.9	152.72	-677.5	349.3	762.3	748.4	13.88	54.925		
4,100.0	4,100.0	4,095.0	4,095.0	7.1	7.1	150.70	-677.5	349.3	763.1	748.8	14.23	53.635		
4,200.0	4,200.0	4,195.0	4,195.0	7.3	7.3	150.78	-677.5	349.3	765.3	750.8	14.57	52.519		
4,300.0	4,299.9	4,294.9	4,294.9	7.5	7.5	150.92	-677.5	349.3	769.1	754.2	14.92	51.565		
4,400.0	4,399.7	4,394.7	4,394.7	7.6	7.6	151.12	-677.5	349.3	774.5	759.2	15.26	50.761		
4,500.0	4,499.4	4,494.4	4,494.4	7.8	7.8	151.36	-677.5	349.3	781.4	765.8	15.60	50.098		
4,600.0	4,598.9	4,593.9	4,593.9	8.0	8.0	151.66	-677.5	349.3	789.8	773.9	15.94	49.559		
4,700.0	4,698.4	4,693.4	4,693.4	8.2	8.2	152.01	-677.5	349.3	798.8	782.5	16.29	49.043		
4,800.0	4,797.9	4,857.7	4,857.5	8.4	8.5	152.67	-672.4	345.3	804.1	787.3	16.75	47.998		
4,900.0	4,897.3	5,026.4	5,024.8	8.6	8.8	153.58	-655.7	332.1	800.8	783.6	17.23	46.486		
5,000.0	4,996.8	5,192.4	5,186.9	8.8	9.1	154.75	-628.0	310.2	789.2	771.5	17.70	44.584		
5,100.0	5,096.3	5,353.3	5,340.6	9.0	9.6	156.22	-590.7	280.7	769.6	751.4	18.18	42.335		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference													Warning		
Offset				Semi Major Axis			Distance				Total		Separation		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	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			
5,200.0	5,195.8	5,461.9	5,442.4	9.2	10.0	157.41	-561.0	257.2	744.8	726.3	18.57	40.114			
5,300.0	5,295.3	5,557.8	5,532.2	9.4	10.3	158.55	-534.5	236.3	720.2	701.2	18.94	38.026			
5,400.0	5,394.7	5,653.6	5,621.9	9.6	10.7	159.77	-508.1	215.4	695.8	676.5	19.32	36.017			
5,500.0	5,494.2	5,749.5	5,711.6	9.8	11.1	161.07	-481.7	194.5	671.7	652.0	19.71	34.085			
5,600.0	5,593.7	5,845.4	5,801.4	10.0	11.5	162.47	-455.2	173.6	648.1	628.0	20.11	32.225			
5,700.0	5,693.2	5,941.2	5,891.1	10.2	11.9	163.96	-428.8	152.7	624.8	604.2	20.53	30.434			
5,800.0	5,792.7	6,037.1	5,980.9	10.4	12.4	165.57	-402.4	131.8	601.9	581.0	20.97	28.711			
5,900.0	5,892.1	6,132.9	6,070.6	10.7	12.9	167.30	-375.9	110.9	579.6	558.2	21.43	27.052			
6,000.0	5,991.6	6,228.8	6,160.3	10.9	13.3	169.16	-349.5	90.0	557.8	535.9	21.91	25.458			
6,100.0	6,091.1	6,324.6	6,250.1	11.1	13.8	171.17	-323.0	69.1	536.7	514.2	22.43	23.926			
6,200.0	6,190.6	6,420.5	6,339.8	11.3	14.3	173.33	-296.6	48.1	516.2	493.2	22.99	22.459			
6,300.0	6,290.1	6,509.5	6,423.1	11.5	14.8	175.48	-272.1	28.7	496.6	473.1	23.55	21.087			
6,400.0	6,389.5	6,565.4	6,476.1	11.8	15.1	176.94	-259.3	16.4	482.8	458.8	24.00	20.120			
6,488.2	6,477.3	6,612.0	6,521.1	12.0	15.2	178.21	-252.7	5.9	478.9	454.5	24.39	19.635			
6,500.0	6,489.0	6,618.3	6,527.1	12.0	15.3	178.38	-252.1	4.5	479.0	454.5	24.44	19.595			
6,600.0	6,588.5	6,671.1	6,578.5	12.2	15.4	179.82	-249.9	-7.4	485.2	460.3	24.90	19.489			
6,700.0	6,688.0	6,722.8	6,628.8	12.4	15.5	-178.82	-252.3	-19.2	501.3	476.0	25.34	19.780			
6,800.0	6,787.8	6,773.5	6,677.7	12.6	15.6	9.68	-259.3	-30.6	521.2	495.5	25.75	20.237			
6,900.0	6,886.8	6,824.2	6,725.7	12.7	15.7	6.46	-270.6	-41.8	533.6	507.9	25.66	20.790			
7,000.0	6,982.2	6,874.9	6,772.7	12.7	15.7	7.15	-286.3	-52.7	538.0	512.9	25.05	21.478			
7,100.0	7,071.0	6,925.9	6,818.4	12.6	15.7	8.23	-306.2	-63.3	534.4	510.5	23.97	22.297			
7,200.0	7,150.4	6,977.0	6,862.3	12.6	15.6	9.56	-330.4	-73.6	523.0	500.4	22.53	23.211			
7,300.0	7,218.2	7,028.5	6,904.1	12.7	15.6	11.19	-358.7	-83.3	503.7	482.8	20.91	24.093			
7,400.0	7,272.2	7,080.3	6,943.6	12.9	15.5	13.25	-390.9	-92.5	476.9	457.5	19.34	24.651			
7,500.0	7,310.8	7,132.5	6,980.4	13.4	15.5	15.90	-426.9	-101.1	442.8	424.6	18.19	24.337			
7,600.0	7,332.8	7,185.2	7,014.1	14.0	15.4	19.44	-466.6	-108.9	402.0	384.1	17.87	22.494			
7,700.0	7,338.0	7,238.6	7,044.4	14.8	15.4	23.78	-509.9	-116.0	355.6	336.9	18.67	19.045			
7,800.0	7,338.0	7,300.0	7,074.4	15.8	15.4	27.41	-563.1	-123.0	314.2	294.2	19.93	15.766			
7,900.0	7,338.0	7,362.1	7,098.8	16.9	15.5	30.84	-619.9	-128.7	282.7	261.4	21.32	13.262			
8,000.0	7,338.0	7,433.5	7,119.3	18.1	15.6	34.09	-688.0	-133.4	261.5	238.6	22.87	11.434			
8,100.0	7,338.0	7,509.3	7,131.9	19.4	15.8	36.27	-762.7	-136.4	250.0	225.6	24.36	10.262			
8,200.0	7,338.0	7,592.3	7,135.0	20.8	16.2	36.83	-845.5	-137.1	247.4	221.7	25.61	9.660			
8,300.0	7,338.0	7,692.3	7,135.0	22.2	16.7	36.83	-945.5	-137.1	247.4	220.5	26.89	9.200			
8,400.0	7,338.0	7,792.3	7,135.0	23.7	17.5	36.82	-1,045.5	-137.1	247.4	219.1	28.27	8.750			
8,500.0	7,338.0	7,892.3	7,135.0	25.2	18.3	36.82	-1,145.5	-137.1	247.4	217.6	29.74	8.316			
8,600.0	7,338.0	7,992.3	7,135.0	26.7	19.3	36.82	-1,245.5	-137.1	247.4	216.1	31.30	7.903			
8,700.0	7,338.0	8,092.3	7,135.0	28.3	20.4	36.82	-1,345.5	-137.1	247.4	214.4	32.92	7.514			
8,800.0	7,338.0	8,192.3	7,135.0	29.8	21.6	36.82	-1,445.5	-137.1	247.4	212.8	34.60	7.149			
8,900.0	7,338.0	8,292.3	7,135.0	31.4	22.8	36.82	-1,545.5	-137.1	247.3	211.0	36.33	6.809			
9,000.0	7,338.0	8,392.3	7,135.0	33.0	24.2	36.82	-1,645.5	-137.1	247.3	209.3	38.10	6.492			
9,100.0	7,338.0	8,492.3	7,135.0	34.7	25.5	36.82	-1,745.5	-137.1	247.3	207.4	39.91	6.198			
9,200.0	7,338.0	8,592.3	7,135.0	36.3	27.0	36.82	-1,845.5	-137.1	247.3	205.6	41.75	5.925			
9,300.0	7,338.0	8,692.3	7,135.0	38.0	28.4	36.82	-1,945.5	-137.1	247.3	203.7	43.61	5.671			
9,400.0	7,338.0	8,792.3	7,135.0	39.6	29.9	36.82	-2,045.5	-137.1	247.3	201.8	45.51	5.436			
9,500.0	7,338.0	8,892.3	7,135.0	41.3	31.4	36.82	-2,145.5	-137.1	247.3	199.9	47.42	5.216			
9,600.0	7,338.0	8,992.3	7,135.0	43.0	32.9	36.82	-2,245.5	-137.1	247.3	198.0	49.35	5.012			
9,700.0	7,338.0	9,092.3	7,135.0	44.6	34.5	36.82	-2,345.5	-137.1	247.3	196.0	51.29	4.822			
9,800.0	7,338.0	9,192.3	7,135.0	46.3	36.1	36.82	-2,445.5	-137.1	247.3	194.1	53.26	4.644			
9,900.0	7,338.0	9,292.3	7,135.0	48.0	37.7	36.82	-2,545.5	-137.1	247.3	192.1	55.23	4.478			
10,000.0	7,338.0	9,392.3	7,135.0	49.7	39.3	36.82	-2,645.5	-137.1	247.3	190.1	57.21	4.323			
10,100.0	7,338.0	9,492.3	7,135.0	51.4	40.9	36.82	-2,745.5	-137.1	247.3	188.1	59.21	4.177			
10,200.0	7,338.0	9,592.3	7,135.0	53.1	42.5	36.82	-2,845.5	-137.0	247.3	186.1	61.21	4.041			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference													Warning		
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			
10,300.0	7,338.0	9,692.3	7,135.0	54.8	44.2	36.82	-2,945.5	-137.0	247.3	184.1	63.23	3.912			
10,400.0	7,338.0	9,792.3	7,135.0	56.5	45.8	36.82	-3,045.5	-137.0	247.3	182.1	65.25	3.791			
10,500.0	7,338.0	9,892.3	7,135.0	58.2	47.5	36.82	-3,145.5	-137.0	247.3	180.1	67.27	3.677			
10,600.0	7,338.0	9,992.3	7,135.0	59.9	49.1	36.82	-3,245.5	-137.0	247.3	178.0	69.31	3.569			
10,700.0	7,338.0	10,092.3	7,135.0	61.6	50.8	36.82	-3,345.5	-137.0	247.3	176.0	71.34	3.467			
10,800.0	7,338.0	10,192.3	7,135.0	63.4	52.5	36.82	-3,445.5	-137.0	247.3	173.9	73.39	3.370			
10,900.0	7,338.0	10,292.3	7,135.0	65.1	54.2	36.82	-3,545.5	-137.0	247.3	171.9	75.43	3.279			
11,000.0	7,338.0	10,392.3	7,135.0	66.8	55.8	36.82	-3,645.5	-137.0	247.3	169.8	77.49	3.192			
11,100.0	7,338.0	10,492.3	7,135.0	68.5	57.5	36.82	-3,745.5	-137.0	247.3	167.8	79.54	3.109			
11,200.0	7,338.0	10,592.3	7,135.0	70.3	59.2	36.82	-3,845.5	-137.0	247.3	165.7	81.60	3.031			
11,300.0	7,338.0	10,692.3	7,135.0	72.0	60.9	36.82	-3,945.5	-137.0	247.3	163.7	83.66	2.956			
11,400.0	7,338.0	10,792.3	7,135.0	73.7	62.6	36.82	-4,045.5	-137.0	247.3	161.6	85.73	2.885			
11,500.0	7,338.0	10,892.3	7,135.0	75.4	64.3	36.82	-4,145.5	-137.0	247.3	159.5	87.80	2.817			
11,600.0	7,338.0	10,992.3	7,135.0	77.2	66.0	36.82	-4,245.5	-137.0	247.3	157.5	89.87	2.752			
11,700.0	7,338.0	11,092.3	7,135.0	78.9	67.7	36.82	-4,345.5	-137.0	247.3	155.4	91.95	2.690			
11,800.0	7,338.0	11,192.3	7,135.0	80.6	69.4	36.82	-4,445.5	-137.0	247.3	153.3	94.02	2.631			
11,900.0	7,338.0	11,292.3	7,135.0	82.4	71.1	36.82	-4,545.5	-137.0	247.3	151.2	96.10	2.574			
12,000.0	7,338.0	11,392.3	7,135.0	84.1	72.9	36.82	-4,645.5	-137.0	247.3	149.1	98.18	2.519			
12,100.0	7,338.0	11,492.3	7,135.0	85.8	74.6	36.82	-4,745.5	-137.0	247.3	147.1	100.26	2.467			
12,200.0	7,338.0	11,592.3	7,135.0	87.6	76.3	36.81	-4,845.5	-137.0	247.3	145.0	102.35	2.417			
12,300.0	7,338.0	11,692.3	7,135.0	89.3	78.0	36.81	-4,945.5	-137.0	247.3	142.9	104.43	2.368			
12,400.0	7,338.0	11,792.3	7,135.0	91.0	79.7	36.81	-5,045.5	-137.0	247.3	140.8	106.52	2.322			
12,500.0	7,338.0	11,892.3	7,135.0	92.8	81.4	36.81	-5,145.5	-137.0	247.3	138.7	108.61	2.277			
12,600.0	7,338.0	11,992.3	7,135.0	94.5	83.2	36.81	-5,245.5	-137.0	247.3	136.6	110.70	2.234			
12,700.0	7,338.0	12,092.3	7,135.0	96.3	84.9	36.81	-5,345.5	-137.0	247.3	134.5	112.79	2.193			
12,800.0	7,338.0	12,192.3	7,135.0	98.0	86.6	36.81	-5,445.5	-137.0	247.3	132.4	114.88	2.153			
12,900.0	7,338.0	12,292.3	7,135.0	99.7	88.3	36.81	-5,545.5	-137.0	247.3	130.3	116.98	2.114			
13,000.0	7,338.0	12,392.3	7,135.0	101.5	90.1	36.81	-5,645.5	-137.0	247.3	128.2	119.07	2.077			
13,100.0	7,338.0	12,492.3	7,135.0	103.2	91.8	36.81	-5,745.5	-137.0	247.3	126.1	121.17	2.041			
13,200.0	7,338.0	12,592.3	7,135.0	105.0	93.5	36.81	-5,845.5	-137.0	247.3	124.1	123.26	2.006			
13,300.0	7,338.0	12,692.3	7,135.0	106.7	95.3	36.81	-5,945.5	-137.0	247.3	122.0	125.36	1.973			
13,400.0	7,338.0	12,792.3	7,135.0	108.4	97.0	36.81	-6,045.5	-137.0	247.3	119.9	127.46	1.940			
13,500.0	7,338.0	12,892.3	7,135.0	110.2	98.7	36.81	-6,145.5	-137.0	247.3	117.8	129.56	1.909			
13,600.0	7,338.0	12,992.3	7,135.0	111.9	100.5	36.81	-6,245.5	-137.0	247.3	115.7	131.66	1.878			
13,700.0	7,338.0	13,092.3	7,135.0	113.7	102.2	36.81	-6,345.5	-137.0	247.3	113.5	133.76	1.849			
13,800.0	7,338.0	13,192.3	7,135.0	115.4	103.9	36.81	-6,445.5	-137.0	247.3	111.4	135.86	1.820			
13,900.0	7,338.0	13,292.3	7,135.0	117.1	105.7	36.81	-6,545.5	-137.0	247.3	109.3	137.96	1.793			
14,000.0	7,338.0	13,392.3	7,135.0	118.9	107.4	36.81	-6,645.5	-137.0	247.3	107.2	140.07	1.766			
14,100.0	7,338.0	13,492.3	7,135.0	120.6	109.1	36.81	-6,745.5	-137.0	247.3	105.1	142.17	1.740			
14,200.0	7,338.0	13,592.3	7,135.0	122.4	110.9	36.81	-6,845.5	-137.0	247.3	103.0	144.27	1.714			
14,300.0	7,338.0	13,692.3	7,135.0	124.1	112.6	36.81	-6,945.5	-137.0	247.3	100.9	146.38	1.689			
14,400.0	7,338.0	13,792.3	7,135.0	125.9	114.3	36.81	-7,045.5	-137.0	247.3	98.8	148.48	1.666			
14,500.0	7,338.0	13,892.3	7,135.0	127.6	116.1	36.81	-7,145.5	-137.0	247.3	96.7	150.59	1.642			
14,600.0	7,338.0	13,992.3	7,135.0	129.4	117.8	36.81	-7,245.5	-137.0	247.3	94.6	152.70	1.620			
14,700.0	7,338.0	14,092.3	7,135.0	131.1	119.6	36.81	-7,345.5	-137.0	247.3	92.5	154.80	1.598			
14,800.0	7,338.0	14,192.3	7,135.0	132.9	121.3	36.81	-7,445.5	-137.0	247.3	90.4	156.91	1.576			
14,900.0	7,338.0	14,292.3	7,135.0	134.6	123.0	36.81	-7,545.5	-137.0	247.3	88.3	159.02	1.555			
15,000.0	7,338.0	14,392.3	7,135.0	136.3	124.8	36.81	-7,645.5	-137.0	247.3	86.2	161.13	1.535			
15,100.0	7,338.0	14,492.3	7,135.0	138.1	126.5	36.81	-7,745.5	-137.0	247.3	84.1	163.23	1.515			
15,116.6	7,338.0	14,508.9	7,135.0	138.4	126.8	36.81	-7,762.1	-137.0	247.3	83.7	163.58	1.512			
15,117.3	7,338.0	14,509.6	7,135.0	138.4	126.8	36.81	-7,762.8	-137.0	247.3	83.7	163.60	1.512	CC, ES, SF		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - McCoy 3B-5H - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	151.82	-652.0	349.3	739.8					
100.0	100.0	94.0	94.0	0.1	0.1	151.82	-652.0	349.3	739.7	739.5	0.26	2,792.407		
200.0	200.0	194.0	194.0	0.3	0.3	151.82	-652.0	349.3	739.7	739.1	0.61	1,207.498		
300.0	300.0	294.0	294.0	0.5	0.5	151.82	-652.0	349.3	739.7	738.8	0.96	769.205		
400.0	400.0	394.0	394.0	0.6	0.7	151.82	-652.0	349.3	739.7	738.4	1.31	564.357		
500.0	500.0	494.0	494.0	0.8	0.8	151.82	-652.0	349.3	739.7	738.1	1.66	445.670		
600.0	600.0	594.0	594.0	1.0	1.0	151.82	-652.0	349.3	739.7	737.7	2.01	368.229		
700.0	700.0	694.0	694.0	1.2	1.2	151.82	-652.0	349.3	739.7	737.4	2.36	313.717		
800.0	800.0	794.0	794.0	1.3	1.4	151.82	-652.0	349.3	739.7	737.0	2.71	273.264		
900.0	900.0	894.0	894.0	1.5	1.5	151.82	-652.0	349.3	739.7	736.7	3.06	242.051		
1,000.0	1,000.0	994.0	994.0	1.7	1.7	151.82	-652.0	349.3	739.7	736.3	3.41	217.238		
1,100.0	1,100.0	1,094.0	1,094.0	1.9	1.9	151.82	-652.0	349.3	739.7	736.0	3.75	197.040		
1,200.0	1,200.0	1,194.0	1,194.0	2.0	2.1	151.82	-652.0	349.3	739.7	735.6	4.10	180.277		
1,300.0	1,300.0	1,294.0	1,294.0	2.2	2.2	151.82	-652.0	349.3	739.7	735.3	4.45	166.144		
1,400.0	1,400.0	1,394.0	1,394.0	2.4	2.4	151.82	-652.0	349.3	739.7	734.9	4.80	154.065		
1,500.0	1,500.0	1,494.0	1,494.0	2.6	2.6	151.82	-652.0	349.3	739.7	734.6	5.15	143.623		
1,600.0	1,600.0	1,594.0	1,594.0	2.7	2.8	151.82	-652.0	349.3	739.7	734.2	5.50	134.507		
1,700.0	1,700.0	1,694.0	1,694.0	2.9	2.9	151.82	-652.0	349.3	739.7	733.9	5.85	126.479		
1,800.0	1,800.0	1,794.0	1,794.0	3.1	3.1	151.82	-652.0	349.3	739.7	733.5	6.20	119.356		
1,900.0	1,900.0	1,894.0	1,894.0	3.3	3.3	151.82	-652.0	349.3	739.7	733.2	6.55	112.992		
2,000.0	2,000.0	1,994.0	1,994.0	3.4	3.5	151.82	-652.0	349.3	739.7	732.8	6.90	107.272		
2,100.0	2,100.0	2,094.0	2,094.0	3.6	3.6	151.82	-652.0	349.3	739.7	732.5	7.24	102.104		
2,200.0	2,200.0	2,194.0	2,194.0	3.8	3.8	151.82	-652.0	349.3	739.7	732.1	7.59	97.410		
2,300.0	2,300.0	2,294.0	2,294.0	4.0	4.0	151.82	-652.0	349.3	739.7	731.8	7.94	93.129		
2,400.0	2,400.0	2,394.0	2,394.0	4.1	4.2	151.82	-652.0	349.3	739.7	731.4	8.29	89.209		
2,500.0	2,500.0	2,494.0	2,494.0	4.3	4.3	151.82	-652.0	349.3	739.7	731.1	8.64	85.605		
2,600.0	2,600.0	2,594.0	2,594.0	4.5	4.5	151.82	-652.0	349.3	739.7	730.7	8.99	82.282		
2,700.0	2,700.0	2,694.0	2,694.0	4.7	4.7	151.82	-652.0	349.3	739.7	730.4	9.34	79.206		
2,800.0	2,800.0	2,794.0	2,794.0	4.8	4.9	151.82	-652.0	349.3	739.7	730.0	9.69	76.352		
2,900.0	2,900.0	2,894.0	2,894.0	5.0	5.0	151.82	-652.0	349.3	739.7	729.7	10.04	73.697		
3,000.0	3,000.0	2,994.0	2,994.0	5.2	5.2	151.82	-652.0	349.3	739.7	729.3	10.39	71.220		
3,100.0	3,100.0	3,094.0	3,094.0	5.4	5.4	151.82	-652.0	349.3	739.7	729.0	10.74	68.905		
