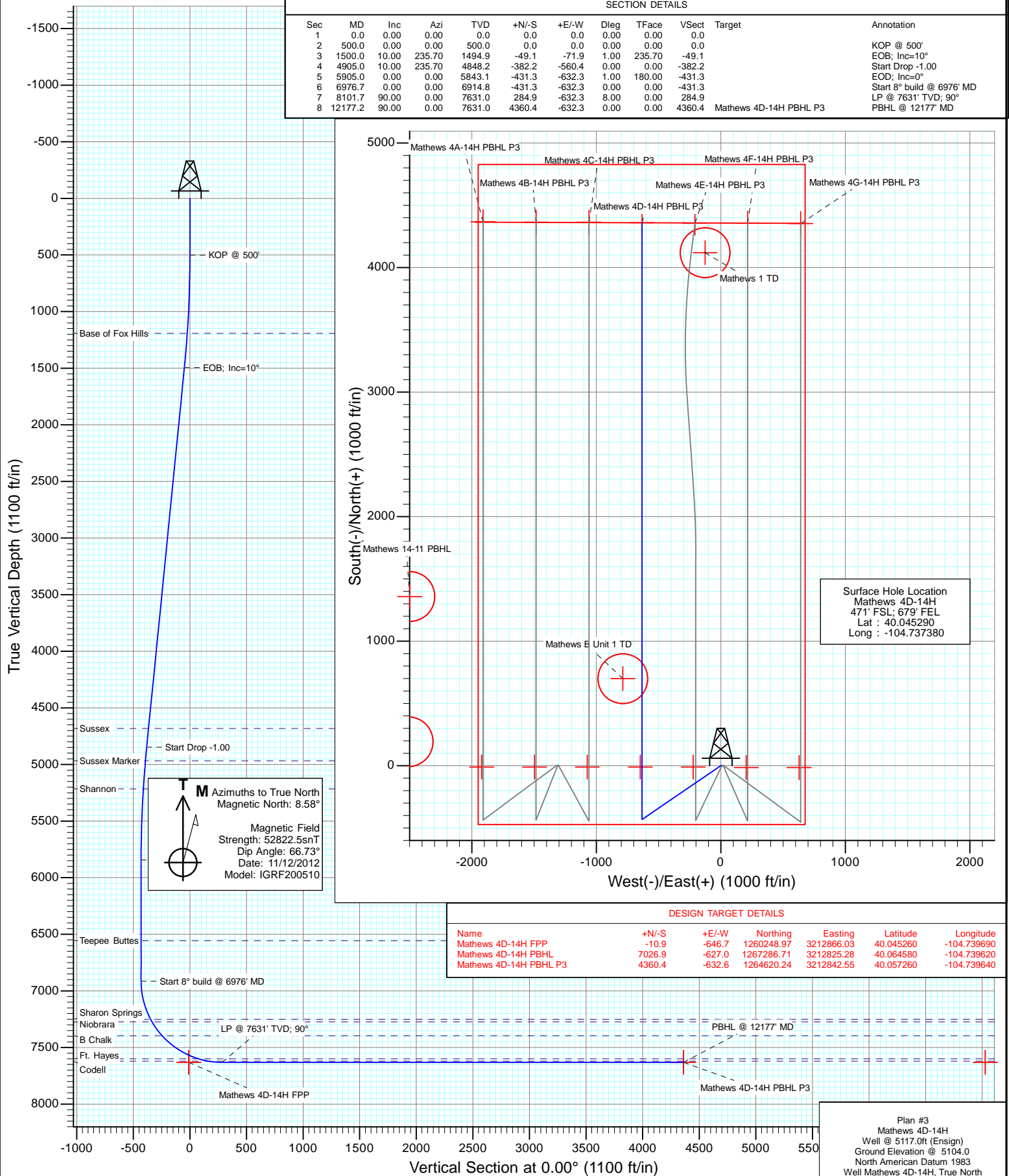




Project: DJ Wattenberg
Site: SWSE S14 T1N-R66W (Mathews)
Well: Mathews 4D-14H
Wellbore: HZ
Design: Plan #3



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Mathews 4D-14H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 5117.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	Well @ 5117.0ft (Ensign)
Site:	SWSE S14 T1N-R66W (Mathews)	North Reference:	True
Well:	Mathews 4D-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

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		SWSE S14 T1N-R66W (Mathews)			
Site Position:		Northing:	1,260,084.79 ft	Latitude:	40.044810
From:	Lat/Long	Easting:	3,212,836.64 ft	Longitude:	-104.739800
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.49 °

Well	Mathews 4D-14H					
Well Position	+N/-S	0.0 ft	Northing:	1,260,265.44 ft	Latitude:	40.045290
	+E/-W	0.0 ft	Easting:	3,213,512.64 ft	Longitude:	-104.737380
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,104.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/12/2012	8.58	66.73	52,822

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.00

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	10.00	235.70	1,494.9	-49.1	-71.9	1.00	1.00	0.00	235.70	
4,905.0	10.00	235.70	4,848.2	-382.2	-560.4	0.00	0.00	0.00	0.00	
5,905.0	0.00	0.00	5,843.1	-431.3	-632.3	1.00	-1.00	0.00	180.00	
6,976.7	0.00	0.00	6,914.8	-431.3	-632.3	0.00	0.00	0.00	0.00	
8,101.7	90.00	0.00	7,631.0	284.9	-632.3	8.00	8.00	0.00	0.00	
12,177.2	90.00	0.00	7,631.0	4,360.4	-632.3	0.00	0.00	0.00	0.00	Mathews 4D-14H PBI

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Mathews 4D-14H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 5117.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	Well @ 5117.0ft (Ensign)
Site:	SWSE S14 T1N-R66W (Mathews)	North Reference:	True
Well:	Mathews 4D-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	1.00	235.70	600.0	-0.5	-0.7	-0.5	1.00	1.00	
700.0	2.00	235.70	700.0	-2.0	-2.9	-2.0	1.00	1.00	
800.0	3.00	235.70	799.9	-4.4	-6.5	-4.4	1.00	1.00	
900.0	4.00	235.70	899.7	-7.9	-11.5	-7.9	1.00	1.00	
1,000.0	5.00	235.70	999.4	-12.3	-18.0	-12.3	1.00	1.00	
1,100.0	6.00	235.70	1,098.9	-17.7	-25.9	-17.7	1.00	1.00	
1,193.7	6.94	235.70	1,192.0	-23.6	-34.6	-23.6	1.00	1.00	Base of Fox Hills
1,200.0	7.00	235.70	1,198.3	-24.1	-35.3	-24.1	1.00	1.00	
1,300.0	8.00	235.70	1,297.4	-31.4	-46.1	-31.4	1.00	1.00	
1,400.0	9.00	235.70	1,396.3	-39.8	-58.3	-39.8	1.00	1.00	
1,500.0	10.00	235.70	1,494.9	-49.1	-71.9	-49.1	1.00	1.00	EOB; Inc=10°
1,600.0	10.00	235.70	1,593.4	-58.8	-86.3	-58.8	0.00	0.00	
1,700.0	10.00	235.70	1,691.9	-68.6	-100.6	-68.6	0.00	0.00	
1,800.0	10.00	235.70	1,790.4	-78.4	-114.9	-78.4	0.00	0.00	
1,900.0	10.00	235.70	1,888.9	-88.2	-129.3	-88.2	0.00	0.00	
2,000.0	10.00	235.70	1,987.3	-98.0	-143.6	-98.0	0.00	0.00	
2,100.0	10.00	235.70	2,085.8	-107.8	-158.0	-107.8	0.00	0.00	
2,200.0	10.00	235.70	2,184.3	-117.6	-172.3	-117.6	0.00	0.00	
2,300.0	10.00	235.70	2,282.8	-127.3	-186.7	-127.3	0.00	0.00	
2,400.0	10.00	235.70	2,381.3	-137.1	-201.0	-137.1	0.00	0.00	
2,500.0	10.00	235.70	2,479.7	-146.9	-215.4	-146.9	0.00	0.00	
2,600.0	10.00	235.70	2,578.2	-156.7	-229.7	-156.7	0.00	0.00	
2,700.0	10.00	235.70	2,676.7	-166.5	-244.0	-166.5	0.00	0.00	
2,800.0	10.00	235.70	2,775.2	-176.3	-258.4	-176.3	0.00	0.00	
2,900.0	10.00	235.70	2,873.7	-186.0	-272.7	-186.0	0.00	0.00	
3,000.0	10.00	235.70	2,972.1	-195.8	-287.1	-195.8	0.00	0.00	
3,100.0	10.00	235.70	3,070.6	-205.6	-301.4	-205.6	0.00	0.00	
3,200.0	10.00	235.70	3,169.1	-215.4	-315.8	-215.4	0.00	0.00	
3,300.0	10.00	235.70	3,267.6	-225.2	-330.1	-225.2	0.00	0.00	
3,400.0	10.00	235.70	3,366.1	-235.0	-344.5	-235.0	0.00	0.00	
3,500.0	10.00	235.70	3,464.5	-244.8	-358.8	-244.8	0.00	0.00	
3,600.0	10.00	235.70	3,563.0	-254.5	-373.2	-254.5	0.00	0.00	
3,700.0	10.00	235.70	3,661.5	-264.3	-387.5	-264.3	0.00	0.00	
3,800.0	10.00	235.70	3,760.0	-274.1	-401.8	-274.1	0.00	0.00	
3,900.0	10.00	235.70	3,858.5	-283.9	-416.2	-283.9	0.00	0.00	
4,000.0	10.00	235.70	3,957.0	-293.7	-430.5	-293.7	0.00	0.00	
4,100.0	10.00	235.70	4,055.4	-303.5	-444.9	-303.5	0.00	0.00	
4,200.0	10.00	235.70	4,153.9	-313.3	-459.2	-313.3	0.00	0.00	
4,300.0	10.00	235.70	4,252.4	-323.0	-473.6	-323.0	0.00	0.00	
4,400.0	10.00	235.70	4,350.9	-332.8	-487.9	-332.8	0.00	0.00	
4,500.0	10.00	235.70	4,449.4	-342.6	-502.3	-342.6	0.00	0.00	
4,600.0	10.00	235.70	4,547.8	-352.4	-516.6	-352.4	0.00	0.00	
4,700.0	10.00	235.70	4,646.3	-362.2	-530.9	-362.2	0.00	0.00	
4,736.2	10.00	235.70	4,682.0	-365.7	-536.1	-365.7	0.00	0.00	Sussex
4,800.0	10.00	235.70	4,744.8	-372.0	-545.3	-372.0	0.00	0.00	
4,900.0	10.00	235.70	4,843.3	-381.8	-559.6	-381.8	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Mathews 4D-14H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 5117.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	Well @ 5117.0ft (Ensign)
Site:	SWSE S14 T1N-R66W (Mathews)	North Reference:	True
Well:	Mathews 4D-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

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
4,905.0	10.00	235.70	4,848.2	-382.2	-560.4	-382.2	0.00	0.00	Start Drop -1.00
5,000.0	9.05	235.70	4,941.9	-391.1	-573.3	-391.1	1.00	-1.00	
5,026.4	8.79	235.70	4,968.0	-393.4	-576.7	-393.4	1.00	-1.00	Sussex Marker
5,100.0	8.05	235.70	5,040.8	-399.5	-585.6	-399.5	1.00	-1.00	
5,200.0	7.05	235.70	5,139.9	-406.9	-596.5	-406.9	1.00	-1.00	
5,275.6	6.29	235.70	5,215.0	-411.8	-603.7	-411.8	1.00	-1.00	Shannon
5,300.0	6.05	235.70	5,239.3	-413.3	-605.9	-413.3	1.00	-1.00	
5,400.0	5.05	235.70	5,338.8	-418.8	-613.9	-418.8	1.00	-1.00	
5,500.0	4.05	235.70	5,438.5	-423.2	-620.4	-423.2	1.00	-1.00	
5,600.0	3.05	235.70	5,538.3	-426.7	-625.6	-426.7	1.00	-1.00	
5,700.0	2.05	235.70	5,638.2	-429.2	-629.2	-429.2	1.00	-1.00	
5,800.0	1.05	235.70	5,738.1	-430.8	-631.5	-430.8	1.00	-1.00	
5,900.0	0.05	235.70	5,838.1	-431.3	-632.3	-431.3	1.00	-1.00	
5,905.0	0.00	0.00	5,843.1	-431.3	-632.3	-431.3	1.00	-1.00	EOD; Inc=0°
6,000.0	0.00	0.00	5,938.1	-431.3	-632.3	-431.3	0.00	0.00	
6,100.0	0.00	0.00	6,038.1	-431.3	-632.3	-431.3	0.00	0.00	
6,200.0	0.00	0.00	6,138.1	-431.3	-632.3	-431.3	0.00	0.00	
6,300.0	0.00	0.00	6,238.1	-431.3	-632.3	-431.3	0.00	0.00	
6,400.0	0.00	0.00	6,338.1	-431.3	-632.3	-431.3	0.00	0.00	
6,500.0	0.00	0.00	6,438.1	-431.3	-632.3	-431.3	0.00	0.00	
6,600.0	0.00	0.00	6,538.1	-431.3	-632.3	-431.3	0.00	0.00	
6,617.9	0.00	0.00	6,556.0	-431.3	-632.3	-431.3	0.00	0.00	Teepee Buttes
6,700.0	0.00	0.00	6,638.1	-431.3	-632.3	-431.3	0.00	0.00	
6,800.0	0.00	0.00	6,738.1	-431.3	-632.3	-431.3	0.00	0.00	
6,900.0	0.00	0.00	6,838.1	-431.3	-632.3	-431.3	0.00	0.00	
6,976.7	0.00	0.00	6,914.8	-431.3	-632.3	-431.3	0.00	0.00	Start 8° build @ 6976' MD
7,000.0	1.86	0.00	6,938.1	-430.9	-632.3	-430.9	7.99	7.99	
7,100.0	9.86	0.00	7,037.5	-420.7	-632.3	-420.7	8.00	8.00	
7,200.0	17.86	0.00	7,134.5	-396.8	-632.3	-396.8	8.00	8.00	
7,300.0	25.86	0.00	7,227.3	-359.6	-632.3	-359.6	8.00	8.00	
7,325.5	27.90	0.00	7,250.0	-348.0	-632.3	-348.0	8.00	8.00	Sharon Springs
7,351.8	30.01	0.00	7,273.0	-335.3	-632.3	-335.3	8.00	8.00	Niobrara
7,400.0	33.86	0.00	7,313.9	-309.8	-632.3	-309.8	8.00	8.00	
7,500.0	41.86	0.00	7,392.8	-248.5	-632.3	-248.5	8.00	8.00	
7,504.3	42.21	0.00	7,396.0	-245.6	-632.3	-245.6	8.00	8.00	B Chalk
7,600.0	49.86	0.00	7,462.4	-176.8	-632.3	-176.8	8.00	8.00	
7,700.0	57.86	0.00	7,521.3	-96.1	-632.3	-96.1	8.00	8.00	
7,800.0	65.86	0.00	7,568.4	-8.0	-632.3	-8.0	8.00	8.00	
7,819.2	67.40	0.00	7,576.0	9.7	-632.3	9.7	8.00	8.00	Mathews 4D-14H FPP
7,890.1	73.07	0.00	7,600.0	76.4	-632.3	76.4	8.00	8.00	Ft. Hayes
7,900.0	73.86	0.00	7,602.8	85.9	-632.3	85.9	8.00	8.00	
7,981.7	80.40	0.00	7,621.0	165.5	-632.3	165.5	8.00	8.00	Codell
8,000.0	81.86	0.00	7,623.8	183.5	-632.3	183.5	8.00	8.00	
8,100.0	89.86	0.00	7,631.0	283.2	-632.3	283.2	8.00	8.00	
8,101.7	90.00	0.00	7,631.0	284.9	-632.3	284.9	8.00	8.00	LP @ 7631' TVD; 90°
8,200.0	90.00	0.00	7,631.0	383.2	-632.3	383.2	0.00	0.00	
8,300.0	90.00	0.00	7,631.0	483.2	-632.3	483.2	0.00	0.00	
8,400.0	90.00	0.00	7,631.0	583.2	-632.3	583.2	0.00	0.00	
8,500.0	90.00	0.00	7,631.0	683.2	-632.3	683.2	0.00	0.00	
8,600.0	90.00	0.00	7,631.0	783.2	-632.3	783.2	0.00	0.00	
8,700.0	90.00	0.00	7,631.0	883.2	-632.3	883.2	0.00	0.00	
8,800.0	90.00	0.00	7,631.0	983.2	-632.3	983.2	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Mathews 4D-14H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 5117.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	Well @ 5117.0ft (Ensign)
Site:	SWSE S14 T1N-R66W (Mathews)	North Reference:	True
Well:	Mathews 4D-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,900.0	90.00	0.00	7,631.0	1,083.2	-632.3	1,083.2	0.00	0.00	
9,000.0	90.00	0.00	7,631.0	1,183.2	-632.3	1,183.2	0.00	0.00	
9,100.0	90.00	0.00	7,631.0	1,283.2	-632.3	1,283.2	0.00	0.00	
9,200.0	90.00	0.00	7,631.0	1,383.2	-632.3	1,383.2	0.00	0.00	
9,300.0	90.00	0.00	7,631.0	1,483.2	-632.3	1,483.2	0.00	0.00	
9,400.0	90.00	0.00	7,631.0	1,583.2	-632.3	1,583.2	0.00	0.00	
9,500.0	90.00	0.00	7,631.0	1,683.2	-632.3	1,683.2	0.00	0.00	
9,600.0	90.00	0.00	7,631.0	1,783.2	-632.3	1,783.2	0.00	0.00	
9,700.0	90.00	0.00	7,631.0	1,883.2	-632.3	1,883.2	0.00	0.00	
9,800.0	90.00	0.00	7,631.0	1,983.2	-632.3	1,983.2	0.00	0.00	
9,900.0	90.00	0.00	7,631.0	2,083.2	-632.3	2,083.2	0.00	0.00	
10,000.0	90.00	0.00	7,631.0	2,183.2	-632.3	2,183.2	0.00	0.00	
10,100.0	90.00	0.00	7,631.0	2,283.2	-632.3	2,283.2	0.00	0.00	
10,200.0	90.00	0.00	7,631.0	2,383.2	-632.3	2,383.2	0.00	0.00	
10,300.0	90.00	0.00	7,631.0	2,483.2	-632.3	2,483.2	0.00	0.00	
10,400.0	90.00	0.00	7,631.0	2,583.2	-632.3	2,583.2	0.00	0.00	
10,500.0	90.00	0.00	7,631.0	2,683.2	-632.3	2,683.2	0.00	0.00	
10,600.0	90.00	0.00	7,631.0	2,783.2	-632.3	2,783.2	0.00	0.00	
10,700.0	90.00	0.00	7,631.0	2,883.2	-632.3	2,883.2	0.00	0.00	
10,800.0	90.00	0.00	7,631.0	2,983.2	-632.3	2,983.2	0.00	0.00	
10,900.0	90.00	0.00	7,631.0	3,083.2	-632.3	3,083.2	0.00	0.00	
11,000.0	90.00	0.00	7,631.0	3,183.2	-632.3	3,183.2	0.00	0.00	
11,100.0	90.00	0.00	7,631.0	3,283.2	-632.3	3,283.2	0.00	0.00	
11,200.0	90.00	0.00	7,631.0	3,383.2	-632.3	3,383.2	0.00	0.00	
11,300.0	90.00	0.00	7,631.0	3,483.2	-632.3	3,483.2	0.00	0.00	
11,400.0	90.00	0.00	7,631.0	3,583.2	-632.3	3,583.2	0.00	0.00	
11,500.0	90.00	0.00	7,631.0	3,683.2	-632.3	3,683.2	0.00	0.00	
11,600.0	90.00	0.00	7,631.0	3,783.2	-632.3	3,783.2	0.00	0.00	
11,700.0	90.00	0.00	7,631.0	3,883.2	-632.3	3,883.2	0.00	0.00	
11,800.0	90.00	0.00	7,631.0	3,983.2	-632.3	3,983.2	0.00	0.00	
11,900.0	90.00	0.00	7,631.0	4,083.2	-632.3	4,083.2	0.00	0.00	
12,000.0	90.00	0.00	7,631.0	4,183.2	-632.3	4,183.2	0.00	0.00	
12,100.0	90.00	0.00	7,631.0	4,283.2	-632.3	4,283.2	0.00	0.00	
12,177.2	90.00	0.00	7,631.0	4,360.4	-632.3	4,360.4	0.00	0.00	PBHL @ 12177' MD - Mathews 4D-14H PBHL -

Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Mathews 4D-14H PBHL	0.00	0.00	7,631.0	7,026.9	-627.0	1,267,286.71	3,212,825.28	40.064580	-104.739620
- plan misses target center by 2666.5ft at 12177.2ft MD (7631.0 TVD, 4360.4 N, -632.3 E)									
- Point									
Mathews 4D-14H FPP	0.00	0.00	7,631.0	-10.9	-646.7	1,260,248.97	3,212,866.03	40.045260	-104.739690
- plan misses target center by 60.4ft at 7819.2ft MD (7576.0 TVD, 9.7 N, -632.3 E)									
- Point									
Mathews 4D-14H PBHL	0.00	0.00	7,631.0	4,360.4	-632.6	1,264,620.24	3,212,842.55	40.057260	-104.739640
- plan misses target center by 0.4ft at 12177.2ft MD (7631.0 TVD, 4360.4 N, -632.3 E)									
- Point									

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Mathews 4D-14H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	Well @ 5117.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	Well @ 5117.0ft (Ensign)
Site:	SWSE S14 T1N-R66W (Mathews)	North Reference:	True
Well:	Mathews 4D-14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #3		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,193.7	1,192.0	Base of Fox Hills		0.00		
4,736.2	4,682.0	Sussex		0.00		
5,026.4	4,968.0	Sussex Marker		0.00		
5,275.6	5,215.0	Shannon		0.00		
6,617.9	6,556.0	Teepee Buttes		0.00		
7,325.5	7,250.0	Sharon Springs		0.00		
7,351.8	7,273.0	Niobrara		0.00		
7,504.3	7,396.0	B Chalk		0.00		
7,890.1	7,600.0	Ft. Hayes		0.00		
7,981.7	7,621.0	Codell		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
500.0	500.0	0.0	0.0	KOP @ 500'	
1,500.0	1,494.9	-49.1	-71.9	EOB; Inc=10°	
4,905.0	4,848.2	-382.2	-560.4	Start Drop -1.00	
5,905.0	5,843.1	-431.3	-632.3	EOD; Inc=0°	
6,976.7	6,914.8	-431.3	-632.3	Start 8° build @ 6976' MD	
8,101.7	7,631.0	284.9	-632.3	LP @ 7631' TVD; 90°	
12,177.2	7,631.0	4,360.4	-632.6	PBHL @ 12177' MD	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