3,200.0	3,200.0	3,194.0	3,194.0	5.5	5.6	151.82	-652.0	349.3	739.7	728.6	11.08	66.735		
3,300.0	3,300.0	3,294.0	3,294.0	5.7	5.7	151.82	-652.0	349.3	739.7	728.3	11.43	64.697		
3,400.0	3,400.0	3,394.0	3,394.0	5.9	5.9	151.82	-652.0	349.3	739.7	727.9	11.78	62.781		
3,500.0	3,500.0	3,494.0	3,494.0	6.1	6.1	151.82	-652.0	349.3	739.7	727.6	12.13	60.974		
3,600.0	3,600.0	3,594.0	3,594.0	6.2	6.3	151.82	-652.0	349.3	739.7	727.2	12.48	59.269		
3,700.0	3,700.0	3,694.0	3,694.0	6.4	6.4	151.82	-652.0	349.3	739.7	726.9	12.83	57.656		
3,800.0	3,800.0	3,794.0	3,794.0	6.6	6.6	151.82	-652.0	349.3	739.7	726.5	13.18	56.129		
3,900.0	3,900.0	3,894.0	3,894.0	6.8	6.8	151.82	-652.0	349.3	739.7	726.2	13.53	54.681		
4,000.0	4,000.0	3,994.0	3,994.0	6.9	6.9	151.82	-652.0	349.3	739.7	725.8	13.88	53.306 CC		
4,100.0	4,100.0	4,094.0	4,094.0	7.1	7.1	149.80	-652.0	349.3	740.5	726.3	14.23	52.054		
4,200.0	4,200.0	4,194.0	4,194.0	7.3	7.3	149.89	-652.0	349.3	742.7	728.2	14.57	50.974		
4,300.0	4,299.9	4,293.9	4,293.9	7.5	7.5	150.03	-652.0	349.3	746.5	731.6	14.91	50.053		
4,400.0	4,399.7	4,393.7	4,393.7	7.6	7.6	150.24	-652.0	349.3	751.8	736.6	15.26	49.279		
4,500.0	4,499.4	4,493.4	4,493.4	7.8	7.8	150.50	-652.0	349.3	758.6	743.0	15.60	48.644		
4,600.0	4,598.9	4,592.9	4,592.9	8.0	8.0	150.82	-652.0	349.3	767.0	751.1	15.94	48.130		
4,700.0	4,698.4	4,692.4	4,692.4	8.2	8.2	151.18	-652.0	349.3	775.9	759.6	16.29	47.640		
4,800.0	4,797.9	4,799.7	4,799.7	8.4	8.4	151.53	-651.6	349.8	784.7	768.0	16.65	47.120		
4,900.0	4,897.3	4,918.2	4,918.0	8.6	8.6	151.49	-646.5	354.2	791.4	774.4	17.04	46.444		
5,000.0	4,996.8	5,036.7	5,035.6	8.8	8.8	150.97	-635.9	363.5	795.9	778.4	17.44	45.635		
5,100.0	5,096.3	5,154.1	5,151.0	9.0	9.0	149.98	-620.0	377.3	798.1	780.3	17.86	44.690		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 3B-5H - 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)				
5,200.0	5,195.8	5,269.6	5,263.2	9.2	9.3	148.54	-599.1	395.5	798.4	780.1	18.31	43.608		
5,300.0	5,295.3	5,382.4	5,370.9	9.4	9.6	146.68	-573.9	417.6	797.3	778.5	18.81	42.393		
5,400.0	5,394.7	5,484.9	5,467.2	9.6	9.9	144.66	-547.3	440.7	795.4	776.1	19.33	41.159		
5,500.0	5,494.2	5,580.9	5,557.1	9.8	10.3	142.71	-522.1	462.8	794.4	774.5	19.86	39.998		
5,556.5	5,550.4	5,635.1	5,607.8	9.9	10.5	141.62	-507.8	475.3	794.2	774.0	20.18	39.363		
5,600.0	5,593.7	5,676.8	5,647.0	10.0	10.6	140.77	-496.8	484.9	794.3	773.9	20.43	38.887		
5,700.0	5,693.2	5,772.8	5,736.9	10.2	11.0	138.82	-471.5	506.9	795.2	774.2	21.02	37.830		
5,800.0	5,792.7	5,868.8	5,826.8	10.4	11.4	136.89	-446.3	529.0	797.1	775.5	21.64	36.833		
5,900.0	5,892.1	5,964.7	5,916.7	10.7	11.9	134.96	-421.0	551.0	800.0	777.8	22.29	35.898		
6,000.0	5,991.6	6,060.7	6,006.6	10.9	12.3	133.05	-395.7	573.1	803.9	781.0	22.95	35.028		
6,100.0	6,091.1	6,156.7	6,096.6	11.1	12.8	131.16	-370.4	595.2	808.8	785.1	23.63	34.223		
6,200.0	6,190.6	6,252.7	6,186.5	11.3	13.3	129.29	-345.2	617.2	814.5	790.2	24.33	33.483		
6,300.0	6,290.1	6,348.6	6,276.4	11.5	13.7	127.44	-319.9	639.3	821.2	796.2	25.03	32.806		
6,400.0	6,389.5	6,444.6	6,366.3	11.8	14.2	125.63	-294.6	661.4	828.8	803.1	25.75	32.192		
6,500.0	6,489.0	6,527.9	6,444.4	12.0	14.7	124.09	-272.9	680.5	837.5	811.1	26.39	31.737		
6,600.0	6,588.5	6,579.2	6,493.2	12.2	14.9	123.34	-262.8	692.5	850.8	823.9	26.82	31.720		
6,700.0	6,688.0	6,631.0	6,543.2	12.4	15.1	122.85	-257.3	704.8	869.6	842.4	27.21	31.955		
6,800.0	6,787.8	6,682.6	6,593.3	12.6	15.2	-48.80	-256.4	717.1	890.4	862.8	27.54	32.327		
6,900.0	6,886.8	6,734.2	6,643.3	12.7	15.4	-52.38	-260.2	729.3	906.5	879.0	27.56	32.890		
7,000.0	6,982.2	6,785.9	6,692.9	12.7	15.4	-52.71	-268.6	741.5	917.7	890.4	27.27	33.651		
7,100.0	7,071.0	6,837.9	6,741.7	12.6	15.5	-53.35	-281.7	753.5	923.8	897.1	26.74	34.548		
7,200.0	7,150.4	6,900.0	6,798.2	12.6	15.5	-54.72	-303.2	767.3	925.3	899.2	26.10	35.454		
7,300.0	7,218.2	6,950.0	6,841.9	12.7	15.5	-56.35	-325.0	778.1	922.1	896.6	25.50	36.155		
7,400.0	7,272.2	7,000.0	6,883.6	12.9	15.5	-58.48	-350.6	788.3	915.1	889.9	25.14	36.395		
7,500.0	7,310.8	7,050.0	6,922.9	13.4	15.5	-61.08	-379.9	797.9	904.8	879.6	25.16	35.963		
7,600.0	7,332.8	7,100.0	6,959.6	14.0	15.5	-64.10	-412.6	806.9	892.1	866.5	25.62	34.820		
7,700.0	7,338.0	7,160.9	7,000.4	14.8	15.4	-67.63	-456.7	817.0	878.4	851.9	26.54	33.100		
7,800.0	7,338.0	7,224.8	7,038.0	15.8	15.5	-70.16	-507.5	826.2	868.6	840.9	27.66	31.399		
7,900.0	7,338.0	7,300.0	7,075.0	16.9	15.5	-72.68	-572.3	835.2	863.6	834.7	28.95	29.837		
8,000.0	7,338.0	7,386.4	7,106.8	18.1	15.7	-74.85	-652.2	843.1	861.8	831.4	30.42	28.334		
8,090.5	7,338.0	7,472.8	7,126.6	19.3	15.9	-76.21	-736.0	847.9	861.6	829.6	31.93	26.984		
8,100.0	7,338.0	7,482.2	7,128.0	19.4	15.9	-76.30	-745.3	848.3	861.6	829.5	32.10	26.844		
8,200.0	7,338.0	7,582.7	7,134.0	20.8	16.4	-76.71	-845.5	849.7	861.6	827.6	33.97	25.362		
8,300.0	7,338.0	7,682.7	7,134.0	22.2	17.0	-76.71	-945.5	849.7	861.6	825.5	36.07	23.889		
8,400.0	7,338.0	7,782.7	7,134.0	23.7	17.7	-76.71	-1,045.5	849.7	861.6	823.3	38.35	22.465		
8,500.0	7,338.0	7,882.7	7,134.0	25.2	18.6	-76.71	-1,145.5	849.7	861.6	820.8	40.81	21.112		
8,600.0	7,338.0	7,982.7	7,134.0	26.7	19.7	-76.71	-1,245.5	849.7	861.6	818.2	43.41	19.848		
8,700.0	7,338.0	8,082.7	7,134.0	28.3	20.8	-76.71	-1,345.5	849.7	861.6	815.5	46.13	18.679		
8,800.0	7,338.0	8,182.7	7,134.0	29.8	22.0	-76.71	-1,445.5	849.7	861.6	812.7	48.94	17.606		
8,900.0	7,338.0	8,282.7	7,134.0	31.4	23.2	-76.71	-1,545.5	849.7	861.6	809.8	51.83	16.624		
9,000.0	7,338.0	8,382.7	7,134.0	33.0	24.6	-76.71	-1,645.5	849.7	861.6	806.8	54.79	15.727		
9,100.0	7,338.0	8,482.7	7,134.0	34.7	26.0	-76.71	-1,745.5	849.7	861.6	803.8	57.80	14.907		
9,200.0	7,338.0	8,582.7	7,134.0	36.3	27.4	-76.71	-1,845.5	849.8	861.6	800.8	60.86	14.158		
9,300.0	7,338.0	8,682.7	7,134.0	38.0	28.8	-76.71	-1,945.5	849.8	861.6	797.7	63.95	13.473		
9,400.0	7,338.0	8,782.7	7,134.0	39.6	30.3	-76.71	-2,045.5	849.8	861.6	794.5	67.08	12.844		
9,500.0	7,338.0	8,882.7	7,134.0	41.3	31.8	-76.71	-2,145.5	849.8	861.6	791.4	70.24	12.267		
9,600.0	7,338.0	8,982.7	7,134.0	43.0	33.4	-76.71	-2,245.5	849.8	861.6	788.2	73.42	11.735		
9,700.0	7,338.0	9,082.7	7,134.0	44.6	34.9	-76.71	-2,345.5	849.8	861.6	785.0	76.63	11.244		
9,800.0	7,338.0	9,182.7	7,134.0	46.3	36.5	-76.71	-2,445.5	849.8	861.6	781.8	79.85	10.791		
9,900.0	7,338.0	9,282.7	7,134.0	48.0	38.1	-76.71	-2,545.5	849.8	861.6	778.5	83.09	10.370		
10,000.0	7,338.0	9,382.7	7,134.0	49.7	39.7	-76.72	-2,645.5	849.8	861.6	775.3	86.34	9.979		
10,100.0	7,338.0	9,482.7	7,134.0	51.4	41.4	-76.72	-2,745.5	849.8	861.6	772.0	89.61	9.616		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													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		
10,200.0	7,338.0	9,582.7	7,134.0	53.1	43.0	-76.72	-2,845.5	849.8	861.6	768.8	92.88	9.277			
10,300.0	7,338.0	9,682.7	7,134.0	54.8	44.6	-76.72	-2,945.5	849.8	861.6	765.5	96.17	8.960			
10,400.0	7,338.0	9,782.7	7,134.0	56.5	46.3	-76.72	-3,045.5	849.8	861.6	762.2	99.47	8.663			
10,500.0	7,338.0	9,882.7	7,134.0	58.2	47.9	-76.72	-3,145.5	849.8	861.6	758.9	102.77	8.384			
10,600.0	7,338.0	9,982.7	7,134.0	59.9	49.6	-76.72	-3,245.5	849.8	861.6	755.6	106.08	8.123			
10,700.0	7,338.0	10,082.7	7,134.0	61.6	51.3	-76.72	-3,345.5	849.8	861.6	752.2	109.40	7.876			
10,800.0	7,338.0	10,182.7	7,134.0	63.4	52.9	-76.72	-3,445.5	849.8	861.6	748.9	112.72	7.644			
10,900.0	7,338.0	10,282.7	7,134.0	65.1	54.6	-76.72	-3,545.5	849.8	861.7	745.6	116.05	7.425			
11,000.0	7,338.0	10,382.7	7,134.0	66.8	56.3	-76.72	-3,645.5	849.8	861.7	742.3	119.39	7.217			
11,100.0	7,338.0	10,482.7	7,134.0	68.5	58.0	-76.72	-3,745.5	849.8	861.7	738.9	122.72	7.021			
11,200.0	7,338.0	10,582.7	7,134.0	70.3	59.7	-76.72	-3,845.5	849.8	861.7	735.6	126.07	6.835			
11,300.0	7,338.0	10,682.7	7,134.0	72.0	61.4	-76.72	-3,945.5	849.8	861.7	732.2	129.41	6.658			
11,400.0	7,338.0	10,782.7	7,134.0	73.7	63.1	-76.72	-4,045.5	849.8	861.7	728.9	132.77	6.490			
11,500.0	7,338.0	10,882.7	7,134.0	75.4	64.8	-76.72	-4,145.5	849.8	861.7	725.5	136.12	6.330			
11,600.0	7,338.0	10,982.7	7,134.0	77.2	66.5	-76.72	-4,245.5	849.8	861.7	722.2	139.48	6.178			
11,700.0	7,338.0	11,082.7	7,134.0	78.9	68.2	-76.72	-4,345.5	849.8	861.7	718.8	142.84	6.033			
11,800.0	7,338.0	11,182.7	7,134.0	80.6	69.9	-76.72	-4,445.5	849.8	861.7	715.5	146.20	5.894			
11,900.0	7,338.0	11,282.7	7,134.0	82.4	71.6	-76.72	-4,545.5	849.8	861.7	712.1	149.56	5.761			
12,000.0	7,338.0	11,382.7	7,134.0	84.1	73.3	-76.72	-4,645.5	849.8	861.7	708.7	152.93	5.634			
12,100.0	7,338.0	11,482.7	7,134.0	85.8	75.0	-76.72	-4,745.5	849.8	861.7	705.4	156.30	5.513			
12,200.0	7,338.0	11,582.7	7,134.0	87.6	76.7	-76.72	-4,845.5	849.8	861.7	702.0	159.67	5.397			
12,300.0	7,338.0	11,682.7	7,134.0	89.3	78.5	-76.72	-4,945.5	849.8	861.7	698.6	163.04	5.285			
12,400.0	7,338.0	11,782.7	7,134.0	91.0	80.2	-76.72	-5,045.5	849.8	861.7	695.3	166.42	5.178			
12,500.0	7,338.0	11,882.7	7,134.0	92.8	81.9	-76.72	-5,145.5	849.8	861.7	691.9	169.79	5.075			
12,600.0	7,338.0	11,982.7	7,134.0	94.5	83.6	-76.72	-5,245.5	849.8	861.7	688.5	173.17	4.976			
12,700.0	7,338.0	12,082.7	7,134.0	96.3	85.4	-76.72	-5,345.5	849.8	861.7	685.1	176.55	4.881			
12,800.0	7,338.0	12,182.7	7,134.0	98.0	87.1	-76.72	-5,445.5	849.8	861.7	681.7	179.93	4.789			
12,900.0	7,338.0	12,282.7	7,134.0	99.7	88.8	-76.72	-5,545.5	849.8	861.7	678.4	183.31	4.701			
13,000.0	7,338.0	12,382.7	7,134.0	101.5	90.5	-76.72	-5,645.5	849.8	861.7	675.0	186.70	4.615			
13,100.0	7,338.0	12,482.7	7,134.0	103.2	92.3	-76.72	-5,745.5	849.8	861.7	671.6	190.08	4.533			
13,200.0	7,338.0	12,582.7	7,134.0	105.0	94.0	-76.72	-5,845.5	849.8	861.7	668.2	193.47	4.454			
13,300.0	7,338.0	12,682.7	7,134.0	106.7	95.7	-76.72	-5,945.5	849.8	861.7	664.8	196.85	4.377			
13,400.0	7,338.0	12,782.7	7,134.0	108.4	97.5	-76.72	-6,045.5	849.8	861.7	661.4	200.24	4.303			
13,500.0	7,338.0	12,882.7	7,134.0	110.2	99.2	-76.72	-6,145.5	849.8	861.7	658.1	203.63	4.232			
13,600.0	7,338.0	12,982.7	7,134.0	111.9	100.9	-76.72	-6,245.5	849.8	861.7	654.7	207.02	4.162			
13,700.0	7,338.0	13,082.7	7,134.0	113.7	102.7	-76.72	-6,345.5	849.8	861.7	651.3	210.41	4.095			
13,800.0	7,338.0	13,182.7	7,134.0	115.4	104.4	-76.72	-6,445.5	849.8	861.7	647.9	213.80	4.030			
13,900.0	7,338.0	13,282.7	7,134.0	117.1	106.1	-76.72	-6,545.5	849.8	861.7	644.5	217.19	3.967			
14,000.0	7,338.0	13,382.7	7,134.0	118.9	107.9	-76.72	-6,645.5	849.8	861.7	641.1	220.59	3.906			
14,100.0	7,338.0	13,482.7	7,134.0	120.6	109.6	-76.72	-6,745.5	849.8	861.7	637.7	223.98	3.847			
14,200.0	7,338.0	13,582.7	7,134.0	122.4	111.3	-76.72	-6,845.5	849.8	861.7	634.3	227.37	3.790			
14,300.0	7,338.0	13,682.7	7,134.0	124.1	113.1	-76.72	-6,945.5	849.8	861.7	630.9	230.77	3.734			
14,400.0	7,338.0	13,782.7	7,134.0	125.9	114.8	-76.72	-7,045.5	849.8	861.7	627.5	234.16	3.680			
14,500.0	7,338.0	13,882.7	7,134.0	127.6	116.5	-76.72	-7,145.5	849.8	861.7	624.1	237.56	3.627			
14,600.0	7,338.0	13,982.7	7,134.0	129.4	118.3	-76.72	-7,245.5	849.8	861.7	620.7	240.95	3.576			
14,700.0	7,338.0	14,082.7	7,134.0	131.1	120.0	-76.72	-7,345.5	849.8	861.7	617.4	244.35	3.526			
14,800.0	7,338.0	14,182.7	7,134.0	132.9	121.8	-76.72	-7,445.5	849.8	861.7	614.0	247.75	3.478			
14,900.0	7,338.0	14,282.7	7,134.0	134.6	123.5	-76.72	-7,545.5	849.8	861.7	610.6	251.15	3.431			
15,000.0	7,338.0	14,382.7	7,134.0	136.3	125.2	-76.72	-7,645.5	849.8	861.7	607.2	254.54	3.385			
15,100.0	7,338.0	14,482.7	7,134.0	138.1	127.0	-76.72	-7,745.5	849.8	861.7	603.8	257.94	3.341			
15,104.4	7,338.0	14,487.1	7,134.0	138.2	127.1	-76.72	-7,749.9	849.8	861.7	603.6	258.09	3.339			
15,117.3	7,338.0	14,496.3	7,134.0	138.4	127.2	-76.72	-7,759.2	849.8	861.7	603.2	258.47	3.334 ES, SF			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - PROMINENCE 4-8 (EXISTING) - KMG WELL - NO SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
10,100.0	7,338.0	7,363.0	7,363.0	51.4	12.8	-90.00	-3,730.2	173.3	998.0	933.7	64.23	15.537		
10,200.0	7,338.0	7,363.0	7,363.0	53.1	12.8	-90.00	-3,730.2	173.3	899.4	833.5	65.93	13.642		
10,300.0	7,338.0	7,363.0	7,363.0	54.8	12.8	-90.00	-3,730.2	173.3	801.3	733.6	67.64	11.847		
10,400.0	7,338.0	7,363.0	7,363.0	56.5	12.8	-90.00	-3,730.2	173.3	703.6	634.3	69.34	10.147		
10,500.0	7,338.0	7,363.0	7,363.0	58.2	12.8	-90.00	-3,730.2	173.3	606.8	535.7	71.05	8.539		
10,600.0	7,338.0	7,363.0	7,363.0	59.9	12.8	-90.00	-3,730.2	173.3	511.1	438.3	72.77	7.024		
10,700.0	7,338.0	7,363.0	7,363.0	61.6	12.8	-90.00	-3,730.2	173.3	417.5	343.0	74.48	5.605		
10,800.0	7,338.0	7,363.0	7,363.0	63.4	12.8	-90.00	-3,730.2	173.3	327.6	251.4	76.20	4.299		
10,900.0	7,338.0	7,363.0	7,363.0	65.1	12.8	-90.00	-3,730.2	173.3	245.8	167.8	77.92	3.154		
11,000.0	7,338.0	7,363.0	7,363.0	66.8	12.8	-90.00	-3,730.2	173.3	182.9	103.3	79.64	2.297		
11,084.7	7,338.0	7,363.0	7,363.0	68.3	12.8	-90.00	-3,730.2	173.3	162.1	81.0	81.10	1.999	CC, ES, SF	
11,100.0	7,338.0	7,363.0	7,363.0	68.5	12.8	-90.00	-3,730.2	173.3	162.8	81.5	81.36	2.001		
11,200.0	7,338.0	7,363.0	7,363.0	70.3	12.8	-90.00	-3,730.2	173.3	198.9	115.8	83.09	2.394		
11,300.0	7,338.0	7,363.0	7,363.0	72.0	12.8	-90.00	-3,730.2	173.3	269.5	184.7	84.81	3.178		
11,400.0	7,338.0	7,363.0	7,363.0	73.7	12.8	-90.00	-3,730.2	173.3	354.5	268.0	86.54	4.097		
11,500.0	7,338.0	7,363.0	7,363.0	75.4	12.8	-90.00	-3,730.2	173.3	445.8	357.5	88.27	5.051		
11,600.0	7,338.0	7,363.0	7,363.0	77.2	12.8	-90.00	-3,730.2	173.3	540.2	450.2	90.00	6.002		
11,700.0	7,338.0	7,363.0	7,363.0	78.9	12.8	-90.00	-3,730.2	173.3	636.3	544.6	91.73	6.937		
11,800.0	7,338.0	7,363.0	7,363.0	80.6	12.8	-90.00	-3,730.2	173.3	733.4	640.0	93.46	7.847		
11,900.0	7,338.0	7,363.0	7,363.0	82.4	12.8	-90.00	-3,730.2	173.3	831.3	736.1	95.19	8.732		
12,000.0	7,338.0	7,363.0	7,363.0	84.1	12.8	-90.00	-3,730.2	173.3	929.5	832.6	96.93	9.590		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - VOGL 31-5 (EXISTING) - KMG WELL - NO SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 500-MWD														
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		
5,900.0	5,892.1	6,056.2	5,857.1	10.7	25.8	-17.55	1,121.9	-258.2	993.8	967.5	26.36	37.698		
6,000.0	5,991.6	6,155.7	5,956.6	10.9	25.9	-17.73	1,121.9	-258.2	984.1	957.4	26.70	36.852		
6,100.0	6,091.1	6,255.2	6,056.1	11.1	25.9	-17.91	1,121.9	-258.2	974.4	947.4	27.05	36.026		
6,200.0	6,190.6	6,354.7	6,155.6	11.3	26.0	-18.09	1,121.9	-258.2	964.7	937.3	27.39	35.220		
6,300.0	6,290.1	6,454.2	6,255.1	11.5	26.1	-18.28	1,121.9	-258.2	955.0	927.3	27.74	34.433		
6,400.0	6,389.5	6,553.6	6,354.5	11.8	26.2	-18.48	1,121.9	-258.2	945.3	917.3	28.08	33.664		
6,500.0	6,489.0	6,653.1	6,454.0	12.0	26.2	-18.68	1,121.9	-258.2	935.7	907.2	28.43	32.913		
6,600.0	6,588.5	6,752.6	6,553.5	12.2	26.3	-18.88	1,121.9	-258.2	926.0	897.2	28.78	32.179		
6,700.0	6,688.0	6,852.1	6,653.0	12.4	26.4	-19.08	1,121.9	-258.2	916.4	887.2	29.13	31.461		
6,780.2	6,768.0	6,932.1	6,733.0	12.6	26.5	-179.38	1,121.9	-258.2	913.0	883.5	29.49	30.960		
6,800.0	6,787.8	6,951.9	6,752.8	12.6	26.5	168.24	1,121.9	-258.2	912.2	882.7	29.55	30.866	CC, ES, SF	
6,900.0	6,886.8	7,050.9	6,851.8	12.7	26.5	163.78	1,121.9	-258.2	924.4	894.9	29.57	31.258		
7,000.0	6,982.2	7,146.3	6,947.2	12.7	26.6	162.97	1,121.9	-258.2	952.9	923.8	29.14	32.698		
7,100.0	7,071.0	7,235.1	7,036.0	12.6	26.7	162.09	1,121.9	-258.2	997.0	968.7	28.35	35.175		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 7910-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	34.85	236.8	164.9	289.6					
100.0	100.0	75.0	75.0	0.1	0.1	34.85	236.8	164.9	288.6	288.3	0.25	1,139.303		
200.0	200.0	175.0	175.0	0.3	0.3	34.85	236.8	164.9	288.6	288.0	0.60	479.057		
300.0	300.0	275.0	275.0	0.5	0.5	34.85	236.8	164.9	288.6	287.6	0.95	303.293		
400.0	400.0	375.0	375.0	0.6	0.7	34.85	236.8	164.9	288.6	287.3	1.30	221.885		
500.0	500.0	475.0	475.0	0.8	0.8	34.85	236.8	164.9	288.6	286.9	1.65	174.931		
600.0	600.0	575.0	575.0	1.0	1.0	34.85	236.8	164.9	288.6	286.6	2.00	144.378		
700.0	700.0	675.0	675.0	1.2	1.2	34.85	236.8	164.9	288.6	286.2	2.35	122.911		
800.0	800.0	775.0	775.0	1.3	1.4	34.85	236.8	164.9	288.6	285.9	2.70	107.001		
900.0	900.0	875.0	875.0	1.5	1.5	34.85	236.8	164.9	288.6	285.5	3.05	94.738		
1,000.0	1,000.0	975.0	975.0	1.7	1.7	34.85	236.8	164.9	288.6	285.2	3.39	84.997		
1,100.0	1,100.0	1,075.0	1,075.0	1.9	1.9	34.85	236.8	164.9	288.6	284.8	3.74	77.073		
1,200.0	1,200.0	1,175.0	1,175.0	2.0	2.1	34.85	236.8	164.9	288.6	284.5	4.09	70.500		
1,300.0	1,300.0	1,275.0	1,275.0	2.2	2.2	34.85	236.8	164.9	288.6	284.1	4.44	64.960		
1,400.0	1,400.0	1,375.0	1,375.0	2.4	2.4	34.85	236.8	164.9	288.6	283.8	4.79	60.227		
1,500.0	1,500.0	1,475.0	1,475.0	2.6	2.6	34.85	236.8	164.9	288.6	283.4	5.14	56.137		
1,600.0	1,600.0	1,575.0	1,575.0	2.7	2.7	34.85	236.8	164.9	288.6	283.1	5.49	52.567		
1,700.0	1,700.0	1,675.0	1,675.0	2.9	2.9	34.85	236.8	164.9	288.6	282.7	5.84	49.424		
1,800.0	1,800.0	1,775.0	1,775.0	3.1	3.1	34.85	236.8	164.9	288.6	282.4	6.19	46.636		
1,900.0	1,900.0	1,875.0	1,875.0	3.3	3.3	34.85	236.8	164.9	288.6	282.0	6.54	44.145		
2,000.0	2,000.0	1,975.0	1,975.0	3.4	3.4	34.85	236.8	164.9	288.6	281.7	6.89	41.907		
2,100.0	2,100.0	2,075.0	2,075.0	3.6	3.6	34.85	236.8	164.9	288.6	281.3	7.23	39.885		
2,200.0	2,200.0	2,175.0	2,175.0	3.8	3.8	34.85	236.8	164.9	288.6	281.0	7.58	38.050		
2,300.0	2,300.0	2,275.0	2,275.0	4.0	4.0	34.85	236.8	164.9	288.6	280.6	7.93	36.375		
2,400.0	2,400.0	2,375.0	2,375.0	4.1	4.1	34.85	236.8	164.9	288.6	280.3	8.28	34.842		
2,500.0	2,500.0	2,475.0	2,475.0	4.3	4.3	34.85	236.8	164.9	288.6	279.9	8.63	33.433		
2,600.0	2,600.0	2,575.0	2,575.0	4.5	4.5	34.85	236.8	164.9	288.6	279.6	8.98	32.133		
2,700.0	2,700.0	2,675.0	2,675.0	4.7	4.7	34.85	236.8	164.9	288.6	279.2	9.33	30.931		
2,800.0	2,800.0	2,775.0	2,775.0	4.8	4.8	34.85	236.8	164.9	288.6	278.9	9.68	29.815		
2,900.0	2,900.0	2,875.0	2,875.0	5.0	5.0	34.85	236.8	164.9	288.6	278.5	10.03	28.777		
3,000.0	3,000.0	2,975.0	2,975.0	5.2	5.2	34.85	236.8	164.9	288.6	278.2	10.38	27.809		
3,100.0	3,100.0	3,075.0	3,075.0	5.4	5.4	34.85	236.8	164.9	288.6	277.8	10.73	26.904		
3,200.0	3,200.0	3,175.0	3,175.0	5.5	5.5	34.85	236.8	164.9	288.6	277.5	11.07	26.056		
3,300.0	3,300.0	3,275.0	3,275.0	5.7	5.7	34.85	236.8	164.9	288.6	277.1	11.42	25.260		
3,400.0	3,400.0	3,375.0	3,375.0	5.9	5.9	34.85	236.8	164.9	288.6	276.8	11.77	24.511		
3,500.0	3,500.0	3,475.0	3,475.0	6.1	6.1	34.85	236.8	164.9	288.6	276.4	12.12	23.805		
3,600.0	3,600.0	3,575.0	3,575.0	6.2	6.2	34.85	236.8	164.9	288.6	276.1	12.47	23.139		
3,700.0	3,700.0	3,675.0	3,675.0	6.4	6.4	34.85	236.8	164.9	288.6	275.7	12.82	22.509		
3,800.0	3,800.0	3,775.0	3,775.0	6.6	6.6	34.85	236.8	164.9	288.6	275.4	13.17	21.912		
3,900.0	3,900.0	3,875.0	3,875.0	6.8	6.8	34.85	236.8	164.9	288.6	275.0	13.52	21.346		
4,000.0	4,000.0	3,975.0	3,975.0	6.9	6.9	34.85	236.8	164.9	288.6	274.7	13.87	20.809		
4,100.0	4,100.0	4,075.0	4,075.0	7.1	7.1	32.89	236.8	164.9	287.8	273.6	14.21	20.248		
4,200.0	4,200.0	4,175.0	4,175.0	7.3	7.3	33.19	236.8	164.9	285.6	271.1	14.56	19.616		
4,300.0	4,299.9	4,274.9	4,274.9	7.5	7.5	33.70	236.8	164.9	282.0	267.1	14.91	18.919		
4,400.0	4,399.7	4,374.7	4,374.7	7.6	7.6	34.42	236.8	164.9	276.9	261.7	15.25	18.161		
4,500.0	4,499.4	4,474.4	4,474.4	7.8	7.8	35.40	236.8	164.9	270.5	254.9	15.59	17.349		
4,600.0	4,598.9	4,573.9	4,573.9	8.0	8.0	36.65	236.8	164.9	262.7	246.8	15.93	16.488		
4,700.0	4,698.4	4,673.4	4,673.4	8.2	8.2	38.01	236.8	164.9	254.6	238.3	16.29	15.630		
4,800.0	4,797.9	4,772.9	4,772.9	8.4	8.3	39.47	236.8	164.9	246.6	230.0	16.65	14.815		
4,900.0	4,897.3	4,872.3	4,872.3	8.6	8.5	41.02	236.8	164.9	238.8	221.8	17.01	14.043		
5,000.0	4,996.8	4,971.8	4,971.8	8.8	8.7	42.67	236.8	164.9	231.2	213.9	17.37	13.311		
5,100.0	5,096.3	5,071.3	5,071.3	9.0	8.9	44.44	236.8	164.9	223.8	206.1	17.74	12.619		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 7910-MWD														
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	5,195.8	5,170.8	5,170.8	9.2	9.0	46.32	236.8	164.9	216.7	198.5	18.11	11.965		
5,300.0	5,295.3	5,270.3	5,270.3	9.4	9.2	48.33	236.8	164.9	209.7	191.2	18.48	11.349		
5,400.0	5,394.7	5,369.7	5,369.7	9.6	9.4	50.47	236.8	164.9	203.1	184.2	18.86	10.769		
5,500.0	5,494.2	5,469.2	5,469.2	9.8	9.5	52.75	236.8	164.9	196.7	177.5	19.24	10.226		
5,600.0	5,593.7	5,568.7	5,568.7	10.0	9.7	55.18	236.8	164.9	190.7	171.1	19.62	9.718		
5,700.0	5,693.2	5,668.2	5,668.2	10.2	9.9	57.76	236.8	164.9	185.0	165.0	20.01	9.246		
5,800.0	5,792.7	5,767.7	5,767.7	10.4	10.1	60.50	236.8	164.9	179.8	159.4	20.41	8.810		
5,900.0	5,892.1	5,867.1	5,867.1	10.7	10.2	63.39	236.8	164.9	175.0	154.2	20.81	8.409		
6,000.0	5,991.6	5,966.6	5,966.6	10.9	10.4	66.44	236.8	164.9	170.6	149.4	21.21	8.045		
6,100.0	6,091.1	6,066.1	6,066.1	11.1	10.6	69.64	236.8	164.9	166.8	145.2	21.62	7.716		
6,200.0	6,190.6	6,165.6	6,165.6	11.3	10.8	72.97	236.8	164.9	163.5	141.5	22.03	7.424		
6,300.0	6,290.1	6,265.1	6,265.1	11.5	10.9	76.43	236.8	164.9	160.8	138.4	22.44	7.167		
6,400.0	6,389.5	6,364.5	6,364.5	11.8	11.1	79.99	236.8	164.9	158.7	135.9	22.85	6.947		
6,500.0	6,489.0	6,464.0	6,464.0	12.0	11.3	83.63	236.8	164.9	157.3	134.0	23.26	6.762		
6,600.0	6,588.5	6,563.5	6,563.5	12.2	11.5	87.32	236.8	164.9	156.5	132.8	23.66	6.612		
6,672.1	6,660.2	6,635.2	6,635.2	12.4	11.6	90.00	236.8	164.9	156.3	132.3	23.95	6.525		
6,700.0	6,688.0	6,663.0	6,663.0	12.4	11.6	91.04	236.8	164.9	156.3	132.3	24.06	6.496		
6,800.0	6,787.8	6,762.8	6,762.8	12.6	11.8	-79.99	236.8	164.9	156.3	131.8	24.41	6.402		
6,900.0	6,886.8	6,861.8	6,861.8	12.7	12.0	-88.97	236.8	164.9	155.4	130.7	24.65	6.303		
6,911.9	6,898.4	6,873.4	6,873.4	12.7	12.0	-90.00	236.8	164.9	155.3	130.7	24.66	6.298	CC, ES, SF	
7,000.0	6,982.2	6,957.2	6,957.2	12.7	12.1	-99.48	236.8	164.9	157.8	133.0	24.75	6.376		
7,100.0	7,071.0	7,046.0	7,046.0	12.6	12.3	-112.04	236.8	164.9	172.0	147.5	24.52	7.014		
7,200.0	7,150.4	7,125.4	7,125.4	12.6	12.4	-122.82	236.8	164.9	205.5	181.7	23.86	8.615		
7,300.0	7,218.2	7,193.2	7,193.2	12.7	12.6	-129.52	236.8	164.9	259.7	236.7	23.01	11.288		
7,400.0	7,272.2	7,247.2	7,247.2	12.9	12.6	-131.40	236.8	164.9	331.0	308.5	22.49	14.716		
7,500.0	7,310.8	7,285.8	7,285.8	13.4	12.7	-127.23	236.8	164.9	414.7	391.7	23.03	18.005		
7,600.0	7,332.8	7,307.8	7,307.8	14.0	12.8	-112.85	236.8	164.9	506.5	481.1	25.41	19.934		
7,700.0	7,338.0	7,313.0	7,313.0	14.8	12.8	-90.00	236.8	164.9	602.3	574.7	27.61	21.817		
7,800.0	7,338.0	7,313.0	7,313.0	15.8	12.8	-90.00	236.8	164.9	699.4	670.8	28.59	24.466		
7,900.0	7,338.0	7,313.0	7,313.0	16.9	12.8	-90.00	236.8	164.9	797.3	767.6	29.70	26.849		
8,000.0	7,338.0	7,313.0	7,313.0	18.1	12.8	-90.00	236.8	164.9	895.6	864.7	30.90	28.980		
8,100.0	7,338.0	7,313.0	7,313.0	19.4	12.8	-90.00	236.8	164.9	994.3	962.1	32.20	30.881		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft	
S5-T2N-R67W (Vogl-McCoy) - VOGL 5-8A (EXISTING) - KMG WELL - NO SURVEYS													Offset Well Error:		0.0 ft
Survey Program: 0-MWD															
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			
11,500.0	7,338.0	7,373.0	7,373.0	75.4	12.9	-90.00	-5,057.3	363.7	977.5	889.2	88.29	11.072			
11,600.0	7,338.0	7,373.0	7,373.0	77.2	12.9	-90.00	-5,057.3	363.7	885.0	795.0	90.02	9.831			
11,700.0	7,338.0	7,373.0	7,373.0	78.9	12.9	-90.00	-5,057.3	363.7	794.3	702.5	91.75	8.657			
11,800.0	7,338.0	7,373.0	7,373.0	80.6	12.9	-90.00	-5,057.3	363.7	706.1	612.6	93.48	7.553			
11,900.0	7,338.0	7,373.0	7,373.0	82.4	12.9	-90.00	-5,057.3	363.7	621.4	526.2	95.21	6.527			
12,000.0	7,338.0	7,373.0	7,373.0	84.1	12.9	-90.00	-5,057.3	363.7	542.0	445.1	96.95	5.591			
12,100.0	7,338.0	7,373.0	7,373.0	85.8	12.9	-90.00	-5,057.3	363.7	470.6	371.9	98.68	4.769			
12,200.0	7,338.0	7,373.0	7,373.0	87.6	12.9	-90.00	-5,057.3	363.7	411.2	310.8	100.42	4.095			
12,300.0	7,338.0	7,373.0	7,373.0	89.3	12.9	-90.00	-5,057.3	363.7	369.8	267.6	102.15	3.620			
12,400.0	7,338.0	7,373.0	7,373.0	91.0	12.9	-90.00	-5,057.3	363.7	352.7	248.8	103.89	3.395			
12,411.8	7,338.0	7,373.0	7,373.0	91.2	12.9	-90.00	-5,057.3	363.7	352.5	248.4	104.09	3.386	CC, ES, SF		
12,500.0	7,338.0	7,373.0	7,373.0	92.8	12.9	-90.00	-5,057.3	363.7	363.3	257.7	105.62	3.440			
12,600.0	7,338.0	7,373.0	7,373.0	94.5	12.9	-90.00	-5,057.3	363.7	399.6	292.2	107.36	3.722			
12,700.0	7,338.0	7,373.0	7,373.0	96.3	12.9	-90.00	-5,057.3	363.7	455.3	346.2	109.10	4.173			
12,800.0	7,338.0	7,373.0	7,373.0	98.0	12.9	-90.00	-5,057.3	363.7	524.4	413.5	110.84	4.731			
12,900.0	7,338.0	7,373.0	7,373.0	99.7	12.9	-90.00	-5,057.3	363.7	602.2	489.6	112.58	5.349			
13,000.0	7,338.0	7,373.0	7,373.0	101.5	12.9	-90.00	-5,057.3	363.7	685.7	571.4	114.32	5.998			
13,100.0	7,338.0	7,373.0	7,373.0	103.2	12.9	-90.00	-5,057.3	363.7	773.2	657.2	116.06	6.662			
13,200.0	7,338.0	7,373.0	7,373.0	105.0	12.9	-90.00	-5,057.3	363.7	863.4	745.6	117.80	7.330			
13,300.0	7,338.0	7,373.0	7,373.0	106.7	12.9	-90.00	-5,057.3	363.7	955.6	836.1	119.54	7.994			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 2A-5H-E267 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	1.0	1.0	0.0	0.0	-89.96	0.0	-11.2	11.2					
100.0	100.0	101.0	101.0	0.1	0.1	-89.96	0.0	-11.2	11.2	10.9	0.25	45.424		
200.0	200.0	201.0	201.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.6	0.60	18.782		
300.0	300.0	301.0	301.0	0.5	0.5	-89.96	0.0	-11.2	11.2	10.2	0.94	11.839		
366.3	366.3	367.3	367.3	0.6	0.6	-89.96	0.0	-11.2	11.2	10.0	1.18	9.508 CC		
400.0	400.0	401.0	401.0	0.6	0.6	-89.96	0.0	-11.2	11.2	9.9	1.29	8.643 ES		
500.0	500.0	500.8	500.8	0.8	0.8	-98.21	-1.7	-11.7	11.8	10.2	1.64	7.191		
600.0	600.0	600.7	600.6	1.0	1.0	-113.46	-5.6	-12.9	14.1	12.1	2.00	7.048		
700.0	700.0	700.6	700.4	1.2	1.2	-124.11	-9.6	-14.1	17.1	14.7	2.35	7.270		
800.0	800.0	800.6	800.3	1.3	1.4	-131.42	-13.5	-15.3	20.5	17.8	2.70	7.590		
900.0	900.0	900.5	900.1	1.5	1.6	-136.58	-17.5	-16.6	24.1	21.1	3.04	7.915		
1,000.0	1,000.0	1,000.4	999.9	1.7	1.7	-140.37	-21.5	-17.8	27.9	24.5	3.39	8.217		
1,100.0	1,100.0	1,100.3	1,099.8	1.9	1.9	-143.25	-25.4	-19.0	31.8	28.0	3.74	8.487		
1,200.0	1,200.0	1,200.2	1,199.6	2.0	2.1	-145.49	-29.4	-20.2	35.7	31.6	4.09	8.726		
1,300.0	1,300.0	1,300.1	1,299.4	2.2	2.3	-147.29	-33.4	-21.4	39.7	35.2	4.44	8.938		
1,400.0	1,400.0	1,400.0	1,399.2	2.4	2.5	-148.76	-37.3	-22.6	43.7	38.9	4.79	9.125		
1,500.0	1,500.0	1,499.9	1,499.1	2.6	2.7	-149.98	-41.3	-23.9	47.7	42.6	5.14	9.292		
1,600.0	1,600.0	1,599.9	1,598.9	2.7	2.9	-151.01	-45.2	-25.1	51.8	46.3	5.48	9.441		
1,700.0	1,700.0	1,699.8	1,698.7	2.9	3.1	-151.89	-49.2	-26.3	55.8	50.0	5.83	9.574		
1,800.0	1,800.0	1,799.7	1,798.6	3.1	3.2	-152.65	-53.2	-27.5	59.9	53.7	6.18	9.694		
1,900.0	1,900.0	1,899.6	1,898.4	3.3	3.4	-153.31	-57.1	-28.7	64.0	57.5	6.53	9.803		
2,000.0	2,000.0	1,999.5	1,998.2	3.4	3.6	-153.90	-61.1	-29.9	68.1	61.2	6.88	9.902		
2,100.0	2,100.0	2,099.4	2,098.0	3.6	3.8	-154.42	-65.1	-31.2	72.2	65.0	7.23	9.992		
2,200.0	2,200.0	2,199.3	2,197.9	3.8	4.0	-154.88	-69.0	-32.4	76.3	68.7	7.58	10.074		
2,300.0	2,300.0	2,299.3	2,297.7	4.0	4.2	-155.29	-73.0	-33.6	80.4	72.5	7.92	10.150		
2,400.0	2,400.0	2,399.2	2,397.5	4.1	4.4	-155.67	-77.0	-34.8	84.5	76.3	8.27	10.219		
2,500.0	2,500.0	2,499.1	2,497.3	4.3	4.6	-156.01	-80.9	-36.0	88.7	80.0	8.62	10.284		
2,600.0	2,600.0	2,599.0	2,597.2	4.5	4.8	-156.31	-84.9	-37.2	92.8	83.8	8.97	10.344		
2,700.0	2,700.0	2,698.9	2,697.0	4.7	4.9	-156.60	-88.9	-38.5	96.9	87.6	9.32	10.399		
2,800.0	2,800.0	2,798.8	2,796.8	4.8	5.1	-156.86	-92.8	-39.7	101.0	91.4	9.67	10.451		
2,900.0	2,900.0	2,898.7	2,896.7	5.0	5.3	-157.10	-96.8	-40.9	105.2	95.1	10.02	10.499		