SWSE S14 T1N-R66W (Mathews)

Mathews 4D-14H

HZ

Plan #3

Anticollision Report

27 December, 2012

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Reference	Plan #3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	12/27/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,177.2	Plan #3 (HZ)	MWD	Geolink MWD	

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						
SWSE S14 T1N-R66W (Mathews)						
05-123-07177, Mathews 1 (Exisitng) - VT (Existing) - Exis	11,936.4	7,633.0	507.2	418.6	5.727	CC, ES
05-123-07177, Mathews 1 (Exisitng) - VT (Existing) - Exis	12,000.0	7,633.0	511.2	421.5	5.701	SF
Mathews 4A-14H - HZ - Plan #3	6,843.9	6,868.8	1,277.1	1,248.9	45.184	CC
Mathews 4A-14H - HZ - Plan #3	12,177.2	11,987.2	1,295.3	1,138.6	8.270	ES, SF
Mathews 4B-14H - HZ - Plan #3	12,177.2	12,166.8	851.0	692.1	5.358	CC, ES, SF
Mathews 4C-14H - HZ - Plan #3	6,893.2	6,880.3	426.3	398.0	15.057	CC
Mathews 4C-14H - HZ - Plan #3	12,177.2	11,956.6	479.0	336.9	3.372	ES, SF
Mathews 4E-14H - HZ - Plan #3	550.6	550.7	7.9	6.0	4.208	CC
Mathews 4E-14H - HZ - Plan #3	600.0	600.1	8.1	6.0	3.928	ES
Mathews 4E-14H - HZ - Plan #3	12,177.2	11,889.5	476.5	335.8	3.385	SF
Mathews 4F-14H - HZ - Plan #3	300.0	300.0	19.6	18.6	19.562	CC, ES
Mathews 4F-14H - HZ - Plan #3	12,177.2	12,161.4	848.2	689.4	5.342	SF
Mathews 4G-14H - HZ - Plan #3	200.0	200.0	31.0	30.4	47.507	CC, ES
Mathews 4G-14H - HZ - Plan #3	12,177.2	11,970.0	1,292.5	1,136.0	8.259	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - 05-123-07177, Mathews 1 (Existing) - VT (Existing) - Existing													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	2.0	2.0	0.0	0.0	-1.74	4,119.6	-125.4	4,121.5					
100.0	100.0	102.0	102.0	0.2	0.2	-1.74	4,119.6	-125.4	4,121.5	4,121.2	0.31	N/A		
200.0	200.0	202.0	202.0	0.3	0.3	-1.74	4,119.6	-125.4	4,121.5	4,120.9	0.66	6,280.468		
300.0	300.0	302.0	302.0	0.5	0.5	-1.74	4,119.6	-125.4	4,121.5	4,120.5	1.01	4,099.751		
400.0	400.0	402.0	402.0	0.7	0.7	-1.74	4,119.6	-125.4	4,121.5	4,120.2	1.35	3,043.114		
500.0	500.0	502.0	502.0	0.8	0.9	-1.74	4,119.6	-125.4	4,121.5	4,119.8	1.70	2,419.525		
600.0	600.0	602.0	602.0	1.0	1.0	122.56	4,119.6	-125.4	4,122.0	4,119.9	2.05	2,008.021		
700.0	700.0	702.0	702.0	1.2	1.2	122.58	4,119.6	-125.4	4,123.4	4,121.0	2.40	1,715.423		
800.0	799.9	801.9	801.9	1.4	1.4	122.61	4,119.6	-125.4	4,125.8	4,123.0	2.76	1,495.710		
900.0	899.7	901.7	901.7	1.6	1.6	122.66	4,119.6	-125.4	4,129.0	4,125.9	3.12	1,323.806		
1,000.0	999.4	1,001.4	1,001.4	1.8	1.7	122.71	4,119.6	-125.4	4,133.3	4,129.8	3.49	1,184.967		
1,100.0	1,098.9	1,100.9	1,100.9	2.0	1.9	122.78	4,119.6	-125.4	4,138.5	4,134.6	3.87	1,069.999		
1,200.0	1,198.3	1,200.3	1,200.3	2.2	2.1	122.86	4,119.6	-125.4	4,144.7	4,140.4	4.26	972.903		
1,300.0	1,297.4	1,299.4	1,299.4	2.5	2.2	122.95	4,119.6	-125.4	4,151.8	4,147.1	4.67	889.606		
1,400.0	1,396.3	1,398.3	1,398.3	2.8	2.4	123.05	4,119.6	-125.4	4,159.9	4,154.8	5.09	817.255		
1,500.0	1,494.9	1,496.9	1,496.9	3.1	2.6	123.16	4,119.6	-125.4	4,169.0	4,163.5	5.53	753.786		
1,600.0	1,593.4	1,595.4	1,595.4	3.4	2.8	123.36	4,119.6	-125.4	4,178.6	4,172.7	5.98	698.883		
1,700.0	1,691.9	1,693.9	1,693.9	3.7	2.9	123.56	4,119.6	-125.4	4,188.3	4,181.9	6.43	651.202		
1,800.0	1,790.4	1,792.4	1,792.4	4.1	3.1	123.75	4,119.6	-125.4	4,198.0	4,191.1	6.89	609.517		
1,900.0	1,888.9	1,890.9	1,890.9	4.4	3.3	123.95	4,119.6	-125.4	4,207.8	4,200.5	7.35	572.835		
2,000.0	1,987.3	1,989.3	1,989.3	4.7	3.4	124.14	4,119.6	-125.4	4,217.6	4,209.8	7.81	540.352		
2,100.0	2,085.8	2,087.8	2,087.8	5.1	3.6	124.33	4,119.6	-125.4	4,227.5	4,219.2	8.27	511.418		
2,200.0	2,184.3	2,186.3	2,186.3	5.4	3.8	124.52	4,119.6	-125.4	4,237.4	4,228.7	8.73	485.503		
2,300.0	2,282.8	2,284.8	2,284.8	5.7	4.0	124.71	4,119.6	-125.4	4,247.4	4,238.2	9.19	462.173		
2,400.0	2,381.3	2,383.3	2,383.3	6.1	4.1	124.90	4,119.6	-125.4	4,257.4	4,247.8	9.65	441.070		
2,500.0	2,479.7	2,481.7	2,481.7	6.4	4.3	125.09	4,119.6	-125.4	4,267.5	4,257.4	10.11	421.899		
2,600.0	2,578.2	2,580.2	2,580.2	6.8	4.5	125.28	4,119.6	-125.4	4,277.6	4,267.0	10.58	404.412		
2,700.0	2,676.7	2,678.7	2,678.7	7.1	4.7	125.47	4,119.6	-125.4	4,287.7	4,276.7	11.04	388.401		
2,800.0	2,775.2	2,777.2	2,777.2	7.5	4.8	125.66	4,119.6	-125.4	4,297.9	4,286.4	11.50	373.690		
2,900.0	2,873.7	2,875.7	2,875.7	7.8	5.0	125.84	4,119.6	-125.4	4,308.2	4,296.2	11.96	360.131		
3,000.0	2,972.1	2,974.1	2,974.1	8.2	5.2	126.03	4,119.6	-125.4	4,318.5	4,306.1	12.42	347.596		
3,100.0	3,070.6	3,072.6	3,072.6	8.5	5.3	126.21	4,119.6	-125.4	4,328.8	4,315.9	12.88	335.974		
3,200.0	3,169.1	3,171.1	3,171.1	8.8	5.5	126.39	4,119.6	-125.4	4,339.2	4,325.9	13.34	325.171		
3,300.0	3,267.6	3,269.6	3,269.6	9.2	5.7	126.58	4,119.6	-125.4	4,349.6	4,335.8	13.80	315.106		
3,400.0	3,366.1	3,368.1	3,368.1	9.5	5.9	126.76	4,119.6	-125.4	4,360.1	4,345.8	14.26	305.705		
3,500.0	3,464.5	3,466.5	3,466.5	9.9	6.0	126.94	4,119.6	-125.4	4,370.6	4,355.9	14.72	296.906		
3,600.0	3,563.0	3,565.0	3,565.0	10.2	6.2	127.12	4,119.6	-125.4	4,381.2	4,366.0	15.18	288.654		
3,700.0	3,661.5	3,663.5	3,663.5	10.6	6.4	127.30	4,119.6	-125.4	4,391.8	4,376.1	15.63	280.901		
3,800.0	3,760.0	3,762.0	3,762.0	10.9	6.5	127.48	4,119.6	-125.4	4,402.4	4,386.3	16.09	273.602		
3,900.0	3,858.5	3,860.5	3,860.5	11.3	6.7	127.65	4,119.6	-125.4	4,413.1	4,396.6	16.55	266.721		
4,000.0	3,957.0	3,959.0	3,959.0	11.6	6.9	127.83	4,119.6	-125.4	4,423.8	4,406.8	17.00	260.221		
4,100.0	4,055.4	4,057.4	4,057.4	12.0	7.1	128.00	4,119.6	-125.4	4,434.6	4,417.2	17.45	254.074		
4,200.0	4,153.9	4,155.9	4,155.9	12.3	7.2	128.18	4,119.6	-125.4	4,445.4	4,427.5	17.91	248.252		
4,300.0	4,252.4	4,254.4	4,254.4	12.7	7.4	128.35	4,119.6	-125.4	4,456.3	4,437.9	18.36	242.729		
4,400.0	4,350.9	4,352.9	4,352.9	13.0	7.6	128.53	4,119.6	-125.4	4,467.2	4,448.4	18.81	237.484		
4,500.0	4,449.4	4,451.4	4,451.4	13.4	7.7	128.70	4,119.6	-125.4	4,478.1	4,458.9	19.26	232.496		
4,600.0	4,547.8	4,549.8	4,549.8	13.7	7.9	128.87	4,119.6	-125.4	4,489.1	4,469.4	19.71	227.748		
4,700.0	4,646.3	4,648.3	4,648.3	14.1	8.1	129.04	4,119.6	-125.4	4,500.1	4,480.0	20.16	223.222		
4,800.0	4,744.8	4,746.8	4,746.8	14.4	8.3	129.21	4,119.6	-125.4	4,511.2	4,490.6	20.61	218.905		
4,905.0	4,848.2	4,850.2	4,850.2	14.8	8.4	129.39	4,119.6	-125.4	4,522.8	4,501.7	21.08	214.579		
5,000.0	4,941.9	4,943.9	4,943.9	15.1	8.6	129.62	4,119.6	-125.4	4,532.9	4,511.4	21.49	210.971		
5,100.0	5,040.8	5,042.8	5,042.8	15.4	8.8	129.84	4,119.6	-125.4	4,542.5	4,520.6	21.90	207.424		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design										SWSE S14 T1N-R66W (Mathews) - 05-123-07177, Mathews 1 (Exisitng) - VT (Existing) - Existing				Offset Site Error: 0.0 ft	
Survey Program: 0-MWD														Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
5,200.0	5,139.9	5,141.9	5,141.9	15.7	9.0	130.03	4,119.6	-125.4	4,550.9	4,528.7	22.30	204.107			
5,300.0	5,239.3	5,241.3	5,241.3	16.0	9.1	130.19	4,119.6	-125.4	4,558.3	4,535.6	22.68	200.997			
5,400.0	5,338.8	5,340.8	5,340.8	16.2	9.3	130.33	4,119.6	-125.4	4,564.6	4,541.5	23.04	198.074			
5,500.0	5,438.5	5,440.5	5,440.5	16.4	9.5	130.45	4,119.6	-125.4	4,569.7	4,546.3	23.40	195.322			
5,600.0	5,538.3	5,540.3	5,540.3	16.6	9.6	130.54	4,119.6	-125.4	4,573.8	4,550.0	23.73	192.725			
5,700.0	5,638.2	5,640.2	5,640.2	16.7	9.8	130.60	4,119.6	-125.4	4,576.7	4,552.6	24.05	190.269			
5,800.0	5,738.1	5,740.1	5,740.1	16.8	10.0	130.64	4,119.6	-125.4	4,578.4	4,554.1	24.36	187.941			
5,905.0	5,843.1	5,845.1	5,845.1	17.0	10.2	6.36	4,119.6	-125.4	4,579.1	4,554.4	24.67	185.631			
6,000.0	5,938.1	5,940.1	5,940.1	17.1	10.3	6.36	4,119.6	-125.4	4,579.1	4,554.1	24.95	183.518			
6,100.0	6,038.1	6,040.1	6,040.1	17.2	10.5	6.36	4,119.6	-125.4	4,579.1	4,553.8	25.25	181.339			
6,200.0	6,138.1	6,140.1	6,140.1	17.3	10.7	6.36	4,119.6	-125.4	4,579.1	4,553.5	25.55	179.203			
6,300.0	6,238.1	6,240.1	6,240.1	17.4	10.9	6.36	4,119.6	-125.4	4,579.1	4,553.2	25.85	177.111			
6,400.0	6,338.1	6,340.1	6,340.1	17.5	11.0	6.36	4,119.6	-125.4	4,579.1	4,552.9	26.16	175.061			
6,500.0	6,438.1	6,440.1	6,440.1	17.6	11.2	6.36	4,119.6	-125.4	4,579.1	4,552.6	26.46	173.051			
6,600.0	6,538.1	6,540.1	6,540.1	17.7	11.4	6.36	4,119.6	-125.4	4,579.1	4,552.3	26.77	171.082			
6,700.0	6,638.1	6,640.1	6,640.1	17.8	11.6	6.36	4,119.6	-125.4	4,579.1	4,552.0	27.07	169.151			
6,800.0	6,738.1	6,740.1	6,740.1	17.9	11.7	6.36	4,119.6	-125.4	4,579.1	4,551.7	27.38	167.259			
6,900.0	6,838.1	6,840.1	6,840.1	18.1	11.9	6.36	4,119.6	-125.4	4,579.1	4,551.4	27.68	165.403			
6,976.7	6,914.8	6,916.8	6,916.8	18.1	12.0	6.36	4,119.6	-125.4	4,579.1	4,551.1	27.92	164.004			
7,000.0	6,938.1	6,940.1	6,940.1	18.2	12.1	6.36	4,119.6	-125.4	4,578.7	4,550.7	27.97	163.714			
7,050.0	6,988.0	6,990.0	6,990.0	18.2	12.2	6.40	4,119.6	-125.4	4,575.3	4,547.3	27.99	163.443			
7,100.0	7,037.5	7,039.5	7,039.5	18.2	12.3	6.47	4,119.6	-125.4	4,568.5	4,540.6	27.92	163.649			
7,150.0	7,086.4	7,088.4	7,088.4	18.2	12.3	6.58	4,119.6	-125.4	4,558.3	4,530.6	27.74	164.333			
7,200.0	7,134.5	7,136.5	7,136.5	18.1	12.4	6.73	4,119.6	-125.4	4,544.7	4,517.3	27.46	165.501			
7,250.0	7,181.5	7,183.5	7,183.5	18.1	12.5	6.93	4,119.6	-125.4	4,527.8	4,500.8	27.09	167.160			
7,300.0	7,227.3	7,229.3	7,229.3	18.0	12.6	7.17	4,119.6	-125.4	4,507.7	4,481.1	26.62	169.323			
7,350.0	7,271.5	7,273.5	7,273.5	17.9	12.7	7.48	4,119.6	-125.4	4,484.5	4,458.5	26.07	171.999			
7,400.0	7,313.9	7,315.9	7,315.9	17.8	12.7	7.85	4,119.6	-125.4	4,458.3	4,432.9	25.45	175.198			
7,450.0	7,354.4	7,356.4	7,356.4	17.7	12.8	8.31	4,119.6	-125.4	4,429.2	4,404.5	24.76	178.920			
7,500.0	7,392.8	7,394.8	7,394.8	17.7	12.9	8.86	4,119.6	-125.4	4,397.4	4,373.4	24.01	183.151			
7,550.0	7,428.8	7,430.8	7,430.8	17.6	12.9	9.54	4,119.6	-125.4	4,363.0	4,339.7	23.23	187.847			
7,600.0	7,462.4	7,464.4	7,464.4	17.5	13.0	10.38	4,119.6	-125.4	4,326.2	4,303.7	22.42	192.922			
7,650.0	7,493.2	7,495.2	7,495.2	17.5	13.1	11.42	4,119.6	-125.4	4,287.1	4,265.5	21.63	198.209			
7,700.0	7,521.3	7,523.3	7,523.3	17.5	13.1	12.75	4,119.6	-125.4	4,246.0	4,225.2	20.87	203.422			
7,750.0	7,546.4	7,548.4	7,548.4	17.5	13.2	14.46	4,119.6	-125.4	4,203.1	4,182.9	20.20	208.085			
7,800.0	7,568.4	7,570.4	7,570.4	17.6	13.2	16.73	4,119.6	-125.4	4,158.6	4,138.9	19.67	211.424			
7,850.0	7,587.2	7,589.2	7,589.2	17.7	13.2	19.85	4,119.6	-125.4	4,112.6	4,093.2	19.38	212.222			
7,900.0	7,602.8	7,604.8	7,604.8	17.8	13.3	24.35	4,119.6	-125.4	4,065.5	4,046.0	19.49	208.637			
7,950.0	7,615.0	7,617.0	7,617.0	18.0	13.3	31.19	4,119.6	-125.4	4,017.4	3,997.1	20.27	198.161			
8,000.0	7,623.8	7,625.8	7,625.8	18.2	13.3	42.33	4,119.6	-125.4	3,968.6	3,946.3	22.22	178.637			
8,050.0	7,629.1	7,631.1	7,631.1	18.4	13.3	61.09	4,119.6	-125.4	3,919.3	3,893.6	25.62	152.999			
8,101.7	7,631.0	7,633.0	7,633.0	18.7	13.3	90.00	4,119.6	-125.4	3,868.1	3,839.6	28.43	136.061			
8,200.0	7,631.0	7,633.0	7,633.0	19.4	13.3	90.00	4,119.6	-125.4	3,770.6	3,741.3	29.28	128.796			
8,300.0	7,631.0	7,633.0	7,633.0	20.2	13.3	90.00	4,119.6	-125.4	3,671.6	3,641.3	30.27	121.277			
8,400.0	7,631.0	7,633.0	7,633.0	21.2	13.3	90.00	4,119.6	-125.4	3,572.5	3,541.1	31.39	113.820			
8,500.0	7,631.0	7,633.0	7,633.0	22.2	13.3	90.00	4,119.6	-125.4	3,473.6	3,441.0	32.60	106.562			
8,600.0	7,631.0	7,633.0	7,633.0	23.4	13.3	90.00	4,119.6	-125.4	3,374.7	3,340.8	33.88	99.594			
8,700.0	7,631.0	7,633.0	7,633.0	24.6	13.3	90.00	4,119.6	-125.4	3,275.9	3,240.6	35.24	92.967			
8,800.0	7,631.0	7,633.0	7,633.0	25.8	13.3	90.00	4,119.6	-125.4	3,177.1	3,140.5	36.64	86.705			
8,900.0	7,631.0	7,633.0	7,633.0	27.1	13.3	90.00	4,119.6	-125.4	3,078.4	3,040.3	38.09	80.813			
9,000.0	7,631.0	7,633.0	7,633.0	28.5	13.3	90.00	4,119.6	-125.4	2,979.8	2,940.3	39.58	75.286			
9,100.0	7,631.0	7,633.0	7,633.0	29.9	13.3	90.00	4,119.6	-125.4	2,881.3	2,840.2	41.10	70.108			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
9,200.0	7,631.0	7,633.0	7,633.0	31.3	13.3	90.00	4,119.6	-125.4	2,783.0	2,740.3	42.64	65.261		
9,300.0	7,631.0	7,633.0	7,633.0	32.8	13.3	90.00	4,119.6	-125.4	2,684.7	2,640.5	44.21	60.725		
9,400.0	7,631.0	7,633.0	7,633.0	34.3	13.3	90.00	4,119.6	-125.4	2,586.6	2,540.8	45.80	56.479		
9,500.0	7,631.0	7,633.0	7,633.0	35.8	13.3	90.00	4,119.6	-125.4	2,488.6	2,441.2	47.40	52.502		
9,600.0	7,631.0	7,633.0	7,633.0	37.4	13.3	90.00	4,119.6	-125.4	2,390.8	2,341.8	49.02	48.775		
9,700.0	7,631.0	7,633.0	7,633.0	38.9	13.3	90.00	4,119.6	-125.4	2,293.1	2,242.5	50.65	45.278		
9,800.0	7,631.0	7,633.0	7,633.0	40.5	13.3	90.00	4,119.6	-125.4	2,195.7	2,143.4	52.29	41.995		
9,900.0	7,631.0	7,633.0	7,633.0	42.1	13.3	90.00	4,119.6	-125.4	2,098.6	2,044.6	53.94	38.909		
10,000.0	7,631.0	7,633.0	7,633.0	43.7	13.3	90.00	4,119.6	-125.4	2,001.7	1,946.1	55.59	36.006		
10,100.0	7,631.0	7,633.0	7,633.0	45.3	13.3	90.00	4,119.6	-125.4	1,905.1	1,847.8	57.26	33.272		
10,200.0	7,631.0	7,633.0	7,633.0	46.9	13.3	90.00	4,119.6	-125.4	1,808.9	1,750.0	58.93	30.695		
10,300.0	7,631.0	7,633.0	7,633.0	48.6	13.3	90.00	4,119.6	-125.4	1,713.2	1,652.5	60.61	28.266		
10,400.0	7,631.0	7,633.0	7,633.0	50.2	13.3	90.00	4,119.6	-125.4	1,617.9	1,555.6	62.29	25.973		
10,500.0	7,631.0	7,633.0	7,633.0	51.9	13.3	90.00	4,119.6	-125.4	1,523.3	1,459.3	63.98	23.808		
10,600.0	7,631.0	7,633.0	7,633.0	53.5	13.3	90.00	4,119.6	-125.4	1,429.4	1,363.7	65.67	21.765		
10,700.0	7,631.0	7,633.0	7,633.0	55.2	13.3	90.00	4,119.6	-125.4	1,336.3	1,269.0	67.37	19.836		
10,800.0	7,631.0	7,633.0	7,633.0	56.9	13.3	90.00	4,119.6	-125.4	1,244.4	1,175.3	69.07	18.017		
10,900.0	7,631.0	7,633.0	7,633.0	58.5	13.3	90.00	4,119.6	-125.4	1,153.8	1,083.0	70.77	16.303		
11,000.0	7,631.0	7,633.0	7,633.0	60.2	13.3	90.00	4,119.6	-125.4	1,064.9	992.4	72.48	14.692		
11,100.0	7,631.0	7,633.0	7,633.0	61.9	13.3	90.00	4,119.6	-125.4	978.1	903.9	74.19	13.184		
11,200.0	7,631.0	7,633.0	7,633.0	63.6	13.3	90.00	4,119.6	-125.4	894.1	818.2	75.90	11.780		
11,300.0	7,631.0	7,633.0	7,633.0	65.3	13.3	90.00	4,119.6	-125.4	813.7	736.1	77.61	10.485		
11,400.0	7,631.0	7,633.0	7,633.0	66.9	13.3	90.00	4,119.6	-125.4	738.2	658.9	79.33	9.305		
11,500.0	7,631.0	7,633.0	7,633.0	68.6	13.3	90.00	4,119.6	-125.4	669.1	588.0	81.05	8.255		
11,600.0	7,631.0	7,633.0	7,633.0	70.3	13.3	90.00	4,119.6	-125.4	608.6	525.8	82.77	7.353		
11,700.0	7,631.0	7,633.0	7,633.0	72.0	13.3	90.00	4,119.6	-125.4	559.6	475.1	84.49	6.623		
11,800.0	7,631.0	7,633.0	7,633.0	73.7	13.3	90.00	4,119.6	-125.4	525.2	439.0	86.21	6.092		
11,900.0	7,631.0	7,633.0	7,633.0	75.4	13.3	90.00	4,119.6	-125.4	508.5	420.6	87.93	5.783		
11,936.4	7,631.0	7,633.0	7,633.0	76.1	13.3	90.00	4,119.6	-125.4	507.2	418.6	88.56	5.727 CC, ES		
12,000.0	7,631.0	7,633.0	7,633.0	77.2	13.3	90.00	4,119.6	-125.4	511.2	421.5	89.66	5.701 SF		
12,100.0	7,631.0	7,633.0	7,633.0	78.9	13.3	90.00	4,119.6	-125.4	532.9	441.6	91.39	5.832		
12,177.2	7,631.0	7,633.0	7,633.0	80.2	13.3	90.00	4,119.6	-125.4	561.5	468.8	92.72	6.056		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4A-14H - HZ - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	14.0	14.0	0.0	0.0	-90.00	0.0	-1,321.4	1,321.4					
100.0	100.0	114.0	114.0	0.2	0.2	-90.00	0.0	-1,321.4	1,321.4	1,321.1	0.33	4,027.308		
161.2	161.2	175.2	175.2	0.3	0.3	-90.00	0.0	-1,321.4	1,321.4	1,320.9	0.54	2,438.589		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-1,321.4	1,321.5	1,320.9	0.65	2,024.537		
300.0	300.0	283.2	283.2	0.5	0.5	-90.03	-0.7	-1,322.4	1,322.8	1,321.8	0.97	1,359.566		
400.0	400.0	356.0	355.9	0.7	0.6	-90.11	-2.5	-1,324.9	1,326.1	1,324.9	1.28	1,038.901		
500.0	500.0	428.7	428.4	0.8	0.8	-90.23	-5.4	-1,328.8	1,331.5	1,330.0	1.58	842.378		
600.0	600.0	500.0	499.5	1.0	0.9	33.88	-9.3	-1,334.0	1,338.3	1,336.4	1.90	703.725		
700.0	700.0	573.3	572.2	1.2	1.1	33.66	-14.4	-1,340.9	1,345.6	1,343.4	2.23	603.492		
800.0	799.9	645.2	643.5	1.4	1.3	33.44	-20.5	-1,349.2	1,353.6	1,351.0	2.57	527.687		
900.0	899.7	717.0	714.2	1.6	1.6	33.20	-27.7	-1,358.8	1,362.1	1,359.2	2.91	467.942		
1,000.0	999.4	800.0	795.6	1.8	1.9	32.90	-37.3	-1,371.7	1,371.3	1,368.0	3.30	415.604		
1,100.0	1,098.9	883.3	877.1	2.0	2.2	32.62	-47.6	-1,385.6	1,380.3	1,376.6	3.70	373.292		
1,200.0	1,198.3	982.8	974.4	2.2	2.6	32.34	-59.9	-1,402.2	1,387.9	1,383.8	4.14	334.909		
1,300.0	1,297.4	1,082.5	1,072.0	2.5	3.0	32.11	-72.3	-1,418.9	1,394.1	1,389.5	4.60	303.130		
1,400.0	1,396.3	1,182.3	1,169.6	2.8	3.4	31.92	-84.7	-1,435.5	1,398.9	1,393.8	5.06	276.314		
1,500.0	1,494.9	1,282.2	1,267.3	3.1	3.8	31.78	-97.1	-1,452.2	1,402.1	1,396.6	5.54	253.306		
1,600.0	1,593.4	1,382.1	1,365.1	3.4	4.2	31.68	-109.4	-1,468.9	1,404.6	1,398.6	6.02	233.501		
1,700.0	1,691.9	1,482.1	1,462.8	3.7	4.6	31.57	-121.8	-1,485.6	1,407.1	1,400.6	6.50	216.553		