3,000.0	3,000.0	2,998.7	2,996.5	5.2	5.5	-157.32	-100.8	-42.1	109.3	98.9	10.36	10.544		
3,100.0	3,100.0	3,098.6	3,096.3	5.4	5.7	-157.52	-104.7	-43.3	113.4	102.7	10.71	10.587		
3,200.0	3,200.0	3,198.5	3,196.1	5.5	5.9	-157.71	-108.7	-44.5	117.6	106.5	11.06	10.627		
3,300.0	3,300.0	3,298.4	3,296.0	5.7	6.1	-157.89	-112.6	-45.8	121.7	110.3	11.41	10.664		
3,400.0	3,400.0	3,398.3	3,395.8	5.9	6.3	-158.06	-116.6	-47.0	125.8	114.1	11.76	10.700		
3,500.0	3,500.0	3,498.2	3,495.6	6.1	6.5	-158.21	-120.6	-48.2	130.0	117.9	12.11	10.733		
3,600.0	3,600.0	3,598.1	3,595.5	6.2	6.6	-158.36	-124.5	-49.4	134.1	121.6	12.46	10.765		
3,700.0	3,700.0	3,698.1	3,695.3	6.4	6.8	-158.50	-128.5	-50.6	138.2	125.4	12.81	10.795		
3,800.0	3,800.0	3,798.0	3,795.1	6.6	7.0	-158.63	-132.5	-51.8	142.4	129.2	13.16	10.823		
3,900.0	3,900.0	3,897.9	3,894.9	6.8	7.2	-158.75	-136.4	-53.1	146.5	133.0	13.50	10.850		
4,000.0	4,000.0	3,997.8	3,994.8	6.9	7.4	-158.86	-140.4	-54.3	150.7	136.8	13.85	10.876		
4,100.0	4,100.0	4,097.7	4,094.5	7.1	7.6	-161.12	-144.4	-55.5	155.6	141.4	14.20	10.960		
4,200.0	4,200.0	4,197.4	4,194.2	7.3	7.8	-161.49	-148.3	-56.7	162.2	147.7	14.54	11.158		
4,300.0	4,299.9	4,297.1	4,293.8	7.5	8.0	-162.02	-152.3	-57.9	170.5	155.6	14.88	11.461		
4,400.0	4,399.7	4,396.6	4,393.2	7.6	8.1	-162.65	-156.2	-59.1	180.5	165.3	15.21	11.863		
4,500.0	4,499.4	4,495.9	4,492.4	7.8	8.3	-163.37	-160.2	-60.3	192.1	176.6	15.54	12.359		
4,600.0	4,598.9	4,594.9	4,591.4	8.0	8.5	-164.13	-164.1	-61.6	205.4	189.6	15.88	12.940		
4,700.0	4,698.4	4,693.9	4,690.3	8.2	8.7	-164.87	-168.0	-62.8	219.4	203.2	16.22	13.523		
4,800.0	4,797.9	4,792.9	4,789.2	8.4	8.9	-165.52	-172.0	-64.0	233.4	216.8	16.57	14.083		
4,900.0	4,897.3	4,891.9	4,888.1	8.6	9.1	-166.10	-175.9	-65.2	247.4	230.4	16.92	14.622		
5,000.0	4,996.8	4,990.9	4,987.0	8.8	9.3	-166.62	-179.8	-66.4	261.4	244.1	17.26	15.140		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													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	Warning									
5,100.0	5,096.3	5,089.9	5,085.9	9.0	9.5	-167.08	-183.7	-67.6	275.4	257.8	17.61	15.639										
5,200.0	5,195.8	5,188.8	5,184.8	9.2	9.6	-167.50	-187.7	-68.8	289.5	271.5	17.96	16.119										
5,300.0	5,295.3	5,287.8	5,283.7	9.4	9.8	-167.88	-191.6	-70.0	303.6	285.3	18.31	16.582										
5,400.0	5,394.7	5,386.8	5,382.6	9.6	10.0	-168.23	-195.5	-71.2	317.7	299.0	18.66	17.028										
5,500.0	5,494.2	5,485.8	5,481.5	9.8	10.2	-168.55	-199.4	-72.4	331.8	312.8	19.00	17.458										
5,600.0	5,593.7	5,584.8	5,580.4	10.0	10.4	-168.84	-203.4	-73.6	345.9	326.5	19.35	17.874										
5,700.0	5,693.2	5,683.8	5,679.3	10.2	10.6	-169.11	-207.3	-74.8	360.0	340.3	19.70	18.275										
5,800.0	5,792.7	5,782.7	5,778.2	10.4	10.8	-169.36	-211.2	-76.0	374.1	354.1	20.05	18.662										
5,900.0	5,892.1	5,881.7	5,877.1	10.7	11.0	-169.59	-215.2	-77.2	388.3	367.9	20.40	19.036										
6,000.0	5,991.6	5,980.7	5,976.0	10.9	11.1	-169.80	-219.1	-78.4	402.4	381.7	20.74	19.399										
6,100.0	6,091.1	6,079.7	6,074.9	11.1	11.3	-170.00	-223.0	-79.6	416.5	395.5	21.09	19.749										
6,200.0	6,190.6	6,178.7	6,173.8	11.3	11.5	-170.19	-226.9	-80.8	430.7	409.2	21.44	20.089										
6,300.0	6,290.1	6,277.7	6,272.7	11.5	11.7	-170.36	-230.9	-82.0	444.8	423.1	21.79	20.417										
6,400.0	6,389.5	6,376.7	6,371.6	11.8	11.9	-170.53	-234.8	-83.3	459.0	436.9	22.14	20.736										
6,500.0	6,489.0	6,475.6	6,470.5	12.0	12.1	-170.68	-238.7	-84.5	473.2	450.7	22.48	21.045										
6,600.0	6,588.5	6,574.6	6,569.4	12.2	12.3	-170.83	-242.7	-85.7	487.3	464.5	22.83	21.345										
6,700.0	6,688.0	6,673.6	6,668.3	12.4	12.5	-170.96	-246.6	-86.9	501.5	478.3	23.18	21.635										
6,800.0	6,787.8	7,082.4	7,057.8	12.6	12.6	19.62	-152.1	-89.7	493.5	469.3	24.16	20.423										
6,900.0	6,886.8	7,344.3	7,235.2	12.7	12.9	40.28	37.5	-88.4	412.4	387.5	24.87	16.581										
7,000.0	6,982.2	7,391.3	7,257.0	12.7	13.0	81.85	79.1	-88.0	317.8	292.2	25.61	12.407										
7,100.0	7,071.0	7,386.0	7,254.7	12.6	13.0	103.77	74.3	-88.0	225.1	199.7	25.38	8.869										
7,200.0	7,150.4	7,361.7	7,243.7	12.6	12.9	104.96	52.7	-88.3	143.5	118.4	25.17	5.702										
7,300.0	7,218.2	7,328.6	7,227.1	12.7	12.8	92.35	24.0	-88.6	99.7	74.3	25.44	3.919										
7,308.7	7,223.5	7,325.4	7,225.5	12.7	12.8	90.68	21.3	-88.6	99.4	73.9	25.47	3.902 SF										
7,400.0	7,272.2	7,290.6	7,206.2	12.9	12.7	69.82	-7.7	-88.9	129.7	104.8	24.84	5.219										
7,500.0	7,310.8	7,250.0	7,181.5	13.4	12.7	47.71	-40.0	-89.2	196.9	174.7	22.25	8.850										
7,600.0	7,332.8	7,200.0	7,148.1	14.0	12.6	31.92	-77.1	-89.4	270.3	250.9	19.39	13.935										
7,700.0	7,338.0	7,163.2	7,121.5	14.8	12.6	24.86	-102.5	-89.6	341.3	323.0	18.27	18.686										
7,800.0	7,338.0	7,123.9	7,091.4	15.8	12.6	22.16	-127.8	-89.7	415.3	397.1	18.16	22.864										
7,900.0	7,338.0	7,100.0	7,072.2	16.9	12.6	20.71	-142.1	-89.7	494.1	475.8	18.31	26.987										
8,000.0	7,338.0	7,050.0	7,030.3	18.1	12.6	18.10	-169.3	-89.7	576.4	558.2	18.19	31.690										
8,100.0	7,338.0	7,050.0	7,030.3	19.4	12.6	18.10	-169.3	-89.7	661.4	642.8	18.62	35.515										
8,200.0	7,338.0	7,015.9	7,000.4	20.8	12.6	16.58	-185.8	-89.6	748.4	729.6	18.70	40.015										
8,300.0	7,338.0	7,000.0	6,986.2	22.2	12.7	15.94	-192.9	-89.6	837.3	818.4	18.97	44.141										
8,400.0	7,338.0	6,980.8	6,968.8	23.7	12.7	15.22	-200.8	-89.5	927.8	908.5	19.20	48.311										

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 2B-5H-E267 - 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	90.06	0.0	8.4	8.4					
100.0	100.0	101.0	101.0	0.1	0.1	90.06	0.0	8.4	8.4	8.1	0.25	34.068		
200.0	200.0	201.0	201.0	0.3	0.3	90.06	0.0	8.4	8.4	7.8	0.60	14.087		
300.0	300.0	301.0	301.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	0.94	8.879		
400.0	400.0	401.0	401.0	0.6	0.6	90.06	0.0	8.4	8.4	7.1	1.29	6.483		
500.0	500.0	501.0	501.0	0.8	0.8	90.06	0.0	8.4	8.4	6.7	1.64	5.105		
566.3	566.3	567.3	567.3	0.9	0.9	90.06	0.0	8.4	8.4	6.5	1.87	4.474	CC	
600.0	600.0	601.0	601.0	1.0	1.0	90.06	0.0	8.4	8.4	6.4	1.99	4.210	ES	
700.0	700.0	700.9	700.9	1.2	1.2	92.92	-0.5	9.1	9.2	6.8	2.34	3.913	SF	
800.0	800.0	800.7	800.6	1.3	1.3	99.09	-1.8	11.4	11.5	8.9	2.69	4.292		
900.0	900.0	900.3	900.2	1.5	1.5	105.07	-4.1	15.1	15.7	12.6	3.04	5.161		
1,000.0	1,000.0	1,000.0	999.7	1.7	1.7	109.53	-7.2	20.3	21.6	18.2	3.39	6.382		
1,100.0	1,100.0	1,099.2	1,098.5	1.9	1.9	112.58	-11.2	27.0	29.3	25.6	3.74	7.852		
1,200.0	1,200.0	1,198.8	1,197.8	2.0	2.1	114.49	-15.6	34.2	37.8	33.7	4.08	9.248		
1,300.0	1,300.0	1,298.4	1,297.1	2.2	2.3	115.70	-20.0	41.5	46.2	41.8	4.43	10.430		
1,400.0	1,400.0	1,398.1	1,396.4	2.4	2.6	116.53	-24.4	48.8	54.7	49.9	4.78	11.443		
1,500.0	1,500.0	1,497.7	1,495.6	2.6	2.8	117.15	-28.7	56.0	63.2	58.1	5.13	12.320		
1,600.0	1,600.0	1,597.3	1,594.9	2.7	3.0	117.61	-33.1	63.3	71.7	66.2	5.48	13.087		
1,700.0	1,700.0	1,697.0	1,694.2	2.9	3.2	117.98	-37.5	70.5	80.2	74.4	5.83	13.763		
1,800.0	1,800.0	1,796.6	1,793.5	3.1	3.4	118.28	-41.9	77.8	88.7	82.5	6.17	14.362		
1,900.0	1,900.0	1,896.3	1,892.7	3.3	3.6	118.52	-46.2	85.1	97.2	90.7	6.52	14.898		
2,000.0	2,000.0	1,995.9	1,992.0	3.4	3.9	118.73	-50.6	92.3	105.7	98.8	6.87	15.380		
2,100.0	2,100.0	2,095.5	2,091.3	3.6	4.1	118.90	-55.0	99.6	114.2	107.0	7.22	15.816		
2,200.0	2,200.0	2,195.2	2,190.6	3.8	4.3	119.05	-59.4	106.9	122.7	115.1	7.57	16.212		
2,300.0	2,300.0	2,294.8	2,289.8	4.0	4.5	119.19	-63.7	114.1	131.2	123.3	7.92	16.573		
2,400.0	2,400.0	2,394.4	2,389.1	4.1	4.8	119.30	-68.1	121.4	139.7	131.4	8.26	16.903		
2,500.0	2,500.0	2,494.1	2,488.4	4.3	5.0	119.40	-72.5	128.6	148.2	139.6	8.61	17.207		
2,600.0	2,600.0	2,593.7	2,587.7	4.5	5.2	119.49	-76.9	135.9	156.7	147.7	8.96	17.488		
2,700.0	2,700.0	2,693.4	2,686.9	4.7	5.4	119.58	-81.2	143.2	165.2	155.9	9.31	17.747		
2,800.0	2,800.0	2,793.0	2,786.2	4.8	5.7	119.65	-85.6	150.4	173.7	164.0	9.66	17.988		
2,900.0	2,900.0	2,892.6	2,885.5	5.0	5.9	119.72	-90.0	157.7	182.2	172.2	10.01	18.212		
3,000.0	3,000.0	2,992.3	2,984.8	5.2	6.1	119.78	-94.4	164.9	190.7	180.4	10.35	18.421		
3,100.0	3,100.0	3,091.9	3,084.1	5.4	6.3	119.83	-98.7	172.2	199.2	188.5	10.70	18.616		
3,200.0	3,200.0	3,191.5	3,183.3	5.5	6.6	119.88	-103.1	179.5	207.7	196.7	11.05	18.799		
3,300.0	3,300.0	3,291.2	3,282.6	5.7	6.8	119.93	-107.5	186.7	216.2	204.8	11.40	18.971		
3,400.0	3,400.0	3,390.8	3,381.9	5.9	7.0	119.97	-111.9	194.0	224.7	213.0	11.75	19.133		
3,500.0	3,500.0	3,490.5	3,481.2	6.1	7.3	120.02	-116.3	201.2	233.3	221.2	12.09	19.285		
3,600.0	3,600.0	3,590.1	3,580.4	6.2	7.5	120.05	-120.6	208.5	241.8	229.3	12.44	19.429		
3,700.0	3,700.0	3,689.7	3,679.7	6.4	7.7	120.09	-125.0	215.8	250.3	237.5	12.79	19.565		
3,800.0	3,800.0	3,789.4	3,779.0	6.6	7.9	120.12	-129.4	223.0	258.8	245.6	13.14	19.694		
3,900.0	3,900.0	3,889.0	3,878.3	6.8	8.2	120.15	-133.8	230.3	267.3	253.8	13.49	19.816		
4,000.0	4,000.0	3,988.6	3,977.5	6.9	8.4	120.18	-138.1	237.5	275.8	262.0	13.84	19.932		
4,100.0	4,100.0	4,088.2	4,076.8	7.1	8.6	118.23	-142.5	244.8	284.7	270.5	14.18	20.082		
4,200.0	4,200.0	4,187.7	4,175.9	7.3	8.8	118.61	-146.9	252.0	294.5	279.9	14.52	20.277		
4,300.0	4,299.9	4,287.1	4,274.9	7.5	9.1	119.25	-151.2	259.3	305.1	290.2	14.87	20.523		
4,400.0	4,399.7	4,386.3	4,373.7	7.6	9.3	120.10	-155.6	266.5	316.6	301.4	15.21	20.816		
4,500.0	4,499.4	4,485.3	4,472.4	7.8	9.5	121.14	-160.0	273.7	329.1	313.6	15.56	21.157		
4,600.0	4,598.9	4,584.1	4,570.8	8.0	9.7	122.35	-164.3	280.9	342.7	326.8	15.91	21.543		
4,700.0	4,698.4	4,682.8	4,669.2	8.2	10.0	123.64	-168.6	288.1	356.7	340.4	16.27	21.929		
4,800.0	4,797.9	4,781.5	4,767.5	8.4	10.2	124.84	-173.0	295.3	370.9	354.3	16.63	22.304		
4,900.0	4,897.3	4,880.2	4,865.8	8.6	10.4	125.94	-177.3	302.5	385.3	368.3	17.00	22.667		
5,000.0	4,996.8	4,978.9	4,964.2	8.8	10.6	126.97	-181.6	309.7	399.8	382.4	17.37	23.020		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													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		
5,100.0	5,096.3	5,077.6	5,062.5	9.0	10.9	127.92	-186.0	316.9	414.4	396.7	17.74	23.362			
5,200.0	5,195.8	5,176.3	5,160.9	9.2	11.1	128.81	-190.3	324.1	429.1	411.0	18.11	23.693			
5,300.0	5,295.3	5,275.0	5,259.2	9.4	11.3	129.64	-194.6	331.3	443.9	425.4	18.49	24.014			
5,400.0	5,394.7	5,373.7	5,357.5	9.6	11.6	130.42	-199.0	338.5	458.8	440.0	18.86	24.325			
5,500.0	5,494.2	5,472.4	5,455.9	9.8	11.8	131.15	-203.3	345.7	473.8	454.6	19.24	24.626			
5,600.0	5,593.7	5,571.1	5,554.2	10.0	12.0	131.83	-207.6	352.9	488.8	469.2	19.62	24.919			
5,700.0	5,693.2	5,669.8	5,652.6	10.2	12.2	132.48	-212.0	360.0	504.0	484.0	20.00	25.202			
5,800.0	5,792.7	5,768.5	5,750.9	10.4	12.5	133.08	-216.3	367.2	519.1	498.8	20.38	25.477			
5,900.0	5,892.1	5,867.2	5,849.2	10.7	12.7	133.65	-220.6	374.4	534.4	513.6	20.76	25.744			
6,000.0	5,991.6	5,965.9	5,947.6	10.9	12.9	134.19	-225.0	381.6	549.6	528.5	21.14	26.003			
6,100.0	6,091.1	6,064.6	6,045.9	11.1	13.1	134.70	-229.3	388.8	564.9	543.4	21.52	26.255			
6,200.0	6,190.6	6,163.2	6,144.3	11.3	13.4	135.19	-233.7	396.0	580.3	558.4	21.90	26.499			
6,300.0	6,290.1	6,261.9	6,242.6	11.5	13.6	135.65	-238.0	403.2	595.7	573.4	22.28	26.736			
6,400.0	6,389.5	6,360.6	6,340.9	11.8	13.8	136.08	-242.3	410.4	611.1	588.5	22.66	26.966			
6,500.0	6,489.0	6,459.3	6,439.3	12.0	14.0	136.50	-246.7	417.6	626.6	603.6	23.05	27.190			
6,600.0	6,588.5	6,776.6	6,749.2	12.2	14.4	134.26	-202.3	440.0	634.9	610.9	23.97	26.487			
6,700.0	6,688.0	7,149.8	7,020.3	12.4	14.8	115.50	43.8	459.0	594.2	568.7	25.52	23.284			
6,800.0	6,787.8	7,272.4	7,068.2	12.6	15.3	-74.40	156.3	462.1	540.3	514.3	26.01	20.776			
6,900.0	6,886.8	7,300.1	7,075.6	12.7	15.4	-87.42	183.0	462.5	493.3	467.4	25.91	19.039			
7,000.0	6,982.2	7,293.1	7,073.8	12.7	15.4	-90.22	176.2	462.4	462.6	436.8	25.77	17.952			
7,100.0	7,071.0	7,270.4	7,067.6	12.6	15.3	-88.65	154.4	462.0	451.9	426.3	25.65	17.615			
7,101.7	7,072.4	7,269.9	7,067.5	12.6	15.3	-88.59	154.0	462.0	451.9	426.3	25.65	17.616			
7,200.0	7,150.4	7,239.5	7,057.7	12.6	15.1	-84.09	125.1	461.4	461.2	435.6	25.56	18.042			
7,300.0	7,218.2	7,200.0	7,042.8	12.7	14.9	-77.09	88.6	460.5	486.9	461.5	25.37	19.193			
7,400.0	7,272.2	7,164.8	7,027.5	12.9	14.8	-69.78	56.9	459.4	523.8	498.8	25.00	20.948			
7,500.0	7,310.8	7,123.9	7,007.2	13.4	14.7	-61.92	21.4	458.1	566.9	542.6	24.34	23.290			
7,600.0	7,332.8	7,081.5	6,983.6	14.0	14.6	-54.66	-13.7	456.5	612.2	588.6	23.58	25.960			
7,700.0	7,338.0	7,038.3	6,957.0	14.8	14.5	-49.26	-47.7	454.7	656.7	633.6	23.19	28.325			
7,800.0	7,338.0	7,000.0	6,931.3	15.8	14.5	-47.29	-76.1	452.9	705.6	682.1	23.51	30.016			
7,900.0	7,338.0	6,963.5	6,905.1	16.9	14.5	-45.39	-101.4	451.1	760.9	737.1	23.88	31.859			
8,000.0	7,338.0	6,932.6	6,881.7	18.1	14.5	-43.78	-121.5	449.4	822.1	797.7	24.34	33.770			
8,100.0	7,338.0	6,900.0	6,855.9	19.4	14.4	-42.09	-141.3	447.6	888.2	863.4	24.78	35.846			
8,200.0	7,338.0	6,881.1	6,840.5	20.8	14.4	-41.13	-152.1	446.5	958.6	933.2	25.40	37.736			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 2C-5H-E267 - 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	90.05	0.0	27.9	27.9					
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	27.9	27.9	27.7	0.25	113.561		
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	27.9	27.9	27.4	0.60	46.956		
266.3	266.3	267.3	267.3	0.4	0.4	90.05	0.0	27.9	27.9	27.1	0.83	33.805 CC		
300.0	300.0	301.0	301.0	0.5	0.5	90.05	0.0	27.9	27.9	27.0	0.94	29.597 ES		
400.0	400.0	400.5	400.5	0.6	0.6	90.61	-0.3	28.8	28.8	27.5	1.29	22.271		
500.0	500.0	500.0	500.0	0.8	0.8	92.10	-1.1	31.3	31.3	29.6	1.64	19.066		
600.0	600.0	599.3	599.2	1.0	1.0	94.11	-2.5	35.3	35.5	33.5	1.99	17.833		
700.0	700.0	698.5	698.2	1.2	1.2	96.23	-4.5	41.1	41.4	39.1	2.34	17.704 SF		
800.0	800.0	797.4	796.8	1.3	1.4	98.19	-7.0	48.4	49.1	46.4	2.69	18.258		
900.0	900.0	896.1	895.0	1.5	1.6	99.89	-10.0	57.3	58.5	55.4	3.03	19.262		
1,000.0	1,000.0	994.4	992.7	1.7	1.9	101.30	-13.5	67.7	69.6	66.2	3.38	20.576		
1,100.0	1,100.0	1,093.1	1,090.6	1.9	2.1	102.44	-17.5	79.5	82.1	78.4	3.73	22.019		
1,200.0	1,200.0	1,192.3	1,189.0	2.0	2.4	103.29	-21.6	91.5	94.8	90.7	4.08	23.248		
1,300.0	1,300.0	1,291.5	1,287.4	2.2	2.7	103.94	-25.7	103.5	107.5	103.0	4.42	24.289		
1,400.0	1,400.0	1,390.6	1,385.7	2.4	2.9	104.45	-29.7	115.4	120.2	115.4	4.77	25.180		
1,500.0	1,500.0	1,489.8	1,484.1	2.6	3.2	104.86	-33.8	127.4	132.9	127.7	5.12	25.953		
1,600.0	1,600.0	1,589.0	1,582.5	2.7	3.5	105.20	-37.9	139.3	145.6	140.1	5.47	26.628		
1,700.0	1,700.0	1,688.2	1,680.9	2.9	3.8	105.49	-41.9	151.3	158.3	152.5	5.81	27.224		
1,800.0	1,800.0	1,787.4	1,779.3	3.1	4.0	105.73	-46.0	163.3	171.0	164.8	6.16	27.753		
1,900.0	1,900.0	1,886.6	1,877.6	3.3	4.3	105.94	-50.1	175.2	183.7	177.2	6.51	28.226		
2,000.0	2,000.0	1,985.8	1,976.0	3.4	4.6	106.12	-54.1	187.2	196.4	189.6	6.86	28.652		
2,100.0	2,100.0	2,084.9	2,074.4	3.6	4.9	106.28	-58.2	199.1	209.2	202.0	7.20	29.037		
2,200.0	2,200.0	2,184.1	2,172.8	3.8	5.1	106.43	-62.2	211.1	221.9	214.3	7.55	29.387		
2,300.0	2,300.0	2,283.3	2,271.1	4.0	5.4	106.55	-66.3	223.1	234.6	226.7	7.90	29.706		
2,400.0	2,400.0	2,382.5	2,369.5	4.1	5.7	106.67	-70.4	235.0	247.3	239.1	8.25	29.998		
2,500.0	2,500.0	2,481.7	2,467.9	4.3	6.0	106.77	-74.4	247.0	260.1	251.5	8.59	30.267		
2,600.0	2,600.0	2,580.9	2,566.3	4.5	6.3	106.86	-78.5	258.9	272.8	263.9	8.94	30.515		
2,700.0	2,700.0	2,680.1	2,664.7	4.7	6.5	106.95	-82.6	270.9	285.5	276.2	9.29	30.745		
2,800.0	2,800.0	2,779.2	2,763.0	4.8	6.8	107.03	-86.6	282.9	298.3	288.6	9.63	30.958		
2,900.0	2,900.0	2,878.4	2,861.4	5.0	7.1	107.10	-90.7	294.8	311.0	301.0	9.98	31.156		
3,000.0	3,000.0	2,977.6	2,959.8	5.2	7.4	107.16	-94.7	306.8	323.7	313.4	10.33	31.341		
3,100.0	3,100.0	3,076.8	3,058.2	5.4	7.7	107.22	-98.8	318.8	336.5	325.8	10.68	31.515		
3,200.0	3,200.0	3,176.0	3,156.5	5.5	7.9	107.28	-102.9	330.7	349.2	338.2	11.02	31.677		
3,300.0	3,300.0	3,275.2	3,254.9	5.7	8.2	107.33	-106.9	342.7	361.9	350.5	11.37	31.829		
3,400.0	3,400.0	3,374.4	3,353.3	5.9	8.5	107.38	-111.0	354.6	374.7	362.9	11.72	31.972		
3,500.0	3,500.0	3,473.5	3,451.7	6.1	8.8	107.42	-115.1	366.6	387.4	375.3	12.07	32.108		
3,600.0	3,600.0	3,572.7	3,550.1	6.2	9.1	107.47	-119.1	378.6	400.1	387.7	12.41	32.235		
3,700.0	3,700.0	3,671.9	3,648.4	6.4	9.3	107.51	-123.2	390.5	412.9	400.1	12.76	32.356		
3,800.0	3,800.0	3,771.1	3,746.8	6.6	9.6	107.54	-127.2	402.5	425.6	412.5	13.11	32.470		
3,900.0	3,900.0	3,870.3	3,845.2	6.8	9.9	107.58	-131.3	414.4	438.3	424.9	13.45	32.579		
4,000.0	4,000.0	3,969.5	3,943.6	6.9	10.2	107.61	-135.4	426.4	451.1	437.3	13.80	32.682		
4,100.0	4,100.0	4,068.6	4,041.9	7.1	10.5	105.57	-139.4	438.4	464.0	449.9	14.13	32.828		
4,200.0	4,200.0	4,167.7	4,140.2	7.3	10.7	105.77	-143.5	450.3	477.5	463.0	14.48	32.976		
4,300.0	4,299.9	4,266.6	4,238.3	7.5	11.0	106.15	-147.5	462.2	491.4	476.6	14.82	33.151		
4,400.0	4,399.7	4,365.4	4,336.2	7.6	11.3	106.68	-151.6	474.2	505.9	490.7	15.17	33.351		
4,500.0	4,499.4	4,464.0	4,434.0	7.8	11.6	107.35	-155.6	486.0	520.9	505.4	15.52	33.573		
4,600.0	4,598.9	4,562.4	4,531.6	8.0	11.9	108.17	-159.7	497.9	536.6	520.7	15.87	33.814		
4,700.0	4,698.4	4,660.7	4,629.1	8.2	12.1	109.13	-163.7	509.8	552.6	536.4	16.23	34.046		
4,800.0	4,797.9	4,758.9	4,726.6	8.4	12.4	110.03	-167.7	521.6	568.8	552.2	16.60	34.266		
4,900.0	4,897.3	4,857.2	4,824.1	8.6	12.7	110.89	-171.7	533.5	585.1	568.1	16.97	34.475		
5,000.0	4,996.8	4,955.5	4,921.6	8.8	13.0	111.69	-175.8	545.3	601.5	584.2	17.35	34.673		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													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		
5,100.0	5,096.3	5,053.8	5,019.1	9.0	13.2	112.46	-179.8	557.2	618.0	600.3	17.73	34.862			
5,200.0	5,195.8	5,152.1	5,116.6	9.2	13.5	113.18	-183.8	569.0	634.7	616.5	18.11	35.042			
5,300.0	5,295.3	5,250.4	5,214.1	9.4	13.8	113.87	-187.8	580.9	651.4	632.9	18.50	35.214			
5,400.0	5,394.7	5,348.7	5,311.6	9.6	14.1	114.52	-191.9	592.7	668.2	649.3	18.89	35.379			
5,500.0	5,494.2	5,447.0	5,409.1	9.8	14.4	115.14	-195.9	604.6	685.1	665.8	19.28	35.536			
5,600.0	5,593.7	5,545.3	5,506.6	10.0	14.6	115.73	-199.9	616.4	702.1	682.4	19.67	35.687			
5,700.0	5,693.2	5,643.6	5,604.1	10.2	14.9	116.30	-204.0	628.3	719.1	699.0	20.07	35.832			
5,800.0	5,792.7	5,741.9	5,701.6	10.4	15.2	116.84	-208.0	640.2	736.2	715.7	20.47	35.971			
5,900.0	5,892.1	5,840.2	5,799.1	10.7	15.5	117.35	-212.0	652.0	753.4	732.5	20.87	36.105			
6,000.0	5,991.6	5,938.5	5,896.6	10.9	15.8	117.84	-216.0	663.9	770.6	749.3	21.27	36.235			
6,100.0	6,091.1	6,036.8	5,994.0	11.1	16.0	118.31	-220.1	675.7	787.8	766.2	21.67	36.359			
6,200.0	6,190.6	6,135.1	6,091.5	11.3	16.3	118.76	-224.1	687.6	805.2	783.1	22.07	36.479			
6,300.0	6,290.1	6,233.4	6,189.0	11.5	16.6	119.19	-228.1	699.4	822.5	800.1	22.48	36.595			
6,400.0	6,389.5	6,331.7	6,286.5	11.8	16.9	119.60	-232.1	711.3	839.9	817.1	22.88	36.708			
6,500.0	6,489.0	6,430.0	6,384.0	12.0	17.1	120.00	-236.2	723.1	857.4	834.1	23.29	36.816			
6,600.0	6,588.5	6,528.3	6,481.5	12.2	17.4	120.38	-240.2	735.0	874.9	851.2	23.70	36.921			
6,700.0	6,688.0	6,626.6	6,579.0	12.4	17.7	120.74	-244.2	746.8	892.4	868.3	24.10	37.023			
6,800.0	6,787.8	6,725.4	6,677.1	12.6	18.0	-50.92	-248.3	758.8	906.8	882.2	24.59	36.883			
6,900.0	6,886.8	7,029.2	6,973.3	12.7	18.6	-60.97	-209.9	794.8	907.6	882.5	25.12	36.133			
7,000.0	6,982.2	7,294.2	7,186.5	12.7	18.9	-77.72	-58.7	820.7	877.3	851.8	25.46	34.453			
7,100.0	7,071.0	7,346.0	7,218.9	12.6	19.0	-84.53	-18.5	824.6	847.0	821.5	25.43	33.307			
7,200.0	7,150.4	7,343.2	7,217.2	12.6	19.0	-86.59	-20.8	824.4	825.6	800.3	25.38	32.533			
7,300.0	7,218.2	7,320.4	7,203.3	12.7	19.0	-86.14	-38.8	822.7	814.9	789.5	25.42	32.052			
7,354.7	7,249.6	7,303.6	7,192.7	12.8	18.9	-85.17	-51.7	821.4	813.4	787.9	25.51	31.882			
7,400.0	7,272.2	7,288.2	7,182.6	12.9	18.9	-84.06	-63.2	820.2	814.4	788.8	25.59	31.829			
7,500.0	7,310.8	7,250.0	7,156.1	13.4	18.8	-80.77	-90.6	817.0	822.8	797.0	25.89	31.778			
7,600.0	7,332.8	7,210.7	7,127.2	14.0	18.8	-76.85	-116.9	813.5	838.5	812.1	26.34	31.829			
7,700.0	7,338.0	7,168.7	7,094.3	14.8	18.7	-72.96	-142.7	809.5	859.2	832.3	26.93	31.907			
7,800.0	7,338.0	7,131.7	7,063.8	15.8	18.7	-70.90	-163.4	805.8	887.0	859.3	27.69	32.035			
7,900.0	7,338.0	7,100.0	7,036.7	16.9	18.7	-69.09	-179.6	802.5	922.8	894.2	28.54	32.328			
8,000.0	7,338.0	7,075.2	7,014.9	18.1	18.7	-67.66	-191.1	799.8	966.2	936.7	29.50	32.757			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 2A-5H-E267 - 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 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	-88.29	0.6	-20.2	20.2	19.3	0.94	21.447		
400.0	400.0	399.4	399.4	0.6	0.7	-83.91	2.4	-22.1	22.3	21.0	1.29	17.213		
500.0	500.0	499.0	498.8	0.8	0.8	-78.21	5.3	-25.3	25.9	24.2	1.64	15.739		
600.0	600.0	598.6	598.3	1.0	1.0	-72.74	9.2	-29.6	31.0	29.0	2.00	15.549		
700.0	700.0	698.4	698.0	1.2	1.2	-68.73	13.2	-34.0	36.5	34.2	2.35	15.576		
800.0	800.0	798.3	797.6	1.3	1.4	-65.79	17.3	-38.4	42.2	39.5	2.70	15.649		
900.0	900.0	898.1	897.2	1.5	1.6	-63.55	21.3	-42.8	47.9	44.9	3.04	15.735		
1,000.0	1,000.0	997.9	996.9	1.7	1.8	-61.78	25.3	-47.2	53.7	50.3	3.39	15.822		
1,100.0	1,100.0	1,097.7	1,096.5	1.9	2.0	-60.36	29.4	-51.6	59.5	55.8	3.74	15.904		
1,200.0	1,200.0	1,197.5	1,196.2	2.0	2.2	-59.20	33.4	-56.1	65.4	61.3	4.09	15.980		
1,300.0	1,300.0	1,297.4	1,295.8	2.2	2.4	-58.22	37.5	-60.5	71.2	66.8	4.44	16.049		
1,400.0	1,400.0	1,397.2	1,395.4	2.4	2.6	-57.40	41.5	-64.9	77.1	72.4	4.79	16.112		
1,500.0	1,500.0	1,497.0	1,495.1	2.6	2.8	-56.69	45.5	-69.3	83.0	77.9	5.14	16.169		
1,600.0	1,600.0	1,596.8	1,594.7	2.7	3.0	-56.08	49.6	-73.7	89.0	83.5	5.48	16.221		
1,700.0	1,700.0	1,696.6	1,694.4	2.9	3.2	-55.54	53.6	-78.1	94.9	89.1	5.83	16.268		
1,800.0	1,800.0	1,796.5	1,794.0	3.1	3.4	-55.07	57.6	-82.5	100.8	94.6	6.18	16.311		
1,900.0	1,900.0	1,896.3	1,893.7	3.3	3.6	-54.64	61.7	-86.9	106.8	100.2	6.53	16.350		
2,000.0	2,000.0	1,996.1	1,993.3	3.4	3.9	-54.27	65.7	-91.3	112.7	105.8	6.88	16.386		
2,100.0	2,100.0	2,095.9	2,092.9	3.6	4.1	-53.93	69.7	-95.7	118.7	111.4	7.23	16.419		
2,200.0	2,200.0	2,195.8	2,192.6	3.8	4.3	-53.62	73.8	-100.2	124.6	117.0	7.58	16.450		
2,300.0	2,300.0	2,295.6	2,292.2	4.0	4.5	-53.34	77.8	-104.6	130.6	122.7	7.92	16.478		
2,400.0	2,400.0	2,395.4	2,391.9	4.1	4.7	-53.09	81.9	-109.0	136.5	128.3	8.27	16.504		
2,500.0	2,500.0	2,495.2	2,491.5	4.3	4.9	-52.85	85.9	-113.4	142.5	133.9	8.62	16.529		
2,600.0	2,600.0	2,595.0	2,591.1	4.5	5.1	-52.64	89.9	-117.8	148.5	139.5	8.97	16.551		
2,700.0	2,700.0	2,694.9	2,690.8	4.7	5.3	-52.44	94.0	-122.2	154.4	145.1	9.32	16.573		
2,800.0	2,800.0	2,794.7	2,790.4	4.8	5.5	-52.26	98.0	-126.6	160.4	150.7	9.67	16.592		
2,900.0	2,900.0	2,894.5	2,890.1	5.0	5.7	-52.09	102.0	-131.0	166.4	156.4	10.02	16.611		
3,000.0	3,000.0	2,994.3	2,989.7	5.2	5.9	-51.93	106.1	-135.4	172.3	162.0	10.36	16.629		
3,100.0	3,100.0	3,094.1	3,089.3	5.4	6.1	-51.78	110.1	-139.8	178.3	167.6	10.71	16.645		
3,200.0	3,200.0	3,194.0	3,189.0	5.5	6.3	-51.65	114.1	-144.3	184.3	173.2	11.06	16.660		
3,300.0	3,300.0	3,293.8	3,288.6	5.7	6.5	-51.52	118.2	-148.7	190.3	178.8	11.41	16.675		
3,400.0	3,400.0	3,393.6	3,388.3	5.9	6.7	-51.39	122.2	-153.1	196.2	184.5	11.76	16.689		
3,500.0	3,500.0	3,493.4	3,487.9	6.1	6.9	-51.28	126.3	-157.5	202.2	190.1	12.11	16.702		
3,600.0	3,600.0	3,593.2	3,587.6	6.2	7.1	-51.17	130.3	-161.9	208.2	195.7	12.46	16.714		
3,700.0	3,700.0	3,693.1	3,687.2	6.4	7.3	-51.07	134.3	-166.3	214.2	201.4	12.80	16.726		
3,800.0	3,800.0	3,792.9	3,786.8	6.6	7.5	-50.97	138.4	-170.7	220.1	207.0	13.15	16.738		
3,900.0	3,900.0	3,892.7	3,886.5	6.8	7.7	-50.88	142.4	-175.1	226.1	212.6	13.50	16.748		
4,000.0	4,000.0	3,992.5	3,986.1	6.9	7.9	-50.80	146.4	-179.5	232.1	218.3	13.85	16.758		
4,100.0	4,100.0	4,092.4	4,085.8	7.1	8.1	-52.89	150.5	-183.9	237.6	223.4	14.20	16.735		
4,200.0	4,200.0	4,192.3	4,185.5	7.3	8.3	-53.27	154.5	-188.4	242.0	227.4	14.55	16.634		
4,300.0	4,299.9	4,292.1	4,285.2	7.5	8.5	-53.97	158.6	-192.8	245.4	230.5	14.90	16.468		
4,400.0	4,399.7	4,392.0	4,384.9	7.6	8.7	-54.98	162.6	-197.2	247.8	232.5	15.25	16.244		
4,500.0	4,499.4	4,491.8	4,484.5	7.8	8.9	-56.31	166.6	-201.6	249.3	233.7	15.61	15.968		
4,600.0	4,598.9	4,591.6	4,584.1	8.0	9.1	-57.97	170.7	-206.0	250.1	234.1	15.98	15.649		
4,700.0	4,698.4	4,691.3	4,683.6	8.2	9.3	-59.74	174.7	-210.4	250.7	234.3	16.35	15.330		
4,800.0	4,797.9	4,791.0	4,783.1	8.4	9.5	-61.50	178.7	-214.8	251.6	234.8	16.73	15.034		
4,900.0	4,897.3	4,890.7	4,882.6	8.6	9.7	-63.24	182.8	-219.2	252.7	235.6	17.12	14.759		
5,000.0	4,996.8	4,990.4	4,982.2	8.8	9.9	-64.97	186.8	-223.6	254.0	236.5	17.51	14.506		
5,100.0	5,096.3	5,090.0	5,081.7	9.0	10.1	-66.68	190.8	-228.0	255.6	237.7	17.91	14.272		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference: S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2A-5H-E267 - Hz - Plan #1															
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	5,195.8	5,189.7	5,181.2	9.2	10.3	-68.37	194.9	-232.4	257.4	239.1	18.32	14.056			
5,300.0	5,295.3	5,289.4	5,280.7	9.4	10.5	-70.03	198.9	-236.8	259.5	240.7	18.72	13.857			
5,400.0	5,394.7	5,389.1	5,380.2	9.6	10.7	-71.67	202.9	-241.2	261.7	242.6	19.14	13.674			
5,500.0	5,494.2	5,488.8	5,479.8	9.8	11.0	-73.27	207.0	-245.6	264.2	244.6	19.56	13.507			
5,600.0	5,593.7	5,588.5	5,579.3	10.0	11.2	-74.85	211.0	-250.0	266.8	246.8	19.98	13.354			
5,700.0	5,693.2	5,688.2	5,678.8	10.2	11.4	-76.39	215.0	-254.5	269.7	249.3	20.41	13.215			
5,800.0	5,792.7	5,787.9	5,778.3	10.4	11.6	-77.90	219.0	-258.9	272.7	251.9	20.84	13.088			
5,900.0	5,892.1	5,887.6	5,877.8	10.7	11.8	-79.38	223.1	-263.3	276.0	254.7	21.27	12.973			
6,000.0	5,991.6	5,987.3	5,977.3	10.9	12.0	-80.82	227.1	-267.7	279.4	257.7	21.71	12.869			
6,100.0	6,091.1	6,087.0	6,076.9	11.1	12.2	-82.23	231.1	-272.1	283.0	260.8	22.15	12.776			
6,200.0	6,190.6	6,186.7	6,176.4	11.3	12.4	-83.60	235.2	-276.5	286.7	264.1	22.59	12.693			
6,300.0	6,290.1	6,286.4	6,275.9	11.5	12.6	-84.93	239.2	-280.9	290.6	267.6	23.03	12.618			
6,400.0	6,389.5	6,386.1	6,375.4	11.8	12.8	-86.23	243.2	-285.3	294.7	271.2	23.48	12.553			
6,500.0	6,489.0	6,485.8	6,474.9	12.0	13.0	-87.49	247.3	-289.7	298.9	275.0	23.92	12.495			
6,600.0	6,588.5	6,586.6	6,575.6	12.2	13.2	-89.01	249.9	-294.1	303.2	278.8	24.36	12.447			
6,700.0	6,688.0	6,684.9	6,673.0	12.4	13.3	-93.03	238.4	-298.5	307.7	282.9	24.77	12.423			
6,800.0	6,787.8	6,775.8	6,760.1	12.6	13.3	88.38	213.1	-302.3	314.8	289.8	25.07	12.558			
6,900.0	6,886.8	6,862.7	6,838.6	12.7	13.3	78.50	176.3	-305.8	324.7	299.5	25.16	12.905			
7,000.0	6,982.2	6,946.3	6,908.2	12.7	13.3	73.12	130.1	-308.9	336.2	311.2	25.05	13.420			
7,100.0	7,071.0	7,027.3	6,968.5	12.6	13.3	68.73	76.1	-311.5	348.3	323.5	24.79	14.054			
7,200.0	7,150.4	7,106.4	7,019.4	12.6	13.4	65.14	15.8	-313.8	360.0	335.6	24.45	14.724			
7,300.0	7,218.2	7,183.9	7,060.8	12.7	13.6	62.31	-49.7	-315.6	370.5	346.4	24.16	15.336			
7,400.0	7,272.2	7,260.3	7,092.6	12.9	13.9	60.20	-119.0	-317.0	379.2	355.1	24.08	15.744			
7,500.0	7,310.8	7,335.8	7,114.7	13.4	14.3	58.75	-191.2	-318.0	385.5	361.1	24.39	15.807			
7,600.0	7,332.8	7,410.8	7,127.1	14.0	14.8	57.95	-265.1	-318.6	389.1	363.9	25.18	15.454			
7,700.0	7,338.0	7,491.3	7,130.0	14.8	15.4	57.77	-345.5	-318.7	390.0	363.5	26.50	14.715			
7,800.0	7,338.0	7,591.3	7,130.0	15.8	16.4	57.77	-445.5	-318.7	390.0	361.8	28.18	13.838			
7,900.0	7,338.0	7,691.3	7,130.0	16.9	17.5	57.77	-545.5	-318.7	390.0	359.9	30.06	12.974			
8,000.0	7,338.0	7,791.3	7,130.0	18.1	18.6	57.77	-645.5	-318.7	390.0	357.9	32.10	12.149			
8,100.0	7,338.0	7,891.3	7,130.0	19.4	19.9	57.77	-745.5	-318.7	390.0	355.7	34.28	11.376			