1,800.0	1,790.4	1,582.0	1,560.6	4.1	5.0	31.47	-134.2	-1,502.2	1,409.7	1,402.7	6.98	201.906		
1,900.0	1,888.9	1,682.0	1,658.3	4.4	5.4	31.37	-146.6	-1,518.9	1,412.2	1,404.7	7.47	189.136		
2,000.0	1,987.3	1,781.9	1,756.1	4.7	5.8	31.27	-159.0	-1,535.6	1,414.7	1,406.8	7.95	177.912		
2,100.0	2,085.8	1,881.8	1,853.8	5.1	6.2	31.16	-171.4	-1,552.3	1,417.3	1,408.8	8.44	167.977		
2,200.0	2,184.3	1,981.8	1,951.6	5.4	6.6	31.06	-183.8	-1,569.0	1,419.8	1,410.9	8.92	159.125		
2,300.0	2,282.8	2,081.7	2,049.3	5.7	7.0	30.96	-196.2	-1,585.7	1,422.4	1,413.0	9.41	151.191		
2,400.0	2,381.3	2,181.6	2,147.1	6.1	7.4	30.86	-208.5	-1,602.3	1,424.9	1,415.0	9.89	144.043		
2,500.0	2,479.7	2,281.6	2,244.8	6.4	7.8	30.76	-220.9	-1,619.0	1,427.5	1,417.1	10.38	137.569		
2,600.0	2,578.2	2,381.5	2,342.6	6.8	8.2	30.66	-233.3	-1,635.7	1,430.0	1,419.2	10.86	131.682		
2,700.0	2,676.7	2,481.4	2,440.3	7.1	8.6	30.56	-245.7	-1,652.4	1,432.6	1,421.3	11.34	126.305		
2,800.0	2,775.2	2,581.4	2,538.1	7.5	9.0	30.46	-258.1	-1,669.1	1,435.2	1,423.4	11.82	121.376		
2,900.0	2,873.7	2,681.3	2,635.8	7.8	9.4	30.36	-270.5	-1,685.7	1,437.8	1,425.4	12.31	116.841		
3,000.0	2,972.1	2,781.3	2,733.6	8.2	9.8	30.27	-282.9	-1,702.4	1,440.3	1,427.5	12.79	112.656		
3,100.0	3,070.6	2,881.2	2,831.3	8.5	10.2	30.17	-295.3	-1,719.1	1,442.9	1,429.6	13.26	108.782		
3,200.0	3,169.1	2,981.1	2,929.1	8.8	10.7	30.07	-307.6	-1,735.8	1,445.5	1,431.8	13.74	105.186		
3,300.0	3,267.6	3,081.1	3,026.8	9.2	11.1	29.97	-320.0	-1,752.5	1,448.1	1,433.9	14.22	101.840		
3,400.0	3,366.1	3,181.0	3,124.6	9.5	11.5	29.87	-332.4	-1,769.2	1,450.7	1,436.0	14.70	98.718		
3,500.0	3,464.5	3,280.9	3,222.3	9.9	11.9	29.78	-344.8	-1,785.8	1,453.3	1,438.1	15.17	95.798		
3,600.0	3,563.0	3,380.9	3,320.1	10.2	12.3	29.68	-357.2	-1,802.5	1,455.9	1,440.2	15.64	93.063		
3,700.0	3,661.5	3,480.8	3,417.9	10.6	12.7	29.59	-369.6	-1,819.2	1,458.5	1,442.4	16.12	90.495		
3,800.0	3,760.0	3,580.7	3,515.6	10.9	13.1	29.49	-382.0	-1,835.9	1,461.1	1,444.5	16.59	88.080		
3,900.0	3,858.5	3,680.7	3,613.4	11.3	13.5	29.39	-394.4	-1,852.6	1,463.7	1,446.7	17.06	85.803		
4,000.0	3,957.0	3,827.5	3,757.3	11.6	14.0	29.30	-411.4	-1,875.5	1,465.4	1,447.8	17.62	83.147		
4,100.0	4,055.4	4,004.5	3,932.6	12.0	14.5	29.38	-426.2	-1,895.4	1,462.2	1,443.9	18.23	80.195		
4,200.0	4,153.9	4,180.1	4,107.6	12.3	14.8	29.68	-434.5	-1,906.6	1,453.7	1,434.9	18.82	77.258		
4,300.0	4,252.4	4,339.0	4,266.4	12.7	15.0	30.16	-436.5	-1,909.4	1,440.3	1,420.9	19.36	74.385		
4,400.0	4,350.9	4,437.4	4,364.9	13.0	15.1	30.51	-436.5	-1,909.4	1,425.2	1,405.4	19.80	71.993		
4,500.0	4,449.4	4,535.9	4,463.4	13.4	15.2	30.87	-436.5	-1,909.4	1,410.3	1,390.0	20.24	69.691		
4,600.0	4,547.8	4,634.4	4,561.8	13.7	15.3	31.23	-436.5	-1,909.4	1,395.3	1,374.6	20.68	67.477		
4,700.0	4,646.3	4,732.9	4,660.3	14.1	15.3	31.60	-436.5	-1,909.4	1,380.4	1,359.3	21.13	65.345		
4,800.0	4,744.8	4,831.4	4,758.8	14.4	15.4	31.98	-436.5	-1,909.4	1,365.6	1,344.0	21.58	63.291		
4,905.0	4,848.2	4,934.8	4,862.2	14.8	15.5	32.39	-436.5	-1,909.4	1,350.1	1,328.1	22.06	61.214		
5,000.0	4,941.9	5,028.5	4,955.9	15.1	15.6	32.68	-436.5	-1,909.4	1,336.8	1,314.3	22.47	59.502		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error: 0.0 ft	
Survey Program: O-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,040.8	5,127.3	5,054.8	15.4	15.7	32.95	-436.5	-1,909.4	1,324.3	1,301.4	22.88	57.870		
5,200.0	5,139.9	5,226.5	5,153.9	15.7	15.8	33.20	-436.5	-1,909.4	1,313.2	1,290.0	23.28	56.400		
5,300.0	5,239.3	5,325.8	5,253.3	16.0	15.9	33.43	-436.5	-1,909.4	1,303.7	1,280.0	23.67	55.083		
5,400.0	5,338.8	5,425.3	5,352.8	16.2	16.0	33.62	-436.5	-1,909.4	1,295.6	1,271.6	24.03	53.911		
5,500.0	5,438.5	5,525.0	5,452.5	16.4	16.1	33.77	-436.5	-1,909.4	1,289.0	1,264.6	24.38	52.874		
5,600.0	5,538.3	5,624.8	5,552.3	16.6	16.2	33.90	-436.5	-1,909.4	1,283.9	1,259.2	24.71	51.965		
5,700.0	5,638.2	5,724.7	5,652.2	16.7	16.3	33.99	-436.5	-1,909.4	1,280.2	1,255.2	25.01	51.177		
5,800.0	5,738.1	5,824.7	5,752.1	16.8	16.4	34.04	-436.5	-1,909.4	1,277.9	1,252.6	25.30	50.504		
5,905.0	5,843.1	5,929.7	5,857.1	17.0	16.6	-90.24	-436.5	-1,909.4	1,277.1	1,251.5	25.59	49.914		
6,000.0	5,938.1	6,024.7	5,952.1	17.1	16.7	-90.24	-436.5	-1,909.4	1,277.1	1,251.3	25.85	49.397		
6,100.0	6,038.1	6,124.7	6,052.1	17.2	16.8	-90.24	-436.5	-1,909.4	1,277.1	1,251.0	26.14	48.861		
6,200.0	6,138.1	6,224.7	6,152.1	17.3	16.9	-90.24	-436.5	-1,909.4	1,277.1	1,250.7	26.42	48.334		
6,300.0	6,238.1	6,324.7	6,252.1	17.4	17.0	-90.24	-436.5	-1,909.4	1,277.1	1,250.4	26.71	47.815		
6,400.0	6,338.1	6,424.7	6,352.1	17.5	17.1	-90.24	-436.5	-1,909.4	1,277.1	1,250.1	27.00	47.305		
6,500.0	6,438.1	6,524.7	6,452.1	17.6	17.2	-90.24	-436.5	-1,909.4	1,277.1	1,249.8	27.29	46.803		
6,600.0	6,538.1	6,624.7	6,552.1	17.7	17.3	-90.24	-436.5	-1,909.4	1,277.1	1,249.5	27.58	46.309		
6,700.0	6,638.1	6,724.7	6,652.1	17.8	17.5	-90.24	-436.5	-1,909.4	1,277.1	1,249.3	27.87	45.823		
6,800.0	6,738.1	6,825.0	6,752.4	17.9	17.6	-90.18	-435.2	-1,909.4	1,277.1	1,249.0	28.15	45.369		
6,843.9	6,782.1	6,868.8	6,796.1	18.0	17.6	-90.00	-431.2	-1,909.4	1,277.1	1,248.9	28.26	45.184 CC		
6,900.0	6,838.1	6,923.9	6,850.4	18.1	17.6	-89.60	-422.4	-1,909.4	1,277.1	1,248.7	28.41	44.953		
6,976.7	6,914.8	6,996.3	6,920.5	18.1	17.5	-88.80	-404.5	-1,909.4	1,277.4	1,248.8	28.61	44.647		
7,000.0	6,938.1	7,017.7	6,940.9	18.2	17.5	-88.50	-397.9	-1,909.4	1,277.6	1,248.9	28.66	44.573		
7,050.0	6,988.0	7,062.9	6,983.1	18.2	17.4	-87.87	-381.9	-1,909.4	1,278.1	1,249.3	28.73	44.487		
7,100.0	7,037.5	7,107.3	7,023.6	18.2	17.3	-87.26	-363.6	-1,909.4	1,278.7	1,249.9	28.74	44.489		
7,150.0	7,086.4	7,150.0	7,061.4	18.2	17.3	-86.68	-343.8	-1,909.4	1,279.4	1,250.7	28.70	44.575		
7,200.0	7,134.5	7,194.3	7,099.2	18.1	17.2	-86.08	-320.8	-1,909.4	1,280.3	1,251.7	28.62	44.741		
7,250.0	7,181.5	7,236.8	7,134.2	18.1	17.1	-85.51	-296.5	-1,909.4	1,281.3	1,252.8	28.49	44.976		
7,300.0	7,227.3	7,278.8	7,167.2	18.0	17.0	-84.97	-270.6	-1,909.4	1,282.3	1,254.0	28.33	45.272		
7,350.0	7,271.5	7,320.4	7,198.4	17.9	17.0	-84.45	-243.1	-1,909.4	1,283.4	1,255.3	28.13	45.618		
7,400.0	7,313.9	7,361.5	7,227.5	17.8	16.9	-83.95	-214.2	-1,909.4	1,284.6	1,256.7	27.93	46.001		
7,450.0	7,354.4	7,400.0	7,253.3	17.7	16.8	-83.49	-185.6	-1,909.4	1,285.8	1,258.1	27.71	46.400		
7,500.0	7,392.8	7,442.5	7,280.0	17.7	16.8	-83.03	-152.4	-1,909.4	1,287.0	1,259.5	27.50	46.803		
7,550.0	7,428.8	7,482.5	7,303.2	17.6	16.8	-82.61	-119.9	-1,909.4	1,288.1	1,260.8	27.30	47.176		
7,600.0	7,462.4	7,522.2	7,324.4	17.5	16.8	-82.22	-86.3	-1,909.4	1,289.3	1,262.1	27.14	47.499		
7,650.0	7,493.2	7,561.7	7,343.6	17.5	16.8	-81.86	-51.9	-1,909.4	1,290.3	1,263.3	27.02	47.749		
7,700.0	7,521.3	7,600.0	7,360.5	17.5	16.8	-81.54	-17.5	-1,909.4	1,291.4	1,264.4	26.97	47.886		
7,750.0	7,546.4	7,639.9	7,376.0	17.5	16.9	-81.25	19.2	-1,909.3	1,292.3	1,265.3	27.00	47.862		
7,800.0	7,568.4	7,678.7	7,389.1	17.6	17.0	-80.99	55.8	-1,909.3	1,293.2	1,266.1	27.10	47.718		
7,850.0	7,587.2	7,717.3	7,400.2	17.7	17.1	-80.77	92.8	-1,909.3	1,293.9	1,266.6	27.30	47.397		
7,900.0	7,602.8	7,755.9	7,409.2	17.8	17.2	-80.59	130.2	-1,909.3	1,294.6	1,267.0	27.60	46.904		
7,950.0	7,615.0	7,800.0	7,417.1	18.0	17.4	-80.42	173.7	-1,909.3	1,295.1	1,267.1	28.04	46.190		
8,000.0	7,623.8	7,832.6	7,421.2	18.2	17.6	-80.33	206.0	-1,909.3	1,295.5	1,266.9	28.53	45.404		
8,050.0	7,629.1	7,870.9	7,424.1	18.4	17.8	-80.26	244.2	-1,909.3	1,295.7	1,266.6	29.15	44.444		
8,101.7	7,631.0	7,911.7	7,425.0	18.7	18.0	-80.23	285.0	-1,909.3	1,295.8	1,265.9	29.91	43.329		
8,200.0	7,631.0	8,010.0	7,425.0	19.4	18.7	-80.23	383.3	-1,909.3	1,295.8	1,264.2	31.58	41.033		
8,300.0	7,631.0	8,110.0	7,425.0	20.2	19.6	-80.22	483.3	-1,909.3	1,295.8	1,262.3	33.55	38.626		
8,400.0	7,631.0	8,210.0	7,425.0	21.2	20.6	-80.22	583.3	-1,909.3	1,295.8	1,260.0	35.74	36.254		
8,500.0	7,631.0	8,310.0	7,425.0	22.2	21.6	-80.22	683.3	-1,909.3	1,295.8	1,257.6	38.12	33.988		
8,600.0	7,631.0	8,410.0	7,425.0	23.4	22.8	-80.22	783.3	-1,909.3	1,295.8	1,255.1	40.66	31.867		
8,700.0	7,631.0	8,510.0	7,425.0	24.6	24.0	-80.22	883.3	-1,909.3	1,295.7	1,252.4	43.33	29.907		
8,800.0	7,631.0	8,610.0	7,425.0	25.8	25.3	-80.22	983.3	-1,909.3	1,295.7	1,249.6	46.10	28.109		
8,900.0	7,631.0	8,710.0	7,425.0	27.1	26.6	-80.22	1,083.3	-1,909.3	1,295.7	1,246.8	48.95	26.468		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4A-14H - HZ - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
9,000.0	7,631.0	8,810.0	7,425.0	28.5	28.0	-80.22	1,183.3	-1,909.3	1,295.7	1,243.8	51.88	24.973		
9,100.0	7,631.0	8,910.0	7,425.0	29.9	29.5	-80.22	1,283.3	-1,909.3	1,295.7	1,240.8	54.88	23.611		
9,200.0	7,631.0	9,010.0	7,425.0	31.3	30.9	-80.22	1,383.3	-1,909.3	1,295.7	1,237.7	57.92	22.370		
9,300.0	7,631.0	9,110.0	7,425.0	32.8	32.4	-80.22	1,483.3	-1,909.2	1,295.7	1,234.6	61.01	21.237		
9,400.0	7,631.0	9,210.0	7,425.0	34.3	33.9	-80.22	1,583.3	-1,909.2	1,295.6	1,231.5	64.14	20.202		
9,500.0	7,631.0	9,310.0	7,425.0	35.8	35.5	-80.22	1,683.3	-1,909.2	1,295.6	1,228.3	67.29	19.253		
9,600.0	7,631.0	9,410.0	7,425.0	37.4	37.0	-80.22	1,783.3	-1,909.2	1,295.6	1,225.1	70.48	18.383		
9,700.0	7,631.0	9,510.0	7,425.0	38.9	38.6	-80.22	1,883.3	-1,909.2	1,295.6	1,221.9	73.69	17.581		
9,800.0	7,631.0	9,610.0	7,425.0	40.5	40.2	-80.22	1,983.3	-1,909.2	1,295.6	1,218.7	76.92	16.843		
9,900.0	7,631.0	9,710.0	7,425.0	42.1	41.8	-80.22	2,083.3	-1,909.2	1,295.6	1,215.4	80.17	16.159		
10,000.0	7,631.0	9,810.0	7,425.0	43.7	43.4	-80.22	2,183.3	-1,909.2	1,295.6	1,212.1	83.44	15.526		
10,100.0	7,631.0	9,910.0	7,425.0	45.3	45.0	-80.22	2,283.3	-1,909.2	1,295.5	1,208.8	86.73	14.938		
10,200.0	7,631.0	10,010.0	7,425.0	46.9	46.6	-80.22	2,383.3	-1,909.2	1,295.5	1,205.5	90.02	14.391		
10,300.0	7,631.0	10,110.0	7,425.0	48.6	48.3	-80.22	2,483.3	-1,909.2	1,295.5	1,202.2	93.33	13.881		
10,400.0	7,631.0	10,210.0	7,425.0	50.2	49.9	-80.22	2,583.3	-1,909.2	1,295.5	1,198.9	96.65	13.405		
10,500.0	7,631.0	10,310.0	7,425.0	51.9	51.6	-80.22	2,683.3	-1,909.2	1,295.5	1,195.5	99.97	12.958		
10,600.0	7,631.0	10,410.0	7,425.0	53.5	53.3	-80.22	2,783.3	-1,909.2	1,295.5	1,192.2	103.31	12.540		
10,700.0	7,631.0	10,510.0	7,425.0	55.2	54.9	-80.22	2,883.3	-1,909.2	1,295.5	1,188.8	106.65	12.146		
10,800.0	7,631.0	10,610.0	7,425.0	56.9	56.6	-80.22	2,983.3	-1,909.1	1,295.4	1,185.4	110.00	11.776		
10,900.0	7,631.0	10,710.0	7,425.0	58.5	58.3	-80.22	3,083.3	-1,909.1	1,295.4	1,182.1	113.36	11.427		
11,000.0	7,631.0	10,810.0	7,425.0	60.2	60.0	-80.22	3,183.3	-1,909.1	1,295.4	1,178.7	116.72	11.098		
11,100.0	7,631.0	10,910.0	7,425.0	61.9	61.6	-80.22	3,283.3	-1,909.1	1,295.4	1,175.3	120.09	10.787		
11,200.0	7,631.0	11,010.0	7,425.0	63.6	63.3	-80.22	3,383.3	-1,909.1	1,295.4	1,171.9	123.47	10.492		
11,300.0	7,631.0	11,110.0	7,425.0	65.3	65.0	-80.22	3,483.3	-1,909.1	1,295.4	1,168.5	126.84	10.212		
11,400.0	7,631.0	11,210.0	7,425.0	66.9	66.7	-80.22	3,583.3	-1,909.1	1,295.4	1,165.1	130.23	9.947		
11,500.0	7,631.0	11,310.0	7,425.0	68.6	68.4	-80.22	3,683.3	-1,909.1	1,295.3	1,161.7	133.61	9.695		
11,600.0	7,631.0	11,410.0	7,425.0	70.3	70.1	-80.22	3,783.3	-1,909.1	1,295.3	1,158.3	137.00	9.455		
11,700.0	7,631.0	11,510.0	7,425.0	72.0	71.8	-80.22	3,883.3	-1,909.1	1,295.3	1,154.9	140.39	9.226		
11,800.0	7,631.0	11,610.0	7,425.0	73.7	73.5	-80.22	3,983.3	-1,909.1	1,295.3	1,151.5	143.79	9.008		
11,900.0	7,631.0	11,710.0	7,425.0	75.4	75.2	-80.22	4,083.3	-1,909.1	1,295.3	1,148.1	147.19	8.800		
12,000.0	7,631.0	11,810.0	7,425.0	77.2	77.0	-80.22	4,183.3	-1,909.1	1,295.3	1,144.7	150.59	8.601		
12,100.0	7,631.0	11,910.0	7,425.0	78.9	78.7	-80.22	4,283.3	-1,909.1	1,295.3	1,141.3	153.99	8.411		
12,177.2	7,631.0	11,987.2	7,425.0	80.2	80.0	-80.22	4,360.5	-1,909.0	1,295.3	1,138.6	156.62	8.270 ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4B-14H - HZ - Plan #3														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	-90.00	0.0	-1,310.3	1,310.3						
100.0	100.0	114.0	114.0	0.2	0.2	-90.00	0.0	-1,310.3	1,310.3	1,309.9	0.33	3,993.179			
200.0	200.0	214.0	214.0	0.3	0.4	-90.00	0.0	-1,310.3	1,310.3	1,309.6	0.68	1,934.840			
261.2	261.2	275.2	275.2	0.4	0.5	-90.00	0.0	-1,310.3	1,310.3	1,309.4	0.89	1,470.610			
300.0	300.0	312.0	312.0	0.5	0.5	-90.00	0.0	-1,310.3	1,310.3	1,309.2	1.02	1,281.023			
400.0	400.0	400.0	400.0	0.7	0.7	-90.07	-1.6	-1,310.9	1,311.0	1,309.6	1.35	970.355			
500.0	500.0	482.8	482.7	0.8	0.8	-90.23	-5.4	-1,312.4	1,312.8	1,311.1	1.67	785.653			
600.0	600.0	567.8	567.5	1.0	1.0	33.80	-11.6	-1,314.9	1,315.0	1,313.0	2.04	646.131			
700.0	700.0	652.6	651.7	1.2	1.2	33.47	-20.1	-1,318.3	1,317.0	1,314.6	2.41	547.024			
800.0	799.9	743.6	741.9	1.4	1.5	33.07	-31.5	-1,322.8	1,318.6	1,315.8	2.81	468.842			
900.0	899.7	843.2	840.5	1.6	1.7	32.65	-44.4	-1,327.9	1,318.9	1,315.7	3.25	405.851			
1,000.0	999.4	942.8	939.1	1.8	2.0	32.29	-57.3	-1,333.1	1,317.9	1,314.2	3.70	356.601			
1,100.0	1,098.9	1,042.5	1,037.9	2.0	2.3	31.97	-70.1	-1,338.2	1,315.4	1,311.3	4.15	317.075			
1,200.0	1,198.3	1,142.2	1,136.6	2.2	2.6	31.70	-83.0	-1,343.3	1,311.6	1,306.9	4.61	284.617			
1,300.0	1,297.4	1,241.9	1,235.3	2.5	2.9	31.47	-95.9	-1,348.4	1,306.2	1,301.1	5.07	257.428			
1,400.0	1,396.3	1,341.5	1,334.0	2.8	3.2	31.29	-108.8	-1,353.6	1,299.4	1,293.8	5.55	234.261			
1,500.0	1,494.9	1,441.1	1,432.6	3.1	3.5	31.15	-121.7	-1,358.7	1,291.1	1,285.1	6.03	214.227			
1,600.0	1,593.4	1,540.6	1,531.1	3.4	3.8	30.99	-134.6	-1,363.8	1,282.1	1,275.6	6.52	196.780			
1,700.0	1,691.9	1,640.1	1,629.7	3.7	4.1	30.82	-147.4	-1,368.9	1,273.1	1,266.1	7.01	181.720			
1,800.0	1,790.4	1,739.7	1,728.2	4.1	4.4	30.66	-160.3	-1,374.1	1,264.1	1,256.6	7.50	168.606			
1,900.0	1,888.9	1,839.2	1,826.8	4.4	4.6	30.49	-173.2	-1,379.2	1,255.1	1,247.1	7.99	157.095			
2,000.0	1,987.3	1,938.7	1,925.4	4.7	4.9	30.31	-186.0	-1,384.3	1,246.1	1,237.6	8.48	146.918			
2,100.0	2,085.8	2,038.2	2,023.9	5.1	5.2	30.14	-198.9	-1,389.4	1,237.2	1,228.2	8.97	137.861			
2,200.0	2,184.3	2,137.8	2,122.5	5.4	5.5	29.96	-211.8	-1,394.6	1,228.2	1,218.7	9.47	129.753			
2,300.0	2,282.8	2,237.3	2,221.0	5.7	5.8	29.78	-224.6	-1,399.7	1,219.3	1,209.3	9.96	122.456			
2,400.0	2,381.3	2,336.8	2,319.6	6.1	6.1	29.60	-237.5	-1,404.8	1,210.3	1,199.9	10.45	115.855			
2,500.0	2,479.7	2,436.3	2,418.1	6.4	6.4	29.41	-250.4	-1,409.9	1,201.4	1,190.5	10.94	109.857			
2,600.0	2,578.2	2,535.9	2,516.7	6.8	6.7	29.23	-263.3	-1,415.0	1,192.5	1,181.1	11.42	104.385			
2,700.0	2,676.7	2,635.4	2,615.3	7.1	7.0	29.04	-276.1	-1,420.2	1,183.6	1,171.7	11.91	99.373			
2,800.0	2,775.2	2,734.9	2,713.8	7.5	7.3	28.84	-289.0	-1,425.3	1,174.7	1,162.4	12.40	94.766			
2,900.0	2,873.7	2,834.4	2,812.4	7.8	7.6	28.65	-301.9	-1,430.4	1,165.9	1,153.0	12.88	90.518			
3,000.0	2,972.1	2,934.0	2,910.9	8.2	7.9	28.45	-314.7	-1,435.5	1,157.0	1,143.7	13.36	86.590			
3,100.0	3,070.6	3,033.5	3,009.5	8.5	8.2	28.24	-327.6	-1,440.7	1,148.2	1,134.4	13.84	82.946			
3,200.0	3,169.1	3,133.0	3,108.0	8.8	8.5	28.04	-340.5	-1,445.8	1,139.4	1,125.1	14.32	79.558			
3,300.0	3,267.6	3,232.5	3,206.6	9.2	8.8	27.83	-353.3	-1,450.9	1,130.6	1,115.8	14.80	76.400			
3,400.0	3,366.1	3,332.1	3,305.2	9.5	9.1	27.62	-366.2	-1,456.0	1,121.8	1,106.5	15.27	73.449			
3,500.0	3,464.5	3,431.6	3,403.7	9.9	9.4	27.40	-379.1	-1,461.1	1,113.0	1,097.3	15.75	70.686			
3,600.0	3,563.0	3,531.1	3,502.3	10.2	9.7	27.18	-391.9	-1,466.3	1,104.2	1,088.0	16.22	68.094			
3,700.0	3,661.5	3,630.7	3,600.8	10.6	10.0	26.96	-404.8	-1,471.4	1,095.5	1,078.8	16.68	65.658			
3,800.0	3,760.0	3,741.7	3,710.9	10.9	10.3	26.74	-418.6	-1,476.9	1,086.5	1,069.3	17.16	63.308			
3,900.0	3,858.5	3,863.9	3,832.5	11.3	10.6	26.70	-429.5	-1,481.2	1,075.7	1,058.1	17.63	61.012			
4,000.0	3,957.0	3,985.3	3,953.7	11.6	10.8	26.90	-435.6	-1,483.7	1,062.8	1,044.7	18.07	58.802			
4,100.0	4,055.4	4,101.0	4,069.4	12.0	10.9	27.33	-437.1	-1,484.2	1,047.9	1,029.4	18.50	56.658			
4,200.0	4,153.9	4,199.5	4,167.9	12.3	11.0	27.77	-437.1	-1,484.2	1,032.5	1,013.6	18.90	54.637			
4,300.0	4,252.4	4,298.0	4,266.4	12.7	11.1	28.23	-437.1	-1,484.2	1,017.1	997.8	19.30	52.690			
4,400.0	4,350.9	4,396.5	4,364.9	13.0	11.2	28.69	-437.1	-1,484.2	1,001.8	982.0	19.72	50.812			
4,500.0	4,449.4	4,495.0	4,463.4	13.4	11.4	29.18	-437.1	-1,484.2	986.5	966.4	20.13	49.001			
4,600.0	4,547.8	4,593.4	4,561.8	13.7	11.5	29.67	-437.1	-1,484.2	971.3	950.8	20.56	47.253			
4,700.0	4,646.3	4,691.9	4,660.3	14.1	11.6	30.19	-437.1	-1,484.2	956.2	935.2	20.99	45.567			
4,800.0	4,744.8	4,790.4	4,758.8	14.4	11.7	30.72	-437.1	-1,484.2	941.2	919.8	21.42	43.939			
4,905.0	4,848.2	4,893.8	4,862.2	14.8	11.8	31.29	-437.1	-1,484.2	925.5	903.6	21.88	42.291			
5,000.0	4,941.9	4,987.5	4,955.9	15.1	12.0	31.73	-437.1	-1,484.2	912.1	889.8	22.30	40.895			

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: O-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
5,100.0	5,040.8	5,086.4	5,054.8	15.4	12.1	32.16	-437.1	-1,484.2	899.4	876.7	22.73	39.573	
5,200.0	5,139.9	5,185.5	5,153.9	15.7	12.2	32.55	-437.1	-1,484.2	888.3	865.1	23.14	38.392	
5,300.0	5,239.3	5,284.9	5,253.3	16.0	12.3	32.89	-437.1	-1,484.2	878.7	855.1	23.53	37.343	
5,400.0	5,338.8	5,384.4	5,352.8	16.2	12.5	33.20	-437.1	-1,484.2	870.5	846.6	23.90	36.418	
5,500.0	5,438.5	5,484.1	5,452.5	16.4	12.6	33.45	-437.1	-1,484.2	863.9	839.6	24.26	35.611	
5,600.0	5,538.3	5,583.9	5,552.3	16.6	12.7	33.65	-437.1	-1,484.2	858.7	834.1	24.60	34.914	
5,700.0	5,638.2	5,683.8	5,652.2	16.7	12.9	33.79	-437.1	-1,484.2	855.0	830.1	24.91	34.323	
5,800.0	5,738.1	5,783.7	5,752.1	16.8	13.0	33.88	-437.1	-1,484.2	852.8	827.6	25.21	33.831	
5,905.0	5,843.1	5,888.7	5,857.1	17.0	13.2	-90.39	-437.1	-1,484.2	852.0	826.5	25.50	33.415	
6,000.0	5,938.1	5,983.7	5,952.1	17.1	13.3	-90.39	-437.1	-1,484.2	852.0	826.2	25.77	33.068	
6,100.0	6,038.1	6,083.7	6,052.1	17.2	13.4	-90.39	-437.1	-1,484.2	852.0	825.9	26.05	32.708	
6,200.0	6,138.1	6,183.7	6,152.1	17.3	13.6	-90.39	-437.1	-1,484.2	852.0	825.7	26.33	32.354	
6,300.0	6,238.1	6,283.7	6,252.1	17.4	13.7	-90.39	-437.1	-1,484.2	852.0	825.4	26.62	32.005	
6,400.0	6,338.1	6,383.7	6,352.1	17.5	13.8	-90.39	-437.1	-1,484.2	852.0	825.1	26.91	31.663	
6,500.0	6,438.1	6,483.7	6,452.1	17.6	14.0	-90.39	-437.1	-1,484.2	852.0	824.8	27.20	31.325	
6,600.0	6,538.1	6,583.7	6,552.1	17.7	14.1	-90.39	-437.1	-1,484.2	852.0	824.5	27.49	30.994	
6,700.0	6,638.1	6,683.7	6,652.1	17.8	14.3	-90.39	-437.1	-1,484.2	852.0	824.2	27.78	30.668	
6,800.0	6,738.1	6,783.7	6,752.1	17.9	14.4	-90.39	-437.1	-1,484.2	852.0	823.9	28.07	30.347	
6,900.0	6,838.1	6,883.7	6,852.1	18.1	14.5	-90.39	-437.1	-1,484.2	852.0	823.6	28.37	30.032	
6,976.7	6,914.8	6,960.4	6,928.8	18.1	14.7	-90.39	-437.1	-1,484.2	852.0	823.4	28.60	29.794	
7,000.0	6,938.1	6,983.9	6,952.3	18.2	14.7	-90.39	-436.7	-1,484.2	852.0	823.3	28.65	29.742	
7,050.0	6,988.0	7,034.3	7,002.6	18.2	14.7	-90.38	-433.3	-1,484.2	852.0	823.3	28.70	29.684	
7,100.0	7,037.5	7,084.8	7,052.5	18.2	14.7	-90.38	-426.3	-1,484.2	852.0	823.3	28.70	29.687	
7,150.0	7,086.4	7,135.2	7,101.8	18.2	14.7	-90.37	-415.9	-1,484.2	852.0	823.3	28.64	29.747	
7,200.0	7,134.5	7,185.6	7,150.3	18.1	14.6	-90.37	-402.0	-1,484.2	852.0	823.4	28.53	29.858	
7,250.0	7,181.5	7,236.0	7,197.6	18.1	14.5	-90.36	-384.7	-1,484.2	852.0	823.6	28.39	30.015	
7,300.0	7,227.3	7,286.3	7,243.6	18.0	14.4	-90.35	-364.2	-1,484.2	852.0	823.8	28.20	30.208	
7,350.0	7,271.5	7,336.7	7,288.0	17.9	14.3	-90.33	-340.5	-1,484.2	852.0	824.0	28.00	30.428	
7,400.0	7,313.9	7,387.1	7,330.7	17.8	14.2	-90.32	-313.7	-1,484.2	852.0	824.2	27.78	30.665	
7,450.0	7,354.4	7,437.4	7,371.3	17.7	14.1	-90.30	-284.1	-1,484.2	852.0	824.4	27.57	30.905	
7,500.0	7,392.8	7,487.7	7,409.7	17.7	14.0	-90.29	-251.6	-1,484.2	851.9	824.6	27.36	31.134	
7,550.0	7,428.8	7,538.0	7,445.8	17.6	13.9	-90.27	-216.5	-1,484.2	851.9	824.7	27.19	31.334	
7,600.0	7,462.4	7,588.3	7,479.3	17.5	13.9	-90.25	-179.1	-1,484.2	851.9	824.9	27.05	31.489	
7,650.0	7,493.2	7,638.5	7,510.1	17.5	13.8	-90.23	-139.3	-1,484.2	851.9	824.9	26.98	31.581	
7,700.0	7,521.3	7,688.8	7,537.9	17.5	13.8	-90.20	-97.6	-1,484.2	851.9	824.9	26.96	31.594	
7,750.0	7,546.4	7,739.0	7,562.8	17.5	13.8	-90.18	-54.0	-1,484.2	851.9	824.9	27.03	31.513	
7,800.0	7,568.4	7,789.1	7,584.6	17.6	13.9	-90.16	-8.8	-1,484.2	851.9	824.7	27.19	31.331	
7,850.0	7,587.2	7,839.3	7,603.1	17.7	14.0	-90.13	37.8	-1,484.2	851.9	824.4	27.44	31.041	
7,900.0	7,602.8	7,889.4	7,618.4	17.8	14.2	-90.11	85.6	-1,484.2	851.9	824.1	27.80	30.644	
7,950.0	7,615.0	7,939.5	7,630.2	18.0	14.4	-90.08	134.2	-1,484.2	851.9	823.6	28.25	30.149	
8,000.0	7,623.8	7,989.6	7,638.6	18.2	14.7	-90.05	183.6	-1,484.2	851.8	823.0	28.81	29.566	
8,050.0	7,629.1	8,039.6	7,643.5	18.4	15.0	-90.03	233.4	-1,484.1	851.8	822.4	29.46	28.911	
8,101.7	7,631.0	8,091.3	7,645.0	18.7	15.4	-90.00	285.0	-1,484.1	851.8	821.6	30.23	28.180	
8,200.0	7,631.0	8,189.6	7,645.0	19.4	16.2	-90.00	383.3	-1,484.1	851.8	819.9	31.93	26.678	
8,300.0	7,631.0	8,289.6	7,645.0	20.2	17.2	-90.00	483.3	-1,484.1	851.8	817.9	33.93	25.107	
8,400.0	7,631.0	8,389.6	7,645.0	21.2	18.3	-90.00	583.3	-1,484.1	851.8	815.6	36.15	23.560	
8,500.0	7,631.0	8,489.6	7,645.0	22.2	19.5	-90.00	683.3	-1,484.1	851.7	813.2	38.57	22.082	
8,600.0	7,631.0	8,589.6	7,645.0	23.4	20.8	-90.00	783.3	-1,484.1	851.7	810.6	41.15	20.699	
8,700.0	7,631.0	8,689.6	7,645.0	24.6	22.1	-90.00	883.3	-1,484.1	851.7	807.8	43.85	19.422	
8,800.0	7,631.0	8,789.6	7,645.0	25.8	23.5	-90.00	983.3	-1,484.0	851.7	805.0	46.66	18.251	
8,900.0	7,631.0	8,889.6	7,645.0	27.1	25.0	-90.00	1,083.3	-1,484.0	851.7	802.1	49.57	17.182	
9,000.0	7,631.0	8,989.6	7,645.0	28.5	26.4	-90.00	1,183.3	-1,484.0	851.6	799.1	52.54	16.209	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4B-14H - HZ - Plan #3												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)					
9,100.0	7,631.0	9,089.6	7,645.0	29.9	27.9	-90.00	1,283.3	-1,484.0	851.6	796.0	55.58	15.323	
9,200.0	7,631.0	9,189.6	7,645.0	31.3	29.5	-90.00	1,383.3	-1,484.0	851.6	792.9	58.67	14.515	
9,300.0	7,631.0	9,289.6	7,645.0	32.8	31.0	-90.00	1,483.3	-1,484.0	851.6	789.8	61.80	13.779	
9,400.0	7,631.0	9,389.6	7,645.0	34.3	32.6	-90.00	1,583.3	-1,484.0	851.5	786.6	64.98	13.106	
9,500.0	7,631.0	9,489.6	7,645.0	35.8	34.2	-90.00	1,683.3	-1,483.9	851.5	783.3	68.18	12.489	
9,600.0	7,631.0	9,589.6	7,645.0	37.4	35.8	-90.00	1,783.3	-1,483.9	851.5	780.1	71.42	11.923	
9,700.0	7,631.0	9,689.6	7,645.0	38.9	37.5	-90.00	1,883.3	-1,483.9	851.5	776.8	74.67	11.403	
9,800.0	7,631.0	9,789.6	7,645.0	40.5	39.1	-90.00	1,983.3	-1,483.9	851.5	773.5	77.96	10.922	
9,900.0	7,631.0	9,889.6	7,645.0	42.1	40.7	-90.00	2,083.3	-1,483.9	851.4	770.2	81.25	10.479	
10,000.0	7,631.0	9,989.6	7,645.0	43.7	42.4	-90.00	2,183.3	-1,483.9	851.4	766.8	84.57	10.067	
10,100.0	7,631.0	10,089.6	7,645.0	45.3	44.0	-90.00	2,283.3	-1,483.9	851.4	763.5	87.90	9.686	
10,200.0	7,631.0	10,189.6	7,645.0	46.9	45.7	-90.00	2,383.3	-1,483.8	851.4	760.1	91.25	9.330	
10,300.0	7,631.0	10,289.6	7,645.0	48.6	47.4	-90.00	2,483.3	-1,483.8	851.4	756.7	94.60	8.999	
10,400.0	7,631.0	10,389.6	7,645.0	50.2	49.1	-90.00	2,583.3	-1,483.8	851.3	753.4	97.97	8.690	
10,500.0	7,631.0	10,489.6	7,645.0	51.9	50.8	-90.00	2,683.3	-1,483.8	851.3	750.0	101.35	8.400	
10,600.0	7,631.0	10,589.6	7,645.0	53.5	52.4	-90.00	2,783.3	-1,483.8	851.3	746.6	104.73	8.128	
10,700.0	7,631.0	10,689.6	7,645.0	55.2	54.1	-90.00	2,883.3	-1,483.8	851.3	743.1	108.13	7.873	
10,800.0	7,631.0	10,789.6	7,645.0	56.9	55.8	-90.00	2,983.3	-1,483.8	851.2	739.7	111.53	7.633	
10,900.0	7,631.0	10,889.6	7,645.0	58.5	57.5	-90.00	3,083.3	-1,483.7	851.2	736.3	114.93	7.406	
11,000.0	7,631.0	10,989.6	7,645.0	60.2	59.2	-90.00	3,183.3	-1,483.7	851.2	732.9	118.34	7.193	
11,100.0	7,631.0	11,089.6	7,645.0	61.9	60.9	-90.00	3,283.3	-1,483.7	851.2	729.4	121.76	6.991	
11,200.0	7,631.0	11,189.6	7,645.0	63.6	62.7	-90.00	3,383.3	-1,483.7	851.2	726.0	125.19	6.799	
11,300.0	7,631.0	11,289.6	7,645.0	65.3	64.4	-90.00	3,483.3	-1,483.7	851.1	722.5	128.61	6.618	
11,400.0	7,631.0	11,389.6	7,645.0	66.9	66.1	-90.00	3,583.3	-1,483.7	851.1	719.1	132.04	6.446	
11,500.0	7,631.0	11,489.6	7,645.0	68.6	67.8	-90.00	3,683.3	-1,483.7	851.1	715.6	135.48	6.282	
11,600.0	7,631.0	11,589.6	7,645.0	70.3	69.5	-90.00	3,783.3	-1,483.7	851.1	712.2	138.92	6.126	
11,700.0	7,631.0	11,689.6	7,645.0	72.0	71.2	-90.00	3,883.3	-1,483.6	851.1	708.7	142.36	5.978	
11,800.0	7,631.0	11,789.6	7,645.0	73.7	73.0	-90.00	3,983.3	-1,483.6	851.0	705.2	145.81	5.837	
11,900.0	7,631.0	11,889.6	7,645.0	75.4	74.7	-90.00	4,083.3	-1,483.6	851.0	701.8	149.26	5.702	
12,000.0	7,631.0	11,989.6	7,645.0	77.2	76.4	-90.00	4,183.3	-1,483.6	851.0	698.3	152.71	5.573	
12,100.0	7,631.0	12,089.6	7,645.0	78.9	78.1	-90.00	4,283.3	-1,483.6	851.0	694.8	156.16	5.449	
12,177.2	7,631.0	12,166.8	7,645.0	80.2	79.5	-90.00	4,360.5	-1,483.6	851.0	692.1	158.83	5.358 CC, ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4C-14H - HZ - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	14.0	14.0	0.0	0.0	-90.00	0.0	-1,301.9	1,301.9					
100.0	100.0	114.0	114.0	0.2	0.2	-90.00	0.0	-1,301.9	1,301.9	1,301.5	0.33	3,967.581		
200.0	200.0	214.0	214.0	0.3	0.4	-90.00	0.0	-1,301.9	1,301.9	1,301.2	0.68	1,922.437		
300.0	300.0	314.0	314.0	0.5	0.5	-90.00	0.0	-1,301.9	1,301.9	1,300.8	1.03	1,268.547		
400.0	400.0	417.9	417.9	0.7	0.7	-90.00	0.0	-1,301.8	1,301.8	1,300.4	1.38	941.765		
500.0	500.0	545.7	545.6	0.8	0.9	-90.14	-3.2	-1,300.1	1,300.5	1,298.7	1.79	728.142		
600.0	600.0	672.9	672.5	1.0	1.2	33.85	-11.4	-1,295.6	1,296.3	1,294.0	2.21	586.406		
700.0	700.0	799.1	797.8	1.2	1.5	33.39	-24.3	-1,288.5	1,288.6	1,285.9	2.67	482.222		
800.0	799.9	898.2	896.0	1.4	1.8	33.00	-36.4	-1,281.9	1,278.5	1,275.4	3.09	413.322		
900.0	899.7	997.2	994.0	1.6	2.0	32.66	-48.5	-1,275.3	1,267.0	1,263.4	3.52	359.535		
1,000.0	999.4	1,096.0	1,091.8	1.8	2.3	32.36	-60.5	-1,268.7	1,254.1	1,250.1	3.96	316.464		
1,100.0	1,098.9	1,194.7	1,189.6	2.0	2.6	32.10	-72.6	-1,262.1	1,239.7	1,235.3	4.41	281.219		
1,200.0	1,198.3	1,293.2	1,287.1	2.2	2.9	31.88	-84.6	-1,255.5	1,224.0	1,219.2	4.86	251.826		
1,300.0	1,297.4	1,391.6	1,384.5	2.5	3.2	31.70	-96.6	-1,248.9	1,206.9	1,201.5	5.32	226.905		
1,400.0	1,396.3	1,489.7	1,481.7	2.8	3.4	31.57	-108.6	-1,242.4	1,188.2	1,182.5	5.78	205.472		
1,500.0	1,494.9	1,587.6	1,578.7	3.1	3.7	31.49	-120.6	-1,235.8	1,168.2	1,161.9	6.25	186.806		
1,600.0	1,593.4	1,685.4	1,675.5	3.4	4.0	31.31	-132.5	-1,229.3	1,147.4	1,140.7	6.74	170.308		
1,700.0	1,691.9	1,783.1	1,772.3	3.7	4.3	31.13	-144.4	-1,222.8	1,126.7	1,119.5	7.22	155.958		
1,800.0	1,790.4	1,880.9	1,869.1	4.1	4.6	30.94	-156.4	-1,216.2	1,105.9	1,098.2	7.71	143.381		
1,900.0	1,888.9	1,978.7	1,965.9	4.4	4.9	30.74	-168.3	-1,209.7	1,085.2	1,077.0	8.20	132.278		
2,000.0	1,987.3	2,076.4	2,062.7	4.7	5.2	30.54	-180.2	-1,203.2	1,064.5	1,055.8	8.70	122.412		
2,100.0	2,085.8	2,174.2	2,159.5	5.1	5.5	30.32	-192.2	-1,196.6	1,043.8	1,034.6	9.19	113.594		
2,200.0	2,184.3	2,271.9	2,256.3	5.4	5.8	30.10	-204.1	-1,190.1	1,023.1	1,013.4	9.68	105.669		
2,300.0	2,282.8	2,369.7	2,353.1	5.7	6.0	29.87	-216.0	-1,183.6	1,002.4	992.2	10.18	98.510		
2,400.0	2,381.3	2,467.4	2,449.9	6.1	6.3	29.63	-228.0	-1,177.0	981.8	971.1	10.67	92.014		
2,500.0	2,479.7	2,565.2	2,546.7	6.4	6.6	29.38	-239.9	-1,170.5	961.1	950.0	11.16	86.096		
2,600.0	2,578.2	2,663.0	2,643.5	6.8	6.9	29.12	-251.8	-1,164.0	940.5	928.8	11.66	80.682		
2,700.0	2,676.7	2,760.7	2,740.3	7.1	7.2	28.85	-263.8	-1,157.4	919.9	907.7	12.15	75.712		
2,800.0	2,775.2	2,858.5	2,837.2	7.5	7.5	28.56	-275.7	-1,150.9	899.3	886.7	12.64	71.135		
2,900.0	2,873.7	2,956.2	2,934.0	7.8	7.8	28.27	-287.6	-1,144.4	878.8	865.6	13.13	66.906		
3,000.0	2,972.1	3,054.0	3,030.8	8.2	8.1	27.95	-299.6	-1,137.8	858.2	844.6	13.63	62.988		
3,100.0	3,070.6	3,151.8	3,127.6	8.5	8.4	27.62	-311.5	-1,131.3	837.7	823.6	14.11	59.349		
3,200.0	3,169.1	3,249.5	3,224.4	8.8	8.7	27.28	-323.4	-1,124.8	817.2	802.6	14.60	55.960		
3,300.0	3,267.6	3,347.3	3,321.2	9.2	9.0	26.92	-335.4	-1,118.2	796.8	781.7	15.09	52.798		
3,400.0	3,366.1	3,445.0	3,418.0	9.5	9.2	26.54	-347.3	-1,111.7	776.3	760.8	15.58	49.840		
3,500.0	3,464.5	3,542.8	3,514.8	9.9	9.5	26.14	-359.2	-1,105.2	756.0	739.9	16.06	47.068		
3,600.0	3,563.0	3,640.5	3,611.6	10.2	9.8	25.71	-371.2	-1,098.6	735.6	719.1	16.54	44.466		
3,700.0	3,661.5	3,738.3	3,708.4	10.6	10.1	25.26	-383.1	-1,092.1	715.3	698.3	17.02	42.018		
3,800.0	3,760.0	3,836.1	3,805.2	10.9	10.4	24.79	-395.1	-1,085.6	695.0	677.5	17.50	39.713		
3,900.0	3,858.5	3,933.8	3,902.0	11.3	10.7	24.29	-407.0	-1,079.0	674.8	656.8	17.98	37.538		
4,000.0	3,957.0	4,031.6	3,998.8	11.6	11.0	23.75	-418.9	-1,072.5	654.7	636.2	18.45	35.483		
4,100.0	4,055.4	4,123.8	4,090.3	12.0	11.2	23.33	-429.1	-1,066.9	635.0	616.1	18.88	33.635		
4,200.0	4,153.9	4,216.0	4,182.1	12.3	11.4	23.14	-436.7	-1,062.8	616.2	596.9	19.27	31.969		
4,300.0	4,252.4	4,308.6	4,274.5	12.7	11.6	23.23	-441.8	-1,060.0	598.4	578.7	19.65	30.456		
4,400.0	4,350.9	4,401.4	4,367.3	13.0	11.7	23.60	-444.2	-1,058.7	581.5	561.5	20.00	29.078		
4,500.0	4,449.4	4,497.5	4,463.4	13.4	11.8	24.26	-444.4	-1,058.6	565.5	545.2	20.36	27.781		
4,600.0	4,547.8	4,596.0	4,561.8	13.7	11.9	25.00	-444.4	-1,058.6	549.7	529.0	20.73	26.521		
4,700.0	4,646.3	4,694.4	4,660.3	14.1	12.1	25.79	-444.4	-1,058.6	534.0	512.9	21.11	25.300		
4,800.0	4,744.8	4,792.9	4,758.8	14.4	12.2	26.62	-444.4	-1,058.6	518.3	496.9	21.49	24.115		
4,905.0	4,848.2	4,896.3	4,862.2	14.8	12.3	27.55	-444.4	-1,058.6	502.1	480.1	21.91	22.912		
5,000.0	4,941.9	4,990.0	4,955.9	15.1	12.4	28.33	-444.4	-1,058.6	488.1	465.8	22.32	21.874		