8,200.0	7,338.0	7,991.3	7,130.0	20.8	21.2	57.77	-845.5	-318.7	390.0	353.4	36.57	10.663			
8,300.0	7,338.0	8,091.3	7,130.0	22.2	22.6	57.77	-945.5	-318.7	390.0	351.0	38.96	10.011			
8,400.0	7,338.0	8,191.3	7,130.0	23.7	24.1	57.77	-1,045.5	-318.7	390.0	348.6	41.42	9.416			
8,500.0	7,338.0	8,291.3	7,130.0	25.2	25.5	57.77	-1,145.5	-318.7	390.0	346.0	43.94	8.875			
8,600.0	7,338.0	8,391.3	7,130.0	26.7	27.0	57.77	-1,245.5	-318.7	390.0	343.4	46.52	8.383			
8,700.0	7,338.0	8,491.3	7,130.0	28.3	28.6	57.77	-1,345.5	-318.7	390.0	340.8	49.14	7.936			
8,800.0	7,338.0	8,591.3	7,130.0	29.8	30.1	57.77	-1,445.5	-318.7	390.0	338.2	51.80	7.528			
8,900.0	7,338.0	8,691.3	7,130.0	31.4	31.7	57.77	-1,545.5	-318.7	390.0	335.5	54.50	7.156			
9,000.0	7,338.0	8,791.3	7,130.0	33.0	33.3	57.77	-1,645.5	-318.7	390.0	332.8	57.22	6.816			
9,100.0	7,338.0	8,891.3	7,130.0	34.7	34.9	57.77	-1,745.5	-318.7	390.0	330.0	59.96	6.504			
9,200.0	7,338.0	8,991.3	7,130.0	36.3	36.6	57.77	-1,845.5	-318.7	390.0	327.2	62.73	6.217			
9,300.0	7,338.0	9,091.3	7,130.0	38.0	38.2	57.77	-1,945.5	-318.7	390.0	324.5	65.51	5.953			
9,400.0	7,338.0	9,191.3	7,130.0	39.6	39.8	57.77	-2,045.5	-318.7	390.0	321.7	68.31	5.709			
9,500.0	7,338.0	9,291.3	7,130.0	41.3	41.5	57.77	-2,145.5	-318.7	390.0	318.8	71.13	5.483			
9,600.0	7,338.0	9,391.3	7,130.0	43.0	43.2	57.77	-2,245.5	-318.7	390.0	316.0	73.95	5.273			
9,700.0	7,338.0	9,491.3	7,130.0	44.6	44.8	57.77	-2,345.5	-318.7	390.0	313.2	76.79	5.078			
9,800.0	7,338.0	9,591.3	7,130.0	46.3	46.5	57.77	-2,445.5	-318.7	390.0	310.3	79.64	4.897			
9,900.0	7,338.0	9,691.3	7,130.0	48.0	48.2	57.77	-2,545.5	-318.7	390.0	307.5	82.50	4.727			
10,000.0	7,338.0	9,791.3	7,130.0	49.7	49.9	57.77	-2,645.5	-318.7	390.0	304.6	85.36	4.568			
10,100.0	7,338.0	9,891.3	7,130.0	51.4	51.6	57.77	-2,745.5	-318.7	390.0	301.7	88.24	4.420			
10,200.0	7,338.0	9,991.3	7,130.0	53.1	53.3	57.77	-2,845.5	-318.7	390.0	298.9	91.11	4.280			
10,300.0	7,338.0	10,091.3	7,130.0	54.8	55.0	57.77	-2,945.5	-318.7	390.0	296.0	94.00	4.149			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 2A-5H-E267 - 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)				
10,400.0	7,338.0	10,191.3	7,130.0	56.5	56.7	57.77	-3,045.5	-318.7	390.0	293.1	96.89	4.025		
10,500.0	7,338.0	10,291.3	7,130.0	58.2	58.4	57.77	-3,145.5	-318.7	390.0	290.2	99.79	3.908		
10,600.0	7,338.0	10,391.3	7,130.0	59.9	60.1	57.77	-3,245.5	-318.7	390.0	287.3	102.69	3.798		
10,700.0	7,338.0	10,491.3	7,130.0	61.6	61.8	57.77	-3,345.5	-318.7	390.0	284.4	105.59	3.693		
10,800.0	7,338.0	10,591.3	7,130.0	63.4	63.5	57.77	-3,445.5	-318.7	390.0	281.5	108.50	3.594		
10,900.0	7,338.0	10,691.3	7,130.0	65.1	65.2	57.77	-3,545.5	-318.7	390.0	278.6	111.41	3.500		
11,000.0	7,338.0	10,791.3	7,130.0	66.8	66.9	57.77	-3,645.5	-318.7	390.0	275.6	114.32	3.411		
11,100.0	7,338.0	10,891.3	7,130.0	68.5	68.7	57.77	-3,745.5	-318.7	390.0	272.7	117.24	3.326		
11,200.0	7,338.0	10,991.3	7,130.0	70.3	70.4	57.77	-3,845.5	-318.7	390.0	269.8	120.16	3.245		
11,300.0	7,338.0	11,091.3	7,130.0	72.0	72.1	57.77	-3,945.5	-318.7	390.0	266.9	123.08	3.168		
11,400.0	7,338.0	11,191.3	7,130.0	73.7	73.8	57.77	-4,045.5	-318.7	390.0	264.0	126.01	3.095		
11,500.0	7,338.0	11,291.3	7,130.0	75.4	75.6	57.77	-4,145.5	-318.7	390.0	261.0	128.94	3.024		
11,600.0	7,338.0	11,391.3	7,130.0	77.2	77.3	57.77	-4,245.5	-318.7	390.0	258.1	131.87	2.957		
11,700.0	7,338.0	11,491.3	7,130.0	78.9	79.0	57.77	-4,345.5	-318.7	390.0	255.2	134.80	2.893		
11,800.0	7,338.0	11,591.3	7,130.0	80.6	80.7	57.77	-4,445.5	-318.7	390.0	252.2	137.73	2.831		
11,900.0	7,338.0	11,691.3	7,130.0	82.4	82.5	57.77	-4,545.5	-318.7	390.0	249.3	140.67	2.772		
12,000.0	7,338.0	11,791.3	7,130.0	84.1	84.2	57.77	-4,645.5	-318.7	390.0	246.4	143.61	2.716		
12,100.0	7,338.0	11,891.3	7,130.0	85.8	85.9	57.77	-4,745.5	-318.7	390.0	243.4	146.54	2.661		
12,200.0	7,338.0	11,991.3	7,130.0	87.6	87.7	57.77	-4,845.5	-318.7	390.0	240.5	149.48	2.609		
12,300.0	7,338.0	12,091.3	7,130.0	89.3	89.4	57.77	-4,945.5	-318.7	390.0	237.5	152.43	2.558		
12,400.0	7,338.0	12,191.3	7,130.0	91.0	91.1	57.77	-5,045.5	-318.7	390.0	234.6	155.37	2.510		
12,500.0	7,338.0	12,291.3	7,130.0	92.8	92.9	57.77	-5,145.5	-318.7	390.0	231.7	158.31	2.463		
12,600.0	7,338.0	12,391.3	7,130.0	94.5	94.6	57.77	-5,245.5	-318.7	390.0	228.7	161.26	2.418		
12,700.0	7,338.0	12,491.3	7,130.0	96.3	96.3	57.77	-5,345.5	-318.7	390.0	225.8	164.20	2.375		
12,800.0	7,338.0	12,591.3	7,130.0	98.0	98.1	57.77	-5,445.5	-318.7	390.0	222.8	167.15	2.333		
12,900.0	7,338.0	12,691.3	7,130.0	99.7	99.8	57.77	-5,545.5	-318.7	390.0	219.9	170.10	2.293		
13,000.0	7,338.0	12,791.3	7,130.0	101.5	101.6	57.77	-5,645.5	-318.7	390.0	216.9	173.05	2.254		
13,100.0	7,338.0	12,891.3	7,130.0	103.2	103.3	57.77	-5,745.5	-318.7	390.0	214.0	176.00	2.216		
13,200.0	7,338.0	12,991.3	7,130.0	105.0	105.0	57.77	-5,845.5	-318.7	390.0	211.0	178.95	2.179		
13,300.0	7,338.0	13,091.3	7,130.0	106.7	106.8	57.77	-5,945.5	-318.7	390.0	208.1	181.90	2.144		
13,400.0	7,338.0	13,191.3	7,130.0	108.4	108.5	57.77	-6,045.5	-318.7	390.0	205.1	184.85	2.110		
13,500.0	7,338.0	13,291.3	7,130.0	110.2	110.3	57.77	-6,145.5	-318.7	390.0	202.2	187.80	2.076		
13,600.0	7,338.0	13,391.3	7,130.0	111.9	112.0	57.77	-6,245.5	-318.7	390.0	199.2	190.76	2.044		
13,700.0	7,338.0	13,491.3	7,130.0	113.7	113.7	57.77	-6,345.5	-318.7	390.0	196.3	193.71	2.013		
13,800.0	7,338.0	13,591.3	7,130.0	115.4	115.5	57.77	-6,445.5	-318.7	390.0	193.3	196.67	1.983		
13,900.0	7,338.0	13,691.3	7,130.0	117.1	117.2	57.77	-6,545.5	-318.7	390.0	190.3	199.62	1.954		
14,000.0	7,338.0	13,791.3	7,130.0	118.9	119.0	57.77	-6,645.5	-318.7	390.0	187.4	202.58	1.925		
14,100.0	7,338.0	13,891.3	7,130.0	120.6	120.7	57.77	-6,745.5	-318.7	390.0	184.4	205.53	1.897		
14,200.0	7,338.0	13,991.3	7,130.0	122.4	122.5	57.77	-6,845.5	-318.7	390.0	181.5	208.49	1.870		
14,300.0	7,338.0	14,091.3	7,130.0	124.1	124.2	57.77	-6,945.5	-318.7	390.0	178.5	211.45	1.844		
14,400.0	7,338.0	14,191.3	7,130.0	125.9	125.9	57.77	-7,045.5	-318.7	390.0	175.6	214.41	1.819		
14,500.0	7,338.0	14,291.3	7,130.0	127.6	127.7	57.77	-7,145.5	-318.7	390.0	172.6	217.36	1.794		
14,600.0	7,338.0	14,391.3	7,130.0	129.4	129.4	57.77	-7,245.5	-318.7	390.0	169.6	220.32	1.770		
14,700.0	7,338.0	14,491.3	7,130.0	131.1	131.2	57.77	-7,345.5	-318.7	390.0	166.7	223.28	1.747		
14,800.0	7,338.0	14,591.3	7,130.0	132.9	132.9	57.77	-7,445.5	-318.7	390.0	163.7	226.24	1.724		
14,900.0	7,338.0	14,691.3	7,130.0	134.6	134.7	57.77	-7,545.5	-318.7	390.0	160.8	229.20	1.701		
15,000.0	7,338.0	14,791.3	7,130.0	136.3	136.4	57.77	-7,645.5	-318.7	390.0	157.8	232.16	1.680		
15,100.0	7,338.0	14,891.3	7,130.0	138.1	138.2	57.77	-7,745.5	-318.7	390.0	154.8	235.12	1.659		
15,104.5	7,338.0	14,895.9	7,130.0	138.2	138.2	57.77	-7,750.1	-318.7	390.0	154.7	235.26	1.658		
15,117.3	7,338.0	14,908.6	7,130.0	138.4	138.5	57.77	-7,762.8	-318.7	390.0	154.3	235.64	1.655 SF		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft		
Survey Program: 0-MWD													Offset Well Error:		0.0 ft	
Reference													S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2C-5H-E267 - Hz - Plan #1			
Reference				Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning			
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	19.6	19.6							
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	19.6	19.6	19.3	0.25	79.492				
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.60	32.869				
300.0	300.0	301.0	301.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	0.94	20.718				
400.0	400.0	401.0	401.0	0.6	0.6	90.05	0.0	19.6	19.6	18.3	1.29	15.126				
466.3	466.3	467.3	467.3	0.8	0.8	90.05	0.0	19.6	19.6	18.0	1.52	12.829 CC				
500.0	500.0	501.0	501.0	0.8	0.8	90.05	0.0	19.6	19.6	17.9	1.64	11.911 ES				
600.0	600.0	600.7	600.7	1.0	1.0	89.18	0.3	20.4	20.4	18.4	1.99	10.245				
700.0	700.0	700.3	700.2	1.2	1.2	86.98	1.2	22.8	22.9	20.5	2.34	9.783				
800.0	800.0	799.8	799.6	1.3	1.4	84.22	2.7	26.9	27.1	24.4	2.69	10.075				
900.0	900.0	899.5	899.2	1.5	1.5	81.75	4.7	32.1	32.5	29.4	3.04	10.692				
1,000.0	1,000.0	999.4	998.9	1.7	1.7	79.97	6.6	37.3	37.9	34.6	3.39	11.205				
1,100.0	1,100.0	1,099.2	1,098.6	1.9	1.9	78.64	8.5	42.5	43.4	39.7	3.73	11.630				
1,200.0	1,200.0	1,199.1	1,198.3	2.0	2.1	77.61	10.5	47.7	48.9	44.9	4.08	11.987				
1,300.0	1,300.0	1,298.9	1,298.0	2.2	2.3	76.78	12.4	52.9	54.5	50.0	4.43	12.291				
1,400.0	1,400.0	1,398.7	1,397.7	2.4	2.5	76.11	14.4	58.2	60.0	55.2	4.78	12.552				
1,500.0	1,500.0	1,498.6	1,497.4	2.6	2.7	75.56	16.3	63.4	65.5	60.4	5.13	12.779				
1,600.0	1,600.0	1,598.4	1,597.1	2.7	2.9	75.09	18.3	68.6	71.1	65.6	5.48	12.979				
1,700.0	1,700.0	1,698.3	1,696.7	2.9	3.1	74.68	20.2	73.8	76.6	70.8	5.83	13.155				
1,800.0	1,800.0	1,798.1	1,796.4	3.1	3.3	74.33	22.2	79.0	82.2	76.0	6.17	13.311				
1,900.0	1,900.0	1,898.0	1,896.1	3.3	3.5	74.03	24.1	84.2	87.8	81.2	6.52	13.452				
2,000.0	2,000.0	1,997.8	1,995.8	3.4	3.7	73.76	26.1	89.5	93.3	86.4	6.87	13.578				
2,100.0	2,100.0	2,097.7	2,095.5	3.6	3.9	73.53	28.0	94.7	98.9	91.7	7.22	13.692				
2,200.0	2,200.0	2,197.5	2,195.2	3.8	4.1	73.31	29.9	99.9	104.4	96.9	7.57	13.797				
2,300.0	2,300.0	2,297.3	2,294.9	4.0	4.3	73.12	31.9	105.1	110.0	102.1	7.92	13.892				
2,400.0	2,400.0	2,397.2	2,394.6	4.1	4.5	72.95	33.8	110.3	115.6	107.3	8.27	13.979				
2,500.0	2,500.0	2,497.0	2,494.3	4.3	4.7	72.79	35.8	115.5	121.1	112.5	8.62	14.059				
2,600.0	2,600.0	2,596.9	2,593.9	4.5	4.9	72.65	37.7	120.7	126.7	117.7	8.96	14.133				
2,700.0	2,700.0	2,696.7	2,693.6	4.7	5.1	72.52	39.7	126.0	132.3	122.9	9.31	14.202				
2,800.0	2,800.0	2,796.6	2,793.3	4.8	5.3	72.40	41.6	131.2	137.8	128.2	9.66	14.266				
2,900.0	2,900.0	2,896.4	2,893.0	5.0	5.5	72.29	43.6	136.4	143.4	133.4	10.01	14.325				
3,000.0	3,000.0	2,996.3	2,992.7	5.2	5.7	72.19	45.5	141.6	149.0	138.6	10.36	14.380				
3,100.0	3,100.0	3,096.1	3,092.4	5.4	5.9	72.09	47.4	146.8	154.5	143.8	10.71	14.432				
3,200.0	3,200.0	3,195.9	3,192.1	5.5	6.1	72.00	49.4	152.0	160.1	149.0	11.06	14.481				
3,300.0	3,300.0	3,295.8	3,291.8	5.7	6.3	71.92	51.3	157.2	165.7	154.3	11.40	14.526				
3,400.0	3,400.0	3,395.6	3,391.5	5.9	6.5	71.84	53.3	162.5	171.2	159.5	11.75	14.569				
3,500.0	3,500.0	3,495.5	3,491.2	6.1	6.7	71.77	55.2	167.7	176.8	164.7	12.10	14.610				
3,600.0	3,600.0	3,595.3	3,590.8	6.2	6.9	71.70	57.2	172.9	182.4	169.9	12.45	14.648				
3,700.0	3,700.0	3,695.2	3,690.5	6.4	7.1	71.64	59.1	178.1	188.0	175.2	12.80	14.684				
3,800.0	3,800.0	3,795.0	3,790.2	6.6	7.3	71.58	61.1	183.3	193.5	180.4	13.15	14.719				
3,900.0	3,900.0	3,894.9	3,889.9	6.8	7.5	71.52	63.0	188.5	199.1	185.6	13.50	14.751				
4,000.0	4,000.0	3,994.7	3,989.6	6.9	7.7	71.47	65.0	193.7	204.7	190.8	13.85	14.782				
4,100.0	4,100.0	4,094.6	4,089.3	7.1	7.9	71.42	66.9	199.0	209.9	195.7	14.20	14.787				
4,200.0	4,200.0	4,194.4	4,189.0	7.3	8.1	71.37	68.8	204.2	214.6	200.1	14.55	14.752				
4,300.0	4,299.9	4,294.3	4,288.7	7.5	8.3	71.32	70.8	209.4	218.7	203.8	14.90	14.680				
4,400.0	4,399.7	4,394.1	4,388.3	7.6	8.5	71.27	72.7	214.6	222.4	207.1	15.26	14.577				
4,500.0	4,499.4	4,493.8	4,487.9	7.8	8.7	71.22	74.7	219.8	225.7	210.1	15.62	14.451				
4,600.0	4,598.9	4,593.3	4,587.3	8.0	8.9	71.17	76.6	225.0	228.8	212.8	15.99	14.310				
4,700.0	4,698.4	4,692.9	4,686.7	8.2	9.1	71.12	78.6	230.2	232.1	215.7	16.36	14.182				
4,800.0	4,797.9	4,792.4	4,786.1	8.4	9.3	80.66	80.5	235.4	235.7	218.9	16.75	14.074				
4,900.0	4,897.3	4,892.0	4,885.5	8.6	9.5	82.75	82.4	240.6	239.6	222.5	17.13	13.985				
5,000.0	4,996.8	4,991.5	4,984.9	8.8	9.7	84.77	84.4	245.8	243.9	226.4	17.53	13.914				

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													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		
5,100.0	5,096.3	5,091.1	5,084.2	9.0	9.9	86.72	86.3	251.0	248.4	230.5	17.93	13.859			
5,200.0	5,195.8	5,190.6	5,183.6	9.2	10.1	88.60	88.2	256.2	253.3	234.9	18.33	13.819			
5,300.0	5,295.3	5,290.1	5,283.0	9.4	10.2	90.41	90.2	261.4	258.4	239.6	18.73	13.791			
5,400.0	5,394.7	5,389.7	5,382.4	9.6	10.4	92.15	92.1	266.6	263.7	244.6	19.14	13.775			
5,500.0	5,494.2	5,489.2	5,481.8	9.8	10.6	93.81	94.1	271.8	269.3	249.7	19.56	13.770			
5,600.0	5,593.7	5,588.8	5,581.2	10.0	10.8	95.41	96.0	277.0	275.1	255.1	19.97	13.775			
5,700.0	5,693.2	5,688.3	5,680.6	10.2	11.0	96.94	97.9	282.2	281.1	260.7	20.39	13.788			
5,800.0	5,792.7	5,787.8	5,780.0	10.4	11.2	98.41	99.9	287.4	287.3	266.5	20.80	13.809			
5,900.0	5,892.1	5,887.4	5,879.3	10.7	11.4	99.81	101.8	292.6	293.7	272.4	21.22	13.837			
6,000.0	5,991.6	5,986.9	5,978.7	10.9	11.6	101.16	103.8	297.8	300.2	278.6	21.64	13.871			
6,100.0	6,091.1	6,086.5	6,078.1	11.1	11.8	102.44	105.7	303.0	306.9	284.9	22.06	13.911			
6,200.0	6,190.6	6,186.0	6,177.5	11.3	12.0	103.67	107.6	308.2	313.8	291.3	22.48	13.955			
6,300.0	6,290.1	6,285.6	6,276.9	11.5	12.2	104.85	109.6	313.4	320.8	297.9	22.91	14.004			
6,400.0	6,389.5	6,385.1	6,376.3	11.8	12.4	105.98	111.5	318.6	327.9	304.6	23.33	14.056			
6,500.0	6,489.0	6,484.6	6,475.7	12.0	12.6	107.06	113.5	323.8	335.1	311.4	23.75	14.112			
6,600.0	6,588.5	6,578.9	6,569.8	12.2	12.8	108.10	114.9	328.8	342.7	318.5	24.15	14.189			
6,700.0	6,688.0	6,656.3	6,646.7	12.4	13.0	110.04	108.4	333.4	354.8	330.3	24.49	14.487			
6,800.0	6,787.8	6,729.9	6,718.4	12.6	13.1	-58.87	92.7	338.5	371.6	346.8	24.78	14.997			
6,900.0	6,886.8	6,800.0	6,784.2	12.7	13.2	-60.00	69.4	343.9	388.2	363.3	24.83	15.635			
7,000.0	6,982.2	6,873.0	6,849.1	12.7	13.3	-57.99	36.7	350.0	403.5	378.8	24.62	16.389			
7,100.0	7,071.0	6,950.0	6,912.5	12.6	13.5	-56.47	-6.5	356.8	416.9	392.7	24.24	17.200			
7,200.0	7,150.4	7,012.8	6,959.5	12.6	13.7	-55.64	-47.7	362.5	427.7	403.9	23.79	17.976			
7,300.0	7,218.2	7,082.3	7,005.8	12.7	13.9	-55.40	-99.0	369.1	435.9	412.4	23.47	18.576			
7,400.0	7,272.2	7,150.0	7,044.7	12.9	14.3	-55.74	-154.0	375.5	441.2	417.8	23.45	18.815			