5,100.0	5,040.8	5,088.9	5,054.8	15.4	12.5	29.12	-444.4	-1,058.6	475.1	452.3	22.73	20.901		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
5,200.0	5,139.9	5,188.0	5,153.9	15.7	12.7	29.85	-444.4	-1,058.6	463.6	440.5	23.13	20.041		
5,300.0	5,239.3	5,287.4	5,253.3	16.0	12.8	30.51	-444.4	-1,058.6	453.7	430.2	23.52	19.289		
5,400.0	5,338.8	5,386.9	5,352.8	16.2	12.9	31.10	-444.4	-1,058.6	445.4	421.5	23.90	18.638		
5,500.0	5,438.5	5,486.6	5,452.5	16.4	13.0	31.60	-444.4	-1,058.6	438.6	414.4	24.26	18.083		
5,600.0	5,538.3	5,586.4	5,552.3	16.6	13.2	32.00	-444.4	-1,058.6	433.4	408.8	24.60	17.619		
5,700.0	5,638.2	5,686.3	5,652.2	16.7	13.3	32.29	-444.4	-1,058.6	429.6	404.7	24.92	17.240		
5,800.0	5,738.1	5,786.3	5,752.1	16.8	13.4	32.47	-444.4	-1,058.6	427.3	402.1	25.22	16.944		
5,905.0	5,843.1	5,891.3	5,857.1	17.0	13.6	-91.76	-444.4	-1,058.6	426.5	401.0	25.51	16.716		
6,000.0	5,938.1	5,986.3	5,952.1	17.1	13.7	-91.76	-444.4	-1,058.6	426.5	400.7	25.78	16.543		
6,100.0	6,038.1	6,086.3	6,052.1	17.2	13.8	-91.76	-444.4	-1,058.6	426.5	400.4	26.07	16.363		
6,200.0	6,138.1	6,186.3	6,152.1	17.3	14.0	-91.76	-444.4	-1,058.6	426.5	400.1	26.35	16.186		
6,300.0	6,238.1	6,286.3	6,252.1	17.4	14.1	-91.76	-444.4	-1,058.6	426.5	399.9	26.64	16.011		
6,400.0	6,338.1	6,386.3	6,352.1	17.5	14.2	-91.76	-444.4	-1,058.6	426.5	399.6	26.92	15.840		
6,500.0	6,438.1	6,486.3	6,452.1	17.6	14.4	-91.76	-444.4	-1,058.6	426.5	399.3	27.21	15.672		
6,600.0	6,538.1	6,586.3	6,552.1	17.7	14.5	-91.76	-444.4	-1,058.6	426.5	399.0	27.51	15.506		
6,700.0	6,638.1	6,686.3	6,652.1	17.8	14.6	-91.76	-444.4	-1,058.6	426.5	398.7	27.80	15.343		
6,800.0	6,738.1	6,787.0	6,752.9	17.9	14.8	-91.58	-443.0	-1,058.6	426.5	398.4	28.07	15.190		
6,893.2	6,831.4	6,880.3	6,845.4	18.0	14.8	-89.99	-431.3	-1,058.6	426.3	398.0	28.31	15.057 CC		
6,900.0	6,838.1	6,887.0	6,851.9	18.1	14.7	-89.82	-430.0	-1,058.6	426.3	398.0	28.33	15.048		
6,976.7	6,914.8	6,960.1	6,922.7	18.1	14.7	-87.37	-411.7	-1,058.6	426.8	398.3	28.53	14.961		
7,000.0	6,938.1	6,981.7	6,943.2	18.2	14.6	-86.48	-405.0	-1,058.6	427.2	398.6	28.58	14.946		
7,050.0	6,988.0	7,027.3	6,985.7	18.2	14.6	-84.59	-388.7	-1,058.5	428.4	399.7	28.65	14.951		
7,100.0	7,037.5	7,072.1	7,026.5	18.2	14.5	-82.75	-370.1	-1,058.5	430.0	401.3	28.67	14.998		
7,150.0	7,086.4	7,116.2	7,065.4	18.2	14.4	-80.97	-349.3	-1,058.5	432.1	403.4	28.64	15.085		
7,200.0	7,134.5	7,159.6	7,102.4	18.1	14.3	-79.24	-326.6	-1,058.5	434.5	405.9	28.56	15.211		
7,250.0	7,181.5	7,200.0	7,135.5	18.1	14.2	-77.66	-303.4	-1,058.5	437.2	408.8	28.44	15.374		
7,300.0	7,227.3	7,244.7	7,170.6	18.0	14.1	-75.99	-275.7	-1,058.5	440.2	411.9	28.27	15.569		
7,350.0	7,271.5	7,286.5	7,201.7	17.9	14.0	-74.48	-247.8	-1,058.5	443.3	415.2	28.07	15.795		
7,400.0	7,313.9	7,327.8	7,230.8	17.8	13.9	-73.05	-218.6	-1,058.5	446.6	418.8	27.83	16.046		
7,450.0	7,354.4	7,368.7	7,257.9	17.7	13.9	-71.71	-188.0	-1,058.5	450.0	422.4	27.57	16.320		
7,500.0	7,392.8	7,409.2	7,283.1	17.7	13.8	-70.46	-156.2	-1,058.5	453.3	426.0	27.29	16.609		
7,550.0	7,428.8	7,450.0	7,306.5	17.6	13.8	-69.28	-122.8	-1,058.5	456.7	429.7	27.01	16.907		
7,600.0	7,462.4	7,489.2	7,327.2	17.5	13.8	-68.22	-89.5	-1,058.5	459.9	433.2	26.75	17.197		
7,650.0	7,493.2	7,528.8	7,346.2	17.5	13.8	-67.24	-54.8	-1,058.5	463.1	436.6	26.50	17.471		
7,700.0	7,521.3	7,568.1	7,363.1	17.5	13.9	-66.36	-19.4	-1,058.5	466.0	439.7	26.29	17.724		
7,750.0	7,546.4	7,607.1	7,378.0	17.5	13.9	-65.57	16.7	-1,058.5	468.8	442.6	26.14	17.932		
7,800.0	7,568.4	7,650.0	7,392.1	17.6	14.1	-64.83	57.2	-1,058.5	471.3	445.2	26.08	18.071		
7,850.0	7,587.2	7,684.7	7,401.7	17.7	14.2	-64.28	90.6	-1,058.5	473.5	447.4	26.09	18.148		
7,900.0	7,602.8	7,723.3	7,410.4	17.8	14.4	-63.77	128.2	-1,058.5	475.4	449.2	26.21	18.135		
7,950.0	7,615.0	7,761.8	7,417.1	18.0	14.6	-63.36	166.0	-1,058.5	477.0	450.5	26.45	18.032		
8,000.0	7,623.8	7,800.0	7,421.8	18.2	14.8	-63.04	204.0	-1,058.5	478.2	451.4	26.81	17.838		
8,050.0	7,629.1	7,838.4	7,424.4	18.4	15.0	-62.82	242.3	-1,058.5	479.1	451.8	27.30	17.550		
8,101.7	7,631.0	7,881.1	7,425.0	18.7	15.4	-62.70	284.9	-1,058.5	479.6	451.7	27.95	17.159		
8,200.0	7,631.0	7,979.4	7,425.0	19.4	16.2	-62.70	383.3	-1,058.5	479.6	450.1	29.48	16.270		
8,300.0	7,631.0	8,079.4	7,425.0	20.2	17.2	-62.69	483.3	-1,058.5	479.6	448.3	31.25	15.344		
8,400.0	7,631.0	8,179.4	7,425.0	21.2	18.3	-62.69	583.3	-1,058.5	479.6	446.3	33.23	14.431		
8,500.0	7,631.0	8,279.4	7,425.0	22.2	19.5	-62.69	683.3	-1,058.4	479.5	444.2	35.37	13.557		
8,600.0	7,631.0	8,379.4	7,425.0	23.4	20.7	-62.69	783.3	-1,058.4	479.5	441.9	37.65	12.736		
8,700.0	7,631.0	8,479.4	7,425.0	24.6	22.1	-62.69	883.3	-1,058.4	479.5	439.5	40.04	11.975		
8,800.0	7,631.0	8,579.4	7,425.0	25.8	23.5	-62.69	983.3	-1,058.4	479.5	437.0	42.53	11.274		
8,900.0	7,631.0	8,679.4	7,425.0	27.1	24.9	-62.69	1,083.3	-1,058.4	479.5	434.4	45.10	10.632		
9,000.0	7,631.0	8,779.4	7,425.0	28.5	26.4	-62.69	1,183.3	-1,058.4	479.5	431.7	47.73	10.046		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4C-14H - HZ - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
9,100.0	7,631.0	8,879.4	7,425.0	29.9	27.9	-62.69	1,283.3	-1,058.4	479.5	429.0	50.42	9.510		
9,200.0	7,631.0	8,979.4	7,425.0	31.3	29.4	-62.69	1,383.3	-1,058.4	479.4	426.3	53.15	9.020		
9,300.0	7,631.0	9,079.4	7,425.0	32.8	31.0	-62.68	1,483.3	-1,058.4	479.4	423.5	55.93	8.572		
9,400.0	7,631.0	9,179.4	7,425.0	34.3	32.6	-62.68	1,583.3	-1,058.4	479.4	420.7	58.74	8.161		
9,500.0	7,631.0	9,279.4	7,425.0	35.8	34.2	-62.68	1,683.3	-1,058.4	479.4	417.8	61.58	7.785		
9,600.0	7,631.0	9,379.4	7,425.0	37.4	35.8	-62.68	1,783.3	-1,058.3	479.4	414.9	64.45	7.438		
9,700.0	7,631.0	9,479.4	7,425.0	38.9	37.4	-62.68	1,883.3	-1,058.3	479.4	412.0	67.34	7.119		
9,800.0	7,631.0	9,579.4	7,425.0	40.5	39.0	-62.68	1,983.3	-1,058.3	479.3	409.1	70.25	6.824		
9,900.0	7,631.0	9,679.4	7,425.0	42.1	40.7	-62.68	2,083.3	-1,058.3	479.3	406.2	73.17	6.551		
10,000.0	7,631.0	9,779.4	7,425.0	43.7	42.3	-62.68	2,183.3	-1,058.3	479.3	403.2	76.11	6.297		
10,100.0	7,631.0	9,879.4	7,425.0	45.3	44.0	-62.68	2,283.3	-1,058.3	479.3	400.2	79.07	6.062		
10,200.0	7,631.0	9,979.4	7,425.0	46.9	45.7	-62.68	2,383.3	-1,058.3	479.3	397.2	82.04	5.842		
10,300.0	7,631.0	10,079.4	7,425.0	48.6	47.3	-62.68	2,483.3	-1,058.3	479.3	394.3	85.02	5.637		
10,400.0	7,631.0	10,179.4	7,425.0	50.2	49.0	-62.67	2,583.3	-1,058.3	479.3	391.3	88.01	5.446		
10,500.0	7,631.0	10,279.4	7,425.0	51.9	50.7	-62.67	2,683.3	-1,058.3	479.2	388.2	91.00	5.266		
10,600.0	7,631.0	10,379.4	7,425.0	53.5	52.4	-62.67	2,783.3	-1,058.2	479.2	385.2	94.01	5.098		
10,700.0	7,631.0	10,479.4	7,425.0	55.2	54.1	-62.67	2,883.3	-1,058.2	479.2	382.2	97.02	4.939		
10,800.0	7,631.0	10,579.4	7,425.0	56.9	55.8	-62.67	2,983.3	-1,058.2	479.2	379.2	100.04	4.790		
10,900.0	7,631.0	10,679.4	7,425.0	58.5	57.5	-62.67	3,083.3	-1,058.2	479.2	376.1	103.07	4.649		
11,000.0	7,631.0	10,779.4	7,425.0	60.2	59.2	-62.67	3,183.3	-1,058.2	479.2	373.1	106.10	4.516		
11,100.0	7,631.0	10,879.4	7,425.0	61.9	60.9	-62.67	3,283.3	-1,058.2	479.2	370.0	109.13	4.391		
11,200.0	7,631.0	10,979.4	7,425.0	63.6	62.6	-62.67	3,383.3	-1,058.2	479.1	367.0	112.17	4.271		
11,300.0	7,631.0	11,079.4	7,425.0	65.3	64.3	-62.67	3,483.3	-1,058.2	479.1	363.9	115.22	4.158		
11,400.0	7,631.0	11,179.4	7,425.0	66.9	66.0	-62.67	3,583.3	-1,058.2	479.1	360.8	118.27	4.051		
11,500.0	7,631.0	11,279.4	7,425.0	68.6	67.8	-62.66	3,683.3	-1,058.2	479.1	357.8	121.32	3.949		
11,600.0	7,631.0	11,379.4	7,425.0	70.3	69.5	-62.66	3,783.3	-1,058.1	479.1	354.7	124.37	3.852		
11,700.0	7,631.0	11,479.4	7,425.0	72.0	71.2	-62.66	3,883.3	-1,058.1	479.1	351.6	127.43	3.759		
11,800.0	7,631.0	11,579.4	7,425.0	73.7	72.9	-62.66	3,983.3	-1,058.1	479.0	348.6	130.49	3.671		
11,900.0	7,631.0	11,679.4	7,425.0	75.4	74.6	-62.66	4,083.3	-1,058.1	479.0	345.5	133.56	3.587		
12,000.0	7,631.0	11,779.4	7,425.0	77.2	76.4	-62.66	4,183.3	-1,058.1	479.0	342.4	136.63	3.506		
12,100.0	7,631.0	11,879.4	7,425.0	78.9	78.1	-62.66	4,283.3	-1,058.1	479.0	339.3	139.69	3.429		
12,177.2	7,631.0	11,956.6	7,425.0	80.2	79.4	-62.66	4,360.5	-1,058.1	479.0	336.9	142.07	3.372 ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4E-14H - HZ - Plan #3													Offset Site Error: 0.0 ft			
Survey Program: 0-MWD															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	89.97	0.0	8.4	8.4							
100.0	100.0	100.0	100.0	0.2	0.2	89.97	0.0	8.4	8.4	8.1	0.30	27.657				
200.0	200.0	200.0	200.0	0.3	0.3	89.97	0.0	8.4	8.4	7.7	0.65	12.867				
300.0	300.0	300.0	300.0	0.5	0.5	89.97	0.0	8.4	8.4	7.4	1.00	8.384				
400.0	400.0	400.0	400.0	0.7	0.7	89.97	0.0	8.4	8.4	7.0	1.35	6.217				
500.0	500.0	500.1	500.0	0.8	0.9	95.58	-0.8	8.0	8.1	6.4	1.70	4.742				
550.6	550.6	550.7	550.7	0.9	0.9	-133.59	-1.8	7.5	7.9	6.0	1.88	4.208 CC				
600.0	600.0	600.1	600.0	1.0	1.0	-126.47	-3.1	6.9	8.1	6.0	2.05	3.928 ES				
700.0	700.0	700.0	699.9	1.2	1.2	-112.74	-7.1	5.0	9.4	7.0	2.41	3.899				
800.0	799.9	799.9	799.6	1.4	1.4	-103.02	-12.6	2.4	12.1	9.3	2.79	4.326				
900.0	899.7	899.8	899.1	1.6	1.6	-97.37	-19.7	-1.0	15.8	12.7	3.18	4.977				
1,000.0	999.4	999.5	998.4	1.8	1.8	-94.39	-28.3	-5.1	20.6	17.0	3.60	5.722				
1,100.0	1,098.9	1,099.2	1,097.4	2.0	2.1	-92.94	-38.5	-9.9	26.2	22.2	4.04	6.492				
1,200.0	1,198.3	1,198.7	1,196.1	2.2	2.3	-92.35	-50.2	-15.5	32.8	28.3	4.52	7.250				
1,300.0	1,297.4	1,298.5	1,294.9	2.5	2.6	-93.31	-62.7	-21.5	39.8	34.8	5.04	7.906				
1,400.0	1,396.3	1,398.2	1,393.7	2.8	2.9	-96.08	-75.2	-27.5	47.0	41.5	5.59	8.413				
1,500.0	1,494.9	1,497.8	1,492.4	3.1	3.2	-99.91	-87.7	-33.5	54.6	48.4	6.18	8.840				
1,600.0	1,593.4	1,597.5	1,591.0	3.4	3.4	-103.63	-100.3	-39.4	62.6	55.8	6.77	9.242				
1,700.0	1,691.9	1,697.1	1,689.6	3.7	3.7	-106.51	-112.8	-45.4	70.7	63.4	7.36	9.607				
1,800.0	1,790.4	1,796.7	1,788.3	4.1	4.0	-108.78	-125.3	-51.4	79.0	71.1	7.95	9.935				
1,900.0	1,888.9	1,896.3	1,886.9	4.4	4.3	-110.63	-137.8	-57.3	87.4	78.9	8.55	10.229				
2,000.0	1,987.3	1,995.9	1,985.6	4.7	4.6	-112.14	-150.3	-63.3	95.9	86.8	9.14	10.494				
2,100.0	2,085.8	2,095.5	2,084.2	5.1	4.9	-113.42	-162.8	-69.3	104.4	94.7	9.73	10.732				
2,200.0	2,184.3	2,195.1	2,182.8	5.4	5.2	-114.49	-175.3	-75.2	113.0	102.7	10.32	10.947				
2,300.0	2,282.8	2,294.7	2,281.5	5.7	5.5	-115.42	-187.8	-81.2	121.6	110.7	10.91	11.142				
2,400.0	2,381.3	2,394.3	2,380.1	6.1	5.8	-116.22	-200.4	-87.2	130.2	118.7	11.51	11.318				
2,500.0	2,479.7	2,494.0	2,478.8	6.4	6.1	-116.93	-212.9	-93.1	138.9	126.8	12.10	11.480				
2,600.0	2,578.2	2,593.6	2,577.4	6.8	6.4	-117.55	-225.4	-99.1	147.6	134.9	12.69	11.627				
2,700.0	2,676.7	2,693.2	2,676.1	7.1	6.7	-118.10	-237.9	-105.1	156.3	143.0	13.28	11.762				
2,800.0	2,775.2	2,792.8	2,774.7	7.5	6.9	-118.60	-250.4	-111.0	165.0	151.1	13.88	11.887				
2,900.0	2,873.7	2,892.4	2,873.3	7.8	7.2	-119.04	-262.9	-117.0	173.7	159.2	14.47	12.002				
3,000.0	2,972.1	2,992.0	2,972.0	8.2	7.5	-119.44	-275.4	-123.0	182.4	167.3	15.06	12.109				
3,100.0	3,070.6	3,091.6	3,070.6	8.5	7.8	-119.81	-287.9	-128.9	191.1	175.5	15.66	12.208				
3,200.0	3,169.1	3,191.2	3,169.3	8.8	8.1	-120.14	-300.5	-134.9	199.9	183.6	16.25	12.300				
3,300.0	3,267.6	3,290.8	3,267.9	9.2	8.4	-120.45	-313.0	-140.9	208.6	191.8	16.84	12.385				
3,400.0	3,366.1	3,390.5	3,366.5	9.5	8.7	-120.73	-325.5	-146.8	217.4	199.9	17.44	12.466				
3,500.0	3,464.5	3,490.1	3,465.2	9.9	9.0	-120.98	-338.0	-152.8	226.1	208.1	18.03	12.541				
3,600.0	3,563.0	3,589.7	3,563.8	10.2	9.3	-121.22	-350.5	-158.8	234.9	216.2	18.62	12.611				
3,700.0	3,661.5	3,689.3	3,662.5	10.6	9.6	-121.45	-363.0	-164.8	243.6	224.4	19.22	12.678				
3,800.0	3,760.0	3,788.9	3,761.1	10.9	9.9	-121.65	-375.5	-170.7	252.4	232.6	19.81	12.740				
3,900.0	3,858.5	3,888.5	3,859.8	11.3	10.2	-121.85	-388.0	-176.7	261.2	240.8	20.40	12.799				
4,000.0	3,957.0	3,988.0	3,958.3	11.6	10.5	-122.17	-399.9	-182.4	270.0	249.0	20.97	12.875				
4,100.0	4,055.4	4,087.3	4,057.0	12.0	10.7	-122.83	-410.3	-187.3	278.9	257.4	21.48	12.980				
4,200.0	4,153.9	4,186.5	4,155.7	12.3	11.0	-123.78	-419.1	-191.5	287.9	265.9	21.95	13.118				
4,300.0	4,252.4	4,285.4	4,254.3	12.7	11.2	-125.01	-426.3	-194.9	297.2	274.8	22.36	13.291				
4,400.0	4,350.9	4,384.1	4,352.8	13.0	11.4	-126.48	-432.0	-197.6	306.7	284.0	22.71	13.506				
4,500.0	4,449.4	4,482.5	4,451.1	13.4	11.5	-128.15	-436.1	-199.6	316.8	293.8	23.01	13.767				
4,600.0	4,547.8	4,580.5	4,549.0	13.7	11.7	-130.01	-438.7	-200.8	327.3	304.1	23.25	14.081				
4,700.0	4,646.3	4,678.1	4,646.6	14.1	11.8	-132.02	-439.8	-201.4	338.6	315.2	23.43	14.454				
4,800.0	4,744.8	4,776.3	4,744.8	14.4	11.9	-134.10	-439.8	-201.4	350.5	327.0	23.57	14.871				
4,905.0	4,848.2	4,879.7	4,848.2	14.8	12.0	-136.15	-439.8	-201.4	363.6	339.8	23.72	15.327				
5,000.0	4,941.9	4,973.4	4,941.9	15.1	12.1	-137.88	-439.8	-201.4	375.1	351.3	23.85	15.726				

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	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	5,040.8	5,072.2	5,040.8	15.4	12.3	-139.43	-439.8	-201.4	386.4	362.3	24.01	16.093	
5,200.0	5,139.9	5,171.4	5,139.9	15.7	12.4	-140.72	-439.8	-201.4	396.5	372.3	24.18	16.399	
5,300.0	5,239.3	5,270.7	5,239.3	16.0	12.5	-141.80	-439.8	-201.4	405.4	381.0	24.36	16.643	
5,400.0	5,338.8	5,370.3	5,338.8	16.2	12.6	-142.67	-439.8	-201.4	413.0	388.5	24.55	16.823	
5,500.0	5,438.5	5,469.9	5,438.5	16.4	12.8	-143.37	-439.8	-201.4	419.4	394.6	24.76	16.937	
5,600.0	5,538.3	5,569.7	5,538.3	16.6	12.9	-143.89	-439.8	-201.4	424.4	399.4	24.98	16.986	
5,700.0	5,638.2	5,669.6	5,638.2	16.7	13.0	-144.27	-439.8	-201.4	428.0	402.8	25.22	16.971	
5,800.0	5,738.1	5,769.6	5,738.1	16.8	13.2	-144.49	-439.8	-201.4	430.2	404.7	25.46	16.894	
5,905.0	5,843.1	5,874.6	5,843.1	17.0	13.3	91.13	-439.8	-201.4	431.0	405.2	25.73	16.748	
6,000.0	5,938.1	5,969.6	5,938.1	17.1	13.4	91.13	-439.8	-201.4	431.0	405.0	26.00	16.577	
6,100.0	6,038.1	6,069.6	6,038.1	17.2	13.6	91.13	-439.8	-201.4	431.0	404.7	26.28	16.400	
6,200.0	6,138.1	6,169.6	6,138.1	17.3	13.7	91.13	-439.8	-201.4	431.0	404.4	26.56	16.225	
6,300.0	6,238.1	6,269.6	6,238.1	17.4	13.8	91.13	-439.8	-201.4	431.0	404.1	26.85	16.054	
6,400.0	6,338.1	6,369.6	6,338.1	17.5	14.0	91.13	-439.8	-201.4	431.0	403.8	27.13	15.885	
6,500.0	6,438.1	6,469.6	6,438.1	17.6	14.1	91.13	-439.8	-201.4	431.0	403.5	27.42	15.719	
6,600.0	6,538.1	6,569.6	6,538.1	17.7	14.3	91.13	-439.8	-201.4	431.0	403.3	27.71	15.555	
6,700.0	6,638.1	6,669.6	6,638.1	17.8	14.4	91.13	-439.8	-201.4	431.0	403.0	28.00	15.394	
6,800.0	6,738.1	6,770.1	6,738.1	17.9	14.5	90.95	-438.5	-201.4	430.9	402.7	28.24	15.263	
6,866.7	6,804.9	6,836.8	6,804.9	18.0	14.5	90.00	-431.3	-201.4	430.9	402.7	28.21	15.274	
6,900.0	6,838.1	6,869.4	6,837.0	18.1	14.5	89.24	-425.6	-201.4	430.9	402.8	28.14	15.314	
6,976.7	6,914.8	6,942.1	6,907.4	18.1	14.4	86.84	-407.5	-201.4	431.6	403.7	27.86	15.493	
7,000.0	6,938.1	6,963.6	6,927.8	18.2	14.4	85.97	-400.9	-201.4	432.1	404.3	27.74	15.577	
7,050.0	6,988.0	7,008.9	6,970.2	18.2	14.3	84.12	-384.8	-201.4	433.4	405.9	27.45	15.786	
7,100.0	7,037.5	7,053.5	7,010.8	18.2	14.3	82.32	-366.3	-201.4	435.1	408.0	27.15	16.024	
7,150.0	7,086.4	7,097.4	7,049.6	18.2	14.2	80.57	-345.8	-201.4	437.3	410.4	26.85	16.284	
7,200.0	7,134.5	7,140.7	7,086.5	18.1	14.1	78.88	-323.2	-201.4	439.7	413.2	26.56	16.557	
7,250.0	7,181.5	7,183.4	7,121.5	18.1	14.0	77.26	-298.8	-201.4	442.5	416.2	26.29	16.834	
7,300.0	7,227.3	7,225.5	7,154.6	18.0	13.9	75.71	-272.8	-201.4	445.5	419.5	26.04	17.110	
7,350.0	7,271.5	7,267.2	7,185.7	17.9	13.8	74.24	-245.1	-201.4	448.7	422.9	25.82	17.377	
7,400.0	7,313.9	7,308.3	7,214.9	17.8	13.7	72.85	-216.0	-201.4	452.0	426.3	25.63	17.630	
7,450.0	7,354.4	7,350.0	7,242.6	17.7	13.6	71.52	-185.0	-201.4	455.3	429.8	25.48	17.867	
7,500.0	7,392.8	7,389.5	7,267.2	17.7	13.6	70.33	-154.1	-201.4	458.6	433.3	25.38	18.074	
7,550.0	7,428.8	7,429.6	7,290.4	17.6	13.6	69.20	-121.4	-201.4	461.9	436.6	25.31	18.254	
7,600.0	7,462.4	7,469.3	7,311.6	17.5	13.6	68.17	-87.7	-201.4	465.1	439.9	25.27	18.404	
7,650.0	7,493.2	7,508.8	7,330.7	17.5	13.6	67.22	-53.2	-201.4	468.2	442.9	25.28	18.516	
7,700.0	7,521.3	7,550.0	7,348.6	17.5	13.7	66.35	-16.1	-201.4	471.1	445.7	25.32	18.603	
7,750.0	7,546.4	7,587.1	7,362.8	17.5	13.7	65.62	18.1	-201.4	473.7	448.3	25.41	18.644	
7,800.0	7,568.4	7,625.9	7,375.9	17.6	13.8	64.96	54.7	-201.4	476.1	450.6	25.54	18.638	
7,850.0	7,587.2	7,664.6	7,386.8	17.7	14.0	64.39	91.8	-201.4	478.2	452.5	25.72	18.592	
7,900.0	7,602.8	7,700.0	7,395.1	17.8	14.2	63.94	126.2	-201.4	480.1	454.1	25.93	18.513	
7,950.0	7,615.0	7,741.6	7,402.6	18.0	14.4	63.54	167.1	-201.4	481.5	455.3	26.22	18.363	
8,000.0	7,623.8	7,780.0	7,407.5	18.2	14.6	63.25	205.2	-201.4	482.7	456.1	26.55	18.180	
8,050.0	7,629.1	7,818.3	7,410.3	18.4	14.9	63.06	243.4	-201.4	483.4	456.5	26.93	17.954	
8,101.7	7,631.0	7,859.8	7,411.0	18.7	15.2	62.96	284.9	-201.4	483.8	456.4	27.38	17.668	
8,200.0	7,631.0	7,958.1	7,411.0	19.4	16.0	62.96	383.2	-201.4	483.8	454.9	28.95	16.714	
8,300.0	7,631.0	8,058.1	7,411.0	20.2	17.0	62.96	483.2	-201.4	483.8	453.1	30.76	15.730	
8,400.0	7,631.0	8,158.1	7,411.0	21.2	18.1	62.96	583.2	-201.4	483.8	451.1	32.77	14.765	
8,500.0	7,631.0	8,258.1	7,411.0	22.2	19.3	62.96	683.2	-201.4	483.9	448.9	34.95	13.846	
8,600.0	7,631.0	8,358.1	7,411.0	23.4	20.6	62.96	783.2	-201.4	483.9	446.6	37.26	12.987	
8,700.0	7,631.0	8,458.1	7,411.0	24.6	22.0	62.96	883.2	-201.4	483.9	444.2	39.68	12.194	
8,800.0	7,631.0	8,558.1	7,411.0	25.8	23.4	62.96	983.2	-201.4	483.9	441.7	42.20	11.466	
8,900.0	7,631.0	8,658.1	7,411.0	27.1	24.8	62.96	1,083.2	-201.4	483.9	439.1	44.79	10.802	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4E-14H - HZ - Plan #3												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
9,000.0	7,631.0	8,758.1	7,411.0	28.5	26.3	62.96	1,183.2	-201.4	483.9	436.4	47.45	10.197	
9,100.0	7,631.0	8,858.1	7,411.0	29.9	27.8	62.96	1,283.2	-201.4	483.9	433.7	50.17	9.646	
9,200.0	7,631.0	8,958.1	7,411.0	31.3	29.3	62.96	1,383.2	-201.4	483.9	431.0	52.93	9.143	
9,300.0	7,631.0	9,058.1	7,411.0	32.8	30.9	62.96	1,483.2	-201.4	483.9	428.2	55.73	8.684	
9,400.0	7,631.0	9,158.1	7,411.0	34.3	32.5	62.96	1,583.2	-201.4	483.9	425.4	58.56	8.264	
9,500.0	7,631.0	9,258.1	7,411.0	35.8	34.1	62.96	1,683.2	-201.4	483.9	422.5	61.42	7.879	
9,600.0	7,631.0	9,358.7	7,411.0	37.4	35.7	62.96	1,783.8	-201.4	483.9	419.6	64.31	7.524	
9,700.0	7,631.0	9,466.8	7,411.0	38.9	37.5	62.90	1,891.9	-202.5	483.0	415.7	67.31	7.175	
9,800.0	7,631.0	9,574.9	7,411.0	40.5	39.3	62.73	1,999.9	-205.7	480.3	410.1	70.26	6.837	
9,900.0	7,631.0	9,682.7	7,411.0	42.1	41.0	62.44	2,107.6	-211.0	476.1	402.9	73.14	6.509	
10,000.0	7,631.0	9,787.5	7,411.0	43.7	42.8	62.05	2,212.2	-217.9	470.2	394.3	75.91	6.194	
10,100.0	7,631.0	9,887.3	7,411.0	45.3	44.5	61.65	2,311.7	-224.8	464.1	385.5	78.59	5.905	
10,200.0	7,631.0	9,987.1	7,411.0	46.9	46.1	61.23	2,411.2	-231.8	458.0	376.7	81.25	5.636	
10,300.0	7,631.0	10,086.8	7,411.0	48.6	47.8	60.81	2,510.8	-238.7	451.9	368.0	83.88	5.387	
10,400.0	7,631.0	10,186.6	7,411.0	50.2	49.5	60.37	2,610.3	-245.7	445.8	359.3	86.49	5.154	
10,500.0	7,631.0	10,286.3	7,411.0	51.9	51.2	59.92	2,709.8	-252.7	439.7	350.7	89.06	4.937	
10,600.0	7,631.0	10,386.1	7,411.0	53.5	52.9	59.46	2,809.3	-259.6	433.7	342.1	91.60	4.735	
10,700.0	7,631.0	10,485.8	7,411.0	55.2	54.6	58.99	2,908.8	-266.6	427.7	333.6	94.11	4.545	
10,800.0	7,631.0	10,583.6	7,411.0	56.9	56.2	58.52	3,006.3	-273.3	421.8	325.3	96.55	4.369	
10,900.0	7,631.0	10,677.6	7,411.0	58.5	57.8	58.14	3,100.1	-278.6	417.1	318.1	99.01	4.213	
11,000.0	7,631.0	10,771.7	7,411.0	60.2	59.5	57.87	3,194.2	-282.3	413.7	312.2	101.56	4.074	
11,100.0	7,631.0	10,865.9	7,411.0	61.9	61.1	57.71	3,288.4	-284.5	411.8	307.6	104.20	3.952	
11,190.1	7,631.0	10,950.8	7,411.0	63.4	62.5	57.66	3,373.3	-285.1	411.2	304.5	106.69	3.854	
11,200.0	7,631.0	10,960.2	7,411.0	63.6	62.7	57.66	3,382.7	-285.1	411.2	304.3	106.97	3.844	
11,300.0	7,631.0	11,054.5	7,411.0	65.3	64.3	57.73	3,476.9	-284.2	412.1	302.2	109.86	3.751	
11,400.0	7,631.0	11,148.7	7,411.0	66.9	65.9	57.91	3,571.1	-281.7	414.3	301.4	112.89	3.670	
11,500.0	7,631.0	11,242.8	7,411.0	68.6	67.5	58.21	3,665.2	-277.7	417.9	301.9	116.06	3.601	
11,600.0	7,631.0	11,336.7	7,411.0	70.3	69.1	58.60	3,758.9	-272.1	423.0	303.6	119.37	3.543	
11,700.0	7,631.0	11,430.5	7,411.0	72.0	70.7	59.10	3,852.4	-265.1	429.4	306.6	122.81	3.497	
11,800.0	7,631.0	11,524.0	7,411.0	73.7	72.3	59.67	3,945.5	-256.5	437.3	311.0	126.36	3.461	
11,900.0	7,631.0	11,617.2	7,411.0	75.4	73.9	60.33	4,038.1	-246.5	446.7	316.7	130.03	3.435	
12,000.0	7,631.0	11,713.7	7,411.0	77.2	75.5	61.06	4,133.9	-234.7	457.3	323.4	133.87	3.416	
12,100.0	7,631.0	11,812.9	7,411.0	78.9	77.2	61.79	4,232.4	-222.5	468.1	330.4	137.76	3.398	
12,177.2	7,631.0	11,889.5	7,411.0	80.2	78.5	62.33	4,308.5	-213.1	476.5	335.8	140.76	3.385 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4F-14H - HZ - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.2	0.2	89.98	0.0	19.6	19.6	19.3	0.30	64.533		
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	19.6	19.6	18.9	0.65	30.023		
300.0	300.0	300.0	300.0	0.5	0.5	89.98	0.0	19.6	19.6	18.6	1.00	19.562	CC, ES	
400.0	400.0	399.9	399.8	0.7	0.7	92.26	-0.8	19.9	20.0	18.6	1.35	14.776		
500.0	500.0	499.6	499.6	0.8	0.9	98.59	-3.2	21.0	21.2	19.5	1.70	12.471		
600.0	600.0	599.3	599.2	1.0	1.0	-129.85	-7.1	22.8	24.4	22.4	2.06	11.864		
700.0	700.0	698.8	698.5	1.2	1.2	-124.71	-12.7	25.2	30.1	27.7	2.42	12.450		
800.0	799.9	798.0	797.4	1.4	1.4	-121.69	-19.8	28.3	38.1	35.3	2.78	13.692		
900.0	899.7	896.9	895.9	1.6	1.7	-120.16	-28.4	32.1	48.4	45.2	3.17	15.294		
1,000.0	999.4	995.5	993.7	1.8	1.9	-119.51	-38.6	36.6	60.9	57.3	3.56	17.086		
1,100.0	1,098.9	1,093.5	1,091.0	2.0	2.2	-119.36	-50.2	41.7	75.5	71.5	3.98	18.963		
1,200.0	1,198.3	1,191.0	1,187.4	2.2	2.5	-119.46	-63.3	47.5	92.2	87.8	4.42	20.855		
1,300.0	1,297.4	1,287.9	1,283.0	2.5	2.8	-119.69	-77.7	53.9	111.1	106.2	4.89	22.715		
1,400.0	1,396.3	1,385.6	1,379.2	2.8	3.1	-120.17	-93.2	60.7	131.6	126.2	5.38	24.438		
1,500.0	1,494.9	1,483.2	1,475.4	3.1	3.4	-121.03	-108.7	67.6	153.0	147.1	5.90	25.914		
1,600.0	1,593.4	1,580.8	1,571.4	3.4	3.7	-122.07	-124.2	74.4	174.8	168.4	6.44	27.164		
1,700.0	1,691.9	1,678.3	1,667.5	3.7	4.1	-122.88	-139.7	81.2	196.8	189.8	6.98	28.201		
1,800.0	1,790.4	1,775.8	1,763.5	4.1	4.4	-123.53	-155.2	88.1	218.7	211.2	7.52	29.074		
1,900.0	1,888.9	1,873.4	1,859.6	4.4	4.7	-124.06	-170.7	94.9	240.7	232.6	8.07	29.817		
2,000.0	1,987.3	1,970.9	1,955.6	4.7	5.0	-124.50	-186.2	101.7	262.7	254.1	8.62	30.455		
2,100.0	2,085.8	2,068.4	2,051.7	5.1	5.4	-124.87	-201.7	108.6	284.7	275.5	9.18	31.009		
2,200.0	2,184.3	2,166.0	2,147.7	5.4	5.7	-125.19	-217.2	115.4	306.7	297.0	9.74	31.494		
2,300.0	2,282.8	2,263.5	2,243.8	5.7	6.0	-125.47	-232.7	122.2	328.7	318.4	10.30	31.922		
2,400.0	2,381.3	2,361.0	2,339.8	6.1	6.4	-125.71	-248.2	129.1	350.7	339.9	10.86	32.301		
2,500.0	2,479.7	2,458.6	2,435.9	6.4	6.7	-125.93	-263.7	135.9	372.8	361.3	11.42	32.640		
2,600.0	2,578.2	2,556.1	2,532.0	6.8	7.1	-126.12	-279.2	142.7	394.8	382.8	11.98	32.944		
2,700.0	2,676.7	2,653.6	2,628.0	7.1	7.4	-126.29	-294.7	149.6	416.8	404.3	12.55	33.219		
2,800.0	2,775.2	2,751.2	2,724.1	7.5	7.7	-126.44	-310.2	156.4	438.9	425.8	13.11	33.468		
2,900.0	2,873.7	2,848.7	2,820.1	7.8	8.1	-126.58	-325.7	163.3	460.9	447.2	13.68	33.695		
3,000.0	2,972.1	2,946.2	2,916.2	8.2	8.4	-126.70	-341.2	170.1	483.0	468.7	14.25	33.903		
3,100.0	3,070.6	3,043.8	3,012.2	8.5	8.8	-126.82	-356.7	176.9	505.0	490.2	14.81	34.094		
3,200.0	3,169.1	3,144.6	3,111.6	8.8	9.1	-126.95	-372.5	183.9	526.9	511.5	15.38	34.255		
3,300.0	3,267.6	3,248.9	3,214.6	9.2	9.4	-127.20	-387.3	190.4	547.8	531.8	15.94	34.353		
3,400.0	3,366.1	3,353.6	3,318.3	9.5	9.7	-127.59	-400.4	196.2	567.4	551.0	16.49	34.406		
3,500.0	3,464.5	3,458.7	3,422.6	9.9	10.0	-128.09	-411.9	201.3	586.0	569.0	17.02	34.421		
3,600.0	3,563.0	3,564.1	3,527.5	10.2	10.2	-128.71	-421.6	205.6	603.4	585.8	17.54	34.407		
3,700.0	3,661.5	3,669.7	3,632.7	10.6	10.4	-129.43	-429.6	209.1	619.7	601.7	18.03	34.371		
3,800.0	3,760.0	3,775.4	3,738.2	10.9	10.6	-130.25	-435.8	211.8	635.0	616.5	18.50	34.319		
3,900.0	3,858.5	3,881.3	3,844.0	11.3	10.8	-131.16	-440.2	213.8	649.2	630.3	18.95	34.260		
4,000.0	3,957.0	3,987.2	3,949.8	11.6	11.0	-132.17	-442.8	214.9	662.5	643.1	19.37	34.200		
4,100.0	4,055.4	4,092.8	4,055.4	12.0	11.1	-133.27	-443.7	215.3	674.9	655.1	19.77	34.142		
4,200.0	4,153.9	4,191.2	4,153.9	12.3	11.2	-134.32	-443.7	215.3	687.0	666.9	20.14	34.103		
4,300.0	4,252.4	4,289.7	4,252.4	12.7	11.3	-135.33	-443.7	215.3	699.3	678.8	20.52	34.088		
4,400.0	4,350.9	4,388.2	4,350.9	13.0	11.4	-136.30	-443.7	215.3	711.9	691.0	20.88	34.094		
4,500.0	4,449.4	4,486.7	4,449.4	13.4	11.5	-137.25	-443.7	215.3	724.6	703.4	21.24	34.118		
4,600.0	4,547.8	4,585.2	4,547.8	13.7	11.6	-138.16	-443.7	215.3	737.6	716.0	21.59	34.159		
4,700.0	4,646.3	4,683.6	4,646.3	14.1	11.8	-139.03	-443.7	215.3	750.7	728.7	21.94	34.214		
4,800.0	4,744.8	4,782.1	4,744.8	14.4	11.9	-139.88	-443.7	215.3	764.0	741.7	22.28	34.283		
4,905.0	4,848.2	4,885.5	4,848.2	14.8	12.0	-140.74	-443.7	215.3	778.1	755.4	22.64	34.367		
5,000.0	4,941.9	4,979.2	4,941.9	15.1	12.1	-141.54	-443.7	215.3	790.4	767.4	22.97	34.413		
5,100.0	5,040.8	5,078.1	5,040.8	15.4	12.3	-142.27	-443.7	215.3	802.1	778.8	23.30	34.425		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	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		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
5,200.0	5,139.9	5,177.2	5,139.9	15.7	12.4	-142.90	-443.7	215.3	812.6	789.0	23.62	34.398		
5,300.0	5,239.3	5,276.6	5,239.3	16.0	12.5	-143.43	-443.7	215.3	821.7	797.8	23.94	34.329		
5,400.0	5,338.8	5,376.1	5,338.8	16.2	12.6	-143.87	-443.7	215.3	829.6	805.3	24.24	34.219		
5,500.0	5,438.5	5,475.8	5,438.5	16.4	12.8	-144.23	-443.7	215.3	836.0	811.4	24.54	34.066		
5,600.0	5,538.3	5,575.6	5,538.3	16.6	12.9	-144.51	-443.7	215.3	841.0	816.2	24.83	33.870		
5,700.0	5,638.2	5,675.5	5,638.2	16.7	13.0	-144.70	-443.7	215.3	844.6	819.5	25.11	33.632		
5,800.0	5,738.1	5,775.5	5,738.1	16.8	13.2	-144.82	-443.7	215.3	846.9	821.5	25.39	33.351		
5,905.0	5,843.1	5,880.5	5,843.1	17.0	13.3	90.84	-443.7	215.3	847.6	822.0	25.68	33.012		
6,000.0	5,938.1	5,975.5	5,938.1	17.1	13.4	90.84	-443.7	215.3	847.6	821.7	25.94	32.673		
6,100.0	6,038.1	6,075.5	6,038.1	17.2	13.6	90.84	-443.7	215.3	847.6	821.4	26.22	32.323		
6,200.0	6,138.1	6,175.5	6,138.1	17.3	13.7	90.84	-443.7	215.3	847.6	821.1	26.51	31.978		
6,300.0	6,238.1	6,275.5	6,238.1	17.4	13.8	90.84	-443.7	215.3	847.6	820.8	26.79	31.638		
6,400.0	6,338.1	6,375.5	6,338.1	17.5	14.0	90.84	-443.7	215.3	847.6	820.6	27.08	31.304		
6,500.0	6,438.1	6,475.5	6,438.1	17.6	14.1	90.84	-443.7	215.3	847.6	820.3	27.37	30.975		
6,600.0	6,538.1	6,575.5	6,538.1	17.7	14.3	90.84	-443.7	215.3	847.6	820.0	27.65	30.651		
6,700.0	6,638.1	6,675.5	6,638.1	17.8	14.4	90.84	-443.7	215.3	847.6	819.7	27.95	30.332		
6,800.0	6,738.1	6,775.5	6,738.1	17.9	14.5	90.84	-443.7	215.3	847.6	819.4	28.24	30.019		
6,900.0	6,838.1	6,875.5	6,838.1	18.1	14.7	90.84	-443.7	215.3	847.6	819.1	28.53	29.711		
6,976.7	6,914.8	6,952.1	6,914.8	18.1	14.8	90.84	-443.7	215.3	847.6	818.9	28.76	29.478		
7,000.0	6,938.1	6,975.9	6,938.5	18.2	14.8	90.84	-443.3	215.3	847.6	818.8	28.80	29.429		
7,050.0	6,988.0	7,026.7	6,989.3	18.2	14.8	90.84	-439.8	215.3	847.6	818.8	28.86	29.375		
7,100.0	7,037.5	7,077.6	7,039.6	18.2	14.8	90.83	-432.7	215.3	847.6	818.8	28.85	29.383		
7,150.0	7,086.4	7,128.5	7,089.4	18.2	14.8	90.82	-422.1	215.3	847.6	818.9	28.78	29.450		
7,200.0	7,134.5	7,179.3	7,138.2	18.1	14.7	90.80	-407.9	215.3	847.6	819.0	28.67	29.570		
7,250.0	7,181.5	7,230.1	7,185.9	18.1	14.7	90.78	-390.4	215.3	847.6	819.1	28.51	29.735		
7,300.0	7,227.3	7,280.9	7,232.2	18.0	14.6	90.75	-369.5	215.3	847.6	819.3	28.31	29.939		
7,350.0	7,271.5	7,331.7	7,276.8	17.9	14.5	90.73	-345.4	215.3	847.6	819.5	28.09	30.172		
7,400.0	7,313.9	7,382.4	7,319.7	17.8	14.3	90.70	-318.3	215.3	847.6	819.8	27.86	30.421		
7,450.0	7,354.4	7,433.1	7,360.5	17.7	14.2	90.66	-288.1	215.3	847.6	820.0	27.63	30.674		
7,500.0	7,392.8	7,483.8	7,399.0	17.7	14.1	90.62	-255.2	215.3	847.6	820.2	27.42	30.916		
7,550.0	7,428.8	7,534.4	7,435.0	17.6	14.0	90.58	-219.7	215.3	847.6	820.4	27.23	31.129		
7,600.0	7,462.4	7,585.0	7,468.5	17.5	14.0	90.54	-181.8	215.3	847.6	820.5	27.08	31.296		
7,650.0	7,493.2	7,635.5	7,499.1	17.5	13.9	90.49	-141.6	215.3	847.6	820.6	27.00	31.398		
7,700.0	7,521.3	7,686.0	7,526.8	17.5	13.9	90.44	-99.5	215.3	847.6	820.6	26.98	31.420		
7,722.1	7,532.8	7,708.3	7,538.1	17.5	13.9	90.42	-80.2	215.3	847.6	820.6	27.00	31.395		
7,750.0	7,546.4	7,736.4	7,551.5	17.5	13.9	90.39	-55.5	215.3	847.6	820.6	27.04	31.347		
7,800.0	7,568.4	7,786.8	7,573.0	17.6	14.0	90.34	-9.9	215.3	847.6	820.4	27.19	31.169		
7,850.0	7,587.2	7,837.1	7,591.2	17.7	14.1	90.28	37.0	215.3	847.6	820.2	27.45	30.883		
7,900.0	7,602.8	7,887.4	7,606.0	17.8	14.3	90.23	85.0	215.3	847.6	819.8	27.80	30.490		
7,950.0	7,615.0	7,937.6	7,617.4	18.0	14.5	90.17	133.8	215.3	847.6	819.4	28.26	29.998		
8,000.0	7,623.8	7,987.7	7,625.4	18.2	14.8	90.11	183.3	215.3	847.6	818.8	28.81	29.418		
8,050.0	7,629.1	8,037.8	7,629.9	18.4	15.1	90.05	233.2	215.3	847.6	818.2	29.47	28.766		
8,101.7	7,631.0	8,089.5	7,631.0	18.7	15.5	90.00	284.9	215.3	847.6	817.4	30.23	28.039		
8,200.0	7,631.0	8,187.8	7,631.0	19.4	16.3	90.00	383.2	215.3	847.7	815.7	31.93	26.545		
8,300.0	7,631.0	8,287.8	7,631.0	20.2	17.3	90.00	483.2	215.3	847.7	813.7	33.93	24.983		