7,500.0	7,310.8	7,221.7	7,078.4	13.4	14.7	-56.75	-216.9	382.3	443.8	419.8	23.98	18.505			
7,600.0	7,332.8	7,292.2	7,103.6	14.0	15.2	-58.31	-282.3	388.8	443.8	418.6	25.13	17.661			
7,700.0	7,338.0	7,363.7	7,120.7	14.8	15.8	-60.38	-351.4	395.1	441.7	414.9	26.82	16.468			
7,720.7	7,338.0	7,378.8	7,123.2	15.0	16.0	-60.75	-366.3	396.4	441.5	414.4	27.18	16.243			
7,800.0	7,338.0	7,437.6	7,129.2	15.8	16.6	-61.74	-424.5	401.3	443.5	414.9	28.55	15.532			
7,900.0	7,338.0	7,527.6	7,130.0	16.9	17.5	-62.25	-514.3	408.4	450.0	419.5	30.50	14.753			
8,000.0	7,338.0	7,627.3	7,130.0	18.1	18.7	-62.71	-613.7	416.3	456.9	424.2	32.72	13.966			
8,100.0	7,338.0	7,727.0	7,130.0	19.4	20.0	-63.15	-713.0	424.1	463.9	428.8	35.10	13.218			
8,200.0	7,338.0	7,826.7	7,130.0	20.8	21.3	-63.58	-812.4	431.9	470.9	433.3	37.61	12.521			
8,300.0	7,338.0	7,931.2	7,130.0	22.2	22.7	-64.00	-916.6	439.7	477.7	437.4	40.31	11.851			
8,400.0	7,338.0	8,039.2	7,130.0	23.7	24.3	-64.33	-1,024.4	446.0	482.9	439.8	43.12	11.198			
8,500.0	7,338.0	8,147.4	7,130.0	25.2	25.8	-64.54	-1,132.5	450.2	486.4	440.4	46.00	10.575			
8,600.0	7,338.0	8,248.9	7,130.0	26.7	27.4	-64.68	-1,234.0	452.9	488.8	440.0	48.82	10.012			
8,700.0	7,338.0	8,348.8	7,130.0	28.3	28.9	-64.81	-1,333.9	455.5	491.2	439.5	51.68	9.505			
8,800.0	7,338.0	8,448.8	7,130.0	29.8	30.4	-64.94	-1,433.8	458.1	493.5	439.0	54.58	9.043			
8,900.0	7,338.0	8,548.8	7,130.0	31.4	32.0	-65.07	-1,533.8	460.8	495.9	438.4	57.52	8.622			
9,000.0	7,338.0	8,648.7	7,130.0	33.0	33.6	-65.19	-1,633.7	463.4	498.3	437.8	60.50	8.237			
9,100.0	7,338.0	8,748.7	7,130.0	34.7	35.2	-65.32	-1,733.6	466.0	500.7	437.2	63.50	7.884			
9,200.0	7,338.0	8,848.6	7,130.0	36.3	36.8	-65.44	-1,833.6	468.6	503.1	436.5	66.54	7.561			
9,300.0	7,338.0	8,948.6	7,130.0	38.0	38.4	-65.57	-1,933.5	471.2	505.4	435.8	69.59	7.263			
9,400.0	7,338.0	9,048.6	7,130.0	39.6	40.1	-65.69	-2,033.4	473.8	507.8	435.1	72.67	6.988			
9,500.0	7,338.0	9,148.5	7,130.0	41.3	41.7	-65.81	-2,133.4	476.5	510.2	434.4	75.77	6.733			
9,600.0	7,338.0	9,248.5	7,130.0	43.0	43.4	-65.93	-2,233.3	479.1	512.6	433.7	78.89	6.497			
9,700.0	7,338.0	9,348.5	7,130.0	44.6	45.0	-66.05	-2,333.2	481.7	515.0	433.0	82.03	6.278			
9,800.0	7,338.0	9,448.4	7,130.0	46.3	46.7	-66.17	-2,433.1	484.3	517.4	432.2	85.17	6.074			
9,900.0	7,338.0	9,548.4	7,130.0	48.0	48.4	-66.28	-2,533.1	486.9	519.8	431.4	88.34	5.884			
10,000.0	7,338.0	9,648.4	7,130.0	49.7	50.1	-66.40	-2,633.0	489.5	522.2	430.7	91.51	5.706			
10,100.0	7,338.0	9,748.3	7,130.0	51.4	51.7	-66.51	-2,732.9	492.2	524.6	429.9	94.70	5.539			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2C-5H-E267 - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
10,200.0	7,338.0	9,848.3	7,130.0	53.1	53.4	-66.63	-2,832.9	494.8	527.0	429.1	97.90	5.383		
10,300.0	7,338.0	9,948.3	7,130.0	54.8	55.1	-66.74	-2,932.8	497.4	529.4	428.3	101.11	5.236		
10,400.0	7,338.0	10,048.2	7,130.0	56.5	56.8	-66.85	-3,032.7	500.0	531.8	427.5	104.33	5.097		
10,500.0	7,338.0	10,148.2	7,130.0	58.2	58.5	-66.96	-3,132.7	502.6	534.2	426.6	107.56	4.967		
10,600.0	7,338.0	10,248.2	7,130.0	59.9	60.2	-67.07	-3,232.6	505.2	536.6	425.8	110.80	4.843		
10,700.0	7,338.0	10,348.1	7,130.0	61.6	61.9	-67.18	-3,332.5	507.9	539.0	425.0	114.04	4.727		
10,800.0	7,338.0	10,448.1	7,130.0	63.4	63.6	-67.29	-3,432.5	510.5	541.4	424.1	117.29	4.616		
10,900.0	7,338.0	10,548.1	7,130.0	65.1	65.4	-67.39	-3,532.4	513.1	543.8	423.3	120.56	4.511		
11,000.0	7,338.0	10,648.0	7,130.0	66.8	67.1	-67.50	-3,632.3	515.7	546.3	422.4	123.82	4.412		
11,100.0	7,338.0	10,748.0	7,130.0	68.5	68.8	-67.60	-3,732.3	518.3	548.7	421.6	127.10	4.317		
11,200.0	7,338.0	10,848.0	7,130.0	70.3	70.5	-67.71	-3,832.2	520.9	551.1	420.7	130.38	4.227		
11,300.0	7,338.0	10,947.9	7,130.0	72.0	72.2	-67.81	-3,932.1	523.6	553.5	419.9	133.67	4.141		
11,400.0	7,338.0	11,047.9	7,130.0	73.7	73.9	-67.91	-4,032.0	526.2	556.0	419.0	136.96	4.059		
11,500.0	7,338.0	11,147.9	7,130.0	75.4	75.7	-68.01	-4,132.0	528.8	558.4	418.1	140.26	3.981		
11,600.0	7,338.0	11,247.8	7,130.0	77.2	77.4	-68.11	-4,231.9	531.4	560.8	417.2	143.56	3.906		
11,700.0	7,338.0	11,347.8	7,130.0	78.9	79.1	-68.21	-4,331.8	534.0	563.2	416.4	146.87	3.835		
11,800.0	7,338.0	11,447.8	7,130.0	80.6	80.8	-68.31	-4,431.8	536.6	565.7	415.5	150.19	3.766		
11,900.0	7,338.0	11,547.7	7,130.0	82.4	82.6	-68.41	-4,531.7	539.3	568.1	414.6	153.51	3.701		
12,000.0	7,338.0	11,647.7	7,130.0	84.1	84.3	-68.50	-4,631.6	541.9	570.5	413.7	156.83	3.638		
12,100.0	7,338.0	11,747.7	7,130.0	85.8	86.0	-68.60	-4,731.6	544.5	573.0	412.8	160.16	3.577		
12,200.0	7,338.0	11,847.6	7,130.0	87.6	87.8	-68.70	-4,831.5	547.1	575.4	411.9	163.50	3.519		
12,300.0	7,338.0	11,947.6	7,130.0	89.3	89.5	-68.79	-4,931.4	549.7	577.9	411.0	166.83	3.464		
12,400.0	7,338.0	12,056.0	7,130.0	91.0	91.4	-68.87	-5,039.8	551.9	579.7	409.4	170.29	3.404		
12,500.0	7,338.0	12,166.4	7,130.0	92.8	93.3	-68.87	-5,150.2	552.0	579.8	406.1	173.71	3.338		
12,600.0	7,338.0	12,276.8	7,130.0	94.5	95.2	-68.80	-5,260.6	550.0	578.1	401.1	177.04	3.265		
12,700.0	7,338.0	12,387.0	7,130.0	96.3	97.1	-68.65	-5,370.8	545.8	574.6	394.3	180.28	3.187		
12,800.0	7,338.0	12,497.1	7,130.0	98.0	99.0	-68.42	-5,480.6	539.6	569.3	385.9	183.41	3.104		
12,900.0	7,338.0	12,606.9	7,130.0	99.7	100.9	-68.11	-5,590.1	531.3	562.3	375.9	186.42	3.016		
13,000.0	7,338.0	12,707.5	7,130.0	101.5	102.6	-67.77	-5,690.3	522.5	554.2	365.0	189.22	2.929		
13,100.0	7,338.0	12,807.1	7,130.0	103.2	104.3	-67.42	-5,789.5	513.8	546.1	354.1	191.99	2.845		
13,200.0	7,338.0	12,906.7	7,130.0	105.0	106.0	-67.07	-5,888.8	505.1	538.1	343.4	194.71	2.764		
13,300.0	7,338.0	13,006.3	7,130.0	106.7	107.7	-66.70	-5,988.0	496.4	530.1	332.7	197.40	2.685		
13,400.0	7,338.0	13,105.9	7,130.0	108.4	109.5	-66.32	-6,087.3	487.8	522.1	322.0	200.04	2.610		
13,500.0	7,338.0	13,205.6	7,130.0	110.2	111.2	-65.93	-6,186.5	479.1	514.1	311.4	202.65	2.537		
13,600.0	7,338.0	13,305.2	7,130.0	111.9	112.9	-65.53	-6,285.7	470.4	506.1	300.9	205.20	2.466		
13,700.0	7,338.0	13,404.8	7,130.0	113.7	114.6	-65.11	-6,385.0	461.7	498.2	290.5	207.71	2.398		
13,800.0	7,338.0	13,504.4	7,130.0	115.4	116.4	-64.68	-6,484.2	453.0	490.3	280.1	210.17	2.333		
13,900.0	7,338.0	13,604.0	7,130.0	117.1	118.1	-64.24	-6,583.5	444.3	482.4	269.8	212.56	2.269		
14,000.0	7,338.0	13,703.6	7,130.0	118.9	119.8	-63.78	-6,682.7	435.6	474.6	259.7	214.90	2.208		
14,100.0	7,338.0	13,803.3	7,130.0	120.6	121.5	-63.31	-6,781.9	426.9	466.7	249.6	217.17	2.149		
14,200.0	7,338.0	13,902.9	7,130.0	122.4	123.2	-62.82	-6,881.2	418.2	459.0	239.6	219.38	2.092		
14,300.0	7,338.0	14,002.5	7,130.0	124.1	125.0	-62.32	-6,980.4	409.6	451.2	229.7	221.51	2.037		
14,400.0	7,338.0	14,102.1	7,130.0	125.9	126.7	-61.79	-7,079.7	400.9	443.5	219.9	223.56	1.984		
14,500.0	7,338.0	14,201.7	7,130.0	127.6	128.4	-61.25	-7,178.9	392.2	435.8	210.3	225.52	1.933		
14,600.0	7,338.0	14,301.4	7,130.0	129.4	130.2	-60.69	-7,278.1	383.5	428.2	200.8	227.40	1.883		
14,700.0	7,338.0	14,401.0	7,130.0	131.1	131.9	-60.11	-7,377.4	374.8	420.6	191.4	229.18	1.835		
14,800.0	7,338.0	14,500.6	7,130.0	132.9	133.6	-59.51	-7,476.6	366.1	413.1	182.2	230.85	1.789		
14,900.0	7,338.0	14,600.2	7,130.0	134.6	135.4	-58.88	-7,575.8	357.4	405.6	173.2	232.41	1.745		
15,000.0	7,338.0	14,699.8	7,130.0	136.3	137.1	-58.24	-7,675.1	348.7	398.1	164.3	233.85	1.702		
15,100.0	7,338.0	14,787.9	7,130.0	138.1	138.6	-57.64	-7,762.8	341.1	390.9	155.7	235.18	1.662		
15,117.3	7,338.0	14,787.9	7,130.0	138.4	138.6	-57.64	-7,762.8	341.1	390.5	155.1	235.44	1.659		
15,117.3	7,338.0	14,787.9	7,130.0	138.4	138.6	-57.64	-7,762.8	341.1	390.5	155.1	235.44	1.659 SF		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2D-5H-E267 - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	39.1	39.1					
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	39.1	39.1	38.9	0.25	158.985		
166.3	166.3	167.3	167.3	0.2	0.2	90.05	0.0	39.1	39.1	38.6	0.48	81.915 CC		
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	39.1	39.1	38.5	0.60	65.740 ES		
300.0	300.0	300.4	300.4	0.5	0.5	89.55	0.3	39.9	39.9	39.0	0.94	42.342		
400.0	400.0	400.0	400.0	0.6	0.7	88.17	1.4	42.3	42.4	41.1	1.29	32.782		
500.0	500.0	498.9	498.7	0.8	0.8	86.22	3.1	46.3	46.4	44.8	1.64	28.306		
600.0	600.0	597.9	597.5	1.0	1.0	84.00	5.4	51.8	52.2	50.2	1.99	26.243		
700.0	700.0	696.6	696.0	1.2	1.2	81.79	8.5	58.9	59.7	57.4	2.34	25.538		
800.0	800.0	795.3	794.3	1.3	1.5	79.74	12.2	67.5	68.9	66.2	2.68	25.659		
900.0	900.0	894.8	893.3	1.5	1.7	78.09	16.2	76.6	78.7	75.7	3.03	25.949		
1,000.0	1,000.0	994.3	992.2	1.7	1.9	76.80	20.1	85.8	88.6	85.2	3.38	26.197		
1,100.0	1,100.0	1,093.8	1,091.2	1.9	2.2	75.77	24.1	95.0	98.5	94.7	3.73	26.409		
1,200.0	1,200.0	1,193.3	1,190.2	2.0	2.4	74.92	28.1	104.1	108.4	104.3	4.08	26.592		
1,300.0	1,300.0	1,292.8	1,289.2	2.2	2.7	74.22	32.0	113.3	118.3	113.9	4.42	26.752		
1,400.0	1,400.0	1,392.3	1,388.2	2.4	2.9	73.63	36.0	122.5	128.3	123.5	4.77	26.891		
1,500.0	1,500.0	1,491.8	1,487.2	2.6	3.2	73.12	39.9	131.7	138.3	133.2	5.12	27.013		
1,600.0	1,600.0	1,591.3	1,586.2	2.7	3.4	72.69	43.9	140.8	148.3	142.8	5.47	27.122		
1,700.0	1,700.0	1,690.8	1,685.2	2.9	3.6	72.30	47.9	150.0	158.2	152.4	5.81	27.219		
1,800.0	1,800.0	1,790.3	1,784.2	3.1	3.9	71.97	51.8	159.2	168.2	162.1	6.16	27.306		
1,900.0	1,900.0	1,889.8	1,883.2	3.3	4.1	71.67	55.8	168.3	178.2	171.7	6.51	27.385		
2,000.0	2,000.0	1,989.3	1,982.2	3.4	4.4	71.40	59.7	177.5	188.2	181.4	6.86	27.456		
2,100.0	2,100.0	2,088.8	2,081.2	3.6	4.6	71.16	63.7	186.7	198.3	191.0	7.20	27.520		
2,200.0	2,200.0	2,188.3	2,180.1	3.8	4.9	70.94	67.7	195.9	208.3	200.7	7.55	27.579		
2,300.0	2,300.0	2,287.7	2,279.1	4.0	5.1	70.74	71.6	205.0	218.3	210.4	7.90	27.633		
2,400.0	2,400.0	2,387.2	2,378.1	4.1	5.4	70.56	75.6	214.2	228.3	220.0	8.25	27.683		
2,500.0	2,500.0	2,486.7	2,477.1	4.3	5.6	70.40	79.6	223.4	238.3	229.7	8.59	27.729		
2,600.0	2,600.0	2,586.2	2,576.1	4.5	5.8	70.24	83.5	232.5	248.3	239.4	8.94	27.771		
2,700.0	2,700.0	2,685.7	2,675.1	4.7	6.1	70.10	87.5	241.7	258.4	249.1	9.29	27.811		
2,800.0	2,800.0	2,785.2	2,774.1	4.8	6.3	69.97	91.4	250.9	268.4	258.7	9.64	27.848		
2,900.0	2,900.0	2,884.7	2,873.1	5.0	6.6	69.85	95.4	260.1	278.4	268.4	9.99	27.882		
3,000.0	3,000.0	2,984.2	2,972.1	5.2	6.8	69.74	99.4	269.2	288.4	278.1	10.33	27.914		
3,100.0	3,100.0	3,083.7	3,071.1	5.4	7.1	69.64	103.3	278.4	298.5	287.8	10.68	27.944		
3,200.0	3,200.0	3,183.2	3,170.1	5.5	7.3	69.54	107.3	287.6	308.5	297.5	11.03	27.972		
3,300.0	3,300.0	3,282.7	3,269.1	5.7	7.6	69.45	111.2	296.7	318.5	307.1	11.38	27.998		
3,400.0	3,400.0	3,382.2	3,368.0	5.9	7.8	69.36	115.2	305.9	328.5	316.8	11.72	28.023		
3,500.0	3,500.0	3,481.7	3,467.0	6.1	8.1	69.28	119.2	315.1	338.6	326.5	12.07	28.047		
3,600.0	3,600.0	3,581.2	3,566.0	6.2	8.3	69.21	123.1	324.3	348.6	336.2	12.42	28.069		
3,700.0	3,700.0	3,680.7	3,665.0	6.4	8.6	69.13	127.1	333.4	358.6	345.9	12.77	28.090		
3,800.0	3,800.0	3,780.2	3,764.0	6.6	8.8	69.07	131.1	342.6	368.7	355.6	13.11	28.110		
3,900.0	3,900.0	3,879.7	3,863.0	6.8	9.0	69.00	135.0	351.8	378.7	365.2	13.46	28.129		
4,000.0	4,000.0	3,979.2	3,962.0	6.9	9.3	68.94	139.0	360.9	388.7	374.9	13.81	28.147		
4,100.0	4,100.0	4,078.7	4,061.0	7.1	9.5	68.86	142.9	370.1	398.4	384.3	14.17	28.126		
4,200.0	4,200.0	4,178.3	4,160.1	7.3	9.8	68.75	146.9	379.3	407.4	392.9	14.52	28.065		
4,300.0	4,299.9	4,277.8	4,259.2	7.5	10.0	68.77	150.9	388.5	415.8	400.9	14.87	27.960		
4,400.0	4,399.7	4,377.4	4,358.2	7.6	10.3	68.09	154.8	397.6	423.5	408.3	15.23	27.812		
4,500.0	4,499.4	4,476.9	4,457.3	7.8	10.5	68.90	158.8	406.8	430.7	415.1	15.59	27.625		
4,600.0	4,598.9	4,576.4	4,556.2	8.0	10.8	69.91	162.8	416.0	437.4	421.4	15.96	27.403		
4,700.0	4,698.4	4,675.8	4,655.1	8.2	11.0	71.02	166.7	425.2	444.0	427.6	16.34	27.177		
4,800.0	4,797.9	4,775.2	4,754.0	8.4	11.3	72.10	170.7	434.3	450.8	434.0	16.72	26.962		
4,900.0	4,897.3	4,874.6	4,853.0	8.6	11.5	73.14	174.6	443.5	457.7	440.6	17.11	26.756		
5,000.0	4,996.8	4,974.1	4,951.9	8.8	11.8	74.15	178.6	452.6	464.8	447.3	17.50	26.560		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 2D-5H-E267 - 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)				
5,100.0	5,096.3	5,073.5	5,050.8	9.0	12.0	75.13	182.6	461.8	472.0	454.1	17.90	26.373		
5,200.0	5,195.8	5,172.9	5,149.7	9.2	12.2	76.08	186.5	471.0	479.3	461.0	18.30	26.195		
5,300.0	5,295.3	5,272.3	5,248.6	9.4	12.5	77.01	190.5	480.1	486.8	468.1	18.71	26.025		
5,400.0	5,394.7	5,371.7	5,347.5	9.6	12.7	77.90	194.4	489.3	494.4	475.3	19.12	25.863		
5,500.0	5,494.2	5,471.1	5,446.4	9.8	13.0	78.77	198.4	498.5	502.1	482.6	19.53	25.708		
5,600.0	5,593.7	5,570.5	5,545.3	10.0	13.2	79.61	202.3	507.6	510.0	490.0	19.95	25.561		
5,700.0	5,693.2	5,670.0	5,644.3	10.2	13.5	80.43	206.3	516.8	517.9	497.5	20.37	25.420		
5,800.0	5,792.7	5,769.4	5,743.2	10.4	13.7	81.22	210.3	526.0	526.0	505.2	20.80	25.286		
5,900.0	5,892.1	5,868.8	5,842.1	10.7	14.0	81.98	214.2	535.1	534.1	512.9	21.23	25.158		
6,000.0	5,991.6	5,968.2	5,941.0	10.9	14.2	82.73	218.2	544.3	542.3	520.7	21.66	25.036		
6,100.0	6,091.1	6,067.6	6,039.9	11.1	14.5	83.45	222.1	553.4	550.6	528.5	22.10	24.920		
6,200.0	6,190.6	6,167.0	6,138.8	11.3	14.7	84.15	226.1	562.6	559.0	536.5	22.53	24.810		
6,300.0	6,290.1	6,266.5	6,237.7	11.5	15.0	84.83	230.1	571.8	567.5	544.6	22.97	24.705		
6,400.0	6,389.5	6,365.9	6,336.7	11.8	15.2	85.49	234.0	580.9	576.1	552.7	23.41	24.604		
6,500.0	6,489.0	6,465.3	6,435.6	12.0	15.4	86.13	238.0	590.1	584.7	560.9	23.86	24.509		
6,600.0	6,588.5	6,564.7	6,534.5	12.2	15.7	86.75	241.9	599.3	593.4	569.1	24.30	24.418		
6,700.0	6,688.0	6,664.1	6,633.4	12.4	15.9	87.36	245.9	608.4	602.2	577.5	24.75	24.331		
6,800.0	6,787.8	6,763.6	6,732.4	12.6	16.2	87.95	249.8	617.6	611.0	585.9	25.16	24.289		
6,900.0	6,886.8	6,863.6	6,831.8	12.7	16.4	88.56	253.7	626.8	619.9	594.6	25.54	24.460		