8,400.0	7,631.0	8,387.8	7,631.0	21.2	18.4	90.00	583.2	215.3	847.7	811.5	36.16	23.444		
8,500.0	7,631.0	8,487.8	7,631.0	22.2	19.6	90.00	683.2	215.3	847.7	809.1	38.58	21.974		
8,600.0	7,631.0	8,587.8	7,631.0	23.4	20.8	90.00	783.2	215.3	847.7	806.6	41.15	20.599		
8,700.0	7,631.0	8,687.8	7,631.0	24.6	22.2	90.00	883.2	215.4	847.7	803.9	43.86	19.329		
8,800.0	7,631.0	8,787.8	7,631.0	25.8	23.6	90.00	983.2	215.4	847.7	801.1	46.67	18.164		
8,900.0	7,631.0	8,887.8	7,631.0	27.1	25.0	90.00	1,083.2	215.4	847.7	798.2	49.57	17.101		
9,000.0	7,631.0	8,987.8	7,631.0	28.5	26.5	90.00	1,183.2	215.4	847.8	795.2	52.55	16.133		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4F-14H - HZ - Plan #3												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
9,100.0	7,631.0	9,087.8	7,631.0	29.9	28.0	90.00	1,283.2	215.4	847.8	792.2	55.58	15.252	
9,200.0	7,631.0	9,187.8	7,631.0	31.3	29.5	90.00	1,383.2	215.4	847.8	789.1	58.67	14.449	
9,300.0	7,631.0	9,287.8	7,631.0	32.8	31.1	90.00	1,483.2	215.4	847.8	786.0	61.81	13.716	
9,400.0	7,631.0	9,387.8	7,631.0	34.3	32.7	90.00	1,583.2	215.4	847.8	782.8	64.98	13.047	
9,500.0	7,631.0	9,487.8	7,631.0	35.8	34.3	90.00	1,683.2	215.4	847.8	779.6	68.19	12.434	
9,600.0	7,631.0	9,587.8	7,631.0	37.4	35.9	90.00	1,783.2	215.4	847.8	776.4	71.42	11.871	
9,700.0	7,631.0	9,687.8	7,631.0	38.9	37.5	90.00	1,883.2	215.4	847.8	773.2	74.68	11.353	
9,800.0	7,631.0	9,787.8	7,631.0	40.5	39.1	90.00	1,983.2	215.4	847.9	769.9	77.96	10.875	
9,900.0	7,631.0	9,887.8	7,631.0	42.1	40.8	90.00	2,083.2	215.4	847.9	766.6	81.26	10.434	
10,000.0	7,631.0	9,987.8	7,631.0	43.7	42.4	90.00	2,183.2	215.4	847.9	763.3	84.58	10.025	
10,100.0	7,631.0	10,087.8	7,631.0	45.3	44.1	90.00	2,283.2	215.4	847.9	760.0	87.91	9.645	
10,200.0	7,631.0	10,187.8	7,631.0	46.9	45.8	90.00	2,383.2	215.4	847.9	756.7	91.25	9.292	
10,300.0	7,631.0	10,287.8	7,631.0	48.6	47.4	90.00	2,483.2	215.4	847.9	753.3	94.61	8.962	
10,400.0	7,631.0	10,387.8	7,631.0	50.2	49.1	90.00	2,583.2	215.4	847.9	750.0	97.98	8.654	
10,500.0	7,631.0	10,487.8	7,631.0	51.9	50.8	90.00	2,683.2	215.4	847.9	746.6	101.35	8.366	
10,600.0	7,631.0	10,587.8	7,631.0	53.5	52.5	90.00	2,783.2	215.5	848.0	743.2	104.74	8.096	
10,700.0	7,631.0	10,687.8	7,631.0	55.2	54.2	90.00	2,883.2	215.5	848.0	739.8	108.13	7.842	
10,800.0	7,631.0	10,787.8	7,631.0	56.9	55.9	90.00	2,983.2	215.5	848.0	736.4	111.53	7.603	
10,900.0	7,631.0	10,887.8	7,631.0	58.5	57.6	90.00	3,083.2	215.5	848.0	733.1	114.94	7.378	
11,000.0	7,631.0	10,987.8	7,631.0	60.2	59.3	90.00	3,183.2	215.5	848.0	729.7	118.35	7.165	
11,100.0	7,631.0	11,087.8	7,631.0	61.9	61.0	90.00	3,283.2	215.5	848.0	726.2	121.77	6.964	
11,200.0	7,631.0	11,187.8	7,631.0	63.6	62.7	90.00	3,383.2	215.5	848.0	722.8	125.19	6.774	
11,300.0	7,631.0	11,287.8	7,631.0	65.3	64.4	90.00	3,483.2	215.5	848.0	719.4	128.62	6.593	
11,400.0	7,631.0	11,387.8	7,631.0	66.9	66.1	90.00	3,583.2	215.5	848.1	716.0	132.05	6.422	
11,500.0	7,631.0	11,487.8	7,631.0	68.6	67.8	90.00	3,683.2	215.5	848.1	712.6	135.49	6.259	
11,600.0	7,631.0	11,587.8	7,631.0	70.3	69.5	90.00	3,783.2	215.5	848.1	709.2	138.93	6.105	
11,700.0	7,631.0	11,687.8	7,631.0	72.0	71.3	90.00	3,883.2	215.5	848.1	705.7	142.37	5.957	
11,800.0	7,631.0	11,787.8	7,631.0	73.7	73.0	90.00	3,983.2	215.5	848.1	702.3	145.82	5.816	
11,900.0	7,631.0	11,887.8	7,631.0	75.4	74.7	90.00	4,083.2	215.5	848.1	698.9	149.26	5.682	
12,000.0	7,631.0	11,987.8	7,631.0	77.2	76.4	90.00	4,183.2	215.5	848.1	695.4	152.72	5.554	
12,100.0	7,631.0	12,087.8	7,631.0	78.9	78.2	90.00	4,283.2	215.5	848.1	692.0	156.17	5.431	
12,143.4	7,631.0	12,131.2	7,631.0	79.6	78.9	90.00	4,326.6	215.5	848.2	690.5	157.67	5.379	
12,177.2	7,631.0	12,161.4	7,631.0	80.2	79.4	90.00	4,356.8	215.5	848.2	689.4	158.77	5.342 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4G-14H - HZ - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	96.73	-3.6	30.8	31.0					
100.0	100.0	100.0	100.0	0.2	0.2	96.73	-3.6	30.8	31.0	30.7	0.30	102.112		
200.0	200.0	200.0	200.0	0.3	0.3	96.73	-3.6	30.8	31.0	30.4	0.65	47.507 CC, ES		
300.0	300.0	299.5	299.5	0.5	0.5	97.50	-4.1	31.5	31.8	30.8	1.00	31.708		
400.0	400.0	399.0	398.9	0.7	0.7	99.60	-5.7	33.6	34.1	32.7	1.36	25.145		
500.0	500.0	498.3	498.2	0.8	0.9	102.52	-8.2	37.1	38.0	36.3	1.72	22.150		
600.0	600.0	597.5	597.1	1.0	1.1	-130.80	-11.8	41.9	44.2	42.1	2.05	21.550		
700.0	700.0	696.3	695.7	1.2	1.3	-129.81	-16.4	48.1	53.2	50.8	2.40	22.119		
800.0	799.9	794.6	793.6	1.4	1.5	-129.74	-21.9	55.6	64.8	62.1	2.76	23.491		
900.0	899.7	892.4	890.8	1.6	1.7	-130.18	-28.4	64.5	79.2	76.1	3.12	25.354		
1,000.0	999.4	989.6	987.1	1.8	2.0	-130.86	-35.8	74.6	96.3	92.8	3.50	27.524		
1,100.0	1,098.9	1,085.9	1,082.4	2.0	2.3	-131.61	-44.1	85.9	116.1	112.2	3.88	29.877		
1,200.0	1,198.3	1,181.4	1,176.6	2.2	2.6	-132.34	-53.3	98.4	138.5	134.2	4.28	32.330		
1,300.0	1,297.4	1,277.9	1,271.6	2.5	2.9	-133.12	-63.2	111.9	163.1	158.4	4.70	34.711		
1,400.0	1,396.3	1,374.4	1,366.7	2.8	3.2	-134.02	-73.1	125.4	189.0	183.8	5.13	36.838		
1,500.0	1,494.9	1,470.6	1,461.4	3.1	3.6	-135.00	-83.0	138.8	216.1	210.5	5.57	38.760		
1,600.0	1,593.4	1,566.6	1,556.0	3.4	3.9	-136.06	-92.9	152.3	243.8	237.8	6.03	40.421		
1,700.0	1,691.9	1,662.6	1,650.5	3.7	4.2	-136.91	-102.7	165.7	271.6	265.1	6.49	41.831		
1,800.0	1,790.4	1,758.6	1,745.0	4.1	4.6	-137.60	-112.6	179.1	299.5	292.5	6.96	43.043		
1,900.0	1,888.9	1,854.6	1,839.5	4.4	4.9	-138.17	-122.5	192.6	327.4	320.0	7.43	44.093		
2,000.0	1,987.3	1,950.5	1,934.1	4.7	5.2	-138.65	-132.3	206.0	355.3	347.4	7.89	45.011		
2,100.0	2,085.8	2,046.5	2,028.6	5.1	5.6	-139.06	-142.2	219.4	383.3	374.9	8.36	45.820		
2,200.0	2,184.3	2,142.5	2,123.1	5.4	5.9	-139.42	-152.1	232.9	411.2	402.4	8.84	46.538		
2,300.0	2,282.8	2,238.5	2,217.6	5.7	6.2	-139.73	-161.9	246.3	439.2	429.9	9.31	47.178		
2,400.0	2,381.3	2,334.5	2,312.2	6.1	6.6	-140.00	-171.8	259.7	467.2	457.4	9.78	47.754		
2,500.0	2,479.7	2,430.5	2,406.7	6.4	6.9	-140.25	-181.7	273.1	495.2	484.9	10.26	48.273		
2,600.0	2,578.2	2,526.4	2,501.2	6.8	7.2	-140.46	-191.5	286.6	523.2	512.4	10.73	48.744		
2,700.0	2,676.7	2,622.4	2,595.7	7.1	7.6	-140.66	-201.4	300.0	551.2	540.0	11.21	49.173		
2,800.0	2,775.2	2,718.4	2,690.3	7.5	7.9	-140.83	-211.3	313.4	579.2	567.5	11.69	49.565		
2,900.0	2,873.7	2,814.4	2,784.8	7.8	8.2	-140.99	-221.1	326.9	607.2	595.0	12.16	49.925		
3,000.0	2,972.1	2,910.4	2,879.3	8.2	8.6	-141.14	-231.0	340.3	635.2	622.6	12.64	50.257		
3,100.0	3,070.6	3,006.4	2,973.8	8.5	8.9	-141.27	-240.9	353.7	663.2	650.1	13.12	50.563		
3,200.0	3,169.1	3,102.3	3,068.4	8.8	9.2	-141.39	-250.7	367.2	691.2	677.6	13.59	50.847		
3,300.0	3,267.6	3,198.3	3,162.9	9.2	9.6	-141.51	-260.6	380.6	719.3	705.2	14.07	51.110		
3,400.0	3,366.1	3,294.3	3,257.4	9.5	9.9	-141.61	-270.5	394.0	747.3	732.7	14.55	51.356		
3,500.0	3,464.5	3,390.3	3,351.9	9.9	10.2	-141.71	-280.3	407.5	775.3	760.3	15.03	51.585		
3,600.0	3,563.0	3,486.3	3,446.5	10.2	10.6	-141.80	-290.2	420.9	803.4	787.9	15.51	51.800		
3,700.0	3,661.5	3,582.2	3,541.0	10.6	10.9	-141.88	-300.1	434.3	831.4	815.4	15.99	52.001		
3,800.0	3,760.0	3,678.2	3,635.5	10.9	11.3	-141.96	-309.9	447.8	859.4	843.0	16.47	52.190		
3,900.0	3,858.5	3,774.2	3,730.0	11.3	11.6	-142.03	-319.8	461.2	887.5	870.5	16.95	52.368		
4,000.0	3,957.0	3,870.2	3,824.6	11.6	11.9	-142.10	-329.7	474.6	915.5	898.1	17.43	52.536		
4,100.0	4,055.4	3,966.2	3,919.1	12.0	12.3	-142.17	-339.5	488.1	943.5	925.6	17.91	52.694		
4,200.0	4,153.9	4,062.2	4,013.6	12.3	12.6	-142.23	-349.4	501.5	971.6	953.2	18.39	52.844		
4,300.0	4,252.4	4,158.1	4,108.1	12.7	12.9	-142.29	-359.3	514.9	999.6	980.8	18.87	52.986		
4,400.0	4,350.9	4,254.1	4,202.7	13.0	13.3	-142.34	-369.1	528.4	1,027.7	1,008.3	19.35	53.121		
4,500.0	4,449.4	4,350.1	4,297.2	13.4	13.6	-142.39	-379.0	541.8	1,055.7	1,035.9	19.83	53.249		
4,600.0	4,547.8	4,446.1	4,391.7	13.7	14.0	-142.44	-388.9	555.2	1,083.8	1,063.5	20.31	53.371		
4,700.0	4,646.3	4,542.1	4,486.2	14.1	14.3	-142.49	-398.7	568.7	1,111.8	1,091.0	20.79	53.487		
4,800.0	4,744.8	4,653.5	4,596.1	14.4	14.7	-142.56	-409.7	583.6	1,139.3	1,118.0	21.29	53.504		
4,905.0	4,848.2	4,775.1	4,716.4	14.8	15.0	-142.71	-420.3	598.1	1,166.5	1,144.7	21.82	53.454		
5,000.0	4,941.9	4,886.3	4,826.7	15.1	15.3	-143.01	-428.7	609.4	1,189.0	1,166.7	22.31	53.287		
5,100.0	5,040.8	5,004.5	4,944.2	15.4	15.6	-143.30	-436.2	619.6	1,209.7	1,186.9	22.80	53.051		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: O-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor	
5,200.0	5,139.9	5,123.8	5,063.0	15.7	15.9	-143.57	-442.3	628.0	1,227.4	1,204.1	23.26	52.760	
5,300.0	5,239.3	5,244.0	5,183.0	16.0	16.1	-143.83	-447.0	634.3	1,241.9	1,218.2	23.70	52.412	
5,400.0	5,338.8	5,364.9	5,303.8	16.2	16.3	-144.08	-450.1	638.7	1,253.4	1,229.3	24.10	52.009	
5,500.0	5,438.5	5,486.4	5,425.2	16.4	16.4	-144.31	-451.8	640.9	1,261.8	1,237.3	24.48	51.552	
5,600.0	5,538.3	5,599.5	5,538.3	16.6	16.5	-144.51	-452.1	641.3	1,267.1	1,242.3	24.82	51.063	
5,700.0	5,638.2	5,699.4	5,638.2	16.7	16.6	-144.65	-452.1	641.3	1,270.8	1,245.6	25.12	50.583	
5,800.0	5,738.1	5,799.3	5,738.1	16.8	16.7	-144.73	-452.1	641.3	1,273.0	1,247.6	25.42	50.085	
5,905.0	5,843.1	5,904.3	5,843.1	17.0	16.8	90.94	-452.1	641.3	1,273.8	1,248.1	25.71	49.543	
6,000.0	5,938.1	5,999.3	5,938.1	17.1	16.9	90.94	-452.1	641.3	1,273.8	1,247.8	25.98	49.035	
6,100.0	6,038.1	6,099.3	6,038.1	17.2	17.1	90.94	-452.1	641.3	1,273.8	1,247.5	26.26	48.509	
6,200.0	6,138.1	6,199.3	6,138.1	17.3	17.2	90.94	-452.1	641.3	1,273.8	1,247.2	26.54	47.992	
6,300.0	6,238.1	6,299.3	6,238.1	17.4	17.3	90.94	-452.1	641.3	1,273.8	1,246.9	26.83	47.482	
6,400.0	6,338.1	6,399.3	6,338.1	17.5	17.4	90.94	-452.1	641.3	1,273.8	1,246.6	27.11	46.981	
6,500.0	6,438.1	6,499.3	6,438.1	17.6	17.5	90.94	-452.1	641.3	1,273.8	1,246.4	27.40	46.487	
6,600.0	6,538.1	6,599.3	6,538.1	17.7	17.6	90.94	-452.1	641.3	1,273.8	1,246.1	27.69	46.002	
6,700.0	6,638.1	6,699.3	6,638.1	17.8	17.7	90.94	-452.1	641.3	1,273.8	1,245.8	27.98	45.524	
6,800.0	6,738.1	6,800.6	6,739.3	17.9	17.8	90.87	-450.7	641.3	1,273.7	1,245.5	28.25	45.093	
6,900.0	6,838.1	6,901.6	6,839.4	18.1	17.8	90.27	-437.4	641.3	1,273.6	1,245.2	28.38	44.871	
6,928.4	6,866.5	6,929.4	6,866.5	18.1	17.8	90.00	-431.2	641.3	1,273.6	1,245.2	28.40	44.847	
6,976.7	6,914.8	6,975.5	6,910.9	18.1	17.7	89.44	-418.7	641.3	1,273.7	1,245.2	28.41	44.832	
7,000.0	6,938.1	6,997.2	6,931.5	18.2	17.7	89.14	-411.9	641.3	1,273.7	1,245.3	28.40	44.845	
7,050.0	6,988.0	7,043.2	6,974.4	18.2	17.7	88.50	-395.3	641.3	1,274.1	1,245.7	28.34	44.957	
7,100.0	7,037.5	7,088.4	7,015.4	18.2	17.6	87.87	-376.4	641.3	1,274.6	1,246.3	28.23	45.145	
7,150.0	7,086.4	7,132.8	7,054.5	18.2	17.5	87.25	-355.3	641.3	1,275.2	1,247.1	28.09	45.398	
7,200.0	7,134.5	7,176.5	7,091.6	18.1	17.4	86.65	-332.2	641.3	1,275.9	1,248.0	27.92	45.705	
7,250.0	7,181.5	7,219.6	7,126.7	18.1	17.3	86.06	-307.2	641.3	1,276.8	1,249.1	27.72	46.055	
7,300.0	7,227.3	7,262.2	7,159.9	18.0	17.2	85.49	-280.6	641.3	1,277.8	1,250.3	27.52	46.435	
7,350.0	7,271.5	7,304.2	7,191.0	17.9	17.2	84.94	-252.4	641.3	1,278.9	1,251.6	27.31	46.829	
7,400.0	7,313.9	7,345.7	7,220.1	17.8	17.1	84.42	-222.8	641.3	1,280.0	1,252.9	27.11	47.221	
7,450.0	7,354.4	7,386.7	7,247.1	17.7	17.0	83.91	-191.9	641.3	1,281.2	1,254.2	26.92	47.588	
7,500.0	7,392.8	7,427.4	7,272.1	17.7	17.0	83.44	-159.8	641.3	1,282.4	1,255.6	26.76	47.916	
7,550.0	7,428.8	7,467.7	7,295.0	17.6	17.0	82.99	-126.6	641.3	1,283.6	1,256.9	26.64	48.183	
7,600.0	7,462.4	7,507.7	7,315.9	17.5	17.0	82.57	-92.6	641.3	1,284.7	1,258.2	26.56	48.373	
7,650.0	7,493.2	7,550.0	7,335.9	17.5	17.0	82.15	-55.2	641.3	1,285.9	1,259.4	26.53	48.463	
7,700.0	7,521.3	7,586.7	7,351.4	17.5	17.0	81.81	-22.0	641.3	1,287.0	1,260.4	26.57	48.432	
7,750.0	7,546.4	7,625.9	7,366.1	17.5	17.1	81.49	14.4	641.3	1,288.0	1,261.4	26.69	48.257	
7,800.0	7,568.4	7,664.9	7,378.6	17.6	17.2	81.19	51.2	641.3	1,289.0	1,262.1	26.87	47.973	
7,850.0	7,587.2	7,700.0	7,388.3	17.7	17.3	80.95	85.0	641.3	1,289.9	1,262.8	27.11	47.577	
7,900.0	7,602.8	7,742.3	7,397.6	17.8	17.4	80.71	126.2	641.3	1,290.6	1,263.2	27.47	46.987	
7,950.0	7,615.0	7,780.7	7,404.0	18.0	17.6	80.53	164.2	641.3	1,291.3	1,263.4	27.89	46.296	
8,000.0	7,623.8	7,819.1	7,408.3	18.2	17.8	80.38	202.3	641.3	1,291.8	1,263.4	28.39	45.499	
8,050.0	7,629.1	7,857.4	7,410.6	18.4	18.0	80.27	240.5	641.3	1,292.2	1,263.3	28.96	44.614	
8,101.7	7,631.0	7,901.9	7,411.0	18.7	18.3	80.20	285.0	641.3	1,292.5	1,262.8	29.67	43.557	
8,200.0	7,631.0	8,000.2	7,411.0	19.4	19.0	80.20	383.3	641.3	1,292.5	1,261.1	31.36	41.213	
8,300.0	7,631.0	8,100.2	7,411.0	20.2	19.8	80.20	483.3	641.3	1,292.5	1,259.1	33.35	38.758	
8,400.0	7,631.0	8,200.2	7,411.0	21.2	20.8	80.20	583.3	641.3	1,292.5	1,256.9	35.56	36.346	
8,500.0	7,631.0	8,300.2	7,411.0	22.2	21.8	80.20	683.3	641.3	1,292.5	1,254.5	37.96	34.049	
8,600.0	7,631.0	8,400.2	7,411.0	23.4	23.0	80.20	783.3	641.2	1,292.5	1,252.0	40.51	31.904	
8,700.0	7,631.0	8,500.2	7,411.0	24.6	24.2	80.20	883.3	641.2	1,292.5	1,249.3	43.19	29.926	
8,800.0	7,631.0	8,600.2	7,411.0	25.8	25.5	80.20	983.3	641.2	1,292.5	1,246.5	45.97	28.114	
8,900.0	7,631.0	8,700.2	7,411.0	27.1	26.8	80.20	1,083.3	641.2	1,292.5	1,243.6	48.84	26.463	
9,000.0	7,631.0	8,800.2	7,411.0	28.5	28.2	80.20	1,183.3	641.2	1,292.5	1,240.7	51.78	24.960	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Offset Design SWSE S14 T1N-R66W (Mathews) - Mathews 4G-14H - HZ - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
9,100.0	7,631.0	8,900.2	7,411.0	29.9	29.6	80.20	1,283.3	641.2	1,292.5	1,237.7	54.78	23.593		
9,200.0	7,631.0	9,000.2	7,411.0	31.3	31.1	80.20	1,383.3	641.2	1,292.5	1,234.6	57.83	22.348		
9,300.0	7,631.0	9,100.2	7,411.0	32.8	32.6	80.20	1,483.3	641.2	1,292.5	1,231.5	60.93	21.212		
9,400.0	7,631.0	9,200.2	7,411.0	34.3	34.1	80.20	1,583.3	641.2	1,292.5	1,228.4	64.06	20.175		
9,500.0	7,631.0	9,300.2	7,411.0	35.8	35.6	80.20	1,683.3	641.2	1,292.5	1,225.2	67.23	19.225		
9,600.0	7,631.0	9,400.2	7,411.0	37.4	37.2	80.20	1,783.3	641.2	1,292.5	1,222.1	70.42	18.354		
9,700.0	7,631.0	9,500.2	7,411.0	38.9	38.7	80.20	1,883.3	641.2	1,292.5	1,218.8	73.63	17.552		
9,800.0	7,631.0	9,600.2	7,411.0	40.5	40.3	80.20	1,983.3	641.2	1,292.5	1,215.6	76.87	16.813		
9,900.0	7,631.0	9,700.2	7,411.0	42.1	41.9	80.20	2,083.3	641.2	1,292.5	1,212.3	80.13	16.130		
10,000.0	7,631.0	9,800.2	7,411.0	43.7	43.5	80.20	2,183.3	641.2	1,292.5	1,209.1	83.40	15.498		
10,100.0	7,631.0	9,900.2	7,411.0	45.3	45.2	80.20	2,283.3	641.1	1,292.5	1,205.8	86.68	14.910		
10,200.0	7,631.0	10,000.2	7,411.0	46.9	46.8	80.20	2,383.3	641.1	1,292.5	1,202.5	89.98	14.363		
10,300.0	7,631.0	10,100.2	7,411.0	48.6	48.4	80.20	2,483.3	641.1	1,292.5	1,199.2	93.29	13.854		
10,400.0	7,631.0	10,200.2	7,411.0	50.2	50.1	80.20	2,583.3	641.1	1,292.5	1,195.9	96.61	13.378		
10,500.0	7,631.0	10,300.2	7,411.0	51.9	51.7	80.20	2,683.3	641.1	1,292.5	1,192.5	99.94	12.932		
10,600.0	7,631.0	10,400.2	7,411.0	53.5	53.4	80.20	2,783.3	641.1	1,292.5	1,189.2	103.28	12.514		
10,700.0	7,631.0	10,500.2	7,411.0	55.2	55.1	80.20	2,883.3	641.1	1,292.5	1,185.9	106.63	12.121		
10,800.0	7,631.0	10,600.2	7,411.0	56.9	56.7	80.20	2,983.3	641.1	1,292.5	1,182.5	109.98	11.752		
10,900.0	7,631.0	10,700.2	7,411.0	58.5	58.4	80.20	3,083.3	641.1	1,292.5	1,179.1	113.34	11.403		
11,000.0	7,631.0	10,800.2	7,411.0	60.2	60.1	80.20	3,183.3	641.1	1,292.5	1,175.8	116.71	11.075		
11,100.0	7,631.0	10,900.2	7,411.0	61.9	61.8	80.20	3,283.3	641.1	1,292.5	1,172.4	120.08	10.764		
11,200.0	7,631.0	11,000.2	7,411.0	63.6	63.5	80.20	3,383.3	641.1	1,292.5	1,169.0	123.45	10.470		
11,300.0	7,631.0	11,100.2	7,411.0	65.3	65.1	80.20	3,483.3	641.1	1,292.5	1,165.7	126.83	10.191		
11,400.0	7,631.0	11,200.2	7,411.0	66.9	66.8	80.20	3,583.3	641.1	1,292.5	1,162.3	130.21	9.926		
11,500.0	7,631.0	11,300.2	7,411.0	68.6	68.5	80.20	3,683.3	641.1	1,292.5	1,158.9	133.60	9.674		
11,600.0	7,631.0	11,400.2	7,411.0	70.3	70.2	80.20	3,783.3	641.1	1,292.5	1,155.5	136.99	9.435		
11,700.0	7,631.0	11,500.2	7,411.0	72.0	71.9	80.20	3,883.3	641.0	1,292.5	1,152.1	140.39	9.207		
11,800.0	7,631.0	11,600.2	7,411.0	73.7	73.7	80.20	3,983.3	641.0	1,292.5	1,148.7	143.78	8.989		
11,900.0	7,631.0	11,700.2	7,411.0	75.4	75.4	80.20	4,083.3	641.0	1,292.5	1,145.3	147.18	8.782		
12,000.0	7,631.0	11,800.2	7,411.0	77.2	77.1	80.20	4,183.3	641.0	1,292.5	1,141.9	150.59	8.583		
12,100.0	7,631.0	11,900.2	7,411.0	78.9	78.8	80.20	4,283.3	641.0	1,292.5	1,138.5	153.99	8.393		
12,143.1	7,631.0	11,943.3	7,411.0	79.6	79.5	80.20	4,326.4	641.0	1,292.5	1,137.0	155.46	8.314		
12,177.2	7,631.0	11,970.0	7,411.0	80.2	80.0	80.20	4,353.1	641.0	1,292.5	1,136.0	156.50	8.259 SF		

Cathedral Energy Services

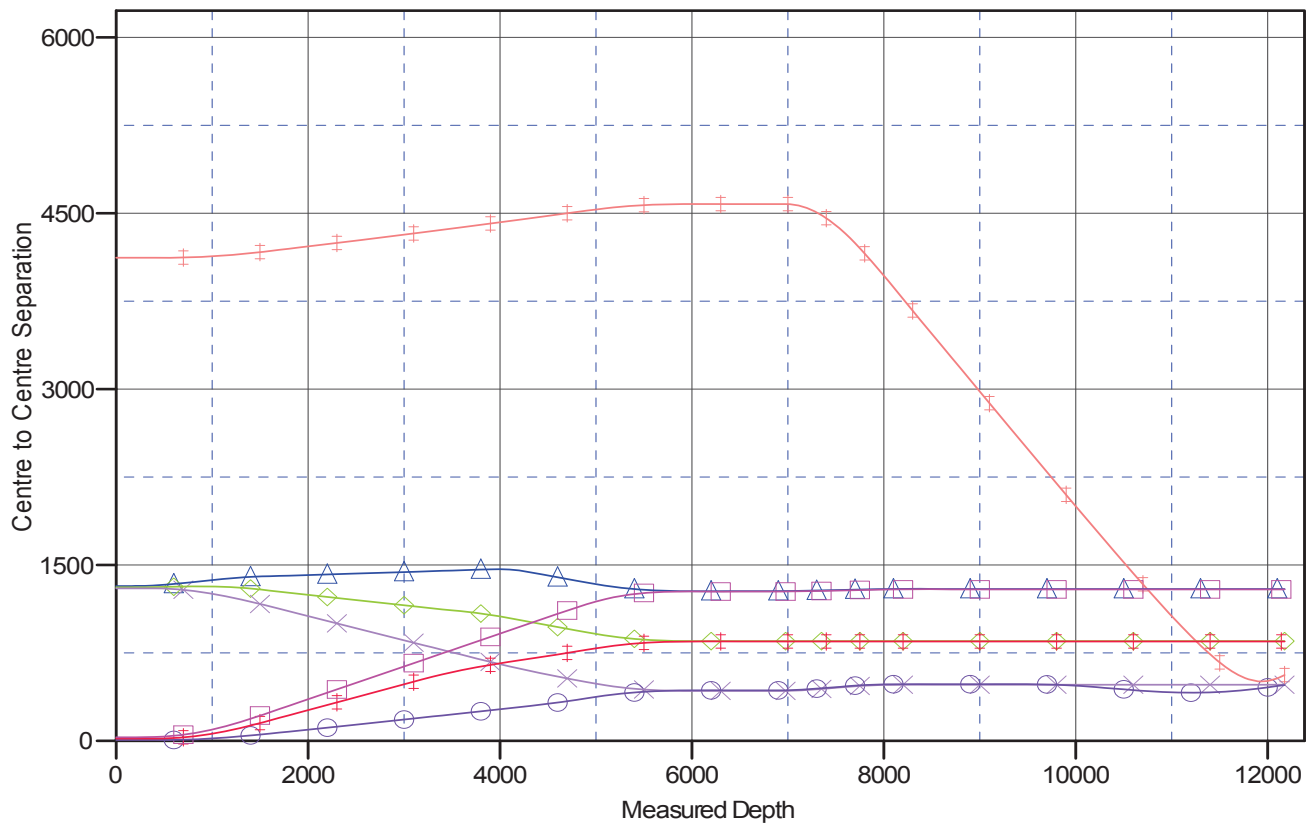
Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Mathews 4D-14H
Project:	DJ Wattenberg	TVD Reference:	Well @ 5117.0ft (Ensign)
Reference Site:	SWSE S14 T1N-R66W (Mathews)	MD Reference:	Well @ 5117.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Mathews 4D-14H	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 #3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 5117.0ft (Ensign)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Mathews 4D-14H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.49°

Ladder Plot



LEGEND

Mathews 1 (Existing), VT (Existing), Existing V0
Mathews4C-14H, HZ, Plan #3 V0
Mathews4E-14H, HZ, Plan #3 V0
Mathews4F-14H, HZ, Plan #3 V0
Mathews4G-14H, HZ, Plan #3 V0