7,000.0	6,982.2	6,958.4	6,931.0	12.7	16.5	89.17	257.6	636.0	628.6	603.2	25.96	24.789		
7,100.0	7,071.0	7,047.2	7,026.8	12.6	16.6	89.77	261.5	644.9	636.8	611.5	26.38	25.189		
7,200.0	7,150.4	7,126.4	7,115.6	12.6	16.6	-89.70	131.8	653.1	644.3	619.1	25.23	25.535		
7,300.0	7,218.2	7,224.4	7,193.8	12.7	16.8	-89.79	58.6	660.3	650.8	625.5	25.36	25.669		
7,400.0	7,272.2	7,391.6	7,257.9	12.9	17.0	-89.86	-29.4	666.3	656.1	630.3	25.79	25.436		
7,500.0	7,310.8	7,502.0	7,304.6	13.4	17.3	-89.90	-129.1	670.6	659.9	633.2	26.66	24.755		
7,600.0	7,332.8	7,613.3	7,331.6	14.0	17.9	-89.92	-236.9	673.1	662.0	634.0	27.99	23.652		
7,700.0	7,338.0	7,722.3	7,338.0	14.8	18.6	-89.91	-345.5	673.7	662.5	632.8	29.73	22.288		
7,800.0	7,338.0	7,822.3	7,338.0	15.8	19.4	-89.91	-445.5	673.7	662.5	630.8	31.69	20.907		
7,900.0	7,338.0	7,922.3	7,338.0	16.9	20.3	-89.91	-545.5	673.7	662.5	628.6	33.90	19.542		
8,000.0	7,338.0	8,022.3	7,338.0	18.1	21.3	-89.91	-645.5	673.7	662.5	626.2	36.32	18.240		
8,100.0	7,338.0	8,122.3	7,338.0	19.4	22.4	-89.91	-745.5	673.7	662.5	623.6	38.91	17.028		
8,200.0	7,338.0	8,222.3	7,338.0	20.8	23.6	-89.91	-845.5	673.7	662.5	620.9	41.63	15.916		
8,300.0	7,338.0	8,322.3	7,338.0	22.2	24.9	-89.91	-945.5	673.7	662.5	618.1	44.46	14.902		
8,400.0	7,338.0	8,422.3	7,338.0	23.7	26.2	-89.91	-1,045.5	673.7	662.5	615.1	47.38	13.983		
8,500.0	7,338.0	8,522.3	7,338.0	25.2	27.6	-89.91	-1,145.5	673.7	662.5	612.1	50.38	13.151		
8,600.0	7,338.0	8,622.3	7,338.0	26.7	29.0	-89.91	-1,245.5	673.7	662.5	609.1	53.44	12.399		
8,700.0	7,338.0	8,722.3	7,338.0	28.3	30.4	-89.91	-1,345.5	673.7	662.5	606.0	56.55	11.716		
8,800.0	7,338.0	8,822.3	7,338.0	29.8	31.9	-89.91	-1,445.5	673.7	662.5	602.8	59.70	11.097		
8,900.0	7,338.0	8,922.3	7,338.0	31.4	33.4	-89.91	-1,545.5	673.7	662.5	599.6	62.89	10.534		
9,000.0	7,338.0	9,022.3	7,338.0	33.0	34.9	-89.91	-1,645.5	673.7	662.5	596.4	66.12	10.020		
9,100.0	7,338.0	9,122.3	7,338.0	34.7	36.5	-89.91	-1,745.5	673.7	662.5	593.2	69.37	9.550		
9,200.0	7,338.0	9,222.3	7,338.0	36.3	38.0	-89.91	-1,845.5	673.7	662.5	589.9	72.65	9.120		
9,300.0	7,338.0	9,322.3	7,338.0	38.0	39.6	-89.91	-1,945.5	673.7	662.5	586.6	75.94	8.724		
9,400.0	7,338.0	9,422.3	7,338.0	39.6	41.2	-89.91	-2,045.5	673.7	662.5	583.3	79.26	8.359		
9,500.0	7,338.0	9,522.3	7,338.0	41.3	42.8	-89.91	-2,145.5	673.7	662.5	579.9	82.59	8.022		
9,600.0	7,338.0	9,622.3	7,338.0	43.0	44.4	-89.91	-2,245.5	673.7	662.5	576.6	85.94	7.710		
9,700.0	7,338.0	9,722.3	7,338.0	44.6	46.0	-89.91	-2,345.5	673.7	662.5	573.2	89.29	7.420		
9,800.0	7,338.0	9,822.3	7,338.0	46.3	47.7	-89.91	-2,445.5	673.7	662.5	569.9	92.66	7.150		
9,900.0	7,338.0	9,922.3	7,338.0	48.0	49.3	-89.91	-2,545.5	673.7	662.5	566.5	96.04	6.898		
10,000.0	7,338.0	10,022.3	7,338.0	49.7	51.0	-89.91	-2,645.5	673.7	662.5	563.1	99.43	6.663		
10,100.0	7,338.0	10,122.3	7,338.0	51.4	52.6	-89.91	-2,745.5	673.7	662.5	559.7	102.82	6.443		
10,200.0	7,338.0	10,222.3	7,338.0	53.1	54.3	-89.91	-2,845.5	673.7	662.5	556.3	106.23	6.237		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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 2D-5H-E267 - 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)				
10,300.0	7,338.0	10,322.3	7,338.0	54.8	56.0	-89.91	-2,945.5	673.7	662.5	552.9	109.64	6.043		
10,400.0	7,338.0	10,422.3	7,338.0	56.5	57.6	-89.91	-3,045.5	673.7	662.5	549.5	113.05	5.860		
10,500.0	7,338.0	10,522.3	7,338.0	58.2	59.3	-89.91	-3,145.5	673.7	662.5	546.1	116.47	5.688		
10,600.0	7,338.0	10,622.3	7,338.0	59.9	61.0	-89.91	-3,245.5	673.7	662.5	542.6	119.90	5.526		
10,700.0	7,338.0	10,722.3	7,338.0	61.6	62.7	-89.91	-3,345.5	673.7	662.5	539.2	123.33	5.372		
10,800.0	7,338.0	10,822.3	7,338.0	63.4	64.4	-89.91	-3,445.5	673.7	662.5	535.8	126.77	5.226		
10,900.0	7,338.0	10,922.3	7,338.0	65.1	66.1	-89.91	-3,545.5	673.7	662.5	532.3	130.20	5.088		
11,000.0	7,338.0	11,022.3	7,338.0	66.8	67.8	-89.91	-3,645.5	673.7	662.5	528.9	133.65	4.957		
11,100.0	7,338.0	11,122.3	7,338.0	68.5	69.5	-89.91	-3,745.5	673.7	662.5	525.4	137.09	4.833		
11,200.0	7,338.0	11,222.3	7,338.0	70.3	71.2	-89.91	-3,845.5	673.7	662.5	522.0	140.54	4.714		
11,300.0	7,338.0	11,322.3	7,338.0	72.0	72.9	-89.91	-3,945.5	673.7	662.5	518.5	143.99	4.601		
11,400.0	7,338.0	11,422.3	7,338.0	73.7	74.6	-89.91	-4,045.5	673.7	662.5	515.1	147.45	4.493		
11,500.0	7,338.0	11,522.3	7,338.0	75.4	76.3	-89.91	-4,145.5	673.7	662.5	511.6	150.90	4.390		
11,600.0	7,338.0	11,622.3	7,338.0	77.2	78.0	-89.91	-4,245.5	673.7	662.5	508.2	154.36	4.292		
11,700.0	7,338.0	11,722.3	7,338.0	78.9	79.7	-89.91	-4,345.5	673.7	662.5	504.7	157.82	4.198		
11,800.0	7,338.0	11,822.3	7,338.0	80.6	81.4	-89.91	-4,445.5	673.7	662.5	501.2	161.29	4.108		
11,900.0	7,338.0	11,922.3	7,338.0	82.4	83.1	-89.91	-4,545.5	673.7	662.5	497.8	164.75	4.021		
12,000.0	7,338.0	12,022.3	7,338.0	84.1	84.9	-89.91	-4,645.5	673.7	662.5	494.3	168.22	3.938		
12,100.0	7,338.0	12,122.3	7,338.0	85.8	86.6	-89.91	-4,745.5	673.7	662.5	490.8	171.69	3.859		
12,200.0	7,338.0	12,222.3	7,338.0	87.6	88.3	-89.91	-4,845.5	673.7	662.5	487.4	175.16	3.782		
12,300.0	7,338.0	12,322.3	7,338.0	89.3	90.0	-89.91	-4,945.5	673.7	662.5	483.9	178.63	3.709		
12,400.0	7,338.0	12,422.3	7,338.0	91.0	91.7	-89.91	-5,045.5	673.7	662.5	480.4	182.10	3.638		
12,500.0	7,338.0	12,522.3	7,338.0	92.8	93.5	-89.91	-5,145.5	673.7	662.5	477.0	185.58	3.570		
12,600.0	7,338.0	12,622.3	7,338.0	94.5	95.2	-89.91	-5,245.5	673.7	662.5	473.5	189.05	3.504		
12,700.0	7,338.0	12,722.3	7,338.0	96.3	96.9	-89.91	-5,345.5	673.7	662.5	470.0	192.53	3.441		
12,800.0	7,338.0	12,822.3	7,338.0	98.0	98.7	-89.91	-5,445.5	673.7	662.5	466.5	196.01	3.380		
12,900.0	7,338.0	12,922.3	7,338.0	99.7	100.4	-89.91	-5,545.5	673.7	662.5	463.0	199.49	3.321		
13,000.0	7,338.0	13,022.3	7,338.0	101.5	102.1	-89.91	-5,645.5	673.7	662.5	459.6	202.97	3.264		
13,100.0	7,338.0	13,122.3	7,338.0	103.2	103.8	-89.91	-5,745.5	673.7	662.5	456.1	206.45	3.209		
13,200.0	7,338.0	13,222.3	7,338.0	105.0	105.6	-89.91	-5,845.5	673.7	662.5	452.6	209.93	3.156		
13,300.0	7,338.0	13,322.3	7,338.0	106.7	107.3	-89.91	-5,945.5	673.7	662.5	449.1	213.41	3.104		
13,400.0	7,338.0	13,422.3	7,338.0	108.4	109.0	-89.91	-6,045.5	673.7	662.5	445.6	216.90	3.055		
13,500.0	7,338.0	13,522.3	7,338.0	110.2	110.8	-89.91	-6,145.5	673.7	662.5	442.2	220.38	3.006		
13,600.0	7,338.0	13,622.3	7,338.0	111.9	112.5	-89.91	-6,245.5	673.7	662.5	438.7	223.87	2.959		
13,700.0	7,338.0	13,722.3	7,338.0	113.7	114.2	-89.91	-6,345.5	673.7	662.5	435.2	227.35	2.914		
13,800.0	7,338.0	13,822.3	7,338.0	115.4	116.0	-89.91	-6,445.5	673.7	662.5	431.7	230.84	2.870		
13,900.0	7,338.0	13,922.3	7,338.0	117.1	117.7	-89.91	-6,545.5	673.7	662.5	428.2	234.33	2.827		
14,000.0	7,338.0	14,022.3	7,338.0	118.9	119.4	-89.91	-6,645.5	673.7	662.5	424.7	237.81	2.786		
14,100.0	7,338.0	14,122.3	7,338.0	120.6	121.2	-89.91	-6,745.5	673.7	662.5	421.2	241.30	2.746		
14,200.0	7,338.0	14,222.3	7,338.0	122.4	122.9	-89.91	-6,845.5	673.7	662.5	417.7	244.79	2.707		
14,300.0	7,338.0	14,322.3	7,338.0	124.1	124.7	-89.91	-6,945.5	673.7	662.5	414.3	248.28	2.668		
14,400.0	7,338.0	14,422.3	7,338.0	125.9	126.4	-89.91	-7,045.5	673.7	662.5	410.8	251.77	2.631		
14,500.0	7,338.0	14,522.3	7,338.0	127.6	128.1	-89.91	-7,145.5	673.7	662.5	407.3	255.26	2.596		
14,600.0	7,338.0	14,622.3	7,338.0	129.4	129.9	-89.91	-7,245.5	673.7	662.5	403.8	258.75	2.561		
14,700.0	7,338.0	14,722.3	7,338.0	131.1	131.6	-89.91	-7,345.5	673.7	662.5	400.3	262.24	2.526		
14,800.0	7,338.0	14,822.3	7,338.0	132.9	133.3	-89.91	-7,445.5	673.7	662.5	396.8	265.74	2.493		
14,900.0	7,338.0	14,922.3	7,338.0	134.6	135.1	-89.91	-7,545.5	673.7	662.5	393.3	269.23	2.461		
15,000.0	7,338.0	15,022.3	7,338.0	136.3	136.8	-89.91	-7,645.5	673.7	662.5	389.8	272.72	2.429		
15,100.0	7,338.0	15,122.3	7,338.0	138.1	138.6	-89.91	-7,745.5	673.7	662.5	386.3	276.21	2.399		
15,104.4	7,338.0	15,126.7	7,338.0	138.2	138.6	-89.91	-7,750.0	673.7	662.5	386.2	276.37	2.397		
15,117.3	7,338.0	15,135.9	7,338.0	138.4	138.8	-89.91	-7,759.2	673.7	662.5	385.8	276.75	2.394	SF	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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													Offset Site Error:	0.0 ft
S5-T2N-R67W (Vogl-McCoy) - WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVEYS													Offset Well Error:	0.0 ft
Survey Program: 75-MWD														
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		
10,800.0	7,338.0	7,532.5	7,373.4	63.4	24.5	89.81	-4,220.4	-479.9	917.3	838.4	78.93	11.622		
10,900.0	7,338.0	7,532.1	7,372.9	65.1	24.5	89.76	-4,220.4	-479.9	834.6	753.9	80.65	10.349		
11,000.0	7,338.0	7,531.6	7,372.5	66.8	24.5	89.70	-4,220.4	-479.9	756.0	673.7	82.37	9.179		
11,100.0	7,338.0	7,531.1	7,372.0	68.5	24.5	89.65	-4,220.4	-479.9	683.1	599.0	84.09	8.124		
11,200.0	7,338.0	7,530.7	7,371.5	70.3	24.5	89.59	-4,220.4	-479.9	617.8	532.0	85.81	7.199		
11,300.0	7,338.0	7,530.2	7,371.1	72.0	24.5	89.54	-4,220.4	-479.8	562.7	475.2	87.53	6.429		
11,400.0	7,338.0	7,529.8	7,370.6	73.7	24.5	89.49	-4,220.4	-479.8	521.2	432.0	89.26	5.840		
11,500.0	7,338.0	7,529.3	7,370.1	75.4	24.5	89.43	-4,220.4	-479.8	496.7	405.7	90.98	5.459		
11,574.9	7,338.0	7,529.0	7,369.8	76.7	24.5	89.39	-4,220.4	-479.8	491.0	398.8	92.28	5.321 CC, ES		
11,600.0	7,338.0	7,528.8	7,369.7	77.2	24.5	89.38	-4,220.4	-479.8	491.7	399.0	92.71	5.303 SF		
11,700.0	7,338.0	7,528.4	7,369.2	78.9	24.5	89.33	-4,220.4	-479.8	506.7	412.3	94.44	5.366		
11,800.0	7,338.0	7,527.9	7,368.8	80.6	24.5	89.28	-4,220.4	-479.8	540.2	444.0	96.17	5.617		
11,900.0	7,338.0	7,527.5	7,368.3	82.4	24.5	89.22	-4,220.4	-479.8	588.9	491.0	97.90	6.016		
12,000.0	7,338.0	7,527.0	7,367.9	84.1	24.5	89.17	-4,220.4	-479.8	649.5	549.9	99.63	6.519		
12,100.0	7,338.0	7,526.6	7,367.5	85.8	24.5	89.12	-4,220.4	-479.8	719.0	617.6	101.36	7.093		
12,200.0	7,338.0	7,526.2	7,367.0	87.6	24.5	89.07	-4,220.4	-479.8	794.9	691.8	103.09	7.711		
12,300.0	7,338.0	7,525.7	7,366.6	89.3	24.5	89.02	-4,220.4	-479.8	875.8	770.9	104.82	8.355		
12,400.0	7,338.0	7,525.3	7,366.1	91.0	24.5	88.97	-4,220.4	-479.8	960.2	853.6	106.56	9.011		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Vogl-McCoy 2B-5H-E267	Survey Calculation Method:	Minimum Curvature
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

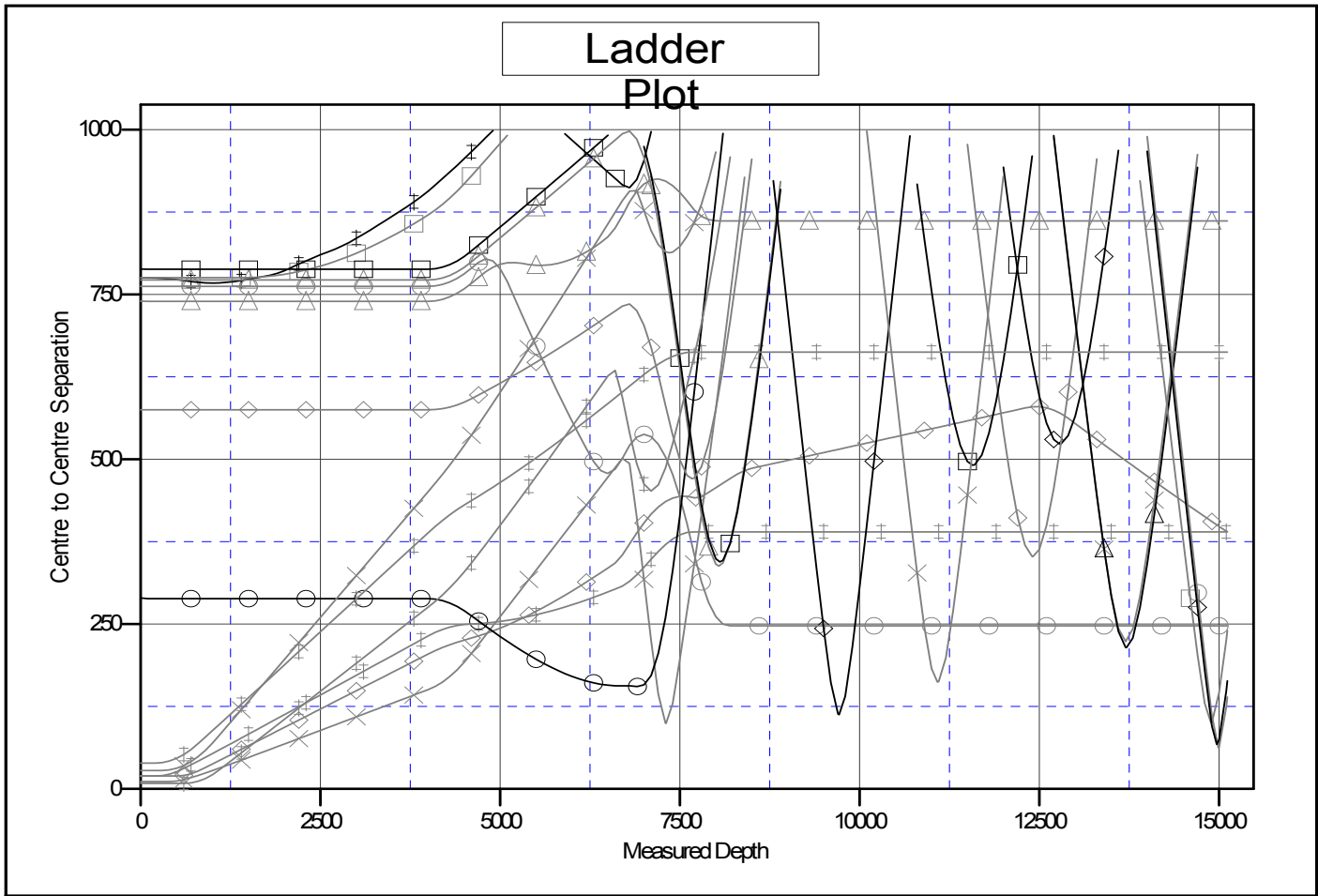
Offset Design S5-T2N-R67W (Vogl-McCoy) - WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 106-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis		Separation Factor
12,000.0	7,338.0	7,775.7	7,379.0	84.1	37.2	90.33	-5,430.3	-512.1	943.2	826.6	116.59	8.090	
12,100.0	7,338.0	7,775.3	7,378.6	85.8	37.2	90.29	-5,430.3	-512.1	861.8	743.5	118.32	7.283	
12,200.0	7,338.0	7,775.0	7,378.2	87.6	37.2	90.24	-5,430.3	-512.1	784.7	664.6	120.06	6.536	
12,300.0	7,338.0	7,774.6	7,377.9	89.3	37.2	90.20	-5,430.3	-512.1	713.3	591.5	121.79	5.857	
12,400.0	7,338.0	7,774.2	7,377.5	91.0	37.2	90.16	-5,430.3	-512.1	649.5	526.0	123.53	5.258	
12,500.0	7,338.0	7,773.8	7,377.1	92.8	37.2	90.12	-5,430.3	-512.1	595.7	470.4	125.27	4.756	
12,600.0	7,338.0	7,773.5	7,376.7	94.5	37.2	90.08	-5,430.3	-512.1	554.9	427.9	127.00	4.369	
12,700.0	7,338.0	7,773.1	7,376.4	96.3	37.2	90.04	-5,430.3	-512.1	530.1	401.3	128.74	4.117	
12,784.8	7,338.0	7,772.8	7,376.1	97.7	37.2	90.01	-5,430.3	-512.1	523.2	393.0	130.22	4.018	CC
12,800.0	7,338.0	7,772.7	7,376.0	98.0	37.2	90.00	-5,430.3	-512.1	523.5	393.0	130.48	4.012	ES, SF
12,900.0	7,338.0	7,772.3	7,375.6	99.7	37.2	89.96	-5,430.3	-512.1	535.8	403.5	132.22	4.052	
13,000.0	7,338.0	7,772.0	7,375.2	101.5	37.2	89.92	-5,430.3	-512.1	565.8	431.8	133.96	4.223	
13,100.0	7,338.0	7,771.6	7,374.9	103.2	37.2	89.88	-5,430.3	-512.1	610.8	475.1	135.70	4.501	
13,200.0	7,338.0	7,771.2	7,374.5	105.0	37.2	89.83	-5,430.3	-512.1	668.0	530.5	137.44	4.860	
13,300.0	7,338.0	7,770.8	7,374.1	106.7	37.2	89.79	-5,430.3	-512.1	734.3	595.1	139.18	5.276	
13,400.0	7,338.0	7,770.5	7,373.7	108.4	37.2	89.75	-5,430.3	-512.1	807.6	666.7	140.92	5.731	
13,500.0	7,338.0	7,770.1	7,373.3	110.2	37.2	89.71	-5,430.3	-512.1	886.2	743.5	142.66	6.212	
13,600.0	7,338.0	7,769.7	7,373.0	111.9	37.2	89.67	-5,430.3	-512.1	968.7	824.3	144.40	6.708	

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

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Vogl-McCoy 2B-5H-E267
Project: DJ Wattenberg	TVD Reference: KB @ 4865.0ft (Ensign)
Reference Site: S5-T2N-R67W (Vogl-McCoy)	MD Reference: KB @ 4865.0ft (Ensign)
Site Error: 0.0ft	North Reference: True
Reference Well: Vogl-McCoy 2B-5H-E267	Survey Calculation Method: Minimum Curvature
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 @ 4865.0ft (Ensign) Coordinates are relative to: Vogl-McCoy 2B-5H-E267
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.37°



LEGEND

(EXISTING), KMGWELL, NOSURVEYS V0 Hz Plan #1 V0 -5H-E267, Hz, Plan #1 V0 7 (EXISTING), ENCANA WELL, SURVEYS V0 (EXISTING), ENCANA WELL, SURVEYS V0 (EXISTING), ENCANA WELL, Plan #1 V0 (EXISTING), KMGWELL, NOSURVEYS V0 H-E267, Hz, Plan #1 V0 Hz Plan #1 V0	▲ MCCOY 0-6-5 (EXISTING), ENCANA WELL, NOSURVEYS V0 ● Vogl-McCoy 2A-5H-E267, Hz, Plan #1 V0 ● VOGL 5-5 (EXISTING), KMGWELL, NOSURVEYS V0 ■ MCCOY 13-5 (EXISTING), ENCANA WELL, NOSURVEYS V0 × DIER 13-8 (EXISTING), ENCANA WELL, Plan #1 V1 ▲ DIER 13-8 (EXISTING), ENCANA WELL, SURVEYS V0 ■ WANDELL 8-2-7 (EXISTING), ENCANA WELL, SURVEYS V0 ◆ MCCOY #1 (EXISTING), ENCANA WELL, NOSURVEYS V0 ■ DIER 14-8 (EXISTING), ENCANA WELL, Plan #1 V1	● DIER 14-8 (EXISTING), ENCANA WELL ◆ DIER 14-8 (EXISTING), ENCANA WELL, ◆ MCCOY 14-5 (EXISTING), ENCANA WEL × Vogl-Geist 2C-5H-E267, Hz, Plan #1 V0 ● Vogl-Geist 2B-5H-E267, Hz, Plan #1 V0 ● Vogl-McCoy 2D-5H-E267, Hz, Plan #1 V0 × PROMINENCE 4-8 (EXISTING), KMGWE
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation